



Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (RAMS)

Habitats Regulations Assessment
Strategy document
2018-2038

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Executive Summary

The Essex coast Recreational disturbance Avoidance and Mitigation Strategy (the “Essex coast RAMS” or the Strategy) aims to deliver the mitigation necessary to avoid significant adverse effects from ‘in-combination’ impacts of residential development that is anticipated across Essex; thus protecting the Habitats (European) sites on the Essex coast from adverse effect on site integrity. All new residential developments within the evidenced Zone of Influence where there is a net increase in dwelling numbers are included in the Essex Coast RAMS.

The Essex Coast RAMS identifies a detailed programme of strategic mitigation measures which are to be funded by developer contributions from residential development schemes.

The 11 Local Planning Authorities (LPAs) which are partners in and responsible for the delivery of the Essex Coast RAMS are listed below:

- Basildon Borough Council
- Braintree District Council
- Brentwood Borough Council
- Castle Point Borough Council
- Chelmsford City Council
- Colchester Borough Council
- Maldon District Council
- Rochford District Council
- Southend Borough Council
- Tendring District Council
- Thurrock Borough Council

The published Habitats Regulations Assessments (HRAs) for the relevant Local Plans have identified recreational disturbance as an issue for all of the Essex coastal Habitats sites.

Mitigation measures have been identified in the HRA (screening and/or Appropriate Assessments) for many of the Local Plans. There are similarities in the mitigation measures proposed, reflecting the identification of in-combination effects resulting from planned and un-planned growth in LPA areas.

Mitigation at this scale, and across a number of LPAs, is best tackled strategically and through a partnership approach. This ensures maximum effectiveness of conservation outcomes and cost efficiency. In recognition of this, Natural England recommended a strategic approach to mitigation along the Essex coast.

This strategic approach has the following advantages:

- It meets the requirements of planning legislation: necessary to make a development acceptable in planning terms, directly related to the development and fairly and reasonably related in scale and kind to a development;
- It is endorsed by Natural England and has been used to protect other Habitats sites across England;
- It is pragmatic: a simple and effective way of protecting and enhancing the internationally important wildlife & habitats of the Essex coast and will help to reduce the time taken to reach planning decisions;
- It allows for detailed evidence to be gathered to understand the recreational disturbance patterns and provide an effective mitigation package;
- It provides an evidence based and fair mechanism to fund the mitigation measures required as a result of the planned residential growth; and

It provides developers, agents and planning authorities with a comprehensive, consistent and efficient way to ensure that appropriate mitigation for residential schemes within the Zone of Influence is provided in an effective and timely manner.

The mitigation measures in the Essex Coast RAMS toolkit are summarised below:

Action area	Examples
Education and communication	
Provision of information and awareness raising	<p>This could include:</p> <ul style="list-style-type: none"> • Information on the sensitive wildlife and habitats • A coastal code for visitors to abide by • Maps with circular routes away from the coast on alternative footpaths • Information on alternative sites for recreation <p>There are a variety of means to deliver this such as:</p> <ul style="list-style-type: none"> • Through direct engagement led by Rangers/volunteers • Interpretation and signage • Using websites, social media, leaflets and traditional media to raise awareness of conservation and explain the Essex Coast RAMS project. • Direct engagement with clubs e.g. sailing clubs, ramblers clubs, dog clubs etc. and local businesses.
Habitat based measures	
Fencing/waymarking/screening	Direct visitors away from sensitive areas and/or provide a screen to minimise their impact
Pedestrian (and dog) access	<ul style="list-style-type: none"> • Zoning • Prohibited areas • Restrictions of times for access e.g. to avoid bird breeding season

Cycle access	Promote appropriate routes for cyclists to avoid disturbance at key locations
Vehicular access and car parking	Audit of car parks and capacity to identify hotspots and opportunities for “spreading the load”
Enforcement	<ul style="list-style-type: none"> Establish how Water Rangers operating the patrol boats can be most effective. It should be possible to minimise actual disturbance from the boat itself through careful operation. Rangers to explain reasons for restricted zones to visitors e.g. for bait digging, dogs on a lead
Habitat creation	Saltmarsh recharge, regulated tidal exchange and artificial islands may fit with Environment Agency Shoreline Management Plans
Project delivery	
Partnership working	Natural England, Environment Agency, RSPB, Essex Wildlife Trust, National Trust, landowners, local clubs and societies.
Monitoring and review	Birds and visitor surveys with review of effectiveness of measures with new ideas to keep visitors wanting to engage

The overall cost for the mitigation package is £8,916,448 in total from today until 2038. **The tariff per dwelling for this period is currently calculated at £122.30.**

Existing visitor pressure at Habitats sites will need to be mitigated through alternative means and any pressure that would arise from different types of development would be addressed through the relevant project HRA.

Ahead of the production of the Essex coast RAMS, LPAs have had an interim approach to delivering the requirements of the Habitats Regulations. The publication of the RAMS begins the strategic mitigation phase and the Essex Coast RAMS allows LPAs to collect developer contributions for applications for new residential dwellings which fall within the Zone of Influence of the Essex coast Habitats sites. The Essex Coast RAMS will be accompanied by a Supplementary Planning Document, which will facilitate its delivery.

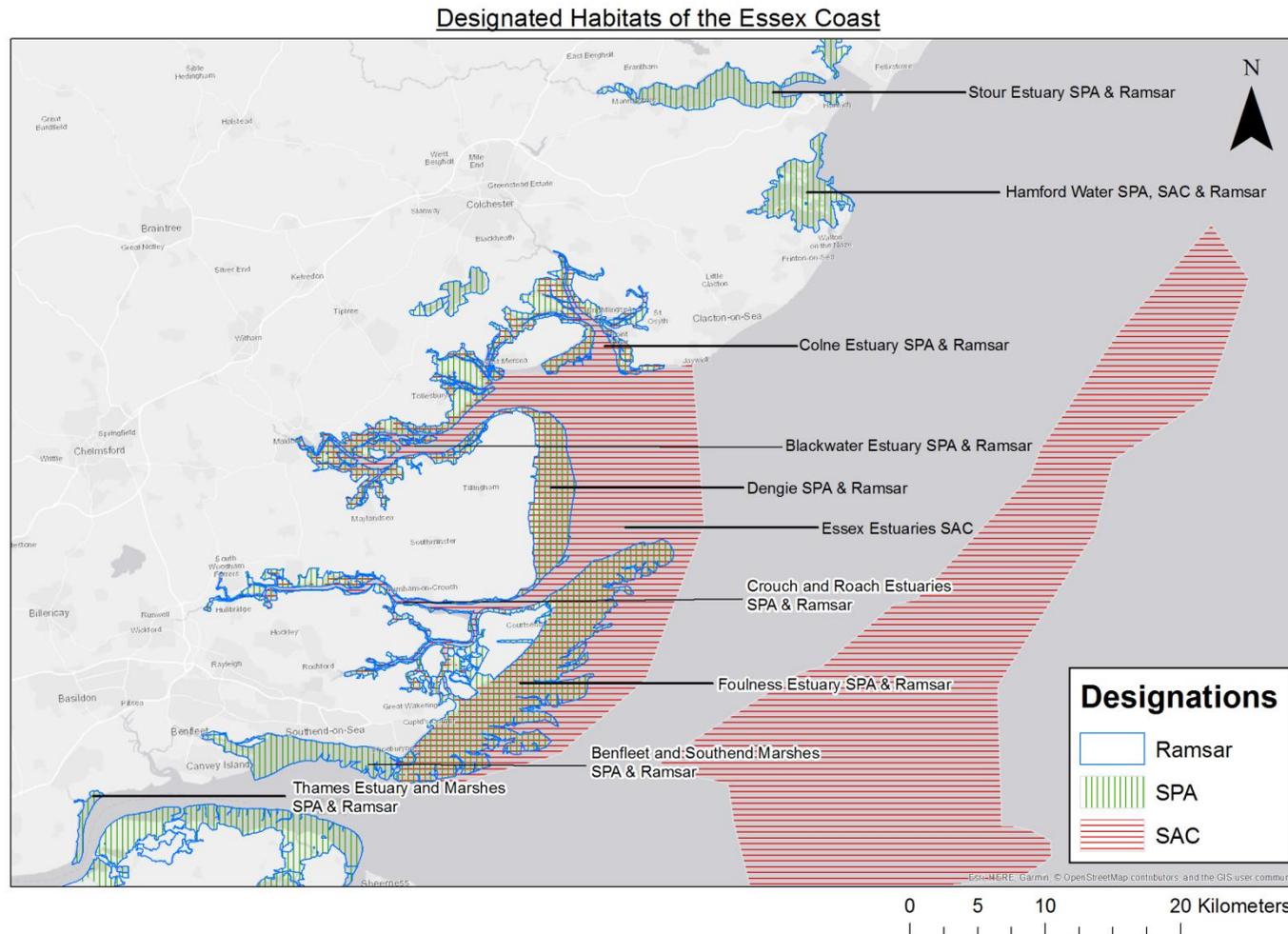
1 Introduction

- 1.1 The Essex coastline stretches for just over 350 miles, extending from the Thames Estuary in the south, northwards to the port of Harwich and the Stour Estuary. The coastline is extremely diverse and features a variety of habitats and environments and which are internationally important for wildlife as shown on Fig. 1.1.
- 1.2 Most of the Essex coast is designated under the UK Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations') as part of the European Natura 2000 network a series of these sites across Europe. For the purposes of this Strategy this means Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites. A key purpose of these designations is to protect internationally important numbers of breeding and non-breeding birds and their coastal habitats.
- 1.3 The Habitats Regulations usually refer to these sites as 'European Sites', however as SPAs and SACs (designated under the EU Birds and Habitats Directives) are now defined as 'Habitats sites' in the National Planning Policy Framework (NPPF) (2018) they will be referred to as Habitats sites in this Strategy. The NPPF (para 176) gives the same protection to Ramsar sites (wetlands of international importance designated under the Ramsar convention). For this Strategy, the term Habitats Sites will therefore also include Ramsar sites.
- 1.4 The Essex coast also provides opportunities for recreation. Housing and consequent population growth in Essex is likely to increase the number of visitors to these sensitive coastal areas, creating the potential for impacts from increased recreational disturbance of the birds and their habitats, unless adequately managed.
- 1.5 This Recreational disturbance Avoidance and Mitigation Strategy (RAMS) will support sustainable residential growth in Essex. It will deliver mitigation to protect coastal Habitats sites and the wildlife they support, from the increased recreational disturbance associated with a growth in population.
- 1.6 This mitigation must keep ahead of the rate of population growth to avoid any adverse effects on the integrity of coastal Habitats sites.
- 1.7 The Essex Coast RAMS will be deemed successful if the level of bird disturbance is not increased despite an increase in population and the number of visitors to the coastal sites for recreation.

- 1.8 The network of Habitats sites within the UK covers over 8.5% of the land area or 920 sites in total. There are 10 of these sites in the Essex Coast RAMS area¹ (see Figure 1.1 overleaf for more details). This means that almost the entire Essex coast is protected by an international designation for its wildlife interest.
- 1.9 Each Habitats site is underpinned by one or more Site of Special Scientific Interest (SSSI) as defined by Natural England advice.
- 1.10 Natural England is the Government's advisor for the natural environment in England and has published a set of mapped Impact Risk Zones (IRZs) for all Sites of Special Scientific Interest (SSSIs). These are defined on the Natural England website as "a GIS tool developed by Natural England to make a rapid initial assessment of the potential risks posed by development proposals to: Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites. They define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts."
- 1.11 The IRZs have been identified for all SSSIs, with different trigger distances for a variety of types of developments. This study has defined Zones of Influence (ZOIs) for each Habitats site, based purely on recreational disturbance from residential dwellings.
- 1.12 11 of the 14 Essex Local Planning Authorities (LPAs) lie wholly or partly within the IRZs of these coastal Habitats sites. The 11 LPAs that are therefore partners to this strategy are:
- Basildon Borough Council
 - Braintree District Council
 - Brentwood Borough Council
 - Castle Point Borough Council
 - Chelmsford City Council
 - Colchester Borough Council
 - Maldon District Council
 - Rochford District Council
 - Southend-on-Sea Borough Council
 - Tendring District Council
 - Thurrock Council

¹ Abberton Reservoir and Epping Forest are also Habitats sites in Essex, but these are not within scope for the Essex Coast RAMS.

Figure 1.1: Habitats (European) sites on the Essex coast



- Notes:**
- Ramsar sites are areas of wetland which are designated of international importance under the Ramsar Convention (1971)¹.
 - Special Protection Areas (SPAs) are sites which support rare, vulnerable and migratory birds.
 - Special Areas for Conservation (SACs) are sites which support high-quality habitats and species.

- 1.13 Together, these LPAs are aiming to deliver approximately 80,000 new homes in the next 20 years according to growth set out in current and emerging Local Plans. This will potentially result in around 190,000 new residents in this area between 2018 and 2038 (based on a 2.4 person per household average household occupancy).
- 1.14 Harlow and Epping Forest Districts are not included in the Essex Coast RAMS because their geographical areas were outside the Zones of Influence for the coastal Habitats sites. However now that the ZOI for the Blackwater Estuary SPA & Ramsar site includes a small part of Uttlesford District, the District Council may decide to join as a partner for adoption of SPD and the delivery phase of the Essex Coast RAMS.
- 1.15 Under the Habitats Regulations, each of the partner LPAs is defined as “competent authority”, which is a term used for any public body or individual holding public office. In practice, this means that these LPAs have a duty to comply with the Habitats Regulations and ensure that plans and projects under their jurisdiction do not lead to adverse effects on the integrity of Habitats sites.
- 1.16 The published Habitats Regulations Assessments (HRAs) for the relevant Local Plans have also identified recreational disturbance as an issue for all of the Essex coastal Habitats Sites.
- 1.17 Each Habitats site or complex of sites in England has a Site Improvement Plan (SIP), developed by Natural England.
- 1.18 SIPs provide a high level overview of the issues (both current and predicted) affecting the condition of the designation features on the Habitats site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.
- 1.19 The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.
- 1.20 The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents; they are live documents that are continually updated.
- 1.21 The planned growth in population is expected to increase the number of residents

using recreational spaces within reach of the new housing, including the Essex coast where people can undertake a range of recreational activities including picnics, hiking, walking their dogs, swimming, sailing and many other land and water based activities.

- 1.22 The Essex coast Habitats sites already experience recreational pressures but the planned level of population growth in Essex is likely to increase the number of visitors to these sensitive coastal areas. Unless adequately managed, this creates a potential for conflict between recreational activities and the conservation of internationally important assemblages of birds and habitats.
- 1.23 In response to the evidence for potential for recreational disturbance impacts from housing allocations in Local Plans, Natural England provided a list of Habitats sites to be included in a strategic approach to mitigation on the Essex coast. These are listed in Table 1.1 and shown on Figure 1.1:

Table 1.1: Habitats sites in Essex relevant to the Strategy

Habitats Sites on the Essex Coast
Essex Estuaries SAC
Hamford Water SAC, SPA and Ramsar
Stour and Orwell Estuaries SPA and Ramsar
Colne Estuary SPA and Ramsar
Blackwater Estuary SPA and Ramsar
Dengie SPA and Ramsar
Crouch and Roach Estuaries SPA and Ramsar
Foulness Estuary SPA and Ramsar
Benfleet and Southend Marshes SPA and Ramsar
Thames Estuary and Marshes SPA and Ramsar

Notes:

- *Ramsar sites are areas of wetland which are designated of international importance under the Ramsar Convention (1971)².*
- *Special Protection Areas (SPAs) are sites which support rare, vulnerable and migratory birds.*
- *Special Areas for Conservation (SACs) are sites which support high-quality habitats and species.*

² Listed or proposed Wetlands of International Importance under the Essex Coast Ramsar Convention (Ramsar) sites are protected as a matter of Government policy. Paragraph 118 of the National Planning Policy Framework applies the same protection measures as those in place for European sites.

1.24 Evidence for a link between population increase, increased recreational pressure on the Essex coast and the resultant impact on wildlife comes from a study by Footprint Ecology commissioned by Natural England (Panter, C & Liley, D 2016). The following text box provides further details.

Table 1.2: Effects of recreational disturbance on non-breeding SPA birds
(Reproduced from Panter, C & Liley, D. 2016)

1.3	<p>Disturbance has been identified by Natural England as a generic issue across many European Marine Sites (see Coyle & Wiggins 2010), and can be an issue for a range of species. During the winter/passage periods there can be high numbers of birds present, and competition for food and resources (Caldow <i>et al.</i> 1999; Goss-Custard <i>et al.</i> 2002, 2006; Stillman <i>et al.</i> 2007). Disturbance to wintering and passage waterfowl can result in:</p> <ul style="list-style-type: none">• A reduction in the time spent feeding due to repeated flushing/increased vigilance (Fitzpatrick & Bouchez 1998; Stillman & Goss-Custard 2002; Bright <i>et al.</i> 2003; Thomas, Kvitek & Bretz 2003; Yasué 2005)• Increased energetic costs (Stock & Hofeditz 1997; Nolet <i>et al.</i> 2002)• Avoidance of areas of otherwise suitable habitat, potentially with birds feeding at poorer quality locations (Cryer <i>et al.</i> 1987; Gill 1996; Burton <i>et al.</i> 2002; Burton, Rehfish & Clark 2002)• Increased stress (Regel & Putz 1997; Weimerskirch <i>et al.</i> 2002; Walker, Dee Boersma & Wingfield 2006; Thiel <i>et al.</i> 2011)
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1.25 For breeding SPA birds, different issues result from recreational disturbance. Key breeding roosts are known on particular estuaries/shorelines and in specific locations where habitat and conditions enable territories to become established. Recreational pressure adds to the stresses of defending a territory, laying eggs and rearing chicks which means that SPA birds are often more vulnerable, and levels of public access to breeding areas can rise in the summer months too. During the breeding season, recreational disturbance can affect breeding success as it can result in nest desertion, potential trampling of eggs and an increase in predation rates etc. (Liley & Sutherland 2007).

