

Swale Local Plan

Draft Habitat Regulations Assessment

Swale Borough Council

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Quality information

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1. Introduction

1.1 Background

- 1.1.1 AECOM has been appointed by Swale Borough Council (SBC) to undertake a Habitats Regulations Assessment (HRA) of the emerging Regulation 19 Swale Local Plan (Hereafter referred to as SLP). The objective of an HRA is to identify any aspects of a Plan that may result in Likely Significant Effects (LSEs) and, where relevant, adverse effects on the integrity of Habitats (previously European) sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites), either in isolation or in combination with other plans and projects. The HRA also advises, as necessary, on appropriate policy mechanisms for delivering mitigation where adverse effects on integrity are identified. Under the Conservation of Habitats and Species Regulations 2017 (as amended), an Appropriate Assessment of impact pathways is required, where a plan or project is likely to have a Likely Significant Effect (LSE) upon a Habitats Site, either alone or in combination with other plans and projects.
- 1.1.2 The SLP will cover the years 2027 to 2042. The Plan will allocate land for housing, employment, mixed-use development and other purposes. For example, the SLP sets a target for the provision of 17,024 new dwellings and 73ha of employment floorspace over the Plan period. The Plan also sets out the policies and proposals to guide the future development in the borough during this period. At the same time, the document seeks to protect Swale's natural environment, including Habitats sites that are designated for internationally important habitats and species.

1.2 Legislation

- 1.2.1 The UK left the European Union (EU) on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). While the UK is no longer a member of the EU, a requirement for Habitats Regulations Assessment continues, as set out in the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019¹.
- 1.2.2 The HRA process applies the 'Precautionary Principle'² to Habitats sites. Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the Habitats site(s) in question. To ascertain whether or not site integrity will be affected, an Appropriate Assessment should be undertaken of the Plan or project in question. Figure 1 below sets out the legislative basis for Appropriate Assessment.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

"A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives... The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site".

Figure 1: The legislative basis for Appropriate Assessment

- 1.2.3 Plans and projects that are associated with potential adverse impacts on Habitats sites may still be permitted if there are no reasonable alternatives and there are Imperative Reasons of Overriding

¹ These don't replace the 2017 Regulations but are just another set of amendments.

² The Precautionary Principle, which is referenced in Article 191 of the Treaty on the Functioning of the European Union, has been defined by the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2005) as: *"When human activities may lead to morally unacceptable harm [to the environment] that is scientifically plausible but uncertain, actions shall be taken to avoid or diminish that harm. The judgement of plausibility should be grounded in scientific analysis".*

Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

- 1.2.4 Over time the phrase ‘Habitats Regulations Assessment’ (HRA) has come into wide currency to describe the overall process set out in the Regulations from screening through to IROPI. This has arisen in order to distinguish the process from the individual stage described in the law as an ‘Appropriate Assessment’.
- 1.2.5 In spring 2018 the ‘Sweetman’ European Court of Justice ruling³ clarified that ‘mitigation’ (i.e. measures that are specifically introduced to avoid or reduce a harmful effect on a Habitats site that would otherwise arise) should **not** be taken into account when forming a view on Likely Significant Effects. Mitigation should instead only be considered at the Appropriate Assessment stage. This HRA has been cognisant of that ruling.

1.3 Scope of the Project

- 1.3.1 There is no guidance that dictates the physical scope of an HRA of a Plan document in all circumstances. Therefore, in considering the physical scope of the assessment, we were guided primarily by the identified impact pathways (called the source-pathway-receptor model) rather than by arbitrary ‘zones’. Current guidance suggests that the following Habitats sites be included in the scope of assessment:
 - All sites within the boundary of Swale Borough; and,
 - Other sites shown to be linked to development within the authority boundary through a known impact ‘pathway’ (discussed below).
- 1.3.2 Briefly defined, impact pathways are routes by which the implementation of a policy within a Local Plan document can lead to an effect upon an internationally designated site. An example of this would be new residential development resulting in an increased population and thus increased recreational pressure, which could then affect Habitats sites by, for example, disturbance of wintering or breeding birds.
- 1.3.3 Guidance from the Ministry of Housing, Communities and Local Government (MHCLG) states that the HRA should be ‘*proportionate to the geographical scope of the [plan policy]*’ and that ‘*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*’ (MHCLG, 2006, p.6). More recently, the Court of Appeal ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be ‘achieved in practice’ to satisfy that the proposed development would have no adverse effect, then this would suffice. This ruling has since been applied to a planning permission (rather than a Core Strategy document). In this case the High Court ruled that for ‘*a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Reg 61 of the Habitats Regulations*’.

1.4 Quality Assurance

- 1.4.1 This report was undertaken in line with AECOM's Integrated Management System (IMS). Our IMS places great emphasis on professionalism, technical excellence, quality, environmental and Health and Safety management. All staff members are committed to establishing and maintaining our certification to the international standards BS EN ISO 9001:2008 and 14001:2004 and BS OHSAS 18001:2007. In addition, our IMS requires careful selection and monitoring of the performance of all sub-consultants and contractors.
- 1.4.2 All AECOM Ecologists working on this project are members (at the appropriate level) of the Chartered Institute of Ecology and Environmental Management (CIEEM) and follow their code of professional conduct (CIEEM, 2019).

³ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

2. Methodology

2.1 Introduction

- 2.1.1 The HRA has been carried out with reference to the general EC guidance on HRA⁴ and general guidance on HRA published by government in July 2019 and 2021⁵. AECOM has also been mindful of the implications of European case law in 2018, notably the Holohan ruling and the People over Wind ruling, both discussed below.
- 2.1.2 Figure 2 below outlines the stages of HRA. The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the Plan until no significant adverse effects remain.

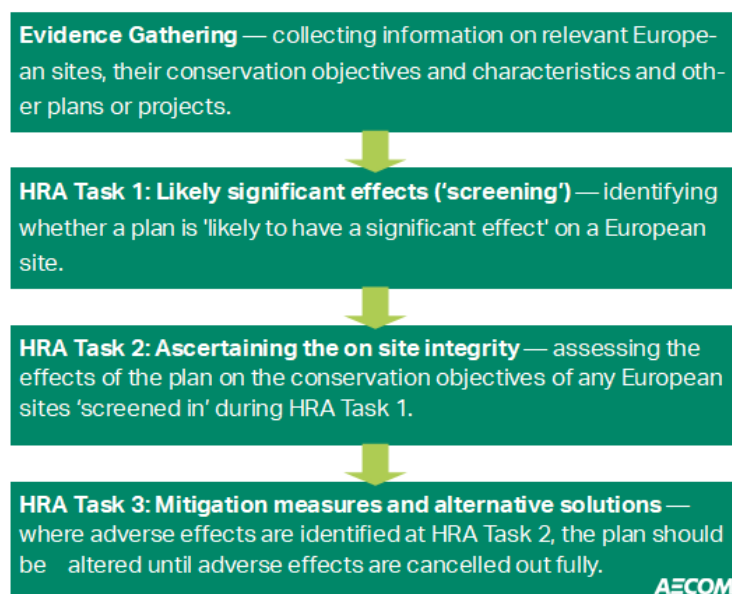


Figure 2: Four Stage Approach to Habitats Regulations Assessment.

2.2 Description of HRA Tasks

HRA Task 1 – Screening for Likely Significant Effects (LSEs)

- 2.2.1 Following evidence gathering, the first stage of any Habitats Regulations Assessment is the screening for Likely Significant Effects (LSEs), essentially a high-level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:
- “Is the project, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?”*
- 2.2.2 The objective is to filter out those Plans and projects that can, without any detailed appraisal, be concluded to be unlikely to result in any impacts upon Habitats sites, usually because there is no mechanism for a negative interaction.

⁴ European Commission (2021): Assessment of plans and projects significantly affecting Natura 2000 Sites: Methodological Guidance on the Provisions of Article 6(3) and 6(4) of the Habitats Directive.

⁵ <https://www.gov.uk/guidance/appropriate-assessment> and <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

HRA Task 2 – Appropriate Assessment (AA)

- 2.2.3 Where it is determined that a conclusion of ‘no Likely Significant Effects (LSEs)’ cannot be drawn, the analysis proceeds to the next stage of HRA known as Appropriate Assessment. Case law has clarified that ‘Appropriate Assessment’ is not a technical term. In other words, there are no particular technical analyses, or level of technical analysis, that are classified by law as belonging to Appropriate Assessment compared to the screening stage.
- 2.2.4 By virtue of the fact that it follows screening for LSEs, there is a clear implication that the analysis will be more detailed than undertaken at the previous stage. One of the key considerations during Appropriate Assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the Appropriate Assessment would take any policies or allocations that could not be dismissed following the high-level screening and assess the potential for an effect in more detail, with a view to concluding whether there would be a potential for an adverse effect on site integrity (in other words, disruption of the coherent structure and function of the Habitats site(s)). A decision by the European Court of Justice⁶ concluded that measures intended to avoid or reduce the harmful effects of a proposed Plan or project on a Habitats site may no longer be considered by competent authorities at the screening for LSEs stage of HRA. That ruling has been taken into account in producing this HRA.
- 2.2.5 Also, in 2018 the Holohan ruling⁷ was handed down by the European Court of Justice. Among other provisions, paragraph 39 of the ruling states that ‘*As regards other habitat types or species, which are present on the site, but for which that site has not been listed, and with respect to habitat types and species located outside that site, ... typical habitats or species must be included in the appropriate assessment, if they are necessary to the conservation of the habitat types and species listed for the protected area*’ [emphasis added]. Due account of this decision has been given in this HRA in relation to the Ashdown Forest SPA, which is designated for mobile ground-nesting birds (although it is to be noted that the qualifying species are not considered to be critically dependent on functionally linked habitats).

HRA Task 3 – Avoidance and Mitigation

- 2.2.6 Where necessary, measures are recommended for incorporation into the Plan in order to mitigate and / or avoid adverse effects on Habitats sites. There is considerable precedent concerning the level of detail that a Local Plan document needs to contain regarding mitigation for impact pathways on Habitats sites (e.g. regarding recreational pressure). The implication of this precedent is that it is not necessary for all measures to be fully developed prior to adoption of the Plan, but the Plan must provide an adequate policy framework within which these measures can be delivered.
- 2.2.7 When discussing mitigation for a Local Plan, one is concerned primarily with the policy framework to enable the delivery of such mitigation rather than the detail of the mitigation measures themselves since a Local Plan document is a high-level policy document.
- 2.2.8 In any Local Plan, there are numerous policies for which there is a limit to the degree of assessment that is possible at the Plan level. This is because either:
- The policy in question does not contain any specifics as to what will be delivered or where, and so cannot be assessed in detail at the Plan level. In these cases, the Appropriate Assessment focusses on precautionary mitigation that can be included in the plan to ensure that whatever proposals come forward will not result in adverse effects on integrity; or
 - The nature of potential impacts (e.g. visual and noise disturbance arising from construction or loss of functionally linked habitat) are related to how the development will be designed and constructed, and therefore cannot be assessed in detail at the plan level. In these instances, the Appropriate Assessment focusses on available mitigation measures, the extent to which such measures would be achievable and effective, and whether an adequate protective framework exists to ensure that the policy would not lead to an adverse effect on the integrity of any internationally designated sites.

⁶ People Over Wind and Sweetman v Coillte Teoranta (C-323/17)

⁷ Case C-461/17

- 2.2.9 There are several court rulings of relevance to the level of detail required in the HRA for a Local Plan. The Court of Appeal⁸ has ruled that providing the Council (competent authority) is duly satisfied that proposed mitigation could be 'achieved in practice' to satisfy that the proposed development would have no adverse effect, then this would suffice. This ruling has since been applied to planning permissions (rather than a Plan level document)⁹. In this case the High Court ruled that for 'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of Reg 61 of the Habitats Regulations'.
- 2.2.10 In these instances, the advice of Advocate-General Kokott¹⁰ is also worth considering. She commented that: 'It would ...hardly be proper to require a greater level of detail in preceding plans [rather than planning applications] 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**' [emphasis added].

2.3 Geographical Scope of the HRA

- 2.3.1 There are no standard criteria for determining the ultimate physical scope of an HRA. Rather, the source-pathway-receptor model should be used to determine whether there is any potential pathway connecting development to any Habitats sites. In the case of Swale Borough, it was determined that for the initial coarse screen the following Habitats Sites required consideration:

Table 1. Physical scope of the HRA

Habitats Site	Reason for Inclusion
The Swale SPA/Ramsar	Within the Swale Borough boundary
Medway Estuary & Marshes SPA/Ramsar	Within the Swale Borough boundary
Queendown Warren SAC	Within the Swale Borough boundary
Blean Complex SAC	Partially within the Swale Borough boundary
Outer Thames Estuary SPA	Immediately adjacent to the Swale Borough boundary
North Downs Woodlands SAC	Located 3.6km south west of the Swale Borough boundary

- 2.3.2 This was based upon a search of surrounding Habitats sites and based on the vulnerabilities of the interest features of the Habitats sites. All the above sites were subjected to the initial screening exercise. It should be noted that the presence of a conceivable pathway linking the Borough to a Habitats site does not mean that likely significant effects will occur.

2.4 The 'in combination' scope

- 2.4.1 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the Habitats site(s) in question. In practice, 'in combination assessment' is of greatest importance when the Local Plan would otherwise be screened out because the individual contribution is inconsequential. It is neither practical nor necessary to assess the 'in combination' effects of the Local Plan within the context of all other plans and projects within the region. The principal other plans and projects that we are considering are:

⁸No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

⁹High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

¹⁰ Opinion of Advocate General Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, paragraph 49 <http://curia.europa.eu/juris/document/document.jsf?docid=58359&doclang=EN>

- Southern Water – adopted Water Resources Management Plan, 2024
- Medway Local Plan 2003. It is noted that Medway is in the progress of updating its local plan and where relevant this has also been consulted.
- Canterbury Local Plan (to 2031), adopted 2017.
- Maidstone Borough Local Plan (to 2031), (adopted 2017)
- Gravesham Local Plan Core Strategy, Site Allocations and a Development Management Policies Document Regulation 18 (December 2020).
- Ashford Local Plan 2030, adopted February 2019.
- Kent Minerals and Waste Local Plan, adopted 2025.
- Kent Local Transport Plan (LTP5): Striking the Balance (2024-2037).
- Environment Agency and Defra - River Basin Management Plan Thames River Basin District, 2022.

2.4.2 It should be noted that, while the broad potential impacts of these other projects and plans has been considered, we have not carried out full HRA on each of these plans – we have however drawn upon existing HRAs that have been carried out for surrounding authorities and plans.

3. Habitats Sites

3.1 The Swale SPA and Ramsar Site

3.1.1 Reason for Designation

The **SPA** is designated for¹¹:

During the breeding season:

- Avocet *Recurvirostra avosetta*
- Marsh Harrier *Circus aeruginosus*
- Mediterranean Gull *Larus melanocephalus*

Over winter:

- Avocet *Recurvirostra avosetta*
- Bar-tailed Godwit *Limosa lapponica*
- Golden Plover *Pluvialis apricaria*
- Hen Harrier *Circus cyaneus*
- Black-tailed Godwit *Limosa limosa islandica*
- Grey Plover *Pluvialis squatarola*
- Knot *Calidris canutus*
- Pintail *Anas acuta*
- Redshank *Tringa totanus*
- Shoveler *Anas clypeata*
- Dark-bellied Brent goose *Branta bernicla bernicla*
- Dunlin *Calidris alpina alpina*

On passage:

- Ringed Plover *Charadrius hiaticula*

The SPA also qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl (Over winter, the area regularly supports 65,390 individual waterfowl (5 year peak mean 1991/2 - 1995/6))

The **Ramsar** site is designated for¹²:

The Ramsar information sheet states that The Swale comprises, "A complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates".

¹¹ <http://publications.naturalengland.org.uk/file/4517156041523200> [accessed 05/06/2026]

¹² <https://jncc.gov.uk/jncc-assets/RIS/UK11071.pdf> [accessed 05/06/2026]

Ramsar criterion 2: The site supports nationally scarce plants and at least seven British Red data book invertebrates.

Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 77501 waterfowl (5 year peak mean 1998/99-2002/2003).

Ramsar criterion 6: – Species/populations occurring at levels of international importance.

Species with peak counts in spring/autumn:

- Common redshank *Tringa totanus totanus*

Species with peak counts in winter:

- Dark-bellied brent goose *Branta bernicla bernicla*
- Grey plover *Pluvialis squatarola*, E Atlantic/W Africa -wintering

Species/populations identified subsequent to designation for possible future consideration under criterion 6:

Species with peak counts in spring/autumn:

- Ringed plover *Charadrius hiaticula*, Europe/Northwest Africa

Species with peak counts in winter:

- Eurasian wigeon *Anas penelope*, NW Europe
- Northern pintail *Anas acuta*, NW Europe
- Northern shoveler *Anas clypeata*, NW & C Europe
- Black-tailed godwit *Limosa limosa islandica*, Iceland/W Europe

3.1.2 Conservation Objectives of the SPA¹³

“With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.”

