Report

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# Thames, Medway & Swale Estuaries - Strategic Access Management and Monitoring Strategy

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## Summary

This report sets out a strategy to resolve disturbance issues to wintering birds on the North Kent Marshes. The report focuses on the European Protected Sites (Thames Estuary and Marshes SPA/Ramsar Site, Medway Estuary and Marshes SPA/Ramsar Site, and The Swale SPA/Ramsar Site) and their internationally important bird interest features.

Previous studies show marked declines of key bird species, particularly on the Medway Estuary. There is currently insufficient evidence to adequately assess the cause of these declines. Disturbance is one potential factor, and studies have shown recreational activities to cause disturbance impacts to birds. The declines in birds have been detected at the SPA level. Within the Medway, the areas that have seen the most marked declines are the area north of Gillingham, including the area around Riverside Country Park. This is one of the busiest areas in terms of recreational pressure.

New development will further exacerbate the pressures. New development (in the region of 68,000 dwellings are set out in the relevant local plans) brings more people to the local area and access levels have been predicted to increase on the coastal sites by around 15%. Such an increase will be gradual and long-term, across a wide stretch of coast; robust solutions are required to ensure that this level of development, considered in-combination, does not have an adverse effect on the integrity of the European sites.

This strategy addresses disturbance impacts and provides a strategic, cross-boundary solution to issues relating to disturbance, there are two aims.

- To support sustainable growth whilst protecting the integrity of European wildlife sites from impacts relating to recreational disturbance
- To reduce the existing recorded recreation impact on birds on the European wildlife sites in order to meet duties relating to the maintenance and restoration of European sites, as required by Article 4(4) of the Birds Directive.

Elements within the strategy are:

- A North Kent Coast Dog Project
- Wardening/Visitor Engagement
- New Access Infrastructure
- Parking (Strategic Review and Changes to Parking)
- Codes of Conduct
- Interpretation/signage
- Work with local club/group
- Refuge
- Enhancement of existing sites to create hub
- Enhancement to existing GI away from SPA
- Enforcement
- Monitoring

The **dog project** and **wardening/visitor engagement** elements are generic and can be established quickly. The **dog project** focuses on the activity that is most associated with disturbance and will engage with local dog walkers. It will be able to promote particular sites to dog walkers and raise

awareness of disturbance issues. **Wardens/rangers** with a visitor engagement role can be mobile and deployed across a range of locations, targeting areas with particular issues or close to new development. **New access infrastructure** will involve a range of discrete, focussed projects that could be phased with new development. **A review of parking locations** will provide the necessary information to underpin long-term changes in parking capacity, charging and provision. Such changes can be phased over time and linked to available funding and locations where new development comes forward. **Codes of conduct** will provide guidance for a range of activities. In-line with these, **interpretation/signage** and **work with local clubs/groups** is envisaged. These three elements dovetail and should be undertaken simultaneously. They also link with the long term aim of creating **refuges** – 'quiet' areas within the Medway where recreation and other activities are discouraged. We also set out **enhancement to existing sites**: both those **within the SPA** and **outside**. In the long term access is best focussed away from the SPAs or in particular honeypots around the shore where it can be managed and engagement with visitors targeted. We therefore highlight sites outside the SPA that are close enough to potentially draw some visitors. Sites within the SPA, such as Riverside Country Park, already draw high numbers of visitors and are likely to always draw people. Measures are possible at such locations to reduce disturbance. **Monitoring** across the SPA sites will provide a check on success of measures and inform where further measures, such as enforcement (for example dog control orders) might be necessary.

The strategy therefore contains elements that can be initiated quickly and other elements that can be phased over time and are flexible. Based on the results of a workshop and some site visits we have set out some suggestions for specific locations and we identify the overall cost for the strategy. The costs are set out below (Table 1). While only indicative the costings should provide the opportunity to budget and source funding, but in the long term different elements of the strategy may change in emphasis and costs may need to be distributed differently. Elements of the strategy that relate to new development (and can be classed as mitigation) should potentially be funded through some means of developer contribution. Other elements within the strategy relate to existing impacts or are more aspirational. We therefore categorise elements within the strategy as:

A. Clearly mitigation for new development as related to particular housing allocations/areas of notable growth or necessary to be confident of no adverse effect on integrity as a result of cumulative impacts of new development over a broad area.

B. Clearly linked to a current issue or required to rectify current problem

C. More aspirational or less defined at this stage. This may be a potential opportunity to avoid or mitigate for impacts but could be implemented in a number of ways, with a variety of partners providing input, or may be such that it is best refined over time, informed by new information. At this stage therefore difficult to categorise and possibly elements that could be developed as an external funding bid.

Using the above criteria, elements that are categorised as A are those that could form part of a tight, clearly defined mitigation plan. Implementation of such a plan should ensure that a significant effect on the relevant European sites as a result of impacts from increased recreational disturbance (linked to new development) on wintering/passage waterfowl is avoided. The total capital cost for these elements is £185,300, plus an annual figure of £95,500.

**Table 1: Summary of all elements of the strategy. Costs are indicative and approximate, drawn where possible from examples elsewhere, but not based on actual quotes. Total costs are given at the end of the table. These costs are also summarised as a per dwelling figure. This is calculated assuming 35,000 dwellings within 6km of the SPA boundaries and annual costs scaled to apply annually for 80 years (included the three ranger posts). No discounting or contingency is applied.**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes | Category |
|---|---|---|---|---|
| Dog Project | £15,000 | £2,000 | Staff time not included in cost as assumed undertaken by warden/rangers. Set up cost to cover web design, production of membership packs, launch event. Running costs for web hosting, updates to website, further events. | A |
| Senior ranger post | | £45,000 | Long-term post. Includes office and vehicle costs. | A (but some of warden time may end up focussed on existing impacts) |
| Two seasonal rangers | | £40,000 | Potentially short-term (c.10 years). Includes office and vehicle costs. | A (but some of warden time may end up focussed on existing impacts) |
| Path links | £5,000 | | Cost would depend on surfacing, route etc. | A |
| Structures to inhibit vehicles. | £3,500 | £750 | Range of different gate styles or designs possible. Costs need to cover installation. Annual maintenance/checking required | B (could possibly be argued that further development would increase pressure) |
| Additional planting at various locations | £1,800 | | Planting relatively low cost, but will need regular checks to ensure gaps are not developing and further planting may be required | A |
| Horrid Hill path management and screening | £5,000 | | Will need regular maintenance and checks to ensure new paths are not developing and further work (planting/screens) may be required | A |
| Dog training area | £3,000 | | Cost depends on area fenced. | A |
| Fencing at Motney Hill | £3,000 | £500 | Cost depends on type of fencing. Will need checking and maintenance | A |
| Fencing and signs around Shellness | £2,000 | £500 | Cost dependent on scale of fencing. New fencing may be required each year depending on flooding/changes in bird use etc. | A |
| Review of Parking | £0 | | No cost allocated as assumed review conducted by warden/ranger team | A |
| Changes to Parking | £20,000 | | Depends entirely on outcome of the review. £20000 would allow one or two small projects to probably be achieved. | A |
| Interpretation boards | £25,000 | £2,500 | Estimate based on 10 outdoor panel | A |

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes | Category |
|---|---|---|---|---|
| | | | interpretation boards (A0 size); £2500 per board. Annual fee allows for replacement of boards over 10 year period | |
| Signs | £20,000 | £1,000 | 10 signs. £2000 per sign, plus £1000 per year for replacement/maintenance | A |
| Codes of Conduct developed | £10,500 | | 8 codes produced as a pack for printing and as interactive document; cost estimated at £8,000. £2,500 additional cost for revision and further print runs | A |
| New Visitor Centre and other facilities at Cliffe Pools RSPB | £4,000,000 | | Very approximate cost. Aspirational rather than an essential element of the strategy. Range of funding sources may be possible. | C |
| Enhancements at Northward Hill RSPB | £20,000 | | Improved parking and other infrastructure | A |
| Enhancements to Riverside Country Park | £25,000 | | Enhancements to areas away from shoreline such that access can increase here without further disturbance | A |
| Enhancements to existing GI away from the SPA | £420,000 | | Cost assumes around five projects at an average cost of £84,000 | C |
| Speed monitoring equipment including digital camera and speed gun | £10,000 | | Approximate cost | A |
| Setting up dog control orders | £10,000 | | Estimate of costs required for legal advice, administration etc | A |
| Monitoring visitor numbers at set locations | £10,000 | £1,500 | Most of the counts every five years, undertaken by warden staff. Budget for automated counters and casual staff/consultancy support as required and included as an annual figure | A |
| Monitoring visitor activities, motivation, profile and | | £1,000 | Questionnaire work undertaken every 5 years (i.e. annual budget of £1000 equates to £5000 every 5 years). | A |
| Continued monitoring of wintering waterfowl | | £500 | Undertaken already as part of WeBS. Small annual fee to ensure data collated by local co-ordinators | A |
| Disturbance monitoring | | £1,000 | Could be undertaken at set intervals - e.g. every 10 years or on an annual basis | A |
| **TOTAL (all categories)** | **£4,608,800** | **£96,250** | **Equates to £351 per dwelling** | |
| **A** | **£185,300** | **£95,500** | **Equates to £223.58 per dwelling** | |
| **B** | **£3,500** | **£750** | **Equates to £1.81 per dwelling** | |
| **C** | **£4,420,000** | **£0** | **Equates to £126.29 per dwelling** | |

## Contents

## Acknowledgements

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A wide range of people participated in a workshop in September 2013, and our thanks to all those who attended and shared ideas about the management of recreation and disturbance impacts to birds.

# 1. Introduction

1.1 In this section we set out the background to this report, summarising why a strategy is required and providing the necessary context for the rest of the document.

## North Kent's international wildlife designations

1.2 This stretch of shoreline encompasses three Special Protection Areas (SPAs): the Thames Estuary and Marshes SPA, the Medway Estuary and Marshes SPA and the Swale SPA (Map 1). All three sites are also listed as Ramsar[1] sites, for their wetlands of international importance. The Ramsar site boundary does not quite match the SPA boundary, notably near Gravesham where the Ramsar boundary extends beyond the western boundary of the SPA (see Map 1).

1.3 The three sites are classified as SPAs in accordance with the European Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds, updated by Council Directive 2009/147/EC in 2009). This European legislation requires Member States to classify sites that are important for bird species listed on Annex 1 of the European Directive, which are rare and/or vulnerable in a European context, and also sites that form a critically important network for birds on migration.

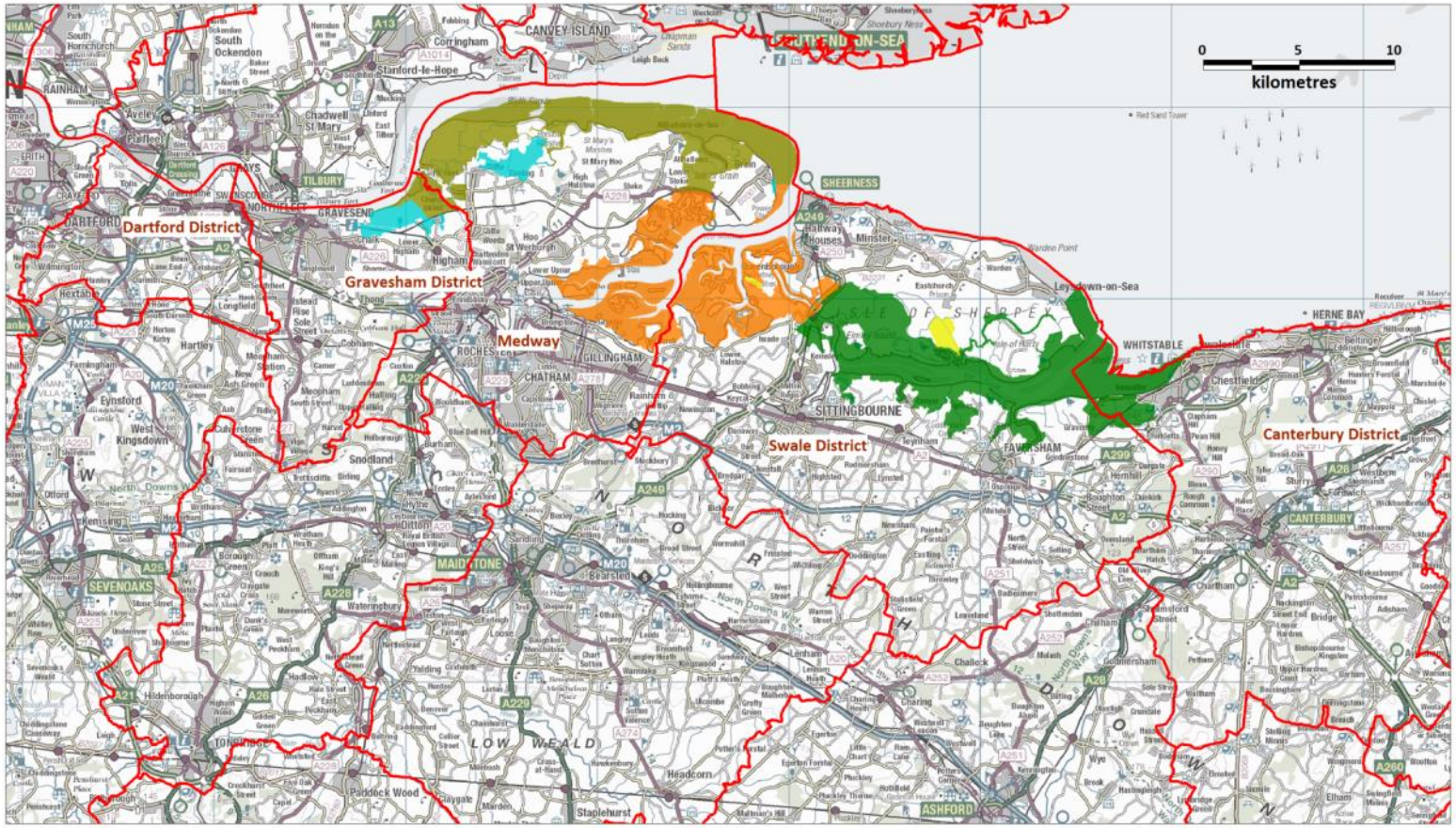
1.4 All three of the north Kent sites are classified for their waders and waterfowl, both Annex 1 and migratory species. The bird interest features for which each site has been classified varies slightly across the three sites, but all three sites provide on passage, overwintering, and breeding habitat to an array of species of European Importance. The sites therefore provide habitat for European wildlife throughout the year, with particular interest varying at different times of the year, and it is clear that the three European sites together provide a vast and linked expanse of critically important habitat to the SPA network around the British coast. Details of the interest features of each of the sites are summarised in Appendix 1.

1.5 The additional Ramsar site listing for all three sites arises from the recognition of the international wetland importance of each, under the Ramsar Convention. It is common for SPAs to also be listed as Ramsar sites, and the Ramsar designations do include interest features that are not birds.

1.6 Also of relevance are areas of land identified as compensatory measures for adverse effects on European sites. These sites are given the same protection as SPAs/Ramsar sites[2]. There are two areas in N Kent that meet this criteria and they are also shown in Map 1.

[1] Convention on wetlands of international importance especially as waterfowl habitat, Ramsar, Iran, 2/2/71 as amended by the Paris protocol of 3/12/92 and the Regina amendments adopted at the extraordinary conference of contracting parties at Regina, Saskatchewan, Canada 28/5 – 3/6/87, most commonly referred to as the 'Ramsar Convention.'

[2] See paragraph 118 of the National Planning Policy Framework




**Map 1: Relevant European Sites (South side of Thames only)**

## Previous studies

1.7 Previous studies (Banks *et al.* 2005) show marked declines of key bird species, particularly on the Medway Estuary (these previous studies are listed and summarised in Appendix 2). There is insufficient evidence to adequately assess the cause of these declines (some of which are long-term, going back 25 years), they may relate to a range of factors. However previous studies (see summary in Appendix 2) do show disturbance impacts to birds and disturbance may be a component factor.

## Growth in North Kent

1.8 This strategy focuses on the administrative areas of Canterbury, Dartford, Gravesham, Medway and Swale local authorities. A review of the progression of local plans across the administrative areas of Canterbury, Dartford, Gravesham, Medway and Swale local authorities has identified that plans have progressed across the area since work on the European site mitigation requirements began. The following bullets provide a brief summary of the current progression of the relevant planning documents and indicate that around 68,000 new homes are likely to come forward in the next few decades[3]:

- **Canterbury** – The preparation of the Canterbury Local Plan by Canterbury City Council is underway, with a recent consultation on the draft plan being undertaken in the summer of 2013. The plan period of 2011 to 2031 is allocated a total of 15,600 dwellings. Land to the south of Canterbury takes up an allocation of 4,000 dwellings, with other large strategic sites at Hillborough and Sturry/Broad Oak.
- **Dartford** – Dartford Borough Council adopted its Core Strategy is September 2011, with a plan period up to 2026. The plan supports new housing provision up to 17,300 dwellings over the plan period. Key development sites are identified in the plan, with Ebbsfleet to Stone accommodating 7,850 new homes, Dartford 3,070 and the Thames waterfront allocated 3,750.
- **Gravesham** – The Council is planning for 6,170 houses over its plan period (to 2028), with the Core Strategy for the Borough currently at examination stage. Most of the new housing will be accommodated within the urban area of Gravesend.
- **Medway** – Medway Council withdrew its draft Core Strategy from Examination in November 2013, following designation of an extended SSSI at Lodge Hill, Chattenden. The Council is in the early stages of preparing a new Local Plan, working to a programme of adoption in 2017. The Council is required to carry out a comprehensive objective assessment of development needs to inform the growth allocations in the new plan that will cover the period up to 2035. Currently, it is premature to indicate the level of the housing provision that will be made in the new plan.
- **Swale** – the draft Local Plan for Swale proposes a housing target of 10,800 new homes over the plan period, primarily as extensions to the larger towns such as Sittingbourne.

[3] The plans for the area have different plan periods with end dates which range from 2026 to 2035.

1.9 Given this level of growth there is a clear need for a strategic strategy for mitigation measures relating to new growth.

## Other projects of relevance

1.10 There are a number of other projects or initiatives that provide some cross-over or links to the SARMP, which include:

- Thames Estuary 2100 (TE2100)[4], which sets out the strategic direction for managing flood risk in the Thames estuary.
- The Greater Thames Marshes Nature Improvement Area (NIA)[5] which is one of twelve landscape scale NIA projects in England. Elements within the NIA include habitat management and creation; work with local businesses, community engagement and securing long-term funding.
- Shoreline Management Plans[6].
- Marine and Coastal Access Act: enhanced coastal access will provide a right of access (with 'spreading room') around England Work is planned to start on the stretch of coast between Ramsgate and London in 2014/15.

## Structure of the Report

1.11 Background to the methods we have used to produce this strategy are set out in Appendix 3. Subsequent sections of this strategy are structured with separate sections that describe:

- An overview of possible measures: the long list, with a review of each of the options within the list
- Locations that are the focus for the strategy
- The short-list of measures
- The detailed strategy.

[4] http://www.environment-agency.gov.uk/homeandleisure/floods/125045.aspx
[5] http://gtgkm.org.uk/greater-thames-marshes-nia/
[6] http://www.environment-agency.gov.uk/research/planning/105014.aspx

# 2. A framework for the Plan

2.1 In this section we define the aims of the strategy, how those aims are distinguished within the strategy and we set out the guiding principles that provide a framework for the strategy.

## Aims of the Plan

2.2 The strategy has two broad aims:

- It will support sustainable growth whilst protecting the integrity of European wildlife sites from impacts relating to recreational disturbance
- It will reduce the existing recorded recreation impact on birds on the European wildlife sites in order to meet duties relating to the maintenance and restoration of European sites, as required by Article 4(4) of the Birds Directive.

## Legal and policy requirements

2.3 The National Planning Policy Framework (NPPF) provides the Government's policy framework within which sustainable growth should come forward. It is fundamental to the success of any strategic mitigation strategy for European sites that such a strategy is founded on sound planning principles. This strengthens the strategy and ensures its deliverability in the planning system.

2.4 The first aim of this strategy relates to new development and the need for competent authorities to ensure that new growth will not adversely affect the integrity of the North Kent European sites. This is in accordance with Article 6(3) of the Habitats Directive, transposed into Regulation 61 of the Habitats Regulations, whereby competent authorities are required to ensure that any plan or project for which they are authorising, or undertaking themselves, will not adversely affect the integrity of a European site. This is met by a competent authority in one of two ways. Firstly, the Habitats Regulations allow for a competent authority to be able to screen out the proposed plan or project from any further detailed assessment if it can be determined that it will not be likely to have a significant effect on any European site due to the nature of the proposal or any measures built into the proposal to avoid the likelihood of significant effects.

2.5 Where proposals cannot be initially screened out, the competent authority will proceed to a more detailed level of assessment, known as the 'appropriate assessment,' gathering the best scientific information to determine whether an adverse effect on the integrity of the European site can be ruled out. Measures that can adequately mitigate for any identified effects are considered during this detailed assessment, and added to the proposal where necessary, usually through the use of planning conditions or legal agreements.

2.6 Local planning authorities are increasingly seeking strategic approaches to securing mitigation for new growth, where the potential impact on European sites is similar for each individual development. Such an approach includes detailed appropriate

assessment work undertaken upfront, followed by an agreed approach to mitigation that can be consistently applied to development coming forward. This is normally supported by local plan policy, and often with a partnership across administrative boundaries and drawing on input from Natural England and both national and local nature conservation bodies or established partnerships.

2.7 Defining potential impacts and making sound decisions relating to when a plan or project is likely to have a significant effect, whether there will be an adverse effect on site integrity and the need to take a precautionary approach whilst not being unjustifiably over precautionary, is a challenging and sometimes very difficult task. These decisions are important not only because they relate to the highest level of wildlife protection, but also because the conclusions may ultimately determine whether a plan or project should proceed or not.

**Geographical area**

2.8 The strategy will relate to the interest features of the following European Sites: the **Medway Estuary and Marshes SPA/Ramsar; the Swale SPA/Ramsar; Thames Estuary and Marshes SPA/Ramsar**. The strategy will not necessarily be limited to measures implemented within these sites, as the interest features may well occur outside the site boundaries at certain times, and in addition, measures relating to access may well be relevant well-outside the site boundaries (for example the provision of new routes or new green infrastructure).

**Activities**

2.9 The strategy will address the impacts **of recreational activities**, and not to impacts relating to other activities (for example there may additional impacts from industrial development, shipping, etc.). New housing may also have other impacts that are outside the scope of the strategy – for example effects on water quality. Impacts that relate solely to other (i.e. non-avian) interest features of the European Sites are also beyond the scope of the strategy.

**Timescale**

2.10 The interest features of the above sites include breeding birds, as well as passage and wintering birds. The declines in birds particularly relate to wintering (though note that the number of little terns has declined, see Liley *et al.* 2011). Following the recommendation of Natural England the strategy will relate only to the winter.

2.11 Mitigation measures will need to be secured in perpetuity, and therefore there is a need for the strategy to last and look to the **long-term**. The strategy should be robust enough to give certainty that European site interest will be protected, but at the same time **flexible** enough to be reviewed and modified over time, in line with results indicated by monitoring. It is difficult to be confident of how the coastline, the distribution of birds, the distribution of prey and access patterns may change over long time periods. Different weather conditions may result in people using the coast differently and result in seasonal shifts in bird numbers and access levels. As such the strategy needs to be able to respond to circumstances and carefully monitor changes.

#### General Principles

2.12 The following principles underpin how the strategy has been prepared. The strategy should be **cost effective** in terms of management, collection, fund-holding, distribution and accounting. It should seek to put in place measures that are required, but not those that are over and above that which is necessary to give certainty that the European sites will be adequately protected, and not those that deliver other objectives for the local area. Requirements of new development should be fairly and reasonably related in scale and kind to the development, as required by paragraphs 204 and 206 of the NPPF.

2.13 The strategy should be **fair** in that it is applied fairly to development, proportionate to the potential impact that will be generated. Measures should not target particular types of development and leave other types free to proceed without adequately contributing to the mitigation for their impacts. Equally, the measures should be fair in respect to the types of recreation and the impacts associated with those activities. It is important to note that the local planning authorities, as competent authorities are responsible for securing the necessary mitigation and funding for some measures may need to be raised from other sources (this accords with the solutions focussed approach advocated in paragraph 187 of the NPPF).

