

Highland Coastal Development Strategy



Ro-innleachd Leasachadh Cladaich na Gàidhealtachd

May 2010
Ceitean 2010

CONTENTS/CLÀR-INNSE

1.0 INTRODUCTION

- 1.1 Background
- 1.2 The need for a coastal development strategy

2.0 AIMS

3.0 IMPORTANCE OF HIGHLAND'S COASTAL ZONE

- 3.1 Characteristics of the Highland coast and key challenges for planning
- 3.2 The East Coast
- 3.3 The North Coast
- 3.4 The West Coast

4.0 KEY COASTAL LEGISLATION AND POLICIES

- 4.1 Background
- 4.2 European Level
- 4.3 UK level
- 4.4 Scotland level
- 4.5 Regional/Local level

5.0 THE COASTAL RESOURCE AND ITS PATTERN OF USE: ISSUES AND OPPORTUNITIES BY SECTOR

- 5.1 Coastal Population and Housing
- 5.2 Agriculture and Crofting on the coast
- 5.3 Forestry and woodland management on the coast
- 5.4 Tourism and Recreation
- 5.5 Fishing and Fish Processing
- 5.6 Aquaculture
- 5.7 Energy Generation
- 5.8 Other Coastal Industries
- 5.9 Landscape
- 5.10 Nature Conservation
- 5.11 Archaeology and Built Heritage
- 5.12 Coastal Water Quality and Waste Disposal
- 5.13 Tackling Climate Change
- 5.14 Scientific Research

6.0 SUB-REGIONAL OVERVIEWS AND STRATEGY

- 6.1 East Coast
- 6.2 North Coast
- 6.4 West Coast

7.0 MONITORING AND REVIEW

8.0 BIBLIOGRAPHY & ACRONYM LIST

APPENDICES

- 1. Extract from NPPG 13: definitions and policy guidance for the 'Developed', 'Undeveloped' and 'Isolated' categories
- 2. Methodology used for the area classification
- 3. PAN 53 recommended indicators and amended criteria used for Highland
- 4. Coastal classification maps

1.0 INTRODUCTION

RO-RADH

1.1 Background

1.1.1 A simple definition of the coast is “the margin of a country bounded by the sea”. However, this belies the complex nature of Highland’s often intricate coast and islands. For the purposes of this document, the coastal zone is taken to mean the land area within 1 km of the coast and the inshore marine area out to 3 nautical miles. This important zone of transition provides employment, recreation and intrinsic value on a wide range of scales and is highly valued by both residents and visitors alike.

1.1.2 The main purpose of the Highland Coastal Development Strategy (HCDS) is to set out a vision for the sustainable use and development of this major resource. It will inform marine and terrestrial planning policy development through the preparation of the Highland Wide Local Development Plan (HWLDP), and then subsequent Area Local Development Plans, Aquaculture Framework Plans, and in time the new Marine Region Plans. Areas of isolated coast which have been identified through the coastal classification in this guidance, will have statutory development plan protection under a general policy in the HWLDP. The link to general policy has already been established in principle for parts of the Highland area through the Wester Ross Local Plan, West Highland and Islands Local Plan and the Sutherland Local Plan.

1.1.3 The draft HCDS was published in August 2009 in accordance with national planning guidance at that time. However, after the consultation period on the HCDS, the Scottish Government consolidated and simplified its national planning guidance. A single Scottish Planning Policy (SPP), produced in February 2010, replaced the series of detailed National Planning Policy (NPP) guidelines, including NPPG 13 (Coastal Planning). In addition the Marine (Scotland) Act 2010 was enacted in March 2010, which will deal with, among other things, issues regarding marine planning, including the need to produce a Scottish Marine Plan and Marine Region Plans. The national policy context has therefore changed but the coastal classification and strategic vision of the HCDS remain relevant. The strategy should therefore provide useful information and guidance for the new marine plans once their format, content and area coverage are decided.

1.1.4 This report presents a classification of the Highland coast for planning purposes using the methodology which was recommended in NPPG 13 and its supporting technical advice note, PAN 53. The guideline, published in 1997, advised Scottish local authorities to classify their coasts using three broad categories: “Developed”, “Undeveloped” and “Isolated” and it provided definitions and policy guidance for each (see Appendix 1).

1.1.5 The classification for Highland follows this basic methodology with some minor amendments to the PAN 53 indicator criteria where this was felt necessary to better reflect local conditions. These amendments are detailed in Appendices 2 and 3. The results of the area classification are provided in a series of maps in

Appendix 4. These maps provide a snapshot of the status of the coastline i.e. the level of existing development at the time of mapping.

1.1.6 The value of this exercise is that it sets the Highland coast in its wider context, appraises the particular characteristics and potential of the coastal zone, and provides a strategic framework for its management. This will be used to (a) inform the preparation and updating of terrestrial Development Plans, coastal plans and other thematic strategies in the coastal zone; (b) assist in the evaluation of specific development proposals on and around the coast and (c) inform the evolving marine policies arising from the Marine (Scotland) Act 2010.

1.2 The need for a coastal development strategy

1.2.1 The inshore marine area is gradually becoming more accessible and better understood and technological advances are allowing more of its economic potential to be realised. However, there are both longstanding problems and emerging issues concerning the management of the coastal zone. These include:

- declining populations and economic fragility in some rural coastal communities;
- pressures for development in sensitive areas which may be difficult to reconcile with the need to safeguard landscape quality, wildlife resources and cultural heritage;
- pressure on some wildlife habitats and species from marine and coastal tourism;
- the integration of marine nature conservation into use of the coastal zone as a means of sustaining biodiversity, protecting vulnerable species and habitat and nurturing bio-productivity;
- the accommodation and integration of different forms of aquaculture and the desire of the industry to expand production and operate larger-scale installations, often in areas where there are constraining interests;
- coastal water quality issues for shellfish farmers and the threats to wildlife, beaches and other shorelines from marine pollution and sea-borne litter;
- diminished and fragile fish stocks, which impact on the long-term interest of fishing communities and on biodiversity;
- the location and design of renewable energy installations and their associated infrastructure on the coast or offshore;
- the implications of climate change and sea level rise for shoreline management;
- the adequacy (or otherwise) of the existing network of public piers, slips and jetties in relation to the existing and potential demand for these facilities

1.2.2 Planning and management systems need to address the significant interrelationships between use of the sea and use of the land and rivers adjacent. Furthermore, the competition between and limitations of single-sector management are becoming more obvious as the range of interests in inshore waters increases and more time and energy has to be spent on applying for licences, assessing potential environmental impacts and risks and resolving

conflicts. Prior to Scottish Marine Region Plans (MRPs) being developed, the HCDS will help bridge the gap and provide useful baseline data when the MRPs come to be developed.

1.2.3 This strategy is committed to the principle of progressing equality. This means a fairer society where everyone is able to participate and has the opportunity to fulfil their potential. The Council believes that opportunities in coastal development should not be denied to anyone because of their race or ethnicity, gender, marital or civil partnership status, disability (particularly when reasonable adjustments can be made to overcome physical barriers), age, religion or belief or sexual orientation. It has to be acknowledged that in some cases, such as remote Highland lochs and coasts, easy access may never be possible.

2.0 AIMS **ASASAM**

2.1 The aims of the strategy are to:

- guide the sustainable development and use of Highland's coastal zone whilst safeguarding its natural and cultural heritage assets;
- provide a strategic planning framework for the coast and nearshore area of Highland which takes account of national policy guidance and the need for more detailed plan coverage in appropriate areas;
- complement the statutory, terrestrial elements of the evolving Highland-wide Development Plan, the new Scottish Planning Policy and the implementation of the Marine (Scotland) Act 2010. This recognises that the use of nearshore waters (particularly the more sheltered water) is relevant and often closely related to the use of the land adjacent

2.2 The scope of the HCDS is to provide strategic vision and guidance for development on and around the Highland coast i.e. development in the planning sense (e.g. buildings and other fixed structures of significant size, mineral workings on the land or in the sea, fish farms and harbours). The HCDS also provides a classification of the Highland coast which is linked to national planning policy and which is relevant to development in the near-shore area (e.g. fish farms). It does not provide strategic guidance for activities such as commercial fishing, marine nature conservation and shipping, which generally do not involve fixed structures in the sea.

2.3 The strategy aims to help planners, developers, coastal communities and coastal users to make best use of the Highland coastal area in a sustainable way. It should be used alongside existing and evolving development plans, acting as supplementary guidance. It provides a strategic context for the HWLDP and plans at a more local level such as terrestrial Local Plans, integrated coastal plans, aquaculture framework plans and Local Biodiversity Action Plans.

3.0 THE IMPORTANCE OF HIGHLAND'S COASTAL ZONE **CUDROMACHD RAON CLADAICH NA GAIDHEALTACHD**

3.1 Characteristics of the Highland coast and key challenges for planning

3.1.1 The Highland coastline is the longest of any local authority area in the UK. Scottish Government statistics, published in 1998, indicate that the Highland coastline, including its islands, extends to some 3600 km [when measured on maps at 1:250,000 scale]. This represents 27% of the Scottish total. However, Highland accounts for nearly 50% of Scotland's mainland coastline. On either count, it represents a hugely important resource and one which is also diverse. The east, north and west coasts of Highland each have their own character because of differing geology and terrain, aspect and heritage.

3.1.2 The Highland coast is predominantly an upland, glaciated coast whose fjordic character in the west is found in relatively few parts of the world. Within the British Isles, similar coastlines are found in Argyll & Bute, the Western Isles and parts of western Ireland. In a global context it shares common characteristics with the coast of Norway, the South Island of New Zealand, Canada, southern Alaska and Chile. The Highland local authority area also includes other coastal types, most notably the lowland estuary type and the more abrupt, relatively unindented coast of Caithness which is similar to that of the Orkney Islands. Aspect and settlement pattern have a significant influence on the identity of Highland's coastal areas as well as their topography so it is often convenient, for descriptive purposes, to consider the east, north and west coasts separately.

3.1.3 The Highland coastal zone is home to the majority of the region's population, most of which is concentrated around the inner Moray Firth but which also includes widely scattered crofting communities on the north and west coasts. The coast is exploited in many different ways, including tourism, fishing, agriculture, aquaculture, residential and commercial use. It is also known internationally for its landscapes and wildlife. The east coast's proximity to the North Sea has given it a role in supporting development and servicing of the offshore oil and gas fields. The next major wave of offshore development is likely to involve installations for harnessing wind, wave and tidal energy and this is likely to happen at various locations around the north and west coasts as well as the east. The coast therefore continues to be the focus for much of Highland's economy and recreational activity.

3.2 The East Coast

3.2.1 The east coast of Highland is generally low-lying with gentle gradients both on and offshore, particularly around the estuaries of the inner Moray Firth. However, between Brora and Lybster the hills come close to the sea, squeezing settlement and agriculture onto a fairly narrow coastal strip. Historically the east coast of Highland has seen more development than the west and north because it is less constrained by topography and climate. Development pressures continue to be significant along the A9 corridor which links Inverness with Wick

and Thurso and along the A96 which links Inverness with Nairn. These pressures are most pronounced within the Inner Moray Firth area.

3.2.2 There are many small towns and villages along the east coast, many of which grew up around the herring fishing industry. Consequently there are a number of small harbours and landing facilities. Some of these settlements, particularly around the Cromarty Firth, gained a new lease of life in the 1970s and 80s with the advent of North Sea oil and gas because they have provided a base for oilfield support services. Some of their facilities have been upgraded accordingly. Other coastal settlements have seen relatively little change and retain their traditional character. There are also several areas of the east coast which are particularly important for their scenic and amenity value. These include the Dornoch Firth (a designated National Scenic Area), the Stacks of Duncansby (an Area of Great Landscape Value: AGLV), the area between Fort George, Rosemarkie and the Sutors (also an AGLV) and the Culbin Sands, Culbin Forest and Findhorn Bay SSSI.

3.2.3 The main planning challenge on the east coast is to control and guide the pressures for development in the inner Moray Firth, providing the maximum benefit to the area whilst ensuring that any development is sustainable in environmental terms.

3.3 The North Coast

3.3.1 The north coast is arguably the most exposed and least densely populated of Highland's three coasts. However, its western and eastern ends are very different in character. The western (Sutherland) section of this coast, from Cape Wrath to Strathy Point is rugged and generally scenic crofting territory, deeply indented by Loch Eriboll and the Kyles of Durness and Tongue and noted for its unspoilt beaches. East of Strathy Point, the geology changes and the coast and hinterland become more level and uniform in character. This allows better road links, there are more options for building and there is better quality farmland along this eastern part. The market town of Thurso, the ferry port at Scrabster and the Dounreay establishment are all key centres of economic activity here. The coast in this eastern (Caithness) part is not all gentle however. Dunnet Head, the most northerly point of the Scottish mainland, is notably rugged and the rocky shores of the Island of Stroma are exposed to the full force of the weather and strong tides in the Pentland Firth.

3.3.2 The north coast has a distinctive character but it is the least accessible of Highland's three coasts from the main centres of population in the south. It has experienced higher than average levels of net out-migration in recent decades and the main planning challenge here is to sustain the viability of key settlements and encourage diversification in the local economy.