3.1.3 Historic Trends and Current Pressures¹⁴

- Coastal squeeze
- Public access/ disturbance
- Invasive species

¹³ <http://publications.naturalengland.org.uk/file/4666133965963264> [accessed 05/06/2026]

¹⁴ <http://publications.naturalengland.org.uk/file/5760073666134016> [accessed 05/06/2026]

- Changes in species distribution
- Fisheries: commercial marine and estuarine
- Vehicles: illicit
- Air pollution: risk of atmospheric nitrogen deposition

3.2 Medway Estuary and Marshes SPA and Ramsar Site

3.2.1 Reason for Designation

The site is designated as an **SPA**¹⁵ for supporting bird populations of European importance for the breeding species of:

- Avocet *Recurvirostra avosetta*
- Little tern *Sterna albifrons*
- Common tern *Sterna hirundo*

The site is designated as an **SPA** for supporting bird populations of European importance for the over-wintering species of:

- Tundra swan *Cygnus columbianus bewickii*
- Avocet *Recurvirostra avosetta*

The **Ramsar** site is designated for¹⁶:

The Ramsar information sheet states that Medway Estuary and Marshes site comprises, “A complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates”.

Ramsar criterion 2: The site supports nationally scarce plants and at least seven British Red data book invertebrates.

Ramsar criterion 5: Assemblages of international importance: Species with peak counts in winter: 47637 waterfowl (5 year peak mean 1998/99-2002/2003).

Ramsar criterion 6: – Species/populations occurring at levels of international importance. The site has bird species occurring in internationally important numbers: Redshank, grey plover (spring/autumn), dark-bellied brent goose, shelduck, pintail, red knot, ringed plover, dunlin (winter)

3.2.2 Conservation Objectives of the SPA¹⁷

“With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the ‘Qualifying Features’ listed below), and subject to natural change;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features

¹⁵ <http://publications.naturalengland.org.uk/file/5039453273849856> [accessed 05/06/2026]

¹⁶ <https://rsis.ramsar.org/RISapp/files/RISrep/GB645RIS.pdf> [accessed 05/06/2026]

¹⁷ <http://publications.naturalengland.org.uk/publication/6672791487119360> [accessed 05/06/2026]

- *The supporting processes on which the habitats of the qualifying features rely*
- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.”*

3.2.3 Historic Trends and Current Pressures¹⁸

- Coastal squeeze
- Public access/ disturbance
- Invasive species
- Changes in species distribution
- Fisheries: commercial marine and estuarine
- Vehicles: illicit
- Air pollution: risk of atmospheric nitrogen deposition

3.3 The Outer Thames Estuary SPA

3.3.1 Reason for Designation

The Marine SPA is designated for its¹⁹:

- Red-throated diver *Gavia stellate* (non-breeding)
- Common tern *Sterna hirundo* (breeding)
- Little tern *Sternula albifrons* (breeding)

3.3.2 Conservation Objectives²⁰

“The site’s conservation objectives apply to the site and the individual species and/or assemblage of species for which the site has been classified (the “Qualifying features” listed above).

The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- *the extent and distribution of the habitats of the qualifying features*
- *the structure and function of the habitats of the qualifying features*
- *the supporting processes on which the habitats of the qualifying features rely*
- *the populations of each of the qualifying features*
- *the distribution of qualifying features within the site”*

3.3.3 Historic Trends and Current Pressures

- Low levels of winter disturbance (from both noise and visual presence);

¹⁸ <http://publications.naturalengland.org.uk/file/5760073666134016> [accessed 05/06/2026]

¹⁹ <https://jncc.gov.uk/jncc-assets/SPA-N2K/UK9020309.pdf> [accessed 05/06/2026]

²⁰ <https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9020309&SiteName=outer%20thames&countyCode=&responsiblePerson=&SeaArea=&IFCAAArea=&HasCA=1&NumMarineSeasonality=3&SiteNameDisplay=Outer%20Thames%20Estuary%20SPA#lco> [accessed 05/06/2026]

- Low risk of direct birdstrike from wind turbines;
- Good water quality; and
- Limited dredging.

3.4 Queendown Warren SAC

3.4.1 Reason for Designation²¹

The site is designated as a SAC for its:

- Dry grasslands and scrublands on chalk or limestone, including important orchid sites.

3.4.2 Conservation Objectives²²

“With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed below), and subject to natural change;

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*
- *The structure and function (including typical species) of qualifying natural habitats, and*
- *The supporting processes on which qualifying natural habitats rely”*

3.4.3 Historic Trends and Current Pressures²³

- Species decline
- Habitat fragmentation
- Air quality: risk of atmospheric nitrogen deposition

3.5 The Blean Complex SAC

3.5.1 Reason for Designation²⁴

The site is designated as a SAC for its:

- Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*. (Oak-hornbeam forests)

3.5.2 Conservation Objectives²⁵

“With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed below), and subject to natural change;

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*

²¹ <https://jncc.gov.uk/jncc-assets/SAC-N2K/UK0012833.pdf> [accessed 05/06/2026]

²² <http://publications.naturalengland.org.uk/file/4860443613200384> [accessed 05/06/2026]

<http://publications.naturalengland.org.uk/file/4724631642832896> [accessed 05/06/2026]

²³ <http://publications.naturalengland.org.uk/publication/4943746697265152> [accessed 05/06/2026]

²⁴ <http://publications.naturalengland.org.uk/file/6743128623022080> [accessed 05/06/2026]

²⁵ <http://publications.naturalengland.org.uk/file/6568792784371712> [accessed 05/06/2026]

- *The structure and function (including typical species) of qualifying natural habitats, and*
- *The supporting processes on which qualifying natural habitats rely”*

3.5.3 Historic Trends and Current Pressures²⁶

- Air quality: risk of atmospheric nitrogen deposition

3.6 North Downs Woodlands SAC

3.6.1 Reason for Designation²⁷

The site is designated as a SAC for its:

- *Taxus baccata* woods of the British Isles. (Yew-dominated woodland)*
- *Asperulo-Fagetum* beech forests. (Beech forests on neutral to rich soils)
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*). (Dry grasslands and scrublands on chalk or limestone)

3.6.2 Conservation Objectives²⁸

“With regard to the SAC and the natural habitats and/or species for which the site has been designated (the ‘Qualifying Features’ listed below), and subject to natural change;

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*
- *The structure and function (including typical species) of qualifying natural habitats, and*
- *The supporting processes on which qualifying natural habitats rely”*

3.6.3 Historic Trends and Current Pressures²⁹

- Public access/ disturbance
- Forestry and woodland management
- Invasive species
- Air pollution: impact of atmospheric nitrogen deposition

²⁶ <http://publications.naturalengland.org.uk/file/4985875433783296> [accessed 05/06/2026]

²⁷ <http://publications.naturalengland.org.uk/file/6520020842577920> [accessed 05/06/2026]

²⁸ <http://publications.naturalengland.org.uk/file/5579173532008448> [accessed 05/06/2026]

<http://publications.naturalengland.org.uk/file/5280120969625600> [accessed 05/06/2026]

²⁹ <http://publications.naturalengland.org.uk/publication/6363401429188608> [accessed 05/06/2026]

4. Identified Impact Pathways

4.1 Atmospheric Pollution (Nitrogen Deposition)

- 4.1.1 The main emitted pollutants of concern for Habitats sites are oxides of nitrogen (NO_x), ammonia (NH₃) and sulphur dioxide (SO₂) and are summarised in Table 2. Ammonia can have a directly toxic effect upon vegetation, particularly at close distances to the source such as near road verges³⁰. NO_x can also be toxic at very high concentrations (far above the annual average Critical Level). Elevated NO_x and NH₃ also increases the total N deposition to soils, potentially leading to deleterious knock-on effects in resident ecosystems depending on sensitivity, extent of area affected and other factors. Increases in nitrogen deposition from the atmosphere can, if sufficiently great, enhance soil fertility and lead to eutrophication. This can have adverse effects on the community composition and quality of semi-natural, nitrogen-limited terrestrial and aquatic habitats^{31 32}.

Table 2: Main sources and effects of air pollutants on habitats and species³³

Pollutant	Source	Effects on habitats and species
Sulphur Dioxide (SO ₂)	The main sources of SO₂ are electricity generation, and industrial and domestic fuel combustion. Total SO₂ emissions in the UK have decreased substantially since the 1980's and our concentrations are now generally very low. Another origin of sulphur dioxide is the shipping industry and high atmospheric concentrations of SO₂ have been documented in busy ports. In future years shipping is likely to become one of the most important contributors to SO₂ emissions in the UK.	Wet and dry deposition of SO₂ acidifies soils and freshwater and may alter the composition of plant and animal communities. The magnitude of effects depends on levels of deposition, the buffering capacity of soils and the sensitivity of impacted species. However, SO₂ background levels have fallen considerably since the 1970's and are presently not regarded a threat to plant communities. For example, decreases in Sulphur dioxide concentrations have been linked to returning lichen species and improved tree health in London.
Acid deposition	Leads to acidification of soils and freshwater via atmospheric deposition of SO₂, NO_x, ammonia and hydrochloric acid. Acid deposition from rain has declined by 85% in the last 20 years, which most contributed to lower sulphate levels. Although future trends in S emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, increased N emissions may cancel out any gains produced by reduced S levels.	Gaseous precursors (e.g. SO₂) can cause direct damage to sensitive vegetation, such as lichen, upon deposition. This can affect habitats and species through both wet (acid rain) and dry deposition. The effects of acidification include the lowering of soil pH, leaf chlorosis, reduced decomposition rates, and compromised reproduction in birds / plants. Not all sites are equally susceptible to acidification. This varies depending on soil type, bed rock geology, weathering rate and buffering capacity. For example, sites with an underlying geology of granite, gneiss and quartz rich rocks tend to be more susceptible.

³⁰ http://www.apis.ac.uk/overview/pollutants/overview_NOx.htm.

³¹ Wolseley, P. A.; James, P. W.; Theobald, M. R.; Sutton, M. A. (2006). Detecting changes in epiphytic lichen communities at sites affected by atmospheric ammonia from agricultural sources. *Lichenologist* **38**: 161-176.

³² Dijk, N. (2011). Dry deposition of ammonia gas drives species change faster than wet deposition of ammonium ions: evidence from a long-term field manipulation. *Global Change Biology* **17**: 3589-3607.

³³ Information summarised from the Air Pollution Information System (<http://www.apis.ac.uk/>).

Pollutant	Source	Effects on habitats and species
Ammonia (NH ₃)	Ammonia is a reactive, soluble alkaline gas released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but ammonia concentrations are directly related to the distribution of livestock. It is also emitted from the catalytic converters of certain vehicles, particularly petrol cars. Ammonia reacts with acid pollutants such as the products of SO₂ and NO_x emissions to produce fine ammonium (NH₄⁺) - containing aerosol. Due to its significantly longer lifetime, NH₄⁺ may be transferred much longer distances (and can therefore be a significant trans-boundary issue). While ammonia deposition may be estimated from its atmospheric concentration, the deposition rates are strongly influenced by meteorology and ecosystem type.	The negative effect of NH₄⁺ may occur via direct toxicity when uptake exceeds detoxification capacity and via N accumulation. Its main adverse effect is eutrophication, leading to species assemblages that are dominated by fast-growing and tall species. For example, a shift in dominance from heath species (lichens, mosses) to grasses is often seen. As emissions mostly occur at ground level in the rural environment and NH₃ is rapidly deposited, some of the most acute problems of NH₃ deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides (NO _x)	Nitrogen oxides are mostly produced in combustion processes. Half of NO_x emissions in the UK derive from motor vehicles, one quarter from power stations and the rest from other industrial and domestic combustion processes. Nitrogen oxides, particularly from traffic, have been consistently falling for many years, notwithstanding an increase in traffic on the network, due to improved vehicle emissions technology.	Direct toxicity effects of gaseous nitrates are likely to be important in areas close to the source (e.g. roadside verges). A critical level of NO_x for all vegetation types has been set to 30 ug/m³. Deposition of nitrogen compounds (nitrates (NO₃), nitrogen dioxide (NO₂) and nitric acid (HNO₃)) contributes to the total nitrogen deposition and may lead to both soil and freshwater acidification. In addition, NO_x contributes to the eutrophication of soils and water, altering the species composition of plant communities at the expense of sensitive species.
Nitrogen deposition	The pollutants that contribute to the total nitrogen deposition derive mainly from oxidized (e.g. NO_x) or reduced (e.g. NH₃) nitrogen emissions (described separately above). While oxidized nitrogen mainly originates from major conurbations or highways, reduced nitrogen mostly derives from farming practices. However, at a local scale, road traffic makes a significant contribution. The N pollutants together are a large contributor to acidification (see above).	All plants require nitrogen compounds to grow, but too much overall N is regarded as the major driver of biodiversity change globally. Species-rich plant communities with high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication. This is because many semi-natural plants cannot assimilate the surplus N as well as many graminoid (grass) species. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O ₃)	A secondary pollutant generated by photochemical reactions involving NO_x, volatile organic compounds (VOCs) and sunlight. These precursors are mainly released by the combustion of fossil fuels (as discussed above). Increasing anthropogenic emissions of ozone precursors in the UK have led to an increased number of days when ozone levels rise above 40ppb	Concentrations of O₃ above 40 ppb can be toxic, to both humans and wildlife, and can affect buildings. High O₃ concentrations are widely documented to cause damage to vegetation, including visible leaf damage, reduction in floral biomass, reduction in crop yield (e.g. cereal grains, tomato, potato), reduction in the number of flowers, decrease in

Pollutant	Source	Effects on habitats and species
	('episodes' or 'smog'). Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	forest production and altered species composition in semi-natural plant communities.

4.1.2 Emissions of NO_x and, at a local scale, ammonia can reasonably be expected to increase as a result of the Plan, primarily due to an increase in the volume of commuter traffic associated with housing growth.

4.1.3 The World Health Organisation has the following critical thresholds for plant communities: The critical NO_x concentration (critical threshold) for the protection of vegetation is 30 µg m⁻³, that for ammonia is 3 µg m⁻³ (1 µg m⁻³ for lower plants) and the threshold for sulphur dioxide is 20 µg m⁻³. Additionally, ecological studies have determined 'Critical Loads'³⁴ of atmospheric nitrogen deposition (that is, NO_x combined with ammonia NH₃).

4.1.4 According to the Department for Transport's Transport Analysis Guidance, beyond 200m, the contribution of vehicle emissions from the roads to local pollution levels is insignificant (Figure 3 and reference³⁵). Additionally, guidance from Natural England³⁶ indicates that 200m is an appropriate screening distance for the impacts of air quality as a result of road traffic emissions. Therefore, this distance has been used throughout this HRA to determine whether Likely Significant Effects (LSEs) on sensitive Habitats sites may arise due to implementation of the Plan.

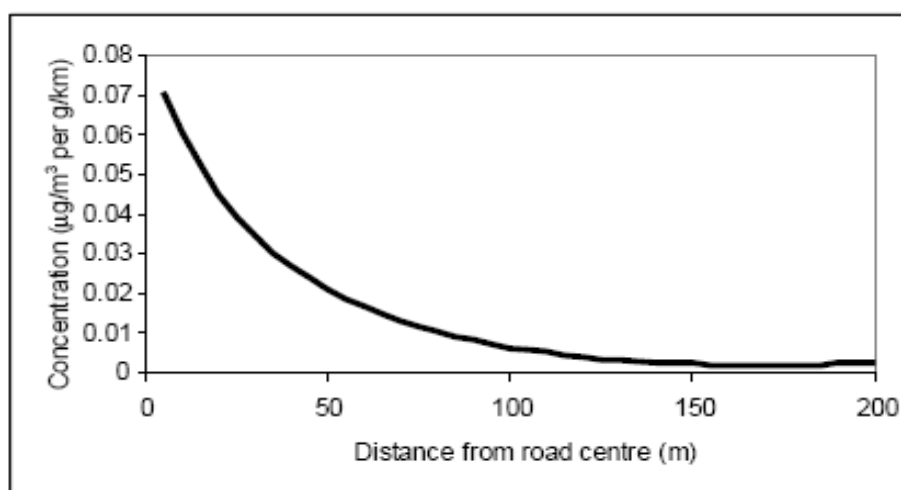


Figure 3: Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT³⁷)

4.1.5 The following Habitats sites within 10km of the Swale Borough boundary are sensitive to atmospheric nitrogen deposition, primarily due to the presence of nutrient-limited habitats and / or species (the sites in **bold** are taken forward into the following HRA chapters), and lie within 200m of relevant roads:

- **The Swale SPA/Ramsar**
- **Medway Estuary & Marshes SPA/Ramsar**
- **Queendown Warren SAC**
- **Blean Complex SAC**

³⁴ The critical load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur.

³⁵ Available at: <http://www.dft.gov.uk/webtag/documents/expert/unit3.3.3.php#013> [Accessed on the 06/01/2026]

³⁶ Available at: <https://publications.naturalengland.org.uk/publication/4720542048845824> [Accessed on the 17/04/2026]

³⁷ Available at: <https://webarchive.nationalarchives.gov.uk/ukgwa/20140715150031/http://www.dft.gov.uk/ha/standards/dmr/vol11/section3/ha20707.pdf> [Accessed on the 06/01/2026]

- **North Downs Woodlands SAC**

4.2 Recreational Pressure

- 4.2.1 There is concern over the cumulative impacts of recreation on key nature conservation sites in the UK, as most sites must fulfill conservation objectives while also providing recreational opportunity. Various research reports have provided compelling links between changes in housing and access levels³⁸, and impacts on Habitats protected sites^{39 40}. This applies to any habitat, but recreational pressure from housing growth is of particular significance for Habitats sites designated for their bird interest. Different Habitats sites are subject to different types of recreational pressures and have different vulnerabilities. Studies across a range of species have shown that the effects from recreation can be complex. HRAs of planning documents tend to focus on recreational sources of disturbance as a result of new residents.

