Norfolk County Council

Transport for Norwich Strategy

Information to Inform Habitats Regulations Screening and Appropriate Assessment

CONTENTS

1. Executive Summary

The Transport for Norwich (TfN) strategy proposes an approach for addressing current and future transport issues within and in the surrounding of the city of Norwich. The TfN strategy is part of a hierarchy of plans associated with the overarching fourth Local Transport Plan for Norfolk. The TfN strategy encompasses all modes of transport and covers the period 2021 - 2036 with the following visionary areas:

- Norwich and Norfolk;
- A zero-carbon future;
- Improving the quality of our air;
- Changing attitudes and behaviours;
- Supporting growth areas;
- Meeting local needs;
- Reducing the dominance of traffic;
- Making the transport system work as one; and
- Making it happen (governance).

Under the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') it is necessary to consider whether the TfN strategy may have likely significant effects (LSE) upon areas of nature conservation importance designated/classified under the Habitats Regulations. Should LSE be identified it would be necessary to further consider the effects of the TfN strategy by way of an appropriate assessment (AA). This process of assessment under the requirements of the Habitats Regulations is described within this document as Habitats Regulations Assessment (HRA).

This HRA screening assessment has been produced as an element of a Sustainability Appraisal (SA) that incorporates the requirement of a Strategic Environmental Assessment (SEA) for the TfN strategy.

Seven Habitats sites lie within the potential 20km Zone of Influence (ZoI) for the TfN strategy, including three Special Areas of Conservation (SAC's), two Special Protection Areas (SPA's) and two Ramsar Sites and in a 30km search radius for SACs with bat interest features there is one Habitats site.

Through HRA screening for potential LSE, it has not been possible to categorically demonstrate that the TfN strategy will not have any adverse effects upon Habitats sites. A number of policies have been screened-out at this stage due to their nugatory or beneficial effects on Habitats sites, but other policies have been screened-in for their further consideration in an appropriate assessment. These policies indicate the potential for emerging new infrastructure or improvement schemes, but only a small number of specific schemes are noted in the TfN strategy.

The TfN strategy is a high-level document, as a result there is insufficient detail to enable a more in-depth analysis to the degree required for Appropriate Assessment. Given the possibility of likely significant effects associated with the screened-in policies, further detailed assessment through Appropriate Assessment is considered necessary at a project-level and on a case by case basis to satisfy the requirements of the Habitats Regulations.

The following over-arching statement is recommended for incorporation within the accompanying supplementary guidance or directly within the TfN strategy:

Any new transport or improvement scheme that would be likely to have a significant effect on a Habitats Site either alone or in combination with other plans or projects, will be subject to assessment under part 6 of the Habitats Regulations at project application stage.

Statutory consultation forms an important element of the HRA exercise and the response from Natural England will be incorporated in the final version of this HRA report.

2. Introduction

2.1. Background

2.1.1. The Transport for Norwich (TfN) strategy is the successor to The Norwich Area Transportation Strategy (NATS) which was adopted in 2004. The TfN strategy will deliver the transport improvements needed over the next 15 plus years (2021 – 2036). It is a high-level strategy setting out a vision, objectives and longer-term aspiration alongside an Action Plan setting out commitment to the major actions that will be undertaken to achieve the policy aspiration. The strategy details the plan for future delivery of improvements in order to develop sustainable transport, reduce congestion and improve air quality within the Greater Norwich area.

2.1.2. The TFN strategy is being developed in parallel with the fourth Local Transport Plan (LTP4) for Norfolk. The LTP4 Plan provides important policy context for transport across the county. The LTP4 is nearing completion and it is planned to be adopted by August 2021.

2.1.3. There is a hierarchy of Transport Plans in Norfolk which the LTP4 overarches. The information in the LTP4 document provides a direction of travel and context for the TfN strategy. There are also two other local transport strategies which have been developed and adopted:

- The Kings Lynn Transport Strategy; and
- The Great Yarmouth Transport Strategy.

2.1.4. A particular challenge to the TfN strategy is climate change and the achievement of net zero carbon targets. Norfolk County Council's Environment Policy, adopted in 2019, aims to achieve net zero carbon emissions from the council's operations by 2030 and a move towards carbon neutrality across all sectors by the same date. As stated in the TfN strategy:

> *"Alongside this, central government also amended the Climate Change Act in 2019 with a target to achieve net zero carbon by 2050. The UK's sixth Carbon Budget, due to become enshrined in law, will set a target to reduce emissions by 78% by 2035 compared to 1990 levels. The transport sector is one of the highest emitters of carbon dioxide and it is therefore expected that large carbon savings are made within the sector to contribute towards the achievement of the goals. The TfN strategy needs to contribute to this key ambition."*

2.1.5. Under the Conservation of Habitats and Species Regulations 2017 (as amended) (the 'Habitats Regulations') it is necessary to consider whether the TfN may have Likely Significant Effects (LSE) upon areas of nature conservation importance designated/classified under the Habitats Regulations. Should LSE be identified it would be necessary to further consider the effects of the TfN by way of an appropriate assessment' (AA). This process of assessment under the requirements of the Habitats Directive is described within this document as Habitats Regulations Assessment (HRA).

2.2. Report Framework

2.2.1. This HRA screening report has been produced as part of a Sustainability Appraisal (SA) that incorporates the requirement of a Strategic Environmental Assessment (SEA) for the TfN strategy.

2.2.2. This HRA has been prepared in parallel to SEA and will ensure that all HRA-related considerations are fully integrated into the TfN strategy as it is developed.

2.2.3. A SEA is a regulatory requirement in England under the "Environmental Assessment of Plans and Programmes Regulations" (SI 2004/1633, known as the SEA Regulations). These Regulations place an obligation on local authorities to undertake SEA for certain plans and programmes which include local transport plans and strategies.

2.2.4. This report details:

- The HRA process and methodology for assessment;
- The relevant national site network and Ramsar sites within the zone of influence for the TfN strategy;
- The challenges of the TfN strategy and how these may impact upon relevant national site network and Ramsar sites;
- The screening of likely significant effects (Stage 1) of the TfN strategy; and
- An appropriate assessment (AA) of the TfN strategy (Stage 2).

2.2.5. It should be noted that this HRA has been based solely upon the TfN strategy and does not include a detailed analysis of any projects that may arise as a result of the strategy.

3. Habitats Directive and Habitats RegulationsAssessment

3.1. Legislative Background

3.1.1. Under the Habitats Regulations 'Competent Authorities' must assess Plans, in this case the TfN strategy, for their potential to cause LSE on Habitats sites. Where the Plan may lead to LSE it must be subject to an HRA to determine whether there will be adverse effects to any Habitats sites. Any Plan that would lead to adverse effects on the integrity of Habitats site(s) cannot be permitted without meeting strict additional tests.

3.1.2. According to the Habitats Regulations, any plan or project likely to have a significant effect on a Habitats site, either individually or in combination with other plans or projects should undergo an AA to determine its implications for the site. The Competent Authority can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site(s) concerned.

3.1.3. Regulation 63 (1) of the Habitats Regulations states that:

> *'…a Competent Authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—*
>
> *(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and*
>
> *(b) is not directly connected with or necessary to the management of that site.*
>
> *—must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.'*

3.1.4. The Habitats Regulations also make allowance for projects or plans to be completed if they satisfy 'imperative reasons of overriding public interest'. Regulation 64 relates to such situations.

3.1.5. The Competent Authority must include consideration of 'in-combination' effects arising from other projects and plans within their assessment, as well as those potentially acting alone.

3.1.6. Special Areas of Conservation (SACs) were originally designated under the Habitats Directive and promote the protection of flora, fauna and habitats. Similarly, Special Protection Areas (SPAs) were designated under the Birds Directive in order to protect vulnerable and migratory birds.

3.1.7. In the United Kingdom, the Habitats Regulations incorporate all SPAs and SACs into the definition of European sites.

3.1.8. It is a matter of Government policy (NPPF paragraph 176) that sites designated under the 1971 Ramsar Convention for their internationally important wetlands (commonly known as Ramsar sites), potential SACs (pSACs) and potential SPAs (pSPA) (where consultation has been initiated) are also considered in the same way as SACs, SPAs and candidate SACs (cSACs).

3.1.9. For the purposes of this report all relevant sites as described above are collectively termed 'Habitats sites'.

3.1.10. Defra guidance (2021) states that SACs and SPAs in the UK no longer form part of the EU's Natura 2000 ecological network. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 have created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes:

- Existing SACs and SPAs; and

- New SACs and SPAs designated under these Regulations.

3.1.11. Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new national site network.

3.1.12. Maintaining a coherent network of protected sites with overarching conservation objectives is still required in order to:

- Fulfil the commitment made by government to maintain environmental protections; and
- Continue to meet our international legal obligations, such as the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions.

3.1.13. It should be noted that the Competent Authority (Norfolk County Council) undertakes the Screening and AA (see section 2.2.2 below), the consultant provides the information or evidence-base to allow this to be completed. The Competent Authority must include consideration of 'in-combination' effects arising from other projects and plans within their assessment, as well as those potentially acting alone.

3.1.14. There are a number of recent Court of Justice of the European Union (CJEU) and UK High Court rulings which are relevant to this HRA and these are summarised in Appendix A.

3.2. Stages of Habitats Regulations Assessment

3.2.1. Guidance on the Habitats Directive (European Commission, 2000) sets out the step wise approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Directive and provides further clarity on the interpretation of Articles 6 (3) and 6 (4). As set out in Regulation 3 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 where Natura 2000 sites are referenced in previously issued guidance, this should be interpreted as relating to the national site network but does not otherwise affect guidance as it applied, before EU exit day.

- **Stage 1:** Screening: the process which initially identifies the likely impacts upon a Natura 2000 site of a plan or project, either alone or in combination with other plans or projects and considers whether these impacts are likely to be significant;
- **Stage 2:** AA: the detailed consideration of the impact on the integrity of the Natura 2000 sites of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site. Specific guidance on this stage is provided in habitat regulations guidance note 1.
- **Stage 3:** Assessment of Alternative Solutions: the processes that examine alternative ways of achieving the objectives of the plans or projects that avoid adverse impacts on the integrity of the Natura 2000 site; and
- **Stage 4:** Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain: an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

3.2.2. This report presents the findings of the Screening undertaken as part of Stage 1 of the HRA process to establish whether the likely impacts of the TfN strategy could have LSE on Habitats sites. The report concludes with a Stage 2 AA.

3.2.3. This document provides this information by undertaking the following steps:

- Determining whether the plan is directly connected with or necessary for the management of applicable Habitats sites;
- Describing the project/plan impacts that may have the potential for significant effects upon applicable Habitats sites; and
- Description of the potential pathways of impacts, both alone and in-combination with other plans and projects.

3.2.4. The precautionary principle is applied at all stages of the HRA process. In relation to screening this means that projects and plans where effects are considered likely and those where uncertainty exists as to whether effects are likely to be significant must be subject to the second stage of the HRA process, AA.

Consultation on this HRA Report

3.2.5. Statutory consultation forms an important part of the HRA exercise and the conclusions and recommendations of this HRA report will be subject to consultation comments and advice from Natural England.

4. Habitats Sites

4.1. Zone of Influence

4.1.1. The geographical coverage of the TfN strategy is detailed in the document as:

"The existing strategy is focussed on Norwich, including the contiguous major growth area, and includes a small rural hinterland. However, Norwich is important for people and businesses across a large area. The travel to work area extends roughly across Norwich, all of Broadland and South Norfolk plus parts North Norfolk, Breckland and Mid-Suffolk so what is done within Norwich therefore affects many more people and businesses than simply those who live within the urban area."

4.1.2. In addition, the TfN strategy states:

"This TfN strategy will have a number of policy layers that each will have their own area of influence so the extent of the strategy cannot be easily represented by a line on a plan, however there will be areas of focus for different policies as they are developed."

