

Improvement Programme for England's Natura 2000 Sites (IPENS) Programme Scoping: identifying key issues affecting Natura 2000 sites and priorities for the IPENS project

Improvement Programme for England's Natura 2000 Sites (IPENS) Programme Scoping: identifying key issues affecting Natura 2000 sites and priorities for the IPENS project

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Project details

The Improvement Programme for England's Natura 2000 Sites is a partnership project between Natural England and the Environment Agency, and is supported by European Union LIFE+ funding. This document forms the first technical report relating to Action E.1 of the IPENS LIFE+ grant agreement. It describes the scoping stages of the project, in which issues affecting the conservation status of Natura 2000 sites in England were identified and prioritised.

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Summary

This report describes the approach taken (between February and May 2013) to scoping and prioritising issues to be addressed within the Improvement Programme for England's Natura 2000 Sites (IPENS), which is a project part funded by the European Union LIFE+ fund. The objectives of programme scoping were to:

- Identify key pressures and threats to England's Natura 2000 series.
- Confirm the status of mechanisms available to address these and identify gaps and blockages to progress.
- Determine which risks, issues and mechanisms will be considered by the programme and the nature of the work required.

A scoping approach was devised which made best use of available information, specialist knowledge and stakeholder feedback. This resulted in the identification of issues within six broad themes which are a priority for the IPENS project to address. The broad themes are:

- Water and pollution.
- Habitat management.
- Species management.
- Invasives and disease.
- Recreation and disturbance.
- Physical change.

The results of the scoping and prioritisation exercise will be used to inform later stages of the IPENS project, including the development of new and amended mechanisms, site and theme plans (see definitions in Appendix 1); and the development of funding options and IPENS funded projects to fill evidence gaps.

This is the first time that the main issues affecting the whole of the Natura 2000 network in England have been assessed using a national, strategic approach. As such, the results are important in developing an overall picture of what the key issues are in relation to improving the management of England's Natura 2000 network, as well as in identifying priority issues which will be taken forward by the IPENS project itself.

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1 Introduction

- 1.1 This report describes the approach used to identify and prioritise pressures and threats affecting Natura 2000 sites in England, and shares the findings of this work. The work was the initial activity (undertaken between February and May 2013) under the Improvement Programme for England's Natura 2000 Sites (IPENS) which is a two-year partnership project between Natural England and the Environment Agency, enabled by LIFE+ funding from the European Union. It will inform later stages of the IPENS project which will develop a programmed approach to address pressures and threats, and produce site and theme based plans.

Context

Terrestrial sites

- 1.2 In England, all terrestrial Natura 2000 sites (those above Mean Low Water (MLW)) are underpinned by Site of Special Scientific Interest (SSSI) designation and Natural England's ENSIS database is used to record their condition. Information on Natura 2000 site condition can, therefore, be derived from condition data for the SSSI units which underpin each terrestrial Natura 2000 site, and where data are available this can also be linked to the condition of specific interest features (mainly terrestrial SAC features).
- 1.3 Based on June 2013 data, of the 40,000ha of English SSSI area that is in unfavourable, no change or declining condition, 70% is on Natura 2000 sites. A further 537,000ha of Natura 2000 sites (underpinned by SSSIs) is in recovering condition.
- Freshwater habitats, including still and running water and lowland bogs, have the highest percentage area not in favourable or recovering condition.
 - Extensive areas of upland bog and heathland (280,000ha) is in recovering condition.
 - Across the area of Natura 2000 sites (underpinned by SSSIs) not in favourable or recovering condition, there are about 40 reasons recorded (using Natural England definitions) as to why these are in adverse condition. These include pollution, grazing issues and invasive species.
- 1.4 Currently 33% of the area of favourable or recovering terrestrial Natura 2000 sites (underpinned by SSSIs) is recorded as 'at risk' of decline in condition. Risks are wide ranging, from not addressing neglect, to lapsed partnership funding, hydrological impacts and changes in species behaviour. This data provides an 'early warning' of the need to proactively address these issues before they impact on condition.

Marine sites

- 1.5 A Natural England review in 2010 of existing activities across 45 marine Natura 2000 sites assessed a number of activities as high and medium risk. This included several associated with fishing and harvesting of aquatic resources, ranging from cockle fishing, clam dredging, and scallop dredging, to fixed nets causing by-catches. Additional risks identified were: recreational activity; the spread of non native species; water pollution; and coastal squeeze. Changes to the fisheries discard policy under the Common Fisheries Policy, development pressure, and climate change are amongst other notable risks. Article 17 reports cover most of these issues in the list of pressures and threats facing marine features.

Managing pressures and threats to Natura 2000 sites

- 1.6 Data on pressures and threats to Natura 2000 sites tend to be available on a 'site by site' basis and work is required to manage them in a more coherent way. Additionally the scale of the task is significant, both to ensure Natura 2000 features are under appropriate management and to

ensure that they remain on an improving trajectory, particularly given the complexity of the remaining adverse condition reasons (as recorded on Natural England's site condition database, ENSIS) and emerging threats. A strategic approach across sites is therefore needed to ensure they contribute to the favourable conservation status of Natura 2000 features in England, and to secure this for the future.

- 1.7 The Improvement Programme for England's Natura 2000 Sites was devised with the aim of developing a programmed approach to achieving target conservation status on all terrestrial and marine Natura 2000 sites in England. It will work with key stakeholders at national and regional levels, in the public, private and voluntary sectors, to help them adopt and implement this strategic approach. The project will analyse the risks and threats to each Natura 2000 site, including an assessment of the actions which may counter them and the mechanisms available to implement these actions. In addition, the project aims to develop new mechanisms where required, including consideration of funding options. The final project output will include:
- improvement plans for each Natura 2000 site;
 - theme plans for issues affecting multiple sites;
 - a directory of mechanisms (see definition in Appendix 1); and
 - an overarching implementation report.
- 1.8 Taken together these outputs will form a programmed approach to improvements across the Natura 2000 series in England.
- 1.9 Appendix 1 summarises the main activities planned within the IPENS project.

Scoping phase aims and objective

- 1.10 The objective of the scoping phase of IPENS was to:
- 1) identify key pressures and threats to the conservation status of Natura 2000 interest features; and
 - 2) identify which of these we are not currently able to fully address using existing mechanisms.
- 1.11 The resulting list of issues will be taken forward into the later stages of the project, either for the development of new or amended mechanisms, or within site and theme plans.
- 1.12 Scoping aimed to:
- Review and analyse available information relating to pressures and threats to Natura 2000 sites in England, including confirmation of whether they are predicted, active or historic.
 - Identify mechanisms available to address each issue and its status.
 - Identify gaps or blockages in our knowledge or ability to address each issue.
 - Prioritise those issues which the IPENS project should take forward into the 'mechanism development' phase of the project.
 - Identify issues for which theme plans may be appropriate.

Definitions

- 1.13 Some terminology used within the IPENS project could be confused with similar terms used elsewhere. For clarity, and partly in response to stakeholder feedback, the following table provides definitions that will be used by IPENS, together with examples. Where possible, the agreed terminology has been kept consistent with use in a European / Natura 2000 context.

Table 1 IPENS terms and definitions

Terms & definitions		Examples
Theme <i>A grouping of several related issues</i>	Issue <i>An overarching term for pressures and threats</i>	<p>Pressure <i>Factors which are currently causing adverse impacts on Natura 2000 interest features</i></p> <p>Threat <i>Potential factors which may in the future cause adverse impacts on Natura 2000 interest features</i></p>
		<p>Excessive fertilizer application is causing elevated nutrient levels in a Natura 2000 lake</p> <p>Potential further loading of nutrients to river flowing into the Natura 2000 site resulting from new housing development</p>
Conservation objective <i>The state we want to achieve to ensure an interest feature is in favourable condition and contributing to Favourable Conservation Status</i>		<p>Nutrient levels in the Natura 2000 lake to achieve a defined quantitative target</p>
Measure <i>An overarching term for actions, mechanisms and funding</i>		<p>Action <i>What is required on the ground to achieve the conservation objective</i></p> <p>Mechanism <i>The enabling structure for the implementation of actions</i></p> <p>Funding <i>How the mechanism will be paid for</i></p>
		<p>Reduce fertilizer application to agricultural land within the catchment.</p>
		<p>Agri-environment scheme option</p> <p>Higher Level Stewardship</p>