Trampling Damage, Nutrient Enrichment and Wildfires

- 4.2.2 Most terrestrial habitats (especially heathland, woodland and dune systems) can be affected by trampling and other mechanical damage, which dislodges individual plants, leads to soil compaction and erosion. The following studies have assessed the impact of trampling associated with different recreational activities in different habitats:
- Wilson & Seney⁴¹ examined the degree of track erosion caused by hikers, motorcyclists, horse riders and cyclists in 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.
 - Cole et al⁴² conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each trampled between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphology was found to explain more variation in response than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. The cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
 - Cole⁴³ conducted a follow-up study (across four vegetation types) in which shoe type (trainers or walking boots) and trampling weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier trampers caused a greater reduction in vegetation height than lighter trampers, but there was no differential impact on vegetation cover.

³⁸ Weitowitz D.C., Panter C., Hoskin R. & Liley D. (2019). The effect of urban development on visitor numbers to nearby protected nature conservation sites. *Journal of Urban Ecology* 5. <https://doi.org/10.1093/jue/juz019>

³⁹ Liley D, Clarke R.T., Mallord J.W., Bullock J.M. (2006a). The effect of urban development and human disturbance on the distribution and abundance of nightjars on the Thames Basin and Dorset Heaths. Natural England / Footprint Ecology.

⁴⁰ Liley D., Clarke R.T., Underhill-Day J., Tyldesley D.T. (2006b). Evidence to support the appropriate Assessment of development plans and projects in south-east Dorset. Footprint Ecology / Dorset County Council.

⁴¹ Wilson, J.P. & J.P. Seney. (1994). Erosional impact of hikers, horses, motorcycles and off-road bicycles on mountain trails in Montana. *Mountain Research and Development* 14:77-88

⁴² Cole, D.N. (1995a). Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. *Journal of Applied Ecology* 32: 203-214

Cole, D.N. (1995b). Experimental trampling of vegetation. II. Predictors of resistance and resilience. *Journal of Applied Ecology* 32: 215-224

⁴³ Cole, D.N. (1995c). Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.

- Cole & Spildie⁴⁴ experimentally compared the effects of off-track trampling by hikers and horse riders (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse trampling was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance but recovered rapidly. Generally, it was shown that higher trampling intensities caused more disturbance.
 - In heathland sites, trampling damage can affect the value of a site to wildlife. For example, heavy use of sandy tracks loosens and continuously disturbs sand particles, reducing the habitat's suitability for invertebrates⁴⁵. Species that burrow into flat surfaces such as the centres of paths, are likely to be particularly vulnerable, as the loose sediment can no longer maintain their burrow. In some instances, nature conservation bodies and local authorities resort to hardening paths to prevent further erosion. However, this is concomitant with the loss of habitat used by wildlife, such as sand lizards and burrowing invertebrates.
- 4.2.3 A major concern for nutrient-poor terrestrial habitats (e.g. heathlands, sand dunes, bogs and fens) is nutrient enrichment associated with dog fouling (addressed in various reviews, e.g. footnote 46). It is estimated that dogs will defecate within 10 minutes of starting a walk and therefore most nutrient enrichment arising from dog faeces will occur within 400m of a site entrance. In contrast, dogs will urinate at frequent intervals during a walk, resulting in a more spread out distribution of urine. For example, in Burnham Beeches National Nature Reserve it is estimated that 30,000 litres of urine and 60 tonnes of dog faeces are deposited annually⁴⁷. While there is limited information on the chemical constituents of dog faeces, nitrogen is one of the main components⁴⁸. Nutrient availability is the major determinant of plant community composition and the effect of dog defecation in sensitive habitats is comparable to a high-level application of fertiliser, potentially resulting in a shift towards plant communities that are more typical of improved grasslands.

Bird Disturbance

- 4.2.4 Human activity can affect birds either directly (e.g. by eliciting flight responses) or indirectly (e.g. by damaging habitat or reducing bird fitness in less obvious ways such as through inducing stress responses). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to much subtler behavioural (e.g. alterations in feeding behaviour, avoidance of certain areas and use of sub optimal areas etc.) and physiological changes (e.g. an increase in heart rate). While such changes are less noticeable, they might result in major population-level changes by altering the balance between immigration / birth and emigration / death⁴⁹.
- 4.2.5 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and time spent responding to disturbance is time that is not spent feeding⁵⁰. Disturbance therefore increases energetic expenditure while reducing energetic intake, which can adversely affect the 'condition' and ultimately survival of birds. Additionally, displacement of birds from one feeding site to another can increase the pressure on the resources available within alternative foraging sites, which must sustain a greater number of birds⁵¹. Moreover, the higher proportion of time a breeding bird spends away from its nest, the more likely it is that eggs will cool and the more vulnerable they, or any nestlings, are to predators. Recreational effects on ground-nesting birds are

⁴⁴ Cole, D.N., Spildie, D.R. (1998). Hiker, horse and llama trampling effects on native vegetation in Montana, USA. *Journal of Environmental Management* **53**: 61-71

⁴⁵ Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

⁴⁶ Taylor K., Anderson P., Taylor R.P., Longden K. & Fisher P. (2005). Dogs, access and nature conservation. English Nature Research Report, Peterborough.

⁴⁷ Barnard A. (2003). Getting the facts – Dog walking and visitor number surveys at Burnham Beeches and their implications for the management process. *Countryside Recreation* **11**:16-19.

⁴⁸ Taylor K., Anderson P., Liley D. & Underhill-Day J.C. (2006). Promoting positive access management to sites of nature conservation value: A guide to good practice. English Nature / Countryside Agency, Peterborough and Cheltenham.

⁴⁹ Riley, J. (2003). Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

⁵⁰ Riddington, R. *et al.* (1996). The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* **43**:269-279.

⁵¹ Gill, J.A., Sutherland, W.J. & Norris, K. (1998). The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* **12**: 67-72.

particularly severe, with many studies concluding that urban sites support lower densities of key species, such as stone curlew and nightjar^{52 53}.

- 4.2.6 Several factors (e.g. seasonality, type of recreational activity) may have pronounced impacts on the nature of bird disturbance. Disturbance in winter may be more impactful because food shortages make birds more vulnerable at this time of the year. In contrast, this may be counterbalanced by fewer recreational users in the winter months and lower overall sensitivity of birds outside the breeding season. Evidence in the literature suggests that the magnitude of disturbance clearly differs between different types of recreational activities. For example, dog walking leads to a significantly higher reduction in bird diversity and abundance compared to hiking⁵⁴. Scientific evidence also suggests that key disturbance parameters, such as areas of influence and flush distance, are significantly greater for dog walkers than hikers⁵⁵. Furthermore, differences in on-site route lengths and usage patterns likely imply that key spatial and temporal parameters (such as the area of a site potentially impacted and the frequency of disturbance) will also differ between recreational activities. This suggests that activity type is a factor that ought to be taken into account in HRAs.

Bird Disturbance Study

- 4.2.7 A study was undertaken in 2010/2011 by Footprint Ecology⁵⁶, who looked at bird disturbance in North Kent. The study focused on recreational disturbance to wintering waterfowl on intertidal habitats and focused on part of the North Kent shoreline, stretching between Gravesend and Whitstable; encompassing three SPAs: the Thames Estuary and Marshes SPA, the Medway Estuary and Marshes SPA and the Swale SPA. The key findings of the study are as follows:
- 4.2.8 From 1,400 events (records of visitors in the bird survey areas) occurring within 200m of the birds, 3,248 species specific observations were noted of which:
- 74% resulted in no response.
 - 13% resulted in a major flight.
 - 5% resulted in a short flight.
 - 5% resulted in a short walk.
 - 3% resulted in an alert.
- 4.2.9 Dog walking accounted for 55% of all major flight observations with a further 15% attributed to walkers without dogs. After controlling for distance, major flights were more likely to occur when activities took place on the intertidal zone (compared to events on the water or events on the shore), when dogs were present, and the probability of major flight increased with the number of dogs present within a group.
- 4.2.10 There were significant differences between species with curlew *Numenius arquata* the species with the highest probability of major flight and teal and black-tailed godwit *Limosa limosa* the lowest.
- 4.2.11 Tide state was also significant with major flights more likely at high tide, after controlling for distance. There was also a significant interaction between distance and tide, indicating that the way in which birds responded varied according to tide.

⁵² Clarke R.T., Liley D., Sharp J.M., Green R.E. (2013). Building development and roads: Implications for the distribution of stone curlews across the Brecks. *PLOS ONE*. <https://doi:10.1371/journal.pone.0072984>.

⁵³ Liley D. & Clarke R.T. (2003). The impact of urban development and human disturbance on the numbers of nightjar *Caprimulgus europaeus* on heathlands in Dorset, England. *Biological Conservation* **114**: 219-230.

⁵⁴ Banks P.B., Bryant J.Y. (2007). Four-legged friend or foe? Dog walking displaces native birds from natural areas. *Biology Letters* **3**: 14pp.

⁵⁵ Miller S.G., Knight R.L., Miller C.K. (2001). Wildlife responses to pedestrians and dogs. *Wildlife Society Bulletin* **29**: 124-132.

⁵⁶ D. Liley & H. Fearnley (Footprint Ecology), 2011. Bird Disturbance Study North Kent.

North Kent Visitor Survey

- 4.2.12 A visitor survey was undertaken at the same time as the aforementioned bird survey by Footprint Ecology⁵⁷. The key findings of the survey are as follows:
- 4.2.13 542 groups of visitors were interviewed representing information from 930 people with 502 dogs.
- 65% (345) interviewed groups were accompanied by at least one dog.
 - 96% (521) interviewed groups were local residents who made their visit from home.
 - 70% of visitors who arrive by foot made their visits either daily or most days (in comparison to 31% who arrive by car).
 - 63% of visitors travelled to their visit location by car or van, 34% of visitors arrived by foot, 3% arrived by bicycle and 2% by public transport.
 - 50% of visitors who arrived by car lived within 4.2km of their visit location.
 - 23% of visitors stated they walked off the paths and onto the mudflats or the open beach. Of the 23% of visitors whose routes took them onto the mudflats 65% were accompanied by at least one dog.

Summary

- 4.2.14 Several Habitats sites in Swale Borough and adjoining authorities are designated for habitats and species that are sensitive to recreational pressure. The increase in residential development allocated in the SLP would lead to an increase in the local population and demand for access to outdoor spaces. The HRA process needs to adequately assess potential recreational pressure effects of the Plan on these Habitats sites.
- 4.2.15 Overall, the following Habitats sites within 10km of the Swale Borough boundary are sensitive to increased recreational access, due to the allocation of residential development in the SLP (the sites in **bold** are taken forward into the following HRA chapters):
- **The Swale SPA/Ramsar**
 - **Medway Estuary and Marshes SPA/Ramsar**

4.3 Water Quantity, Level and Flow

- 4.3.1 The unique nature of wetlands combines shallow water, high levels of nutrients and high primary productivity. These conditions are ideal for the growth of organisms at the basal level of food webs, which sustain a wide range of birds, mammals, fish and amphibians. Overwintering and migrating wetland bird species are particularly reliant on these food sources, as they need to build up enough nutritional reserves to sustain their long migration routes.
- 4.3.2 Wetland habitats rely on hydrological connections with other surface waters, such as rivers, streams and lakes. A constant supply of water is fundamental to maintaining the ecological integrity of sites. However, while the natural fluctuation of water levels within narrow limits is desirable, excess or too little water supply might cause the water level to be outside of the required range of qualifying birds, invertebrate or plant species. This might lead to the loss of the structure and functioning of wetland habitats. There are two mechanisms through which urban development might negatively affect the water level in Habitats Sites:
- The supply of new housing with potable water will require increased abstraction of water from surface water and groundwater bodies. Depending on the level of water stress in the geographic region, this may reduce the water levels in Habitats Sites sharing the same catchment.
 - The proliferation of impermeable surfaces in urban areas increases the volume and speed of surface water runoff. As traditional drainage systems often cannot cope with the volume of

⁵⁷ Fearnley, H. & Liley, D. (2011). North Kent Visitor Survey Results. Footprint Ecology.

stormwater, sewer overflows are designed to discharge excess water directly into watercourses. Often this pluvial flooding results in downstream inundation of watercourses and the potential flooding of wetland habitats.

- 4.3.3 The SLP could result in changes to the water quantity, level and flow in the catchment of several Habitats sites, if it required additional abstractions from sources that are hydrologically connected to these sites. This may alter the water level within the designated sites themselves with potential cascading effects on qualifying species or habitats. Overall, the following Habitats sites are considered to be sensitive to changes in water quantity, level and flow (**sites in bold are taken forward to the following chapters of the HRA**):

- **The Swale SPA/Ramsar**
- **Medway Estuary & Marshes SPA/Ramsar**

4.4 Water Quality

- 4.4.1 Water quality is an important determinant of the nature and condition of qualifying habitats and species in Habitats sites. Declining water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life and have additional detrimental effects (even at lower levels), such as increased vulnerability to disease and changes in wildlife behaviour.
- Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication, deoxygenates water further, exacerbating the ongoing oxygen depletion. In the marine environment, nitrogen is the main growth-limiting plant nutrient and so eutrophication is primarily associated with discharges containing bioavailable nitrogen.
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.

- 4.4.2 The main risk associated with the SLP is an increase in the discharge of treated sewage effluent from Wastewater Treatment Works (WwTWs) serving the borough. This may increase nutrient concentrations (phosphorus is the main limiting nutrient in freshwater habitats) in Habitats sites that are hydrologically connected to waterbodies receiving sewage effluent. Within Swale there are Waste Water Treatment Works at Faversham, Teynham, Sittingbourne, Eastchurch and Queenborough and immediately outside the borough at Motney Hill.

- 4.4.3 The Local Plan assessed in this HRA provides for development in the area served by Southern Water, responsible for the public water supply and wastewater treatment in large areas of south England

- 4.4.4 Overall, the following Habitats sites are potentially sensitive to negative changes in water quality (**sites in bold are taken forward to the following chapters of the HRA**):

- **The Swale SPA/Ramsar**
- **Medway Estuary & Marshes SPA/Ramsar**

4.5 Visual and Noise Disturbance from Construction Works

- 4.5.1 Development schemes can result in the disturbance of qualifying SPA / Ramsar bird species in European sites or functionally linked habitats through several mechanisms. Noise and visual disturbance arising from construction activities may result in behavioural changes (e.g. flight from the nest, cessation of foraging) in birds. Furthermore, post-construction disturbance from site usage, road traffic and operational lighting might also arise. Three of the most important factors determining the magnitude of disturbance appear to be species sensitivity, proximity of the disturbance source and

- timing / duration of the disturbance. Generally, the most disturbing visual and auditory stimuli are likely to involve irregular, infrequent, unpredictable loud noise events, movements or vibrations. Birds are least likely to be disturbed by activities that involve regular, predictable and quiet patterns of sound or movement. The further any activity is from the birds, the less likely it is to result in disturbance.
- 4.5.2 An increasing amount of research on visual and noise disturbance of waterfowl from construction (and other activities) is now available. Both visual and noise stimuli may elicit disturbance responses, potentially affecting the fitness and survival of waterfowl and waders. Noise is a complex disturbance parameter requiring the consideration of multiple parameters, including the fact that it is not described on a linear scale, its nonadditive effect and the source-receptor distance. A high level of noise disturbance constitutes a sudden noise event of over 60dB or prolonged noise of over 72dB. Bird responses to high noise levels include major flight or the cessation of feeding, both of which might affect the survival of birds if other stressors are present (e.g. cold weather, food scarcity).
- 4.5.3 Generally, research has shown that above noise levels of 84 dB waterfowl show a flight response, while at levels below 55dB there is no effect on their behaviour⁵⁸. These two thresholds are therefore considered useful as defining two extremes. The same authors have advised that regular noise levels should be below 70 dB at the bird, as birds will habituate to noise levels below this level⁵⁹. Generally, noise is attenuated by 6 dB with every doubling of distance from the source. Impact piling, the noisiest construction process of approx. 110 dB at 0.67m from source, will therefore reduce to 67-68dB by 100m away from the source. The loudest construction noise should therefore have fallen to below disturbing levels by 100m, and certainly by 200m, away from the source even without mitigation. Note that this is a rule of thumb and does not obviate the need for application-level noise modelling. However, comparison with baseline noise levels will also be important in any assessment rather than purely using comparison with the 70 dB metric.
- 4.5.4 Visual disturbance is generally considered to have a higher impact than noise disturbance as, in most instances, visual stimuli will elicit a disturbance response at much greater distances than noise⁶⁰. For example, a flight response is triggered in most species when they are approached to within 150m across a mudflat. Visual disturbance can be exacerbated by workers operating equipment outside machinery, undertaking sudden movements and using large machinery. Several species are particularly sensitive to visual disturbance⁶¹, including curlew (taking flight at 275m), redshank (at 250m), shelduck (at 199m) and bar-tailed godwit (at 163m). Overall, specific regard should be given to assemblage composition when identifying threshold levels for both visual and noise disturbance.
- 4.5.5 Disturbance can also result post-construction, although substantial changes in traffic flow are generally needed for significant noise disturbance to arise from roads. For example, a 25% increase in road traffic (e.g. through a road scheme) will result in only a 1dB(A) increase at the roadside, with a 100% increase needed to result in a 3dB(A) increase – the lowest increase in noise that is thought to be even perceivable by humans and birds. In contrast, the introduction of operational lighting of schemes into areas that are not currently lit can result in disturbance of animal species within European sites or those that rely on functionally linked habitats.
- 4.5.6 It is noted that visual and noise disturbance is relevant not only to designated sites themselves, but also to habitat that is functionally linked to such sites. Because qualifying species depend on linked habitats for foraging and roosting (see earlier impact pathway), any visual and noise disturbance might impair the species' ability to use such land appropriately.
- 4.5.7 Overall, the following Habitats sites are sensitive to negative changes as a result of visual and noise disturbance from construction works (**sites in bold are taken forward to the following chapters of the HRA**):
- **The Swale SPA/Ramsar**
 - **Medway Estuary & Marshes SPA/Ramsar**

⁵⁸ Cutts N & Allan J. 1999. Avifaunal Disturbance Assessment. Flood Defence Works: Saltend. Report to Environment Agency).