2.14 The measures within the strategy should be included on the basis of **evidence** to justify their need and their appropriateness and likely effectiveness, and therefore in accordance with the requirements of paragraph 158 of the NPPF. The strategy should not include measures that may be considered desirable to achieve other objectives.

2.15 The strategy should be **implementable** with a good degree of certainty that the required measures can be delivered in a timescale that is related to the commencement of the development and the avoidance of potential impacts, taking account of the gradual change in recreational use over time. This will require considerable forward planning for the strategy to be implemented in a timely manner. Some measures will need to be secured in-perpetuity to ensure that impacts are avoided into the long term.

### Drawing a distinction between current impacts and the effects of new development

2.16 The two broad aims for the SARMP are interlinked aims and very difficult to separate. However, it is important to clarify how they should be addressed as two different requirements of the legislation, as described above in Section 1, and where responsibility lies for securing the achievement of each.

#### Maintaining and restoring the European site network by resolving existing impacts

2.17 The overriding principles of the European legislation in terms of the European site network is the establishment, maintenance, restoration and protection of a coherent network that secures the favourable conservation status of the habitats and species of European importance, listed in the Directives. Article 6(2) of the Habitats Directive particularly requires each Member State to avoid the deterioration of habitats and disturbance of species for which European sites have been designated. It is this requirement that is the reason for the second aim of the strategy, which is to reduce the impact of existing levels of recreation on the North Kent European sites. There

have been marked declines in the bird interest on some of the sites for a number of years, and disturbance levels may be a factor in these declines.

2.18 Meeting the requirements of Article 6(2) of the Habitats Directive is a Member State responsibility, and it is therefore a government wide responsibility, which logically extends to all public bodies and individuals holding public office whether their statutory remit includes duties that are relevant to the Article 6(2) requirement. It is worth noting that similar duties in national legislation exist for public bodies with regard to furthering the conservation and enhancement of Sites of Special Scientific Interest (SSSIs).

2.19 Whilst the first aim of the SARMP is specifically met by measures provided by new development, the second aim of the strategy is to contribute to the achievement of Article 6(2) objectives, and this can be achieved by the collective input of a range of authorities, bodies and partnerships. There may therefore be a number of options and opportunities for funding and resourcing measures contributing to this requirement.

**Suggested approach to identifying responsibility for measures relating to new and existing impacts**

2.20 The intention is to set out a single strategy that addresses the issue of recreational disturbance across the board, from both new development as well as existing development. The strategy aims to provide the right balance between the two aims, apportioning measures to each with logical and justified distinctions, whilst also seeking a realistic and implementable way forward that does not separate out the two aims to the extent that implementation becomes overly complicated and burdensome. Responsibility for existing deterioration should not be borne by new development, and at the same time, where new development will lead to additional impacts, fair and proportionate responsibility should be taken.

2.21 Our approach to seeking to identify responsibility will be to produce a single strategy that addresses disturbance impacts. Within the strategy we will – as far as possible – identify and split measures that relate to the two different aims. These splits will be identified as follows:

- Some measures within the strategy will be applicable to both aims, but it may be possible to subdivide or apportion them. **As far as possible some elements within the strategy may therefore be split according to whether they address new impacts from new development or solely relate to existing access.**

- Some of the measures will be those that are clearly and urgently required and those will therefore highlight existing issues requiring rectification. Such measures are likely to be location specific, and need to be very clearly defined. **This will need to relate back to ecological information to focus on locations in most need of urgent action.**

- Housing allocations may identify where particular measures will be required to prevent any new impacts from occurring. **A check of allocations should identify any such hotspots.** However windfall development and high levels of growth a few

kilometres from the coast will mean that changes in access will also occur across a wide area.

- Some measures within the strategy may be less structured at this stage, being opportunities to mitigate for impacts but ones that may be implemented in a number of ways, with a variety of partners providing input, or may be those that can be refined over time. Some of these measures may even be more aspirational in nature. **These types of measures do not offer the necessary certainty to enable new development to meet the requirements of the legislation, but may provide positive opportunities to contribute towards rectifying existing issues.**

- Some measures will not necessarily have a clear allocation to either existing or new development impacts, but there may be logical reasons why their implementation is with one or the other. There will be activities that are best implemented by local planning authorities or other partners, and others that would be very difficult without developer led funding. Additionally, some projects may be of a type that meet external funding bid criteria, and therefore best pursued for existing impacts, leaving developer contributions to fund other important and necessary mitigation. **The most appropriate implementation path should be followed to maximise outcomes, and this will be a consideration in highlighting where responsibility may lie.**

- In checking that the burden on new development is fair and proportionate, consideration should be given to the expected increases in housing, and how that relates to the existing level of impact. **Checks should also be made across to other established strategic mitigation schemes, to assess whether impact, mitigation requirements and costs, and the levy placed on developers is in line with other approaches.**

# 3. An overview of possible mitigation measures: the long-list

3.1 In this section we provide an overview of the different measures to reduce disturbance impacts at coastal sites: measures that could form part of a strategy. We then review each in terms of cost, deliverability, effectiveness and timescale to implement to provide context to later stages of the report.

## A 'long list'

3.2 We set out a summary 'long' list of possible options in Appendix 4. These options range from soft measures and proactive work with local residents, to enforcement. The table simply sets out all the possible ways in which disturbance might be reduced. Some measures can be described as either off-site or on-site measures. Others, such as the promotion of visitor awareness of issues, or habitat creation, may fall into both categories. Therefore this distinction is only made where useful in organising the measures presented in the table. The measures listed are not necessarily compliant with the habitat regulations in terms of mitigation.

## Assessment of the long list

3.3 In Appendix 5 we provide a table assessing each of the measures in the long list (Appendix 4) in terms of effectiveness, deliverability, time frame to implement and cost. The colours facilitate comparison – rows that are mostly green indicate more positive assessment while those rows with dark brown cells indicate approaches with less merit.

3.4 From this assessment we can draw the following broad conclusions.

### Habitat Management

3.5 Habitat management measures could include creation of artificial, undisturbed roost sites, creation of additional feeding areas (e.g. managed retreat or new lagoons) or enhancement of habitats to provide better feeding sites (for example changes of management of wet grassland). Problems with these measures include:

- Some are large infrastructure projects which are complex and expensive to deliver,
- There are existing roost sites on islands that are largely free from disturbance,
- Wet grassland habitats (the obvious focus for changing management) are not used during the winter by many of the waders that have been declining (such as knot, grey plover, dunlin and ringed plover)
- They may be dependent on opportunities and other plans (managed retreat),
- Some should be taking place anyway (management of the European sites to achieve favourable condition),
- They are not necessarily compliant with the Habitat Regulations if new habitat is being created outside the SPA to compensate for deterioration of the SPA.

3.6 We therefore suggest that opportunities may arise, such as managed retreat. Such opportunities will depend on other plans and circumstance, and whenever possible maximum potential should be made to enhance habitats and minimise disturbance for the bird interest. As such, habitat management measures are not a main element of this strategy, but should be recognised as important in their own right.

**Planning and off-site measures**

3.7 Ensuring development does not take place around sensitive sites effectively avoids issues relating to the impacts of new development. There are now precedents around the UK where SPA and SAC sites have a development exclusion zone clearly set out within overarching plans. For example local authorities around the Dorset Heaths, Thames Basin Heaths, Breckland, Ashdown Forest and Wealden Heaths have all included 400m zones around their heathland sites. Establishing such a zone with respect to disturbance issues and coastal sites is much more difficult, as recreational users travel from a wide area to visit and use coastal sites (previous work has suggested a 6km zone from which the majority of recreational use originates). There are also practical considerations as each local authority is at different stages in their relevant plans. A 'sterile' zone of no development around the three North Kent SPAs would encompass ports, town centres, very built up residential areas and contaminated brownfield sites. Development would potentially be halted or pushed to greenfield sites whilst also preventing regeneration of urban centres. We therefore suggest this approach does not merit further consideration with any large buffer. While not included as a main mitigation element within the strategy, local authorities may wish to consider small exclusion zones (say 400m) around main access points.

3.8 The provision of Suitable Alternative Natural Greenspace 'SANGs' and other additional green infrastructure is a potentially appealing solution to resolving disturbance impacts. By providing additional space for visitors, it would seem intuitive that an area can support more visitors. In terms of visitors to the coast, alternative sites are most likely to work for types of access that are not dependent on particular coastal features – for example visitors who are simply drawn to sites because it is the nearest open space to their home, or because it is a convenient place to walk the dog and let the dog off a lead. The options to create alternative sites that provide coastal scenery, locations to kite surf or beautiful beaches are likely to be limited. Given the high cost of purchasing land and securing management in perpetuity, SANGs are not 'quick wins' and should be carefully selected, targeted and planned. Taking a long view, SANGs may have a longer term and more strategic role in mitigation compared to other measures, and must clearly be carefully considered on a site-by-site basis.

3.9 Opportunities for SANGs delivery may come forward through existing sites (potentially already in local authority or county council ownership) which could be enhanced to provide access or when directly linked to individual, large developments. Sites that are linked to development will be likely to be close to new housing (in some ways ideal – but likely to mean a particularly 'urban' feel) and need to be considered very carefully on their merit (an area of grassland on the edge of a large development is unlikely to provide a good alternative to the SPA sites). We therefore suggest that provision of new green space sites does have a role in mitigation, but that it is a long-term one and one that needs to be carefully planned. Given the high cost of such measures, they are dependent on local opportunities.

3.10 Other off-site measures relate to more local approaches, enhancing sites outside the European sites, managing visitor flows on adjacent sites, essentially drawing visitors away from European sites. These approaches have merit, but are small in scale and local.

### On-site Access Management

3.11 The matrix in Appendix 5 indicates that most on-site measures are relatively easy to implement, effective and relatively low cost. The one measure with concern regarding effectiveness is fenced exercise areas for dogs.

3.12 There are a range of management measures that relate to shore based access which would be relatively easy to implement and potentially low-cost, but they are mostly quite local and site specific. As such they could work to resolve issues in particular locations, enhance access in particular places and be carefully targeted. They all require some work 'on the ground', working with local landowners, rights of way officers and other relevant stakeholders, and as such could be considered as a series of individual small, discrete projects:

- Management of visitor flows on adjacent land
- Paths rerouted inland/below seawall
- Screening
- Path management
- Restricting access at particular locations (such as temporary fencing near wader roosts)

3.13 These kind of approaches have merit, but require careful planning and design. Many can be targeted to resolve particular issues at sites or be tailored to particular access types. For example low screening or low fencing at particular locations may provide opportunities to keep dogs away from key areas for birds. These kinds of measures can be phased/targeted as resources allow and as issues arise.

3.14 Management of parking (reducing/redistributing spaces/closing parking locations/review of charging) is a means of managing access over a wide area, and applies to a wide range of different access types. Changes to car-parks can take place both on and off-site. In order to ensure success, careful work is needed initially to review existing parking, map parking and identify changes. An important element is the need to ensure a consistent approach across local authorities and others responsible for parking. Changes to parking may also be unpopular with some users, so would need to be undertaken carefully and considerately. It would be necessary to predict and monitor likely displacement to ensure that the pressure did not merely move from one sensitive area to another. Conducting a review, producing a car-parking 'plan' and liaising with users would all necessitate a degree of staff resources.

3.15 Zoning is particularly relevant to watersports and there are numerous examples around the country where watersport zones have been established. Zoning works where users spread over a wide area and there are issues with disturbance at particular points. Zoning is positive in that it creates a dedicated space for users, but zones require some careful

consideration and consultation in order to get right. As such the approach is not a 'quick win'.

#### Education and Communication/Awareness Raising

3.16 Education initiatives, such as interpretation, guided walks, wardening, school visits, community events etc., are widely undertaken at many countryside sites and enhance people's visits to sites and their understanding of the local area. Such approaches are proactive, rather than reactive, but unlikely to solve problems in the short term and depend largely on the audience and style of communication. In general, therefore, education and awareness raising measures are likely to have wider conservation benefits, but there is relatively little evidence that such measures on their own will bring about rapid changes in people's behaviour and reduce disturbance. Good communication is however likely to be important when linked to other measures, to ensure visitors understand issues and to ensure clear guidance for people on where to go, how to behave etc.

3.17 Voluntary codes of conduct provide a means of clearly conveying messages about where to undertake different activities and how to behave, and provide a foundation to other measures such as enforcement.

3.18 Wardens appear twice in the matrix, as people out 'on-site' can have an engagement role (talking to visitors, showing people wildlife, explaining issues etc.) and/or an enforcement role. Establishing a warden presence is relatively easy to implement, but employment costs over a long-period (in perpetuity) are high. If wardens have an enforcement role, then there is a need for clear guidance to users and legislative support to provide the scope for enforcement.

3.19 The presence of a warden on-site, asking people to behave differently, and the wardens on-site to show people wildlife are relatively 'quick wins' in that a wardening team can be established quickly. There is published evidence of their effectiveness, for example in resolving impacts from access for breeding terns (Medeiros *et al.* 2007). Given that warden/rangers could undertake monitoring and also work closely with stakeholders on other projects, an on-site presence, at least in an early part of the strategy, would seem a sensible use of resources. It will be important to ensure that the warden/rangers have powers to enforce byelaws etc. as required over time.

#### Enforcement

3.20 A range of legal mechanisms are relevant. Byelaws can be applied to enforce zones, limit speeds and dog control orders provide a range of options for fines to be levied to dog owners (for example requiring dogs to be on leads; requiring dog owners to put their dogs on leads when asked etc.). In general these measures require a little time to set up – involving consultation, evidence gathering etc. – and (not surprisingly) can be unpopular. Users need to be made aware of any changes and some way of monitoring, checking and enforcing (such as wardens, see above) is required. Measures relating to enforcement are therefore ones which have a high likelihood of success, but require some time to set up and establish. We therefore suggest legal mechanisms such as dog control orders and byelaws are elements that potentially feature later in any strategy, after other (more positive) measures have been implemented.

3.21 Capping visitor numbers is problematical. Permits or similar systems are used in other countries (see Newsome, Moore & Dowling 2002 for details and a review), and occasionally within the UK. In general, however, the approach is applicable to wilderness areas or sensitive nature reserves and has largely lost favour within the UK. At most locations around the SPA there are existing rights of access and controlling access in such a way along the coastline is probably not worth further consideration.

3.22 Covenants relating to pets in new development is also not worth further consideration. It is difficult to have confidence that covenants can be applied and be effective in the long term. The checks, monitoring and legal costs of ensuring residents do not keep pets are complicated.

# 4. Locations that are a focus for the strategy

4.1 In this section we summarise spatial data relevant to the strategy. Appendix 6 includes a series of maps and summarises background information relating to spatial context. It contains the following maps:

- Map 11: Areas important for particular bird species: WeBS sectors holding more than 10% of the count of interest features of the SPAs
- Map 12: Areas that are potentially vulnerable to disturbance/sensitive to disturbance (high tide roosts)
- Map 13: Priority habitats within the SPAs, highlighting habitats relevant to the SPA interest features
- Map 14: Areas where access may increase in particular
- Map 15: Current access
- Map 16: Areas where particular activities are focussed

4.2 The key areas for birds – based on WeBS core count data – are the northern parts of the Swale and the inner part of the Medway (islands). These are some of the quietest areas in terms of access and development pressure. These areas also hold a high proportion of wader roosts. The largest areas of intertidal habitat (the richest feeding for many of the birds) are in the Medway and the outer Thames. The area with the most new housing likely to come forward (within a 6km radius) is the South-west corner of the Medway, between Lower Upnor and Gillingham. Areas near Gravesend and the upper reaches of the Swale are also likely to see a marked increase in housing within 6km. Current access levels are highest near Whitstable (mouth of the Swale) and the upper parts of the Medway.

# 5. Elements of the Plan

5.1 The following elements form the basis of the strategy. Each are discussed in detail within this section.

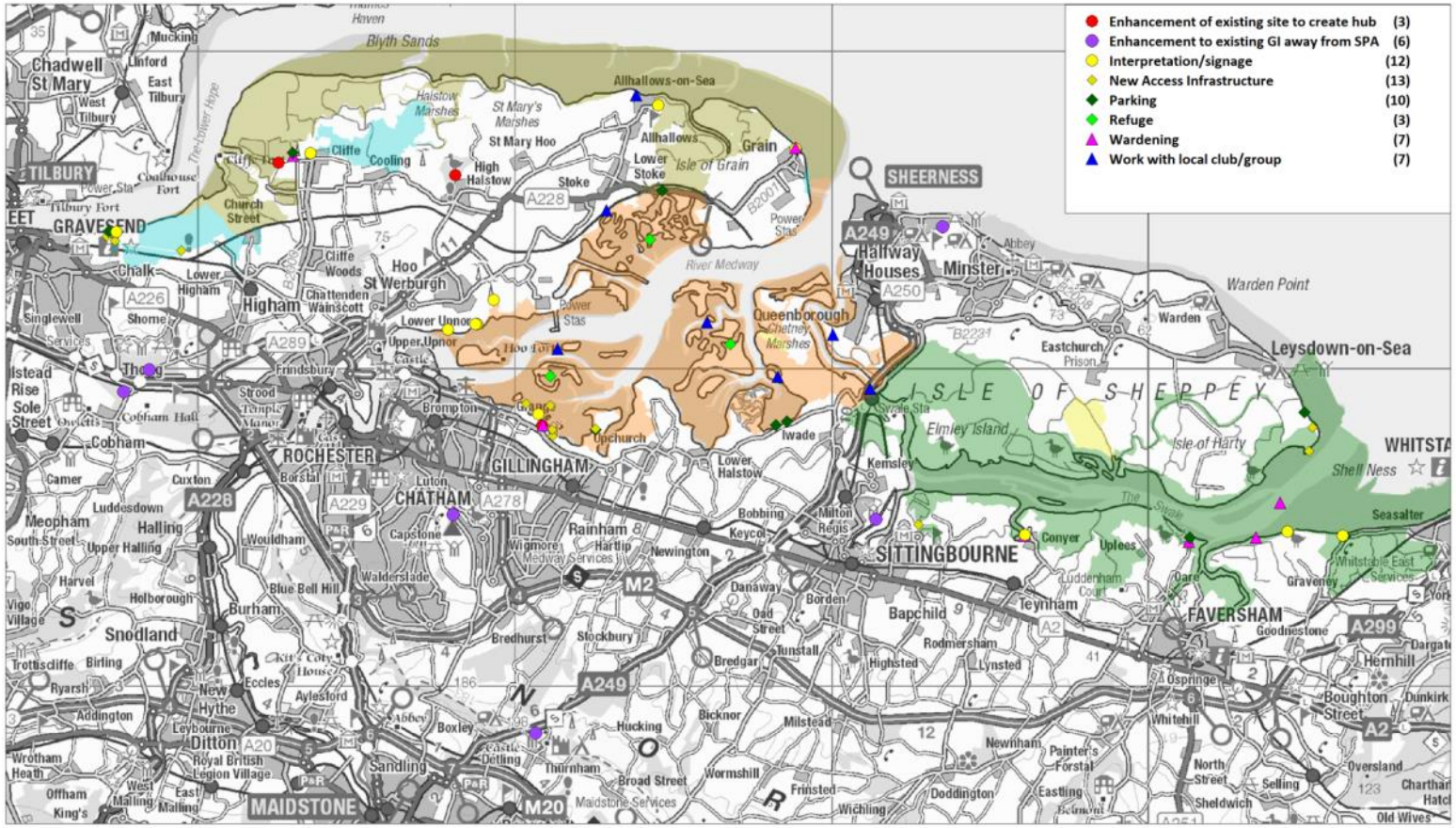
- A North Kent Coast Dog Project
- Wardening/Visitor Engagement
- New Access Infrastructure
- Parking: Strategic Review and Changes to Parking
- Codes of Conduct
- Interpretation/signage
- Work with local club/group
- Refuge
- Enhancement of existing sites to create hub
- Enhancement to existing GI away from SPA
- Enforcement
- Monitoring

5.2 The **dog project** and **wardening/visitor engagement** elements are generic and can be established quickly. The **dog project** focuses on the activity that is most associated with disturbance and will engage with local dog walkers. It will be able to promote particular sites to dog walkers and raise awareness of disturbance issues. **Wardens/rangers** with a visitor engagement role can be mobile and deployed across a range of locations, targeting areas with particular issues or close to new development. The level of wardening can be flexible over time and the posts can supplement existing visitor engagement and range posts.

5.3 **New access infrastructure** will involve a range of discrete, focussed projects that could be phased with new development. **A review of parking locations** will provide the necessary information to underpin long-term changes in parking capacity, charging and provision. Such changes can be phased over time and linked to available funding and locations where new development comes forward. **Codes of conduct** will provide guidance for a range of activities, in particular making it clear how users should behave and where to undertake particular activities (important ground work should legal enforcement be required in later years). In-line with these, **interpretation/signage** and **work with local clubs/groups** is envisaged. These three elements should be undertaken in tandem and it is important they interlink, for example the maps on the codes of conduct could also be used on the interpretation. Also linked is the long term aim of creating **refuges** – 'quiet' areas within the Medway where recreation and other activities are discouraged. We also set out **enhancement to existing sites**: both those **within the SPA** and **outside**. In the long term access is best focussed away from the SPAs, and the more that existing green infrastructure away from the SPA can absorb access pressure and people's access requirements the better. Particular honeypots within the SPA will be likely to continue to draw access and coastal sites will always have a particular draw. These sites therefore need to be made more robust, with

additional resources made available and management measures targeted to reduce disturbance impacts. Measures are possible at such locations to reduce disturbance. **Monitoring** across the SPA sites will provide a check on success of measures and inform where further measures, such as enforcement (for example dog control orders) might be necessary

5.4 Elements which can be mapped are shown in Map 2, which provides an overview of the different elements. Note that some parts of the strategy cannot be specifically plotted and for some elements (such as wardening) some suggested locations are indicated on the map but there may be additional locations over time. We also summarise the strategy spatially in Appendix 7. In this Appendix we set out a summary map (Map 17) showing all components of the strategy and an accompanying table that summarises the spatial elements of the strategy.




**Map 2: Mapped Components of the Plan**

## A North Kent Coast Dog Project

### Overview

5.5 A dog project would provide the opportunity to actively engage with local dog walkers and establish a means for dog walkers and conservation/countryside staff to communicate with each other. The approach has been successfully used in other parts of the country where there are concerns about the impacts of dogs on European sites.

### Justification

5.6 Dog walking was the most common activity people were undertaking at the survey points included in the disturbance study (Liley & Fearnley 2011). Dog walking accounted for 55% of the major flight events recorded during the disturbance study and the study showed that it was dogs off-lead that were a particular issue. A dog project aimed at establishing communication with dog walkers, providing a means to engage with users, raising concerns, highlighting sites to visit (and sites where dogs are not so welcome) etc. is a positive, proactive and cost effective approach.

### Detailed Recommendations

5.7 We recommend that a project is established that has its own identity/branding and is something that is free. The project would be a strategic, over-arching element of the strategy – in that it is not location specific. The main element to the project would be a website that is aimed at those interested in dogs. As such the website could provide:

- social networking opportunities for dog walkers,
- a forum for users to share information on places to walk and local issues,
- help for people with lost dogs
- a list of vets, pet food suppliers, kennels etc.
- a live gazetteer of countryside sites, potentially with opportunities for users to add comments about sites, recommend sites etc. The gazetteer should indicate (potentially with a colour scheme) sites where dogs are welcome and sites where dogs should be on a lead or are not welcome
- a register for professional dog walkers (allowing professional dog walkers to sign up to a particular code of conduct)
- a code of conduct for dog walkers in the countryside

5.8 Besides the website, there is the potential for the project to include events (guided walks, meet-the-ranger type events, events at particular sites where there are dog walking issues, indoors events with stands etc.). Promotion of the project could involve face-face contact on-sites, and also active work with local vets, suppliers etc.

5.9 By holding people's contact details (and potentially details of their dogs, where they live/walk etc.) there is the potential for users to be contacted directly if there are issues on local sites, for consultation etc.

5.10 'Dorset Dogs'[7] provides a useful precedent – the project has won awards from the Kennel Club and has been developed over a number of years, using funding from developers to off-set impacts related to the Dorset Heaths SAC/Dorset Heathlands SPA.

### Indicative Costs and Implementation

5.11 The website and the approach of the project will need to be designed with the involvement of local dog walkers and be tailored to the specific area of North Kent. This will ensure it will appeal to local dog walkers and be useful.

5.12 The project will need to have its own identity and initial costs will need to cover the design of the website, production of membership packs, display material, equipment for events etc. Staff time will be required to develop the project and organise any start-up events etc.

