

6 NATURAL ENVIRONMENT

6.1 Introduction

- 6.1.1 This broad ranging chapter deals with the Natural Environment: the natural heritage, its biodiversity and the need for its protection and enhancement; and the coast with its fragility and interface with agriculture, industry and urban settlement. It also considers the landscape, both natural and that shaped by man over the centuries through his agricultural, silvicultural and forestry practices.
- 6.1.2 The natural heritage includes plants and animals, landforms, geology, natural beauty and amenity. Natural heritage embraces the combinations and interrelationships of land form, habitat, wildlife and landscape and their capacity to provide enjoyment and inspiration. It therefore encompasses both physical attributes and aesthetic values and has important cultural and economic dimensions, given the long interaction between human communities and the land in Scotland.
- 6.1.3 Whilst there has never been a comprehensive Nature Conservation Strategy for the Council area, International Conventions, European Directives, national legislation and planning guidance now place more and more emphasis on the protection of the earth's diminishing habitats and species and require local authorities to take steps to secure their protection at a local level.
- 6.1.4 The compact nature of the Council area, together with the competing demands on land-use places considerable pressure on the area's Natural Heritage. The reliance on mining and associated industrial development over the past two centuries has

not only lead to the economic success of the area but has left a legacy of scars which in turn are fortunately being reintegrated back into the natural heritage of the area providing reservoirs, corridors and stepping stones for ever adaptable flora and fauna. However, their success as re-emergent ecological habitats is again under threat from competing demands on brownfield and derelict sites from development pressure.

6.2 International & National Planning Policy

INTERNATIONAL AND NATIONAL POLICY ON NATURAL HABITATS AND NATURE CONSERVATION

- 6.2.1 "It is recognised that in the European Community natural habitats are continuing to deteriorate and an increasing number of wild species are seriously threatened; the threatened habitats and species form part of the European Union's natural heritage and the threats to them often cannot be confined by national boundaries so it is necessary to take measures at European level to conserve them": The Habitats Directive - How it will apply in Great Britain - page 2.
- 6.2.2 Habitats and nature conservation do not recognise local, national or international boundaries. The habitats of the Falkirk Council area must be viewed therefore not only in a Scottish, UK, European and International context, but through their respective legislative and protective measures brought in as a commitment to sustainable development and to ensure that the Natural Heritage is conserved and enhanced for the benefit of present and future generations. The Government recognises that the effective conservation of our natural heritage cannot depend solely

on national action. It therefore attaches great importance to the various international obligations it has assumed in relation to the protection of the natural environment.

International Policy

The Earth Summit

- 6.2.3 At the UN Conference on Environment and Development held in Rio de Janeiro in 1992, the UK signed the Convention on Biological Diversity which requires that the components of the Earth's biological diversity should be used in ways which do not lead to their decline. The commitments contained in the Convention are reflected in the UK and Scottish programmes for sustainable development which accord the planning system an important role in the protection of the national environment and the maintenance of biodiversity. Practical measures designed to safeguard biodiversity are set out in the UK Biodiversity Action Plan and the Report of the UK Steering Group on Biodiversity. In Scotland, the Scottish Biodiversity Group is taking these forward in conjunction with local authorities, non governmental organisations (N.G.Os) and local communities.

The Ramsar Convention

- 6.2.4 Whilst the Rio summit sets out the UK commitment to Biodiversity other key International and European obligations are more specific. The International signing of the Waterfowl Habitats Convention in 1971 in the Iranian town of Ramsar (The Ramsar Convention of Wetlands of International Importance, especially Waterfowl Habitats) requires the conservation of wetlands, especially sites listed under the Convention. The UK became a signatory in 1973 and the subsequent application of the Ramsar site

label to its Sites of Special Scientific Interest (SSSI) indicated them as being Wetland Sites of International Importance, usually because of its value to migratory birds. The 4 SSSIs on the Firth of Forth between Blackness and Alloa Inches are designated as Ramsar sites.

European Policy

- 6.2.5 E.U. nature protection legislation consists of two principal directives: The Birds Directive and the Habitats Directive which concern the protection of natural habitats in the European Union and the flora and fauna which inhabits them.

The Birds Directive

- 6.2.6 The EC Council Directive on the Conservation of Wild Birds (79/409/EEC) (the Birds Directive) provides for the protection, management and control of all wild birds, their eggs and nests, together with their habitats within the European Community. It requires Member states to take measures to preserve a sufficient diversity of habitats for all species of wild birds naturally occurring within their territories in order to maintain populations of ecologically sound levels and to take special measures to conserve the habitats of rare and migratory species.
- 6.2.7 Under the EC Birds Directive, member states are given the power and responsibility to classify Special Protection Areas (SPAs) to protect the habitats of rare vulnerable or migratory bird species within the E.U. A list of potential SPAs which included the SSSI's on the Firth of Forth was first published in full in SOED Circular 6/1995. The Circular's revision in June 2000 contained 117 classified SPA's and some 22 proposed potential sites including the Firth of Forth. In August 2000 formal consultation on the Firth of Forth commenced as described below.

- 6.2.8 SPAs are classified by the Secretary of State following extensive consultation by Scottish Natural Heritage (SNH) with owners, occupiers and other local interests. Where appropriate SSSIs identify ornithological interest, SPA Status will supplement and not replace SSSI designation.
- 6.2.9 Thereafter, their legal protection is covered by the Conservation (Natural Habitats & c) Regulations 1994 which sets out the responsibilities of official bodies in safeguarding the interest of the SPA. Under these regulations the Local Authority may be determined as the Competent Authority (CA) for legal and administrative purposes. (Paragraph 6.2.17)
- 6.2.10 The Classification of an SPA may require some changes to the current management regime because of the stricter protection. Recommendations for management changes may include alterations to existing lists of potentially damaging operations already established for a particular SSSI and where appropriate, practical ways of achieving positive management of the area, through management or other agreements. Whilst this places the responsibility with SNH, the Local Authority's remit is to accord with the legislation, identify the sites within their Statutory Plan framework, make appropriate policies and take appropriate steps to safeguard and monitor such sites. Accordingly, the proposed SPA along the Firth of Forth should be included in the Structure Plan policy framework as under UK legislation potential SPA's are afforded the same protection as formally classified sites.

The Habitats Directive

- 6.2.11 The EC Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) (the Habitats Directive) is the European Community's major contribution to implementing the Rio Biodiversity Convention. Member states must take measures to ensure that rare, endangered or vulnerable habitats and species of community interest are either maintained at or restored to a favourable conservation status. The Directive transposes the Bern Convention on European Wildlife and Natural Habitats into EU law.
- 6.2.12 The Directive divides Europe into 5 Biogeographical regions. Great Britain is entirely within the Atlantic region and the selection of areas in Britain will entirely reflect the habitat types and species characteristics of this region. The Directive lists 168 natural habitat types in Europe whose conservation requires the designation of Special Areas of Conservation (SAC). Those which are at a greater risk of disappearing altogether are given Priority Status.
- 6.2.13 The 131 candidate SACs in Scotland cover some of the best examples of these European habitat types, including 14 of the Priority Status habitat types. One such Priority type is the active Blanket Bog, with an example found on the south western boundary of the Council area at Black Loch Moss (though 95% of the site lies within the North Lanarkshire Council area).
- 6.2.14 The Directive lists 632 animal and plant species throughout Europe whose conservation requires the designation of SACs. Sixty three of these species are found in Scotland.

6.2.15 SNH is responsible for identifying potential SACs in accordance with scientific criteria. Following extensive consultation at national and local level, they are presented to the UK Government for submission to the European Commission as candidate SACs. A definitive list of sites including Black Loch Moss is due to be agreed with the Commission. Member states must then designate all the agreed areas as Special Areas of Conservation by 2004. Accordingly the Candidate SAC at Black Loch Moss should be included in the Structure Plan policy framework.

Natura 2000 Areas

6.2.16 The Habitat Directive not only complemented and amended the Birds Directive but also provided for the Creation of Natura 2000. Under the Directive, SPAs and SACs are together intended to form a community-wide network of protected areas designed to maintain or restore the distribution and abundance of species and habitats of community interest to be known as Natura 2000. They are identified for the purposes of protecting those habitats and species within the EU which are endangered, vulnerable, rare or otherwise require special attention. Both SPAs and SACs are protected under the relevant directives as outlined above. In addition, the same level of protection is also afforded to both potential SPAs and SACs, together with sites which qualify for designation under the Ramsar Convention.

Conservation (Natural Habitats & c) Regulations

6.2.17 The Conservation (Natural Habitats & c) Regulations 1994 place a statutory duty on planning authorities as competent Authority to meet the requirements of the Habitats Directive. Detailed advice on the requirements of the Directive is contained in SOED Circular 6/1995. The Regulations require that when an authority concludes that a development proposal unconnected with natural heritage management is likely to have a significant effect on a Natura 2000 area, it must undertake an appropriate assessment of the implications for the conservation interests for which the area has been designated. Guidance on the assessment of proposals affecting Natura 2000 areas is set out in Appendix A of Annex D to Circular 6/1995. In cases where an assessment of the proposal is also required under Environmental Assessment (Scotland) Regulations 1999 authorities should ensure that the Environmental Statement prepared in respect of the proposal meets the requirements of both sets of Regulations.

6.2.18 To ensure the protection of an area's designated interests, the need for appropriate assessment also extends to proposed developments outwith the boundary of the designated area. Authorities should therefore consult SNH if they are in any doubt whether a development outside a Natura 2000 area could have a significant effect on it.

6.2.19 A development which would have an adverse effect on the conservation interests for which a Natura 2000 area has been designated should only be permitted where:

- * *there is no alternative solution; and*
- * *there are imperative reasons of over-riding public interest, including those of social or economic nature.*

6.2.20 Where a Priority habitat or species e.g. Black Loch Moss (paragraph 6.3.46) would be affected, prior consultation with the European Commission is required unless the development is necessary for public health or safety reasons.

6.2.21 The Secretary of State must be notified if an authority proposes to permit a development which would have an adverse affect on a Natura 2000 area.

6.2.22 Not all developments on or near Natura 2000 areas will be generally prohibited. Many wildlife species and habitats readily co-exist with human activity and may well rely upon it. Proposals therefore need to be assessed as it may indicate that there will be no adverse effects on these interests.

6.2.23 The Regulations and the need for assessments will have to be considered by Falkirk Council when determining planning applications that may well have significant effects on the Council's Natura 2000 areas along the Forth Estuary and more notably the Priority Site at Black Loch Moss.

National Policy on Natural Habitats

6.2.24 Many of the policies and regulations contained in the more recent Government circulars, Planning Advice Notes (PANs) and National Planning Policy Guidelines (NPPGs) are summations of the previous

UK legislation, International Conventions and European Directives bringing together current International thinking on the Natural Heritage and endorsing the UK Government's commitment to biodiversity and sustainability. The major International designations have been fully discussed above and where possible their national context, responsibility and implications outlined.

NPPG 14 "Natural Heritage"

6.2.25 Released in January 1999 this NPPG provides a definitive statement of national planning policy in relation to Scotland's natural heritage and gives guidance on how the Government's policies for the conservation and enhancement of Scotland's natural heritage should be reflected in land use planning. In this context Scotland's natural heritage includes its plants and animals, its landforms and geology and its natural beauty and amenity. The NPPG:

- * *sets out national planning policy considerations in relation to Scotland's natural heritage;*
- * *summarises the main statutory obligations, International, European and UK, in relation to the conservation of natural heritage;*
- * *explains as part of a wider framework for conservation and development, how natural heritage objectives should be reflected in development plans;*
- * *describes the role of the planning system in safeguarding sites of national and international importance;*
- * *provides guidance on the approach to be adopted in relation to local and non statutory designations;*
- * *draws attention to the importance of safeguarding and enhancing natural heritage beyond the confines of designated areas; and*
- * *emphasises that the Natural Heritage principles and policies apply equally to urban as well as rural areas.*

Circular 6/1995 “The Habitats and Birds Directive”

6.2.26 This Circular, published in March 1995, and revised in June 2000 provides the core of Scottish policy advice and legislative description of the Birds and Habitats Directive (discussed above in paragraphs 6.2.6 and 6.2.11) and forms a cornerstone of NPPG 14 “Natural Heritage”. Although confined to the Directive’s legislation it nevertheless spells out in detail the duties and obligations of the member states in respect of: site selection and designations; protection of SAC and SPA interests; and the effects of nature conservation provisions and species protection. At the more local level it defines the effects of the provisions relating to planning permission and permitted development rights and the role the Local Authority must adopt in its approach to development control.

6.2.27 In particular it emphasises that Development Plans must clearly refer to European Sites, with Structure Plans indicating their broad locations and Local Plans identifying the site in detail. The accompanying texts should emphasise the very strict protection which must be afforded to the interests for which the Natura 2000 network areas are designated and the implications this has for development proposals which would adversely affect those interests. The Circular also states that suitably worded policies and planning conditions should be included to protect habitats and species, including the management of landscape features of major importance for wild flora and fauna. It also places emphasis on the nature conservation importance of those landscape features such as rivers, hedgerows, ponds and small woods which form stepping stones and wildlife corridors essential for migration, disposal and genetic

exchange and calls for them to be taken into account as part of the planning process. Their inclusion would therefore give additional recognition to the importance of the wider countryside outwith the top tier SPAs, SACs, SSSIs etc. and draws attention to the potential of urban greenspace as an important wildlife habitat which may be promoted through suitable planning conditions.

Wildlife and Countryside Act 1981

6.2.28 The terms of the 1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats and the 1979 Birds Directive were largely incorporated into UK policy and legislation through the Wildlife and Countryside Act. The Act also strengthened the protection given to SSSIs (introduced under the National Parks and Access to the Countryside Act 1949). It provides additional protection to a wide range of wild animals and plants. The deliberate killing, injury or taking of protected species, or damage, destruction or obstruction of places used by such species for shelter or protection is an offence under the Act unless the action is the incidental result of a lawful action and could not reasonably be avoided.

Sites of Special Scientific Interest

6.2.29 Sites of Special Scientific Interest (SSSIs) are defined in the Wildlife and Countryside Act as areas of land or water which, in the opinion of SNH are of special interest by reason of their flora, fauna, geological or physiological features. SNH has a statutory duty to notify and seek appropriate protection for such sites which are identified in accordance with guidelines developed and applied on a Great Britain basis. SSSIs provide the foundation for a

range of additional natural heritage designations, including Natura 2000 (SACs and SPAs) and National Nature Reserves. They are therefore at the core of national and international arrangements for the protection of species, habitats and geological or geomorphological features.

- 6.2.30 Planning Authorities are statutory consultees in the process of the preparation and designation of SSSIs. Moreover Planning Authorities have a statutory duty to consult with SNH when determining an application for a development which might affect an SSSI. These can be some distance away and not always apparent, highlighting the need for close liaison with SNH and the need for Environmental Assessment to be made for certain significant developments.

National Nature Reserves

- 6.2.31 National Nature Reserves (NNRs) are areas considered to be of National Importance for their nature conservation interest which are managed as nature reserves. They are declared under the National Parks and Access for the Countryside Act 1949 and may be either owned or leased by SNH or managed by the owners and occupiers under a Nature Reserve Agreement. As a consequence of their national importance all NNRs are also SSSIs.
- 6.2.32 Whilst there are no NNRs within the Council area at present the RSPB does operate a Bird Reserve at Skinflats and given the proposed SPA along the estuary there may be potential for a new designation within the Council area.