1.26 Since this Footprint Ecology study was published, mitigation schemes across the UK have provided data which accords with the conclusions of this study.

1.27 The maps in Appendix 11 for each Habitats site, are annotated with existing recreational disturbance issues evidenced by Managers of these sites.

1.28 The potential ways in which species and their habitats are impacted by recreational disturbance, are considered in this Strategy. The Essex Coast RAMS identifies the baseline:

- The current condition of the Habitats sites, such as the existing pressures upon them, the effects on species and habitats;
- The level of recreational disturbance to non-breeding and breeding birds, trampling of sensitive vegetation e.g. saltmarsh, and nutrient enrichment and erosion of habitats; and
- The mitigation currently in place.

1.29 The Strategy then predicts the future situation without any mitigation and suggests suitable recreational disturbance avoidance and mitigation measures to negate possible significant effects on the Habitats sites.

1.30 The baseline will be used to assess the effectiveness of the Essex Coast RAMS.

1.31 A separate Supplementary Planning Document (SPD) will set out how each LPA will deliver the Essex Coast RAMS through the planning process. This SPD will build upon and provide more detailed guidance about the policies in the Local Plans prepared by the 11 Local Planning Authorities (LPAs) for adoption.

2 Background to the Strategy

Policy Context

- 2.1 This Strategy complies with the relevant legislation and national guidance, including:
- Article 6 of the Habitats Directive (92/43/EEC) 1994
 - European Commission (2001) Assessment of plans and projects significantly affecting Habitats sites – Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC ³
 - Government Circular 06/2005
 - Conservation of Habitats and Species Regulations 2017
 - The National Planning Policy Framework (NPPF) 2018
- 2.2 The Conservation of Habitats and Species Regulations 2017, as amended (commonly known as the Habitats Regulations) transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into UK law. They also transpose elements of the EU Wild Birds Directive in England and Wales. The Regulations came into force on 30th November 2017 and extend to England.
- 2.3 The Habitats Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites (henceforth referred to as Habitats sites in accordance with the NPPF).
- 2.4 Regulations 63 and 64 of the Habitats Regulations require a series of steps and tests to be followed for plans or projects that could potentially affect a Habitats site. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' (HRA) process that competent authorities must undertake to consider whether a proposed development plan or programme is likely to have significant effects on a Habitats site.
- 2.5 HRA is often referred to as 'Appropriate Assessment' (AA) although the requirement for AA is first determined by an initial HRA 'Screening' stage undertaken as part of the full HRA.

³

http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/natura_2000_assess_en.pdf

2.6 Specifically, Regulation 63 states:

63.—(1) A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which—

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) is not directly connected with or necessary to the management of that site,

must make an appropriate assessment of the implications of the plan or project for that site in view of that site’s conservation objectives.

2.7 The Regulation 63 of the Habitats Regulations refers to “the competent authority”. These are the body or bodies responsible for the application of the Habitats Regulations Assessment process, on a case-by-case basis to ensure compliance with the Habitats and Birds Directives. A competent authority is defined in Regulation 7 of the Habitats Regulations so as to include:

a) Any Minister of the Crown (as defined in the Ministers of the Crown Act 1975(1)), government department, statutory undertaker, public body of any description or person holding a public office;

b) the Welsh Ministers; and

c) any person exercising any function of a person mentioned in sub-paragraph (a) or (b).

and public body includes:

a) the Broads Authority(4);

(b) a joint planning board within the meaning of section 2 of the TCPA 1990 (joint planning boards)(5);

(c) a joint committee appointed under section 102(1)(b) of the Local Government Act 1972 (appointment of committees)(6);

(d) a National Park authority; or

(e) a local authority, which in this regulation means—

(i) in relation to England, a county council, a district council, a parish council, a London borough council, the Common Council of the City of London, the sub-treasurer of the Inner Temple or the under treasurer of the Middle Temple;

(ii) in relation to Wales, a county council, a county borough council or a community council;

- 2.8 The Habitats Regulations also use the following terms, which are used in this Strategy and are defined below:

Likely Significant Effect – *this is a possible adverse effect that would undermine the conservation objectives for a Habitats (European) site and which cannot be ruled out based on clear verifiable objective information.*

Alone – *consideration given to the details of the plan or project which may result in effects on a Habitats site*

In combination with other plans and projects – *consideration needs to also be given to the cumulative effects which will or might result from the addition of the effects of other relevant plans or projects.*

- 2.9 The Government has produced core guidance for competent authorities and developers to assist with the HRA process. This can be found online ⁴
- 2.10 HRA is thus a vital part of a Local or Strategic Plan's evidence base: for Plans to be considered legally compliant and sound, as set out in section 35 of the National Planning Policy Framework 2018, each LPA must provide mitigation.

Identifying the problem

- 2.11 The majority of the HRAs produced by Essex LPAs as part of the production of their respective Local or Strategic Plans identified that the level of planned housing growth may lead to disturbance of birds in coastal Habitats (European) sites within and beyond each individual LPA boundary.
- 2.12 HRA work relating to the Essex coast Habitats sites undertaken to date at the plan level and project level across the 11 LPAs is detailed in Table 2.1.

4

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/82706/habitats-simplify-guide-draft-20121211.pdf

Table 2.1 LPAs and their relevant Habitats Sites

LPAs	Work undertaken	Relevant Habitats sites
Basildon Borough Council	Basildon Borough Council Local Plan 2014-2034 and HRAs (Oct 2018) at the plan and project level	The HRA identifies that new residential development is likely to result in significant effects on the Essex coast Habitats sites due to the draw of the coast for recreation.
Braintree District Council	North Essex Authorities Shared Section 1 Local Plan HRA (May 2017) Braintree District Council Section 2 Local Plan HRA (May 2017) Braintree District Council has prepared project level HRAs for residential developments in Hatfield Peverel, Cressing, Braintree and Coggeshall.	The HRA identifies that new residential development is likely to result in significant effects on the Essex coast Habitats sites due to the draw of the coast for recreation.
Brentwood	Brentwood Local Plan Habitat Regulations Assessment (January 2018)	The HRA identifies that new residential development is likely to result in significant effects on the Essex coast Habitats sites due to the draw of the coast for recreation.
Castle Point	Castle Point Local Plan HRA is currently being undertaken	<ul style="list-style-type: none"> • Crouch and Roach Estuaries • Foulness Estuary • Benfleet and Southend Marshes • Outer Thames Estuary
Chelmsford	Chelmsford City Council's Pre-Submission Local Plan Habitats Regulations Assessment (January 2018) and an update dated June 2018	The HRA identifies the possibility of significant effects on European sites. In the Pre-Submission Local Plan, the Council has committed to the adoption of the RAMS SPD. Plan level mitigation measures are considered to be both achievable and likely to be effective. Additional provision and master planning requirements are included to minimise effects on the Crouch and Roach Estuaries.
Colchester Borough Council	North Essex Authorities Shared Section 1 Local Plan HRA Colchester Borough Council Section 2 Local Plan HRA <ul style="list-style-type: none"> - HRA screening for Boxted Neighbourhood Plan (2014-2029) - HRA screening for West Bergholt Neighbourhood Plan (2018-2033) - HRA re-screening for Wivenhoe Neighbourhood Plan (2017-2032) 	Colne Estuary, Hamford Water, the Blackwater Estuary the Stour and Orwell Estuaries.

LPAs	Work undertaken	Relevant Habitats sites
Maldon District Council	Maldon District Council Local Development Plan Sustainability Appraisal Report (March 2017) incorporating Strategic Environmental Assessment and Habitats Regulations Assessment Nine LDP allocations with planning permission or planning consent subject to a S106 agreement have project level HRAs. Only two LDP allocations without consent have not had project level HRAs.	Maldon's Local Development Plan was approved in 2017 and all mitigation identified through its HRA was reflected in relevant LDP policies and has been secured via project level HRAs for each allocation.
Rochford District Council	Rochford District Council Local Plan HRA (January 2013) HRA Maylons Farm, West Hullbridge and Wallasea Island	<ul style="list-style-type: none"> • Crouch and Roach Estuaries • Foulness Estuary • Benfleet and Southend Marshes • Outer Thames Estuary
Southend Council	Southend Council Local Plan HRA (September 2010) Southend Central Area Action Plan (February 2018)	<ul style="list-style-type: none"> • Crouch and Roach Estuaries • Foulness Estuary • Benfleet and Southend Marshes • Outer Thames Estuary
Tendring District Council	North Essex Authorities Shared Section 1 Local Plan HRA (May 2017) Tendring District Council Section 2 Local Plan HRA (May 2017) Adopted project level HRAs for development	<ul style="list-style-type: none"> • Colne Estuary, • Hamford Water, • Blackwater Estuary • Stour and Orwell Estuaries
Thurrock	Thurrock Local Plan Local Development Scheme (December 2015)	<ul style="list-style-type: none"> • Crouch and Roach Estuaries • Foulness Estuary • Benfleet and Southend Marshes • Outer Thames Estuary

Notes: Not all of the LPAs have prepared project level HRAs for residential developments within the IRZs³ of the SSSIs that underpin each Habitats site. Uttlesford is only affected by a small geographical area on its eastern boundary within the ZOI of Blackwater Estuary SPA & Essex Coast Ramsar and this component of the Essex Estuaries SAC. This also applies to strategic plans eg Joint Strategic Plan and north Essex

⁴ Natural England has published a set of mapped Impact Risk Zones (IRZs) for Sites of Special Scientific Interest (SSSIs). This helpful GIS tool can be used by LPAs to help consider whether a proposed development is likely to affect a SSSI and determine whether they need to consult Natural England to seek advice on the nature of any potential SSSI impacts, their avoidance or mitigation. The dataset and user guidance can be accessed from the [gov.uk website](http://gov.uk/website).

Identifying the need for a strategic solution

- 2.13 In 2017, Natural England's West Anglia Team identified the Essex coast as a priority for strategic and proactive planning engagement and mitigation. This was due to the high numbers of dwellings that were likely to come forward for each Plan alone and also in combination within the relevant Local Plans by 2038 to meet projected housing needs, and the potential recreational impact these new residents could have upon the Habitats sites.
- 2.14 In September 2017, Natural England proposed a strategic approach to LPAs and recommended identifying the scale of the disturbance and implementing measures to mitigate impacts through the preparation of a joint Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS). Based on existing evidence of visitor pressures, Natural England advised that 11 district/borough Councils across Essex should be partners in the preparation of the Strategy. To reflect the differing Local Plan adoption dates of these authorities, Natural England advised that a Supplementary Planning Document should be the mechanism to secure developer contributions towards the mitigation measures identified as necessary by the Strategy.
- 2.15 Natural England's advice was that the Local Plans must have a clear policy commitment to producing a Mitigation Strategy, with a clear timeframe for its completion. This should be by the time the plan is adopted to ensure any developments coming forward as part of the plan have certainty that there are mitigation measures which can be implemented as soon as the plan is live.
- 2.16 Local Plans are advancing across Essex. The number of Local Plan consultations that are scheduled further increases the urgency to produce the strategy and secure a delivery mechanism for an effective mitigation package.
- 2.17 Mitigation measures have been identified in the HRA (screening and/or Appropriate Assessments) for many of the Local Plans. There are similarities in the mitigation measures proposed, reflecting the identification of in-combination effects resulting from growth in LPA areas. In recognition of this, Natural England recommended a strategic approach to mitigation along the Essex coast.
- 2.18 The LPAs agreed that a strategic solution to mitigate the impacts of recreational disturbance from Local Plans was a sensible approach to take the support of Natural England and Essex County Council. Strategic solutions are usually driven by challenges and opportunities arising from planning issues. They apply more broadly than at a single designated site and often include aims such as cutting down on unnecessary consultations, providing strategic scale mitigation or developing a generic approach to evidence collection and use. The development plan process provides huge opportunities to influence planning policy and create solutions that

can filter down to the application stage, providing confidence that mechanisms exist to deliver much needed development in the right places whilst also ensuring the natural environment is fully considered. Under planning legislation, LPAs have a statutory 'duty to cooperate' with each other, and other bodies, when preparing, or supporting the preparation of policies which address strategic matters. This includes the Essex Coast RAMS.

2.19 The initial Essex Coast RAMS meeting was held in November 2017 under the umbrella of the Essex Planning Officers Association (EPOA), with all Essex LPAs invited to discuss the rationale for taking a strategic approach to securing a solution to support their Local Plans. Natural England explained the need for Local Plans to provide mitigation in order that sustainable housing growth can be delivered whilst at the same time, adequately protecting Habitats sites from harm that could potentially occur because of increased recreational pressure arising from the new housing growth.

2.20 Natural England's guidance provided at the meeting held on 13 September 2017 outlined that a mitigation strategy should:

- Set clear parameters, providing a mechanism by which pressure from increased recreation can be avoided and mitigated for, thus enabling rather than stalling the progression of planned housing growth within local Plans;
- Be based on evidence and be precautionary where uncertainties remain;
- Provide a good degree of certainty that the required measures can be delivered;
- Be solutions focused, seeking to find robust means of mitigating for impacts to allow development to proceed, incorporating such mitigation at the plan level wherever possible so that these requirements are clear to developers and are consistently applied;
- Build upon work undertaken to date as part of the HRAs for the various Local Plans;
- Reflect best practice; and
- Include monitoring.

2.21 At the same meeting, Natural England also set out the key lessons learnt from strategic mitigation schemes in other parts of the country. These are:

- Early engagement is key to ensuring issues and opportunities are identified from the outset when time is on our side to deliver real solutions
- Embedding strategies – whilst a robust evidence base and options for avoidance and mitigation are crucial, the policy framework within a LPA's development Plan needs to be clear and reflect what is required at project stage to ensure successful delivery
- Stepping back and seeing the "bigger picture"

- Sharing and learning to embed strategic solutions is hugely important and enables lessons to be learnt and to apply best practice elsewhere.

2.22 Mitigation measures applied for the protection of Habitats sites through development should be those that :

- Are essential for and relevant to the planning permission being granted
- Provide certainty that housing development can proceed without adverse effect on the Habitats sites
- Are proportionate to the potential impact that may be generated, evidence based and cost effective.

Developing the Essex Coast RAMS project

2.23 The three options for the scale of joint working were discussed by the Essex LPAs present at the initial Essex Coast RAMS meeting. These are outlined in Table 2.2 below.

Table 2.2: Options for preparing an Essex Coast RAMS

<p style="text-align: center;"><u>Option 1 – No Joint Project</u></p> <p>In the absence of some form of joint project, it would fall upon those LPAs with likely effects predicted on European Sites to prepare the Essex Coast RAMS. However, in order for them to do this, information was required on housing growth from the other LPAs for the full extent of recreational impacts to be determined. Furthermore, those other LPAs would still be under a legal obligation to fulfil their duties under the Habitats Regulations, including managing residual recreational impacts on Habitats sites. In this situation, it would be the LPA with the Essex Coast RAMS determining how this could be resolved with no input from those other LPAs, potentially resulting in disputes over the appropriateness of projects and their costs. This did not appear to be an appropriate approach given the scale and cross-boundary nature of the problem.</p>
<p style="text-align: center;"><u>Option 2 – Sub-regional Projects</u></p> <p>LPAs are familiar with working across their housing market areas in order to deliver evidence-based projects and elements on plan making. This option offered some benefits in terms of utilising existing working arrangements. However, the housing market areas do not align with the ZOIs for the Habitats sites along the Essex coast and therefore there would still be a need for each sub-region to look at the Essex Coast RAMS beyond their area in order to determine their full impact on Habitats sites.</p> <p>Additionally, different approaches between these sub-regions may give rise to areas of dispute over the appropriateness and cost of projects, although this risk is not considered to be as significant as for Option 1. A further issue with this option is that some LPAs in Essex, such as Maldon are not part of a sub-regional working group because Maldon sits within its own housing market area. Given these issues, normal patterns of sub-regional working may not be appropriate in this instance.</p>
<p style="text-align: center;"><u>Option 3 – Essex-wide Project</u></p> <p>In order to cover all of the coastal Habitats Sites, and all of the Essex LPAs within the ZOIs, an Essex coast RAMS could be prepared jointly by the 11 LPAs considered likely to be affected. This was considered to be the</p>

most effective approach in terms of capturing all cross-boundary interactions between the different LPAs involved, and ensures that all authorities affected would have a stake in the final selection of mitigation projects and are aware of the costs associated with these.

Without a co-ordinated approach, it may be very difficult for LPAs to deliver bespoke mitigation measures particularly for those at a distance from the Essex coast.

However, experience with the Gypsy & Traveller Accommodation Assessment, as an example, has shown that it is difficult to manage a project with this number of authorities and therefore a dedicated project management would be a requirement, particularly if it is to deliver in a timely manner.

2.24 It was concluded that the best outcomes in terms of delivering an Essex coast RAMS which addresses the issues in an effective and equitable way will be achieved through joint working at an Essex wide level i.e. Option 3. However, this option presented the greatest challenge in terms of project management. It was agreed by the LPAs present that Option 3 would be taken forward.

2.25 The Essex LPAs appointed Place Services to prepare the Essex Coast RAMS and undertake project management.

What will the Strategy achieve?

2.26 A Steering Group (comprising officers from the 11 LPAs, from Essex County Council and Natural England and consultants from Place Services, Essex County Council) was established to lead this project. The initial work of the Steering Group focused on approval of the project plan, signing of a Memorandum of Understanding which set out the commitment to undertaking this project, an initial review of existing information sources (Baseline Evidence Report), and planning for stakeholder events to aid information sharing. The need for visitor surveys to provide a robust evidence base was subsequently agreed with Natural England.

2.27 The initial brief for the Essex Coast RAMS is set out in Table 2.3 although details were considered in consultation with Natural England along the journey of producing the Strategy. It was decided by the Steering Group that governance and resourcing would be a separate piece of work to the Strategy.

