Feering Neighbourhood Plan

Regulation 14 Submission

Habitats Regulations Assessment

Feering Parish Council

Project number: 60571087

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Quality information

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1. Introduction

Background to the Project

1.1 AECOM has been appointed by Feering Parish Council to assist in producing a report to inform Braintree District Council's Habitats Regulations Assessment (HRA) of the potential effects of Feering Neighbourhood Plan Regulation 14 on internationally designated wildlife sites. The objectives of the assessment are to:

- Identify any aspects of the Neighbourhood Plan that would cause an adverse effect on the integrity of international sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs)) including, as a matter of Government policy, Ramsar sites, either in isolation or in combination with other plans and projects, and
- To advise on appropriate policy mechanisms for delivering mitigation where such effects were identified.

1.2 The HRA of the Feering Neighbourhood Plan is required to determine if there are any realistic linking pathways present between an international site and the Neighbourhood Plan and where Likely Significant Effects cannot be screened out, an analysis to inform Appropriate Assessment to be undertaken to determine if adverse effects on the integrity of the international sites will occur as a result of the Neighbourhood Plan alone or in combination.

Legislation

1.3 The UK left the EU on 31 January 2020 under the terms set out in the European Union (Withdrawal Agreement) Act 2020 ("the Withdrawal Act"). This established a transition period, which is currently set to end on 31 December 2020. The Withdrawal Act retains the body of existing EU-derived law within our domestic law. During the transition period EU law applies to and in the UK.

1.4 The UK is therefore still bound by the terms of the Habitats Directive (92/43/EEC). Under Article 6(3) of the Habitats Directive, an appropriate assessment is required, where a plan or project is likely to have a significant effect upon an international site, either individually or in combination with other projects. The Directive is implemented in the UK by the Conservation of Habitats and Species Regulations 2017 (as amended) (the "Habitats Regulations").

1.5 The need for Appropriate Assessment is set out within Article 6 of the EC Habitats Directive 1992[1], and interpreted into British law by the Conservation of Habitats and Species Regulations 2017 (as amended)[2]. The ultimate aim of the Directive is to "*maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest*" (Habitats Directive, Article 2(2)). This aim relates to habitats and species, not the international sites themselves, although the sites have a significant role in delivering favourable conservation status.

[1] http://jncc.defra.gov.uk/page-1374 [accessed 31/01/2019]
[2] https://www.legislation.gov.uk/uksi/2017/1012/contents/made [accessed 31/01/2019]

Figure 1: The legislative basis for Appropriate Assessment

Conservation of Habitats and Species Regulations 2017 (as amended)

The Regulations state that:

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

1.6 It is therefore important to note that this report has two purposes:

- To assist the Qualifying Body (the Neighbourhood Plan Group) in preparing their plan by recommending (where necessary) any adjustments required to protect international sites, thus making it more likely their plan will be deemed compliant with the Conservation of Habitats and Species Regulations 2017 (as amended); and
- On behalf of the Qualifying Body, to assist the Local Planning Authority to discharge their duty under Regulation 105 (in their role as 'plan-making authority' within the meaning of that regulation) and Regulation 106 (in their role as 'competent authority').

1.7 As 'competent authority', the legal responsibility for ensuring that a decision of 'likely significant effects' is made, for ensuring an 'appropriate assessment' (where required) is undertaken, and for ensuring Natural England are consulted, falls on the local planning authority and the Neighbourhood Plan examiner. However, they are entitled to request from the Qualifying Body the necessary information on which to base their judgment and that is a key purpose of this report.

1.8 The Habitats Regulations applies the precautionary principle to international sites SAC, SPA, and Ramsar. For the purposes of this assessment candidate SACs (cSACs), proposed SPAs (pSPAs) and proposed Ramsar (pRamsar) sites are all treated as fully designated sites.

1.9 Plans and projects can only be permitted having ascertained that there will be no adverse effect on the integrity of the site(s) in question. This contrasts with the SEA Directive which does not prescribe how plan or programme proponents should respond to the findings of an environmental assessment; merely that the assessment findings (as documented in the 'environmental report') should be 'taken into account' during preparation of the plan or programme. In the case of the Habitats Directive, plans and projects may still be permitted if there are no alternatives to them and there are Imperative Reasons of Overriding Public Interest (IROPI) as to why they should go ahead. In such cases, compensation would be necessary to ensure the overall integrity of the site network.

1.10 In 2018, the 'People Over Wind' European Court of Justice (ECJ) ruling[3] determined that 'mitigation' (i.e. measures that are specifically introduced to avoid or reduce the harmful effects of a plan or project on international sites) should not be taken into account when forming a view on likely significant effects. Mitigation should instead only be considered at the appropriate assessment stage. Appropriate assessment is not a technical term: it simply means 'an assessment that is appropriate' for the plan or project in question. As such, the law purposely does not prescribe what it should consist of or how it should be presented; these are decisions to be made on a case by case basis by the competent authority. An amendment was made to the Neighbourhood Planning Regulations in late 2018 which permitted Neighbourhood Plans to be made if they required appropriate assessment.

1.11 Over the years the phrase 'Habitats Regulations Assessment' has come into wide currency to describe the overall process set out in the Conservation of Habitats and Species Regulations from screening through to Imperative Reasons of Overriding Public Interest (IROPI). This has arisen in order to distinguish the process from the individual stage described in the law as an 'Appropriate Assessment'. Throughout this report we use the term Habitats Regulations Assessment for the overall process.

Report Layout

1.12 **Chapter 2** of this report explains the process by which the HRA has been carried out. **Chapter 3** explores the relevant pathways of impact. **Chapter 4** summarises the Test of Likely Significant Effects of the policies and site allocations of the Plan considered 'alone' and 'in-combination. (The Test of Likely Significant Effects itself is undertaken in **Appendix B**). **Chapter 5** contains the Appropriate Assessment for any linking impact pathways that could not be screened out from potentially resulting in a Likely Significant Effect. **Chapter 6** contains the conclusion and a summary of recommendations.

[3] Case C-323/17

2. Methodology

Introduction

2.1 This section sets out the approach and methodology for undertaking the Habitats Regulations Assessment (HRA). HRA itself operates independently from the Planning Policy system, being a legal requirement of a discrete Statutory Instrument. Therefore, there is no direct relationship to the National Planning Policy Framework (NPPF) and the 'Tests of Soundness'.

A Proportionate Assessment

2.2 Project-related HRA often requires bespoke survey work and novel data generation in order to accurately determine the significance of effects. In other words, to look beyond the risk of an effect to a justified prediction of the actual likely effect and to the development of avoidance or mitigation measures.

2.3 However, the draft MHCLG guidance[4] (described in greater detail later in this chapter) makes it clear that when implementing HRA of land-use plans, the Appropriate Assessment (AA) should be undertaken at a level of detail that is appropriate and proportional to the level of detail provided within the plan itself:

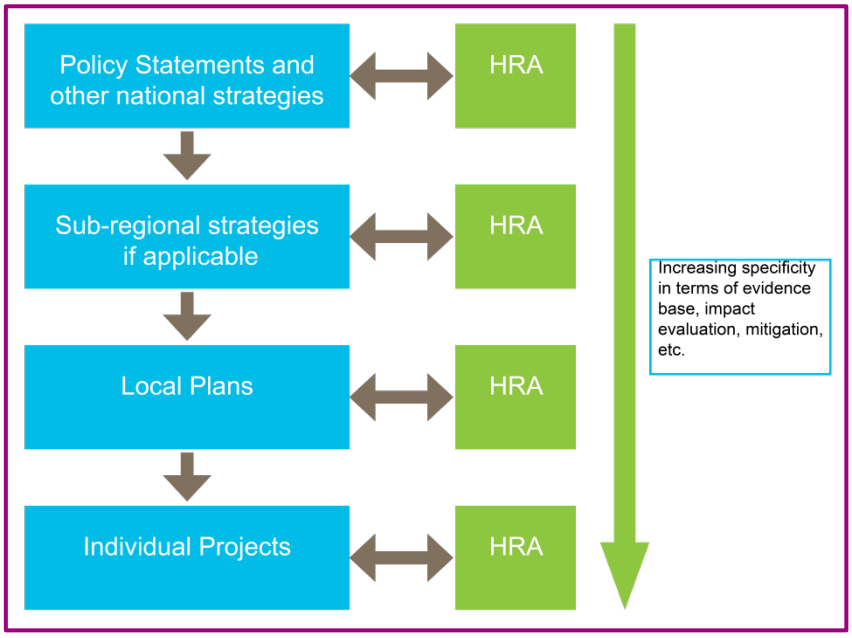
2.4 "The comprehensiveness of the [Appropriate] assessment work undertaken should be proportionate to the geographical scope of the option and the nature and extent of any effects identified. An AA need not be done in any more detail, or using more resources, than is useful for its purpose. It would be inappropriate and impracticable to assess the effects [of a strategic land use plan] in the degree of detail that would normally be required for the Environmental Impact Assessment (EIA) of a project."

2.5 More recently, the Court of Appeal[5] ruled that providing the Council (competent authority) was duly satisfied that proposed mitigation could be "*achieved in practice"* then this would suffice to meet the requirements of the Habitat Regulations. This ruling has since been applied to a planning permission (rather than a Plan document)[6]. In this case the High Court ruled that for "*a multistage process, so long as there is sufficient information at any particular stage to enable the authority to be satisfied that the proposed mitigation can be achieved in practice it is not necessary for all matters concerning mitigation to be fully resolved before a decision maker is able to conclude that a development will satisfy the requirements of reg 61 of the Habitats Regulations"*.

2.6 In other words, there is a tacit acceptance that AA can be tiered and that all impacts are not necessarily appropriate for consideration to the same degree of detail at all tiers as illustrated in **Figure 2**.

[4] MHCLG (2006) Planning for the Protection of European Sites, Consultation Paper
[5] No Adastral New Town Ltd (NANT) v Suffolk Coastal District Council Court of Appeal, 17th February 2015
[6] High Court case of R (Devon Wildlife Trust) v Teignbridge District Council, 28 July 2015

Figure 2: Tiering in HRA of Land Use Plans



2.7 For a plan the level of detail concerning the developments that will be delivered is usually insufficient to make a highly detailed assessment of significance of effects. For example, precise and full determination of the impacts and significant effects of a new settlement will require extensive details concerning the design of the new housing sites, including layout of greenspace and type of development to be delivered in particular locations, yet these data will not be decided until subsequent stages.

2.8 The most robust and defensible approach to the absence of fine grain detail at this level is to make use of the precautionary principle. In other words, the plan is never given the benefit of the doubt (within the limits of reasonableness); it must be assumed that a policy/measure is likely to have an impact leading to a significant adverse effect upon an internationally designated site unless it can be clearly established otherwise.

The Process of HRA

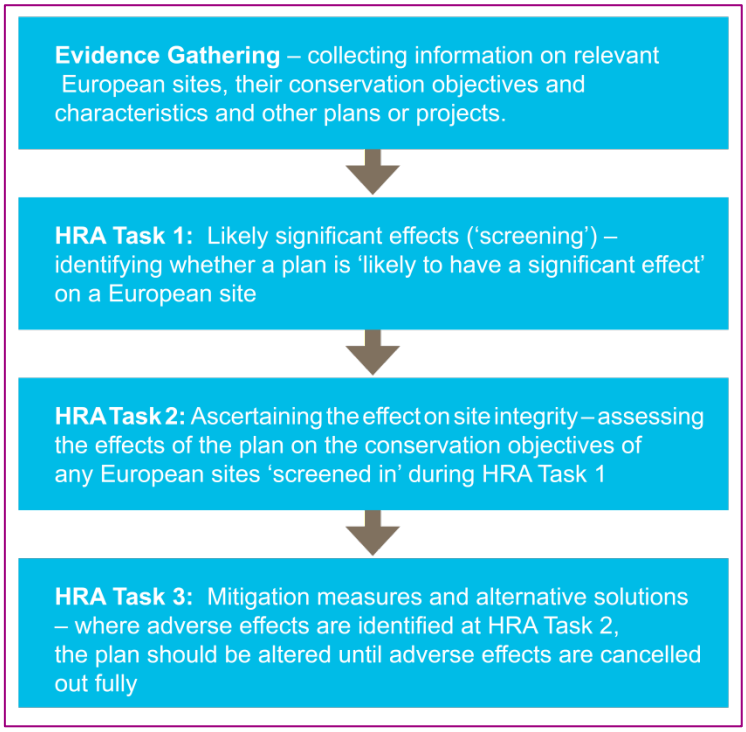
2.9 The HRA is being carried out in the continuing absence of formal central Government guidance. The former DCLG (now MHCLG) released a consultation paper on AA of Plans in 2006[7]. As yet, no further formal guidance has emerged from MHCLG. However, Natural England has produced its own informal internal guidance and Natural Resources Wales has produced guidance for Welsh authorities on "*the appraisal of plans under the Habitats Regulations*" as a separate guidance document aimed at complementing and supplementing the guidance/advice provided within Technical Advice Note 5: Nature Conservation and Planning[8].