5.13 Costs are summarised in Table 2.

**Table 2: Indicative costs for dog project**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Dog Project | £15,000 | £2,000 | Staff time not included in cost as assumed undertaken by warden/rangers. Set up cost to cover web design, production of membership packs, launch event. Running costs for web hosting, updates to website, further events. |

[7] http://www.dorsetwildlifetrust.org.uk/dorset-dogs.html

## Wardening/Visitor Engagement

### Overview

5.14 A small team of mobile warden/rangers is needed to patrol the SPA, engaging with visitors and providing the staffing needed to implement some of the other measures within the strategy.

### Justification

5.15 There are lengths of coastline with currently little or no ranger presence and there are issues of disturbance from both legal and illegal activities. There are also a number of local settlements where there is little liaison with the communities and a lack of understanding of the importance of the SPA featured species and their sensitivity to human activities. Where mitigation measures are needed, there will be a need to liaise with local land managers and owners and to either carry out works or appoint and supervise contractors. A number of places are popular with tourists and enthusiasts at all times of year and engagement with these transient visitors is also important to inculcate an understanding of the importance of the SPA and the vulnerability of the featured species to human impacts. This all requires a presence on the ground of knowledgeable rangers. We therefore envisage a small mobile ranger team that would supplement and fit with existing warden/rangers. The team would have a dedicated role along the lines of a 'bobby on the beat', and the team would be flexible over time in that staffing levels and deployment would vary as required.

5.16 There are published studies that show that wardening is effective in reducing disturbance impacts (e.g. Medeiros *et al.* 2007).

### Detailed Recommendations

5.17 The warden/ranger's would function as a mobile team, covering multiple sites (under different ownership and management) and their duties would involve working with the existing site managers (where present) and include:

- Actively patrolling sensitive areas, engaging with visitors.
- Putting up seasonal signs, fences etc.
- Familiarisation with the area and identification of disturbance issues
- Putting in place mitigation measures to remove sources of disturbance (such as illegal motor biking) or reducing disturbance from legitimate users (education, signs, screening etc.
- Liaison with local communities, landowners and land managers and other organisations
- Education initiatives with local schools etc.
- Monitoring impacts from human activities and the effectiveness of mitigation measures

5.18 While we envisage that the main work of the warden/rangers would involve active engagement with visitors, we also envisage that the duties would include work on some of the other areas recommended in this report – the parking review and the dog project for example.

5.19 The wardens would need to have a strong presence and be clearly identifiable. There are a range of options for how the warden/rangers could be hosted or established. For example it may be possible to add to existing staff teams in the area (e.g. wildlife trust/RSPB/local authority) alternatively the warden/rangers could form their own team with a separate brand and identification.

5.20 It would be possible for the core team to work with volunteers, which could provide a means of increasing local support and face-face contact. 'Walking Wardens' have been employed by some wildlife trusts[8] on their reserves to report anti-social behaviour and (for those who have dogs) 'best practice' dog walking.

5.21 Wardening effort and patrolling would involve all areas, and be flexible. Different locations and issues may become a focus at different times. Map 3 shows suggested locations for the wardening effort to be focused. These are also summarised in Table 3. The list is not exhaustive, but provides an overview of some of the locations where the wardening effort could be directed.

**Table 3: Suggested areas for wardening effort to be focussed.**

| Map ID (See Map 3) | Details |
|---|---|
| 11 | Mobile warden/ranger focus: issues with local dog walkers/motor bikes |
| 22 | Roaming warden along Medway estuary shore - boost to existing warden staff |
| 41 | Mobile warden/ranger focus dog walkers |
| 48 | warden presence |
| 51 | Existing wardening presence at Oare Marshes, but necessary to ensure continuity and coverage |
| 53 | Mobile warden/ranger focus: issues with local dog walkers, roosts wardened at high tides |
| 55 | enforce speed limits - jet skis and catamarans in this area |

5.22 In general the areas that should be a focus for wardening effort should be:

- Wader roost sites at high tides
- Sites with particular issues, such as a focus for particular activities (off-roading; dogs off-leads etc.)
- Areas where access is likely to change, for example close to areas where development takes place

#### Indicative Costs and Implementation

5.23 It is anticipated that two rangers will be required during the winter, and in addition one senior ranger throughout the year. Additional short-term posts could be created to supplement the core team as required (monitoring results will provide indication as to whether this is necessary). The senior ranger would supervise the seasonal rangers and would be funded in perpetuity. The senior ranger would cover the sites where wader

[8] For example in Northamptonshire: Irthlingborough Lakes and Meadows Walking Wardens leaflet

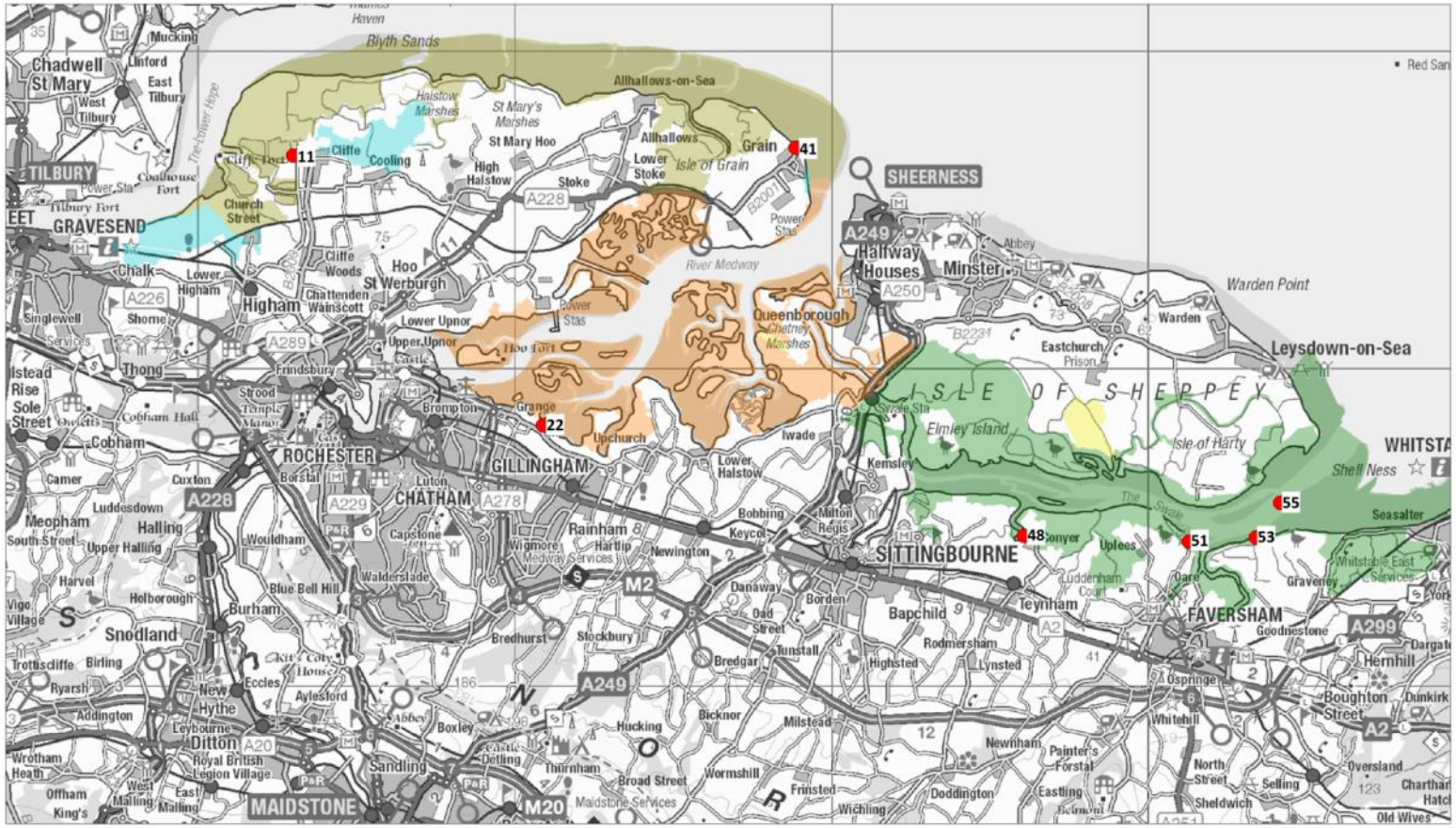
numbers start to build in July and in the quieter summer months (April – July) would be working on the other elements, such as data entry (monitoring data), the dog project, the parking review etc.). The two seasonal ranger posts would be employed for the autumn/winter only (August-March) and may not be required in perpetuity. This is because once access patterns have become established in particular ways that reduce disturbance (such as dogs on leads at particular sites) then there may no longer be a need for the staffing to continue at such a level. Volunteer wardens may prove effective support in the long term too. It may therefore be that – after eight to ten years and following careful review - it would be possible to reduce the staffing levels to two or one.

5.24 Costs would depend on how the team is set up and functioning. We recommend that the team does have its own identity, with an office base, vehicles, branding etc. With three staff in place, one staff member could have a focus on a particular estuary (Thames, Medway and Swale), with the potential for the three to also work together on particular aspects/projects/events.

5.25 Approximate costs are summarised in Table 4.

**Table 4: Indicative costs for warden/ranger team**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Senior ranger post | | £45,000 | Long-term post. Includes office and vehicle costs. |
| Two seasonal rangers | | £40,000 | Potentially short-term. Includes office and vehicle costs. |
| **Total** | | **£85,000** | |




## Map 3: Wardening/Rangers

**(NB these would have a wide remit, points are examples and indicative)**

## New Access Infrastructure

### Overview

5.26 This section is intended to cover small projects to reduce or modify visitor impacts on a site specific basis, for example changes to paths, gateways or other access infrastructure. Generic measures across sites and larger projects such as strategic signage or visitor centres are considered elsewhere.

### Justification

5.27 Small, site specific measures may work well to resolve issues at a local scale. For example there are examples of where resurfacing paths has changed where people walk and as a consequence reduced disturbance (Pearce-Higgins & Yalden 1997). Vegetation structure appears to have the potential to affect how disturbance may affect birds (Murison *et al.* 2007), with thicker, scrubbier vegetation potentially screening visitors and reducing access off-paths.

5.28 The visitor survey results (Fearnley & Liley 2011) indicate that certain features draw users to particular locations and include better path surfacing/path network (7% respondents) and more dog-friendly (6%). For dog walkers in general evidence suggests that favourite sites are those where dogs are perceived as most happy; where they are permitted to run off lead, can socialise with other dogs, and where there is little danger of road traffic (Edwards & Knight 2006).

5.29 Re-routing paths, providing screening, providing fenced areas for dogs to be off lead and restricting access at certain (vulnerable) locations are commonly used approaches to simultaneously enhance access and reduce impacts. Many measures will be cost-effective to implement.

### Detailed Recommendations

5.30 The following site specific measures have merit and could be focussed to particular locations:

- Allow vegetation to grow to set access back from sea-wall and screen users
- Provision of physical screening, such as reeds or fencing, to keep people away from particular areas and hide them. It may be possible to provide viewing facilities through the screen
- Enhancement of existing paths, for example through resurfacing, to draw users along particular routes
- Enhanced gateway/access furniture to prevent particular types of activity (such as off-road vehicles or motorbikes)
- Linking paths to provide choice of routes and potentially divert access away from seawall/shoreline
- Re-routing paths, for example below seawalls
- Fencing to direct people away from wader roosts

5.31 Opportunities for some of these measures may occur over time or be linked to other projects. It may be necessary to consider particular approaches as access levels change.

Through the workshop and site visits, we have identified a number of particular locations and projects. These are summarised in Table 5 and Map 4.

**Table 5: Locations where there is potential for new access infrastructure which will reduce potential disturbance**

| Map ID (See Map 4) | Details |
|---|---|
| 1 | Linking of the shoreline path (Saxon Shore Way) with the Thames and Medway Canal towpath to give a choice of circular walks from housing and industrial area to east of Gravesend |
| 3, 4 & 8 | Infrastructure to inhibit motorbikes and other vehicles accessing marshes along the Saxon Shore Way, the Thames and Medway Canal towpath or existing or proposed new paths across Eastcourt or Shorne marshes. |
| 19 | Continue to manage existing shoreline vegetation of bramble etc. and reinforce with additional planting to provide partial screening - along seaward side of seawall in country park |
| 23 | Management of paths at Horrid Hill –making subtle changes including modification of path surfaces, provision of low vegetation screening and measures to discourage visitors straying onto foreshore instead staying on paths. Gated entrance to main access path onto Horrid Hill Peninsula with dogs on leads restriction on peninsula. |
| 24 | Continue to manage existing shoreline vegetation of bramble etc. and reinforce with additional planting to provide partial screening - along seaward side of seawall in country park |
| 26 | Promotion of fenced dogs run free areas away from shoreline, including particular dog training area |
| 28 | Fencing to restrict access from Saxon Shore Way on west side of Motney Hill onto adjoining beach. |
| 46 | Infrastructure to inhibit motorbikes and other vehicles accessing marshes on paths either side of Milton Creek |
| 50 | Screening enhanced at Oare Marshes with additional planting |
| 58 | Fencing around roost |
| 59 | Potential to restrict access at Shellness (privately owned area owned by hamlet) during tern breeding season (fencing and signs) and negotiate for access to very specific locations during winter to prevent disturbance to roosts. |

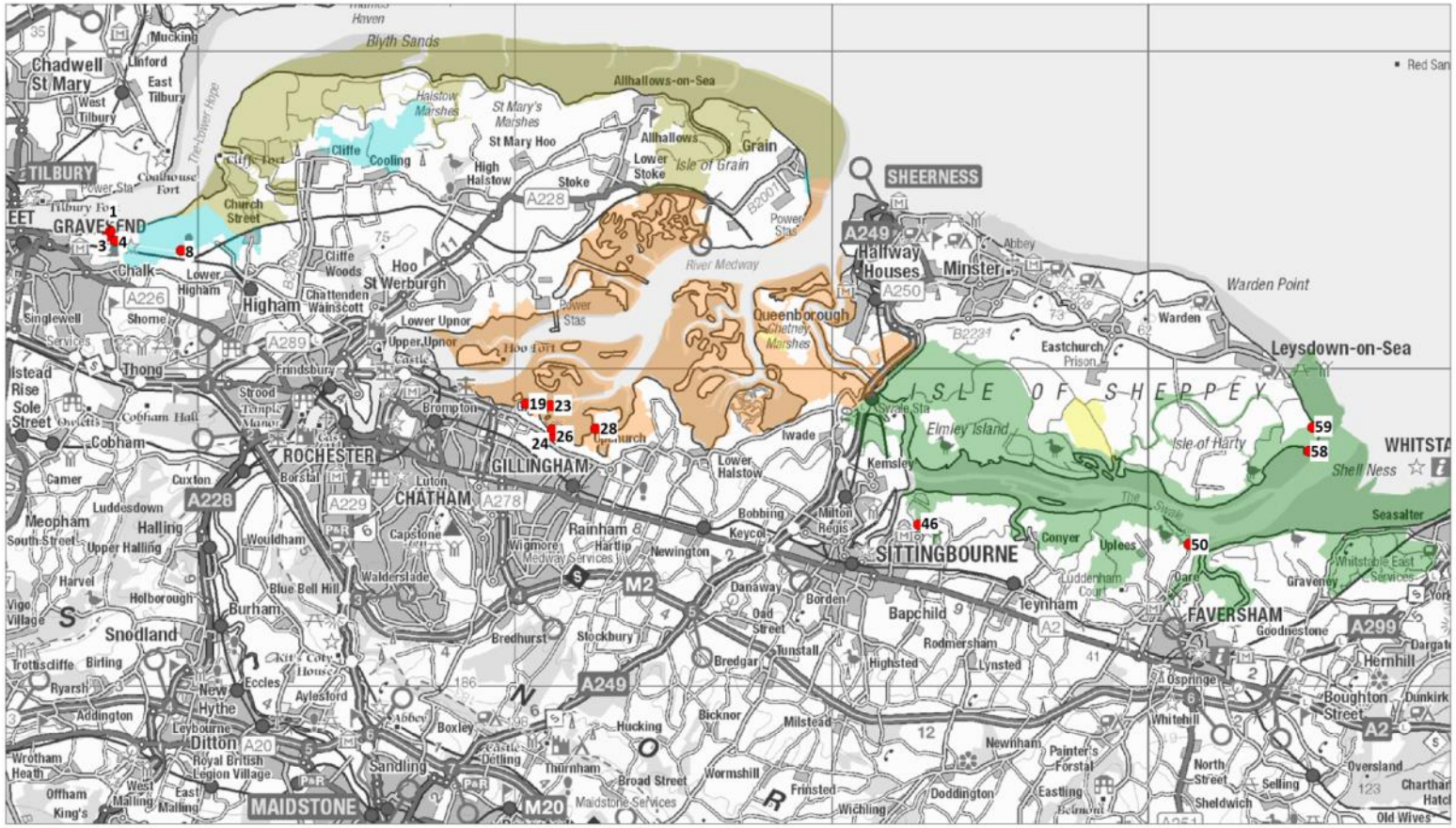
5.32 Many of the recommendations in Table 5 relate to screening and allowing vegetation to develop further at particular locations. Low bramble exists in many locations, particularly around the Medway in the vicinity of the Riverside Country Park, and allowing the vegetation to build on the seaward side of the path to still provide views to people walking, but acting as a screen (particularly for dogs) would be relatively simple to achieve. Such approaches are particularly relevant in areas such as Horrid Hill where the spit allows people to be close to large areas of intertidal habitat important for birds. Provision and promotion of dog fenced areas in this area would also help divert use away from the shoreline, particularly if there is a stronger push for dogs to be kept on leads along the shoreline. Guidance on design and size of dog-fenced areas are provided by Jenkinson (2013). There is scope to provide agility areas (for both owners and their dogs: Jenkinson 2009).

5.33 These relatively small infrastructure projects need to be considered on a case-by-case basis, and could be developed by the wardening team once in place. It may be that the best approach – at least initially – is for projects to come forward over time as funds allow. These projects could be phased with development.

5.34 Indicative costs for the measures above are summarised in Table 6.

**Table 6: Indicative costs for site specific infrastructure**

| | Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|---|
| 1 | Path links | £5,000 | | Cost would depend on surfacing, route etc. |
| 3, 4, 8 & 46 | Structures to inhibit vehicles. | £3,500 | £750 | Range of different gate styles or designs possible. Costs need to cover installation. Annual cost covers maintenance/checking |
| 19, 24 and 50 | Additional planting at various locations | £1,800 | | Planting relatively low cost, but will need regular checks to ensure gaps are not developing and further planting may be required |
| 23 | Horrid Hill path management and screening | £5,000 | | Will need regular maintenance and checks to ensure new paths are not developing and further work (planting/screens) may be required |
| 26 | Dog training area | £3,000 | | Cost depends on area fenced. |
| 28 | Fencing at Motney Hill | £3,000 | £500 | Cost depends on type of fencing. Will need checking and maintenance |
| 58&59 | Fencing and signs around Shellness | £2,000 | £500 | Cost dependent on scale of fencing. New fencing may be required each year depending on flooding/changes in bird use etc. |
| | **Total** | £17,500 | | |




## Map 4: New Access Infrastructure

Contains Ordnance Survey data © Crown database and database right 2013

- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites

## Parking: Strategic Review and Changes to Parking

### Overview

5.35 We recommend a review of parking across the three estuaries and adjacent sites. The review should encompass lay-bys, formal car parks and roadside parking. It should consider the number of parking spaces available, any charges for parking and whether there are additional facilities (such as access to the water with a boat). While sites that have access to the SPAs should be the focus, sites that may also attract similar visitors and are away from the coast should be included. Following from the review a series of carefully considered changes should be possible.

### Justification

5.36 Of the people interviewed in the visitor survey, 63% had arrived by car (Fearnley & Liley 2011). For locations well away from nearby housing the majority of people will travel by car. Modifying the distribution, cost and ease of parking is therefore a means of managing visitor flows. There are examples of sites where the careful review, assessment and management of parking provision has led to a marked change in how people use sites. For example at Burnham Beeches, an SAC near Slough, the Corporation of London have created a car-free zone in the northern part of the site and then closed part of Lord Mayor's Drive (which allowed vehicular access through the middle of the site). In total three car parks have been closed and roadside parking has been restricted on roads around the site through signage, ditches, banks and dragon's teeth. In parallel with these changes, the Corporation of London relocated the main visitor facilities to provide a central focus of activity slightly away from sensitive SAC features and adjacent to open grassland which was not particularly sensitive to recreation pressure. Car park charges have been introduced at weekends only, a system intended to encourage people not to visit at busier times.

5.37 The Burnham Beeches example illustrates how managing parking has the potential to influence access and redistribute visitor pressure. Closing car parks can however be contentious; for example proposals to close car-parks in the New Forest National Park have been strongly opposed by local dog walkers[9]. Closures should only be undertaken after careful consultation and survey work to ascertain people's reactions and where access might be deflected to. Evidence from Cannock Chase in Staffordshire suggests that results can be unpredictable (Burton & Muir 1974), for example people may still choose to visit favoured areas, but are prepared to park further away and walk further. In general, preventing parking in lay-bys, on verges and other informal parking locations may be easier to achieve than closing formal car-parks

### Detailed Recommendations

5.38 A review of parking across the area would involve a short visit to each parking location and assessment of each in a standard fashion – recording charges, capacity, surfacing, signposting etc. Sites can initially be identified from aerial imagery. The review would

[9] http://www.bournemouthecho.co.uk/news/districts/newforest/888601.Dog_owners____fury_over_car_park_closures/

identify changes that could be made to the car-parks, including enhancing some locations (by providing additional spaces, reducing parking fees etc.) and reducing parking and introducing charges/increasing charges at other locations. Suggestions for some locations that could be included in the review are set out in Table 7.

**Table 7: Some locations to include in the parking review and where measures relating to parking could be adopted in the future**

| Map ID (See Map 5) | Details |
|---|---|
| 2 | Parking: creation of a small parking area linked to paths to provide circular walk on edge of SPA, i.e. focusing access where signs, visitor engagement etc. can take place. |
| 10 | Include in parking review. Track with parking |
| 29 | Could restrict roadside parking and close lay-by |
| 34 | Potential to close lay |
| 37 | Potential to formalise this layby, provide interpretation; low fence/dragons teeth to ensure parking and access contained |
| 39 | Potential to formalise this layby, provide interpretation; low fence/dragons teeth to ensure parking and access contained |
| 42 | Potential to enhance car-park to create more welcoming feel but also restricting overall number of spaces - potentially removing back half of car-park (already difficult to access and use anyway) |
| 52 | Oare Marshes. Include in review with consideration as to limit roadside parking in some locations and enhance car-park |
| 57 | Potential to move car-park entirely away from end of road, placing it part way down track and providing access to NNR well away from beach |
| 61 | Possibility for measures to restrict roadside parking around Sportsman Pub with aim of ensuring this location does not become too busy in future |

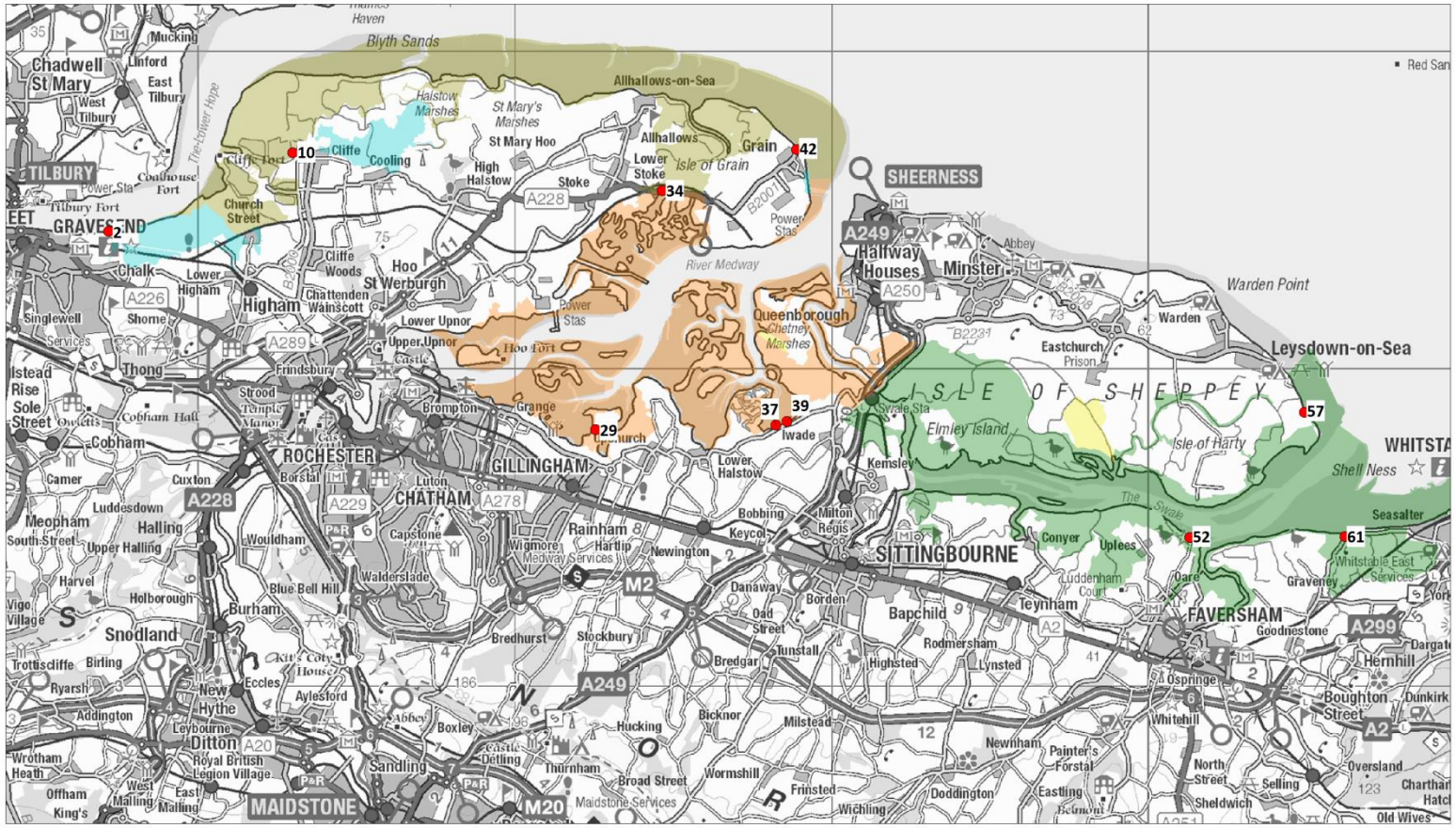
### Indicative Costs and Implementation

5.39 It would be possible to include this as part of other projects – such as green infrastructure audits or checks. The review itself would not be a large or complicated piece of work, and could be achieved at little or no cost by wardening staff. Recommendations would need a set budget, but would depend on the outcomes of the review.