Protection of Badgers Act 1992

- 6.2.33 The Local Authority should be aware of the requirement under the Act to obtain a licence from SNH where development would result in the interference with a badger sett.

UK Biodiversity Action Plan

- 6.2.34 The Plan sets national targets for the consideration of biodiversity and in Scotland the Scottish Biodiversity Group is promoting the preparation of Local Biodiversity Action Plans (LBAPs) as a means of identifying priorities for action at local level. LBAPs are generally prepared by partnerships of public bodies, local organisations and communities. While there is no statutory obligation on any organisation to become involved in the preparation of an LBAP many local authorities are taking an active role. Planning Authorities can make an important contribution to the achievement of biodiversity targets by adopting policies which promote and afford protection to species and habitats identified as members in LBAPs. Falkirk Council has appointed an officer to produce an LBAP.

National Policy on Coastal Planning

- 6.2.35 The discussion paper, "Scotland's Coasts", issued by the Scottish Office in March 1996, gave a commitment to update the 1974 and 1981 NPGs on the coast. The following year saw the publication of NPPG 13 "Coastal Planning".

NPPG 13 “Coastal Planning”

6.2.36 Published in August 1997 this takes account of recent and likely development pressures on the coast, new nature conservation and the Government’s commitment to sustainable development and other relevant Government policies. The NPPG:

- * *sets out how planning can contribute to achieving sustainable development and maintain and enhance biodiversity on the coast;*
- * *highlights the need to distinguish between policies for the developed, undeveloped and isolated coast;*
- * *indicates how planning authorities should respond to the risk of erosion and flooding in the coastal zone;*
- * *outlines policy guidance for developments which may require a coastal location; and*
- * *identifies the action to be taken by planning authorities in their development plans and in development control decisions.*

6.2.37 Many developments and other pressures on the coast fall outwith the limits of planning control but the NPPG does however set out how the planning system can contribute to coastal zone management. Accordingly, it is for Planning Authorities to define the extent of the coastal zone in their area, based on the particular characteristics of the area.

6.2.38 Planning Authorities should consider whether there are additional areas where they need to work with the other authorities and agencies to pursue a co-ordinated approach to issues arising on the coast. These inter-relationships have already been recognised through the establishment of a number of Firths Fora. Within the Central Belt the authorities and agencies have come together to form the Forth Estuary Forum. (paragraph 6.3.79).

Risk from Erosion

6.2.39 The coast is subject to a number of dynamic natural processes including erosion of the coastline by the sea. Local authorities have powers to undertake coastal protection works under the Coast Protection Act 1949. Schemes approved by the Secretary of State attract Central Government grant aid.

6.2.40 SEPA has hydrographic data which can be used in the preparation of Shoreline Management Plans within a sub cell or through joint working partnership where the sub cells cross the Local Authority boundaries. In addressing the problem of coastal erosion there are essentially three courses of action open to planning authorities:

- * *allow the continuation of natural processes;*
- * *defend the coastline; or*
- * *managed retreat.*

6.2.41 For the majority of the coast, especially where there is little or no development, the most appropriate course of action will be to let the natural processes of erosion continue. However, it is also important that planning authorities fully understand the potential impact of coastal protection works on the environment and on the natural movement of material along the coast.

6.2.42 Coastal protection works are expensive and in some cases, where erosion is severe, it may be more appropriate to implement a managed retreat strategy, particularly in low lying undeveloped areas of the coast. However, the NPPG points out that this course of action is not justified in Scotland as yet. Accordingly planning authorities should:

- * *identify in Structure and Local Plans, areas at risk from coastal erosion;*
- * *set out policies which will be applied to the location of new development in areas at risk; and*
- * *refuse planning permission for development in areas at risk from coastal erosion, particularly where expensive engineering works would be required to protect that investment.*

Risk from Flooding

6.2.43 Coastal flooding may be caused by extreme tides, storm surges, exceptional waves during storms or a combination of these. Global warming is predicted to increase the incidence of flooding due to rises in sea level and the increased severity and frequency of storms. These events may also increase the erosion of natural defences, potentially exposing the areas behind them to a greater risk of flooding. To ensure that flood risk is properly taken into account in the location of new development, NPPG 7 “Planning and Flooding” was published in September 1995 and authorities should adhere to the principles outlined therein.

Non Statutory Plans

Coastal Zone Management

6.2.44 The coast is not only a complex natural environment it is also a complex policy area where a range of agencies with differing, but often overlapping objectives, responsibilities and powers operate. The Government believes the partnership approach with an agreed overview provides the best method of management and has established the various Firths initiatives.

6.2.45 The establishment of a Scottish Coastal Forum was announced in November 1996 to provide a context for the work of local Firths Fora as well as a national focus for coastal issues. It is envisaged that the forum will play a part in the preparation of future national guidance relating to the coast and the dissemination of good practice on coastal management. The local forum in this area is the Forth Estuary Forum producing the Forth Integrated Management Strategy. The final report is due for publication in mid 1999.

PAN 53 “Classifying the Coast for Planning Purposes”

6.2.46 The publication of PAN 53 in October 1998 fulfils the commitment given in NPPG 13 “Coastal Planning” to provide further elaboration of the criteria to be used in classifying the coast for the purposes of development planning and development control. The categorisation is not an additional statutory designation.

6.2.47 A consistent approach to the classification seeks to provide a practical framework within which planning authorities in their Structure and Local Plans can classify the coast as a basis for the promotion and control of development. The approach has to be pragmatic: it is not seen as prescriptive but should provide a coherent and consistent framework which does not undermine the ability for planning authorities to respond to local circumstances reflecting local needs and potential. The coast should be classified as “developed” or “undeveloped”. However, to ensure a consistent approach, planning authorities will require to hold discussions with neighbouring local authorities and other key interests.

NATIONAL POLICY ON LANDSCAPE PLANNING

6.2.48 No national planning policy guidance is published which provides comprehensive advice on the approach to landscape planning or landscape designation, although various government guidance touches on different aspects of this.

6.2.49 Guidance for housing and mineral development, for example, NPPGs 3,4 and 16, makes it clear that new development must respect the local environment and landscape setting. The Structure Plan and the Local Plans need to provide the framework to allow appropriate development but at the same time protect important landscapes and landscape features. This would include, amongst other things, Green Belts, prime agricultural land and historic gardens.

NPPG 15 “Rural Development”

6.2.50 This NPPG seeks to address how land use planning can contribute to a more integrated and strategic approach to rural policy. The diversity of rural Scotland is viewed as a major asset which contributes to regional identities and should not be eroded by ill-considered development.

6.2.51 The concept of sustainability underpins the guidance. In general the Government continues to restrict new development in the open countryside and any opportunities for new development outside settlements should be clearly set out in development plans and justified in environmental and infrastructure terms.

6.2.52 The guiding principle for Councils and developers considering proposals for rural development is that development should benefit local communities economically, socially and environmentally.

6.2.53 NPPG 18 “Planning and the Historic Environment”, released in April 1999, sets out the Government’s policies for planning and development in historic environments, with a view to continued protection, conservation and enhancement. It advocates a positive approach, emphasising the need to find ways to extend the active life of protected areas, especially to provide wider social, economic and environmental benefits and be consistent with the principles of sustainable development.

6.2.54 It specifically outlines national planning policy on non-statutorily designated Historic Gardens and Designed Landscapes as listed in the inventory compiled and jointly maintained by Historic Scotland and Scottish Natural Heritage. It also emphasises the role of planning authorities to enforce

Conservation Area control, where trees are afforded special protection and says that positive management of such areas is vital if their character and appearance is to be protected and enhanced.

SDD Circular 2/1962

6.2.55 Circular 2/1962 provides advice on the definition of Areas Of Great Landscape Value in development plans and the framing of policies for the control of development within them. It's content and purpose are currently being reviewed by SNH as part of its review of National Scenic Areas and landscape designations generally.

SDD Circular 24/1985

6.2.56 This defines the functions of the Green Belt as:

- * *to maintain the identity of towns by establishing a clear definition of their physical boundaries and preventing coalescence;*
- * *to provide countryside for recreation and institutional purposes; and*
- * *to maintain the landscape setting of towns.*

6.2.57 The advice indicates that Green Belts have been generally designated where there are strong development demands on land adjacent to large towns and cities. In such circumstances:

- * *Structure Plans should set out the urban settlement structure necessary to meet demographic, economic and social needs of the area within or outwith the town or city over which the plan relates;*
- * *outwith the areas identified in this settlement structure, development should be very strictly controlled by Green Belt policies and designation in Structure Plans;*
- * *Local Plans should define precise boundaries and secure the continuity of Green Belts.*

- * *Towns and villages should not be allowed to expand beyond the limits established; and*
- * *there should be a general presumption against any intrusion into designated Green Belts.*

PAN 44 "Fitting New Development into the Landscape"

6.2.58 This advice note follows up earlier advice in PAN 36 on the "Siting and Design of New Housing in the Countryside". The document considers how new developments are best integrated into the natural environment. It is highly critical of housing schemes which have been planned, sited and developed with little regard to settlement patterns or the landscape.

6.2.59 Much of the advice is given in the form of a manual which identifies siting and design criteria which must be given full consideration when assessing planning applications or allocating land through development plans. This includes landscape and landscape capacity, landform, climate, vegetation, and mineral and sub-soil constraints.

National Planning Policy on Forestry

6.2.60 The control of forestry operations lies largely outwith the scope of statutory planning control. The UK regulatory mechanisms are primarily operated by the Forestry Commission who produce guidance on forestry design and implementation which applicants are expected to adhere to when obtaining grant aid form the Commission.

NPPG 14 “Natural Heritage”

- 6.2.61 This NPPG has a section on trees and woodlands, emphasising their value both as wildlife habitats and in terms of their contribution to landscape character and quality.
- 6.2.62 It states that Planning Authorities should seek to protect trees, groups of trees and areas of woodland where they have natural heritage value or contribute to the character of amenity of a particular locality. Under Section 159 of the Town and Country Planning (Scotland) Act 1997 planning authorities have a duty to ensure that, wherever appropriate, planning permissions make adequate provision for the preservation of trees. Where development involves the loss of trees, permission should normally be conditional on a replanting scheme with trees of appropriate species in appropriate numbers.
- 6.2.63 The guidance goes on to say that Section 160 of the 1997 Act makes provision for the authorities to safeguard trees or woodlands by means of Tree Preservation Orders where this is expedient in the interests of amenity.
- 6.2.64 The document encourages relevant planning authorities in the Central Belt to work together with the Central Scotland Countryside Trust to ensure that their development plans, indicative forestry strategies and development control decisions contribute positively to the development of the Central Scotland Forest.

SDD Circular 9/1999 “Indicative Forestry Strategies”

- 6.2.65 The main planning policy guidance is set out in SDD Circular 9/1999. This updates Circular 13/1990, which advocated the inclusion of Indicative Forestry Strategies (IFS) in Structure Plans. They provide a focus for local authority responses to consultations on grant scheme proposals and inform those developing forestry proposals of possible sensitivities when considering options for planting. IFSs were originally introduced at a time of controversy over large scale planting of commercial forests and were designed to reduce conflict by steering further planting to less sensitive areas. Circumstances have changed radically since then and the new Circular advocates adaptation of IFSs to play a positive role in guiding and influencing future planting and felling. It also reflects the multi-benefit nature and the positive roles which forestry can have in rural and peri-rural areas and underlines the importance of having sustainable policies for forestry which embrace environmental, social and economic objectives.
- 6.2.66 Outwith IFS guidance forestry is controlled by legislative procedures. The Town and Country Planning (Scotland) Act 1997 sets out the Local Authority’s role in creating and enforcing Tree Preservation Orders and protecting trees within Conservation Areas. Felling of trees is controlled under the Forestry Act 1967.

National Planning Policy on Agriculture

6.2.67 The Government's policy on the protection of agricultural land is set down in SDD Circular 18/87 (as amended by SDD Circular 25/1994). These indicated that, when considering the allocation of land for development and in deciding applications for planning permission affecting agricultural land, the agricultural implications must be considered together with the environmental, cultural and socio-economic aspects. In particular prime quality agricultural land (i.e. that defined by the Scottish Office as areas ranked 1, 2 or 3 in the Land Capability for Agriculture maps produced by the Macaulay Institute) should normally be protected against permanent development or irreversible damage.

6.3 Current Situation & Trends

Natural Heritage and Nature Conservation

Background

6.3.1 The report "Falkirk District: Sites of Nature Conservation Interest" by Keith Watson, commissioned in 1997 by Falkirk Council and SNH, collated existing information on sites, areas or general habitats of actual or potential interest occurring within the Council area. While not viewed as a definitive statement on the areas nature conservation it does nevertheless provide the core information for any future Nature Conservation Strategy or LBAP and is used extensively in this section.

6.3.2 Falkirk Council area covering 29, 924 hectares is located in the middle of the Central Belt of Scotland with the Forth Estuary forming the north-eastern boundary. It ranges from sea level along the coastal strip, extending through to the low-lying land associated with the flood plain of the Forth. It then extends westwards, following the broad valley associated with the Carron and Bonny Water. Higher ground occurs in two main areas: the Slamannan plateau and the eastern edge of the Kilsyth Hills, to the west of Denny. The latter includes the highest ground within the area at Darrach Hill (357m).

6.3.3 Sedimentary formations are the main rock types underlying the area, with Carboniferous Coal Measures forming much of the Slamannan plateau and extending to the north towards the Forth around Airth. The land either side, around Denny and Grangemouth, is underlain by similar sedimentary rock of the Millstone Grit Series. The higher ground of the Kilsyth Hills to the west of Denny comprises igneous rock with local linear dykes of basalt and dolerite extending from Braeswood towards Bathgate.

6.3.4 The gentle topography of the Council area has encouraged widespread deposition of glacial drift deposits over much of the area. These comprise marine and freshwater alluvia across the Forth flood plain with often large areas of sand, gravel and brick clay and also extensive areas of boulder clay particularly over the Slamannan plateau. Additionally there are significant areas of deep peat in depressions and level ground of the Slamannan plateau and the Forth flood plain towards Airth.

6.3.5 The area's wide range of topographical features, the largely acidic underlying rock and relatively high rainfall on the upland areas are reflected in the habitats and associated plant species. For example, the areas of impeded drainage and mire formations of the Slamannan plateau (mostly deep peat of intermediate or raised bogs) and the changing vegetation and species assemblages produced on the shallow soils overlying the igneous rocks of the Kilsyth Hills and local dolerite intrusions.

6.3.6 The topography creates a varied drainage pattern although there is very little in the way of open water (eg Black Loch, Loch Ellrig and other artificial reservoirs at Drumbowie, Denny and Carron). The features associated with water courses promote an increased diversity of habitats and plant species, reflecting not just the more diverse geological and soil exposures, but also the often more limited influence of human activities. The large number of tributaries flowing from the Slamannan plateau and from the Kilsyth Hills are important ecological and landscape features. The major rivers are the Carron and Avon, with the Pow Burn and Bonny Water also of some significance. The tidal mud and estuarine habitats along much of the Forth are important physical and ecological features of the area.

