Habitats Regulations Appraisal Statement

West Lothian Local Development Plan: background paper

"The importance of key habitats and related species in West Lothian's most important protected areas, and impacts from any potential new development plan allocations and policies, requires to be carefully assessed at this early stage of the Local Development Plan process"

Contents

1 Introduction

This Habitat Regulations Appraisal statement has been prepared in conjunction with the Main Issues Report (MIR) for the West Lothian Local Development Plan (LDP).

Figure 2 of *Planning Circular 1/09* makes it clear that the appropriate time to publish a record of HRA in support of local development plans is at the same time as publishing the Proposed Plan, Proposed Action Programme and revised Environmental Report. At the *Main Issues Report* stage, all that is required is that implications from preferred options for nature conservation sites protected by European legislation are considered.

West Lothian Council has considered implications for European sites from preferred options through the Strategic Environmental Assessment process and have detailed this within the *Environmental Report*. The *Environmental Report* includes as a distinct SEA objective:

"Demonstrate no adverse effects on the integrity of Natura 2000 sites."

2 What is a Natura 2000 site?

Natura 2000 is the European wide network of protected areas developed under the European Commission 'Habitats Directive' (Directive 92/43/EEC) and the 'Birds Directive' (Directive 79/409/EEC).

The Natura 2000 Network is made up of Special Areas of Conservation (SAC) which support rare, endangered or vulnerable natural habitats and species of plants or animals (other than birds) of European importance, and Special Protection Areas (SPA) which support significant numbers of wild birds and their habitats. SACs in Scotland are designated by Scottish Ministers under the Habitats Directive and SPAs are classified by Scottish Ministers under the Birds Directive.

There is great a deal of overlap in early stages of SEA and HRA and it is appropriate to carry out the early stages in parallel. However, the SEA objective 60 demonstrate no adverse effects on the integrity of Natura 2000 sites should not also be relied on in the HRA and LDP as advised by Scottish Natural Heritage. The recommendation in the SNH HRA guidance and in Scottish Government's HRA Advice Sheet 2 is that plan-making bodies should not rely on a general policy in the plan. All proposed development allocations therefore need to be considered carefully and mitigation identified as appropriate in allocating sites.

3 What is a 'Special Protection Area' (SPA)?

Special Protection Areas (SPAs) are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species. The European Commission's website hosts a full copy of the EC Directive on the conservation of wild birds (79/409/EEC), within which all the Articles and Annexes (including amendments) are given, along with useful interpretation information.

4 What is a 'Special Area of Conservation' (SAC)?

A Special Area of Conservation (SAC) is an area which has been given special protection under the European Union's Habitats Directive. SACs provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

West Lothian has three such Natura 2000 sites, one being a Special Protection Area, the other two being Special Areas of Conservation, brief details of which are provided. There are also two other sites close to West Lothian that have also been considered for potential impacts that may occur through allocations in the LDP, namely Balch Loch Moss Special Area of Conservation in Falkirk Council (within circa 1.2km of West Lothian at its nearest point) and Westwater Special Protection Area within the Scottish Borders (within circa 2.2km of the boundary of West Lothian at its nearest point)

It is also important to note what the 'vulnerabilities' and 'conservation objectives' are in respect of the sites referred to in this document. These are set out as follows:

Vulnerabilities

Activities which are known, or are likely, to affect the European sites. This information can help to direct subsequent appraisal of mitigation measures. A robust, publicly accessible source of information on site vulnerabilities can be found in the standard data forms available on the JNCC website at the following pages:

- Special Protection Areas
- Special Areas of Conservation

Conservation objectives

The SNH SiteLink webpages provide details of where the conservation objectives for each of the sites referred to in this document can be found. This information is particularly useful as the test of significance is against whether a plan or project could undermine the site's conservation objectives.

A summary of the vulnerabilities and conservatio objectives for Natura 2000 sites in West Lothian and sites close to West Lothian is as follows:

Firth of Forth SPA (West Lothian)

Vulnerabilities and conservation objectives

To avoid deterioration of the habitats of the qualifying bird species or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and to ensure for the qualifying species that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

NB *Details of the qualifying species are found elsewhere in this document on page 6-7*

Craigengar SAC (West Lothian)

Vulnerabilities and conservation objectives

To avoid deterioration of the qualifying habitats thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and to ensure for the qualifying habitats that the following are maintained in the long term:

- Extent of the habitat on site
- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat
- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat
- No significant disturbance of typical species of the habitat

Qualifying habitats:

- Dry heaths
- Species-rich grassland with mat-grass in upland areas*

** Indicates priority habitat*

Blawhorn Moss SAC & NNR (West Lothian)

Vulnerabilities and conservation objectives

To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and to ensure for the qualifying habitats that the following are maintained in the long term:

- Extent of the habitat on site
- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat
- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat
- No significant disturbance of typical species of the habitat

Black Loch Moss SAC (Falkirk)

Vulnerabilities and conservation objectives

To avoid deterioration of the qualifying habitats (listed below) thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features; and to ensure for the qualifying habitats that the following are maintained in the long term:

Extent of the habitat on site

- Distribution of the habitat within site
- Structure and function of the habitat
- Processes supporting the habitat
- Distribution of typical species of the habitat
- Viability of typical species as components of the habitat
- No significant disturbance of typical species of the habitat

Qualifying habitats:

- Active raised bogs*
- Degraded raised bogs

** Indicates priority habitat*

SNH Sitelink gives more information on the Black Loch Moss site.

Westwater SPA (Scottish Borders)

Vulnerabilities and conservation objectives

To avoid deterioration of the habitats of the qualifying species (listed below) or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained; and to ensure for the qualifying species that the following are maintained in the long term:

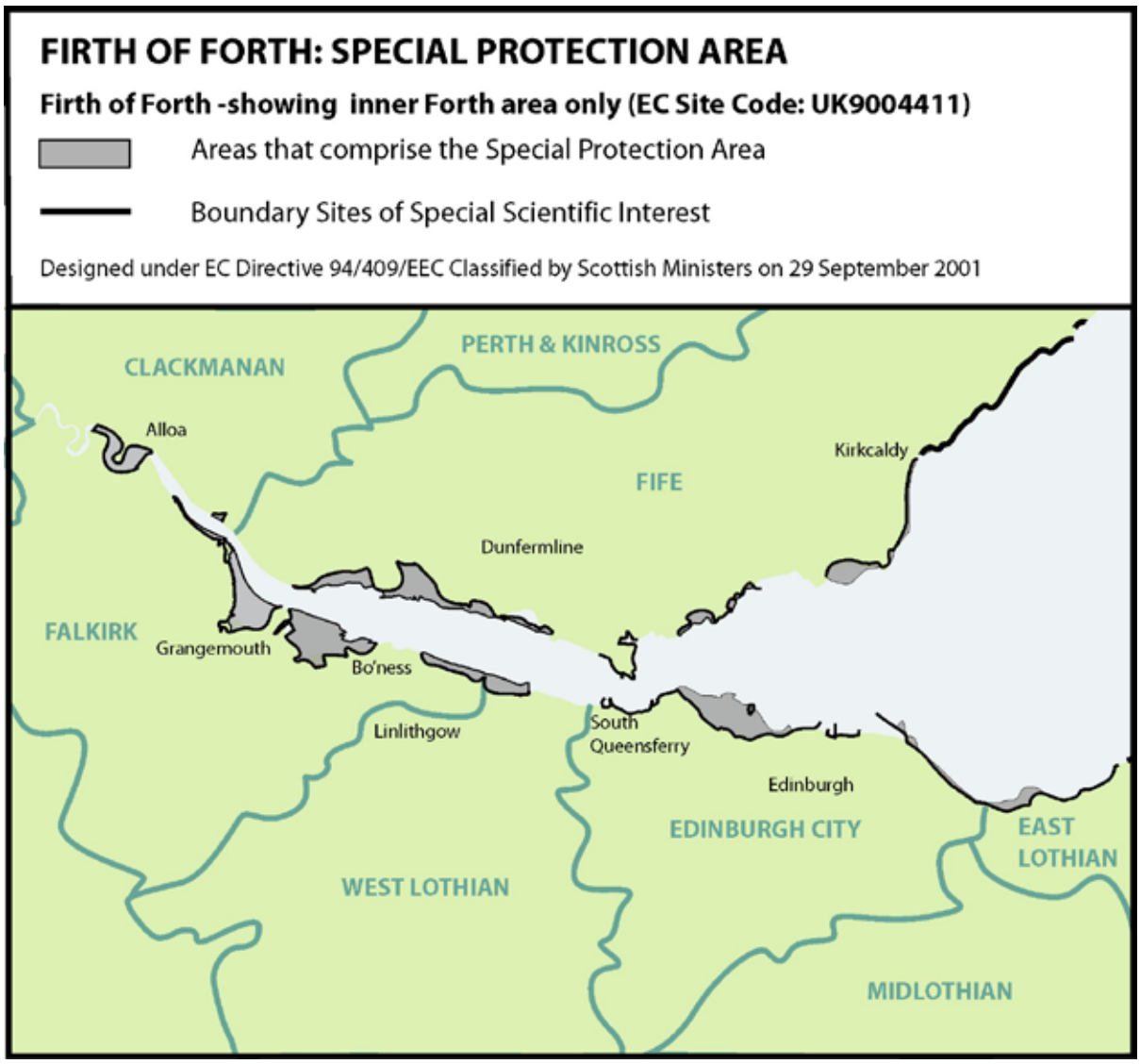
- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species

Qualifying species:

- Pink-footed goose (Anser brachyrhynchus)
- Waterfowl assemblage

SNH Sitelink gives more information on the WestwaterSPA site.

5 Special Protection Areas in West Lothian and adjacent local authoriities



Firth of Forth Special Protection Area (SPA)

The Firth of Forth SPA is a complex of estuarine and coastal habitats in south east Scotland stretching east from Alloa to the coasts of Fife and East Lothian. The site includes extensive invertebrate-rich intertidal flats and rocky shores, areas of saltmarsh, lagoons and sand dune. The site is underpinned by the Firth of Forth SSSI. In West Lothian it covers the area west of Hopetoun House.

Qualifying interest

The Firth of Forth SPA qualifies under *Article 4.1 of the Birds Directive – Special Protection Areas* by regularly supporting wintering populations (1993/94-97/98 winter peak means) of species of European importance listed in *Annex 1 of the Act.*

Such species include:

Red-throated diver	*Gavia stellata* (90 individuals; 2% of GB)
Slavonian grebe	*Podiceps auritus* (84; 2% of NW Europe, 21% of GB)
Golden plover	*Pluvialis apricaria* (2,949; 1% of GB)
Bar-tailed godwit	*Limosa lapponica* (1,974; 2% of Western Europe, 4% of GB)

The site further qualifies under *Article 4.1 of the Birds Directive – Special Protection Areas* by regularly supporting a post-breeding (passage) population of European importance of the *Annex 1* species

Sandwich tern	*Sterna sandvicensis* (1,617, 6% of GB, 1% of East Atlantic)

The Firth of Forth SPA qualifies under *Article 4.2 of [Birds Directive – Special Protection Areas]* by regularly supporting wintering populations (1993/94-97/98 winter peak means) of both European and international importance of the migratory species. These include:

Pink-footed goose	*Anser brachyrhynchus*	(10,852; 6% of Icelandic/Greenlandic)
Shelduck	*Tadorna tadorna*	(moulting flock of 4,509; 2% of NW European)
Knot	*Calidris canutus*	(9,258; 3% of western European/Canadian)
Redshank	*Tringa totanus*	(4,341; 3% of European/West African)
Turnstone	*Arenaria interpres*	(860 individuals; 1% of European)

The Firth of Forth SPA further qualifies under *Article 4.2 of [Birds Directive – Special Protection Areas]* by regularly supporting a wintering waterfowl assemblage of European importance: a 1992/93-96/97 winter peak mean of 95,000 waterfowl, comprising 45,000 wildfowl and 50,000 waders. This assemblage includes nationally important numbers of 15 migratory species of:

Great crested grebe	*Podiceps cristatus*	(720; 7% of GB)
Cormorant	*Phalacrocorax carbo*	(682; 5% of GB)
Scaup	*Aythya marila*	(437; 4% of GB)
Eider	*Somateria mollissima*	(9,400; 13% of GB)
Long-tailed duck	*Clangula hyemalis*	(1,045; 4% of GB)
Common scoter	*Melanitta nigra*	(2,880; 8% of GB)
Velvet scoter	*M. fusca*	(635; 21% of GB)
Goldeneye	*Bucephala clangula*	(3,004; 18% of GB population)
Red-breasted merganser	*Mergus serrator*	(670; 7% of GB)
Oystercatcher	*Haematopus ostralegus*	(7,846; 2% of GB)
Ringed plover	*Charadrius hiaticula*	(328; 1% of GB)
Grey plover	*Pluvialis squatarola*	(724; 2% of GB)
Dunlin	*Calidris alpina*	(9,514; 2% of GB)
Curlew	*Numenius arquata*	(1,928; 2% of GB)

The assemblage also includes large numbers of the following species:

Wigeon	*Anas penelope*	(2,139 [1991/2-95/96])
Mallard	*A. platyrhnchos*	(2,564 [1991/2-95/96])
Lapwing	*Vanellus vanellus*	(4,148 [1991/2-95/96])

Area: 6,313.72 ha.