2 Identifying and prioritising key issues affecting England's Natura 2000 network

2.1 The process used for IPENS programme scoping and prioritisation is summarised in Figure 1.

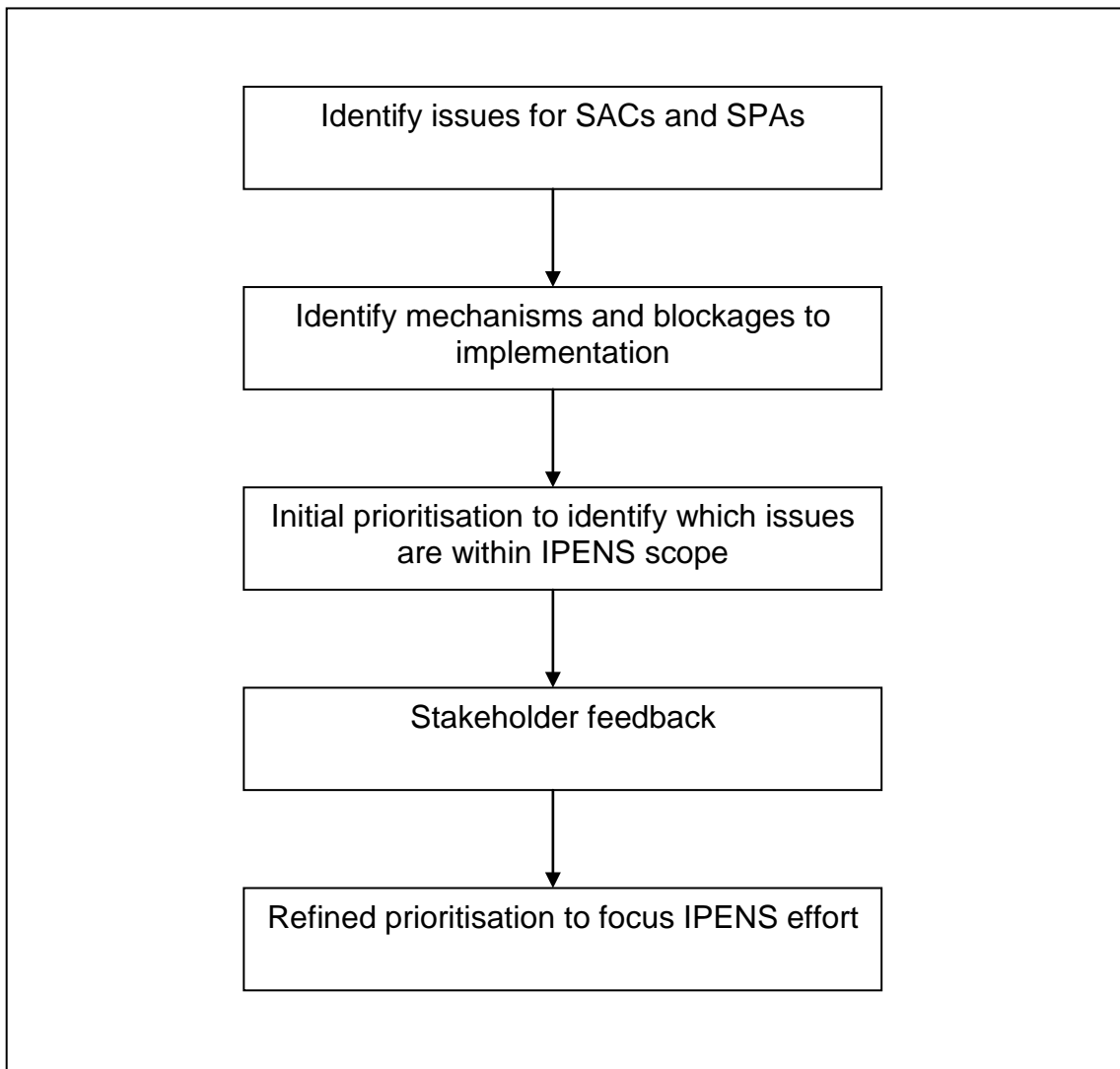


Figure 1 Simplified scoping and prioritisation process diagram

2.2 Programme scoping commenced by identifying issues (pressures and threats) affecting Natura 2000 sites in England. As there is no single data source for Natura 2000 sites in England, various sources were used including:

- Natural England's ENSIS data system, which holds detailed information about the condition of the SSSIs which underpin all terrestrial Natura 2000 sites and specific pressures and threats that affect them.
- The 2007 Article 17 report, which includes a detailed list of pressures and threats affecting each Natura 2000 interest feature in the UK.
- Other sources provided by Natural England specialists, including academic literature and specialist knowledge.

- 2.3 It became apparent that the nature of the data available for Special Area of Conservation (SAC) interest features was different from that for Special Protection Area (SPA) features. In addition, the data available for subtidal marine sites – which are rarely underpinned by SSSI designation – was also different. It was therefore necessary to take three different approaches to scope IPENS work, which is explained in the following sections.
- 2.4 Having completed all three analyses, the resulting issues were grouped into ‘Themes’, which were higher level descriptors of types of pressures and threats. Results are presented in Chapter 3 and Appendices 2 and 3.

Methodology for Special Areas of Conservation (SACs)

- 2.5 The Natural England ENSIS system holds a comprehensive set of SAC feature data, associated with the SSSI boundaries that underpin the SAC designation. This made it possible to analyse the condition of the SSSI on which designated SAC features occur, thus providing at least a proxy for the condition of the SAC feature itself, and in some cases a direct assessment of the condition of the SAC feature where it has been specifically monitored. The availability of this data enabled a methodology with both quantitative and qualitative elements to be devised.
- 2.6 SAC interest features were ranked based on the importance of the UK / England resource and their current condition using the following factors:
- 1) The condition status of the SSSI units which underpin the Natura 2000 site holding each feature: percentage area which was ‘unfavourable no change’ and ‘declining’ taken from Natural England’s ENSIS system was used. Greatest concern was associated with features with more than 10% of their area in ‘unfavourable no change’ and ‘declining’ condition.
 - 2) Whether or not the UK has special responsibility in Europe for each feature. Greatest concern was associated with features for which the UK has special responsibility.
 - 3) The rarity of each feature and importance of the UK / England resource within Europe: information within feature accounts published on the Joint Nature Conservation Committee (JNCC) website was used. Greatest concern was associated with features which are rare on any geographical scale, or for which England or the UK has a high proportion of the total European resource.
- 2.7 Issues affecting those interest features which had more than 10% area in unfavourable or declining condition status and for which the UK / England resource was important within Europe were identified from Article 17 reports and ENSIS threat data. Similarly, issues affecting those interest features with more than 90% of their area in favourable or recovering condition were also checked – recognising that the objective of IPENS is to address threats to sites which are currently in favourable condition, as well as to address pressures affecting sites in unfavourable condition. This information was used to compile a list of key issues affecting the England SAC network.

Methodology for Special Protection Areas (SPAs)

- 2.8 In contrast to SACs, the Natural England ENSIS system does not currently hold a comprehensive set of SPA interest feature information, so it was not possible to obtain quantitative data on SSSI site condition in relation to SPA features. Additionally, whilst Article 17 conservation status reports are available for SAC features, a similar Article 12 report for SPAs is yet to be produced. Therefore there is no comparable source of information on threats and pressures for the two designation types.
- 2.9 A wealth of monitoring information is available for England’s bird populations from which trend data are available. However, this information is not often available specifically for SPA sites without significant further analysis and the amount of data available regarding the potential causes of the observed trends is limited.

- 2.10 It was, therefore, necessary to take a more subjective approach to identifying the key issues affecting England's SPAs compared to SACs, as follows:
- The assumption was made that in general, the pressures and threats acting on SAC habitats are also likely to affect the habitats that support SPA birds. On this basis, it was assumed that the methods used to identify the key issues affecting SAC interest features should pick up the majority of issues which also affect SPA features. It was, nonetheless, recognised that there may also be other bird-specific issues.
 - To check these assumptions and to identify any issues that had not already been included on the SAC issues list, a series of discussions were held with Natural England ornithology specialists. These took into account SPA bird species which are considered a priority for increased conservation action, due to:
 - inclusion on the Birds of Conservation Concern amber or red lists (www.bto.org/sites/default/files/u12/bocc3.pdf);
 - inclusion on the UK list of Priority Species and Habitats ([Section 41 of the NERC Act 2006](#)); and / or
 - species showing a declining population trend from BTO WeBS data www.bto.org/volunteer-surveys/webs/publications/webs-alerts.

Methodology for marine SAC and SPA interest features

- 2.11 Any marine or coastal SAC features which are underpinned by SSSI designation were assessed using the SAC methodology described above. The majority of the subtidal SAC and SPA area is not, however, underpinned by SSSI designation. Therefore, a different methodology was needed to identify the issues affecting the interest features of these sites.
- 2.12 Two SPAs are purely marine (Liverpool Bay and Outer Thames Estuary). Discussions were held with Natural England specialists to identify issues relevant to the features of these sites.
- 2.13 For the remaining marine SACs and SPAs a provisional list of issues was compiled using specialist expertise within the IPENS project team and Article 17 information. This list was then checked and added to by one of Natural England's Marine Principal Advisers. A series of more specific issue-based discussions were then held with a range of other Natural England specialists to gather more detail about the issues identified. Subsequent work also considered information in the European Marine Site (EMS) risk assessment.

Identifying available mechanisms and evidence gaps

- 2.14 Detailed discussions were held with Natural England's specialists about each theme and the associated specific issues identified by the review of evidence. An example is provided below (see section 2.17).
- 2.15 The focus of the discussions was to identify the areas where the IPENS project could add value through mechanism development and addressing knowledge gaps, therefore specialists were asked for information about:
- What mechanisms are available to address each issue.
 - Whether available mechanisms are being deployed appropriately and how effective are they.
 - Whether there are any gaps or risks associated with each issue (in mechanism availability or funding).
 - Whether resources are adequate to undertake the required work.
- 2.16 The results are presented in Chapter 3.

2.17 Example of a theme and some of the issues associated with it:

Theme: disease and invasive species

Issues:

- Freshwater non-native invasive species having adverse effects on our native species, such as by competition, disease or habitat modification. Species of concern to us include *Pacifastacus leniusculus* (American signal crayfish), which spreads disease to our native white clawed crayfish *Austropotamobius pallipes*; and *Crassula helmsii* (New Zealand pygmy weed) which deoxygenates and shades water bodies, adversely affecting a variety of species.
- Tackling plant diseases such as *Phytophthora austrocedrae*, a disease affecting Juniper which threatens some of our upland habitats.
- Controlling bracken on Natura 2000 sites, to avoid adverse impacts of the spread of this species on the diversity of habitats. This is of particular importance in the light of the recent ban on the herbicide Asulam, which has historically been the preferred herbicide to control this species on protected sites.

