



**SCOTTISH  
NATURAL  
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No 19

**Dunfermline District landscape assessment : a  
landscape assessment of Dunfermline District,  
including part of Kirkcaldy District lying in the  
West Fife Woodlands Initiative Area**

**David Tyldesley and Associates**

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# **DUNFERMLINE DISTRICT LANDSCAPE ASSESSMENT**

**A Landscape Assessment of Dunfermline District,  
including part of Kirkcaldy District lying in the  
West Fife Woodlands Initiative Area**

**For**

**Scottish Natural Heritage**

**And**

**Dunfermline District Council**

**David Tyldesley and Associates**

**November 1995**



## **Preface**

This report forms part of the National Programme of Landscape Character Assessment, which is being carried out by Scottish Natural Heritage, in partnership with local authorities and other agencies.

The National Programme aims to improve our knowledge and understanding of the contribution that landscape makes to the natural heritage of Scotland.

This study was commissioned jointly by Dunfermline District Council and Scottish Natural Heritage. It provides a detailed assessment of the landscape character of Dunfermline District, considers the likely pressures and opportunities for change in the landscape, assesses the sensitivity of the landscape to change and includes guidelines indicating how landscape character may be conserved, enhanced or restructured as appropriate.

The report will be of interest to all those concerned with land management and landscape change. More specifically, it is intended to provide the landscape context for SNH staff responding to planning and land use related casework. SNH also hopes that the information it contains will be of use to Fife Council in the production of its local and structure plans.

The views contained within this report represent those of the consultants, David Tyldesley Associates, and do not necessarily reflect the policies and views of the sponsors.



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## **S. SUMMARY**

- S.1. This Report presents the results of a landscape character assessment for Dunfermline District and the part of Kirkcaldy District lying in the area of the West Fife Woodlands Initiative.
- S.2. It provides, in Section A, the national and regional context and explains the purpose of the assessment.
- S.3. Section B describes the natural processes and other natural influences on the landscape including the geology, geomorphology, drainage and climate. In particular it explains the importance of glaciation which left many of the physical features of the landscape that we see today.
- S.4. The influence of human activity on the landscape is considerable and Section C describes the main land uses and other changes that affect the landscape today. The loss of natural woodland cover is prehistoric but significant changes to the area have occurred since then, largely as a result of human activity. Designed landscapes at Pittencrieff Park, Culross Abbey House and several other locations that are specified in Section C are important features of the Dunfermline District landscape.
- S.5. Historically and today the landscape of Dunfermline District has been appreciated, valued and enhanced. This gives the landscape important historical and cultural dimensions. Blairadam and Sir Walter Scott's occupation of the Loch Ore Estate in the early 19th century, for example, have immense cultural and historic value which helped to influence art and literature at a national level. These are described in Section D.
- S.6. Section E comprises the description of the eleven landscape character types identified in the study area and refers to some 47 landscape character sub areas. These are derived from an analysis of landscape context at a national and regional level, summarised in Table 1 overleaf and the Landscape Character Types are briefly described on pages 3 to 4 and summarised in Figure 4.
- S.7. For each of the landscape types Section E provides a fuller description, an explanation of changes in the landscape, and recommendations and observations on landscape management, landscape capacity and landscape enhancement.
- S.8. Section F sets out an Agenda for the landscape of Dunfermline District prioritising various recommendations and proposals.
- S.9. The Priority Proposals are set out below, at the end of this Summary.

**TABLE 1: DERIVATION OF THE LANDSCAPE CHARACTER TYPES AND AREAS**  
See Figure 4

NATIONAL CONTEXT	<b>The Midlands Valley of Scotland Firth / Estuarine Landscapes of Scotland</b>	
REGIONAL CONTEXT	LANDSCAPE CHARACTER TYPE	LANDSCAPE CHARACTER AREAS
<b><i>VOLCANIC UPLANDS OF THE MIDLANDS VALLEY</i></b>	<b>1. UPLANDS</b> (Figure 6)	1. Cleish Hills 2. Benarty Hill
	<b>2. UPLAND SLOPES</b> (Figure 7)	3. Cleish Slopes North 4. Cleish Slopes West 5. Benarty Slopes South
	<b>3. FOOTHILLS &amp; VOLCANIC HILLS</b> (Figure 8a+8b)	6. Cleish Foothills 7. Cullaloe Hills 8. Cowdenbeath Hill 9. Redwell Hill
<b><i>MIDLANDS VALLEY LOWLANDS</i></b>	<b>4. LOWLAND HILLS &amp; VALLEYS</b> (Figure 9a+9b)	10. Central Area, West of Dunfermline 11. South Dunfermline 12. South Oakley 13. Bluther Burn 14. Devilla Forest & Bath Moor Plantation 15. Black Devon Valley 16. Central Area, north-east of Dunfermline 17. Fordell
	<b>5. LOWLAND LOCH BASINS</b> (Figure 10)	18. Loch Leven 19. Loch Ore 20. Loch Fitty 21. Loch Gelly
<b><i>COASTAL</i></b>	<b>6. COASTAL HILLS</b> (Figure 11)	22. Kincardine to Culross 23. Valleyfield to Charlestown 24. Limekilns 25. Castlandhill 26. Ferry Hills 27. Letham Hill 28. Aberdour Hills
	<b>7. COASTAL BRAES</b> (Figure 12)	29. Culross 30. Torryburn to Limekilns 31. Aberdour to Burntisland
	<b>8. COASTAL FLATS</b> (Figure 13)	32. Kincardine 33. Longannet 34. Valleyfield Ash Lagoons 35. Rosyth

<b>INTERTIDAL</b>	<b>9. INTERTIDAL ZONE</b> (Figure 14)	36. Mudflats 37. Shingle Bays 38. Sandy Beaches
<b>MARITIME</b>	<b>10. FIRTH OF FORTH</b> (Figure 15)	39. Firth of Forth
<b>DESIGNED LANDSCAPES</b>	<b>11. DESIGNED LANDSCAPES</b> (Figure 16a+16b)	40. Aberdour Castle & House 41. Blairadam 42. Culross Abbey House 43. Donibristle 44. The Murrel 45. Pittencrieff Park 46. Tulliallan 47. Valleyfield

### Brief Description of the Eleven Landscape Character Types

#### 1. Uplands

A series of high, open, exposed uplands with varying topography forming distinctive skylines dominated by hill pastures, wet grasslands and, in places, by coniferous afforestation. A peaceful, balanced, inspiring, quasi-natural landscape; the uplands also contribute to the identity and character of other landscape types in the area.

#### 2. Upland Slopes

Upland slopes with rolling landform and occasional knolls dominated by improved grassland with areas of coniferous afforestation, deciduous woodlands and boundary trees, and limited areas of rough grazing and arable production.

#### 3. Foothills & Volcanic Hills

Pronounced hills situated within the lowland hills and valleys. Open and generally exposed in character these gently rounded hills are dominated by semi-improved grassland, and generally lack tree cover, with the exception of the Cleish Foothills which have undergone extensive coniferous afforestation.

#### 4. Lowland Hills & Valleys

A subtle, varied, complex, mature, settled landscape with a series of low hills and valleys characterised by open, regular patterns of medium scale arable and grassland fields with woodlands and mostly tall hedges with hedgerow trees. This extensive landscape type has regular often linear patterns of settlements which are generally well related to the landscape. It is a generally tended, safe, sheltered, well treed, quiet, balanced and calm landscape but in the more urban, industrialised areas, it is also busy, random, disturbed and noisy. The variety, continuity, maturity and subtlety of the landscape, with its long history of settlement, are key characteristics.

#### 5. Lowland Loch Basins

Simple landforms with large water bodies set generally within areas of gently sloping arable land and flat areas of marsh, associated with loch inlets and outlets. Woodlands and deciduous belts of trees around or extending out from the lochs is a frequent characteristic of these areas.

**6. Coastal Hills**

A series of hills, mainly located above the coastal braes, which slope gradually towards the Firth of Forth offering panoramic views of the estuary. Characterised by large, regular, open, arable landscapes with linear shelterbelts and policy plantings and some fine designed landscapes these hills have a strong coastal character and mark the transition between coastal and landward areas of the District sharing the characteristics of both.

**7. Coastal Braes**

The prominent, steep sided coastal braes are mainly wooded, giving the unusual appearance, from a distance, of wooded cliffs. They have rounded tops rolling on to the coastal hills or Cullaloe Hills marking an abrupt edge to landward cultivation. At the foot of the braes there are raised beaches or wave cut platforms which form long, linear strips of land above the beaches, some with small peninsulas of open space projecting seaward. The landscape experience varies considerably according to weather conditions but most of the time they are small scale, diverse, textured, colourful, calm and quiet landscapes with a contrast between the sheltered enclosure, vertical, sinuous lines of the braes and the vast scale, exposed, horizontal, landscapes of the Firth.

**8. Coastal Flats**

These are very flat, low-lying coastal landscapes claimed from the Firth and protected by flood banks. They are dominated by industrial, dock or port related development, power stations or open, arable farmland with large, geometric field patterns. Roads are elevated above the field levels. The agricultural areas are large scale, still, open or exposed, uniform, textured, flat, angular landscapes, with discordant features, muted colours, regular patterns and disturbed or neglected areas between the large, intensively cultivated fields. Near Rosyth reed beds are more natural in appearance. The industrial and dock areas are urbanised but the scale of buildings and infrastructure is very large.

**9. Intertidal Zone**

Nine locations on the north shore of the Firth of Forth comprising mudflats, shingle bays and sandy beaches. They are large scale, flat, open or exposed, uniform or simple landscapes with smooth textures, sinuous lines and muted colours. They can be near natural landscapes of solitude with sometimes huge flocks of birds; or on hot summer days, busy, noisy and colourful places. The intertidal zone forms an ever changing transition between the shore and the open Firth.

**10. The Firth of Forth**

A single major Firth forming the southern limit of the study area with maritime landscapes studded with off shore islands, navigational infrastructure and slow moving ships and vessels of many kinds. Dominated by the spectacular but contrasting Forth Rail Bridge and Forth Road Bridge this is a calm, bright, colourful and smooth landscape with extensive views dominating the coastal scenery from north and south shores. It can also be a forbidding landscape in storms and may be concealed altogether by haars.

**11. Designed Landscapes**

Dunfermline has many examples of fine, designed landscapes which are generally managed for their amenity value. They are associated with the castles, ecclesiastical sites and large houses. They have outstanding landscape, cultural and historical value. Pittencrieff Park is now diverse in character and historically very important, being the seat of Scotland's Kings and Queens, and more recently given to the people of Dunfermline by Andrew Carnegie.

## ***Priority Proposals***

### ***A. Proposed Vision For The Future of the Lowland Hills and Valleys***

(See Figure 17)

The planning authority could prepare a long term Master Plan and Vision Statement for the Restoration of the Landscapes to the north and east of Dunfermline. An ambitious landscape restoration programme that would include the West Fife Woodlands Initiative (WFWI) as one of the key instruments in implementing the programme. A long term master plan of the area with a long term vision of the environment of this area half way through the 21st century could be drawn up as a strategic vision statement. It could form the landscape context for future structure plan and local revisions, for the WFWI programme and for the targeting of public resources and infrastructure works in the long term. It would be led by the vision of a new landscape of high natural heritage value. This may feed into the process of preparing a *Local Agenda 21* plan for Fife.

To the west of Dunfermline the principal form of enhancement to the landscape would be the restoration, to woodland and recreational/leisure uses, of bings and previously mined areas, since agricultural restoration has not worked well from a landscape point of view. This can be achieved through the development control process (eg by the use of S.50 Agreements in planning decisions) and normal land management measures such as the WFWI.

### ***B. To Develop Landscape Management Plans for the Upland Slopes and Cullaloe Hills***

(See Figure 17)

To safeguard, conserve and enhance these highly conspicuous areas. The Benarty and Cleish slopes and the Cullaloe Hills require low key management, sustaining present day activities. When the softwood plantations reach commercial maturity replanting should consider a more integrated approach focusing on a combination of conifer and broadleaves to reflect their natural occurrence.

### ***C. Proposed Context for Development Control***

(See Figure 17)

Restrict any form of built development, high, linear or large scale structures, or mineral working, or engineering operations that would affect the key characteristics and features of the Uplands, the Upland Slopes, the Foothills and Volcanic Hills.

Safeguard the skyline features of Benarty Hill, the coastal hills and braes and the Cullaloe Hills, from all development proposals that could affect the skylines, landform or visual horizons.

Undertake a detailed study of the Cleish Hills, to identify carrying capacity for the location of appropriate changes of land use and development.

#### ***D. To Develop a Recreation Access Strategy***

(See Figure 17)

Aimed at managing visitor pressure in the Uplands and on the coast, in a positive way, and to enhance recreational access provision in the Uplands, on the Upland Slopes and, where practicable, on the Cleish Foothills, the coastal hills and braes and at Blairadam. A Recreational Access Strategy for the area, involving landowners and managers, could enhance the provision of access for tourism and recreation without harming other land management objectives. The Forestry Authority, WFWI and Dunfermline District Council have worked closely together on this for the past three years. Networks of public rights of way linked to woodlands have been agreed and implemented and this process will remain ongoing and will be improved on. A strategy could help to further develop local access networks, improve provision for the disabled and for walkers, cyclists and horse riders. It could promote the role of interpretation, to encourage more meaningful and sustainable tourism.

Consideration should be given to the provision of better access to the Upland Slopes, Cullaloe Hills and the Coastal Hills and Braes for informal countryside recreation and viewing. This should constitute no more than carefully routed paths on the slopes with parking below.

At Blairadam the future management of the landscape should tackle the question of public access. Problems have occurred due to the unauthorised access through the woodland, resulting in theft and vandalism. At Blairadam the advantages of public access would need to be carefully weighed against any possible disadvantages due to visitor pressure, such as overuse, access and car parking problems. Since the Forestry Commission acquired large areas of land for afforestation at Blairadam, improved public access and some recreational facilities, particularly alongside the numerous burns, could be successfully absorbed without adverse effect.

#### ***E. Proposed Context for Mineral Working***

Restrict new or extended mineral workings to those parts of the District with a landscape character that has the capacity to accommodate well designed, phased mineral extraction with progressive restoration. The Uplands, Upland Slopes, Cleish Foothills and the Volcanic Hills generally have no capacity for accommodating mineral workings owing to their high conspicuity and openness. Extensive parts of the Lowland Hills and Valleys including sub areas 11, 12, 13, 15 east of the B 913 and 17 have retained their variety, continuity, maturity and subtlety which would be lost in mineral extraction. Elsewhere, this landscape type could accommodate further mineral extraction - in landscape terms - subject to detailed appraisal of the design, operational methods, restoration proposals and visual impacts of individual projects: these areas are sub areas 10, 14, 15 west of the B 913 and 16; but in sub area 10 operations should be concentrated in those areas already disturbed in the past by mineral operations, should avoid prominent slopes and skylines and should be restored exclusively to woodland.

**The Lowland Loch Basins may be able to accommodate very small scale mineral working on the flat land at the base of the basins but large scale workings on the lochs themselves or up the slopes or on the skylines of the basins would adversely and permanently affect key landscape characteristics.**

**The Coastal Hills and Braes generally have no capacity for significant scale mineral workings owing to their landform, land cover, conspicuity and maturity of character.**

**The Coastal Flats, except sub area 35 at Rosyth, could be worked for minerals but design, operational methods, phasing and restoration should be carefully considered to ensure the minimum area of disruption at any one time and to provide local screening.**

**The Intertidal Zones are near-natural landscapes and further land claim and any proposals for mineral extraction should be resisted on landscape grounds. Dredging for minerals in the Firth of Forth would be unlikely to affect the key characteristics of the Firth subject to scale and duration of operations and the effects on ecology, natural marine and coastal processes, and the location and design of any new unloading facilities on the shores.**

**Mineral extraction in the designed landscapes would permanently and substantially affect the essential characteristics of the design, maturity and continuity of these important landscapes.**

**Generally, throughout the District restoration of mineral workings to agriculture has not worked well in landscape terms. The planning authority could ensure, wherever possible, that open cast mineral workings and former bings are restored predominantly to new woodlands, secured by a Section 50 Agreement under the Town and Country Planning (Scotland) Act 1972.**

## **A. INTRODUCTION**

### **A.1 Context of the Assessment**

This Landscape Assessment of Dunfermline District has been commissioned jointly by Scottish Natural Heritage (SNH) and Dunfermline District Council.

Scottish Natural Heritage was established in 1992 as the government agency with a duty to secure the conservation and enhancement of the natural heritage of Scotland and to help people understand, enjoy and use it wisely, so it can also be used and enjoyed by future generations. Part of SNH's programme of work is to improve the knowledge and understanding of the landscape and to help others to make decisions that may affect the landscape in a way that will contribute to its sustainability and enhancement. This project is part of an ongoing programme of landscape assessment in Scotland to help to achieve these aims. It will also inform and guide SNH staff involved in consultations and casework at the local level.

A district-wide Landscape Assessment will also be of benefit to Dunfermline District Council, the local planning authority, by providing information of help in making forward planning and development control decisions, including decisions on mineral planning applications. It also has potentially wider use, for example by contributing to land management activities such as the West Fife Woodlands Initiative, together with other agencies.

### **A.2 Aims and Purpose of the Assessment**

The Brief for the Assessment is set out in Appendix 1. The key objectives are to:-

- produce in written and map form a detailed assessment of the landscape character of the area;
- to recommend principles/criteria for the conservation/enhancement of different landscape character areas;
- to assess the sensitivity of the landscape to change;
- to identify which areas have the greatest and least capacity to accommodate development, particularly open cast coal mining proposals;
- to identify areas of landscape under threat and to find opportunities for landscape conservation, restoration or enhancement;
- to identify priorities for specific landscape initiatives;
- to provide a useful working tool for planners, landscape architects, ecologists, land managers, developers and others who may contribute to the conservation and enhancement of the landscape; and
- to provide information consistent with recent landscape assessments undertaken for neighbouring areas.

### **A.3 Study Area**

The study area is based upon the West Fife Woodlands Initiative area, mainly in Dunfermline District (302 km<sup>2</sup>) but including a small part of the western part of Kirkcaldy District (49 km<sup>2</sup>). Where the District boundaries do not closely coincide with the boundaries of landscape types, the study area has been slightly extended into adjacent local authority areas to indicate their extent, and to integrate with the Kinross-shire Landscape Assessment of 1995 and, in due course, with landscape assessments in other adjacent areas.

The study area extends to 351 square kilometres from:-

- the Cleish Hills and Benarty Hill in the north; to
- Kinglassie and Auchtertool in the east; to
- the Firth of Forth in the south; and to
- Kincardine in the west.

(See Figure 4, and 5a & 5b at the end of this report).

#### **A.4 Methodology**

Appendix 2 includes a summary of the method and procedure adopted to undertake the landscape assessment. The assessment was carried out from September to October 1995 by a team of three landscape architects, two planners and an ecologist. It was guided by a working group of SNH officers and officers from the Dunfermline District and Fife Regional Councils and the Forestry Authority.

#### **A.5 National and Regional Perspectives**

A number of historically significant properties are present within the study area, some of which are both Category A Listed Buildings and are in the National Inventory of Gardens and Designed Landscapes, for example Pittencrieff Park.

Important designations include:

- 8 designated Conservation Areas
- 32 Scheduled Ancient Monuments
- 8 Gardens/Designed Landscapes included in the National Inventory (See section E.11)
- 16 Sites of Special Scientific Interest (described in section B.4)

This diverse, and to many people, familiar area, has a widely recognised geological, archaeological, cultural, historical and ecological interest of regional, national and international importance. The conservation and enhancement of its landscape is vital to all of these interests and in turn a knowledge and understanding of these interests is vital to the understanding of the landscape of Dunfermline.

The area is also subject to development pressure for housing, commercial, mineral, tourism and recreational developments, strongly influenced by the M90, and to other land use changes. The impacts of these and other changes are a matter of concern to SNH and the local authorities, but this report concentrates on the landscape issues of the area. It does not attempt to resolve land use and development issues and conflicts. It seeks 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.

## **B. THE SHAPING OF THE LANDSCAPE - NATURAL PROCESSES**

### **B.1 Topography, Geology, Geomorphology and Climate**

See Figures 1, 2 and 3

#### **National Context:**

The study area is located within the Midland Valley, a relatively low lying part of Scotland, between the Grampian Highlands to the north and the Southern Uplands to the south. Geologically the area is defined by two parallel fault lines, approximately 50 miles apart, between which land has subsided, creating an ancient rift valley (the Midland Valley). The Midland Valley is, however, quite diverse in character ranging from low lying arable farmland to large areas of upland pasture and moorland. The area is dominated by rocks of the Devonian and Carboniferous periods, with approximately 75% of the area underlain with sedimentary rocks and 20% of the area underlain with igneous rocks of these periods.

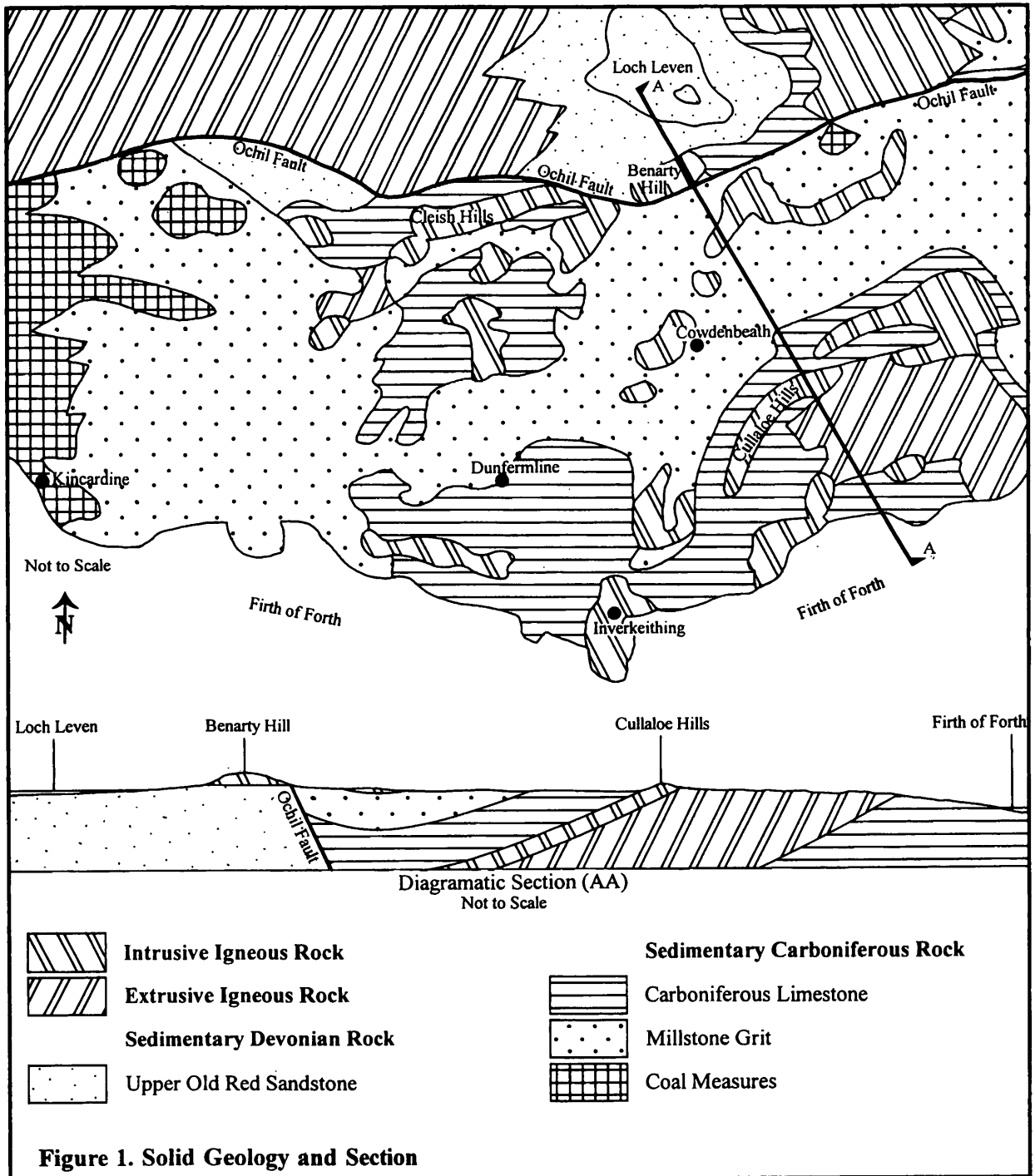
The general form of the landscape was established during the Tertiary period and was further modified during the Quaternary period of glacial activity with extensive erosion and deposition of material.

#### **Local Context**

The Benarty and Cleish Hills to the north are formed from resistant igneous sills of quartz dolerite protecting Carboniferous sedimentary rocks which overlie the Old Red Sandstone. The Ochil Fault, running generally in an east-west direction, along the northern edge of the Cleish Hills, and to the south of Benarty Hill, forms the northern extent of the Midland Valley sill complex which consists of sedimentary Carboniferous rocks with coal measures and covers the majority of the study area.

To the south east of the study area another extensive area of igneous quartz-dolerite rock forms the Cullaloe Hills. Further, more localised, exposures of both intrusive and extrusive igneous rocks occur throughout the area creating a varied landscape of undulating lowland with occasional and sometimes very prominent hills (Figure 1).

All land except the main hills is now covered by glacial and fluvioglacial deposits, particularly boulder clay, from the last glaciation which affected the Midland Valley, occurring in the latter part of the Devensian Stage (approximately 20,000 years ago). The ice sheet was sufficiently thick to override all the hills in the area and prior to the melting of the ice, the general direction of movement was in an eastwards direction, indicated by the orientation of striae in the Cleish Hills. The debris, eroded by the ice, formed thick deposits of boulder clay, sand, and gravel. Along the Firth of Forth raised beaches are present and are associated with fluctuations in the level of the land and the sea during late glacial and postglacial times. There are also steep, wooded braes forming a distinctive backdrop to coastal settlements and features in views from across the Firth (See Figure 2).



**Figure 1. Solid Geology and Section**

## Climate

The climate in and around the study area is dominated by Maritime air masses, which are characterised by lack of extremes, and occasionally influenced by Continental high pressure systems providing greater extremes in temperature and reduced wind speeds. With its location in the east of Scotland, and at quite low altitude, the Dunfermline area generally receives less rainfall and more sunshine than areas along the west coast and higher ground inland.

Within the area some two-thirds of the strong winds, greater than force 5, are from a south westerly direction. The proportion of winds from this direction increases as wind speed increases. Average annual rainfall is approximately 900 mm, although more rain generally falls in the west of the area than the east, and substantially more falls on the higher ground (Cleish Hills) to the north.

The Macaulay Institute for Soil Research in its "*Assessment of Climatic Conditions in Scotland*" has subdivided Scotland into a number of categories and describes the lower lying land to the south and west as warm and moderately dry and the slightly higher ground to the north and east as warm and wet. The tops of the Benarty Hill and the Cleish Hills are described as cool, rather wet and exposed with rather severe winters.

## B.2 Soils and Land Capability

In terms of agricultural land capability the land to the south is generally better agricultural land than that to the north of the study area. This trend generally reflects changes in altitude and geology of the area. In general the majority of the land in the study area is Grade 3.1 or 3.2 on the Macaulay Institute Soil Survey of Scotland: Land Capability map, these are "*areas capable of producing a moderate range of crops*". Grades 4 and isolated patches of Grade 5 are also recorded in some parts of this area. To the south the land is generally Grade 3.1 with some areas of Grade 2 (*land capable of producing a wide range of crops*). To the north of the study area, Benarty Hill and Cleish Hills, the land capability is at its lowest with Grades 5 and 6 dominating (*land capable of use as improved grassland or use only as rough grazings*).

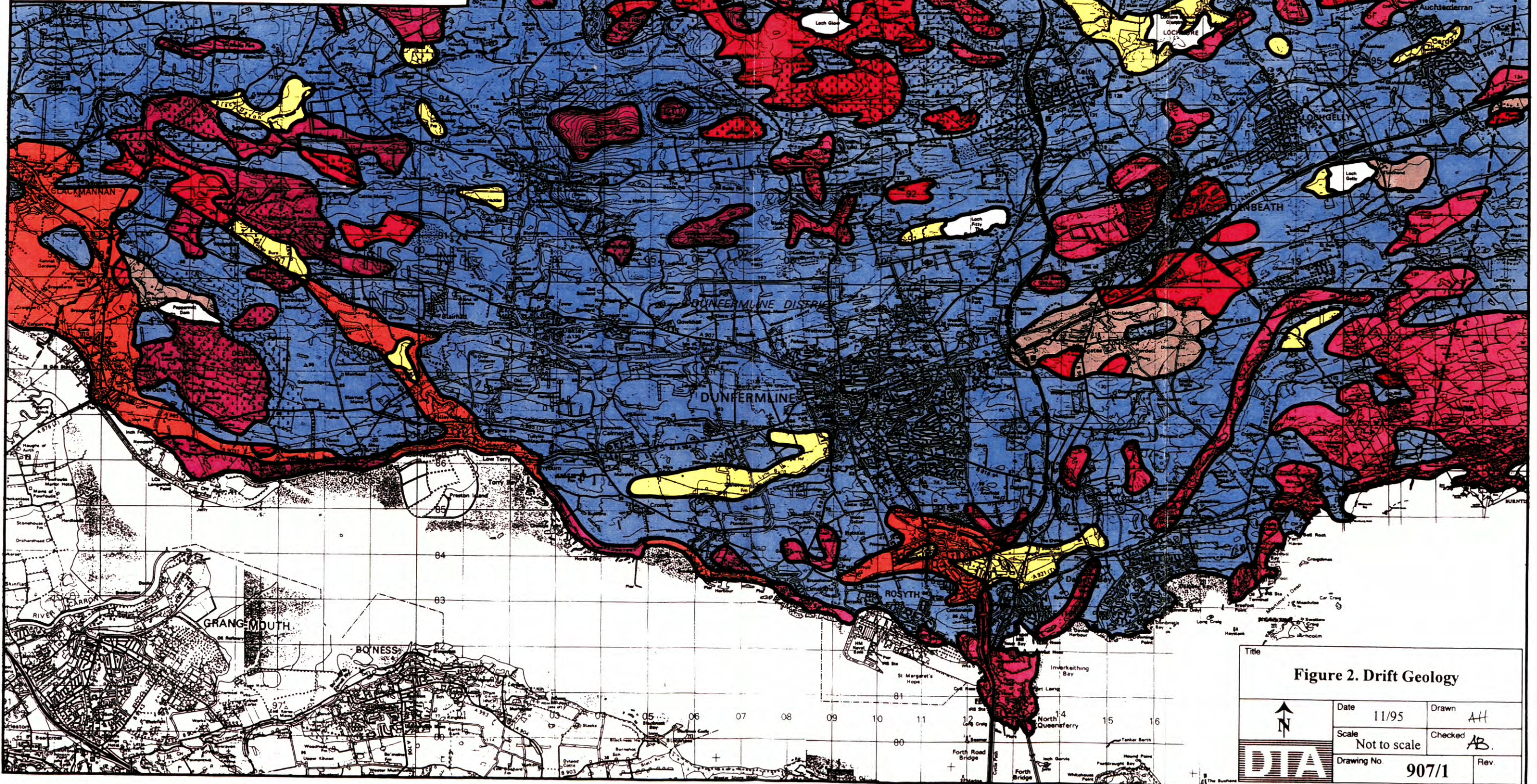
## B.3 The Coast, Estuary and River Systems and Lochs.