6.3.7 Human influence has obviously had a major impact on the landscape and natural resource of the area. The main areas of urbanisation (industrial and residential) occur to the northern half of the Council area following the lower-lying land of the Carron Valley from Denny in the west to Grangemouth and Bo'ness along the coast. The area has had a long history of coal mining which has impacted on the land in

both the urban and rural areas and in more recent times it has involved large scale open cast operations.

6.3.8 The large rural area of the Slamannan plateau and smaller outliers around Denny, to the north at Airth, and east of Polmont, support a largely open agricultural landscape. There is a high percentage of agricultural land considered to be of high quality with land capability for agriculture (LCA) classes 2 to 4 (wide to narrow ranges of crops) occurring throughout the lower lying areas of the Forth estuary and Carron Valley. Much of the Slamannan plateau and Kilsyth Hills is classed as 5 for use as improved grassland. The resulting intensive agriculture use has had a serious impact on the ecological resource, with few areas of semi-natural wild land remaining. Large scale afforestation has not occurred within the Council area although recent years have seen an increasing number of woodland initiatives.

Survey Resource

6.3.9 Over the last 20 years there have been a number of surveys carried out within the general Falkirk Council area which are gradually revealing the type and location of the existing nature conservation resource. The surveys carried out by Falkirk Museums Services between 1978 and 1983 provided the earliest source of site information. These survey reports provided the base information source for assessing the quality and range of the nature conservation resource culminating in the production of the Scottish Wildlife Trust's Listed Wildlife Sites (LWS) Register, prepared throughout the 1980s.

Phase 1 Survey

- 6.3.10 In 1993 and 1995 habitat surveys covering the south and north of the Falkirk Council area (Shotton and Arnott 1994 and Bates et al 1995) were conducted on behalf of SNH and Falkirk District Council using the methodology of the former Nature Conservancy Council's (NCC) Phase 1 Habitat Mapping system.
- 6.3.11 Phase 1 Habitat Surveys are the starting point of a systematic assessment of an area's nature conservation resource through a survey of all habitats present, where each parcel of land is given a habitat classification based principally on vegetation. The results show which habit types are commonplace and which are rare and enable a broad analysis of nature conservation interests on the basis of what is generally known about different habitat types. Whilst survey maps highlight particular concentrations of semi-natural habitats and also where such habitats are absent or rare, they also help to identify areas with important concentrations of semi-natural habitats which individually may be of less importance. Conversely, the maps may help identify the social, recreational and educational importance of an isolated parcel of semi-natural habitat within an otherwise built up area.
- 6.3.12 Accordingly, whilst the surveyors' target notes and results of the comprehensive phase one survey alone can immediately identify some sites of nature interest, further analysis throws up other sites of potential nature conservation interest which require a phase two survey.

Phase 2 Surveys

- 6.3.13 In the systematic approach to site designation, Phase 2 surveys are carried out on those sites identified in Phase 1 as having potential nature conservation interest and concentrate on gathering information on a site's importance against a set of predetermined criteria, including:
- * *habitat and species diversity;*
 - * *habitat and species rarity;*
 - * *naturalness; and*
 - * *extent in local context.*
- 6.3.14 In 1994, 26 high priority recommended sites from the South Falkirk Phase 1 Survey were surveyed to Phase 2 level (Watson 1994) with a further 47 sites from the North Falkirk Phase 1 Survey surveyed to Phase 2 level in 1997. This amalgamated information was presented in a series of individual site reports and a summary report. (Watson 1997)
- 6.3.15 The information was further supplemented by a number of individual site reports carried out to a Phase 2 level between the mid 1980s and 1997 as part of Environmental Statements or background information on strategic planning applications. (For a full and detailed list of all surveys carried out, see Watson, March 1998, Appendix 1).

Habitats and Vegetation

6.3.16 The Phase 1 Survey identifies 10 major habitat groups found within the Council area. Figure 6.1 shows the approximate area of that habitat group and the area within designated or protected sites. Of these, the six main habitats groups supporting a broad range of nature conservation sites are identified as follows, with 3 highlighted for special mention.

Figure 6.1 - Habitat Groups and Nature Conservation Interest in the Falkirk Council Area.

Habitat Group	Area of Habitat Group Within of Council Area	Area of SSSI/Wildlife Site	Area of SSSI/Wildlife Site as % of Habitat Group
Woodland and Scrub	2,700	729	21.5%
Grassland and Marsh	11,700	501	14.8
Tall Herb and Fern	150	65	1.9
Heathland	170	66	1.9
Mire	2,500	637	18.8
Swamp, Marginal and Inundates	30	43	1.2
Open Water	300	267	7.8
Coastland	2,200	999	29.5
Rock Exposure and Waste	300	3	0.1
Miscellaneous	9,400	72	2.1
Total	29,450	3,382	

Woodlands

6.3.17 The woodland resource is one of the more important habitat types recognised within the Council area. However it is not a habitat that is well represented with the nature conservation interest being focused on a few areas of valley type woodland notably along the Avon and Carron Valleys. Away from the valley sides the woodlands are considered to be mostly of secondary origins or at least highly modified through planting. About 7.1% of the Council area is mapped as woodland. However only 490 ha or 1.7% are of the more habitat rich semi-natural woodlands, with the plantation woods at 1600 ha or 5.4% of the Council area.

6.3.18 Of particular note are the Ash Elm type woodlands of the Carron and Avon Valleys and the uncommon Ash woodland at Carriden foreshore and Polmont woods. Oak woodlands are widespread throughout the area and represent the main climax vegetation of the lowlands prior to deforestation but have since undergone modification through subsequent management and planting. The valley woodlands of Carron Glen and Muiravonside and the areas at Dunmore, Callendar Braes, Seabegs and Rough Castle are worthy of mention.

- 6.3.19 The acid Birch woodlands on the heaths and wetter mires support distinct ground floras indicating the grazed heaths and grasslands and the less grazed partially drained bogs and mires. Of particular note are the woods at Letham and Dunmore and the Slamannan Plateau ungrazed mires at Howierigg and Lochgreen.
- 6.3.20 Several woodlands exist as individual sites although other smaller examples are best included as part of larger linear corridors sites i.e. water courses as part of habitat mosaics. These isolated woodlands have ecological interest in their own right but should be viewed as extensions or links to older sites or as focal points for new habitat creation planting schemes.
- 6.3.21 Of the 83 sites identified in the Phase 2 Habitat Survey as being of nature conservation interest, 24 of these were for their woodland habitat representing 729 ha or 21.5% of the total area of the sites.
- Grasslands and Heaths**
- 6.3.22 Open grass dominated habitats are a common feature stretching right across the area. However, those unimproved or semi-improved examples which tend to have the greatest ecological significance appear to be an increasingly scarce resource.
- 6.3.23 Grasslands present a particular problem for nature conservation assessment. Agricultural management practices and the use of chemical fertilisers have resulted in the loss of many of the more diverse, traditionally managed grasslands. This has been off-set somewhat by the rise in the development of grassland on waste ground where disturbance, neglect and chance factors can result in the development of species rich.
- 6.3.24 The acid grasslands associated with the well drained slopes of the Kilsyth Hills at Denny Muir and the undulating mire sites on high ground of the Slamannan Plateau at California, Standburn and Rumford are worthy of mention.
- 6.3.25 The neutral grasslands, particularly the short pasture or traditional meadow types, are notably rare and have all but disappeared in this area through improvements. Other neutral grasslands are found on the disturbed or neglected urban fringe sites where they often support, at least initially, a number of casual often alien species such as at Hallglen Haven, Bo'ness, Summerford and Baltic Quay at Grangemouth.
- 6.3.26 Heathland is not common locally, reflecting habitat destruction and grazing pressure. A few examples occur on the free draining outcrops of the Kilsyth Hills, or the northern slopes of the Slamannan Plateau at Castlecary and Greenhill. About 11,700 ha of the Council area is mapped as grassland and marsh with 170 ha as heathland. Of the 83 sites identified in the Phase 2 Habitat Survey as being of nature conservation interest, 12 were for their grassland and heath habitat, representing 567 ha or 16.7% of the total area of sites.
- 6.3.27 It is worth noting that the SSSIs at Denny Muir and Bo'mains Meadows are designated for their Grassland and Heath habitat.

Mires and raised bogs

- 6.3.28 The peatland habitat is one of the key ecological features of the Council area, comprising the number of raised or intermediate mires that extend across the Slamannan Plateau and the large remnant, often degraded, Raised Bogs at Dunmore and Letham. Although heavily degraded, their large size and remnant classic raised dome formation, situated along the Forth flood plain indicates that high note should be taken of their actual or potential ecological interest.
- 6.3.29 The raised and intermediate bog mires of the Slamannan Plateau tend to occur in often narrow basin like depressions of the underlying topography and form extensive landscapes on apparently level ground. The bogs at Darnrigg, Gardrum and Garbethillmuir are worthy of note although they have suffered from drainage, grazing and extraction. Other good examples are scattered around the south western part of the Council area associated with the lagg fen type mires.
- 6.3.30 Of particular note is the Black Loch Moss on the extreme south western boundary of the Council area. This is a Candidate Special Area of Conservation (cSAC) as it contains a habitat that is very rare and endangered in Europe and has been given Priority Status under the Habitats Directive. Darnrig Moss (although partly the subject of open cast coal extraction in the mid 1980s) and Howierig Muir are both designated as peatland SSSI's.
- 6.3.31 About 2500 ha of mire were mapped in the Phase 1 survey of the Council area. Of the 83 Phase 2 sites identified for their nature conservation interest, 15 were highlighted for their mire habitat, with a further 20 for their raised bog habitat. This represents 637 ha or 18.8% of the total area of sites.

Open Water And Wetlands

- 6.3.32 Open water bodies and wetlands are not well represented within the area but do occur as isolated features. Several of the larger ones tend to be upland, often with narrow emergent fringe habitat and thus with a limited botanical interest. Nevertheless, they do represent some habitat and species diversity with importance for fauna and of landscape interest eg. Black Loch, Loch Ellrig and the reservoirs above Denny.
- 6.3.33 In the low lying ground along the Rivers Carron, Avon, the Bonny Water and Pow Burn are a few ponds or areas of wetland interest. Of these, the Carron Dams is of particular note but so too are the locally important Parkfoot Marsh, Elf Hill Dam, West Mains and Callendar Lake. The smaller ponds and wetlands at Dorrator, Limerigg and California provide valuable local interest and stepping stone features in the ecological network.
- 6.3.34 The Union and Forth and Clyde Canals, whilst of man made origin, are now long established and provide extension linear habitat corridors supporting a range of species as well as providing a valuable educational and recreation resource.
- 6.3.35 About 10 of the 83 Phase 2 sites identified for their nature conservation interest were highlighted for their wetland, predominantly open water habitat, amounting to 267 ha or 7.8% of the total area of sites.

Saltmarsh And Estuarine Habitats

- 6.3.36 The estuarine habitat is the last of the three main ecological features previously highlighted. It has also been recognised through the designation of large areas of the coast as being of international importance for their habitats and support for wintering birds.
- 6.3.37 The area includes 4 SSSIs at Alloa Inches, Skinflats, Kinneil Kerse and Blackness Bay. The main interest is focused on the intertidal mudflats and associated rich fauna providing the feeding habitat for birds. There are also significant areas of saltmarsh which although degraded and affected by the flood prevention embankments nevertheless link with fresh-water transition areas of the brackish lagoons at Skinflats, the Pow Burn and Carriden foreshore.
- 6.3.38 About 2200 ha have been mapped as being of coastland with 1200 ha comprising intertidal mud and shingle and 100 ha as saltmarsh. The remainder comprise the estuary. Of the 83 sites identified in the Phase 2 Habitat Survey as being of nature conservation interest, 6 were for their saltmarsh habitat. This represents 999 ha or 29.5% of the total area of sites.

Mixed sites

- 6.3.39 A number of sites have been identified which do not readily sit with the above habitat categories either because they are relatively large, complex areas or have been influenced by urban development. These range from Denny Muir, Rough Castle, Braes Wood and other such complex large sites to the smaller urban fringe sites such as Summerford, Bonnyfield Quarry, Polmont Station and Grangemouth.

- 6.3.40 The larger habitat mosaics are analogous to the water course corridors representing long continued features supporting a wide range of habitats. Attention should be paid to protecting their continuity and providing a focus for habitat creation or enhancement. This is evident from map 6.1, as is the potential of the artificial corridors based on the canals, railways (both used and disused) and roads: the canals and disused railways playing an important dual role as wildlife habitats and recreational areas.
- 6.3.41 Finally, the figures of miscellaneous habitats accounts mainly for arable farmland, the built environment and amenity grassland associated with maintained public open space.

Current Situation & Trends

- 6.3.42 Watson's report on The Sites of Nature Conservation Interest in Falkirk District brought together the existing information on sites, reviewed the nature conservation resource in association with land use pressures and management implications and produced an inventory of sites which would form the core resource of any future Council-wide Nature Conservation Strategy Document and Local Biodiversity Action Plan.
- 6.3.43 In reviewing and collating the core data the report not only drew attention to a hierarchy of nature conservation sites thereby reinforcing the international designations of the Forth Estuary and mosses of the Slamannan Plateau and the national SSSI system but also enabled the assessment of the lower order of non-statutory Wildlife Sites and SINC's by SWT. It is this lower classification which has all too often been underestimated but is now increasingly being recognised as the

reservoirs of local biodiversity. Its inclusion in the recent Local Plans for Falkirk and Polmont reinforces the Council's recognition of and commitment to the natural heritage and local nature conservation.

International Sites

6.3.44 It is important to consider the assessments of local sites in the wider, regional, national and international perspective. There are two site complexes within the Council area which have been recognised as Natura 2000 sites; the complex network of internationally important sites within the European Union designated under the Habitats Directive and covered by the Habitats Regulations 1994 (paragraph 6.2.16). These sites are also sites of Special Scientific Interest and are discussed later.

6.3.45 The two site complexes are: Black Loch Moss a candidate Special Area of Conservation (SAC) and the Forth Estuary a potential Special Protection Area (pSPA).

Black Loch Moss (SAC)

6.3.46 This site, lying on the extremity of the Council area to the south west of Black Loch and the village of High Limerigg, falls mainly within the North Lanarkshire Council area (Map 6.1). A very small part falls within the Falkirk Council area as a result of a recent Local Government boundary amendment. The site amounts to some 108 hectares and is a biological site of a peatland habitat.

6.3.47 The area has been considered because it contains habitat types which are rare or threatened within a European context and has been cited as an active raised bog for which this is considered to be one of the

best areas in the UK. These bogs generally have the appearance of a gently sloping raised mound within the landscape. They consist of a deep accumulation of waterlogged peat and a surface covered by a living layer of plants and mosses. As the surface of the bog is raised above the local water table the only source of water and nutrient feeding the bog is rainwater and all plants are specially adapted to live in its waterlogged, nutrient poor conditions.