5.40 Costs are summarised in Table 8

**Table 8: Indicative costs for parking: review and changes to parking**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Review of Parking | £0 | | No cost allocated as assumed review conducted by warden/ranger team |
| Changes to Parking | £20,000 | | Depends entirely on outcome of the review. £20000 would allow one or two small projects to probably be achieved. |


Blyth Sands
Allhallows-on-Sea
Halstow Marshes
St Mary's Marshes
St Mary Hoo
Allhallows
Grain
Isle of Grain
High Halstow
Stoke
Lower Stoke
Cliffe
Cooling
Chadwell St Mary
Linford
East Tilbury
West Tilbury
TILBURY
Tilbury Fort
Coalhouse Fort
Church Street
GRAVESEND
Chalk
Lower Higham
Higham
Cliffe Woods
Hoo St Werburgh
Chattenden
Wainscott
Lower Upnor
Upper Upnor
Hoo Fort
River Medway
Queenborough
Chetney Marshes
SHEERNESS
Halfway Houses
Minster
Abbey
Warden Point
Warden
Eastchurch
Leysdown-on-Sea
ISLE OF SHEPPEY
Elmley Island
Isle of Harty
Shell Ness
WHITSTA
Singlewell
Shorne
Thong
Istead Rise
Sole Street
Cobham
Cobham Hall
Strood
Frindsbury
Brompton
Grange
Iwade
Kemsley
ROCHESTER
GILLINGHAM
CHATHAM
Borstal
Luton
Lower Halstow
Camer
Cuxton
Luddesdown
Meopham
South Street
Halling
Upper Halling
Capstone
Wigmore
Medway Services
Rainham
Hartlip
Newington
Bobbing
Keycol
Milton Regis
SITTINGBOURNE
Conyer
Uplees
Seasalter
Whitstable East Services
Graveney
Luddenham Court
Dare
Teynham
Bapchild
FAVERSHAM
Goodnestone
Harvel
Holborough
Vigo Village
Snodland
Wouldham
Blue Bell Hill
Walderslade
Burham
Bredhurst
Stockbury
Danaway
Dad Street
Borden
Tunstall
Bredgar
Rodmersham
Highsted
Lynsted
Hernhill
Dargate
Trottiscliffe
Birling
Ryarsh
New Hythe
Eccles
Aylesford
Addington
Leybourne
Ditton
Royal British Legion Village
Boxley
Detling
Thurnham
Sandling
Maidstone Services
Hucking
Bicknor
Milstead
Broad Street
Wormshill
Frinsted
Wichling
Newnham
Painter's Forstal
Doddington
Eastling
Whitehill
Ospringe
Boughton Street
Dunkirk
Oversland
North Street
Selling
Sheldwich
Wrotham Heath
Offham
West Malling
East Malling
King's
MAIDSTONE
M2
M20
A2
A20
A228
A229
A249
A278
A289
A226
A250
A299
B2001
B2231
10
2
34
42
37
39
29
57
52
61
Map 5: Some Locations to Include in Parking Review
Contains Ordnance Survey data © Crown database and database right 2013
Medway Estuary & Marshes SPA & Ramsar
Thames Estuary & Marshes SPA & Ramsar
Ramsar outside of SPA
Compensation sites

## Interpretation/signage

### Overview

5.41 Interpretation will ensure visitors recognise that the sites they are visiting are important for nature conservation and will potentially increase awareness of nature conservation issues (and possibly behaviour in the long-term). Signage will convey particular messages, such as asking dogs to be on leads or asking people not to stray from the path. We recommend that interpretation with consistent styling and branding is installed at a range of carefully selected locations. Standard signs are also warranted at a range of locations.

### Justification

5.42 Interpretation boards and signs are widely used around the UK at nature reserve sites. Tests of the effectiveness of education and interpretation in reducing visitor impacts are limited (Newsome, Moore & Dowling 2002), but studies would seem to indicate that they can be effective if targeted and well designed (Littlefair 2003). Interpretation has a role only in mitigation only as part of a package of measures – while it may help change people's awareness, new interpretation boards on their own will certainly not be guaranteed to resolve any disturbance issues.

5.43 Signs are an important means of conveying information to visitors. Considerable guidance is available, for example describing design principles, wording, etc. for signs and interpretation (Mcleavy 1998; Kuo 2002; Hall, Roberts & Mitchell 2003; Littlefair 2003; Bell 2008; Kim, Airey & Szivas 2010). Provision of signage and wardening has been shown to result in enhanced breeding success for little terns in Portugal (Medeiros *et al.* 2007), and there is therefore some evidence of their merit.

5.44 Signs can ask visitors to behave in different ways. Interpretation provides information for visitors, enhancing their understanding of the site and its importance. Signs are also important to give the information to users that would be necessary to enable a conviction to be taken in relation to visitors knowingly causing harm to any of the features for which the site is notified.

### Detailed Recommendations

5.45 We recommend a series of new interpretation boards should be designed and placed at strategic locations around the three sites. These signs should highlight the importance of the sites and the wildlife present in an inspiring way, and also provide information on what (in general) people can do to help protect the site, for example through keeping dogs on leads.

5.46 It would seem appropriate to establish up-dated signs at strategic points around the estuary, in line with the revised codes of conduct. The signs should clearly set out how users should behave, and a series of designs may be necessary – for example one for dogs on leads.

5.47 The locations for new signs and interpretation should be established by the warden/ranger team and new locations may become evident over time, as access

patterns change or as levels of access change at some places. Some suggestions for possible locations are given in Table 9 and Map 6.

**Table 9: Potential locations for new interpretation and/or signage.**

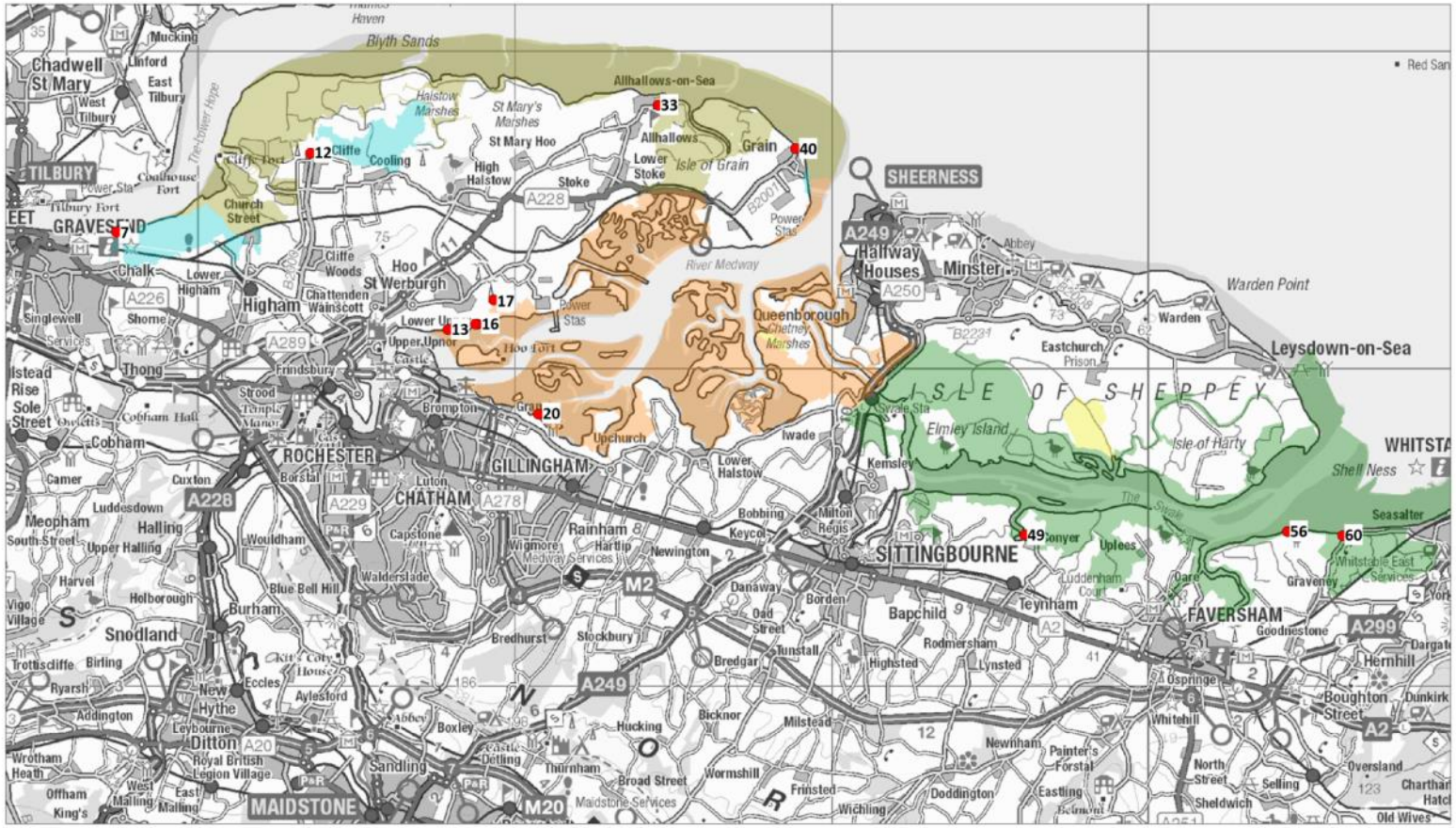
| Map ID (See Map 6) | Details |
|---|---|
| 60 | Potential for interpretation: targeted to users at caravan park |
| 56 | Potential for signage re dogs on leads |
| 49 | Potential for interpretation aimed at dog walkers |
| 20 | Potential for signage re dogs on leads |
| 13 | Potential for interpretation at car-park |
| 16 | Potential location for interpretation, edge of marshes |
| 17 | Potential location for interpretation |
| 7 | Potential location for interpretation |
| 40 | Potential location for interpretation |
| 12 | Potential location for interpretation : at start of track. |
| 33 | Potential location for interpretation at start of footpath across marshes |

### Indicative Costs and Implementation

5.48 Costs are summarised in Table 10, we estimate that around ten interpretation panels and ten signs would be required. The exact locations would be chosen by the wardens/rangers.

**Table 10: Indicative costs for new interpretation and or signage**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Interpretation boards | £25,000 | £2,500 | Estimate based on 10 outdoor panel interpretation boards (A0 size); £2500 per board. Annual fee allows for replacement of boards over 10 year period |
| Signs | £20,000 | £1,000 | 10 signs. £2000 per sign, plus £1000 per year for replacement/maintenance |




**Map 6: Some Locations for Interpretation/Signage**

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- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites

## Codes of Conduct

### Overview

5.49 Codes of conduct set out how users should behave and provide guidance on a range of issues, including safety. A standard set of codes of conduct should be developed for the main activities and covering all three estuaries. Developing the codes provides a means to engage with local users and once established, a foundation is in place for enforcement if required. Codes of conduct should be widely promoted to users through paper copies, websites, user groups and local clubs. The warden/ranger team should be able to refer to them and give them out as required.

### Justification

5.50 Codes of conduct set out clearly how users undertaking a particular activity should behave. Where there is plenty of space, relatively few users and few conflicts, there is unlikely to be a need for any agreed code of conduct. They are however relevant where there are a wide range of different users, potentially not linked to particular clubs, and a range of complicated issues, or where multiple activities overlap. Developing good, clear codes with user groups ensures that safety issues, insurance, consideration of other users and nature conservation issues can be accommodated, ensuring users can enjoy their chosen activities while minimising any impacts. The codes are also useful for casual visitors, who perhaps visit a location sporadically, and are unlikely to be fully informed of all local issues. A code of conduct provides the user with all the information they need to undertake their chosen activity safely, within the law and without creating conflict with others.

5.51 Codes of conduct can be established by directly working with local users, even by the users themselves. Codes developed in this way are likely to be the most effective. Involvement with users directly also makes sure that the codes of conducted reach the right audiences, as one of the key issues can be ensuring that they are read and circulated widely and that visitors are aware of them. Getting people to 'sign up' to voluntary codes of conduct is potentially tricky and may be difficult to achieve where many users are ad hoc, casual visitors and where there are multiple access points (i.e. no central location at which users can be intercepted).

5.52 A good example of voluntary codes of conduct is those for the Thanet area of Kent, where a series of codes of conduct have been brought together in a single document for a stretch of coast[10]. The document sets out the bird roosts and European Marine sites, and provides an easily accessible overview for users. The individual codes of conduct include dog walking, horse riding, bait collection, wind-powered activities and powercraft.

[10] http://www.thanetcoast.org.uk/pdf/ThanetCoastalCodes.pdf

#### Detailed Recommendations

5.53 Using the Thanet example, we recommend that a similar set of Codes of Conduct are developed for the North Kent sites. These codes should be similar in design and wording, and should work as a pack.

5.54 We suggest codes are developed for the following activities (with a single code of conduct for each activity covering the three estuaries).

- Dog walking
- Powercraft activities
- Wind-powered craft
- Bait digging and collecting
- Wildlife Watching
- Shore angling
- Canoeing
- A general shore code covering other activities

5.55 They should address safety issues, consideration for other users and conservation issues and be developed with users. Monitoring of behaviour should take place after the codes are established.

#### Indicative Costs and Implementation

5.56 The development of the codes could potentially be implemented by the wardening team. Consultancy support and graphic design would be required, and additional input may be required from local authorities/partners.

5.57 Costs are summarised in Table 11.

**Table 11: Indicative costs for developing generic codes of conduct**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Codes of Conduct developed | £8,000 | £200 | 8 codes produced as a pack for printing and as interactive document; cost estimated at £8,000. Annual cost allows for revision and further print runs |

### Work with local club/group

#### Overview

5.58 There is scope to resolve very specific local issues by directly talking to local users that have a local club/group and this contact has relevance for some of the other recommendations in this report (such as input into the codes of conduct).

#### Detailed Recommendations

5.59 An estuary users survey was undertaken in 2012 and this provides a useful overview of local clubs and groups. The survey identified 57 local clubs/groups and provides information on which have codes of conduct for members, how each group is set up and provides contact details. Direct contact with some of these groups to discuss

disturbance issues and resolve specific issues is recommended. These are listed below in Table 12 and shown in Map 7.

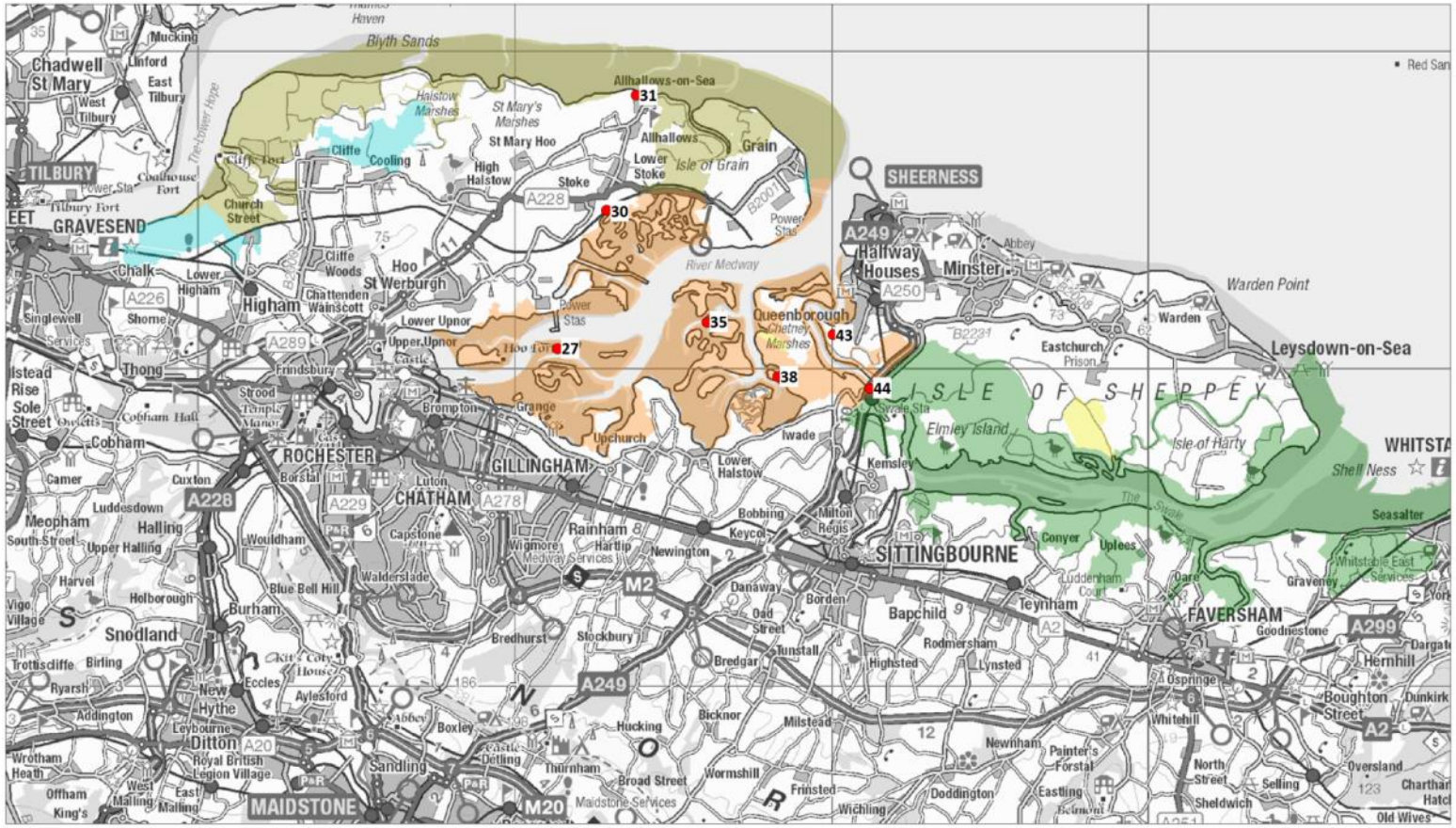
**Table 12: Specific locations where there are specific issues relating to a club/group or where there is potential to reduce disturbance through direct contact and discussion**

| Map ID (See Map 7) | Details |
|---|---|
| 27 | Proactive work with canoe clubs, links to codes of conduct. |
| 30 | Liaison with the micro light Club (Medway Airsports Club) to attempt to resolve disturbance issues. Club website has no-fly zones but these do not seem to overlap with the SPA. |
| 31 | Work with caravan site |
| 35 | Work with canoe clubs to minimise disturbance from canoes here |
| 38 | Work with wildfowlers to minimise disturbance |
| 43 | Work with local landowner to reduce disturbance from corporate shoot |
| 44 | Liaison with long reach jet ski club. Seems an awkward location given speed restrictions and alternative locations may be better. |

5.60 Besides the specific examples given in Table 12 more general contact with local clubs and groups is recommended. The development of the codes of conduct may be a good way to facilitate contact and engage with local groups. Such contact should raise the profile of the nature conservation importance of the sites, ensure that users are aware that it may be illegal for them to disturb wildlife and discuss ways in which users could ensure they are not causing problems.

#### Indicative Costs and Implementation

5.61 Implementation of this element of the work could be done by the local warden/ranger team and no additional costs are likely to be incurred.




**Map 7: Some Locations for Work with Local Clubs/Groups**

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- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites

## Refuges

### Overview

5.62 The Medway is the estuary with the most pressure from new development and the most marked declines in waterfowl. At the workshop it was suggested that creating one or more areas as refuges could be effective. These refuges would essentially be areas where human activity was minimised and users actively discouraged or prevented from undertaking activities in these areas.

### Justification

5.63 There are some existing areas in the Medway that are relatively quiet and inaccessible and include a range of habitats. Establishing one or more of these as refuges would provide a means of ensuring a disturbance free area was always available to the birds. Such areas should provide roost and feeding areas.

### Detailed Recommendations

5.64 Three potential areas could be established as 'refuges', these currently have relatively low levels of access and are relatively remote compared to some other parts of the estuary. The three areas are shown in Map 8 and Table 13. We recommend that at least one and potentially all three are promoted as areas for users to avoid. While access is fairly limited in these areas at present, they are used, for example Hoo Ness and Darnet are visited by canoeists who wild camp on the islands[11]. Canoeists visiting these islands park at the Riverside Country Park and launch from Horrid Hill. Establishing these areas as voluntary no-go areas could be done through direct contact with the local groups, through maps in the codes of conduct and through other ways, such as restricting canoe launching from certain locations (for example by making it awkward to access the water). Creating these areas as refuges could also be extended to commercial activities and specific planning schemes. Mapping and promoting these areas as 'quiet zones to protect bird interest' (or similar) wherever possible would help ensure their effectiveness.