The study area is drained by ten river systems, although along the Firth of Forth numerous minor burns are also present. The study area broadly can be divided into three areas in terms of drainage. The northern half of the area drains either east (via the Rivers Leven or Ore) or west (via the Rivers Devon or Black Devon). To the south, smaller catchment areas are present, due to the close proximity of the Firth of Forth, these are the Bluther Burn, Lyne Burn, Fordell Burn, Peppermill Dam, Torry Burn, Dour Burn, and Bottom Burn. These southern systems have created the extensive depositional mudflats associated with the Firth of Forth, e.g. Bluther Burn forming Torry Bay (see Figure 3). Inland the burns drain into main river systems eg the River Black Devon, or into inland lochs. These inland lochs have distinct basin landscapes and form a characteristic landscape type eg. Lochs Fitty, Ore and Gelly.

- Bedrock at or near surface
- Boulder clay
- Glacial sand & gravel
- Alluvium
- Raised beach deposits
- Peat

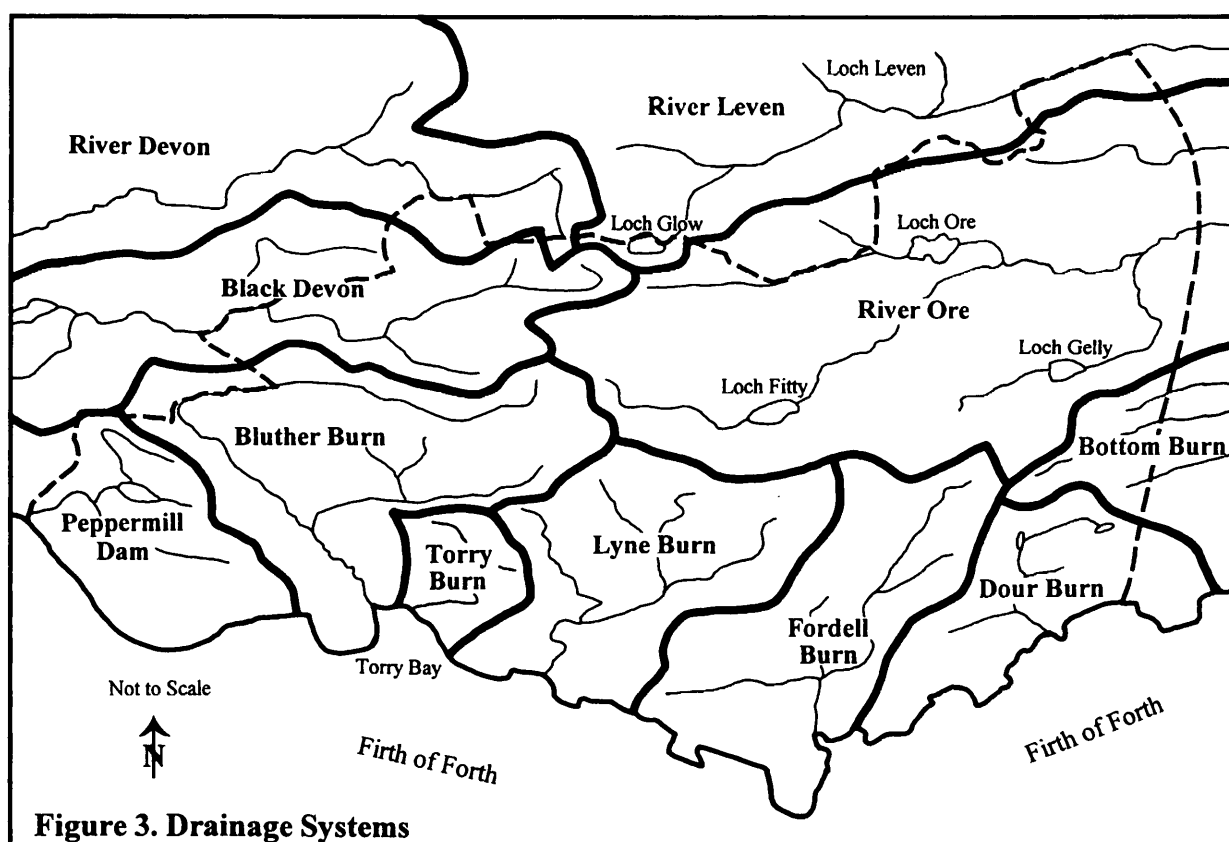


Based upon the Ordnance Survey's 1:50,000 map with the permission of The Controller of HMSO, © Crown Copyright. DTA, Nottingham, Licence No. AL 50065A.



<b>Figure 2. Drift Geology</b>			
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#### B.4 Natural Landscape Features and Ecological Relationships

The natural landscape features and ecological relationships closely reflect the geological, geomorphological and climatic influences and processes described above. Thus, many of the area's topographic features, rivers and other hydrological systems and semi natural habitats are important elements in the landscape.

Thus the basic pattern of geology, landform, soils, natural systems and natural processes determines the overall pattern of the landscape types of the area, and together with an analysis of the land cover, they established the broad landscape types which were refined by field survey and further desk study of land use patterns and historic change in the landscape. This process produced the Landscape Character Types and Areas shown on Figure 4, 5a and 5b and described in Part B of this Report.

A range of semi natural habitats and landform features reflect the former natural ecology before modification by human activity in the form of agricultural, and urban and industrial development. The best examples of these have been designated Sites of Special Scientific Interest (SSSI) and comprise a good range of grassland types, semi natural woodlands and important geological exposures. They are summarised below:-

1. Black Loch SSSI (48.3 ha - part within Perth and Kinross District). A shallow, natural, unpolluted mesotrophic loch with extensive areas of emergent vegetation.

2. Carling nose SSSI (5.9 ha): Hilltop plateau with steep coastal slopes and high quarry cliffs. Herb rich calcareous grassland and dwarf shrub heath.
3. Craigmad Wood SSSI (28.6 ha - part within Clackmannan District). Areas of long-established semi-natural mixed valley woodland, acid oakwood and lowland dwarf shrub heath.
4. Cullaloe Reservoir SSSI (10.28 ha). Diverse wetland vegetation types.
5. Dalbeath Marsh SSSI (2.34 ha). Derelict site with small basin mire and adjoining herb rich grassland.
6. Ferry Hills SSSI (27.9 ha). Road cuttings provide geologically valuable sites, Ferry Hills grassland supports species rich unimproved calcicolous and neutral grassland, and Ferry Loch is a small, seasonally flooded basin mire.
7. Lielowan Meadow SSSI (2.68 ha). Unimproved lowland grassland grading from dry neutral grassland through to a small area of fen.
8. Lochshaw Mosses SSSI (59.4 ha). A series of lowland raised mires which together form the largest and least disturbed area of this habitat in Fife region.
9. Otterston Loch SSSI (18.3 ha). Small mesotrophic water body in a narrow valley with swamp, fen, carr woodland and mixed deciduous woodland.
10. Park Hill and Tipperton Mosses SSSI (90.6 ha). Upland raised mire, the only remaining unafforested example in Fife.
11. Roscobie Hills SSSI (22.2 ha). Base rich and neutral grassland with a small open water transition mire.
12. Roscobie Quarry SSSI (1.2 ha). A disused limestone quarry with marine taxa, of palaeontological interest, and sedimentary features.
13. Steelend Moss SSSI (7.1 ha). An elongated raised mire with adjacent basin fen and fringing birch and willow woodland.
14. Swallow Craig Den SSSI. (18ha) A rich gorge woodland, probably ancient in origin, with areas of dry and flushed grassland and fen.
15. Torry Bay SSSI (620.1 ha). Mosaic of intertidal and coastal habitats with a large number of feeding and roosting waders and sea duck in winter. The site is now a proposed Ramsar Site and a proposed Special Protection Area under the terms of the EC Directive 79/409/EEC on the Conservation of Wild Birds.
16. Wether Hill SSSI (96 ha - part within Perth & Kinross District). Exhibits a combination of habitat types and topography unique in the region. Broad "terrace" near the summit, steep slopes below dissected by numerous small valleys with extensive ground water flushing. Semi-natural woodland, terraced raised mire, grassland, peatland combined with a rich fauna and Lepidoptera.

There are other sites within the area which have been designated as of nature conservation interest by the Scottish Wildlife Trust (SWT). For example SWT have identified Listed Wildlife Sites for their wildlife interest (flora and fauna). These have no formal statutory protection. Some of these are included in a list of Sites of Nature Conservation Importance (SINCs) recently drawn up by SNH and Dunfermline District Council, and to be included in the Local Plan. The SINCs are listed below:

Moor Loch	Devilla Forest Mires	Cowstrandburn Meadow
Black Loch	Loch Fitty	Benarty Hill
Loch Gelly	Moss Morran	Moss Easy
Charleshill Point	St Margaret's Hope	Long Craig Island
Hopeward Point	Dun Moss	Comrie Dean Woodland
Ballingry Meadow	Humbie Wood	The Clune, Loch Ore Meadows
Hawkcraig Point		

## **C. THE SHAPING OF THE LANDSCAPE - HUMAN ACTIVITIES**

### **C.1 Landscape Changes in History**

Although human activity has almost eradicated the natural habitats and landscapes of the landward area of Dunfermline, the pattern of land use today continues to reflect the important natural influences of geology, climate, landform, drainage and soils. On the coast of the Firth of Forth, near natural landscapes remain in the intertidal areas.

There is evidence of early settlement throughout the entire study area and the archaeological landscape is potentially rich although many of the former sites may have been disturbed or lost through urban development and mineral extraction. There are sites, buildings and features of national importance, from pre-history through early historical times and into the industrial history of the 18th, 19th and 20th centuries.

Today, the predominant land uses are agriculture, urban development, mineral working, industry and forestry. The towns of Dunfermline, Cowdenbeath, Lochgelly, Kelty, Ballingry, Rosyth, Burntisland and Dalgety Bay have seen continuing and in some cases rapid expansion in the latter part of the 20th century, such that these towns now locally cover the landscape of many parts of the area. The area has been subject to extensive mineral working: for coal, limestone, aggregates, industrial sands and other materials. This has changed the landscape character of the lowland areas, leaving, in the past, derelict bings often prominently located on skylines. More recently restored but immature landscapes now lack the subtlety of landform and landscape features of the undisturbed parts. During extraction the intrusion of the voids, working operations, plant, traffic and screening bunds and soil/overburden mounds can be conspicuous.

The large scale afforestation of the Cleish Hills is also a 20th century phenomenon that has masked much of the original landscape of Blairadam and the subtle topography of the Cleish hills and foothills. This has been a response, in part, to the poor capability of the land for agriculture. Upland agriculture is almost entirely open hill grazing on mainly unimproved or semi-improved and occasionally improved pastures. Today, however, new woodland planting is focused on the lowlands and there is a small but growing and significant land use change to small-scale broadleaved woodland in the better farmland, led by the West Fife Woodlands Initiative. Woodland and tree cover on the lower hills are mainly small plantations, shelterbelts, parkland and policy planting and, locally, hedgerow trees.

The steeper slopes tend to be a transition area from the arable lowlands to the hill pastures of the uplands. These slopes have a patchwork of fields - mainly grassland both improved and unimproved, with occasional arable cultivation where slopes are less steep, drainage more effective and soils deeper. Stock farming remains important in most of these areas and field boundaries tend to be less modified although post and wire fences often supplement the low stone dykes and hedges where maintenance and management has not sustained a stockproof enclosure.

The twentieth century has seen the diversification of industry in many of the main towns but the legacy of the coalfield remains in many parts of the lowland hills and valleys.

Roads are important elements in the landscape of Dunfermline. For most of the area they form a network of small scale rural roads which respect the topography and drainage patterns and generally blend well with the landscape. Their roadside stone dykes and hedges are important linear features where they remain intact. In the Black Devon valley there is an area characterised by narrow relatively straight roads with wide roadside belts of trees forming a distinctive landscape pattern.

The A class roads are of larger scale and have been systematically improved to take the high levels of traffic associated with the large urban areas and important industrial installations. Most have been improved on their existing line but the A94 is a major dual carriageway that in part has been constructed on a new line through the lowland valleys. The M90 runs north - south through the area towards the Forth Road Bridge and forms a large scale linear feature sweeping in curves, through extensive cuttings and on long embankments between Dunfermline and Cowdenbeath.

## **C.2 Gardens and Designed Landscapes**

An important aspect of human influence of the landscapes of Dunfermline is the creation and evolution of gardens and designed landscapes. Over the last 400 years or so amenity landscapes have been created around many of the larger houses and steadings. Some were of small scale and local effect, many have been lost or neglected to the point where they are no longer recognisable. Others have been modified as a result of fashion or later development or agricultural changes but parts of the amenity planting and/or the gardens remain evident. Thus, in some cases the features consist of a modified private garden area with a blend of amenity and shelterbelt or policy planting around the larger houses or farm steadings.

Elsewhere, the gardens were more extensive and are more complete and policy planting around the houses and the transition from the formal garden to a parkland amenity landscape is recognisable. Several designed landscapes in the area are of national importance and recorded on the Inventory of Gardens and Designed Landscapes maintained by SNH. These are Aberdour Castle and House, Blairadam, Culross Abbey House, Donibristle, The Murrel, Tulliallan, Valley Field and Pittencrief Park which are referred to in more detail in Part E of this Report (see also Section D below).

However, there are a number of other examples of designed landscapes in the study area which deserve further examination and, if appropriate, recognition, protection and sensitive management. These are:- Benarty House, Ballingry; Blair Castle, Culross; Broomhall, 4km SW of Dunfermline; Culross Palace; Dunimarle Castle, Culross; Fordell Castle; Inzievar, and Old Inzievar House, Oakley; Lethans, 3km NNW of Saline; Pitferrane, 3.5km WSW of Dunfermline; Pitliver House, Dunfermline; Pitreavie Castle, Inverkeithing; and St Colme House, Dunfermline.

## **C.3 Other Man Made Landscape Features (Including the Bridges)**

Human activity in the landscape over thousands of years has not only modelled the general landscape character we see today but has left individual features. Older features are an important record of the relationship between people and the landscape. They may be of important cultural and historic interest in their own right and help to interpret the unfolding story of changes in the natural heritage. Some such as cairns or ancient earthworks, may be old, small or inconspicuous; some may be relatively recent, large and intrusive, such as telecommunication masts on hill tops.

Thus, features may have a positive contribution to the landscape: in this area cairns, ancient earthworks, castles, churches, other historic buildings or buildings of special architectural interest, old bridges, ancient woodlands, and small historic settlements all contribute positively to the landscape. Of great consequence in this respect are the three bridges over the Firth of Forth. The Forth Bridge and the Forth Road Bridge, particularly, are outstanding features in the Dunfermline landscape that are recognised across the world. They are described in Section E.10.

Conversely, some features detract from the landscape because they are intrusive, uncharacteristic, poorly designed in relation to their setting or of inappropriate scale. In this area they include the Mossmorran chemical plant and the huge power and industrial installations on the coast, with their tall structures, flues and plumes of gaseous emissions. Of smaller scale they also include some twentieth century houses, large agricultural buildings, quarries, the motorway, and masts such as those on the Cleish Hills.

## **D. APPRECIATING THE LANDSCAPE**

The term landscape refers primarily to the visual appearance of the land, including its shape, form and colours. It also reflects the way in which these various components combine to create specific patterns and pictures that are distinctive to particular localities. However, the landscape is not a purely visual phenomenon, because its character relies closely on its physiography and its history. Hence, in addition to the scenic or visual dimension of the landscape, there are a whole range of other dimensions, including geology, topography, soils, ecology, archaeology, landscape history, land use, architecture, and cultural associations. All of these factors have influenced the formation of the landscape and continue to affect the way in which it is experienced and valued.

The landscape can therefore hold a special meaning for many people as the source of numerous experiences and memories. Many of these are visual, but at times the landscape may also evoke other sensual, cultural and even spiritual responses. This personal appreciation of the landscape leads to the ever increasing demand for access to the countryside and to the enjoyment of the landscape by local residents, workers, visitors, tourists and others who travel through it. It also leads to and justifies the public demand for the protection, sensitive management and enhancement of the landscape.

These responses to the landscape are not new. Historically, the landscapes of Dunfermline have been enjoyed and appreciated. Landowners have sought to enhance the landscape through the creation of policy and other amenity planting, gardens and designed landscapes. Historical documentary evidence helps to reveal the way in which the landscape was appreciated in the past and the forces behind the changes in the landscape. Landscapes can be of special importance because of their associations with the arts, historical events or well known personalities.

Whilst the study area is well documented in map form from the early 19th century most of it is not well recorded in literature or painting and photographic records are limited. However, good documentary evidence exists in the Inventory held by SNH for the 8 gardens and designed landscapes in the study area. The historic value of these designed landscapes is enhanced by associations with well known or influential people, such as the Douglas family (Aberdour Castle and House), the Earls of Elgin and Dundonald (Culross Abbey House), the Earls of Moray (Donibristle), the architects Frank Deas and Sir Robert Lorimer (The Murrel), Andrew Carnegie (Pittencrieff Park, Dunfermline), and Viscount Keith (Tulliallan). The designed landscape around Valleyfield is the only Scottish example of the work of Humphrey Repton one of the leading landscape architects of the English Landscape Movement. At Blairadam, William Adam, the grandson of the builder of the house, was a notable lawyer and politician who became Lord Chief Commissioner. He was a close friend of Sir Walter Scott who was a regular visitor to the estate and may have encouraged Scott's purchase of the neighbouring estate of Loch Ore in the early 19th century. The two were part of a small group known as the "Blair Adam Club" formed in 1816, which met every year for a few days at Blairadam up to 1831 and visited local places of historical interest which proved to be the inspiration of later works of Scott. These historical, artistic and cultural associations together with the outstanding documentary record and high quality of the design of the house, garden and policies of Blairadam are of national importance.

Designed landscapes are an important element of the Dunfermline landscape and there are numerous other examples not formally listed on the inventory. Typically they comprise large houses, often with lodges, chapels, coachhouses and dovecots and those on the coast often include castles or the remains of fortifications. They have formal gardens close to the main buildings and are set within large, designed policy landscapes, providing a setting to the main building and a screen or frame for longer distance views. Today the gardens and designed landscapes that remain are often of smaller proportions than the original planting. In a number of instances buildings are ruined and parklands sold off or severed from the main buildings, for example by new roads. Nevertheless, the features that do remain, be they buildings, perimeter walls, gates, lodges, woodlands, policies etc. have a considerable influence on the character of the landscape.

## **E. THE LANDSCAPE TYPES**

### **The Analysis of the Landscape Types**

This part of the Report identifies the 11 basic landscape types of the study area and explains the way in which different aspects of the landscape types are analysed. Appendix 2 describes the method used to draw up, describe and analyse the landscape types.

### **Key Characteristics and Features**

This assessment does not evaluate landscape types or identify areas that are perceived to be of greater value than others. All landscapes everywhere are of importance as a part of the natural heritage resource, as a record of the past, as the environment in which human activity interacts with natural processes and as human and wildlife habitats. All landscapes are valued and often cherished by those who live or work in them or visit or travel through them. This assessment seeks to classify landscapes into their general types to provide a better understanding of them and thus to enable better conservation, restoration, management and enhancement. This understanding is helped by drawing out of the description and analyses of the landscape types those key characteristics and features which are the most important positive contributions to the character of the landscape.

### **Changes in the Landscape**

By their very nature, landscapes are dynamic. They are always changing: daily, as a result of climate or light; seasonally; annually and over longer periods of time. The key changes that may affect the essential character of each landscape type are identified. These tend to be the more permanent forms of change eg. development or changes in land use and land management that may be widespread or may have a marked effect on the landscape character because they affect the key characteristics and features.

### **Landscape Management**

Management of the landscape resource is an essential part of sustaining the natural heritage of Scotland. Even where no development or land use change occurs the landscape will change as components mature and age and in response to changes in land management. Landscape management may involve positive action eg. managing hedgerows or repairing stone dykes, or considered decisions not to take positive action eg. to retain and manage unimproved semi-natural grasslands for their landscape and nature conservation value. Woodlands may appear to be enduring features but management is essential to sustain their natural heritage value. The key issues of landscape management are identified in relation to each of the landscape types.

### **Landscape Sensitivity and Capacity**

Each of the different landscape types has a different sensitivity to change and a different capacity to absorb differing forms of change. Contemporary landscape planning seeks to ensure that development is directed towards those landscape areas which could absorb the different forms of development without harming the overall character, or where some developments could make a positive contribution to the character. This section assesses, broadly, the capacity of each landscape type to accommodate the main forms of development likely to arise.

### **Landscape Enhancement**

In most landscape types there will be opportunities to enhance the landscape character by mitigating the effects of adverse changes, restoring important landscape characteristics and features and adding new elements to the landscape which complement their character. Self-evidently, however, some landscape types are more in need of enhancement than others. This section addresses the scope and relative priority for enhancement of each of the landscape types.

### **Landscape Character Types and Sub - Areas**

Table 1 on pages 2 and 3, in the Summary above, and Appendix 2 indicate how the landscape character types in the study area are defined from an analysis of the context of the national and regional landscape character types, taking account of the local geology, soils, topography, land cover, land use and landscape features and characteristics. Three landscape types relate to the volcanic uplands of the Midlands Valley of central Scotland. Two types relate to the Midlands Valley Lowlands and three types relate to the coast. The intertidal and maritime areas of the Firth of Forth form two further landscape types. Finally, the 8 examples of the larger scale designed landscapes form the eleventh landscape type in the area.

The eleven landscape types identified in the study area are not homogenous throughout. Most contain areas that differ in the way that the landscape type has developed, in response to natural processes or human activity. This provides a local sense of place and a series of distinct "landscape character areas". In the eleven landscape types there are a total of 47 landscape character areas, referenced 1 - 47 in Table 1, and shown on Figures 4, 5a and 5b. They are referred to in the text as "sub areas" of the landscape types.

## **E.1 THE UPLANDS**

### ***Distribution***

*Two localities in the Study Area on the tops of the Cleish Hills and Benarty Hill. (Sub areas 1 and 2, Figures 4 and 5a)*

### ***Natural Systems and Processes***

*Geologically the uplands are relatively stable areas in the longer term. They are important watersheds containing the sources of the river systems. There are active and modified areas of peatland, the bedrock is at or near the surface, drainage is generally poor on the higher plateaux and tops. The uplands experience the most extreme climatic conditions with high exposure, wind speeds, rainfall and snow retention which makes them distinctive landscape features in the winter.*

**Illustration See Figure 6**

### **Description**

#### **Physical Characteristics**

- E.1.1 The two areas of uplands are located on the northern edge of the study area, these are the Cleish Hills to the west (sub area 1) and Benarty Hill to the east (sub area 2). Benarty Hill is separated from the Cleish Hills by the distinct gap at Keltybridge, through which the M90 passes, which results from geological differences in resistance to erosion.
- E.1.2 These upland areas average between 250m and 300m in height, although the highest points reach 379m in the Cleish Hills, and 356m on Benarty Hill. They reinforce the general trend of landform falling towards the Firth of Forth.
- E.1.3 The Uplands consist of intrusive igneous rock, in the form of resistant sills of igneous quartz dolerite, which has resisted erosion more successfully than the sedimentary carboniferous rock dominating the majority of the study area.
- E.1.4 Drift geology in these areas is frequently thin or non-existent although on the flatter plateaux of the Cleish Hills extensive areas of peat have developed. The soils are also frequently thin and are generally brown forest soils derived from the basaltic rock.
- E.1.5 The uplands are open, exposed and climatically rigorous. A range of landform features typical of upland areas are present although the landform on Benarty Hill, a simple ridge with two indistinct peaks, is relatively simple in comparison with the range of landforms found within the larger area of the Cleish Hills, with numerous peaks, ridges, upland lochs, and large areas of plateaux.

#### **Land Cover**

- E.1.6 The uplands are dominated by poor, mainly unimproved or semi-improved permanent grasslands used for rough hill grazing of sheep and some beef cattle (Figure 6). Arable land and improved grassland is virtually absent. Bracken is locally dominant and the wettest ground is dominated by coarse grass/sedge/rush communities. There are some bogs with sphagnum and some heathy areas with gorse and coarse grasses the main constituents. Thus,

there tends to be a **summer patchwork of greens** with smoother textures and lighter colours on the better pastures and **rougher textures** with summer greens and winter browns on the poorer pastures and **wet areas**.

- E.1.7 Afforestation of **coniferous, softwood, mainly evergreen** plantations (locally there are significant areas of **Larch**) is **extensive** over most of the Cleish Hills below the peaks. However, the area around **Loch Glow** on the Cleish Hills, and the peaks and ridge of Benarty Hill are not planted.

### **Settlement Pattern and Other Land Uses**

- E.1.8 There are no settlements on the **uplands** and they are generally free of built development with the exception of **Knockhill Motor Racing Circuit**, telecommunication masts, on Knock Hill and near Craiggaveral, and some **cairns** and other archaeological features. Apart from **Knockhill Motor Racing Circuit** and informal recreational activities the uplands are used for agriculture and forestry.

### **Linear and Point Features**

- E.1.9 The uplands are generally open with few field boundaries (Figure 6) but where field or estate boundaries occur they are mainly stone dykes, often in good repair. The roads are generally defined by narrow verges and stone dykes with occasional post and wire fencing. Where dykes have been neglected they are supplemented by post and wire fencing where a stockproof boundary is needed. The few stone dykes form prominent features within a landscape dominated by topography.
- E.1.10 The Uplands are not affected by high voltage overhead lines, and low voltage lines generally follow the few roads in the uplands and are not conspicuous. The telecommunications masts in the Cleish Hills are visually prominent features from both within the character area and from extensive parts of the study area.
- E.1.11 The edges of the forestry plantations form strong linear features. In most of the older plantations the edges are straight and some pay little or no regard to landform. The edges themselves are conspicuous at considerable distances and exacerbate the artificial, blanket appearance of some of the older plantations in the Cleish Hills. These were mainly planted in the period 1950 - 1980 when forestry policies, objectives and environmental criteria were very different to those of today. These woodlands successfully met those former policies and criteria but with each crop growing over a 40 - 50 year period the results are still evident on the landscape. Amelioration of their effects is an ongoing process.

### **Experiential Characteristics**

- E.1.12 The experience of the upland landscapes falls sharply into two contrasting types. In or close to the forestry plantations from about 10 years after planting until commercial maturity the experience is of a uniform, monochrome, dark, silent, intimate, tightly enclosed space dominated by the vertical lines and formal regularity of the trees, seasonal changes are limited. In windless conditions movement is dead or still, the plantations are unsettling. Walking along the rides or edges gives a contrast with views of the open hills and relieves the uniformity but not the regular formality and straight, sharp vertical and horizontal lines. Many of the upland woods are at pre- or early thinning stage and their character and amenity will change as thinning and restructuring progresses.

- E.1.13 Away from the plantations the upland experience is of a vast, exposed, rather uniform or simple landscape of rough (occasionally craggy) texture, predominantly green or brown, vertical or sloping form and curving or sinuous lines. It is generally a still (wind dependent), balanced, quiet landscape which is irregular in pattern, being responsive to natural topography. It is a quiet and peaceful, safe landscape except in poor weather conditions when it can become disturbed, isolated and hostile.
- E.1.14 The uplands can evoke strong spiritual feelings ranging from awesome respect to tranquil appreciation. These and other experiential characteristics and qualities are heightened by the extent and scale of views, often across one upland range to others such as the Ochil Hills and Lomond Hills on the distant skyline to the north.

### **Key Characteristics and Features**

- E.1.15 The most important features and characteristics of the uplands are their:
- a) physical landform;
  - b) distinctive silhouette and skylines;
  - c) recognisable shapes, peaks and slopes;
  - d) open, rolling hills of upland pasture;
  - e) texture and green/brown colour patchwork of the grasses, bracken, sedge and rush;
  - f) stone dykes, burns and occasional minor roads flowing over and along the contours;
  - g) vast scale, exposure, openness, peacefulness, simplicity; and
  - h) irregular patterns responding to the landform.