2.10 **Figure 3** outlines the stages of HRA according to the draft MHCLG guidance (which, as government guidance applicable to English authorities is considered

[7] MHCLG (2006) Planning for the Protection of European Sites, Consultation Paper
[8] Welsh Government. Technical Advice Note 5, Nature Conservation and Planning (2009) http://gov.wales/topics/planning/policy/tans/tan5/?lang=en [accessed 01/12/2016]

to take precedence over other sources of guidance). The stages are essentially iterative, being revisited as necessary in response to more detailed information, recommendations and any relevant changes to the plan until no likely significant effects remain.

Figure 3: Four-Stage Approach to Habitats Regulations Assessment



2.11 The following process has been adopted for carrying out the subsequent stages of the HRA.

Task One: Test of Likely Significant Effect

2.12 The first stage of any Habitats Regulations Assessment is a test of Likely Significant Effect - essentially a high-level assessment to decide whether the full subsequent stage known as Appropriate Assessment is required. The essential question is:

2.13 "Is the Plan, either alone or in combination with other relevant projects and plans, likely to result in a significant effect upon European sites?"

2.14 In evaluating significance, AECOM have relied on professional judgment and experience of working with the other local authorities on similar issues. The level of detail concerning developments that will be permitted under land use plans is rarely sufficient to make a detailed quantification of effects. Therefore, a precautionary approach has been taken (in the absence of more precise data) assuming as the default position that if a likely significant effect (LSE) cannot be confidently ruled out, then the assessment must be taken the next level of assessment Task Two: Appropriate Assessment. This is in line with the April 2018 court ruling relating to 'People Over Wind' where mitigation and avoidance measures are to be included at the next stage of assessment.

Task Two: Appropriate Assessment

2.15 International site(s) which have been 'screened in' during the previous Task have a detailed assessment undertaken on the effect of the policies on the international site(s) site integrity. Avoidance and mitigation measures to avoid adverse significant effects are taken into account or recommended where necessary.

2.16 As established by case law, 'appropriate assessment' is not a technical term; it simply means whatever further assessment is necessary to confirm whether there would be adverse effects on the integrity of any international sites that have not been dismissed at screening. Since it is not a technical term it has no firmly established methodology except that it essentially involves repeating the analysis for the likely significant effects stage, but to a greater level of detail on a smaller number of policies and sites, this time with a view to determining if there would be adverse effects on integrity.

2.17 One of the key considerations during Appropriate Assessment is whether there is available mitigation that would entirely address the potential effect. In practice, the Appropriate Assessment takes any policies or allocations that could not be dismissed following the high-level Screening analysis and analyse the potential for an effect in more detail, with a view to concluding whether there would actually be an adverse effect on integrity (in other words, disruption of the coherent structure and function of the international site(s)).

The Scope

2.18 There is no guidance that dictates the physical scope of an HRA of a plan. Therefore, in considering the physical scope of the assessment we were guided primarily by the identified impact pathways rather than by arbitrary "zones", i.e. a source-pathway-receptor approach. Current guidance suggests that the following international sites be included in the scope of assessment:

- All sites within the Neighbourhood Area (the area covered by the Neighbourhood Plan); and
- Other sites shown to be linked to development within the Neighbourhood Area through a known "pathway" (discussed below).

2.19 Briefly defined, pathways are routes by which a change in activity within the plan area can lead to an effect upon an international site. In terms of the second category of international site listed above, MHCLG guidance states that the AA should be "*proportionate to the geographical scope of the* [plan policy]" and that "*an AA need not be done in any more detail, or using more resources, than is useful for its purpose*" (MHCLG, 2006, p.6).

2.20 The full details of all international designated sites discussed in this document along with specifying their qualifying features, conservation objectives and threats to integrity can be found in **Appendix A,** whilst their locations are illustrated in **Appendix A, Figure A1.**

2.21 **Table 1** below lists all those international designated sites included in this HRA.

Note that the inclusion of an international sites or pathway below does not indicate that an effect is expected but rather that these are pathways that will be investigated.

Table 1: Physical Scope of the HRA

International Designated Site	Location	Reason for Inclusion/ Exclusion (pressures/ threats[9] associated with the International site that could link to the Plan.)	Other site vulnerabilities
Abberton Reservoir SPA and Ramsar	At its closest 5.6 km SE of the Neighbourhood Area	- Public access / disturbance - Water pollution - Air pollution: risk of atmospheric nitrogen deposition	- Siltation - Planning permission: general - Changes in species distribution - Bird strike
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar	At its closest 11.4 km SE of the Neighbourhood Area	- Public access / disturbance - Air pollution: risk of atmospheric nitrogen deposition	- Coastal squeeze - Planning permission: general - Change in species distribution - Invasive species - Fisheries: recreational marine and estuarine - Fisheries: commercial marine and estuarine
Essex Estuaries SAC	At its closest 11.8 km SE of the Neighbourhood Area	- Public access / disturbance - Air pollution: risk of atmospheric nitrogen deposition	- Coastal squeeze - Planning permission: general - Change in species distribution

[9] As identified in the Site Improvement Plans or RAMS for European sites.

			- Invasive species - Fisheries: recreational marine and estuarine - Fisheries: commercial marine and estuarine
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar	At its closest 13.2 km E of the Neighbourhood Area	- Public access / disturbance - Air pollution: risk of atmospheric nitrogen deposition	- Coastal squeeze - Planning permission: general - Change in species distribution - Invasive species - Fisheries: recreational marine and estuarine - Fisheries: commercial marine and estuarine

The 'in Combination' Scope

2.22 It is a requirement of the Regulations that the impacts and effects of any land use plan being assessed are not considered in isolation but in combination with other plans and projects that may also be affecting the internationally designated site(s) in question.

2.23 When undertaking this part of the assessment it is essential to bear in mind the principal intention behind the legislation i.e. to ensure that those projects or plans which in themselves have minor impacts are not simply dismissed on that basis but are evaluated for any cumulative contribution they may make to an overall significant effect. In practice, in combination assessment is therefore of greatest relevance when the plan would otherwise be screened out because its individual contribution is inconsequential. The overall approach is to exclude the risk of there being unassessed likely significant effects in accordance with the precautionary principle. This was first established in the seminal Waddenzee[10] case.

2.24 For the purposes of this assessment, we have determined that, due to the nature of the identified impacts, the key other plans and projects with potential for in combination likely significant effects are those schemes that have the following impact pathways: Disturbance (including urbanisation and recreational pressure), changes in hydraulic conditions and loss of functionally linked land. The following plans have been assessed for their in-combination impact to interact with the Neighbourhood Plan:

- Braintree District Local Plan (Publication Draft) 2017-2033
- Colchester Borough Local Plan (Submission Draft) 2017-2033
- Maldon District Local Development Plan 2014-2033
- Chelmsford City Local Plan to 2036
- Uttlesford District Local Plan 2005
- Joint Babergh and Mid-Suffolk Local Development Scheme (Preferred Options) 2019
- Anglian Water Drought Plan 2019
- Anglian Water Water Resource Management Plan 2019
- Essex Transport Strategy: The Local Transport Plan for Essex 2011
- Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (RAMS) 2018 – 2038
    - Participating local authorities: 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

[10] Waddenzee case (Case C-127/02, [2004] ECR-I 7405)

Borough Council, Tendring District Council, Thurrock Borough Council.

2.25 It should be noted that, while the broad potential impacts of these other projects and plans will be considered, we do not propose carrying out full HRA on each of these plans – we will however draw upon existing HRA that have been carried out for surrounding regions and plans.

3. Pathways of Impact

3.1 The HRA of the Braintree Local Plan (2017) has been referenced in producing this HRA and identifying the potential pathways of impact. The following pathways of impact are considered relevant to the HRA of the Plan:

- Recreational pressure
- Water quality
- Atmospheric pollution from atmospheric nitrogen deposition

Recreational Pressure

3.2 Recreational use of an international site has the potential to:

- Cause disturbance to sensitive species, particularly ground-nesting birds and (where relevant) wintering wildfowl;
- Cause damage through erosion and fragmentation;
- Cause eutrophication as a result of dog fouling; and
- Prevent appropriate management or exacerbate existing management difficulties.

3.3 Different types of international sites are subject to different types of recreational pressures and have different vulnerabilities. Studies across a range of species have shown that the effects from recreation can be complex.

3.4 It should be emphasised that recreational use is not inevitably a problem. Many international sites also contain nature reserves managed for conservation and public appreciation of nature.

3.5 HRAs of Local Plans tend to focus on recreational sources of disturbance as a result of new residents[11].

Breeding birds (February to August)

3.6 Concern regarding the effects of disturbance on birds stems from the fact that they are expending energy unnecessarily and the time they spend responding to disturbance is time that is not spent feeding (this will apply all year round)[12]. Disturbance therefore risks increasing energetic output while reducing energetic input, which can adversely affect the 'condition' and ultimately survival of the birds. In addition, displacement of birds from one feeding site to others can increase the pressure on the resources available within the remaining sites, as they have to sustain a greater number of birds[13]. Moreover, the more time a

[11] The RTPI report 'Planning for an Ageing Population'(2004) which states that 'From being a marginalised group in society, the elderly are now a force to be reckoned with and increasingly seen as a market to be wooed by the leisure and tourist industries. There are more of them and generally they have more time and more money.' It also states that 'Participation in most physical activities shows a significant decline after the age of 50. The exceptions to this are walking, golf, bowls and sailing, where participation rates hold up well into the 70s'.
[12] Riddington, R. *et al*. 1996. The impact of disturbance on the behaviour and energy budgets of Brent geese. *Bird Study* 43:269-279
[13] Gill, J.A., Sutherland, W.J. & Norris, K. 1998. The consequences of human disturbance for estuarine birds. *RSPB Conservation Review* 12: 67-72

breeding bird spends disturbed from its nest, the more its eggs are likely to cool and the more vulnerable they, or any nestlings, are to predators.

Non-breeding birds (September to January)

3.7 The potential for disturbance may be different in winter than in summer, in that there are often a smaller number of recreational users. In addition, the consequences of disturbance at a population level may be reduced because birds are not breeding. However, activity outside of the summer months can still cause important disturbance, especially as birds are particularly vulnerable at this time of year due to food shortages. Disturbance which results in abandonment of suitable feeding areas can have severe consequences for those birds involved and their ability to find alternative feeding areas. Evans & Warrington[14] found that on Sundays total water bird numbers (including shoveler and gadwall) were 19% higher on Stocker's Lake LNR in Hertfordshire, and attributed this to observed greater recreational activity on surrounding water bodies at weekends relative to week days displacing birds into the LNR. However, recreational activity was not quantified in detail in this study and individual recreational activities were not evaluated separately. Tuite et al[15] used a large (379 site), long-term (10-year) dataset (September – March species counts) to correlate seasonal changes in wildfowl abundance with the presence of various recreational activities. They found that shoveler was one of the most sensitive species to disturbance. The greatest impact on wildfowl numbers during these months was associated with sailing/windsurfing and rowing. Underhill et al[16] counted waterfowl and all disturbance events on 54 water bodies within the South West London Water Bodies Special Protection Area and clearly correlated disturbance with a decrease in bird numbers at weekends in smaller sites and with the movement of birds within larger sites from disturbed to less disturbed areas.