4.1.3. The zone of influence (ZoI) of the relevant policies and vision for the TfN strategy on Habitats sites and their interest features is critical to the HRA. In order to identify all strategic corridors where potential direct, indirect and in-combination effects could reasonably be considered possible, a source-pathway-receptor approach was adopted. The ZoI therefore, is defined by the potential effects arising from the Strategy and the available pathways for those effects to reach and affect the interest features of Habitats sites.

4.1.4. Habitats sites with qualifying features with sensitivities, which have the potential to be affected by the relevant policies of the TfN strategy, were initially investigated in a 20km radius around:

- The Norwich City boundary;
- Broadland District;
- South Norfolk District; and
- Parts of North Norfolk, Breckland, Waveney Districts and Great Yarmouth Borough Council.

4.1.5. It is considered that the 20km ZoI is a precautionary buffer to allow for the extensive and far-reaching policies of the TfN strategy. This buffer also encompasses the premise that 10km represents the average trip length from the National Transport Survey and traffic data for this buffer will be consulted and used in any detailed analysis or if required at AA stage. This radius was extended as necessary to ensure all potential LSE could be investigated, for example, to 30km where highly mobile bat species are the qualifying features of a SAC or cSAC.

4.2. Identification of Relevant Habitats Sites

4.2.1. Seven Habitats sites lie within the potential 20km ZoI for the TfN strategy, including three SACs, two SPAs and two Ramsar Sites and for the 30km search for SACs with bat interest features there is one Habitats site.

4.2.2. These Habitats sites are listed below and their locations given in Figure 1.

Special Areas of Conservation (SAC) (*30km ZOI for bats) Norfolk Valley Fens

- River Wensum
- The Broads
- Paston Great Barn*

Special Protection Area (SPA) and Ramsar Site (where both apply)**

- Breydon Water**
- Broadland**

4.2.3. The reasons for designation of these Habitats sites and their known vulnerabilities are summarised in Appendix B, which has been collated from the Natura 2000 standard data forms (JNCC, 2016) and Site Improvement Plans (Natural England, 2014) which incorporate the conservation objectives for each Habitats site.

4.2.4. With regard for the qualifying features and information on vulnerability of the sites detailed in Appendix B, the broad conservation objectives for SACs and SPAs are to:

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:
  - The extent and distribution of qualifying natural habitats and habitats of qualifying species;
  - The structure and function (including typical species) of qualifying natural habitats;
  - The structure and function of the habitats of qualifying species;
  - The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely;
  - The populations of qualifying species; and
  - The distribution of qualifying species within the site.

4.2.5. The use of the term Favourable Conservation Status (FCS) is not amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the term still has the meaning given by Article 1 of the Habitats Directive. Defra (2021) does however note that "*an appropriate authority is only responsible for managing and adapting the national site network to secure FCS of a feature proportionately to the importance of the UK within the feature's natural range*". The Habitats Directive provides further interpretation of the meaning of 'favourable conservation status' within Article 1 parts a, e and i as below.

> *'(a) conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status as defined in (e) and (i);…..*

(e) *conservation status of a natural habitat means the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2. The conservative status of a natural habitat will be taken as "favourable" when:*

- *Its natural range and areas it covers within that range are stable or increasing, and*
- *The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and*
- *The conservation status of its typical species is favourable as defined in (i).*

(i) *conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as "favourable" when:*

- *Populat*ion dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- *The natural range of the species is neither being reduced nor is likely to be reduced forthe foreseeable future, and*
- *There is, and will probably continue to be, a sufficiently large habitat to maintain itspopulations on a long-term basis'.*

5. Screening Assessment

5.1. The Strategy and Management of Habitats Sites

5.1.1. This stage considers whether the TfN strategy is directly connected with or necessary to the management of Habitats sites. Within this context 'directly' means that the plan is solely conceived for the conservation management of a site or group of sites and 'management' refers to the management measures required in order to maintain in favourable condition the features for which the European site has been designated.

5.1.2. The TfN strategy is neither directly connected with, nor necessary for, the management of any of the Habitats sites listed. As such, it is clear that further consideration of the TfN strategy by way of an HRA screening assessment is required.

5.2. Description of The Transport For Norwich Strategy

5.2.1. The overall vision of the TfN is:

> *"Norwich and the Strategic Growth Area around it will become a place to thrive because shared, clean, active and accessible travel are the first choice for journeys, and people within at least the urban area can access a range of services without a car".*

5.2.2. The Vision will be delivered through the following themes:

Norwich and Norfolk

- Norwich, and the strategic growth area around it, is the centre for a large part of the county.Good, strategic connections are vital for continued prosperity.

A zero-carbon future

- Achieving net zero carbon will require significant and far-reaching interventions including reductions in travel demand, mode shift through an increased emphasis on active travel andaccelerating the switch to electric vehicles.

Improving the quality of our air

- Clean air is important. As required for reducing carbon, significant and far-reaching interventionswill be needed. Measures will need significant further study and engagement work to consider before being able to commit to delivery of a preferred option, but the following interventions will be further considered: Clean air zone; Workplace parking place levy; Road charging / congestioncharge; Vehicle bans (e.g. prohibiting petrol and diesel engine vehicles from the city centre).

Changing attitudes and behaviours

- Local people, businesses and others who use transport networks need to be engaged so that they understand and support the changes and feel confident in being able to make changes totheir own behaviour.

Supporting growth areas

- The area has plans for significant growth. This needs to be in the right places, with transport networks improved, so that people can easily access facilities. Priority should be given to walking,cycling and public transport links.

Meeting local needs

- The transport system supports the needs of everyone, being designed to take account thedifferent needs of different people.

Reducing the dominance of traffic

- In local neighbourhoods, traffic impacts will be reduced. This will be achieved through a series ofinterventions including 20mph speed limits, low traffic neighbourhoods, school streets and reductions in speed limits, based around the principle of Healthy Streets.

Making the transport system work as one

- The transport system needs to ensure efficient movement of large numbers of people. We will identify roads where general traffic is prioritised; where public transport is prioritised; and whereactive travel is prioritised. This reflects that streets cannot accommodate every demand, and wemust prioritise. Elsewhere, streets will primarily support communities who live there, businessesor for leisure uses like meeting friends or entertainment. Parking will be reviewed to consider current parking capacity, arrangements, cost, availability and type.

Making it Happen (governance)

- Good governance arrangements are vital for effective actions and delivery, supported by active engagement across a range of people and partners. Special interest sectors need to be drawn into advise and assist with direction and delivery. Without this, we will not achieve our ambitions.

5.2.3. A number of policies are proposed to achieve the above strategic objectives and set out the high-level approach to transport in Norwich. A summary of these policies are set out below.

Norwich and Norfolk

- **Policy 1:** We will ensure that new strategic connections are optimised to benefit the economy, this includes rail enhancements to Cambridge, Stansted, London and otherdestinations, main bus and coach links, the Norwich Western Link, A47 improvements, and Long Stratton Bypass. Sustainable transport measures will be promotedto capture the benefits of these connections within the Norwich urban area and the strategic growth area around it. Individual schemes will need to mitigate their environmental impacts through the detailed work on theseprojects. We will ensure that Norwich's role as a regional economiccentre and transport hub is supported through excellent transport connectivity to the Norwich travel to work area and longer distance connections are improved to markets outside the county. The park and ride system play an important role in maintaining good access into Norwich forlonger distance trips.
- **Policy 2:** We will devise a carbon budget for surface transport acrossNorwich and its strategic growth area. A baseline will be set. We will use this to assess potential interventions to guide delivery. We will monitor the efficacy of interventions using the carbon budget to guide further delivery. We will gather evidence to provide the basis for significant and far-reaching interventions including reductions in traveldemand, mode shift through an increased emphasis on active travel and accelerating the switch to electric vehicles. These are covered in Chapter 7 Improving the Quality of our Air.
- **Policy 3:** Significant and far-reaching interventions will be considered including measures limiting or restricting use ofthe private car within the city, particularly vehicles poweredby internal combustion engines, and promotion of low/zeroemission public transport. We need significant further study work to understand the impacts that such measures will have, and which might be appropriate for further consideration. This will be done through a mix of technical study work alongside extensiveengagement with a range of partners and the public to understand what it means for business, and the effects such measures might have on how easy people find it to get about. Considerable further work is required before being able tocommit to delivery, but we

envisage that the following interventions should be further considered, with a view to taking forward the preferred option:

- Clean Air Zone to charge vehicles with higher emissions
- Workplace parking place levy
- Road charging / congestion charge
- Vehicle bans on certain roads or areas

- **Policy 4:** We will use a mixture of information, engagement, and incentives and disincentives. A brand is being developed,Travel Norfolk, which will provide a one-stop-shop countywide to deliver information, advice and messages. We will do this through a range of partners.
- **Policy 5:** We commit to continuing to use cameras to enforce offences related to inappropriate use of bus lanes and busgates and make use of new powers to enforce moving traffic offences (banned turns, yellow box junctions etc) to manage the way that journeys operate and make journeysmore reliable. Pavement parking will be reviewed to see if it is appropriateto introduce an area wide ban, allowing parking on pavements only in marked bays where it is required and doesn't obstruct other users.
- **Policy 6 & 7:** We will ensure that extant transport infrastructure commitment associated with planned growth and redevelopment areas is delivered. We commit to continuedworking in partnership with local planning authorities in devising suitable transport measures to support planned growth as part of the implementation of the Greater Norwich Local Plan. Emphasis will be on promoting connectivity though public transport, walking and cycling. We will ensure that the TfN action plan effectively considers and gives appropriate priority to capital investment in infrastructure that will support planned growth.
- **Policy 8:** We will adopt the Healthy Streets approach. This approachputs the focus on people using the streets, using ten indicators, each describing an aspect of the experience of being on a street. These are prioritised and balanced to improve social, economic and environmental sustainability through design and management. We will continue to tackle road casualties using the safe systems approach and working with road safety partners.The safe systems approach uses the following topics for how to deal with road safety collisions: Safe speeds; Saferoads; Safe road users; Safe vehicles and Post-crash responses This ensures that the emphasis is not entirely on the roaduser, since the approach accepts that people will make mistakes and that this needs to be considered.
- **Policy 9:** The mobility requirements of those who might experience barriers to transport will be considered. This will include people with protected characteristics under the Equality Act2010, those on low incomes and people without access to a private car. We will recognise the needs of those who need to travel to Norwich from the rural hinterland where access to non-car modes of transport might be limited; see Chapter 12 Making the Transport System Work as One. We will work with partners, and in the provision of information and infrastructure, to overcome barriers.
- **Policy 10:** Transport schemes developed in places of historical, landscape or architectural importance, including conservationareas, will be designed to ensure that they maintain or enhance the area and improve public realm.
- **Policy 11:** We will review how deliveries within the city centre are managed in the short term and in the long-term review howdeliveries within the entire urban area are managed.
- **Policy 12:** We will undertake a strategic appraisal of traffic and transportissues experienced by local neighbourhoods to prioritise our work.
- **Policy 13:** We will introduce a hierarchy that reflects how roads, streets and spaces are used. This will range from identifying roads where essential movement will be the priority through to identify places where the primary use willbe for meeting people, eating out or socialising. Key movement corridors will prioritise movement of the greatest number of people rather than the greatest numberof vehicles. This

will ensure that they operate most effectively. The layout and constrained nature of roads in our urban areas means it is very difficult to make improvements for all types of user. Therefore, we will prioritise space for certain types of users rather than tryingto make provision for all types of user along different corridors. We will identify corridors for general traffic; corridors where public transport measures like bus lanes will be prioritised; and corridors where active travel measures like segregated cycle lanes will be prioritised. Movement across Norwich and its strategic growth areas will seek to significantly reduce the intrusion of extraneous traffic within the city centre and residential neighbourhoods.Cross city traffic will be required to use orbital and radial primary routes rather than short cuts on neighbourhood roads. These are potentially major changes. Although at this stageproposals have not been fully developed, a key diagram showing the longer-term changes to the network will be worked up to show how the network will be developed. This will be done as part of developing the strategy and action plan and will take account of the outcome of the consultation on the strategy and ongoing detailed technical work. These changes will be consistent with, and developed from, work done to date, such as delivery of the pedalway network and our Transforming Cities programme. The key diagram will also show the cycle network in theLocal Cycling and Walking Infrastructure Plan, currentlybeing consulted on, and the neighbourhood areas (i.e. those areas where 20mph speed limits and low traffic zones could be introduced).