**Table 13: Potential locations for 'refuges'**

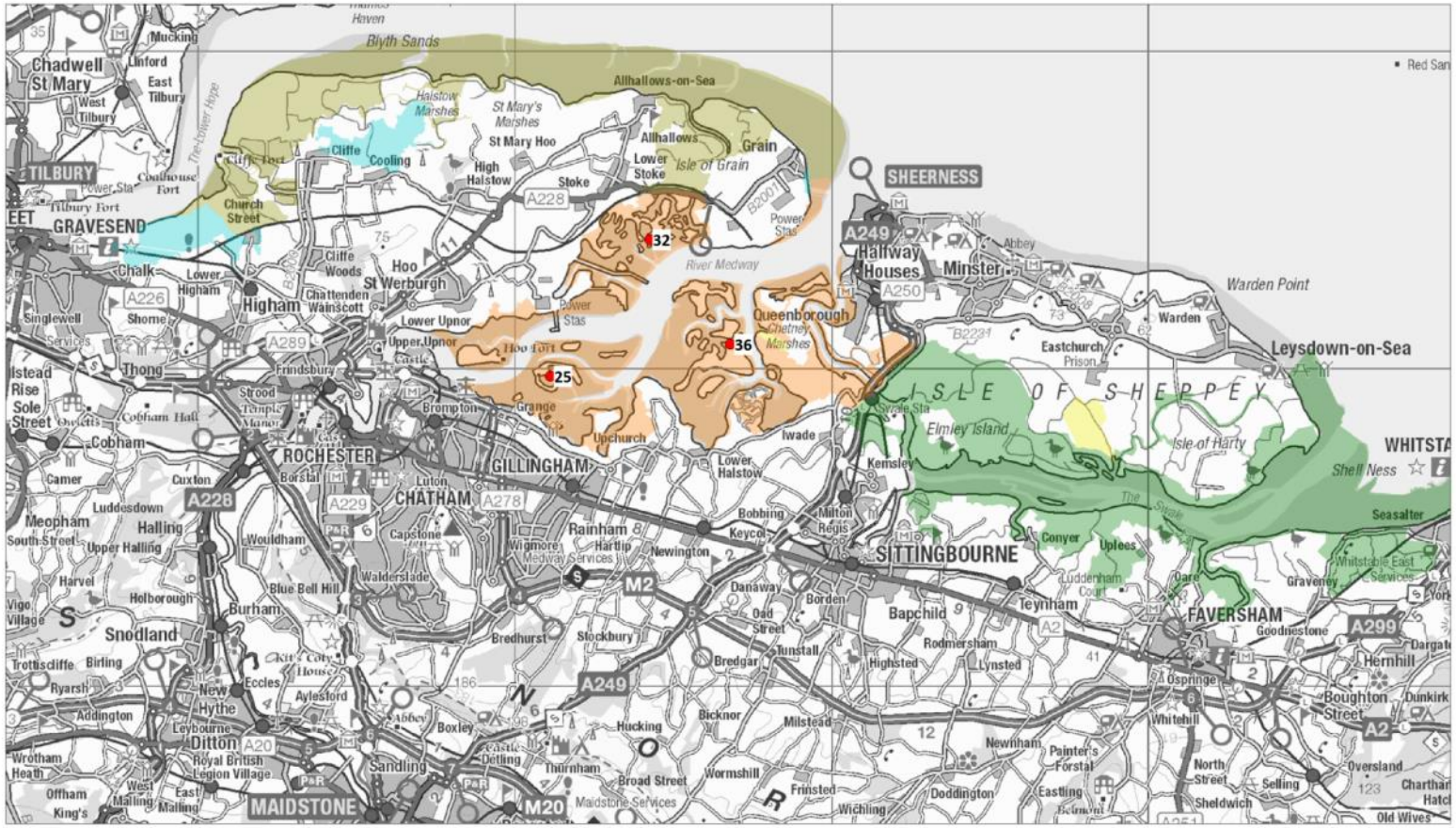
| Map ID (See Map 8) | Details |
|---|---|
| 25 | Potential for 'refuge' - area with minimal access and disturbance. Overlap with 36 and 32 |
| 36 | Potential for 'refuge' - area with minimal access and disturbance. Overlap with 25 and 32 |
| 32 | Potential for 'refuge' - area with minimal access and disturbance. Overlap with 25 and 36 |

### Indicative Costs and Implementation

5.65 Establishing the refuge areas would be a longer term goal than some of the other measures in this strategy, and would dovetail with many of the other recommendations such as the direct contact with clubs and the codes of conduct. We would envisage that

[11] For example: http://www.trekandrun.com/features/canoetrips/thetwoforts/trip.html

the refuges would be established and promoted through these means and therefore the cost of this work would be minimal.




**Map 8: Potential Areas to Create Quiet Areas/Refuge**

Medway Estuary & Marshes SPA & Ramsar
Thames Estuary & Marshes SPA & Ramsar
Ramsar outside of SPA
Compensation sites

## Enhancement of existing site to create hub

### Overview

5.66 Directing users to particular locations where there is good access infrastructure and management in place should reduce disturbance. Where the users are deflected from visiting other more sensitive locations and instead spend their time at locations where disturbance is managed this approach is effective and the approach is positive as it enhances access for visitors.

### Justification

5.67 At sites with high disturbance pressures it is usually best to aggregate visitors in as small an area as possible, whereas in areas with lower disturbance pressure, an even distribution of visitors may be better (Beale & Monaghan 2005; Beale 2007). A long term aim should therefore be to focus activity at particular locations, drawing users to areas where disturbance impacts can be effectively managed. Such an approach should reduce access in the wider area by drawing visitors who use other sites, rather than attracting new visitors to the area.

5.68 This approach is not a quick win, but would dovetail with the creation of the refuges in the Medway and be a long term goal of drawing access to particular locations.

### Detailed Recommendations

5.69 We can identify three sites where existing visitor infrastructure is in place but where enhancements could be made to make more of a focus and draw for users. These three locations are:

- RSPB Cliffe Pools Reserve (Location 9 on Map 9)
- RSPB Northward Hill Reserve (Location 14 on Map 9)
- Riverside Country Park (Location 21 on Map 9)

5.70 At Cliffe Pools there is a secure car-park, nature trails and viewing platforms for seeing wildlife. There is potential in the long term to enhance the facilities here, for example with a dedicated visitor centre, toilets, education facilities and a wider range of walks.

5.71 At Northward Hill the RSPB Reserve has a car-park and toilets. This site could be promoted more for local access/users and access infrastructure enhanced to raise the profile of the site and its ability to absorb more visitors – for example through increasing the amount of parking provision. The existing public rights of way network, including the Saxon Shore Way and bridleways provide routes where dogs can be welcomed. These measures would be much more low-key than at Cliffe Pools. The aim would be to draw local visitors from nearby villages (Cooling, High Halstow, All Hallows) rather than these directly accessing the shoreline at other locations around the Thames/Medway.

5.72 Riverside Country Park covers a long stretch of the Medway shoreline and already draws a wide range of users, including many dog walkers. The site has a large car-park, visitor centre, café and children's playground. A number of measures could be

established here to reduce disturbance (see para 5.30) and the site could absorb further visitors. Additional infrastructure at the site could include fenced areas for dogs (again see para 5.30) and promotion of areas within the park away from the shoreline, for example creating more circular walks – drawing more access inland at the park.

### Indicative Costs and Implementation

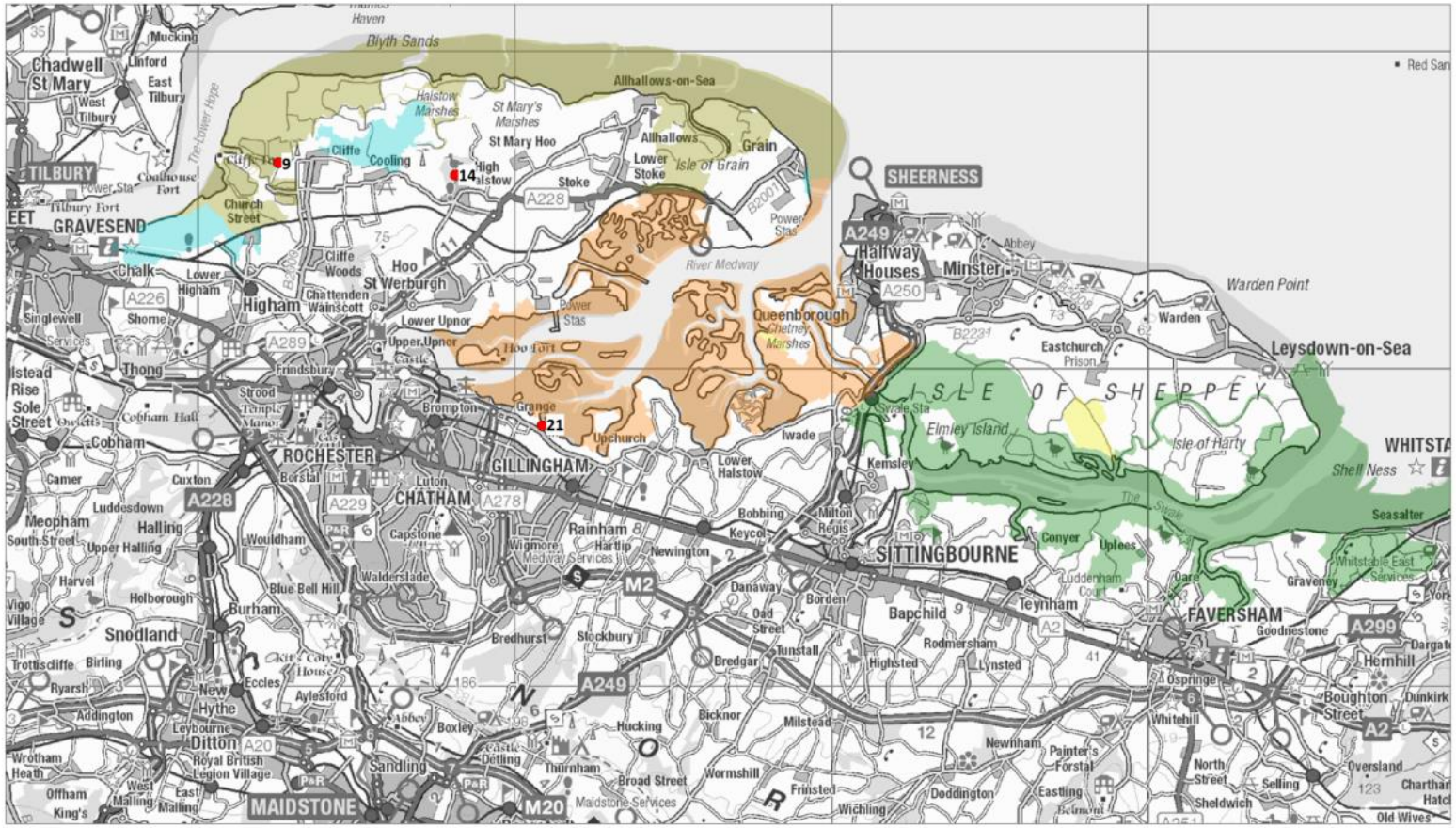
5.73 The enhancement of visitor facilities at Cliffe would be expensive and long-term. Options at both Cliffe Pools and Northward Hill would depend on the RSPB, their assessment of the impact of existing visitor pressure and their long-term aspirations at the sites. At the Riverside Country Park the measures suggested are relatively low key and could be developed relatively easily, potentially incorporated into the site management plan. Any potential changes at the site would be dependent on Medway Council and their aspirations for the site.

5.74 Costs are summarised in Table 14. These costs are difficult to estimate and are approximate costs intended as a guide only. The potential to implement measures at these sites will depend on opportunities

**Table 14: Indicative costs for enhancements to additional sites around the SPA**

| Map ID (See Map 9) | Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|---|
| 9 | New Visitor Centre and other facilities at Cliffe Pools RSPB | £4,000,000 | | Very approximate cost, roughly equivalent to cost of centre at Saltholme[12]. Aspirational rather than an essential element of the strategy. Range of funding sources may be possible. |
| 14 | Enhancements at Northward Hill RSPB | £20,000 | | Improved parking and other infrastructure |
| 21 | Enhancements to Riverside Country Park | £25,000 | | Enhancements to areas away from shoreline such that access can increase here without further disturbance |

[12] http://www.eshbuild.co.uk/case-studies/leisure/rspb-saltholme/




**Map 9: Potential Locations for Enhancements to Create Visitor 'Hubs'**

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- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites

## Enhancement to existing green infrastructure sites away from SPAs

### Overview

5.75 There are some existing sites, well away from the SPAs, which could function as alternative destinations, drawing visitors away from the coast. Enhancements to these to draw visitors that otherwise would visit the SPA coast should help to reduce disturbance.

### Justification

5.76 SANGs are a cornerstone of a number of European site mitigation strategies. We do not recommend creation of new sites for access, as whilst the evidence gathered for other strategic mitigation schemes and their particular circumstances indicate a clear need for alternative open space as a primary mechanism to protect the European sites, it is apparent that for North Kent there is a need for a more comprehensive mix of measures because alternative green infrastructure is unlikely to be as successful in drawing all types of visitors away in the absence of a wider suite of measures. It is important to appropriately apply mitigation to meet the individual circumstances of any strategic mitigation scheme, and where alternative greenspace will be successful it plays an important role. However, over reliance on new alternative greenspace that is expensive and potentially complex to achieve in circumstances where the benefits would be notably less will not benefit the European sites or those trying to achieve sustainable development. A strategic mitigation scheme should be evidence led, and it is however apparent that it should be possible to draw some of the very local and regular use of the European sites by improving the greenspace resource in the area. There are some existing nearby greenspace sites which would appear to have the potential to draw visitors and therefore we identify as potential alternative destinations.

5.77 In the on-site visitor work conducted on the North Kent Marshes (Fearnley & Liley 2011), one of the questions addressed whether changes could be made to alternative local sites in order to attract the interviewee to those sites. Of the responses given, 63% indicated that they thought no changes would work. This suggests enhancing alternative sites is likely to be effective for a relatively small proportion (37%) of visitors.

5.78 Modifications (to other local sites) that would appear from the visitor data to have the most merit are improvements to path surfacing and paths; making sites more dog friendly; measures to control other users and attractive scenery.

### Detailed Recommendations

5.79 Five locations were mentioned in the workshop and are potentially good locations to draw visitors away from the SPAs. These sites are under existing management as recreational greenspace. It may be possible at each site to change the management slightly in such a way as to attract users that might otherwise visit the SPA. The sites are listed in Table 15 and shown in Map 10. In addition we would expect there to be other greenspace sites in the wider area which may suitable or may come forward over time.

5.80 We recommend that these sites are included in the review of parking (see para 5.35) and that consideration is given to measures at these sites that would attract those people who might otherwise visit the SPA. Measures would be changes to the path network, provision of dedicated areas for dogs, provision of attractive and relatively wild dog walking routes. Measures would need to be carefully considered and developed with the relevant organisations running the site.

**Table 15: Existing green infrastructure sites away from the SPA**

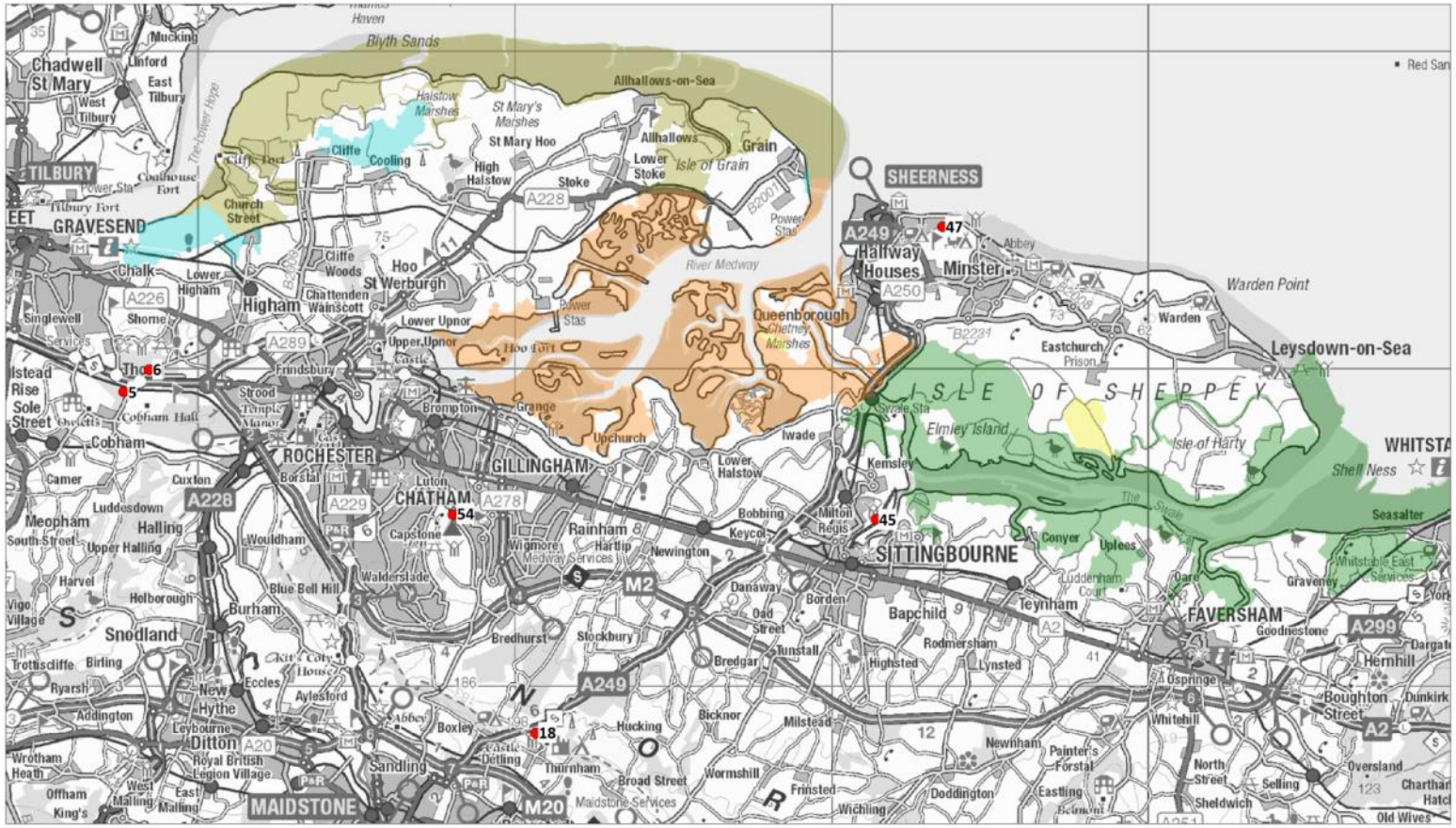
| Map ID (See Map 10) | Details |
|---|---|
| 18 | White Horse Wood Country Park: potential to enhance and function as alternative destination for dog walking etc, though possibly too distant from main urban areas |
| 45 | Sittingbourne Church Marshes: potential to enhance and function as alternative destination for dog walking etc |
| 5 | Jeskyns Community Woodland: liaison with FC to ensure function as alternative greenspace and links to Shorne |
| 6 | Shorne Woods Country Park: liaison with KCC to ensure function as alternative greenspace and links to Jeskyns |
| 47 | Bartons Point Coastal Park: potential to enhance to draw canoeists and other users away from estuary |
| 54 | Capstone Country Park: potential to enhance and function as alternative destination for dog walking etc |

### Indicative Costs and Implementation

5.81 Implementation of management measures at the above sites would be undertaken by the organisations responsible for the sites. Costs are difficult to estimate as they are dependent on opportunities at the sites themselves.

5.82 As a means of calculating an indicative cost for a project to enhance access at an alternative site we have reviewed measures proposed in Dorset as mitigation (funded through developer contributions) to resolve access impacts on the Dorset Heaths. In the Dorset Heaths Planning Framework 2012-2014[13] a series of projects are proposed which relate to enhancing existing greenspace sites[14] – these range in cost (the cost sought from the fund) from £4,800 (for a dog gym/agility area) to £200,000 (for a new route and crossing to provide access to an existing open space) and the average cost is £84,000. A total budget of £420,000 would therefore be likely to fund around five projects.

[13] See: www.boroughofpoole.com/EasySiteWeb/GatewayLink.aspx?alId=8409
[14] Projects 1,4,6,8,10,11,14 and 15 in Appendix A of the above report




**Map 10: Potential Locations for Off-site Enhancements to Green Infrastructure**

Contains Ordnance Survey data © Crown database and database right 2013

- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites

## Enforcement

### Overview

5.83 Legal enforcement provides a means of ensuring some particularly disturbing activities do not take place. We suggest enforcement of speed limits on the water and the establishment of dog control orders as two mechanisms that would reduce disturbance. These should be targeted in response to monitoring data and phased such that they are utilised should other measures not be working.

### Justification

5.84 A six knot speed limit operates west of Folly Point on the Medway and an eight knot limit is in place on the Swale. Active enforcement of these for small craft such as RIBs and Personal Watercraft would potentially curb speeding and could encourage users to seek alternative locations for their activity.

5.85 Dog control orders provide a mechanism through which dog walkers can be required to keep their dogs on a leads. Dog walkers whose dogs are not on leads can be fined. This would provide 'clout' to the on-site wardens.

5.86 The enforcement of speed limits and dog control orders would both require active policing and are likely to alienate users. Both are not without practical difficulties. They are therefore justified where other approaches have failed to work and applied to specific locations where disturbance issues are in place. As such their application will be linked to the monitoring results.

### Detailed Recommendations

5.87 The enforcement of speed limits would primarily fall under the Medway Port authority. Some funding may be required to ensure effective targeting to the locations and times of year when birds are disturbed. Targeting would be informed by the monitoring. We feel that a dedicated patrol boat may be unnecessary, but additional equipment to record speed and capture images may need to be purchased.

5.88 Dog control orders need to be based on evidence, and will therefore need to be established in line with monitoring results. Costs will include legal fees and administration and in order to be effective active policing will be required. This will necessitate warden/ranger time. Dog control orders could therefore be carefully phased –as required – such that wardens can target their time efficiently.

### Indicative Costs and Implementation

5.89 Indicative costs are set out in Table 16. The costs of these elements would depend on scale and may not even be required at all.

**Table 16: Indicative costs for enforcement**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Speed monitoring equipment including digital camera and speed gun | £10,000 | | Approximate cost |
| Setting up dog control orders | £10,000 | | Estimate of costs required for legal advice, administration etc |

## Monitoring

5.90 Monitoring is essential to ensure the successful delivery of the mitigation work. Monitoring is necessary to ensure approaches are working as anticipated and to tell whether further refinements or adjustments are necessary. As the individual projects take off, monitoring will inform where resources can best be allocated, for example it may be that once codes of conduct are in place and working efficiently, wardening presence can be reduced or scaled back. In addition it is difficult to be confident of how access patterns may change over time, for example in response to new activities, changes in climate, and changes on the sites themselves. The monitoring is therefore aimed at ensuring mitigation effort is focused and responsive to changes in access, and that money is well-spent and correctly allocated. The monitoring is integral to the mitigation 'package'.

5.91 Specific monitoring requirements are set out in Table 17. Many of these are already undertaken (at least in part) or there are existing protocols in place (for example the WeBS counts for birds).

**Table 17: Monitoring elements required as part of the mitigation strategy**

| Monitoring | Justification | Approach |
|---|---|---|
| Visitor numbers at set locations | Repeat monitoring will inform how use is changing over time | Car-park counts, spot counts of people, mapping of people on the site (from vantage points); automated counters. Undertaken at a sample of locations and repeated annually |
| Visitor activities, motivation, profile and | Provides information on what people do, why they visit and how they behave | Questionnaires at a sample of access points repeated every 5 years. Questionnaires including home postcode, route on site, etc |
| Continued monitoring of wintering waterfowl | Ensures any changes in bird use of the site are picked up | WeBS |
| Disturbance monitoring | Checks to monitor response of birds and levels of disturbance | Repeat of approach in Disturbance Study, potentially at 10 year intervals. |

5.92 Indicative costs for the monitoring (as set out in Table 17) are summarised in Table 18.

**Table 18: Indicative costs of monitoring**

| Recommendation | Set-up/Capital Cost | Annual Cost | Notes |
|---|---|---|---|
| Visitor numbers at set locations | £10,000 | £1500 | Most annual, undertaken by warden staff. Budget for automated counters and casual staff/consultancy support as required and included as an annual figure |
| Visitor activities, motivation, profile and | | £1000 | Questionnaire work undertaken every 5 years (i.e. annual budget of £1000 equates to £5000 every 5 years). |
| Continued monitoring of wintering waterfowl | | £500 | Undertaken already as part of WeBS. Small annual fee to ensure data collated by local co-ordinators |
| Disturbance monitoring | | £1000 | Could be undertaken at set intervals - e.g. every 10 years or on an annual basis |

# 6. Implementation

6.1 In this section we consider the implementation of the strategy, including delivery, phasing, governance, options for developer contributions and how to ensure the strategy can be flexible.

## Delivery

6.2 The challenge with the strategy is that it needs to provide for the mitigation measures necessary to address the in-combination impacts of a range of development (including many small developments) spread over a wide area and coming forward over an extended time period. It also needs to ensure that the impacts are resolved in perpetuity, which could be 80-125 years into the future[15].

6.3 A strategic approach that is plan led should enable impacts to be avoided where possible, and adequately mitigated for where the pressure cannot be diverted. A strategic approach for new growth should provide timely measures so that they are in place and functioning in line with growth coming forward, and therefore prevent harm from occurring. Such measures are often particularly difficult to secure where there are numerous, small developments likely to come forward. There therefore needs to be certainty that a package of measures to avoid and mitigate for the potential impact is planned, is fit for purpose, capable of implementation and fully committed to by those competent authorities taking forward the local plans and authorising the development projects.