3.4 The West Coast

3.4.1 The west coast is probably the best known of the three Highland coasts and has the strongest marketing identity. However there are many constraints on development here as well as opportunities. It is highly indented by its many sea lochs and rugged headlands; hills and islands are almost always close by. This mountainous topography means that substantial lengths of this coast are remote, unroaded and relatively uninhabited. This wild land quality is a comparative rarity in the wider UK context and is increasingly being seen as a natural heritage asset in its own right. On the other hand, the more accessible and sheltered areas, particularly where they give access to deeper water and have a scenic setting, tend to be local focal points for development, e.g. for inshore fisheries, aquaculture and marine-based tourism. Achieving the right balance between these interests, maintaining the viability of remote settlements and safeguarding the substantial natural heritage assets are key challenges for planning on the west coast.

3.4.2 The high scenic quality of this coast is recognised by the fact that there are many SPAs, SACs, RAMSAR sites and SSSIs, along with AGLVs and National Scenic Area designations covering much of the area. It also has an international reputation as a tourism destination.

4.0 KEY COASTAL LEGISLATION AND POLICIES

PRIOMH REACHDAS AGUS PHOILEASIDHEAN CLADAICH

4.1 Background

4.1.1 In recent years, there has been a considerable change to the legislation and policies affecting European coastal and maritime waters. The key drivers of these changes have been the increasing and sometimes conflicting uses and pressures that have been placed on our marine resources, along with the desire to achieve sustainable levels of use, to manage these resources in a more co-ordinated, integrated way and to simplify legislation and licensing arrangements.

4.2 European level

4.2.1 The EU Marine Strategy, of which the Marine Strategy Framework Directive (MSFD) is a part, is one of seven thematic strategies adopted by the European Commission as a result of the EU's 6th Environment Action Programme. The strategy aims to "*promote sustainable use of the seas and conserve marine ecosystems*". This directive requires Member States to develop national marine strategies, designed collectively to achieve Good Environmental Status for Europe's marine environment by 2020.

4.3 UK level

4.3.1 The draft UK Marine Bill was published in March 2008, with the Government's stated aim to have "*clean, healthy, safe, productive and biologically diverse ocean and seas*". It received Royal Assent in November 2009 as the Marine and Coastal Access Act 2009. It includes a variety of measures designed to improve our ability to make long term, strategic, sustainable decisions and to simplify the systems used to manage the marine environment. It does not however, cover Scottish territorial waters (within 12 nautical miles) or the Scottish fisheries offshore zone.

4.3.2 At the time of writing, the UK Marine Policy Statement (MPS) is in preparation and the Government hopes to complete it by spring of 2011. This aims to deliver sustainable development and use of marine waters and will only take effect once agreed. There must then be compliance at devolved nation, sectoral and regional level. The breadth of the MPS will reflect the range of activities which take place in the marine area. However, it will not say which activities should have priority in certain areas. It will provide a framework for more detailed work at other levels. Under the new system, decisions on activities are expected to be plan-led and must be taken in consultation with terrestrial planning authorities and statutory bodies/advisors.

4.4 Scotland level

4.4.1 The draft Scottish Marine Bill was published in July 2008 and received Royal Assent in March 2010 as the Marine (Scotland) Act 2010. It sets out how Scotland will comply with the EU MSFD and contains similar aims to the UK Marine Bill i.e. sustainable use of our coastal and marine resources. It addresses four key topics: marine planning, licensing and enforcement, nature conservation and science and data. The new marine management organisation '*Marine Scotland*' has an overarching co-ordinating role. *Marine Scotland* combines the former Fisheries Research Services, SG Marine Directorate and the Scottish Fisheries Protection Agency. The Government expects this new organisation to help simplify the regulations and processes and make it easier from both a planning and industry perspective to deliver sustainable use and development in the marine area. This will be partly achieved through the production of a National Marine Plan for Scotland, a draft of which is expected in spring 2011, with subsequent Marine Region Plans following in due course. Formal consultations on boundaries for the Scottish Marine Regions and secondary legislation for driving the new marine licensing system is due to take place in the summer of 2010.

4.4.2 NPPG 13 (Coastal Planning), published in 1997, set out how planning could contribute to achieving sustainable development, whilst also maintaining and enhancing biodiversity on the coast. It highlighted the need to distinguish between Developed, Undeveloped and Isolated coast in policy terms and outlined policy guidance for developments which may require a coastal location. It also indicated how planning authorities should respond to the risk of erosion and flooding in the coastal zone and identified the action to be taken by planning authorities in their development plans and in development control decisions. In

addition, PAN 50 (Mineral Workings), SPP 22¹ (Fish Farming) and NPPG 6 (Renewable Energy) provided additional information, which could aid decision-making in these specific areas.

4.4.3 As mentioned in section 1.1.3, the Scottish Government has recently revoked NPPG13 and other NPPGs and SPPs by producing its new Scottish Planning Policy (SPP). This consolidates and rationalises its existing subject policies into one document. For coastal planning, it removes the specific requirement for development plans to classify the coast. However the Council has to ensure that it can differentiate between coastal areas likely to be suitable for development, coastal areas that are subject to significant constraints and other areas where there should be a presumption against development (including protection of the isolated coast). In doing so, the Council needs to consider natural, built and cultural heritage interests, flooding and coastal erosion issues (taking account of climate change and sea level rise), whilst taking account of the locational requirements of different types of development and regeneration and brownfield priorities.

4.5 Regional/Local level: Highland

4.5.1 There are currently seven Local Plans covering the Highland area. These are in the process of being replaced by four local development plans: the Highland Wide Local Development Plan (HWLDP) and three sub-regional plans for (a) the Inner Moray Firth, (b) Caithness and Sutherland and (c) the West Highland and Islands area. The HWLDP will replace the policies in the Highland Structure Plan (which is no longer prepared) and it will set some of the main growth areas for the Highlands over the next ten to twenty years. The Highland-wide plan and the three sub-regional plans will draw on the coastal strategy's vision and translate it into the specifics of development plan sites and developer requirements. The Highland-wide plan will also need to include appropriate policy protection for the 'Isolated' coast and its policy approach to wild land will need to pay due regard to the relationship between these two categories of land.

4.5.2 Supporting the Local Plans are a series of supplementary planning guidance documents, of which this coastal development strategy forms a part. Others include the 10 aquaculture framework plans (AFPs) which have been prepared for specific coastal areas and the Coastal Plan for the Two Brooms Area. The latter document is the Council's first integrated (multi-sectoral) coastal plan and represents a prototype which may be used to guide development in other areas of Highland where this type of approach is warranted. At the time of writing, another integrated coastal plan is in preparation for the Sound of Mull under the Scottish Sustainable Marine Environment Initiative.

¹ Now revoked, replaced by SPP: see section 1.1.3

5.0 THE COASTAL RESOURCE AND ITS PATTERN OF USE: ISSUES AND OPPORTUNITIES BY SECTOR

STORAS A' CHLADAICH AGUS A PHÀTRAN CLEACHDAIDH: CÙISEAN AGUS COTHROMAN A RÈIR ROINN

5.0.1 This section looks at the various sectoral interests which are relevant to the Highland coastal zone. For each of these, the text below sets out: (a) the nature of the activity or interest and examples of its extent along the coast; (b) the relevant coastal planning issues associated with that sector; (c) examples of what the development opportunities may be and (d) the Council's approach to planning for the sector.

5.1 Coastal Population and Housing

5.1.1 If the coastal zone is defined as including the area 1 km inland from the high water mark, it includes almost half of the houses in Highland. In 2008, this meant about 51,000 houses out of a total of 108,000. Between January 2000 and September 2008 (latest available figures) just over 4,000 houses were built in this zone. Sheltered locations with seaward views and good local infrastructure are attractive to both developers and house buyers, particularly where this coincides with an attractive landscape setting and community facilities nearby.

5.1.2 Just over half of these new houses were built within our larger coastal settlements, with the highest numbers in Nairn (504), Inverness & Culloden (344), Thurso (232) and Fort William (211). These new developments, along with new proposals such as the A96 corridor, have a range of infrastructure issues, such as sewerage and access, which need careful consideration.

5.1.3 Predictions from UKCP09 suggest that sea level rise in the Highlands is going to be a significant issue over the next few decades. Average rates of relative sea level rise over the last 15 years vary between 2.6 mm/yr in Inverness and 5.5 mm/yr in Wick. As one would expect these shorter averages have larger error terms than longer samples. Recent detailed analysis from three of Scotland's longest tide-gauge records indicate that the observed increase in flood events was not due to storminess, but due to underlying increases in mean sea level (SNIFFER 2008). This increasing tidal influence on river flooding has been identified on the lower reaches of the River Ness. The present and expected accelerations in relative sea level rise in combination with other climate change projections are likely to increase the likelihood of erosion and flooding within the coastal zone across many parts of Highland region. These factors have significant implications for planning, particularly in low-lying, built-up areas close to the coast, such as the estuaries.

5.1.4 At the time of writing, the approach to housing development is being consulted on within the Main Issues Report of the Highland Wide Local Development Plan (HWLDP). The preferred approach is to put in place policy to ensure coastal development is not hindered where it will not have an impact on any specific designation or the character of the area. Also preferred is a clear

link between the Local Development Plan and the Coastal Development Strategy to ensure that the right development can take place in coastal areas.

5.1.5 Decisions on which land should be identified for housing development will ultimately be reviewed through Local Development Plans. The plan approach will be substantially informed by national planning policy and the HWLDP. However, the assessment of site options will also be crucially shaped by local circumstance and knowledge (gained in part from the public, cross service and agency engagement), alongside the Strategic Environmental Assessment of options.

5.2 Agriculture and Crofting on the coast

5.2.1 Agriculture and crofting are an important component of Highland identity, particularly in the north and west, both in socio-economic terms and natural heritage character. Partly because of the Clearances, crofting became more and more concentrated around the coastal areas of the Highlands and Islands. Many crofters became dependent on the harvesting of seaweed. Highland has over 2 million hectares of agricultural land on approximately 10,200 individual holdings. Farms range from tiny crofts on poor soil in the west and north to huge estates of several thousand hectares in the south.

5.2.2 Although much of the sheep farming is located in the hills, many crofts can be found in coastal areas. It is therefore important that any de-crofting or new crofts do not have a significantly negative impact on the coastal landscape. The slow decay of traditional elements of the crofting landscape in many areas (e.g. drystone dykes and sheep fanks falling into disrepair) impacts on scenic quality. Where such features are of particular merit, the Local Development Plans should recognize them and promote their conservation.

5.2.3 The Crofting Reform Act (2007) has made provision for the creating of new crofts. There may also be some limited scope for the development of coastal woodlands through the Scotland's Environmental and Rural Services (SEARS) programme. Many crofter forestry schemes have already been established in coastal areas and the development of forest crofts may increase this activity further.

5.2.4 The Council will support the maintenance of flourishing crofting communities. Further agricultural or crofting development on coastal locations will be supported where such a location is deemed necessary and where the benefits outweigh the environmental costs.

5.3 Forestry and woodland management on the coast

5.3.1 Productive forestry is most noticeable as a presence on the west coast from Loch Carron southwards and on the east coast from Dunrobin southwards. The most sheltered and productive areas are in Sunart/Morvern and Kintail-Carron. Some coastal forest areas, despite their attractive landscape setting or the proximity of communities, have been developed with little regard for

recreation. This issue needs to be addressed when the forests are being restructured. Others (e.g. Culbin) place great emphasis on recreational value. Also some conifer plantations have been put into remote coastal areas which are difficult to access and they are not in character with their surroundings. Over the past decade or so, the balance of activity has however moved from productive forestry to the restoration and expansion of the historically depleted native woodland resource, as part of the drive to increase the amount of native forest cover in Scotland. Much of this activity has occurred within coastal areas, particularly on the west coast. The scope for native woodland regeneration is huge and is gradually changing the face of Highland for the better, with associated wildlife benefits. Transportation of timber by sea may also be a means of reducing pressure on the road system.

5.3.2 The UK Woodland Assurance Standard (UKWAS) is a voluntary certification standard which set out the requirements for owners and managers in order to certify their woodlands. Sections of the standard relate specifically to woodland design, conservation and the local community, all of which are fundamental to the management of coastal woodlands. These woodlands play an important role in the coastal landscape, particularly within National Scenic Areas (NSA) and Areas of Great Landscape Value (AGLV), which are identified in the Local Plans. Of the 16 NSAs found in Highland, 10 have a significant length of coastline. The design of new woodland or existing woodland management should make reference to Forestry Commission guidance on Forest Landscape Design and Scottish Natural Heritage's guidance on Local Landscape Designations. Also identified within the Local Plans and likely to be included in future Local Development Plans are policy designations for 'views over open water', which should be safeguarded against any obstructions, including inappropriate forest design. The enhancement of river systems by riparian planting or regeneration and the expansion of native woodland are regarded as key contributors to the reversal of climate change. Recreation within woodlands (e.g. at Culbin forest) is becoming increasingly popular as they often provide an existing road infrastructure suitable for cyclists and horse riders, as well as greater biodiversity and shelter than many other areas.

5.3.3 The Scottish Rural Development Programme is a £1.6 billion programme of economic, environmental and social measures designed to support rural Scotland over the next six years. Within Highland a number of regional priorities have been identified in order to deliver national objectives through local solutions. These priorities include biodiversity, landscape, water, climate change and public access, all of which are applicable to the establishment and management of coastal woodlands. For example, the Sunart Oakwood Initiative is a major and developing native woodland project that has demonstrated significant conservation, economic and amenity benefits to the wider Sunart area. Opportunities for the development of wood fuel and other added-value products which can be processed locally improves the viability of the more remote coastal woodlands and provides a real benefit to the local communities.