2.18 This stage focussed on mechanisms already commonly used in England. However, it was acknowledged that other options may be in use, for example site specific experimental techniques or mechanisms in use elsewhere in Europe to address similar issues. Options for reviewing the full range of available mechanisms and funding options, including the potential for joint working with other similar LIFE+ projects, will therefore be considered as a separate action for the later stages of the project.

Prioritising to focus further IPENS actions

Initial prioritisation

2.19 Using the themes identified in the review of evidence and information gathered through discussions with specialists, the IPENS project team made an initial assessment of which themes should be considered as potentially requiring further work within the project, and which should not be developed further. This decision was guided by the following criteria:

- 1) Are there mechanisms available?
- 2) Will available mechanisms fully deliver favourable condition?
- 3) Is funding to implement the mechanism available / secure?
- 4) Are there evidence gaps blocking progress?
- 5) Are there resource problems?
- 6) Are there policy or legal constraints?
- 7) Is the issue historic, active or predicted?

2.20 The results of the provisional prioritisation decisions are presented in Chapter 3 and Appendix 4.

Stakeholder feedback

2.21 A launch workshop for the Improvement Programme for England's Natura 2000 Sites held on 24th April 2013 provided a key opportunity to share and test the project's initial prioritisation work. After introductory presentations which described the project and the wider policy context, the project's initial findings on priority themes affecting the condition of Natura 2000 sites were shared and discussed. Attendees were invited to provide feedback about:

- Whether the right issues had been identified.
- Whether any issues had been missed.
- Whether any issues had been rejected which should have been included.

2.22 Feedback was considered by the project team and, where appropriate, will be taken into account for later stages of the project. The detailed feedback received and the project team's response to it is presented in Chapter 3 and Appendices 5 and 6.

Refining the prioritisation

2.23 Having taken into account feedback received at the launch workshop, work progressed to refine the list of issues and its prioritisation, with the aim of focussing effort on issues which should be taken forward into later IPENS tasks, particularly:

- Development of new or amended mechanisms and production of a directory of mechanisms.
- Development of funding options.
- Evidence projects funded by IPENS.
- Production of site and theme plans.

2.24 See Appendix 1 for a summary of the main IPENS actions.

2.25 There were three elements to this, as follows:

- 1) Theme names were reviewed to reduce the number of themes and more closely align them with ENSIS adverse condition reasons and threat categories.
- 2) Further discussions were held with Natural England specialists to identify the specific work required for each theme and issue, and to check that this was not already covered by existing work programmes.
- 3) The updated list of themes and their associated issues was then screened to focus effort on a smaller number of issues, as recommended in the stakeholder feedback. To do this, themes and issues were firstly assessed against two subjective criteria as follows:

- Where can most value to conservation status improvement be added given the available time and resources?
- Focus on operational improvements and how to fund them for mechanism development rather than high level strategic issues, even if IPENS needs to flag the need for further work on the latter.

2.26 Two objective factors were then considered:

- 1) issues affecting SAC features for which the UK has special responsibility within Europe, or SPA features where the UK hosts more than 20% of a breeding or non-breeding population; and
- 2) issues affecting any features currently subject to infraction proceedings. Chapter 3 presents the results of this process.

2.27 Issues remaining following the refined prioritisation process were then categorised according to the nature of the work required from IPENS, to assist planning for the next stages of the project.

2.28 The results of this section are presented in Chapter 3 and Appendices 6, 7 and 8.

Identifying topics for Theme Plans

2.29 Having undertaken the issue scoping exercise, the results were reviewed to identify issues which would benefit from a strategic approach, to be the subject of Theme Plans. The following criteria were used to identify appropriate issues:

- issues which act on multiple sites;
- issues which need addressing nationally and / or in the wider environment;

- issues where coordination between sites / a strategic approach is vital to improve efficiency of measures; and
- issues where we may want to advocate a particular approach or steer the direction of action.

2.30 The results are presented in Chapter 3 and Appendix 10.

3 Results

Key issues affecting England's Natura 2000 network

SACs

- 3.1 18 SAC interest features were identified which had more than 10% of their area in unfavourable or declining condition status, and for which the UK / England resource is important within a European context (Appendix 2). Issues affecting these 18 features, identified from Article 17 (2007) reports and ENSIS threat data, formed the basis of a list of key issues affecting England's SAC sites (Appendix 3 – Source 1).
- 3.2 Issues affecting the remaining 76 SAC interest features (those present on sites which had more than 90% area in favourable or recovering condition) were also considered. This was in recognition of the objective of IPENS to address threats to sites which are currently in favourable condition, as well as to address pressures affecting sites in unfavourable condition. As a result, a number of issues which had not already been picked up by the analysis of the 18 features in poor condition were added to the list (Appendix 3 – Source 2).

SPAs

- 3.3 The methods described in Chapter 2 confirmed that the analysis of SAC feature data did indeed identify the majority of issues which affect SPA features. Discussion with Natural England ornithologists resulted in the identification of a small number of other issues which were added to the master list (Appendix 3 – Source 3).

Marine SAC and SPAs

- 3.4 A small number of additional issues were identified, using the methods described in Chapter 2, for marine SACs and SPAs not underpinned by SSSI designation. These were amalgamated with the master list of issues (Appendix 3 – Source 4).
- 3.5 The master list of issues resulting from the three elements of this scoping process was grouped into 29 'themes' which were identified as summary groupings of the detailed issues. The programme scoping approach after this point moved to develop a focussed subset of issues which the IPENS project could develop further.

Available mechanisms and evidence gaps

- 3.6 Discussions with Natural England specialists captured a considerable volume of information, providing a good overview of the status of each theme and issue. It was clear that the work underway across most of the themes identified is extensive. There are many areas, however, in which improvements to knowledge or mechanisms could make the achievement of favourable condition more efficient and effective. For example, improved baseline survey or monitoring data; better evidence about the effect of mechanisms currently used; the development of new mechanisms; and the resolution of funding or policy issues in order to implement mechanisms that have already been identified.
- 3.7 Specific examples include:
 - Limited uptake of certain agri-environment options, such as Resource Protection options, is slowing our efforts to reduce the impacts of diffuse water pollution.

- A lack of good evidence to show the degree of improvement that can result from implementing various mechanisms, for example for air quality or diffuse water pollution, introduces significant uncertainty and inefficiency into our attempts to improve site condition.
- Insufficient and variable levels of understanding about the hydrological functioning of sites can hamper our efforts to manage site hydrology effectively, or respond to development applications appropriately.
- Significant funding gaps can slow down or prevent the implementation of action, even where the mechanism is known and well understood, for example, for lake and river restoration.
- A lack of availability of cutting equipment or livestock for grazing at the right place and time can limit our ability to appropriately manage some grassland habitats.
- No baseline information for what an estuary which has experienced coastal squeeze should look like when in favourable condition, makes management an uncertain process.
- In the marine environment, dredge sediment disposal sites need much more research to determine impacts on Natura 2000 sites.
- There are gaps in our knowledge about the impact on Natura 2000 sites of new invasive species that may enter the UK as a result of climate change.

The scope of further IPENS actions

Initial prioritisation

- 3.8 The prioritisation process initially identified 17 issues which were not appropriate for further mechanism development work within the IPENS project – mainly because they are already well regulated or because they are emerging issues which are the subject of significant ongoing research by other bodies. The rationale for each of these themes is given in Appendix 4.
- 3.9 Other broader topics such as ecological connectivity, habitat fragmentation and climate change were logged as important wider issues, which may need to be referred to in site or theme plans, even if it is not possible to develop new mechanisms for them within the scope and resources of the IPENS project. All of these issues were removed from the Appendix 3 master list.

Stakeholder feedback

- 3.10 Feedback received from stakeholders at the IPENS Launch Event could be broken down into two broad categories:
- specific suggestions for new issues to consider including on the master list; and
 - broader comments about solutions and our approach to management of Natura 2000 sites.
- 3.11 Feedback on the initial prioritisation of themes and issues confirmed that the approach and conclusions were generally appropriate and that the rationale for rejecting some issues was suitable. Despite the lack of comprehensive data on pressures and threats facing SPA bird species, no specific feedback was received, indicating that the provisional prioritisation was inappropriate for birds. This gave some degree of confidence that the approach taken was appropriate, despite the data issues.
- 3.12 It was clear that the overall number of issues and themes identified was too many for IPENS to tackle within its two-year lifespan. The project was therefore advised by stakeholders to focus its efforts on a smaller number of themes where it could add the most value to the existing work being undertaken.
- 3.13 The project team considered all proposals for new themes and issues and drew conclusions about whether they should be rejected, added to the master list of issues, or dealt with via evidence projects or action plans. Appendix 5 lists the stakeholder proposals and the project

team decisions and rationale. Appendix 6 provides a full account of all stakeholder feedback received at the launch event.

3.14 Secondly, a wide range of views was received about our approach to management of the Natura 2000 series and measures used to resolve issues. A selection of comments is presented below, and all comments will be used to inform the next stages of the project:

- IPENS should consolidate existing plans and focus on adding value.
- Where possible IPENS should help to orientate national strategy to site based activity.
- Improvements could be made to the way in which Natural England operates regarding Natura 2000 sites, particularly through better join up of agri-environment advice and wider measures, and through the use of our regulatory powers and advisory role.
- Economic incentives that help deliver business solutions and environmental improvements are essential to help secure the engagement of economic interests in managing Natura 2000 sites.
- We need to step back to ‘sense check’ what we are trying to achieve in the longer term on the Natura 2000 series, and whether we are taking the best approach using all available mechanisms.
- Long term sustainable solutions are needed.
- In some cases landscape or catchment scale approaches are required. Is there potential to create bigger sites, or manage Natura 2000 sites together with non-designated sites?