- **Policy 14:** Continue to work in partnership with operators to develop bus services meet the requirements of people within the travel to work area to access the city centre, strategic employment areas and other key destinations such as health, education and retail facilities, whilst recognising that the majority of bus services in the Norwich area are run on a commercial basis by the operators
- **Policy 15:** As part taking forward the action plan, we will undertake a review to look at the cost, availability and type of parking. This to make sure that the parking policy supports the objectives of the strategy including to reduce travel by car and ensure a switch to active travel and public transport, whilst still ensuring the economic attractiveness of Norwich. Previous strategies introduced a cap on the amount of public parking provision in the city centre (10,000 spaces).This will be reviewed.
- **Policy 16:** We will review the operation of Park and Ride to establishits long-term development and sustainability. This review will include consideration of:
    - The location and size of sites;
    - Potential for serving sites by other modes including possible roles as bus and coach interchanges including tourist coaches; accommodating Cycle andRide; interchange with scheduled bus services;
        - Potential for ancillary operations at the sites including electric vehicle infrastructure, decking sites to support solar panel installation, services for customers at sites and freight consolidation;
        - Routes, frequencies and periods of operation; and
        - Funding.
- **Policy 17:** We will ensure that journeys by bus are consistent and journey times are reduced where possible and consider thefeasibility of demand management approaches such as congestion charging and workplace parking levies to facilitate traffic reduction to free up road space for essential travel.
- **Policy 18:** Active travel networks will be prioritised. Active travel will be prioritised over other forms of transport on dedicated movement corridors, within the city centre and within localneighbourhoods.
- **Policy 19:** We will undertake to review the existing governance arrangements to determine an approach to working in partnership with the public and private sector to developgovernance that is inclusive and appropriate for taking forward the strategy in the long term.

6. Initial Screening for Impacts And Effects on Habitats Sites

6.1.1. The initial screening exercise filters the TfN strategy policies in relation to potential effects pathways. The development of or improvements to infrastructure in proximity to Habitats sites as a result of the implementation of the TfN strategy for example has the potential to result in a number of short and long-term effects, as detailed below.

- **Water Resources and quality** - Pollution from accidental spills and run off (construction and operation).
- **Air Quality** - Increase in atmospheric pollutants during construction andoperation (nitrogen deposition and levels, ammonia levels,dust).
- **Habitat / Species Disturbance** - Construction and operation of new developments (noise, air, visual disturbance). Recreational pressures during operation including improved access.
- **Habitat (and species) loss and fragmentation(including supporting habitats)** - Direct land take during construction and Barriers to migration during operation (for examplebridge construction).

6.1.2. Where the TfN strategy policies will clearly not lead to specific infrastructure projects or any tangible effects on Habitats sites, for example as a result of being communication-based, they have been screened out. Where there is still the likelihood of significant effects of policy actions on the integrity of Habitats sites or any uncertainty in this respect, policies have been screened-in.

Policy 1: Screened in

Strategic connections include rail enhancements to Cambridge, Stansted, London and other destinations,main bus and coach links, the Norwich Western Link,A47 improvements and Long Stratton Bypass. Largely the implications on Habitats sites will be assessed at project level for these connections. The spatial location of necessary infrastructure to support this policy will be key in assessing the effects on Habitats sites, hence why Policy 1 has been screenedin. Likely effects may include habitat loss/damage /fragmentation; changes in air quality; changes in hydrology; disturbance to associated species throughnoise, visual and vibration emissions. At project level assessments it will be important to consider functionally linked land (FLL) which is not within the Habitats Site's boundary. Habitats sites function within a landscape of other semi-natural habitats which can also support qualifying features andact as buffers to the pressures placed on those sites.

Policy 2 Screened out

Policy 3 Screened out

Policy 4&5 Screened out:

Policies 6 and 7 Screened in: Construction/improvement of transport links (to supportplanned growth and regeneration areas) in or adjacent to Habitats sites have the potential for short-term and long-term effects during construction and operation. Likely effects may include habitat loss/damage/fragmentation; changes in air quality; changes in hydrology; disturbance to associated species throughnoise, visual and vibration emissions. It will be important to consider functionally linked land (FLL) which is not within the Habitats site's boundary at project level assessments. Habitats sites function within a landscape of other semi-natural habitats whichcan also support

qualifying features and act as buffers to the pressures placed on those sites. Construction of cycle paths and walkways in or adjacent to Habitats sites may result in construction phase effects: habitat loss/damage/ fragmentation; changes air quality; changes in hydrology; disturbanceto associated species through noise, visual and vibration emissions. In addition, increased human presence in proximity toHabitats sites may result in long-term (operational phase) impacts of visitor pressure to sites and disturbance to species. Habitat degradation (marine access: water sports, trampling of vegetation, soil compaction, erosion, fly tipping, air pollution through increased vehicle emissions) and disturbance (noise,light, visual) may result.

Policies 8&9 Screened out

Policies 10&11 Screened out

Policy 12 Screened in: Any changes to the transport network, including the provision of connections that meet local needs (Policy12), may lead to activities in or adjacent to Habitats sites which have the potential for short-term and long-term effects during construction and operation. Likely effects may include habitat loss/damage/fragmentation; changes in air quality; changes in hydrology; disturbance to associated species throughnoise, visual and vibration emissions. It will be important to consider functionally linked land (FLL) which is not within the Habitats Site's boundary at project level assessments. Habitats sites function within a landscape of other semi-natural habitats whichcan also support qualifying features and act as buffers to the pressures placed on those sites.

Policies 14, 15&17 Screened out

Policies 13, 16&18 Screened in: All these policies help support the general shift to sustainable transport modes and ensuring the transport network works as one. These are supportedby the Transforming Cities Fund, Norwich's local cycling and walking infrastructure plan, Norfolk Greenways to Greenspace Strategy, and Norwich's Beryl Bike and E-Scooter share scheme. These are largely urban, Norwich city focused and as such the potential to affect the integrity of Habitats sites is limited. Policies 14, 15 and 17 are therefore not takenfurther in this assessment. Mobility hubs could be large in scale and there is the possibility that land take is required. This may have a negative impact on the biodiversity and the integrity ofHabitats sites. Park and Rides and the extra parking are located outside of the city centre and generally follow good sustainability principles, however where land take is required there may be implications for Habitats sites. Construction of cycle paths and walkways in or adjacent to Habitats Sites may result in construction phase effects: habitat loss/damage/ fragmentation; changes air quality; changes in hydrology; disturbanceto associated species through noise, visual and vibration emissions. It will be important to consider the effects on functionally linked land (FLL) which is not within the Habitats Site's boundary at project level assessments. Habitats sites function within a landscape of other semi-natural habitats which can also support qualifyingfeatures and act as buffers to the pressures placed on those sites. Policies 13, 16 and 18 are therefore screened in andconsidered further in this screening assessment.

Policy 19 Screened out

7. Assessment of The Significance of Effects on HabitatsSites

7.1.1. Taking into account the specific vulnerabilities, issues and threats for each Habitats Site within the ZOI identified, an assessment has been made whether any of the potential effects described above might arise as a result of the implementation of the TfN strategy.

7.1.2. Those Policies screened-in (1, 6, 7, 12, 13, 16 and 18) are the focus for the mainscreening exercise. The results of this assessment are summarised below.

7.1.3. It is important to note that no specific new road or improvement schemes are listed in the TfN strategy, so therefore this final screening stage is high level and precautionary. Potential Effects and Conclusion on LSE

Policy 1: The implications on Habitats sites will be assessed at project level for these strategic connections. The spatial location of necessary infrastructure to support this policy will be key in assessing theeffects on Habitats sites, hence why Policy 1 has been screened in.

Likely effects may include habitat loss/damage /fragmentation; changes in air quality; changes in hydrology; disturbance to associated species through noise, visual and vibration emissions. It will be important to consider functionally linked land (FLL) which is not within the Habitats Site's boundary. Habitats sites function within a landscape of other semi-natural habitats which can also support qualifying features and act as buffers to the pressures placed on those sites.

It is not possible to conclude that there will be no Likely Significant Effects on the integrity of Habitats sites from habitat loss/fragmentation; and water or air quality changes as a result of theimplementation of TfN strategy policies alone*. It is therefore not possible to conclude no Likely Significant Effects at this strategic level.

Notwithstanding the need for project-level HRAs, there are a number of measures that can be exploited at the detailed design stage to ensure that LSE are avoided on the integrity of Habitats sitesand FLL. Specifically, that there will be a presumption against land-take within designated sites and in addition, construction best-practice measures will be integrated into Scheme designs to avoid indirect effects. It is also considered likely that LSE as a result of disturbance can be avoided with the use of carefully designed measures which will be based on evidence acquired through survey. The locations exploited should ensure that disturbance effects do not arise and/or that engineering solutions are exploited at the detailed design stage to avoid LSE.

*There are also likely to be in-combination effects with other plans and projects (see section 5.2).

Policy 6 and Policy 7: Policy 6 emphasises the promotion of connectivity through public transport, walking and cycling and maximising the proportion of trips made by these modes. There will be positive effects on Habitats sites as result, but new development (related to both Policies 6 and 7) will be located and designed to support the objectives of the TfN strategy and these could have a negative effect onthe integrity of Habitats sites and FLL.

It is not possible to conclude that there will be no Likely Significant Effects on the integrity of Habitats sites from habitat loss/fragmentation; and water or air quality changes as a result of theimplementation of TfN strategy policies alone*. It is therefore not possible to conclude no Likely Significant Effects at this strategic level.

Notwithstanding the need for project-level HRAs, there are a number of measures that can be exploited at the detailed design stage to ensure that LSE are avoided on the integrity of Habitats sitesand FLL. Specifically, that there will be a presumption against land-take within designated sites and in addition, construction best-practice measures will be integrated into Scheme designs to avoid indirect effects. It is also considered likely that LSE as a result of disturbance can be avoided with the use of carefully designed measures which will be based on evidence acquired through survey.

The locations exploited should ensure that disturbance effects do not arise and/or that engineering solutions are exploited at the detailed design stage to avoid LSE.

*There are also likely to be in-combination effects with other plans and projects (see section 5.2).

Policy 12: It is not possible to conclude that there will be no Likely Significant Effects on the integrity of Habitats sites from habitat loss/fragmentation; and water or air quality changes as a result of theimplementation of these TfN strategy policies alone*. It is therefore not possible to conclude no Likely Significant Effects at this strategic level.

There will be a statutory requirement to undertake HRAs at project or scheme-level on a case by case basis and in consultation with Natural England and the competent authority. Any new development proposal within an identified ZoI of a Habitats Site including FLL, should be considered for a screening exercise under the Habitats Regulations. There is a stringent focus on anypotential changes in air quality as a result of proposed developments and Natural England will need to be satisfied that the design will avoid potential problems or that suitable measures are inplace to mitigate issues at Appropriate Assessment Stage of HRA.

*There are also likely to be in-combination effects with other plans and projects (see section 5.2).

Policy 13, 16 and 18: It is not possible to conclude that there will be no Likely Significant Effects on of Habitats sites from habitat loss/fragmentation; and water or air quality changes as a result of the implementation ofthese TfN strategy policies alone*. It is therefore not possible to conclude no Likely Significant Effects at this strategic level.