6.3.48 It should be noted that whilst the Black Loch Moss Site is the only SAC in the area there nevertheless are a large number of mires on the Slamannan Plateau which form part of the increasingly recognised group of raised or intermediate mires occurring across the Central Belt of Scotland. Several of these high quality mires, occur at the Council boundary extending across into neighbouring Council areas, notably at Wester Whin and Garbethillmuir. (Map 6.1)

Firth of Forth (pSPA)

6.3.49 The coastal habitats of the Council area form an important part of the wider Forth Estuary, occurring on the northern shore and stretching both up and down stream of the Council area. The Alloa Inches and Blackness Bay SSSIs both extend into adjoining Council areas (Map 6.1). The mudflat SSSIs of Alloa Inches, Skinflats, Kinneil Kerse and Blackness Bay form part of the Firth of Forth potential Special Protection Area (pSPA) and are internationally important for wintering birds. Their importance as a waterfowl habitat has also been recognised through earlier designation as a Ramsar Site (paragraph 6.2.4). In August 2000 formal consultation began over the classification of the Firth of Forth potential SPA : 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 salt marsh lagoons and sand dunes. The potential site is underpinned by a new Firth of Forth pSSSI. The only part of the Councils shore not covered by the pSPA is the Grangemouth Dock and the section from north Dunmore to South Alloa. Once determined, it will be classified under the EC Birds Directive. Meanwhile the site is afforded the same protection as a formally classified site. This protection is over and above that already guaranteed by SSSI designation.

- 6.3.50 The probable classifying of the Firth of Forth as a SPA has been recognised in the preparation of the non statutory Forth Integrated Management Strategy by the Forth Estuary Forum (1998). Specific reference has been made regarding the impacts of bridges and transport links upon wildlife. Of particular relevance is a replacement for the Kincardine Bridge and the deep mining proposals from the Longannet Complex. It is possible that the inner Forth part of the pSPA could be affected by these developments.
- 6.3.51 The Strategy also recognises that the pSPA is backed for the most part by some form of linear coastal defence. These have been constructed to allow land claim for agriculture or industry and to protect land at threat from tides and storms; this has undoubtedly contributed to most of the intertidal habitat loss of the Forth.
- 6.3.52 The future of coastal defence is closely linked to the estimates of sea level rise as a result of global climate change. The Strategy considers that a policy of managed retreat may have to be applied inevitably to relocate or remove flood embankments from claimed land which was formerly saltmarsh. This would encourage the restoration of the saltmarsh which whilst providing a valuable additional habitat would act as a natural defence for areas inland.
- 6.3.53 This scenario has to be actively considered in the Structure Plan for that part of the low-lying agricultural land lying immediately behind the pSPA on the River Forth flood plain. This may be the trade off for the loss of European habitat that may result from the Kincardine Road Bridge development or Longannet Deep mining proposals as called for under the Ramsar conventions: “where a contracting party in its urgent national interest deletes or restricts the boundaries of a wetland area included in the list it shall as far as possible compensate for this by designating and protecting alternative wetland areas of similar habitat”, (paragraph 28 Circular 6/1995).
- 6.3.54 It should be emphasised, that as international Natura 2000 areas the Black Loch Moss and Forth Estuary Sites are afforded the greatest degree of protection. A development which would have an adverse effect on the conservation interests for which a Natura 2000 area has been designated should only be permitted where:
- * *there is no alternative solution; and*
 - * *there are imperative reasons for over-riding public interest, including those of a social or economic nature.*
- 6.3.55 Where a priority habitat or species (as defined as Article 1 of the Habitats Directive) would be affected, prior consultation with the European Commission is required unless the development is necessary for public health or safety reasons.

National Sites

Sites Of Special Scientific Interest (SSSI)

6.3.56 There are 12 SSSIs within the Council area of which 4 cross Local Authority boundaries. (Map 6.1) Figure 6.2 below shows the SSSIs together with their area (including that within the Falkirk Council area); habitat type and date of notification.

Figure 6.2 - Sites of Special Scientific Interest (June 1999)

Site Name	Date Notified	Total Site Area (ha)	Area In Falkirk(ha)	HabitatType
Alloa Inches◆	Oct 88	316.1 ^{CS}	8.6	Coastland
Avon Gorge	Nov 86	19.0	19.0	Woodland
Blackness Bay	Aug 87	189.6 ^{WL}	31.5	Coastland
Blackloch Moss#	Jul 96	108.0 ^{NL}	2.4	Peatland
Bo'mains Meadow	Feb 91	0.9	0.9	Lowland Grassland
Carron Dams	Mar 84	17.1	17.1	Fen❖
Carron Glen	Mar 90	42.1 ^S	39.7	Woodland & Grassland
Darnrig Moss	Nov 95	77.5	77.5	Peatland
Denny Muir	Jan 92	197.6	197.6	Grassland, Heathland, Bog & Flush
Howierig Muir	Nov 94	20.5	20.5	Peatland
Kinneil Kerse*◆	Jan 88	763.5	763.5	Coastland❖❖
Skinflats*◆	Mar 88	542.6	542.6	Coastland❖❖❖
Total			1,720.9	

Notes:

❖ Also Zoological Notification - Breeding and Wintering Birds.

❖❖ Also Ornithological Notification.

❖❖❖ Also Wintering Birds.

* RAMSAR Site.

cSAC (Candidate Site).

◆ pSPA (Firth of Forth National Conservation Review Site).

^{C/NL/S/WL} Part in Clackmannanshire / North Lanarkshire / Stirling / West Lothian Council Area.

Source: Public Register of SSSIs, SNH 1999

6.3.57 It is worth noting that there are 1721 ha of SSSI representing 5.8% of the Council area which can be broadly broken down into 4 Habitat type groups. Figure 6.2 shows the majority as being the coastal margins and salt marsh of the Forth Estuary. Their importance and significant contribution to International Conservation has been highlighted above (paragraph 6.3.36).

6.3.58 The significant area of peatland is also worth noting as it should be seen as part of a wider mosaic of habitats supporting breeding, visiting and wintering birds.

6.3.59 The broad expanse of Denny Muir with such variation and extent in habitats accounts in part for the notable ornithological interest where extensive areas of open ground are required for the maintenance of viable population of birds such as red grouse, lapwing and snipe. This site can be contrasted to Bo'mains Meadow, almost 1 hectare but nevertheless of national significance.

6.3.60 Carron Glen and Avon Gorge represent the few remaining ancient, semi natural woodland sites within the Council area. They comprise several recognised woodland types reflecting the variety of conditions found beneath the canopy. These two sites follow the river valley providing a valuable ecological corridor linking varied and diverse locally important habitats now recognised for their value as Wildlife Sites and SINCS.

6.3.61 Finally the importance of Carron Dams can't be understated. The former water filled dam for the Carron Ironworks is now drained and supports the largest area of rich fen vegetation in the Council area and is one of the most extensive of its type in Central Scotland. The fen, associated open water

and woodland habitat makes it an important site for breeding and wintering birds. Its location in the centre of the urban area adjacent to a major school complex makes this site a valuable ecological and educational resource and as such demands protection. Its importance has been recognised by the Scottish Wildlife Trust in their designation of the site as a reserve in 1997.

6.3.62 It is this non recognition of Council boundaries by nature conservation and their international and national designations that has to be addressed in the Council's Structure and Local Plans, Conservation Strategies and Local Biodiversity Action Plans and their policies and recommendations. The Black Loch Moss SAC, the SPAs and SSSIs highlight this issue and draw attention to other such sites which might be immediately adjacent to the Council's boundary but not within it.

Local Conservation Sites

6.3.63 This final tier of nature conservation sites comprises, Wildlife Sites and Sites of Importance for Nature Conservation (SINCS). Following the comprehensive survey work funded by SNH and Falkirk Council, the Phase 1 and 2 habitat survey information collated and tentatively graded by Watson (1998) was assessed by SWT using criteria as set out in the Wildlife Sites Manual (1993) which examines the sites support of habitat and species in terms of both diversity and rarity. The criteria also looks at the naturalness and extent of the site.

- 6.3.64 Over 100 sites were assessed resulting in 60 meeting the criteria for designation as a SWT Wildlife Site. The remaining sites were then reassessed using more socially oriented criteria resulting in 32 SINCS; sites of a lower but significant quality.
- 6.3.65 Following the initial assessment of 60 it became apparent that sites in close proximity or of similar habitat types could be amalgamated or should incorporate adjacent complementary SINCS to form Wildlife Corridors or more significant larger sites. 56 Wildlife Sites have finally been identified and are shown on Map 6.1. They amount to some 1935 ha, 6.5% of the Council area.
- 6.3.66 The 32 remaining sites comprising both rural and urban fringe sites were highlighted from the Phase 1 Habitat Survey as Wildlife areas supporting a mosaic of habitats which were locally important due to their urban setting or their role in complementing Wildlife Corridors. Despite their somewhat limited interest on strictly "natural" habitat quality, it was considered that when combined with their importance for access for informal recreation, environmental education and their significant contribution to the quality of life for local people, 32 sites were worthy of safeguarding. These were identified as SINCS.
- 6.3.67 Following the assessment and subsequent amalgamation procedure described above, some 27 sites have now been finally identified. These are shown on Map 6.1. They amount to some 390 ha, or 1.3% of the Council area.
- 6.3.68 Circular 6/1995 on the EC Habitats and Birds Directive refers to the need for policies to encourage the management of landscape features which are not designated sites but which may be of major importance for wild flora and fauna. These features are those which because of their linear and continuous structure or their function as stepping stones are essential for migration, dispersal and genetic exchange. A number of these important wildlife corridors occur within the Council area, the main ones being the River Carron, the Forth and Clyde and Union Canals, the two main railway lines and parts of the Antonine Wall. Other important features include semi-natural woodlands, hedgerows, dykes, shelter belts, water courses, ponds and urban open spaces. Wildlife corridors take on added importance in urban areas where habitats are often small and fragmented. This recognition of the more local site as a key to maintaining biodiversity emphasises its partnership with the international site and the need for its inclusion in development plans and policies.
- 6.3.69 The Structure Plan Review must consider how the lower tier of nature conservation sites should be afforded protection and how best such protection can be achieved in policy terms. Some of the sites are within the urban area and may be subject to future development proposals. In addition, the Plan should consider which sites have the greatest potential for positive management and environmental education. The use of Local Nature Reserve designation may be the appropriate policy guide.

Ad Hoc Issues

Bean Goose Working Group

- 6.3.69 The Bean Goose is a rare visitor to Britain with approximately 400 birds wintering here from Scandinavia. They are now confined to two regular sites: the Slamannan Plateau in Central Scotland and the Yare Valley in Norfolk. The Bean Goose population in Central Scotland has risen over the last 10 years from 130 to 168 in 1998/99. Bean Geese are protected under European legislation and the Wildlife and Countryside Act 1981 and are therefore not a legal quarry species.
- 6.3.70 Before the mid 1980s little was known about Bean Geese in Scotland although their national importance was recognised. Local bird watchers highlighted the lack of knowledge of the species behaviour and habitat requirements. In 1994 the Survey of Bean Geese started and the initial findings indicated that:
- * *in Scotland they favour short grass pasture;*
 - * *in common with other geese, they prefer areas for feeding with low disturbance and good all round visibility;*
 - * *they use many different fields for feeding during the winter (Oct-March) but return to the same ones;*
 - * *they do not go beyond the core area of Slamannan; and*
 - * *they range between Fannyside Loch in North Lanarkshire and Loch Ellrig, Bean Farm and Slamannan.*

Central Scotland Forest (CSF)

- 6.3.71 The aim of the CSF Strategy is outlined in paragraph 6.3.134. However the promotion of nature conservation and habitat creation in line with the UK biodiversity action plan is a key element of the strategy and the Council as a partner has a key role in implementing the Strategy and achieving the targets through the policies and proposals contained in the Structure and Local Plan process.

Greenspace

- 6.3.72 This initiative is discussed in paragraphs 6.3.130 and 6.3.131 and like the CSF above provides the Council with a vehicle to promote practical local nature conservation through to policies and proposals contained in the structure and local plan process.

Millennium Link

- 6.3.73 This project is discussed in various parts of this report. By its very nature it will compete with the ecological and nature conservation interest of the Union and Forth and Clyde canals. Whilst the initial development will have a short term negative impact on the ecological balance of these two important linear features the positive management of the waterway and adjacent land should provide the opportunity for enhancing the areas biodiversity and creating additional habitat stepping stones and reservoirs through planning gain and positive policies in the Structure and Local Plans.

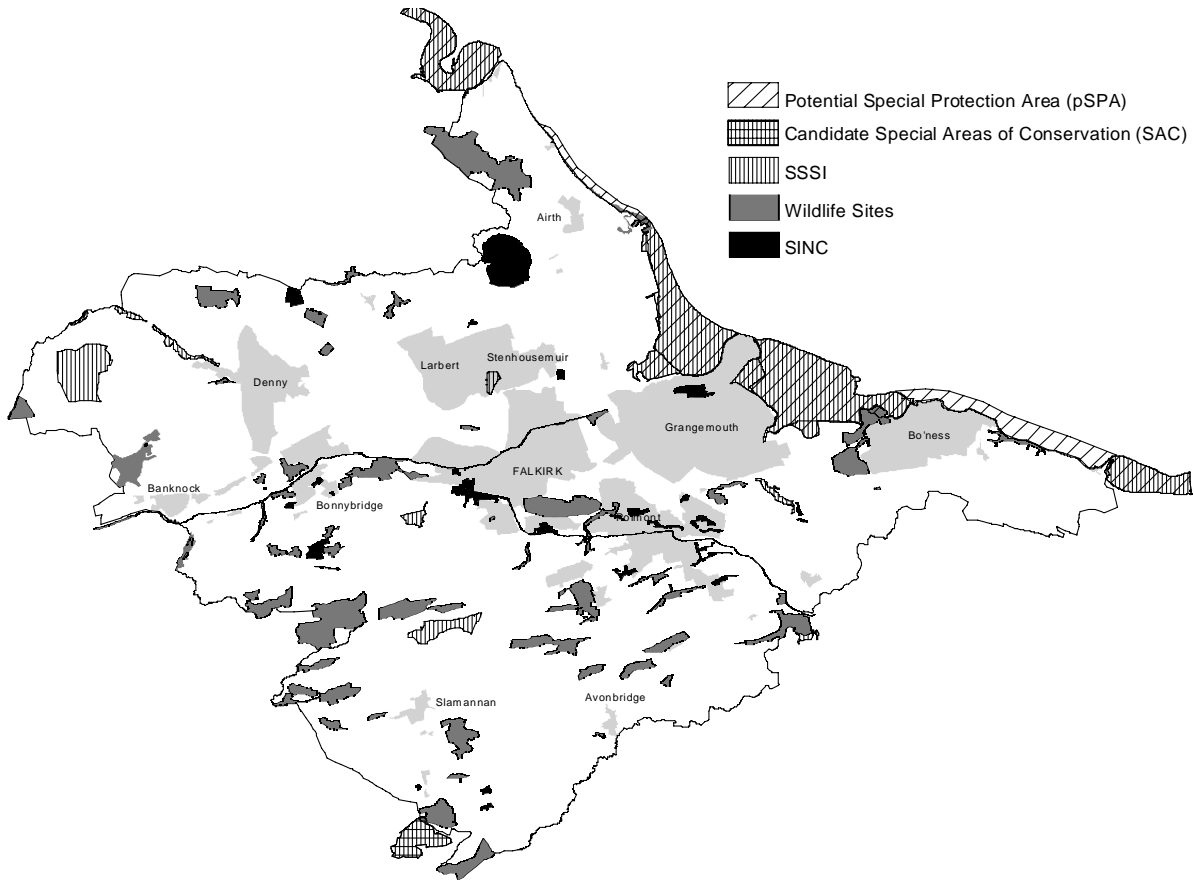
Conclusion

6.3.74 The variety of land use pressures and management activities can have an equally variable impact on the nature conservation resource. There can be direct threats to a site through the pressure of land-use through the spread of urban housing, industrial and retail developments. The recent pressure of large scale open cast coal-mining operations in the Falkirk area has now abated, however it did result in the total destruction of some sites and was particularly threatening at a number of mire sites on the Slamannan Plateau where the indirect influence on local hydrology needed consideration.