3.8 More recent research has established that human activity including recreational activity can be linked to disturbance of wintering waterfowl populations[17] [18].

3.9 Human activity can affect birds either directly (e.g. through causing them to flee) or indirectly (e.g. through damaging their habitat or reducing their fitness in less obvious ways e.g. stress). The most obvious direct effect is that of immediate mortality such as death by shooting, but human activity can also lead to behavioural changes (e.g. alterations in feeding behaviour, avoidance of certain areas and use of sub optimal areas etc.) and physiological changes (e.g. an increase in heart rate) that, although less noticeable, may ultimately result in major population-level effects by altering the balance between immigration/birth and emigration/death[19].

3.10 The degree of impact that varying levels of noise will have on different species of bird is poorly understood except that a number of studies have found that an

[14] Evans, D.M. & Warrington, S. 1997. The effects of recreational disturbance on wintering waterbirds on a mature gravel pitlake near London. International Journal of Environmental Studies 53: 167-182
[15] Tuite, C.H., Hanson, P.R. & Owen, M. 1984. Some ecological factors affecting winter wildfowl distribution on inland waters in England and Wales and the influence of water-based recreation. *Journal of Applied Ecology* 21: 41-62
[16] Underhill, M.C. et al. 1993. Use of Waterbodies in South West London by Waterfowl. An Investigation of the Factors Affecting Distribution, Abundance and Community Structure. Report to Thames Water Utilities Ltd. and English Nature. Wetlands Advisory Service, Slimbridge
[17] Footprint Ecology. 2010. Recreational Disturbance to Birds on the Humber Estuary
[18] Footprint Ecology, Jonathan Cox Associates & Bournemouth University. 2010. Solent disturbance and mitigation project – various reports.
[19] Riley, J. 2003. Review of Recreational Disturbance Research on Selected Wildlife in Scotland. Scottish Natural Heritage.

increase in traffic levels on roads does lead to a reduction in the bird abundance within adjacent hedgerows - Reijnen et al (1995) examined the distribution of 43 passerine species (i.e. 'songbirds'), of which 60% had a lower density closer to the roadside than further away. By controlling vehicle usage they also found that the density generally was lower along busier roads than quieter roads[20]. A study on Holt Heath noted reduced levels of fitness due to occupation of sub optimal habitats alongside roads amongst heathland species.

3.11 A recent study on recreational disturbance on the Humber[21] assesses different types of noise disturbance on waterfowl referring to studies relating to aircraft (see Drewitt 1999[22]), traffic (Reijnen, Foppen, & Veenbaas 1997)[23], dogs (Lord, Waas, & Innes 1997[24]; Banks & Bryant 2007[25]) and machinery (Delaney et al. 1999; Tempel & Gutierrez 2003). These studies identified that there is still relatively little work on the effects of different types of water-based craft and the impacts from jet skis, kite surfers, windsurfers etc. (see Kirby et al. 2004[26] for a review). Some types of disturbance are clearly likely to invoke different responses. In very general terms, both distance from the source of disturbance and the scale of the disturbance (noise level, group size) will both influence the response (Delaney et al. 1999[27]; Beale & Monaghan 2005[28]). On UK estuaries and coastal sites, a review of WeBS data showed that, among the volunteer WeBS surveyors, driving of motor vehicles and shooting were the two activities most perceived to cause disturbance (Robinson & Pollitt 2002)[29].

Mechanical/abrasive damage and nutrient enrichment

3.12 Most types of aquatic or terrestrial sites can be affected by trampling, which in turn causes soil compaction and erosion:

- Wilson & Seney (1994)[30] examined the degree of track erosion caused by hikers, motorcycles, horses and cyclists from 108 plots along tracks in the Gallatin National Forest, Montana. Although the results proved difficult to interpret, it was concluded that horses and hikers disturbed more sediment on wet tracks, and therefore caused more erosion, than motorcycles and bicycles.

[20] Reijnen, R. et al. 1995. The effects of car traffic on breeding bird populations in woodland. III. Reduction of density in relation to the proximity of main roads. Journal of Applied Ecology 32: 187-202
[21] Helen Fearnley Durwyn Liley and Katie Cruickshanks (2012) Results of Recreational Visitor Survey across the Humber Estuary produced by Footprint Ecology
[22] Drewitt, A. (1999) Disturbance effects of aircraft on birds. English Nature, Peterborough.
[23] Reijnen, R., Foppen, R. & Veenbaas, G. (1997) Disturbance by traffic of breeding birds: evaluation of the effect and considerations in planning and managing road corridors. Biodiversity and Conservation, 6, 567-581.
[24] Lord, A., Waas, J.R. & Innes, J. (1997) Effects of human activity on the behaviour of northern New Zealand dotterel Charadrius obscurus aquilonius chicks. Biological Conservation, 82,15-20.
[25] Banks, P.B. & Bryant, J.V. (2007) Four-legged friend of foe? Dog-walking displaces native birds from natural areas. Biology Letters, 3, 611-613.
[26] Kirby, J.S., Clee, C. & Seager, V. (1993) Impact and extent of recreational disturbance to wader roosts on the Dee estuary: some preliminary results. Wader Study Group Bulletin, 68, 53-58.
[27] Delaney, D.K., Grubb, T.G., Beier, P., Pater, L.L.M. & Reiser, H. (1999) Effects of Helicopter Noise on Mexican Spotted Owls. The Journal of Wildlife Management, 63, 60-76.
[28] Beale, C.M. & Monaghan, P. (2005) Modeling the Effects of Limiting the Number of Visitors on Failure Rates of Seabird Nests. Conservation Biology, 19, 2015-2019.
[29] Robinson, J.A. & Pollitt, M.S. (2002) Sources and extent of human disturbance to waterbirds in the UK: an analysis of Wetland Bird Survey data, 1995/96 to 1998/99: Less than 32% of counters record disturbance at their site, with differences in causes between coastal and inland sites. Bird Study, 49, 205.
[30] Wilson, J.P. & J.P. Seney. 1994. Erosional impact of hikers, horses, motorcycles and off road bicycles on mountain trails in Montana. Mountain Research and Development 14:77-88

- Cole et al (1995a, b)[31] conducted experimental off-track trampling in 18 closed forest, dwarf scrub and meadow & grassland communities (each tramped between 0 – 500 times) over five mountain regions in the US. Vegetation cover was assessed two weeks and one year after trampling, and an inverse relationship with trampling intensity was discovered, although this relationship was weaker after one year than two weeks indicating some recovery of the vegetation. Differences in plant morphological characteristics were found to explain more variation in response between different vegetation types than soil and topographic factors. Low-growing, mat-forming grasses regained their cover best after two weeks and were considered most resistant to trampling, while tall forbs (non-woody vascular plants other than grasses, sedges, rushes and ferns) were considered least resistant. Cover of hemicryptophytes and geophytes (plants with buds below the soil surface) was heavily reduced after two weeks, but had recovered well after one year and as such these were considered most resilient to trampling. Chamaephytes (plants with buds above the soil surface) were least resilient to trampling. It was concluded that these would be the least tolerant of a regular cycle of disturbance.
- Cole (1995c)[32] conducted a follow-up study (in 4 vegetation types) in which shoe type (trainers or walking boots) and trampler weight were varied. Although immediate damage was greater with walking boots, there was no significant difference after one year. Heavier tramplers caused a greater reduction in vegetation height than lighter tramplers, but there was no difference in effect on cover.
- Cole & Spildie (1998)[33] experimentally compared the effects of off-track trampling by hiker and horse (at two intensities – 25 and 150 passes) in two woodland vegetation types (one with an erect forb understorey and one with a low shrub understorey). Horse traffic was found to cause the largest reduction in vegetation cover. The forb-dominated vegetation suffered greatest disturbance, but recovered rapidly. Higher trampling intensities caused more disturbance.

3.13 Walkers with dogs contribute to pressure on sites through nutrient enrichment via dog fouling and also cause greater disturbance to fauna as dogs are less likely to keep to marked footpaths and also tend to move in a more erratic manner. Sites being managed by nature conservation bodies and local authorities frequently resort to hardening eroded paths to restrict erosion but at the same time they are losing the habitats formerly used by sand lizards and burrowing invertebrates. Motorcycle scrambling and off-road vehicle use can cause more serious erosion, as well as disturbance to sensitive species. Cycling and horse riding also contribute to mechanical abrasion and disturbance; however, dog walkers, due to their prevalence and motor vehicles cause the

[31] Cole, D.N. 1995a. Experimental trampling of vegetation. I. Relationship between trampling intensity and vegetation response. Journal of Applied Ecology 32: 203-214
Cole, D.N. 1995b. Experimental trampling of vegetation. II. Predictors of resistance and resilience. Journal of Applied Ecology 32: 215-224
[32] Cole, D.N. 1995c. Recreational trampling experiments: effects of trampler weight and shoe type. Research Note INT-RN-425. U.S. Forest Service, Intermountain Research Station, Utah.
[33] Cole, D.N., Spildie, D.R. 1998. Hiker, horse and llama trampling effects on native vegetation in Montana, USA. Journal of Environmental Management 53: 61-71

greatest impact. Boats can cause some mechanical damage to intertidal habitats through grounding as well as anchor and anchor line damage.

Water Quality

3.14 Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients on international sites leading to unfavourable conditions. In addition, diffuse pollution, partly from urban run-off has been identified during an Environment Agency Review of Consents process and a joint Environment Agency and Natural England evidence review, as being a major factor in causing unfavourable condition of international sites.

3.15 The quality of the water that feeds international sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts:

- At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour. Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen;
- Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life; and
- Increased discharge of treated sewage effluent can result both in high levels of macroalgal growth, which can smother the mudflats of value to SPA birds and in greater scour (as a result of greater flow volumes).

3.16 At sewage treatment works, additional residential development increases the risk of effluent escape into aquatic environments in addition to consented discharges to the catchment. In many urban areas, sewage treatment and surface water drainage systems are combined, and therefore a predicted increase in flood and storm events could increase pollution risk.

Atmospheric Pollution (Atmospheric Nitrogen Deposition)

3.17 The main pollutants of concern for international sites are oxides of nitrogen (NO_x), ammonia (NH_3) and sulphur dioxide (SO_2). NO_x can have a directly toxic effect upon vegetation. In addition, greater NO_x or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally

regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

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

Pollutant	Source	Effects on habitats and species
Acid deposition	SO_2, NO_x and ammonia all contribute to acid deposition. Although future trends in S emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased nitrogen emissions may cancel out any gains produced by reduced sulphur levels.	Can affect habitats and species through both wet (acid rain) and dry deposition. Some sites will be more at risk than others depending on soil type, bed rock geology, weathering rate and buffering capacity.
Ammonia (NH_3)	Ammonia is released following decomposition and volatilisation of animal wastes. It is a naturally occurring trace gas, but levels have increased considerably with expansion in numbers of agricultural livestock. Ammonia reacts with acid pollutants such as the products of SO_2 and NO_X emissions to produce fine ammonium (NH_4^+) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue.)	Adverse effects are as a result of nitrogen deposition leading to eutrophication, as well as direct toxicity. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 deposition are for small relict nature reserves located in intensive agricultural landscapes.
Nitrogen oxides NO_x	Nitrogen oxides are mostly produced in combustion processes. About one quarter of the UK's emissions are from power stations.	Deposition of nitrogen compounds (nitrates (NO_3), nitrogen dioxide (NO_2) and nitric acid (HNO_3)) can lead to both soil and freshwater acidification. In addition, NO_x can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen (N) deposition	The pollutants that contribute to nitrogen deposition derive mainly from NO_X and NH_3 emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow-growing perennial species and bryophytes are most at risk from N eutrophication, due to its promotion of competitive and

		invasive species which can respond readily to elevated levels of N. N deposition can also increase the risk of damage from abiotic factors, e.g. drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions from NO_x and volatile organic compounds (VOCs). These are mainly released by the combustion of fossil fuels. The increase in combustion of fossil fuels in the UK has led to a large increase in background ozone concentration, leading to an increased number of days when levels across the region are above 40ppb. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O_3 above 40 ppb can be toxic to humans and wildlife and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops, decreased forest production and altered species composition in semi-natural plant communities.
Sulphur Dioxide SO_2	Main sources of SO_2 emissions are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total SO_2 emissions have decreased substantially in the UK since the 1980s.	Wet and dry deposition of SO_2 acidifies soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.