### **Changes in the Landscape**

- E.1.16 The uplands tend to have an enduring quality with changes being gradual in response to the longer term effects of management change. Agricultural improvement is limited in extent and potential. Adverse weather and isolation deter pressure for built development. Access and communications are limited. Small scale quarries have been opened for hard rock extraction but most are now derelict, none are currently operational and they are of local impact owing to their small size, weathering and recolonisation with vegetation.
- E.1.17 The most profound change in the uplands has been afforestation, especially in the Cleish Hills. The older plantations (i.e. over 40 years) were imposed on the hills with little regard to conservation and landscape. These older plantations changed the experience and appearance of the hills.
- E.1.18 Current policy dictates landscape, conservation and environmental enhancement and all new planting schemes adopt the following Forestry Commission guidelines as the minimum accepted requirements.
1. Landscape Guidelines (Upland and Lowland).
  2. Forest and Water Guidelines (3rd Edition).
  3. Nature Conservation Guidelines.
  4. Forest and Archaeology Guidelines.
  5. Recreation Guidelines.

New planting schemes are well designed, integrating viable farm units with forestry where feasible. Since 1991, for example, one area on the eastern side of Benarty Hill, at Navitie Hill, has been planted under the Woodland Grant Scheme (WGS) within the West Fife

Woodlands Initiative Area, in close association with the nearby Navitie Farm.

- E.1.19 One further change which to date has affected only the Cleish Hills is the erection of telecommunication masts. Whilst not in themselves bulky structures their height, materials, colour, texture and inelegant shape tend to make them conspicuous and uncharacteristic features in these prominent hill top locations. At close quarters their presence is an alien intrusion, entirely out of character with the landscape experience. From the upland slopes they are frequently obscured by landform but from the rest of the study area they are visually prominent. The uplands are also vulnerable to proposals for wind driven power generators (wind turbines).

### **Landscape Management**

- E.1.20 Change has been slow and subtle in the farming of the uplands and is unlikely to see radical change unless there is a major change in the economics of hill farming. The essential aspects of the agricultural management are the repair and maintenance of the stone dykes, maintaining the characteristic open, irregular field patterns (and not introducing new field patterns into open land) and maintaining the patchwork of grasslands. Improving grasslands and drainage schemes could disturb the characteristic patterns. Unimproved pasture and hill grazing should be retained as the predominant land use.
- E.1.21 Afforested areas will be managed strictly in accordance with good forestry practice. Consideration will be given to varying the amount and timing of clear felling in advance of full commercial maturity, leaving some areas or trees to over-mature commercially and to the introduction of broadleaved planting and open clearings to break down the uniformity and regularity of the forests.
- E.1.22 Recreational and tourism access to the hills could create pressure for more facilities and access. The Cleish Hills have a higher capacity and already appear to be subject to greater pressure. It is proposed, within the local plan (based on the management plan drawn up by the Regional Council), that part of Benarty Hill be incorporated within the Lochore Meadows Country Park. Benarty Hill is also situated within a Regional Park but a wider initiative for the uplands, in the form of a Recreational Access Strategy for the area, could involve landowners and managers in the enhancement of provision without harming other land management objectives. The forestry plantations have a high capacity for absorbing large numbers of people thus relieving pressure on the open hills. Forestry Authority management grants are available for improving the recreational, conservation and landscape value of woodlands. Plantations in and outwith the assessment area can be eligible for these and a current example is Blackhill plantation, in the Ochils, where the public are welcomed. Considerable work is also being undertaken by the Forestry Authority to encourage other woodland owners to enter these schemes. Outwith woodlands, SNH will be launching a "Paths for All" initiative in the future to encourage access to open land.

### **Landscape Capacity**

- E.1.23 The uplands have an extremely low capacity for absorbing any form of built development, high, linear or large scale structures, mineral working, or large scale engineering operations. Screening would be extremely difficult: many afforested areas are overlooked from important peaks and other high vantage points; landform would not screen these types of development. Furthermore, the introduction of any of these developments into the undeveloped parts of the Cleish Hills and any part of Benarty Hill would not only be difficult to screen but entirely

alien to the character of the hills.

- E.1.24 The exceptions are parts of the Cleish Hills where limited, small scale development could take place in association with the coniferous plantations and the motor racing circuit. Although considerable care would be required in siting and design it could be possible to locate such development without so radical a change to the character and experience of the landscape in these parts of the Cleish Hills, owing to the presence of major roads, the motor racing circuit, the masts and some development being visible on the perimeter of the hills. However, the open areas, particularly at Outh Muir should remain free of development. **Further requirements for masts must be concentrated at existing locations. Hills should not be selected which do not have masts at present. Benarty Hill should have a presumption against any masts and any wind turbines. The skylines of the Hills should be regarded as landscape features of national importance and should be safeguarded from all development proposals that may affect the skylines or landform or visual horizons. A detailed study of the Cleish Hills, including areas outwith this study area, may identify potential sites for wind turbines, in accordance with national and local planning policies and sensitive to the upland landscape.**

### **Landscape Enhancement**

- E.1.25 Positive enhancement of the uplands is both possible and, in the case of parts of the Cleish Hills, a priority. **Enhancement could restore the stone dykes and reintroduce some semi-natural broadleaved woodland into sheltered hollows or dips, but not to the extent that the open character would be adversely affected.**
- E.1.26 **A bold approach to the afforestation problems in the Cleish Hills is required and is being taken by Forest Enterprise. Some additional planting around the edges and as extensions to some of the existing blocks of forestry could relieve the uniformity and regularity of the older planting and the outlines of the plantations should respond more closely to the landform. The most conspicuous edges should be considered and the lead has already been taken by Forest Enterprise in its approach to restructuring. Other landowners are being encouraged to adopt this principle, but where plantations are in multi-ownership, immediate work can reduce the economic viability of the forest. However, this change will be encouraged at the time of replanting and thinning. A Management Plan for the Cleish Hills could provide an overall context and help to identify potential schemes and priorities. This would translate the Indicative Forestry Strategy into a more positive but not prescriptive land use and management plan. This aspect of enhancement should continue to be regarded as a priority.**

## **E.2 THE UPLAND SLOPES**

### ***Distribution***

*Three localities in the Study Area, on the south facing slopes of Benarty Hill, and the north and west facing slopes of the Cleish Hills. (Sub areas 3, 4 and 5, Figures 4, 5a and 5b).*

### ***Natural Systems and Processes***

*Steeply sloping edges to the uplands, densely wooded in parts and including burns flowing down into the surrounding water catchments.*

**Illustration See Figure 7**

## **Description**

### **Physical Characteristics**

- E.2.1 The north-facing Cleish slopes are particularly steep, rising in the study area to approximately 280m AOD. They define the northern extent of the Cleish hills, outside the study area, and they are characterised by extensive softwood plantations and numerous burns and waterfalls flowing northwards into the Pow Burn in the Loch Leven catchment. In unplanted areas, the Cleish slopes are rugged but with a generally good soil cover. They have distinctive breaks of slope at their base, where gradient suddenly changes to the gentler slopes of the lowland hills and valleys. The slopes also have distinctive breaks of slope at the tops, where the almost cliff-like steepness suddenly gives way to the upland plateaux and peaks. The tops of the slopes form the skyline in views from the north, south and west.
- E.2.2 By contrast, the west-facing Cleish slopes and south-facing Benarty slopes are less steep and less well defined. The west-facing Cleish slopes generally fall gradually, although quite steeply in parts, to the Black Devon, fed by small burns flowing down the hillside. Thus these slopes are characterised by the glen-like landform around the Devon, with the higher Cleish uplands on two or three sides. The lower slopes, close to the river, contain isolated properties and in parts dense broadleaved woodland, and is in part notified as a SSSI. The extreme northern section of the west-facing Cleish slopes rises to Cult Hill, a peak of intrusive igneous rock rising to 264m AOD. The undulating, hummocky landform is a distinctive feature of the upland slopes.
- E.2.3 The south-facing slopes of Benarty Hill are similarly less steep and less well defined than the Cleish slopes north, falling from around 280m to the basin of Loch Ore at around 190m AOD. The tops, however, are very steep, in parts covered by Benarty Wood and elsewhere more exposed and undulating. The lower slopes give way to the Loch Ore basin edge with a series of minor peaks and ridges. There are few obvious signs of any surface water drainage system on the south-facing Benarty slopes.

### **Land Cover**

- E.2.4 The Cleish slopes north are extensively planted, between Wether Hill and Hill End. Outwith this woodland, short grasslands and other semi-natural vegetation dominate the rocky and hummocky slopes.
- E.2.5 The Cleish slopes west, being less steep, are a patchwork of semi-natural vegetation with occasional outcrops, hillside pasture, semi-improved and improved grassland and occasional

arable fields. The slopes around the Black Devon are almost entirely covered with broadleaved trees, in sharp contrast to the surrounding softer textured cover of the smooth landform. Two areas on the slopes of Cult Hill have been planted under the WGS.

- E.2.6 Land cover on the south-facing Benarty slopes is dominated by Benarty Wood. Elsewhere, the steep tops are characterised by thin, poor soils with bedrock at or near the surface. Being much more open, they are easily weathered by active erosion processes, and they include short turfed grasslands with pockets of bracken, gorse and other semi-natural vegetation. The open, undulating slopes around Ballingry include improved and semi-improved grassland for grazing, and large, regularly-shaped fields, with stone dykes, in arable production. Roadside planting has been undertaken since 1991 under the WGS.

### **Settlement Pattern and Other Land Uses**

- E.2.7 There is built development on or close to all the upland slopes. The Cleish slopes north have a few settlements along the foot of the slope, which is characteristic of the north facing slopes outside the study area also. Otherwise they are free of any buildings. The smoother west-facing Cleish slopes contain numerous, isolated steadings, often at the end of long, narrow tracks. More nucleated, small settlements occur around Balgonar and Killernie, to the north of Saline. The open western edge of Ballingry allows uninterrupted views up the Benarty slopes towards Benarty Hill. There are one or two isolated farms on the slopes.

### **Linear and Point Features**

- E.2.8 The most important linear features of the upland slopes are their tops, where the landform cuts back sharply to the uplands, like a cliff top. These form the skyline and visual horizons from extensive parts of the lowland hills and valleys from which the tops of the uplands are not always visible. There are no high voltage power lines along the face of the slopes, which would be visually conspicuous being in particularly open, sensitive landscapes with important skylines. Powerlines, however, can be seen to the east of Ballingry and Lochore. The straight edges of the older plantations form regular, geometric patterns insensitive to the bold, rugged and irregular landform, and the minor roads and tracks across the Cleish slopes west and Benarty slopes south.
- E.2.9 Point features on the slopes are inevitably very conspicuous. The slopes themselves are conspicuous across much of the lowland hills, and features can be prominent at distances of over 10km. The main point features are the peaks and rocky crags and occasional buildings where not obscured by woodland.

### **Experiential Characteristics**

- E.2.10 There are two important experiences of the upland slopes. Firstly, on the slopes themselves and secondly looking to the slopes from the low hills, loch basins and from other slopes and uplands. Where not obscured by planting the slopes themselves offer some of the most exhilarating landscape experiences in the study area with long distance, clear and often dramatic views across to the uplands beyond, sometimes over 20km away. Access to the upland slopes is limited, many of the minor tracks are private. Elsewhere, access is only possible on the minor roads passing through the Cleish slopes west and Benarty slopes south.
- E.2.11 Consequently, the main experience of the slopes is as the backdrop to views from the east, south and west. These experiences are common, everyday perceptions for residents and local workers and vital to tourists and other travellers because of the prominence of the slopes.

They are of a large scale, exposed simple, rough, rugged, robust, vertical and curving landscape background dominated by quasi-natural or upland type landscapes readily experienced from the lowlands. They are balanced, harmonious, colourful, many-featured landscapes ranging from the random naturalness of the west Cleish slopes around the glen to the more regular, tended slopes of the south Benarty slopes.

E.2.12 The slopes are a strong influence on the landscape experiences of the study area and sustaining that contribution is critical to much of the study area.

### **Key Characteristics and Features**

E.2.13 The most important characteristics and features of the upland slopes are:-

- The high conspicuity on the slopes and skylines.
- The natural and dramatic landform.
- The burns and natural landform processes eg. weathering and erosion.
- The open semi-natural land cover.
- Woodland cover related to buildings and both buildings and tree cover related to landform.
- The general lack of built development and the lack of intrusive man-made features (except for afforestation).
- The gentler, smoother, open, regular landform and land cover of the Benarty slopes and Cleish slopes west.
- The balanced, harmonious, colourful, many-featured, vertical, open, quasi-natural upland characteristics of the slopes with the ruggedness of the Benarty and Cleish slopes north and the sweeping patchwork of regular but not geometric patterns of the Cleish slopes west.

### **Landscape Change**

E.2.14 The Cleish and Benarty slopes have changed little except for some afforestation and consolidation of tracks. The nature of the slopes deters most forms of change but there may be pressure for more planting and recreational access. There is some evidence that the scattered open semi-natural tree cover that does occur infrequently may have been more widespread at the foot of the hills and alongside the burns, and has been lost through grazing.

E.2.15 The Cleish slopes north have already been so extensively planted that only the area below Wether Hill remains unplanted. The maturing plantations are masking the subtle, hummocky landform, and some of the burns. Additional new steadings are evident on the Cleish slopes west, and recent planting under the WGS has occurred.

E.2.16 Ballingry has spread westwards towards the Benarty slope, and the transitional area between the slopes, and the Loch Ore basin has been subject to open cast coal mining. One site is being restored and another is currently operational.

### **Landscape Management**

E.2.17 **The Lomond, Benarty and Cleish slopes require low key management, sustaining present day activities.** When the softwood plantations reach commercial maturity, restructuring of the woodlands to incorporate more open ground and broadleaves using modern Forestry Authority design principles must be undertaken.

### **Landscape Capacity**

E.2.18 **The higher, steeper slopes of the Cleish and Benarty Hills have no capacity to accept**

**built development, significant land use change that would result in a change of land cover or other developments including engineering operations or mineral extraction that would involve changes to land form.** Apart from their physical characteristics, openness and conspicuity of the slopes themselves, any significant changes of these kinds would affect the landscape experience of many other landscape types particularly the loch basin and lowland hills and valleys.

- E.2.19 **The Cleish slopes north have little capacity to absorb more afforestation without obscuring the last remaining views of natural landform such as Wether Hill. The Cleish slopes west, being smoother and lower with more complex landcover, have the capacity to accept carefully designed and located development and planting.** New broadleaved woodland (not softwood) could be planted along the Black Devon and any acceptable development should also be concentrated only in existing corridors, on lower-lying ground (but beyond the SSSI).
- E.2.20 **The Benarty Slopes south have little capacity to absorb more afforestation without obscuring views up to Benarty Hill.** However, some of the harsh, straight edges to the plantations could be softened by further, mixed planting, which would help to diversify the land cover, make it visually more pleasing, and could have beneficial ecological effects.
- E.2.21 **The interface of the upland slopes and the Loch Ore basin is particularly sensitive, with little capacity to absorb further development.** Opencast mining would be particularly damaging environmentally and especially visually. Existing and previous workings should be restored in keeping with the typical land use pattern of this sensitive landscape character area.
- E.2.22 The continuation of stock farming on the slopes is an important key to their future landscape character. Should this become vulnerable to significant change, measures should be considered to sustain the stock farming or a positive landscape management plan should be drawn up to guide resultant changes.

### **Landscape Enhancement**

- E.2.23 **Consideration should be given to the provision of better access to the slopes for informal countryside recreation and viewing.** This should constitute no more than one or two carefully routed paths on the Cleish west and Benarty slopes with parking below the foot of the slope. The Cleish Hill slopes have a high potential for access along the burn, but viewpoints would be more difficult to create owing to topography and vegetation. The Benarty slopes have a low potential for access and for viewpoints but a recreational link to the Loch Ore Meadows Country Park and car parks could be investigated, which would open up extensive views to the south.
- E.2.24 Generally there is evidence of a characteristic pattern of narrow, linear belts of broadleaved semi natural woodland along the lines of some, but not all, of the burns and rivers. **Consideration should be given to new planting schemes, where appropriate, to reflect this pattern, but the general openness of the upper parts of the Cleish and Benarty slopes should be protected.** Other forms of landscape enhancement are not generally necessary on the slopes, more being achieved by sensitive management. The slopes have a low priority for enhancement but an extremely high priority for safeguarding/conservation and management.

## **E.3 FOOTHILLS AND VOLCANIC HILLS**

### ***Distribution***

*Four localities in the Study Area, the foothills of the Cleish Hills, the Cullaloe Hills, Cowdenbeath Hills and Redwell Hill (sub areas 6, 7, 8 and 9, Figures 4, 5a and 5b)*

### ***Natural Systems and Processes***

*Extensive hill areas of boulder clay with bedrock at or near the surface, and either of volcanic origin or a series of peaks of carboniferous limestone comprising the foothills of the Cleish Hills, between the Uplands and the lowland hills and valleys.*

**Illustration See Figure 8a and 8b**

## **Description**

### **Physical Characteristics**

- E.3.1 The four locations have similar physical characteristics but also different, individual ones. They are distinctive hills standing out from the surrounding lowland hills and valleys landscape. The smallest area, Redwell Hill (sub area 9) is relatively shallow rising gradually from around 100m to a peak at 192 m AOD. It is enlarged in an east-west direction, with steeper slopes to the north of Kinglassie and along the Loch Leven basin. It drains eastwards to the River Leven, although there are few obvious signs of exposed drainage systems.
- E.3.2 The Cowdenbeath Hills (sub area 8) are a series of bedrock outcrops to the west of Cowdenbeath, with distinctive peaks at either end, ie. Hill of Beath in the south, rising to 240m, and Tollie Hill rising to 162m AOD in the north. They are exposed, steep sided hills with a series of peaks and troughs between, ranging from around 145m to 190m AOD. A series of wells feed a number of burns that flow eastwards to the River Ore.
- E.3.3 The Cleish foothills (sub area 6) are a complicated series of peaks, ridges and valleys covering an extensive area between the lowlands and uplands. They comprise generally gradually sloping hillsides, from around 150m AOD but rising occasionally very steeply to up to 245m. Numerous burns flow in a westerly direction in the lower-lying valleys between the hills, towards the Bluther Burn. There are also a series of reservoirs and small lochs. Distinctive breaks of slope contrast with more undulating areas in between, giving a varied landform, which is predominantly open and exposed with the exception of Carnock Moor Forest. Other lower-lying areas have been planted alongside the burns.
- E.3.4 The Cullaloe Hills (sub area 7) comprise a series of hills generally falling towards the coast, with a steep sided, densely wooded ridge along its western edge (Cullaloe Woods). The ridge generally extends from around 170m to up to 219m AOD at its highest. Ground levels in between the ridge and the coast vary between 35m AOD and 175m at Hawk Hill to the east. Two lochs, a series of springs, waterfalls and numerous burns provide drainage down to the coast.

## Land Cover

- E.3.5 Redwell Hill is characterised by its open, exposed form covered predominantly by unimproved grassland, poor soils and in places exposed outcrops of bedrock. Regular field patterns with regularly spaced post and wire fences over the hill accentuates its landform. Blythe's Tower, a folly close to the top, is a local landmark and visible for some distance around. Relatively small copses and plantations are found alongside the minor road, between the hill and the Loch Leven basin.
- E.3.6 Land cover within the Cowdenbeath Hills and Cleish foothills is similar in that the tallest hills are exposed with thin, poor soils being constantly and actively weathered. Carnock Moor woodland is a distinctive hillside feature in the foothills, being a softwood plantation. By contrast, other hillside and burnside trees are deciduous, broadleaved areas, although there have been several plantation schemes undertaken. Other land use comprises a mix of pasture grassland and rough grazing on the steeper areas, with arable production on the more shallow slopes.
- E.3.7 Geometric, regularly shaped roadside planting belts are common amongst the Cleish Foothills, Cowdenbeath Hills and Cullaloe Hills. Mostly they are poorly related to landform and would benefit from additional planting to improve both their structure and shape.

## Settlement Pattern and Other Land Uses

- E.3.8 The Redwell and Cowdenbeath Hills are devoid of any settlements, but include several isolated steadings on the lower ground. Within the Cleish Foothills, Steelend lies at the change from the Upland Slopes to the Foothills, and there are numerous isolated steadings, often at the ends of tracks off the 'A' and 'B' roads or minor roads running throughout the area. A former depot, now comprising several small commercial units, lies on flat ground either side of a small burn and is generally well screened by dense vegetation on slopes above the burn.
- E.3.9 In the Pilkham Hills to the north east of the Cullaloe Hills, lies the town of Auchtertool, in Kirkcaldy District. Other settlements include numerous farms and steadings, and small cottages previously housing farm workers. There are also the remains of several dovecotes close to large houses and estates, indicating their former glory. One estate, The Murrel, is included in the Inventory of Gardens and Designed Landscapes (sub area 41 see Section E.11), but the gardens and designed landscape are sheltered in the deeply incised valley of the Dour Burn and is not easily visible from surrounding roads.
- E.3.10 All areas except Redwell Hill include some quarrying and tipping activities, either existing or disused.

## Linear and Point Features

- E.3.11 The most obvious point features are the tops of the hills themselves. Several are distinctive, local landmarks, such as Hill of Beath. Blythe's Tower close to the top of Redwell Hill is also an obvious feature and local landmark. Otherwise isolated, exposed buildings are features in some cases, although most are on lower ground or well screened.
- E.3.12 Linear features are the flat ridgelines, such as at Redwell Hill and the densely wooded Cullaloe Hill, and straight edges of plantations, and roads where these are not screened by trees. The M90 is a distinctive linear feature on the edge of the Cowdenbeath Hills. High voltage powerlines directly to the north and south of the Cowdenbeath Hills are obvious linear features, although not generally on the highest ground.

### Experiential Characteristics

- E.3.13 Experiential characteristics vary depending on location within the foothills and volcanic hills. Where access is available to the highest points, experiences gained are due to often extensive views across the lowland valleys. Here, experiences are of large, exposed, diverse, textured, sloping landforms, with muted colours, balanced, calm, regular and tended landscape. On the other hand, from a location confined by taller hills, experiences can be intimate, with simple, rough, angular landforms, and monochrome, discordant, random and disturbed landscape.
- E.3.14 Access is not possible in Redwell Hill other than on the minor roads along the bottom of its slopes. From here the land falls away, and the hill acts as a backcloth to extensive views out to the north and east. In the other areas roads pass through allowing the traveller to experience the changes in slope and the range of characteristics mentioned above.

### Key Characteristics and Features

- E.3.15 The most important characteristics and features of the foothills and volcanic hills are :-
- a) the high conspicuity of the slopes and hill tops;
  - b) the natural and sometimes dramatic landform;
  - c) the burns and other water features, and distinctive natural landform due to weathering and erosion on the hill tops;
  - d) woodlands and buildings well related to landform;
  - e) the lack of settlements and the general abundance of farmsteads;
  - f) the presence of point features, providing each area with its own identity;
  - g) the combination of steep sided, rugged, open landform and landcover on the hills, and the shallower, smoother, more vegetated or developed landform lower down.

### Landscape Change

- E.3.16 Redwell Hill is a relatively stable landscape, having changed little. Significant changes have occurred around it, such as the large opencast coal mine and surrounding screen mounds and planting to the south. These have had an adverse effect on the setting of the Hill in some views.
- E.3.17 Opencast coal mining has had an indirect effect on the Cowdenbeath Hills, due to the location of the huge Kiersbeath Mine directly to the south of Hill of Beath. This has been restored and is now being maintained in the after care period.
- E.3.18 Changes to the landscape in the other hill areas have occurred as a direct result of human activities, the most destructive of which are quarrying and tipping. These have left physical and visual scars on the landscape. Roadside plantations have helped to reduce adverse views.

### Landscape Management

- E.3.19 Landscape Management should be aimed at ensuring that the typical characteristics of the areas remain. Thus the high hill tops should remain open and exposed. Development should not be allowed that would alter the dramatic natural landforms that occur in some places. Parts of the Cleish Foothills and Cullaloe Hills lie within designated Areas of Great Landscape Value (AGLV) and these areas especially should be closely managed, though not at the expense of other areas.
- E.3.20 Agricultural land use should remain as the predominant use. Some areas may be capable of accepting agricultural change, without detracting from their overall character, as long as the general pattern of fields, boundaries and tree cover is not lost. Any changes should not affect the

general landform of the areas, which is a strong landscape component.

- E.3.21 **The south-facing Cullaloe Hills should be protected from changes which would have a detrimental effect on views of or from the Firth of Forth.** The typical character of the area, with the Cullaloe Woods on the high ridgeline forming an important backdrop to the rest of the area, should be maintained.

### **Landscape Capacity**

- E.3.22 **The most exposed and open areas have little or no capacity for accepting built development, or large scale tree planting which, within the context of the locality, may be proposals for more than 3 to 10 ha.** Redwell Hill is particularly exposed and should remain so. Those parts of the Cleish Foothills and Cullaloe Hills within the AGLVs also have little capacity for accepting built development, mineral extraction or engineering operations. The western ridge of the Cullaloe Hills and the southern hills of the Cleish Foothills should be conserved as important landscape features in this and other landscape character types. Any development that does occur should be particularly well sited and designed and should be subject to a landscape appraisal.
- E.3.23 **The lower, less steep areas of the hills have the capacity for absorbing some development,** as long as the overall character is maintained. Woodland planting would be appropriate here and must comply with Forestry Commission design guidance. Any built development should be concentrated in areas currently built up, and should be well screened.
- E.3.24 **Important features and local landmarks should be protected from harmful development including woodland planting and built development that would obstruct views of the features.** Cowdenbeath Hills, for example, could come under pressure for the future expansion of Cowdenbeath, but the Hill of Beath should be protected.

### **Landscape Enhancement**

- E.3.25 Further restoration or removal of former quarries and tips would enhance the landscape. Due consideration should be given to planting these with trees and shrubs under the WGS. Otherwise this is not a priority landscape type for further enhancement.

## **E.4 LOWLAND HILLS & VALLEYS**

### ***Distribution***

*An expansive area running the length of the Study Area between the volcanic uplands and the coastal systems, and comprising 8 landscape character sub areas 10 to 17 Figures 4, 5a and 5b)*

### ***Natural Systems and Processes***

*A series of low hills and valleys predominantly of boulder clay with outcrops of bedrock, the valleys closely associated with a number of burns draining to the coast.*

**Illustration See Figure 9a and 9b**

### **Description**

#### **Physical Characteristics**

- E.4.1 This extensive landscape type is representative of the majority of the Dunfermline landscapes, extending across the whole District in a wide band between the upland slopes, foothills, volcanic hills, coastal hills and coastal braes. The landscape type is locally interrupted by volcanic hills (See E.3) and by Loch Basins (E.5) and Designed Landscapes (E.11). It includes eight localities: sub areas 10 to 17 (See Figures 9a and 9b). It forms a series of valleys with ridges of low, rounded hills rising on average up to 100m to 150m AOD. The hills and valleys consist mainly of boulder clay overlaying the Millstone Grit of the sedimentary carboniferous rocks with smaller areas of limestone and coal measures. Their landform is very variable but typically consists of gently undulating, rounded, low hills often with relatively large areas of plantations, and policy planting associated with large estates.
- E.4.2 Most of the areas drain to the Firth of Forth via a series of small rivers and burns which flow in a network of sinuous valleys between the hills. However, some areas in the north of this character type drain eastwards to the Rivers Ore and Leven or westwards to the Rivers Devon and Black Devon.
- E.4.3 Sub areas 15(the Black Devon Valley) and 14 (Devilla Forest and Bath Moor Plantation) are distinctive areas to the west of this character type. The Black Devon Valley has extensive areas of broadleaved woodland on relatively unspoilt, gently undulating grasslands. It is designated an AGLV. The Black Devon and several smaller burns drain westwards across the sub area, with a regular scattering of traditional steadings. Devilla Forest and Bath Moor Plantation have been planted on poor soils to the west of the Study Area, the former having been planted after the felling of woodland once part of the Tulliallan estate.
- E.4.4 Sub area 17 (Fordell) is a distinctive area between the M90 and the Cullaloe Hills. The undulating and, in parts, steep landform includes extensive areas of broadleaved and softwood plantations, associated with the Fordell Estate. Fordell Castle lies adjacent to the Fordell Burn which flows southwards to the coast.
- E.4.5 To the south of Dunfermline (sub area 11), to the east of Devilla Forest (sub area 13) and to the south of Oakley (sub area 12) there are substantial parts of the landscape type which have a typically varied topography and land cover which, in places, have been enhanced by policy

planting, and which lie close to the coastal hills. They are largely intact in character with all the variety, maturity and continuity typical of the landscape character type. The other two sub areas within this landscape character type are the larger expanses between Dunfermline and the Study Area boundary to the west (sub area 10) and to the north, north east and east of Dunfermline (sub area 16). In respect of landform these areas are typical of the character type, being a series of low, rounded hills and valleys associated with the burns. They include many of the settlements within the Study Area (except those on the coast). Sub area 10, to the west, is a relatively natural, unspoilt landscape with several large plantations, woodlands and remnant policy plantings, and occasional areas of mineral working and former bings. Sub area 16, to the north and east of Dunfermline, is a much more industrialised, despoilt landscape, including large areas of previously worked opencast mines, the Mossmorran Chemical Works and other industrial works.