5.3.4 The Council's Structure Plan and Local Plans provide more general policies relating to coastal development. In addition, the Highland Forest and Woodland Strategy was launched in May 2006. This aims to develop a convergence of interests and exploit the wide range of opportunities which exist

in Highland by helping to deliver the vision of the Scottish Forestry Strategy at a regional level. It provides guidance for forestry frameworks and individual forest plans and helps to maximise funding opportunities within the forestry sector.

5.4 Tourism and Recreation

5.4.1 The tourism industry is a key part of the economy of the Highlands and Islands, proportionally more so than in the rest of Scotland. Tourism-related employment accounts for nearly 14% of the workforce in Highland; around 15,000 full-time equivalent jobs (2007 figures). Most visitors come to the area because of its natural and cultural heritage, much of it coastal-based.

5.4.2 One of the most noticeable trends of recent years is a growing interest in wildlife and nature-based tourism e.g. dolphin-watching. The sheer scale and quality of Highland's indented west coast for active outdoor recreation amidst fine scenery, for walking, sailing and kayaking in particular, is worth emphasising. Rugged and unspoilt coast and the opportunities for visitors to experience coastal wild land on a significant scale are key recreational assets of Highland because they offer both a physical challenge and tranquillity in an increasingly urbanised world. For the less active there are also other attractions, e.g. good beaches around the Dornoch area and in northwest Sutherland, and many sites of historical interest, e.g. Fort George and Dunrobin Castle.

5.4.3 Access into and around many of Highland's coastal areas can be difficult due to their remoteness or a lack of integrated transport links. However, sustainable transport development has to balance upgraded or new transport links with the natural, unspoilt beauty that attracts visitors in the first instance. Similarly, uncoordinated coastal building projects can have a detrimental impact on the landscape value of the area.

5.4.4 Some small rural communities need to be supported to ensure their continued viability therefore projects need to be conceived which will allow them to grow in a sustainable way. This may be through developing visitor centres, de-centralisation of businesses, or support for crofting initiatives, to name but a few examples.

5.4.5 The Highland Council's strategy for tourism is closely linked to development of its policies on land suitable for business and housing in the countryside. As highlighted in section 5.9, many Highland coastal areas have great landscape value and are regarded as desirable for both local residential living and tourism. However, the high natural heritage value of the area means that standards for development often have to be quite stringent if development is to be genuinely sustainable. Development should only be encouraged where natural systems can sustain it and where the socio-economic benefits clearly outweigh the environmental costs.

5.5 Fishing and Fish Processing

5.5.1 Sea fishing has a long cultural history in the Highlands and many of Scotland's freshwater fish populations (which are linked to the sea by rivers) are of international natural heritage value. Many of the existing coastal towns and villages arose around the herring industry, providing employment across the region. After its decline, technical developments concentrated fishing in the hands of increasingly fewer fishermen operating ever more efficient vessels and although the annual value of catches continued to rise, the number of people working in the industry fell. The value of our total fish catches was £62.3m in 2007 (some 18% of the Scottish total). In addition, shellfish landings add approximately a further £25m per annum, based mainly on *Nephrops*, crabs and mussels. Fish processing and disposal of fish waste continues to provide coastal employment in a few key locations. Both direct sea fishing jobs and indirect onshore employment account for nearly 5,000 jobs in the Highlands and Islands.

5.5.2 There are four Inshore Fisheries Groups (IFGs) in Highland which aim to improve the management of Scotland's inshore fisheries and to give commercial inshore fishermen a strong voice in wider marine management. The IFGs will develop Management Plans for the North West and the Moray Firth in the next few years. Highland Council will work with these groups to ensure sustainable development of this sector, whilst working with other stakeholders to resolve any conflicts of resource use. Aquaculture developments can sometimes present a risk to wild salmon and sea trout fisheries so Highland Council will take the interests of all coastal users and uses into account when determining applications.

5.5.3 It is hoped that the IFGs will lead the way in highlighting new development potential, supported by Marine Scotland at national level and Highland Council at regional level. There is also scope for innovative value-added products and development of local food networks of which fish and shellfish products could play a key part.

5.5.4 The Council will continue to support enhanced fishery management in inshore and freshwaters for the direct benefit of coastal fishing communities, working with IFGs, District Salmon Fishery Boards, anglers and commercial fishermen.

5.6 Aquaculture

5.6.1 Aquaculture is an important coastal industry for the Highlands, particularly in the larger, more sheltered west coast sea lochs and around Skye, where many small communities benefit from the employment and revenue it provides. 23% of Scotland's salmon farms are located in Highland region and Highland companies account for around 12% of Scotland's shellfish production. The development of marine aquaculture has also been an important factor in the evolution of coastal planning, both here and in Norway. This is because of its growth potential and demand for space in inshore waters and because thus far it has operated close to the coast, impacting on both marine and terrestrial interests.

5.6.2 The Scottish Government has produced a renewed strategic framework for aquaculture which will help address the main challenges facing the industry. From a planning perspective, the main issue is managing development so that the industry's aspirations for bigger sites do not clash with the interests of other users of the marine and freshwater environment. There are a number of guidance documents that help to address this issue. These include SG locational guidelines based on the capacity (or otherwise) of sea lochs to absorb additional nutrients and disperse the waste from finfish farms and SNH landscape design guidance, both of which are currently being reviewed. They also include the Council's own aquaculture framework plans (AFPs) which give detailed guidance on the range of interests which need to be taken into account along different sections of coast and the types and scales of development which would be appropriate.

5.6.3 There is a national policy presumption against further expansion of finfish aquaculture on the north and east coasts to safeguard wild salmonid stocks. Development within the carrying capacity of many west coast sea lochs is assisted by the Council's AFPs as mentioned above, along with the relevant national policies as additional guidance (see section 4.0). The coastal classification maps in the HCDS provide further information on the areas which are more or less likely to be favoured for further development. The Council's AFPs are gradually being updated (e.g. a revised Loch Nevis AFP was produced in November 2009) in line with new legislation and evolving industry needs and they provide valuable supplementary guidance.

5.6.4 One of the key issues at present is how to accommodate a restructuring of salmon production as the industry pursues economies of scale and seeks to operate larger sites in selected areas. Another is how to reconcile the industry's aspirations for expansion with the widespread concerns of those involved with wild fisheries interests, who maintain that salmon farming (through escapes, sea lice or disease) pose a threat to native populations of wild salmonids (Frazer, 2008; Mente *et al.* 2008). Many of these native fish populations in the relatively short west coast rivers are in decline, not necessarily due to aquaculture, but impacts are affecting their economic and conservation value.

5.6.5 The Council will support development of aquaculture in appropriate areas provided that it is in harmony with other interests and with minimum adverse environmental impact.

5.7 Energy Generation

5.7.1 Existing energy supplies in Highland are mainly through hydro-electric schemes, although there are a growing number of onshore wind farms. The nuclear reactor at Dounreay ceased its production during the 1990s but decommissioning will take many more years to complete.

5.7.2 The Highlands and Islands arguably contain some of the world's best renewable energy resources in terms of wind, wave and tidal currents. Work to realise this substantially untapped resource is now well underway, bringing with it the reality of significant economic development for the Highlands. From local

businesses supplying the sector, to research, development and full-scale test facilities, the region is at the forefront of renewable energy development. There are a number of research centres in Thurso and Inverness, as well as the European Marine Energy Centre in Orkney, the world's first grid-connected, full-scale marine energy testing centre.

5.7.3 As the development of marine renewable energy is in its infancy, it is important that the appropriate marine spatial planning is developed in time to support this new industry. Guidance from the marine acts, renewable energy strategies and marine spatial planning will all help consolidate the guidance necessary to assist the sustainable development of these new energy sources. For example, Marine Scotland's emerging Pentland Firth and Orkney Waters Marine Spatial Plan Framework and the Regional Locational Guidance for Marine Energy will be relevant.

5.7.4 The north coast in particular has the greatest potential for marine renewable energy generation due to its exposure and the strong tidal flows through the Pentland Firth. The relevant Highland agencies and communities will therefore have to work closely together and with their counterparts in Orkney to ensure that the appropriate strategies, policies and infrastructure are put in place. In addition, further expansion of offshore wind farms off the east coast is likely and there may be potential for some wave or tidal energy developments off the west coast. Identification of suitable locations for subsea cable landfalls and connections to the national grid for this new phase of development is still at an early stage. However, the Highland Coastal Development Strategy can help to inform this process.

5.7.5 The Council will support the sustainable development of the marine renewable industry through various policies and projects, such as the Highland Renewable Energy Strategy, the Highland Wide Development Plan, Pentland Firth projects and associated work. The HCDS can support this by providing information on coastal classification and helping to identify the most appropriate sites.

5.8 Other Coastal Industries

MINERAL EXTRACTION

5.8.1 Quarries can have a significant impact on the coastal landscape but provide employment and resources for roads and building work. There are several quarries around the Highland coast, including the largest coastal quarry in the UK at Glensanda. This granite quarry is located in a remote area with no road access and the rock is shipped out.

5.8.2 Quarry working and expansion can have a significant impact on the surrounding area in terms of noise, traffic movements and effects on river and loch systems. However, the level of that impact depends partly on the quarry's location and size.

5.8.3 There may be some potential for greater development of ornamental stone usage such as Caithness Flagstone or small-scale specialist minerals such as barytes and mica, if there is market demand. The SPP recommends recycling and re-use of material in waste tips and construction and demolition wastes at appropriate general industrial locations or minerals sites.

5.8.4 The general policies to assess any quarry proposal will be contained within the Highland Wide Development Plan. The preferred approach covers, safeguards to mineral reserves, buffers for incompatible uses close to existing quarries and setting out the expectations of proposals for new quarries and extensions to quarries.

PORTS, HARBOURS AND MARINAS

5.8.5 The larger ports of Inverness, Invergordon and Scrabster are of strategic and economic importance in Highland. The harbours in Mallaig and Ullapool also play an important role as ferry and fisheries ports, while the more remote fisheries ports, such as Kinlochbervie and Lochinver, sustain communities which would otherwise have few employment options. Uig on Skye and Gills Bay in Caithness are also significant as ferry terminals for the Western Isles and Orkney respectively. In addition, short sea shipping offers a realistic, environmentally friendly alternative to road and rail transport. There is increasing demand for quality marinas, which is being met by the new developments at Inverness and Wick and potentially by development planned at Whiteness. Harbours also form a key part of urban coastal defences and the more traditional ones are often a tourist destination in their own right e.g. Nairn. In addition, the former oil platform construction yards at Nigg and Kishorn have the potential to become multi-activity, multi-user facilities, as may the yard at Whiteness if not redeveloped for marina uses.

5.8.6 The main priority is to maintain the functionality and safe service provision at existing ports, harbours, jetties and slips which are in regular use. Where there are growth opportunities, where the facilities are not up to modern-day standards, or where the commercial prospects are less certain (e.g. in some of the older, less-used fishing harbours) the scope for further development needs to be investigated. Enhancing the provision for recreational boats and tourism interests is often a key element in this but a holistic approach is required which takes account of both the harbour's immediate environs and its wider catchment area. Safeguard for protected marine species and bird populations should also be a factor if an increase in boat movements (recreational or otherwise) is being considered.

5.8.7 There remains considerable potential to further diversify port activities and to promote enhanced links with the wider transport network e.g. increased short shipping options. Developments such as the new marina in Inverness and further proposed projects at Inverness Harbour offer a range of new opportunities. Development of the Nigg and Kishorn sites could provide opportunities for the growing wind turbine fabrication sector, thus further supporting the National Renewables Infrastructure Plan (NRIP). This national plan has identified Nigg, Ardersier, Kishorn, Highland Deephaven, Scrabster and

Wick as key sites for development. This will be supported through the development process of preparing and updating the Local Plans.

5.8.8 The Council will support measures to improve the range and quality of service provision at Highland ports and the further linkage of port facilities into the domestic and international freight and passenger transport networks. The Council will also progress the Nigg Development Masterplan to ensure best use of this valuable asset.

5.9 Landscape

5.9.1 The landscape resource of the Highland coast, particularly the west coast which includes Skye and the Small Isles, is one of Scotland's greatest natural assets. Landscape forms the core of the area's appeal to visitors in an increasingly competitive global tourism market and is integral to Highland culture and identity. The coastal landscapes of Highland provide inspiration for countless photographers and artists and continuously generate income through the sale of books, magazine articles, calendars and paintings. Highland's coastal landscapes provide an important marketing tool for local businesses and educational materials for generations of students and school pupils. They also represent an experiential resource in their own right.

5.9.2 Most of the Highland west coast is designated either as National Scenic Area or Area of Great Landscape Value (regionally important). About half of the north coast is so designated and about one quarter of the east coast. Fjordic sea lochs, ancient coastal mountains, rugged and remote headlands, undeveloped coastlines and wild land, sheltered firths, and big, island-studded views across the Minch are what the Highland coastal landscape does particularly well. It is a resource which is not just significant at a national level. The interest from abroad shows that it is significant at a European level as well.