A refined prioritisation

3.15 The results of the three elements used to refine the prioritisation were as follows:

1) **Review of theme names** – The result of the review of theme names was that six ‘broad themes’ were identified which were more consistent with ENSIS adverse condition reason and threat categories. These are:

- Disease and invasive species.
- Habitat management.
- Species management.
- Water and pollution.
- Physical change.
- Recreation and disturbance.

An additional ‘Energy production’ broad theme was identified. However, as all issues relating to this are subject to thorough regulatory regimes and have already been listed as inappropriate for further development work, it will not be considered further within the IPENS remit to develop new mechanisms.

2) **Further specialist discussions** – as a result of discussions with specialists at this stage in the process, the specific tasks under each issue were identified. It was possible to remove four issues from the master list because the necessary actions were already underway, or because specialists felt that it would be more productive to focus IPENS effort elsewhere. Issues eliminated at this stage and the rationales for these decisions are listed in Appendix 7.

3) **Screening to focus effort** – the master issues list was screened by the IPENS project team in order to identify priority issues which the project should focus on. Two subjective assessment criteria were used; i) where most value can be added, and ii) focus on operational improvements and mechanism development. Sixteen issues and their associated tasks were identified as ‘low priority’ for IPENS for various reasons, including:

- It is the remit of other parts of Natural England to progress the issue as ‘business as usual’.

- The issue requires pure research which is out of the IPENS scope.
- Low knowledge levels and the scale of work required mean that it would not be possible for IPENS to add value within the two-year limit of the project.
- The issue is being investigated through other projects, therefore it is not appropriate for IPENS to progress work until these have reported.

3.16 The 16 resulting issues are listed in Appendix 8. It is worth noting that, at this stage, all issues within the 'Recreation and Disturbance' theme were considered 'low priority', even though it had been highlighted by stakeholder feedback as an issue of concern. It was, therefore, removed from the master issues list at this point.

3.17 Further to the subjective screening, two objective factors were considered:

- 1) Issues facing SAC features for which the UK has special responsibility, or SPA features where UK has less than 20% of a population:
 - There are 32 SAC interest features (21 habitats and 11 species) which are the primary reason for designation of English SACs and for which the UK has special responsibility. Pressures and threats relevant to the 32 SAC features, as listed in the 2007 Article 17 report, were reviewed to ensure all major issues had been included in the master issues list.
 - The review indicated that, on the whole, there were no major omissions from the master issues list, except for Recreation and Disturbance. This concurred with the stakeholder feedback that had been received earlier in the scoping process that Recreation and Disturbance should be included. Even though all issues within the Recreation and Disturbance broad theme had earlier been judged to be low priority for IPENS, it was decided that it should, after all, be included in the master issues list. It was also noted that disturbance is likely to be an important issue for SPA birds.
 - There are 16 SPA bird species occurring on English SPAs and for which the UK holds more than 20% of the international population (based on the 2001 SPA Review report). All of these are waders or wildfowl. JNCC SPA Review (2001) species accounts were checked for any data about pressures and threats to individual species, however, only four species had information on pressures and threats.
 - Due to the lack of comprehensive data on pressures and threats to SPA features, it was decided to convene a workshop of bird specialists at which a final agreement could be made regarding which bird issues IPENS should focus on. This workshop was held on 29th July 2013.
- 2) Issues facing any features subject to European infringement proceedings:
 - One SAC interest feature, rivers (H3260 Water courses of plain to montane levels with *R. Fluitantis*), is currently the subject of potential infringement proceedings, although the case has not yet reached that stage. The Article 17 pressures and threats data was assessed for this feature, and it was felt that all important issues were already covered within the master issues list.

3.18 The issues which remained on the master list after the refined prioritisation were then categorised according to the nature of work required from IPENS. The final master issues list and workload categorisation results are presented in Appendix 9.

Identification of topics for Theme Plans

3.19 Application of the criteria listed in Chapter Two resulted in the identification of 13 issues which require the development of Theme Plans to provide a strategic management approach. These are listed in Appendix 10 and will be subject to further scrutiny by the IPENS Reference Group before the list is finalised.

4 Discussion

Data issues

- 4.1 The analysis undertaken was affected by a number of unavoidable data issues, however the method used has attempted to compensate for these.
- 4.2 The best information available on pressures and threats facing Natura 2000 interest features at the time the analysis was started was the output of the Habitats Directive Article 17 reporting process, which was published in 2007. The new 2013 Article 17 data became available as the analysis was being concluded, and was reviewed to ensure that no major omissions had been made. The top ten pressures and threats reported in the 2013 data are set out in Table 2.

Table 2 Top ten pressures and threats reported in 2013 Article 17 data (based on England data)

Top 10	High impact pressures and threats	High, medium and low impact pressures and threats
1	Human induced changes in hydraulic conditions	Human induced changes in hydraulic conditions
2	Grazing	Grazing
3	Air pollution, air-borne pollutants	Changes in abiotic conditions
4	Pollution to surface waters (limnic and terrestrial, marine and brackish)	Pollution to surface waters (limnic and terrestrial, marine and brackish)
5	Biocenotic evolution, succession	Air pollution, air-borne pollutants
6	Changes in abiotic conditions	Outdoor sports and leisure activities, recreational activities
7	Outdoor sports and leisure activities, recreational activities	Forest and Plantation management and use
8	Other human intrusions and disturbances	Invasive non-native species
9	Restructuring agricultural land holding	Urbanised areas, human habitation
10	Invasive non-native species	Biocenotic evolution, succession

- 4.3 This gave confidence that the majority of the top issues had been considered within the IPENS scoping process, and indeed many were already being taken forward to later stages of the project. Biocenotic evolution or succession has not been specifically considered, but it is expected that any issues will be most appropriately picked up in the Site Improvement Plans (see definition in Appendix 1).
- 4.4 It was clear that information on pressures and threats facing bird species was not available in as comprehensive a format as for SAC interest features, due to differences between the Article 17 and Article 12 reporting processes and timetables associated with these. No stakeholder feedback was received at the launch event to indicate that the provisional issues list was inadequate for birds – which gives confidence that most issues of concern have been noted. An SPA workshop for Natural England specialists and stakeholders, held on 29th July 2013, provided a further opportunity to double check the suitability of the final issues list for SPAs.
- 4.5 In addition to the specific data issues outlined above, the picture that emerged following discussions with specialists was one of significant evidence gaps for many issues. These relate

to baseline information on the location and condition of features; knowledge of ecological functioning; population monitoring; and the effects of the mechanisms that are used to improve site condition. In the absence of this type of information, work to address pressures and threats to site condition cannot be an exact science. Attempts to make improvements may necessarily take an 'adaptive management' approach, try one mechanism, learn from the results and then adapt the management accordingly. That approach gives a clear justification for allocating money to evidence projects, in order to identify the right mechanisms and make site improvements more efficient.

5 Conclusions and next steps

- 5.1 This is the first time that the main issues affecting the whole of the Natura 2000 network in England have been assessed using a national, strategic approach. As such, the results are important, giving an overall picture of the key issues affecting England's Natura 2000 network, as well as identifying priority issues which will be taken forward by the IPENS project itself. Whilst the impact of some issues will clearly act across a wider geographical area and range of species than others, all interest features [and the issues affecting them] have been considered equally, thereby reducing any bias resulting from the area or size of individual features.
- 5.2 Although a prioritised list of issues has been produced to focus the effort of later stages of the IPENS project, it is important that the long list of themes and issues detailed in Appendix 3 is not overlooked when considering the full range of pressures and threats facing England's Natura 2000 network. Where appropriate these will be covered in the suite of Site Improvement Plans or Theme Plans that will be produced, or recommendations for future action may be made.

Next steps

- 5.3 Whilst the aim of the IPENS scoping exercise was primarily to identify issues which require the development of new or amended mechanisms (IPENS Action A3), it was of particular note that very few issues fell into the 'mechanism development' category [when the issues list was grouped by the type of work required]. This may be an accurate reflection of the current position, thus indicating that most effort should be expended on evidence gathering, funding options and influencing the political will to address certain issues. Alternatively it could reflect the methods used to gather information from specialists, which may have encouraged thinking about existing mechanisms, rather than stimulating innovative thinking. To address this a series of topic based technical workshops are planned in which discussions will be held with Natural England specialists and stakeholders. This will provide an opportunity to challenge the status quo and to think about new ways in which our aims for Natura 2000 sites may be achieved. The workshops will also seek input to the strategic approach that should be outlined in Theme Plans.
- 5.4 Many evidence projects were identified and will be treated as priorities by the IPENS project when bidding for funding (IPENS Action A8). Similarly, issues highlighted as requiring new funding sources will be considered within the IPENS funding work stream (IPENS Action A4). A number of other issues will be best addressed by site or theme plans (IPENS Action A5). These include significant issues such as climate change adaptation and large scale approaches, where it is hoped IPENS can add value to ongoing work.

6 Bibliography

BTO. WeBS Alerts. URL: www.bto.org/volunteer-surveys/webs/publications/webs-alerts [Accessed August 2013].

COYLE, M and WIGGINS, S. 2010. European Marine Site risk review. Natural England Research Reports, Number 038. URL: <http://publications.naturalengland.org.uk/publication/36006> [Accessed August 2013].

DEPARTMENT FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS. 2007. European Community Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora: First report by the United Kingdom under Article 17 on implementation of the Directive from June 1994 to December 2000. URL: <http://jncc.defra.gov.uk/page-3051#download> [Accessed August 2013].

EATON, M. A., BROWN, A.F., NOBLE, D.G., MUSGROVE, A.J., HEARN, R., AEBISCHER, N.J., GIBBONS, D.W., EVANS, A and GREGORY, R.D. 2009. Birds of conservation concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 102, 296-341. Summary document URL: www.bto.org/sites/default/files/u12/bocc3.pdf [Accessed August 2013].