6.3.75 Other threats to the ecological interest may not be so obvious. The high intensity agricultural methods, practised throughout the area, can result in a direct loss (and also some indirect damage through drainage and nutrient enrichment) of habitat quality and associated biodiversity, even though the landscape remains rural, such as in the arable lowlands and the upland pastures. In addition to the loss of marginal habitats, such as woodland blocks, scrub, hedgerows and wetlands, there can also be disturbance caused by changes in management regimes. Grasslands (and heaths), as noted earlier, are particularly sensitive, but other habitats such as woodland and wetlands (including mires) can also be affected by unsympathetic grazing and drainage regimes.

6.3.76 Management for landscape and recreational needs can present both threats and opportunities to the natural resource. Positive management for habitat diversity at existing amenity managed areas such as parks, golf courses and other open spaces, can result in subtle damage caused through cosmetic tidying activities or changes in management regimes. Some apparently positive environmental improvement work can have negative impacts such as tree planting on marginal grassland or mire sites, or drainage work associated with path improvements. The current Millennium Link project on the two canals is perhaps of great relevance. However with wider consultation and planning such activities should be viewed as valuable opportunities for enhancement of sites, but also for habitat creation and the promotion of corridor links.

Map 6.1 Nature Conservation



The Coast

6.3.77 The north eastern boundary of the Falkirk Council area is the Forth Estuary. In considering the coast/estuary it is important to recognise that planning controls only extend to the mean low water mark of ordinary spring tides. More significantly, planning controls are only one of the mechanisms to influence development and that Falkirk Council's estuary is only a relatively small part of a much larger estuary system.

6.3.78 In line with the National Policy outlined above in paragraph 6.2.50, where local authorities and agencies are urged to work together in a partnership approach to ensure the effective management of the country's Firths, the Forth Estuary Forum was established to manage this Council's estuarine coast.

- 6.3.79 The Forth Estuary Forum is a Government supported voluntary partnership which aims to prepare an Integrated Management Strategy for the River Forth and Estuary. A wide range of organisations are actively involved in this partnership including government agencies, local authorities, business representatives, voluntary groups and some private individuals. Falkirk Council and its predecessor bodies have been involved in the work of the Forum since its instigation in 1993. The Forum has been successful in attracting European Union funding as part of an international demonstration programme on the Integrated Management of Coastal Zones which includes the Forth and other estuaries.
- 6.3.80 The Forum concept arose from the recognition that many of the activities which make the Forth so important can also be damaging to its long term future and that there is a need to find an appropriate balance between the interests of private and commercial users of the Forth and the conservation of the natural heritage. Examples of these potential problems are pollution from one source affecting the whole river system or coastal defence works in one location causing problems of flooding or erosion at another location on the estuary.
- 6.3.81 The Forum's aims are to:
- * *work to create a co-ordinated approach to the planning and the management of the Forth;*
 - * *promote the exchange of information and opinions about the Forth and improve common understanding; and*
 - * *encourage everyone to consider the full implications of future decisions on other users and upon the estuary itself.*
- 6.3.82 The Forth Integrated Management Strategy due for publication in mid 1999 is a non-statutory document. Whilst its aim is to consider a new approach to the management of the Forth, the duty and powers of regulating activities will remain the responsibility of statutory bodies. The Strategy does not impose any new duties on any authority, organisation or individual. Instead it relies on relevant authorities, organisations and individuals to voluntarily take steps to implement the actions suggested. The Strategy will work through a combination of awareness, co-operation and commitment to implement the objectives and actions recommended.
- 6.3.83 The developing Strategy seeks to address the many issues facing the Forth by basing future use and management on a series of 'guidelines' and 'actions'.
- 6.3.84 The guidelines are intended to be a series of widely supported and easily understood management statements on which future use and management can be based for specific issues or activities. The Strategy encourages public bodies, voluntary groups, private interests and individuals to adopt and use these guidelines to guide their decisions regarding the Forth.
- 6.3.85 The intention is to take forward the guidelines, actions and flagship projects through a combination of joint working arrangements between partners in the Forum and to seek commitment from individual partners to take a lead in delivering specific actions. Whilst some partner organisations, including SEPA, SNH and East of Scotland Water, have already made a commitment on specific actions. Commitment from other agencies, including local authorities, are being sought prior to the launch of the Strategy in August/September 1999.

6.3.86 It has been stressed that the Strategy is advisory and has been developed through a voluntary partnership approach. Strategy implementation will proceed on the same basis. There is however, strong European Union and Government support for this approach to estuary management and there are considered to be benefits to the Council in continuing to support and participate in the work of the Forum. Being based on the principles of sustainable development, the draft strategy is also fully in line with the Council's Environmental Strategy. Falkirk Council area has a relatively short coastline to the Forth and relatively poor access to the river. For this reason, there is less focus on coastal issues than might be the case in Fife or the Lothians with much longer coastlines and larger coastal communities. There are however, important local issues, such as pollution, water quality, the port functions of Grangemouth, coastal protection, flooding and recreational access to the Forth which have direct relevance to the work of the Forum. A wider information base and the sharing of knowledge and current best practice with other agencies is likely to benefit the Council in dealing with such issues.

6.3.87 In this respect, topic group papers, prepared as a first step in developing the strategy have already provided a valuable source of information on the estuary, helping to inform the Council's Environmental Strategy, the emerging Falkirk Council Structure Plan and in dealing with flooding and nature conservation issues.

6.3.88 The Council will be asked to endorse the Strategy and to make a commitment to continue participation in its implementation. As noted above, the general principles underpinning the strategy are considered to be consistent with the goals and values of the Council and

specifically with the sustainable development themes being pursued in the Council's Environmental Strategy. It has also been recommended that the Council endorse the Strategy, if and when requested to do as by the Forum. Its context should be reflected in the Structure Plan Policies.

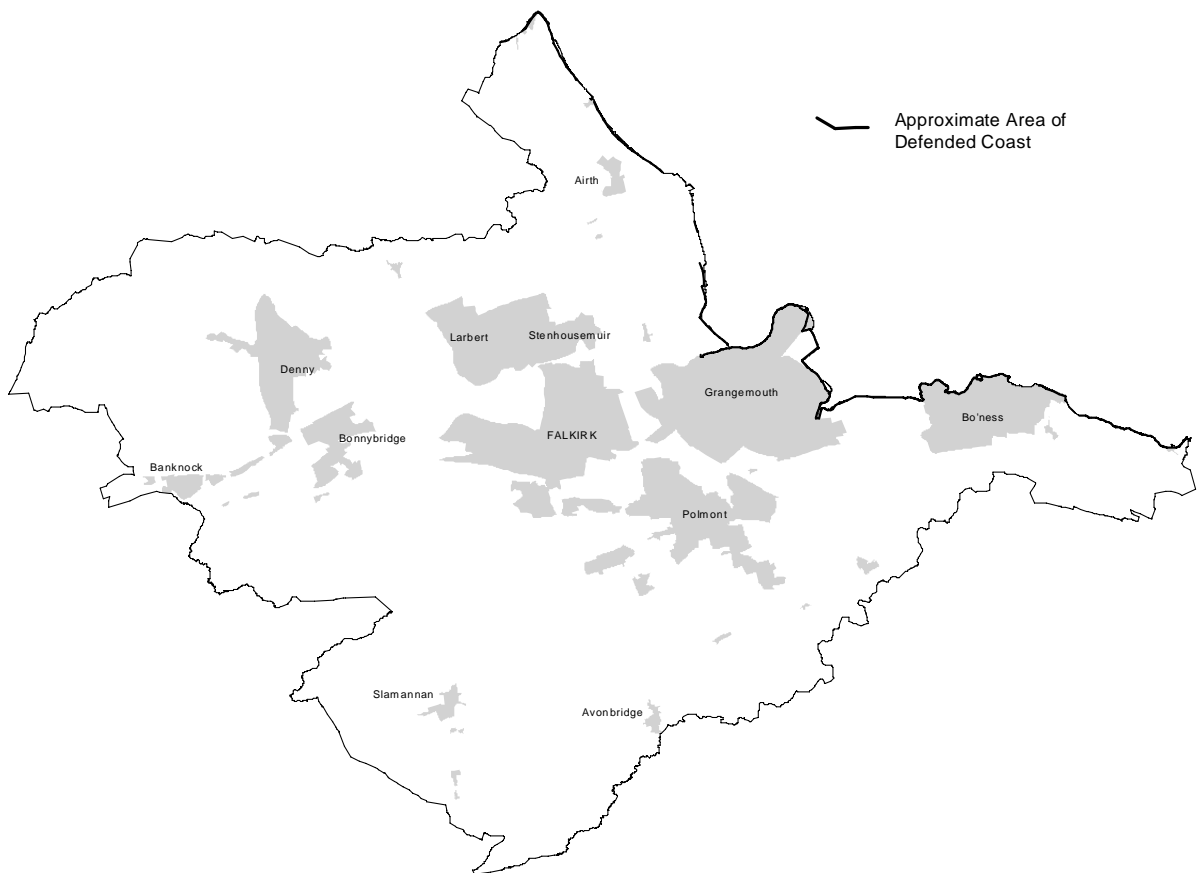
Coastal Defence

6.3.89 Coastal defence includes the management of coastal erosion and tidal flooding. The natural processes of erosion are complex and dynamic. Apart from the prediction of a sea level rise that would tend to increase both erosion and flooding, defence measures themselves will in turn impact on the processes of erosion. Coastal defence is an extremely expensive activity both in the initial cost and continuing maintenance and if not based on a sound understanding and monitoring of natural processes can cause more problems than it solves. The location of new development in relation to coastal defence measures is therefore one of the main planning issues relative to the Forth Estuary. The approximate area of defended coastline is shown on map 6.2.

6.3.90 The defended coastline ranges from earth embankments covering the majority of the coast from South Alloa, Dunmore, Airth through to Skinflats and the mouth of the Carron, gabion boxes and rip-rap along the Bo'ness foreshore and approaches to Blackness, to sheet piling and sea walls around the Grangemouth Docks, the petrochemical industry and Bo'ness Dock and Harbour. There are however significant intervening lengths of relatively unprotected coast north of the Kincardine Bridge and

along the industrially developed Bridgeness foreshore at Bo'ness. The defences are in various states of disrepair, abandonment and neglect, suggesting the need for a strategy. In areas where there will be less impact on the built environment a policy of managed retreat should be considered. This may have the effect of creating additional saltmarsh, coastal lagoons and intertidal habitat. Such a proposal would however require a multi-agency approach and the agreement of SNH in view of its EU protection.

Map 6.2 Defended Coastline



Landscape

Landscape Setting

6.3.91 Despite its relatively small geographical area of 29,924 hectares, the landscape of the Falkirk Council area enjoys great variety. From the River Forth in the north, with its foreshore of inter-tidal mudflats, saltmarshes and raised beaches, the flat agricultural carseland extends southwards. The low lying coastal margins around Grangemouth, dominated by the petrochemical industry, become generally more hilly to the east towards Bo'ness. Inland the east of the district has good quality agricultural land with rolling hills and the scenic Avon Valley with its landscape of small field units, hedgerows and tree belts. The centre of the Council area is largely urban and low lying around the river valleys of Bonny Water and the Carron, with the Forth and Clyde and Union Canals and the Antonine Wall representing major landscape features of national historical importance. To the south the land rises up to the lowland Slamannan Plateau - a remote area with a legacy of former mining activity. To the west the land rises again to form the Kilsyth and Denny Hills, through which the Carron flows. North of the major central settlements the largely agricultural landscape contains major road corridors of the M9, M876 and M80.

6.3.92 The visual quality of the landscape is also very diverse. The petrochemical industry at Grangemouth and major service lines represent the most obvious modern day detracting influences, whilst mining dereliction, legacy of the iron works industry and long term decline of the agricultural landscape framework are reminders of past landscape pressures. Gradual development of urban fringes is becoming a real threat to the open character of many parts of the Council area. Landscapes with the highest visual quality enjoy protection through various designations although these represent a relatively small percentage of the land area.

Landscape Character Assessment

6.3.93 As part of a national programme of Landscape Assessment in Scotland the "Central Region Landscape Assessment" (Ash 1996) and its supplement "Stirling/Grangemouth Landscape Assessment" (DTA 1998) have been produced by Scottish Natural Heritage (SNH) in conjunction with the former Central Region and Falkirk District Council. These provide an up-to-date, detailed understanding of the area's landscape resource, dividing it into the character areas shown in figure 6.3 below and Map 6.3.

Figure 6.3 - Landscape Character Assessment

National Landscape Context	Regional Character Areas	Landscape Character Types	Landscape Character Units Present in the Falkirk Council Area
Midland Valley of Scotland	Volcanic Uplands of the Midland Valley	Volcanic Uplands	
		Lowland Hills and Ranges	
	Lowland Hills and Valleys		
	Lowland Hill Fringes	East Touch Fringes (15A) Denny Muir (17)	
	Lowland Plateau	Slamannan Plateau (19B)	
	Lowland River Valley Fringes		
	Lowland River Valleys	Carse of Forth (D) Avon Valley (F) Falkirk/Denny Urban Fringe (30/B) Middle Carron Valley (29)	
Coastal Landscapes of Scotland	Midland Valley Coastal Landscapes	Coastal Margins, Coastal Hills and Flats	Grangemouth/Bo'ness Flats (G) Bo'ness Coastal Hills (H)

The letters in brackets in the final column relate to the divisions in the Grangemouth /Stirling Landscape Assessment and the numbers to the Central Region Landscape Assessment.

6.3.94 These character assessments do not evaluate the identified landscape types or perceive them to be of greater or lesser value than others. They seek purely to classify the landscapes into their general types to provide a better understanding and thus enable better conservation, restoration, management and enhancement. Whilst recognising that there are land use and development issues and conflicts, the documents do not attempt to resolve these,

but rather to inform decision makers about the landscape context of proposals for change and to ensure that a fuller understanding of the landscape is included in the planning and management of the area.