⁵⁹ Cutts, N., Phelps, A. and Burdon, D. 2009. Construction and waterfowl: Defining Sensitivity, Response, Impacts and Guidance. Report to Humber INCA, Institute of Estuarine and Coastal Studies, University of Hull.

⁶⁰ Research undertaken by the Institute of Estuarine & Coastal Studies, University of Hull. 2013. Available at: <http://bailey.persona-pi.com/Public-Inquiries/M4%20-%20Revised/11.3.67.pdf> [Accessed on the 01/12/2020]

⁶¹ Ibid. Response distances to visual stimuli are given in the Estuarine & Coastal Studies report.

- **The Outer Thames Estuary SPA**

4.6 Coastal Squeeze

- 4.6.1 Coastal squeeze is a term that originates from coastal management, whereby qualifying intertidal habitats (i.e. the habitats themselves and as a foraging / roosting resource for SPA and Ramsar birds) are lost to rising sea levels and inland brownfield development (e.g. a sea wall or an industrial complex) prevents the inland migration of these features. As a result, habitat is 'squeezed' and reduces in size. This is a significant process, particularly in geographic areas that are highly urbanised or that are rapidly transitioning from an undeveloped to developed state.
- 4.6.2 Additionally, as development frequently takes place immediately inland from the sea wall, flood defences generally cannot be moved landwards to accommodate the managed retreat of threatened habitats. This may result in gradually reducing areas of saltmarsh and mudflat habitats adjacent to built-up areas. In areas where sediment availability is low, the coastal squeeze also includes an increasingly steep beach profile and foreshortening of the seaward zones.
- 4.6.3 In order to conclude that development allocated in the SLP would not result in LSEs regarding coastal squeeze, development should not be situated in locations that require new defences in currently undefended parts of the coastline or in areas allocated for managed realignment (i.e. adjustments to coastal flood defences). To assess this impact pathway, residential and employment sites allocated in the SLP will be assessed as to their relative distance to designated coastal habitats, whether they are on greenfield sites and if they lie within sections of the coast identified for managed realignment.
- 4.6.4 Overall, the following Habitats sites are sensitive to negative changes as a result of coastal squeeze (**sites in bold are taken forward to the following chapters of the HRA**):
- **The Swale SPA/Ramsar**
 - **Medway Estuary & Marshes SPA/Ramsar**

5. Screening for Likely Significant Effects (LSEs)

5.1 Atmospheric Pollution (Nitrogen Deposition)

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

- 5.1.1 Given that both The Swale SPA/Ramsar and the Medway Estuary and Marshes SPA/Ramsar sites both lie within 200m of numerous roads that may be regularly used by vehicle journeys arising from the Swale borough as a result of the increased population, it was concluded that air quality should be included within the scope of this assessment.
- 5.1.2 For approximately 4km, the Swale SPA/Ramsar site lies within 200m of the A249 as it approaches and crosses onto the Isle of Sheppey (predominantly to the east of the A249). For approximately 2.4km the Medway Estuary and Marshes SPA/ Ramsar is within 200m of the A249 as it approaches the and crosses onto the Isle of Sheppey (to the west of the A249). The MAGIC website www.magic.gov.uk indicates that the habitat within 200m of the road along this route is predominantly grazing marsh, along with areas of mudflat in the vicinity of the Swale Crossing itself. In addition, although Milton Creek is not actually part of the SPA, it does constitute important habitat for some SPA species, and the Sittingbourne Northern Relief Road crosses the mudflats of the Creek. Development provided by the Plan will result in an increase in traffic flows over the Swale Crossing.

- 5.1.3 There will also be an increase in traffic flows due to development in surrounding local authorities (particularly Medway and Maidstone) over the same time period and (to a lesser extent) due to proposals for new minerals and waste facilities being developed for the Kent Minerals and Waste Plan.
- 5.1.4 **Therefore, LSEs of the SLP on the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar regarding atmospheric pollution cannot be excluded and the sites are screened in for Appropriate Assessment regarding this impact pathway.**

Queendown Warren SAC

- 5.1.5 Queendown Warren SAC is located in the south west corner of Swale Borough. It is located immediately adjacent to the minor lanes of Warren Lane, an unnamed lane, and bisected by Yaugter Lane but due to their minor nature these are not expected to experience a change in daily traffic flows due to Local Plan growth. The SAC is also located approximately c.300m from the A2, the only affected road within the vicinity of the SAC. The Site Improvement Plan⁶² identifies that the dry grassland and scrublands on chalk or limestone (important orchid sites) are potentially vulnerable to atmospheric nitrogen deposition. Whilst the sensitive features of the site are currently identified to be in favourable condition⁶³, the deposition rates at the site (15.5kg N/ha/yr) exceeds the minimum critical load for the chalk grassland and scrubland habitat (10kg N/ha/yr)⁶⁴. However, due to the distance from the only affected road in the locality of the SAC (i.e. the SAC is well over 200m from the road) traffic growth will have a negligible effect on local pollutant levels. As such no likely significant effect will result. Overall, LSEs of the SLP on the Queendown Warren SAC regarding atmospheric pollution can be excluded and the site is screened out from Appropriate Assessment in relation to this impact pathway.

Blean Complex SAC

- 5.1.6 The Blean Complex SAC is located on the edge of the Borough of Swale, with the majority of the site located within the neighbouring Canterbury City authority boundary. It is 6.5km in a straight line from the nearest significant population centre in the Borough (Faversham) or 8.5km following the road network. In comparison, The Blean Complex is less than 200m from Rough Common, a suburb of Canterbury City, and less than 30 m from the A290, the main through road from Canterbury in the south to the A299 in the north, both within the City Council area. Traffic modelling for the Swale Local Plan does not identify the A290 as an affected road as a result of the Plan.
- 5.1.7 Given that the A290 is not identified as an affected road in the traffic modelling, LSEs of the SLP on the Blean Complex SAC regarding atmospheric pollution can be excluded and the site is screened out from Appropriate Assessment in relation to this impact pathway.

North Downs Woodlands SAC

- 5.1.8 North Downs Woodland SAC is located within the neighbouring authority of Maidstone Borough, 3.6km from the Swale Borough boundary. At its closest, it is located 7m from the A249 (Detling Hill), a dual carriageway that connects the A2 in the north of Kent (and within Swale Borough) to the A20 at Maidstone to the south. The Site Improvement Plan for the SAC identifies that the dry calcareous grassland and scrubland (important orchid site), the beech forests on neutral to rich soils and the yew dominated woodland are vulnerable to atmospheric nitrogen deposition⁶⁵. The portion of the SAC that is located within 200m of the A249 is designated as Wouldham to Detling Escarpment SSSI (unit Lynch Bank – 026). This portion of the site only contains woodland habitats, no calcareous grassland is present, and as such only the woodland habitats are considered further. **Therefore, LSEs of the SLP on the North Downs Woodlands SAC regarding atmospheric pollution can be excluded concerning calcareous grassland but not regarding woodland and the site is screened in for**

⁶² <http://publications.naturalengland.org.uk/file/5485982457528320> [accessed 05/06/2026]

⁶³ <https://designatedsites.naturalengland.org.uk/SiteUnitList.aspx?SiteCode=S1001523&SiteName=&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAAArea=> [accessed 05/06/2026]

⁶⁴ www.apis.ac.uk/ [accessed 05/06/2026]

⁶⁵ <http://publications.naturalengland.org.uk/publication/6363401429188608> [accessed 05/06/2026]

Appropriate Assessment regarding this impact pathway in relation to the woodland present on site.

Policy Screening

5.1.9 A review of the SLP indicates that LSEs in relation to atmospheric pollution cannot be excluded due to the allocation of residential / employment growth and the concomitant increase in commuter traffic. The following policies need to be taken forward to Appropriate Assessment:

- Policy ST4 – Development needs for the Borough

5.2 Recreational Pressure

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

5.2.1 All residential development within the Borough of Swale is located within such proximity to the North Kent Marshes internationally designated sites (less than 6km from an access point to the designated sites) as included within the Bird Wise North Kent Mitigation Strategy⁶⁶, that they could result in a likely significant effect on the internationally designated North Kent bird sites.

5.2.2 A review of the emerging SLP indicates that LSEs in relation to recreational pressure cannot be excluded for several policies due to the allocation of residential growth and a concomitant increase in the local population. The following policies need to be taken forward to Appropriate Assessment:

- Policy ST4 – Development needs for the Borough

5.3 Water Quantity, Level and Flow

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

5.3.1 The SLP will lead to an increased requirement for potable water consumption for households and industrial sites. If this requirement is met by an increase in consented abstraction volumes or the development of new water resources, this can result in changes to the integrity of hydrologically connected Habitats sites, such as through reduced water levels or flows. Runoff from impermeable urban surfaces can also lead to increased volumes of surface water input and flash floods in nearby nature conservation sites.

5.3.2 Given the baseline evidence, LSEs of the SLP on these Habitats sites cannot be excluded, and **the sites are screened in for Appropriate Assessment** in relation to this impact pathway.

5.4 Water Quality

5.4.1 The Site Improvement Plan for the Thames Complex⁶⁷ (including the Swale, Medway Estuary and Marshes and the Outer Thames Estuary), does not identify water quality (specifically nitrates) as an issue for these designated sites.

5.4.2 While the grazing marsh components of the SPA are sensitive to deteriorations in water quality, the grazing marsh and its ditches are not subject to the presence of treated sewage effluent, which due to the point of discharge flows through the creek channels and into the marine/estuarine portions of the SPA.

5.4.3 If macroalgae (such as members of the sea lettuce genus *Ulva*) are able to grow uncontrolled they can develop a thick layer over mudflats, saltmarsh and other intertidal habitats. This can result in a significant reduction in oxygen within the sediment which can in turn reduce invertebrate biomass

⁶⁶ <https://northkent.birdwise.org.uk/wp-content/uploads/2023/07/Strategy-draft-v2-June-24.pdf> [accessed 05/06/2026]

⁶⁷ <http://publications.naturalengland.org.uk/file/5760073666134016> [accessed 05/06/2026]

thereby reducing its value as foraging habitat. The mats can also prove a simple physical barrier for birds trying to forage within the underlying sediment. The principal issue controlling oxygen depletion in the underlying sediments appears to relate less to the weight and coverage of algae but to the quick growth and persistence of the mats.

- 5.4.4 In some estuaries on the south coast (e.g. Chichester & Langstone Harbours SPA) smothering macroalgae have been a historic problem due to the warmer water temperatures, low sediment loading and limited wave action, which result in a combination of rapid algal growth during the summer and low algal mortality during the winter and thus the accumulation of large dense persistent mats. In those estuaries nutrient inputs to the water have been a major contributor to the further growth of these algae (since there are few environmental factors to otherwise inhibit growth) and have necessitated controls on nitrogen loading of discharged effluent as well as other sources (such as agricultural runoff).
- 5.4.5 In estuaries like The Swale and Medway where the sediment loading is higher (reducing light penetration and thus restricting rates of growth) in addition to temperatures being cooler and wave action stronger (leading to winter break up of mats and considerable annual variation in algal cover) the sediments are able to remain well oxidised despite high nutrient loadings and hence the benthic invertebrate community is unaffected by macroalgal mats. If the benthic invertebrate community is unaffected then the site would continue to maintain its prey productivity for birds.
- 5.4.6 Previous discussions with the Environment Agency and the Review of Consent reports for the various marine/intertidal Special Protection Areas and Ramsar sites around the greater Thames Estuary have confirmed that while nutrient levels are high within the various estuaries around the greater Thames Estuary, this does not result in the smothering macro-algal growth that is having an adverse effect upon other European marine sites (such as The Solent). The prevailing expert opinion is that the dominant control on phytoplankton growth in these estuaries is not nutrient availability but light availability which is controlled by the high loading of suspended sediment. While nutrient neutrality has been identified as a requirement for other estuarine European sites around the English coastline, the North Kent Estuaries have not been identified as requiring nutrient neutrality.
- 5.4.7 As such, with regards to the Swale and Medway designated sites, this impact pathway can be screened out from resulting in a Likely Significant Effect as a result of the Plan, either in isolation or combination.

5.5 Visual and Noise Disturbance from Construction Works

- 5.5.1 This impact pathway considers disturbance effects on qualifying bird species through pathways other than recreational pressure, such as construction and vehicular noise, construction lighting, operational lighting and other types of visual and noise disturbance during and post construction. Professional experience suggests that these impacts are unlikely to arise on sites located more than 300m from designated sites or functionally linked habitats.
- 5.5.2 For example, the noisiest construction activity (impact piling, which involves a hammer dropping onto a pile) has a typical maximum noise level of 100-110dB at 1m from source. However, it will result in noise levels below the 70 dB threshold at which studies on the Humber estuary identified habituation was likely to occur, at distances of more than 100m from source, because atmospheric noise attenuates by 6dB for every doubling of distance. Therefore, a 200m screening distance for noise disturbance was used to assess the development proposals with the most significant impact potential on European sites. For visual stimuli a precautionary distance of 300m was used, which is the distance at which the most sensitive waterfowl have been observed to react to such stimuli. It should be noted that these distances are used purely for the purposes of identifying those development sites which are (in the absence of mitigation) at greatest risk of causing construction-period disturbance to SPA birds. However, this does not mean that it is impossible for disturbance to arise from construction at greater distances and project-level noise modelling may be required for developments located more than 200m from SPA and Ramsar sites. It should also be noted that for bespoke noise modelling assessments comparison with baseline noise levels is also likely to be required.

- 5.5.3 The Swale SPA and Ramsar is designated for waterfowl and wader species that are all sensitive to visual and noise disturbance. The precautionary distance for non-recreational disturbance is 300m, meaning that potential development sites within this buffer are likely to result in LSEs. Three proposed site allocations lie within 200m of the Swale SPA and Ramsar. **LSEs of the SLP cannot be excluded, and the site is screened in for Appropriate Assessment.**
- 5.5.4 The Medway Estuary and Marshes SPA and Ramsar, also designated for sensitive waterfowl and wader species. Three proposed site allocations lie within 200m of the Medway Estuary and Marshes SPA and Ramsar, and therefore have the potential to cause visual and noise disturbance on SPA and Ramsar birds. **LSEs of the SLP cannot be excluded, and the site is screened in for Appropriate Assessment.**
- 5.5.5 The Outer Thames Estuary SPA is designated for waterfowl species that are all sensitive to visual and noise disturbance. The precautionary distance for non-recreational disturbance is 300m, meaning that potential development sites within this buffer are likely to result in LSEs. There are no proposed site allocations within 300m of the Outer Thames Estuary SPA. Moreover, this site is designated for it open water foraging and resting areas for non-breeding red throated diver and its marine foraging areas for common tern and little tern. While red throated diver are highly sensitive to disturbance in the water, there is no indication that they are sensitive to land-based construction. **Therefore, LSEs of the SLP can be excluded, and the site is screened out for Appropriate Assessment.**

Policy Screening

- 5.5.6 The following policies of the SLP have been screened in for Appropriate Assessment because they will involve construction activities with the potential to result in visual and noise disturbance to SPA and Ramsar waterfowl and waders:
- Policy ST4 – Development needs for the Borough

5.6 Coastal Squeeze

- 5.6.1 Coastal squeeze is a term that originates from coastal management, whereby qualifying intertidal habitats (i.e. the habitats themselves and as a foraging / roosting resource for SPA and Ramsar birds) are lost to rising sea levels and inland brownfield development (e.g. a sea wall or an industrial complex) prevents the inland migration of these features. As a result, habitat is 'squeezed' and reduces in size. This is a significant process, particularly in geographic areas that are highly urbanised or that are rapidly transitioning from an undeveloped to developed state.
- 5.6.2 Additionally, as development frequently takes place immediately inland from the sea wall, flood defences generally cannot be moved landwards to accommodate the managed retreat of threatened habitats. This may result in gradually reducing areas of saltmarsh and mudflat habitats adjacent to built-up areas. In areas where sediment availability is low, the coastal squeeze also includes an increasingly steep beach profile and foreshortening of the seaward zones.
- 5.6.3 In order to conclude that development allocated in the SLP would not result in LSEs regarding coastal squeeze, development should not be situated in locations that require new defences in currently undefended parts of the coastline or in areas allocated for managed realignment (i.e. adjustments to coastal flood defences). To assess this impact pathway, residential and employment sites allocated in the SLP will be assessed as to their relative distance to designated coastal habitats, whether they are on greenfield sites and if they lie within sections of the coast identified for managed realignment.
- 5.6.4 The SLP does not designate any sites on greenfield sites in close proximity to designated habitats sites that do not already lie behind existing flood defences. Therefore, LSEs of the SLP can be excluded, and coastal squeeze is screened out from appropriate assessment.