OS 1:50,000 sheets - 59, 65, 66 & 67

National Grid References: NS 865920 to NO 615075 and NT 678794

Blawhorn Moss (SAC)

Blawhorn Moss is one of the larger, least-disturbed active raised bogs in the Central Belt of Scotland. The vegetation exhibits well-developed hummock and hollow topography and supports many of the species representative of bog, such as *Sphagnum papillosum, S. magellanicum* and cranberry *Vaccinium oxycoccos*. It is of further interest in that on one side it grades into 'Blanket Bogs'. It is also a National Nature Reserve and one of only 47 such sites in Scotland. National Nature Reserves are areas of land set aside for nature, where the main purpose of management is the conservation of habitats and species of national and international significance.

Centroid - NS885682 - ** (This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.)*

Joint Nature Conservation Committee - Blawhorn Moss

Description of ecological characteristics

Degraded raised bogs occur where there has been widespread disruption, usually by man, to the structure and function of the peat body. This can involve changes to the hydrology, vegetation, and physical structure of the bog, leading to desiccation, oxidation and loss of species or changes in the balance of the species composition. In contrast to other active raised bogs, peat is not currently forming in the way a degraded bog does. The vegetation of degraded bog contains several, but not all, of the species typical of active raised bogs, but the relative abundance and distribution of individual species differs.

The Interpretation manual of European habitats (European Commission DG Environment 1999) stresses that degraded raised bogs only includes examples which are 'capable of natural regeneration', i.e. *"where the hydrology can be repaired and where, with appropriate rehabilitation management, there is a reasonable expectation of re-establishing vegetation with peat-forming capability within 30 years".* This has been assessed on a case-by-case basis. Provided they are capable of natural regeneration, the following land-cover types are considered to fall within the definition of degraded raised bogs:

1. Conifer plantations;
2. Improved pasture;
3. Scrub woodland (usually birch Betula spp.);
4. Bare peat;
5. Impoverished vegetation dominated by species including purple moor grass Molinia caerulea, hare's-tail cottongrass Eriophorum vaginatum and heather Calluna vulgaris, and lacking significant cover of bog-mosses and also containing Sphagnum species.

BLAWHORN MOSS SPECIAL AREA OF CONSERVATION (SAC)

Designation date: 17 March 2005

Administrative area: West Lothian

Qualifying interests for which the site is designated:

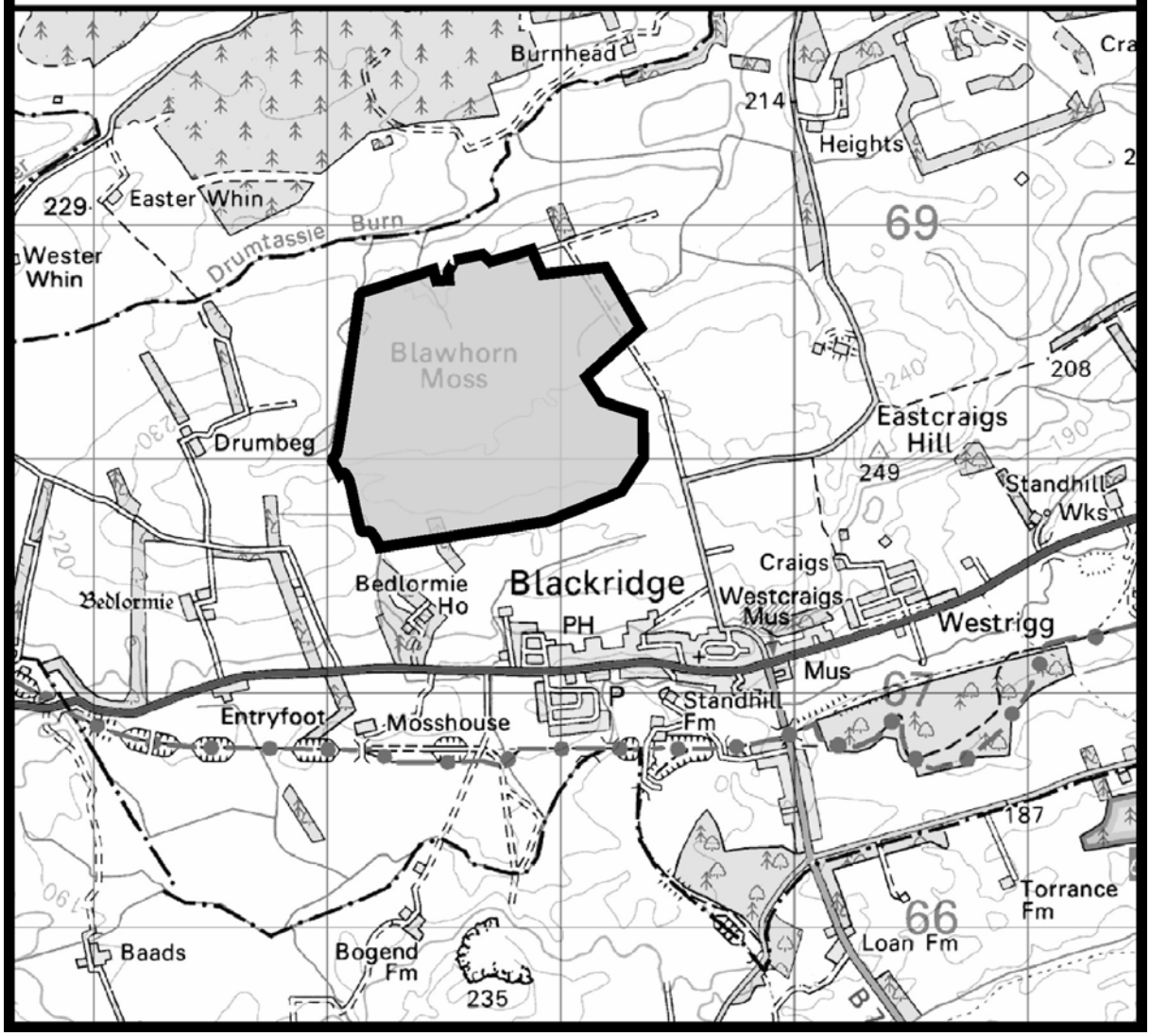
SCIENTIFIC NAME	*COMMON NAME*
*Active raised bogs**	*Active raised bogs*
Degraded raised bogs still capable of natural regeneration	*Degraded raised bog*

* Indicates a priority habitat

Blawhorn Moss (EC Site Code: UK0019758)

Special Area of Conservation (SAC) (SAC is coincident with component SSSI)

SPECIAL AREA OF CONSERVATION
Designed under EC Directive 92/43/EC by Scottish Ministers on 17 March 2005



Craigengar Special Area of Conservation (SAC)

Craigengar is situated in the Pentland Hills and contains the largest population of marsh saxifrage *Saxifraga hirculus* in Scotland. It is the largest single colony outside the North Pennines, supporting, in 1999, an estimated 9,666 plants in base-rich flushes in an area of upland heather moorland.

Centroid - NT075542 - ** This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.*

Marsh saxifrage *Saxifraga hirculus* is an attractive, yellow-flowered perennial that requires base-rich and wet conditions. It is now considered an upland species because its favoured habitats in the lowlands have been destroyed. It has suffered from overgrazing and drainage. Many of the sites for the species are heavily grazed, although moderate levels of grazing are probably beneficial to this plant.

In the UK marsh saxifrage *Saxifraga hirculus* is found only at a very few sites in the uplands of Scotland and England, and at one site in Northern Ireland. Since the 19th century, it has become extinct in several areas, mostly in Scotland. In summer 1999, estimates made across the main English and Scottish localities suggested a population of well over 300,000 plants, with the largest single population surveyed estimated at 153,100 (Hallam & Kelly 2002). Sites in Scotland and Northern Ireland tend to have much smaller populations , although Craigengar in Scotland supported an estimated 9,666 plants in summer 1999.

CRAIGENGAR SPECIAL AREA OF CONSERVATION (SAC)

Designation date: 17 March 2005

Administrative area: Scottish Borders, South Lanarkshire and West Lothian

Qualifying interests for which the site is designated:

SCIENTIFIC NAME	*COMMON NAME*
Eurpoean dry heaths	*Dry heaths*
Saxifraga hirculus	*Marsh saxifrage*
*Species rich Nardus grassland, on siliceous insubstrates in mountain areas (and submountain upland areas areas in continental Europe)**	*Species-rich grassland with mat-grass*