There will be a statutory requirement to undertake HRAs at project or scheme-level on a case by case basis and in consultation with Natural England and the competent authority. Any new development proposal within an identified ZoI of a Habitats Site including FLL, should be considered for a screening exercise under the Habitats Regulations. There is a stringent focus on anypotential changes in air quality as a result of proposed developments and Natural England will need to be satisfied that the design will avoid potential problems or that suitable measures are inplace to mitigate issues at Appropriate Assessment Stage of HRA.

7.2. Summary of Screening Results

7.2.1. At an initial broad screening, a number of policies in the TfN strategy have been screened-out as they are likely to have nugatory or positive impacts on Habitats sites in Norfolk. These are: Policies 2, 3, 4, 5, 8, 9,10,11,14,15,17 and 19.

7.2.2. At an initial broad screening, a number of policies have been screened-in and these were further investigated in the main screening exercise. The main screening exercise found that the actions associated with these policies are likely to have significanteffects on Habitats sites in Norfolk. These are: Policies 1, 6, 7,12,13,16 and 18.

7.2.3. Following the screening stage, if likely significant effects on Habitats sites are unable to be ruled out, the plan-making authority is required under Regulation 61 of the Habitats Regulations 2017 (as amended) to make an 'Appropriate Assessment' of the implications of the plan for Habitats sites, in view of their conservation objectives. EC Guidance states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function.

8. Appropriate Assessment

8.1.1. The HRA recognises that in taking forward sustainable transport growth in the area risks to Habitats sites cannot be ruled out, but that at this strategic level, the direction and objectives relating to that growth are very high level in nature. The strategic plan itself does not include specific proposals in terms of the quantity, precise location and arrangement of transport growth. Such detail will be brought forward under lower tiers of policy.

8.1.2. All the policies screened into this AA relate to new transport or improvement schemes and theseare:

- Policies 1, 6, 7,12,13,16 and 18.

8.1.3. It has not been possible to conclude no likely significant effects in the absence of mitigation for these policies and associated schemes due to insufficient detail to avoid a requirement for further consideration through AA. It will only be possible to undertake this level of assessment once specific projects are proposed and/or once sufficient detail is available at the plan level to enable a thorough and robust analysis to be carried out.

8.1.4. The information presented within this AA is therefore high-level and does not contain the detail typically presented for HRA AA. These uncertainties limit the capacity of the HRA to reasonably predict the effects on relevant Habitats sites.

8.1.5. It is clear that a certain level of uncertainty is inevitable for a strategic level HRA, however the level of uncertainty should decrease in proportion to the precision of the plan until the final or project level assessment, where no such uncertainty would be admissible, in accordance with the test set out in the Waddenzee judgement[13]. This judgement has been added to by subsequent rulings.

8.1.6. In the Opinion of Advocate General Kokott in Case C-6/04 Commission v UK [2005] ECR I-9017 at paragraph[14] she noted that an assessment of plans cannot by definition take into account all effects because:

> "*Many details are regularly not settled until the time of the final permission" and "[i]t would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure".*

8.1.7. The Kokott finding was also bolstered and added to in the UK High Court Feeney case:

> "*A core strategy is a high level strategic document and the detail falls to be worked out at a later stage. Subsequent appropriate assessment of specific proposals is plainly envisaged by, and indeed necessitated under, the regime. Each appropriate assessment must be commensurate to the relative precision of the plans at any particular stage and no more. There does have to be an appropriate assessment at the Core Strategy stage, but such an assessment cannot do more than the level of detail of the strategy at that stage permits."*

8.1.8. In accordance, any new transport or improvement projects brought forward under the TfN strategy are likely to require consideration of their own HRA and this document does not preclude the need for further assessment at a lower tier of plan. However, the findings of this strategic level HRA canbe incorporated into and explored at the appropriate level of detail at the next tier.

8.1.9. The TfN strategy HRA has identified the potential for effects on Habitats sites, but these effects are by no means certain or a confirmed outcome of the policies assessed. It is considered likely that such effects, at a more detailed stage of consideration, can be wholly avoided or mitigated. As a result, the HRA for these policies and any associated schemes should be undertaken at project level under these particular circumstances:

- The HRA of the new transport or improvement schemes noted in the TfN strategy cannotreasonably assess the effects on Habitats sites in a meaningful way;
- The HRA of any projects will be required as a matter of law or government policy;
- The results of the project level HRA will be able to inform changes in a proposal if necessary; and
- Enabling a retrospective update of the plan-level HRA (TfN strategy) if required.

8.1.10. It is important to re-emphasise that the adoption of the TfN strategy does not facilitate the granting of any new transport or improvement projects that would be contrary to the Habitats Regulations.

8.1.11. With any schemes proposed under the TfN strategy and associated policies, there are a number of environmental control measures that it will be necessary to employ to ensure adverse impacts upon the environment are avoided (in the first instance) or minimised.

8.1.12. Policy 1 of the TfN strategy lists a number of new transport and improvement schemes and these have been considered in relation to the vulnerabilities of Habitats sites identified in the ZoI. These will be the primary considerations at project-level HRA.

8.1.13. Air quality emissions will be a critical consideration at project-level HRA for any new road or improvement schemes and their reduction to below critical threshold levels as identified by the air pollution information system (APIS) and other sensitive qualifying features of Habitats sites will be the primary aim. It should be noted that the levels and loads (deposition) of nitrogen within some Habitats sites are already above critical thresholds (the relevant APIS tables based on measured–interpolated data for a 3 year average 2016-2018, are given in Appendices C and D for information).

8.1.14. A further critical consideration will be the effects on the hydrology of the local environment and implications for Habitats sites of any scheme proposals. The control of water abstraction and discharge of water is required via the Water Framework Directive and the consideration of impacts on designated sites is covered under the Habitats Regulations, Wildlife and Countryside Act 1981 (as amended), and national and location planning policy.

8.1.15. With appropriate measures in place likely significant effects can be avoided / minimised and the integrity of the Habitats sites can be maintained and protected for the majority of cases, where schemes are brought forward under the TfN strategy or the overarching LTP4 policies.

Policy 1:

Strategic connections and hinterland access will be promoted to enhance the role of Norwich as the regionalcapital.
Includes rail enhancements to Cambridge, Stansted, London and other destinations, main bus and coach links, the Norwich Western Link, A47 improvements, and Long Stratton Bypass. Sustainable transport measures willbe promoted to capturethe benefits of these connections within the Norwich urban area and the strategic growth area around it. Individual schemes willneed to mitigate their environmental impacts through the detailed work on these projects.

Rail Schemes:

- Norwich to London rail line:Scheme detailsunknown.
- Norwich to Cambridge Peterborough raillines: Scheme details unknown
- East West Rail including the construction of anew rail line between Cambridge and Bedford
- King's Lynn to London rail line:Scheme detailsunknown

Habitat loss/fragmentation: These schemes are largely remote from most of the Habitats Sites identified in the ZoI, but the Norwich to Cambridge line traverses elementsof the Norfolk Valley Fens SAC. In this respect habitat fragmentation and loss is a threat andshould be considered at project level on a case by case basis,
Noise/vibrational/ visual disturbance: Due to proximity. any potential changes in the baseline noise environment duringthe construction and operation significant effects could result alone and in-combinationwith other development phases on the Norfolk Valley FensSAC.
Water quality/quantity: The potential effects on local hydrology of theNorfolk Valley Fens SAC should be considered
Air quality (emissions, deposition and dust): Changes to air quality during the constructionand operation phases in the locations proposed could result in significant effects alone and in- combination with other development onthe Broadland SPA, the Broads SAC and Norfolk Valley Fens SAC, including their supportinghabitats and FLL.
Recreational disturbance: The nature of therail improvements is not likely to resultin increased recreational pressures on nearby Habitats Sites
Conclusion: It is not possible to conclude that there will be no adverse effects on the integrity of the Habitats Sites noted opposite from habitat loss/fragmentation; noise, water or air quality changes as a result of the implementation of TfN strategy policies. Project-level HRA will berequired for the Norwich to Cambridge Scheme.

The Norwich Western Link: At design and assessment stage. Norfolk County Council isaiming to start construction in late 2022 and open the road to traffic in early 2025.
Habitat loss/fragmentation: Due to proximity and potential changes in habitat connectivity and the loss of habitatsduring the construction and operation phases significant effects could result alone and in-combinationwith other development on the River WensumSAC.
Noise/vibrational/ visual disturbance: Due to proximity and potential changes in the baseline noise environment duringthe construction and operation

phases significant effects could resultalone and in- combination with other development on the River Wensum SAC.
Water quality/quantity: Due to proximityand potential. changes to water quality during the construction and operation phases significant effects could result alone andin-combination with other development onthe River Wensum SAC
Air quality (emissions, deposition anddust): Changes to air quality during the constructionand operation phases in the locations proposed significant effects could result alone and in-combination with other development onRiver Wensum SAC.
Recreationaldisturbance: Greater levels ofaccess may occur as a resultof improved linkages; however, recreation is notidentified as a key threat.
Conclusion: It is not possibleto conclude that there will be no adverse effects on the integrity of the Habitats site noted opposite from habitat loss/fragmentation; and noise, water or air quality changes as a result of theimplementation of TfN strategy Policy 1. A project-level HRA will be required for this Scheme.

The A47 trunk roads dualling: Providing the main east-west road connection and route to the Midlands and north of England

- Scheme details unknown, but improvement areas include:
- Dualling the A47 North Tuddenhamto Easton
- Dualling the A47Blofield to NorthBurlingham
- Improving theA47/A11Thickthornjunction
- Improving A47 Great Yarmouth junctions includingreconstruction of the Vauxhall Roundabout

Habitat loss/fragmentation: In the absence of further details on the schemes proposed, followingthe precautionary principle, it is considered that fragmentation as aresult of new infrastructure cannot be ruled out.
Noise/vibrational/ visual disturbance: In the absence of further details on the schemes proposed, followingthe precautionary principle, it is considered that noise disturbance as a result of new infrastructure both at construction and operational phases,cannot be ruled out.
Water quality/quantity: Due to proximityand potential changes to water quality during the construction and operationalphases in the Norfolk Valley Fens, River Wensum, Broads SACs and the supporting habitats of Broadland and Breydon WaterSPAs could result in significant effects alone and in- combination with other development.
Air quality (emissions, deposition and dust): As above for the River Wensum SAC,Breckland SAC/SPA, Broadland SPA,the Broads SAC, Norfolk Valley Fens SAC, and Breydon Water SAC.
Recreationaldisturbance: Greater levels ofaccess may occur at as a result of the A47improvements and linkages andthis will need to be considered further for the Broadland SPA and the Broads SAC.
Conclusion: It is not possibleto conclude thatthere will be no adverse effects on the integrity of Habitats sitesnoted opposite from habitat loss/fragmentation; and water orair quality changes as a result of the implementation of the TfN strategy Policy A project-levelHRA screening exercise will be necessary for the proposed A47 improvements.

Long Stratton Bypass: Scheme details unknown. Construction on the bypass is due to start in the firsthalf of 2022, withthe road open to traffic in 2024.
Habitat loss/fragmentation: Not likely to be a consideration giventhe distance to Habitats sites andtheir identified vulnerabilities.
Noise/vibrational/ visual disturbance: Not considered likely to be a consideration given the distance to Habitats sites andtheir identified vulnerabilities

Water quality/quantity: Not consideredlikely to be a consideration given the distance to Habitats sitesand their identified vulnerabilities
Air quality (emissions, deposition anddust): As above forthe Norfolk Valley FensSAC.
Recreationaldisturbance: Greater levels ofaccess may occur at as a result of improved linkages; however, recreation is notidentified as a key threat for Habitats sites in ZoI.
Conclusion: It is not possibleto conclude thatthere will be no adverse effects on the integrity of Habitats sitesnoted opposite from habitat loss/ fragmentation; and water orair quality changes as a result of the implementation of TfN strategy Policy 1. A project-level HRA is requiredfor this Scheme.