6. Appropriate Assessment

6.1 Atmospheric Pollution

The Swale SPA / Ramsar and Medway Estuary & Marshes SPA/Ramsar

6.1.1 To be completed when air quality data has been received.

North Downs Woodlands SAC

- 6.1.2 North Downs Woodlands SAC is approximately 9km from the nearest significant settlement in Swale (Sittingbourne) along the A249, while the nearest likely destination along the A249 for residents of Sittingbourne is Maidstone, located 11km to the south at its closest. This is therefore on (or beyond) the outer limits of the likely journey to work distance for residents of the borough. 2021 Census data shows that the majority (nearly 70%) of people in employment in the UK travel less than 10 km to work and the remainder will generally have dispersed across the network by that distance. Moreover, traffic and air quality modelling of the A249 has been undertaken to inform both the Maidstone and Tonbridge & Malling Local Plan HRAs.
- 6.1.3 By far the greatest source of traffic growth on the A249 past North Dows Woodlands SAC is likely to be Maidstone Local Plan. The modelling undertaken as part of the Maidstone Local Plan HRA for the adopted Local Plan demonstrated that, with a more detailed approach to modelling growth in Maidstone, and taking account of the use of traffic calming measures along Boxley Road / Lidsing Road to restrict traffic and discourage its use; and the connection of Lidsing Garden Settlement to the M2 J4 via the new link road, reducing traffic from the Garden Settlement past North Downs Woodlands SAC, no adverse effect on the integrity of North Downs Woodlands SAC would arise either alone or in combination with other plan or projects.
- 6.1.4 For both these reasons (distance and the results of Maidstone Local Plan's modelling) a conclusion of no adverse effect on the integrity of North Downs Woodlands SAC can be drawn.

6.2 Recreational Pressure

The Swale SPA / Ramsar and Medway Estuary & Marshes SPA/Ramsar

- 6.2.1 In accordance with the Bird Wise North Kent Mitigation Strategy⁶⁸, all residential development within 6km of the North Kent Bird sites could result in an adverse effect on the integrity of the SPA as a result of increased recreational pressure. The strategic Mitigation Strategy is funded by developer contributions. It provides for a range of mitigation and avoidance strategies. As such to ensure no adverse effects on the integrity of the designated sites occurs, any net new residential development within 6km of the North Kent Bird sites will be required to contribute to the Mitigation Strategy and provide the appropriate financial contributions.
- 6.2.2 The requirement for contributions towards this mitigation strategy is detailed within Plan Policy ST11: Conserving and enhancing the natural environment. It states: *"All relevant development will require the completion of project specific Habitats Regulations Assessment (HRA), to ensure there are no likely significant effects upon any European designated site. For residential sites within 6km of an access point to any of the North Kent Marshes, development must contribute to its Strategic Access Management and Monitoring Strategy or undertake their own HRA;"*

⁶⁸ <https://northkent.birdwise.org.uk/wp-content/uploads/2023/07/Strategy-draft-v2-June-24.pdf> [accessed 05/06/2026]

- 6.2.3 It is noted that there are four residential sites allocated in the SLP that lie immediately adjacent to either The Swale SPA/Ramsar or Medway Estuary and Marshes SPA/Ramsar. These are:
- Land at West Street
 - South of Queenborough Creek
 - West of Rushenden Road, Queenborough
 - Ridham Dock - redevelopment
- 6.2.4 Given the proximity of these sites to Habitats sites, AECOM recommended that these allocations go beyond contributing to the Bird Wise North Kent Mitigation Strategy and deliver on-site recreational pressure management. We recommend that this be secured in the local plan by including policy text for these allocations that includes text to the effect of **“The applicant will be required to provide evidence that the development will not result in a Likely Significant Effect. To achieve this, measures to control recreational pressure should be incorporated into site design and layout, including, for sites large enough to accommodate it, on site semi-natural recreational greenspace to divert residents away from the coast and measures to discourage direct access into the SPA from the development site such as planting and other features to make direct access more difficult. The planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the measures implemented provide adequate mitigation to ensure that the development does not result in adverse effects on integrity due to recreational pressure.”**
- 6.2.5 With the implementation of the above recommendation, it can be concluded that the Plan will provide sufficient protective policy framework to ensure no adverse effects on the integrity of these sites as a result of increased recreational pressure from new residential development stemming from the Plan.

6.3 Loss of Functionally Linked Land

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

- 6.3.1 The following allocations have been identified to be located within land parcels that have the potential to provide habitat that could support a significant population of designated bird species, and thus could act as functionally linked land:
- Former Istil site Rushenden Road/Thomsett Way
 - Three Lakes Park, Church Road, ME10 3NL
 - Ridham Dock – redevelopment
 - Smeed Dean Works, Eurolink Industrial Estate, Castle Road
 - South of Queenborough Creek
- 6.3.2
- 6.3.3 At the Local Plan level there are no recent non-breeding bird surveys available to inform a more detailed assessment. All sites identified above should provide policy or supporting requiring the need to determine if the land parcel or neighbouring affected land does indeed act functionally linked land by inclusion of the following (or similar text): **“The applicant will be required to provide evidence that the development will not result in a Likely Significant Effect. To achieve this, surveys will be required to determine habitats and current use of the site and surrounding land parcels to determine if it does support a significant population (A significant population is classified as a site that regularly used by more than 1% of the population of qualifying bird species) of qualifying species. Where habitats are suitable, non-breeding bird surveys will be required to determine if the site and neighbouring land constitute a significant area of supporting habitat. Surveys should be required to be undertaken during autumn, winter and spring and at more than 1 year of surveys may be needed (to be agreed in consultation with the local planning authority and Natural England). If habitat within or adjacent to the site is identified to support**

significant populations of designated bird features avoidance measures and mitigation will be required, such as the creation of replacement habitat nearby, and the planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the development does not result in adverse effects on integrity."

- 6.3.4 It is considered that allocating sites for development prior to full wintering bird surveys being undertaken is appropriate and legally compliant in this case. Firstly, the law accepts that ecological investigation to support plan development must be tiered, with more detailed investigation undertaken at each subsequent stage:
- The Court of Appeal⁶⁹ has ruled that provided the competent authority is duly satisfied that mitigation can be achieved in practice (in other words that solutions exist that are likely to be effective) this will suffice to enable a conclusion that the proposed development would have no adverse effect.
 - The High Court⁷⁰ has ruled that for 'a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of the Habitats Regulations'.
 - Advocate-General Kokott⁷¹ has commented that 'It would also hardly be proper to require a greater level of detail in preceding plans [than lower tier plans or planning applications] 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'.
- 6.3.5 Secondly, there is a low risk of any of these allocated sites proving undeliverable due to loss of functionally-linked land. The functionally-linked habitats in question are common, widespread and easily recreated (or managed in a more favourable manner) and the species in question do not have highly specific habitat requirements and are sufficiently widespread in their use of this functionally-linked land that development is only likely to affect a small amount of their overall foraging resource.
- 6.3.6 With the above recommendation it can be concluded that the Plan will not result in an adverse effect on the integrity of the international sites.

6.4 Water Quantity, Level and Flow

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

Surface Run-Off

- 6.4.1 The development allocated in the SLP has the potential to alter the water quantity / level in the SAC / Ramsar in two main ways. Firstly, an increase in the coverage of impermeable urban surfaces might result in faster water surface run-off, resulting in altered water supply to the site. This is a particular threat for settlements that lie close to the SPAs / Ramsars. Surface run-off is considered to be a risk factor for flooding up to several hundred metres from ecological receptors. Any development that increases the volume of impermeable surfaces has the potential to increase the 'in-combination' water supply to the site, particularly following intense rainfall events. Provided the magnitude of effect is sufficiently high, local hydrological changes may occur.
- 6.4.2 Sustainable Drainage Systems (SuDS) are considered the main approach to reduce the volume of surface run-off that reaches sensitive ecological receptors by limiting the occurrence and magnitude of flooding. SuDS are interventions that manage surface water at source by limiting run-off to pre-

⁶⁹ No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015

⁷⁰ High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

⁷¹ Opinion of Advocate General Kokott, 9th June 2005, Case C-6/04. Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland, paragraph 49.

<http://curia.europa.eu/juris/document/document.jsf?docid=58359&doclang=EN>

development greenfield rates. Depending on local drainage characteristics / soil type and the type of development proposed, a variety of different techniques may be employed as SuDS, including soakaways, infiltration trenches, permeable pavements, grassed swales, green roofs, ponds and wetlands. The ultimate aim of SuDS is to control the quantity of run-off (by slowing and / or holding back some of the water) to protect the natural water cycle. This is reflected in the SLP through Policy ST3. This identifies that *'new development uses nature-based solutions to provide connected, accessible and multi-functional green spaces, which prioritise... sustainable drainage and pollution prevention'*

- 6.4.3 Additionally, while at this stage of assessment only the Strategic policies are available it is noted that policy C9 will be dedicated to sustainable drainage and policy C10 will be dedicated to Water quality and water resources. Policy content to this effect is included in the SLP and adverse effects of the SLP on the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar regarding water quality from surface run-off can therefore be excluded.

Water Abstraction

- 6.4.4 The second main way in which the SLP may impact upon the water level in the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar is through abstraction of potable surface water and / or groundwater for the public water supply. If the regional water resources were sufficiently depleted, this would likely lead to a reduction in the water supply to the SPAs/Ramsars with knock-on effects on their plant and invertebrate communities. The SLP seeks the development of approx. 17,024 dwellings at an average occupancy of 2.4 people per household. Notably, public water supply is only considered to be an issue where new housing will require increases to existing Environment Agency (EA) abstraction consents or the use of previously unexploited water sources. This is because existing consents have already undergone the EA's Review of Consents (RoC) process, which considers the Conservation Objectives of Habitats sites.
- 6.4.5 Potable water in Swale is supplied two different water companies, Southern Water (SW) and South East Water (SEW).
- 6.4.6 SW's eastern supply area covers several areas of Kent including the western portion of Swale borough. The Water Resources Management Plan (WRMP) for Southern Water for a 50-year period between 2025 and 2075⁷², indicates that the supply-demand balance for its this area will go into a deficit. The Water Resources Management Plan proposes active steps to be undertaken by SW to address the supply-demand balance. These include:
- groundwater options to provide more water in Petersfield (1.6 million litres per day), Petworth (4 million litres per day) and West Chiltington (3.1 million litres per day) from 2031.
 - a water recycling scheme near Littlehampton, to transfer water to the Pulborough area by 2031 to provide up to 15 million litres per day
 - water transfers from neighbouring water companies SES Water and South East Water that together could provide up to 20 million litres per day
 - a new reservoir, near Henfield, to store water from the River Adur to supply up to 19.5 million litres per day to parts of Sussex
 - a desalination plant near the tidal River Arun to provide up to 40 million litres per day, which may be needed in the longer term if more significant reductions to how much water we can abstract from the environment are needed.
- 6.4.7 This SW WRMP includes several supply-side options which could have a potential impact on water quantity, level and flow including increased groundwater abstraction and the construction of a new surface water reservoir. However, these lie relatively far from the hydrological catchment of the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar and therefore there is no potential for these new water abstractions to affect the hydrological regime in the site. These findings are in accordance with the screening HRA undertaken by SW on the WRMP, which assessed potential in-

⁷² Southern Water. (2024). Water Resources Management Plan 2025 to 2075. Available at: <https://www.southernwater.co.uk/about-us/our-plans/water-resources-management-plan/>

combination impacts resulting from the plan. This concluded that the Water Resource Management Plan will not have an adverse effect on Habitats sites.

- 6.4.8 SEW's supply area is divided into eight Water Resource Zones (WRZs) and Swale Borough is partially located within WRZ8. In turn, for management purposes, the WRZs are organised into three larger areas, namely Sussex, West and Kent (within which Lewes District is included). SEW serves an area that is under serious water stress, which is defined by the EA as a geographic area where current and future household demand covers a high proportion of effective rainfall. This places significant pressure on water resources as there is a high risk that additional abstraction will result in depletion of freshwater bodies. Positively, the existing stress on water resources has resulted in a compulsory metering programme that commenced in 2011, permeating approx. 90% of households by 2019/20.
- 6.4.9 The Water Resources Management Plan (WRMP) for South East Water for a 50-year period between 2025 and 2075⁷³, indicates that the supply-demand balance for its Kent area will go into a deficit. The Water Resources Management Plan proposes active steps to be undertaken by SEW to address the supply-demand balance. These include:
- Leakage reductions
 - Water efficiency measures
 - Regional water transfer with collaborating water companies
 - Improved connectivity between component WRZs
 - New surface water reservoirs (New Arlington Reservoir and Broad Oak Reservoir)
- 6.4.10 Most of these options are demand-management options, which are positive because they seek a higher degree of sustainability without the need for increased water abstraction. However, a potential impact on water quantity, level and flow is associated with the construction of new surface water reservoirs, such as those identified at New Arlington and Broad Oak. However, review of the EA catchment data explorer indicates that these new reservoirs lie relatively far from the hydrological catchment of the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar and therefore there is no potential for these new water abstractions to affect the hydrological regime in the site. These findings are in accordance with the screening HRA undertaken by SEW on the WRMP⁷⁴, which assessed potential in-combination impacts resulting from the plan on 33 Habitats sites. This assessed multiple preferred and alternative options (including the new surface water reservoirs) and concluded that the Water Resource Management Plan will not have an adverse effect on Habitats sites.
- 6.4.11 Given that there is no hydrological linkage between the new surface water reservoirs proposed by SEW or the supply-side measures proposed by SW and the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar, it is concluded that the SLP will not result in adverse effects on the integrity of these sites regarding water quantity, level and flow, both alone and in-combination.

6.5 Visual and Noise Disturbance from Construction Works

The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

- 6.5.1 The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar are designated for waterfowl, waders and seabirds, which are all sensitive to visual and noise disturbance from construction works. ToLSE identified that LSEs on these sites, regarding this impact pathway cannot

⁷³ South East Water. (2024). Water Resources Management Plan 2025 to 2075. Available at: https://cdn.southeastwater.co.uk/SewHousehold/Documents/WRMP2023/Final/SEW_WRMP24_Technical_Overview_Document.pdf

⁷⁴ South East Water. (2024). WRMP24 Habitats Regulations assessment report. Available at: https://cdn.southeastwater.co.uk/SewHousehold/Documents/WRMP2023/Final/SEW_WRMP24_HRA_Report.pdf

be excluded. Disturbance may result from both visual and aural stimuli, although it is well recognised that there is a paucity of response data particularly in relation to avifaunal responses to construction noise. In recent years, for the noisiest construction methods (e.g. piling, which generates 120 dB at source) and considering an acceptable noise level of 70 dB at birds, a 200m threshold distance has been identified for noise disturbance. This was based on field observations of bird responses to noise disturbance events and utilising the standard distance decay rates for noise (across open areas). However, both the source of noise and bird species involved are important considerations in identifying potential noise disturbance impacts. For example, sudden irregular noise events may evoke bird responses at lower thresholds (approx. 60 dB) than more prolonged noise events.

- 6.5.2 An alternative approach to using absolute noise disturbance thresholds has been developed in recent years and is now formally accepted by Natural England on some development projects. Most bird species show a degree of habituation to disturbance stimuli as a result of repeated exposure in their natural habitats. This has potentially important implications as some noise levels may cause little to no disturbance in areas with existing loud soundscapes. As such, using absolute noise thresholds may greatly overestimate the threat that construction noise poses in some areas and place undue burdens on developers. Consequently, frequently the absolute change in noise levels between the pre-construction and construction periods is now used to assess potential impacts of noise disturbance. This comparison is enabled by undertaking pre-construction baseline noise measurements at receptor locations and contrasting these with noise models informed by construction parameters (e.g. location, type and duration of construction methods). This comparative noise impact assessment provides a valuable alternative and, potentially, more meaningful approach to evaluating construction impacts on SPA and Ramsar birds.
- 6.5.3 In contrast, visual disturbance on birds has been more frequently studied. Visual stimuli will typically create a disturbance effect before associated noise begins to have an impact. For example, Cutts et al. (2013) report that most species will show a flight response when approached to within 100-150m in intertidal sand- or mudflats. Generally, disturbance associated with visual stimuli will be highest where workers operate outside of equipment, large plant is involved, and works are undertaken at high speeds and close to birds. Visual disturbance is not necessarily easily predictive or intuitive due to other factors, such as conspicuousness and visibility to birds. For example, a lone worker in open habitat may trigger a major flight response at further distances than the operation of large plant. It is now commonly accepted that there are likely to be minimal visual disturbance impacts beyond 300m distance to source, although species-specific variation has been documented.
- 6.5.4 Overall, AECOM considers that a precautionary 300m buffer captures all allocations that represent a concern regarding visual and noise disturbance from construction works. Table 3 lists all residential and employment allocations within 300m of Swale's SPAs and Ramsar sites. AECOM advises that mitigation measures will be required to protect the bird populations in these SPAs and Ramsar from adverse visual and noise disturbance impacts.