* Indicates a priority habitat

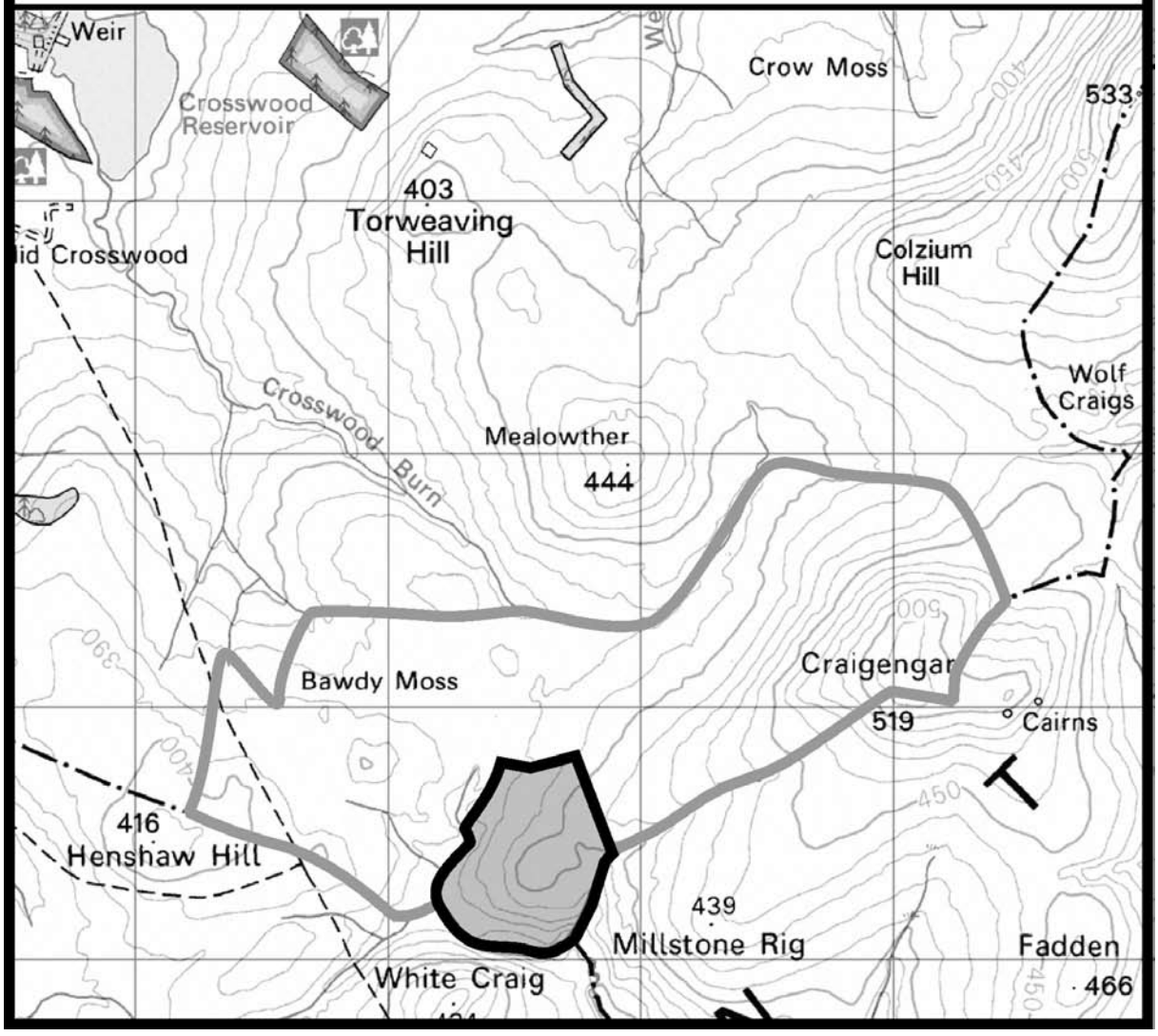
Craigengar (EC Site Code: UK0012577)

Special Area of Conservation (SAC)

SSSI boundary

SPECIAL AREA OF CONSERVATION

Designed under EC Directive 92/43/EC by Scottish Ministers on 17 March 2005



6 Assessment of Potential Impacts on Natura 2000 sites

Preferred options for the LDP and their reasonable alternatives as set out in the *Main Issues Report*, have all been assessed for their performance against the objective of protecting Natura 2000 habitats and significant negative effects have been recorded against the biodiversity topic if it was considered that there was potential for an adverse effect on the integrity of a Natura 2000 site (eg. Firth of Forth SPA).

An initial assessment of the potential for an adverse effect on the integrity of a Natura 2000 site against key issues identified in the key issues identified in the West Lothian LDP Main Issues Report are shown in table 1:

Table 1: ***Assessment of Impacts on Natura sites from key issues identified in the West Lothian LDP Main Issues Report***

Main Issue	Main Issue	Impacting Element	Nature of Impact	Mitigation Measures?
1	**Economic development and growth**	Cumulative scale of employment land growth in Broxburn, Livingston, Uphall and Winchburgh.	Yes – Firth of Forth SPA. Potential impacts during construction arising from run-off and/or untreated waste water entering watercourses which are tributaries of River Forth. Loss of supporting habitat was considered against current BTO tetrad data. No records associated with preferred option area.	Ensure construction is carried out in accordance with current best practice and SEPA licensing requirements.LDP to include specific policy caveat where required.
2	**Community Regeneration**	The settlements identified are unlikely to have connections to the SACs, particularly Craigengar or Black Loch Moss. This suggests that the SACs can be screened out. There are records of pink-footed geese near Whitburn, Bathgate and Blackburn but likelihood of impact is related to what the community regeneration will involve. If this is within settlement, LSE is unlikely. If regeneration is likely to lead to expansion in these areas, the council will screen in this for further consideration.	LSE will be determined by answer in previous column to whether there is to be any likely significant effect (LSE)	Will be dependent on whether there is any LSE. Any specific requirements that identify any impacts on a Natura site would be picked up through detailed requirements against an individual sit at the proposed stage of the plan.

Main Issue	Main Issue	Impacting Element	Nature of Impact	Mitigation Measures?
3	**Housing Growth, Delivery and Sustainable Housing Locations**	Cumulative scale of housing land development in particular in Broxburn, Livingston, Uphall and Winchburgh.	Yes – Firth of Forth SPA. Potential impacts during construction arising from run-off and/or untreated waste water entering watercourses which are tributaries of River Forth. Loss of supporting habitat was considered against current BTO tetrad data. No records associated with preferred option area.	Ensure construction is carried out in accordance with current best practice and SEPA licensing requirements. LDP to include specific policy caveat where required. Any specific requirements that identify any impacts on a Natura site would be picked up through detailed requirements against an individual sit at the proposed stage of the plan.
4	**Infrastructure Requirements and Delivery**	Will be dependent on the nature of infrastructure is being considered here. If it infrastructure that is proposed by this plan then there could be some LSE, if by other plans or previous plans then this will not lead to any LSE Anything not proposed by the Plan itself, e.g. motorway junction upgrades from previous plans will be screened out. Also smaller scale infrastructure such as minor junction improvements, school extensions and even new schools can be screened out and any individual impact assessed at the time of any detailed planning application.	LSE will be determined by answer in previous column to whether there is to be any likely significant effect (LSE), but this is considered unlikely	Will be dependent on whether there is any LSE. Any specific requirements that identify any impacts on a Natura site would be picked up through detailed requirements against an individual sit at the proposed stage of the plan.

Main Issue	Main Issue	Impacting Element	Nature of Impact	Mitigation Measures?
5	**Town Centres and Retailing**	Town centres given their locations and scale of development involved can be screened out as unlikely to have direct or indirect effect on any of the designated sites. Retailing requires consideration however as this may lead to development in areas likely to have either direct or indirect effect on Firth of Forth SPA.	LSE will be determined by answer in previous column to whether there is to be any likely significant effect (LSE), but this is considered unlikely	Will be dependent on whether there is any LSE. Any specific requirements that identify any impacts on a Natura site would be picked up through detailed requirements against an individual sit at the proposed stage of the plan.
6	**The Natural and Historic Environment**	Formalising footpath access, new woodland planting and formalising of footpath networks could be impacting elements on the natural environment. As with infrastructure, if these are unlikely to be proposed by the Plan itself, they will be screened out and dealt with in HRA of the appropriate PPS, e.g. applications, plan or other plans. Other elements of the Plan related to the historic and natural environment will be screened out as measures intended to protect the natural environment (see SNH HRA guidance, para 4.18, pg 19). This could include minor works in conservation areas or to listed buildings.	LSE will be determined by answer in previous column to whether there is to be any likely significant effect (LSE), but this is considered unlikely	Will be dependent on whether there is any LSE.

Main Issue	Main Issue	Impacting Element	Nature of Impact	Mitigation Measures?
7	**Climate Change and Renewable energy**	The draft HRA statement identifies renewable energy proposals as the impacting element. Our advice is that it is unlikely that you will have enough information on where these proposals will come forward for you to assess this at Plan level. Suggest that this is screened out as being too general (HRA guidance, para 4.18, pg 20)	If renewable projects were to be considered further, the first paragraph of mitigation for maintaining use of the site is unlikely to be appropriate for a wind farm site.	Will be dependent on whether there is any LSE, but likely impacts would be picked up through any planning applications. Any specific requirements that identify any impacts on a Natura site would be picked up through detailed requirements against an individual sit at the proposed stage of the plan.
8	**Waste and Minerals**	Cumulative impact of individual developments that could have an impact on watercourses flowing to each Natura site listed, in particular any water from each site which finds its way into the River Almond which feeds into the River Forth and could affect the SPA.	Yes – Firth of Forth SPA; Blawhorn Moss SAC; Craigengar SAC. Potential loss of supporting habitat, disturbance during use and potential effects through water environment.	Mitigation requires further consideration. Unlikely that general requirement for SUDS and filtration alone would address identified impacts. Site specific policy caveats likely to be required. Potential impacts where there are pathway links have to be considered.

***NB** it is highly likely that any development allocations as known at the time of writing for possible inclusion in the LDP will not have any individual or cumulative impacts on any of the SACs listed in this documents, due to no demonstrable pathways in terms if water or other pollutants of any significance that would have any impact on the integrity on the qualifying interests or conservation objectives of any of these designations.*

Should the council consider allocating sites that are identified as having a likely significant effect on the Firth of Forth SPA, Blawhorn Moss SAC or Craigengar SAC; if this likely significant effect cannot be avoided an appropriate assessment will be required.

What is appropriate assessment?

Habitats Regulations require competent authorities (in this case West Lothian Council) to carry out appropriate assessments in certain circumstances where a plan or project affects a Natura (European) site. Habitats Regulations Appraisal (HRA) refers to the whole process, including the appropriate assessment step. Appropriate assessment is required when a plan or project affecting a Natura site:

- Is not connected with management of the site for nature conservation, and
- Is likely to have a significant effect on the site (either alone or in combination with other plans or projects)

This applies to any plan (in this case the *West Lothian Local Development Plan*) or project which has the potential to affect a Natura site, no matter how far away from that site. An appropriate assessment should focus exclusively on the qualifying interests of the Natura site affected and must consider any impacts on the conservation objectives of the site. It should also be based on, and supported by evidence that is capable of standing up to scientific scrutiny.

The council must therefore not authorise a plan or project unless, by means of the appropriate assessment, they can ascertain that it will not adversely affect the integrity of a Natura site. The only exceptions are if there are no alternative solutions and there are imperative reasons of overriding public interest for the plan or project to go ahead. Further guidance on this is provided within the document published by the

Department for Environment, Food and Rural Affairs and entitled

Habitats Directive: guidance on the application of article 6(4) Alternative solutions, imperative reasons of overriding public interest (IROPI) and compensatory measures

In essence there can be occasions where there is an overriding public interest that necessitates an impact on a Natura 2000 site, however 'compensatory' developments can be accrued to make up for any impact. A brief summary of this is outlined:

1. The purpose of the Habitats Directive is to enhance Europes biodiversity by protecting its most important habitats and species. This is achieved, in part, through the designation of protected sites
2. The directive requires competent authorities (those with decision making powers) to assess the impact of plans or projects that may have a significant effect on these "European sites", either alone or in combination with other plans or projects. Competent authorities cannot consent to plans or projects they determine may have an *"adverse effect on the integrity of a European site"* following such an assessment.

3. However the directive provides a derogation under article 6(4) which allows such plans or projects to be approved provided three tests are met:
   - There are no feasible alternative solutions to the plan or project which are less damaging.
   - There are *"imperative reasons of overriding public interest"* (IROPI) for the plan or project to proceed.
   - Compensatory measures are secured to ensure that the overall coherence of the network of European sites is maintained.
4. These tests must be interpreted strictly and developments which may result in an adverse effect on the integrity of a European Site can only be authorised once the above tests have been met. This document provides guidance on how these tests should be applied in England and UK offshore waters (except in relation to functions exercised by devolved authorities). It is not intended to provide an authoritative statement of the law and should be read in conjunction with the Habitats Directive and its transposing regulations. The Government recommends competent authorities and statutory nature conservation bodies have regard to this guidance when considering making a derogation under article 6(4). This guidance does not apply to article 16 of the directive which concerns European Protected Species.
5. Competent authorities should be aware that there may be circumstances where a development that may be damaging to a European site is needed for an imperative reason of overriding interest. As long as the other requirements of article 6(4) are met, such developments can be approved to ensure that this interest is met.
6. Developers and competent authorities should engage closely when an application is made for an article 6(4) derogation. They should also ensure that the tests are fully explored and documented, since this will help avoid delays to the decision making process and ensure a transparent and robust decision. Early engagement with statutory nature conservation bodies (Scottish Natural Heritage, Joint Nature Conservation Committee, as appropriate) is strongly recommended, since their view should be obtained on the extent of any adverse effect, and the compensatory measures required. The Government expects the statutory nature conservation bodies to have a role in helping the competent authorities to identify adequate compensatory measures.