Table 2.3: The Brief for the Essex Coast RAMS

1. Patterns of use of SPAs/SACs/Ramsar sites	a) Review existing sources of information, and produce report/paper to present to the Steering Group
	b) Agree with Natural England whether sufficient information exists.
	c) Obtain further primary data where necessary.

	<p>d) Analyse data to identify the locations where new development may lead to an impact in order for the LPAs to justify contributions being sought.</p>
<p>2. Mitigation and visitor monitoring</p>	<p>a) Based upon the conclusions from the patterns of use, identify which Habitats sites are relevant to which growth locations/ LPA.</p>
	<p>b) Identify mitigation and visitor monitoring objectives (i.e. what needs to be monitored, how often and to identify what methodologies to use).</p>
	<p>c) Identify specific existing or proposed on-site/off-site mitigation and site management measures which would address the HRA requirements. This must reflect HRA recommendations, set out the governance arrangements and likely delivery partners.</p>
	<p>d) Identify gaps (e.g. SAC/SPAs/Ramsar sites or parts of these Habitats sites where no mitigation or visitor monitoring is planned or where no or insufficient management is in place or planned, or where no delivery partner can be identified).</p>
<p>3. Funding</p>	<p>a) Identify what measures have already been funded and provide detail of how the current funding mechanisms work.</p>
	<p>b) Calculate the total cost of mitigation measures over the period of the local plans (based on the longest plan period of the project partners as in preparation now).</p>
	<p>c) Identify planned growth in the locations identified under 2c (above).</p>
	<p>d) Identify mechanisms for securing funding for each mitigation measure.</p>
	<p>e) Identify effective mechanisms for a Strategic Mitigation Scheme(s), to include collecting and holding contributions for 11 separate LPAs, prioritising spend and transfer of funds to delivery partners/organisations.</p>
<p>4. Monitoring of the Strategy</p>	<p>a) Identify mechanisms for monitoring the delivery and effectiveness of the mitigation strategy (e.g. outputs and outcomes – the former might be monitored more regularly).</p>
	<p>b) Provide recommendations related to future growth e.g. how might the strategy take account of growth in the longer term (beyond most plan periods) which would be subject to new HRAs and how should the results of monitoring feed into decisions about locations / scale of future growth.</p>
	<p>c) Identify how monitoring results will be analysed and used effectively.</p>
<p>5. Strategy finalised with recommendation for SPD</p>	<p>a) Incorporate areas above into strategy.</p>
	<p>b) Agree strategy with the Steering Group.</p>

to facilitate implementation	c) LPAs to consult on draft SPD- targeted consultation with interested parties, but strategy publically available for comment.
6. Finalise SPD	a) Consider consultation responses.
	b) Amend and finalise SPD.
	c) Adopt SPD.

3 Purpose of the Strategy

- 3.1 The Essex Coast RAMS will support sustainable residential growth in Essex while protecting Habitats sites and their wildlife from the increased disturbance from recreation associated with a growth in population. The Essex Coast RAMS will identify specific avoidance and mitigation measures that will be necessary to enable the planned housing and associated population growth within the strategy area to go ahead, without adversely affecting the designated features of the Habitats sites.
- 3.2 The Essex Coast RAMS will identify:
- the likely in combination impacts from recreational disturbance;
 - a range of effective mitigation measures;
 - when the mitigation measures are required;
 - where the mitigation is required;
 - how mitigation relates to development (or development locations);
 - how mitigation measures will be funded;
 - how the Strategy will be implemented
 - how the success of the mitigation measures will be monitored; and
 - how best to incorporate monitoring data and other information and best practice into future reviews of the strategy and Local Plans.
- 3.3 The Strategy does not cover any additional site-specific infrastructure, such as Country Parks, which are often referred to as Suitable Alternative Natural Greenspaces (SANGs). The issue of SANG is slightly different as, given that the coast cannot be replicated inland, SANGs do not tend to form part of coastal mitigation strategies. However, there is some evidence from the Solent HRA Mitigation project and corresponding website⁴ that if people are only visiting the coast because it is their nearest greenspace, then they can be drawn away from the coast by providing an attractive site nearer to their home. Natural England therefore may advise that on-site greenspace should be provided as part of individual developments (e.g. to include circular walks, dogs off lead areas etc.) to take some of the pressure off the coastal sites. However, this will not remove residents' overall desire to visit the coast, so a contribution to the mitigation measures at the coastal Habitats sites still needs to be made in all cases.

⁵ <http://www.birdaware.org/>

3.4 The Essex Coast RAMS Strategy does not provide:

- A mechanism to deliver mitigation for recreational impacts from individual residential developments alone; this must be provided on/near the development site;
- A mechanism for measures necessary to avoid likely significant effects from non-recreational impacts e.g. air or water quality, identified through project level HRAs prepared for individual planning application;
- Any mitigation needed to reduce or avoid *existing* impacts from recreational or other activities identified by Natural England in the SIPs for each Habitats site along the Essex coast;

or

- Mitigation for the England Coast Path (ECP). This is a Natural England project, which aims to create a new National Trail around the entirety of England’s coast. For each section of the ECP, Natural England undertakes an “Access and Sensitive Features Appraisal” (ASFA) which contains a bespoke HRA to mitigate for the effects of the Coast Path.

3.5 As listed in Natural England’s letters to LPAs (Interim advice to ensure new residential development and any associated recreational disturbance impacts on European designated sites are compliant with the Habitats Regulations, November 2017 & August 2018) provided in Appendix 1, the Strategy applies to all net increases in residential dwellings that fall within the ZOI which are in the Planning Use Classes listed in Table 3.1, overleaf (excluding replacement dwellings and extensions).

Table 3.1: Planning Use Classes

Planning Use Class*	Class Description
C2 Residential institutions	Residential care homes, boarding schools, residential colleges and training centres.
C2A Secure Residential Institution	Military barracks.
C3 (a) Dwelling houses (a)	Covers use by a single person or a family (a couple whether married or not, a person related to one another with members of the family of one of the couple to be treated as members of the family of the other), an employer and certain domestic employees (such as an au pair, nanny, nurse, governess, servant, chauffeur, gardener, secretary and personal assistant), a carer and the person receiving the care and a foster parent and foster child.
C3 Dwelling houses (b)	Up to six people living together as a single household and receiving care e.g. supported housing schemes such as those for people with learning disabilities or mental health problems.
C3 Dwelling houses (c)	Allows for groups of people (up to six) living together as a single household. This allows for those groupings that do not fall within the C4 HMO definition, but which fell within the previous C3 use class, to be provided for i.e. a small religious community may fall into this section as could a homeowner who is living with a lodger.

C4 Houses in multiple occupation	Small shared houses occupied by between three and six unrelated individuals, as their only or main residence, who share basic amenities such as a kitchen or bathroom
Sui Generis ***	- Residential caravan sites (excludes holiday caravans and campsites) -Gypsies, travellers and travelling show people plots

Notes:

* This table is based on Natural England advice (244199, included as Appendix 1) which was advisory, not definitive.

** Care homes will be considered on a case-by-case basis according to the type of residential care envisaged.

*** Sui Generis will be considered on a case-by-case basis according to the type of development.

3.6 The applications in scope for consideration will be confirmed in the SPD and should include:

- Full planning applications;
- Reserved Matters planning applications where the outline planning consent was not previously assessed through the HRA process; and
- Permitted Development as clarified by SPD.

3.7 A strategic, coordinated approach will reduce the burden on the LPAs and developers for project-level HRAs and offer a straight-forward, efficient and effective option for residential developers to provide appropriate mitigation measures, to ensure development accords with the Habitats Regulations.

3.5 Without a co-ordinated approach, it may be very difficult for LPAs to deliver effective bespoke mitigation measures particularly for locations that are on the outer edge of the Essex coast RAMS ZOI.

The Technical Report – Evidence Base

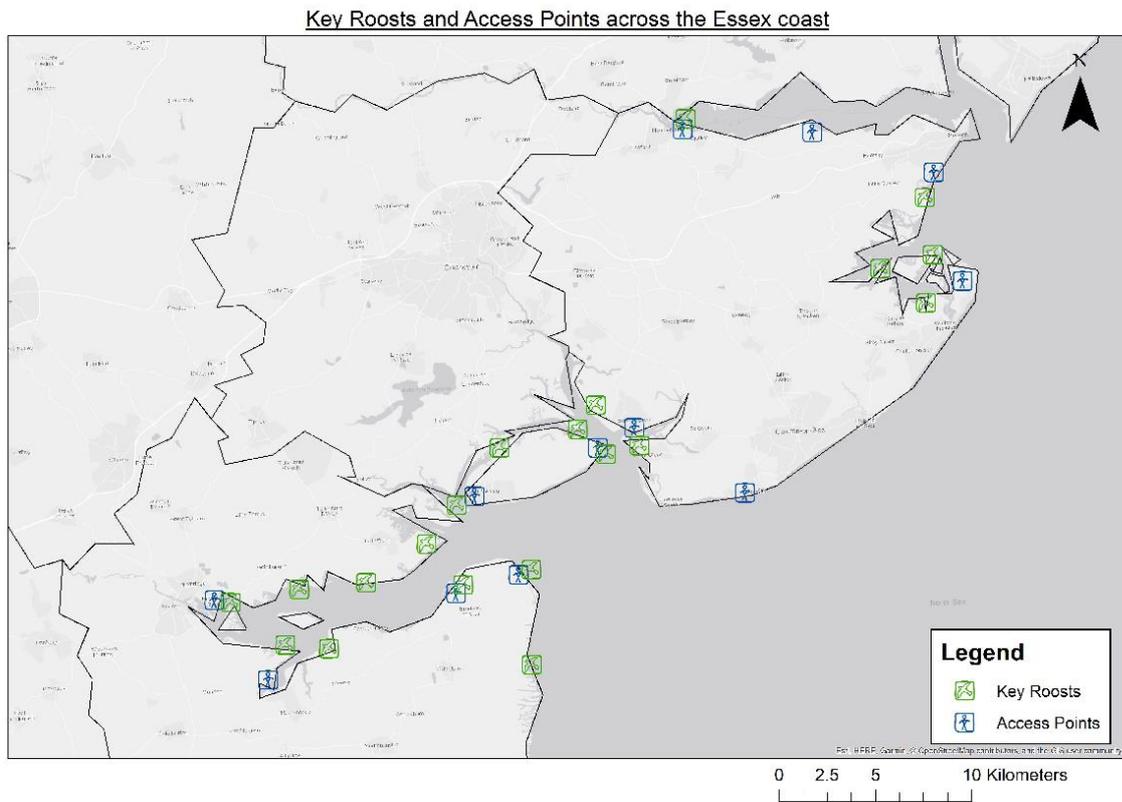
4 The Baseline

- 4.1 In order to determine the baseline, the following methodology was followed in the review process to determine patterns of visitor use of designated sites:
- Desk studies to determine what evidence existed and identify any gaps;
 - Visitor surveys to supplement the desk studies and gain an understanding of the origins of visitors to the Habitats sites and thereby determine the ZOIs;
 - Continual engagement with Natural England to discuss and agree the methodology, location and results of the studies to provide robust evidence on which to develop the Strategy; and
 - Stakeholder meetings with those parties with a responsibility for or an interest in the Habitat sites to gain a fuller understanding of the Habitats sites, the recreational pressures they are under presently, those that would arise with an increase in population and an understanding of what mitigation has been undertaken to date and how effective this is. Full details of the workshop attendees can be found in Appendix 10.

The Importance of the Essex coast Habitats sites – Desktop review

- 4.2 A desktop review looked at the existing data on the Habitats sites and the species therein.
- 4.3 Forty different bird species – predominantly waders and wildfowl – are specifically listed by Natural England as designated Interest Features for at least one of the Habitats sites.
- 4.4 Discussion with the Royal Society for the Protection of Birds (RSPB) on data available on key bird roost locations which are sensitive to disturbance has identified 20 key sites, which are shown on the maps 4.1 and 4.2. Because breeding information is confidential, the maps do not distinguish breeding and non-breeding roosts.
- 4.5 [Functionally Linked Land](#) (FLL) also needs to be protected from disturbance e.g. key areas of farmland and grassland for Brent geese. This will need to be mapped and has been included as a project in the mitigation package set out in this Strategy.

Map 4.1 Key SPA bird roosts/breeding areas and access points for North Essex



Map 4.2 Key SPA bird roosts/breeding areas and access points for South Essex



- 4.12 As key roosts are used by SPA birds at different times of the year (breeding and non-breeding), there are seasonal variations as well as daily variations in usage due to the tidal cycle. Key locations for SPA birds and the state of the tide can mean birds are closer or further from the shoreline and potential disturbance.
- 4.13 During harsh winters, a prolonged cold spell can mean birds struggle to get sufficient feeding time in between tides and any disturbance in these conditions is more significant to bird populations. Some roost sites hold large concentrations of birds but numbers may change as use fluctuates and factors other than disturbance or habitat degradation may be an issue in some locations.
- 4.14 [The Wetland Bird Survey](#) (WeBS) data has also been reviewed. WeBS monitors non-breeding waterbirds in the UK. There is a WeBS Alerts system which provides a method of identifying changes in numbers of water birds at a variety of spatial and temporal scales and reports are written every 3 years. It would be beneficial to integrate WeBS counts with the Essex Coast RAMS bird monitoring programme. Species that have undergone major changes in numbers are flagged, by the issuing of an Alert. Alerts are intended to be advisory; subject to interpretation, they should be used as a basis on which to direct research and subsequent conservation efforts if required.

Identifying visitor patterns of use of Habitats sites

- 4.15 Visitor surveys were undertaken to inform the Strategy, with the aim of gathering information on the number of visitors expected at coastal Habitats sites and evidence of the distances visitors to the sites will travel to access coastal locations for recreation purposes. This evidence is then used to calculate the Zones of Influence.

Visitor surveys

- 4.16 Where visitor data existed for Habitats sites, which had been previously collected by the LPAs, this was collated, and gaps identified in a baseline report to the Steering Group.
- 4.17 Visitor data (for the Stour & Orwell Estuaries SPA and Ramsar site, Hamford Water SAC, SPA and Ramsar site, the Colne SPA and Ramsar site and the Essex Estuaries SAC) was collected over a three-year period (from 2011 to 2013) as required by the appropriate assessments of Colchester and Braintree's adopted development plans and Tendring's emerging Local Plan.
- 4.18 On the advice of Natural England, the Essex Coast RAMS Steering Group agreed that the sites which would be subject to visitor surveys needed to be prioritised due

to resourcing and time constraints. Surveys at locations with no data were therefore prioritised so that there were data on which to base the ZOIs for all Habitats sites.

- 4.19 Tables 4.1 and 4.2 below show the visitor survey data which had previously been completed, and also the location of surveys needed to fill in the gaps.
- 4.20 ZOIs for the Habitats sites in North Essex were informed by the survey and monitoring work undertaken as a requirement of the Appropriate Assessments of Colchester and Braintree's adopted development plans and Tendring's emerging Local Plan. Since this joint survey work the North Essex LPAs have submitted an Appropriate Assessment (AA) for the North Essex Authorities Shared Strategic Part 1 for Local Plans Pre-submission (Regulation 19) prepared by Land Use Consultants (LUC) May 2017.
- 4.21 The AA for this joint plan identifies an increased prevalence and occurrence of negative recreational effects to the Habitats sites, which in the absence of effective mitigation is likely to lead to adverse effects on the sites' integrity.

Table 4.1: North Essex visitor survey details

Survey Location	Habitats Site	Source of existing information?	Seasons which information is needed for: Summer (May-July) Winter (August to April)
Mistley Walls	Stour and Orwell Estuaries	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Stour Wood	Stour and Orwell Estuaries	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Kirby Quay	Hamford Water	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
The Naze	Hamford Water	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Brightlingsea Marsh	Colne Estuary	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Cudmore Grove CP, Mersea	Colne Estuary	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Wivenhoe Barrier	Colne Estuary	None	Winter
Strood Channel	Blackwater Estuary	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Old Hall Marshes (owned by RSPB)	Blackwater Estuary	North Essex surveys over winter and summer months from 2010-2013.	Summer and winter
Tollesbury Wick (owned by EWT)	Blackwater Estuary	None	Summer and Winter
Promenade Park Maldon (Northey Island Causeway)	Blackwater Estuary	None	Winter
Bradwell Marina	Blackwater Estuary	None	Summer and winter
Dengie (St Peters Chapel)	Dengie	None	Winter

Table 4.2: South Essex visitor surveys required to identify impacts on the designated features

Survey Location	Habitats Site	Existing information?	Season Summer (May-July) Winter (August to April)
Burnham-on-Crouch	Crouch and Roach Estuaries	None	Winter
Blues House Farm (EWT), North Fambridge	Crouch and Roach Estuaries	None	Winter
Wallasea Island	Crouch and Roach Estuaries	Total visitor numbers recorded by RSPB from 2008-2016 and visitor numbers to the sea wall and number of cars from Apr-Sep 2017.	All
Thameside Nature Park (EWT)	Thames Estuary and Marshes	None	Winter
Coalhouse Fort	Thames Estuary and Marshes	None	Winter
Cinder Path, Leigh-on-Sea	Benfleet and Southend Marshes	None	Summer and Winter
Gunners Park, Shoebury	Benfleet and Southend Marshes	None	Winter
Two Tree Island, Leigh-on-Sea	Benfleet and Southend Marshes	None	Summer

Additional evidence gathered and analysis

4.22 The first round of visitor surveys took place in winter 2017/18, when non-breeding waders and wildfowl which are designated features of the Habitats sites are present along the Essex coast (August to April). The second round of visitor surveys took place on the Blackwater Estuary during the spring of 2018 when breeding birds such as the Little Tern and Ringed Plover, which are designated features of this Habitats site, use it for nesting. Benfleet and Southend Marshes SPA provide habitat for SPA birds which could be impacted by trampling during the summer months used by non-breeding species over winter.