- 6.3.95 For each landscape type the assessments:
- * *identify the forces or pressure for change in the landscape which may affect its distinctive character;*
 - * *assess the sensitivity of the landscape to change;*
 - * *identify which areas have the greatest and least capacity to accommodate development and land use change;*
 - * *recommend guidelines for conservation, restoration and enhancement; and*
 - * *identify priorities for specific landscape initiatives.*

6.3.96 The Landscape Character Assessments (LCAs) represent the most comprehensive overview of the landscape of the Falkirk Council area and should be used to guide any assessment of the success of existing landscape policy and the formulation of new ones.

Existing Landscape Designations

6.3.97 Various areas of the Falkirk Council Area landscape are currently afforded protection through a number of designations. The Structure Plan is the main way of ensuring that these provide a coherent strategic framework for the protection and enhancement of irreplaceable resources, within which development is promoted and enabled in appropriate locations.

Areas of Great Landscape Value (AGLVs)

6.3.98 AGLVs are areas of regional significance and may be designated by planning authorities for the purpose of safeguarding locally important areas of outstanding scenic character or quality from inappropriate development. Two such areas exist within the Falkirk Council area - the Avon Valley and the eastern end of the Touch/Campsie/Gargunnoch Hills - which were designated in previous structure plans prior to and set down in the Central 2000. These cover the upland parts of the Council area.

6.3.99 There is a presumption against development in AGLVs with the exception of such farming, forestry and recreational activities as can be accommodated without detriment to the scenic quality of the areas. Essentially this is a negative planning approach and if possible the new Structure Plan should address how the existing landscape framework should be managed and enhanced.

Green Belts

- 6.3.100 The Green Belt was first established in the Falkirk Council area in 1962 and now stretches for approximately 9 miles in a broad arc between the Kincardine Bridge/M876/A876 and Bo'ness, with outliers in the Carron Corridor south of Larbert/Stenhousemuir and at Callendar Park and Wood. Since its creation, its extent has fluctuated, with major extensions at Bo'ness in 1985 and Larbert and Callendar Park/Wood in 1994. There have also been a number of deletions over the years to accommodate industrial development (e.g. West Mains) or housing (e.g. Roughlands, 1969 and Gilston, 1970). The total area now covered is 39 square kilometres. Ongoing Local Plan Reviews are taking further land from the Green Belt at Middlefield/Westfield and at Gilston.
- 6.3.101 The Green Belt varies in width from 2 miles to a few hundred metres and forms more of a wedge than a belt. It is absent from the western settlements in the Council area and does not extend to many urban edges within the core area. As such it is an adaptation of the Green Belt concept, quite different from the typical metropolitan Green Belt.
- 6.3.102 Land use within the Green Belt is dominated by agriculture, much of which is of prime quality. There are substantial pockets of recreational use (e.g. Callendar Park, Dorrator Playing Fields, Polmonthill Ski Centre, Falkirk, West Lothian and Grangemouth Golf Courses), cemeteries at Camelon and Polmont, some small areas of woodland, and areas of past, present or consented sand and gravel extraction and landfill at Polmont.
- 6.3.103 However, much of the Falkirk Council Green Belt was designated to help prevent the coalescence of settlements, rather than to protect the landscape qualities of the area. As such, the Green Belt abuts the rear of settlements and industrial areas and consists of land of relatively poor landscape quality.
- 6.3.104 The Green Belt is also a major transport and service corridor, bisected by the M9, and carrying a number of oil, gas and chemical pipelines.
- 6.3.105 The current Central 2000 Structure Plan sets out the strategic context for the designation of Green Belt in the area. It was designated to:
- * *prevent the coalescence of Falkirk with Laurieston, Grangemouth, Larbert, Stenhousemuir, Carron and Carronshore;*
 - * *prevent the coalescence of Grangemouth with Polmont and Laurieston;*
 - * *prevent the coalescence of Bo'ness and Polmont with Linlithgow;*
 - * *protect the landscape setting of Falkirk and Bo'ness; and*
 - * *protect the landscape setting of Callendar House.*
- 6.3.106 The precise boundary of the Green Belt and the detailed policies for the control of development are set out in the Rural Local Plan 1994. It sets out the general presumption against new development in the Green Belt, indicating a limited range of exceptions:
- * *development required for farming and forestry;*
 - * *development for appropriate recreation and tourism which require a countryside location; and*

- * *other types of development, such as telecommunications and temporary uses, including mineral and landfill activity, where a Green Belt location is essential and there is no serious detrimental impact on the character of the Green Belt.*

Historic Gardens and Designed Landscapes

- 6.3.107 In 1988 the Countryside Commission for Scotland published an Inventory of Gardens and Designed Landscapes which is generally intended to be the start of a fuller survey of the historic landscape resource of Scotland. This is now jointly maintained by SNH and Historic Scotland.
- 6.3.108 Of the 275 sites identified in the Inventory, two lie within Falkirk Council area:
- * *site no. 147, Dunmore Park - Dunmore Park, which appears to date from the 1820s, lies 4km from the Kincardine Bridge on the south bank of the River Forth. The policy woodlands and ornamental trees are significant in the surrounding agricultural landscape and fine views are obtained from the Park, particularly to the north-east and across the Forth; and*
 - * *site no. 148, The Pineapple - The Pineapple was built in 1761 for the 4th Earl of Dunmore as a folly and garden retreat in the north wall of the walled garden at Dunmore Park. It was designed to have extensive views out, but is sheltered and screened by woodland today. The ornamental gardens extend to over 4 hectares.*
- 6.3.109 These sites are currently protected through the Central 2000 Structure Plan and Rural Local Plan, both of which seek to protect such areas from development which would adversely affect their character and setting, as well as other unlisted historic gardens and landscapes of national and regional significance.

- 6.3.110 The two areas within Falkirk Council area which are listed in the Inventory represent a very small percentage of the landscape extent, which makes the implementation of the above policies particularly important and to date these appear to have been successful.

Tree Preservation Orders

- 6.3.111 Trees and woodlands within both urban and rural environments are important for their amenity value, as well as having more subtle benefits such as reducing air pollution and providing habitats for wildlife.
- 6.3.112 Under Section 160 of the Town and Country Planning (Scotland) Act 1997 Local Planning Authorities are empowered to place Tree Preservation Orders (TPOs) on trees and woodlands which have suitably significant amenity value. Within a TPO an owner must seek permission from the Council before undertaking any work on their trees.
- 6.3.113 There are currently 49 TPOs in Falkirk Council area. The earliest designation was made in 1961 and no overview has been undertaken in recent years. A recent report by Strategic Services (September 1998) suggests that a review is necessary to make existing Orders more enforceable. It is therefore planned to undertake a review of all long standing existing TPOs over the next few years.

- 6.3.114 The Council will also continue to designate new TPOs where this is considered necessary to protect important trees and woodlands in the area. It is hoped that new Supplementary Planning Guidance currently under preparation will help to raise public awareness of the importance of TPOs.

Trees in Conservation Areas

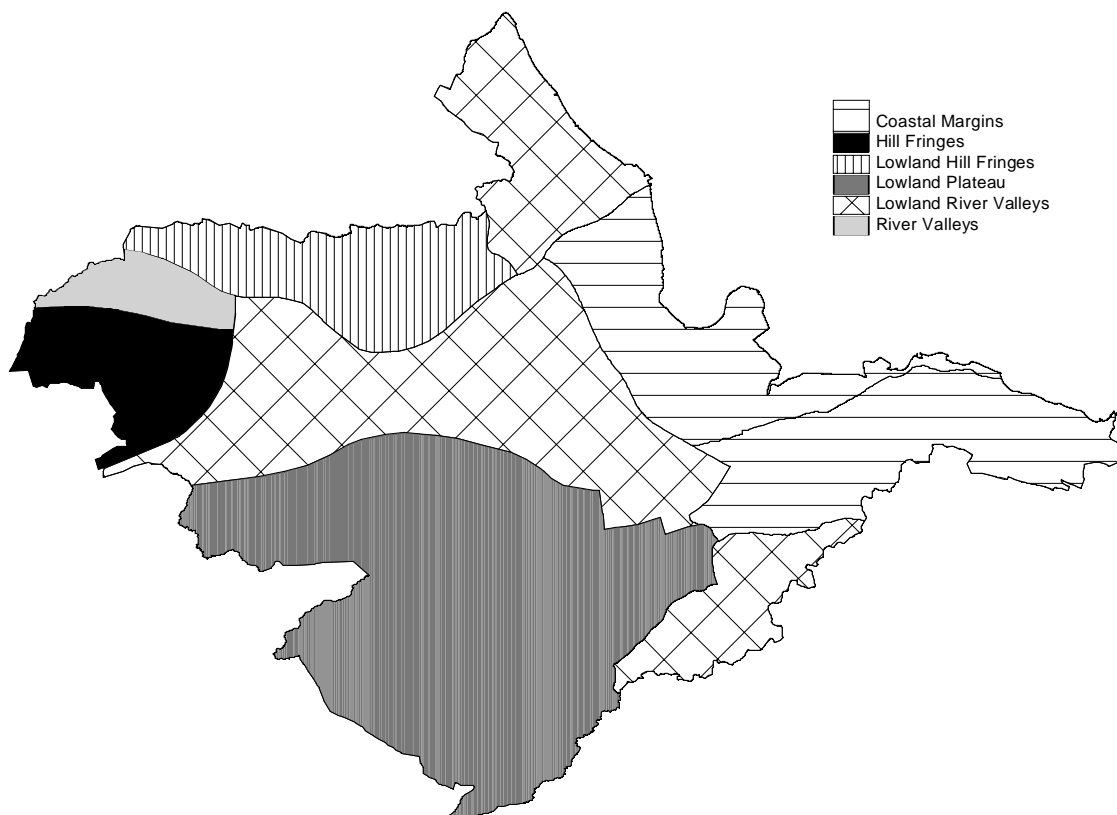
6.3.115 There are 9 Conservation Areas within Falkirk Council area where trees are also afforded protection through the Town and Country Planning (Scotland) Act 1997 (see paragraph. 5.3.13 of the Built Heritage Section). If an owner wishes to undertake any tree works six weeks notice of the intention to do this must be given to the Local Planning Authority in order that a TPO might be placed on the trees if the works are considered to threaten the amenity value of the area.

6.3.116 Current Structure Plan policy seeks to ensure that the landscape setting of Conservation Areas are safeguarded. Rural Local Plan policy seeks to protect the visual amenity and character of each Conservation Area with particular reference to protecting trees.

Hedgerows

6.3.117 Both the Phase 1 Habitat Survey and the Landscape Assessments commissioned by SNH highlight the decline in hedgerow cover and quality in the Falkirk Council area. Where hedges do exist they are commonly closely trimmed and frequently with gaps. Many have been removed in agricultural areas to increase land productivity. In the Landscape Assessments areas are highlighted where hedgerow reinstatement and management could be prioritised to improve both the visual and conservation value of the landscape.

Map 6.3 Landscape Characteristics



Forestry

United Kingdom Context

6.3.118 The woodlands of the UK reflect changes in land use over several thousand years. Land which was largely covered with woodland was cleared of trees to satisfy the demands of an increasing population for timber, fuel and farm land. By the beginning of the 20th Century woodland cover was around 5%. Today this figure has risen to around 15% nationally, 16% in Scotland, as the result of commitment of successive Governments to a steady programme of planting. It is current Government policy to increase woodland area in the UK. An increasing number of woodlands are managed specifically for recreational and conservation purposes, rather than solely for timber production and in Scotland forestry supports 11000 jobs.

6.3.119 As part of the UN Conference on Environment and Development in Rio de Janeiro (The Earth Summit) a commitment was made to the use of forests as sustainable resources. Sustainable Forest Management means

“the stewardship of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems.”

(Ministerial Conference on the Protection of European Forests, Helsinki; 1993)

6.3.120 “The UK Forestry Standard - The Government’s Approach to Sustainable Forestry” was published in January 1998 and expresses a vision for the Country’s woodlands. It describes good practice and recognises the need to monitor UK forests. Consultation is currently underway on a Scottish Forestry Strategy, which Falkirk Council will comment on.

Falkirk Council Tree Coverage

6.3.121 Woodland and plantation comprise approximately 8% of the Council area. Forestry in the recent past has not been a major industry, although where it occurs it can have a significant effect on the local environment, especially if poorly designed or located.

6.3.122 The type and areas of woodland cover in Falkirk Council area are as follows

Figure 6.4 - Woodland Cover in the Falkirk Council Area

Type of Woodland	Area (hectares)	% of Council area
Semi-natural broadleaved woodland	791.1	2.50%
Semi-natural coniferous woodland	9.4	0.03%
Broadleaved plantation	109.5	0.35%
Coniferous plantation	1439.2	4.60%
Mixed plantation	157.5	0.50%
Recently felled plantation	1.3	0.004%
Total	2508.3	7.984%

Source - Phase 1 Habitat Survey, 1994

Semi-natural Broadleaved and Mixed Woodland

6.3.123 This habitat type comprises all woodland stands which do not obviously originate from planting. In the southern part of the Council area it is a scarce habitat, with the only mature woodland of any size being Castle Glen Wood. Elsewhere in the south there are very small pockets of woodland along the steep sheltered valleys of burns. In the north semi-natural broadleaved woodland is much more extensive, with large areas at Letham Moss and Dunmore Moss. It is also common on the steeper sided valleys of the rivers Avon, Carron and Castlerankine Burn, with some present in the urban areas.

Semi-natural Coniferous Woodland

6.3.124 These woodlands are usually comprised of exotic conifers which have either arisen spontaneously or are derelict plantations with a semi-natural appearance. They are a scarce habitat in the area, with most areas too small to record.

Broadleaved Plantation

6.3.125 Small mixed broadleaved plantations, many quite recent, occur in corners or strips of fields and mature characteristic beech shelterbelts make up this habitat in the southern area. To the north it is mostly landscape and amenity planting in urban areas.

Coniferous Plantation

6.3.126 Coniferous plantation is the most widespread woodland habitat in the area, with several plantations of over 100 hectares. To the south both mature and young plantations are widespread, many planted over mire and heath. Mature Scots Pine shelter belts are included, although their overall area is relatively small. In the northern area the habitat is found in small-scale landscaping, although larger areas exist at Tor Wood and Denny Muir.

Mixed Plantation

6.3.127 Very recent plantations, planted by both the Forestry Commission and private individuals, form most of this category. This reflects new forestry practice and guidelines.

6.3.128 Some woodland planting has been undertaken since the Habitat survey but this is difficult to quantify. The Forestry Commission estimate that 254 ha of conifers and 270 ha of broadleaves have been planted under Woodland Grant Scheme since 1st April 1994, with a further 124 ha of conifers and 61 ha of broadleaves approved but not planted.