6.4 However, within this there needs to be an inbuilt level of flexibility to adapt, particularly in light of monitoring findings, in recognition of the fact that further information and opportunities will emerge. Access patterns may change over time, and new recreational activities may become more prevalent. Whilst declines in SPA interest features are known, there are some aspects that are not fully understood, and as the way in which the sites are used changes over time, threats and potential impacts on the birds may also change.

6.5 A partnership of local planning authorities, Natural England and those best placed to contribute to mitigation through their land ownership or remit could be responsible for the continued evolution of the strategy over time. A partnership/board/panel would be responsible for overseeing the whole project and reacting to any changes necessary as monitoring or other new information emerges. Some mitigation measures (e.g. enhancement of alternative sites) will depend on the response of private landowners).

6.6 Within the strategy there is potential for measures to be interchanged, or developed in detail at a later stage, or modified in reaction to new information. Initially, there needs to be momentum behind the implementation of measures that are urgent and/or those that are easily implemented, in order to have confidence that initial development

[15] The Perpetuities and Accumulations Act 1964 defined in-perpetuity as 80 years. The new Perpetuities and Accumulations Act 2009 extended the in-perpetuity definition to 125 years.

coming forward is being mitigated for by measures that are in progress, thus preventing any significant time lag between development and mitigation. It is suggested that measures to be implemented in the immediate term should include the dog project and the wardening (see phasing section above).

6.7 The concept of a flexible list of mitigation is already well established for the Dorset Heathlands strategic mitigation scheme, where for some time the approach has been based on an initial costed list of measures which is used to set a tariff that goes into a central funding pot. Proposals and bids are then put forward to use this money. For North Kent, a similar approach could be implemented, but it is also suggested that the additional element of maximising opportunities through external funding and combining the objective of European site protection with other initiatives should also be a focus, particularly given the twin objectives of this Plan and the need to rectify existing impacts. Changes in land management or ownership, wider green infrastructure or visitor management initiatives, remediation and regeneration projects, European funding, lottery funding, industry led funding schemes or changes in focus within partner organisations could provide additional opportunities.

6.8 An approach to implementing the strategy is therefore to develop a tariff based on the overall quantum cost of measures required for the level of new development coming forward, and this tariff calculated on a per house contribution. The partnership/board/ panel would then collect and allocate funds according to proposals that come forward. Alongside the initial commencement of the scheme, there is continued work to improve the detail of the Plan, get the monitoring established and continually review opportunities for refined or additional measures. This approach would allow projects to be developed locally, collectively, and carefully planned to ensure success, encouraging proactive development of measures by all partners, and maintaining a best value approach, whilst continuing to ensure that the funding was being allocated to measures that were appropriate.

### Phasing

6.9 The elements of the strategy, as set out in Section 6, are in an order that represents the order in which the main elements should be implemented and should facilitate phasing. Further notes on phasing are summarised in Table 19.

6.10 Establishing the wardening team will provide a core team and staff resources to get the other projects off the ground. Crucially the warden/ranger team could be deployed where most required, i.e. at locations where there is a direct link with new development or where particular issues are in place. The Dog Project could be started in tandem and could be set up very quickly. These two elements provide an immediate start to the strategy. As developer contributions and other funding allows, later discrete projects would include new access infrastructure, the review of parking and commencing work on the codes of conduct. Other elements of the strategy would develop later. This phasing allows mitigation measures to be phased alongside the development and as funding allows, ensuring that the response is proportionate to the impacts and targeted appropriately.

**Table 19: Phasing of the different strategy elements**

| Elements of the strategy | Phasing |
|---|---|
| Dog Project | Quick win, website could be established quickly and project started quickly. |
| Wardening/Visitor Engagement | Establishing wardens at early stage would provide staff resources to oversee later elements. Quickly establishing a base and a team will allow many of the other projects to develop and take place. |
| New Access Infrastructure | Various small projects, could be phased over a number of years |
| Parking | Review of parking could be done quickly and easily; measures identified within review could be phased over a number of years |
| Codes of Conduct | Codes of conduct would need careful planning and consultation. Could start once other elements (above) have commenced. |
| Interpretation/signage | Would link to code of conduct so should happen in parallel |
| Work with local club/group | Some links to codes of conduct, so again happen in parallel. Some work could be done earlier (such as contact with micro light club). |
| Refuge | Long term aim with links to codes of conduct. |
| Enhancement of existing sites to create hub | More major projects, particularly Cliffe. These elements would be phased much later within the strategy. |
| Enhancement to existing GI away from SPA | Again, phased later in strategy, potential to be flexible with timing depending on opportunities. |
| Enforcement | Final elements of strategy, informed by monitoring results and only as required. |
| Monitoring | On-going through the strategy. |

## Implementing a cross boundary approach to protecting European sites

6.11 There is an increasing interest in developing strategic and cross boundary approaches to mitigating for the impacts of growth on European sites, in recognition of the potential benefits for both the environment and growth. Defra has produced guidance on the development of strategic approaches to Habitats Regulations Assessment, which is currently available in draft form on the Defra website.[16]

6.12 Any cross boundary approach to European site mitigation requires each planning authority to take full responsibility for the implementation of the strategic approach in their own administrative area. Each remains an individual competent authority and is therefore ultimately responsible for ensuring compliance with the Habitats Regulations for any plan or project taken forward under their authority. However, a strategic and cross boundary approach can provide notable benefits in terms of shared administration, consistency in implementation (proportionate to impacts), collaborative working to rectify existing impacts and fairness to developers across the neighbouring areas.

6.13 This SARMP sets out a comprehensive suite of measures to manage access and recreation that may otherwise affect the North Kent European sites. Fundamentally the implementation of the measures is reliant upon funding and resources sourced by each of the planning authorities, and the administration of the Plan, including the

[16] Draft guidance on strategic approaches to HRA can be found at the following link: http://guidanceanddata.defra.gov.uk/strategicapproacheshra/

collection and allocation of funds, is a critical element of that implementation. Decisions therefore need to be made regarding the extent to which each planning authority works in partnership, via an elected lead authority, collaboratively or individually to achieve the objectives of the strategy and fund the implementation of measures on the ground.

6.14 Dividing or combining the administration and management of the Plan could potentially be achieved by a number of options: to either implement delivery individually, funded locally by developer contributions obtained within each administrative area and other funding sources pursued; to pool all contributions and implement the entire mitigation package jointly; or an approach that is partially individual and partially collective.

6.15 If the entirely individual approach was taken, the implementation of measures would become the responsibility of the administrative area in which they needed to be put in place. An entirely individual approach for a cross boundary scheme does present considerable difficulties in administration. Recognising that the reason for the joint approach is to mitigate for a collective potential impact that is not simply and easily defined by boundaries, an individual competent authority's duty to secure the necessary mitigation measures may not be met. There would potentially be some significant reliance on the implementation of measures in a different area by another competent authority, but in the absence of any joint commitment. It may therefore be difficult to secure adequate mitigation for the full impact of existing and new development across the administrative areas, and difficult to adequately monitor the effectiveness of measures.

6.16 A partial approach would be for the access and recreation management measures that relate to the individual authority and a specific geographical area to be taken forward by the individual authority, with funding sourced by the individual authority, and then for those measures relating to the area as a whole or are equally applicable across the administrative areas, to be implemented via a joint approach. A per-house contribution could still be made to a joint fund to implement those joint measures for new development, with the remaining elements of mitigation being the individual authority's responsibility to deliver. This approach would include some additional costs of administering a partial approach with funding moving between the planning authorities, and as with an entirely joint approach, the joint elements of a partial approach would be best administered by a lead authority, where funds are pooled.

6.17 An entirely joint approach may be the most appropriate way of delivering and monitoring the package of access and recreation management measures set out within this Plan. A fully joined up approach, working as a partnership, would maintain an overview of the entire project, thus ensuring consistent and timely implementation. The burden of mitigation delivery would be shared with each of the planning authorities, as competent authorities, committing to and assisting in the delivery of the Plan. This approach would be likely to be the most resource efficient method as it is the least administratively complicated.

6.18 An entirely joint approach would require one authority to administer the funding, with contributions paid into the fund on a per house basis via developer contributions. The fund would be used to pay for the full suite of access and recreation management measures, irrespective of which area they need to be implemented in. Whether the administration of the strategy is a full or partial approach, it is strongly advised that a partnership/board/panel needs to be established, to maintain transparency, make democratic decisions, and benefit from a range of expertise when reviews, monitoring and future options are being considered. Any staff funded by the project would be important members of the partnership/board/panel, and would be involved in key aspects of monitoring and review. Monitoring will need to cover three aspects of the overall project; the implementation of measures, the finance and administration, and continued monitoring of numbers of houses coming forward to ensure that the measures continue to be provided in a timely manner, and fully mitigate for potential impacts.

## Developer contributions for the impact of new development

6.19 Competent authorities are responsible for securing any mitigation necessary to prevent adverse effects on European site interest features, but the mechanisms by which such measures are funded is a decision for the competent authorities, and there may be a range of options for funding some of the initiatives. Primarily however, developer contributions form the main source of funding when avoiding and mitigating for the effects of new development, and follow a principle of each development proportionately mitigating for its own potential impact.

6.20 Currently there are essentially two main mechanisms for obtaining funding for measures to avoid and mitigate for impacts on European sites: the Community Infrastructure Levy (CIL), or as an individual planning obligation, commonly referred to as a Section 106, or 'S106' as they are planning obligations as set out in Section 106 of the Town and Country Planning Act 1990. An alternative, third option, applies only to large developments, which may be able to provide mitigation measures as part of the development.

### Community Infrastructure Levy (CIL)

6.21 The Community Infrastructure Levy was first introduced by the previous Government in the 2008 Planning Act. Section 205(2) of that Act states that the overall purpose of the levy is to ensure that costs incurred in providing infrastructure to support the development of an area can be funded wholly or partly by owners or developers of land. Specific legislation, the Community Infrastructure Levy Regulations 2010, brought the levy into force, with subsequent amendments made to those Regulations in 2011 and 2012. A further amendment is expected in 2014.

6.22 The Community Infrastructure Levy places a levy on new development that then provides funding to meet local infrastructure requirements, enabling growth to proceed with adequate and maintained infrastructure in place. As the charging schedule for the levy is a document produced in consultation with the public and taken through an Examination process, and given that the schedule takes into account all infrastructure

needs for the local area, the Community Infrastructure Levy is promoted as a fairer, more transparent and consistent way of seeking developer contributions for local infrastructure needs.

6.23 Importantly, the levy is agreed upfront, having regard for the growth proposed for an area and the consequent infrastructure needs, the needs of the local community, and the viability of the levy, i.e. not making it so onerous that it impedes development in the local area, is the most influential factor in the tariff set.

**Section 106 agreements**

6.24 Prior to the Community Infrastructure Levy, all contributions were obtained via Section 106 legal agreements, which can be bespoke and specific to an individual proposal, or could form part of a wider agreed strategy with numerous developments contributing. A planning obligation is used to fund requirements that are necessary to make the development acceptable in planning terms. With the introduction of the Community Infrastructure Levy to specifically fund infrastructure, the government expects the use of Section 106 agreements to be scaled back, and although there will still be a need for such obligations, they will now be primarily for non-infrastructure or site specific requirements.

6.25 Where developer contributions are necessary to fund requirements that do not specifically relate to the provision of infrastructure, or relate to development site specific measures that are necessary to make a development proposal acceptable, contributions can continue to be obtained on a development by development basis through Section 106 agreements. The difference between the application of the Community Infrastructure Levy and Section 106 obligations is that the Community Infrastructure Levy is a levy calculated on the basis of a pre-approved schedule that has taken into account the overall infrastructure needs of an area and its local community. Each new development coming forward will pay a proportionate contribution based on size and nature of the development, whereas Section 106 agreements can contain specific requirements that relate to the development and any particular requirements at that location that are necessary to make the planning application acceptable in planning terms.

6.26 There is potentially still provision for infrastructure to be funded through pooled Section 106 agreements, if firstly the infrastructure project requires less than five developments to contribute to its funding and if secondly the infrastructure project has not been listed as an infrastructure project for which the authority will be seeking contributions under the Community Infrastructure Levy. There are other exceptions where use of Section 106 may be the most appropriate means of securing infrastructure funding, particularly where the need is to mitigate for very site specific issues.

6.27 Although the Community Infrastructure Levy is relatively new and some local planning authorities are yet to put their charging schedule in place, it is understood that the Government has advised that the levy is appropriate for funding infrastructure required to mitigate for any development impacts on European sites, such as alternative green infrastructure that meets recreational needs of new residents to divert their use away

from European sites. The new amendments to the Community Infrastructure Levy Regulations, brought into force in November 2012, provide greater clarity regarding the use of the levy, identifying that the provision of infrastructure by the levy includes the provision, improvement, replacement, operation or maintenance of that infrastructure. Critically therefore, the operation and maintenance of alternative green infrastructure, as well as its provision, should be included in the levy.

6.28 It is considered that any non-infrastructure related avoidance and mitigation measure for potential impacts on European sites could continue to be funded by Section 106 agreements. Section 106 agreements can therefore cover a wide range of requirements and have successfully been used for European site mitigation for some time. The new restrictions on the use of S106 agreements do still allow non-infrastructure requirements that are directly related to the development to be funded through this mechanism. The restriction also still allows for development site specific infrastructure projects to be funded, if the total funding can be obtained from less than five developments and if the infrastructure project is not listed by the local planning authority as a project to be delivered by the Community Infrastructure Levy. This therefore provides opportunities for obtaining funding for European site mitigation from developments that may be specifically excluded from the Community Infrastructure Levy, but still have a potential impact.

6.29 To date, Government has indicated that provision of alternative greenspace does come under the umbrella of infrastructure to be funded by the Community Infrastructure Levy, but has not issued any specific guidance or statement regarding non-infrastructure elements of European site mitigation schemes. Therefore there remains the option of splitting the measures between the two mechanisms for obtaining the funds, with infrastructure paid for by the levy and non-infrastructure elements paid for by S106 obligations, or to fund the entire package through the levy. The planning authorities should give consideration to the two options, and determine which provides the most appropriate way forward in terms of cost, funding available, administration and flexibility.

6.30 It is advised that the contribution to be made into the fund for the implementation of the Plan needs to continually be calculated on a per house basis, as this is the measurement unit by which potential impacts are calculated and mitigated for. Particularly because of the way in which the Community Infrastructure Levy is generated (i.e. per sq m), contributions from the developer to the Levy will differ. However, whilst each house may generate differing levels of funding, via its Community Infrastructure Levy and/or S106 contributions, the overall quantity of the contribution for European site mitigation needs to be based on a consistent per house contribution. Expenditure out of the European site mitigation pot needs to equate to the number of houses that have come forward.

#### On-site provision on development sites

6.31 A third opportunity can also present itself when large developments are able to provide mitigation measures alone, as part of the proposed development, removing the

requirement to contribute to a central pot. The latter requires careful consideration to ensure fairness and adequate mitigation, and is most beneficial when considered upfront as part of large allocations within masterplans and green infrastructure strategies, for example.

6.32 The kind of mitigation measures that are applicable, with this third option, include on-site green infrastructure, such as dedicated areas for dog walking (see para 3.9 for more discussion).

### Other funding sources

6.33 Other funding sources besides developer contributions will be necessary to deliver all the elements within the strategy. This is appropriate as elements such as the new facilities at Cliffe Pools and enhancements to green infrastructure away from the SPA will have a wider function and role than mitigating new development. For these elements (category B in Table 1) developer contributions may be appropriate for a small component, potentially providing match funding. We have also identified a measure that is perhaps more relevant to current impacts rather than impacts from new development (category B in Table 1), and again, this would be best funded through an alternative funding source. Other funding sources would be the best way of also securing habitat management within the SPA (which falls outside the role of mitigation).

6.34 Other funding sources could include local NGOs, Heritage Lottery Fund, the Nature Improvement Area (NIA) partnership and the Thames Estuary 2100 (TE2100). Other opportunities may arise over time, and partnership working and innovative approaches may be necessary.

### Delivering measures relating to existing impacts

6.35 As demonstrated in Table 1 there is relatively little within the overall strategy that can be clearly identified as relating to existing impacts and excluded as mitigation. We have however suggested that structures to prevent access from vehicles – stopping off-road vehicles, motorbikes etc. from accessing key areas – relates primarily to existing impacts. Such measures need to be funded through some other means.

6.36 In para 3.6 we discussed habitat management and largely discounted habitat management options from the shortlist because some such management should be taking place anyway (management of the European sites to achieve favourable condition) and because they are not necessarily compliant with the Habitat Regulations if new habitat is being created outside the SPA to compensate for deterioration of the SPA. There may be opportunities that arise, however, linked to other plans and initiatives, in particular relating to shoreline management and managed retreat. We therefore suggest that there may be particular opportunities that arise and these should be considered carefully to check for potential to enhance the area for the SPA interest and help to reverse the bird declines.

### Implementation next steps

6.37 Following from the discussion above, we set out the following as next steps in implementation:

- Establishment of a developer contributions tariff, based on calculations within this SARMP
- Continued review of spatial planning documents to ensure that the SARMP is plan led
- Establishment of a partnership/board/panel with Terms of Reference and memorandums/commitments agreed
- Agreement on the level of individual/joint working to take the scheme forward.
- Agreement on a lead authority and administrative procedures.
- Consideration of dedicated staff/allocated resources for the SARMP within each organisation
- Planning for the implementation of immediate measures
- Progression on the detail of more aspirational measures to establish level of contribution to the two objectives of the SARMP

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# 8. Appendix 1: Interest Features of the three SPAs

Table gives the interest features of the three SPAs and recent WeBS alerts (the national standard approach of assessing species populations on estuaries, alerts apply to certain wintering waterfowl, breeding birds are not assessed). Colours reflect alert status (red and amber) for the relevant species at the relevant site. Red shading indicates at least one high alert for a given species across all time periods, and amber at least one medium alert (if no high alerts) across all time periods. No shading indicates the species is not assessed or there is no alert triggered. Ramsar columns simply indicate bird species that are listed under Ramsar criterion 6 – species/populations at levels of international importance at time of designation.

| | Thames Estuary & Marshes SPA | | | | | Swale SPA | | | | | Medway Estuary & Marshes SPA | | | | | Ramsar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | Thames | Swle | Medway |
| Avocet | | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | | ✓ | | | |
| Bar-tailed Godwit | | | | | | | | ✓ | | ✓ | | | | | | | | |
| Black-tailed Godwit | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | | |
| Curlew | | | | | | | | | | ✓ | | | | | ✓ | | | ✓ |
| Dunlin | | | | | ✓ | | | | | ✓ | | | | ✓ | ✓ | ✓ | | ✓ |
| Golden Plover | | | | | | | | ✓ | | ✓ | | | | | | | | |
| Grey Plover | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Knot | | | | | | | | | ✓ | ✓ | | | | | | ✓ | | |
| Lapwing | | | | | ✓ | | | | | ✓ | | | | | ✓ | | | |
| Oystercatcher | | | | | | | | | | ✓ | | | | | ✓ | | | |
| Redshank | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Ringed Plover | | ✓ | | ✓ | ✓ | | ✓ | | | | | ✓ | | ✓ | ✓ | ✓ | | ✓ |
| Whimbrel | | | | | ✓ | | | | | | | | | | ✓ | | | |

| | Thames Estuary & Marshes SPA | | | | | Swale SPA | | | | | Medway Estuary & Marshes SPA | | | | | Ramsar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | 4.1 Breeding | 4.2 Passage | 4.1 over winter | 4.2 over winter | 4.2 Assemblage | Thames | Swle | Medway |
| Dark-bellied Brent Goose | | | | | | | | | | ✓ | | | | ✓ | ✓ | | ✓ | ✓ |
| Gadwall | | | | | ✓ | | | | | ✓ | | | | | | | | |
| Pintail | | | | | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ | | | ✓ |
| Shelduck | | | | | ✓ | | | | | ✓ | | | | ✓ | ✓ | | | ✓ |
| Shoveler | | | | | ✓ | | | | ✓ | ✓ | | | | | | | | |
| Teal | | | | | | | | | | ✓ | | | | | ✓ | | | |
| White-fronted Goose | | | | | ✓ | | | | | ✓ | | | | | | | | |
| Wigeon | | | | | | | | | | ✓ | | | | | ✓ | | | |
| Cormorant | | | | | | | | | | ✓ | | | | | ✓ | | | |
| Great-crested Grebe | | | | | | | | | | | | | | | ✓ | | | |
| Hen Harrier | | | ✓ | | | | | ✓ | | | | | | | | | | |
| Little Grebe | | | | | ✓ | | | | | ✓ | | | | | ✓ | | | |
| Little Tern | | | | | | | | | | | ✓ | | | | | | | |
| Marsh Harrier | | | | | | ✓ | | | | | | | | | | | | |
| Mediterranean Gull | | | | | | ✓ | | | | | | | | | | | | |

# 9. Appendix 2: Previous Studies

9.1 There are a range of potential issues and pressures relating to the North Kent sites, these include industrial development, mineral extraction and water quality. Previous studies in North Kent underpin this strategy and provide context in terms of recreation and the other potential threats. Previous studies include:

1) What do we know about the birds and habitats of the North Kent Marshes? (Cruickshanks *et al.* 2011)
2) Bird Disturbance Study, North Kent 2010/11 (Liley & Fearnley 2011)
3) North Kent Visitor Survey Results (Fearnley & Liley 2011)
4) North Kent Comparative Recreation Study (Fearnley & Liley 2012)
5) Estuary Users Survey (Medway Swale Estuary Partnership, 2011)
6) GGKM Roost survey (mapped in Liley & Fearnley 2011)
7) Recent Wetland Bird Surveys results produced by the British Trust for Ornithology
8) Phase I Bird Disturbance Report (Liley, Lake & Fearnley 2012)
9) Detailed analysis of bird trends on individual parts of the Medway, conducted by the BTO (Banks *et al.* 2005)

9.2 The latest bird data (see Appendix 1) for the Medway Estuary and Marshes SPA (WeBS alerts[17]) indicate high alerts (declines above 50%) for nine species and medium alerts (declines between 25 and 50%) for a further three species, out of 17 assessed. In all cases comparison of the trends with broadscale trends suggests the declines are site-specific. Five of the high alerts on the Medway are triggered for the long term (i.e. 25 years). The latest WeBS alerts for the Swale SPA indicate alerts triggered for nine out of the 21 species assessed (site specific declines for two species) and for the Thames Estuary and Marshes SPA alerts have been triggered for seven out of the 14 species assessed (site specific declines for three).

9.3 A simple overview of the various reports listed above indicate that:

- There have been marked declines in some of the bird species, particularly around the Medway
- Within the Medway, the areas that have seen the most marked declines are the area north of Gillingham, including the area around Riverside Country Park. This is one of the busiest areas in terms of recreational pressure.
- There is no evidence to support the suggestion that bird declines on the Medway relate to increases on neighbouring sites (i.e. birds simply redistributing)

[17] See http://blx1.bto.org/webs-reporting/

- The estuaries and coastline are widely used for recreation and a range of activities take place.
- Recreational activities do result in birds being flushed and displaced.
- Most behavioural responses that were observed from the birds were due to the presence of dogs, particularly those off the lead.
- There was some evidence that bird numbers at locations with high numbers of visitors were low.
- Visitors are mainly local, around a third of people interviewed in the visitor survey had walked from their home and of the two-thirds who had travelled by car, the median distance (home postcode to interview location) was 4.2km.
- Visitor rates decline with distance from the SPAs and indicate that development within a 6km radius of access points is particularly likely to result in increased access levels and activities that relate to day-to-day use of local greenspace.
- The levels of housing around the three European sites are currently relatively high compared to other estuary SPA sites in the UK
- The scale of new development in the general area – as set out in the relevant strategic plans – is considerable and may result in an increase in access levels of around 1700 person visits per day (an increase of 15%).

# 10. Appendix 3: Our Approach

10.1 In this appendix we summarise our approach.

10.2 Our approach has been initially to clarify a **framework** (section 3) for the strategy that sets out the aims, the limits (geographical and temporal), legal/planning requirements and guiding principles that underpin the plan. This framework was agreed with the steering group for the project in the early stages of developing the plan.

10.3 The next step was to identify **a long list** of all possible measures that could be used to address disturbance issues; this is set out in section 4. This list was then reviewed to consider which approaches have the most merit and the relative advantages and disadvantages of each. From this **a short-list** of measures was compiled that we believe could form the basis of a plan.