Natural Environment and Rural Communities (NERC) Act. 2006. Section 41: Species of Principal Importance in England. URL: www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx [Accessed August 2013].

Appendix 1

Table A IPENS main activities

Action number	Description	Expected results	Duration
A.2	Programme scoping	A matrix or dataset which plots Natura 2000 features against issues, mechanisms and evidence gaps.	3 months
A.3	Review and develop mechanisms	A directory of 'practical' mechanisms for achieving or maintaining favourable condition (see definition in Appendix 1).	9-12 months, overlapping with A.4
A.4	Review and develop funding options	An update to the directory of mechanisms, to identify funding options.	12 months
A.5	Produce site and theme plans	Action plans: Site plans – bringing together all earlier outputs to define action plans for achieving or maintaining favourable condition at the site level. Theme plans – to address factors acting on multiple sites.	12-15 months, overlapping with A.4
A.6	Integrate mechanisms into River Basin Management Plans	The Natura 2000 protected areas sections of 10 River Basin Management Plan 'programmes of measures' will include all relevant mechanisms identified through IPENS.	6-9 months, overlapping with A.5 and A.6
A.7	Compile overall Programme Plan	An overall action plan, summarising output of earlier actions.	6-9 months, overlapping with A.5 and A.6
A.8	Identify, define and, where possible, implement actions to address evidence gaps	A log of evidence gaps and a suite of research contracts to fill evidence gaps.	24-27 months

Definition of terms

Practical or achievable mechanisms – Mechanisms which are suitable to address an issue on a given site and can be implemented because funding is available.

Site Improvement Plan – IPENS will produce a plan for each Natura 2000 Site that outlines the measures required to achieve and maintain the site in favourable condition such that it contributes to favourable conservation status.

Theme Plan – IPENS will produce Theme Plans, which will provide a national strategic approach to address issues that impact on, and affect the condition of, multiple Natura 2000 sites and which are difficult to resolve on a site-by-site basis.

Directory of mechanisms – An IPENS product which will be a user-friendly reference manual for anyone needing to identify appropriate mechanisms to address issues on Natura 2000 sites.

Appendix 2

Table B SAC interest features with greater than 10% of the underpinning SSSI area in poor condition. Importance of the UK / England resource is indicated

L2 Feature popular description	% area in poor condition (no change + declining)	UK special responsibility	Rarity
S1029 Freshwater pearl mussel <i>Margaritifera margaritifera</i>	100.00%	Yes	Yes – vulnerable in EU, UK has special responsibility
S1390 Western rustwort <i>Marsupella profunda</i>	92.87%	No	Yes – very rare in EU & UK. Cornwall has high % of total resource
H3160 Natural dystrophic lakes and ponds	67.37%	No	Yes – scarce in England
S1103 Twaite shad <i>Alosa fallax</i>	61.98%	No	Yes – rare in England
S1831 Floating water-plantain <i>Luronium natans</i>	49.37%	No	No
H3260 Water Courses Of Plain To Montane Levels With <i>R. Fluitantis</i>	42.46%	Yes	Yes – chalk type rare in EU & England has large % of the EU resource
S1092 White clawed crayfish <i>Austropotamobius pallipes</i>	27.20%	No	Yes – UK has high % of the EU resource
H3130 Oligotrophic To Mesotrophic Standing Water With Vegetation	26.46%	No	Yes – rare in England but not in EU and UK
S1096 Brook lamprey <i>Lampetra planeri</i>	23.74%	No	No
H7110 Active Raised Bogs	22.10%	Yes	Yes – significant % of the resource in UK
S1095 Sea lamprey <i>Petromyzon marinus</i>	20.86%	No	No
H2150 Atlantic Decalcified Fixed Dunes (Calluno-Ulicetea)	17.53%	No	No
S1099 River lamprey <i>Lampetra fluviatilis</i>	17.38%	Yes	Yes – UK population important for conservation of EU resource
S1163 Bullhead <i>Cottus gobio</i>	17.02%	No	No
H7120 Degraded Raised Bogs (Still Capable Of Natural Regeneration)	16.07%	No	Yes – England has high % of UK resource
H6520 Mountain hay meadows	15.44%	No	Yes – scattered in EU, rare in UK
H2130 Fixed Dunes With Herbaceous Vegetation (Grey Dunes)	12.11%	Yes	No
S1106 Atlantic salmon <i>Salmo salar</i>	11.23%	Yes	Yes – UK pop important % of EU resource

Appendix 3

Table C Initial 'master' issues list: pressures and threats affecting Natura 2000 interest features

Theme	Detailed issues	Analysis source 1 = SAC features in poor condition; 2 = other SAC features; 3 = SPA features; 4 = marine features
1. Water pollution	Discharges	1
	Eutrophication	1
	Nutrient enrichment	1
	Water pollution	1
2. Other pollution	Air pollution	1
	Other pollution	1
	Pesticides	1
	Acidification	2
3. Water Quantity	Water abstraction	1
	Drainage	1
	River flows	1
	Flooding	1
	Water level management	1
	Drying out	1
	Grip blocking	1
	Submersion	2
4. Hydrological functioning	Changes to hydrological functioning	1
	Changes to hydrological regime	1
	Modification of hydrographic functioning	1
	Human induced changes in hydraulic conditions	1
	Inappropriate management of hydrology	3
5. Channels	Changes to natural channel	1
	Channel management	1
	Channel straightening	1
	Inappropriate management of channels	1
	Loss of river connectivity (obstacles to migration)	1
	Infilling of ditches, dykes, ponds, pools, marshes or pits	2
	Modifying structures of inland water courses	2

Table continued...

Theme	Detailed issues	Analysis source 1 = SAC features in poor condition; 2 = other SAC features; 3 = SPA features; 4 = marine features
6. Commercial and recreational fishing and aquaculture	Fish and shellfish aquaculture	4
	Fishing	1 / 4
	Fixed location fishing	4
	Leisure fishing	1
	Professional fishing	4
	Trawling	4
	Commercial exploitation	1 / 4
7. Fishing: Associated impacts (ornithological and other)	Accidental capture in fish traps	1
	Bait digging	4
	Drowning through entanglement in fishing gear	4
	Excessive stocking of fish for angling	1
8. Fishing: Other	Decline of salmonid species	1
9. Grazing regime	Cessation of grazing	1
	Grazing regime	1
	Insufficient grazing	1
	Intensive grazing	1
	Overgrazing in late summer	1
	Abandonment of pastoral system	1
	Stock feeding	1
	Inappropriate management of grazing	3
10. Agricultural management	Agricultural intensification	1
	Agricultural operations	1
	Cessation of summer mowing	1
	Fertilizer use	1
	Modification of cultivation practices	1
	Mowing / cutting	2
	Removal of hedges and copses	2
	Planting	2
11. Forestry	Forestry operations	1
	General forestry management	1
	Artificial planting	1
	Forest clearance	2

Table continued...

Theme	Detailed issues	Analysis source
1 = SAC features in poor condition; 2 = other SAC features; 3 = SPA features; 4 = marine features		
12. Recreation / Disturbance	Excessive boat traffic	1
	Horse riding & non-motorised vehicles	1
	Motorised vehicles	1
	Recreational disturbance	1
	Trampling	1
	Walking	1
	Disturbance of roost & hibernation sites	1
	Vandalism	2
	Speliology	2
	Mountaineering & rock climbing	2
	Nautical sports	2
	Inappropriate management of recreation	3
13. Mining & extraction	Cessation of mining activities	1
	Mining	1
	Open cast mining	1
	Cessation of peat cutting	1
	Dredging	1
	Peat extraction	1
	Removal of beach materials	1
	Quarries	2
14. Sediments	Sediment (insufficient)	1
	Sediment (too much)	1
	Siltation	1
	Removal of sediments	1
	Accumulation of organic material	2
15. Disposal of deposits	Depositing of dredged deposits	1
	Dumping	1
16. Landscape change	Habitat fragmentation	1
	Habitat loss	1
	Habitat neglect	1
	Simplification of foraging habitat	1

Table continued...

Theme	Detailed issues	Analysis source 1 = SAC features in poor condition; 2 = other SAC features; 3 = SPA features; 4 = marine features
17. Habitat Management	Burning	1
	Inappropriate habitat management (scrub)	1
	Removal of dead / dying trees	1
	Removal of undergrowth	2
18. Conservation management	Inadequate conservation management	3
	Inadequate implementation of management schemes and agreements	3
	Inadequate knowledge to inform management plans, strategies and schemes	3
	Inadequate public consultation to secure approval for management	3
	Inappropriate management of species	3
19. Land Reclamation	Land reclamation and drying out	1
	Reclamation of land from sea, estuary or marsh	1
20. Disease	Disease	1
	Ash Die-Back	1
	Introduction of disease	2
	Parasitism	2
21. Mortality	Deliberate killing	1
	Exploitation	1
	Road accidents	1
	Poaching	1
	Persecution	3
	Taking / removal of flora	2
	Trapping, poisoning, poaching	2
	Pillaging of floristic stations	2
22. Competition	Inter-specific faunal competition	1
	Competition (with grey seals)	1
	Other forms or mixed forms of inter-specific faunal competition	2
	Antagonism arising from introduction of species	2
23. Invasives	Invasive non-native species	1
	Invasive species	1

Table continued...