### **Land Cover**

- E.4.6 Over such extensive areas it is to be expected that land cover is highly variable. However, all the sub areas are dominated by arable land including grass leys in rotation. Permanent pasture is locally dominant but the overall impression is one of a regular, medium scale, field pattern of mixed but mainly cultivated farmland. There are infrequent areas of peat, the resulting acid soils being very poor and supporting patches of gorse, tufted grass and birch trees.
- E.4.7 Woodlands are variable in extent, but rarely absent. There are extensive areas of afforestation, plantations and policy planting to the west and some to the east (ie. to the south of Cardenden and around Fordell) though fewer. Regularly shaped shelterbelts have been planted, eg. on restored land to the east of Loch Ore and in the west of the Black Devon sub area which are out of keeping with the rest of the area.
- E.4.8 Roadside trees, linear belts, hedgerow trees, tree groups around steadings and individual trees form important components in the landscape.
- E.4.9 The field pattern is also a strong characteristic, defined by a variable pattern of post and wire fences, and hedges. Hedges are generally left to grow unchecked, although roadside hedges particularly are kept short.

### **Settlement Pattern and Other Land Use**

- E.4.10 The low hills and valleys are a busy landscape, bisected by many roads, railways (some dismantled) and overhead power lines and pylons. There is a regular pattern of steadings generally well related to landform and often with shelter planting. In some areas the steadings and small numbers of dwellings are grouped into small hamlets, eg. Gowkhill to the west and Kingseat to the east. Elsewhere there are individual residential properties standing in substantial grounds, some of high architectural merit, eg. Valley field and Inzievar in the west and Fordell to the east. Others are more closely associated with agriculture, such as West Grange, Middle Grange and East Grange, taking advantage of the areas of prime agricultural land.
- E.4.11 This central part of the Study Area also includes most of the larger towns (except those on the coast). To the west of Dunfermline lie the towns of Blairhall, Crossford, Cairneyhill, Pattiesmuir, Carnock, Comrie, Oakley, Saline, Wellwood, Milesmark and Parkneuk. To the east of Dunfermline lie the towns of Townhill, Halbeath, Hillend, Cowdenbeath, Crossgates

and Lochgelly within Dunfermline District, but also the Cardenden/Auchterderran settlements and Kinglassie within Kirkcaldy District. Thus by far the larger settlements lie within sub area 16, to the north-east of Dunfermline, and these have developed mainly as a result of the coalfields. Furthermore, there are more areas to the east of Dunfermline surrounding the larger settlements, which are more urban-fringe type landscapes and either unused, despoilt, or used for recreational purposes such as playgrounds and golf courses.

### **Linear and Points Features**

E.4.12 The predominant linear features throughout most of this landscape character type are the numerous tracks and roads, including the motorway. The sub area to the east of Dunfermline also includes the main railway line, and numerous overhead power lines, which also cut across the southern part of the sub area to the west of Dunfermline, radiating out from Longannet and Kincardine Power Stations on the coast. These are most obvious on the higher ground and where not screened by woodland. they generally run across the valleys containing the burns, and not on the lower ground parallel to them, and are thus for the most part, conspicuous features. Where power lines pass through the Devilla Forest (sub area 14) they are generally screened by the trees.

E.4.13 Single point features, which draw the eye in this busy, rolling landscape, are few. Most obvious examples are the large chimneys with plumes of gaseous emissions at the Power Stations and the other chemical works such as the Mossmorran plant. Otherwise, views of individual buildings, plantations, groups or individual trees can be locally important.

### **Experiential Characteristics**

E.4.14 Generally the landscape of the lowland hills and valleys is typically of a medium or large scale, open, regular landscape with linear and geometric field patterns overlaying a rolling or undulating topography with linear, curving roads. It is generally a tended, sage, quiet and calm landscape with a variety of seasonal colours and textures. It is generally a balanced and simple or diverse landscape. However, the eastern areas, being more urbanised and industrialised, result in a busy, random, disturbed and noisy landscape in some parts.

E.4.15 Typically the low hills are seen with the uplands in the background, bringing vertical relief and a tiered impression of the landscape. Experiential characteristics can vary greatly from one area to another, depending on the location and direction of view, these are the most varied of the sub areas within one landscape character type, but the landform and land use and landscape patterns are sufficiently similar to consider the lowland hills and valleys in a single landscape type. Furthermore, the low hills are strongly influenced by the other landscape types. Middle and long distance views to the upland slopes and the uplands themselves are invariably present. From many parts of the low hills there are also clear views of and across the loch basins.

E.4.16 Thus, the landscape experience of the low hills is probably the most complex and variable in the study area. These are subtle landscapes with variety being a key characteristic that should be valued. The relatively high density of settlement and the busy nature of the landscape, with many people living, working and travelling in the area, mean that the intrinsic landscape value of the lowland hills and valleys is very high. They are the background and context to much of every day life in Dunfermline, for most of the District's residents. They are landscapes familiar to many people and the landscapes which provides individuals and communities with their sense of belonging. The variety, continuity, maturity and subtlety of the landscape, with

its long history of settlement and rural land use, is the essence of the landscape type.

### **Key Characteristics and Features**

E.4.17 The key characteristics and features of the lowland hills and valleys landscape type are:-

- a) the variety and subtlety of landform;
- b) the open, regular farmland patterns of medium scale fields of arable and grasslands;
- c) the variable pattern of post and wire fences and mostly tall hedges with hedgerow trees;
- d) the extensive areas of plantations, shelter planting, roadside planting and policies linked to large estates;
- e) the regular often linear pattern of the distribution of steadings and larger settlements and towns all of which are generally well related to the landscape;
- f) the network of roads often well related to landform;
- g) other dominant linear and point features of plantations and tree groups, individual trees or local buildings;
- h) the generally tended, safe, quiet, balanced and calm ambience, but also a busy, random, disturbed and noisy one in the more urban, industrialised areas;
- i) the variety of inter related middle and long distance views of, from and across the low hills
- j) the variety, continuity, maturity and subtlety of the landscape with its long history of settlement.

### **Changes in the Landscape**

E.4.18 The variety, continuity, maturity and subtlety of the landscape, with its long history of settlement and rural land use, which is the essence of the landscape type is changed but not necessarily destroyed by built development. Where new building retains the close relationship between the landscape and the settlement pattern, as is generally the case now, the landscape type is not diminished; the interrelationship of built and natural heritages continues. It is lost where mineral extraction removes the record of human activity and the maturity and subtlety of the landscape which is then replaced neither by the permanent change to a built heritage or to a compatible natural heritage. The variety, continuity, maturity and subtlety of the landscapes so far disturbed by mineral operations has not been restored.

E.4.19 Parts of this landscape character type are relatively stable and remain largely unchanged, whilst others have seen extensive changes. Sub areas 17 (Fordell) and 15 (Black Devon Valley) remain relatively unaltered. Fordell exhibits the characteristics of its estate, although this was probably larger than that which remains today. Pressures from open cast mining to the north, up to Crossgates, have resulted in changes to the landscape. Black Devon Valley is also relatively unspoilt, although again previous open cast mining to the west of this area has resulted in the landscape being restored in a less than sensitive way, with regularly shaped, straight sided plantations.

E.4.20 Devilla Forest and Bath Moor Plantation are also relatively stable now, having been planted around 1900. However, they are commercial forests in various ownerships, liable to continued change in the future.

E.4.21 Sub area 10, to the west of Dunfermline, is a predominantly agricultural landscape, but with locally significant changes due to changes in agricultural management and in several parts by mineral working. Sub areas 11 to 13 have seen fewer changes and exhibit a more stable

agricultural landscape, less influenced by industrialisation and mineral working. Minor planting schemes have occurred under the WGS. There have been generally small and sensitive extensions to settlements and none of the settlements are planned for any significant expansion in the foreseeable future. Overhead transmission lines passing through the area from the Power Stations on the coast and the coal extraction activities, including a number of skyline bings, are obvious features detracting from the otherwise rural setting.

- E.4.22 The area to the north-east of Dunfermline, sub area 16, has seen much more change, both in scale and kind. Opencast mining, and industrial and chemical plants have brought with them road improvements and increases in the size of towns. Further expansions are planned to the east of Dunfermline, around Cowdenbeath and Kelty, with minor expansions to Lochgelly. Other areas around Cowdenbeath and Auchterderran/Cardenden are planned for restoration from coal mining to recreation/leisure or agricultural use.

### Landscape Capacity

- E.4.23 **The largely unspoilt landscapes to the south and west of Dunfermline have little capacity to absorb new development of any significant scale. Small scale built development well designed and related to its landscape setting could readily be absorbed into this varied landscape.** Extensive areas of woodland and other planting would enable some larger residential type development to be accommodated with little harm to the landscape, but it would again need to sustain the strong existing relationships between the built settlements and landscape in this part of the District. Small farmsteads or other small scale business or residential or agricultural buildings may be accommodated, especially where there is good tree cover, but this should not occur so frequently as to change the essentially rural character of the landscape of this area. Large scale industry would not be appropriate. **Any form of large scale industrial, chemical, engineering or mineral workings could radically alter key characteristics of this landscape type and, where it remains largely unspoilt - eg. sub areas 11, 12, 13, 15 east of the B913 and 17 (at Fordell to the east of Dunfermline) these developments would not be acceptable in landscape terms. In area 10 larger scale developments should be concentrated in areas already disturbed in the past and should avoid prominent slopes and skylines.**
- E.4.24 The area east of Dunfermline, (Sub area 16) however, has considerable capacity to accommodate larger scale new developments *in the longer term*. This landscape is in need of comprehensive restoration and improvement, especially around the main settlements. Local Plans for development areas are currently available and priority should be given to new planting within these areas. There is the scope, through WGS and the WFWI to initiate the planting of the landscape framework that would accommodate the development requirements of the 21st century whilst, at the same time, achieving the shorter term objective of environmental improvement. This could be vital to the image of Dunfermline District as perceived from the motorway and the A94 and other through routes. **Around the edge of the larger existing settlements there is scope for new built development, as planned for around some settlements to the east of Dunfermline. In the longer term, given a new landscape framework the area could have a substantial capacity to accommodate the district's necessary economic growth and housing provisions.**

### Landscape Enhancement

- E.4.25 To the west of Dunfermline **the principle form of enhancement to the landscape would be the restoration of bings and previously mined areas to woodland and recreational/leisure**

uses, agricultural restoration has not worked well from a landscape point of view. This can be achieved through the development control process and normal land management measures such as the West Fife Woodlands Initiative.

- E.4.26 **To the north east of Dunfermline, sub area 16, a more ambitious landscape restoration programme is required.** This would not supersede the WFWI which would be one of the key instruments in implementing the programme. **A long term master plan of the area with a long term vision of the environment of this area half way through the 21st century could be drawn up as a strategic vision statement.** It could form the context for future structure plan and local revisions, for the WFWI programme and for the targeting of public resources and infrastructure works in the long term. **It would be led by the vision of a new landscape of high natural heritage value.** Local environmental initiatives could be integrated into it and it could begin through the process of preparing a *Local Agenda 21* plan for Fife.

## **E.5 LOWLAND LOCH BASINS**

### ***Distribution***

*Three lochs and their basins in the Study Area and part of the basin of Loch Leven, lying to the north (Sub area 18), Loch Ore (Sub area 19), Loch Fitty (Sub area 20) and Loch Gelly (Sub area 21), (see Figures 4, 5a and 5b).*

### ***Natural Systems and Processes***

*Glacial or fluvio-glacial deposits with alluvium soils surrounding the open water bodies, fed by a series of small burns and rivers flowing eastwards to the River Ore. The Leven basin drains northwards to the River Leven, flowing eastwards out of Loch Leven.*

**Illustration See Figure 10**

### **Description**

#### **Physical Characteristics**

- E.5.1 Lochs Ore, Fitty and Gelly comprise low lying land with freshwater lochs surrounded by gently rising agricultural land. The Loch Leven basin (sub area 18) is edged by the volcanic Redwell Hills (sub area 9) along the minor road running from Ballingry to Auchmuirbridge which is relatively steep and wooded in parts. The Leven basin is in intensive arable production.
- E.5.2 The loch basins are important to the setting of the lochs themselves, which are all utilised in one form or another for recreational/leisure use. Loch Ore (sub area 19) covers 260 acres and is the centre piece of the Lochore Meadows Country Park, a massive reclamation scheme transforming a former deep mine into a 1,000 acres park of gently rolling grassland and young woodland. It is a popular recreational facility served by three car parks and offers a wide range of activities both water based and utilising the surrounding park. It sits at the foot of the south facing slopes of Benarty Hill (sub area 5), with Benarty Wood and Harran Hill Wood providing a mature, vegetated backcloth. The loch basin extends to the edge of the towns of Lochore and Ballingry.
- E.5.3 Loch Fitty is also an important recreational facility. A natural loch of some 170 acres, it is a commercial fish farm offering Trout and Salmon in season. The loch basin (sub area 20) extends northwards up a series of minor ridges in arable and pasture use, to Thornton Wood, an extensive coniferous plantation on the slopes of the Cleish Hills. The area in between includes several isolated properties and a small group of buildings at Lassodie. The basin extends along the burn, feeding it from the west, and includes other isolated properties and groups at Bowershall, a gently undulating land at between 130m and 150m AOD. To the south, the basin extends to approximately the 150m contour, to the B912, and includes land in arable production with lines and groups of mature deciduous trees. The M90 forms the boundary of the basin to the east.
- E.5.4 Loch Gelly is a smaller loch on the northern edge of the Cullaloe Hills. The basin (sub area 21) extends from the base of the hills to the minor road to the east and the minor road and A92(T) to the north. There are clear views into the loch from the roads, through young, maturing mixed evergreen and deciduous planting. To the west, the loch basin extends for some 600 to 700 metres along low-lying marshy land close to the small burn running into the loch. The loch is used for fishing.

**Land Cover**

E.5.5 Land cover is predominantly agricultural land in arable use, although there is some grazing of cattle within the Loch Fitty basin. There are several isolated and groups of properties lying on the gently sloping land, and groups and lines of mainly broadleaved trees. Apart from the lochs themselves, there are other marshy areas on the loch edges where the water level varies.

**Settlement Pattern and Other Land Uses**

E.5.6 There is one farmstead within this part of the Loch Leven basin. There are approximately a dozen farmsteads or small properties lying within the Loch Ore basin, which extends to the edges of Ballingry and Lochore to the east and close to Kelty to the west.

E.5.7 Although there are no properties lying within the Loch Gelly basin, the A92(T) separates it from Lochgelly town. The B9149 passes over the A92(T) close to the edge of the loch. Overhead power lines from Mossmorran are conspicuous features, breaking the skyline close to the edge of the loch.

E.5.8 Within the Loch Fitty basin, there are groups of properties at Lassodie and Bowershall, and up to twenty other outlying properties. There are no major settlements close to the loch.

**Linear and Point Features**

E.5.9 The most obvious linear features are the shorelines of the lochs themselves and, across or close to the lochs, the roads (including minor tracks, 'C', 'B' and 'A' class roads and the Motorway) and the powerlines crossing the Loch Gelly basin.

E.5.10 The channelised River Leven's artificially straight course is a prominent feature within the Loch Leven basin, especially when seen from higher ground within the Study Area.

E.5.11 Localised ridges to the loch basin edges are minor linear features, generally masked by other higher landforms beyond.

E.5.12 The most obvious point features are the lochs themselves, especially when seen as much smaller elements in a wider landscape from viewpoints further away from the basins. The islands on Loch Ore are important features.

E.5.13 Individual buildings and small groups of buildings around the lochs form important visual features, contrasting to the flat, dark water especially when the buildings are painted white.

**Experiential Characteristics**

E.5.14 The loch basins are characteristically open, large scale landscapes, with diverse land uses amongst gently rolling, curved, colourful and balanced landform. They are typically calm, organised, tended and safe, although they can sometimes be disturbed by recreational or traffic noise and occasional visually discordant elements.

E.5.15 Around the Lochs the ambience tends to change emphasis in patterns, line and texture. Thus, on and around the lochs the landscape (in fair weather) is open, large scale, flat with curved lines and simple forms. Patterns are less regular, colours more subdued or very bright - depending on sunshine, textures vary but are often strongly reflective. The landscape is quiet, harmonious, calm, tended and safe. In storm conditions, however, the lochs can change quickly in mood and ambience and become rough, disturbed, threatening and dark with a

rather ambivalent appealing, yet deterring ambience. The birds on, over and flying around the lochs are an important part of the landscape experience. Lochs Fitty, Gelly and Ore are located on the edges of the lowland hills and valleys and their slopes tend to form a transition from lowlands to uplands.

### Key Characteristics and Features

E.5.16 The most important characteristics and features of the basins are:-

- a) the lochs and their islands and shorelines;
- b) the flat, relatively low-lying landform with strong horizontal lines;
- c) the open, large scale, regular, tended pattern of fields;
- d) the regular distribution of steadings and plantations/tree groups/shelterbelts and small settlements;
- e) the dominance and enclosure of the distinctive upland skylines and slopes;
- f) the diverse, calm, settled and (away from the motorway and main roads) the quiet, calm and balanced ambience;
- g) the presence of wildlife on and around the lochs and overhead in flight.

### Changes in the Landscape

E.5.17 Loch Ore has in the past changed, from an undisturbed landscape to a coal mining landscape and subsequently to the restored landscape of the Country Park. Its designation should protect it from encroachment by surrounding settlements. Extensive changes have also occurred within the Loch Leven basin as far back as the early 19th Century, when the River Leven was channelised to regulate its flow and thus enable land susceptible to seasonal flooding to be reclaimed for arable use.

E.5.18 Changes around Loch Gelly and Loch Fitty have included road improvements and changes in settlement pattern. The A92(T) will eventually act as a barrier to the southwards expansion of Lochgelly town, and the minor road to the east and the Cullaloe Hills to the south should protect the basin in these directions. To the west, however, the land is much more open and flatter, and pressure for development here must be a distinct possibility.

E.5.19 Similarly, there may be development pressure on the gently undulating slopes to the north of Loch Fitty. These south-facing slopes are relatively low when seen from higher land to the south, and the extensive plantations form an important element in the setting of the loch. The former Kelty Quarry lies on the south facing slopes, overlooking the loch, and remaining structures are evident in views of the loch and basin from the west, east and south, indicating the conspicuous nature of development on the loch basin slopes. Any change to this landscape, even relatively minor, would be obvious, conspicuous and highly adverse to views of the loch and the basin as seen from the motorway and other roads and properties to the south.

### Landscape Management

E.5.20 Landscape management opportunities relate mainly to the farmland where there is some evidence of neglect of field boundaries, better maintenance of which would help to restore the strong field patterns of the basins. Additional planting especially around steadings and building groups and hamlets would enhance the agricultural landscapes and sensitive management of the grounds of the older steadings is important. Shelterbelts and other plantations need positive management which, at present, is variable.

### **Landscape Capacity**

- E.5.21 **Most of the basins are highly visible from surrounding land so that large scale developments would be conspicuous if located away from existing developed areas.** On the other hand, **small scale developments tend to be less noticeable** in the open expanse of the basins from higher land and, because of the flat topography, would be noticeable only locally within the basins. The scale of land use change and development is therefore important. These are open flat or sloping landscapes which are inherently conspicuous and development within them would be equally conspicuous.
- E.5.22 Some small groups of buildings already form part of the pattern of the landscape of the basins. In general the settlements relate well to their landscape settings. The small settlements are seen across flat intensive agricultural land and their scale is not readily appreciated. Thus, **some of the groups could be extended by small scale development without changing the character of the basins so long as their linear or compact nature is retained, traditional design and materials are used and the edges are landscaped.**

### **Landscape Enhancement**

- E.5.23 There is little need for enhancement of the existing landscapes of the lowland loch basins. Some of the buildings and the storage of materials and vehicles on the southern edge of Loch Fitty are untidy and detract from the overall ambience of the area. If possible, the owners should be encouraged to improve this area, and planting close to the facilities or alongside the roads to supplement that recently carried out should be undertaken sensitively, to avoid a blanket screen of the loch.

## **E.6 THE COASTAL HILLS**

### ***Distribution***

*Seven locations within the Study Area, between the volcanic hills or lowland hills and valleys and the coastal braes or flats (sub areas 22 to 28 Figs.4 and 5a and 5b)*

### ***Natural Systems and Processes***

*Relatively extensive areas of predominantly boulder clay over-laying millstone grit or carboniferous limestone, and draining via a series of burns towards the coast.*

**Illustration See Figure 11**

### **Description**

#### **Physical Characteristics and Land Cover**

- E.6.1 Areas of undulating south-facing hills, similar to the lowland hills and valleys although more directly influenced by the coast. In two locations, namely Valleyfield to Charlestown (sub area 23) and part of Kincardine to Culross (sub area 22), the hills come to an abrupt end before the coast, by falling gently towards the steep, densely vegetated coastal braes (see E.7). In two other locations, namely Limekilns (sub area 24) and Aberdour Hills (sub area 28), the coastal hills fall gradually towards the coast itself, with no coastal braes in between. The remaining three areas, namely Castlandhill (sub area 25), Ferry Hills (sub area 26) and Letham Hill (sub area 27) are more individually distinctive hills to the west, south and east (respectively) of Inverkeithing, with relatively steep slopes rising to a distinctive peak or plateau. The western part of Kincardine to Culross falls gradually to the flat coastal platform containing the Longannet power Station.
- E.6.2 The heights of the coastal hills vary from around 35m AOD at Limekilns, 50m at Aberdour, 60m at Valleyfield to Charlestown, 70m at Ferry Hills, 85m at Castlandhill and up to 95m at Letham Hill.
- E.6.3 Letham Hill is a steep sided hill between Inverkeithing and Dalgety Bay, almost entirely covered by deciduous woodland at Letham Hill Wood. Negotiations with the owners are presently ongoing to bring the woodland into management under the WGS and to formally open it for public access and recreation. Letham hill ridge runs approximately north-south, but the less steep arable fields to the west of the ridge fall gently to the coast at Inverkeithing Bay. The A921(T) forms a distinctive break between Letham Hill and the lowland hills and valleys (E.4), and this characteristic is similar to the other coastal hills, where the A985(T) is the recognisable edge to the landscape character sub areas.
- E.6.4 Apart from the densely wooded ridge at Letham Hill, all other coastal hills except Ferry Hill comprise agricultural land in predominantly arable production. All except Castlandhill are prime agricultural land, Castlandhill being an outcrop of igneous rock with poor, thin soil cover over boulder clay. The lower slopes of Ferry Hill are built over within North Queensferry, and the railway passes beneath, in a cutting through the highest part.

#### **Settlement Pattern and Other Land Uses**

- E.6.5 Apart from the developed lower slopes of the Ferry Hills, the coastal hills include only isolated farmsteads, lying between larger settlements either side of this landscape character

type. Thus Kincardine to Culross coastal hills lie between Kincardine and Valleyfield, with Culross on the coast. Other land uses in this area include the overhead power lines emanating from both Longannet and Kincardine Power Stations, and minor roads running from the A985(T) to Culross. The B9037 coastal road forms part of the southern boundary to this area. An avenue of trees lines the access road from the A985(T) down to Dunimarle Castle.

- E.6.6 The Valleyfield to Charlestown hills lie between these two settlements, and along the northern edges of the coastal hamlets of Newmills and Torryburn. Crombie lies adjacent to the main road. Minor tracks and roads lead down from the main road to the two main farms in this area (Bankhead Farm and Bullions) and to the Torry Bay coast. Limekilns hills are sandwiched between Limekilns and the Rosyth naval base. Minor, unsurfaced tracks lead down to the ruins of Rosyth Church on the coast, past an area of broadleaved shelterbelt planting.
- E.6.7 There are large MOD buildings and telecommunications masts on Castlandhill, which acts as an important break between the built up areas of Rosyth town, the naval base and Inverkeithing. On the lower, arable slopes to the west of Letham Hill lies Spencerfield Farm, the fields being an important gap between the hill and Inverkeithing. Built development within Dalgety Bay is encroaching right up to the eastern edge of Letham Hill. Aberdour hills stretch from the eastern edge of Dalgety Bay to Aberdour, and east of Aberdour to Silversands Bay. The gradually sloping hills between Dalgety Bay and Aberdour include a golf course, extensive areas of mixed plantations, and a sewage works and gas terminal on the coast.

### **Linear and Point Features**

- E.6.8 The most significant linear feature seen from the coastal hills is the river Forth, a key characteristic of this landscape character type. Views southwards from the coastal hills either include the river or the distinctive coastal climate, with often strong winds coming off Firth. This is obvious in the wind-sculptured trees along the coastal braes or in other plantations and shelterbelts within the hills.
- E.6.9 Hedgerows, hedgerow trees and other field boundaries do not form distinctive linear features due to their general absence from the typically large, open and exposed arable fields. Individual farmsteads are often conspicuous point features, seldom screened by vegetation or topography.
- E.6.10 Within the Kincardine to Culross hills, the power lines are obvious linear features against the Forth, and the Longannet Power Station a distinctive point feature for miles around. Major roads on the edges of the hills and the minor roads and tracks running across them are conspicuous linear features in an open landscape when even minor, subtle changes in topography are clearly visible.

### **Experiential Characteristics**

- E.6.11 The main characteristics experienced from within the coastal hills are those associated with the coast and the river. Thus views are often large scale, open or exposed, of a simple, generally smooth textured, rolling landform. However, where coastal braes are present, these form a distinctive break of slope to the undulating arable fields, giving a more diverse, rough edge to the landform. They add colour to an otherwise muted scene, which is generally balanced, calm and quiet, with a regular, well tended landscape. On days when the weather is bad, with high winds and cloud cover, the rough firth and fast moving clouds transform the

experience into a disturbed, moving, unsettled one. Away from the coast, similar experiences are gained due to the presence of the busy A roads.

### Key Characteristics and Features

E.6.12 The key characteristics and features of this landscape character type are:

- a) close association with the coast, either through views of the Forth or indirect coastal experiences of sounds, smell, etc.;
- b) predominantly large, open, undulating arable fields, with few field boundaries or little other land cover;
- c) isolated farms amongst open, exposed fields;
- d) extensive views southwards across the Firth of Forth and beyond, and generally confined to the north by lowland hills;
- e) distinctive edges to the character type, either by the river, roads, built development or coastal braes;
- f) general lack of tree cover, with few plantations and shelterbelts;
- g) some pasture and rough hill grazing on the poorer hill soils.

### Changes in the Landscape

E.6.13 This landscape character type is one of the least changed within the Study Area. Changes have generally occurred on lower ground towards the coast, or either side of the coastal hills by the encroachment of development. This is the greatest threat to these areas in the future.

E.6.14 The Kincardine to Culross sub area has changed as a result of the Longannet Power Station on the coast, requiring access roads, power lines and other associated development. Ferry Hills has also changed due to its setting and important position in terms of transportation routes over the Firth of Forth. North Queensferry has expanded around the Ferry Hills due to the Forth road and railway bridges.

E.6.15 Letham Hill was, until recently, a high wooded ridge with open arable fields to the east and west. Its eastern side is changing rapidly as houses and other development are built as Dalgety Bay expands.

E.6.16 Agricultural changes have generally been confined to the removal of field boundaries and thus the expansion of field sizes.

### Landscape Management

E.6.17 Management of the coastal hills has generally maintained the large, regularly sized fields, with occasional corner plantations or small semi-natural woodland alongside the burns draining to the coast. **Continued management of the agricultural land use is necessary to maintain the character of the coastal hills.**

### Landscape Capacity

E.6.18 **The coastal hills have some capacity for absorbing built development, but this should only be at their edges adjacent to existing settlements.** The area to the east of Kincardine, for example, alongside the A985(T), could accommodate some development to improve its setting as an important gateway to the north across the Forth. This should include a softening of the edges to the town, by tree and shrub planting as a gradual break between town and country. Valleyfield and Charlestown could expand out in to the coastal hills if necessary, but

this should be confined to essential expansion and taking into account the impact on views from the coast and river.

- E.6.19 Limekilns, Castlandhill, Letham Hill and Aberdour Hills have little capacity for absorbing development and should remain predominantly open as distinctive and conspicuous breaks between settlements.** The development of these areas would, in effect, lead to the built-up coastline extending from Charlestown to Aberdour.
- E.6.20 There is high capacity for absorbing recreational access in the coastal hills areas.** Footpaths along the actual coast have their own characteristics, but can be spoilt by the urbanisation and industrialisation of the coastline in certain areas, such as the Power Stations, Rosyth, Ash Lagoons etc. Footpaths higher up could be protected from such views by the coastal braes and shelterbelt planting, and would provide extensive panoramic views across the river. Access should be readily available from the numerous roads, but the careful siting and design of car parks (if necessary) and interpretation would be essential.
- E.6.21 Other recreational facilities that protect the open nature of the hills could also be successfully absorbed, such as golf courses.**

#### **Landscape Enhancement**

- E.6.22 Little enhancement of the coastal hills character type is required. Softening the harsh edges of adjacent settlements by planting schemes would be advantageous in some areas, and planting as a screen to the Longannet Power Station would also be beneficial.**

## **E.7 THE COASTAL BRAES**

### ***Distribution***

*Three locations in the study area at Culross, from Torryburn to Limekilns and from Aberdour to Burntisland (sub area 29-31 see Figures 4 and 5a and 5b).*

### ***Natural Systems and Processes***

*The influence of the coastal processes, wind, rain and frost/snow continue to weather the braes and the narrow strips of land on which the villages are located. In places sea defences in the form of walled promenades are important to prevent the erosion affecting developed land. (see Figure 11).*

**Illustration See Figure 12**

### **Description**

#### **Physical Characteristics**

- E.7.1 The north shore of the Firth naturally consisted of a series of mudflats, beaches, sand and shingle bays and braes. The braes are visually prominent from the south shore, bridges and from the Firth. They are mainly wooded, steep sided (rather than sheer) and softened by vegetation. They have rounded tops rolling over a distinct break of slope on to the rising land of the coastal hills (see E.6) or Cullaloe Hills (see E.3). They form one of the most outstanding features of the north coast of the estuary. They may be described as wooded bluffs but this does not emphasise their height and coastal character.
- E.7.2 At the foot of the braes there are raised beaches or wave cut platforms which form long, linear strips of land elevated generally up to about 5m above the beaches or intertidal zones (see E.9). There are occasional small peninsulas projecting seaward from these platforms and locally the platforms widen. Both of these features provide important open spaces between the coastal road and the intertidal areas.