A further issue is that of the potential cumulative impact of the loss of land which acts as supporting habitat to the qualifying species of the Firth of Forth SPA. It is understood that Pink Footed Geese can use any greenfield site within 20km of the SPA and that some other species can use any greenfield site up to 5km from the SPA boundary as supporting habitat. As the majority of the West Lothian Council area is within 20km of the Firth of Forth SPA there is, in theory, the potential for the loss of supporting habitat at every greenfield site within the council area. In this respect there is some useful data that we will use from the British Trust for Ornitholgy in the form of 'tetrad' data (see glossary of terms for more information).

BTO tetrad data, shows information for the following species in West Lothian:

- Curlew
- Golden plover
- Grey plover
- Lapwing
- Oystercatcher
- Redshank

Records for the above species are concentrated within 5km of the SPA, no further south than Bridgend and Winchburgh.

The map also shows pink-footed geese records, which are up to 20km from the SPA and extend south to the Pentland Hills fringe (see attached maps as Appendix 1). This information will form the basis for making decisions on likely significant effect in the initial screening stages of our HRA.

It is understood that Scottish Natural Heritage are working towards developing a better understanding of the types of greenfield land which act as supporting habitat to the qualifying species of the SPA and that they will advise the council which of their greenfield sites have the potential to act as supporting habitat to the SPA through the LDP *Main Issues Report* consultation process.

Appendix 1 – TETRAD MAPS

Habitats Regulations Assessments of Local Development Plans

Firth of Forth SPA – distribution maps for selected bird species, including inland feeding sites.

This is an explanatory note to accompany the distribution maps. The purpose, source, limitations and potential uses of the data are highlighted.

Introduction

The Firth of Forth SPA covers most of the intertidal coastal areas around the Forth estuary. The SPA is designated for a number of different bird species, mainly waterfowl (ducks, geese, divers and grebes) and waders. These tend to be referred to as wintering birds. However, it is more accurate to call them "non-breeding, migratory birds", i.e. they breed elsewhere and migrate to, or pass through, the Firth of Forth between July and April. The core "winter" period is September to March for most of these species.

It is known that a number of these SPA species also spend a proportion of their time away from the coast, at inland feeding and day roosting sites. Many of these will be very close to the coast, and most species rarely fly more than 5km from the coast on a regular basis. Pink-footed geese are the exception to this, often flying up to 20km from the coast, or from other roosting sites, to their feeding areas.

The following species were identified as commonly using inland feeding sites:

- Waders
  - Curlew
  - Redshank
  - Oystercatcher
  - Golden plover
  - Grey plover
  - Lapwing
- Pink-footed geese

These waders primarily feed and roost on the coast, feeding in the intertidal zone at low and mid tide. At high tide, when the intertidal zone is underwater, they often use inland sites for feeding. The will use arable fields and pasture as well as recreational green spaces such as sports pitches, golf courses and parks with short mown grass. (Lapwing feed less in the intertidal area and are more dependent on the inland sites).

Pink-footed geese behave differently from the waders. They primarily feed at inland feeding sites, using coastal sites, as well as inland reservoirs and lochs, for roosting. They principally feed in arable fields and pasture.

Purpose of the mapping project

The council knows that these bird species use inland feeding sites. We also know that green field sites are being lost to development, a process that has been going on for many years but which has greatly accelerated in the last few decades. Concerns have been raised that the incremental loss of green field sites could be detrimental to these SPA bird species, by depriving them of important feeding areas.

Local Development Plans which propose the development of green field sites are required to assess the potential impacts on these SPA bird species as part of their Habitats Regulations Assessment.

British Trust for Ornithology data

There are a lot of good data for SPA birds on the coast, in particular the WeBS counts (Wetland Bird Survey) carried out every year by BTO (British Trust for Ornithology in partnership with RSPB and JNCC). The WeBS counts are undertaken every month, allowing a detailed picture to be built up of bird distributions.

However, there are relatively few data for the inland green field sites, mostly anecdotal recordings or very local surveys undertaken for a particular EIA. BTO, in association with BirdWatch Ireland and the Scottish Ornithologists' Club, have recently completed Bird Atlas 2007–11 which was a four year national survey, based on surveys of 10-km squares and tetrads (2 x 2 km squares) to obtain national breeding and wintering distribution and relative abundance information. Fortunately, the area around the Firth of Forth has been well covered by this survey, with counts for most tetrads, allowing mapping at local scales. Counts take two forms: each tetrad required two dedicated winter counts, one in November-December and one in January-February, at some point over the four winters 2007/08 to 2010/11. In addition, observers could chose to make further visits to add extra species or other counts. The data are therefore less detailed than the WeBS counts, having been collected for a different purpose.

Additionally, there is some extra count data collected by local bird recorders. The maps show the highest of the two counts for each tetrad, or the highest count from another source if this was higher than the Bird Atlas 2007–11 tetrad counts.

Tetrads for which no counts were made, and for which no other records exist, have been greyed out on the maps (please note that these uncounted squares are not greyed out, but have been left blank, on the pink-footed geese maps due to a spreadsheet glitch). The only significant area where a number of tetrads haven't been counted is north east Falkirk. This is unfortunate, as given the proximity of high concentrations of intertidal birds at Kinneil Kirse and Skinflats there is a reasonable probability of higher than average numbers of birds using the inland tetrads here. It may be possible to get additional data from local bird recorders to fill in these uncounted squares.

If viewing these data as shape files on a GIS system, each individual tetrad can be interogated – this will give the maximum number of birds counted for that tetrad, both the Bird Atlas 2007–11 survey count and any additional count. Unfortunately this data doesn't show up on pdfs or paper copies (although it could be supplied for the assessment of particular sites). Negotiations with BTO are ongoing to allow distribution of GIS shape files to all interested parties.

Limitations of the data

- Wader species were mapped in a zone within about 5km, or three tetrads, from the coast. Pink-footed geese were mapped in an approximate 20km zone, or about two to three 10 x 10 km squares, from the coast. Some birds do occur outwith these zones, but their distribution is generally quite sporadic and therefore development outwith the coastal zone is less likely to be of concern from this perspective.
- Because each tetrad was only counted twice it would be easy to miss birds that were using a tetrad on other occasions. Therefore, a zero count does not necessarily mean that birds don't use that tetrad.
- If birds were recorded in a tetrad, even in large numbers, there is no guarantee that they use that tetrad on a regular basis – it could have been a one off.
- The size of the tetrads, i.e. 2 x 2 km (four square km) means that a number of fields or green field sites may be covered. We have no way of knowing which of the green sites was being used by the birds.
- Many of the tetrads overlap the coast. In these instances there is a fairly high probability that the birds were recorded on the coast, rather than on the green field sites adjacent to the coast (we can't tell this from the survey, which was not designed to record this information). However, it is well known that suitable green field sites close to areas of the coast favoured by waders, are also likely to be used by these same waders at high tide.
- A count of birds in an isolated tetrad on the maps tells us very little. However, where patterns emerge this is a good indication of bird distribution. High counts in several adjacent tetrads could be seen as a reasonable indication of common use of that general area by that species. Any suitable habitat in those tetrads and in adjacent tetrads should therefore be regarded as having a high potential for use by that species.

Despite these limitations it is hoped that this Bird Atlas 2007–11 data will be useful to inform HRAs of development plans. It is recommended that these Bird Atlas 2007–11 data are used in conjunction with WeBS data (intertidal counts only). We would expect there to be a high correlation between the two data sets along the coastal tetrads.

What do the data tell us

In spite of the data limitations described above, some clear patterns do emerge which give us an idea about the distribution of these bird species around the Forth.

Pink-footed geese

Pink-footed geese have a clustered distribution with large numbers using fields in eastern and northern East Lothian, northern Falkirk, coastal Clackmannanshire and at several sites in Fife.

Curlew

Curlew have a very widespread distribution, being found along most of the southern Forth coast and adjacent inland tetrads, with a slightly more scattered, but still widespread distribution, along the north coast. Curlew appear to use more inland feeding sites than any other wader species.

Redshank

Concentrations of redshank occur at scattered locations along both north and south coasts. Small numbers of redshank are widely distributed along the coast and in a few inland sites, particularly in East Lothian.

Oystercatcher

Similar to curlew, oystercatcher show a widespread coastal distribution but with fewer birds venturing inland beyond the coastal tetrads.

Golden plover

Golden plover distribution is concentrated in eastern and northern East Lothian, with a number of large flocks using inland sites.

Grey plover

Grey plover show a very restricted distribution, limited to a few coastal sites in East Lothian, with little apparent use of inland tetrads.

Lapwing

Lapwing show a widespread but scattered distribution, with the main concentrations in eastern and northern East Lothian, Falkirk and at a few locations in Fife. Large numbers of lapwing seem to use inland tetrads in East Lothian, but with far less inland use elsewhere.

Conclusions

Most species appear to show relatively little use of tetrads inland from the coast. These data suggest that for most species, those green field sites immediately adjacent to the coast are probably of most importance. Maintaining a comprehensive network of greenfield sites adjacent to the coast, throughout the Firth of Forth area, should therefore be secured through the Planning system.

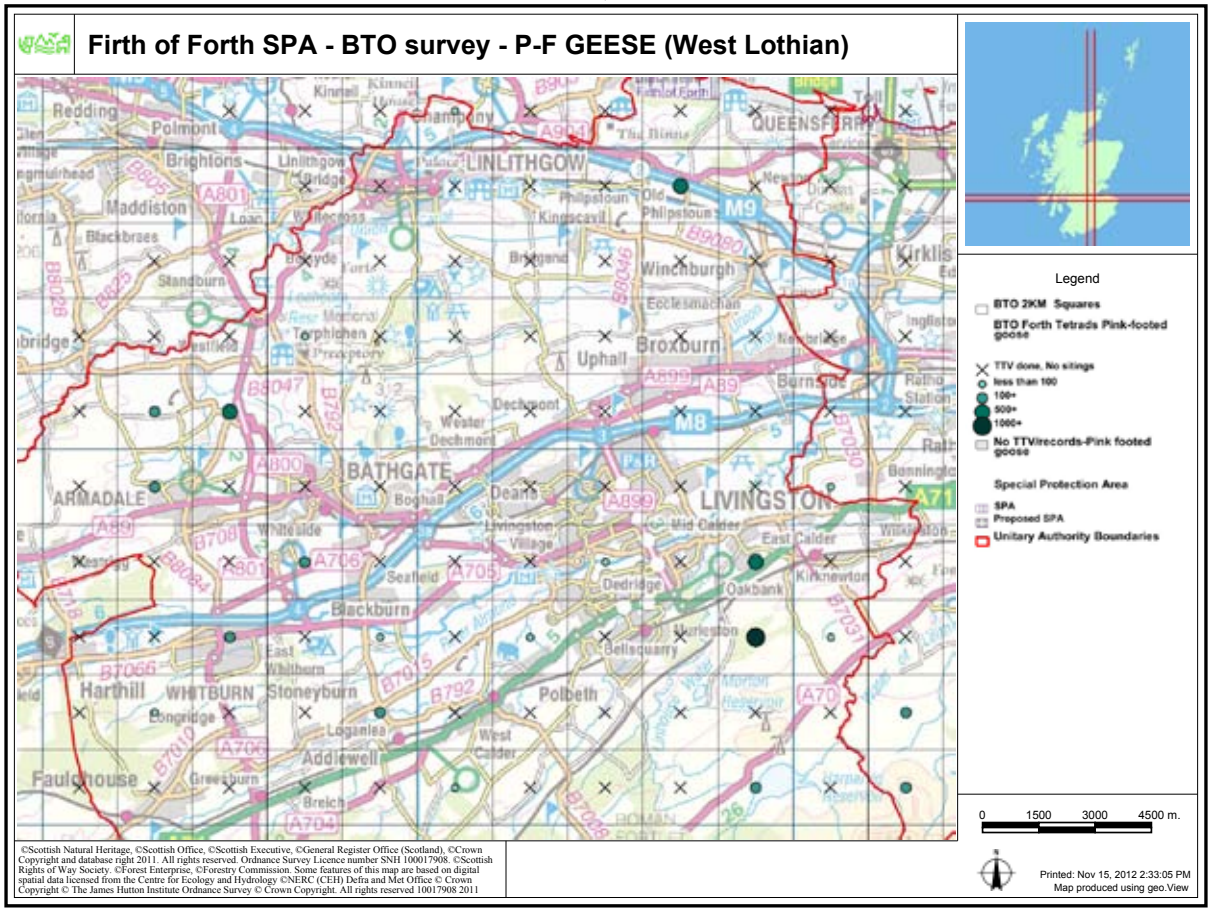
The most important area of inland greenfield sites appears to be eastern and northern East Lothian, with pink-footed geese, curlew, golden plover and lapwing all showing concentrations of inland use in this region. The East Lothian Local development Plan will need to pay particular regard to the maintenance of the green field resource in this area.