9. IN-COMBINATION EFFECTS ON HABITATS SITES

9.1.1. There is also potential for in-combination effects between new and improvement transportation schemes indicated in policies in the TfN strategy and the overarching LTP4. It is therefore possible to outline at a strategic level the broad types of effects that may arise from the implementation of other plans in the County and beyond the County boundary. Some of the effects may occur as a result of a given scheme but may also occur or be compounded as a result of a wider range of development actions and activities arising from the implementation of other plans and projects.

9.1.2. The strategic nature of the TfN strategy and the uncertainties surrounding the timing and effects of any emerging schemes, as well as other higher tier plans and projects often in development or emerging stages, makes it impracticable to identify all the possible plans and projects that may act ‘in-combination’ and to consider the specific nature of likely effects arising.

9.1.3. The focus therefore for the in-combination assessment of the TfN strategy, similar to the overarchingLTP4 HRA, has been on higher tier and strategic level plans at County and District level. In most cases associated HRA work has been completed and this has been used to guide the assessment, however a precautionary approach has been adopted here as some of these assessments are based on earlier guidance and pre the current CJEU rulings.

9.1.4. Background information on the plans considered and a conclusion on the in- combination assessment. It should be noted that this list is not exhaustive and in-combination effects arising from individual projects and plans should be revisited as part of a project level assessment. For example, noise, dust and visual have a combined effect which can only be determined at the project level. In addition, current events are leading to rapid short-term changes inthe transport sector, as well as creating greater uncertainty about future transport approaches in themedium to longer term (post 2020).

9.1.5. The Local Plan (core strategies, development frameworks) for each local authority district in Norfolk form the main policies for delivering development and infrastructure within each area. The HRAs of these Local Plans generally conclude that there are no likely significant effects on any Habitats sites reasonably anticipated through adoption of the Local Plans policies. This should be qualified however, as most have undergone policy amendments and appropriate mitigation has been applied in some cases to avoid and manage LSE on Habitats sites. In accordance with current CJEU and UK High Court rulings (see Appendix A) the application of mitigation measures is now only considered at AA stage, however in this assessment it is the outcome of the assessment process forthe relevant Local Plans and strategies which is being considered in combination with the TfN strategy rather than the pre-mitigated effects of such. The conclusions of older Plan-level HRAs has been adopted with caution at the Stage 1 Screening level.

9.1.6. Recreational pressures were identified in all Local Plans as an issue for selected Habitats sites, in particular, the Breckland and Broadland SPAs, and the Broads SAC, and, alongside potential changes in air quality as a result of new road schemes and improvements, this factor will need to be considered in lower tier HRAs where access to the Habitats sites is improved. In this respect, the Norfolk Authorities are progressing a Norfolk-wide study, the Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy (GIRAMS). This strategy is expected to set out a

proposed approach to tariff contributions from new development. This study will also provide useful evidence/guidance for a future Suitable Alternative Natural Greenspace (SANGs) strategy which will be a key feature at AA (Stage 2) HRA work at project level.

9.1.7. A lower tier HRA is in preparation for the proposed Norwich Western Link Road.

9.1.8. Local transport plans for the surrounding three County planning authorities have been reviewed; all propose similar policies to the TfN strategy and LTP4 and all have published HRA information.

9.1.9. Each of the three HRAs also conclude no likely significant effects on Habitats sites following adoption of the County LTPs, and it is therefore reasonable to conclude that there will be no likely significant effects arising from the policies of the TfN strategy and overarching LTP4 in-combination with these other higher tier County LTPs.

9.1.10. It is important to note that both the TfN strategy and the LTP4 strategy HRAs have policies that could lead to new road schemes or improvement projects that could have LSE. In both cases, full determination is deferred to individual projects to assess. There is overlap between both strategies and whilst the current draft of the TfN strategy does not specifically list road schemes or improvements projects, the LTP4 strategy does, including schemes which are within the Norwich area, including the Norwich Western Link road. The potential for in-combination effects therefore cannot be discounted with emerging schemes across both Plans. It is recommended that effects from specific projects under both Plans are considered on a case by case basis with suitable ZoI to capture any arising effects at their own in-combination stage.

9.1.11. It is generally concluded therefore that no in-combination effects are likely between these Local Planpolicies and the TfN strategy and LTP4 policies in general. However, it is clear that at a road scheme or project level, lower tier HRAs will be necessary to address potential in-combination effects.

Plans, Policies and Programmes with the Potential for In-Combination EffectsRegional and Adjoining Counties Plans
England's Economic Heartland Transport Strategy
Status: The strategy was subject to formal consultation which closed on 6 October 2020

HRA findings: Screening undertaken, and it has not been possible to categorically demonstrate that the EEH Transport Strategy will not have any effects upon European sites and detailed Appropriate Assessment is considered necessary for schemes at a project-level to satisfy the requirements of the Habitats Regulations.
In-combination: Given the strategic nature of this screening assessment and the uncertainties surroundingthe timing and effects of other county/regional level plans and projects, it is not practicable at this stage to identify all the possible plans and projects that may act 'in-combination' or to consider the specific nature oflikely effects arising.

Suffolk County Council LTP3
Status: Adopted for years 2011 - 2031
HRA findings (2011): The HRA Screening Report determines that it is unlikely to have significant effects on the European Sitesconsidered either alone or in combination with other plans and policies identified.
In-combination: There are no likely in-combination effects of the Suffolk Local Transport Plan 3 with theNorfolk LTP4 Strategy.

Cambridgeshire and Peterborough Combined Authority LTP4
Status: This Local Transport Plan for Cambridgeshire and Peterborough 2019 – 2035 replaces the Interim Local Transport Plan, which was published in June 2017.
HRA findings (May 2019): This HRA screening considered that the proposed Cambridgeshire and Peterborough Combined Authority LTP4, either alone or in-combination, is not likely to have a significant effect on any European site or their associated features.
In-combination: There are no likely in-combination effects of the Cambridgeshire and Peterborough Combined Authority LTP4 with the Norfolk LTP4 Strategy.

Lincolnshire County Council LTP4
Status: This 4th Lincolnshire Local Transport Plan (LTP4) covers the 10-year period 2013/14 to 2022/23
HRA findings: The proposals included in the Lincolnshire LTP4 have been screened for their potential to have significant impacts on Habitats sites. The following effects arising from the LTP4 may give rise to potential impacts:
Changes in air quality through pollution; Increases in noise and light levels (as a result of vehicles, construction or new infrastructure); and
Changes in soil or water chemical composition (through road spray and construction activities.
"No significant impacts to Habitats sites will directly result from the implementation of the LTP4. However, based on the findings of the HRA screening Lincolnshire Local Transport Plan 4 process, it is possible that significant impacts could arise from some specific schemes or projects implemented in accordance with the LTP4. There is also potential for multiple plans to have in-combination effects with schemes implemented in accordance with the LTP4. Because of this uncertainty, the potential for schemes to affect Habitats sites included within the HRA should be considered again when carrying out further HRA work at the project level or when preparing more detailed lower tier plans."
In-combination: There are no likely in-combination effects of the Lincolnshire Local Transport Plan with the Norfolk LTP4 Strategy.

In-County Plans/Strategies

Norfolk Minerals and Waste Local Plan

Status: Adopted

HRA findings (July 2019): Following the review of the proposed policies within the Preferred Options consultation document of the M&WLP, there were no policies identified which could result in likely significant effects on a European designated site.

In-combination: There are no likely in-combination effects of the Norfolk Mineral and Waste Local Plan 2022-2036 with the Norfolk LTP4 Strategy.

Broads Authority Local Plan
Status: The Local Plan for the Broads was adopted by the Broads Authority on 17 May 2019
HRA findings: After public examination the final changes proposed by the Inspector and the Broads Authority led to the HRA concluding that there will be no likely significant effects on European sites as a result of the Local Plan for the Broads.
In-combination: There are no likely in-combination effects of Local Plan for the Broads with the Norfolk LTP4 Strategy, but lower tier or project level HRAs will be necessary and these will need to focus on recreation pressures as a key factor.

North Norfolk District Local Plan

Status: The Council undertook a major consultation exercise on its emerging First Draft Local Plan and a range of supporting documents between 7 May and 28 June 2019. The feedback from this consultation is currently being considered.

HRA findings: The initial screening of policies and allocations identified recreation pressure as a key theme for more detailed assessment at the appropriate assessment stage. The appropriate assessment has commencedbut there are further evidence gathering and assessment requirements for the next iteration of the HRA. The appropriate assessment is in its early stages and highlights the current work in place to develop a strategic recreation mitigation strategy, and progress will be reviewed to inform the next iteration.

In-combination: There are no likely in-combination effects of Local Plan for the Broads with the NorfolkLTP4 Strategy, but lower tier or project level HRAs will be necessary, and these will need to focus on recreation pressures as a key factor.

Broadland District, Norwich Borough and South Norfolk District Councils Local Plan (Greater Norwich Local Plan)

Status: Broadland District Council, Norwich City Council and South Norfolk Council are working together with Norfolk County Council to prepare the Greater Norwich Local Plan (GNLP). The Local Plan documentsfit into a hierarchy with broad, strategic policies at the top and more detailed policies interpreting the strategic approach at a district or smaller area level. For the Greater Norwich area (which includes South Norfolk), the adopted ***Joint Core Strategy for Broadland, Norwich and South Norfolk*** (JCS) is at the top of the hierarchy. The JCS was adopted inMarch 2011, with amendments adopted in January 2014.

HRA status:

It is ascertained that the Greater Norwich Local Plan Strategy v8.1 would have no adverse effect upon theintegrity of any European site acting alone, subject to the following outstanding matters:

- Satisfactory completion of the Green Infrastructure and Recreational Avoidance Mitigation Strategy (Section 5) to achieve a tariff-based payment taken from residential, and other relevant accommodation
- e.g. tourist accommodation, that will be used to fund a mixture of mitigation measures, most likely consisting of: soft and hard mitigation measures at the designated natural sites themselves to increasetheir resilience to greater visitor numbers; he provision of suitable alternative natural green space (SANGs), which would be large enough to meeta range of needs and sufficiently well publicised for effective mitigation;
- The current Broadland District Council Development Management DPD policy EN3 may be consideredas a precedent for housing growth in the emerging Greater Norwich Local Plan, although considerationwill need to be given to new evidence emerging as part of plan production;
- Implementation of a wider programme of Green Infrastructure Improvements in accordance with currentand emerging project plans so that residents of existing and proposed housing have an alternative to European sites for regular routine activities such as dog walking; and
- Satisfactory completion of the Water Cycle Study (Section 5).
- Clarification of Policy 6, Section 5, ‘Habitats Regulations Assessments will be required for small scale tourism accommodation within 1km, and for larger scale tourism accommodation within 10km, of a European site. Habitats Regulations Assessment will also be required for tourism, leisure, cultural andenvironmental activities which would utilise European sites’. (Section 10.2)
- It is recommended that road schemes, not allocated or promoted by the Greater Norwich Local Plan butmentioned in the plan, receive stronger recognition from the plan with respect

to protection of Europeansites.

In-combination: There are no likely in-combination effects of GNLP with the Norfolk LTP4 Strategy, but lower tier or project level HRAs will be necessary and these will need to focus on recreation pressures as akey factor.

King's Lynn and West Norfolk Local Plan
Status: The Borough Council's Local Plan currently consists of the two documents; the Core Strategy (CS) adopted in July 2011 and the Site Allocations and Development Management Polices Plan (SADMP)adopted in September 2016. As part of the adoption of the SADMP the borough council agreed to review both documents to create one single plan document that would look over the longer term to 2036.