Existing Woodland Protection

6.3.129 There are several designations, both statutory and non statutory, which afford areas of woodland varying degrees of protection against development:

- * *Tree Preservation Orders (see earlier paragraphs);*
- * *trees in Conservation Areas (see earlier paragraphs);*
- * *planning conditions. In certain instances where development has been permitted in a situation where many significant trees exist a condition may be placed on the planning permission stating that no work shall be undertaken to trees without prior consent of the Local Planning Authority;*
- * *Sites of special scientific interest (SSSIs). Designated under the 1987 Wildlife and Countryside Act by SNH these sites are of national importance for wildlife. Not all of them are woodland. Anyone wishing to undertake works within such areas has to gain permission from SNH. There is a presumption against development of these areas in the Rural Local Plan;*
- * *listed wildlife sites and sites of importance for nature conservation (SINCs). These were identified by SNH in their Habitat Survey as being locally important for their wildlife value. Again, they are not all woodland and there is a presumption against development in the Rural Local Plan; and*
- * *ancient/long established/semi-natural woodland. These areas of woodland, which comprise 2.5% of the Council area are the most long standing areas of trees and are protected through Local Plan policies.*

Initiatives for New Tree Planting Falkirk Greenspace Initiative

6.3.130 This initiative, a joint venture between Falkirk Council, Central Scotland Countryside Trust (CSCT), Forth Valley Enterprise and Scottish Natural Heritage, is an attempt to use the Falkirk Council area Green Belt in a more positive way. It provides a means of addressing landscape and recreational improvements in the GB and other urban fringe areas. Recent Local Plans, particularly Larbert and Falkirk, have tried to put the concept on a statutory basis and to raise it's profile. In the Falkirk Local Plan Review, a Greenspace policy (FAL 4.2) is included and priority areas for implementation are identified on the Proposals Map.

6.3.131 Conceived in 1993 as a way of focusing the strategic activities of CSCT the Greenspace concept envisages the creation of an attractive, well-wooded landscape encircling Falkirk and providing a permanent link between existing and proposed recreational spaces, public parks, the corridors of the River Carron, the two canals, the GB, former policy woodland and designated countryside around the urban areas.

Tree Planting and Housing Proposals on the Slamannan Plateau

6.3.132 Policy Rural 1 (3) of the Rural Local Plan states that the development of a new dwelling house on the Slamannan Plateau should be accompanied by 10-15 hectares of tree planting. The exact character and density of planting is considered on its own merits for each site, although a high proportion of native broadleaved species will be encouraged. Falkirk Council's Planning Policy Advice Note 1 stresses the

need for careful design and consideration of other environmental issues.

6.3.133 The applicant will be expected to enter into a management agreement with the Council and the occupation of the house is expected to be restricted to the person responsible for the tree maintenance and management.

Central Scotland Forest Strategy (CSFS)

6.3.134 This initiative started in 1995, following on from the earlier Central Scotland Woodlands Initiative launched in 1989. It builds on original aims to encourage economic and environmental regeneration and the creation of new woodlands across Central Scotland. The CSFS aims to double the current woodland cover of 11% over the 160000 hectare area (which encompasses the former Councils of Monklands, Motherwell, West Lothian, Falkirk and Cumbernauld and Kilsyth and the eastern fringes of Hamilton Council), creating a sustainable multi-purpose and productive woodland resource. CSCT are the lead organisation in a wide partnership which includes Falkirk Council. They aim to co-ordinate and improve existing mechanisms available for woodland creation to fulfil the aims of the strategy. The concept of the CSF is supported in Local Plan policies.

Control of Forestry Operations

6.3.135 Forestry operations lie largely outwith the scope of statutory planning control. Regulatory mechanisms in the UK are primarily operated by the Forestry Commission (FC).

6.3.136 The FC consults the Council on applications for planting grants and felling licenses over 10 hectares, as well as seeking views from other statutory bodies such as Scottish Natural Heritage. It also encourages Councils to seek and consider the views of other local bodies before formulating their expert advice on such proposals. Certain Community Councils have recently asked to be involved in this consultation process, requesting a standard notification procedure to be set up.

6.3.137 Environmental guidelines are produced by the Forestry Commission on good forestry practice and it is required that all applications made under their forestry grant schemes adhere to these. Following the withdrawal of income tax relief for forestry in 1988, the introduction of the Woodland Grant Scheme and Farm Woodland Premium Scheme has resulted in a more responsive and flexible range of grants targeted at achieving a broad spread of objectives. This has meant a marked increase in broadleaved woodland cover nationally - particularly of native species - and the targeting of well-designed productive forestry “down the hill” which is very relevant to the Falkirk Council area.

Indicative Forestry Strategy (IFS)

6.3.138 The IFS (As shown on map 6.4), which aims to guide the location and character of new forestry, follows the guidelines set down in SDD Circular 13/1990 and was included in the Central 2000 Structure Plan (July 1997). The strategy takes into account land capability for tree growth, land use interests and various environmental issues which may impose limitations on forestry development. More details of the current strategy are given in the subsequent section on forestry.

6.3.139 The very recently updated Circular 9/1999 continues to advocate the use of IFSs as part of Structure Plans but changes the emphasis to reflect the multi-benefit nature of forestry today. Falkirk Council is currently liaising with the Forestry Commission with a view to revising the IFS in line with the new guidance. Ideally a revised strategy should form part of the new Structure Plan, but Circular 9/1999 states that it will be acceptable to prepare this independently and submit it as a specific alteration to the plan.

6.3.140 The Indicative Forestry Strategy presented in the Central 2000 Structure Plan and here (with only urban limit boundaries adjusted) to guide the location and character of new forestry planting in the Falkirk area considered the following constraints:

- * *landscape;*
- * *nature conservation;*
- * *water catchments,*
- * *agriculture;*
- * *recreation and tourism;*
- * *archaeology; and*
- * *roads capability.*

The combination and intensity of these constraints was assessed and the land was divided into three basic categories, as shown in figure 6.5.

Figure 6.5 – Categories in the Indicative Forestry Strategy land Classification

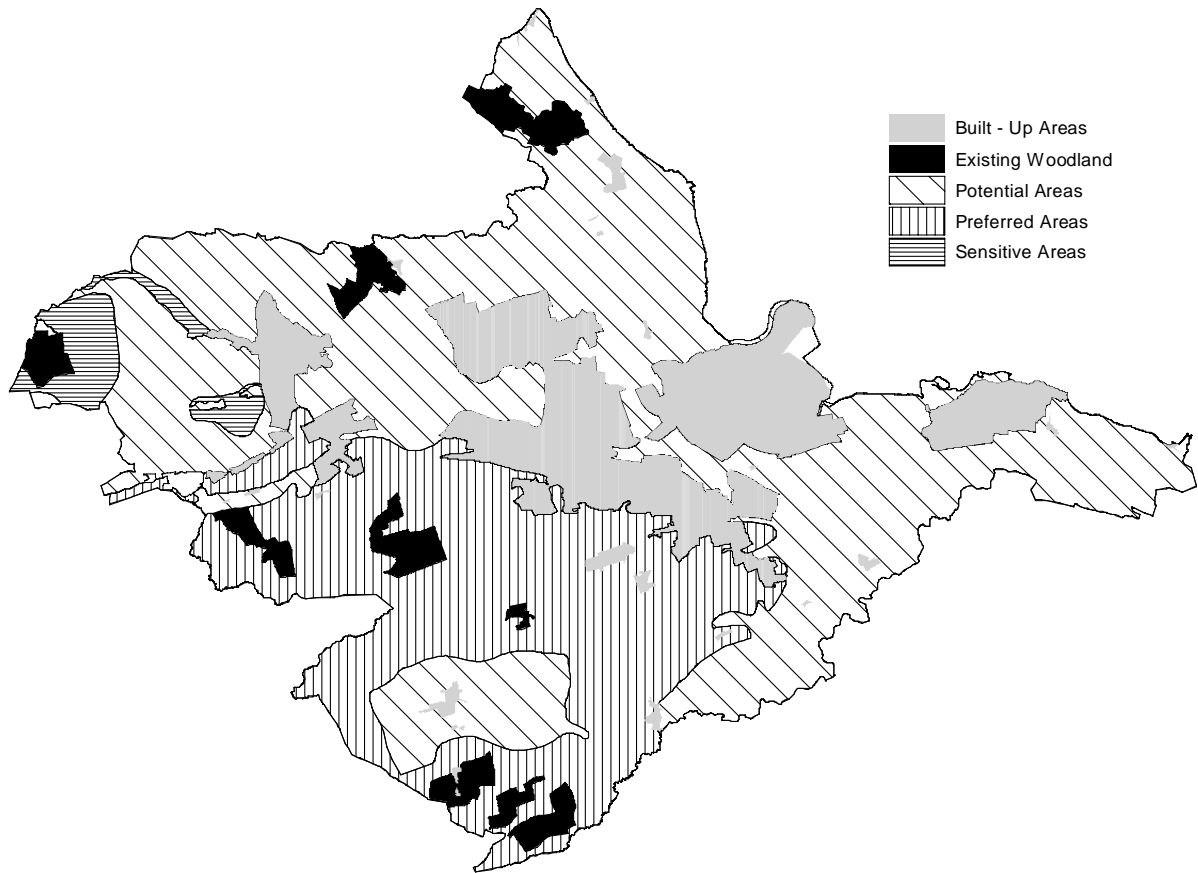
CATEGORY	CRITERIA
Preferred Areas	Land which is likely to be attractive for forestry investment where there are no major constraining interests. Strategically preferred locations which fully meet Falkirk Council’s environmental guidelines. Land with marginal to low agricultural capacity and ranging from Forestry Capability F2 to F6, largely F4/5. (See below for explanation).
Potential Areas	Areas which are suitable for forestry but where at least one major constraining interest has been identified. Any forestry proposals are expected to have regard to these interests. All types of forestry may be acceptable but in certain localities particular types may be preferred, e.g. farm forestry, mixed forests or broadleaves. Forestry Capability F2 to F5, predominantly F2 and F4.
Sensitive Areas	Land where the number, intensity or complexity of issues make it extremely sensitive to forestry planting. Does not imply a general presumption against tree planting – some suitable planting may be possible in certain areas, although emphasis should be placed on amenity, game, nature conservation or shelter. Where new planting is acceptable in principle, high standards of design, with an emphasis on indigenous species and natural regeneration with substantial open space will be expected.

6.3.142 Figure 6.6 shows the land capability classification for forestry, as produced by the Macaulay Land Research Institute. F1 classification indicates that the land is least suitable, with F7 showing the most favourable areas.

Figure 6.6 - Land Capability for Forestry in Falkirk and Scotland in Square km

	F1	F2	F3	F4	F5	F6	F7
Falkirk	2	96	26	96	13	1	0
Scotland	740	4060	6222	10290	13639	19237	21784

Map 6.4 Indicative Forestry Strategy



Agriculture

Summary of Coverage

6.3.143 Agriculture is an extensive, major land use in the Falkirk Council area. The Phase 1 Habitat Survey (SNH, 1994) is the most recent overview of land use and shows that:

- * *in the northern part of the area there are large lowland areas put over to arable use and improved grasslands. A small area of upland agriculture is limited to rough grazing, but with some conifer afforestation; and*
- * *most of the southern area is under agriculture of varying intensity. Sheep and beef cattle grazing predominates, with occasional dairy farms and horse rearing. Arable fields are scattered throughout, becoming more frequent to the east. Most farming units are relatively small.*

6.3.144 Pressure continues for land to be taken out of agricultural use or used less intensively. Farm diversification and the need for farming practice to be closely linked to conservation objectives remain important issues.

6.3.145 It is believed that land most likely to come out of production in the future is medium-to-low capability classified areas in locations which are suited to other uses, e.g. forestry, tourism and recreation. Such alternatives will need careful management to safeguard the amenity and wildlife resources of the countryside and to sustain rural communities.

Land Classification

6.3.146 Prime agricultural land occupies approximately 17.2% of the Council area, as shown on Map 6.5. Such land is defined by the Scottish Office as areas ranked 1, 2 and 3.1 in the Land Capability for Agriculture maps produced by the Macaulay Institute.

Less Favoured Area

6.3.147 Much of the southern and western part of the Council area falls within the European Community's Less Favoured Area designation and is therefore eligible for a range of grants and subsidies.

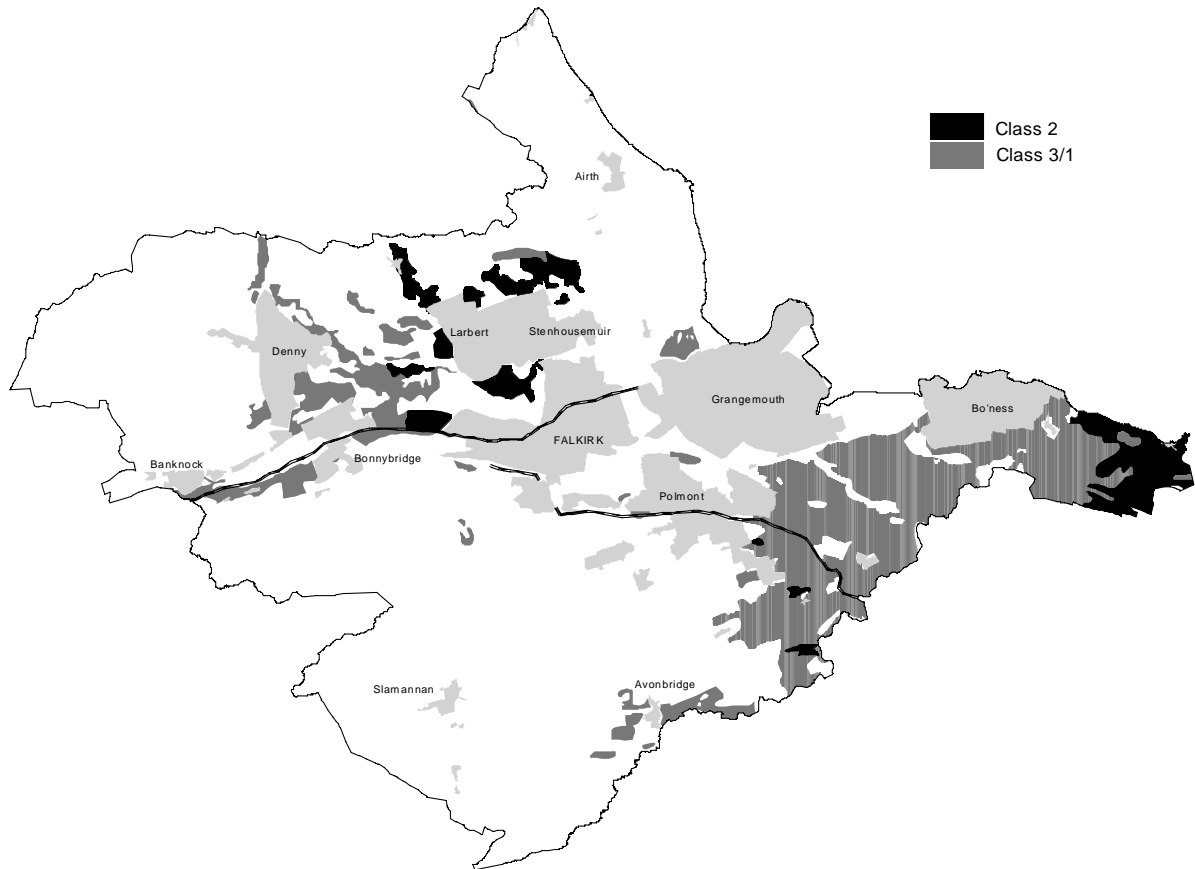
Partnership

6.3.148 In the past, grants were made available for forestry or agricultural schemes which were contrary to nature conservation interests. Landowners are still faced with a confusing array of overlapping measures and sources of advice. Integration can be pursued by a range of complementary measures, especially the production of indicative strategies, area initiatives and other partnership ventures.