Theme	Detailed issues	Analysis source
		1 = SAC features in poor condition; 2 = other SAC features; 3 = SPA features; 4 = marine features
24. Climate change	Climate change	1
	Climate change related ecological change / coastal squeeze	1
	Impacts on prey species via climate change	1
25. Marine / Coastal Processes	Coastal squeeze	1 / 4
	Modification of marine currents	1 / 4
	Modifications to natural dynamic coastal processes	1 / 4
	Failure to offset coastal squeeze losses	3 / 4
26. Marine / Coastal Works	Sea defence or coast protection works	1 / 4
	Shipping	1 / 4
	Port areas	1 / 4
	Dykes	2
	Embankments	2
	Marine renewables	4
	Marine oil and gas	4
	Marine aggregate extraction	4
27. Development	Development	1
	Development (noise etc)	1
	Human habitation	1
	Urbanised areas	1
	Other urbanisation, industrial and similar activities	2
	Industrial or commercial areas	2
28. Land Use: Other	Human impacts / activities	1
	Military manoeuvres	1
29. Natural processes	Erosion	1
	Other natural processes	1
	Biocenotic evolution	1

Appendix 4

Table D Issues rejected by the provisional prioritisation exercise

Rationale	Theme / issue
Regulated activity. Management for Natura 2000 relies on effective regulation / Article 6 process. No new mechanisms needed.	<p>Hydropower developments</p> <p>Marine: Oil & Gas</p> <p>Marine: Aggregates</p> <p>Marine: Ports & shipping / Maintenance dredging</p> <p>Mining & extraction: Peat removal</p> <p>Pollution (other): Contaminated land</p> <p>Pollution (other): Radioactivity</p> <p>Pollution (other): spreading waste to land</p> <p>Water quality: Point source pollution (domestic)</p> <p>Water quality: Point source pollution (industrial / toxic)</p>
Noted by IPENS as an emerging or potential future issue. Research is underway but as the effect on Natura 2000 is not well understood, it is considered outside the scope of the current IPENS project.	<p>Air quality: ozone</p> <p>Disease & Invasives: Chalara</p> <p>Disease & Invasives: Juniper Decline</p> <p>Water quality: Point source pollution (endocrine disruptors)</p>
Regulated activity and effective Water Sector mechanisms in place to address outstanding issues.	<p>Water abstraction: non-Water company</p> <p>Water abstraction: Water company</p>
Effective mechanism in place for the key feature this pertains to.	<p>Mortality: Taking / removal of flora</p>

Appendix 5

Table E New themes and issues proposed by stakeholders and the IPENS project response

New themes proposed by stakeholders	IPENS Rationale	IPENS Conclusion
Marine: Commercial fisheries	Impacts of commercial fisheries on Natura 2000 sites are being dealt with by a separate Defra project focussing on Article 6 of the Habitats Directive. This has prioritised commercial fisheries issues and will address them in a staged process. IPENS does not want to duplicate this work, so will not take this issue into later stages of the project.	Not appropriate for IPENS
Marine: Renewable energy development	Renewable energy development is well regulated, therefore there is not a role for IPENS to develop new mechanisms.	Not appropriate for IPENS
Climate change impacts	In recognition of the importance of this issue, consideration will be given to either including a climate change element into site improvement plans, or letting an evidence contract to help gather evidence of the main climate change related factors relevant to each Natura 2000 site and/or interest features.	IPENS evidence project / Site Improvement Plans
Disease & Invasives: invasive native species	Whilst the project recognises that invasive native species can potentially impact Natura 2000 sites, as deer were the only specific concern raised, no other issues will be taken forward in the project.	Retain deer on issues master list
Water Quality: impacts of upland forestry	It was noted that forestry can both be an adverse and mitigating influence in the uplands. It will be addressed in site improvement plans where relevant, but it will not be considered as a priority for the development of new mechanisms.	IPENS Site Improvement Plans
Landscape: use and management change	IPENS is contributing ideas related to the Natura 2000 series to ongoing work to shape and design the new agri-environment scheme. Until the results of this work are known IPENS will not take forward any separate work on new mechanisms.	IPENS to contribute to agri-environment scheme design
Air quality: historic versus ongoing	The need to consider both historic and ongoing elements of air quality was noted, and will be built into site and theme plans where appropriate.	IPENS Site and Theme Plans
Recreational pressures	Whilst it is clear that recreational pressure does impact on certain sites and interest features, a lack of clarity about what IPENS could address led to this issue being rejected. However, at a later stage in the prioritisation work, it was added back into the list of issues for further work (see Chapter 3).	Retain on master issues list

Table continued...

New themes proposed by stakeholders	IPENS Rationale	IPENS Conclusion
Natural physical change	Whilst this will be addressed in site improvement plans where relevant, it was decided that it would not be possible to progress any additional work to develop new mechanisms within the scope and time limits of the IPENS project.	IPENS Site Improvement Plans
Water quality: connection between terrestrial & freshwater issues	The need to take a catchment based approach was noted and will be built into site and theme plans where appropriate.	IPENS Site and Theme Plans
Water quality: smothering / siltation from agricultural practices (for example on pearl mussel)	Siltation issues are considered to be a part of 'diffuse water pollution' and therefore are already included in the priority theme list.	Already on master issues list
Water quality: Marine / unregulated pollution sources from shipping (for example PIP)	Although this issue continues to be an occasional risk to some Natura 2000 features, shipping is largely well regulated and controlled. The legislation around pollution sources from shipping is thorough and lobbying for changes to the types of pollution that are regulated is carried out by projects and organisations other than IPENS.	Not appropriate for IPENS
Marine: loss of sites / mitigation	This is an issue that has been discussed with Natural England specialists and it may be included in a coastal squeeze Theme Plan as coastal development is commonly a factor in coastal squeeze.	IPENS Theme Plans
Marine: Recreation / Wildfowling	All wildfowling on intertidal / coastal Natura 2000 sites which are also SSSI is regulated under the SSSI Operations Likely to Damage lists. Those areas which are Natura 2000 and not SSSI, where wildfowling takes place are likely to be very small and therefore it was recommended at the launch event not to pursue this issue.	Remove from master issues list

Appendix 6

Stakeholder feedback received at IPENS launch event on 24 April 2013

Group 1

General

- We need to allow ourselves an opportunity to step back and sense-check what we are trying to achieve in the long term on sites (and groups of sites) and whether we are taking the best approach using all the various mechanisms – often best done at ‘ecological network/landscape’ scale, after some initial detailed analysis of issues and solutions.
- We need to use consistent terminology with the Site of Species Scientific Interest suite – introducing a new terminology confuses.
- Suggestion that ‘themes’ are mapped against mechanisms in a matrix to identify any bigger strategic issues/messages.
- Need to ensure we consolidate around plans already in place, recognise what works well already (if it ain’t broke..) and focus on the added value.

Have we got the right mechanisms? Should we add new ones?

Mechanisms not listed or downplayed in the analysis:

- Socio-economic mechanisms – specifically economic incentives that help deliver business solutions
- Farm advice – specifically CFE
- Regulation not picked up consistently across themes
- External funding – for example, Heritage Lottery Fund
- Catchment Sensitive Farming grants
- Research and monitoring
- Reviewing Natura 2000 site objectives/revising designations – based on review of landscape scale networks
- Suitable Alternative Natural Greenspace (SANGs) – green infrastructure projects, linked to a Community Infrastructure Levy
- Species re-introductions/translocations
- Land purchase
- Landscape scale projects
- Community engagement

New or developing mechanisms:

- Payment for ecosystem services
- Carbon trading
- Biodiversity offsets
- Range of mechanisms to encourage ‘sustainable drainage’ arising from recent Floods/water white paper?
- Opportunity to develop Regional Habitat creation plans (currently feeding into Shoreline Management Plans and Water Level Management Plans) as a wider mechanism to deliver habitat creation/compensation for site impacts?

- Rural development regulation – specific Natura 2000 funding measures?

Mechanisms not working so well (there is greater potential):

- Regulation – how and where we deploy Countryside and Rights of Way Act proactive powers re management schemes etc and also decision-making around casework
- Advice around agri-environment interventions not always joined up with wider measures
- Evidence often a constraint across many mechanisms – needs a particular focus
- Need to recognise the limitations of Common Agricultural Policy funding – both money in the pot and also not a longer term solution?
- Invasive control programmes – no dedicated funding for surveillance system to support

Other comments:

- Themes versus places-based approach
- Air quality – distinguish between historic & ongoing
- Natural change
- Wildfire is a potential gap
- Early warning systems
- Evidence on deer control is already good
- Keep prioritisation under review
- Be clear on what is good in terms of mechanisms
- Military training – where does this fit in?
- Whose costs / benefits are we estimating?