3.18 Sulphur dioxide emissions are overwhelmingly influenced by the output of power stations and industrial processes that require the combustion of coal and oil. Ammonia emissions are dominated by agriculture, with some chemical processes also making notable contributions. As such, it is unlikely that material increases in SO_2 or NH_3 emissions will be associated with Local Plans or Neighbourhood Plans. NO_x emissions, however, are dominated by the output of vehicle exhausts. Within a 'typical' housing development, by far the largest contribution to NO_x (92%) will be made by the associated road traffic. Other sources, although relevant, are of minor importance (8%) in comparison[34]. Emissions of NO_x could therefore be reasonably expected to increase as a result of greater vehicle use as an indirect effect of the Neighbourhood Plan.

3.19 According to the World Health Organisation, the critical NO_x concentration (critical threshold) for the protection of vegetation is 30 μgm^{-3}; the threshold for sulphur dioxide is 20 μgm^{-3}. In addition, ecological studies have determined

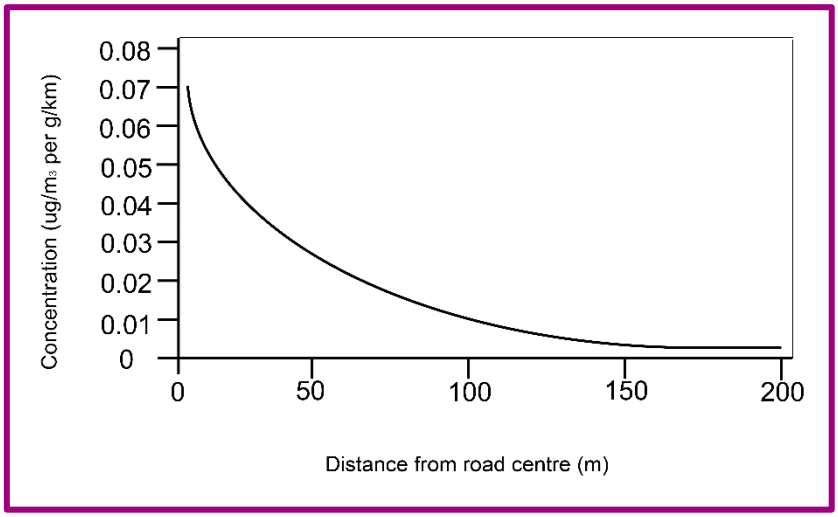
[34] Proportions calculated based upon data presented in Dore CJ et al. 2005. UK Emissions of Air Pollutants 1970 – 2003. UK National Atmospheric Emissions Inventory. http://www.airquality.co.uk/archive/index.php

'Critical Loads'[35] of atmospheric nitrogen deposition (that is, NO_x combined with ammonia NH_3) for key habitats within international sites.

Local Air Pollution

3.20 According to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the roadside to local pollution levels is not significant"[36].

Table 3. Traffic contribution to concentrations of pollutants at different distances from a road (Source: DfT)



3.21 This is therefore the distance that has been used throughout this HRA in order to determine whether international sites are likely to be significantly affected by development under the Neighbourhood Plan.

[35] The Critical Load is the rate of deposition beyond which research indicates that adverse effects can reasonably be expected to occur
[36] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

4. Test of Likely Significance

Introduction

4.1 The initial scoping of internationally designated sites undertaken in **Table 1** identifies that some sites are potentially vulnerable to:

- Recreational pressure
- Water quality
- Atmospheric pollution from atmospheric nitrogen deposition

4.2 The full test of Likely Significant Effects for the Feering Neighbourhood Plan is presented in **Appendix B**. The assessment took into consideration the above potential vulnerabilities of the international sites included in **Table 1**.

4.3 After an initial investigation into linking impact pathways the following international sites have been screened in as having one or more linking impact pathways:

- Abberton Reservoir SPA and Ramsar
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar
- Colne Estuary (Mix-Essex Coast Phase 2) SPA and Ramsar
- Essex Estuaries SAC

4.4 None of these international sites are present within the Neighbourhood Area and therefore will not cause likely significant effects upon the international sites alone. Therefore, the following sections will focus on the 'in combination' effects.

Summary of Test of Likely Significance 'In Combination'

Policy Screening Summary

4.5 Of the 11 Neighbourhood Plan policies, one policy is considered to have the potential to result in a likely significant effect in combination:

- Policy 1: New Development Allocations within the Parish - this policy allocates a single residential site allocation (including associated local highways improvements, a new primary school, new early years and childcare facilities, retail facilities, public open space, and contributions towards additional education and local healthcare provision) for up to 750 new homes within the Neighbourhood Area. It should be noted that this site has been allocated within the Braintree District Local Plan (Publication Draft) 2017-2033

4.6 Policy 1 provides for the following realistic potential linking impact pathways that could result in likely significant effects on international sites in combination:

- Recreational pressure: as a result of new residential dwellings increasing the number of visitors within the international sites.
- Air quality: as a result of increased journeys to work and increased local residents driving to international sites.
- Water quality: increased effluent as a result of increased residential dwellings and business development.

4.7 All remaining policies are development management policies that do not provide impact pathways that could potentially link to international sites.

International Site Vulnerabilities

Abberton Reservoir SPA and Ramsar

4.8 Abberton Reservoir SPA and Ramsar is a large water storage reservoir close to the Essex Coast. The international site at its closest is approximately 5.6km South East of the Neighbourhood Area. The site has been identified to be vulnerable to **increased disturbance through recreational pressure**, **water pollution** and **air pollution through increases in atmospheric nitrogen deposition**.

Blackwater Estuary (Mid-Essex Phase 4) SPA and Ramsar

4.9 Blackwater Estuary SPA and Ramsar is a coastal plain estuarine system with open coast mudflats and sand banks. The international site at its closest is approximately 11.4 km south of the Neighbourhood Area. The site has been identified to be vulnerable to **increased disturbance through recreational pressure,** and **air pollution through increases in atmospheric nitrogen deposition**.

Essex Estuaries SAC

4.10 Essex Estuaries SAC is a coastal plain estuarine system with open coast mudflats and sand banks. The international site at its closest is approximately 11.8 km south of the Neighbourhood Area. The site has been identified to be vulnerable to **increased disturbance through recreational pressure,** and **air pollution through increases in atmospheric nitrogen deposition**.

Colne Estuary (Mid-Essex Phase 2) SPA and Ramsar

4.11 Colne Estuary SPA and Ramsar is a coastal plain estuarine system with open coast mudflats and sand banks. The international site at its closest is approximately 13.2 km south of the Neighbourhood Area. The site has been identified to be vulnerable to **increased disturbance through recreational pressure**, and **air pollution through increases in atmospheric nitrogen deposition**.

Potential Impact Pathways

4.12 Having discussed international site vulnerabilities this section of the report discusses the potential for impacts through each pathway identified.

Recreational Pressure

4.13 Recreational pressure is a known impact pathway upon the Essex Coastal European Sites and has been highlighted and discussed within the Braintree District Local Plan and its HRA. As mitigation cannot be taken into consideration at the Screening Stage of the HRA process, **Recreational pressure will be**

discussed further within the Appropriate Assessment in Chapter 5 of this report.

Water Quality

4.14 Increased amounts of housing or business development can lead to reduced water quality of rivers and estuarine environments. Sewage and industrial effluent discharges can contribute to increased nutrients on international sites leading to unfavourable conditions. In addition, diffuse pollution, partly from urban run-ff has been identified during an Environment Agency Review of Consents process and a joint Environment Agency and Natural England evidence review, as being a major factor in causing unfavourable conditions of international sites.

4.15 Abberton reservoir is one of two water storage reservoirs that supplies drinking water to Essex. It is known to be vulnerable to decreases in water quality. The reservoir is filled through water being pumped from the River Stour via two large underground pipelines[37]. The site improvement plan for Abberton Reservoir states that the reservoir high in nutrients (eutrophic)[38], however this is mainly from the catchment area of the River Stour being intensively farmed and therefore the nutrients deriving from agricultural processes. In addition to this, Feering Parish is approximately 11.1 km south of the River Stour and does not form part of the Stour's catchment area. Feering Parish is instead part of the River Blackwater's catchment which drains to the Blackwater Estuary. However, the Blackwater Estuary is not vulnerable to water quality issues to the same extent as the build-up of smothering algal blooms from eutrophication is far reduced by the cooler water temperatures, higher wave action and higher sediment loading of coastal waters on the east coast of the UK.

4.16 Therefore, water quality impacts can be screened out of further discussion as there are no linking impact pathways to sensitive international sites.

Air Pollution

4.17 The main pollutants of concern for international sites are oxides of nitrogen (NO_x), ammonia (NH_3) and sulphur dioxide (SO_2). NO_x can have a directly toxic effect upon vegetation. In addition, greater NO_x or ammonia concentrations within the atmosphere will lead to greater rates of nitrogen deposition to soils. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats.

4.18 The Essex Coast European Sites are vulnerable to nitrogen deposition. According to the SIP[39], at these sites' nitrogen deposition exceeds the relevant critical loads for coastal dune habitats, which are used by breeding terns, a qualifying feature of the SPA. However, on the Essex estuaries the decline in the number of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank at Foulness and to disturbance elsewhere, rather than to over-vegetation of breeding areas caused by nitrogen deposition.

4.19 In addition to this, according to the Department of Transport's Transport Analysis Guidance, "Beyond 200m, the contribution of vehicle emissions from the

[37] https://www.eswater.co.uk/your-home/leisure/Abberton-Reservoir.aspx [Accessed 21/10/2020]
[38] http://publications.naturalengland.org.uk/publication/5195034185957376 [Accessed 21/10/2020]
[39] http://publications.naturalengland.org.uk/publication/5459956190937088 [Accessed 21/10/2020]

roadside to local pollution levels is not significant"[40]. The HRA for the 2017 Braintree Local Plan concluded that "*None of the strategic roads running from or through Braintree District are within 200m of the identified European sites… [and] in particular, commuting journeys are more likely to be contained within the District…, or associated with large settlements such as Colchester and Chelmsford, neither of which are within 200m of the European sites."* Air pollution was for this reason, concluded within the context of the Braintree District Local Plan, not to cause a likely significant effect.

4.20 As this impact pathway has been screened out for the District as a whole within the Local Plan, it can therefore be concluded that air pollution impacts arising from the Neighbourhood Area, can be screened out of further discussion as there are no linking impact pathways to the international sites.

[40] www.webtag.org.uk/archive/feb04/pdf/feb04-333.pdf

5. Appropriate Assessment

5.1 No linking impact pathways were identified for 'alone' effects therefore the following impact pathways will be focused on 'in combination' effects.

Recreational Pressure 'in Combination'

5.2 The submitted Braintree District Local Plan is proposing to deliver 14,320 new homes over the plan period up to 2033, as stated in Policy LPP 17 – Housing Provision and Delivery. A single site in Feering Parish has been allocated for residential development within the Braintree District Local Plan; Policy LPP22: Strategic Growth: Land at Feering to provide up to 750 net new dwellings.

5.3 As previously detailed, Policy 1: New Development Allocations within the Parish has the potential in combination with other plans and projects to increase recreational pressure within international sites with increased recreational pressure listed as a vulnerability within the Site Improvement Plan (SIP). All international sites discussed within this HRA are vulnerable to increased recreational pressure. These are:

- Abberton Reservoir SPA and Ramsar
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar
- Colne Estuary (Mix-Essex Coast Phase 2) SPA and Ramsar
- Essex Estuaries SAC

5.4 Policy LPP68 in the Braintree District Local Plan 2033 provides protection to international sites as follows; "*Proposals likely to have an adverse effect will require a full assessment in line with European Legislation" and "Planning permission for major development will be refused in these areas except in exceptional circumstances where overriding public interest be demonstrated*". Visitor surveys of the Essex Coast European Sites were undertaken by Colchester District Council[41] in order to highlight visitor numbers and patterns to allow for appropriate mitigation measures to be sought.