The western part of the upper Forth, particularly the Falkirk coast, also appears to host higher than average numbers of birds. Again, the maintenance of a strong network of green field sites, especially in coastal locations, should be encouraged.

Individual development proposal sites throughout the Forth coastal zone can be checked against these maps to see if they might affect greenfield sites showing local or regional concentrations of wading birds. These sites may require further detailed assessment at the planning application stage.

If looking at a particular development site, each of the individual species maps for that area can be assessed. If several species are recorded to be using a particular tetrad, or group of adjacent tetrads, that gives a good indication that the data are likely to be showing a real pattern of bird distribution rather than an artefact of the sampling method.

This is a first attempt at addressing the issue of assessing the potential impacts of development on green field sites used by Firth of Forth SPA birds. In the context of the HRA of Local Development Plans. Hopefully collective experience will help us to refine this assessment process.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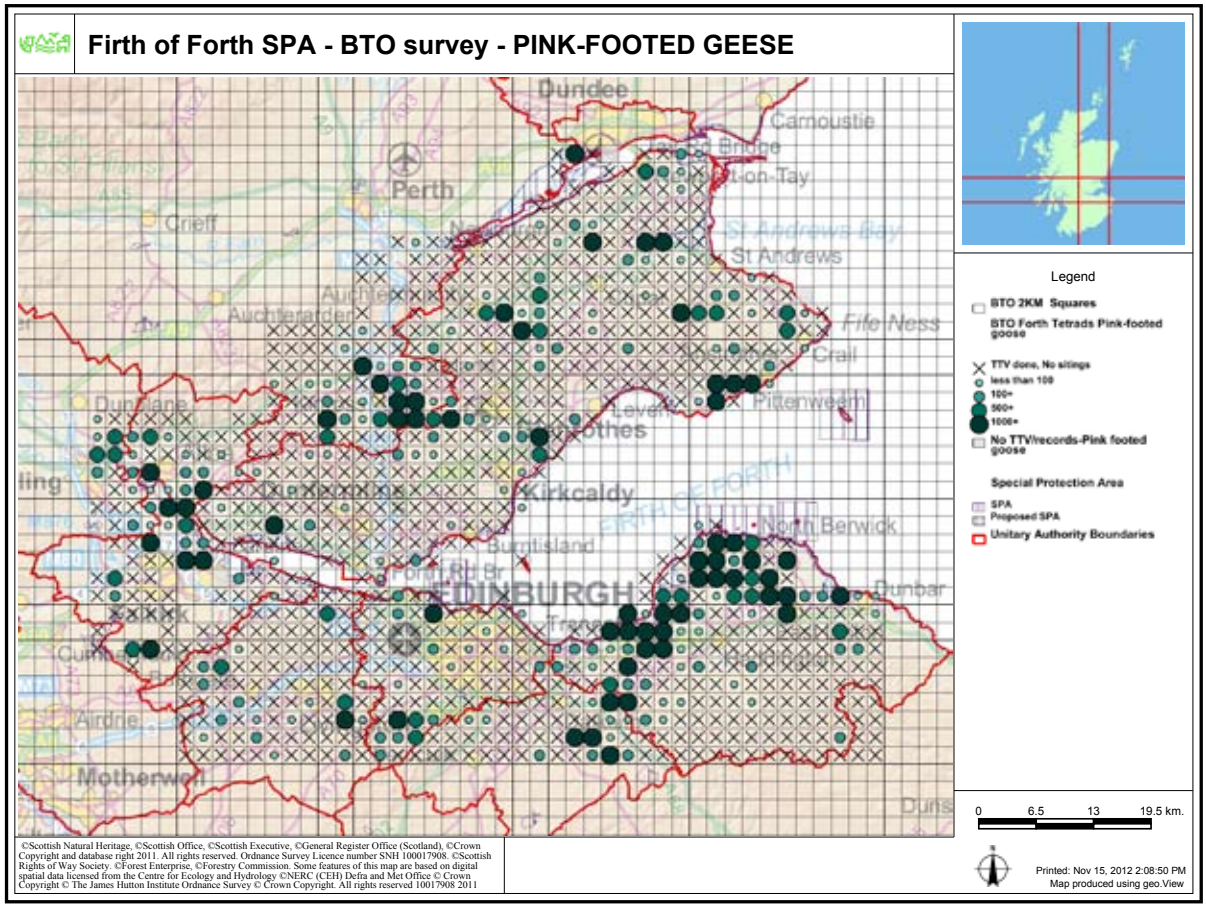
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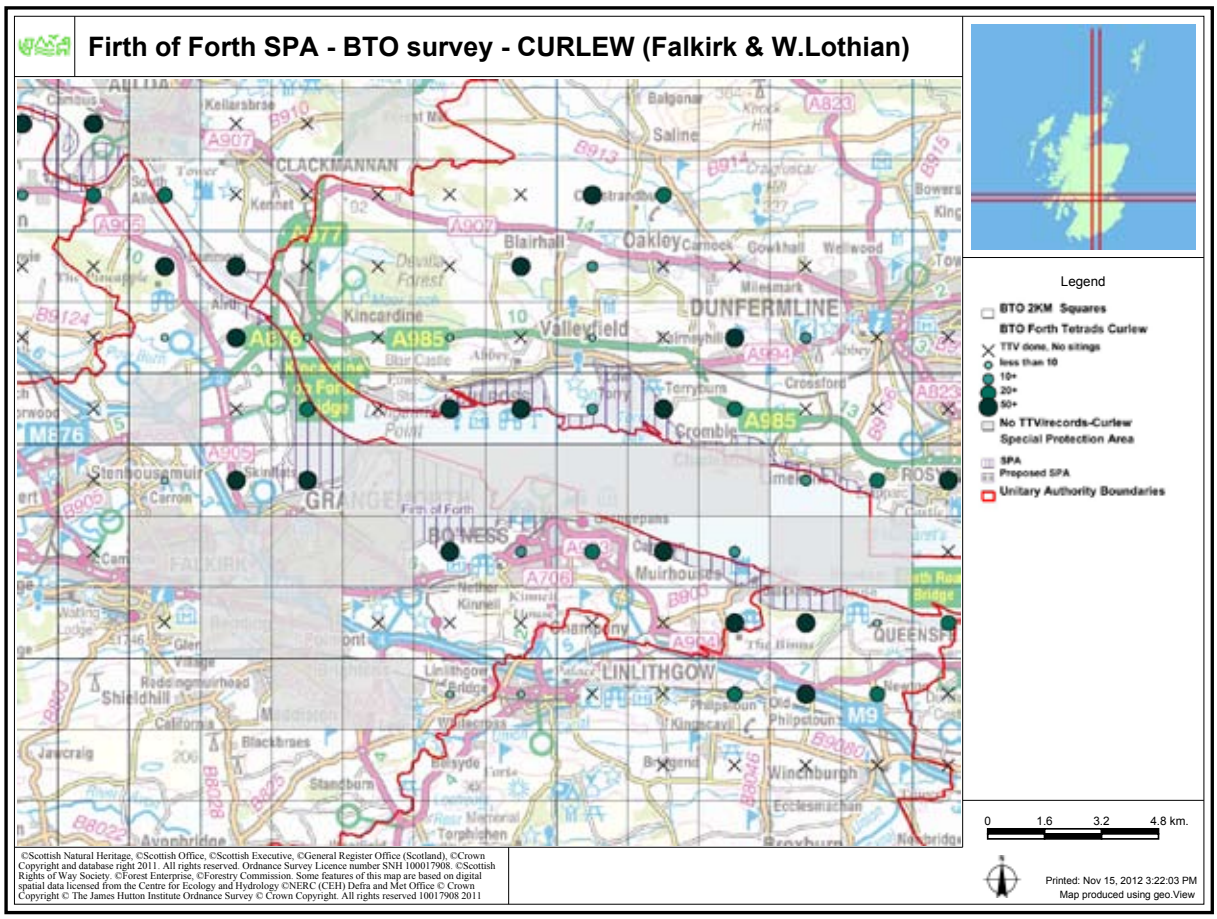
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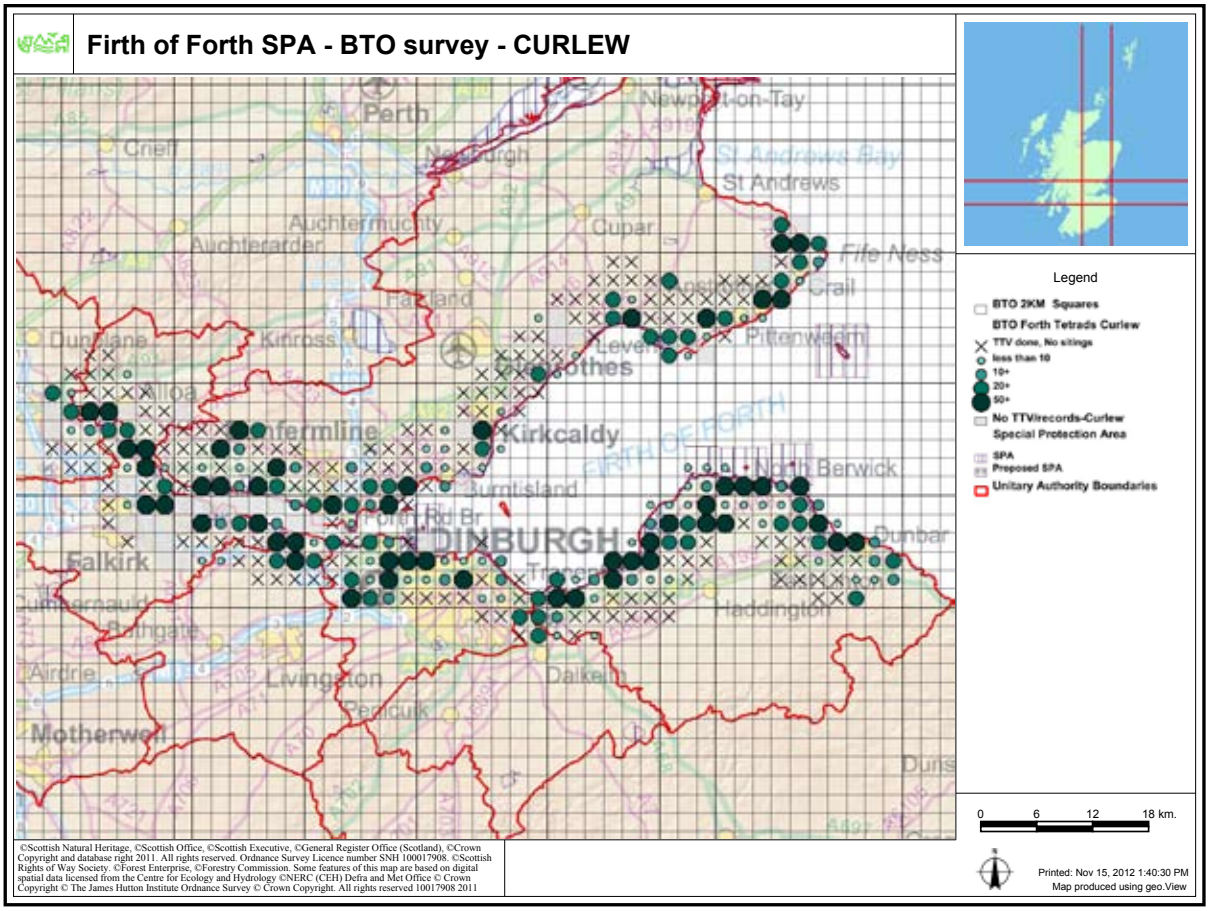
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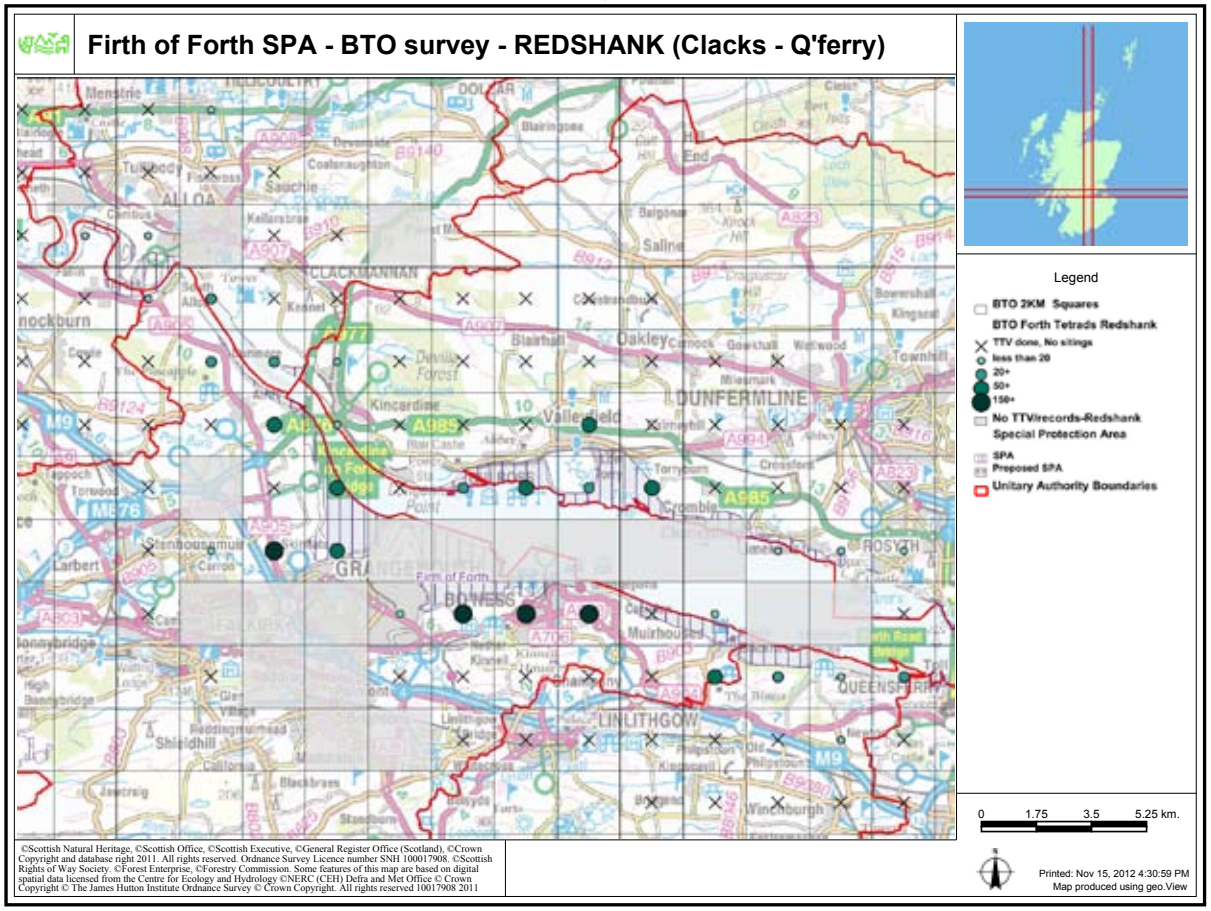
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SPA
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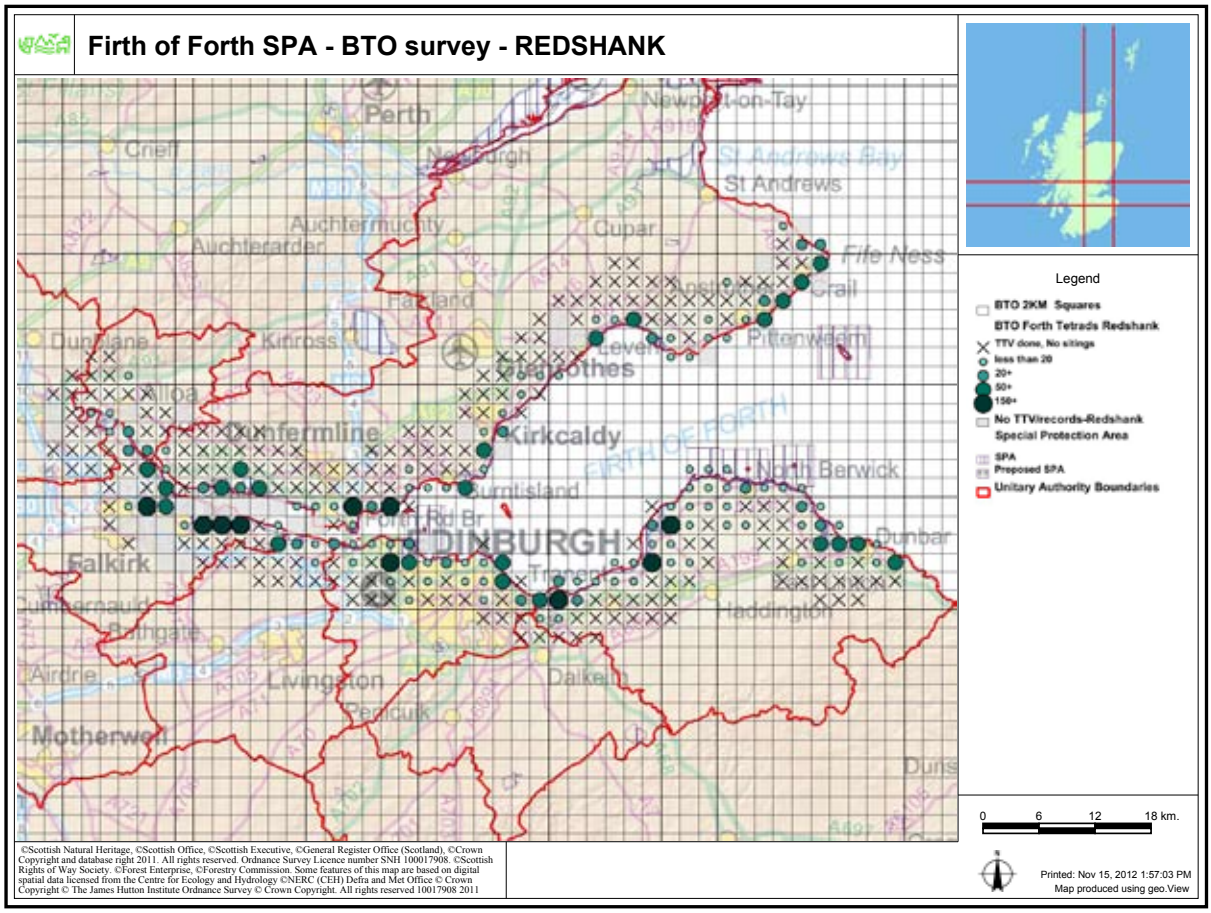
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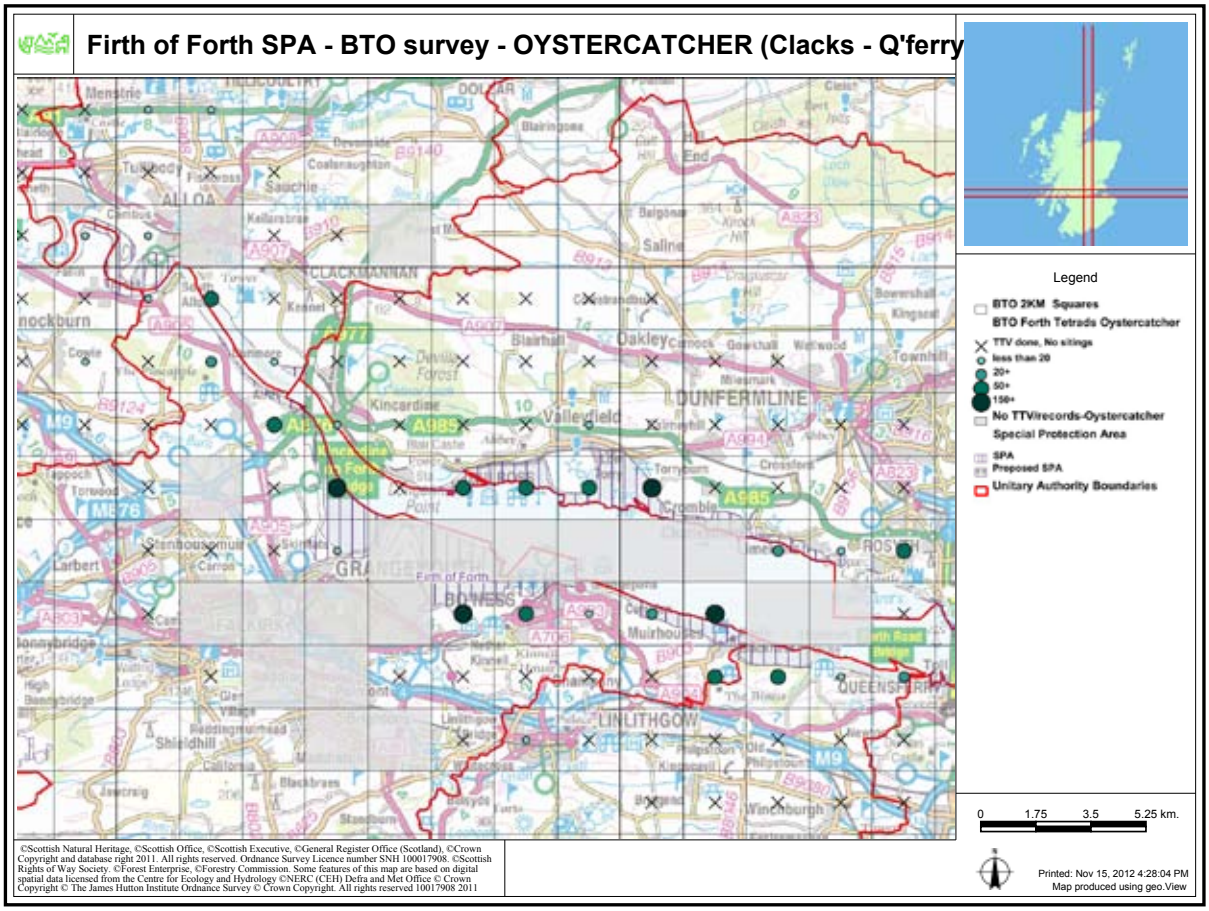
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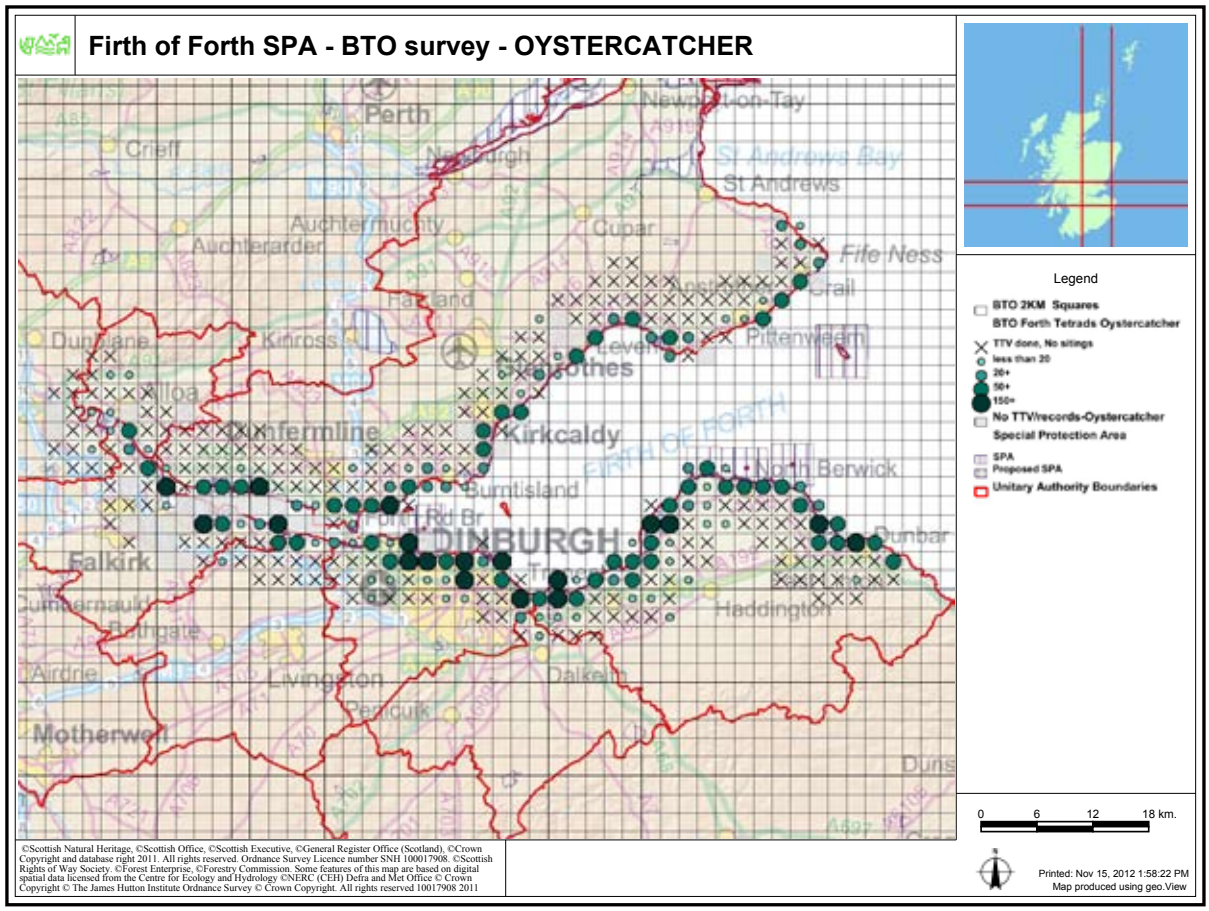