#### **Settlement Pattern, Land Use and Land Cover**

- E.7.3 The narrow platforms at the base of the braes are utilised for the linear, south facing settlements of Culross, Charlestown and Limekilns which retain their traditional coastal character and form prominent features from the south shore, the bridges and the Firth. The physical constraints of the steeply wooded braes and the Firth have ensured the traditional linear settlement pattern has been retained. The buildings all cluster at the foot of the brae and face the coastal road.
- E.7.4 The villages have also spread up the narrow, sheltered steep sided folds in the braes where they front narrow, steep, winding roads that gain access to the shore, via the folds, from the coastal hills above.
- E.7.5 The braes are almost entirely wooded. There are some areas of permanent pasture. None of the braes are cultivated. The wooded tops of the braes mark the abrupt end of arable farmland on the coastal hills and the trees are visible above the brae top. Thus the woods are seen from the Firth and landward sides of the braes.

E.7.6 The platforms at their base are developed as villages or used as recreational open space, with occasional features related to the Firth, eg. navigational infrastructure and small boat moorings and yards. There are old limekilns at Limekilns that are of industrial heritage and landscape interest.

### **Linear and Point Features**

E.7.7 These landscapes have very strong linear characteristics with the sinuous lines of the villages, roads, sea walls, beach heads and brae tops flowing along the north coast of the Firth. The peninsulas of low lying land projecting seaward are the only interruptions to these lines. Point features tend to be any tall, vertical features on the peninsulas or open spaces, eg. navigational lights, poles etc. Otherwise point features that influence the braes tend to be the masts, flues and cranes on the coastal flats (see E.8) outwith this landscape type.

### **Experiential Characteristics**

E.7.8 Owing to their coastal location these landscapes can vary considerably according to weather conditions. High southerly winds, storms and high seas can make them very exposed noisy, chaotic places. Most of the time, however, they are small scale, diverse, textured, colourful, calm and quiet landscapes with a contrast between the sheltered enclosure, vertical, sinuous lines of the braes and the vast scale exposed, horizontal, landscape of the Firth. The braes provide security, shelter and an enduring quality to the narrow strips of developed land but the settlements look outwards across the Firth, so the braes tend to be an ever present backdrop to the villages rather than their focus.

### **Key Characteristics and Features**

E.7.9 The key characteristics and features of the coastal braes are:

- a) the steep, wooded, rounded braes;
- b) the narrow platforms of land at the foot of the braes;
- c) the small, linear, traditional, bright and colourful coastal settlements;
- d) the narrow, sinuous coastal roads and steep, narrow roads down folds in the braes from the coastal hills;
- e) the peninsulas and wider areas of the raised beaches which remain open, undeveloped, recreational areas;
- f) the maritime, navigation, boating infrastructure and features typical of coastal villages;
- g) the lime kilns built into the braes and associated industrial archaeology.

### **Changes in the Landscape**

E.7.10 There is little evidence of substantial change in this landscape type which is generally well managed and well controlled from a planning point of view. The physical restrictions limit development options. Environmental improvements have enhanced the sea fronts.

E.7.11 The woodland trees appear to be in good condition in themselves but there is a noticeable lack of natural regeneration or under-planting in most of the woods. This could lead to the loss or decline of the woodland on the braes. The woodland is partly plantation and partly semi-natural. There are large areas dominated by sycamore which was clearly planted to withstand the coastal exposure and has since spread.

- E.7.12 Where grazing may be abandoned the pastures would revert to scrub or woodland which would be compatible with the landscape type.

### **Landscape Management**

- E.7.13 **The only urgent need in this landscape type is to bring all of the woodland into a consistently high standard of management.** The slopes make management difficult in places and an approach that favoured natural regeneration with under-planting and selective control of sycamore would be the most appropriate and probably most successful. **The Woodland Grant Scheme is sufficiently flexible to provide for this sensitive management. It could also encourage better public access to the woods which do provide outstanding recreational potential with views of exceptional quality and interest.**

- E.7.14 If the woodland is actually threatened then the Forestry Authority and Planning Authority may need to consider refusing felling licences and/or the use of Tree Preservation Orders. A proactive approach to better management would be preferred.

### **Landscape Capacity**

- E.7.15 **The landscape has the capacity to absorb traditional forms of linear, small scale development along the platforms.** The peninsulas and open spaces should be kept open and free of development as this would be conspicuous, inappropriate and interrupt the flow of the coast and obstruct views of the Firth from the coast road.

- E.7.16 **The woodland and braes may be subject to proposals for tourism/recreation development, eg. chalets etc. owing to the potential views and proximity of coastal villages. Such proposals should be rigorously resisted.** Any form of development or break in continuity of the wooded braes would irreparably damage the integrity of this landscape type and would be conspicuously intrusive in views within the brae landscape, and from the coastal hills, coastal flats, intertidal and Firth landscape types and the south shore.

### **Landscape Enhancement**

- E.7.17 This is not a priority area for enhancement. The main opportunities will arise as part of the long term management of the open spaces and as buildings in the villages are repaired, extended or replaced.

## **E.8 COASTAL FLATS**

### ***Distribution***

*Four locations at Kincardine, Longannet, Preston Island and Rosyth (sub areas 32-35 Figures 4 and 5a and 5b).*

### ***Natural Systems and Processes***

*Extensive flats created naturally as raised beaches or, for the most part, artificially by the creation of sea walls and claiming land from the Firth and the intertidal area, protected by flood banks and ditches.*

**Illustration See Figure 13**

### **Description**

#### **Physical Characteristics and Land Cover**

- E.8.1 The very flat, low-lying coastal landscapes comprise land claimed from the intertidal and maritime parts of the Firth and are at or slightly above or below sea level. Protected by flood banks the areas are dominated by industrial or dock or port related development, power stations and associated lagoons or arable farmland with large, geometric field patterns divided by fences. Roads crossing the flats are elevated up to a metre or so above the field levels. All buildings and other structures are prominent in views across the flats and from the Firth and the intertidal areas. From the coastal braes and hills the flats are seen as encroachments into the estuary, now typical but not historically characteristic.
- E.8.2 At Rosyth the flats are not intensively farmed and areas of reed beds prevail, locally, with scrub spreading from the higher land behind.

#### **Settlement Pattern and Land Use**

- E.8.3 Historically, settlements have located at the foot of the coastal braes, on the wave cut platforms and raised beaches. The flats are occupied by the farmland and now the industrial, dock, port and energy land uses they were created for. Occasional steadings appear in the fields.
- E.8.4 The power stations at Kincardine and the dock yards at Rosyth are prominent features across the Firth of Forth.

#### **Linear and Point Features**

- E.8.5 High voltage powerlines are dominant features in the Kincardine area radiating from the power stations and even crossing the Firth itself. Though less conspicuous the often straight or slightly curving or angular roads, with fences, overhead wires and, in places, drystone dykes, are characteristic and noticeable features. Some roads have had all boundaries removed and internal field boundary loss has led to very large, featureless arable fields at Longannet, in contrast to the area immediately behind the power station which has overgrown hedges, low grazing levels, hedgerow trees and pockets of wetland habitats. The sea walls and banks are also noticeable.

E.8.6 Point features tend to be the chimneys, stacks, towers and cranes of the power stations, factories and docks on the industrial areas. On the agricultural land the steadings are conspicuous point features, so too are the few remaining trees.

### **Experiential Characteristics**

E.8.7 The agricultural areas tend to be large scale, still, open or exposed, uniform, textured, flat, angular landscapes, with discordant features, muted colours, regular patterns and disturbed or neglected areas between the large, intensively cultivated fields. Near Rosyth the reed beds are more colourful, with varied textures, movement and a more natural appearance.

E.8.8 The industrial and dock areas are urbanised but the scale of buildings and infrastructure is very large and noisy, dominating the nearby areas.

### **Key Characteristics and Features**

E.8.9 The key characteristics and features of the undeveloped coastal flats are :

- a) the flat, low-lying, open, large scale, exposed landscape;
- b) the intensively cultivated, geometrically laid out fields with rectilinear, fenced enclosures or without enclosure;
- c) the slightly sinuous or angular roads raised above the fields with stone dykes or open sides;
- d) isolated, scattered, conspicuous farmsteads, often without shelter or screening;
- e) straight ditches, sea walls and flood banks with small bridges.

### **Changes in the Landscape**

E.8.10 Although ground levels on the claimed land may change absolutely and relatively to the changing sea level these are not perceptible. There is evidence of loss and neglect of field boundaries and abandonment of farming at least near Rosyth. Without intensive agricultural activity and the maintenance of sea and flood defences these areas would rapidly succumb to inundation and may even revert to saltmarsh or other semi-natural coastal habitats. In most parts they lack the sense of history, permanence and endurance of the landward areas. The potential threat of the sea is present and will not be diminished by rising sea levels. Declining field hedgerows and stone dykes and scrub invasion of embankments and ditches indicate that these landscapes are vulnerable to changes in management as well as to changes in land use through development pressures.

### **Landscape Capacity**

E.8.11 The character of the landscape is open and flat with few screening elements or near topographic horizons, or other frameworks, for farmsteadings, buildings or other development. New buildings and additional infrastructure above ground would inevitably be immediately conspicuous. **Whilst the intrinsic landscape interest is low, therefore, isolated, scattered or single point features in the landscape could not be accommodated easily. Low level, linear features would be appropriate but higher linear features would either add to the clutter of existing overhead lines or create new and inappropriate features in those parts that do not have them at present.**

E.8.12 **The areas have a high capacity for accommodating woodland and linear tree belts that would help to screen some of the intrusive features, relieve the uniformity and horizontal nature of the area but need not necessarily obstruct important views from the roads to the Firth**

or the bridges. Woodland is certainly not characteristic of the area but this is often a man made land and landscape and where raised beaches have created natural coastal flats they would naturally have become wooded with wetlands in the lower areas and depressions.

### **Landscape Management and Enhancement**

**E.8.12 Bearing in mind the discussion of the landscape capacity, there are two clear options for managing and/or enhancing the undeveloped coastal flats that are currently in agricultural use:-**

- a) **sustain the existing open, exposed, flat landscape by managing farmland and agricultural features** and restricting new development and above ground infrastructure;
- b) **resolve to change the character of the flats, or parts of the flats, by introducing extensive tree planting in the form of woodlands or linear belts**, this would in time significantly increase the capacity of the landscape to accommodate change in the form of leisure/recreational facilities and development pressures. It would create enhanced enclosure, scale, spatial variety, ecological interest and landscape experience.

**E.8.13 In any event, the open area of semi-natural habitats at Rosyth should be sustained** as an open, wetland area, with scrub invasion reduced and any tree planting confined to the perimeter of the wetland area and located so as not to obstruct views across the Firth.

## **E.9 INTERTIDAL**

### ***Distribution***

*Nine locations on the north shore of the Firth of Forth noted on Figures 4 and 5a as : No. 36 for mudflats - east of Longannet, Culross, Torry Bay and Limekilns; No. 37 for shingle bays at Charlestown, Inverkeithing Bay and Dalgety Bay; and No. 38 for the Sandy beaches east and west of Aberdour. (Figures 4 and 5a).*

### ***Natural Systems and Processes***

*These landscapes are extremely dynamic being affected constantly by the natural coastal geomorphological processes and the daily cycle of tides covering and exposing them. However, there are no signs of large scale short term change caused by natural processes, eg. rapid accretion or erosion of sand dunes.*

**Illustration See Figure 14**

### **Description**

#### **Physical Characteristics and Land Cover**

- E.9.1 The three sub types each have their own distinctive physical characteristics that are typically associated with mudflats, shingle bays and sandy beaches elsewhere on the east coast of Scotland.
- E.9.2 The mudflats are flat and variably covered with water, depending on the tide. They tend to be low lying, dull brown or brown-grey sheets of mud with the meandering outwash channels of the burns adding further reflective surfaces. The presence of feeding and roosting/resting birds is important. In places they are covered in green algae or eel grass but generally they are unvegetated.
- E.9.3 The shingle bays, by contrast, are a rougher texture, more colourful but still low lying though sometimes with a gentle slope to the sea. Wave action is more pronounced especially where rocky protrusions break the inflow or outflow of the tides. The shingle bays have fewer birds and less noticeable water channels.
- E.9.4 The sandy beaches are prominent by reason of their colour and smooth, even slope to the sea. Groyne and other structures are present and water channels are few. Wave action depends on tide and weather conditions. These areas can be densely occupied by people with great activity at lower tides in the summer in fine weather. At other times they can be apparently devoid of life and activity.

#### **Settlement Pattern and Other Land Uses**

- E.9.5 Self evidently there are no settlements on the intertidal areas but these areas have been lost to land claim, with substantial seaward encroachment by the coastal flats described at E.8 above. Land claim results in a total loss of the area from intertidal to permanent land, often with associated infrastructural and industrial development.
- E.9.6 Land use of the intertidal is necessarily limited in scope but the recreational enjoyment and some shellfish and bait gathering are important social and cultural activities that generally

leave the landscape of the intertidal unaffected owing to the tidal cycle.

### Linear and Point Features

E.9.7 There are no significant point features on the intertidal as navigational equipment etc is generally located on the maritime part of the Firth (see E.10 below). Linear features include the outwash channels and groynes at low tide and the constantly changing lines of the breaking waves and water's edge.

### Experiential Characteristics

E.9.8 The sandy beaches and other intertidal areas, on fine summer days, can be colourful or garish, chaotic, busy and noisy places. Most of the time, however, they are large scale, flat, open or exposed, uniform or simple landscapes with smooth textures, sinuous lines and muted colours. They can be areas of solitude dominated by natural noises (waves, wind, birds) and free of the intrusion of human activity. The naturalness of the areas, with sometimes huge flocks of birds or perhaps just occasional waders scurrying across the mud or shingle are the epitome of a Scottish estuary.

### Key Characteristics and Features

E.9.9 The key characteristics and features of the intertidal areas are :

- a) the low lying, dull brown or brown-grey sheets of the mudflats with the meandering outwash channels;
- b) the rougher texture, more colourful but still low lying shingle bays with their effect on the waves;
- c) the colour and smooth, even slope to the sea of the sandy beaches with their groynes and other structures;
- d) the large scale, flat, open or exposed, uniform or simple landscapes with smooth textures, sinuous lines and muted colours;
- e) the solitude dominated by natural noises and the naturalness of the areas, with sometimes huge flocks of birds or perhaps just occasional waders scurrying across the mud or shingle;
- f) the ever changing line of the water's edge and the influence of the sea and natural elements.

### Changes in the Landscape

E.9.10 There is little evidence of change in the intertidal zone except where algae or eel grass appear to be expanding and some gradual changes in the line of outwash channels and beach levels are just perceptible. The greatest threat of change must be further land claim, especially of mudflats, but the international ecological importance of these is likely to deter further extensive encroachment. Otherwise, infrastructural works eg. pipelines and coast protection works may be the only other expected changes.

### Landscape Management and Enhancement

E.9.11 In the conventional sense, the intertidal landscapes are not subject to management and despite occasional, temporary occupation of beaches for recreational use they are **essentially natural landscapes that do not require intervention for management or enhancement**. Litter and debris at the tidelines is locally unsightly and **more beach/tideline cleaning could enhance the appearance of some of the bays**, especially those backed by urban and industrial development. An oil or chemical spillage on the coast or in the Firth would have a very considerable impact on these sensitive natural landscapes, visually as well as biologically.

### **Landscape Capacity**

E.9.12 These near natural landscapes are extremely sensitive and vulnerable to any development proposals that would be uncharacteristic of the intertidal areas (eg. groynes or harbour related infrastructure of small scale and traditional design could be accommodated). **Any development not conventionally associated with the interface of the sea and the shore would be inappropriate.**

## **E.10 FIRTH OF FORTH**

### ***Distribution***

*A single major Firth forming the southern limit of the study area (see Figure 4 sub area 39)*

### ***Natural Systems and Processes***

*Tidal estuary of the River Forth dominated by maritime influences, crossed by three bridges and further modified by extensive land claim on both the north and south shores.*

**Illustration See Figure 15**

### **Description**

#### **Physical Characteristics and Land Cover**

E.10.1 The part of the estuary is permanently covered by water with the appearance of the open sea to the east and of a wide, slow river estuary in the west. The landscape is flat, expansive and maritime in character but it is not featureless. Many small off shore islands are studded across the eastern part of the Firth. There are navigation and shipping artefacts on the water and frequent movements of vessels ranging from large tankers and cargo ships to diminutive dinghies and other small craft. Although busy, the landscape has slow moving features. Weather conditions and time of day can radically change the character.

#### **Settlement Pattern and Land Use**

E.10.2 Self evidently, there are no settlements on the maritime Firth but the shores tend to be dominated by towns and industrial development. The Firth is a focus for settlement, transport and industrial activity and the flat, open sea is consequently dominated by these features on the coast. Substantial areas of the Firth have been lost to land claim, eg. at Preston Island and Rosyth on the North shore and Grangemouth/Kinneil/Bo'ness on the south shore. These artificial land bodies reduce the area and intrude into the Firth. They interrupt the natural, sinuous lines of the coast. They contain, in places, a clutter of industrial infrastructure which can extend into the open sea.

#### **Linear and Point Features**

E.10.3 The off shore islands form the main pattern of point features on the Firth. All are small and vary from low lying, rounded or linear domes to rocky protrusions with shallow bluffs and braes. Some are featureless, several are wooded and some contain buildings including lighthouses. All are prominent and important features in the landscape. With the bridges, they provide a strong sense of place and distinctive identity. At low tide, shallow sand bars may also be exposed, causing the waves to break and adding complex patterns to the ripples on the surface caused by the wind and tides. Numerous small buoys and other navigational aids can be noticeable features on a calm sea.

E.10.4 Whilst, at the western end, the Kincardine river bridge is an important visual feature the main linear features on the Firth are the two bridges at Queensferry. These outstanding engineering structures give the Firth a landscape recognised across the world and provide Dunfermline with two of its most distinctive features. By day, and when lit at night, the close relationship of the two bridges and their respective landings dominates the Firth. The contrasting designs and materials of the two structures enhance the inter relationships. The elegant, simple shape

of the road bridge with its high towers and graceful curves of the suspension cables contrasts with the solid, geometrical, balanced, latticework of the rail bridge which has three massive piers linked by seemingly fragile sub-bridges forming two flat arches over the Firth, each some 518 metres long.

- E.10.5 The presence of the bridges as landscape features is enhanced by their considerable cultural, social and economic importance. Built to supplement the traditional ferries that experienced difficulties with the Firth's currents, winds, high seas and haars, the bridging of the Firth was first proposed in 1740. It was advanced in 1817 with the publication of James Anderson's 'chain bridge' design to be superseded in turn by the proposal for a rail bridge. The collapse of Thomas Bouch's Tay Bridge, in 1879, led to the abandonment of construction on his similar design for the Forth.
- E.10.6 The engineers John Fowler and Benjamin Baker were eventually appointed to design the existing cantilever concept bridge with work commencing in April 1883. The Prince of Wales officially opened the Forth Bridge on 4th March 1890 which was then the biggest bridge in the world with clear spans over 3½times larger than any bridge that had been constructed to that date. The total length of the Bridge including the approach spans is in excess of 1½ miles. The bridge was the first major structure to be built entirely of steel. It was the first to develop the use of tubular sections and its giant cantilevers were designed on carefully calculated scientific principles.
- E.10.7 The columns of the piers are 100 metres high and carry the railway 45 metres clear of the Forth. The 54,000 tons of steel were supplied by three iron works. The painting of the 18.2 ha of steel surfaces started immediately and became the symbol of the perpetual job. Today the bridge is still regarded as a milestone in the development of bridge engineering. It is recognised by the Institution of Civil Engineers and the American Society of Civil Engineers as a Historic Engineering Monument and is Scotland's largest "listed building".
- E.10.8 When the Forth Road Bridge was opened in 1964 by Her Majesty Queen Elizabeth II it was the largest suspension bridge in Europe and, together with the approach viaducts, is a little over 1½ miles long. The bridge has a spectacular central span of 1,005 metres between its two main towers. The side spans, which carry the deck to the side towers, are each 408 metres long, and are flanked by approach viaducts. The supporting cables turn downwards to the anchorages which were fixed by tunnelling into the rock.
- E.10.9 The main towers are 156 metres above mean sea level and the sag of the cables between the towers is approximately 100 metres. Under the deck of the main span there is a maximum shipping headroom of almost 50m at mid-span. Construction of the bridge required 39,000 tons of steel, 8 miles of new dual carriageway, 8 miles of minor road links and 24 other (considerably smaller) bridges.

### **Experiential Characteristics**

- E.10.10 The Firth can be calm, bright, colourful and smooth with extensive views dominating the coastal scenery from north and south shores. It can also become stormy, dark, rough, almost monotone grey with low cloud, rain and high winds transforming the estuary into a forbidding deterrent to human activity. Haars can conceal the shores and blanket the Firth in a dense featureless mist disorientating even those people familiar with its banks and features.

E.10.11 This landscape is experienced in four important ways:

- a) from the shores;
- b) from ships and other vessels on the water;
- c) from the three bridges; and
- d) from the air.

From the shores the experience is dominated by the flat openness of the sea with the noises of the waves, wind, sea birds and often traffic being important influences. The views across the Firth to the southern shore are expansive and contain many features that are distinctive despite the vast scale and distance. These include the Pentlands, the Edinburgh conurbation, industrial structures and flares at Grangemouth and the bridges.

E.10.12 From the sea itself the experience is typically maritime but not with the infinite horizons and juxtaposition of sea and sky. Here the horizons are higher, closer and formed by the shores of the Firth. The experience is determined entirely by weather and sea conditions in a landscape dominated by the natural elements.

E.10.13 Views from the Kincardine Bridge are low, across a mixed landscape of farmland and urban and industrial development. A large scale landscape that is open, diverse, mainly flat and busy with many discordant elements. From the Forth and Forth Road Bridges the views are from high points looking down on to a seascape with many features. It is exposed (for the cyclist or pedestrian), surprisingly diverse, busy and often colourful for a maritime landscape.

E.10.14 The Firth is often viewed from the air because, depending on wind direction, many scheduled and chartered aircraft fly out over the Firth on take off or landing from Edinburgh Airport. The views are seen at relatively low altitude with the Firth, the Bridges, the shores and the landward areas seen in a context that is not possible from the ground.

### **Key Characteristics and Features**

E.10.15 The key characteristics and features of the Firth are:

- a) the flat, expansive and maritime character;
- b) the many small off shore islands;
- c) the navigation and shipping artefacts on the water;
- d) the frequent but very slow movements of vessels of a variety of types;
- e) the changing weather conditions and the effects of the lights on the Firth at night;
- f) the three bridges, but particularly the spectacular Forth and Forth Road Bridges;
- g) the calm, bright, colourful and smooth open, large scale landscape with extensive views dominating the coastal scenery from north and south shores.

### **Changes in the Landscape**

E.10.16 The seascapes are unlikely to experience major changes that would alter their landscape character unless:

- a) significant further land claim encroached on the sea (negative impact);
- b) shipping and/or boating noticeably increased (potentially positive effects);
- c) new structures, masts etc were located on the sea or the islands (negative impact); or
- d) a further bridge crossing is constructed (this potentially would have both negative and positive effects depending on the location and design).

### **Landscape Management**

E.10.17 Is outwith the control of the planning authority and landowners in the conventional sense. However, **management of the Firth of Forth is crucial to the landscape heritage of extensive areas on the north and south shores and to the image of Dunfermline (and elsewhere).** The visual, physical and ecological characteristics of the whole estuary require sensitive, co-ordinated management and this is being progressed through the Firth of Forth Initiative.

### **Landscape Capacity**

E.10.18 **Whilst the seascape has considerable capacity to accommodate, visually, increased shipping, boating and small scale, maritime navigational infrastructure (both temporary and permanent) it is extremely vulnerable to inappropriate features which would be uncharacteristic of the sea and the islands.** These could include, for example:

- a) large scale jetties, moorings etc projecting into the Firth;
- b) marina-type developments away from the mainland shores;
- c) high, bright, reflective, garish or otherwise conspicuous masts, towers etc (but further conventional lighthouse structures could enhance the maritime character);
- d) further overhead cables or wires;
- e) permanent rigs, platforms or other anchored structures on the inner Firth (upstream of the Forth Bridge).

### **Landscape Enhancement**

E.10.19 Conventional landscape enhancement measures are not relevant. **The seascapes generally do not require enhancement.**

## **E.11 DESIGNED LANDSCAPES**

### ***Distribution***

*Eight locations in the study area, as included on the national inventory of Gardens and Designed Landscapes at Aberdour Castle and house; Blairadam; Culross Abbey House; Donibristle; The Murrel; Pittencrief Park; Tulliallan; and Valleyfield. (Sub areas 40 to 47. (See Figures 4, 5 a and 5b)*

### ***Natural Systems and Processes***

*Designed and managed landscapes on which natural processes have a limited effect. Two of the designed landscapes lie on upland slopes, two lie within the lowland hills and valleys but close to the coast, three lie on the coast and one lies adjacent to the built-up edge of Dunfermline.*

**Illustration See Figure 16a and 16b**

### **Description**

#### **Physical Characteristics**

E.11.1 All these designed landscapes have been included on the Inventory of Gardens and Designed Landscapes due to their significance as either works of art, or due to their historical connections, horticultural, scenic, nature conservation or architectural value. The physical attributes of each differ, but each is (or was) associated with a grand house and a well known family or person, and the estates often included either lodges, chapels, coach houses, dovecots and/or castles, set around or within formal gardens and designed woodland landscapes. The extent of what remains today of the original estate varies considerably, but all exhibit some features of the former landscape, be it building(s), boundary walls, gates or fences, mature specimen trees, formal gardens or remains of the policy planting.

#### **Land Cover, Settlement Pattern and Other Land Uses**

E.11.2 The boundaries of Blairadam are defined by the former extent of Blairadam house and historic garden, and the extent of Blairadam forest, important to the setting of Blairadam, on the eastern slopes of the Cleish Hills. The M90 Motorway severed a small part of the former designed landscape and now forms the eastern boundary of the park beyond which, and to the south-east, lies the town of Kelty. The policies extend north to North Blair house and along the access road which links it with the B996, south of the woodland by the Glen Burn, and west to the woodlands of the Blairadam forest, beyond Hill Wood.

E.11.3 Blairadam House, listed category B, was built by the renowned architect, William Adam, in 1733. The grounds were laid out in the formal style of the period when the woodlands and parks were established. After three generations, the estate was broken up and sold off in separate units in 1925, to pay death duties. Two years later, the house was repurchased by the Adam family and subsequently the garden, cottages and some parkland were re-acquired.

E.11.4 The predominant land cover is mixed coniferous and deciduous woodland. The current policy lands of the Blairadam estate extend to some 217 acres (88 ha) of which 40 ha are amenity planting, 2.4 ha are walled garden and arboretum, and 40 ha are parks which are let for grazing. There are some smaller cottages and various artifacts, some of which are listed, within the estate. Some of the formal parkland and avenues of trees still exist, but the walled

garden has become overgrown and disused.

- E.11.5 The Murrel (sub area 44) lies in a similar situation to Blairadam, on the well wooded slopes of the Cullaloe hills. The listed B house is of great interest due to its importance as an example of the work of the architect Frank Deas, in the early 1900's. The designed landscape, sheltered in the deeply incised valley of the Dour Burn, and thus not easily visible from surrounding roads, provides the setting for the house and other buildings.
- E.11.6 Built on former farmland, the land slopes steeply to the south and south-west, providing good views over the Forth from the terraced slope. The designed landscape is enclosed to the north by the minor access road from the B9157, to the east by the garden wall and shelter planting, to the south by the burn and shrubbery, and to the west by the wild garden and west shelterbelt. The designed landscape encloses about 17 acres (7 ha) and is subdivided into several compartments.
- E.11.7 Tulliallan (sub area 46) and Valleyfield (sub area 47) both lie on the southern edge of the lowland hills and valleys landscape character type, although close to the coast. Historically, the designed landscape of Tulliallan extended around the former Tulliallan Castle to the west of the Alloa road (now the A977). A new castle was built around 1815 to the east, set facing west across the river. The extent of the landscape is similar today, with 230 acres (93 ha) extending northwards to a mausoleum and including a large area to the east planted up as forestry (Devilla Forest, sub area 14). Several lochs on the estate were dammed but remain today (Peppermill Dam, Moor Loch and small ones). Subsequent fragmentation in ownership has resulted in no known plans of the policies or grounds remaining, but several historical features and buildings remain despite its use now as a police training establishment for the whole of Scotland, known as the Scottish Police College. Several new buildings have been added. Most of the woodland is now in commercial forestry management, some privately owned and some owned by the Forestry Commission. Surrounding areas have been worked for coal, limestone and sand and gravel. There are extensive views to the west and to the Ochil Hills to the north. Buildings are visible from the A977 and the extensive area of woodland from the A985.
- E.11.8 Valleyfield was originally designed around a south-east facing house, now demolished. The original estate has been bisected by the A985 and most of the southern part has been developed for housing related to the local coal mining industry. Today the designed landscape is enclosed by the Pitsoulie Plantation to the north and east, and by the north and west drives to the west. The east drive, put in by Repton, continues southwards under the A985 following the course of the Bluther Burn in its deep wooded valley to the East Lodge at Newmills. Valleyfield is the only Scottish example of Repton's work, and is well documented by the existence of his Red Book produced for the then owner. Although little remains of the architectural features, and most of the plant material has been lost, the designed landscape provides the setting for several features of interest, including a Gate Lodge and rustic bridges, and it makes a significant contribution to the surrounding scenery by virtue of its contrast with the trunk road and built up area to the south. The Bluther Burn's deep valley has a cover of mixed deciduous species, and the mineshafts are thought likely to provide nesting sites for bats.
- E.11.9 Three of the designed landscapes lie on the coast, namely Aberdour Castle and House (sub area 40), Culross Abbey House (sub area 42) and Donibristle (sub area 43). At Aberdour, the designed landscape provides the setting for the A-listed Castle, which is well screened from

the town to the west and by the A921 and railway to the north, but views from the public park are possible from the south-east. The Castle was built on a steep hill to the east of the Dour Burn above its estuary and the sheltered harbour at Aberdour. The designed landscape extended over a greater area than it does today, originally extending west across the burn, north to the former main road, east to the Hughses Wood and south to the coast. The Castle and its tower house, terraces, gateways, walled garden, church, boundary walls, a Sundial and Obelisk remain today, although Aberdour House and its grounds have been neglected for some years. Some parkland trees remain, dotted around areas of pasture.