Table 4.3: Designation features per Habitats site (MAGIC, 2018) and visitor surveys undertaken to assess disturbance

Habitats Site	Designation features sensitive to recreational disturbance and surveys undertaken				
	Habitats	Breeding birds (May to July)	Summer survey completed?	Non-breeding birds August to April	Winter survey completed?
Stour and Orwell Estuaries	Yes	Yes	Yes	Yes	Yes
Hamford Water	Yes	Yes	Yes	Yes	Yes
Colne Estuary	Yes	Yes	Yes	Yes	Yes
Blackwater Estuary	Yes	Yes	Yes	Yes	Yes
Dengie	Yes	No	N/A	Yes	Yes
Crouch and Roach Estuaries	Yes	No	No	Yes	Yes
Foulness Estuary	Yes	No	No	Yes	No**
Benfleet and Southend Marshes	Yes	No	Yes	Yes	Yes
Thames Estuary and Marshes	Yes	No	No	Yes	Yes
Essex Estuaries	Yes	No*	No*	No*	No*

*The Essex Estuaries comprise the Colne Estuary, Blackwater Estuary Dengie, Crouch and Roach Estuaries and Foulness Estuary and so follow the respective Zols throughout.

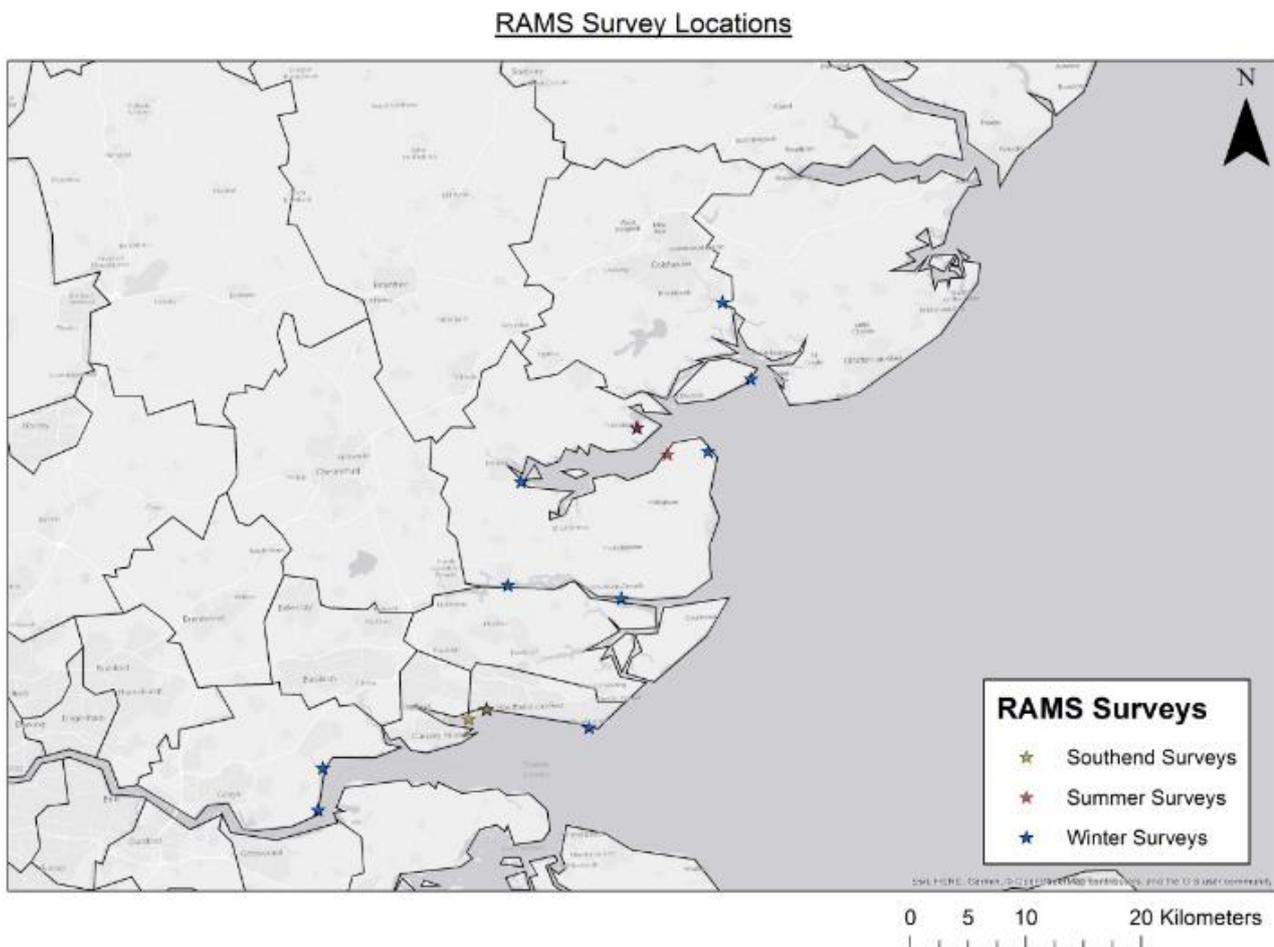
** As Foulness Estuary has limited access due to military control of much of the land, no surveys were considered necessary by Natural England.

- 4.23 Foulness Estuary, which is located within the Foulness Estuary SPA and Ramsar site, is Ministry of Defence (MoD) land and public access is restricted. For that reason, recreational disturbance from visitors is likely to be minimal or non-existent. As a result, no visitor surveys were carried out in this location.
- 4.24 A copy of the Visitor Survey methodology is included in Appendix 2, the questionnaire in Appendix 3 and the results for the Winter Visitor Surveys are in Appendix 4. Summer Visitor Survey results for the Blackwater Estuary and Benfleet and Southend Marshes are in Appendix 5.
- 4.25 The survey questionnaires were the same for both winter and summer, with the addition of a question relating to water borne recreational activities for the summer surveys. This was in response to the particularly high level of water borne recreation in the Blackwater Estuary when compared to other sites. The content of the survey questionnaires was agreed by the Steering Group and Natural England.
- 4.26 Cudmore Grove Country Park situated on the Colne Estuary was surveyed from 2011-2013, in the first north Essex surveys. This was repeated in 2018 as the ZOI was a lot higher than anticipated and the data was potentially skewed based on the

surveyor's location. As Cudmore Grove is a Country Park that attracts visitors from afar, the Essex Coast RAMS needed to clarify which of these visitors were there to use the facilities within the park and not at risk of causing disturbance to the coast. Therefore surveys were repeated with surveyors being focussed on locations where key bird roosts or habitats were likely to be disturbed by recreational activities. This enabled efforts to capture disturbance to coastal Habitats sites and no other recreational activities such as the children's play area.

4.27 Figure 4:1 shows the existing (completed) and additional allocations for visitor surveys on the Essex coast in 2018.

Figure 4.1 Locations of Visitor surveys undertaken 2018



- 4.28 Further visitor surveys were completed during May/June 2018 for the Blackwater Estuary SPA, when breeding SPA designated birds e.g. Little Tern & Ringed Plover use the site for nesting. Survey locations within the Blackwater Estuary were at Bradwell Marina and Tollesbury Wick. Additional visitor surveys were also undertaken by Southend Council in August 2018 for Benfleet and Southend Marshes SPA & Ramsar site with surveyors at Cinder Path and Two Tree Island. All locations were agreed with Natural England to ensure the results would inform recreational disturbance of Habitats sites features.
- 4.29 The visitor surveys provided data to add to the picture painted by attendees at the workshops. Indeed the significant visitor pressure experienced on the foreshore at Southend with over 7 million day visitors a year, principally in the summer months, includes dog walking at the Garrison in Shoebury as well as along the foreshore in the winter months when dogs are permitted on the beach.
- 4.30 The questions asked of visitors to the SPA locations were designed to collect data on the reasons for visits as well as postcodes to evidence Zones of Influence. The datasets collected for surveys of people visiting the Habitats sites on the Essex coast are therefore up to date and the best available. Natural England, as well as the LPAs and other key stakeholders are satisfied that they are acceptable to inform the mitigation strategy. It will therefore be used as a robust basis for identifying the mitigation measures necessary for this Strategy.
- 4.31 Additional surveys will improve the robustness of the datasets and repeat, surveys of visitors will be undertaken at the earliest opportunity to review the postcode data and Zone of Influence for the Dengie SPA & Ramsar. The total number of visitors completing questionnaires was below the number considered by Visit Britain guidelines to provide a comprehensive picture of recreational activities to draw them to this site (i.e. below 400). This is in addition to repeat visitor surveys throughout the lifetime of the Local Plan periods for all Habitats sites to ensure that the ZOIs remain fit-for-purpose, for example in the context of new development, infrastructure and advances in technology.

Identifying Zones of Influence (Zoi) for Essex coast Habitats sites

- 4.32 Data from both the winter and summer visitor surveys has been used primarily to calculate the Zois for each Habitats site, and also to collate information on current recreational activities at Habitats sites and predict likely impacts from increased use by additional residents.
- 4.33 The consideration of mitigation needed at each Habitats site and assessment of need, based on site sensitivity and housing allocated within the ZOI will be included

in the mitigation section of this report.

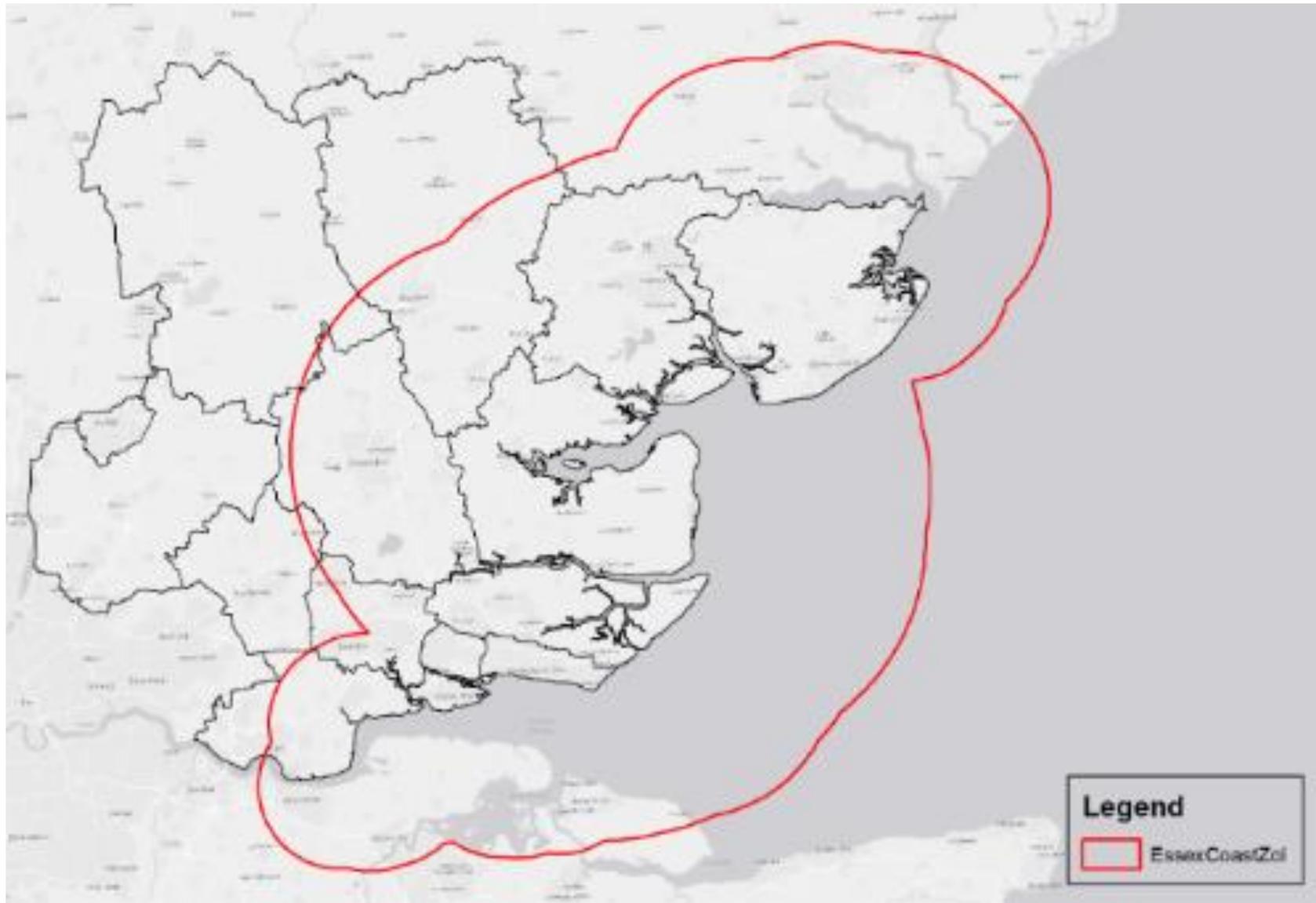
- 4.34 The results of the winter and summer visitor surveys provided substantial evidence relating to who uses the Habitats sites, where they travel from, how often they visit and why..
- 4.35 The data used to calculate the ZOIs defined in Table 4.4 has been refined to eliminate surveys where people were unlikely to cause disturbance to the coast. Although surveyors were placed in locations to capture the most potential disturbance in sensitive coastal areas, some sites had facilities that could be used for alternative recreational activities. For example, in the Dengie surveyors were located by St. Peters Chapel where some visitors were there solely for the use of the Chapel and were unlikely to cause recreational disturbance. Therefore an adjustment was made. Without refinement this would have increased the ZOI and affected the credibility of the data.
- 4.36 The ZOIs were calculated by ranking the distances travelled by visitors to the coast based on the home town postcode data they provided. Not all postcode data is used as this can skew the results. Instead the ZOIs are based on the 75th percentile of postcode data (i.e. the distance where the closest 75% of visitors come from) taken from the winter.
- 4.37 This method was used for a number of strategic mitigation schemes, including the emerging Suffolk Coast RAMS and is considered by Natural England to be best practice.
- 4.38 The ZOIs identify the distance within which new residents are likely to travel to the Essex coast Habitats sites for recreation. The ZOIs presented within this report will guide the requirement for residential developments to provide a financial contribution towards visitor management to mitigate for in-combination impacts on all the Habitats sites. Natural England have reviewed their IRZs, on MAGIC website on the basis of the overall Zoi because the data collected for this Strategy is the most comprehensive and up-to-date available.
- 4.39 ZOIs will be used to trigger developer contributions for delivery of mitigation measures for the Habitats sites. This will enable the delivery of mitigation measures to avoid impacts from increased recreational pressure.
- 4.40 Figure 4.4 below shows the overall ZOI for the Essex Coast RAMS to be used by each LPA to secure developer contributions for the Essex Coast RAMS package of measures. NB This excludes areas within the adjoining counties of Suffolk and Kent.

Table 4.4: ZOI calculations for Essex Coast Habitats sites

European designated site	Original ZOI (km) from Natural England's interim advice letter (Nov 2017)	Updated ZOI based on winter Essex Coast RAMS visitor surveys (RAW DATA)	Updated ZOI based on winter Essex Coast RAMS visitor surveys (REFINED DATA)	Updated ZOI based on summer Essex Coast RAMS visitor surveys (RAW DATA)	Updated ZOI based on summer Essex Coast RAMS visitor surveys (REFINED DATA)	Final ZOI (km)
Essex Estuaries SAC	24	-	-	-	-	-*
Hamford Water SAC, SPA and Ramsar	8	-	-	-	-	8
Stour and Orwell Estuaries SPA and Ramsar	13	-	-	-	-	13
Colne Estuary SPA and Ramsar	24	9.7	9.7	-	-	9.7
Blackwater Estuary SPA and Ramsar	8	14.2	14.2	22	22	22
Dengie SPA and Ramsar	13	27.3	20.8	-	-	20.8
Crouch and Roach Estuaries SPA and Ramsar	10	4.5	4.5	-	-	4.5
Foulness Estuary SPA and Ramsar	13	-	-	-	-	13
Benfleet and Southend Marshes SPA and Ramsar	10	4.1	4.1	4.9	4.3	4.3
Thames Estuary and Marshes SPA and Ramsar	10	8.1	8.1	-	-	8.1

**The Essex Estuaries comprise the Colne Estuary, Blackwater Estuary, Dengie, Crouch and Roach Estuaries and Foulness Estuary and so follow the respective ZOIs throughout.*

Figure 4.2: Overall Zone of Influence (Zol) for Essex Coast RAMS



5 Housing planned in the Zones of Influence

- 5.1 Tables 5.1 and figures 5.1 and 5.2 represent the amount of housing that is being planned for in each Local Plan. All LPAs are at different stages of the plan making process. Some figures will be based on Local Plan allocations, but where that is not possible LPAs have provided an informed estimate based on evidence from housing trajectory documents and past housing delivery rates.
- 5.2 The housing data goes up to 2038, which is the longest Plan period for a partner LPA. These housing numbers will be reviewed and, where necessary, updated over the lifetime of the strategy in accordance with LPA monitoring data, as part of the Essex Coast RAMS monitoring and review process.
- 5.3 The housing numbers supplied in Table 5.1 below are based on the quantity of net new dwellings that are expected to fall within the ZOI for the Essex Coast RAMS. Basildon, Braintree, Brentwood, Chelmsford, and Thurrock are all partially covered by the ZOI, and therefore only the numbers of homes that are expected to be built within the ZOI have been included in the figures in the tables below. All the other authorities are wholly covered by the ZOI. Estimated windfall is the amount expected for the length of the strategy.