10.4 In order to identify the **locations** (section 5) that are a focus for the plan, we used GIS data from the previous studies (summarised in paragraph 1.7) to identify areas:

- Important for particular bird species
- Potentially vulnerable to disturbance/sensitive to disturbance (e.g. high tide roost)
- That fall within the designated sites or support relevant interest features
- Where access levels are predicted to increase markedly
- Where access levels are low
- Where access levels are high
- Where there is no or limited public access
- Where access onto intertidal is limited
- Where there are particularly high levels of particular activities

10.5 These maps provided the information required to identify the locations and geographical focus for the elements within the plan.

10.6 The short-list was presented to a workshop[18] comprising local landowners, site managers, countryside staff, rangers, wardens and other stakeholders, whose opinion was sought on how to deliver the different elements. Drawing on their local knowledge we were able to produce a list of detailed, target projects and check the short list. The **detailed strategy** was then finalised after this workshop.

[18] Workshop held at Medway Council offices on 9th September 2013

# 11. Appendix 4: A 'long list'

This table provides a broad overview of ways to reduce disturbance to birds at coastal sites. Note that some of these may not necessarily be compliant with the Habitat Regulations, for example habitat management within European sites to enhance the habitat for the interest features would not count as 'mitigation'.

| | Management option | Description |
|---|---|---|
| **1. Habitat Management** | | |
| 1a | New habitat creation | Creation of new habitat in areas away from parts of the site with recreation pressure (see also zoning). Examples may include creation of islands for roosts or lagoon areas for additional feeding. |
| 1b | Habitat management | Habitat enhancement may create new breeding/roosting/feeding sites, potentially in areas away from sources disturbance. |
| **2. Planning & Off-site Measures** | | |
| 2a | Locate development away from sensitive sites | Much recreational use of sites is local, for example from people living within a short drive or walk of sites. Focussing development away from nature conservation sites is a way to reduce the long term future pressures of increased recreation from development. |
| 2b | Management of visitor flows and access on adjacent land (outside European site) | Planting, screening, careful routing, provision of access infrastructure (boardwalks, marked paths, steps etc.) around the periphery and outside European sites can influence how people access sites. |
| 2c | Provision of suitable alternative greenspace sites ('SANGs') | SANGs, sited away from designated sites, have the potential to draw users away from designated sites. Alternative sites need to be tailored to provide a viable and attractive alternative destination, matching the draw of the relevant designated site or providing a near equivalent recreational experience in a more convenient location. |
| 2d | Provision of designated access points for water sports | Provision of public slipways, trailer & vehicle access to shore etc. in predetermined locations where boat access is likely to be away from nature conservation interest. |
| 2e | Enhance access in areas away from designated sites | At a reasonably strategic level it should be possible to encourage people to change access patterns by enhancing access provision at less sensitive sites and not enhancing provision at sensitive locations. Users can be encouraged to locations through the provision of attractions/facilities such as toilets, food, improved walking surfaces, hides etc. Demand can be managed through modification of parking fees and parking capacities, restriction of on-road parking, wardening etc. As such there are parallels with 3e and also the approach is similar to 2d. |
| **3. On-site Access Management** | | |
| 3a | Restrict/ prevent access to some areas within the site | Potential to restrict access at particular times, e.g. high tide and particular locations (roost sites). Temporary fencing, barriers, diversions etc. all possible. |
| 3b | Provide dedicated fenced dog exercise areas | Allowing dogs off leads etc. in particular locations that are not sensitive for nature conservation or other reasons may increase their attractiveness to dog walkers. Links to 2e. |
| 3c | Zoning | Designated areas for particular activities. Often zones are set out in a code of conduct and prevention of use for the |

| | | |
|---|---|---|
| | | areas outside the zones is enforced through byelaws. We refer to zoning therefore as positive spaces where users are welcomed, as opposed to the exclusion zones described in 3a. |
| 3d | Infrastructure to screen, hide or protect the nature conservation interest | Screens, hides, embankments etc. are commonly used to direct visitors along particular routes and screen people from birds or other features vulnerable to disturbance. Such infrastructure can also provide enhanced viewing facilities and opportunities for people to get close to wildlife without causing disturbance. Path design can enhance the extent to which people stray or roam from the path. Boardwalks etc. can protect vulnerable habitats. |
| 3e | Management of car-parking | Car-park spaces can be redistributed around a site, parking closed in some areas, parking fees modified (e.g. encouraging people not to stay too long) or a permit system be instigated to limit use of car-parks. |
| 3f | Path design and management | Surfacing, path clearance and other relatively subtle measures may influence how people move around a site and which routes they select. |
| **4. Education and Communication to Public/Users** | | |
| 4a | Signs and interpretation and leaflets | Provision of informative and restrictive signs, and interpretive boards. Directions to alternative less sensitive sites. General information on the conservation interest to highlight nature conservation interest/importance. |
| 4b | Codes of Conduct | Guidance on how to behave to minimise impacts is promoted at a range of sites, through websites, leaflets, interpretation etc. These are sometimes enforced by byelaws and other control measures (see section 5). |
| 4c | Wardening | In addition to an enforcement role (see 5d below) wardens can provide a valuable educational role, showing visitors wildlife etc. |
| 4d | Provision of information off-site to local residents and users. | Local media, newspapers etc. can provide means to highlight conservation importance of sites and encourage responsible access. Educational events, provision of items for local TV/other media. Information can be made available in local shops, tourist centres etc. Potential to promote non-designated sites, for example through web / leaflets listing, for example, dog friendly sites. Can include school visits and working with children. |
| 4e | Contact with relevant local clubs | Agreed codes of conduct (see 4b) and self-policing can be set up with individual groups and provide a means of ensuring users are aware of how to act responsibly (e.g.water-sports club revoking membership for anyone caught speeding). |
| **5. Enforcement** | | |
| 5a | Covenants regarding keeping of pets in new developments | Covenants prohibiting the keeping of cats and / or dogs. |
| 5b | Legal enforcement | Byelaws can be established by a range of bodies including local authorities, the MOD, National Trust, Parish Councils etc. Other options include special nature conservation orders, dog control orders or prosecution under SSSI legislation. Enforcement can apply to speed limits (e.g. on water), where people go and how they behave. Dog control orders involve a range of options such as dogs on leads only, on leads when asked, no fouling and no dogs at |

| | | |
|---|---|---|
| | | all. |
| 5c | Wardening | Wardens have both educational (see 4c above) and enforcement roles. With respect to the later, wardens can provide direct contact and intervene when they observe particular activities (such as dogs off the lead on mudflats). The ability of a warden to control disturbing activities is clearly related to whether control measures are in place, and their nature. The more specific and statutory in nature the control, the greater the potential for enforcement by a warden. |
| 5d | Limiting visitor numbers | Visitor numbers capped, for example through tickets, permits or a similar system. |

# 12. Appendix 5: Main Matrix

This appendix sets out the 'main matrix', assessing measures against various assessment criteria. The shading reflects how measures are scored. For all shaded cells, the colours go from green (through pink and orange) to dark red. Rows with lots of green cells are therefore those where measures are most likely to be easy, cheap, effective and will work over a wide area. Green cells therefore lend support for a measure while orange or dark red indicates difficulties or issues with a particular measure. Where there is some uncertainty regarding how to categorise a measure (for example the cost), we have coloured the cell orange.

The categories used are broad and we have categorised measures based on our judgement.

| | | Activity specific? | Activities relevant | Likely Effectiveness | Practicality of delivery | Scale of measure | Mechanisms for delivery | Time to implement | Potential for phased delivery | Capital Costs | Maintenance Costs (annual/phased) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1a | New Habitat Creation | No | | Likely to work but limited evidence | Some difficulties | Very local/site specific | Local landowner/stakeholder/Developer | Single one-off event | No | £10k - £100k | <£50k | Unlikely to be an option within European site boundaries as already designated. Creating habitat outside the sites a positive measure, but not acceptable if proposed as mitigation to offset harm to the designated site. Dependent on suitable locations with no disturbance; likely to be a very limited range of locations where could be implemented |
| 1b | Habitat management | No | | Effectiveness dependent on location and specific circumstances | Some difficulties | Very local/site specific | Local landowner | Requires continuous input | No | negligible | £? | Habitat management within the European sites is necessary to achieve favourable condition and taking place anyway. Habitat management outside the designated sites may provide some opportunities, but dependent on circumstances. |
| 2a | Locate development away from sensitive sites | No | | Good evidence that can work | Highly complex to deliver | Sub-regional | Local authority | Single one-off event | No | negligible | negligible | Distance at which development would have to be limited would be considerable and may be unworkable for many local authorities |
| 2b | Management of visitor flows on adjacent land | Yes | General Shoreba sed | Likely to work but limited evidence | Straight forward & easy to implement | Very local/site specific | Directly linked to developer/local authority | Single one-off event | Yes - but over 5 years or less | £10k - £100k | <£50k | Depends very much on site specific details and opportunities available. |
| 2c | Provision of alternative sites for recreation "SANGs" | Yes | General Shoreba sed | Effectiveness dependent on location and specific circumstances | Highly complex to deliver | Sub-regional /local | Strategic/partnership working | Single one-off event | No | >£1m | <£50k | large, carefully positioned sites only likelihood of success; 20ha site - land value could be around £1m; capital costs would also need to include landscaping, planting etc.; maintenance costs around £1500 per ha p.a. Very much dependent on opportunities. Inland SANGs may not attract shore users |
| 2d | Provision of designated facilities for watersports outside SPA | Yes | Watersp orts | Effectiveness dependent on location and specific circumstances | Some difficulties | Sub-regional | Strategic/partnership working | Single one-off event | Yes - but over 5 years or less | £100k-£1m | <£50k | Many activities such as kite surfing rely on specific conditions - wind, tide etc. that mean limited options. Most applicable for jet skis and small craft from trailers. |
| 2e | Enhance access facilities in general area | No | | Effectiveness dependent on location and specific | Some difficulties | Sub-regional /loca | Strategic/partnership working | Single one-off event | Yes - over many years | £10k - £1 | <£50k | Costs, ease and details depend on the enhancement, location etc. |

| | | Activity specific? | Activities relevant | Likely Effectiveness | Practicality of delivery | Scale of measure | Mechanisms for delivery | Time to implement | Potential for phased delivery | Capital Costs | Maintenance Costs (annual/phased) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (away from SPA) | | | circumstances | | l | | | | 00k | | |
| 3a | Restricted access to parts of site | No | | Likely to work but limited evidence | Some difficulties | Very local/site specific | Local landowner/stakeholder/Developer | Single one-off event | No | £10k - £100k | <£50k | Difficult on sites with rights of access |
| 3b | Provide dedicated fenced dog exercise areas | Yes | Dogs/dog walking | Unsure/limited effectiveness | Straight forward & easy to implement | Very local/site specific | Local landowner/stakeholder/Developer | Single one-off event | No | £10k - £100k | <£50k | May draw dog walkers from wide area, therefore probably not effective if on edge of SPA. Likely to be effective only if off site or combined with other measures - i.e. Dogs then subsequently required to be on leads |
| 3c | Zoning | Yes | Most applicable to watersports | Likely to work but limited evidence | Some difficulties | Local | Local authority/Strategic/partnership working | Single one-off event | No | £10k - £100k | <£50k | Single zones could be very local and site specific. Zoning for some watersports could alternatively be established at a broad scale. Would need to be combined with codes of conduct/enforcement etc |
| 3d | Infrastructure to screen, hide or protect the nature conservation interest | Yes | Most applicable to General Shoreba sed | Effectiveness dependent on location and specific circumstances | Straight forward & easy to implement | Very local/site specific | Local landowner/stakeholder/Developer | Single one-off event | Yes - but over 5 years or less | £10k - £100k | <£50k | Different types of screening likely to work better in different locations. |
| 3e | Management of car-parking | No | | Likely to work but limited evidence | Some difficulties | Sub-regional/local | Local landowner/stakeholder/Developer | Single one-off event | Yes - but over 5 years or less | £10k - £100k | <£50k | May be unpalatable/unpopular. Reduction in spaces likely to work better than full closure. Parking charges may even help to cover costs. Dependent on organisations involved working together and agreeing charges |
| 3f | Path design and management | No | Most applicable to General | Effectiveness dependent on location and specific | Straight forward & easy to | Local | Local landowner/stakeholder/Developer | Single one-off event | Yes | £10k - £1 | <£50k | Marked routes can provide means to funnel access away from particular areas. Depends on opportunities at site/general area. Resurfacing and modifying particular routes or part of routes may provide opportunities at very local level |

| | | Activity specific? | Activities relevant | Likely Effectiveness | Practicality of delivery | Scale of measure | Mechanisms for delivery | Time to implement | Potential for phased delivery | Capital Costs | Maintenance Costs (annual/phased) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Shoreba sed | circumstances | implem ent | | | | | 00 k | | |
| 4a | Signs, interpretation and leaflets | N o | | Unsure/limite d effectiveness | Straight forward & easy to implem ent | Sub-regi onal /loca l | Strategic/partnership working | Single one-off event | No | <£ 10 k | <£ 50 k | Difficult to have much confidence of success. May raise awareness of disturbance. |
| 4b | Voluntary codes of conduct developed with local user groups/users | Y e s | Watersp orts/bait digging and others | Likely to work but limited evidence | Straight forward & easy to implem ent | Sub-regi onal | Strategic/partnership working | Single one-off event | No | negli gibl e | <£ 50 k | Intensive work to establish, set up and only likely to be effective where good link with users can be established and where scope to develop codes of conduct that resolve issues and do not inhibit users |
| 4c | Wardening (with an education/co mmunication role) | N o | | Unsure/limite d effectiveness | Straight forward & easy to implem ent | Sub-regi onal /loca l | Strategic/partnership working | Requi res conti nuou s input | No | negli gibl e | £5 0k - £5 00 k | Wardens showing people wildlife but not actually asking people to behave differently. May have some success but unlikely to be effective with many user groups. Most likely to work if wardens in an engagement role, talking directly to users about activities and use of site etc. |
| 4d | Provision of information off-site to local residents and users | N o | | Unsure/limite d effectiveness | Straight forward & easy to implem ent | Sub-regi onal /loca l | Strategic/partnership working | Requi res conti nuou s input | Yes - over many years | <£ 10 k | £5 0k - £5 00 k | Labour intensive. Potentially beneficial in terms of local support/awareness for nature conservation, but may have little or no success in reducing disturbance. |
| 4e | Contact with relevant local clubs | Y e s | Watersp orts | Unsure/limite d effectiveness | Straight forward & easy to implem ent | Sub-regi onal /loca l | Strategic/partnership working/ Local landowner/stakehold er/Developer | Requi res conti nuou s input | Yes - over many years | £1 0k - £1 00 k | <£ 50 k | Requires staff input to maintain dialogue and connection with clubs. Most likely to work where there is an active local group and potential to enforce further restrictions if self-policing doesn't work. |
| 5a | Covenants regarding keeping of pets in new developments | Y e s | Dog walking | Unsure/limite d effectiveness | Some difficulti es | Very local /site speci fic | Directly linked to developer | Single one-off event | Yes - over many years | <£ 10 k | negli gibl e | Impossible to be confident of effectiveness in perpetuity. Maintenance costs may need to be high to check and enforce |

| | | Activity specific? | Activities relevant | Likely Effectiveness | Practicality of delivery | Scale of measure | Mechanisms for delivery | Time to implement | Potential for phased delivery | Capital Costs | Maintenance Costs (annual/phased) | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5b | Legal enforcement | No | | Likely to work but limited evidence | Some difficulties | Local | Legal framework needs to be established by local authority or other body with appropriate powers | Requires continuous input | No | £10k - £100k | <£50k | Byelaws may take some time to establish and potentially evidence base necessary to establish need |
| 5c | Wardens on site to ask people to behave differently | No | | Good evidence that can work | Straight forward & easy to implement | Sub-regional/local | Strategic/partnership working | Requires continuous input | No | <£10k | £50k - £500k | Presence of wardens costly but wardening is possible over wide area/multiple sites. Possibly more effective if wardens are able to enforce. |
| 5d | Limiting visitor numbers | No | | Likely to work but limited evidence | Some difficulties | Very local/site specific | Local landowner/stakeholder/Developer | | No | <£10k | <£50k | Possible at nature reserves or sites where management of access formalised and in place, can only work where no legal right of access |

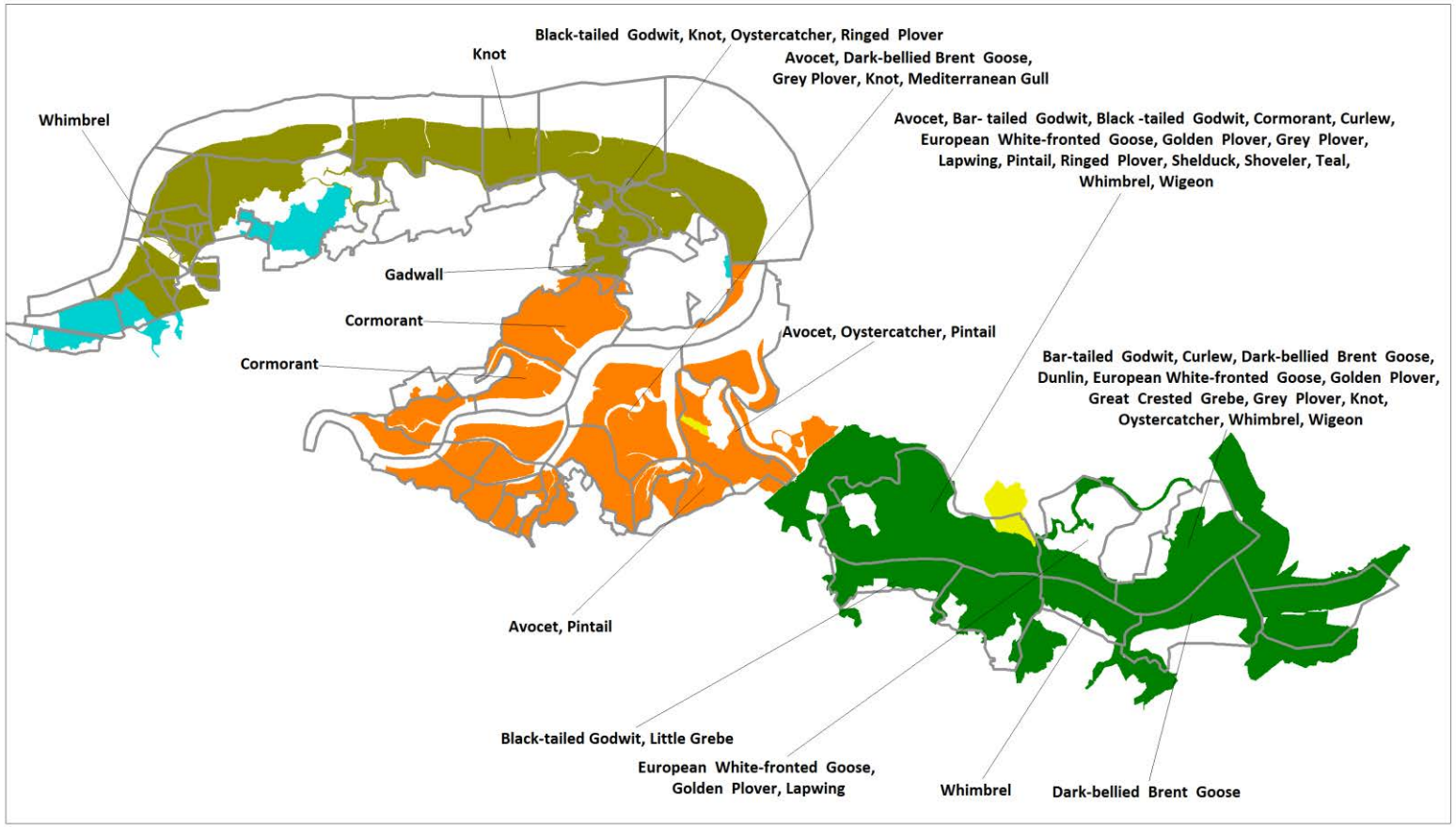
# 13. Appendix 6: Spatial Context: Identifying areas that should be a focus for the strategy

13.1 Map 11 shows WeBS sectors and those with at least 10% of the mean peak count for the period 1988-2010 for each species across all three SPAs. This allows us to highlight WeBS sectors that are particularly important for given species. A problem with this approach is that the WeBS sectors vary in size and the WeBS counts are high tide counts and therefore do not necessarily reflect the distribution of the birds at other tide states. The map will also not necessarily indicate areas where bird declines have already taken place. The map is however useful in summarising where birds can be concentrated, but other information is important too.

13.2 We therefore show roost sites in Map 12. The wader roost locations are extracted from the bird disturbance study. In Map 13 we show the priority habitats within the SPAs. The mudflats (grey) provide the main feeding areas for many species at low tide. The coastal grassland also will provide some important feeding areas for some species (such as golden plover and lapwing). The saline lagoons are used by some breeding species – such as avocets and terns – and also provide important roost and loafing areas for the wintering bird interest. While the intertidal habitat and wet grassland habitats are widely distributed, saline lagoons are more limited in distribution, with Cliffe and Oare Marshes being the main locations.

13.3 Visitor data indicates that most visitors live within 6km of the locations where interviewed. Identifying areas that have high levels of new housing within 6km provides a simple way of identifying areas that are most likely to see a change in access. In Map 14 we show these data, and it highlights that the most change will be around the Medway Estuary. The western part of the study area – towards Gravesend – and the Isle of Sheppey are also areas that appear likely to change in access levels.

13.4 In considering changes in access it is also important to consider which locations already have high levels of access and which have relatively low levels of access. In Map 15 we show comparative scores (scoring by local experts) that show relative levels of access. It can be seen that the Medway and the area towards Whitstable are the busiest areas currently. Some of the areas with the low scores for access have limited access to the shore. Access infrastructure – such as parking, jetties, slipways etc. are largely focused in the Medway and towards Whitstable (Map 16).