- E.11.10 Culross Abbey House is listed B and is of value due to its setting within a largely undisturbed designed landscape comprising estate walls, parkland with old avenues of lime trees, and woodland known as Kirkbrae Wood on the southern boundary. It stands on the north-eastern edge of the Royal Burgh of Culross, bounded to the west by Culross Abbey and its grounds, to the south by the B9037 and to the east by a B road which links the latter with the A985(T). The Abbey House stands on a south-facing wall above Culross, with surrounding agricultural land to the north and west, and the estate of Valleyfield, now largely local authority housing, about 1km to the east. The designed landscape now extends northwards to a disused access road, and includes some 112 acres (45 ha). The woodland on the southern boundary is of mixed deciduous species, and a small young coniferous plantation lies on the north-west corner of the park. Some parkland trees are thought to be between 150 and 250 years old.
- E.11.11 Little remains today of the designed landscape at Donibristle. The original 18th Century house was set in a valley at the north end of Donibristle Bay and faced south-east with fine views across the Firth. A new house, built in 1719-20 has wings which are listed A, and is screened from views from the north, east and west by the expansion of built development, which has obliterated most of the former estate. Planning permission has been obtained for twenty houses to be built within the curtilage of the house. Some mixed deciduous woodland remains.
- E.11.12 Pittencrieff Park is situated on the west side of Dunfermline, bounded by roads. It slopes gently to the south but is steeply incised by the glen on its eastern side, containing the Tower Burn. The ruins of the former Dunfermline Abbey and Palace form a magnificent backdrop to the north-east of the Park, and views can be obtained southwards to the Forth Road Bridge and the Lothian hills. Views inward to the Park are limited by its high boundary walls. The designed landscape extends over 76 acres. Its association with Andrew Carnegie, who bought it and donated it to the local people to bring them 'sweetness and light', gives the Park outstanding historical value. Access is free to the Park, which is always open for people to use its many facilities or to simply stroll through the parks, which are now mostly mown grass with gardens.

### **Linear and Point Features**

- E.11.13 Linear and point features are few, due to the screening by woodlands, buildings etc. Where visible, the buildings and other features within the designed landscapes are themselves point features of interest. Most obvious linear features are roads and occasionally overhead power lines and avenues of trees.

## **Experiential Characteristics**

E.11.14 Most of the estates are well screened from surrounding areas, and thus their aesthetic and historical value can only be experienced by gaining access. This is readily possible at Aberdour, Culross and Pittencrieff, at Blairadam during organised visits only, and at Tulliallan and Valleyfield by wandering around once inside the grounds. Public access is not available at Donibristle and The Murrel, although the former is readily visible from the foreshore. Policy planting, and other woodland forming a framework to the designed landscapes, are important in capturing the feeling of enclosure so important to them. Those located on or close to the coast were specifically designed to allow views southwards across the Forth, and views of the river are essential in recreating the ambience initially intended. Whilst allowing views to the south, coastal designed landscapes are thus also exposed to offshore winds and more open to the vagaries of the weather than the more enclosed, screened landscapes. In general, the main feelings experienced from within the designed landscapes (where this is possible) are those of well-tended landscapes, calm and balanced, with simple smooth lines providing a generally quiet and safe experience. Coastal landscapes can, however, be more busy and disturbed, due to the often vast expanses of exposed water in the form of the Forth. Valleyfield and Donibristle are the least well-tended, giving a feeling of under management and general neglect.

## **Key Characteristics and Features**

E.11.15 Essentially, the key characteristics and features of these areas are all of the characteristics and features described in the inventory as the reason for the inclusion of each of the designed landscapes.

## **Changes in the Landscape**

E.11.16 There have been many changes to all of the designed landscapes since they were originally laid out. Woodlands have been felled and planted, buildings demolished or left to ruin, and pressures from modern day life have resulted in new roads or road improvements severing some of the estates (Aberdour, Blairadam, Donibristle, Tulliallan and Valleyfield) and built development reducing the size of some estates (Aberdour, Blairadam, Donibristle and Valleyfield). Those which have changed the least are Culross Abbey and House and Pittencrieff Park, and thus the setting of these remain close to when they were laid out. The Murrel is in private ownership and is being well maintained, and although new planting and garden components are being introduced, records are being kept and the essential elements of the garden design (terraces, walls, built features, rose garden and water features) have been maintained.

E.11.17 The greatest threat of change comes from a lack of maintenance. Although the setting of Culross Abbey is relatively unchanged, for example, trespass is common due to decaying boundary walls. Vandalism is also a problem at Culross Abbey and House, and at other estates located close to built up areas, mainly as a result of boundaries being poorly maintained.

## **Landscape Management**

E.11.18 **Landscape management is essential to ensure that the value of the designed landscapes is maintained or enhanced.** The settings of the buildings, gardens and other features is a vital component in their significance as important works of art or their architectural or scenic value. Thus features important to the setting of the

designed landscapes, such as boundary features, enclosure planting and/or maintaining important open views eg. across the Forth, need to be retained and maintained where necessary. The most successful management will probably come about gradually within each individual designed landscape, as part of a management plan for the whole estate or park, in accordance with the individual pressures and needs of that particular designed landscape.

- E.11.19 Woodlands should be managed using species and other design criteria as close to that originally intended and owners should be encouraged to maintain their estates in a way that reflects their historical value, as is being done at Aberdour Castle and House, Culross Abbey House, The Murrel, Pittencrieff Park (by the District Council) and Tulliallan (by the Crown Estates). The owners of Blairadam are keen to adopt a management strategy for the restoration of parts of the designed landscape. Valleyfield, owned jointly by British Gas and Dunfermline District Council, has remained unmanaged for a long period. **Valleyfield is regarded as an essential local amenity, and since much of the structure of the designed landscape remains, landscape management is essential.**
- E.11.20 Where problems have occurred due to unauthorised access, such as at Culross Abbey, Blairadam, Donibristle and Valleyfield, **future management should tackle the question of public access.** The advantages of public access would need to be carefully weighed against any possible disadvantages due to visitor pressure, such as overuse, access and car parking problems.

### Landscape Capacity

- E.11.21 **Due to the importance of the setting of the designed landscapes, this landscape character type has extremely low capacity for absorbing any changes that do not take this into account.** Any changes to land use should be done in a way that reflects the original designs and this is likely to limit development potential considerably.
- E.11.22 **Blairadam has a high capacity for absorbing countryside recreational pressure.** Since the Forestry Commission has acquired large areas of land for afforestation, improved public access and some recreational facilities, particularly alongside the numerous burns, could be successfully absorbed without adverse effect.
- E.11.23 The Murrel has a small access road and does not lend itself to public opening. However, it would be advantageous if more people could appreciate its dramatic setting in the deep Dour Burn, by for example, **providing a public footpath between Aberdour and the B9157, allowing views down to, but not too close to, The Murrel.**
- E.11.24 **Valleyfield has high capacity for providing informal recreation for a much wider catchment area than it presently (informally) provides.** Proper restoration and management, including better access, parking and interpretation, would be an improvement. Valleyfield is currently under a WGS to help slowly restore the designed landscape, and to improve the overall woodland management.

- E.11.25 **Pittencrieff Park has the capacity to be slightly altered from time to time in order to attract tourists.** Any new additions or amendments should be in keeping with the scale and general designs as originally intended.
- E.11.26 **Tulliallan has high capacity for absorbing formal managed public access, as a recreational facility for Kincardine and other settlements.** This should be possible without any detrimental effect on the designed landscape or on the running of and day to day use of the Scottish Police College.

### **Landscape Enhancement**

- E.11.27 **Positive enhancement of all the designed landscapes would be to restore as much of them as possible back to their original designs.** Reinstating lost features, replanting with species originally intended and as individual trees, avenues, groups or woodland as intended, and leaving or recreating open areas would all be beneficial. The future of currently empty or ruined buildings should be quickly decided upon, to enable enhancement and future management.
- E.11.28 **More immediate enhancement would be to repair unmaintained boundaries** which would help reduce unauthorised access and vandalism, as well as improving the setting of the landscapes and restoring their character.
- E.11.29 **In particular, the landscape of Valleyfield could be dramatically enhanced by bringing it back into one ownership and to restore and manage it as the only example of Repton's work in Scotland deserves to be.**

## **F. AN AGENDA FOR THE LANDSCAPE OF DUNFERMLINE**

### **F.1 Priorities**

Within the range of general, area-wide priorities indicated in the Summary at the beginning of this report, it is difficult to recommend which of these should proceed first. They rely on differing combinations of resources and partnerships and could occur concurrently. However, in terms of the sensitivity of the landscapes and the potential of irreversible harm or long term degradation we would suggest the following order of initiation:-

1. *Priority Proposal C, Proposed Context for Development Control - immediately.*
2. *Priority Proposal E, Proposed Context for Mineral Working - immediately.*
3. *Priority Proposal B, Landscape Management Plans for the Upland Slopes and Cullaloe Hills*
4. *Priority Proposal A, Long Term Master Plan for the Lowland Hills and Valleys*
5. *Priority Proposal D, To Develop a Recreation Access Strategy.*

Section E indicates a range of other proposals specific to landscape types. Again, prioritisation is difficult because all of these initiatives rely on various permutations of partnerships, resources and circumstances. However, in general terms, action in respect of the other recommendations and proposals described for each of the landscape types in Section E, in the order listed below, would reflect the relative needs and sensitivities of the landscape types:-

1. Designed Landscapes
2. Lowland Hills and Valleys
3. Upland Slopes
4. Foothills and Volcanic Hills
5. Coastal Flats
6. Coastal Hills
7. Coastal Braes
8. Lowland Loch Basins
9. Uplands
10. Intertidal Zone
11. Firth of Forth

## **APPENDIX 1 THE BRIEF**

### **DUNFERMLINE DISTRICT LANDSCAPE ASSESSMENT: BRIEF FOR CONSULTANTS**

#### **1. INTRODUCTION/PURPOSE**

- 1.1 A Landscape Assessment of Dunfermline District is being commissioned jointly by Scottish Natural Heritage (SNH) and Dunfermline District Council (DDC). The main purpose of the assignment is to provide a description of the District's main landscape character areas, and an assessment of their sensitivity and capacity for change, and thereby to help inform future decisions on the planning, development, management and use of land in Dunfermline District. To provide coverage of the West Fife Woodland Initiative area, the study area extends to 351km<sup>2</sup> (302km<sup>2</sup> in Dunfermline District, plus 49km<sup>2</sup> of adjoining Kirkcaldy District).
- 1.2 SNH has a statutory duty for the conservation and enhancement of Scotland's natural heritage, which includes landscape. This study will form part of a wider programme of landscape character assessments throughout Scotland, which is aimed at improving knowledge and understanding of the country's landscape resources. From a more local perspective, SNH staff are also involved in consultations and casework of various kinds, which will benefit from the information expected to be compiled in a District Landscape Assessment.
- 1.3 Dunfermline District Council is responsible, as planning authority, for a number of matters affecting the development and use of land in Dunfermline District, including the preparation and review of development plans, the processing of planning applications, and some landscape management activities, including for example the West Fife Woodland Initiative, with joint support from other agencies. The Council's interest in commissioning a landscape assessment has also been influenced by continuing pressures for opencast coal mining developments in the district. These pressures have led to the production by DDC of an opencast strategy, which recognises that landscape issues are usually primary considerations in determining the acceptability, or otherwise, of development proposals. A district-wide Landscape Assessment is therefore expected to provide an important basis for the evaluation of current and future opencast mining proposals, with potentially wider use in relation to development plans, planning applications and land management proposals.

#### **2. OBJECTIVES**

- 2.1 To produce a report, containing maps and annotated photographs or sketches, which provides a detailed assessment of landscape character for the study area.

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## 2.

- 2.2 To ensure that the information produced is consistent with recent landscape assessments undertaken for the neighbouring areas of Loch Leven and the Firth of Forth.
- 2.3 To recommend principles/criteria for the conservation and/or enhancement of different landscape character areas, for use in the assessment of proposals for landscape change.
- 2.4 To assess the sensitivity of different landscape character areas in the District to different types of potential development or land use change.
- 2.5 To identify areas of the landscape under threat of adverse change, and areas which have opportunities for positive landscape conservation, restoration or enhancement.
- 2.6 To highlight priority areas for specific landscape enhancement initiatives such as tree planting.
- 2.7 To consider and advise, with particular reference to opencast coal mining proposals, and the District Council's recently approved policy document, which areas have the greatest and least capacity, in landscape terms, to accommodate these, or other kinds of development.
- 2.8 To provide an information base which helps officials in SNH and the planning authority with their handling of day-to-day casework, as well as providing a useful basis for longer term strategic planning purposes.

## 3. APPROACH/METHODOLOGY

- 3.1 In their response to this brief, consultants are asked to suggest approaches to this study which they consider to be the most appropriate ways to achieve the objectives given above. However, the methodologies must be consistent with those used in neighbouring landscape assessments (Loch Leven and Firth of Forth), and with others commissioned recently by SNH. Reference to the following will be required:
  - Countryside Commission (1993) Advisory Booklet CCP423  
- "Landscape Assessment Guidance"
  - Countryside Commission (1993) Advisory Publication CCP 434 -  
"Opencast Coal Mining".
  - David Tyldesley & Associates (1995) - "The Landscape of Kinross-  
shire - A Landscape Assessment of the Kinross Local Plan Area"  
(Report to SNH).

## 3.

- Dunfermline District Council (1995) - "The Evaluation of Proposals for Opencast Coal Mining" (Copy supplied with brief).
  - Environmental Resources Management (1995) - "An Overview of Landscape Assessment Methodology" (Report to SNH).
  - Land Use Consultants (1994) - "Firth of Forth Landscape Assessment.
  - Landscape Institute and Institute of Environmental Assessment (1995) - Guidelines for Landscape and Visual Impact Assessment.
  - Llewelyn-Davies et al (1995) - East Dunfermline Master Plan - Landscape Report.
- 3.2 The final report will include a short account of the methodologies which have been used in undertaking the work. The general approach for this assignment is expected to include:
- i A study of the basic influences which have helped to shape and create today's landscape, including the physical processes of geology, climate and ecology; and the historical and cultural influences of human activity.
  - ii Identification of the patterns and types of landscape character which have come about as a result of these influences.
  - iii A bringing together of the objective factors determining landscape character, with the more subjective qualities that relate to people's experience of it.
- 3.3 The consultants are not required to undertake an evaluation of the landscape, in the sense of assigning relative values to different character areas.
- 3.4 The descriptions of landscape character areas should be expressed in clear and simple terms, with minimal use of technical jargon, to assist wide application and understanding. The key distinctive elements of each landscape unit - its landform, land cover, key features and distinctive "sense of place" should be presented and summarised succinctly.
- 3.5 In assessing the sensitivity of different landscape units to change, and their capacity to accommodate different types of development, consultants should try to be as specific as possible, within the allowable constraints of the scale of the study area, about what kinds of change would or would not "fit" in the landscape and why.

## 4.

## 3.6 The study is expected to involve:

- i Desk study of maps, air photos, survey information, historical records, etc.
- ii Field survey to supplement available map data with a visual assessment of landscape character. This stage of the work should be undertaken by a team of at least two people, to help maintain consistency and objectivity, with at least one of the team having relevant experience and formal qualification in landscape assessment work.
- iii Consultation with representatives of the study sponsors, and others who may be recognised as potentially helpful in addressing the requirements of the brief, and in the implementation of the advice produced, (including Forestry Authority, for example).
- iv Confirmation of the landscape types and character areas considered to have a distinct, consistent and recognisable character, making use of the material collected above.

4. **OUTPUTS**

- 4.1 The final report will be clear, concise and well-illustrated, and suitable for dissemination to a wider audience of interested agencies or individuals.
- 4.2 For more detailed working reference and use, the sponsors should also be provided with copies of the consultants' survey sheets, in addition to the main report.
- 4.3 Any maps produced should make use of recognised Ordnance Survey grid base, be of suitable scale (1:25,000 is suggested by the sponsors), and should be capable of transfer if required later by the sponsors to GIS. Photographs and/or sketches, suitably annotated, should be used to provide supporting illustrations.
- 4.4 The sponsors will provide access as required to air photos or other survey information which may be helpful.

## **APPENDIX 2 THE ASSESSMENT METHOD**

### **General Approach**

The objectives of the assessment are clearly set out in the Brief. In essence this was a multi-purpose assessment providing a resource for different levels of input. It was set in a regional/national context whilst at the same time it aimed to provide a working tool for day to day local development planning and land management decisions.

Key elements of the objectives included:

- \* providing an understanding of the landscape character;
- \* providing an understanding of the landscape experience;
- \* an assessment of the dynamics of landscape change;
- \* an assessment of the sensitivity of the landscape to change;
- \* identifying key characteristics and features which may be modified to enhance or accelerate the evolution of the landscape;
- \* identifying actual and potential changes that may degrade the landscape character and how these may be avoided, restrained or managed;
- \* establishing and prioritising opportunities for positive landscape initiatives;
- \* considering how the landscape and visual impacts of proposals may be assessed in the planning process;
- \* helping to inform planning decisions and selection of options;
- \* contributing to the definition of the carrying capacity of the area for key forms of development.

The general approach ensured that the Brief requirements led the assessment at each stage, with a clear understanding of how the assessment would be used. It followed the published guidance of the Countryside Commission for Scotland (CCS) and Countryside Commission as specified in the Brief, adapted to take account of recent advances in landscape assessment and the need for compatibility with other assessments, and with the planning, economic development and environmental assessment/audit processes. As the capacity of the landscape to absorb change goes beyond the conventional concept of landscape classification it formed a new element, not covered by the published methodologies. Account was taken of the joint Institute of Environmental Assessment and Landscape Institute Guidance.

The method followed the method set out in the Brief at Section 3, (see appendix 1 above). The main stages are set out below, with a brief commentary. It should also be noted that the method was the same as that used, by the same team of landscape architects, for the adjacent assessment of the Landscape of Kinross-shire. The stages are summarised in Table 2 overleaf.

### **The Brief**

The first stage included consultation with members of the Steering Group to clarify matters relating to the Brief, although these were of a minor and detailed nature. For clarification we took the scope of the assessment to be the holistic view of the landscape as the fundamental component of the natural heritage, consisting not only of the physical and visible elements of the landscape but also the dynamics of natural processes and human activities historically, now and in the future, together with the experiences of the landscape as perceived by those who live and work in the area or those who visit or travel through it, including its historical, cultural, social and economic dimensions.

**TABLE 2**  
**GENERAL METHODOLOGY AND APPROACH**

<p style="text-align: center;"><b><i>The Brief</i></b></p> <p style="text-align: center;">Object and Purpose of the Assessment Target Audience/Users Scope and Scale</p>
<p style="text-align: center;"><b><i>Planning The Assessment</i></b></p> <p style="text-align: center;">Assembling Resources and Skills Methodology Programme Familiarisation Identify and Collate Information Sources Preparation of Map Bases</p>
<p style="text-align: center;"><b><i>Desk Study</i></b></p> <p style="text-align: center;">Information Analysis Map Analysis Define Preliminary Landscape Types Literature and Arts Review Aerial Photographic Analysis Data Base Analysis Consultations</p>
<p style="text-align: center;"><b><i>Field Survey</i></b></p> <p style="text-align: center;">Sample Checklists Structured Survey Forms Objective and Subjective Analysis Photographs &amp; Sketches</p>
<p style="text-align: center;"><b><i>Analysis and Presentation</i></b></p> <p style="text-align: center;">Landscape Types Descriptions and Illustrations Interpretation of Landscape Change Consultations Report and Recommendations</p>

### **Planning The Assessment**

This is an important part of the project management. Time was limited and the assessment had to be planned in detail to ensure completion dates were met. This included assembling and programming resources and skills, defining a programme for each stage of the methodology, familiarisation with the area and identifying and

collecting sources of information.

We produced an OS base negative at scale 1/25,000 on which the assessment work was based. The OS 1/25,000 sheets were the working plans for fieldwork.

### **Desk Study**

Some information gathering needed to be concurrent with fieldwork to meet the programme. Initially, however, essential information which was a pre-requisite of fieldwork was collated as a priority. This related to solid and drift geology, soils, land capability, topography, natural systems and broad land cover derived from geological, soil, land capability and current and former OS maps and from the MLURI LCS 88. From this data we defined preliminary 'landscape types' to provide a basis for fieldwork. Information was then gathered on cultural associations, socio-economic influences, archaeology, historic and designed landscapes, ecological interrelationships, SSSIs, SAMs, other natural and built heritage designations, settlement patterns and traditional building patterns and materials. Evidence of landscape changes was also gathered from old OS maps. Local libraries were consulted in respect of historical records and publications, together with a review of literature and the arts.

Sources of information included those identified in the Brief together with:

1. Archaeological Sites and Monuments Record maps;
2. Old OS maps where available;
3. Literature review, photographs, paintings etc.;
4. Draft Dunfermline and Kirkcaldy Local Plans.
5. The Fife Region Structure Plan;
6. The Forestry Authority and SOAFD statistics;

### **Fieldwork**

The object of this stage in the assessment was to record and describe the natural heritage features and characteristics and to read the dynamics of landscape change which cannot be drawn from desk studies. The Brief required only the landscape description and classification stages, not evaluation. "*Landscape Assessment Principles and Practice*", 1991 indicates that Landscape Description means providing a verbal portrayal of what a landscape looks like (i.e. its features and characteristics). Landscape Classification means sorting landscape into different types based on similarities and differences in character. It involves dividing landscapes into distinct areas, grouping areas of similar character and their distribution.

This assessment did not intend to progress to the evaluation stage and does not seek to compare the relative value of differing areas by way of comparative evaluation. Thus, landscape classification should be an inherently more objective process than landscape evaluation. It is primarily an objective process based on the intrinsic characteristics of the landscape and although this requires some subjective description it does not involve subjective evaluation, an important distinction. Subjective evaluation is not part of the process, but subjective description is and can be accommodated in a way which is likely to lead to a consistent approach by several landscape architects over a period of time, thus aiding the value of the assessment in environmental monitoring. The distinction between subjective and objective description is built into the methodology by clearly separating the two sets of description in fieldwork and later stages.

The Fieldwork stage covered, amongst other things:-

- a) Visible (physical) elements and characteristics [mainly objective description]; and
- b) Experiential characteristics [mainly subjective description].

### **Visible Elements and Characteristics**

An essential part of the assessment is the description of visible elements and characteristics and their composition in the landscape. It can only be done by field survey. All of the physical elements or components of the landscape should be included. They relate generally to landform, land cover and land use, built structures, settlement and infrastructure. Some will be large scale (eg. hills or lochs); some may be single point features such as a telecommunications mast or small island; others may be linear features such as rivers, railway lines and

in this case the Motorway.

Each element makes a contribution to the visual composition of the landscape. This may be beneficial or adverse. Each element forms a part of the composition which may vary from the dominating role of a large scale and conspicuous element to an insignificant role of a single, inconspicuous, small-scale element of subdued colour.

The object of the descriptive fieldwork is to identify the visually significant component parts of the landscape and to consider their role in the composition of views and how they contribute to visible characteristics. This contributes not only to the description of the landscape resource but also helps to understand it and to begin to appreciate its capacity for absorbing change. Considering the scale of significance in the landscape necessarily involves judgement, but this is not an entirely aesthetic judgement. It is based on an impartial consideration of the physical features of a landscape. It is not reliant on personal taste and a large measure of agreement would be expected amongst a group of surveyors as to scale and conspicuity of physical elements.

It is necessary to structure this type of survey and to achieve consistency of application across a large area and differing landscape types. Contemporary good practice landscape assessment recommends the use of checklists. Standard checklists need to be used with considerable care. Ideally, each assessment should produce its own checklist for the visible elements which are relevant to the subject area. No standard checklist could be comprehensive for the range of elements present in all landscape types in Scotland. Equally, many items on standard checklists would be irrelevant or would make the description too long and imbalanced. Consequently we developed a sample checklist from the familiarisation stage and tested this in two different areas before applying it consistently across the study area. A copy of the checklist and field sheet used is attached to this appendix.

### **Experiential Characteristics**

These characteristics too can only be identified and described by field survey. The reading of the landscape is a skill which is acquired by training and experience. The survey of visible elements and experiential characteristics was carried out by qualified landscape architects, with at least two landscape architects looking at all areas, usually separately. They were already trained and experienced to observe, analyse and assess the visual and perceptual aspects of the natural heritage. They were responsible for drawing up the relevant checklists, and for undertaking the descriptive fieldwork in respect of visible elements and experiential characteristics. Their skill in reading the landscape was also vital to the interpretation of change, trends and pressures on the landscape.

If landscapes are to be fully understood and their character protected or enhanced in planning, land use and management decisions then it is necessary to appreciate the key experiential characteristics of the landscape type as well as the visible features. This not only contributes to the description and understanding of the landscape resource but also helps to appreciate its capacity for absorbing change. Again, considering the characteristics of a landscape involves judgement. However, with the trained eye, impartial approach and professional experience of a landscape architect these judgements should not be reliant on personal taste and a large measure of agreement would be expected amongst a group of surveyors. The survey excludes those characteristics of landscapes that rely substantially or wholly on personal preference, taste or experience and are essentially comparative eg. 'beauty', 'wildness', or 'familiarity'. The range of experiential characteristics which were described are shown on the field sheets, an example of which is reproduced at the end of this Appendix.

This is an adaptation of Figure 4 in the CCS Guidance. Landscape description and classification into landscape character types does not usually benefit from assessment of the full range of perceptual impressions which would only be required if proceeding to the stage of landscape evaluation, which this project was not. Thus, 'Rarity', 'Beauty' and 'Familiarity', which are perhaps the most subjective factors are not necessary or applicable to landscape classification, they are relative judgements between one area and another and more appropriate therefore to evaluation for AGLV etc. 'Wildness' and 'Productivity' can be inconsistently applied, even by experienced landscape architects and, again, are relative in terms of one study area and another which may result in an assessment that cannot be consistently repeated in future monitoring.

As in the case of visible elements, contemporary good-practice in landscape assessment recommends the use of checklists to structure the survey consistently across a large and diverse area. Again, the use of a checklist was on the basis of a specific checklist drawn up and tested by the landscape architects specifically for the assessment of this area.

In carrying out the descriptive fieldwork the landscape architect was also reading and interpreting changes in the landscape. Many changes are evident to the trained eye. Not only do these indicate how land use, management and development changes have affected the landscape and resulted in present-day character but they also indicate how effectively the landscape could absorb these or other changes in the future. Furthermore, reading past changes in the landscape (mentally replacing lost elements or removing added elements) can help the landscape architect to appreciate the relationship between natural processes and human activities. Self-evidently these both affect visible elements and experiential characteristics.

Descriptive fieldwork has usually been carried out on the basis of fixed point surveys, on a sample basis. This has not always been found to be satisfactory and we have developed techniques for appreciating the landscape and recording visible and experiential characteristics dynamically whilst travelling on foot, bicycle or in a car around the preliminary landscape types. This supplements rather than replaces fixed point surveys which are useful where there are good vantage points over an homogenous area. In areas lacking good vantage points or areas with a complex and subtle changing character we place less weight on the fixed point surveys. Moving around the area to develop a feel for its characteristics and for the changes which influence it is an essential part of fieldwork which can usefully be repeated in later stages of the assessment. Not all the landscape types were and amendments and additions were made. Comprehensive photographic coverage was obtained because field sketching was impractical in the cold weather conditions.

### **Analysis and Presentation**

The results of desk study and fieldwork were drawn together to provide the landscape classification into landscape types. These formed the basis of consultation with the project partners and other relevant bodies where the implications of landscape change, development options and proposals and opportunities for positive enhancement were discussed.

Following consultation and discussion with the Steering Group of the project, guidance on landscape and visual impact assessment and priorities and specific projects and proposals were incorporated into the Report after careful analysis of the Assessment results. This included ways in which proposals for change could be assessed in relation to the capacity of the differing landscape types to absorb the changes.

This Report is the principal product of the Assessment and contains the impact assessment advice and the agenda for the landscape of Dunfermline.

**DUNFERMLINE LANDSCAPE ASSESSMENT**

Sheet 1 of 3 Fixed Viewpoint/~~Travelling Views~~  
 LANDSCAPE CHARACTER TYPE..... FOOTHILLS  
 LANDSCAPE CHARACTER AREA 6 Cleish Foothills  
 LOCATION..... Roscobie  
 DIRECTION..... DATE 26/9/95 PHOTO REFS Fig 8a

**VISIBLE FEATURES AND CHARACTERISTICS**

**Landform:** High Plateau Peak Knoll Ridge Spur  
 Crag Outcrops Corrie/Gulley Low Plateau Hills  
Slopes Glen Valley Gorge Bench/Terrace Wide Basin  
 Confined Basin Hollows Plain Flats  
 Mounds/Moraines Cliff Bay Headland Beach Intertidal  
 Notes..... Undulating with low hills, tops of Cleish in b/g

**Water:** Lochs Lochans Pools River Whitewater  
 Burn Drain Ditch Canal Waterfall  
 Notes..... Small burns concealed

**Trees:** Coniferous Plantation Mixed Plantation Broadleaved Plantation  
 Semi Natural Woodland Tree Clumps Policy/Parkland Trees Small Copses  
Shelterbelts Tree Lines Roadside Tree Belts  
Hedgerow Trees Notable Single Trees  
 Notes..... Former hedgerow trees appear now as single trees.