5.9.3 Landscape is the sum of its parts and sometimes more; what the observer also brings to the view in terms of expectation, understanding and experience. In terms of distant views, Highland's coastal landscapes are relatively robust. However, even at this scale, major installations such as wind farms, forest plantations with geometric shapes and structures located on skylines or just offshore tend to draw attention to themselves and can disrupt the natural lines and boundaries in the landscape. At the local level, landscape character and scenic quality can often be sensitive to change, so if these qualities are to be sustained, careful attention must be paid to the location, scale and design of individual developments, cumulative effects and the impact on local views. The amenity of semi-enclosed areas of coast, wilderness recreation areas, small islands and the seaward outlook from coastal settlements can be particularly sensitive in this respect.

5.9.4 There is often a mistaken assumption that the landscape can "look after itself" or that all we have to do is protect elements of it. However, more proactive restoration and improvement is an option which is increasingly being considered. Restoration of native woodlands and improvements to the design of coastal forests when commercial timber crops come up for harvesting are prime

examples of landscape restoration in practice. Improvements to the setting of archaeological sites; incentives to improve building design or support vernacular styles of architecture; restoration of traditional coastal buildings and harbours, or the field divisions which give pattern and structure to agricultural and crofting land, are all examples of ways that coastal landscape can be positively managed.

5.9.5 The coastal classification presented in this document identifies areas of isolated coast which the Government says should generally be regarded as unsuitable for development. The Council is also in the process of assimilating the AGLVs which were identified in the Highland Structure Plan of 2001 into its suite of Development Plans and ultimately hopes to publish (in conjunction with SNH) guidance schedules for each of these. Further local guidance on coastal landscape is available in the aquaculture framework plans and integrated coastal plans which the Council has prepared, or is preparing in conjunction with other bodies. The Council has made it known that it would welcome the allocation of funds from EU sources to match the international status of some of its landscape resources.

5.10 Nature Conservation

5.10.1 The Highland coast is a diverse collection of sea lochs, firths, sandy and shingle beaches, cliffs, islands and skerries. Much of it is largely unspoilt and a substantial proportion is also relatively remote from centres of population. This means wildlife habitats are relatively intact and the wildlife found here is relatively undisturbed. Sections of it are protected by nature conservation designations such as Special Protection Areas (SPA), Special Areas of Conservation (SAC: both terrestrial and marine) and Sites of Special Scientific Interest (SSSIs) and extensions to some existing sites are being proposed. As a statutory body, the Council is obliged to help safeguard the interests of these designated sites and to support biodiversity in the area as a whole. It is committed to assisting the aims of the Scottish Biodiversity Strategy.

5.10.2 Much of the Highland coastal zone's economic value comes from its natural heritage resources. The bio-productivity of its inshore waters is integral to this and it sustains the local fishing industry. Marine wildlife-watching businesses, once rare in this country, are found at an increasing range of locations around the coast. Shore-based marine mammal watching is becoming very popular, with Chanonry Point being the best known site but there are other good locations all round the coast.

5.10.3 The east coast of Highland generally experiences greater development pressure than the west due to the former's larger population and the industrial activity associated with its major ports and better access to the North Sea oil and gas-producing areas. However, the west coast has seen pressure in many areas from the development of aquaculture, holiday homes and expansion of facilities for recreational boating. Development pressure can lead to the loss or fragmentation of coastal habitats and poorly located or managed installations can displace or disturb important wildlife species (such as cetaceans) or fragile wildlife populations (such as migratory wild salmonids).

5.10.4 Aquaculture's impacts tend to be highly localised and restricted to nearshore areas and some river systems. However, marine renewable energy projects, which are likely to be primarily developed off the east and north coasts, could impact on wider areas further offshore. Organised wildlife watching trips themselves and recreational boating could have an adverse impact on some species and habitats if sites were to be exploited beyond their carrying capacity and if no organisation takes responsibility for managing these impacts. It is important therefore to have effective site management arrangements in place e.g. SAC management groups. In addition, flooding linked to climate change may also have an adverse impact on some wildlife and habitats.

5.10.5 Providing better and more consistent wildlife information on coastal walking routes and looking at where the key gaps are, along with working to bridge them, is a key development that links closely with the Council's Access Strategy. Developing appropriate facilities at key wildlife watching sites is also important for providing a better visitor experience and for generating long-term local economic benefit from this activity. Providing better access to information on marine life and biodiversity not only benefits tourists, it can benefit local communities by demystifying what is found beneath the sea around them and by informing the development planning process.

5.10.6 The Council supports the protection of designated nature conservation sites and wild land through the development planning process. It also gives special consideration to such sites in the evaluation of individual planning applications. The Council has furthermore contributed to the preparation, monitoring and review of management strategies for several of the EU-designated marine Special Areas for Conservation (SACs). It will continue to do so but is concerned that this may become logistically more difficult if the number of marine protected areas increases, as now seems likely (and indeed desirable) under the provisions of the Marine (Scotland) Act. The Council recommends the Scottish Government to develop a suitably resourced regional infrastructure for marine nature conservation which is able to deliver the management these sites collectively require.

5.10.7 The Council will work with SNH and other appropriate agencies to support the development of sustainable wildlife-watching opportunities around the coast of Highland (e.g. via Wildlife Safe (WISE) accreditation; the Dolphin Space Programme; Scottish Marine Wildlife Watching Code). It will also encourage collaboration between nature conservation and inshore fishing interests to help put inshore fishing on a more sustainable basis. The Council will work with partners to provide facilities for sea-mammal watching in Fortrose or Chanonry Point. This would compliment the opportunities at the latter site for viewing Bottlenose Dolphins, one of the best shore locations in Europe for this activity.

5.10.8 The Council will take account of the best available scientific advice in preparing its coastal plans and in evaluating coastal development proposals. It will draw on the relevant UKBAP marine habitat and species plans, have regard to the aspirations of the Scottish Biodiversity Strategy and utilise the North West Moray Firth Marine Action Plan.

5.11 Archaeology and Built Heritage

5.11.1 Historic and prehistoric activity has resulted in a rich variety of cultural heritage sites along Highland's long coastline. Popular sites include Fort George, Eilean Donan castle and the wreck of the "*Port Napier*" in the waters near Kyleakin. Most archaeological sites are on land or survive in the foreshore; some are submerged and lie on the seabed. These sites can be domestic, fortified, industrial or military and include shell middens, brochs, castles, salt pans, fishing stations, harbours, wartime defences and shipwrecks.

5.11.2 For thousands of years, from the time of the earliest human settlers in Highland, the coast has been a focus of life and activity. Many early sites have survived because the parts of the coast they occupy have, over time, become more peripheral to the economy and cultural heart of the region. They have therefore been less prone to disturbance by large-scale developments and farming practice. As with all archaeology it is important to remember that not everything has yet been discovered. For example some sites survive buried in the soil or sand dunes and they are only identified once they have been exposed by human activity or natural erosion.

5.11.3 Erosion is one of the greatest threats to the coastal cultural heritage of Highland. Hundreds of recorded sites as well as many more unrecorded sites are threatened by erosion and may soon be destroyed. Understanding the process of coastal erosion is a key management issue. It is not possible to protect the entire coastline, so we must identify significant sites along the coast and respond when these are under threat. In addition, housing and industrial development can also have a direct impact on coastal sites.

5.11.4 Scottish Planning Policy (SPP) sets out the national planning policy with a view to the protection, conservation and enhancement of the historic environment. It must be read in conjunction with the Scottish Historic Environment Policy (SHEP). Associated planning advice can be found in PAN 42 Archaeology.

5.11.5 Cultural heritage sites are important to the identity of local communities for education generally and they can be important to the local economy. Well-presented sites can bring direct economic benefits by attracting visitors and by generating a positive impression of an area to visitors. The archaeological resource can also enrich people's perception of the landscape and provide a focus for lifelong learning.

5.11.6 Local communities are being put at the forefront of erosion monitoring projects. *Shorewatch* is a national project to train local groups to monitor and record historic sites threatened in this way; observation by local people seems one of the best ways to approach a study of eroding coastal landscapes.

5.11.7 Highland Council will continue to support the initiatives set up by Historic Scotland and the Scottish Coastal Archaeology and the Problem of Erosion Trust to make a systematic record of the archaeological sites on Scotland's coast and to gauge the level of threat to them.

5.12 Coastal Water Quality and Waste Disposal

5.12.1 Developments or activities which happen some distance from the coast can still have a significant impact on coastal areas, including designated marine sites. Water quality, along with sediment benthos quality, is largely monitored by the Scottish Environment Protection Agency (SEPA) through a range of legislation and policies such as the European Community Shellfish Waters Directive (1979), Water Framework Directive (WFD) (2000), Bathing Waters (Scotland) Regulations 2008 and The Water Environment (Oil Storage) (Scotland) Regulations 2006. The North and West WFD Area Advisory Groups, set up and co-ordinated by SEPA, aim to address waterbody quality issues in Highland. SEPA also produces River Basin Management Plans. In addition, diffuse pollution is regulated under the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR).

5.12.2 Highland is renowned for the beauty of its sea lochs and it also has some of the most attractive beaches, headlands and islands in Scotland. The aesthetic appeal and commercial value of these places is partly dependent on good water quality and clean shorelines. Water quality standards have generally been maintained or improved in recent years by attention to both point-source and diffuse pollution. However, sea-borne shoreline litter, particularly on the more remote beaches and bays without road access, has proved more challenging.

5.12.3 SEPA monitors the water quality on eight Highland beaches, mainly on the east coast. In addition, shellfish growing waters require protection to ensure the quality and productivity of shellfish, such as mussels and periwinkles. They must meet the minimum environmental quality standards as laid out in the water framework directive. In addition, Scottish Water is undertaking a number of schemes to improve sewerage systems in order to address water quality failures with some shellfish areas. SEPA also monitors coastal water quality generally and point-source discharges such as sewage outfalls and fish farms.

5.12.4 Increasingly stringent targets on waste recycling pose a challenge to the Council and identifying specifically coastal waste issues can be difficult. However, the Council will continue to improve on its recycling targets.

5.12.5 The Council requires any proposed coastal developments to be drained by Sustainable Drainage Systems (SuDS) and they will be assessed with regard to PAN 69 (Planning and Building Standards Advice on Flooding). Increased provision of recycling facilities is being reviewed across all areas, including appropriate coastal sites. At the time of writing recycling is currently lowest in Skye and Lochalsh (2008 figures), an area with a proportionately large amount of coastline.

5.12.6 Development opportunities are linked to a range of other factors which are dependant on other statutory agencies, most notably SEPA. However, progress could be made in supporting innovative use of existing water supplies and the design of water-saving devices. In addition, the Council's recycling and waste minimization schemes offer a range of possibilities to cut down on the amount of waste sent to landfill.

5.12.7 The build-up of shoreline litter in accessible areas can be dealt with by regular beach clean-ups. On more remote sections of coast (and there are many of these in Highland) the management of shoreline litter depends largely on voluntary effort. Some local communities do periodic clean-ups and (more importantly) help to ensure that users of the inshore marine and coastal area drop no litter in the first place. Because sea-borne litter can end up a long way from its source, application of the “polluter pays” principle is particularly difficult to implement. Pre-emptive education is important, but effective monitoring of shoreline litter can also help in targeting resources on problem areas.

5.12.8 The Council will seek to safeguard water resources from developments, land use changes or other activities which would result in a significant reduction in the volume or quality of water available. The Council will assess proposals for waste management with regard to the Waste Hierarchy and the best practicable environmental option. In doing so, it will take into account the extent to which they contribute to the delivery of a financially viable and environmentally sustainable integrated waste management system.

5.13 Tackling Climate Change

5.13.1 Climate change is a global phenomenon. However, despite the scale of the issue, action can be taken at the local level to help alleviate the problem. While the effects of rising sea levels as a result of climate change are anticipated to be less severe in Highland than elsewhere in Europe, they are still significant. Through the signing of Scotland’s Climate Change Declaration, the Highland Council is responsible for reducing greenhouse gas emissions from its own estate and practices and encouraging communities to also reduce emissions. The Council has a social responsibility to ensure that communities are safeguarded against the effects of changing weather patterns and Sea Level Rise (SLR) and that the costs of responding to such events are minimised. The best way to achieve this is to adapt in advance of changing weather, preparing communities and building resilience to the effects of climate change.

5.13.2 One of the most significant effects of climate change on the Highland coast will be changes in sea level, as discussed in section 5.1.3. Rising sea levels could lead to accelerated coastal erosion and increased incidence of flooding. This will impact on our coastline, especially the estuaries in various ways i.e. physical, economic, social and ecological. Changing climatic conditions can for example lead to invasive species spreading along watercourses. Salmon and freshwater fisheries may be affected through the spread of a parasite such as *Gyrodactylus salaris* and invasive species including the American Crayfish. These would also have detrimental effects on native wildlife.

5.13.3 There are ample renewable energy opportunities in Highland’s coastal and offshore areas and as the UK moves towards a low-carbon economy, increased wind, wave and tidal energy developments may help mitigate climate change impacts in the longer term.

5.13.4 While a climate change strategy for Highland is being produced by the Council it is important that actions to combat climate change are built into all

development policies. Climate change will influence where and what type of development takes place. Location will be important not only in terms of flood risk but also communities need to be sustainable in terms of consolidated development (housing, retail, jobs and transport). Under the Flood Risk Management (Scotland) Act 2009, HC will produce flood-risk maps in due course, which will inform appropriate development sites. The likelihood of events and proportionality of our response to the changing weather will help in decision making. A balance between economic growth and climate change adaptation must be found.