Table 5.1: – Housing to be delivered in the Essex coast RAMS overall Zol

	Included in calculations for RAMS mitigation package for Local Plans								
		Phasing of dwellings from allocations within ZOI				A	A2	A3	
Local planning authority	Estimated total windfall Nov 2017-2038	2017 - 2022/23	2023/24 - 2027/28	2028/29 - 2032/33	2033/34 - 2037/38	Total dwellings within ZOI	Of the total dwellings (column A), how many have been consented ?	Dwellings to include in the RAMS tariff = A-A2.	
Basildon	686	2669	2625	3758	2133	11871	2431	9440	
Braintree	582	3169	5269	3659	1300	13979	209	13770	
Brentwood	41	0	0	0	0	41	0	41	
Castle Point	300	1369	1867	886	470	4892	171	4721	
Chelmsford	1222	2149	2969	2964	1672	10976	2205	8771	
Colchester	315	1407	3266	3851	455	9294	150	9144	
Maldon	300	1795	1421	130	0	3646	0	3646	
Rochford	300	471	701	0	0	1472	150	1322	
Southend-on-Sea	3843	2450	2073	193	0	8559	911	7648	
Tendring	1195	185	1384	1545	4568	8877	448	8429	
Thurrock	375	3500	2100	0	0	5975	0	5975	
Total	9159	19164	23675	16986	10598	79582	6504	72907	

Figure 5.1: North Essex - distribution of housing allocations and numbers of units

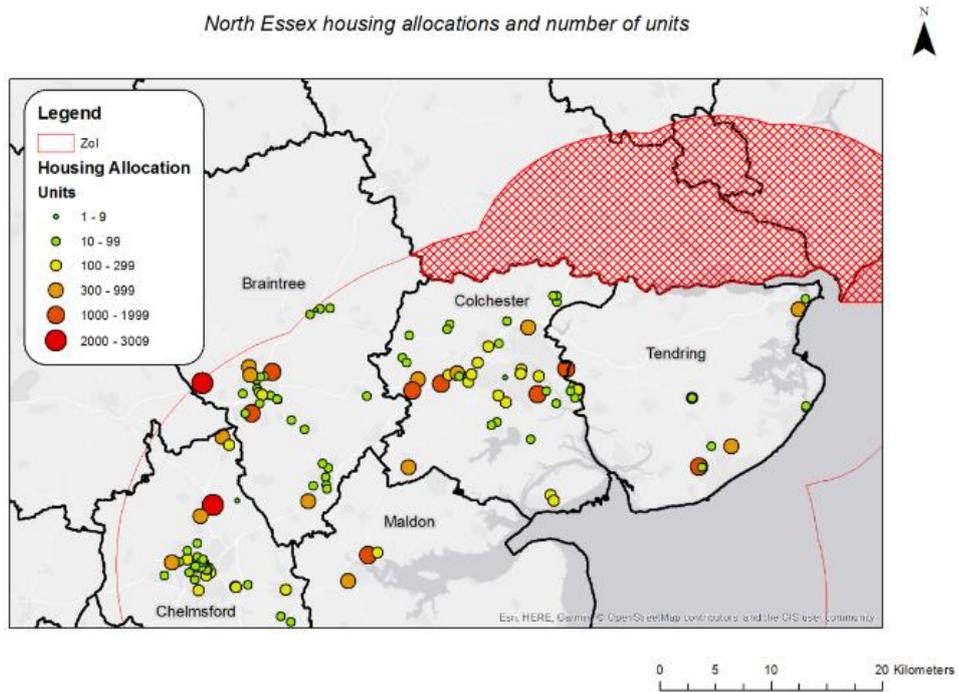
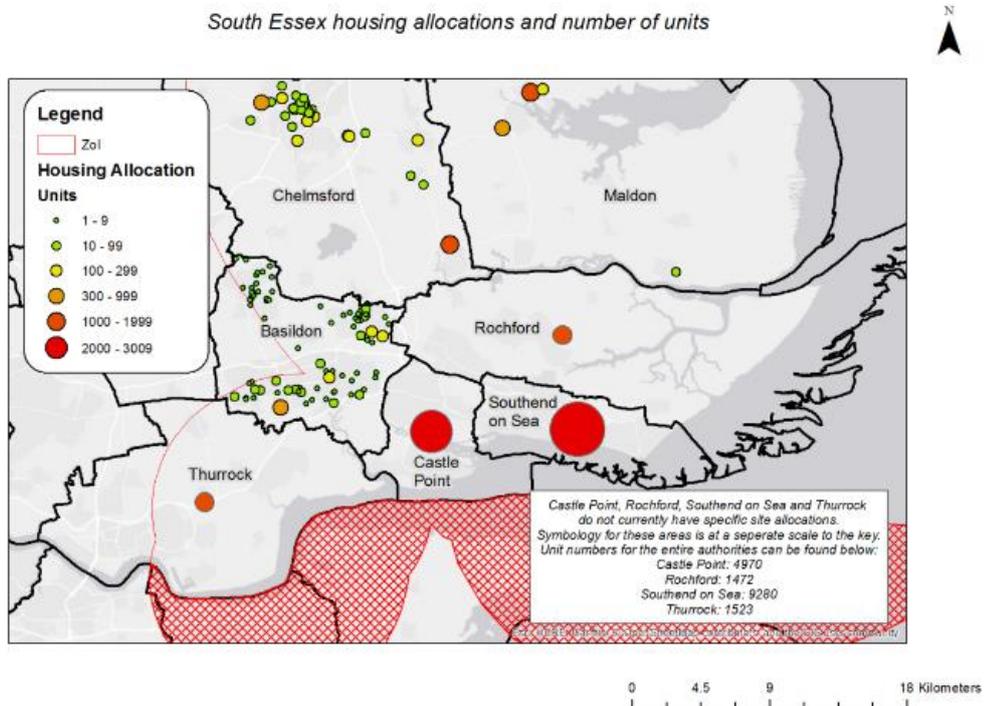


Figure 5.2: South Essex - distribution of housing allocations and numbers of units (NB Castle Point and Southend have a single dot instead of sites)



6 Exploring mitigation options

- 6.1 Two initial workshops were held for key stakeholders in February and March 2018 to gather local and specialised knowledge from organisations and individuals on the following:
- The locations of visitors at the coast and the recreational activity currently taking place;
 - Current recreational disturbance problems; and
 - Current mitigation measures in place.
- 6.2 A follow-up workshop held with key stakeholders in June provided an opportunity to capture the mitigation measures considered as most effective to avoid the impacts likely to result from increased recreational pressure on the Essex coast on Habitats sites in the future.
- 6.3 For each Habitats site, stakeholder input has helped to identify current issues of recreational disturbance which have provided a focus for and will help prioritise measures in the Essex Coast RAMS. The results of the workshop are summarised in the tables below and full details of the workshops is in Appendix 7.
- 6.4 It was explained to workshop attendees that the Essex Coast RAMS funds are targeted at non-infrastructure measures which are needed for in-combination effects from the overall quantum of residential development.
- 6.5 The provision of Suitable Accessible Natural Greenspaces (SANGs) (see Section 3.3) are not within the scope of the Essex Coast RAMS, since this provision is required to deal with impacts from an individual development scheme (i.e. identified by the project level HRA for that scheme). Furthermore, SANGs would have to be funded by the Community Infrastructure Levy, rather than the use of Section 106 (s106) Planning Obligations/agreements. Since no more than five s106 agreements may currently be pooled to contribute to infrastructure projects it will be up to the Project Board to determine whether any of these are a priority or if pooling restrictions are amended, It will however be important for LPAs involved with SANG provision to liaise closely with the Essex Coast RAMS Rangers to deliver the same messages to avoid recreational disturbance.
- 6.6 LPAs could decide to identify SANG(s) to be provided through separate funding streams (CIL) or enhancements such as the Local Growth Fund and Local Enterprise Partnership, where appropriate. Examples discussed by the Steering Group include:
- expand Belhus and/or Hadleigh Castle Country Parks

- upgrade other open space areas near the coast to attract visitors away from the beach areas
- provide a new Country Park/open space facility to the northeast of Southend as identified in the adopted Southend-on-Sea Core Strategy.

6.7 The information gained from the workshops has been summarised in the following tables as well as in Figures 6.1 and 6.2. They show the current recreational disturbance by increased visitor access, existing mitigation in place and identification of any gaps in mitigation which could be considered to be part of the Essex Coast RAMS.

Figure 6.1: Types of recreational disturbance reported at the Essex Coast RAMS workshops

Sources of disturbance on the Essex Coast

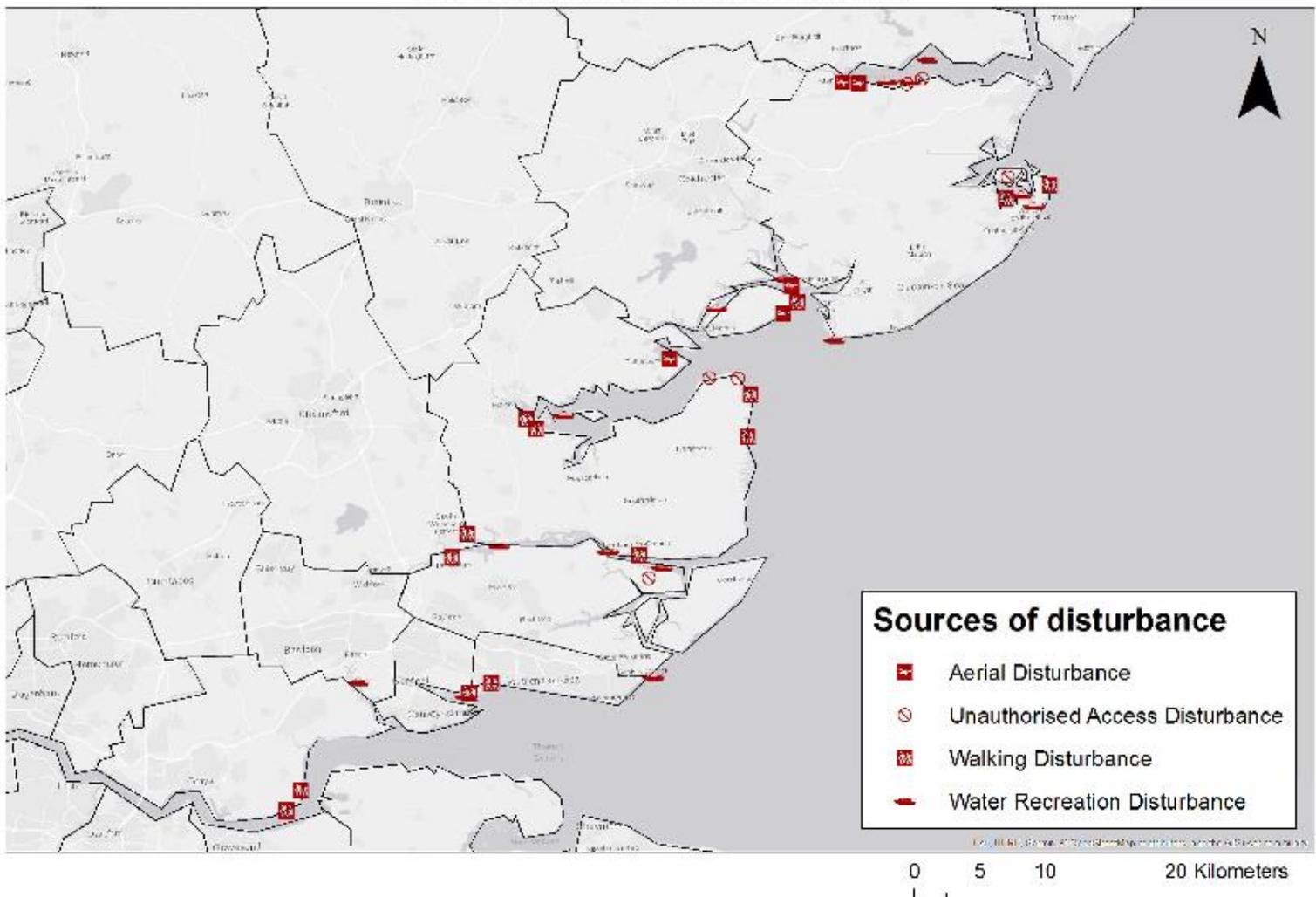


Figure 6.2: Key mitigation options identified at the Essex Coast RAMS workshops

Key mitigation options for the Essex Coastline

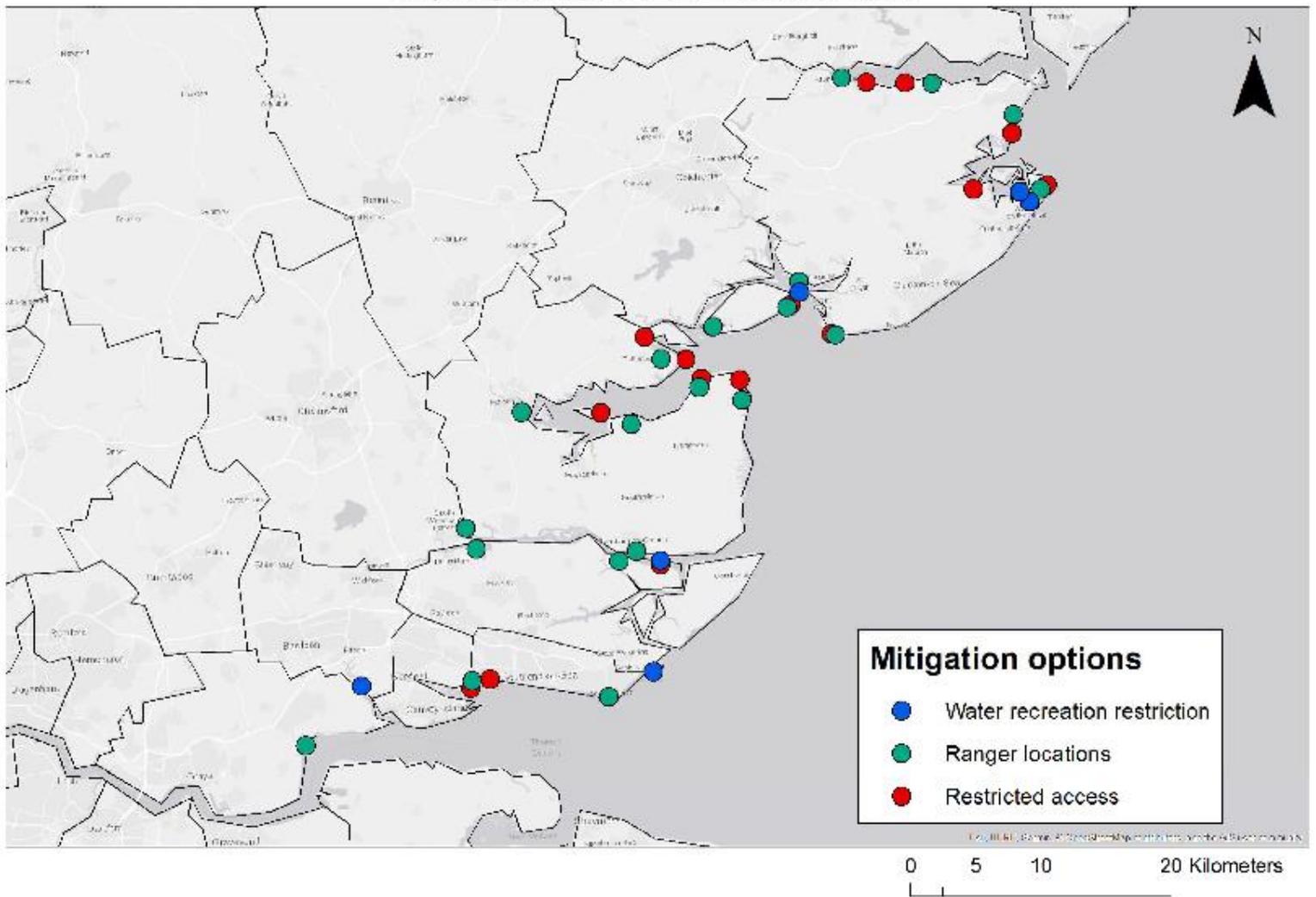


Table 6.1: Potential for disturbance to birds in Stour Estuary (Essex side only)

Stour Estuary SPA and Ramsar (Essex side only)		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - Average percentage from WeBS for southern sectors is relatively low suggesting relatively even distribution of birds across southern part of estuary. - Relatively few roost sites mapped suggest that those mapped may hold large numbers of birds. - Percentage of mudflat within 60m of the shore are mostly quite low, though WeBS sector at Mistley relatively high suggesting shoreline access here has potential to affect a high proportion of open mud feeding areas. - Shoreline near Manningtree and Harwich has high levels of local housing suggesting access levels could be potentially high at access points creating hotspots for recreation. One WeBS section with high housing near Harwich is identified as not having easy access to the estuary. - Paths all along southern shore but high path densities around eastern and western ends, suggesting more current access around Harwich and Manningtree. Relatively few car-parks mapped. 	<ul style="list-style-type: none"> - There is a visual screening and a bird hide on the southern shore of the estuary at RSPB Stour Wood. This ensures that an area looks more important for overwintering birds, with the aim of creating a better public attitude on how the area is used. - Oyster shell recharge projects are being undertaken to help create habitats for Little Terns - The Stour estuary has few access points to the Habitats site on the Essex side. Main points include Mistley Walls, Bradfield foreshore, Wrabness foreshore from Stone Lane and RSPB Stour Wood, Essex Coast Ramsey. - EWT manage the Wrabness nature reserve with a volunteer on site visual screening. However walkers use seawall which is not PROW from Wall Lane towards Bradfield and a lot of signage on site for visitors - EWT also manage some of the Wrabness Marsh fields which are adjacent to the Nature Reserve; these have no access and have been improved with scrapes and bunds to retain more water on site. There is a hide and the marsh fields under EWT management which will be extended following a purchase of additional land. - To the north of Harwich international port and Parkeston the estuary is relatively inaccessible due to the lack of PROW and the private ownership of the port. - At the RSPB Stour Estuary reserve there is already a ban on dogs for parts of the site, rangers, screening and hides. 	<ul style="list-style-type: none"> - Recreational disturbance is focused in the Manningtree and Mistley area. Although the shoreline near Harwich is within a short distance of housing, there is limited access due to a lack of PROW and private ownership of the port. - Essex coast RAMS measures should tie in with Suffolk Coast RAMS measures for this estuary, particularly at the western end near Cattawade Marshes and a high tide roost on the Brantham side which is relatively close to the Essex shoreline. - Drone activity and paramotors over SSSI/SPA – witnessed at Manningtree and Mistley Walls - Kayakers accessing saltmarsh at inappropriate times, e.g. close to high tide roosts - Increased mid-estuary mooring - Water skiing is common in Holbrook Bay and speed limits are not kept to in Jacques Bay. This should be enforced to reduce disturbance. - Saltmarsh is driven over and trampled at Jacques Bay (accessed via Shove Lane, Bradfield): possible reduction in access to avoid habitat erosion. - Unauthorised access along sea wall in front of screen at Wrabness NR (not on PROW) should be managed; this could be through better screening or wardening to encourage use of PROW through Wrabness NR. - There are bait diggers at Jacques Bay which should be made seasonal and have location restrictions. - Pedestrian access from at Wall Lane, Wrabness (no car park) along PROW on landward edge of saltmarsh to high tide roosts can cause disturbance as well as recreational water craft particularly kayakers and paddle boarders. Access and locations of activities should be restricted in conjunction with local landowners.