**Agriculture: Land Cover/Use**  
Arable Horticulture Intensive Livestock Ley Grassland Permanent Pasture  
 Unimproved Grassland Rough Hill Grazing  
**Boundaries:**  
 Stone Dykes Dykes with Fencing Remnant Dykes  
Continuous Hedgerows Hedgerows with Gaps Remnant Hedgerows  
Lost Hedgerows Post and Wire Fencing Post and Rail Fencing  
 Stone walls Stone pillars Wooden/Metal Gates  
**Fields:** Large and Medium Small Geometric Regular  
 Informal Irregular Indistinct Pattern  
 New / Restored Field Patterns  
**Steadings:** Regular Irregular Traditional Modified Absent  
 Frequent Infrequent Conspicuous Screened Often on hill tops  
**Animals:** Cattle Sheep Pigs Poultry Horses Deer  
 Notes.....

**DUNFERMLINE LANDSCAPE ASSESSMENT**

Sheet 2 of 3

LANDSCAPE CHARACTER TYPE..... FOOTHILLS  
 LANDSCAPE CHARACTER AREA..... 6 Cleish Foothills  
 LOCATION..... Roscobie

<b>Other Land Uses:</b>	Country Park	Urban Park	Nature Reserve	Coastal Amenity
	Car Parks	Sports Fields	Golf Course	Angling
	Camping Site	Caravan Site	Marina/Boats	Dock / Harbour
	Military	Open Cast Coal	Sand and Gravel	<u>Hard Rock</u>
	Industrial .....			
	Utilities.....			
Notes.....	<u>Predominantly agricultural</u>			

<b>Settlements:</b>	Nucleated	Scattered	Planned	Unplanned	Traditional
	Modern	Mixed	Frequent	Infrequent	<u>Absent</u>
	Town	Village/Township	Hamlet	Sprawling	
<b>Relationship to Landscape</b>					
Settlements Generally		Well Related	Generally Good, Some Poor		Generally Poor
Settlement Edges		Well Related	Generally Good, Some Poor		Generally Poor

<b>Linear Features:</b>	Motorway	Main Road	B Roads	<u>Minor Roads</u>
	<u>Tracks</u>	<u>Bridleways/Paths</u>	Drove Roads	Hill Tracks
	Railway - Derelict/Operational		Embankments	Cuttings
	Power Lines	<u>High Voltage</u>	Low Voltage	Transformers
	Overhead Telephone	<u>distance</u>	Pipelines	Coast / Shoreline

<b>Single Point Features:</b>	Church	Castle	Ruin	Folly	Obelisk
	Cairn	Bridge	Large House	<u>Mast/Transmitter</u>	<u>Knock Hill</u>
	Industrial Site	Tips/Bings		<u>Quarry/Mine</u>	Quarry Buildings
	Quarry Entrance	Signs			
Notes.....	<u>Main point feature is the steading</u>				

**Other Features and Visible Characteristics**  
Ruderal vegetation on verges. High visual horizon makes sky very prominent - interesting horizon.

<b>Visual Horizons:</b>	Confined	<u>Limited</u>	<u>Long Distance</u>	<u>Low Hills</u>
Cullaloe Hills	Coastal Braes	Ochils	Lomond Hills	Benarty Hill
<u>Cleish Hills</u>	Others			
<u>See above</u>				

## DUNFERMLINE LANDSCAPE ASSESSMENT

Sheet 3 of 3

LANDSCAPE CHARACTER TYPE

FOOTHILLS

LANDSCAPE CHARACTER AREA

6 Cleish Foothills

LOCATION

Roscobie

### EXPERIENTIAL CHARACTERISTICS

SCALE:	Intimate	Small	<u>Large</u>	Vast
ENCLOSURE:	Tight	Confined	<u>Open</u>	Exposed
DIVERSITY:	Uniform	Simple	<u>Diverse</u>	<u>Complex</u>
TEXTURE:	Smooth	<u>Textured</u>	Rough	Craggy
FORM:	Vertical	<u>Sloping</u>	<u>Rolling</u>	Flat/Horizontal
LINE:	Straight	<u>Angular</u>	Curved	Sinuous
COLOUR:	Monochrome	Muted	<u>Colourful</u>	Garish
BALANCE:	Harmonious	<u>Balanced</u>	Discordant	Chaotic
MOVEMENT:	Dead	Still	<u>Calm</u>	Busy
PATTERN:	Random	Organised	<u>Regular</u>	Formal
MANAGEMENT:	Derelict	Disturbed	<u>Tended</u>	Manicured
NOISE:	Silent	<u>Quiet</u>	Disturbed	Noisy

BRIEF DESCRIPTION OF CHANGES:

Hedgerow loss and replacement with p+w fencing, field size increasing, hedgerow trees not replaced, increase in arable, loss of permanent pasture. Masts on Knock Hill.

## APPENDIX 3 LANDSCAPE AND VISUAL IMPACT ASSESSMENT

### Introduction to Assessment

This methodology for the assessment of development proposals follows the good practice methodology "*Guidelines for Landscape and Visual Impact Assessment*" published by the Institute of Environmental Assessment (IEA) and the Landscape Institute (LI) in 1995. This is the most thorough and authoritative guidance on methodology for the assessment of landscape and visual impacts of specific projects. The Countryside Commission for Scotland Guidance is also relevant but is supplemented by the more detailed guidance of the IEA/LI.

The IEA/LI guidance establishes the importance of landscape because it is:-

- *"an essential part of our natural resource base;*
- *a reservoir of archaeological and historical evidence;*
- *an environment for plants and animals;*
- *human habitat, evoking sensual, cultural and spiritual responses;*
- *an important part of our quality of life."*

It also recognises that *"unlike less obvious impacts such as changes in groundwater quality, changes in the landscape have a direct, immediate, visible effect upon people's surroundings, and therefore may arouse strong feelings. They may also be used by the public as a focus for a variety of other concerns about the impact of a development. Therefore it is essential that assessment of the landscape and visual impacts of a proposed development is carried out in as measured and controlled a way as possible."*

#### Understanding Landscape and Visual Impacts

Landscape impacts and visual impacts are separate, but related. Broadly, **landscape impacts** are changes in the fabric, character and quality of the landscape as a result of development. Hence landscape impact assessment is concerned with:-

- direct impacts upon specific landscape elements;
- more subtle effects upon the overall pattern of elements that gives rise to landscape character and local distinctiveness;
- impacts upon acknowledged special interests or values such as designated landscapes, conservation sites and cultural associations.

**Visual impacts** are a subset of landscape impacts. They relate solely to changes in the appearance of the landscape, and the effects of those changes on people. Hence visual impact assessment is concerned with:-

- the direct impacts of a development upon views of the landscape through intrusion or obstruction;
- the reactions of viewers who may be affected;
- the overall impact on visual amenity, which can range from degradation through to enhancement.

Landscape and visual impacts do not necessarily coincide. Landscape impacts can occur in the absence of visual impacts, for instance where a quarry development is wholly screened from external views, but nonetheless results in a loss of landscape elements, and character within the site boundary. Similarly, some developments, such as a new TV mast within a built-up area, may have significant visual impacts, but negligible landscape impacts. However, such cases are very much the exception. For most developments both landscape and visual impacts will need to be addressed.

Impact occurs when important landscape or visual resources (which are often referred to as "*receptors*") are affected by one or more sources of impact. Such sensitive receptors of landscape and visual impact may include physical and natural landscape and biological resources, special interests and groups of viewers, for example:-

- areas of intact and locally distinctive landscape character, with characteristic patterns and combinations of landform and landcover and a strong sense of place;
  - valued landscapes including those which are designated;
  - other conservation interests, including archaeological sites, historic gardens and designed landscapes, important habitats and protected species, built environment features, commons and recreation areas;
  - specific landscape elements and features such as coastline, open hilltops, glens, gorges, river corridors, woodlands and built artifacts;
  - viewers of the landscape, such as residents, visitors, travellers through the area and others.
- Impacts upon sensitive receptors may be beneficial or adverse, direct or indirect, temporary or permanent, and of course may vary in their magnitude and significance.

#### **Sensitivity, Prediction, Magnitude and Significance**

These four concepts are fundamental to impact assessment. They are often confused or absent from Environmental Statements and landscape assessments. Sensitivity, for landscape receptors, may be signalled by distinctiveness of landscape character, inability to accommodate specific change without loss of landscape integrity; presence or absence of landscape designations; and occurrence of special conservation interests or cultural associations. For visual receptors, a different set of sensitivity factors applies, such as the character and quality of existing views, the types of viewer affected, and the general popularity or visual amenity of the affected area at present.

Prediction is important because this should reflect the degree of likelihood of the impacts that may occur. These could range from highly improbable to certain. Prediction is related to significance for example, unlikely impacts may need to be avoided if the impact would be severe and permanent if it occurred. In landscape and visual impact assessment there can be a high degree of confidence in prediction if the impacts are based on careful examination of the facts.

Magnitude of change can be measured in a variety of ways, and tends to relate back to sensitivity. Hence for landscape receptors, the degree of change to, or loss of, distinctive landscape characteristics or features, designated landscapes, and special features of conservation or cultural interest are considered. For visual receptors, the extent of visibility, numbers and type of affected viewers, degree of visual intrusion and distance of view will all be relevant.

By combining these factors: sensitivity; prediction and magnitude; in a systematic fashion, conclusions can be drawn on impact significance. Impact significance is a function of the sensitivity of the affected landscape and visual receptors and the predictability and magnitude of change that they will experience. We suggest the following scale of impact significance.

***Substantial Adverse or Beneficial Landscape Impact:***

Where a proposal would have a substantial adverse or beneficial effect on the landscape as a resource, or on the character of the landscape, bearing in mind the sensitivity of the landscape and its capacity to absorb the type of change proposed and the proposed mitigating measures.

***Moderate Adverse or Beneficial Landscape Impact:***

Where a proposal would have a significant but not substantial adverse or beneficial effect on the landscape as a resource, or on the character of the landscape, bearing in mind the sensitivity of the landscape and its capacity to absorb the type of change proposed and the proposed mitigating measures.

***Slight Adverse or Beneficial Landscape Impact:***

Where a proposal would have a noticeable but not significant adverse or beneficial effect on the landscape as a resource, or on the character of the landscape, bearing in mind the sensitivity of the landscape and its capacity to absorb the type of change proposed and the proposed mitigating measures.

***Negligible Impact***

Where the proposal would have no noticeable effect on the landscape resource, or on landscape character.

In respect of visual impacts we suggest the following scale of impact significance:

***Substantial Adverse or Beneficial Visual Impact:***

Where a proposal would cause a substantial, prominent or conspicuous deterioration or improvement to the existing view, bearing in mind the sensitivity of the receptor and proposed mitigation measures.

***Moderate Adverse or Beneficial Visual Impact:***

Where a proposal would cause a significant but not conspicuous or prominent deterioration or improvement to the existing view, bearing in mind the sensitivity of the receptor and proposed mitigation measures.

***Slight Adverse or Beneficial Visual Impact:***

Where a proposal would cause a noticeable but not significant deterioration or improvement to the existing view, bearing in mind the sensitivity of the receptor and proposed mitigation measures.

***No Change:***

Where the proposal would cause no noticeable change to the view.

## G.2 Criteria for Assessing Proposed Changes

It is necessary to study the location, scale and nature of the proposals, the methods of operation or construction, processes involved, the phasing, mitigation, restoration and after-use/after-care stages wherever relevant. Clearly a proposal could have different impacts at different stages in the life of the development and, in respect of screen planting, allowance needs to be made for the anticipated growth of the new vegetation. All of these factors have a bearing on the assessment of the impacts. Additionally, the site is not an island and must be viewed in the context of its wider setting both in landscape and visual impact terms.

A proposed development could have effects on the following matters:-

- Landform;
- Natural features such as rock exposures or outcrops;

- Natural processes such as river or other hydrological systems which are important elements in the landscape;
- The fabric of the landscape including soils, and sub soils;
- Landscape Character;
- Landscape Features;
- Landscape designations and development plan policies.

Impacts on the landscape need to be assessed in relation to the landscape character area in which the proposal is situated, and in some cases the character areas from which it may be seen, or seen across. **Impacts on the key characteristics and features defined in this report are likely to be substantial impacts** (whether positive or negative), whereas **impacts on other characteristics and features mentioned are likely to be moderate (significant)**. Impacts on characteristics or features not mentioned in the relevant landscape type analysis may be noticeable but their significance is unlikely to justify a refusal of planning permission on landscape grounds alone.

In assessing the **visual effects** of a proposed development the following matters should be considered:-

- sensitive receptors - private property, public roads, other rights of way;
- what would be seen at which stage of the development;
- the magnitude of the change or impact;
- the significance of the impact.

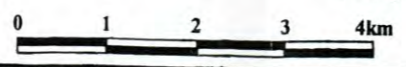
The visual assessment should describe views from areas surrounding the site, and assess the change in views as a result of the proposed development taking into account the proposed mitigation measures and different stages in the development including construction, operational, restoration and decommissioning stages where relevant.. Existing views and the effects of proposed development and mitigation measures, on those viewpoints for sensitive receptors, such as private property, public roads and other rights of way, should be examined in the field and illustrated by photographs, photomontage or before / after sketches to elucidate the potential visual impacts of a proposal that may be difficult for the public to envisage from two dimensional plans. The assessment should also take into account the likely impact of the phasing of the proposed development where relevant, particularly checking the effectiveness and phasing of associated mitigating measures such as screen bunds or planting.

## APPENDIX 4 REFERENCES

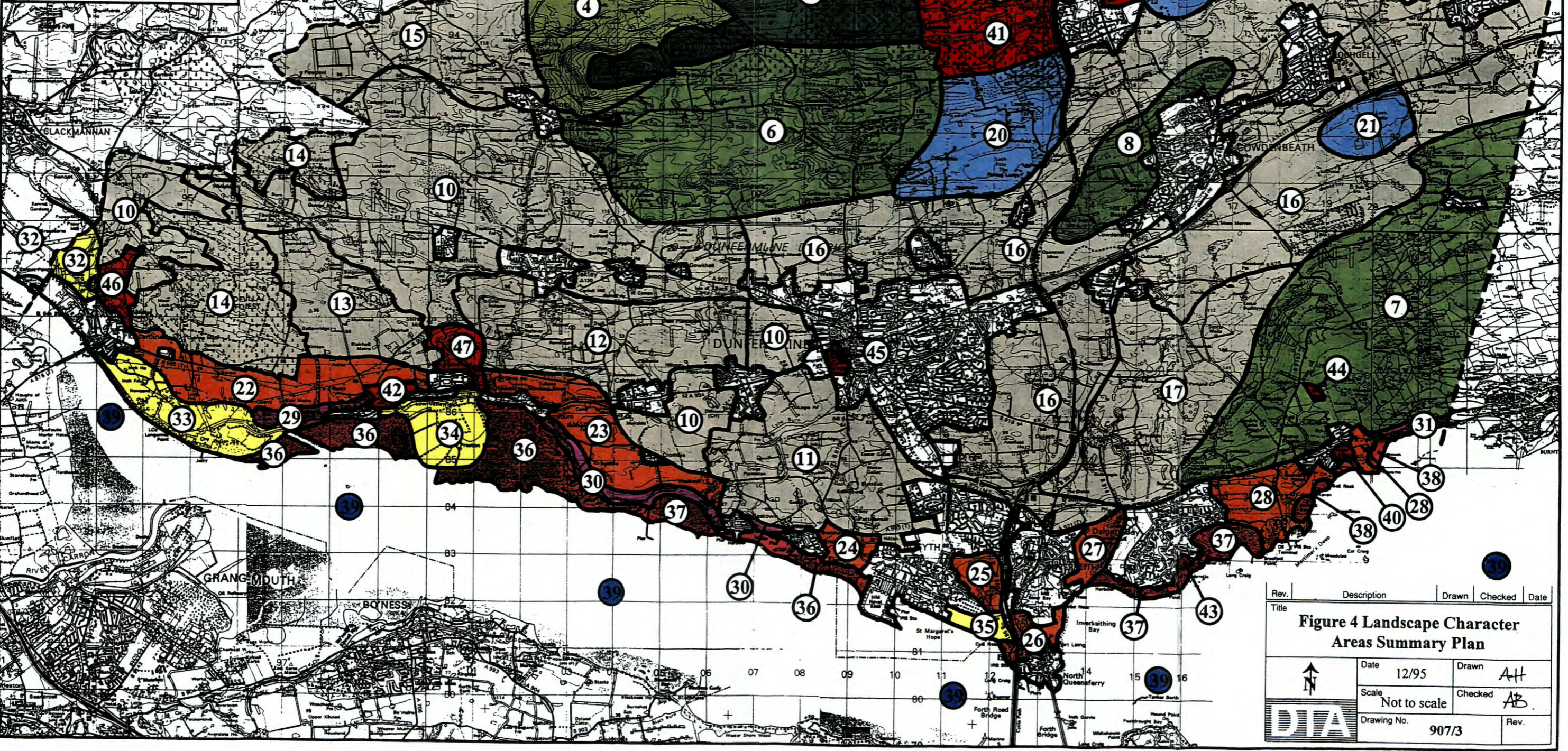
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- UPLANDS**
  - 1 Cleish Hills
  - 2 Benarty Hill
- UPLAND SLOPES**
  - 3 Cleish Slopes North
  - 4 Cleish Slopes West
  - 5 Benarty Slopes South
- FOOTHILLS & VOLCANIC HILLS**
  - 6 Cleish Foothills
  - 7 Cullaloe Hills
  - 8 Cowdenbeath Hill
  - 9 Redwell Hill
- LOWLAND HILLS & VALLEYS**
  - 10 Central Area, west of Dunfermline
  - 11 South Dunfermline
  - 12 South Oakley
  - 13 Bluther Burn
  - 14 Devilla Forest & Bath Moor Plantation
  - 15 Black Devon Valley
  - 16 Central Area, north-east of Dunfermline
  - 17 Fordell
- LOWLAND LOCH BASINS**
  - 18 Loch Leven
  - 19 Loch Ore
  - 20 Loch Fitty
  - 21 Loch Gelly
- COASTAL HILLS**
  - 22 Kincardine to Culross
  - 23 Valleyfield to Charlestown
  - 24 Limekilns
  - 25 Castlandhill
  - 26 Ferry Hills
  - 27 Letham Hill
  - 28 Aberdour Hills
- COASTAL BRAES**
  - 29 Culross
  - 30 Torryburn to Limekilns
  - 31 Aberdour to Burntisland
- COASTAL FLATS**
  - 32 Kincardine
  - 33 Longannet
  - 34 Valleyfield Ash Lagoons
  - 35 Rosyth
- INTERTIDAL ZONE**
  - 36 Mudflats
  - 37 Shingle Bays
  - 38 Sandy Beaches
- FIRTH OF FORTH**
  - 39 Firth of Forth
- DESIGNED LANDSCAPES**
  - 40 Aberdour Castle & House
  - 41 Blairadam
  - 42 Culross Abbey House
  - 43 Donbristle
  - 44 The Murrel
  - 45 Pittencrieff Park
  - 46 Tulliallan
  - 47 Valleyfield



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Rev.	Description	Drawn	Checked	Date
<b>Figure 4 Landscape Character Areas Summary Plan</b>				
Date 12/95		Drawn AH		
Scale Not to scale		Checked AB		
Drawing No. 907/3		Rev.		





Study Area Boundary

Landscape Character Area Boundary

30

**Landscape Character Areas**

- UPLANDS**
- 1. Cleish Hills
- 2. Benary Hill
- UPLAND SLOPES**
- 3. Cleish Slopes North
- 4. Cleish Slopes West
- 5. Benary Slopes South
- FOOTHILLS & VOLCANIC HILLS**
- 6. Cleish Foothills
- 7. Cullaloe Hills
- 8. Cowdenbeath Hill
- 9. Rodwell Hill
- LOWLAND HILLS & VALLEYS**
- 10. Central Area, west of Dunfermline
- 11. South Dunfermline
- 12. South Oakley
- 13. Bluther Burn
- 14. Devilla Forest & Bath Moor Plantation
- 15. Black Devon Valley
- 16. Central Area, north-east of Dunfermline
- 17. Fordell
- LOWLAND LOCH BASINS**
- 18. Loch Leven
- 19. Loch Ore
- 20. Loch Finny
- 21. Loch Gelly
- COASTAL HILLS**
- 22. Kincardine to Culross
- 23. Valleyfield to Charlestown
- 24. Limekilns
- 25. Castlandhill
- 26. Ferry Hills
- 27. Letham Hill
- 28. Aberdour Hills
- COASTAL BRAES**
- 29. Culross
- 30. Torryburn to Limekilns
- 31. Aberdour to Burntisland
- COASTAL FLATS**
- 32. Kincardine
- 33. Longannet
- 34. Valleyfield Ash Lagoons
- 35. Rosyth
- INTERTIDAL ZONE**
- 36. Mudflats
- 37. Shingle Bays
- 38. Sandy Beaches
- FIRTH OF FORTH**
- 39. Firth of Forth
- DESIGNED LANDSCAPES**
- 40. Aberdour Castle & House
- 41. Blairadam
- 42. Culross Abbey House
- 43. Donibristle
- 44. The Murrel
- 45. Pittencrieff Park
- 46. Tulliallan
- 47. Valleyfield

Character Area Extending Out Beyond Study Area

Site of Special Scientific Interest


SAM Scheduled Ancient Monument

Gardens & Designed Landscapes

Fife Regional Park

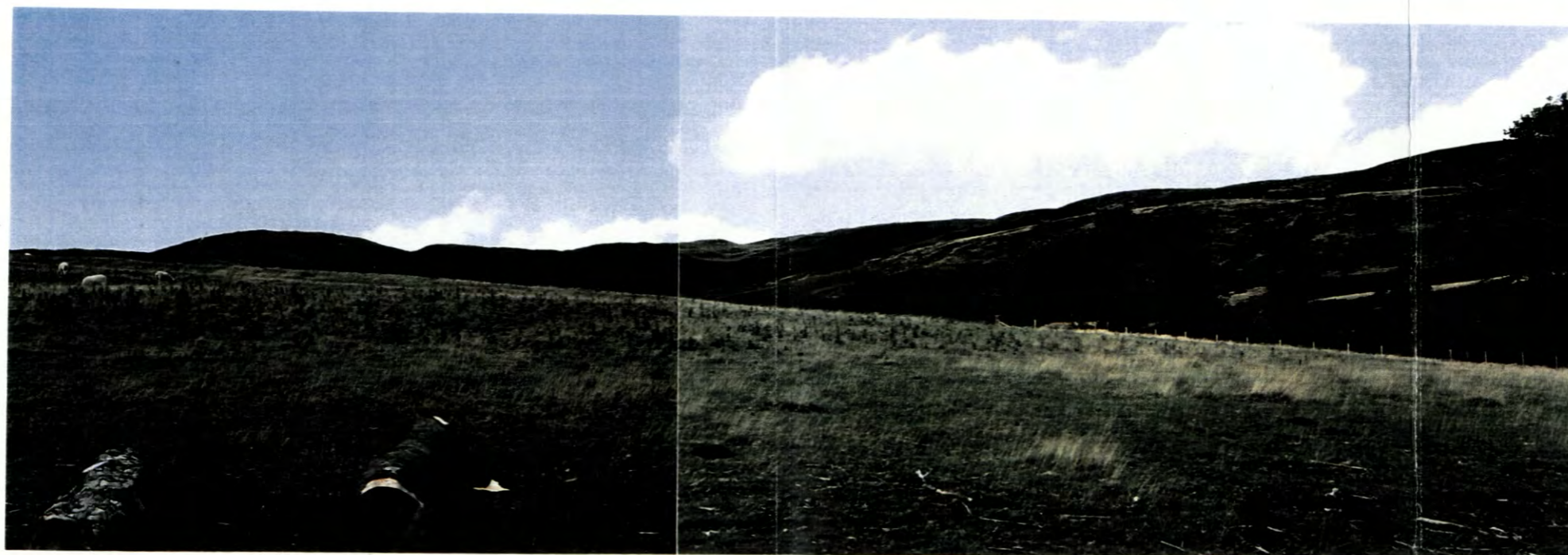
Area of Great Landscape Value

Photographic View Point

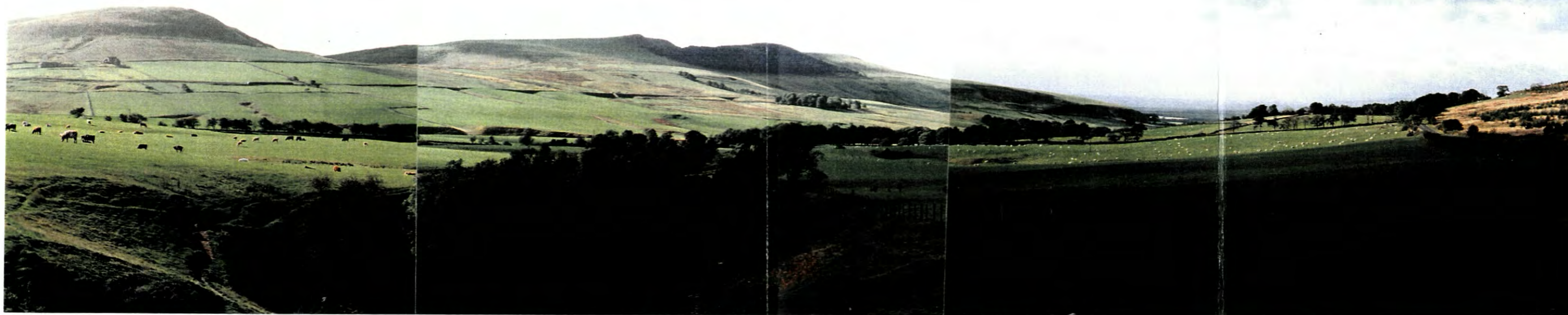
Rev.	Description	Drawn	Checked	Date
	David Tyldesley and Associates			
Client/Contract				
<b>Dunfermline District Landscape Assessment</b>				
Drawing Title				
<b>Figure 5b Landscape Character Areas and Landscape Features</b>				
Sherwood House 144 Annesley Road HUCKNALL Nottinghamshire NG15 7DD Tel.(0115)9680092 Fax.(0115)9680344		 Date <b>12/95</b> Drawn <b>Att</b> Scale <b>1:25,000</b> Checked <b>AB</b> Drawing No. <b>907/5</b> Revision		



**Sub area 1 Cleish Hills (NGR 067 943)** - View looking north-east, across Nettly Burn and Lethans and Outh Muirs, towards the highest ground of the Cleish Hills. The highly distinctive, open character of these uplands is threatened by ever encroaching coniferous afforestation (far right).



**Sub area 2 Benarty Hill (NGR 153 967)** - A small, isolated and exposed area of upland with steep slopes and domed hill tops. The varied vegetation cover of grasses, bracken, and heather, provides an attractive mosaic of colour.



**Sub area 4 Cleish Slopes West (NGR 052 955)** - This highly distinct area, between Wether Hill to the north and Knock Hill and Saline Hill to the south, forms a wide, open, and relatively shallow valley with a number of deeply incised glens which are typically vegetated with mature deciduous trees.



**Sub area 5 Benarty Slopes South (NGR 152 966)** - View south across the south facing slope of Benarty and in the distance Loch Ore. Improved grazing with mature deciduous woodland dominate this sub area.



**Sub area 6 Cleish Foothills (NGR 097 931)** - View of Roscobie, situated on one of the many low hills within the gently undulating landscape of this area. Improved grazing and, where conditions permit, arable dominate the land use. Stone dykes, generally lacking repair, are being supplemented or replaced by post and wire fencing. Mature deciduous trees dot the landscape and are particularly concentrated around steadings. A quarry and Knock Hill can be seen in the distance.



**Sub area 7 Cullaloe Hills (NGR 197 880)** - View looking north west towards the long ridge of the Cullaloe Hills, situated on the more resistant intrusive igneous rock. Extensive coniferous plantations dominate the hills and mask any detailed variations in landform.



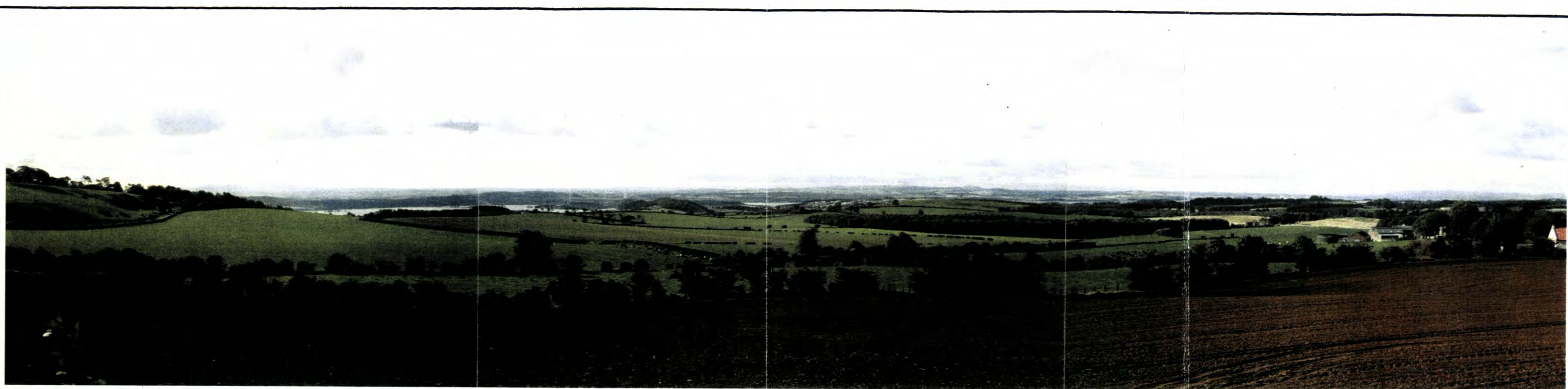
**Sub area 7 Cullaloe Hills (NGR 207 874)**- View looking north east across Stenhouse Reservoir a small isolated loch located within a rough landscape of knolls and hollows, dominated by grazing and blocks of deciduous woodland.