Table 3: Site allocations within 300m of a SPA and Ramsar

Site Name	Nearest SPA and Ramsar	Distance to SPA and Ramsar (m)
Land at West Street	Medway Estuary and Marshes	Immediately adjacent
South of Queenborough Creek	Medway Estuary and Marshes	Immediately adjacent
West of Rushenden Road, Queenborough	Medway Estuary and Marshes	Immediately adjacent
Ridham Dock - redevelopment	The Swale	Immediately adjacent
Smeed Dean Works, Eurolink Industrial Estate, Castle Road	The Swale	Immediately adjacent

Three Lakes Park, Church Road,
Sittingbourne, ME10 3NL

The Swale

89m

- 6.5.5 Overall, several recommendations regarding visual and noise disturbance from construction works are made to guide development proposed in the SLP. Given Swale situation amidst several Habitats sites designated for sensitive bird species, the advice regarding visual and noise disturbance is the following:
- **To minimise the effect of visual and noise disturbance, it is recommended that any construction work (and associated road infrastructure) within 300m of the The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar be undertaken during periods when bird populations in these sites are low.**
 - **Furthermore, given the potential presence of sensitive bird species on functionally linked habitat near development allocations, it is advised that such a distance is also maintained regarding functionally linked habitat. Construction within 300m of the SPAs / Ramsars, or functionally linked habitat parcels, should be carried out during the months when most qualifying species are unlikely to be present in great numbers. This particularly applies to construction processes associated with high noise levels (e.g. impact piling).**
 - **If construction cannot be timed to avoid periods with high bird populations, then an impact assessment will need to be undertaken to confirm that noise levels will remain at acceptable noise levels (agreed upon with Natural England) near qualifying bird assemblages. This may encompass the comparison of modelled construction noise levels to pre-construction baseline noise measurements. Mitigation of noise impacts may be required, including the provision of screens, selection of less noisy equipment or techniques, damping and noise shielding of equipment or avoidance of lighting in sensitive locations.**
 - **Construction sites within 300m of known bird roosts in the SPAs and Ramsars or functionally linked habitats should have appropriate screening in place to minimise visual disturbance.**
- 6.5.6 Given the length of this recommendation, AECOM advises that the above paragraphs are included in the supporting text of, or in condensed form within, an appropriate policy of the SLP. Provided that the above addition to the policy framework of the SLP is made, it is concluded that the Plan will not result in adverse effects on Habitats sites regarding visual and noise disturbance from construction works.

6.6 In Combination Effects

- 6.6.1 The Bird Wise North Kent Mitigation Strategy is specifically intended to mitigate the impacts of development from multiple developments and plans across the recreational catchment of the North Kent SPAs. Therefore, the requirement for development to contribute appropriately to this strategy means that recreational pressure has already been considered 'in combination' with other plans and projects.
- 6.6.2 The assessments regarding water quantity, level and flow rely on the assessment of water availability and resources produced by SW and SEW in their water management plans. These documents and their associated HRAs take into account the entire hydrological catchment and therefore inherently provide an in combination assessment with regards to this impact pathway.
- 6.6.3 No other local authority is located within 300m of any site allocated by this local plan which has the potential to cause impacts via noise and visual impacts during construction works. Therefore this impact pathway cannot lead to in combination effects.

7. Conclusions & Recommendations

7.1.1 This HRA assessed the potential implications of the policies and site allocations included in the Swale Local Plan on the following Habitats sites:

- The Swale SPA/Ramsar
- Medway Estuary & Marshes SPA/Ramsar
- Queendown Warren SAC
- Blean Complex SAC
- Outer Thames Estuary SPA
- North Downs Woodlands SAC

7.1.2 Following the Test of Likely Significant Effects, Appropriate Assessment was undertaken of potential linking impact pathways that could not be screened out and were identified to potentially result in an adverse effect on the integrity of an international site. Appropriate Assessment was undertaken regarding the following:

- Atmospheric Pollution on:
 - The Swale SPA/Ramsar
 - Medway Estuary and Marshes SPA/Ramsar
 - North Downs Woodlands SAC
- Recreational Pressure on:
 - The Swale SPA/Ramsar
 - Medway Estuary and Marshes SPA/Ramsar
- Loss of Functionally Linked Land on:
 - The Swale SPA/Ramsar
 - Medway Estuary and Marshes SPA/Ramsar
- Water Quantity level and Flow on:
 - The Swale SPA/Ramsar
 - Medway Estuary and Marshes SPA/Ramsar
- Visual and Noise disturbance of Construction Works on:
 - The Swale SPA/Ramsar
 - Medway Estuary and Marshes SPA/Ramsar

7.2 Atmospheric Pollution

7.2.1

7.3 Recreational Pressure

7.3.1 In accordance with the Bird Wise North Kent Mitigation Strategy, all residential development within 6km of the North Kent Bird sites could result in an adverse effect on the integrity of the SPA as a result of increased recreational pressure. The strategic Mitigation Strategy is funded by developer contributions. It provides for a range of mitigation and avoidance strategies. As such to ensure no adverse effects on the integrity of the designated sites occurs, any net new residential development

within 6km of the North Kent Bird sites will be required to contribute to the Mitigation Strategy and provide the appropriate financial contributions.

- 7.3.2 The requirement for contributions towards this mitigation strategy is detailed within Policy ST 11: Conserving and enhancing the natural environment.
- 7.3.3 It is noted that there are four residential sites allocated in the SLP that lie immediately adjacent to either The Swale SPA/Ramsar or Medway Estuary and Marshes SPA/Ramsar. Given the proximity of these sites to Habitats sites, AECOM recommended that these allocations should go beyond contributing to the Bird Wise North Kent Mitigation Strategy and deliver on-site recreational pressure management. We recommend that this be secured in the local plan by including policy text for these allocations that includes text to the effect of **“The applicant will be required to provide evidence that the development will not result in a Likely Significant Effect. To achieve this, measures to control recreational pressure should be incorporated into site design and layout including, for sites large enough to accommodate it, on site semi-natural recreational greenspace to divert residents away from the coast and measures to discourage direct access into the SPA from the development site such as planting and other features to make direct access more difficult. The planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the measures implemented provide adequate mitigation to ensure that the development does not result in adverse effects on integrity due to recreational pressure.”**
- 7.3.4 With the implementation of the above recommendation, it can be concluded that the Plan will provide sufficient protective policy framework to ensure no adverse effects on the integrity of these sites with regards to increased recreational pressure as a result of the SLP.

7.4 Water Quantity Level and Flow

- 7.4.1 The development allocated in the SLP has the potential to alter the water quantity / level in the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar via an increase in the coverage of impermeable urban surfaces and via abstraction of potable surface water / groundwater for the public water supply.
- 7.4.2 Sustainable Drainage Systems (SuDS) are considered the main approach to reduce the volume of surface run-off that reaches sensitive ecological receptors. SuDS are interventions that manage surface water at source by limiting run-off to pre-development greenfield rates. This is reflected in the SLP through Policy ST3. This identifies that *‘new development uses nature-based solutions to provide connected, accessible and multi-functional green spaces, which prioritise... sustainable drainage and pollution prevention’*. Adverse effects of the SLP on the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar regarding water quality from surface run-off can therefore be excluded.
- 7.4.3 The SLP will increase residential and employment development within Swale borough, for which there is a statutory obligation to deliver potable water. If the water supply to new developments would require the exploitation of additional water sources in hydrological connectivity with the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar, this could reduce the freshwater supply to these sites. However, a review of SEW’s WRMP indicates that the supply-demand deficit will be primarily addressed through demand management measures. The SW WRMP proposes a number of supply-side measures to meet the needs of areas supplied by southern water, including areas of Swale Borough. The supply-side options identified in the SEW and SW WRMP do not extract freshwater from the hydrological catchment of the SAC / Ramsar, implying that there is no potential for impacting the site’s water supply. This assessment is in agreement with the SEW’s and SW’s screenings HRA of their WRMPs, which concluded no LSEs on Habitats sites.
- 7.4.4 Give the above, it is concluded that there will be no adverse effect on the Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar with regards to water quantity level and flow as a result of the SLP.

7.5 Loss of Functionally Linked Land

- 7.5.1 The following allocations have been identified to be located within land parcels that are believed to contain coastal and floodplain grazing marsh that could support designated bird species, and thus could act as functionally linked land:
- Former Istil site Rushenden Road/Thomsett Way
 - Three Lakes Park, Church Road, ME10 3NL
 - Ridham Dock – redevelopment
 - Smeed Dean Works, Eurolink Industrial Estate, Castle Road
 - South of Queenborough Creek
- 7.5.2 All sites identified above should provide policy or supporting requiring the need to determine if the land parcel or neighbouring affected land does indeed act functionally linked land by inclusion of the following (or similar text). **“The applicant will be required to provide evidence that the development will not result in a Likely Significant Effect. To achieve this, surveys will be required to determine habitats and current use of the site and surrounding land parcels to determine if it does support a significant population (A significant population is classified as a site that regularly used by more than 1% of the population of qualifying bird species) of qualifying species. Where habitats are suitable, non-breeding bird surveys will be required to determine if the site and neighbouring land constitute a significant area of supporting habitat. Surveys should be required to be undertaken during autumn, winter and spring and at more than 1 year of surveys may be needed (to be agreed in consultation with the local planning authority and Natural England). If habitat within or adjacent to the site is identified to support significant populations of designated bird features avoidance measures and mitigation will be required, such as the creation of replacement habitat nearby, and the planning application will likely need to be supported by a project specific Habitats Regulations Assessment to ensure that the development does not result in adverse effects on integrity.”**
- 7.5.3 With the above recommendation it can be concluded that the Plan will not result in an adverse effect on the integrity of the international sites.

7.6 Visual and Noise Disturbance from Construction Works

- 7.6.1 Overall, AECOM considers that a precautionary 300m buffer captures the site allocations that represent the biggest threat regarding visual and noise disturbance from construction works. The SLP allocates five sites that lie within this screening distance and have the potential to result in visual and noise disturbance in the construction period. To avoid adverse effects on the populations of qualifying birds, detailed recommendations are made to guide development proposed in SLP. Given Swale Borough's proximity to two Habitats sites designated for their bird interest, this text should be included in the supporting text of, or, in condensed form, within an appropriate policy of the SLP. AECOM provides the following advice regarding visual and noise disturbance from construction works:
- **‘To minimise the effect of visual and noise disturbance, it is recommended that any construction work (and associated road infrastructure) within 300m of the The Swale SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar be undertaken during periods when bird populations in these sites are low.**
 - **Furthermore, given the potential presence of sensitive bird species on functionally linked habitat near development allocations, it is advised that such a distance is also maintained regarding functionally linked habitat. Construction within 300m of the SPAs / Ramsars, or functionally linked habitat parcels, should be carried out during the months when most qualifying species are unlikely to be present in great numbers. This particularly applies to construction processes associated with high noise levels (e.g. impact piling).**

- **If construction cannot be timed to avoid periods with high bird populations, then an impact assessment will need to be undertaken to confirm that noise levels will remain at acceptable noise levels (agreed upon with Natural England) near qualifying bird assemblages. This may encompass the comparison of modelled construction noise levels to pre-construction baseline noise measurements. Mitigation of noise impacts may be required, including the provision of screens, selection of less noisy equipment or techniques, damping and noise shielding of equipment or avoidance of lighting in sensitive locations.**
- **Construction sites within 300m of known bird roosts in the SPAs and Ramsars or functionally linked habitats should have appropriate screening in place to minimise visual disturbance.**

7.6.2 Provided that the above recommendations are included in the SLP, it is concluded that the SLP will not result in adverse effects on Habitats sites regarding visual and noise disturbance from construction works.

Appendix A Maps

Figure 4: Habitats sites in and within 10km of Wealden District in relation to sites allocated in the Wealden Local Plan.

Appendix B Likely Significant Effects (LSEs) Screening

Table 4: Likely Significant Effects (LSEs) screening assessment of policies contained in the SLP.

Where the 'LSEs Screening Outcome' column is shaded orange, LSEs of the policy cannot be excluded, and it is taken forward to Appropriate Assessment (AA). Where that final column is shaded green, a realistic pathway of impact is not present, and the policy is screened out from AA.

Policy Number & Name	Policy Content	LSEs Screening Outcome
Policy ST1 – Delivering sustainable Development in Swale	To deliver sustainable development in Swale that provides both mitigation and adaptation to climate change, all development proposals will contribute to: 1. Build a strong competitive and green economy by meeting identified needs for inward investment and indigenous growth on allocated and suitable sites, including meeting the needs of under-represented sectors; 2. Ensure the vitality of town centres by: strengthening the principal centre role of Sittingbourne; improving the role of Sheerness as the Island's main centre; or consolidating, proportionate to its scale and character, Faversham's role as a centre for the town itself and its local catchment; 3. Support a prosperous rural economy, especially for sustainable farming and tourism, or where enabling communities to meet local needs or benefiting countryside management; 4. Accord with the Local Plan settlement strategy; 5. Offer the potential to reduce levels of out-commuting and support the aims of the Swale Local Transport Strategy, including the promotion of zero carbon and active transport; 6. Support high quality communications infrastructure; 7. Deliver a wide choice of high quality, low carbon homes by: a. meeting the full, objectively assessed need for housing in the housing market area; b. providing housing opportunity, choice and independence with types of housing for local needs; and c. keeping vitality within rural communities with identified housing needs, proportionate to their character, scale and role; d. promoting energy efficiency, renewable energy and district heat networks on new developments; e. promoting the use of recognised certification schemes to demonstrate the environmental quality of new housing. 8. Achieve good design through reflecting the best of an area's defining characteristics; 9. Promote healthy communities through:	This policy is not associated with LSEs on Habitats sites. The policy lays out broad requirements for development within the plan area. The policy does not allocate quanta or locations of residential or employment development. Therefore, no impact pathways to Habitats sites are present. Overall, this policy is screened out from further appraisal in the Appropriate Assessment.

	a. location of development to achieve safe, mixed uses and shared spaces; b. rejuvenation of deprived communities; c. the Local Plan implementation and delivery plan and schedule; d. safeguarding services and facilities that do or could support communities; e. maintaining the individual character, integrity, identities and settings of settlements; f. protecting, managing, providing and enhancing open spaces and facilities for sport and recreation; g. implementing the Swale natural assets green infrastructure strategy; and h. enabling and fostering the conditions for cultural enterprises to establish and flourish within Swale. 10. Meet the challenge of climate change, flooding and coastal change through: a. promotion of sustainable, low carbon and resilient design and construction, the installation and use of renewable energy, the efficient use of natural resources and the management of emissions; b. the management and expansion of green infrastructure; and c. applying planning policies to manage flood risk and coastal change; 11. Protect and enhance the natural environment by: a. applying international, national and local planning policy for: (i) areas designated for their biodiversity (inc. Nature Improvement Areas), geological or landscape importance; and/or (ii) priority habitats and populations of protected and notable species; b. using landscape character assessments to protect, and where possible, enhance, the intrinsic character, beauty and tranquillity of the countryside, with emphasis on the estuarine, woodland, dry valley, down-land and horticultural landscapes that define the landscape character of Swale; c. integrating the benefits of ecosystems to society across all policy areas; d. achieving plentiful native landscaping of local provenance in and around developments; e. achieving net gains in biodiversity within and around developments by use of such measures as natural/semi-natural greenspace and the creation of coherent ecological networks; f. avoiding significant harm to biodiversity or, when not possible, adequately mitigating it, or, as a last resort, compensating for it with off-site action at identified Biodiversity Opportunity Areas or other appropriate locations; g. using areas of lower quality agricultural land for significant levels of development (singly or cumulatively) where compatible with other criteria; and; h. applying national planning policy in respect of pollution, despoiled, degraded, derelict, contaminated, unstable and previously developed land; i. having regard to the Local Nature Recovery Strategy.	
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	12. Conserve and enhance the historic environment by applying national and local planning policy through the identification, assessment and integration of development with the importance, form and character of heritage assets (inc. historic landscapes).	
Policy ST2 – Swale's Settlement Hierarchy	By use of previously developed land within defined built up area boundaries and on sites allocated by the Local Plan, development proposals will be permitted in accordance with the following settlement strategy: 1. The principal town and main Borough urban centre of Sittingbourne will provide the primary urban focus for growth where development will support town centre regeneration and make the best use of previously developed and vacant or underused land; 2. Faversham, as one of the Borough's secondary towns, will provide a key focus for growth where development includes a sustainable urban extension and will deliver significant infrastructure improvements; 3. Redevelopment at Rushenden as an expansion to the Regeneration Area of Queenborough & Rushenden to provide landscape led regeneration that will provide new homes, jobs, infrastructure, open space and community facilities; 4. Village service centres provide the tertiary focus for growth. 5. Small villages with built-up area boundaries that can provide some services and offer more sustainable travel options than private car travel on infill and redevelopment sites within the built up areas boundaries where compatible with the settlement's character, amenity, landscape setting, heritage or biodiversity value; and 6. At locations in the open countryside, outside the built-up area boundaries shown on the Proposals Map, development will not be permitted unless supported by national planning policy and able to demonstrate that it would contribute to protecting and, where appropriate, enhancing the intrinsic value, landscape setting, tranquillity and beauty of the countryside, its buildings and the vitality of rural communities.	This policy is not associated with LSEs on Habitats sites. This is a broad development management policy detailing settlements that will be the main focus of development. This policy does not identify any type, specific location or quantum of development Overall, this policy is screened out from further appraisal in the Appropriate Assessment.
Policy ST3 – Climate Change	1. All new development must demonstrate how it will mitigate and adapt to climate change and create places which respond to the local and national Climate Emergency by demonstrating that: a. the location and choice of sites, linkages to other sites, layout and land-uses of development have been chosen to mitigate and adapt to climate change; b. new development uses nature-based solutions to provide connected, accessible and multi-functional green spaces, which prioritise climate mitigation and adaption, biodiversity enhancement, health and wellbeing, flood risk mitigation, sustainable drainage and pollution prevention, in accordance with policies ST7 Good design, ST8 Health and Wellbeing, ST10 Promoting sustainable transport and active travel; ST11 Conserving and enhancing the natural environment and the corresponding development management policies; c. the principles of sustainable design and adaptation, including addressing overheating and creating places that are comfortable to live in and are adapted to climate change, as set out in Policy C1 Sustainable design and construction principles, are considered from the very start of the site selection and design process and integrated into the development; d. new development is net zero carbon in operation, in line with Policies C2 Net zero operational in new build residential development and C3 Net zero operational in new build non-residential development. e. embodied carbon and waste is minimized in line with Policy C4 Embodied carbon and waste;	This policy is not associated with LSEs on Habitats sites. This is a positive policy, requiring that development within the plan area mitigate and adapt to climate change including being net zero in operation and incorporating factors of sustainable design and adaptation. This policy does not identify any type, specific location or quantum of development Overall, this policy is screened out from further appraisal in the Appropriate Assessment.