5.13.5 The Highland Coastal Development Strategy will support measures which promote energy reduction, renewable energy, waste reduction, recycling, local retail networks and sustainable transport options. Such measures will help to mitigate the effects of climate change and increase the resilience of coastal communities to the effects of changing weather patterns and sea level rise. The strategy should take into consideration future scenarios for predicted weather change, considering both the positive and negative effects which these may bring to coastal regions, the gradual and more dramatic changes which may occur as a result, and the future environmental, economic and social costs. However, detailed assessment will take some considerable time and are outwith the scope of the current HCDS; further local plans and the Scottish Marine Regional Plans may be a more appropriate way forward.

5.14 Scientific Research

5.14.1 Although the Council has limited capacity to undertake its own research, it does contribute both financially and with input of expertise to a range of coastal projects in partnership with many other organisations. The publication of "*Scotland's Seas: Towards Understanding their State*" (2008) was a collaboration between the FRS, SEPA, Scottish Government and SNH. It provides useful background research data, literature resources on a range of topics and identifies gaps in our knowledge. There are also a number of evolving database websites tasked with collating a wide range of marine data (e.g. MEDIN and UKCP09) which may provide useful data for future plans.

5.14.2 In addition, the Environmental Research Institute (ERI) was opened in Thurso in 2000. The Institute's international team of researchers has contributed to the understanding of climatic and environmental change with a range of projects (see bibliography). The move towards greater use of marine renewable energy may lead to a requirement for associated habitats and species research on the impacts of these new technologies.

5.14.3 As new technologies develop, there may be greater input required from the Council to evaluate impacts of some scientific research, but at present there is little direct impact on coastal planning.

5.14.4 Given the length of its coastline and the extent of its inshore waters, Highland is arguably underprovided with coastal research stations and has relatively few scientific research facilities of any kind located on the coast. The exceptions to this are Ardtoe (Viking Fish Farms Ltd), Kishorn (Inverness

College), Kyle of Lochalsh (BUTECH), Aultbea (Scottish Government), Dounreay (UKAEA) and Cromarty (Aberdeen University). The Marine (Scotland) Act 2010 may lead the way in suggesting development opportunities and possible new commitments which may require some research before new projects can be developed.

5.14.5 The Council will continue to support and encourage coastal scientific research where there are clear social, economic or environment benefits, provided the projects are sustainable and not in conflict with any of these three factors.

6.0 SUB-REGIONAL OVERVIEWS AND STRATEGY **THAR-SEALLAIDHEAN FO-ROINNEIL AGUS RO-INNLEACHD**

6.1 East Coast

VISION

6.1.1 The ports on Highland's east coast provide ready access to the North Sea and collectively the towns and villages of the inner Moray Firth represent the main hub of economic activity in Highland. The east coast is diverse however, with many parts noted for their wildlife interest and landscape value. There is physical scope to accommodate significant population growth and major industrial development in this area, which at the same time can offer and sustain a pleasant environmental setting. This provides many opportunities for business growth, inward investment and the expansion or consolidation of settlements.

BACKGROUND

6.1.2 The bulk of the Highland population is located on the east coast, the three largest settlements being Inverness, Nairn and Wick. Inverness, which accounts for 26% of the Highland population, has undergone two growth spurts in the last few decades. The first was in the 1970s with the expansion of public services and growth of the oil and gas industries, which continued into the 1980s. The second expansion was linked to the growth of medical expertise and manufacturing in the 1990s.

6.1.3 Currently, public administration, education and health constitute about half of the main employment opportunities on the east coast, followed by distribution, the hotel industry and restaurants, whilst agriculture and fishing employs around 3% of the population.

6.1.4 The largest Special Area of Conservation (SAC) in Highland is the Moray Firth which has been designated for its dolphin and sandbank interest. An SAC also covers the Dornoch Firth and Morrich Mor for its seal interest. Because of the east coast's importance for birds, there are also several Special Protection Areas (SPAs) including the Dornoch Firth and Loch Fleet, the Cromarty Firth, and the East Caithness Cliffs, which stretch from Wick to Helmsdale. Several of

these sites also contain areas of RAMSAR, NNR and/or SSSI status linked to their wetland and bird populations.

ISSUES AND OPPORTUNITIES

6.1.5 There are a range of development pressures on the east coast as it is a key area of growth, with several major developments in coastal locations. Some proposals in coastal areas earmarked in Local Plans for development have had to overcome environmental concerns, e.g. the Whiteness development and the former Nigg bay construction yard, for which a Masterplan has been approved as supplementary planning guidance.

6.1.6 The popularity of a few key tourist hotspots can itself cause conflicts of interest between the desire to encourage and develop the tourism industry and the need to protect the area's rich natural heritage e.g. the key seal pupping sites in Loch Fleet.

This page is blank to allow for double-sided printing.

Table 6.1 Development Opportunities for the Highland East Coast

Topic	Background	Key Issues	Opportunities
Coastal Population and Housing	Coastal house building is highest in and around Inverness. Large developments proposed along A96 between Inverness and Nairn. 37% of the coastal housing completions in 2008 were on the east coast (166 homes).	Need to retain local community identities and foster the growth of sustainable communities, providing additional supporting infrastructure where necessary. Environmental and flooding impacts are key factors.	<p>The east coast offers the greatest opportunities for coastal development. Some of the more remote villages such as Lybster, Dunbeath and Brora could benefit from rejuvenation of coastal brownfield and housing sites. Well-planned housing and business use would help safeguard the rural settings of the towns and villages.</p> <p>At a national level the Inverness-to-Nairn corridor is recognised as the main focus for growth in the Inner Moray Firth (National Planning Framework 2). In terms of coastal sites, at Whiteness planning permission has been secured for a mixed use development which includes housing, whilst its potential as a site for fabrication opportunities related to the expanding renewable energy sector may still remain and it is identified in Scotland's National Renewables Infrastructure Plan. Other major development sites within the coastal zone exist at Inverness East, along with Sandown and Delnies at Nairn and have recently been identified as major development sites within the Council's A96 corridor growth development framework. However, appropriate development sites, their developer requirements and their phasing will be considered and confirmed on a statutory basis through the HWLDP. A key benefit to be delivered will be a coastal pathway from Inverness to Nairn.</p>
Agriculture & Crofting	Crofting has a strong cultural background on all the Highland coasts. It provides supplementary income and key land management practices.	Limited suitable coastal land for expansion of crofts. Limited evidence base at present; no complete register of crofts and no mapped locally important croft land.	There is some potential for zoning of land in Area Local Plans for the purpose of creating new crofting townships, subject to landowner agreements and landscape considerations. Traditionally, crofters use low amounts of chemical fertilizers, weed killers and insect sprays. As a result the range of plants is much wider than on more intensively managed areas therefore there is opportunity to further enhance the biodiversity value of croft through schemes such as the SEARs initiatives.
Forestry	This coast has the least amount of exposure therefore this greater shelter	Less exposure and several large estuarine areas that can support a wider	There are a number of opportunities on the east coast to consolidate and expand coastal edge woodland e.g. at Navidale and Spinningdale forest. On a larger scale, the recent BALCAS wood pellet development in Invergordon has provided a new and much needed market for lower grade timber.

Topic	Background	Key Issues	Opportunities
Tourism & Recreation	<p>can lead to more productive forestry.</p> <p>Inverness is the main hub for tourists on the Highland east coast and has a wide variety of coastal attractions within day-trip range. There are good beaches and links golf courses at Nairn, Castle Stuart and between Dornoch and Golspie. Popular historical sites on the coast include Fort George, Dunrobin Castle and the Walligoe Steps near Ulbster. Dolphin watching is popular from the shore a Chanonry Point and other sites and specialist boat trips for this purpose operate within the inner Moray Firth. Cruise liners increasingly use the port at Invergordon.</p>	<p>range of species, especially native trees.</p> <p>The need to maintain the quality and breadth of provision of recreational facilities in keeping with the needs and aspirations of the local population and the increasingly competitive tourism market. The need also to do this without compromising the natural and cultural resources on which they are based. Coastal footpaths and cycleways are relatively underdeveloped on the Highland east coast. Some coastal caravan sites are poorly laid out by modern standards and overdeveloped. There is pressure at Chanonry Point due to high numbers of visitors but lack of facilities. Northeast</p>	<p>The east coast is rich in potential opportunities for tourism and recreation development. Pooling of resources will be more important in remoter parts of the east coast to overcome the disadvantage of sparse population and distance from the main tourist market.</p> <p>Greater promotion of the quality beaches around Loth, Brora and Nairn. The Moray Firth dolphins could be an even larger tourist draw if given greater promotion linked to wider wildlife interests. However, this would need to be done with very careful planning (see natural heritage section).</p> <p>The marinas at Nairn and Inverness could be promoted to encourage more recreational sailors to visit the Highland east coast, harnessing the link to the west coast provided by the Caledonian canal and the lochs of the Great Glen. There may also be sailing opportunities with the proposed marina at Whiteness.</p> <p>Efforts should be made to develop more recreation attractions in areas which tend to be by-passed by tourists, e.g. the coast between Balintore, Tarbat Ness and Portmahomack and the coast north of Helmsdale up to Caithness. The rich cultural heritage of these areas could provide a focus. Development of coastal footpaths and cycleways would improve the health of the local population and take some pressure off the roads. The scope for developing short coastal walking routes, particularly in the vicinity of Inverness (e.g. at Munloch Bay, Inverness to Nairn and between Eathie and Cromarty), should be explored.</p>

Topic	Background	Key Issues	Opportunities
Inshore Fishing	<p>There are also good opportunities for bird and seal watching around the Beaully Firth, Udale Bay, the Dornoch Firth and Loch Fleet. There is increasing provision for recreational boats at harbours on the east coast and there is a yachting club at Fortrose. A new marina has opened in Inverness, whilst a new one is planned for Whiteness. There are however a number of small jetties and slips on the east coast which have fallen into disrepair. There is wreck diving off Balintore and Portmahomack and scenic diving around the cliffs and geos of Duncansby Head.</p>	<p>of Golspie and Helmsdale, visitor flows are relatively weak because, in the absence of major attractions, many tourists are drawn to the more spectacular scenery of the north and west.</p>	<p>Support the introduction of local fisheries management through Inshore Fisheries Groups.</p> <p>Closer management of fish stocks, better matching of fishing effort to the natural</p>

Topic	Background	Key Issues	Opportunities
	<p>stricter system of local controls and closer integration with marine nature conservation. There is a long tradition of fishing here, linked to the many small ports on this coast and the previous herring industry.</p>	<p>limited resources.</p>	<p>productive capacity of the area and a requirement for fishing methods to be sustainable will increase the viability of inshore fishing in the long run.</p> <p>Some fishing areas could be rested and re-seeded on a rotational basis as part of a programme of fisheries restoration and marine nature conservation.</p>
Aquaculture	<p>There are few aquaculture sites on the east coast as, since 1999, there has been a Government presumption against further expansion of finfish farming on the north and east coasts as a precautionary measure to safeguard migratory fish species.</p>	<p>Whether the ban on the expansion of finfish farming on the east coast should be sustained in perpetuity or reviewed in order to take some of the pressure off the west coast and to encourage the development of more robust fish farm technologies for offshore sites. Shellfish farming in designated nature conservation areas may be problematic if large-scale</p>	<p>Currently very limited for finfish farming due to the national presumption against further such development on the north and east coasts. Exposure and navigational constraints in the inner firths can also affect shellfish farming. However, new technologies for aquaculture further offshore (possibly linked to marine renewable energy generation) should be explored. There may be opportunities for shellfish farming on currently unused sites which hold Crown Estate leases, as well as potential for new sites.</p>

Topic	Background	Key Issues	Opportunities
Energy Generation	The interest in harnessing offshore wind, wave and tidal energy is relatively new but it is a key part of Governments' commitment to addressing energy supply needs.	production is proposed. Limited knowledge of the technology required. There is some potential for conflicts between energy generation developments and fishing, landscape and wildlife interests. This is likely to be location, scale and technology dependent so careful appraisal is needed to search areas and individual proposals.	Local expertise and capacity in the offshore oil and gas industry and rig fabrication puts this area in a good position to get involved in the new wave of interest in generating renewable energy from marine-based sources. This will require a range of onshore and offshore construction and expertise. The Scottish Government is helping to fund the Beatrice Wind Farm demonstration project in the Moray Firth, to demonstrate the potential for large-scale offshore wind farm development. The Crown Estate is proceeding with its Round 3 offshore wind programme, which aims to develop a further 25 GW of offshore wind power by 2020. This includes further development on the Smith Bank in the Moray Firth. Proximity to the national electricity grid and oil and gas installations in the North Sea gives this area a strategic advantage for renewable energy development over the west coast.
Other Coastal Industries: 1. Quarries	1. Active quarry safeguarded areas in Local Plans	1. Competition for development of sites with other land uses e.g. SSSI's, housing.	1. The predicted continuation of population growth on the east coast should ensure a continued demand for aggregates so there may be opportunity for some expansion of existing sites, e.g. Alturlie sand quarry.
2. Harbours	2. Wick harbour is a mix of commercial and leisure use. Invergordon, Cromarty and Inverness key ports providing flow of goods into/out of Highland. The former construction yard at Nigg is being	2. Financial constraints may hamper growth.	2. Muirtown Basin, Inverness could be transformed with multi-level business/living accommodation as suggested in the Local Plan, whilst the proposed marina at Whiteness may be a boost to the yachting community. Inverness Harbour has ongoing mixed use development, with potential for e.g. a data centre, hotels and retail. The ports of Wick, Nigg, Highland Deephaven and Ardersier have been identified in the NRIP as key development sites.