**Sub area 8 Cowdenbeath Hill (NGR 130 906)** - View looking south east to the Hill of Beath, a prominent hill, situated within the lowlands, especially when viewed from the northbound carriageway of the M90 motorway. The M90 passes at the foot of the hill but is located within a cutting and therefore is not visible. The simple pattern of land use allows the character of the landform to dominate.



**Sub area 9 Redwell Hill (NGR 222 982)** - View north east towards Blythe's Tower situated on a gently domed hill within the lowlands. Predominantly grassland with patches of scrub and some arable. Traditional steadings with mature deciduous trees and stone walls are key elements within this area. Kinglassie is situated at the base of the south facing slope.



**Sub area 17 Fordell (NGR 172 867)** - View south west across Fordell, an area of distinct character within the lowland hills and valleys due to its relatively undeveloped character of rolling grassland, blocks of deciduous woodland, and hedgerows (although these are falling into disrepair). Policy planting associated with the Fordell estate is seen in the middle-right. The Firth of Forth and the Forth Road Bridge are visible in the distance.



**Sub area 15 Black Devon (NGR 024 931)** - View west looking down Saline Burn and with settlement of Saline just visible (far left). Improved grassland, mature hedgerows which are falling into disrepair, and mature deciduous hedgerow trees dominate this gently undulating landscape. The Ochil Hills, in the far distance, add a further dimension to the area on clear days.



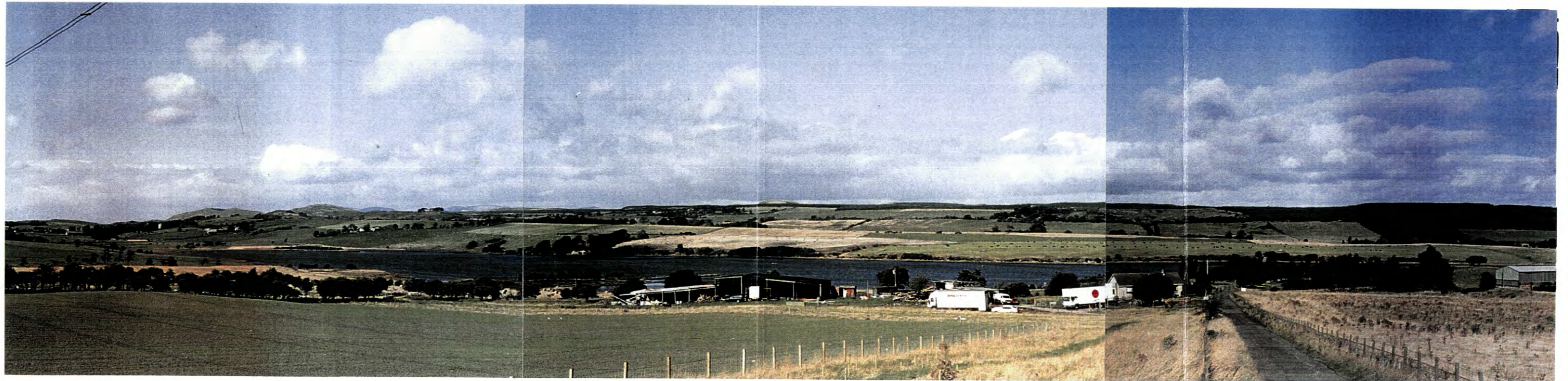
**Sub area 14 Devilla Forest & Bath Moor Plantation (NGR 962 904)** -View looking north from the A907 across Bath Moor Plantation towards the Ochil Hills. The patchwork of evergreen and deciduous trees, patches of recently felled land with bracken, and the mix of pasture and arable land results in an attractive blanket of colours laid over the undulating landscape.



**Sub area 16 Central Area, north-east of Dunfermline (NGR 181 979)** - View south towards the large area of reclaimed land with its horizontal ridge and the regular and geometric coniferous plantations, which increase in age from east to west (left to right). To the left of the photograph Westfield Development Centre and the extensive area of opencast mining are visible, along with the Transformer Station and associated high voltage power lines, which are characteristic features of this sub area.



**Sub area 19 Loch Ore (NGR 971 960)** - Loch Ore Meadows Country Park is a popular recreational facility offering a wide range of activities centred around the 260 acre loch at the foot of Benarty Hill. Extensive planting of mixed woodland species has occurred following reclamation of the site from a coal mining wasteland.



**Sub area 20 Loch Fitty (NGR 126 908)** - View looking north across Loch Fitty towards the Cleish Hills with its extensive cover of coniferous plantations. Arable farming, with some pasture, dominates the land use around the loch basin, along with groups and lines of mature deciduous trees. Loch Fitty is a natural loch of approx. 170 acres and is used on a commercial basis for trout fishing.



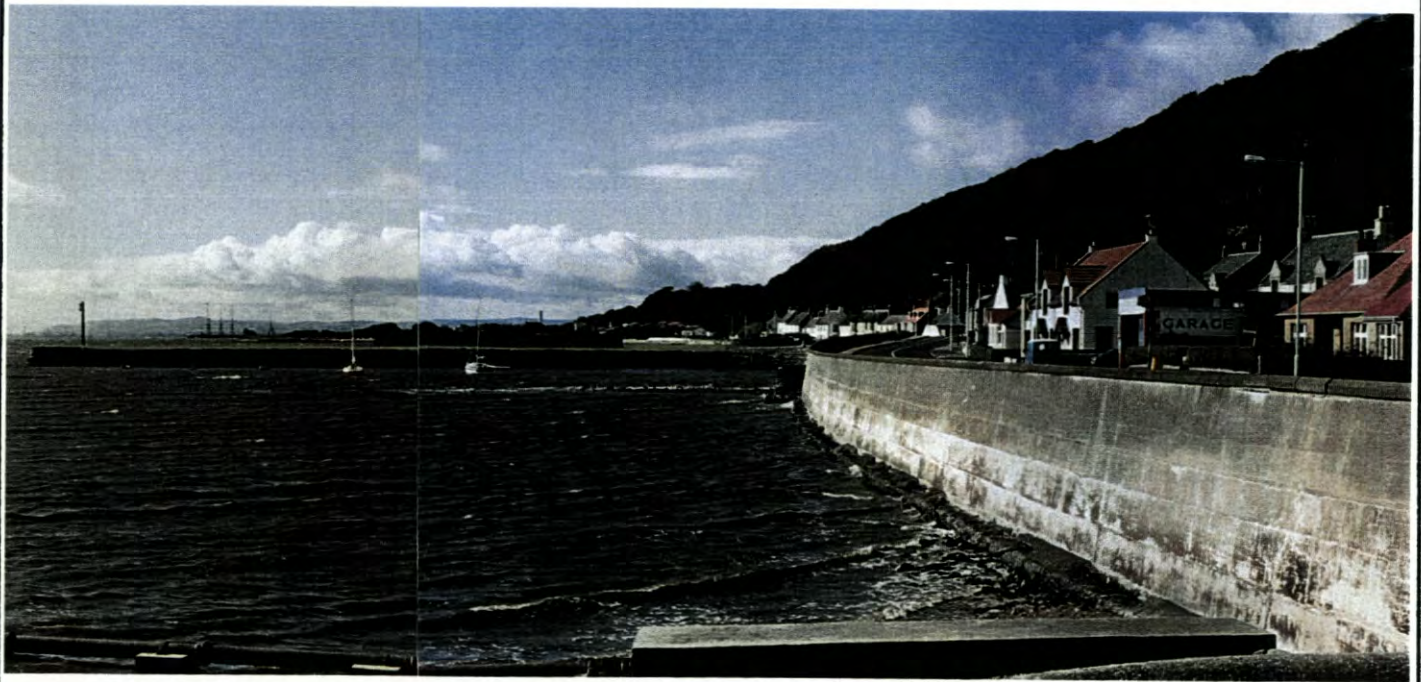
**Sub area 23 Valleyfield to Charlestown (NGR 033 849)** - View north-westwards along the coastal hills, with the Firth of Forth visible in the distance below the densely wooded cliff with wind blown trees, which form distinctive features along this stretch of the Firth of Forth. Land use is dominated by large arable fields, and with only occasional hedgerows and hedgerow trees the landscape is open and subtle changes in topography are clearly visible.



**Sub area 26 Ferry Hills (NGR 127 824)** - View south across Inverkeithing Inner Bay, and its scrap metal yard and quarry, to the higher ground of Ferry Hills. Ferry Hills is an exposed area, with extensive views in most directions, dominated by rough grazing and scrubby woodland.



**Sub area 29 Culross (NGR 022 861)** - View looking west along the Firth of Forth from Torryburn towards the coastal cliffs of Culross in the distance. The steeply wooded cliffs and the raised beach at its base are strong characteristic features typical of this landscape type.



**Sub area 30 Torryburn to Limekilns (NGR 077 833)** - View looking west along the Firth of Forth with the typical wooded cliff and raised beach. The raised beach has been utilised for the linear, south facing, developments of Limekilns and Charlestown, piers and harbours have extended this narrow strip of land into the Firth of Forth.



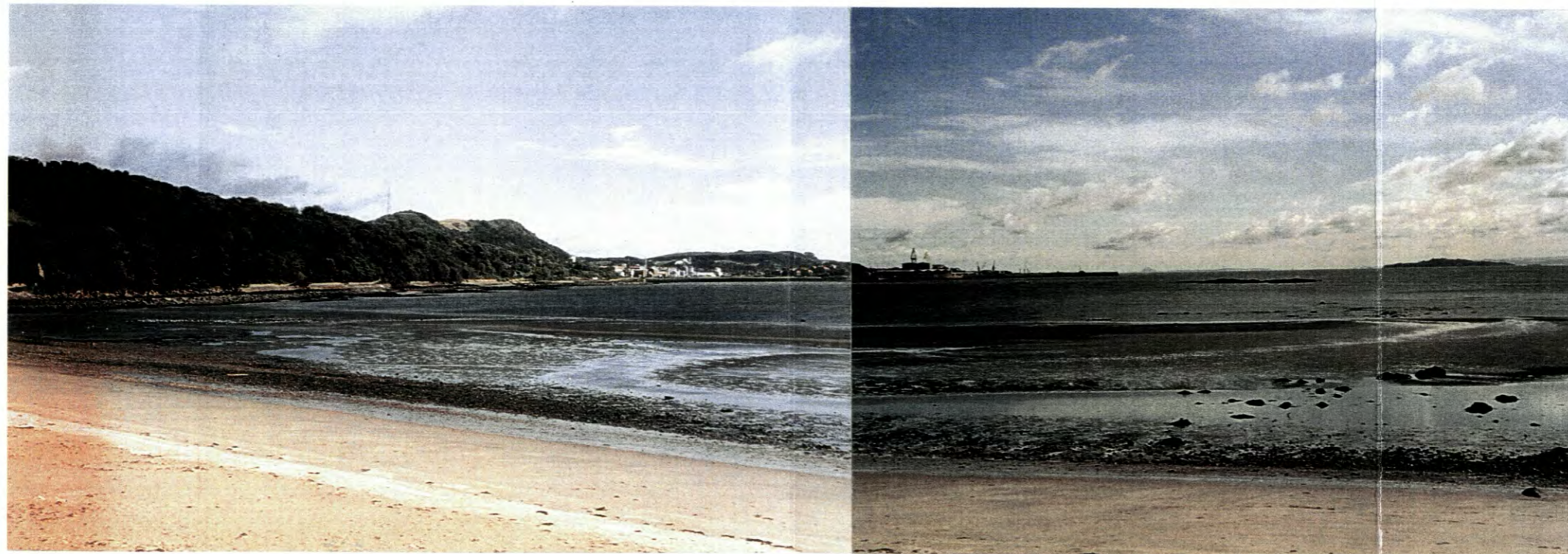
**Sub area 32 Kincardine (NGR 935 868)** - View north-west over the flat and partly reclaimed (to the left of the road) arable land, towards Kincardine and Kincardine Road Bridge, with the Ochil Hills in the far distance. High voltage power lines are dominant features in this area and radiate out from the two power stations situated to the north-west and south-east of Kincardine.



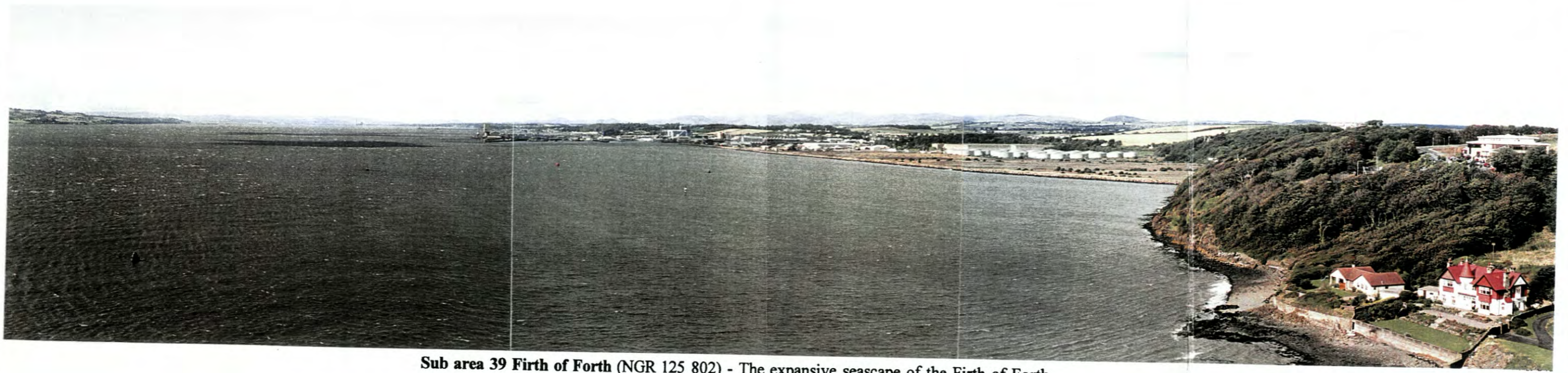
**Sub area 35 Rosyth (NGR 124 815)** - View west across the reclaimed land of Rosyth and the Firth of Forth to Rosyth docks and the south bank of the Firth of Forth in the distance. The large flat expanse of colourful reeds come to life in sunshine when wind passes across the surface. Encroaching scrub threatens the continuity of these reeds.



**Sub area 37 Shingle Bays (NGR 165 837)** - The flat, exposed, dark brown mudflats and shingle bays, with algae, eel grass and meandering outwash channels can be places of solitude enhanced by the sight and sound of birds.



**Sub area 38 Sandy Beaches (NGR 200 802)** - The smooth, bright, flat areas of the sandy beaches have outwash channels, sand bars and a constantly changing water's edge. Flocks of birds may gather on these quiet, near natural landscapes and on fine summer days they can be transformed into busy, noisy recreational areas. Views to the coastal cliffs, volcanic hills and across the Firth of Forth are closely interrelated.



**Sub area 39 Firth of Forth (NGR 125 802)** - The expansive seascape of the Firth of Forth, bound by a sinuous shore of mixed land uses is seen from the shores, the bridges, the air and the sea itself.



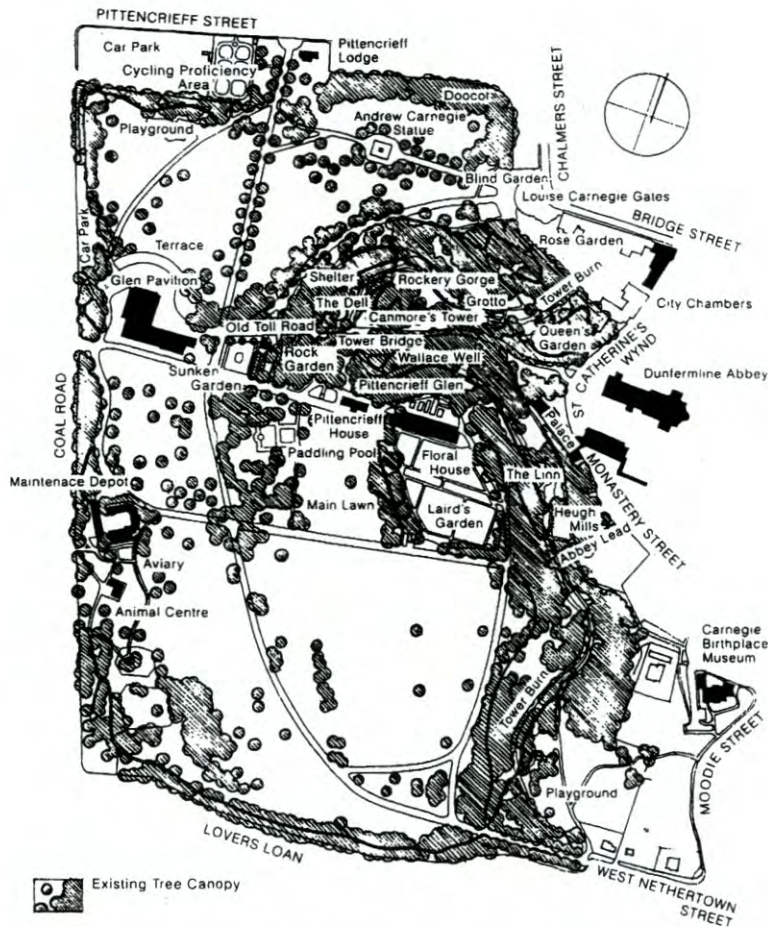
**Sub area 39 Firth of Forth (NGR 205 858)** - The Firth is studded with many islands, navigation features (including Oxcars lighthouse), and frequent ships, which provide a distinctive maritime feel to the estuary. Interrelated views between the intertidal areas, coastal flats and cliffs, and coastal and distant hills are vital to the character of the Dunfermline landscape and their sense of place.



**Sub area 39 Firth of Forth (NGR 132 803)** - View of the Forth Bridge, from North Queensferry, which has carried trains across the Firth of Forth, at a height of 45 metres, since it was officially opened in 1890, painting of the 45 acres of steel surfaces is still on-going. This stretch of the Firth of Forth, between North and South Queensferry, is totally dominated by the massive structures of both this bridge (Scotland's biggest "listed building") and the Forth Road Bridge.



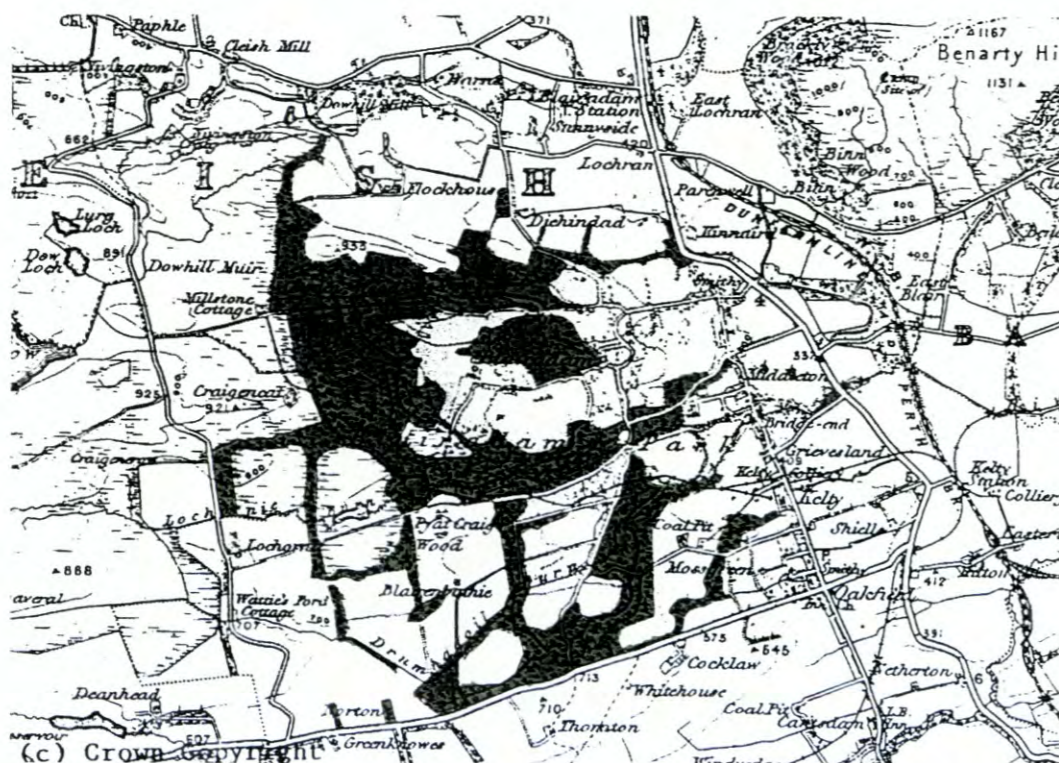
**Sub area 45 Pittencrieff Park (NGR 088 872) - View looking north-east from the Laird's Garden to Dunfermline Abbey, across the remains of the Palace.**



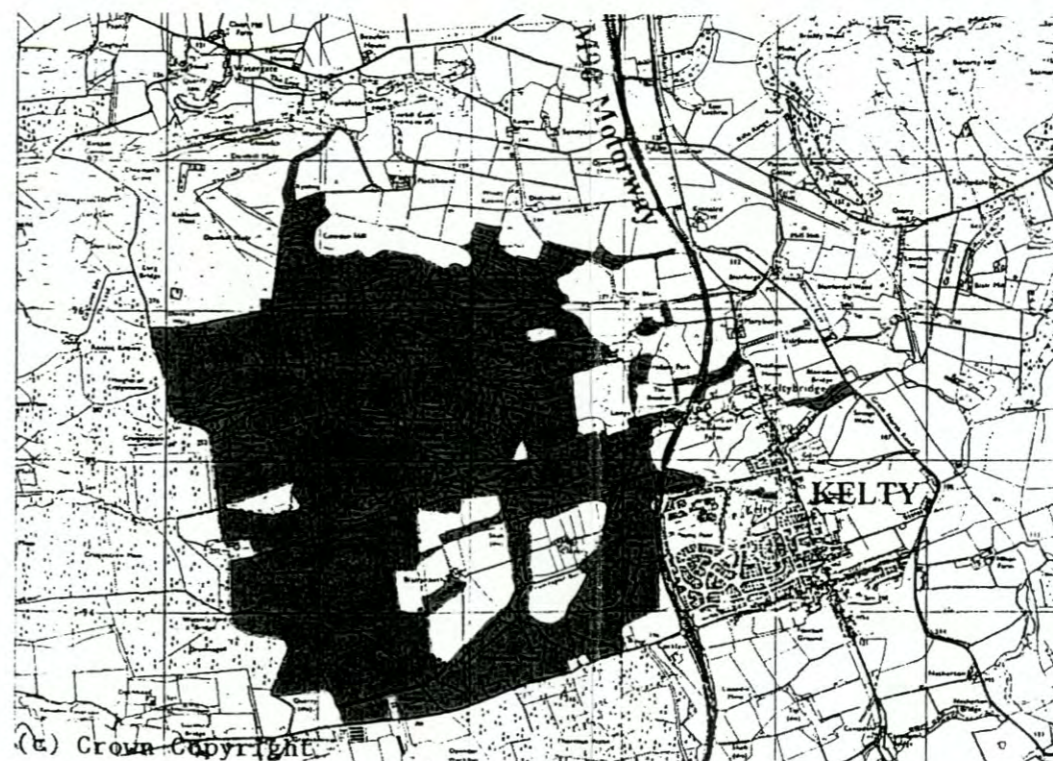
Extract from a guide to Pittencrieff Park published by Dunfermline District Council.



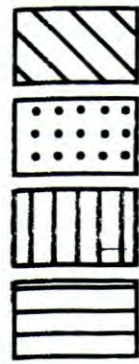
**Sub area 41 Blairadam (NGR 137 970)** - This view of the setting of Blairadam indicates the way in which twentieth century afforestation has almost engulfed the designed landscape and renders the house difficult to view. The motorway in the foreground severed part of the park but the overall structure, though depleted, is still recognisable.



Plan of Blairadam from the First Edition (revised to 1896) of the Ordnance Survey One-Inch map showing the extent of the designed landscape and the setting of Blairadam at the end of the 19th Century.

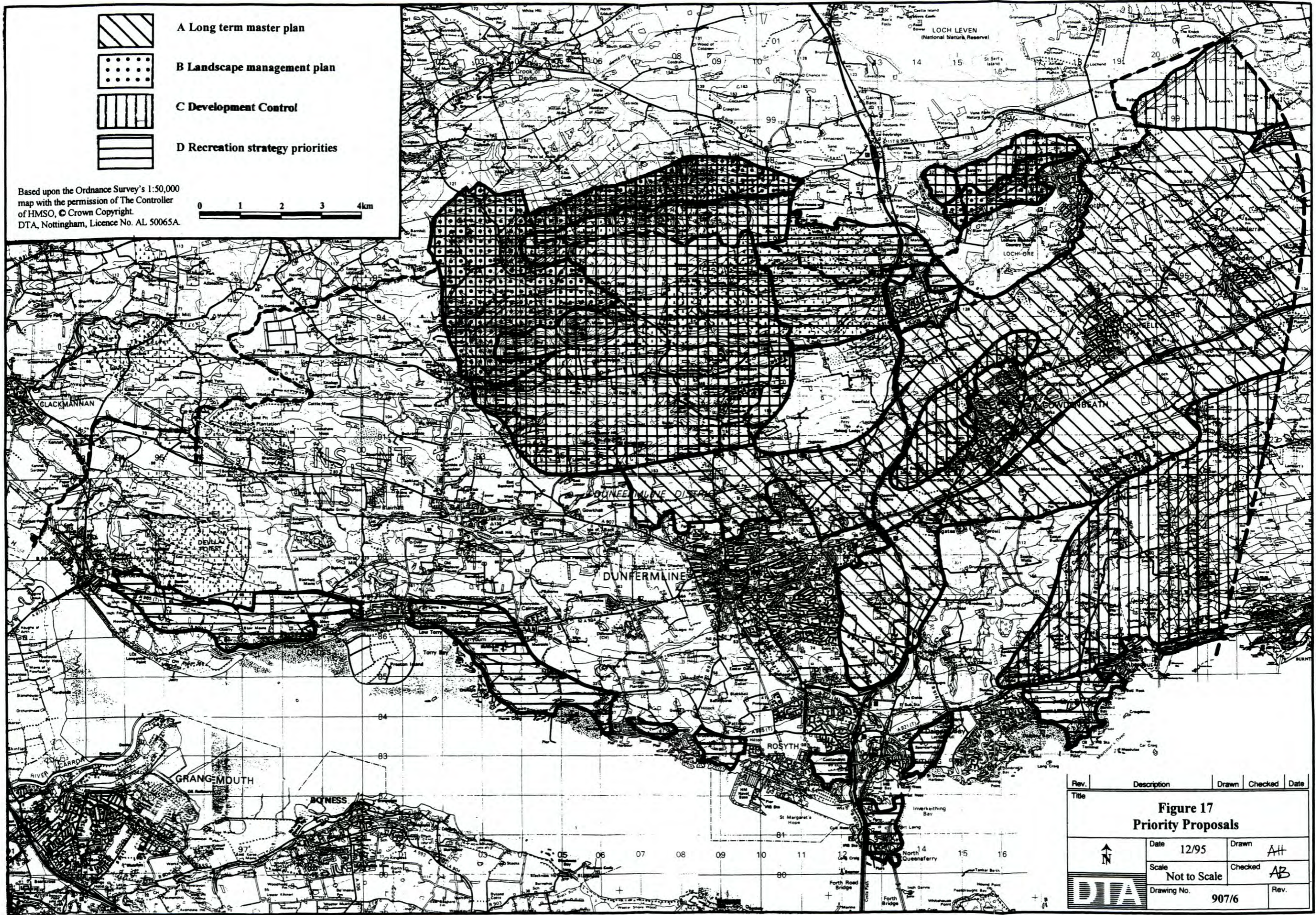
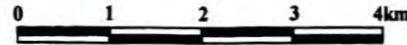


Plan of Blairadam from the 1991 edition of the Ordnance Survey 1:25,000 map showing the changes undergone in and around Blairadam in the 20th Century.



- A** Long term master plan
- B** Landscape management plan
- C** Development Control
- D** Recreation strategy priorities

Based upon the Ordnance Survey's 1:50,000 map with the permission of The Controller of HMSO. © Crown Copyright. DTA, Nottingham, Licence No. AL 50065A.



Rev.	Description	Drawn	Checked	Date
Title				
<b>Figure 17</b>				
<b>Priority Proposals</b>				
		Date	12/95	Drawn
		Scale	Not to Scale	Checked
		Drawing No.	907/6	Rev.

## SCOTTISH NATURAL HERITAGE

Scottish Natural Heritage is a government body established by Parliament in 1992, responsible to the Secretary of State for Scotland.

Our task is to secure the conservation and enhancement of Scotland's unique and precious natural heritage - the wildlife, the habitats, the landscapes and the seascapes - which has evolved through the long partnership between people and nature.

We advise on policies and promote projects that aim to improve the natural heritage and support its sustainable use.

Our aim is to help people to enjoy Scotland's natural heritage responsibly, understand it more fully and use it wisely so that it can be sustained for future generations.