	f. renewable energy is enabled where it is appropriate for its site, in line with Policy C5 Renewable energy development and infrastructure; g. existing and new development will be safe from the impacts of climate change, including coastal change and flood risk and contributes to necessary infrastructure where appropriate, in line with policies C6 Coastal Change Management, C7 Implementing the Medway Estuary and Swale Coastal Risk Management Strategy, C8 Flood Risk and C9 Sustainable drainage. Where existing areas are at risk, positive approaches to adaptation and relocation are sought, in accordance with policy C6 Coastal Change Management; h. new development will seek to protect the ecosystem services on which we rely (including our water, air and soil) from all types of pollution and land instability in line with policies C10 Water quality and water resources, C11 Air quality and C12 Pollution and land instability.	
Policy ST4 – Development needs for the Borough	1. The Council seeks to meet its development needs through the implementation of existing consented sites and by and by allocating sites for development as set out in this Local Plan. <u>Swale's development needs for jobs and homes 2027 – 2042</u> 2. Land is identified by the Local Plan Review to meet the following development targets: ▪ B Class Employment floorspace provision (ha): 73ha ▪ Housing provision: 17,024 (1,064 dwellings per annum) 3. The Council will monitor and review the Local Plan as required by national policy. Infrastructure requirements to support housing and employment will be delivered as set out in the Infrastructure Delivery Plan.	LSEs of Policy ST4 on Habitats sites cannot be excluded. Policy ST4 identifies a net increase of 17,024 dwellings and 73ha of employment floorspace that will be delivered during the Local Plan period. Depending on their location, may contribute to the following impact pathways: • Atmospheric pollution • Recreational pressure • Loss of functionally linked land • Water quantity, level and flow • Visual and noise disturbance from construction works Overall, Policy ST4 is screened in for Appropriate Assessment.
Policy ST5 – Building a Strong, Competitive Economy	Actions by public, private and voluntary sectors will work towards the delivery of the Local Plan economic strategy. 1. Development proposals for current employment sites that re-provide the same employment land uses will be supported. 2. Development proposals for employment use on sites used for non-employment purposes will be encouraged where they meet the needs identified in the Council's Employment Land Review and/or where other considerations weigh in their favour. Development proposals will be encouraged where they: 3. Stabilise losses of jobs within the manufacturing sector or exploit competitive strengths in the Swale economy including uplifting sectors related to the visitor economy and expansion of the pharmaceutical and science sectors; 4. Bring forward an increase in homegrown business creation and inward investment, including those able to encourage younger people to retain and use their skills within Swale;	Policy ST5 is not associated with LSEs on Habitats sites. This policy seeks to protect existing employment sites. It also supports the intensification of existing employment sites and sets requirements for the expansion or redevelopment of existing employment sites.

	5. Encourage educational facilities or an expansion of vocational learning, developing links between institutions and the private sector or work-based learning at key locations; 6. Grow opportunities for the creative and cultural sector through opportunities in underused properties or new developments for creative start-up space, skills hub, and flexible public facing creative exhibitions and events; 7. Contribute to the delivery of a comprehensive land portfolio for the Borough by: a. safeguarding and maximising the potential of identified 'Strategic Employment Sites'; b. bringing forward the stock of existing committed employment sites for industrial use; c. addressing qualitative issues with new provision at Local Plan allocations to support established industrial markets, additional office space, the release of poorer quality locations and the broader upgrade of the supply; or d. managing existing and future employment potential by upgrading older industrial areas. 8. Include sectors that are under-represented in Swale, and/or that may potentially enable a reduction in commuting out of the Borough; 9. Avoid proposals that would harm existing employment locations and allocations where appropriately located and suitable, viable for users under normally functioning economic conditions or required to meet the identified needs for the plan period; 10. Address future challenges to the agricultural and woodland/forestry industries with sustainable and appropriate proposals to create new markets and greater resilience; 11. Safeguard or enhance Swale's 'Principal Tourism Assets' and consolidate or widen the Borough's tourism potential, particularly where embracing principles of sustainable tourism; 12. Focus larger scale development where they utilise the strategic and primary road networks; 13. Support sectors attractive to the local population who would otherwise out-commute for work; 14. Facilitate the delivery of digital infrastructure, including access to high speed Internet connectivity from all new developments; 15. Create improved resilience for existing businesses by measures to address flood risk, climate change and natural processes and lead to an expansion of businesses in the low carbon sectors; or 16. Provided the Local Plan strategy is not significantly compromised, and sites cannot be found within criterion 7, meet unanticipated needs on appropriate sites within one or more of the following 'Priority Locations': a. the extension of an existing employment site; b. where benefits to deprived communities can be achieved; c. sites well related to the A249, A2, Sittingbourne Northern Relief Road or A299 Thanet Way; or d. re-use of heritage assets or where delivering significant benefits to the conservation of landscape or biodiversity.	This policy does not propose any allocation or quantum of additional development of employment or residential sites. Therefore, this policy has no likely significant effects.
Policy ST6 – Delivering a wide Choice of High-quality Homes	Development proposals will, as appropriate: 1. Provide affordable housing in accordance with Policy H1; 2. Be steered to locations in accordance with Policy ST 2 (Swale's Settlement strategy), including: i. at local plan and neighbourhood plans allocations and Community Right to Build initiatives; ii. Windfall sites where, its design, layout and landscaping would support and enhance the character of the area and can demonstrate that development of the site within its local context, would benefit the existing community and support sustainable development. iii. town centres when contributing to their vitality and viability; or iv. Deprived communities when improving local housing markets and supporting communities. 3. Use densities determined by the context and the defining character of the area;	Policy ST6 is not associated with LSEs on Habitats sites. Policy ST6 identifies mix, affordability and density of housing developments. This policy also requires that development meet certain space standards. This policy area does not propose any allocation or quantum of additional development of employment

	4. Provide dwellings that meet minimum space standards M4(2) on 95% of all dwellings and the accessible standards M4(3) on the remaining 5% of dwellings; 5. Achieve the mix of housing types needed as reflected in the findings of the latest Housing Market Assessment or similar needs assessment, and for affordable homes to use the information from the Council's Housing Register to ascertain specific needs at that time; 6. Meet the housing requirements of specific groups including families, older persons or disabled and other vulnerable persons; 7. Bring vacant homes back into use and up to the relevant standards; and 8. Achieve sustainable, healthy and high quality designed homes in accordance with Policy ST 7 Good Design, ST8 Health and Wellbeing and policies GD1 Local Design Principles and C1 Sustainable design and adaption principles.	or residential sites. Therefore, this policy has no likely significant effects.
Policy ST7 – Good Design and Placemaking	All development will be required to achieve high-quality design that delivers sustainable, resilient and locally distinctive places. Development proposals must demonstrate how they respond to the following principles: 1. Character and Identity - Reinforce and enhance the distinctive qualities of Swale's coastal, creek, estuarine and rural landscapes, its historic towns, villages and settlements, and its built and archaeological heritage. Development must contribute positively to local identity and sense of place, responding positively to local character and context while allowing for high-quality and innovative design. 2. Inclusion and Safety - Create inclusive environments that promote health, wellbeing and social interaction. Development must ensure that spaces are safe, accessible, easy to navigate and reduce opportunities for crime. 3. Connectivity and Permeability - Provide a clear, legible and well-connected network of streets, routes and spaces that are attractive and permeable. Development should prioritise walking, cycling and public transport, and provide strong and integrated connections within sites and to the surrounding urban and natural environment, including links to the coast, countryside, green spaces and heritage assets where appropriate. 4. Sustainability and Climate Resilience - Maximise resource efficiency and minimise carbon emissions, while integrating multifunctional green and blue infrastructure that supports amenity, biodiversity net gain, water management and climate adaptation. Given Swale's particular vulnerability to flood risk, climate change and sea level rise, development must demonstrate resilience to current and future climate impacts. 5. Well-managed and Built to Last - Ensure buildings and spaces are durable, adaptable, and designed for longevity, delivering a high standard of amenity. Development must support clear arrangements for long-term stewardship, management, and maintenance, and contribute positively to Swale's built and natural environment. 6. Context - Ensure that the use, scale, height, massing, density, and appearance of development are appropriate to their location, responding positively to both the immediate context and the wider area. In smaller settlements, rural areas, and sensitive coastal, creekside, and historic environments, development should take account of the established character, grain, and setting. 7. Public Spaces - Deliver high-quality, well-designed public spaces and public realm that support social interaction, community cohesion and opportunities for recreation and cultural activity. Public spaces should respond to and celebrate Swale's distinctive character, including its maritime, industrial and landscape heritage. 8. Development should comply with the detailed requirements of Policy GD1 (Local Design Principles), relevant design codes and masterplans, which provide more specific guidance on achieving these principles. 9. Major and sensitive development proposals will be required to engage with the Council's Design Review Panel at an early stage, in accordance with the Council's Design Review Protocol.	Policy ST7 is not associated with LSEs on Habitats sites. Policy ST7 is a design management policy that sets certain design criteria for development within the plan area. This policy area does not propose any allocation or quantum of additional development of employment or residential sites. Therefore, this policy has no likely significant effects.
Policy ST8 – Health and Wellbeing	The Council, working in conjunction with relevant organisations, communities and developers, will undertake targeted interventions to identify Swale's most disadvantaged families and communities, improve	Policy ST8 is not associated with LSEs on Habitats sites.

	our understanding of the issues they face, and develop new ways of working to reduce social exclusion and enhance opportunities and quality of life to reduce health inequalities. Development proposals will, as appropriate: 1. Bring forward accessible new community services and facilities, including sufficient health facilities with developers contributing towards the provision of built facilities and other improvements to healthcare services, as set out in the Infrastructure Delivery Plan; 2. Safeguard existing community services and facilities where they are viable or can be made so, or where replacement facilities can be provided without leading to any shortfall in provision: access to open space to facilitate physical activity, cultural activity, activities which strengthen social bonds, healthy eating learning, childcare and youth provision; 3. Safeguard or provide multifunctional open space, sport and recreation in accordance with INF3 Open space, sport and recreation provision, additionally enabling access to nature in accordance with the green infrastructure strategy in ST11 Conserving and enhancing the natural environment; 4. Promote healthier options for transport, including cycling and walking by ensuring that the site chosen for the new place is suitable for sustainable transport links with other places, where appropriate is designed to be mixed use, compact and provided with safe pedestrian and cycle routes to make active travel easier in accordance with ST10 Promoting sustainable transport and active travel; 5. Improve or increase access to a healthy food supply such as allotments, markets and farm shops; 6. Limit new hot food takeaways within 400m of a school perimeters; 7. Create social interaction and safe environments through mixed uses and in the design and layout of new development in accordance with ST6 Delivering a wide choice of high-quality homes ST7 Good design; 8. Create a healthy environment that regulates local climate by providing open space and greenery to achieve shading and cooling, particularly within existing urban environments in accordance with B5 Woodland, orchards, trees and hedgerows; 9. Address air quality in accordance with C11 Air quality; 10. Ensure mitigation and adaptation to climate change through sustainable design and construction in accordance with C1 Sustainable design and adaptation principles; and 11. Undertake and implement a Health Impact Assessment for relevant proposals that are: a. Required to undertake Environmental Impact Assessments; or b. Within Swale's most deprived wards; or c. Identified as required by the Local Plan.	Policy ST8 seeks to support the health and wellbeing of residents. This includes the safeguarding of open space and community facilities as well as promoting healthier options for food and transport. The policy does not allocate quanta or locations of residential or employment development. Therefore, no impact pathways to Habitats sites are present. Overall, Policy ST8 is screened out from further appraisal in the Appropriate Assessment.
Policy ST9 – Planning for Infrastructure	The Council will work with Kent County Council, infrastructure providers, applicants and other key stakeholders to ensure that growth over the plan period is supported by necessary infrastructure, facilities and services in a timely manner to meet the needs of communities. 1. The Council will resist the loss or change of use of existing social and community facilities unless it can be demonstrated that: a. The facility is no longer needed for its existing purpose, and the site or building is not needed for an alternative social or community use; b. The current or alternative community uses are not viable; or	Policy ST9 is not associated with LSEs on Habitats sites. Policy ST9 is a development management policy, requiring new development to ensure there is sufficient infrastructure provision. This policy also

	c. The services can be re-provided in a facility of better quality on the same site or in an alternative location that is equally accessible to the community served. 2. Development proposals, including those allocated in this plan, which give rise to the need for infrastructure improvements will be expected to mitigate their impact either individually or cumulatively and at a rate and scale to meet the needs that arise from that development or a phase of that development. As such development may require to be phased to ensure the co-ordination with delivery of necessary infrastructure. Where appropriate, developers will be expected to collaborate on the provision of infrastructure needed to serve more than one site. 3. The council will regularly update the Infrastructure Delivery Plan to determine the scope, cost and range of infrastructure improvement required to continue supporting the delivery of the Local Plan.	resists the loss and change of use of existing social and community facilities. This policy does not control either the quantum or location of new development. There are no linking impact pathways present. Overall, Policy ST9 is screened out from further appraisal in the Appropriate Assessment.
Policy ST10 – Promoting Sustainable Transport and Active Travel	New development will be located in accordance with Policies ST 1 and Policy ST 2, Local Plan allocations and approved Neighbourhood Plans, which minimise the need to travel for employment and services and facilitate sustainable transport. The Council will promote an uptake of sustainable transport and active travel through the prioritisation of walking, wheeling and cycling, in line with the hierarchy of road users, and the Council's adopted Swale wide Local Cycling and Walking Infrastructure Plan (LCWIP) and Faversham's LCWIP, along with public transport within all new developments. The Council will: 1. Promote walking within the borough by ensuring that developments improve the pedestrian environments by supporting public realm improvements including the provision of high-quality safe road crossings, seating, signage and landscaping that are safe and easy to walk through; 2. Promote cycling in the borough by ensuring that developments provide and make a contribution towards high quality and safe cycle routes, provide for accessible, secure cycle parking taking into account the size and location of the development, and make provision for high quality facilities that promote cycle usage including showers, lockers and dryers; 3. Ensure walking and cycling routes are linked to new and existing communities with services and facilities, public transport and the Green Grid network and are accessible for all users; 4. Safeguard and promote the provision of public transport in the borough by ensuring that development contributes towards improvements to bus network infrastructure including access to bus stops, shelters, passenger seating, waiting areas, signage and timetable information. Contributions will be sought where the demand for bus services generated by the development is likely to exceed existing capacity. Contributions may also be sought towards the improvement of other forms of public transport in major developments where appropriate; 5. Where appropriate, be required to provide for the interchange between different modes of transport including the provision of facilities to make interchange easy and convenient for all users – as set out in Policy INF1; 6. Facilitate the greater use of waterways for commercial traffic, where this would not have an unacceptable adverse environmental impact, through working with the Port of Sheerness and other bodies; 7. Contribute to transport network improvements, where capacity is exceeded and or safety standards are unacceptably compromised with particular emphasis on those identified in the Infrastructure Delivery Schedule and in paragraph 4.2.112 above;	Policy ST10 is not associated with LSEs on Habitats sites. Policy ST10 is a positive development management policy, requiring new development to support public transportation and active travel. This also includes the support of use of waterways for commercial traffic, and maintaining and improving the highway network where required to improve transport flows. This policy does not control either the quantum or location of new development. There are no linking impact pathways present. Overall, Policy ST10 is screened out from further appraisal in the Appropriate Assessment.