Policy LP24 Habitats Regulations Assessment (HRA)

In relation to Habitats Regulations Assessment (HRA) monitoring and mitigation the Council has endorsed aMonitoring and Mitigation Strategy including:

1. *Project level HRA to establish affected areas (SPA, SAC, Ramsar sites) and a suite of measuresincluding all/some of:*
    a. *provision of an agreed package of habitat protection measures, to monitor recreational pressureresulting from the new allocations and, if necessary, mitigate adverse impacts before they reacha significant threshold, in order to avoid an adverse effect on the European sites identified in theHRA. This package of measures will require specialist design and assessment, but is anticipated to include provision of:*
        - *a monitoring programme, which will incorporate new and recommended further actions from the Norfolk visitor pressure study (2016) as well as undertaking any other monitoringnot covered by the County-wide study.*
        - *enhanced informal recreational provision on (or in close proximity to) the allocated site [Sustainable Accessible Natural Greenspace], to limit the likelihood of additional recreational pressure (particularly in relation to exercising dogs) on nearby relevant natureconservation sites. This provision will be likely to consist of an integrated combination of:*
            - *informal open space (over and above the Council's normal standards for play space);*
            - *landscaping, including landscape planting and maintenance;*
            - *a network of attractive pedestrian routes, and car access to these, which provide avariety of terrain, routes and links to the wider public footpath network.*
        - *contribution to enhanced management of nearby designated nature conservation sitesand/or alternative green space;*
        - *a programme of publicity to raise awareness of relevant environmental sensitivities and ofalternative recreational opportunities.*
    b. *Notwithstanding the above suite of measures the Borough Council will levy an interim Habitat Mitigation Payment of £50 per house to cover monitoring/small scale mitigation at the Europeansites.*

In-combination: There are no likely in-combination effects of GNLP with the Kings Lynn and West NorfolkLTP4 Strategy, but lower tier or project level HRAs will be necessary and these will need to focus on recreation pressures as a key factor.

Breckland Local Plan
Status: The Breckland Local Plan was adopted on 28 November 2019.
HRA findings: Measures to strengthen the Local Plan were recommended in the likely significant effects screening table, under each appropriate assessment theme, and in text revisions for environmental policies ENV02 and ENV03 (at Publication stage and again during Examination). The required measures that have now enabled a conclusion of no adverse effects on site integrity are comprehensive. All recommendations made within the HRA report have been fully incorporated into the Local Plan enabling a conclusion of compliance with the requirements of the legislation.[39]
Key impact and mitigation themes are:
Impacts of built development on Stone Curlew - Mitigation measures now well established and incorporatedinto the Local Plan through the Stone Curlew Buffer zones but are updated in light of new data.
Recreation disturbance to SPA birds - A measure not yet fully progressed from the Core Strategy HRA. Securing adequate recreation provision at new development, and working with partners to appropriately manage recreation, particularly at accessible forest sites. Commitment to be included in ENV 3.
Urbanisation effects on SAC and SPA habitats - A measure not yet fully progressed from the Core StrategyHRA. framework committed to within Policy ENV 3 for working with relevant partners to protect and restorethe most urban heath sites, with a requirement for developers to contribute to measures within the framework where development may lead to increased recreation use of urban heaths.
Additional measures in sensitive areas of focussed growth (Thetford, Swaffham, Mundford). - Informed by recent additional evidence gathering in conjunction with Norfolk LPAs. Policy ENV 3 to include requirementfor additional focussed measures at Thetford, Swaffham and Mundford.
Air quality and road improvements - Measures remain consistent with Core Strategy HRA – no road improvements promoted within 200m of Breckland SAC, and within 1500m of Breckland SPA. Air quality protection measures and monitoring needs should be reviewed in order to put in place better protective measures to prevent deterioration.
Water supply, water quality and wastewater discharge, flood risk - The WCS update provides some assurances of European site protection, but it is recognised that the Council needs to work with partners tofind sustainable solutions for Dereham. Additional policy strengthening is required. The Flood Risk Assessment update includes measures incorporated into policy, but policy wording needs to secure the fullsuite of recommendations.
In-combination: There are no likely in-combination effects of Local Plan for the Brecklands with the Norfolk LTP4 Strategy, but lower tier or project level HRAs will be necessary and these will need to focus on recreation pressures as a key factor.

Great Yarmouth Local Plan – Core Strategy
Status: Adopted on 21 December 2015 for years 2013 -2030 now in Review. The Final Draft Local Plan Part 2 was published for consultation between Friday 28 February and Friday 22 May 2020. The consultation was rerun between Monday 1 June and Monday 13 July 2020

HRA findings: An interim HRA has been prepared for the Draft Plan stage and awaits public consultation. The conclusion of no adverse effects on European site integrity is made having regard for the current implementation of theGreat Yarmouth Monitoring and Mitigation Strategy. The Draft Plan assessed for this HRA includes the Monitoring and Mitigation Strategy within the Local Plan LPP2 at Appendix 4, giving weight to its function aspart of the Great Yarmouth Local Plan, and additional certainty of strategy delivery. The strategy is in its initial stages of implementation, with developer contributions as outlined in the strategy document initially being collected from large applications.

In-combination: There are no likely in-combination effects **of the Great Yarmouth Local Plan** with the Norfolk LTP4 Strategy, but lower tier or project level HRAs will be necessary and these will need to focus onrecreation pressures as a key factor.

The Great Yarmouth Transport Strategy and Implementation Plan
Status: The Great Yarmouth Transport Strategy sets out the transport vision for Great Yarmouth, highlighting the challenges and opportunities along with the transport infrastructure that needs to be delivered within the short, medium and long-term to enable growth to come forward sustainably as well assupporting existing local communities. Adopted 2020.

HRA: No HRA information is available for this Strategy and Implementation Plan. A number of policies for infrastructure improvements are set out in the Strategy and Implementation Plan and these are largely urban-based schemes and unlikely to have adverse effects on Habitats sites. However, two schemes are listed which have potential for LSE on the Breydon Water SPA and SAC and the Southern North Sea SAC, the Third River Crossing and the A47 Acle Straight Duelling. The former has been subject to HRA (see relevant projects below), but the latter will likely require HRA screening when details of the scheme are known. In the latter case a lower tier HRA will be required.

In-combination: It is uncertain whether there will be in-combination effects on Habitats sites as result of the A47 Acle Straight Duelling Scheme, but this will be assessed at the lower tier HRA work for this scheme.
The Third River Crossing proposals were not considered likely to give rise to significant effects on Habitats sites.

The King's Lynn Transport Strategy and Implementation Plan
Status: The strategy aims to support sustainable economic growth in King's Lynn by improving travel choices for all, whilst also bettering air quality and protecting historic areas. Adopted 2020.

HRA: No HRA information is available for this Strategy and Implementation Plan. A number of policies forinfrastructure improvements are set out in the Strategy and Implementation Plan and these are largely urban-based schemes and unlikely to have adverse effects on Habitats sites. However, two schemes arelisted which have potential for LSE on the Roydon Common Bog SAC: the A149 Duelling and the West Winch Road Improvements schemes. Both will require consideration for HRA at project or lower tier level,but it is unlikely to progress beyond Stage 1 pre-screening given the distance to the SAC and the scale ofthe proposed works.

In-combination: It is uncertain whether there will be in-combination effects on Habitats sites as result of thetwo schemes listed above, but this will be assessed at the lower tier HRA work for these schemes if pre- screening recommends further assessment and it is assumed that avoidance/mitigation can be secured at this level.

Relevant projects

Great Yarmouth Third River Crossing
Status: The Third River Crossing is a Nationally Significant Infrastructure Project and is currently under construction.

HRA findings: The Scheme was not considered to have the potential to give rise to other adverse effectson any European site, alone or in combination with other schemes.

In-combination: In combination with other developments, the Scheme proposals are not considered likelyto give rise to significant effects on European Sites, their qualifying resources or conservation

objectives. The assessment that has been undertaken has considered the construction and operation phases. There are no effects that would be such that, in combination with those from other developments, would cause such effects to arise during any phase of the Scheme.

10. Summary And Recommendations

10.1.1. The TfN strategy proposes an approach for addressing current and future transport issues in the in and around Norwich and in this document it has been subject to HRA screening and AA for potential LSE and adverse effects on the integrity of Habitats sites at a strategic level.

10.1.2. A number of TfN strategy policies have been screened-out due to their nugatory or beneficial effects on the integrity of Habitats sites, but other policies were screened-in for their further consideration at AA Stage 2. These policies, in particular Policy 1, indicate the emergence of new transport infrastructure or improvement schemes, for which limited information is currently available.

10.1.3. Given the possibility of LSE associated with the screened-in policies, further detailed assessment through Appropriate Assessment is considered necessary at a project-level and on a case by case basis to satisfy the requirements of the Habitats Regulations. It is considered however, that, due to the inherent flexibility of lower-tier plans or projects at an early stage, avoidance and mitigation measures can be effectively used to address any LSE on Habitats sites and the competent authority can conclude at this plan level that the TfN strategy is not likely to have an effect on the integrity of the Habitats sites.

10.1.4. The following over-arching statement is recommended for incorporation within the accompanying supplementary guidance or directly within the TfN strategy:

> *Any new transport or improvement scheme that would be likely to have a significant effect on a Habitats Site either alone or in combination with other plans or projects, will be subject to assessment under part 6 of the Habitats Regulations at project application stage.*

10.1.5. No further HRA work is considered necessary for the TfN strategy to be adopted as a strategic document by Norfolk County Council subject to the conditions noted above relating to the requirement for project-level HRA be undertaken for any road schemes and other infrastructure improvements emerging from relevant policies.

10.1.6. Statutory consultation forms an important element of the HRA exercise and the response from Natural England will be incorporated into final version of this HRA report.

10.1.7. The HRA concludes that the TfN strategy is compliant with the Habitats Regulations and will not result in adverse effects on the integrity of Habitats sites, either alone or in-combination with other plans or projects. For transport schemes or associated development coming forward through implementation of TfN strategy policies, mitigation measures should set out specific project-level HRA and regulatory requirements to ensure the integrity of relevant Habitats sites are protected in the long term.

11. References

- APIS (2011). Air Pollution Information System Database, available at www.apis.ac.uk. Accessed2nd July 2021.
- Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583. As amended by the Paris Protocol, 3 December 1982, and Regina Amendments, 28 May 1987.
- Council of the European Union (1992). Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. Available online: http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:31992L0043. Accessed 2nd July 2021.
- Council of the European Union (2009). Directive 2009/147/EC of the European Parliament and ofthe Council of 30 November 2009 on the conservation of wild birds. Available online: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:ev0024. Accessed 2nd July 2021.
- Department for Communities and Local Government (DCLG) 2012. National Planning Policy Framework.
- DETR (1998). European Marine Sites in England & Wales: A guide to the Conservation (Natural Habitats &c.) Regulations 1994 and to the Preparation and Application of Management Schemes. Department of the Environment, Transport and the Regions: UK.
- European Commission (2000). Managing Natura 2000 Sites, the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Available: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en. pdf. Accessed 2nd July 2021.
- European Communities (2007). Guidance document on Article 6 (4) of the 'Habitats Directive' 92/43/EEC; Available: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en. pdf Accessed: accessed 2nd July 2021.
- Her Majesty's Stationary Office (2017). The Conservation of Habitats and Species Regulations 2017/490.
- HMSO (2007). The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007, SI 2007/1842.
- Joint Nature Conservation Committee (JNCC) (2016). SAC and SPA Standard Data Forms and Ramsar Information Sheets. Available online: http://www.jncc.gov.uk/. Accessed 2nd July 2019.
- Natural England (2018). Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. Available online: http://publications.naturalengland.org.uk/publication/4720542048845824 Accessed 15th July 2021.
- Tyldesley, D. and Associates (2015). Habitats Regulations Appraisal of Plans - Guidance for plan-making bodies in Scotland. Available online: https://www.nature.scot/habitats-regulations-appraisal-plans-guidance-plan-making-bodies-scotland-jan-2015