Table 6.2: Potential for disturbance of birds in Hamford Water

Hamford Water SAC, SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - Garnham Island and Horsey Island have highest average percentage values from WeBS for Hamford Water, suggesting these areas are particularly important - Large and important gull colonies - Breeding Little Tern and Ringed Plover at a range of beaches around the site - Percentage of mudflat within 60m of the shore for WeBS sectors near Walton and Great Oakley relatively high, suggesting shoreline access in these areas has potential to affect a high proportion of open mud feeding areas - Weighted housing values are mostly relatively low compared to other sites, suggesting few local residents - Some of the shoreline near the south-east of the site is identified as having no access and also has some higher values for local housing, suggesting high numbers of local residents within 'visiting' range - Western side (opposite Garnham) appears to have relatively little or no access and little path infrastructure and is likely to be relatively undisturbed - Limited path network and parking 	<ul style="list-style-type: none"> - Bramble Island has no access and is a quiet area as it is known as an area that is sensitive to wintering and breeding birds - Much of the site is inaccessible but the impact of the England Coast Path (ECP) is difficult to assess at this stage - Low risk to grassland habitat due to its wide nature and known location - Skippers Island has regular visits by a volunteer warden who speaks to visitors - Skippers Island has no landing signage on site - At EWT John Weston reserve there is very little recreation disturbance as 50% of the site has restricted access. However this has led to dog walkers and public users using the other half of the site and has made it worse. This is now being promoted as a safe, dog exercise area - Voluntary regulated speed limits are in place for boats to avoid disturbance to wildlife 	<ul style="list-style-type: none"> - Breeding Little Tern and Ringed Plover nest at a range of beaches and Garnham & Horsey Islands have the highest average WeBS value for the SPA so are important to protect waders and wildfowl from disturbance - Some of the key threats to SPA birds are sailing and jet skiing out of Titchmarsh marina and Walton Yacht Club - The location of the grassland habitat close to the southern PROW is susceptible to trampling and nutrient enrichment. Walking on the saltmarsh is also disturbing birds on the south easterly side of Hamford Water - At John Weston Essex Wildlife Trust reserve dog walkers and public use the accessible half of the site and has made it worse, this is now being promoted as a safe, dog exercise area - Enforcement on unauthorised quadbikes and motorbikes is needed - If a permissive bridle path was created at the western side of Hamford Water, this would draw horses away from the seawalls and give landowners income stream through stabling and grazing - Create shorter circular paths off coastal path with particular access from car parks. A main car park on public open space away from The Naze may encourage people to walk their dogs there instead of sensitive areas - Promote alternative sites for wind surfers and canoeists away from The Naze such as St. Osyth Lake/Jaywick/end of Clacton beach - The Naze would benefit from seasonal access rather than all year round day access

Table 6.3: Potential for disturbance to birds and mitigation options in Colne Estuary (including Essex Estuaries SAC)

Colne Estuary SPA and Ramsar (including Essex Estuaries SAC)		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - All average percentage values from WeBS are relatively low; creeks around Mersea Island have highest average values for the site - Percentage of mudflat within 60m of the shore values are moderate, suggesting a relatively high proportion of mudflat is close to shoreline areas - MOD land at Fringringhoe holds range of breeding bird species including Marsh Harrier and Pochard - Weighted housing is highest around Brightlingsea, otherwise relatively low levels of housing nearby and sections of shore identified as having no access - Areas around Brightlingsea and St. Osyth with high density of paths; Fringringhoe Ranges and Eastmarsh Point currently appear to have no access - Path network (and parking) focused around Brightlingsea, St Osyth and towards Clacton - Western shoreline and to some extent northern parts with little or no paths (including large area owned by MOD). - Very few slip ways and potentially limited access to water for those with boats - Development at Robinson Road will impact site 	<ul style="list-style-type: none"> - Natural England and EWT manage many of the key areas - The Colne Point is wardened and as such is likely to be resilient to increased visitor impacts although this provides a good opportunity for engagement with visitors. The Brightlingsea Marsh part of the site is only accessible by permit holders - Western edge of the Colne channel is sensitive to disturbance but this is on MOD land where access is difficult - St Osyth Stone Point and Brightlingsea Creek is another area where potential conflict could take place, however these areas are relatively remote - Conflict between water birds and water sports is also recognised on this SPA - Paramotors at Cudmore Grove – Natural England have held a meeting with Mersea Paramotors Club to discuss code of conduct - Ray Island has no landing signs which have proven ineffective. More recently new no access signs, a new gate and fence have been implemented onto the landward access through Bonner Saltings - EWT Fringringhoe Wick Nature Reserve has a no landing sign on Raised Beach which is very effective as well as a warden. Fringringhoe Wick Nature Reserve extension area has no landing signs on the sea wall and outside the wall by the saltmarsh; this reserve also has a warden - EWT Fringringhoe Wick Nature Reserve, Geedon Bay and Saltmarsh belonging to MOD have multiple no landing and keep off signs and a warden - Colne River between Tide Barrier and Point where Alresford Creek joins the Colne Estuary has a warden 	<ul style="list-style-type: none"> - Housing within easy reach of access points is highest around Brightlingsea and St Osyth and this area has a high density of PROW so this is a key area for Essex Coast RAMS ranger patrols - Another key location for mitigation is Mersea and Cudmore Grove Country Park in particular. Strandline/sand/shingle vegetation along the south side of Mersea and Cudmore Grove is currently being damaged by trampling and fires; mitigation is required to reduce impact. Current access levels at Cudmore Grove already cause some damage to vegetation and reduce breeding success for ringed plover. Access to the foreshore at Cudmore Grove at ebb tide causes disturbance to feeding waders - Powered hang gliders currently take off from a field in Mersea which affects a large area, these occasionally fly low and fly over the Colne and Blackwater SPAs. Paramotors have also caused disturbance at Cudmore Grove and it will be important to work with Mersea Paramotors Club - Jet skis and canoes disturbing wader high tide roosts in main channel of the Colne Estuary and Strood Channel. Water based recreation of Strood Channel in summer can also impact on breeding Little Terns - Breeding Ringed Plover and potentially Little Tern are heavily disturbed by the passenger ferry route from Mersea to Brightlingsea - Colne Point is by far the most important area for sand/shingle vegetation and breeding Ringed Plover so should be protected. Saltmarsh is vulnerable to increased visitor pressure at the EWT and National Nature Reserve (NNR) - Natwurst beach - dune vegetation badly damaged in places and may benefit from fencing - The popular beach by Point Clear commonly has kiteboarding which is disturbing terns and ringed plovers - Habitat creation could be used to move roosting birds away from the shoreline - As this SAC is designated for estuary and shoreline habitats eg mudflats, saltmarsh & sandbanks that support SPA birds, the measures specific to this Habitats site are to avoid trampling and degradation by promoting visitor behaviour including codes of conduct

Tables 6.4: Potential for disturbance to birds and mitigation options in the Dengie

Dengie SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - All WeBS sectors with relatively high average percentages suggesting relatively high importance across site - All WeBS sectors with relatively low percentage of mudflat within 60m of the shore, suggesting open mudflat is mostly away from shoreline areas. - Weighted housing densities are all low - Very little existing paths - No parking identified - No infrastructure providing access to water for boats 	<ul style="list-style-type: none"> - This is not a managed access restriction but as the south-east area of Dengie has poor access it means that it is only occasionally used. 	<ul style="list-style-type: none"> - Canoeists disturb high tide roosts on the River Blackwater although there is no infrastructure providing access to water for boats - There is often illegal off-roading of motorcycles and quadbikes on the seawalls and saltmarsh beach by Bradwell PowerStation - The north east Dengie area is too disturbed for high tide roosts although the open mudflat is mostly away from the shoreline and weighted housing densities are all low for this SPA - Othona Community and St Peters Church area is known to have walkers cross the saltmarshes in all directions. This should be an issue for the ECP to mitigate and Essex Coast RAMS Rangers to explain when they are in this area

Table 6.5: Potential for disturbance to birds and mitigation options in Blackwater Estuary

Blackwater Estuary SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - RSPB Old Hall Marshes shown to be particularly important from average WeBS values - Gull colony and breeding Ringed Plovers on Peewit Island - Important concentration of breeding birds around Old Hall Marshes - Sectors near Maldon coast, Mayland and St Lawrence have relatively high percentages of mudflat within 60m of the shore, indicating access in these areas has potential to affect higher proportion of open mudflat - Weighted housing values are high around Maldon suggesting higher levels of access here - Path network shows some sections of shoreline with high path density, suggesting much access. Other areas, such as large section of northern shore have just single routes along shoreline - Parking concentrated at western end of estuary near Maldon 	<ul style="list-style-type: none"> - RSPB Old Hall Marshes has a Little Tern colony and has a managed restricted access by boat in the summer - Despite efforts made to gather stakeholder information at workshops and follow-up questionnaires, there are fewer existing measures identified for some SPA sites. It will therefore be important for the Essex Coast RAMS rangers to ensure local stakeholders can add to these lists, and any additional measures and their efficiency are understood before trialling new ones 	<ul style="list-style-type: none"> - Boat landing at Old Hall point (breeding little terns) needs mitigation - Kite surfing and Para hang-gliding are a problem on the wider parts of the estuary and paramotors have caused disturbance at Tollesbury - Dog walking causes disturbance to Little Terns - Weighted housing values are high around Maldon and parking is concentrated in this locality so will be a key area for Essex Coast RAMS ranger patrols - Mayland & St Lawrence also have relatively high percentages of mudflat within 60m of the shore indicating these areas could be subject to disturbance from access - Maldon District Council jet-ski patrols should be supported - Work with Natural England to Keep National Trust Northey Island free of England Coast Path spreading room (access to foreshore) - Goldhanger had a former Little Tern colony - East Osea is a very popular picnic area which is un-authorised - Keep shingle spit free from public access at Tollesbury Wick - Stationary electronic people counters have been used by Essex County Council (Highways) to determine visitor numbers to areas in Essex which will be useful for monitoring the strategy and its effectiveness

Table 6.6: Potential for disturbance to birds and mitigation options in Crouch and Roach Estuaries

Crouch and Roach Estuaries SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - Central part of site has highest average WeBS values - WeBS sectors around Wallasea have relatively high percentage of mudflat within 60m of the shore, indicating access in these areas has potential to affect higher proportion of open mudflat. Creeks here are relatively narrow - High weighted housing values for South Woodham Ferrers, Hullbridge and around Burnham on Crouch, suggesting access levels higher in these areas - Areas near Brandy Hole and Bridgemarsh Island likely to be currently relatively undisturbed - Path network variable, with some areas with high density of paths (suggesting good current access provision and use), particularly around the settlements and for much of shoreline continuous routes. Some parts of north shore seem to have limited or little paths - Wide range of parking locations scattered around the estuary 	<ul style="list-style-type: none"> - Essex County Council parks such as Fenn Washland and Chelmsford City Council's Saltcoats Park are alleviating pressures on Habitats Sites as they provide good facilities such as dog walking, car parking, play and sports facilities. - EWT manages Blue House Farm - There is signage on the sea walls and Public Rights of Way (PROW). - RSPB Wallasea Island Nature Reserve (Allfleets Marsh is soon to be a designated SPA) 	<ul style="list-style-type: none"> - Although there is a wide range of parking opportunities around the estuaries, high weighted housing values for South Woodham Ferrers, Hullbridge and Burnham on Crouch suggest access levels are highest in these areas. These should be key patrol areas for Essex Coast RAMS rangers. - Dogs off lead require mitigation and maybe free leads being available from Essex Coast RAMS rangers - Trespass - regular occurrences of public access to private areas of the RSPB Wallasea reserve - generally on foot, but recently on motorcycles - Unauthorised boat activity – entering Allfleets Marsh to fish (which is the northern section of the island where the first seawall breaches took place) - Unauthorised fishing off the old seawalls on Allfleets Marsh - “Recreational” use of high speed watercraft including unauthorised temporary mooring to the conveyor pontoon in both the Crouch and Roach estuaries - Drone flying in this area causes disturbance to SPA birds & needs code of conduct for clubs - Better signage to minimise cycling on the seawall as it's a public footpath) - Use the Southend Council foreshore officers to enforce byelaws and speed limits for water sports such as jet-skis

Table 6.7: Potential for disturbance to birds and mitigation options in Foulness

Foulness SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - Central part of site has highest average WeBS values - WeBS sectors around Wallasea have relatively high percentage of mudflat within 60m of the shore, indicating access in these areas has potential to affect higher proportion of open mudflat. Creeks here are relatively narrow - High weighted housing values for South Woodham Ferrers, Hullbridge and around Burnham on Crouch, suggesting access levels higher in these areas - Areas near Brandy Hole and Bridgemarsh Island likely to be currently relatively undisturbed - Path network variable, with some areas with high density of paths (suggesting good current access provision and use), particularly around the settlements and for much of shoreline continuous routes. Some parts of north shore seem to have limited or little paths 	<ul style="list-style-type: none"> - This site is under MoD management and heavily restricted access or no public access at all - This site has 31 SSSI units that are unaffected by recreational pressure 	<ul style="list-style-type: none"> - Currently there is access for jet-skis in the north of Shoebury which causes disturbance and possible restrictions should be considered

Table 6.8: Potential for disturbance to birds and mitigation options in Benfleet and Southend Marshes

Benfleet and Southend Marshes SPA and Ramsar		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - North side of Canvey Island has highest average WeBS values - No data on the distribution of roost sites - WeBS sectors tend to have relatively low values for percentage of mudflat within 60m of shore, reflecting expansive areas of intertidal. - Weighted housing values all high, particularly around north side of Canvey, suggesting these areas have high levels of current access - Very high path density around most of shoreline particularly at Southend which experiences over 7 million day visitors a year to its tourist facilities centred on the coast which displaces local residents - Car-parking relatively evenly spread around shore 	<ul style="list-style-type: none"> - Signage at various locations along the length of the foreshore about the different types of birds and habitats raising awareness - Southend Council dog controls are in force in the summer months preventing dogs from entering the beach areas from 1st May to 30th September - Bait diggers are a common sight on the foreshore and their activities are controlled by local bye-laws. They can be seen travelling quite a way out from the shore - Significant water recreation takes place along the foreshore including sailing (5 clubs, jet skiing and rowing). Bye-laws are available to control accessibility to the foreshore and jet-ski use - EWT lease the nature reserves at Two Tree Island and Gunners Park from Southend-on-Sea BC and manage these areas 	<ul style="list-style-type: none"> - Two Tree Island has been highlighted as key area of habitat disturbance for breeding birds (eastern saltmarsh, island and eastern lagoons). Two Tree Island is subject to a wildfowling shooting agreement made in the 1950s. The agreement was made in perpetuity - The foreshore is accessible (with the exception of Gunners park) for its entire length and is regularly visited by residents and tourists. In the summer months the area experiences significantly high volumes of visitors with residents tending to be dispersed to the west which impacts on the SPA features and east foreshore which is also sensitive to disturbance in winter, Thameslink pathway near Two Tree Island is heavily used (Two Tree to Hadleigh Loop) - Leigh Cackle Sheds provide access to mudflats – people take their dogs which causes degradation of the habitat which impacts birds over the winter - Foreshore Officers have been significantly reduced in recent years. This and a lack of enforcement powers to implement by-laws and codes of conduct is resulting in some habitat degradation. On busy days in the summer, Foreshore officers are focused in central Southend to the detriment of other sensitive areas. Southend BC is working with Natural England to identify a solution - Delivering the sustainable links between Southend-on-Sea and Rochford as set out in the urban habitats strategy would provide relief to the coastal areas - Motorbiking, horse riding and trespassing for fishing in this SPA are activities which require mitigation

Table 6.9: Potential for disturbance to birds and mitigation options in Thames Estuary & Marshes (Essex side only)

Thames Estuary & Marshes SPA and Ramsar (Essex side only)		
Potential for disturbance of birds by increased visitor access	Access management and monitoring measures currently in place	Discussion of mitigation options
<ul style="list-style-type: none"> - No variation in average WeBS values and all moderately high - WeBS sector near Thurrock has high percentage of mudflat within 60m of the shore, suggesting little mudflat is away from shoreline areas - No data on the distribution of roost sites - Little variation in weighted housing and all currently moderate - Relatively low path density for whole area - Limited parking 	<ul style="list-style-type: none"> - Thameside Nature Park (Essex Wildlife Trust) is set to expand – this park has rangers and opening / closing times to the car park restricting access - East Tilbury Quarry is anticipated to restore provide recreational facilities/areas away from the coast 	<ul style="list-style-type: none"> - Thameside Nature Park run by EWT will be a key location for the Essex Coast RAMS rangers to complement the existing resource - Restoration of East Tilbury Quarry is anticipated to provide recreational facilities away from the coast - Unauthorised activities involving motorbikes, horse riding and trespassing for fishing are problems which will require input to resolve - Holehaven Creek is proposed as an extension to this SPA so may be a focus for the Essex Coast RAMS rangers to visit - There is little mudflat away from the shoreline in this WeBS sector and jet skis from Wat Tyler Park using this part of the coast are a problem. This issue could benefit from better signage and working with this supplier and clubs in the wider area