	8. Make best use of capacity in the network by working together with transport providers to improve the transport network in the most sustainable way, and extending it where necessary, as demonstrated by Transport Assessments and Travel Plans in support of development proposals – as discussed in INF1; 9. Support the provision of major new transport infrastructure in accordance with national and local transport strategies; and 10. Maintain and improve the highway network at key points to improve traffic flows and respond to the impact of new development and regeneration, as set out in the existing Local Transport Strategy.	
Policy ST11 – Protecting and Enhancing the Natural Environment	1. Actions by public, private and voluntary sectors will: a. use nature-based solutions to safeguard, restore and enhance the size, quality, diversity and interconnectedness of the natural environment in Swale and reverse the decline in nature, including furthering the delivery of Swale's Green and Blue Infrastructure Network and Strategy and the Kent and Medway Local Nature Recovery Strategy; b. recognise and value natural capital and ecosystems for the wider services they provide, such as for food, water, flood mitigation, disease control, recreation, health and well-being, climate change mitigation; c. provide a focus and opportunities for social inclusion, community development and lifelong learning(?); 2. All non-householder development proposals will, as appropriate, demonstrate via a Natural Environment Statement how the development: a. is appropriate to its location, steered to land of least environmental value and avoids: internationally, nationally and locally designated sites of importance for nature; nationally and locally designated landscapes; best and most versatile agricultural land, in accordance with policies B1 Biodiversity and geodiversity conservation and Biodiversity Net Gain and B2 Conserving and enhancing valued landscapes and B6 Agricultural Land; b. follows the mitigation hierarchy by avoiding, then mitigating, and only as a last resort, compensating for adverse impacts on biodiversity and the natural environment; c. provides protection, enhancement and recovery to the most valuable existing habitats and species (Habitats and Species of principle importance under s.41 of the NERC Act), and the creation of new habitats; d. contributes to the recovery and expansion of Swale's natural environment, by fully responding to the Council's Biodiversity Baseline Study, the Green and Blue Infrastructure Strategy, Natural England's Green Infrastructure Strategy and contributes to the targets of identified Biodiversity Opportunity Areas and of the Kent and Medway Local Nature Recovery Strategy. e. protects and enhances the intrinsic character and natural beauty of the countryside and the borough's urban natural environment; 3. All applications will accord with Policy B1 Biodiversity, geodiversity and biodiversity net gain with regard the hierarchy of biodiversity and geological designations as well as for land that is not specifically designated, but contains features of biodiversity and geodiversity value. 4. All relevant development will set out, via a Biodiversity Gain Plan, how development will achieve a measurable, by a recognised metric, net gain of 20% in biodiversity, in accordance with Policy B1 Biodiversity, geodiversity and biodiversity net gain; 5. All relevant development will require the completion of project specific Habitats Regulations Assessment (HRA), to ensure there are no likely significant effects upon any European designated site. For residential sites within 6km of an access point to any of the North Kent Marshes, development must contribute to its Strategic Access Management and Monitoring Strategy or undertake their own HRA; 6. All development will: a. increase opportunities for nature, 'green' the borough and assist with adaptation to the changing climate in existing and proposed development by contributing to the planting of a strategically significant network of street trees, trees in and around formal open spaces and in new gardens, green roofs and green walls, and contribute	Policy ST11 is not associated with LSEs on Habitats sites. Policy ST11 is a positive development management policy, requiring new development to protect and enhance the natural environment. This includes requirements for all relevant development to prepare project specific Habitat Regulations Assessments. This policy also requires development to contribute to the councils Green and blue infrastructure strategy. This policy does not control either the quantum or location of new development. There are no linking impact pathways present. Overall, Policy ST11 is screened out from further appraisal in the Appropriate Assessment.

	to approaches to improve the network of habitats at scale and locally (eg though the inclusion of swift and bat boxes and hedgehog highways); b. deliver a high standard of design quality and promote nature-based solutions to protect the intrinsic natural beauty and character of our natural environment in accordance with policies ST7 Good design, GD1 Local Design Principles, B4 The Separation of Settlements – Important Local Countryside Gaps, B8 Rural Lanes and B9 The keeping and grazing of horses and maximise the social, economic, health and environmental benefits of green and blue infrastructure c. provide new recreational facilities in accordance with Policy INF3 Open space, sport and recreation provision, exploiting opportunities to increase green infrastructure whilst linking urban and countryside areas and to create new 'green' footpath and cycle links between new and existing developments and services and facilities for both recreation and commuting, in accordance with ST 10 Promoting Sustainable Transport and Active Travel and INF1 Managing transport demand and impact; d. create natural environments that promote health and wellbeing and protect Local Green Spaces in accordance with policies ST8 Health and Wellbeing and INF4 Local Green Spaces. e. ensure mitigation and adaptation to climate change is a defining element of any proposals, in accordance with ST 3 Climate Change and the Development Management Climate Change Policies C1 to C5, prioritising nature-based approaches. f. take account of and integrate with natural processes, such as natural flood management, utilising sustainable urban drainage in accordance with Policies C8 Flood Risk and C9 Sustainable Drainage; g. ensure development is safe from the risks of flooding and coastal change and does not increase flood risk elsewhere, in accordance with C6 Coastal Change Management, C7 Implementing the Medway Estuary and Swale Risk Management Strategy and C8 Flood Risk; h. demonstrate how pollution will be prevented and local environmental conditions, including air, soil and water quality are to be improved by development and how contaminated or unstable land will be remediated; i. demonstrate how natural resources will be protected and ecosystem services supported, in accordance with C10 Water quality and water resources, C11 Air Quality and C12 Pollution and Land Instability j. protect, enhance and manage the value, character, amenity and tranquillity of the Borough's landscapes, in accordance with Policies B2 Conserving and enhancing valued landscapes and B3 The Kent Downs National Landscape and B7 The Coast. k. Demonstrate the protection, enhancement and management, as appropriate, of seascape and coastal processes in accordance with C6 Coastal Change Management, B7 The Coast and C7 Implementing the Medway Estuary and Swale Coastal Risk Management Strategy.	
Policy ST12 – Conserving and Enhancing the Historic Environment	1. Heritage assets within the Borough are an irreplaceable resource that contribute to its character, identity, economy, and quality of life. Development affecting heritage assets will be required to conserve and, where appropriate, enhance their significance, including their setting, in a manner proportionate to their importance. 2. Designated heritage assets will be given great weight in decision-making. Any harm to, or loss of, their significance, including their setting, must be clearly justified and will be weighed against the public benefits of the proposal. Substantial harm or total loss will be exceptional and will only be permitted where substantial public benefits outweigh that harm or loss. 3. Applications affecting non-designated heritage assets, directly or indirectly, will be assessed through a balanced judgement, having regard to the significance of the asset and the scale of any harm or loss. 4. Development proposals must respond, where applicable, to the following principles: 5. Conserve and respond positively to the significance, form and character of settlements, historic landscapes and heritage assets;	Policy ST12 is not associated with LSEs on Habitats sites. This policy is a development management policy that protects designated and non-designated heritage assets. This policy area does not propose any allocation or quantum of additional development of employment

	6. Support the sensitive and sustainable use of heritage assets, including those identified as being at risk on national or local registers; 7. Promote the understanding, appreciation and enjoyment of heritage assets through interpretation, education and, where appropriate, public access; 8. Ensure that measures to address climate change and sustainable development are sensitively designed and implemented to avoid unacceptable harm to the significance of heritage assets; 9. Recognise the importance of archaeological remains, historic landscapes and the broader setting of heritage assets; and 10. Recognise and account for cumulative or incremental impacts on heritage assets and their settings. 11. Where appropriate, conservation and enhancement measures will be secured through planning conditions or obligations.	or residential sites. Therefore, this policy has no likely significant effects.
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Appendix C Site Allocations

Table 5: Site allocations within the SLP

Site Allocation	Land Use type	Number of Dwellings	Floorspace sqm	Nearest Habitats Site	Coastal and Floodplain Grazing Marsh	Approx. Distance to the Nearest Habitats Site (km)
Bell House, Bell Road	Houses	120	0	The Swale SPA/Ramsar	N	2.2km
Former Bus Depot, East Street	Houses	22	0	The Swale SPA/Ramsar	N	2.0km
The Classic Cinema, High Street, Sittingbourne, ME10 4PE	Houses	50	0	The Swale SPA/Ramsar	N	2.1km
10-14 High Street, Sittingbourne, ME10 1PD	Houses	3	0	The Swale SPA/Ramsar	N	2.2km
Land at Tonge Road	Houses	19	0	The Swale SPA/Ramsar	N	1.0km
St Michaels House and Langs Bar, St Michaels Road, Sittingbourne	Houses	30	0	The Swale SPA/Ramsar	N	2.2km
ISP, Church Street	Houses	15	0	The Swale SPA/Ramsar	N	2.5km
Lady Dane Farm Buildings, Love Lane	Houses	25	0	The Swale SPA/Ramsar	N	1.0km
Land at Graveney Road, East of Faversham (Site A)	Houses	177	0	The Swale SPA/Ramsar	N	0.9km
Land at Lion Field	Houses	68	0	The Swale SPA/Ramsar	N	1.5km
Syndale Park, London Road, Faversham, Kent, ME13 0RH	Houses	9	0	The Swale SPA/Ramsar	N	1.7km
Land at West Minster off of Brielle Way, Sheerness	Houses	76	0	Medway Estuary and Marshes SPA/Ramsar	N	1.1km

Land Brielle Way, Sheerness	Houses	76	0	Medway Estuary and Marshes SPA/Ramsar	N	0.5km
Halfway Houses Primary School, Southdown Rd	Houses	60	0	The Swale SPA/Ramsar	N	1.7km
Hollybush Farm Caravan Park, Oak Lane, Minster-on-Sea, ME12 3QR	Houses	124	0	Outer Thames Estuary SPA	N	0.5km
Estuary View, Bell Farm Lane, Minster-on-Sea, ME12 4JA	Houses	15	0	Outer Thames Estuary SPA	N	0.9km
Golden Leas Holiday Park, Bell Farm Lane, Minster-on-Sea, ME12 4JA	Houses	232	0	Outer Thames Estuary SPA	N	0.7km
Land at West Street	Houses	80	0	Medway Estuary and Marshes SPA/Ramsar	N	Immediately adjacent
South of Queenborough Creek	Houses	380	0	Medway Estuary and Marshes SPA/Ramsar	N	Immediately adjacent
Former Istil site Rushenden Road/Thomsett Way	Houses	240	0	Medway Estuary and Marshes SPA/Ramsar	Y	0.3km
West of Rushenden Road, Queenborough	Houses	278	0	Medway Estuary and Marshes SPA/Ramsar	N	Immediately adjacent
The Foundary, Rushenden Road	Houses	37	0	Medway Estuary and Marshes SPA/Ramsar	N	0.3km
Land adjacent to Leysdown Road, Eastchurch, ME12 4BN	Houses	62	0	Outer Thames Estuary SPA	N	1.9km
Land south of Little Groves, Leysdown Road	Houses	53	0	Outer Thames Estuary SPA	N	1.0km
Sheppey Beach Villas, Manor Way, ME12 4QQ	Houses	133	0	Outer Thames Estuary SPA	N	0.7km

Digswell, Lower Hartlip Road, Hartlip, ME9 7SX	Houses	11	0	Queensdown Warren SAC	N	2.2km
Amethyst Horticulture, Land at Newington Nurseries, London Road, Newington, ME9 7NY	Houses	52	0	Medway Estuary and Marshes SPA/Ramsar	N	2.2km
Barrow Green Farm, Barrow Green	Houses	30	0	The Swale SPA/Ramsar	N	1.4km
Land Adjoining Mayfield, London Road	Houses	13	0	The Swale SPA/Ramsar	N	2.2km
Land at Claxfield Road	Houses	127	0	The Swale SPA/Ramsar	N	2.2km
Land at Claxfield Road (Site 2)	Houses	12	0	The Swale SPA/Ramsar	N	2.2km
Land off Colonels Lane	Houses	15	0	Blean Complex SAC	N	3.3km
The Former Garden Hotel (no 169), The Street	Houses	10	0	The Swale SPA/Ramsar	N	3.3km
Land at Norton Ash Garden Centre	Houses	100	0	The Swale SPA/Ramsar	N	1.5km
Land at Street Farm, Pond Farm Road (Site B)	Houses	15	0	Queensdown Warren SAC	N	4.8km
Home Farm, Breach Lane, Lower Halstow, ME9 7DB	Houses	16	0	Medway Estuary and Marshes SPA/Ramsar	N	0.9km
Land at Forge Lane, Upchurch	Houses	20	0	Medway Estuary and Marshes SPA/Ramsar	N	0.6km
Land south of Forge Lane and Holywell Primary School and East of Chaffes Lane	Houses	84	0	Medway Estuary and Marshes SPA/Ramsar	N	0.6km
Land off Chaffes Lane	Houses	14	0	Medway Estuary and Marshes SPA/Ramsar	N	0.5km
Land at Long Field, Chaffes Lane	Houses	50	0	Medway Estuary and Marshes SPA/Ramsar	N	0.5km

Land west of Warden	Houses	139	0	Outer Thames Estuary SPA	N	1.0km
Three Lakes Park, Church Road, ME10 3NL	G&T Pitches	4	0	The Swale SPA/Ramsar	Y	0.08km
Bakers Place, Lomas road, ME9 8BB	G&T Pitches	2	0	The Swale SPA/Ramsar	N	0.7km
Emley Road, ME12 3SS	G&T Pitches	1	0	The Swale SPA/Ramsar	N	1.2km
The Peartree, Greyhound Road, ME 12	G&T Pitches	1	0	The Swale SPA/Ramsar	N	1.0km
15 The Laurels, Bell Farm Lane, ME12 4JA	G&T Pitches	3	0	Outer Thames Estuary SAC	N	0.4km
Land At Warden Road / Rear Of Orchard Cottage (Mary's Place) ME12 4GJ	G&T Pitches	2	0	Outer Thames Estuary SAC	N	1.8km
Keycol Farm, Keycol Hill, ME9 8NA	G&T Pitches	2	0	Medway Estuary and Marshes SPA/Ramsar	N	2.9km
Breach Farm Paddocks, Breach Lane	G&T Pitches	1	0	Medway Estuary and Marshes SPA/Ramsar	N	2.0km
Mattsfield, Boxted Lane, ME9 7BX	G&T Pitches	4	0	Medway Estuary and Marshes SPA/Ramsar	N	1.5km
Halstow Cross, ME9 7ER	G&T Pitches	3	0	Medway Estuary and Marshes SPA/Ramsar	N	0.6km
Jack Russell Place, ME9 7AB	G&T Pitches	3	0	Medway Estuary and Marshes SPA/Ramsar	N	0.3km

Windmill Farm, ME9 7XF	G&T Pitches	3	0	Queendown Warren SAC	N	0.4km
Ridham Dock - redevelopment	Employment	0	250000	The Swale SPA/Ramsar	Y	Immediately adjacent
Land at Pheasant Farm (west), Howt Green, Sittingbourne	Employment	0	16000	The Swale SPA/Ramsar	N	1.5km
Land fronting east side Bobbing Hill, Sittingbourne	Employment	0	10000	Medway Estuary and Marshes SPA/Ramsar	N	3.5km
Land adj. Kemsley Substation, ME10 2FE	Employment	0	50000	The Swale SPA/Ramsar	N	0.5km
Smeed Dean Works, Eurolink Industrial Estate, Castle Road	Employment	0	43000	The Swale SPA/Ramsar	Y	Immediately adjacent
Land north of Keycol Hill (Yellow/Blue parcel)	Employment	0	296000	Medway Estuary and Marshes SPA/Ramsar	N	3.2km
Land East of Faversham expansion	Employment	0	210000	The Swale SPA/Ramsar	N	1.0km
Land adj to A2 at Love Lane and west of Salter's Lane to Brenley Corner (the Duchy site)	Employment	0	200000	The Swale SPA/Ramsar	N	1.4km
Land at Marshlands Farm, Lower Road, Minster	Employment	0	56000	The Swale SPA/Ramsar	N	0.8km
South of Queenborough Creek	Employment	0	10000	Medway Estuary and Marshes SPA/Ramsar	Y	Immediately adjacent
Newington Industrial Estate - southern expansion	Employment	0	20000	Queendown Warren SAC	N	2.1km
Land to the west and east of Newington Industrial Estate, Newington, ME9 7NU	Employment	0	31400	Queendown Warren SAC	N	2.1km
Land at Radfield Farm, London Road, Bapchild	Employment	0	30000	The Swale SPA/Ramsar	N	1.6km

Hartlip Industrial Estate, Hartlip (extension to)	Employment	0	59000	Queendown Warren SAC	N	1.6km
Grove Farm	Employment	0	51000	Medway Estuary and Marshes SPA/Ramsar	N	3.2km
Lamberhurst Farm, Yorklets - proposed southern expansion	Employment	0	32000	Blean Complex SAC	N	0.3km
Waterham Industrial Estate - expansion east	Employment	0	5000	The Swale SPA/Ramsar	N	0.5km
South East Faversham	Mixed	2500	54000	The Swale SPA/Ramsar	N	1.4km
Land west of existing Bobbing Village	Mixed	2500	52100	Medway Estuary and Marshes SPA/Ramsar	N	1.4km