Abberton Reservoir

5.5 One of the areas surveyed was Abberton Reservoir, which is a large reservoir manage by Essex and Suffolk Water. It is one of the most important reservoirs in the country for overwintering waterfowl and also supports substantial aggregations of moulting birds in early autumn and a large colony of tree-nesting cormorants. The reservoir itself has no public access, however there are several footpaths around the reserve which lead to bird hides which can be used for bird watching. In addition, no dogs are allowed to be walked on the reserve. A visitor study was undertaken at Abberton during the winter of 2011 and 2012 which showed that 57% of all visitors travelled 16km or less to get to the international site. This places the Neighbourhood Area well within the core catchment of the site. However, of the 33 groups interviewed in November 2012, six groups came from Braintree District, with none visiting from Feering Parish. In terms of

[41] Colchester Borough Council (November 2012) Habitats Regulations Assessment Survey and Monitoring. Year 3 Interim Report.

frequency of the 33 groups, 25 groups visited the site 2-3 times a month or fewer and none visited the site daily. These statistics show that, although Abberton Reservoir is regularly visited, the number from within the Neighbourhood Area is likely to be very small to negligible.

5.6 Compared to the district as a whole the relatively small increase of 750 dwellings and enhancement of tourist facilities within the Neighbourhood Area is only likely to cause a minimal increase in visitor numbers at the site. Restrictions are also in place to minimise the disturbance caused by visitors including access around the reservoir being restricted, dogs banned from the site and hides provided to cover those watching the bird interest on the reservoir.

5.7 The reserve is a strictly access controlled site due to its use as a water source for Essex, which in itself reduces the recreational pressure on the site. The site is also managed by the RSPB where they have utilised screening and hides upon designated pathways on the edges of the reserve for public visitors to the site. This allows those wishing to utilise the site to be screened from the qualifying species and reducing the disturbance levels within the SPA and Ramsar. There is also a visitor centre which provides education on the site. This site is therefore managed to promote visitors while ensuring disturbance to the site is kept to a minimum. Within the Site Improvement Plan for Abberton Reservoir it also states "*Disturbance at ground level is well controlled by Essex & Suffolk Water, though there is occasional trespassing. Disturbance from the air by low-flying civilian and military aircraft occurs several times each year and is more difficult to manage*". The SIP highlights that recreational pressure from visitors on foot is well managed and with the addition of the mitigation already being provided and managed by the RSBP at the site. For the aforementioned reasons the HRA of Braintree District Council Local Plan 2017, concluded no adverse impact upon Abberton Reservoir and **therefore it can be concluded that the Feering Neighbourhood Plan will not have an adverse effect upon the integrity of the international site.**

The Blackwater Estuary

5.8 The Blackwater Estuary area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of international importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering water birds in the UK and is of international importance for several breeding bird species.

5.9 Two areas within the SPA and Ramsar site were surveyed for visitors[42], the first Old Hall Marshes and the second Strood Channel. Both have a small carpark; however, the majority of visitors walked to the site. This indicates that the sites are mostly used by locals. In 2012, six groups of people were surveyed, with none travelling from Feering Only six groups were interviewed in 2012 over both sites. None originated from Feering Parish. Two groups visited Old Hall Marshes. One originated from Coggeshall Parish (the Parish neighbouring Feering to the west) and was visiting the site to bird watch. The other person from Old Hall Marshes lived locally and was exploring the local footpaths. All four groups at the

[42] Colchester Borough Council (November 2012) Habitats Regulations Assessment Survey and Monitoring. Year 3 Interim Report.

Strood site were dog walkers and lived locally. These areas have relatively low visitor pressure, possibly due to the area being remote and a lack of facilities.

5.10 It is unlikely that the relatively small increase in dwellings within the Neighbourhood Plan will increase the visitor pressure upon areas within the SPA and Ramsar such as those surveyed by Colchester District Council in 2012, if considered on its own. Due to the relative remoteness, small parking areas and lack of visitor facilities, it is likely that the site is self-regulating and may therefore not see a large increase in visitor numbers. Should an increase be seen it is likely that visitors from Feering Parish will only be a negligible/ very small percentage of this increase.

The Colne Estuary

5.11 The Colne Estuary area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of international importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering water birds in the UK and is of international importance for several breeding bird species.

5.12 Two areas within the SPA and Ramsar site were surveyed for visitors in the winter of 2011 and 2012. These areas were Cudmore Grove (a country park adjacent to the SPA) and Brightlingsea Marshes. A total of 43 groups were interviewed at Cudmore and 76 groups at Brightlingsea. The major draw at both sites was dog walking. However, the majority of people at these sites lived close to the site at Cudmore the majority of groups lived in the close village of Mersea or the town of Colchester and at Brightlingsea Marshes the majority lived in Brightlingsea village (45 of 76 groups) and 11 groups in Colchester. Very few visitors came from the Braintree district and no visitors came from the Feering Parish. Although recreational activities are high in this area, the percentage from the Braintree District is very small and from Feering Parish would likely be de minimis.

Strategic Approach

5.13 However, recreational pressure is a much wider issue than solely for the Feering Parish and therefore strategic planning to mitigate its effects must be undertaken at higher level. Essex County Council have undertaken the production of the Essex Coast Recreational disturbance Avoidance & Mitigation Strategy[43] (RAMS) in conjunction with 11 Local Planning Authorities, including Braintree District, in order to mitigate against the 'in combination' effects of increased dwellings within the county between 2018 and 2038, upon the Essex Coast European Sites e.g. Blackwater estuary SPA & Ramsar, Colne Estuary SPA & Ramsar and the Essex Coast SAC.

5.14 The RAMS sets out measures which will mitigate the effects of the increased recreational disturbance, such as; fencing/waymarking/screening – directing visitors away from sensitive areas and/or providing a screen to minimise impacts; pedestrian and dog access – zoning, prohibited areas and restricted times of access; and the provision of Rangers and Water Rangers to enforce restrictions

[43] Essex County Council, March 2019. Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS). Habitats Regulations Assessment Strategy Document 2018 – 2038. Essex County Council

etc. As well as monitoring through bird and visitor surveys to review effectiveness of the measures.

5.15 These mitigation measures are funded through developer contributions from developments within the Zone of Influence (ZoI). As Feering Parish is within the ZoI the developers of the allocated sites will be required to pay a tariff per dwelling of £122.30 towards funding the strategic mitigation measures for the coastal international sites.

5.16 Policy 6: Natural Environment and Green Infrastructure within the Neighbourhood Plan states that "*B viii. All residential development within the zones of influence of European Sites will be required to make a financial contribution towards mitigation measures, as detailed in the Essex Coast RAMS, to avoid adverse in-combination recreational disturbance effects on European Sites".*

5.17 In addition, it is also required by Braintree District Council that residential development sites provide access to natural greenspace. The Braintree Local Plan Policy LPP 53 gives protection to and provision for open space for sport and recreation. A table within the supporting text sets out *"what type and when provision would be required on site*". The table states that any development site with 20 or more dwellings will be required to provide amenity/natural green space on site; however, the Policy also state "*For small sites where on-site provision is impractical, consideration will be given to opportunities for off-site provision or improvements within the ward or an adjacent ward"*. The Local Plan does not, however, prescribe a specific rate of natural greenspace provision within the policy.

5.18 The HRA of the submitted Local Plan (dated May 2017) recommends inclusion of reference to the role of open space and green infrastructure providing alternatives to international sites. It is noted that Neighbourhood Plan Policy 2: Master planning Site F1 identifies the need for "*New public open space*" and the site allocation itself within Braintree's Local Plan (Policy LPP22: Strategic Growth: Land at Feering), provides for the delivery of a new country park. However, within the Neighbourhood Plan this only refers to the strategic site allocation, and no other windfall residential development that may come forward within the Parish. To ensure the Neighbourhood Plan is in line with the Local Plan Policy LPP 53, it is recommended that:

- Sites developing 20 or more dwellings will be required to provide amenity/natural green space in line with Policy LPP 53 of the Braintree District Local Plan and recommendations of the May 2017 Local Plan Section 2 HRA, as an alternative to international sites. The provision of natural green space is recommended within site where possible. However, where this is impractical provision of the natural green space can be provided off site at a suitable location. This should be undertaken through developer contributions in line with Neighbourhood Plan Policy P11 which states "*New development in the Parish must contribute towards the infrastructure projects listed within Table 1* (Table 1 includes the provision of new public open space, a nature trail, and other outdoor recreational facilities)" through the Community Infrastructure Levy (CIL).

5.19 With this text included within the Feering Neighbourhood Plan it can be concluded that for the Essex Coast European Sites that the Neighbourhood Plan will not result in adverse effects on the integrity of internationally designated sites.

6. Conclusions and Recommendations

6.1 This assessment undertook both Screening and Appropriate Assessment of the policies and any allocations within the Feering Neighbourhood Plan.

6.2 The international designated sites considered within the Appropriate Assessment for impact pathways that could not be screened out at the screening stage were:

- Abberton Reservoir SPA and Ramsar
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar
- Colne Estuary (Mix-Essex Coast Phase 2) SPA and Ramsar
- Essex Estuaries SAC

6.3 Impact pathways considered during the screening were: recreational pressure, water quality and air pollution. Water quality and air pollution were screened out at the Screening stage due to a lack of linking impact pathways. Recreational pressure could not be screened out at the Screening stage and was therefore further discussed within the Appropriate Assessment.

6.4 In relation to the discussions of recreational pressure within the Appropriate Assessment it was recommended that, in line with the recommendations of most recent HRA of the Braintree District Local Plan and Local Plan Policy 53 that some text providing reference to the role of open space and green infrastructure be added either within policy or supporting text as follows:

- Sites developing 20 or more dwellings will be required to provide amenity/natural green space in line with Policy LPP 53 of the Braintree District Local Plan and recommendations of the May 2017 Local Plan Section 2 HRA, as an alternative to international sites. The provision of natural green space is recommended within site where possible. However, where this is impractical provision of the natural green space can be provided off site at a suitable location. This should be undertaken through developer contributions in line with Neighbourhood Plan Policy P11 which states “New development in the Parish must contribute towards the infrastructure projects listed within Table 1 (Table 1 includes the provision of new public open space, a nature trail, and other outdoor recreational facilities)” through the Community Infrastructure Levy (CIL).

6.5 Provided the above recommendations are included within the Neighbourhood Plan it can be concluded that the Plan document will not result in an adverse effect on the integrity of any international sites either alone or in combination.

Appendix A International Site Background Information

Abberton Reservoir SPA and Ramsar

Introduction

Abberton Reservoir is a large water storage reservoir close to the Essex coast. It is one of the most important reservoirs in the country for overwintering waterfowl and also supports substantial aggregations of moulting birds in early autumn and a large colony of tree-nesting cormorants. Causeways divide the reservoir into three sections. Currently the water level of the main, eastern section is being raised by 3 metres to increase storage capacity. As part of the level-raising scheme, the original concrete banks have been removed and the shoreline re-profiled, creating extensive new areas of shallow wetland habitat for the site's waterfowl.

Conservation Objectives[44]

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

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

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

Qualifying Features

The features for which the site is designated as a SPA[45] are:

This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

Over winter;

- Golden Plover *Pluvialis apricaria*, 3,714 individuals representing at least 1.5% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

[44] http://publications.naturalengland.org.uk/publication/5673002612031488 [Accessed 15 October 2020]
[45] http://jncc.defra.gov.uk/page-2013 [Accessed 15 October 2020]

During the breeding season;

- Cormorant *Phalacrocorax carbo*, 490 pairs representing at least 1.2% of the breeding Northwestern Europe population (5 year mean, 1993-1997)

Over winter;

- Gadwall *Anas strepera*, 518 individuals representing at least 1.7% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)
- Shoveler *Anas clypeata*, 654 individuals representing at least 1.6% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6)
- Teal *Anas crecca*, 5,326 individuals representing at least 1.3% of the wintering Northwestern Europe population

Assemblage qualification: A wetland of international importance.