The Mitigation Report

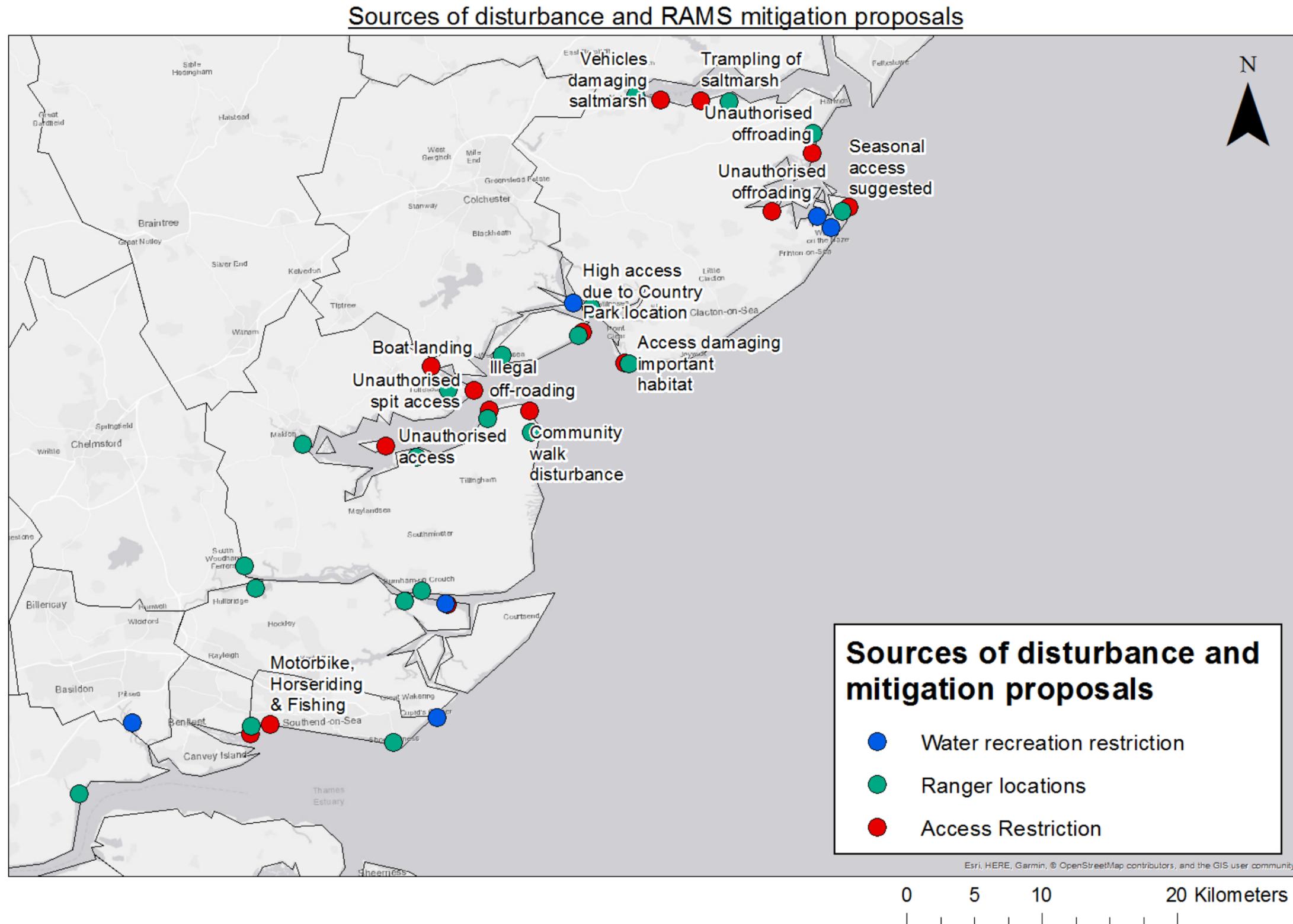
7 Overview of Essex coast RAMS mitigation options

- 7.1 This report has used the evidence gathered in the Technical report (sections 4- 6) to identify the package of effective measures considered necessary to avoid and mitigate the impacts of recreational disturbance from planned residential growth over the next 20 years in each participating LPA area. It is not designed to mitigate or reduce the current level of recreational disturbance in the Essex coastal sites although the measures identified for delivery will promote good visitor behaviour, which will have a positive impact where there are existing problems.
- 7.2 This chapter contains sections that address the following parts of the brief:
- a) effective mitigation measures;
 - b) when the mitigation measures are required;
 - c) where the mitigation is required;
 - d) how mitigation relates to development;
 - e) how mitigation measures will be funded;
 - f) How the mitigation will be implemented;
 - g) how the success of the mitigation measures will be monitored; and
 - h) how best to incorporate monitoring data and other information and best practice into future reviews of the strategy and Local Plans.

Recommended measures to avoid impacts from planned residential growth in Essex

7.3 The key measures proposed in the mitigation package are shown in Figure 7.1 below:

Figure 7.1 Sources of disturbance and Essex Coast RAMS mitigation proposals



- 7.4 The geographical distribution of recommended mitigation measures shown on Figure 7.1 indicate key locations where resources should be focussed. However it is possible that during the winter, one ranger would ideally be dedicated to one or two Habitats sites when disturbance of over-wintering birds is likely, where additional new housing delivery numbers are greatest in this part of the Essex Coast RAMS Zone of Influence. Ranger visits in the winter months will be focussed on key locations to counter problems e.g. associated with bait digging, oyster pickers and dog walkers allowed on to the beaches at Southend during these months.
- 7.5 In the summer months (May to September), Ranger efforts should be dedicated to locations within Habitats sites where trampling of sensitive habitats and SPA breeding birds in the spring & summer months are the focus e.g. Blackwater Estuary SPA, Benfleet & Southend Marshes SPA, Essex Estuaries & Hamford Water SACs. Clearly, the prioritisation of the implementation of these measures will need to consider which measures will achieve the greatest impact, the cost of the measures and the amount of funds available in the Essex Coast RAMS budget and the complexity of projects, for example some may require long term planning and feasibility work.
- 7.6 The package of mitigation measures, some coast-wide and others specific to an individual Habitats site, will need to be implemented “in perpetuity” although the costs are limited to the lifetime of the Local Plans 2018-2038. The term “in perpetuity” has a legal definition of 125 years (The Perpetuities and Accumulations Act 2009) and it has been accepted in strategic mitigation schemes for European sites such as those in place for the [Thames Basin Heaths](#) and [Dorset heathlands](#). Existing RAMS partnerships elsewhere in England invest some of the developer contributions to ensure that mitigation for impacts from residential development can be delivered for the Local Plan periods without the need for successive funding. BirdAware Solent currently invest 40% of all such contributions. After the current Strategy lifetime, future timetables will need to be prepared based on reviews of the Strategy itself and its evidence base.
- 7.7 The interventions for the Essex Coast RAMS Rangers are broadly categorised as education, communication and habitats based and are listed in Table 7.1 Essex Coast RAMS toolkit. Education and communications is discussed in sections 7.8 – 7.14. Partnership working, monitoring and review will be essential tasks for the partner LPAs

Table 7.1 – The Essex coast RAMS toolkit

Action area	Examples
Education and communication	
Provision of information and awareness raising	<p>This could include:</p> <ul style="list-style-type: none"> • Information on the sensitive wildlife and habitats • A coastal code for visitors to abide by • Maps with circular routes away from the coast on alternative footpaths • Information on alternative sites for recreation <p>There are a variety of means to deliver this such as:</p> <ul style="list-style-type: none"> • Through direct engagement led by rangers/volunteers • Interpretation and signage • Using websites, social media, leaflets and traditional media to raise awareness of conservation and explain the Essex Coast RAMS project. • Direct engagement with clubs e.g. sailing clubs, ramblers clubs, dog clubs etc and local businesses.
Habitat based measures	
Fencing/waymarking/screening	Direct visitors away from sensitive areas and/or provide a screen such that their impact is minimised.
Pedestrian (and dog) access	<ul style="list-style-type: none"> • Zoning • Prohibited areas • Restrictions of times for access e.g.to avoid bird breeding season
Cycle access	Promote appropriate routes for cyclists to avoid disturbance at key locations
Vehicular access and car parking	Audit of car parks and capacity to identify hotspots and opportunities for “spreading the load”
Enforcement	<ul style="list-style-type: none"> • Establish how the crew operating the river Ranger patrol boat could be most effective. It should be possible to minimise actual disturbance from the boat itself through careful operation. • Rangers to explain reasons for restricted zones to visitors
Habitat creation	Saltmarsh recharge, regulated tidal exchange and artificial islands may fit with Environment Agency Shoreline Management Plans
Partnership working	Natural England, Environment Agency, RSPB, Essex Wildlife Trust, National Trust, landowners, local clubs and societies.
Monitoring and review	Birds and visitor surveys with review of effectiveness of measures with new ideas to keep visitors wanting to engage

Education and communication

- 7.8 A cost-effective approach which has been successfully implemented in North Kent and the Solent, is to develop a brand and use positive and clearly understandable message to engage with visitors. This positive and comprehensible approach is more engaging than an explanation of the Essex Coast RAMS and the intricacies of planning and conservation law. The latter would be provided on the website for interested parties.
- 7.9 The Solent partnership uses “Bird Aware” and North Kent uses “Bird Wise”, which is based upon the Bird Aware model. The use of the ‘Bird Aware’ brand for Essex Coast RAMS would not mean that the entire focus of the Essex Coast RAMS was on SPA birds as designated habitat features must be protected in their own right through the Essex Coast RAMS and these would not be forgotten about if this branding was used.
- 7.10 The Solent Coast RAMS project now offers a portal for information and partners under the Bird Aware brand which has a ready-made communication package including an established website - www.birdaware.org. This would be available for the Essex coast RAMS team to purchase and would include a bespoke Bird Aware Essex Coast webpage and an initial print run of Essex Coast with leaflets containing relevant local photos. A strategic approach / campaign is usually most effective where an easily understandable, clear, persuasive and memorable message/brand is presented to the target audience at the point of contact (recreational users of the sites in this case). For example, the RSPB have built an easily recognisable and well respected brand and, although their key focus is on protecting birds, their educational materials etc. advocate the conservation of other species and habitats too which improves people’s awareness of these as well. With this in mind, we just need to be mindful that the educational materials, ranger interactions with the public etc. should cover wider coastal habitat protection as well as birds.
- 7.11 Using a brand would complement the use of the Essex Coast RAMS rangers and the provision of rangers was a measure that was commonly cited in the Essex Coast RAMS workshops as being very effective. This face-to-face engagement with visitors is the main feature of other mitigation schemes such as the Solent (Bird Aware partnership), in the [Thames Basin Heaths](#) and [Dorset heathlands](#). Encouraging people to avoid disturbance of roosting and /or feeding wildfowl and waders has been identified as one of the most effective mitigation measures by wardens of Habitats sites.
- 7.12 The RAMS Rangers will form a small mobile team that spend the majority of their time outside at the coastal sites, educating and communicating with visitors, influencing how visitors behave and showing people wildlife. The advantage of such an approach is that the staff can focus their time at particular priority sites/locations as required, such as those with the best visitor access and those likely to result in disturbance of key roosts (see Figures 4.1 and 4.2).
- 7.13 The roles of the Essex Coast RAMS team as allocated by the RAMS Delivery co-ordinator would also include helping with the delivery of site-specific and local projects and monitoring of

visitors. As the Strategy is rolled out, the work of the Rangers will change to include publicity, events, monitoring, reporting and working on some of the longer-term measures.

- 7.14 Apart from the 20 identified key roosts and feeding areas, for Ranger visits across the Essex Coast RAMS area, other less sensitive sites will require additional visits. Locations identified should also include those with high visitor numbers regardless of risk to Habitats site features. Based on information provided by Bird Aware Solent Rangers, key locations should receive weekly visits as High Risk sites for recreational disturbance, whilst other locations should be categorised as Medium (with monthly visits scheduled) or Low (seasonal visits required). This frequency of visits to specific sites within each Ranger's geographical work area is aimed at maximising public engagement at the appropriate time of year which may be year-round in some locations. Rangers should aim to visit 2 sites each day on 3 days/week to allow for other work commitments. This calculation supports the inclusion of three Essex Coast RAMS Rangers within the mitigation package and any additional seasonal rangers will need to be assessed based on developer contributions collected and priorities for mitigation in any specific areas.
- 7.15 Rangers could also carry out further visitor surveys over the lifetime of the Essex Coast RAMS to provide updated baseline for ZOIs as part of the monitoring programme. This would ideally be prioritised as follows:
- Summer visitor surveys at all sites as the Ramsar sites and Essex Estuaries SAC include habitat features sensitive to recreational pressure at all times of the year, especially from water-based recreation. The ZOI should then be calculated from the combined dataset from summer visitors as well as over winter too.
 - Winter and summer visitor surveys at Hamford Water as these had been covered as part of Colchester, Braintree & Tendring visitor survey programme 2013-15.
 - Winter visitor surveys at the Stour Estuary as these were covered as part of Colchester, Braintree & Tendring visitor survey programme 2013-15.
 - Winter and/or summer visitor surveys for those sites which were surveyed as part of the Essex Coast RAMS programme but which had a dataset lower than 400 as per the Visit Britain guidelines.

Coordination of the Essex Coast RAMS

- 7.16 Delivering the Essex Coast RAMS will require the appointment of a delivery co-ordinator to overseeing the implementation of the different themes. This officer would report to a Project board. Options for governance of the Strategy implementation are to be dealt with in a separate report.

- 7.17 The delivery co-ordinator would act as the main contact point for the Essex Coast RAMS and report to the project board and Steering Group and other liaison as directed by the Governance report and relevant Terms of Reference.
- 7.18 The Essex Coast RAMS rangers would report to the Essex Coast RAMS Delivery co-ordinator and work with existing teams towards similar ends on the Essex coast. This could include the Coastal Guardians trained by Essex Wildlife. These volunteers promote visitor awareness by talks and the management of signage. The details will be finalised when the Essex Coast RAMS governance has been agreed with the partners.
- 7.19 The delivery co-ordinator will need to ensure that the Strategy complements other work to protect Habitats sites e.g. England Coast Path (Natural England), other projects delivered by stakeholders e.g. landowners, EWT, RSPB; and potentially also bringing additional benefits from funding elsewhere, whereby match funding can open enhancement opportunities over and above the mitigation requirement. As such the delivery co-ordinator would have the following duties:
- Develop projects and help with their implementation, working with stakeholders (landowners, NGOs, statutory bodies, LPA foreshore officers etc.) as necessary;
 - As funds are available, assist with recruitment of and oversee the Ranger's work programme. Tasks may include each ranger visiting sites each day and plan to maximise the numbers of people encouraged to avoid disturbance when visiting the coastal Habitats sites. The number of locations possible to visit each week will depend on the distance travelled in between Habitats sites as housing schemes come forward and the key hotspots for birds and people;
 - Report to the project board, Steering Group, liaise with Development Management planners and others e.g. s106 officers regarding development implemented and strategy work completed;
 - Organise funding for projects, both gaining funding from the developer contributions 'pot' through the Project Board but also linking with stakeholders and seeking other opportunities for additional funding, for example through reserve-based projects, tourism initiatives and the Heritage Lottery Foundation;
 - Oversee the project webpages and other publicity opportunities, explaining the strategy and providing information making full use of BirdAware or similar and other resources; and
 - Monitoring and review of the Strategy⁵.

⁵ It is recommended that the visitor survey information is updated within the first two years of the Essex Coast RAMS adoption and repeated every 5 years afterwards to maintain postcode evidence of new residents and justifiable ZoIs. The Essex Coast RAMS package of measures will need to be prioritised and delivered on several timescales. The initial priorities will be reviewed by the Essex Coast RAMS delivery co-ordinator, once they are in post.

8 Costed Mitigation Package and Mitigation Delivery

- 8.1 The costed mitigation package in Table 8.2 has been based on measures considered necessary to avoid likely disturbance at key locations with easy public access (as shown on Figure 7.1). A precautionary approach to avoid adverse effects has been adopted, with priority areas for measures identified as those which have breeding SPA birds which could conflict with high number of visitors to the coast in the summer and those with important roosts and foraging areas in the winter. Sensitive habitats are also at risk from damage by high numbers of visitors and potential hotspots have been identified for ranger visits which may including water rangers. The package includes an effective mixt of avoidance and mitigation measures to provide flexibility and deliverability, based on costed similar provision elsewhere in England.
- 8.2 This has been developed through identifying best practice measures and gathering local nature conservation practitioner expertise, from a new dedicated staff resource to focussing on awareness raising and appropriate behaviour with a wide range of recreational user groups at Habitats sites. The package particularly prioritises measures considered to be effective at avoiding and mitigating recreational disturbance by Habitats sites managers and Maldon DC in managing water sports on the Blackwater estuary. These measures can be justified as necessary, relevant and reasonable and enables the LAs to demonstrate that as competent authorities, they can avoid adverse effects on the integrity of Habitats sites.
- 8.3 The proposal to bolster the terrestrial RAMS Ranger visits with water based RAMS Ranger patrols is aimed at encouraging all users to take an active role in avoiding impacts from recreational activities on the coast waters. It is hoped that codes of conduct and zonation of sensitive waters near SPA bird roosts and foraging areas can be implemented, similar to measures on the Exe Estuary.
- 8.4 There is a potential need for additional rangers following the first five years of the project based on the predicted peak in housing delivery at this time, though evidence for this spend will be based on the findings of the rangers patrolling the coast. To provide flexibility for strategic deployment of resources, indicative locations are identified though “ground- trothing” from Ranger visits and updated surveys for the Essex Coast RAMS project Board and Delivery co-ordinator to account for any unforeseen circumstances.
- 8.5 The phasing of housing delivery, as shown below (taken from Table 4.4) indicates that most development within the overall ZOI for the Essex coast RAMS will take place in the period 2023/24-2027/28. The third Essex Coast RAMS Ranger is likely to be triggered in this time period.