Group 2

Invasives (native and non-native)

Existing mechanisms:

- Orientating national strategy to site based activity
- Nationwide action plans – NNISS
 - Implement on Natura 2000 sites/network
 - Take action or not, determine appropriate response per species
- Catchment level activity = tackling at source
 - Prevention and reaction
 - None in England as yet (use River Basin Management Plans?)
- Deer Initiative
 - Cost?
 - Already focused at Sites of Special Scientific Interest/Special Areas of Conservation
 - A good model
- Environmental Stewardship should not be a barrier to tackling invasives on sites
 - Issues with derogations
 - Options to specifically tackle invasives if they appear
- Prevention – GB strategy review
 - Implementation for England

Funding:

- Deer Management plans in woodland – Cost of Woodland Grant Scheme

- Small amount from Environmental Stewardship – potential for more?
- UK grant bodies
- New EU Life projects
- Natura 2000 measure in the Rural Development Programme for England (linked to second one around Environmental Stewardship)

Lowland Grazing

Livestock issues:

- Availability
- Movement
- Fencing

Solutions:

- Stock sharing (flying flocks)
- Invisible Fencing – Trials at Epping Forest / Burnham Beeches
- Creation of bigger sites, managing them with adjacent sites (non-designated)
- Different grazing animals – use of ponies instead of sheep/cattle?
- Landscape approach – connecting small sites
- Innovative Partnerships
 - Landowners + Non-Governmental organisations + Statutory bodies + local initiatives
 - Realise multiple funding mechanisms

Funding:

Current

- Environmental Stewardship
 - Supports grazing where livestock exists but not where livestock unavailable
 - Potential ability to use for flying flocks + infrastructure + staffing

Future

- Need long term sustainable solutions
- Beyond Environmental Stewardship

Group 3

Water

Existing mechanisms:

- We don't need more of the same – creative and novel approaches needed – innovation
- Incentives
- How we perceive the management end point is time dependent – are we aiming for woodland as it was in the past, or are we comfortable with a changed outcome? Or just the best we can get?
- What we have traditionally done is not enough now and we need to demonstrate progress for continued public engagement
- There is a continued need for 'end-of-pipe' solutions, whilst longer-term 'diffuse' mechanisms take effect
- Focus on function, and possibly changing function to adapt to conditions

- Identify seed funding to develop or implement innovative mechanisms
- Partnerships can be seen as a mechanism in their own right (issues are administrative blockages, different rules to meet for each partner, management structures, resources needed to manage groups)
- Local benefits need to be made more clear – Members of Parliament, Non-Governmental Organisations, Community groups etc

Funding / What to do in the future to get it right:

- Knowledge sharing is vital. Who to go to for what (at various scales / levels – don't restrict to site boundary)
- Social responsibility – land banking? Swapping or purchasing arrangements to allow land use change or adaptation within an area or group of users
- Flexible use of funds. Bids to central fund made up of partner contributions
- Key advocates needed in key posts – virtual groups / teams & networks
- Businesses should be invited to join steering groups
- Smaller businesses or farms could also be valuable contributors
- Use the Action Plan's stakeholder groups to capture ideas / approaches
- Use top-up incentives for mechanisms that can be linked to payment
- Use of praise as encouragement – recognition

Have we got the right issues?:

- No economic model
 - Ecosystems cost benefits / value. Quantitative values
 - Tax credit / incentives – more carrot than stick
- Climate change
 - Tough enough job to cope with “no deterioration”
 - Biggest issue for ‘wet’ sites – needs addressing or considering
 - Changes to catchment management – natural and anthropogenic – future projects as part of management plan
- Horizon scanning – what's coming next? Links to other work needed
- Public engagement – greater & wider understanding of issues and links to other plans
- Better integration of Natura 2000 protected area requirements in Water Framework Directive River Basin Management Plans
- Balance of strategic and site specific issues
- Use of enforcement – apparent reluctance of regulators to use existing powers
- Missing issues include:
 - Invasive NATIVE species
 - Prioritisation of invasive species (focus on less widespread?)
 - Impact of forestry on water quality is now well understood
 - Landscape change – upstream impacting rest of catchment (for example, forestry)

Group 4

Marine & Coastal

Existing mechanisms – what is good plus issues:

- 2 methods of controlling activities (Carrot & Stick)
- Regulation (Carrot & Stick at different times), including incentives

- Voluntary methods (carrot), including education, codes of practice etc
- Incentives include decommissioning etc, however it is much harder to financially incentivise at sea as there is no owner of the resources (Crown Estate own the seabed, but fish stocks for example are un-owned) – marine equivalent of HLS would not work
- In order to measure how good a mechanism is, we first need to understand what success looks like and this is not possible for some areas
- We cannot assume success without monitoring & evidence to establish the facts, which is costly
- An important mechanism in marine particularly is to empower & engage interested parties in order to gain compliance
- It would be useful for IPENS to look at existing best practice, both domestic & abroad (EU)
- An available (although not always used mechanism) is the possible inclusion of partnerships and local communities as a means of helping to protect & enhance N2K sites

Funding:

- Lots of marine evidence gathering still to be done
- This is costly, and therefore need to be careful about what evidence is gathered – type, method, area etc

Have we got the right issues?:

- Yes, but some need to have name changes (for example, bait digging to bait gathering)
- Wildfowling (rec) does not need to be on the list as it is regulated through SSSIs (on the OLDs list) and there are very few N2K sites that have intertidal areas where wildfowling takes place, that are not underpinned by SSSI
- Marine power could be added to the list (nuclear / coal in addition to renewable energy) although all of these are well regulated
- Worth thinking about whether unregulated sources of pollution from shipping is an issue that IPENS could look at – for example, the recent pollution incident – is this too big an issue / already regulated where possible?

Appendix 7

Table F Issues eliminated following specialist discussions in the refined prioritisation exercise

Eliminated issue	Rationale
Water quality: Marine / toxics / bioaccumulation	Agreed with Natural England Principal Specialist that this should be regarded as very low priority for IPENS.
Water abstraction: exempt	The Defra / Environment Agency timescales to address this are now much earlier than anticipated, so there is no scope for IPENS to get involved immediately as initially thought.
Mortality: Persecution	Agreed with Natural England Principal Adviser that whilst IPENS should keep a watching brief on this issue, a Defra led steering group is currently developing new mechanisms to reduce raptor persecution, therefore it should not be within the scope of IPENS. However, mechanisms should be included in the IPENS Directory of Mechanisms and where appropriate in site improvement plans. Also agreed that any changes in the range of raptor species since designation will be dealt with via the SPA review process.
Marine: Ports & shipping / Construction Disturbance	Agreed with Natural England Senior Specialist that this is too large an issue for IPENS to address in the time available given the scale of the shipping sector and lack of existing knowledge.

Appendix 8

Table G Issues eliminated by subjective screening in the refined prioritisation exercise

Broad theme	Issue and task required	IPENS screening conclusion
Disease & Invasives	Disease – Genetic diversity investigation of key woodland species to enable avoidance/management of future disease outbreaks.	Desirable but too large a task for IPENS within the project timescale. IPENS may be able to help identify funding sources to progress the work outside of the project.
Disease & Invasives	Disease – Work with Food and Environment Research Agency (FERA) to develop assays to enable quick identification of a variety of diseases which threaten SAC and SPA feature condition.	Research and Development required which is outside of scope of IPENS funding. IPENS may be able to help influence FERA to achieve this.
Disease & Invasives	Marine Invasive Non-Native Species (INNS) – Developing bio security action plans for EMS.	Not in scope for IPENS, should be business as usual for marine function.
Disease & Invasives	Marine INNS – Providing decision trees for EMS site leads on INNS.	Not in scope for IPENS, should be business as usual for marine function.
Disease & Invasives	Marine INNS – Sector specific guidance on bio security.	Not in scope for IPENS, should be business as usual for marine function.
Habitat management	Lowland heath – Identify and promote best practice mechanisms for addressing human barriers to heathland restoration, including fire management plans.	Not appropriate for development of new mechanisms, but consider addressing via a Theme Plan.
Habitat management	Lowland heath – Input advice on issues with agri - environment/Natura 2000 to the Common Agricultural Policy reform Options Review process (by end April 2013).	Already completed.
Physical change	Marine ports & shipping – Achieve an overall picture of cumulative development within a small estuarine system.	A Research and Development project, rather than evidence or operational. Not likely to be transferable between sites therefore low priority for IPENS.
Physical change	Remediation of metaliferous mine spoil – Determine mechanism to enable flexibility in designation to address transient features.	Should be picked up by the SSSI Detailed Notification Review, so not a task for IPENS.
Recreation & disturbance	Marine Bait digging – Unable to specify at this stage; awaiting outcome of national bait gathering conference (date to be confirmed).	Knowledge levels low and scale of work needed mean IPENS will not be able to deliver much operationally within life of the project.

Table continued...

Broad theme	Issue and task required	IPENS screening conclusion
Recreation & disturbance	Coastal Dog walking – Unable to specify at this stage; further scoping required with Natural England specialists.	Knowledge levels low and scale of work needed mean IPENS will not be able to deliver much operationally within life of the project.
Recreation & disturbance	Marine recreational angling – Unable to specify at this stage; further scoping required with Natural England specialists.	Knowledge levels low and scale of work needed mean IPENS will not be able to deliver much operationally within life of the project.
Recreation & disturbance	Marine recreational boating – Unable to specify at this stage; further scoping required with Natural England specialists.	Knowledge levels low & scale of work needed mean IPENS won't be able to deliver much operationally within life of the project.
Water & pollution	River restoration – Clarification of Natural England legal powers regarding sluice management.	Remit of Natural England legal team, not IPENS.
Water & pollution	Air quality: nitrogen – Work to increase uptake of agri-environment / Catchment Sensitive Farming options to benefit air quality.	Largely dependent on outcome of agri-environment design work (NELMS), so low priority for IPENS until that is clear.
Water & pollution	Air quality: nitrogen – Identify other sources that are not well controlled.	Evidence project, but remains low priority until it is clear whether the Air Quality task and finish group will pick this up.