The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

Over winter, the area regularly supports 39,155 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit *Limosa limosa islandica*, Lapwing *Vanellus vanellus*, Coot *Fulica atra*, Goldeneye *Bucephala clangula*, Tufted Duck *Aythya fuligula*, Pochard *Aythya ferina*, Pintail *Anas acuta*, Wigeon *Anas penelope*, Cormorant *Phalacrocorax carbo*, Great Crested Grebe *Podiceps cristatus*, Shoveler *Anas clypeata*, Teal *Anas crecca*, Gadwall *Anas strepera*, Golden Plover *Pluvialis apricaria*.

The features for which the site is designated as a Ramsar[46] are:

Ramsar Criterion 5

Assemblage of International importance:

Species with peak counts in the winter:

- 23,787 waterfowl (5-year peak mean 1998/99 – 2002/03)

Ramsar Criterion 6 – Species / populations occurring at levels of international importance

Qualifying species / populations (as identified at designation):

Species with peak counts in spring / autumn:

- Gadwall (*Anas Strepera strepera*), NE Europe. 550 individuals, representing an average of 3.2% of the GB population (5-year peak mean 1998/99 – 2002/03)
- Northern Shoveler (*Anas clypeata*), NW & C Europe. 377 individuals, representing an average of 2.5% of the GB population (5-year peak mean 1998/99 – 2002/03)

[46] http://jncc.defra.gov.uk/pdf/RIS/UK11001.pdf [Accessed 15 October 2020]

Species with peak counts in winter:

- Eurasian wigeon (*Anas penelope*), NW Europe. 2,888 individuals, representing an average of 1.6% of the population (5-year peak means 1991/92 – 1995/96)

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

Species with peak counts in the spring / autumn:

- Mute swan (*Cygna olor*), Britain. 387 individuals, representing an average of 1% of the population (5-year peak mean 1998/99 – 2002/03)
- Common pochard (*Anas ferina*), NE & NW Europe. 4,373 individuals, representing an average of 1.2% of the population (5-year peak mean 1998/99 – 2002/03)

Environmental vulnerabilities related to the Plan[47]

- Siltation
- Public access / disturbance
- Planning permission: general
- Changes in species distribution
- Bird strike
- Water pollution
- Air pollution: risk of atmospheric nitrogen deposition

Blackwater Estuary (Mid Essex Coast Phase 4) SPA and Ramsar

Introduction

The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of international importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

Conservation Objectives[48]

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

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

[47] http://publications.naturalengland.org.uk/publication/5195034185957376 [Accessed 15 October 2020]
[48] http://publications.naturalengland.org.uk/publication/4888693533835264 [Accessed 15 October 2020]

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

Qualifying Features

The features for which the site is designated as a SPA[49] are:

This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

During the breeding season;

- Little Tern *Sterna albifrons*, 36 pairs representing at least 1.5% of the breeding population in Great Britain (Count as at 1997)

Over winter;

- Avocet *Recurvirostra avosetta*, 76 individuals representing at least 6.0% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)
- Golden Plover *Pluvialis apricaria*, 7,247 individuals representing at least 2.9% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)
- Hen Harrier *Circus cyaneus*, 4 individuals representing up to 0.5% of the wintering population in Great Britain (5 year mean, 1993/94-94/95, 1996/7-98/99)
- Ruff *Philomachus pugnax*, 51 individuals representing up to 7.3% of the wintering population in Great Britain (5-year peak mean 1991/2 - 1995/6)

This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

On passage;

- Ringed Plover *Charadrius hiaticula*, 955 individuals representing up to 1.9% of the Europe/Northern Africa - wintering population (5-year peak mean 1991/2 - 1995/6)

Over winter;

- Black-tailed Godwit *Limosa limosa islandica*, 1,280 individuals representing up to 1.8% of the wintering Iceland - breeding population (5-year peak mean 1991/2 - 1995/6)
- Dark-bellied Brent Goose *Branta bernicla bernicla*, 15,392 individuals representing up to 5.1% of the wintering Western Siberia/Western Europe population (5-year peak mean 1991/2 - 1995/6)

[49] http://jncc.defra.gov.uk/default.aspx?page=2020 [Accessed 15 October 2020]

- Dunlin *Calidris alpina alpina*, 33,267 individuals representing up to 2.4% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6)
- Grey Plover *Pluvialis squatarola*, 5,090 individuals representing up to 3.4% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)
- Redshank *Tringa totanus*, 4,015 individuals representing up to 2.7% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)
- Ringed Plover *Charadrius hiaticula*, 600 individuals representing up to 1.2% of the wintering Europe/Northern Africa - wintering population (WeBS/Peter Clement)
- Shelduck *Tadorna tadorna*, 4,594 individuals representing up to 1.5% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance.

The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

Over winter, the area regularly supports 109,815 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Great Crested Grebe *Podiceps cristatus*, Golden Plover *Pluvialis apricaria*, Ruff *Philomachus pugnax*, Dark-bellied Brent Goose *Branta bernicla bernicla*, Shelduck *Tadorna tadorna*, Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Dunlin *Calidris alpina alpina*, Avocet *Recurvirostra avosetta*, Redshank *Tringa totanus*, Curlew *Numenius arquata*, Cormorant *Phalacrocorax carbo*, Wigeon *Anas penelope*, Teal *Anas crecca*, Pintail *Anas acuta*, Shoveler *Anas clypeata*, Goldeneye *Bucephala clangula*, Red-breasted Merganser *Mergus serrator*, Lapwing *Vanellus vanellus*, Black-tailed Godwit *Limosa limosa islandica*.

The features for which the site is designated as a Ramsar[50] are:

Criterion 1

Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.

Criterion 2

The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these are: Endangered: a water beetle Paracymus aeneus; Vulnerable: a damselfly Lestes dryas, the flies Aedes flavescens, Erioptera bivittata, Hybomitra expollicata and the spiders Heliophanus auratus and Trichopterna cito; Rare: the beetles Baris scolopacea, Philonthus punctus, Graptodytes bilineatus and Malachius vulneratus, the flies Campsicemus magius and Myopites eximia, the moths Idaea ochrata and Malacosoma castrensis and the spider Euophrys.

[50] http://jncc.defra.gov.uk/pdf/RIS/UK11007.pdf [Accessed 15 October 2020]

Criterion 3

This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

Criterion 5

Assemblage of international importance:

Species with peak counts in the winter:

- 105,061 waterfowl (5 year peak mean 1998/99 – 2002/03)

Criterion 6 – Species / populations occurring at levels of international importance

Qualifying species with peak counts in winter:

- Dark-belled brent goose (*Branta bernicla bernicla*). 8,689 individuals, representing an average of 4% of the population (5 year peak mean 1998/99 – 2002/03)
- Grey plover (*Pluvialis squatarola*) E Atlantic/W Africa – wintering. 4,215 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/99 -2002/03)
- Dunlin (*Calisdris alpina alpina*) W Siberia/W Europe. 27,655 individuals, representing an average of 2% of the population (5 year peak mean 1998/99 – 2002/03)
- Black-tailed godwit (*Limosa limosa islandica*) Iceland/W Europe. 2,174 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/99 – 2002/03)

Species populations identified subsequent to designation for possible future consideration under Criterion 6

Species with peak count in winter:

- Common shelduck (*Tadorna tadorna*) NW Europe. 3,141 individuals, representing an average of 1% of the population (5 year peak mean 1998/99 – 2002/03)
- European golden plover (*Pluvialis apricaria apricaria*) P. a. altifrons Iceland & Faroes/E Atlantic. 16,083 individuals, representing an average of 1.7% of the populations (5 year peak mean 1998/99 – 2002/03)
- Common redshank (*Tringa tetanus totanus*). 4,169 individuals, representing an average of 1/6% of the population (5 year peak mean 1998/99 – 2002/03)

Environmental vulnerabilities related to the Plan[51]

- Coastal squeeze
- Public access / disturbance
- Planning permission: general
- Change in species distributions
- Invasive species
- Fisheries: recreational marine and estuarine
- Fisheries: commercial marine and estuarine
- Air pollution: risk of atmospheric nitrogen deposition

Colne Estuary (Mid Essex Coast Phase 2) SPA and Ramsar

Introduction

The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of international importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

Conservation Objectives[52]

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

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

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

Qualifying Features

The features for which the site is designated as a SPA[53] are:

This site qualifies under **Article 4.1** of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

[51] http://publications.naturalengland.org.uk/publication/5459956190937088 [Accessed 15 October 2020]
[52] http://publications.naturalengland.org.uk/publication/5664206519009280 [Accessed 15 October 2020]
[53] http://jncc.defra.gov.uk/default.aspx?page=2018 [Accessed 15 October 2020]

During the breeding season;

Little Tern *Sterna albifrons*, 38 pairs representing at least 1.6% of the breeding population in Great Britain (5 year mean, 1992-1996)

Over winter;

Avocet *Recurvirostra avosetta*, 75 individuals representing at least 5.9% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

Golden Plover *Pluvialis apricaria*, 2,530 individuals representing at least 1.0% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

Hen Harrier *Circus cyaneus*, 4 individuals representing at least 0.5% of the wintering population in Great Britain (5 year mean 1994/95-1998/99)

This site also qualifies under **Article 4.2** of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

Over winter;

Dark-bellied Brent Goose *Branta bernicla bernicla*, 4,907 individuals representing at least 1.6% of the wintering Western Siberia/Western Europe population (5 year peak mean 1991/2 - 1995/6)

Redshank *Tringa totanus*, 2,077 individuals representing at least 1.4% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance.

The area qualifies under **Article 4.2** of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

Over winter, the area regularly supports 38,548 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit *Limosa limosa islandica*, Dunlin *Calidris alpina alpina*, Lapwing *Vanellus vanellus*, Grey Plover *Pluvialis squatarola*, Ringed Plover *Charadrius hiaticula*, Shelduck *Tadorna tadorna*, Cormorant *Phalacrocorax carbo*, Great Crested Grebe *Podiceps cristatus*, Redshank *Tringa totanus*, Dark-bellied Brent Goose *Branta bernicla bernicla*, Golden Plover *Pluvialis apricaria*, Avocet *Recurvirostra avosetta*.

The features for which the site is designated as a Ramsar[54] are:

Criterion 1

The site is important due to the extent and diversity of salt marsh present. This site, and the four other sites in Mid-Essex Coast complex include a total of 3,237 ha, that represents 70% of the salt marsh habitat in Essex and 7% of the total saltmarsh in Britain.

Criterion 2

[54] http://jncc.defra.gov.uk/pdf/RIS/UK11015.pdf [Accessed 15 October 2020]

The site supports 12 species of nationally scarce plants and at least 38 British Red Data Book invertebrate species

Criterion 3

This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.

Criterion 5

Assemblage of international importance

Species with peak counts in the winter:

- 32,041 water fowl (5 year peak mean 2998/99 – 2002/03)

Criterion 6 – Species / populations occurring at levels of international importance

Qualifying species / populations (as identified at designation):

Species with peak counts in the winter:

- Dark-bellied brent goose, (*Branta bernicla bernicla*). 3,165 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/99 – 2002/03)
- Common redshank (*Tringa tetanus totanus*). 1,624 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/99 0 2002/03)

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

Species with peak counts in the winter:

- Black-tailed godwit (*Limosa limosa islandica*) Iceland / W Europe. 402 individuals, representing an average of 1.1% of the population (5 year peak mean 19980/99 – 2002/03)

Environmental vulnerabilities related to the Plan[55]

- Coastal squeeze
- Public access / disturbance
- Planning permission: general
- Change in species distributions
- Invasive species
- Fisheries: recreational marine and estuarine
- Fisheries: commercial marine and estuarine
- Air pollution: risk of atmospheric nitrogen deposition

[55] http://publications.naturalengland.org.uk/publication/5459956190937088 [Accessed 15 October 2020]

Essex Estuaries SAC

Introduction

The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of European importance are represented as well as large areas of grazing marsh.