Topic	Background	Key Issues	Opportunities
Landscape	<p>redeveloped for mixed use.</p> <p>The sheltered inner firths have a smooth landscape character compared with most of the Highland coastline. They also represent the most populated of Highland's coastal areas. Sandy beaches are an attractive feature of the areas around Dornoch/Littleferry and Nairn. The coast north of Golspie is more exposed and generally has a more abrupt coastal edge with hills or cliffs close by. There is only one National Scenic Area on the East Coast: the Dornoch Firth. However, there are regionally important AGLVs around the mouth of the Cromarty and Inverness firths, at</p>	<p>The larger population in the inner firths area tends to put this coast under more development pressure than in the north and west of Highland. Poorly located windfarms could also impact on coastal quality. Caravan/camping sites are attracted to coastal areas with good beaches and sometimes these have been overdeveloped. The older quarter of traditional fishing villages often represent a townscape/landscape asset but may need support to adjust to a changing economic base.</p>	<p>Some good viewpoints on headlands (e.g. South Sutor, Tarbat Ness, Chanonry Point) have scope for development of better facilities for visitors, as do a number of strategic points by the main bridge crossings over the firths. A strategic review of coastal caravan/camping sites should be made to ascertain where improvements to layout and design are required and the scope for new (or relocated) sites to be developed.</p>

Topic	Background	Key Issues	Opportunities
Nature Conservation	<p>Loch Fleet, between Brora and Helmsdale, around Berriedale and at the Stacks of Duncansby.</p> <p>The inner Moray Firth area is characterised by intimate and relatively unspoilt estuaries in a largely rural setting with a backdrop of mountains. Further north, the coastline is less indented, the hills press close to the coast and there are more cliffs. Overall, this makes for a diverse mosaic of wildlife habitats where the opportunities for observing migratory birds, dolphins and seals are particularly noteworthy.</p>	<p>Balancing environmental, including biodiversity, considerations with socio-economic pressures, especially at pressure areas such as Chanonry Point.</p> <p>Maintenance of coastal water quality and prevention of oil spills is particularly important in light of European designated bird and dolphin interests.</p>	<p>There are good opportunities to educate people about wildlife and the biodiversity in this area, using species such as dolphins and seals as a focal point. The Lighthouse Field Station at Cromarty and the Moray Firth Partnership have been assets to the area in this respect. Better links with UHI and SNH could lead to more action being taken to protect and enhance key coastal species within east coast biodiversity action plans. Key sites such as Culbin Sands nature reserve, Loch Fleet and the Cromarty Firth could be promoted as key research sites to a wider audience.</p>
Archaeology & Built Heritage	<p>Rich in Scheduled Ancient Monuments, listed buildings and</p>	<p>Danger of being lost under development or to erosion by wind</p>	<p>More coastal archaeological sites could be linked to wildlife watching and coastal paths at key sites such as the Dornoch and Moray Firths, the East Caithness Cliff SSSIs and the various WWII lookout posts dotted along the coast.</p>

Topic	Background	Key Issues	Opportunities
	wrecks such as the ruins of Berriedale castle, Yarrows Broch and 17 th century vessels in Dornoch sands. A few well documented heritage trails that are close to the coast e.g. Fort George and Castlehill Flagstone Trail.	and waves. Relics of the Second World War (e.g. gun emplacements and bunkers at the mouth of the Cromarty Firth) have often been neglected and their interpretive and recreational potential has not been fully explored.	
Coastal Water Quality/Waste Disposal	The expansion of Inverness has led to major upgrading of the infrastructure, including water and drainage.	The large development proposals for Whiteness and Tornagrain could have a significant impact on the waste infrastructure.	Scottish Water proposes to adapt the waste water treatment plant at Allanfearn so it can recycle the waste into agricultural fertiliser, soil conditioner and a source of fuel. SEPA continues to monitor the water quality of the bathing beaches. Under the revised Bathing Waters Directive, tighter microbiological standards have to be met by 2015. This may provide a marketing opportunity for beaches such as Nairn, as the water quality is linked to tourism development potential and ecological standards.
Scientific Research	Some research is being done by agencies such as SNH, MSS and SEPA. Direct academic research is outwith the scope of the Council.	Relatively new university status offers the opportunity for the UHI to build its capacity to undertake coastal projects.	Developments in the tertiary education and offshore engineering sectors mean there are more opportunities for collaboration and support in relation to coastal developments and issues. Better links with the UHI would allow a more cohesive approach to research that fitted in with the Council's requirements for data and expertise.

STRATEGY FOR THE EAST COAST

6.1.7 Build on the economic dynamism and infrastructure strengths of this area whilst safeguarding the characteristics which make it an attractive place for people to live and work. Safeguard also its important coastal wildlife resources and heritage sites and develop its capacity to provide quality recreational opportunities for its growing population. Maintaining a healthy relationship between coastal industry and the wildlife populations of the firths will require careful management of environmental impacts.

- Help local businesses to grow within spatially-defined communities by supporting development that does not detract from the immediate coastline (e.g. development of existing brownfield sites such as Lybster, Dunbeath and Brora);
- support the development of modern tourism-related businesses and recreation facilities for local people and tourists which help to nurture and make the most of the area's cultural and natural heritage assets, e.g. at Chanonry Point and Loch Fleet;
- protect the integrity of designated sites by discouraging inappropriate development and encouraging restoration and enhancement projects, taking particular care with waste disposal;
- support development of renewable energy in appropriate sites, e.g. Moray Firth deep water sites (Beatrice site);
- until such time as the Government's policy on finfish farming off the east coast of Scotland is reviewed, support the development of shellfish farming at appropriate sites and at a scale which is compatible with other coastal interests;
- support opportunities to consolidate and expand coastal woodland at sites such as Navidale and Spinningdale.

6.2 North Coast

VISION

6.2.1 The Highland north coast has more of the character of a frontier than its eastern and western counterparts. Remote and mainly rugged, exposed, and thinly populated, it marks the northern extremity of the British mainland. This is a draw in itself for the more adventurous-minded tourist. However, good scenery, particularly along the Sutherland section, also tempts the visitor. Most of the population on the north coast is concentrated around the Thurso/Scrabster/Dounreay area where commercial fishing, ferry services to the Orkney Islands and energy generation have a significant presence. These, combined with a strong stock-farming sector on good quality agricultural land, make the local economy of Caithness distinctive and relatively resilient. A new dimension opening up relates to the fact that the Pentland Firth, with its strong tidal flows, is now seen as the area of opportunity for the development of marine-based renewable energy installations.

6.2.2 The future for the North coast lies in making the most of the strengths described above and developing them in harmony. Firstly, this can be done by consolidating and improving the facilities for recreation and tourism: (a) to encourage more visitors to make the journey to the far north and to enhance their enjoyment of the experience when they get there; (b) to help extend the relatively short tourist season and (c) to improve the quality of life for local residents, particularly in the western section which is more remote from urban services. Facilities which aid appreciation and enjoyment of the area's natural resources and cultural heritage and which take an imaginative approach should be particularly worthwhile. Secondly, the development opportunities presented by the Pentland Firth and the area's proximity to the Orkney Islands should be harnessed sustainably so that fishing, shipping, energy generation, tourism and natural heritage can all benefit.

BACKGROUND

6.2.3 The north coast of Highland has three main character zones which reflect differences in geology, topography and land capability. From Skerray westwards to Cape Wrath the coast has relatively high relief and is indented by major inlets such as Loch Eriboll, offshore islands and broad sandy bays. It is sparsely populated. At the opposite eastern end, between Melvich and Duncansby Head, the coast is characterised by relatively low relief, compact (but imposing) headlands and better quality farmland. It is more developed, populated and especially around Thurso, Scrabster and Dounreay, more urban in character. The middle section, from Bettyhill to Melvich is intermediate in character, moderate relief, rocky and indented on a small scale, with many crofting settlements.

6.2.4 Many of the smaller coastal villages are traditional crofting communities and employment is mainly a mix of crofting, tourism and (in the east) work related to Dounreay, which at the time of writing employs around 1200 people. However, the loss of jobs at Dounreay, Vulcan and the US Naval base at Forss has been one of the main factors accounting for an overall decline in population on the North Coast in recent years. Many visitors go to John O' Groats as it is billed as the northerly end of the longest distance between two points on the British mainland, the other end being Land's End. However, as a key tourist destination, it requires significant upgrading. Visitors are similarly attracted to Durness because of its proximity to Cape Wrath. Key natural attractions of the north coast are its mix of good beaches, dramatic cliffs and headlands, nesting seabirds and geological interest. The North Coast also has some of the best surfing and diving areas in Highland, e.g. at Dunnet Bay and around Eilean nan Ron. There are a few SACs on the north coast, e.g. Durness, along with a number of SPAs, including the North Sutherland Coastal Islands and Cape Wrath and several coastal SSSIs e.g. Duncansby Head.

ISSUES AND OPPORTUNITIES

6.2.5 Many young people leave the area in search of further education or jobs and may have little incentive to return due to lack of job opportunities. Affordable housing is a key issue, although only a small percentage of housing is currently built in coastal areas.

This page is blank to allow for double-sided printing.

Table 6.2 Development opportunities for the Highland North Coast

Topic	Background	Key Issues	Opportunities
Coastal Population	Population predicted to decline by c. 7% over the next 20 years. 7.4% of the coastal housing completions in 2008 were on the north coast (33 homes).	Declining population, lack of affordable housing and decommissioning of Dounreay are major challenges. Environmental and flooding impacts also need to be considered.	Dounreay will take over 20 years to fully decommission so the skills gained during that time should be redirected into other industry that will support local communities. The marine renewables industry in particular offers the opportunity to counteract population decline. There is also opportunity for expansion in the tourism and food and drink industries. In addition, the Caithness and North Sutherland Regeneration Partnership is taking forward the task of helping diversify the economy of the area.
Agriculture & Crofting	Crofting has a strong cultural background on all the Highland coasts. It provides supplementary income and key land management practices.	Limited suitable coastal land for expansion of crofts. Limited evidence base at present; no complete register of crofts and no mapped locally important croft land.	This coast is the most exposed of the three coasts, therefore opportunities for expansion of coastal crofting are very limited.
Forestry	This coast has the most amount of exposure therefore there is very limited potential for productive forestry.	Exposure, sea salt and lack of suitable soil mean that there are few coastal forests on the north coast.	Apart from expansion of one small coastal forest at Dunnet, there is very limited opportunity for further forestry expansion on this coast, for the technical reasons given opposite.
Tourism & Recreation	The north coast has many areas of high scenic value in the	Relative lack of facilities for recreation and	The north coast appears to have much under-realised potential which could be tapped into. Areas such as John O' Groats and the Castle of Mey would benefit from better marketing and enhanced transport links, along with the route to Orkney connections.

Topic	Background	Key Issues	Opportunities
	western part and sites of cultural interest in the eastern part. However, it is disadvantaged by its remote location and limited transport links.	tourism compared with the more accessible east and west coasts. How to tempt more visitors to make the journey to the North Coast? The exposed nature of the north coast tends to limit water-based recreational activity.	The impressive headlands at Whiten Head, Dunnet Head and Duncansby Head are under-publicised and worthy of more visitors. This coast also has some very good locations for scuba diving and high-quality surfing beaches which would benefit from better service provision. A public slip to allow the launching of boats in Loch Eriboll could attract more visitors to the area. This area also has a wealth of archaeological heritage that could be further developed.
Inshore Fishing	Strong traditional cultural, economic and historical links.	Dwindling fish stocks and competition for limited resources.	Support the introduction of local fisheries management through Inshore Fisheries Groups. Greater use of new technologies and sound scientific principles to expand fisheries in a sustainable manner.
Aquaculture	Aquaculture is currently limited to the more sheltered areas of the north coast i.e. in Loch Eriboll and the Kyle of Tongue. Since 1999 there has been a national policy presumption against further development of finfish farming on the	There is now very limited scope for further expansion of aquaculture with current technology due to best sites being largely taken up and the policy restraint on finfish farming.	The main aquaculture opportunities are likely to be for shellfish farming operations which can cope with the exposed conditions found on the north coast and integrate well with other interests (e.g. fishing, tourism, wildlife and landscape).