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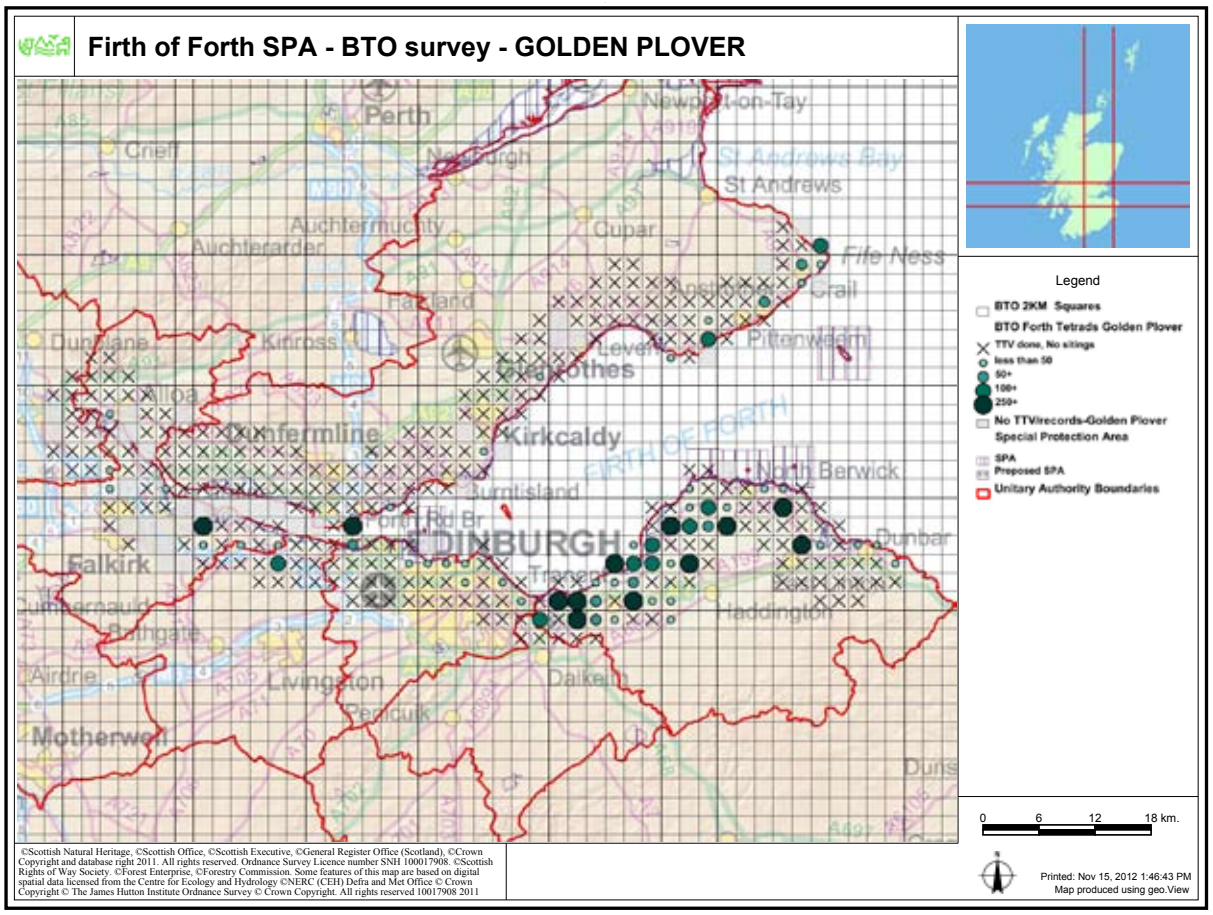
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Dunfermline
North Berwick
Falkirk
EDINBURGH
Dunbar
Haddington
Livingston
Dalkeith
Motherwell
Legend
BTO 2KM Squares
BTO Forth Tetrads Golden Plover
TTV done, No sitings
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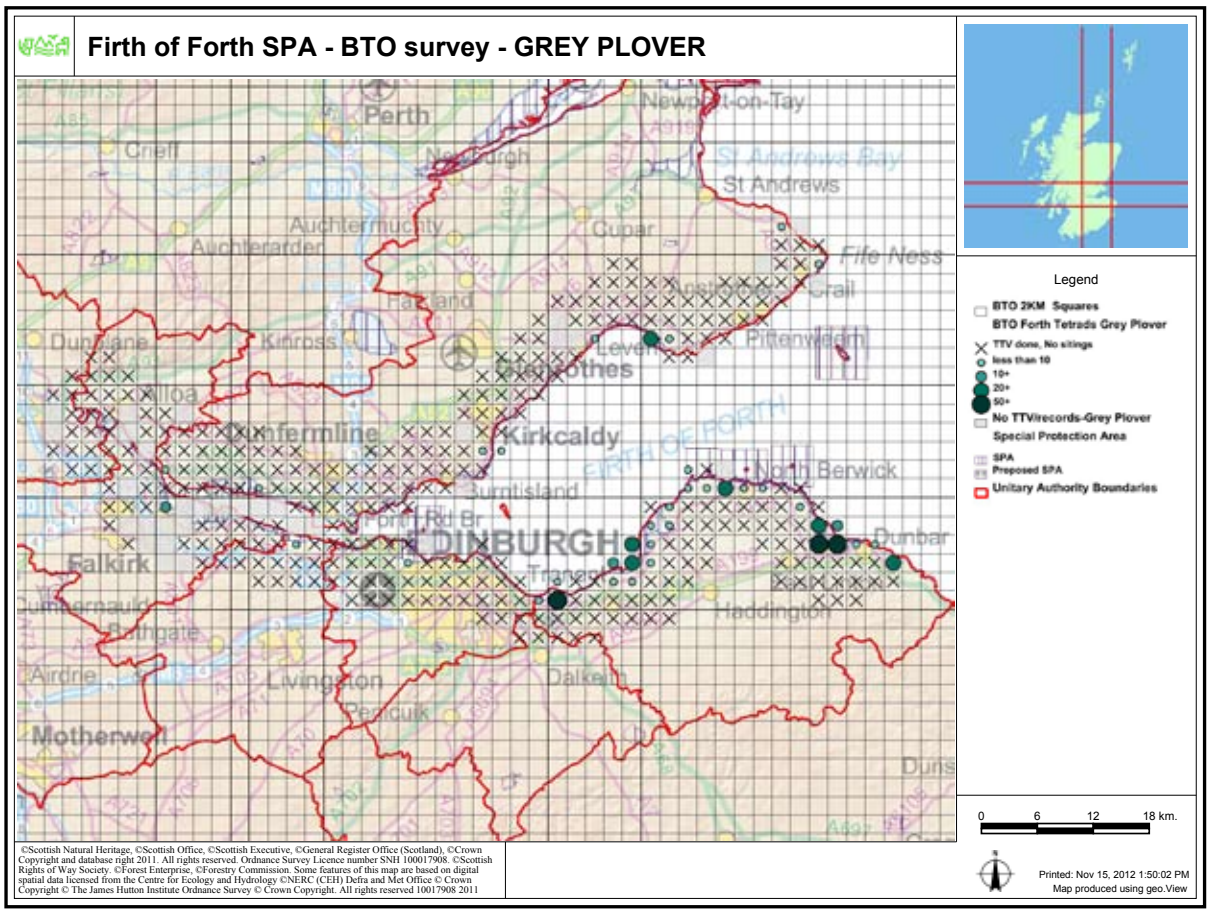
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North Berwick
Falkirk
EDINBURGH
Dunbar
Haddington
Livingston
Dalkeith
Motherwell
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BTO 2KM Squares
BTO Forth Tetrads Grey Plover
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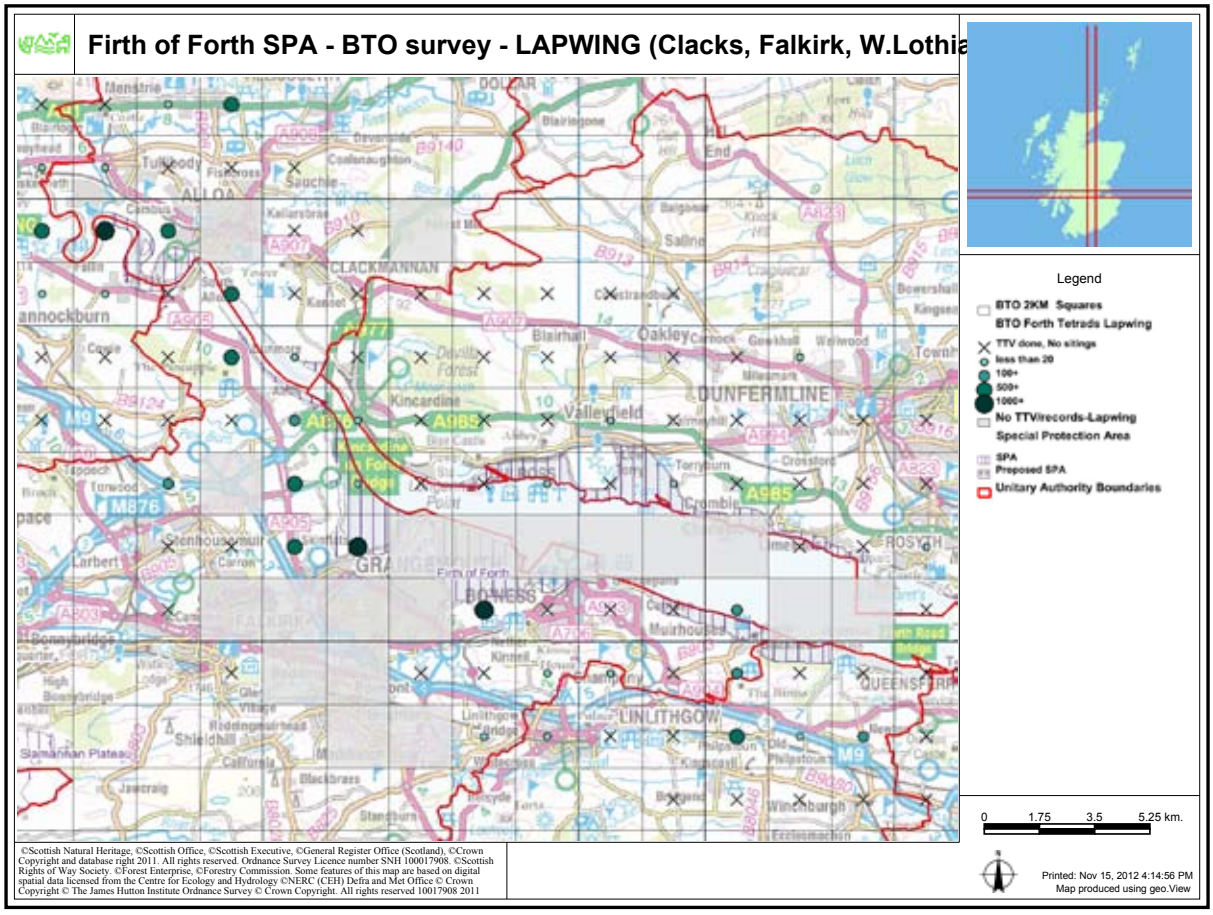
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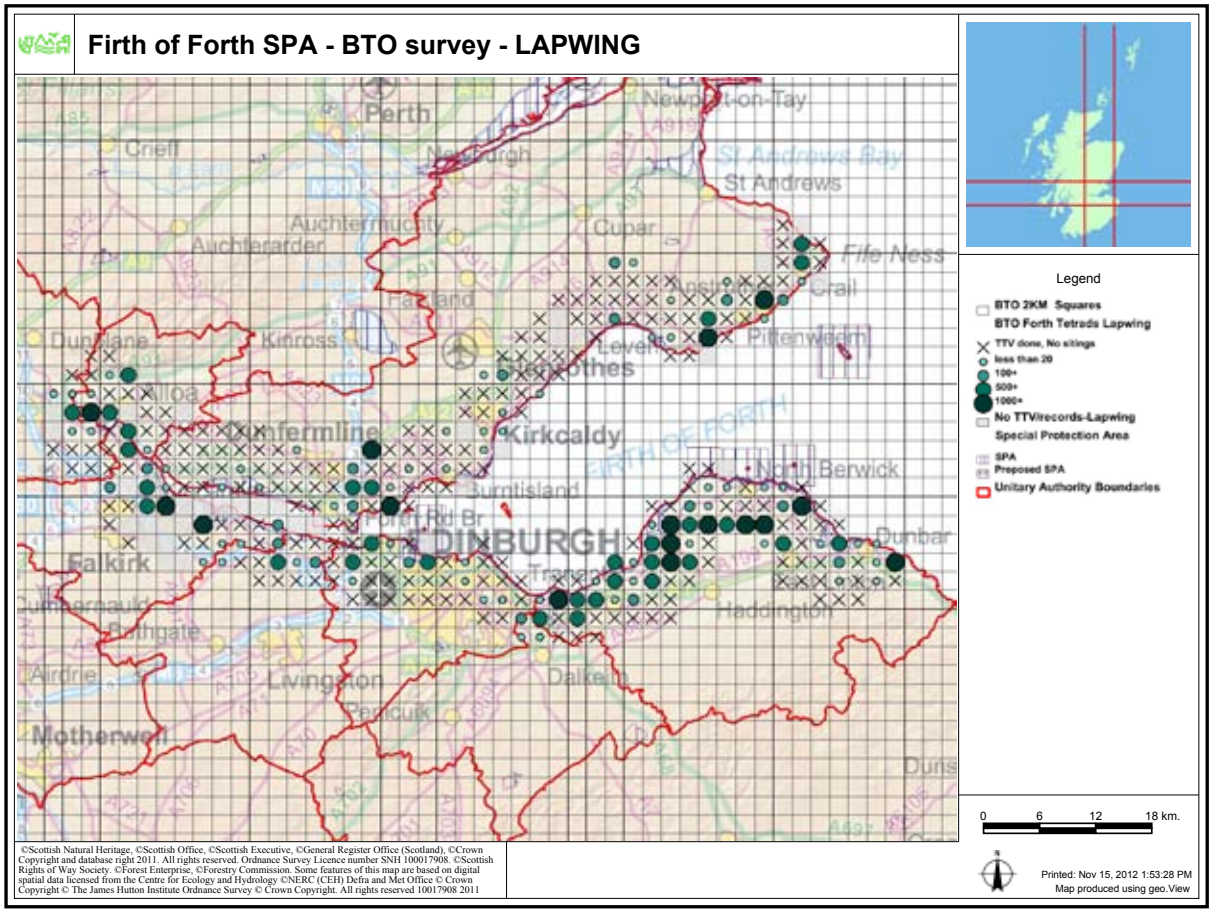
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Glossary of useful terms