Table 8.1 Phasing of housing delivery 2018-2038

Phasing of dwellings				Total to be included in the Essex Coast RAMS
2018/19 - 2022/23	2023/24 - 2027/28	2028/29 - 2032/33	2033/34 - 2037/38	
19,164	23,675	16,986	10,598	79,582

- 8.6 The per dwelling tariff is calculated by dividing the total cost of the Essex Coast RAMS mitigation package by the total number of houses still to be delivered over the Local Plans period i.e. any houses already consented having come forward early, are not included in this calculation.
- 8.7 As the above figures may change before the SPD is adopted, the tariff will require re-assessment beforehand. It will also be required as part of the monitoring process.

Table 8.2: Mitigation package costed for 2018-2038

Priority	Theme	Measure	One off cost?	Annual cost	No. of years	Total cost for developer tariff calculations	Notes
Immediate - Year 1/2	Staff resources	Delivery officer		£45,000	19	£1,027,825	Salary costs include NI and overheads & 2% annual increments
		Equipment and uniform		(small ongoing cost)		£5,000	Bird Aware logo polo shirts, waterproof coats and rucksacks, plus binoculars for Rangers
Year 2		1 ranger		£36,000	18	£770,843	Salary costs include NI and overheads & 2% annual increments
Year 2		1 ranger		£36,000	18	£770,843	Salary costs include NI and overheads & 2% annual increments
		Staff training		£2,000	19	£38,000	£500 training for each staff
		Partnership Executive Group		(LPA £1,000)	19	£0	This would need to be an 'in kind' contribution from the LPA as this is a statutory requirement of the competent authorities. NB This is over and above the requirement for S106 monitoring
		Administration & audit		(LPA £1,000)	19	£0	As above
	Access	Audit of Signage including interpretation	£1,000			£1,000	Undertaken by Delivery officer/rangers but small budget for travel
		New interpretation boards	£48,600			£48,600	£2,700 per board, based on HLF guidance. Approx. 9 boards, one per Site. Cost allows for one replacement in plan period

Table 8.2: Mitigation package costed for 2018-2038

	Monitoring	Levels of new development				£0	No cost as undertaken as part of LPA work in Development Management and s106 or Infrastructure officers
		Recording implementation of mitigation and track locations and costs				£0	No cost as delivered as part of core work by delivery officer
		Collation & mapping of key roosts and feeding areas outside the SPA	£10,000			£10,000	Initial dataset to be available to inform Rangers site visits.
		Visitor surveys at selected locations in summer (with questionnaires)	£15,000			£15,000	Focus on Dengie, Benfleet & Southend Marshes and Essex Estuaries saltmarsh; estimated cost £5/Habitats site. Liaise with NE & ECC PROW re England Coast Path
		Visitor numbers and recreational activities	£5000 (£500/Habitats site/yr)			£5,000	Rangers, partner organisations, LPAs
		Consented housing development within ZOI.	£0/ Habitats site/yr)			£0	S106 officers to Track financial contributions for each development for all LPAs; liaise with LPA contributions officers
	Communication	Website set up for Day 1				£0	Essex Coast Bird Aware webpage set up costs £3k to be covered by LPAs.
		Walks and talks to clubs and estuary users groups				£0	Covered by salary costs for Delivery officer

Table 8.2: Mitigation package costed for 2018-2038

		Promotional materials				£5,000	Use BirdAware education packs, stationery, dog bag dispensers, car stickers etc.
Short to Medium term	Dog related	Set up/expand Dog project in line with Suffolk Coast & Heaths AONB "I'm a good dog" and Southend Responsible Dog Owner Campaign	£15,000			£15,000	Use BirdAware design for leaflets & website text, liaison with specialist consultants (Dog focussed), liaison with dog owners etc. Liaise with dog clubs & trainers;
	Water sports zonation		£10,000			£10,000	Approx. costs only to be refined when opportunity arises
Year 5	Staff resources	1 additional ranger		£36,000	13	£456,567	Salary costs include NI and overheads & 2% annual increments
		Staff to keep website & promotion on social media up to date		£1,000	19	£19,000	Update/refresh costs spread over plan period and include dog and water borne recreation focussed pages on Essex Coast RAMS / Bird Aware Essex Coast website plus merchandise eg dog leads.
Year 5	Monitoring	Update Visitor surveys at selected locations in summer (with questionnaires)	£45,000			£45,000	Estimated cost £5000/Habitats site/year for 9 Sites. Liaise with NE & ECC PROW re England Coast Path and LPAs re budgets as some of the survey costs may be absorbed into the budget for the HRAs needed for Local Plans. This could reduce the amount of contributions secured via Essex Coast RAMS which could be used for alternative measures.

Table 8.2: Mitigation package costed for 2018-2038

		Signage and interpretation	£14,500			£14,500	£14500 allows for 3 sets of discs - 3 designs, 1500 of each; e.g. paw prints in traffic light colours to show where no dogs, dogs on lead and dogs welcome. This may linking with a timetable eg Southend with dog ban 1 st May to 30 th Sept
	Water based Rangers to enforce byelaws	Set up Water Ranger	£50,000	£120,000	15	£2,029,342	Costs need to include jet ski(s), salary & on costs, training and maintenance plus byelaws costs. Priority is recommended for at least 1 Ranger to visit locations with breeding SPA birds eg Colne Estuary, Hamford Water, and other locations eg Southend to prevent damage during the summer. Explore shared use at different times of year eg winter use at other Habitats sites.
		Additional River Ranger where needed		£120,000	15	£2,029,342	Given increased recreation predicted,
	Codes of conduct	for water sports, bait digging, para motors/power hang gliders & kayakers	£5,000			£5,000	Use Bird Aware resources with small budget for printing. Talks to clubs and promotion covered by Delivery officer and rangers

Table 8.2: Mitigation package costed for 2018-2038

	Habitat creation - Alternatives for birds project – and long term management	Work with landowners & EA to identify locations eg saltmarsh creation in key locations where it would provide benefits and work up projects	£500,000			£500,000	Approx. costs only to be refined when opportunity arises for identified locations in liaison with EA and landowners via Coastal Forum and Shoreline Management Plans.
	Ground nesting SPA bird project – fencing and surveillance costs - specifically for breeding Lt Terns, & Ringed Plovers	Work with landowners & partners to identify existing or new locations for fencing to protect breeding sites for Little Tern & Ringed Plover populations	£15,000			£15,000	Check with RSPB, NE & EWT when project is prioritised
Longer term projects	Car park rationalisation	Work with landowners, Habitats site managers & partner organisations	£50,000			£50,000	Approx. costs only to be refined when opportunity arises
	Monitoring	Birds monitoring for key roosts & breeding areas within and outside SPAs		£5,000	10	£50,000	Costs for trained volunteers; surveys every 2 years
		Vegetation monitoring		£5,000	4	£20,000	Costs for surveys every 5 years

Table 8.2: Mitigation package costed for 2018-2038

Year 10, 15 & 20	Monitoring	Update Visitor surveys at selected locations in summer (with questionnaires)	£45,000			£135,000	Estimated cost £5/Habitats site. Liaise with NE & ECC PROW re England Coast Path
	Route diversions	Work with PROW on projects	£15,000			£15,000	Approx. costs only to be refined when opportunity arises

TOTAL MITIGATION PACKAGE
10% contingency
TOTAL COST

COSTS £8,105,862
£ 810,586
£8,916,448

8.8 The total cost for calculation per dwelling tariff is based on the total number of dwellings identified in each Local Plan which have not received Full/Reserved matters consent i.e. any houses already consented having come forward early, are not included in this calculation. **This figure is therefore £8,916,448 divided by 72,907 which means the recommended tariff is £122.30 rounded to nearest pence.**

8.9 As set out in Table 8.3 below, the split of the total cost for the Essex Coast RAMS mitigation package for each LPA to collect (i.e. the proportion of the costs to be collected from developers) is based on their housing figures to be delivered by the Local Plan. If predicted housing numbers are not realised, the associated impacts will also be less so the cost of the mitigation necessary will be reduced.

Table 8.3 Housing number and cost of mitigation for each LPA

(to include Habitats site specific measures plus over-arching measures e.g. delivery co-ordinator and Essex Coast RAMS Rangers.)

Charging Zone	Dwellings coming forward up to the end of Essex Coast RAMS plan period not already consented	Cost per dwelling tariff (rounded to nearest pence)	Cost of mitigation per LPA area
Basildon	9,440	£122.30	1,154,502.00
Braintree	13,770	£122.30	1,684,056.00
Brentwood	41	£122.30	5,014.26
Castle Point	4,721	£122.30	577,373.20
Chelmsford	8,771	£122.30	1,072,684.00
Colchester	9,144	£122.30	1,118,301.00
Maldon	3,646	£122.30	445,901.90
Rochford	1,322	£122.30	161,679.20
Southend-on-Sea	7,648	£122.30	935,342.20
Tendring	8,429	£122.30	1,030,858.00
Thurrock	5,975	£122.30	730,736.10
Total (Cost of package plus 10% contingency)	72,907		£8,916,448.00

8.10 The cost of implementing the mitigation measures will increase with inflation so the per dwelling tariffs will be updated each year in line with the Retail Price Index.

- 8.11 A proportion of all developer contributions collected (% to be determined by the Essex Coast RAMS Board) will be invested to cover the cost of delivering the visitor management measures in perpetuity, as the number of new residents will be permanent.
- 8.12 To avoid impacts, delivery of mitigation needs to be in advance of new residents occupying additional homes so triggers for payment should be prior to commencement of house building.

9. Monitoring and review

- 9.1 The Essex Coast RAMS sets out the baseline, status and disturbance evidence from which to monitor change and the impact of the Essex Coast RAMS in the future.
- 9.2 The effectiveness of mitigation measures and their timely delivery will be monitored and reviewed by the Essex Coast RAMS team, reporting to the Essex Coast RAMS Steering Group.
- 9.3 Monitoring will be undertaken annually and a report provided to each LPA to inform their Annual Monitoring Report (AMR). As competent authorities under the Habitats Regulations, the delivery of the Essex Coast RAMS is the responsibility of the LPA needing it to ensure their Local Plan is sound and legally compliant.
- 9.4 The Steering Group shall work with the Essex Coast RAMS team to establish the monitoring procedure, which will include SMART targets to effectively gauge progress.
- 9.5 To ensure the monitoring process is fit for purpose, there will be various monitoring activities which will be undertaken at different times and at an appropriate frequency. For example, visitor survey updates will be scheduled for after 2 and then 5 years.
- 9.6 Table 9.1 provides an example of what the monitoring approach may look like.

Table 9.1: Monitoring Report

Monitoring type	Objective	Responsibility	Action	Notes
Visitor numbers and recreational activities	Collect data on use and type of activity at different locations; assess change in behaviour likely to cause disturbance	Ranger / site warden team	Car park counter data; collated every 2 years with counters shared at different locations over plan period	
Visitor surveys with questionnaires	Collect repeat or additional post code data to review Zones of Influence for each Habitats site using the same methodology	Ranger/ site warden team	Minimum one face to face survey on each Habitats site location during the plan period	
Bird numbers and roost/feeding locations	Identify numbers and behaviour of designated birds	Ranger and volunteers e.g. WeBS on estuaries, continued monitoring of Little Terns	WeBS and breeding bird surveys	
Vegetation monitoring	Targeted at identifying impacts of trampling and triggers for mitigation	Site wardens/ managers		
Effectiveness of mitigation measures	Check that projects deliver status quo or improvements	Ranger/ site warden team/Habitats site staff	Questionnaires for behaviour and incident logs,	
Delivery of mitigation measures	Audit of projects delivered with feedback on implementation to LPAs refunds spent on each Habitats site.	Delivery officer	Project management tools e.g. membership of dog project, numbers of visitors engaged at different events	

- 9.7 Any future decrease (or increase) in bird populations cannot be the only measure of success for the Essex Coast RAMS in this respect as the designated habitats require protection too and effects could not be attributed solely to the implementation of the Essex Coast RAMS. This is due to multiple other factors at play on a local scale (e.g. predation, weather, habitat loss, coastal squeeze) and international scale (e.g. success at breeding or wintering grounds elsewhere etc.). Therefore, a range of monitoring identified for the Essex Coast RAMS delivery is needed and disturbance events reported
- 9.8 Working closely with partner organisations will be essential to understand these factors, evaluate success and provide feedback to inform reviews of the Essex Coast RAMS work programme. Both Place Services and Natural England recommended that the Essex Coast RAMS team regularly liaise with local nature conservation practitioners for this purpose.
- 9.9 Formal records will need to be kept of what, where and how the Essex Coast RAMS measures have been implemented e.g.:
- Most sensitive European site locations e.g. key bird roosts & breeding areas (noting that some of this is ecologically sensitive information);
 - Pending projects i.e. all mitigation priorities reflected in the above tables;
 - Live projects i.e. those underway; and
 - Completed projects i.e. those chalked off as the strategy progresses.
- 9.10 These will support the audit trail for spending against priorities set for the whole Strategy but also for the funds collected for each Habitats site by the Local Authorities. The latter is essential as the numbers of dwellings consented in Zols which will be subject to developer contributions and will provide the Essex Coast RAMS budget available for spending in each financial year.

10 Conclusions and next steps

- 10.1 Each LPA partner to the Essex Coast RAMS made a commitment to developing a strategic mitigation solution to address potential significant recreational impacts, in combination with other plans and projects, arising from new housing on the Habitats Sites on the Essex Coast.
- 10.2 The evidence base for the strategic mitigation package is set out in the Essex Coast RAMS which will be accompanied by an Essex Coast RAMS SPD.
- 10.3 The Essex Coast RAMS per dwelling tariff (currently £122.30) for new dwellings in the Zone of Influence is to be adopted by the LPAs to fund the mitigation measures set out in this Strategy.
- 10.4 Place Services recommend that the LPAs now finalise the SPD to ensure that tariff contributions are collected to implement the Essex Coast RAMS and avoid adverse effects on integrity for the Habitats sites identified in this Strategy document.
- 10.5 Governance and delivery models are still being discussed by the LPAs.
- 10.6 Place Services recommend that a model similar to that used by the Solent Recreation Mitigation Partnership and that used in North Kent would provide an effective way to deliver the Essex Coast RAMS. Strong branding, such as use of the Bird Aware brand, gives a powerful and intelligible wildlife conservation message and would help deliver elements of the Strategy in a positive and effective way. It also provides a tried and tested model for governance, delivery of measures and communications
- 10.7 The Essex Coast RAMS will be deemed successful if the level of bird and habitat disturbance is not increased despite an increase in population and the number of recreational visitors to the coastal sites.

11 Glossary

Appropriate Assessment	Forms part of the Habitats Regulations Assessment
Competent Authority	Has the invested or delegated authority to perform a designated function.
England Coast Path	Natural England are implementing the Government scheme to create a new national route around the coast of England
Impact Risk Zone	Developed by Natural England to make a rapid initial assessment of the potential risks posed by development proposals. They cover areas such as SSSIs, SACs, SPAs and Ramsar sites.
Habitats sites	Includes SPA, SAC & Ramsar sites as defined by NPPF (2018). Includes SPAs and SACs which are designated under European laws (the 'Habitats Directive' and 'Birds Directive' respectively) to protect Europe's rich variety of wildlife and habitats. Together, SPAs and SACs make up a series of sites across Europe, referred to collectively as Natura 2000 sites. In the UK they are commonly known as European sites; the National Planning Policy Framework also applies the same protection measures for Ramsar sites (Wetlands of International Importance under the Ramsar Convention) as those in place for European sites.
Habitats Regulations Assessment	Considers the impacts of plans and proposed developments on Natura 2000 sites.
Natural England	Natural England - the statutory adviser to government on the natural environment in England.
Local Planning Authority	The public authority whose duty it is to carry out specific planning functions for a particular area.
Ramsar site	Wetland of international importance designated under the Ramsar Convention 1971.
Responsible Officer	Natural England officer responsible for a particular habitats site.
Special Area of Conservation	Land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Special Protection Area	Land classified under Directive 79/409 on

	the Conservation of Wild Birds.
Supplementary Planning Document	Documents that provide further detail to the Local Plan. Capable of being a material consideration but are not part of the development plan.
Zone of Influence	A designated distance that establishes where development is permitted.

Abbreviations

AA	Appropriate Assessment
AMR	Annual Monitoring Report
ASFA	Access and Sensitive Features Appraisal
BTO	British Trust for Ornithology
CIL	Community Infrastructure Levy
EA	Environment Agency
ECP	England Coast Path
EPOA	Essex Planning Officers Association
EWT	Essex Wildlife Trust
FLL	Functionally Linked Land
GTAA	Gypsy and Traveller Accommodation Assessment
HRA	Habitats Regulations Assessment
IRZ	Impact Risk Zone
LEP	Local Enterprise Partnership
MoD	Ministry of Defence
NE	Natural England
NGOs	Non-Government Organisations
LPA	Local Planning Authority
PROW	Public Rights of Way
RO	Responsible Officer, Natural England
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SANG	Suitable Alternative Natural Greenspace
SIP	Site Improvement Plan
SPA	Special Protection Area
SPD	Supplementary Planning Document
SSSI	Site of Special Scientific Interest
WeBS	Wetland Bird Survey
Zol	Zone of influence

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