Topic	Background	Key Issues	Opportunities
Renewable Energy	<p>north coast to safeguard migratory salmonids. However shellfish farming has been increasing, particularly in Loch Eriboll.</p> <p>Relatively new but key part of the Governments' commitment to addressing energy supply needs.</p>	<p>Emerging research and development technology opportunities.</p>	<p>This coast has the greatest potential for marine renewable energy generation. The Dounreay site could be redeveloped to cater for this growing industry. The Pentland Firth is currently the focus of much research. This in turn may offer the opportunity to attract high energy demand industries such as data centres. The vision is to strengthen an already diverse renewable energy industry in the Highlands and Islands and develop a truly mixed renewable energy economy which supports the development of wave and tidal energy devices, biomass and deep-water offshore wind farms. The Crown Estate is currently licensing a range of projects to support these developments.</p>
<p>Other Coastal Industries:</p> <p>1. Quarries</p> <p>2. Harbours</p>	<p>1. Flagstone quarries on the north coast of historical value; most now located away from the immediate coastline.</p> <p>2. Scrabster is the main harbour, with lifeline ferries to Stromness in Orkney. Gills bay harbour provides an alternative ferry link to Orkney via South Ronaldsay. Thurso's</p>	<p>1. Lack of suitable and acceptable sites.</p> <p>2. Financial constraints and low population may hamper growth.</p>	<p>1. Greater promotion of the quality and variety of uses of Caithness flagstone could boost the local economy.</p> <p>2. Scrabster's strategic location at the entrance to the Pentland Firth makes it an attractive location for businesses involved with marine renewable energy operations, along with North Atlantic oil and gas developments. The port of Scrabster been identified in the NRIP as a key development site.</p>

Topic	Background	Key Issues	Opportunities
Landscape	<p>river harbour is less busy since the Scrabster one was built.</p> <p>Distinctive landscape character which stems from its aspect/orientation (e.g. major inlets running north-south in the Sutherland section and views to Orkney from the Caithness section) and its geology (e.g. the physical legacy of the Moine Thrust which differentiates Loch Eriboll from the more sinuous sea lochs of the West Coast). Most of the coastline west of Melvich is designated either as a National Scenic Area or an AGLV.</p>	<p>High scenic value of the Sutherland section merits careful control of coastal and offshore development. The value of major headlands (e.g. Duncansby Head, Dunnet Head) as viewpoints may be under-publicised and could benefit by better visitor facilities. Offshore development in the vicinity of these should pay close regard to visual impact. Development at John O' Groats lacks coherence and would benefit from a more cohesive approach.</p>	<p>John O' Groats would justify its reputation as a tourist attraction better if there were fewer but better facilities, perhaps more closely associated with Duncansby Head. The full potential of Dunnet Head and Duncansby Head (both of which are commanding viewpoints) to attract visitors should be explored, without compromising the landscape character.</p>

Topic	Background	Key Issues	Opportunities
Nature Conservation	Rich in high quality sites such as Dunnet Head, Duncansby Stacks, Tongue Bay and Loch Eriboll, which support a diverse mix of wildlife.	Balancing environmental considerations with a reducing population. Areas of coastline out of bounds around Dounreay.	The open, remote landscapes and rugged cliffs are ideal for colonies of breeding birds. A number of new sites have been designated as SPA and therefore offer opportunities for research into priority species, as well as ongoing monitoring. The North Coast's rich wildlife heritage has potential to attract further eco-tourism.
Archaeology & Built Heritage	The north coast has numerous quality archaeological sites including traditional fishing villages, 17 th C lime kilns and ancient promontory forts.	The northern coast is subject to strong winds and battering waves therefore erosion of key coastal sites is a problem.	Existing sites could be promoted to a wider audience and linked with other initiatives (e.g. wildlife tourism), such as the Bettyhill Salmon Net Fishing Station and the Castlehill Flagstone Trail.
Scientific Research	Some research is done by agencies such as SNH, MSS and SEPA. Limited direct academic research on the north coast, but the Environmental Research Institute in Thurso has started research into marine renewables.	Growing capacity to undertake high quality research.	Opportunity to support energy projects that will bring much needed economic prosperity to this region.

This page is blank to allow for double-sided printing.

STRATEGY FOR THE NORTH COAST

6.2.6 Counter the issues of remoteness, exposure and relatively low visitor numbers by playing to this coast's strengths and promoting the area more vigorously. These strengths are unspoilt and distinctive coastal scenery, strong energy infrastructure and potential for harnessing tidal power, ready access to northern fishing grounds and the Orkney Isles, coastal wildlife interest and high-quality surfing and diving.

- Help local businesses to grow within spatially-defined communities by supporting development that does not detract from the immediate coastline, e.g. onshore support for renewable energy industry;
- support redevelopment of John O'Groats to make it a more memorable visitor destination;
- capitalise on the fine panoramic coastal viewpoints provided by the major North Coast headlands by supporting development of appropriate visitor facilities at Dunnet Head and Duncansby Head;
- encourage more provision for water-based recreation activities at suitable coastal locations, e.g. Dunnet Bay, Skerry, Loch Eriboll;
- protect the integrity of designated wildlife and heritage sites and high-value landscape areas by discouraging inappropriate development and applying suitable design standards;
- support the development of renewable energy in appropriate sites, e.g. Pentland Firth, Thurso Environmental Research Institute.

6.3 West Coast

VISION

6.3.1 The west Highland coast is widely recognised as one of the most attractive and unspoilt in Europe. This brings with it a responsibility to manage it with great care so that future generations can enjoy it as much as present and past ones have. The combination of high quality scenery, a rich and accessible wildlife resource, abundant outdoor recreation opportunities, tranquillity and a colourful cultural heritage represents a resource which, if properly managed, should continue to attract both tourists and residents long into the future. This however is contingent on good management of the details as well as the big picture so that standards are maintained.

6.3.2 The area has clean seas with relatively high natural productivity, an intricate coast with many areas of sheltered water and good resources of wind, wave and tidal energy. This also makes it an attractive coast for commercial fishing, aquaculture, marine science and nature conservation, and (potentially) a development frontier for energy generation. Together, all these factors make the west coast a complex and sensitive matrix of interests and opportunities. However, it is one where, with care, many synergistic relationships can be developed to the benefit of the local economy, communities and the environment.

BACKGROUND

6.3.3. The west coast has a mix of small towns, villages and very small settlements. Current projections indicate modest population growth in Skye, Lochalsh and Lochaber over the next few decades. Population in the more remote Sutherland section is however projected to fall by around 6% over the same period.

6.3.4 Many of the smaller coastal villages are traditional crofting communities. Most of the larger settlements i.e. Fort William, Mallaig, Kyle, Broadford, Portree, Gairloch, Ullapool and Lochinver, combine a port/harbour function with local service provision and tourist facilities. The rural economy is generally supported by small, local businesses such as tourism-related ventures, crofting, fishing and aquaculture, which rely on quality coastline and waters.

6.3.5 The west coast has a number of Special Protection Areas for birds, including the island of Rum and Priest Island in the Summer Isles. It also has several European-designated marine Special Areas of Conservation: in the Sound of Arisaig, Lochs Duich/Long/Alsh, and in Lochs Dunvegan, Snizort and Laxford. In addition there are numerous coastal SSSIs, e.g. near Aultbea and Elgol.

6.3.6 Semi-natural coastal habitats are a key feature of the west coast and in this respect it also has some of the most important wilderness recreation areas in the UK. These represent sanctuaries of natural tranquillity in a world which is increasingly built-up, interconnected and under pressure.

ISSUES AND OPPORTUNITIES

6.3.7 The west coast offers probably the most opportunities for the development of recreation and tourism facilities and activities which are tuned to sustainable use of the strong natural heritage base. However the careful husbandry of inshore waters to produce seafood via sustainable fishing practices and environmentally-friendly aquaculture will continue to be important. Such husbandry will require closer collaboration between these industries and marine scientists and environmental interests than has been the case up to now. The new, integrated marine spatial planning system which is likely to be introduced by the Marine Bill and overseen by *Marine Scotland* should be an important catalyst for this collaboration. Inshore Fisheries Groups will also have a role.

6.3.8 The natural heritage assets of the west coast also pose a number of constraints, most notably in terms of access to and around this rugged and often remote coast. This means access to goods and services is often somewhat limited. However, advances in ICT (information communications technology) have already had a profound and generally positive effect on the life and economy of the west coast in recent decades. Innovations in transportation and energy generation from renewable sources could also have a major effect in the future.

Table 6.3 Development opportunities for the Highland West Coast

Topic	Background	Key Issues	Opportunities
Coastal Population	Coastal house building is highest in the Fort William area.	North west coast is likely to experience some degree of sea level rise over next 40 years. Tendency for some areas to lose their character and coherence due to demise of traditional crofting, rather sprawling house building, and sometimes unsympathetic building design. Environmental and flooding impacts also need to be considered.	Effective coastal planning can help retain/improve physical coherence of communities, preventing an 'urban sprawl' effect and helping to support local community sustainable development.
Agriculture & Crofting	Crofting is a vital part of many west coast communities, especially in Skye and has a long cultural heritage. Croft land provides environmental benefits and a varied habitat for wildlife.	Decline in traditional skills; lack of new people wanting to take on crofts or farms.	Traditionally, crofters use low amounts of chemical fertilizers, weed killers and insect sprays. As a result the range of plants is much wider than on more intensively managed areas. There is therefore opportunity to further enhance the biodiversity value of crofts through schemes such as the SEARS initiatives. In addition, west coast crofters may want to build small-scale wind farms on croft land and common grazings, which would assist in reducing the dependency on fossil fuels and make use of the prevailing winds.
Forestry	There are a number of ongoing coastal projects, linked to	Although this coast is quite exposed there is potential for	Existing schemes could be consolidated and expanded to provide a greater network of coastal forestry sites e.g. at Applecross, Flowerdale.

Topic	Background	Key Issues	Opportunities
	wider landward schemes.	productive forestry. Lack of suitable infrastructure can hamper development. Some areas of plantation forestry on the coast have been developed as single-purpose with little regard for other interests, e.g. public access and recreation. This needs to be addressed at harvesting/replanting stage.	There is potential for temporary and permanent barge points for timber extraction which can provide shared benefits e.g. at Loch Sunart, Orbost, Kishorn and North Raasay. The Highland Forest and Woodland Strategy identifies priority areas for forest design improvement at Loch Sunart, Loch Hourn, Broadford, Loch Eynort, Loch Bracadale and Loch Snizort. A number of locations on the West Coast are also identified for enhancement of cultural heritage sites.
Tourism & Recreation	Key part of local economy, mainly based on the high scenic quality of the West Coast and opportunities there for outdoor activities. Marine/water-based recreational activities are on the increase. Major cultural heritage sites (e.g. Eilean Donan Castle, Dunvegan Castle and Inverewe	Balancing growth with often fragile environments & retaining a sense of 'wildness'. Improving coastal access infrastructure and the availability of launching/mooring facilities. Improvement of the network of coastal footpaths and cycleways to reduce dependency on	Some areas (e.g. NW Sutherland, Raasay and the Small Isles) could support greater tourism numbers if appropriate facilities and visitor management strategies are developed. However, these should aim to spread the impact and the economic benefits and consolidate worthwhile elements of local identity (e.g. vernacular architecture, community events, cultural heritage sites). This would help to differentiate the tourism products which Highland can offer, offset decline in some of the traditional industries and support remote rural economies. The areas of sheltered west coast waters which are most accessible to the population of the inner Moray Firth (e.g. Loch Broom, Loch Carron and Loch Duich) could be further developed for their water sports and wildlife tourism potential. Similarly, Loch Linnhe and Loch Leven could absorb more visitors and marinas here could be further developed to attract a wider mix of pleasure craft.

Topic	Background	Key Issues	Opportunities
Inshore Fishing	Gardens) act as “honey pots” but natural features and coastal “character” towns and villages, especially those with harbours (e.g. Ullapool and Portree) are also important.	vehicular access.	Support the establishment and development of Inshore Fisheries Groups. Greater use of new technologies and sound scientific principles to expand fisheries in a sustainable manner.
Aquaculture	Industry grew rapidly in 1980s with Crown Estate/Central Government support but no local authority planning control. Has generated many new jobs in remote rural areas of the west coast but has also been dogged by	Carrying capacity of some sea lochs; balancing the needs of other users. Resolving conflicts with wild fisheries interests over the impacts of fish farming on wild salmon and sea trout stocks which	There is a ready market for good-value, sustainably produced seafood. Some areas with potential for further development of aquaculture are identified in the Council’s Aquaculture Framework Plans and integrated coastal plans. As new technology evolves, there may be the opportunity to develop marine farming sites which hitherto have been regarded as too exposed. Shellfish farming is relatively underdeveloped in some areas and could “back-fill” some sites vacated by finfish farms.