Conservation Objectives[56]

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

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

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

Qualifying Features[57]

The features for which the site is designated as a SAC are:

Annex I habitats that are a primary reason for the selection of this site:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats)
- Glasswort and other annuals colonising mud and sand
- Cord-grass swards
- Atlantic salt meadows
- Mediterranean saltmarsh scrub

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

- Sandbanks which are slightly covered by sea water all the time (subtidal sandbanks)

Environmental vulnerabilities related to the Plan[58]

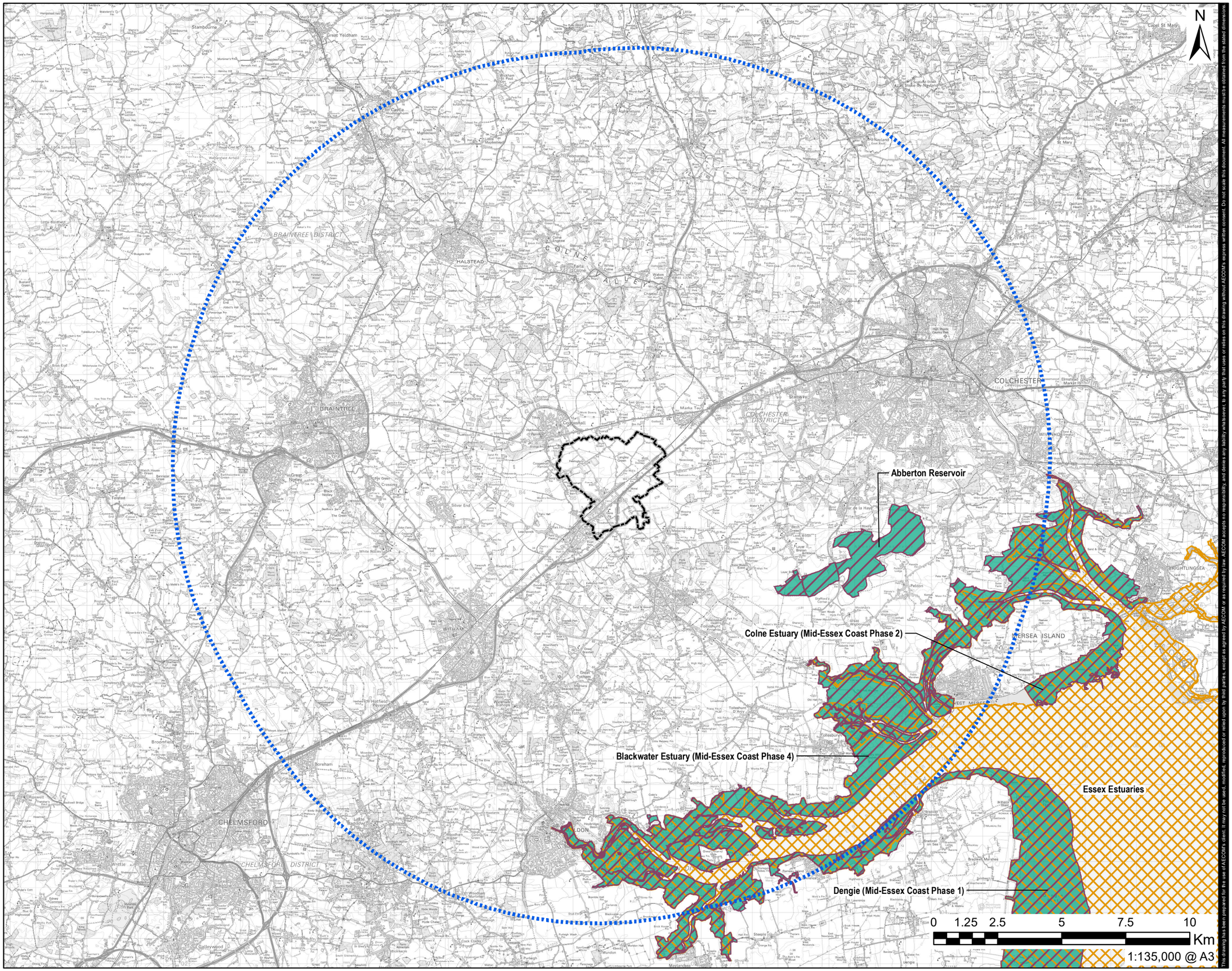
- Coastal squeeze

[56] http://publications.naturalengland.org.uk/publication/4781199427895296 [Accessed 15 October 2020]
[57] http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013690 [Accessed 15 October 2020]
[58] http://publications.naturalengland.org.uk/publication/5459956190937088 [Accessed 15 October 2020]

- Public access / disturbance
- Planning permission: general
- Change in species distributions
- Invasive species
- Fisheries: recreational marine and estuarine
- Fisheries: commercial marine and estuarine
- Air pollution: risk of atmospheric nitrogen deposition

Figure A1: Location of Internationally Designated Sites

Date: 21/10/2020
Checked: JW
Approved: IH
Drawn: TG
Revision: 01



Filename: F:\Feering HRA\02_Maps\201021_FeeringHRA_FigureA1_LocationofInternationalSites.mxd

AECOM

PROJECT

Feering Neighbourhood Plan

CLIENT

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CONSULTANT

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LEGEND

- Feering Parish Boundary
- Feering Parish 15km Buffer
- Ramsar
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

NOTES

ISSUE PURPOSE

FOR INFORMATION

PROJECT NUMBER

60571087

SHEET TITLE

Location of International Sites

SHEET NUMBER

Figure A1

Appendix B Policy Screening

Policy	Description	Test of Likely Significant Effects
Policy 1: New Development Allocations within the Parish	A. To meet the current and future development needs of the Parish: i. Land at Feering, identified as Site F1 in the Neighbourhood Plan Proposals Map, is allocated for the development of up to 750 new homes and associated local highways improvements, a new primary school, new early years and childcare facilities, retail facilities, public open space, and contributions towards additional education and local healthcare provision. ii. 4 hectares of land within Site F1 in the Neighbourhood Plan Proposals Map, is allocated for B1, B2 and B8 employment uses. B. The production of the masterplan and subsequent detailed proposals for the development of Site F1 should be informed by an independent quality review panel which would be funded by the developer, appointed by Braintree District Council in close consultation with the Parish Council.	Likely Significant Effect A single site allocation (F1) has been allocated for housing development with a maximum of 750 houses. It is noted that this site was allocated within the Parish within the Draft Braintree District Local Plan as site allocation LPP 22: Strategic Growth Locations: Land at Feering, so will have been subject to HRA at the overarching Local Plan level. Potential impact pathways from the development of houses within the parish include: • Recreational pressure • Water quality • Air pollution
Policy 2: Master planning Site F1	A. Proposals for the development of Site F1 must be in general conformity with a masterplan covering the entire allocation which has been endorsed by Braintree District Council and Feering Parish Council. The masterplan will be developed collaboratively between the developer / site promoter, the Parish Council, the local community, infrastructure providers, Braintree District Council, and other relevant stakeholders.	No HRA implications. This is effectively a development management policy outlining elements that are required during the master planning stage of site allocation F1.

	B. The masterplan should: i. Provide a strategic development framework which will define key development principles and strategic concepts to enable a co-ordinated approach to delivering the planned level of growth on Site F1; ii. Be informed by a comprehensive assessment of the site and key opportunities and constraints; iii. Develop an overarching vision and objectives for the creation of a high-quality development, outlining how the vision and objectives have been developed through collaborative working with the Parish Council and the local community; iv. Explain how the identified vision and objectives for the site will be secured; v. Outline how infrastructure requirements will be delivered and phased, including (but not limited to): a. Improvements to the highway networks; b. A new early years and childcare facility; c. A new primary school; d. Improvements to surrounding secondary and sixth form educational facilities; e. New public open spaces, children's play areas, and sports facilities; f. A local centre; g. Improvements to water supply and wastewater networks;	This is positive as it identifies the need for phased development in line with provision of services and infrastructure such as new public open spaces, improvements to the water supply and wastewater networks, and sustainable transport methods such as public transport and cycle, walking networks. There are no linking impact pathways present.

	h. Extended, additional, and improved public transport services; i. New or improved health facilities within the surrounding area; and j. New community facilities, such as additional sporting facilities, shops, public open space such as a community woodland, footpaths, cycle tracks, fitness trails, and a new community hall with bespoke youth space. vi. Identify requirements for future planning applications associated with the site to ensure that if a phased approach is used that there is an overall cohesive and sustainable plan that must be responsive to the changing needs of the parish; vii. Establish design codes which will guide the production of future planning applications based upon the FPC Neighbourhood Plan Village Assessment & Design Guide viii. Allow for small and medium business opportunities, appropriately located adjacent to Threshelfords and/or near an A12 junction, supported by suitable, sustainable transport links. ix. Make provision for flood risks as identified by the Environment Agency C. To incorporate appropriate ‘place shaping’ principles the masterplan should: i. Establish key routes and linkages within the site and with the wider Parish; ii. Maintain and enhance the important features, character and assets within the site and the wider Parish;	

	iii. Conserve and positively enhance key landscapes, habitats and biodiversity; iv. Establish a long-term plan for the stewardship of assets, incorporating the local community; v. Provide high quality and imaginatively designed homes with gardens or access to usable and accessible amenity space; vi. Provide innovative SUDS solutions which creates areas of open space which can be used for recreation; vii. Ensure generous, well connected and biodiverse rich green space provision; viii. Ensure that development enhances the natural environment; ix. Provide for sustainable movement and access to local and strategic destinations including rail, bus, pedestrians and cycling; x. Ensure positive integration with Feering village and the wider surrounds; xi. Ensure appropriate density of development across the site which reflects and maintains the character of the surrounding area; xii. Establish an appropriate location for employment land which provides good access to surrounding transport networks and avoids a significant increase in congestion within Feering village; and xiii. Establish an appropriate location for the new local centre which includes new community facilities and is accessible and well connected to both the new development and the existing village. D. The production of the masterplan must be informed by an independent quality review process. The independent quality review	

	panel will be appointed by Braintree District Council, in consultation with the Parish Council. E. The masterplan shall be subject to public consultation prior to finalisation and should be capable of being adopted as a supplementary planning document (following the adoption of the Local Plan) and a material planning consideration by Braintree District Council.	
Policy 3: Design	A. Development proposals should: i. Include a high-quality design which will contribute positively to the character and appearance of the surrounding area in accordance with the FPC NP Village Assessment & Design Guide; ii. Reflect and respond positively to the scale, design, character, density and layout of existing development in the surrounding area, and not result in significant harm to neighbouring residential amenity; iii. Incorporate an appropriate use of materials which enhances the quality of design and preserves and enhances the character of the area; iv. Provide an appropriate provision of off-street parking in accordance with the adopted Essex County Council Parking Standards; v. Preserve views of local landmarks, open space, green infrastructure, and the wider rural landscape, which contribute to the rural character and appearance of the area, as referenced in the FPC NP Village Assessment and Design Guide; vi. Create an accessible and inclusive design for all age groups and abilities;	No HRA implications. This is a development management policy relating to design. There are no linking impact pathways present.

	vii. Provide dwelling designs which can easily be adapted to meet the changing requirements of residents; viii. Provide a safe and secure environment, including measures through design and layout which will seek to reduce and prevent crime and enhance personal safety; and ix. Incorporate sustainable design features which promote energy efficiency, biodiversity gains, innovative low carbon technology, water efficiency, energy conservation and efficiency, flood resilience, sustainable waste and mineral management. B. All non-residential development should achieve a minimum of BREEAM 'very good' rating or be supported by a bespoke assessment that demonstrates appropriate environment performance results above current Building Regulation requirements.	
Policy 4: Housing	I. Proposals for residential development should: i. Be located within defined settlement boundaries or on sites allocated within this Plan; ii. Include housing types and tenures which meet the current and future housing needs of the Parish. Development proposals should outline current local housing needs and demonstrate how the proposed housing mix will assist in meeting the identified local needs; and iii. Provide affordable housing in accordance with the requirements set out within the Braintree District Local Plan, which supports the affordable housing needs of the Parish. Development proposals which include affordable housing should outline current local affordable housing needs, and demonstrate how	No HRA implications. Whilst this policy relates to housing, it does not provide any location or quantity of development. It is a development management policy. There are no linking impact pathways present.