Appendix 9

Table H The prioritised list of issues that IPENS will focus on in later stages of the project

Ref.	Broad theme	Issue & task	Workload category
1	Disease & Invasives	Freshwater INNS – Evidence project to improve baseline data about freshwater INNS distribution.	Evidence project
2	Disease & Invasives	Disease – <i>Phytophthora austrocedrae</i> – develop and find funding for a project to control spread of the disease on SACs.	Evidence project
3	Disease & Invasives	Disease – <i>Phytophthora ramorum</i> and <i>kernoviae</i> : update the distribution data for these species and establish which SACs are most at risk due to proximity of rhododendron, to enable a programme of rhododendron removal to take place to avoid risk of infection of bilberry.	Evidence project
4	Disease & Invasives	Marine INNS – Control of pacific oyster in Thanet Coast Kent.	Evidence project
5	Disease & Invasives	Marine INNS – Site wide baseline data of pacific oysters.	Evidence project
6	Disease & Invasives	Disease – Identification of risk factors, pathways and mechanisms to avoid new outbreaks.	Evidence project
7	Disease & Invasives	Disease – <i>Phytophthora ramorum</i> and <i>kernoviae</i> : find funding and set up a programme of rhododendron removal close to highest risk sites.	Funding
8	Disease & Invasives	Freshwater INNS – Identification of funding sources for control work.	Funding / Theme plan
9	Disease & Invasives	Marine INNS – Identifying long term funding sources for control work.	Funding / Theme plan
10	Disease & Invasives	Invasive native species – Address control issues.	Funding / Theme plan
11	Disease & Invasives	Freshwater INNS – Theme Plan.	Theme plan
12	Habitat management	Bracken control – An evidence project to improve understanding of the impacts to Natura 2000 of not treating bracken.	Evidence project
13	Habitat management	Cutting & mowing – pending conclusion of new agri-environment options, consider picking up any mechanisms that the new options do not address.	Site and theme plans
14	Habitat management	Lowland grass grazing regime – pending conclusion of new agri-environment options, consider picking up any mechanisms that the new options do not address.	Site and theme plans
15	Habitat management	Upland burning – Unable to specify at this stage; awaiting outcome of Uplands Evidence Review and clarification of evidence to advice / Outcomes work streams.	Site and theme plans
16	Habitat management	Upland blanket bog – Unable to specify at this stage; awaiting outcome of Uplands Evidence Review and clarification of evidence to advice / Outcomes work streams.	Site and theme plans

Table continued...

Ref.	Broad theme	Issue & task	Workload category
17	Habitat management	Upland hay meadows – Unable to specify at this stage; awaiting outcome of Uplands Evidence Review and clarification of evidence to advice / Outcomes work streams.	Site and theme plans
18	Habitat management	Lowland heath – Identify and promote best practice mechanisms for addressing human barriers to heathland restoration and fire management plans.	Theme plan
19	Physical change	Remediation of metaliferous mine spoil – funding to address evidence gaps.	Evidence project
20	Physical change	Coastal squeeze – Investigate <i>Spartina anglica</i> in estuaries (across England and potentially other EU countries).	Evidence project
21	Physical change	Coastal squeeze – wave exposure and intertidal habitat erosion in estuaries.	Evidence project
22	Physical change	Coastal squeeze – intertidal sand / mudflat extent.	Evidence project
23	Physical change	Coastal squeeze – SPA species and how they are affected by the presence / absence of salt marsh.	Evidence project
24	Physical change	Coastal squeeze – follow up to healthy estuaries project.	Evidence project
25	Physical change	Natural physical change – address relevant issues via site improvement plans.	Site improvement plans
26	Physical change	Upland tracks – Unable to specify at this stage; awaiting outcome of Uplands Evidence Review and clarification of evidence to advice / Outcomes work streams.	Site and theme plans
27	Physical change	Change to coastal processes – Further scoping required for this issue.	Site and theme plans
28	Physical change	Marine loss of sites – Incorporate into Coastal Squeeze theme plan.	Theme plan
29	Recreation & disturbance	Marine SPAs – research on Exe Estuary into a species that seems to be in decline contrary to the national and regional trend.	Evidence project
30	Recreation & disturbance	Recreational pressures – Specific issues to be decided, but consideration to be given to marine bait digging, dog walking, marine recreational angling, marine recreational boating and other marine, coastal and terrestrial activities.	Site or theme plans
31	Species management	Deer – Analyse existing information on SACs relating to the adequacy of deer management measures and develop a plan for improvement.	Evidence project
32	Species management	Commercial fisheries – Source funding for evidence gathering to assist with Natural England's input into the Defra Article 6 fisheries project.	Evidence project
33	Species management	Invertebrate SAC features – Funding to fill Fischers Estuarine Moth evidence gap for this year, plus possibly other evidence gaps to be confirmed.	Evidence project
34	Species management	SPA birds – provide funding to develop a mechanism to address predation issues on intertidal/flooded sites.	Evidence project

Table continued...

Ref.	Broad theme	Issue & task	Workload category
35	Species management	Marine SPAs – investigate how changes to fisheries discards (Common Fisheries Policy) policies could change populations of seabird colonies.	Evidence project
36	Species management	Marine SPAs – research into foraging ecology and individual movements of diving birds within the Outer Thames Estuary SPA.	Evidence project
37	Species management	Invertebrate SAC features – pending conclusion of new agri-environment options, consider picking up any mechanisms that the new options do not address.	Site and theme plans
38	Species management	Vascular plants grazing regime – pending conclusion of new agri-environment options, consider picking up any mechanisms that the new options do not address.	Site and theme plans
39	Water & pollution	Air quality: nitrogen – pending conclusion of new agri-environment options, consider improvements to Catchment Sensitive Farming / agri-environment targeting to benefit air quality.	Evidence project
40	Water & pollution	Air quality: nitrogen – Work on applicability of measures spatially.	Evidence project
41	Water & pollution	Hydrological functioning – Evidence project to identify ground (and where required surface water) catchments for Natura 2000 sites, needed to support better implementation of a range of mechanisms. Links closely with Diffuse Water Pollution issue.	Evidence project and funding
42	Water & pollution	River restoration – Work up potential mechanisms into achievable mechanisms for river morphology.	Funding
43	Water & pollution	Lake restoration – To help secure stakeholder buy in and resources to restore Natura 2000 lakes including external funding.	Funding / Theme plan
44	Water & pollution	Siltation – To be included as part of work on Diffuse Water Pollution.	See Diffuse water pollution
45	Water & pollution	Water quality & forestry – To be confirmed. May be a diffuse pollution issue of local significance from time to time. Can be addressed via site plans or within a diffuse water pollution Theme Plan.	Site and theme plans
46	Water & pollution	Marine water quality – Work to check consistency of water quality metrics between Natural England and the Environment Agency.	Site and theme plans
47	Water & pollution	River restoration – Theme plan for River Restoration.	Theme plan
48	Water & pollution	Diffuse Water Pollution – Strategic plan for addressing diffuse pollution (nutrients and siltation) affecting Natura 2000 sites.	Theme plan and evidence

Appendix 10

Table I Provisional list of Theme Plan topics

Ref.	Theme	Rationale / Justification	Broad theme
1	Freshwater invasive non-native species	A strategic approach is needed and would help to apply practically the Natural England and Environment Agency approaches to invasives control.	INNS
2	Marine invasive non-native species	A strategic approach and guidance are required, which would aid the inclusion of bio security and INNS issues in all action plans for European Marine Sites. New approaches for funding also needed.	INNS
3	Lake restoration	A plan is needed to focus on developing a funding strategy for the suite of SAC lakes that will have lake restoration plans developed under Water Framework Directive funding.	Water & Pollution
4	River restoration	Many of the building blocks for river restoration are in place, but would benefit from a theme plan giving a strategic overview, as solutions are likely to take 20-30 years to fully implement.	Water & pollution
5	Diffuse Water Pollution (DWP)	A strategic plan would be a useful addition to address diffuse pollution affecting Natura 2000 sites. It would seek to cover improving the evidence needed to base effective delivery upon; resources required; proposals for national overview and tracking of DWP implementation; building capability and engaging support from stakeholders.	Water & Pollution
6	Coastal Squeeze	A national plan is needed for coastal squeeze, as it affects many estuaries around the country, and it is an issue that is beginning to be looked at strategically within Natural England.	Physical change
7	Coastal & Marine recreation & disturbance	Many minor but widespread problems within this theme, and it would be useful to have an overview of all activities, evidence gaps and impacts on Natura 2000 sites, including a consistent approach.	Recreation & Disturbance
8	Aerial Nitrogen Deposition	This affects many sites and features and is reported as one of the main causes for lack of progress in article 17 (2013). Needs solutions at national level to address background deposition and make local solution possible. There is a gap in available mechanisms. Involves multiple sectors.	Water & Pollution
9	Ecological connectivity & landscape scale approaches	This topic was noted as a possibility for a theme plan although not for further mechanism development by IPENS. Has been raised by stakeholders as a topic for consideration and is mentioned as a topic in the IPENS Life+ grant agreement.	Habitat management

Table continued...

Ref.	Theme	Rationale / Justification	Broad theme
10	Habitats management	Grazing change is the second most frequently reported pressure in the latest draft Article 17 report (2013).	Habitat management
11	Species management -high risk	A theme plan could help ensure that delivery mechanisms relating to site management are appropriate in accommodating the specific needs of Natura 2000 species. Species of the Habitats Directive often have specific habitat management requirements (in addition to the need to resolve environmental pressures). Supporting mechanisms (for example enabling specific grazing, specialist advice, financing through Higher Level Stewardship) can be inadequate due to regulatory constraints (for example CAP regulations). Especially relevant to Natura 2000 plants and invertebrates. Emphasis may be placed on species for which the UK has special responsibility and which are assessed under Article 17 as declining.	Species management
12	High risk SPA Birds	Necessity and scope of this theme will be informed by IPENS SPA workshop (29 th July)	Species management
13	Water stress / hydrological management	Hydrological change is the most frequently reported pressure in the latest draft Article 17 report. Unfavourable hydrology (for example through drainage) is constraining the condition of mainly bogs, fens and some coastal and forest habitats, as well as freshwater habitats (lakes, ponds, species). Resolution often involves complex and costly measures. Water Level Management Plans are in place, but majority of bog sites do not have comprehensive hydrological plans. Strategic approach may help to step up implementation of necessary measures at priority locations.	Water & pollution



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