6.3.149 Organisations such as the Central Farming and Wildlife Advisory Group (FWAG) and CSCT have an important role to play in this process. Particular opportunities for demonstration projects are being demonstrated in the Slamannan Plateau and Falkirk Greenspace. (See landscape and forestry section).

6.3.150 In line with Government guidance existing Structure Plan and Local Plan policies state that prime agricultural land should be safeguarded against development. In practice these are rarely important in their own right in determining planning applications - they merely add to the main countryside policy.

Map 6.5 Agricultural Land Classification



6.4 Summary of Main Findings

NATURE CONSERVATION

- 6.4.1 The Council has responsibility as a Competent Authority under the terms of the Conservation (National Habitats & c) Regulations to take care not to harm protected species or habitats. The Structure Plan should provide the main strategic land use framework in order to implement this duty.
- 6.4.2 A hierarchy of policies will be needed to safeguard the statutory and non-statutory sites and areas. The international and national designations need to be identified on the key diagram.
- 6.4.3 The Structure Plan should establish strategic policies for natural heritage planning in which wildlife sites, landscape features and other areas of greenspace are linked together in an integrated habitat network to make an important contribution to the maintenance and enhancement of local biological diversity.
- 6.4.4 Further research is required to gather more data on less well known species groups; notably, all fauna groups and lower plants and fungi groups.

COAST

- 6.4.5 NPPG 13 “Coastal Planning” advises that local authorities should classify their coast into one of three categories - developed, undeveloped or isolated. The initial guidance in PAN 53 implies the coast of the Falkirk Council area should be regarded as undeveloped with the exception of the area fronting the Grangemouth petro-chemical complex and the Bo’ness Harbour and foreshore area which should be regarded as developed. This classification however should be the subject of further more detailed investigations.
- 6.4.6 The Forth Integrated Management Strategy draws attention to the potential long term damaging activities and the need to find an appropriate balance between the interests of private and commercial uses of the Forth and the conservation of the natural heritage. It highlights that pollution from one source can affect the whole river system and that coastal defence works in one location can cause problems of flooding or erosion at other locations on the estuary, not always within the same Council area or agency boundary.
- 6.4.7 The future of coastal defences is closely linked to the estimates of sea level rise as a result of global climate change. The fragmentary nature of the current defences begs the question as to the efficiency of such defences, their impact on nature conservation and possibility of adopting a policy of managed retreat to encourage the restoration of saltmarsh and a more natural defence for inland areas.

LANDSCAPE

Landscape Designations

- 6.4.8 It is clear that Government guidance supports the continued safeguarding of areas of special landscape, scenic and strategic importance. The Falkirk Council area has a tiered system of landscape designation in place to recognise this in existing Structure and Local Plans. However, modern day development pressure on the landscape, especially in urban fringe areas, is giving rise to questions about the extent of these designations, in particular Green Belt and AGLV. It is vital that the new Structure Plan anticipates likely future landscape pressures in its revision of current designations. It is unlikely that any other tier of designation will be required if adjustments are made to existing designations.

Landscape Improvement and Enhancement

- 6.4.9 The Landscape Character Assessment Guidelines represent the best current overview of the Falkirk Council landscape and should be incorporated into the Structure Plan to help target landscape improvement in a way which complements other initiatives already in place.

FORESTRY

Indicative Forestry Strategy

- 6.4.10 In the light of the new Circular 9/1999 the existing Indicative Forestry Strategy (IFS) needs to be revised to reflect the multi-benefit and positive roles which forestry can have in rural and peri-rural areas. Revision of the IFS may lead to the need to include more site specific policies relating to forestry location, as for the Slamannan Plateau policy in the Rural Local Plan

Tree Preservation Orders

- 6.4.11 The protection of existing trees and woodlands can play an important role in successfully integrating new development into the landscape. The role of existing trees and other landscape features in improving the quality of development and habitat enhancement needs to be recognised.

Central Scotland Forest

- 6.4.12 The CSF initiative is arguably the most potentially influential catalyst in increasing the woodland cover of Falkirk Council area. It's profile should, if possible, be raised through the Structure Plan.

AGRICULTURE

Prime Agricultural Land

- 6.4.13 At present areas of prime agricultural land are protected from development by existing Structure Plan and Local Plan policies. Government guidance continues to advocate this approach. The policies, however, need to be given higher profile, rather than be used as additional ammunition in planning decisions.

Diversification

- 6.4.14 Agricultural diversification is seen by many in the industry as the only way forward and this needs to be encouraged positively through the Planning process.

Figure 6.7 - Wildlife Sites

Site	Area(Ha)	Dominant Habitat	Grid Ref.
Almond Bing	7.52	Birch Willow Scrub	NS960763
Balquhatstone	64.13	Unimproved Acid Grassland	NS865725
Barleyside	15.43	Mire/Bog	NS862759
Blackhill Moss	10.31	Mire/Bog/Broadleaved Semi Natural Woodland	NS813776
Black Loch	56.73	Water	NS860700
Bo'ness Foreshore	54.88	Unimproved Neutral Grassland	NS982811
Bonnyfield Quarry	22.37	Unimproved Neutral Grassland	NS817799
Braes Wood	55.78	Broadleaved Semi-Natural Woodland	NS795850
California	68.91	Semi Improved Acid Grassland	NS900762
Callendar Wood and Lake	105.23	Coniferous Plantation/Broadleaved Semi-Natural Woodland	NS897787
Camelon Riverside	5.43	Dense Continuous Scrub	NS870813
Candie Mire	6.08	Blanket Bog	NS927738
Carriden Wood	21.20	Broadleaved Semi-Natural Woodland	NT028808
Castleary Wood	14.15	Broadleaved/Coniferous Plantation /Broadleaved Semi Natural/ Woodland	NS787775
Cleuch Plantation	7.10	Broadleaved Semi Natural Woodland	NS887775
Cowden	88.76	Unimproved Acid Grassland/ Improved Grassland/Wet Modified Bog	NS771803
Craigbank Quarry (Avonbridge)	2.39	Scattered Scrub/Unimproved Acid Grassland	NS908722
Drumbroider	24.33	Raised Bog	NS919743
Dunmore Moss and Wood	237.93	Coniferous Plantation Woodland/Dense Continuous Scrub/Broadleaved Semi-Natural Woodland	NS871890
East Drumclair	6.91	Raised Bog	NS866712
Easter Greenrig	19.15	Raised Bog/Wet Modified Bog	NS825743
Forth and Clyde Canal	?	Eutrophic Standing Water	NS785785
Garbethill Moss	176.95	Raised Bog	NS831757
Grangeneuk Moss	18.64	Raised Bog	NS820736
Graystone Knowe	47.87	Blanket Bog/Wet Modified Bog	NS815761
Kinneil Estate	63.83	Coniferous Plantation Woodland	NS980803
Loch Ellrig and Gardrum Moss	58.92	Eutrophic Standing Water/Raised Bog	NS893750
Lochgreen Hospital	1.06	Unimproved Acid Grassland/Semi Improved Neutral Grassland	NS876786
Lochgreen Moss	7.32	Dense Continuous Scrub/Marshy Grassland/ Wet Modified Bog BasinMire	NS819776
Maddiston West	19.70	Unimproved Acid Grassland	NS929764
Muiravonside	63.85	Broadleaved Semi Natural/ Plantation Woodland	NS962756
Newcraig (Auchengean)	60.52	Dry Modified Bog/Basin Mire	NS850760
North Walton Burn	8.34	Raised Bog/Valley Mire/Wet Dwarf Shrub Heath	NS806763
Parkfoot Marsh	4.90	Marsh Grassland	NS808797
Polmont Woods	19.99	Broadleaved/Semi Natural/Coniferous Plantation Woodland	NS943793
Pow Burn and Estuary	27.44	Saltmarsh/ Improved Grassland	NS915873
Rashiehill Mire	5.94	Wet Modified Bog	NS842728
Righead	16.05	Wet Modified Bog	NS905742
Roughcastle	74.31	Broadleaved Semi Natural Woodland	NS843800
Rumford West	12.29	Dense Continuous Scrub	NS924769
Seabegs Wood	10.34	Broadleaved Semi Natural Woodland	NS815793
Shielknowes Moss	13.55	Raised Bog/Basin Mire	NS829726
Skipperon Glen	7.15	Broadleaved Semi Natural Woodland	NS809785
South Drum Moss	11.42	Basin Mire	NS830777
South Torwood	8.73	Unimproved Acid Grassland	NS828835
Standburn	29.57	Unimproved Acid Grassland/Semi Improved Neutral Grassland	NS928750
Stoneywood	5.17	Dense Continuous Scrub	NS798826
Takmadoon (Denny Muir)	28.01	Semi Improved Neutral/ Unimproved Acid and Marsh Grasslands	NS739819
Torwood Glen	12.41	Broadleaved Semi Natural Woodland	NS835857
Torwood Mire	19.68	Raised Bog	NS825844

Upper Avon Mires	52.75	Raised Bog/Basin Mire/ Marshy Grassland/ Unimproved Neutral Grassland	NS825734
Wallacebank Wood	15.68	Broadleaved Semi Natural Woodland	NS847847
Wester Drum	7.22	Raised Bog,/Marshy Grassland	NS828782
Wester Whin	58.36	Raised Bog	NS870686
Wester Mains Pond	10.04	Broadleaved Plantation Woodland (Plus Wetland)	NS906816
Westquarter Burn	23.06	Broadleaved Semi Natural Woodland	NS906786

Source: Falkirk Council/Scottish Wildlife Trust/Scottish Natural Heritage. 1999

Figure 6.8 - Sites of Importance for Nature Conservation (SINCs)

Site	Area(Ha)	Dominant Habitat	Grid Ref.
Avonbank/Birkhill	4.49	Unimproved Neutral Grassland/Continuous Bracken/ Broadleaved Semi-Natural Woodland	NS966787
Baltic Quay, Grangemouth	26.15	Scattered Scrub/Dense Continuous Scrub	NS935823
Bantaskine Estate	27.79	Broadleaved Semi-Natural Woodland/Broadleaved Plantation Woodland	NS873793
Carron Meander	4.87	Brackish Standing Water/Saltmarsh	NS896828
Dales Wood	18.99	Broadleaved Semi-Natural Woodland	NS818851
Falkirk Gasworks	1.02	Dense Continuous Scrub	NS896813
Glenfuir Road – <i>Still to be ratified</i>	2.12	Unimproved Neutral Grassland/Broadleaved Semi- Natural Woodland	NS866799
Glenyards	3.96	Semi-Improved Neutral Grassland	NS817789
Hall Wood, High Bonnybridge	0.71	Broadleaved Semi-Natural Woodland	NS829794
Hallglen Haven	11.66	Broadleaved Semi-Natural Woodland	NS893783
Letham Moss	167.22	Bare Peat/Dry Modified Bog	NS880860
Limerigg Ponds	1.07	Bare Ground Marshy Grassland	NS854707
Little Black Loch	4.13	Basin Mire/Marshy Grassland	NS879706
Maddiston	5.99	Amenity Grassland/Unimproved Neutral Grassland	NS944768
Milnquarter, High Bonnybridge	3.41	Semi-Improved Neutral Grassland	NS826797
North Stenhousemuir	2.24	Broadleaved Semi-Natural Woodland	NS871841
Polmont Park	3.13	Mixed Plantation Woodland	NS933792
Polmont Station	7.33	Dense Continuous Scrub/Scattered Scrub	NS926783
Redding Grasslands	10.62	Semi-Improved Neutral Grassland	NS918787
Rumford East	10.64	Broadleaved Semi-Natural Woodland	NS940776
South Drum Claypit	21.89	Marshy Grassland	NS825777
South Polmont	11.79	Unimproved Neutral Grassland	NS937786
Stoneridge	3.51	Unimproved Acid Grassland/Basin Mire	NS874702
Summerford	8.55	Unimproved Neutral Grassland/Dense Continuous Scrub	NS868797
Tippetcraig	2.43	Semi-Natural Broad-leaved Woodland	NS828773
Union Canal	?	Eutrophic Standing Water	NS910782
Wallacestone	8.71	Semi-Improved Neutral Grassland	NS915770

Source: Falkirk Council/Scottish Natural Heritage/Scottish Wildlife Trust. 1999

Figure 6.9 - List of Tree Preservation Orders in the Falkirk Council Area by Local Plan Area.

BO'NESS

Name of Order	Grid Reference
Bo'mains Farm, Bo'ness	NS 988805
Muirhouses, Bo'ness	NT 019806
Grange Terrace, Bo'ness	NT 006812
Carriden Estates, Bo'ness	NT 024807
Church Road, Bo'ness	NS 994812

BONNYBRIDGE AND BANKNOCK

Name of Order	Grid Reference
Glen View, Dennyloanhead	NS 810802
Mansewood, Dennyloanhead	NS 809802

DENNY AND DISTRICT

Name of Order	Grid Reference
Vale Board Mills, Denny	NS 808832
Doghillock Quarry, Denny	NS 818838
Stoneywood, Denny	NS 802827
The Topps, Denny	NS 757841
Braes and Quarter Wood, Dunipace	NS 797850

FALKIRK

Name of Order	Grid Reference
Arnothill, Falkirk	NS 881799
Bantaskine, Antonine Wall, Falkirk	NS 874800
Callendar Park, Falkirk	NS 905793
Etna Road/Dalderse Avenue, Falkirk	NS 896810
Bankside, Falkirk	NS 897814
Kerse Lane, Falkirk	NS 895796
Windsor Hospital, Falkirk	NS 877794
Falkirk Town Centre, Falkirk	NS 888796
89 Windsor Road, Falkirk	NS 872794
Westquarter Avenue, Falkirk	NS 912786

GRANGEMOUTH

Name of Order	Grid Reference
Avondu House Hotel, Grangemouth	NS 936815
Mansfield, Dalgrain Road, Grangemouth	NS 916821

LARBERT AND STENHOUSEMUIR

Name of Order	Grid Reference
Carron Dams, Stenhousemuir	NS 875827
Kinnaird House, Stenhousemuir	NS 882846
Carronvale Road, Larbert	NS 863821
Central Business Park, Larbert	NS 857836
Carronvale House, Larbert	NS 866819
Carron Hill and Carron Grange, Stenhousemuir	NS 873823

POLMONT AND DISTRICT

Name of Order	Grid Reference
Lathallan Drive, Polmont	NS 934786
Polmont House, Polmont	NS 933782
Parkhill, Polmont	NS 930787
Polmont Park, Polmont	NS 935793
Kinneil House, Polmont	NS 935791
Ashley Road, Polmont	NS 936790
Melonsplace, Maddiston	NS 951738
Ercall Road, Brightons	NS 936776
Toravon, Maddiston	NS 944764
Ercall Road, Brightons – Glen View	NS 932774
Quarry Brae, Brightons	NS 931776

RURAL

Name of Order	Grid Reference
Black Avenue, Airth	NS 895877
Dunmore Village	NS 893894
Airth Castle, Airth	NS 899867
Dunmore Estate	NS 884891
Braeside, Sheildhill	NS 896769
The Rowans, Sheildhill	NS 896769
Southfield Wood, Slamannan	NS 845719
Muiravonside	NS 961755

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