	the proposed housing mix will assist in meeting the identified local needs. II. Outside of the defined settlement boundaries in the Parish and Site F1, land which may not otherwise be considered appropriate for residential development will be supported for release for affordable housing schemes on Rural Exception Sites provided that; i. The proposed development by virtue of its size, scale and type will be consistent with up to date evidence of local need ii. The affordable housing is provided for those with a local connection to the parish in perpetuity	
Policy 5: Heritage	Development proposals should protect and enhance existing heritage assets. Development proposals which could have an impact on a designated or non-designated heritage asset should demonstrate how the significance of the asset has been acknowledged and addressed. Development proposals which would result in significant harm to a heritage asset (both designated and non-designated) will not be supported.	No HRA implications. This is a development management policy relating to heritage. There are no linking impact pathways present.
Policy 6: Natural Environment and Green Infrastructure	A. Development proposals should protect, and where possible, enhance the natural environment. All proposals should seek to deliver net biodiversity gain, in addition to protecting existing habitats and species. Any proposals which negatively affect, or have the potential to negatively affect, the natural environment should demonstrate that any negative impacts on biodiversity, flora and fauna, local wildlife and their habitats, will be adequately mitigated. B. Proposals for new development should:	No HRA implications. This is a positive policy relating to the Natural Environment and Green Infrastructure. It is positive as it provides for the enhancement of public open space, and increased access and creation of new public open space and green infrastructure. This has the potential to

	i. Protect and where possible enhance public open space, local wildlife sites, important features of the natural environment, and the biodiversity of the site and its surrounds; ii. Seek opportunities to improve access to, and / or create new, public open spaces and green infrastructure where appropriate; iii. Improve connectivity between wildlife areas and public open spaces through green corridors and/or improvements to the Public Rights of Way, cycle, footpath and bridleway networks; iv. Enhance the visual characteristics and biodiversity of open spaces in close proximity to the development, via developer contribution; v. Ensure that landscape schemes, layouts, access and public open space provision and other amenity requirements contribute to the connectivity, maintenance and improvement of the green infrastructure network within the site and beyond; vi. Incorporate the multi-functional use of open spaces where appropriate as part of the green infrastructure network; vii. Incorporate the principles of Sustainable Urban Drainage (SUDs) where appropriate, which will enhance biodiversity and ecosystems; and viii. All residential development within the zones of influence of European Sites will be required to make a financial contribution towards mitigation measures, as detailed in the Essex Coast RAMS, to avoid adverse in-combination recreational disturbance effects on European Sites. C. Development proposals which are likely to have a negative impact on the natural environment, public open space, and green	divert recreational pressure away from sensitive international sites. It also states that 'B *viii. All residential development within the zones of influence of International Sites will be required to make a financial contribution towards mitigation measures, as detailed in the Essex Coast RAMS, to avoid adverse in-combination recreational disturbance effects on international Sites*.' There are no linking impact pathways present.

	infrastructure features should demonstrate that the benefits of development clearly outweigh any negative impacts. D. Development proposals within the Blackwater River Valley or the Langley Green Farmland Plateau Landscape Character Areas should demonstrate how the proposal will protect and enhance the special features and overall character of the area. E. The future management and maintenance arrangements for new areas of open space SuDS and green infrastructure provided as part of new development should be established in agreement with Feering Parish Council and Braintree District Council.	
Policy 7: Flood Management	Where appropriate, proposals for new development should avoid and reduce the risk of flooding (including fluvial and pluvial) on site and elsewhere in the catchment area, and adequately manage water and wastewater discharges by complying as a minimum with Local Plan flood risk policies.	No HRA implications. This is a development management policy relating to flood management and the requirement for development to adhere to Local Plan Flood Risk Policies (upon adoption, the Local Plan will have been subject to HRA and will not result in an adverse effect on the integrity of an international site). There are no realistic linking impact pathways present.
Policy 8: Community and Leisure Facilities	A. Development proposals should contribute proportionately towards the provision of community facilities within the Parish which will meet the needs of the existing and future residents of the development. Where possible, development proposals should also identify opportunities to improve and expand existing community and leisure	No HRA implications. This is a development management policy. It contains positive provision to resist the loss of existing facilities. The existence of these facilities has the potential to divert recreational pressure

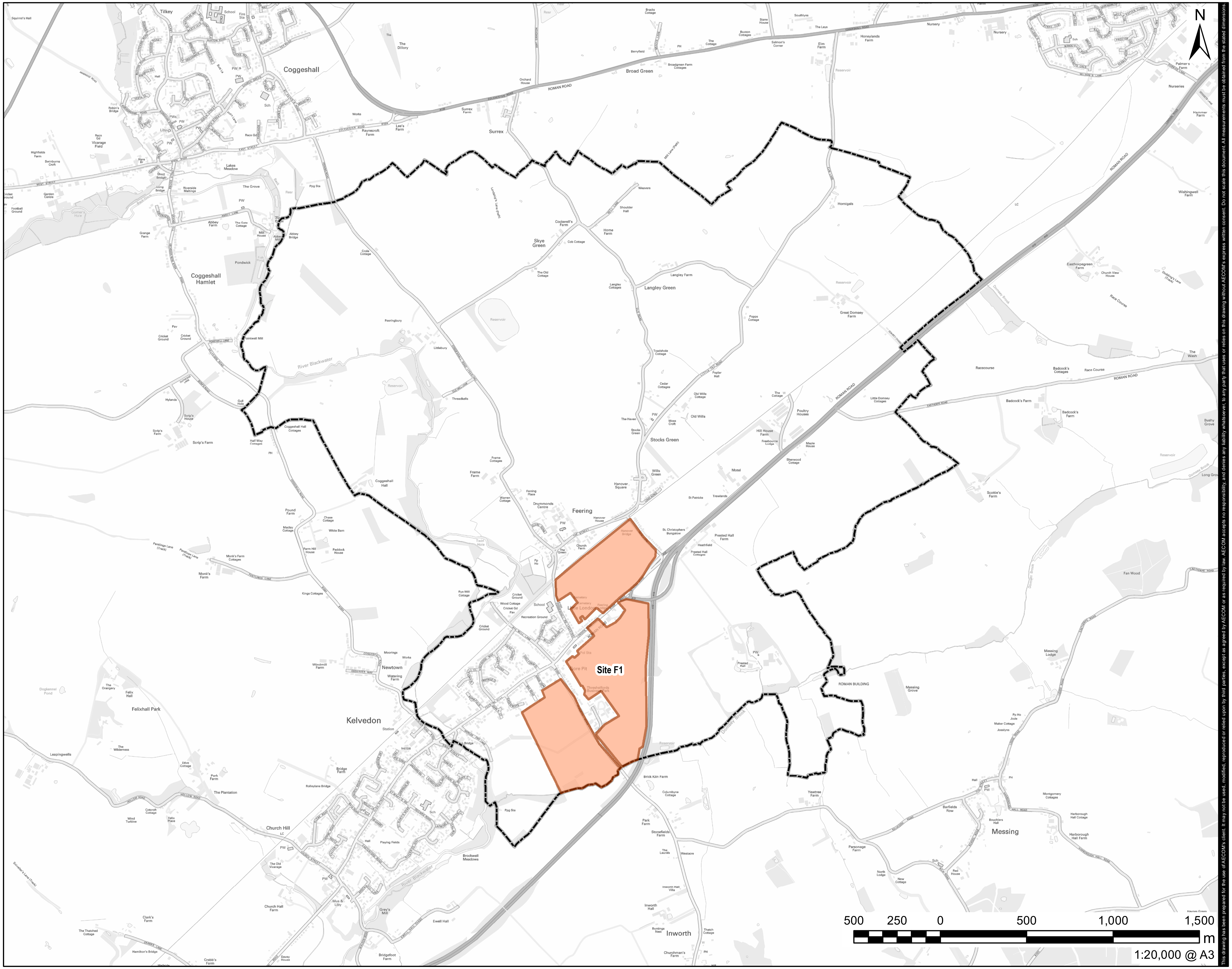
	facilities within the Parish to the benefit of existing and future residents of the Parish. B. Development proposals which would result in the net loss of existing community and leisure facilities will be resisted. C. Development proposals which create additional demand on educational facilities in the area should provide contributions towards additional education provision in accordance with the requirements of Essex County Council.	away from sensitive international designated sites. There are no realistic linking impact pathways present.
Policy 9: Moving Around	A. Proposals for new development should: i. Not result in any detrimental impact on local highway safety, and where possible improve highway safety, within the Parish; ii. Where possible, protect and enhance public rights of way, pedestrian and cycle routes, and bridleways throughout the Parish; iii. Not significantly increase levels of congestion within the Parish; iv. Where appropriate, improve accessibility and increase the use of sustainable modes of transport within the Parish by providing or contributing towards providing public transport improvements and providing safe pedestrian and cycle routes to surrounding areas and local services and facilities; v. Not detrimentally impact air quality and public health within the Parish as a result of increased traffic flows and congestion; and vi. Create safe and accessible environments for those with limited mobility. B. Proposals for employment generating development should:	No HRA implications. This is a development management policy relating to 'moving around'. It identifies the protection and enhancement of public rights of way, pedestrian and cycle routes, and encourages the use of sustainable transport methods. These provisions have the potential to reduce atmospheric pollution contributions. There are no realistic linking impact pathways present.

	i. Ensure good access to the A12; ii. Ensure good quality pedestrian and cycle access to Kelvedon Station; iii. Avoid significantly increasing traffic flows through the village; and iv. Provide sufficient car parking to accommodate the needs of new businesses in accordance with the Essex County Council Parking Standards.	
Policy 10: Business and Economy	A. Employment generating development proposals should: i. Enable new SME businesses to locate within the Parish; ii. Protect and support existing businesses within the Parish; iii. Provide benefits to the local economy and community which outweigh any harmful impacts of the proposals; and iv. Be located in areas which are accessible to the surrounding transport network without having a significantly detrimental impact on levels of traffic or congestion in the Parish. B. Proposals which will result in the loss of existing employment uses (Class B) or employment land should demonstrate that: i. the present use and activity on site significantly harms the character and amenity of the adjacent area; or ii. the site would have a greater benefit to the local community if an alternative use were permitted; or iii. the site has been marketed effectively for 12 months at a rate which is comparable to local market value for its existing use, or as redevelopment opportunity for other similar uses, and it can be	No HRA implications. This is a development management policy relating to the business and the economy. Whilst economic growth has the potential to impact environmental resources such as water quality and quantity and air quality, this policy does not identify any quantum, type or location of development. There are no realistic linking impact pathways present.

	demonstrated that the continuous existing use of the site is no longer viable, taking into account the site's existing and potential long-term market demand in its current use.	
Policy 11: Developer Contributions to Community Infrastructure	A. Where appropriate, development proposals will be required to contribute towards the provision of new and improved infrastructure in the Parish to mitigate the impacts of the development. B. Planning applications should, where appropriate, clearly demonstrate the impact of the proposed development on local infrastructure in the area, and demonstrate how developer contributions towards local infrastructure will satisfactorily mitigate the identified impacts. C. New development in the Parish must contribute towards the infrastructure projects listed within Table 1. Development proposals which do not provide contributions as set out within Table 1 will be required to demonstrate, through an open book viability assessment, that the provision of the contribution will render the site financially unviable.	No HRA implications. This is a development management policy identify the need for developer contributions to community infrastructure. This includes the provision of public open space (that has the potential to divert recreational pressures away from sensitive international sites), improvements to the water supply and waste water networks (that has the potential to reduce impacts from adverse environmental conditions stemming from changes in water levels and nutrient levels as a result of new development), and to improve public transport networks (which has the potential to limit atmospheric pollution contributions). There are no linking impact pathways present.

Appendix C Figure C1: Location of the Site Allocation

Revision: 01 Drawn: TG Checked: JW Approved: IH Date: 21/10/2020



AECOM

PROJECT

Feering Neighbourhood Plan

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LEGEND

Feering Parish Boundary
Site Allocation

NOTES

ISSUE PURPOSE

FOR INFORMATION

PROJECT NUMBER

60571087

SHEET TITLE

Location of Site Allocation

SHEET NUMBER

Figure C1

Filename: F:\Feering HRA\02_Maps\201021_FeeringHRA__FigureC1_LocationofSiteAllocation.mxd

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