Appropriate Assessment (AA)

Is the process and documentation associated with the statutory requirement under the EU Habitats and Species Directive.

British Trust for Ornithology tetrad data

A tetrad is an area 2km x 2km square. The term has a particular use in connection with the British Ordnance Survey national grid, and then refers to any of the 25 such squares which make up a standard hectad. Tetrads are sometimes used by biologists for reporting the distribution of species to maintain a degree of confidentiality about their data. In this instance, the data is used to measure bird populations within areas by the British Trust for Ornithology (BTO).

Biodiversity

The variety of life in an area, including the variety of gene pools, species, plant and animal communities, ecosystems, and the processes through which individual organisms interact with one another and their environments.

Habitats Regulations Appraisal (HRA)

The Habitats Regulations require competent authorities to carry out appropriate assessments in certain circumstances where a plan or project affects a Natura (European) site. Habitats Regulations Appraisal (HRA) refers to the whole process, including the appropriate assessment step.

Likely Significant Effects (LSE)

An Assessment of Likely Significant Effect (LSE) is part of the Appropriate Assessment process, forming the first stage in determining whether or not a proposed plan or project is likely to have a significant effect on an SPA/SAC either alone or in combination with other plans or projects. If an ALSE concludes that a plan or project is likely to have a significant effect on an SPA/SAC, then an Appropriate Assessment would be required.

The Local Planning Authority or other competent authority is responsible for undertaking Assessments of Likely Significant Effect and Appropriate Assessments.

National Nature Reserve (NNR)

National Nature Reserves are areas of land set aside for nature, where the main purpose of management is the conservation of habitats and species of national and international significance. There are 47 National Nature Reserves in Scotland and they're some of the best places for wildlife in the country. They're managed primarily for nature, but people are welcome too, many have facilities to enable visitors to appreciate the wildlife living there. Together, the suite of NNRs, showcase the wide variety of Scotland's habitats and species from pine forest to blanket bog, from seabird colonies to mountain plants.

Natura 2000 site

Natura 2000 is the centrepiece of EU nature & biodiversity policy. It is an EU wide network of nature protection areas established under the 1992 Habitats Directive. The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and habitats. It is comprised of Special Areas of Conservation (SAC) designated by Member States under the Habitats Directive, and also incorporates Special Protection Areas (SPAs) which they designate under the 1979 Birds Directive. Natura 2000 is not a system of strict nature reserves where all human activities are excluded. Whereas the network will certainly include nature reserves most of the land is likely to continue to be privately owned and the emphasis will be on ensuring that future management is sustainable, both ecologically and economically. The establishment of theis network of protected areas also fulfils a Community obligation under the UN Convention on Biological Diversity.

Scottish Natural Heritage (SNH)

Is a Scottish public body and is a key agency that local authorities are required to consult with on heriateg matters relating to development proposals. It is responsible for Scotland's natural heritage, especially its natural, genetic and scenic diversity. It advises the Scottish Government and acts as a government agent in the delivery of conservation designations, i.e. National Nature Reserves, Local Nature Reserves, Long Distance Routes, National Parks, Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation, Special Protection Areas and the National Scenic Area.

Special Area of Conservation (SAC)

Is defined in the European Union's Habitats Directive (92/43/EEC), also known as the Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. They are to protect the 220 habitats and approximately 1000 species listed in annex I and II of the directive which are considered to be of European interest following criteria given in the directive. They must be chosen from the Sites of Community Importance by the State Members and designated SAC by an act assuring the conservation measures of the natural habitat.

Special Protection Area (SPA)

Are strictly protected sites classified in accordance with Article 4 of the EC Birds Directive, which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species. The European Commission's website hosts a full copy of the EC Directive on the conservation of wild birds (79/409/EEC), within which all the Articles and Annexes (including amendments) are given, along with useful interpretation information. JNCC has prepared an Index to key rulings of the European Court of Justice relating to the selection, classification and management of SPAs under Article 4 of the EU Birds Directive.

Strategic Environmental Assessment (SEA)

Is a systematic decision support process, aiming to ensure that environmental and possibly other sustainability aspects are considered effectively in policy, plan and programme making. In this context, SEA may be seen as:

- a structured, rigorous, participative, open and transparent environmental impact assessment (EIA) based process, applied particularly to plans and programmes, prepared by public planning authorities and at times private bodies,
- a participative, open and transparent,possibly non-EIA-based process, applied in a more flexible manner to policies, prepared by public planning authorities and at times private bodies, or
- a flexible non-EIA based process,applied to legislative proposals and other policies, plans and programmes in political/cabinet decision-making.

In this case, the *West Lothian Local Development Plan* requires to be accompanied by a SEA.