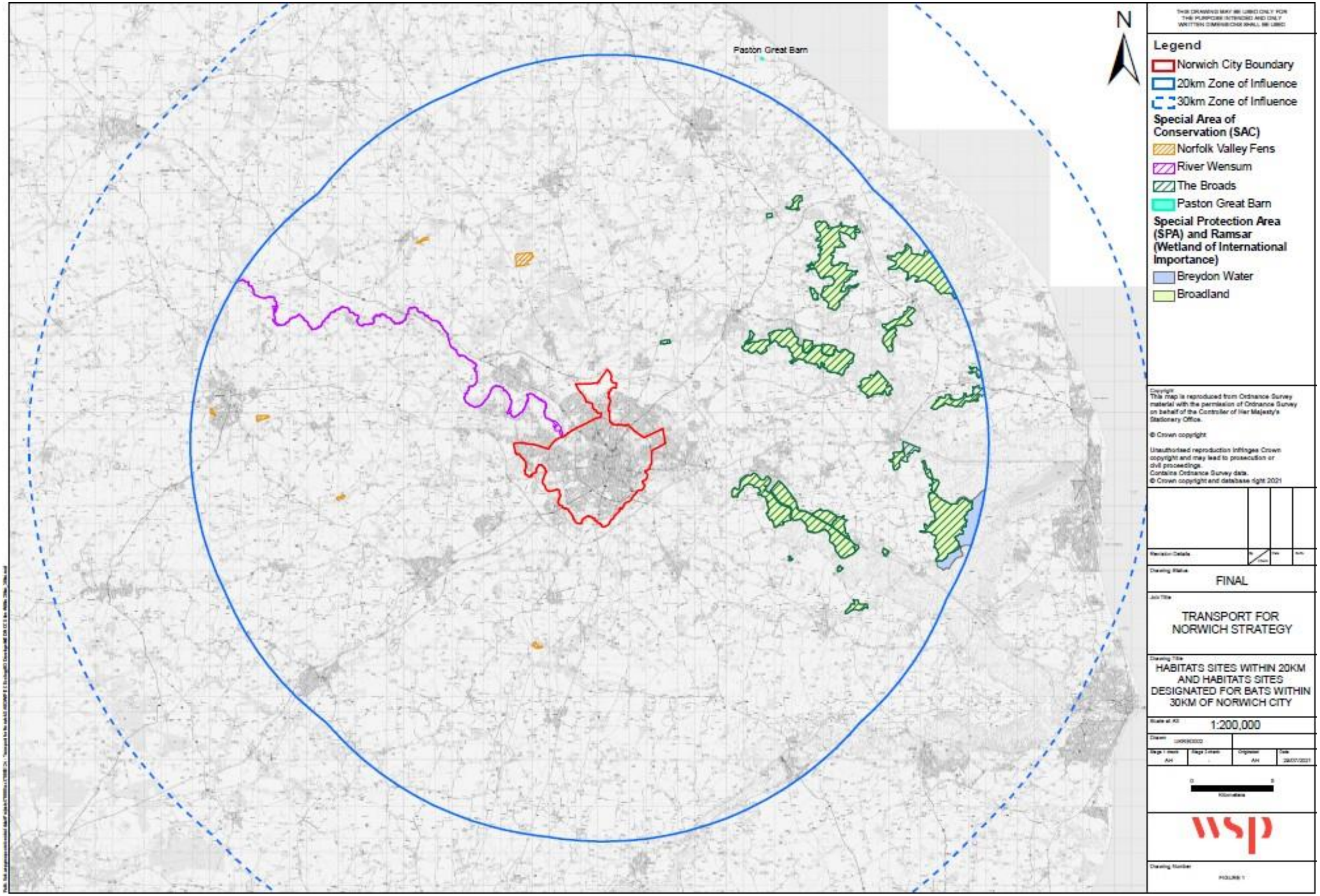

Figure 1 - Locations of Habitats sites within the specified ZoI

Appendix A

RELEVANT CJEU RULINGS

The Court of Justice of the European Union (CJEU) rulings

A number of CJEU rulings are relevant to the HRA screening and AA exercises and these are noted below.

The Wealden Judgement

The Wealden Judgement, handed down in March 2017, has introduced additional complexities into the assessment process in relation to in-combination and cumulative effects.

Prior to this Judgement, air quality impacts on Habitats sites were only considered alongside roads where the traffic growth associated with the individual Plan or Project being assessed exceeded specified screening criteria. These criteria were typically based on changes in vehicle movements and taken from the Design Manual for Roads and Bridges (DMRB, HA207/07), namely: increases of 1000 vehicles per day or 200 Heavy Goods Vehicles per day (as Annual Average Daily Traffic (AADT)).

The Wealden Judgement means that every single plan or project which, alone, is predicted to give rise to any increase in traffic or other air emission (however small) must be subjected to an in-combination assessment with other plans or projects (which would include those plans or projects with a similar tiny impact). However, the judgement did not rule out the application of thresholds in principal and this approach is normally taken as the basis of the assessment.

The judgement has led to a more detailed analysis of three key questions to discern which plans and project are those where a detailed “in combination” assessment is required in relation to changes in air quality:

1. Is your plan or project putting emissions into the air?
2. If so, are those emissions at a level where they could actually be measured / perceived?
3. If so, is there a realistic (rather than hypothetical) risk that those emissions, alone, will have an adverse effect on the ecology of a SAC / SPA?

A fuller justification will be required when applying the threshold approach.

People over Wind (The Sweetman Case)

The ECJ decision in the matter of People Over Wind and Sweetman v Coillte Teoranta (C-323/17) (hereafter referred to as the ‘Sweetman Case’), states that:

> *‘Article 6(3) .....must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an Appropriate Assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site.’*

In the new judgement the ECJ concluded that mitigation measures could not be considered as part of the project, and thus that the screening stage of HRA should not take account of them. This will undoubtedly be tested further in the courts in coming months and years, but the key issue is whether the mitigation measures proposed can genuinely be considered as part of the project, in that they would happen in any case, irrespective of the Habitats Site. If not, then they should be considered mitigation measures, and considered at the Appropriate Assessment stage of HRA.

This is an emerging issue for local authorities and means that, because of the potential for 'in-combination effects and the fact that HRA Screening should not take into account measures targeted at mitigating effects on Habitats sites. Therefore, it is becoming increasingly commonplace for local authorities to conduct an Appropriate Assessment of all project, plans and planning applications (i.e. these are often no longer screened out, by way of an HRA Screening as has been the practise to date).

ECJ Ruling in the Netherlands nitrogen and agriculture cases c-293/17 and c-294/17

The final Court Judgement in relation to these two cases was handed down on the 7th November 2018. The ruling is still being reviewed by industry professionals and Natural England is yet to issue its Position Statement on the ruling. The judgement relates to the assessment of agricultural activities under the Habitats Regulations, but has potential implications for the assessment of changes in nitrogen (N) deposition in relation to air quality (as the air quality calculations draw upon N deposition rates from APIS and guidance within the DMRB which assumes a 2% reduction in N deposition year on year).

Of particular relevance to the assessment of air quality effects on Habitats sites, the Court of Justice of the European Union ruled that:

> *"An 'appropriate assessment' may only take into account the existence of Article 6(1) 'conservation measures', or Article 6(2) 'preventive measures', or specific measures adopted for a conservation programme, or 'autonomous' measures not in the programme, if the expected benefits of those measures are certain at the time of the assessment.*

The Ruling makes clear that certainty and a thorough and in-depth examination of the scientific soundness is required that that there is no reasonable scientific doubt as to the absence of adverse effects of each plan or project on the integrity of the site concerned.

Kokott Ruling

In the Opinion of Advocate General Kokott in Case C-6/04 Commission v UK [2005] ECR I-9017 at paragraph 49 she noted that an assessment of plans cannot by definition take into account all effects because:

> *"Many details are regularly not settled until the time of the final permission" and "[i]t would also hardly be proper to require a greater level of detail in preceding plans or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan. This assessment is to be updated with increasing specificity in subsequent stages of the procedure".*

Appendix B

HABITATS SITES INFORMATION

Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet

Site Name: Breydon WaterSPA
Site Size: 1,203
Reasons for Designation: The site qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain population of five species listed on Annex 1, in any season.
Over Winter:

- Bewick's Swan Cygnus *columbianus bewickii* - 391 individuals representing 5.6% of GB population;
- Pied Avocet *Recurvirostra avosetta* - 33 individuals representing 3.3% of GB population; and
- Golden Plover *Pluvialis apricaria* 5,040 individuals representing 2.0% of GB population.

Passage:

- Ruff *Philomachus pugnax* 54 individuals representing 7.7% of GB population.

Breeding:

- Common Tern Sterna hirundo 155 pairs.
- The site qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by more than 1% of the biogeographicpopulation of a regularly occurring migratory species (other than those listed on Annex 1), in any season.

In Winter:

- Lapwing *Vanellus vanellus* 24,940 individuals representing 1.2% of Europe's breeding population.
- The site qualifies under article 4.2 of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterfowl in anyseason.
- 43,225 waterfowl (5-year peak mean 1991/2 – 1995/6).

Site Name: Breydon WaterSPA
Site Size: 1,203
Reasons for Designation: Assemblages of international importance: Species with peak counts in winter:
68175 waterfowl (5-year peak mean 1998/99-2002/2003).
Ramsar Criterion 6 - Qualifying Species/populations (as identified at designation):
Species with peak counts in winter:

- Tundra swan *Cygnus columbianus bewickii* - 171 individuals, representing an average of 2.1% of GB population; and
- Northern lapwing *Vanellus vanellus* - 20142 individuals, representing an average of 1.3% of the GB population.
- Species/populations identified subsequent to designation for possible future consideration under criterion 6.Species with peak counts in winter:
- Pink-footed goose *Anser brachyrhynchus* - 5816 individuals representing an average of 2.4% of the population;
- Eurasian wigeon *Anas penelope* - 15624 individuals, representing an average of 1% of the population;
- Northern shoveler *Anas clypeata* - 478 individuals, representing an average of 1.1% of the population;

- European golden plover *Pluvialis apricaria apricaria* - 10656 individuals, representing an average of 1.1% of the population;and
- Black-tailed godwit *Limosa limosa islandica* -1100 individuals, representing an average of 3.1% of the population.

Site Name: Broadland SPA
Site Size: 5,502
Reasons for Designation: The site qualifies under article 4.1 of the Directive (79/409/EEC) as it is used regularly by 1% or more of the Great Britain population of six species listed on Annex 1, in any season.
Breeding:

- Bittern *Botaurus stellaris* - 2-3 booming males representing 10 – 15% of GB population.In winter:
- Bewick's Swan *Cygnus columbianus bewickii* – 495 individuals representing 7.1% of GB wintering population;
- Whooper Swan Cygnus *cygnus cygnus* - 121 individuals representing at least 2% of GB population;
- Marsh Harrier *Circus aeruginosus* - 16 breeding females representing 16% of GB breeding population;
- Hen Harrier *Circus cyaneus* - 22 individuals representing 3% of GB population (3% GB); and
- Ruff *Philomachus pugnax* - 96 individuals representing 6.4% GB population.

It is used regularly by 1 % or more of the biogeographic population of a regularly occurring non- Annex 1 migratory speciesany season:

- Wigeon *Anas penelope* 10,071 individuals representing 1.34% NW Europe's population;
- Gadwall *Anas strepera* 240 individuals representing 0.96% NW Europe's population;
- and Shoveler *Anas clypeata* 231 individuals representing <1% NW Europe population.

Site Name: BroadlandRamsar
Site Size: 5,48
Reasons for Designation: Ramsar criterion 2. The site supports a number of rare species and habitats within the biogeographical zone context, including the followingHabitats Directive Annex I features:

- H7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* Calcium-rich fen dominated bygreat fen sedge (saw sedge); and
- H7230 Alkaline fens Calcium-rich springwater-fed fens;
- H91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) Alderwoodland on floodplains, a

- and the Annex II species:
- S1016 *Vertigo moulinsiana* Desmoulin`s whorl snail;
- S1355 *Lutra lutra* Otter; and S1903 *Liparis loeselii* Fen orchid.