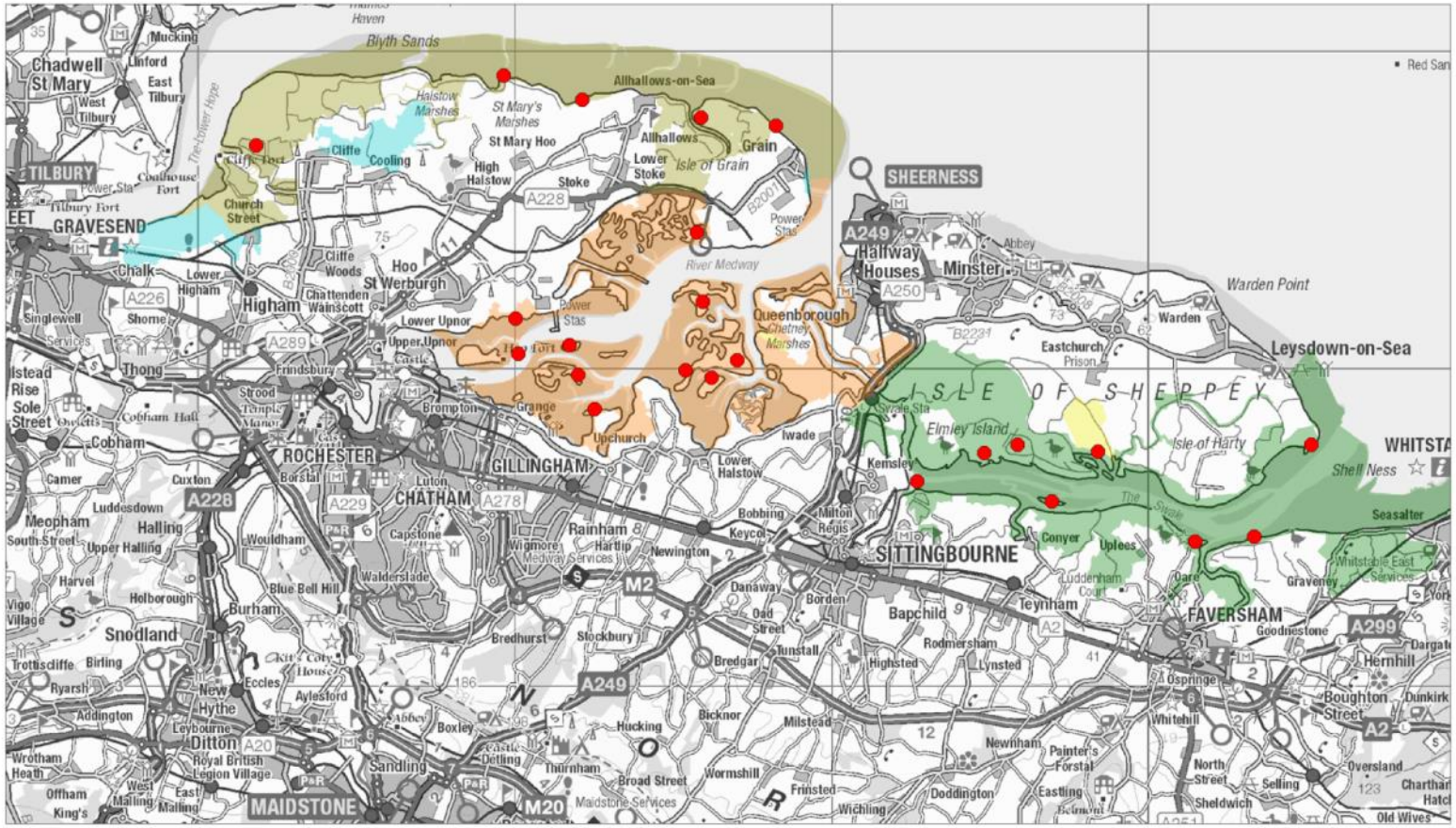

**Map 11: Areas Important for Particular Bird Species**

**WeBS sectors with at least 10% of counts of given species across all 3 SPAs.**

**WeBS data as summarised in Liley et al. 2011**



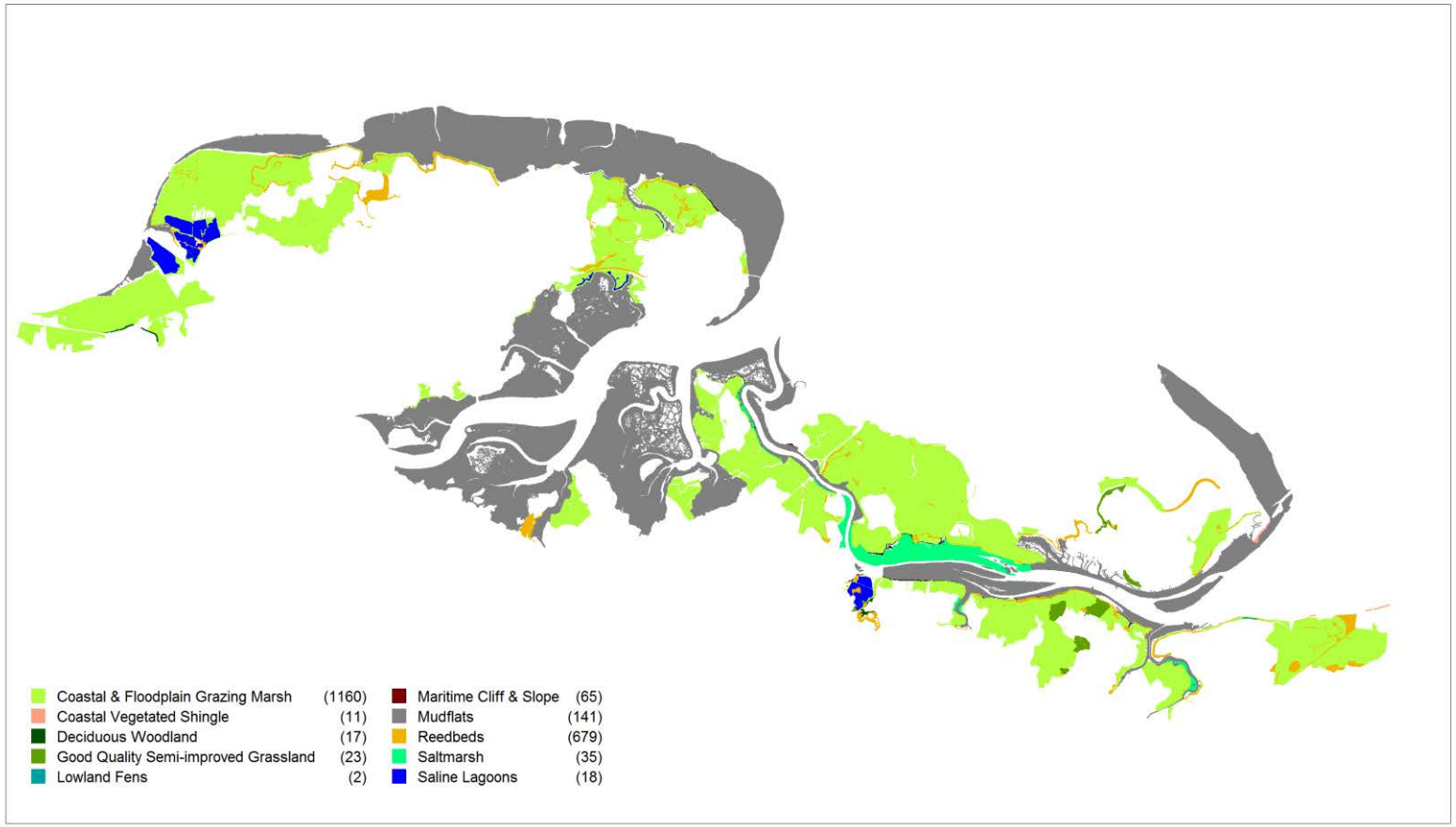
Medway Estuary & Marshes SPA & Ramsar
Thames Estuary & Marshes SPA & Ramsar
Ramsar outside of SPA
Compensation sites
WeBS Sectors




## Map 12: Wader Roosts

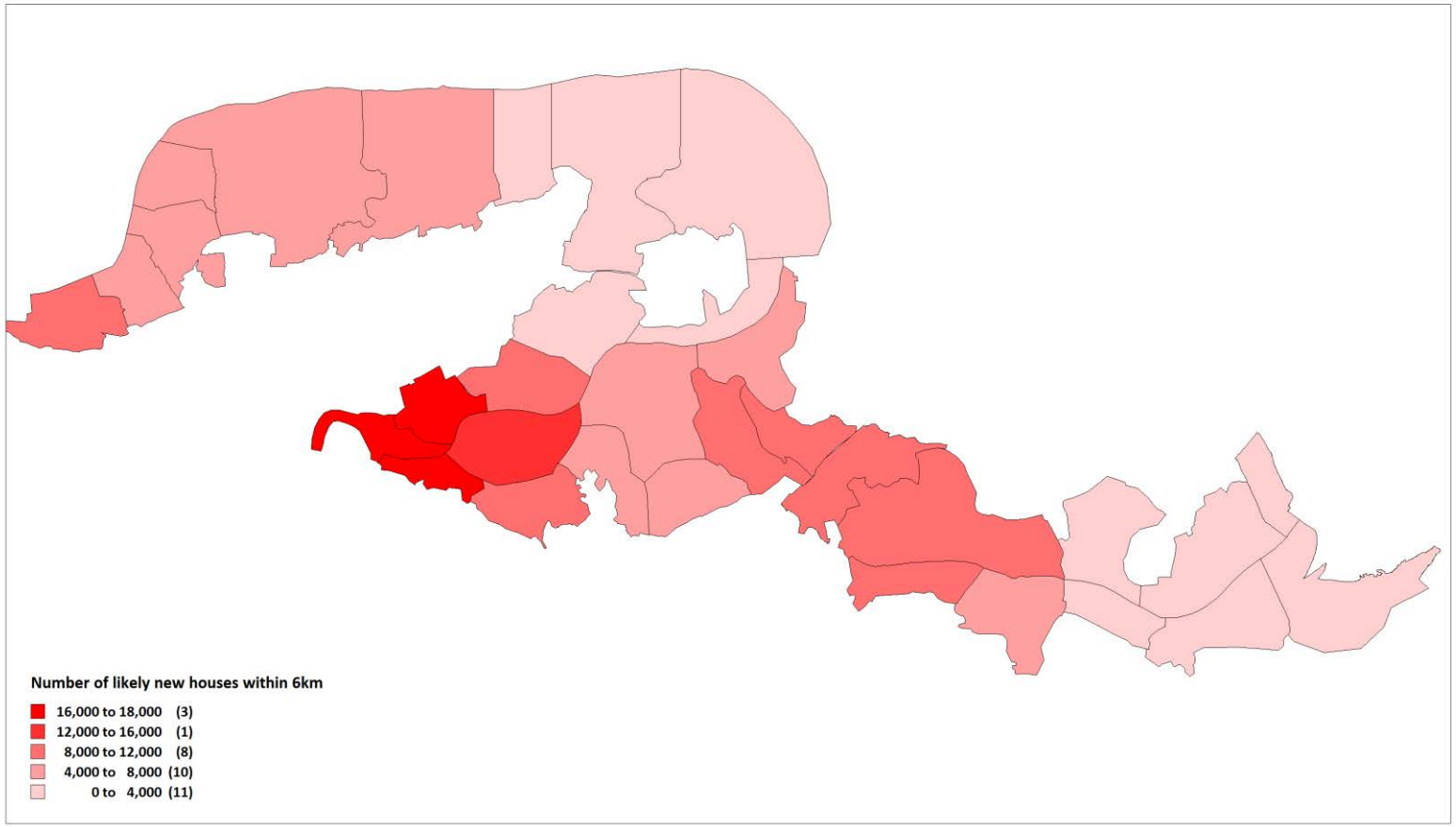
Contains Ordnance Survey data © Crown database and database right 2013

- Medway Estuary & Marshes SPA & Ramsar
- Thames Estuary & Marshes SPA & Ramsar
- Ramsar outside of SPA
- Compensation sites
- Roost Sites



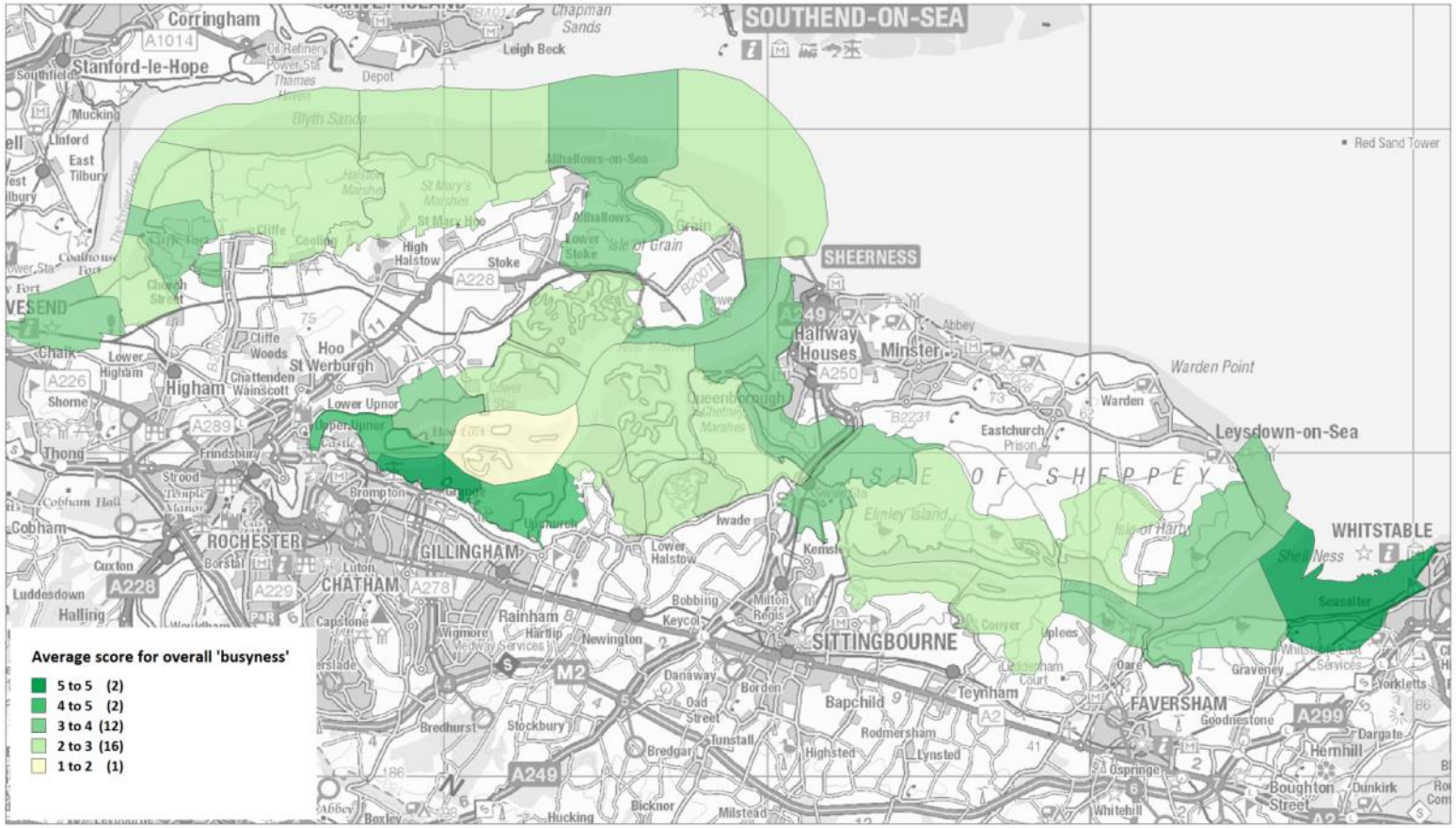

**Map 13: Main Priority Habitats Within the SPA and Ramsar Sites**

**Derived from priority habitats GIS data, provided by Natural England**

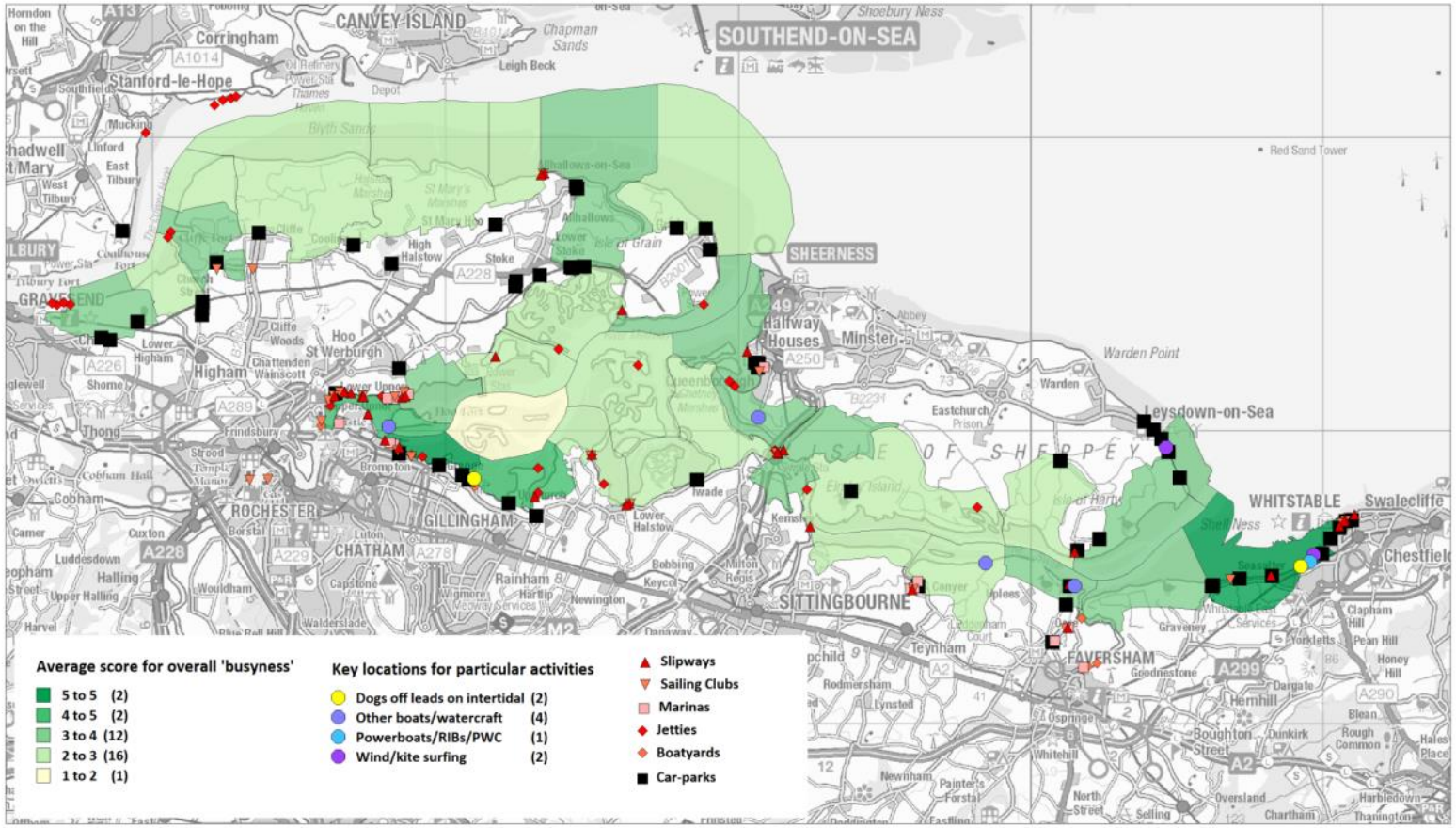



**Map 14: Coast sections shaded to reflect indicative levels of new housing within 6km radius**

**See Liley, Lake and Feanley 2012 for further details**




**Map 15: Levels of Current Access (from Fearnley & Liley 2012)**



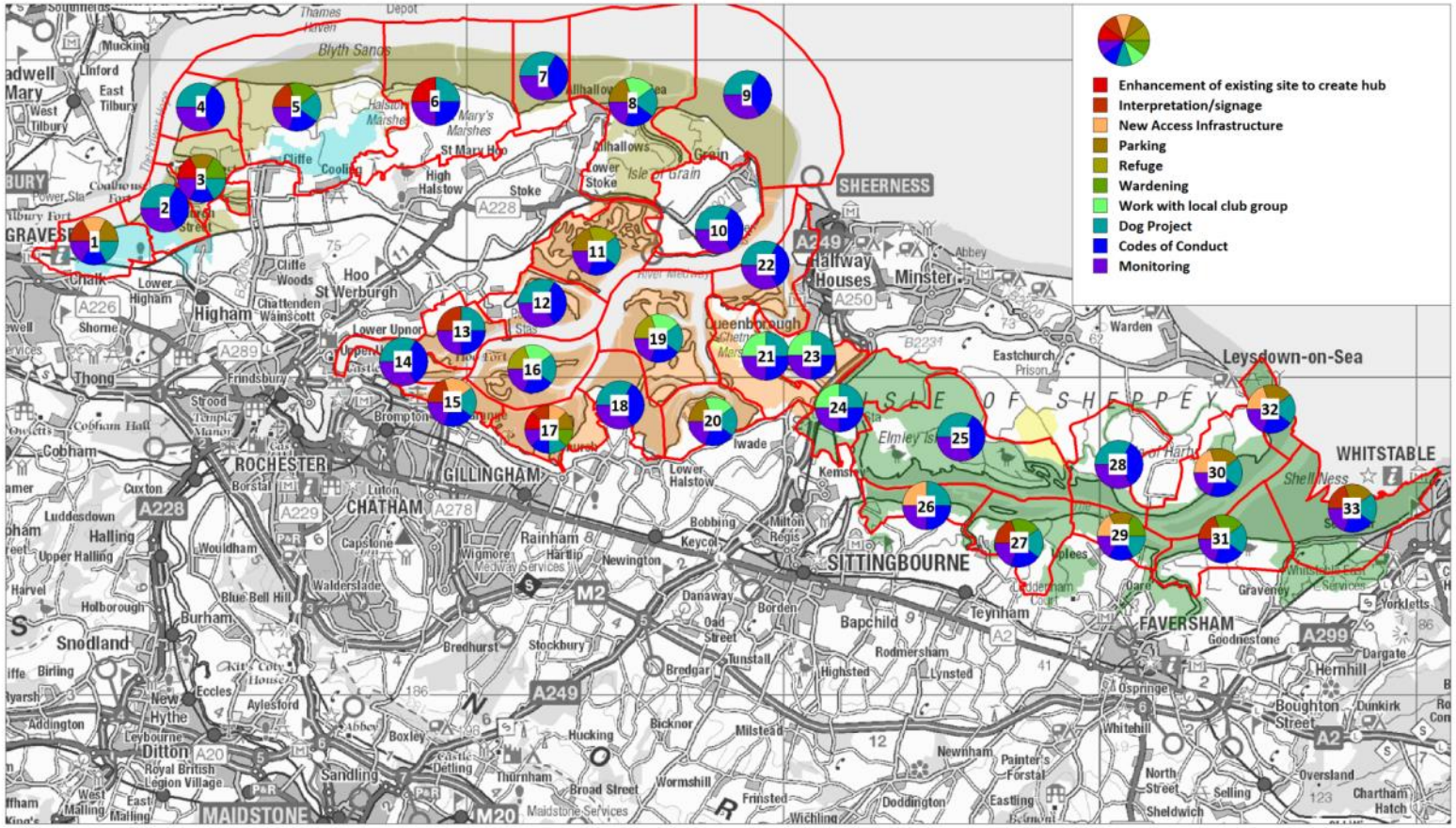

**Map 16: Levels of Current Access (see Map 14), Access Infrastructure and Key Locations for Particular Activities**

## 14. Appendix 7: Summary Map and Tables for Elements of the Plan

Summary of strategy elements by section. Sections are those used in Maps 14-16. See also Map 17 which shows each section and pie charts coloured to reflect measures within each. Within the table the number of new houses within 6km are the data in Map 14 (see Liley, Lake & Fearnley 2012 for details) and the score for 'busyness is from Map 15 and reflects a score of 1 (quiet) to 5 (high general levels of access) (see Fearnley & Liley 2012). In all cases the ticks are indicative, additional areas or changes to locations are likely. The dog project, codes of conduct and monitoring are all elements that are generic and therefore difficult to map. Enforcement is an option that can be phased and used when other options fail, hence the brackets.

| Map Ref (See Map 17) | LPA | No. of New Houses Within 6km | Score reflecting Current 'Busyness' | Enhancement of existing site to create hub | Interpretation/signage | New Access Infrastructure | Parking | Refuge | Wardening | Work with local club/group | Dog Project | Codes of Conduct | Monitoring | Enforcement |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Gravesham | 9349 | 3 | | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | (✓) |
| 2 | Gravesham | 7320 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 3 | Gravesham & Medway | 6752 | 3 | ✓ | | | ✓ | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 4 | Medway | 5018 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 5 | Medway | 6534 | 2 | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 6 | Medway | 6504 | 2 | ✓ | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 7 | Medway | 183 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 8 | Medway | 166 | 3 | | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 9 | Medway | 3834 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 10 | Medway | 3874 | 3 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 11 | Medway | 3375 | 2 | | | | ✓ | ✓ | | | ✓ | ✓ | ✓ | (✓) |
| 12 | Medway | 8951 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 13 | Medway | 16582 | 3 | | ✓ | | | | | | ✓ | ✓ | ✓ | (✓) |
| 14 | Medway | 17181 | 4 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 15 | Medway | 17155 | 5 | | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | (✓) |

| Map Ref (See Map 17) | LPA | No. of New Houses Within 6km | Score reflecting Current 'Busyness' | Enhancement of existing site to create hub | Interpretation/signage | New Access Infrastructure | Parking | Refuge | Wardening | Work with local club/group | Dog Project | Codes of Conduct | Monitoring | Enforcement |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | Medway | 15029 | 1 | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 17 | Medway | 8461 | 4 | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 18 | Swale | 6282 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 19 | Swale | 5256 | 2 | | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 20 | Swale | 6899 | 2 | | | | ✓ | | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 21 | Swale | 8426 | 2 | | | | | | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 22 | Swale | 5173 | 3 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 23 | Swale | 8393 | 3 | | | | | | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 24 | Swale | 9044 | 3 | | | | | | | ✓ | ✓ | ✓ | ✓ | (✓) |
| 25 | Swale | 9503 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 26 | Swale | 8985 | 2 | | | ✓ | | | | | ✓ | ✓ | ✓ | (✓) |
| 27 | Swale | 5225 | 2 | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 28 | Swale | 2133 | 2 | | | | | | | | ✓ | ✓ | ✓ | (✓) |
| 29 | Swale | 1006 | 3 | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 30 | Swale | 1414 | 3 | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | (✓) |
| 31 | Swale | 2009 | 3 | | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | (✓) |
| 32 | Swale | 1282 | 3 | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | (✓) |
| 33 | Canterbury | 3610 | 5 | | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | (✓) |




**Map 17: Spatial Summary**