Ramsar criterion 6 – species/populations occurring at levels of international importance.Qualifying

Species/populations (as identified at designation):

Species with peak counts in winter:

- Tundra swan *Cygnus columbianus bewickii* - 196 individuals, representing an average of 2.4% of the GB population;
- Eurasian wigeon *Anas penelope*, (NW Europe) - 6769 individuals, representing an average of 1.6% of the GB population;
- Gadwall *Anas strepera strepera* (NW Europe) 545 individuals, representing an average of 3.1% of the GB population; and
- Northern shoveler *Anas clypeat* (NW & C Europe) - 247 individuals representing an average of 1.6% of the GB population.
- Species/populations identified subsequent to designation for possible future consideration under criterion 6.Species with peak counts in winter:
- Pink-footed goose Anser brachyrhynchus.

(Greenland, Iceland/UK) - 4263 individuals, representing an average of 1.7% of the population:

- Greylag goose *Anser anser anser* (Iceland/UK, Ireland) - 1007 individuals, representing an average of 1.1% of the population.

Site Name: Norfolk ValleyFens SAC
Site Size: 617
Reasons for Designation: Annex I habitats that are a primary reason for selection of this site:

- 7230 Alkaline fens.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

- 4010 Northern Atlantic wet heaths with *Erica tetralix;*
- 4030 European dry heaths;
- 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites);

- 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*);
- 7210 Calcareous fens with Cladium mariscus and species of the *Caricion davallianae* (* Priority feature); and
- 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae*) (* Priority feature).

Annex II species that are a primary reason for selection of this site:

- 1014 Narrow-mouthed whorl snail *Vertigo angustior*; and
- 1016 Desmoulin's whorl snail *Vertigo moulinsiana.*

Site Name: Paston GreatBarn SAC
Site Size: <1
Reasons for Designation: Annex II species that are a primary reason for selection of this site:
1308 Barbastelle Barbastella barbastellus.

Site Name: River WensumSAC
Site Size: 307
Reasons for Designation:
Annex I habitats that are a primary reason for selection of this site:

- 3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation.

Annex II species that are a primary reason for selection of this site:

- 1092 White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes.

Annex II species present as a qualifying feature, but not a primary reason for site selection:

- 1016 Desmoulin's whorl snail Vertigo moulinsiana;
- 1096 Brook lamprey Lampetra planeri; and
- 1163 Bullhead Cottus gobio.

Site Name: The BroadsSAC
Site Size: 5865
Reasons for Designation: Annex I habitats that are a primary reason for selection of this site:

- 3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp;

- 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition;
- 7140 Transition mires and quaking bogs;
- 7210 Calcareous fens with *C. mariscus* and species of *C. davallianae* (*Priority feature);
- 7230 Alkaline fens; and
- 91E0 Alluvial woods with *A. glutinosa*, *F. excelsior* (*Priority feature).

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:
6410 Molinia meadows on calcareous, peat or clay-silt soil.

- Annex II species that are a primary reason for selection of this site:
- 1016 Desmoulin's whorl snail, *Vertigo moulinsiana*;
- 1903 Fen orchid, *Liparis loeselii*; and
- 4056 Little ram's-horn whirlpool snail, *Anisus vorticulus.*

Annex II species present as a qualifying feature, but not a primary reason for site selection:

- 1355 Otter Lutra lutra

Appendix C

APIS INFORMATION FOR SPAS

Site: Breydon Water

Species	Relevant Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Sterna hirundo (Northern/Eastern Europe -breeding) - Common tern (A193)	Supralittoral sediment (acidictype)	Coastal stable dune grasslands - acid type	8 to 10	16.4	12.5
Sterna hirundo (Northern/Eastern Europe -breeding) - Common tern (A193)	Supralittoral sediment (calcareous type)	Coastal stable dune grasslands - calcareous type	10 to 15	16.4	12.5
Sterna hirundo (Northern/Eastern Europe -breeding) - Common tern (A193)	Supralittoral sediment	Shifting coastaldunes	10 to 20	16.4	12.5
Sterna hirundo (Northern/Eastern Europe -breeding) - Common tern (A193)	Standing open water and canals	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken ata site-specific level.	9.7	9.4
Recurvirostra avosetta (Western Europe/Western Mediterranean - breeding) -Pied avocet (A132)	Littoral sediment	Pioneer, low-mid,mid-upper saltmarshes	20 to 30	16.4	12.5
Pluvialis apricaria [North- western Europe] - European golden plover	Littoral sediment	Pioneer, low-mid,mid-upper saltmarshes	20 to 30	16.4	12.5

(A140)					
Pluvialis apricaria [North- western Europe] - European golden plover (A140)	Neutral Grassland	Low and medium altitude hay meadows	20 to 30	16.4	12.5
Pluvialis apricaria [North- western Europe] - European golden plover (A140)	Improved grassland	None Given	Species' broad habitat not sensitive to eutrophication	16.4	12.5
Vanellus vanellus (Europe - breeding) - Northern lapwing (A142)	Littoral sediment	Pioneer, low-mid, mid-upper saltmarshes	20 to 30	16.4	12.5
Vanellus vanellus (Europe - breeding) - Northern lapwing (A142)	Arable and horticulture	N/A	Species' broad habitat not sensitive to eutrophication	16.4	12.5
Philomachus pugnax (Western Africa - wintering) -Ruff (A151)	Littoral sediment	Pioneer, low-mid, mid-upper saltmarshes	20 to 30	16.4	12.5
Philomachus pugnax (Western Africa - wintering) -Ruff (A151)	Neutral Grassland	Low and medium altitude hay meadows	20 to 30	16.4	12.5
Cygnus columbianus bewickii (Western Siberia/North- eastern & North-western Europe) - Tundra swan (A037)	Arable and horticulture	N/A	Species' broad habitat not sensitive to eutrophication	16.4	12.5
Cygnus columbianus bewickii (Western Siberia/North- eastern & North-western Europe) - Tundra swan (A037)	Improved grassland	N/A	Species' broad habitat not sensitive to eutrophication	16.4	12.5

Cygnus columbianus bewickii(Western Siberia/North- eastern & North-western Europe) - Tundra swan (A037)	Standing open water and canals	None Given	No comparable habitat withestablished critical load estimate available	9.7	9.4

Site: Broadland

Species	Relevant Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Circus cyaneus - Hen harrier (A082)	Dwarf shrub heath	Northern wet heath: Calluna-dominated wet heath (upland moorland)	10 to 20	18.1	11.7
Circus cyaneus - Hen harrier (A082)	Fen, marsh and swamp	Rich Fens	15 to 30	18.1	11.7
Circus cyaneus - Hen harrier (A082)	Littoral sediment	Pioneer, low-mid, mid-upper saltmarshes	20 to 30	18.1	11.7
Botaurus stellaris (Europe - breeding) - Great bittern (A021)	Fen, marsh and swamp	Rich Fens	15 to 30	18.1	11.7
Circus aeruginosus - Eurasian marsh harrier (A081)	Fen, marsh and swamp	Rich Fens	15 to 30	18.1	11.7
Anas penelope (Western Siberia/North-western/North-eastern Europe) - Eurasian wigeon (A050)	Littoral sediment	Pioneer, low-mid, mid-upper saltmarshes	20 to 30	18.1	11.7
Anas penelope (Western Siberia/North-western/North-eastern Europe) - Eurasian wigeon (A050)	Standing open water and canals	None Given	No comparable habitat with established critical load estimate available	11.6	9.1
Philomachus pugnax (Western Africa - wintering) - Ruff (A151)	Littoral sediment	Pioneer, low-mid, mid-upper saltmarshes	20 to 30	18.1	11.7

Philomachus pugnax (Western Africa - wintering) -Ruff (A151)	Neutral Grassland	Low and medium altitude hay meadows	20 to 30	18.1	11.7
Europe) - Tundra swan (A037)	Arable and horticulture	N/A	Species' broad habitat not sensitive to eutrophication	18.1	11.7
Europe) - Tundra swan (A037)	Improved grassland	N/A	Species' broad habitat not sensitive to eutrophication	18.1	11.7
Cygnus cygnus (Iceland/UK/Irelan d) - Whooper swan (A038)	Standing open water and canals	None Given	No comparable habitat withestablished critical load estimate available	11.6	9.1
Cygnus cygnus (Iceland/UK/Irelan d) - Whooper swan (A038)	Improved grassland	N/A	Species' broad habitat not sensitive to eutrophication	18.1	11.7
Anas strepera (North-western Europe) - Gadwall(A051)	Standing open water and canals	None Given	No comparable habitat withestablished critical load estimate available	11.6	9.1
Anas clypeata (North-western/Central Europe) -Northern shoveler (A056)	Standing open water and canals	None Given	No comparable habitat withestablished critical load estimate available	11.6	9.1

Appendix D

APIS INFORMATION FOR SACS

Site: Norfolk Fens Valley

Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Northern Atlantic wet heaths with *Erica tetralix* (H4010)	Northern wet heath: Erica tetralix dominated wet heath	10 to 20	27.7	13.8
European dry heaths (H4030)	Dry Heath	10 to 20	27.7	13.8
Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) (H6210)	Sub-atlantic semi-dry calcareous grassland	15 to 25	27.7	13.8
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) (H6410)	Moist and wet oligotrophic grasslands: Molinia caerulea meadows	15 to 25	27.7	13.8
Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* (H7210)	Rich Fens	15 to 30	27.7	13.8
Alkaline fens (H7230)	Rich Fens	15 to 30	27.7	13.8
Alluvial forests with *Alnus glutinosa* and Fraxinus excelsior (*Alno- Padion, Alnion incanae, Salicion albae*) (H91E0)	Not sensitive to N deposition	Not sensitive to N deposition	48.7	23.0
Vertigo angustior - Narrow- mouthed whorl snail (S1014)	Alpine and subalpine grasslands	5 to 10	27.7	13.8
Vertigo moulinsiana - Desmoulin`s whorl snail (S1016)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore	15.7	10.3

		decisions should be taken at a site-specific level.		

Site: Paston Great Barn

Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Barbastella barbastellus - Barbastelle (S1308)	Broadleaved deciduous woodland	10 to 20	24.4	24.4

Site: River Wensum SAC

Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation (H3260)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	21.2	10.4
Vertigo moulinsiana - Desmoulin`swhorl snail (S1016)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	21.2	10.4
Austropotamobius pallipes - White- clawed (or Atlantic stream) crayfish (S1092)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	21.2	10.4

Lampetra planeri - Brook lamprey(S1096)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems.These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	21.2	10.4

Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Cottus gobio - Bullhead (S1163)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	21.2	10.4

Site: The Broads

Habitat	Relevant Critical Load Habitat	Critical Load Range	N Deposition (kg N/ha/yr.) Maximum	N Deposition (kg N/ha/yr.) Minimum
Transition mires and quaking bogs (H7140)	Valley mires, poor fens and transition mires	10 to 15	18.1	11.7
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) (H6410)	Moist and wet oligotrophic grasslands: Molinia caerulea meadows	15 to 25	18.1	11.7
Calcareous fens with Cladium mariscus and species of the Caricion davallianae (H7210)	Rich fens	15 to 30	18.1	11.7
Alkaline fens (H7230)	Rich fens	15 to 30	18.1	11.7
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp (H3140)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-	11.6	9.1

		specific level.		
Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation (H3150)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	11.6	9.1
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) (H91E0)	Not sensitive to N deposition	Not sensitive to N deposition	31.7	19.9
Liparis loeselii - Fen orchid (S1903)	Moist to wet dune slacks	10 to 20	18.1	11.7
Vertigo moulinsiana - Desmoulin`s whorl snail (S1016)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	11.6	9.1
Lutra lutra - Otter (S1355)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	11.6	9.1
Anisus vorticulus - Ramshorn snail (S4056)	None Given	No Critical Load has been assigned to the EUNIS classes for meso/eutrophic systems. These systems are often P limited (or N/P co-limiting), therefore decisions should be taken at a site-specific level.	11.6	9.1

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