Topic	Background	Key Issues	Opportunities
	<p>controversy because of impacts on other interests and perceived lack of local accountability. Less jobs now because of automation and most the best sites have been taken up. Main scope for expansion of finfish production may be via development of less sheltered sites and low-impact technology.</p>	<p>are now a depleted and fragile resource in many areas.</p>	
<p>Renewable Energy</p>	<p>Relatively new but key part of the Government's commitment to addressing energy supply needs and meeting its responsibilities to reduce greenhouse gas emissions under the Kyoto agreement.</p>	<p>Limited knowledge of the technology required. Large-scale surface installations in near-shore waters would be difficult to reconcile with the high landscape & seascape value of the West Coast, especially in relation to grid connections.</p>	<p>Although there is widespread potential for offshore wind and tidal energy development, the mix of opportunities and constraints on the West Coast is less conducive to large-scale/ high-output developments than the other Highland coasts. However, as the technology evolves and/or the demand for renewable energy increases, smaller-scale installations may become more viable. There are already a range of quality small-scale projects as part of the Sustainable Islands Development Initiative.</p> <p>Sub-sea installations harnessing tidal power would be easier to reconcile with some of the key interests on the west coast than wind and wave-power installations.</p>
<p>Other Coastal Industries: 1. Quarries</p>	<p>1. Minerals extraction: there are several sand and</p>	<p>1. Quarries have a significant impact on the coastal</p>	<p>1. The most significant quarry is the large granite quarry at Glensanda. It is located in a remote area with no road access and there would be a presumption for continued support of this quarry.</p>

Topic	Background	Key Issues	Opportunities
2. Harbours	<p>gravel quarries, with Glensanda being the biggest coastal quarry in the UK.</p> <p>2. Several small but important harbours servicing relatively remote communities.</p>	<p>landscape but provide valuable employment and much-needed resources.</p> <p>2. Many of the smaller harbours need upgrading but funding remains a challenge.</p>	<p>2. The harbours at Kishorn and (to a lesser extent) Mallaig and Lochinver have potential to support and service marine renewable energy developments. Under the Council's review of the facilities at small ports and harbours, potential for investment can be identified. As discussed above, ongoing development of marinas to attract a wider mix of pleasure craft would help support some of the more remote communities. The site at Kishorn been identified in the NRIP as a key development site.</p>
Landscape	<p>Most of the west coast is designated as high scenic value (national and regional designations). The landscape forms the basis of the area's attraction for tourists and is a key aspect of the area's marketing identity for other products and services. "Rugged and unspoilt" are key elements of its appeal, along with more intimate crofting landscapes.</p>	<p>Appropriate location, scale and design are important criteria in safeguarding landscape character and scenic quality. The coastline is a key visual reference and seaward views are generally important so careful judgement is required in assessing proposals for buildings, structures or excavations on the coast and installations in nearshore waters.</p>	<p>Opportunities to enhance the landscape of the west coast include: (1) schemes to rejuvenate or expand native woodland cover where this has become depleted; (2) design improvements to forests (particularly those close to settlements or popular recreational areas) to open up views from coastal paths, enhance the setting of coastal settlements and archaeological sites and increase species diversity; (3) initiatives to maintain traditional elements of the crofting/farming landscape where these help to give structure and character to the landscape; (4) grant aid for work to renovate listed buildings; (5) guidance and support to improve the design of houses in the countryside; (6) initiatives to improve the amenity of harbour areas, particularly where these have a recreational as well as commercial function.</p>

Topic	Background	Key Issues	Opportunities
Nature Conservation	Major asset to the west coast; focus of much tourism-related activity. Diverse marine life which attracts many divers, sailors and kayakers.	Balancing environmental considerations with socio-economic pressures.	Opportunities can be created to work with terrestrial and biodiversity planning officers and other stakeholders to focus on priority coastal biodiversity targets. In the marketing package for Fort William/ Ben Nevis/Glencoe, more could be made of the wildlife-watching opportunities around the coasts of Loch Linnhe and Loch Leven. Much of Skye's coastal areas are of high natural heritage value which could be augmented by greater access via coastal footpaths, interpretation boards and visitor facilities. Footpaths could steer people away from the most sensitive sites thereby protecting the most valuable sites whilst encouraging greater participation in biodiversity projects, outdoor activities or just simple enjoyment of the surroundings.
Archaeology & Built Heritage	Historic and prehistoric activity has resulted in a rich variety of sites along our long coastline. These sites can be domestic, fortified, industrial or military and include shell middens, brochs, castles, salt pans, fishing stations, wartime defences and shipwrecks.	Coastal erosion and battering by prevailing winds can damage fragile sites.	The west coast has a rich archaeological heritage ranging from Iron Age brochs and forts to coastal castles like Eilean Donan and Mingary, to relics from the Second World War, e.g. the emergency coastal battery at Cove, on the shores of Loch Ewe. There are opportunities to further promote these sites to encourage more visitors and create a better understanding of our fragile coastal archaeological heritage. There are also some wreck dives around this coast (e.g. the <i>Port Napier</i> at Kyle) which could be more widely promoted.
Scientific Research	Some research is done by agencies such as SNH, MSS and SEPA at e.g. Ardtoe and Kyle. Limited direct academic research undertaken by HC.	Lack of capacity and funding to carry out many types of research.	Some types of research favour locations away from built-up areas or in largely natural settings. The Highland west coast has a relative abundance of such locations and these are often combined with an attractive landscape setting which can help to attract high-calibre staff. Research units majoring on natural resources, especially if they have an attractive or dramatic landscape setting, can also have wider education and tourism spin-offs. Research opportunities exist in a range of fields, e.g. aquaculture, the ecology and genetics of rare marine species such as the <i>Ascophyllum nodosum</i> ecad <i>mackaii</i> beds in Loch Duich, seaweed harvesting and the effects of climate change on intertidal communities.

STRATEGY FOR THE WEST COAST

6.3.9 Safeguard the high natural heritage and recreational value of this coast and the bio-productivity of its inshore waters by close attention to the principles of sustainable development and use.

- Aim for greater co-operation and synergy between fishing and marine nature conservation interests particularly in semi-enclosed areas of inshore waters and around the major islands where tangible benefits to local communities should arise from this co-operation;
- help local businesses to grow within spatially-defined communities by supporting development that does not detract from the immediate coastline;
- support the development of sustainable tourism-related businesses and recreational facilities, especially in the more isolated areas such as NW Sutherland, Raasay and the Small Isles;
- protect the integrity of designated sites by discouraging inappropriate development and implementing appropriate codes of conduct;
- support the development of aquaculture which is compatible with other coastal interests, tailored to the potential and sensitivities of respective sites and at a scale which is within the visual and biological carrying capacity of the areas concerned;
- ensure that Aquaculture Framework Plans or Integrated Coastal Plans are prepared and maintained to provide local guidance for developers where necessary;
- support the development of renewable energy at appropriate sites;
- manage access and development to safeguard the integrity and tranquillity of key areas of coastal wild land;
- support the development of coastal timber extraction barge points at key sites, e.g. Loch Sunart, Orbost (Loch Bracadale), Kishorn and north Raasay;
- support forest design improvements where these can add to the amenity and recreational value of coastal forests, enhance appreciation of coastal archaeological sites and open up views from coastal footpaths and cycleways;
- develop harbours to help them cater for multiple interests where appropriate.

7.0 MONITORING AND REVIEW

SGRÙDADH AGUS ATH-BHREITHNEACHADH

7.0.1 To assess the effectiveness of this strategy, Highland Council will use the issues and objectives from the SEA process to monitor and review the coastal development strategy. Part of this review will take account of changes brought in through the Scottish Marine Act (2010) and any impacts it will have in relation to marine spatial planning.

8.0 BIBLIOGRAPHY

CLÀR-LEABHRAICHEAN

Ancestral Scotland

<http://www.ancestralscotland.com/research-your-roots/working-men-and-women/909581/> (accessed 29/01/09)

A Strategy for Scotland's Coast and Inshore Waters

<http://www.scotland.gov.uk/Publications/2004/07/19639/40168> (accessed 30/04/09)

Baxter, J.M., Boyd, I.L., Cox, M. Cunningham, L. Holmes, P. & Moffat, C.F. (Editors) (2008). *Scotland's Seas: Towards Understanding their State*. Fisheries Research Services, Aberdeen.

Crofting Reform Act (2007)

http://www.opsi.gov.uk/legislation/scotland/acts2007/asp_20070007_en_1 (accessed 30/04/09)

EU Marine strategy directive <http://www.seas-at-risk.org/n2.php?page=12> (accessed 30/04/09)

Fisheries Research Service (2008) *Scottish Shellfish Farm Production Survey 2007*, FRS, Aberdeen.

Frazer, L.N. (2008) Sea-Cage Aquaculture, Sea Lice and Declines of Wild Fish. *Conservation Biology*, **23**, 3, 599-607.

Inshore Fishing <http://openscotland.gov.uk/Topics/Fisheries/Sea-Fisheries/InshoreFisheries/IFG'sMap> (accessed 30/04/09)

Mente, E., Pierce, G.J., Spencer, N.J., Martin, J.C., Karapanagiotidis, I.T., Santos, M.B., Wang, J. & Neofitou, C. (2008) Diet of demersal fish species in relation to aquaculture development in Scottish sea lochs. *Aquaculture*, **277**, 263-274.

Pethick, J. (1999) *Scotland's Living Coastline*. (Eds) Baxter, J.M., Duncan, K., Atkins, S.M. & Lees, G. SNH/TSO, London.

Renewable Energy <http://www.hie.co.uk/renewable-energy.html> (accessed 02/12/2008)

Scottish Coastal Forum (2004) A Strategy for Scotland's Coast and Inshore Waters. Scottish Coastal Forum, Edinburgh.

Sea Fisheries <http://www.hie.co.uk/HIE-economic-reports-2007/Sector%20profile%202007%20-%20sea%20fisheries.pdf> (accessed 30/04/09)

Shellfish Water Quality http://www.sepa.org.uk/water/shellfish_waters.aspx (accessed 10/02/2009)

The Scottish Government (2008) *Sustainable Seas for All: a consultation on Scotland's first marine bill*. The Scottish Government, Edinburgh.

The Scottish Office Development Department, 1997. *National Planning Policy Guideline 13 (NPPG-13). Coastal Planning*.

The Scottish Office Development Department, 1997. *Planning Advice Note 53 (PAN-53). Classifying the Coast for Planning Purposes.*

Tsimplis, M. (2004) *Towards a vulnerability assessment for the UK coastline*". Tyndall Centre of Climate Change Research Technical Report 10

ADDITIONAL USEFUL WEBSITES

www.eri.ac.uk/

www.highland.gov.uk/NR/rdonlyres/B1A99C69-B1B3-4586-8BC8-CC8684301011/0/20072008AnnualWasteDataReport.pdf

<http://openscotland.gov.uk/Topics/Fisheries/Sea-Fisheries/InshoreFisheries/IFGsMap>

www.seas-at-risk.org/n2.php?page=12 (EU Marine strategy directive)

www.sepa.org.uk/water/shellfish_waters.aspx (accessed 10/02/2009)

www.sniffer.org.uk

<http://ukclimateprojections.defra.gov.uk/>

LIST OF ACRONYMS

AFP	Aquaculture Framework Plan
AGLV	Area of Great Landscape Value
ERI	Environmental Research Institute
FRS	Fisheries Research Service (now Marine Scotland Science)
HCDS	Highland Coastal Development Strategy
HWLDP	Highland Wide Local Development Plan
ICT	Information Communication Technology
IFG	Inshore Fisheries Group
MEDIN	Marine Environmental Data and Information Network
MRP	Marine Region Plan
NPPG	National Planning Policy Guidance
NRIP	National Renewables Infrastructure Plan
NSA	National Scenic Area
PAN	Planning Advice Note
SAC	Special Area of Conservation
SEARS	Scotland's Environment and Rural Services
SEPA	Scottish Environment Protection Agency
SHEP	Scottish Historic Environment Policy
SLR	Sea Level Rise
SNH	Scottish Natural Heritage
SNIFFER	Scottish and Northern Ireland Forum for Environmental Research
SPA	Special Protection Area
SPP	Scottish Planning Policy
SSSI	Site of Special Scientific Interest
UHI	University of the Highlands and Islands
UKBAP	UK Biodiversity Action Plan
UKCP09	UK Climate Projections 2009

Cover photo credit

Ken Crossan, Caithness Biodiversity Partnership Project

EXTRACT FROM NPPG 13 – DEFINITIONS AND POLICY GUIDANCE FOR THE ‘DEVELOPED’, ‘UNDEVELOPED’ AND ‘ISOLATED’ CATEGORIES

[The Scottish Office Development Department published NPPG 13 “Coastal Planning” in August 1997. It followed this in October 1998 with Planning Advice Note (PAN) 53 “Classifying the Coast for Planning Purposes”. Together these documents provided the basis for the coastal classification which was used in the consultative draft of the Highland Coastal Development Strategy published in August 2009.

After the public consultation period on the draft Highland CDS, the Scottish Government decided to consolidate and simplify its national planning guidance by producing a single Scottish Planning Policy (SPP) in February 2010. This superceded NPPG 13 and PAN 53 and removed the requirement for local planning authorities to classify their coast in that way. However, many local authorities besides Highland had already done so and this form of classification remains a valid indicator of the level of existing development around the coast. The coastal classification for Highland can therefore help to inform the pending plans that will arise from the SPP process, along with the new Marine (Scotland) Act 2010.

Whilst the policy elements of NPPG 13 have now been superceded, they are included here for background interest and to indicate the context in which the coastal classification was developed.

The following text extracts include the paragraph numbers used in the original NPPG 13 document. Some of the headings used here have been adapted from those in NPPG 13 or are new. These are solely for signposting purposes]

Planning for the coast: general approach and definition of the coastal zone

“11. The coastal zone comprises three main elements: the land; the intertidal zone; and the sea. Statutory planning control does not extend to the entire coastal zone, although some development which occurs offshore may impact onshore, for example fish farming. Conversely, onshore development through, for example, discharge of pollutants into the sea may affect fish stocks and the subsequent livelihood of coastal communities. **Planning authorities should recognise the inter-relationship between onshore and offshore activities.**

“12. For statutory planning purposes the limit of the coastal zone in the seaward direction is, at the time of writing, 3 nautical miles. The landward limit of the coast is more difficult to define but can be determined by the geographical effects of coastal processes and coastal-related human activity; it is therefore a zone of variable width. It may include areas affected by offshore and nearshore natural processes, such as areas of potential erosion; enclosed tidal waters, for example

estuaries and surrounding areas of land; and areas which are directly visible from the coast. In some places, for example where there are cliffs, the coastal zone may be relatively narrow. Elsewhere, particularly where there are sub-tidal areas of low-lying land and inter-tidal areas, it will be much wider and, for many islands, will consist of their entire area. **It is for planning authorities, based on the particular characteristics of an area, to define the extent of the coastal zone in their area.**”

Categories to be used in the classification

“14. There is a variety of coastal types in Scotland but, for planning purposes, the coast can be viewed as developed, undeveloped or isolated:

- The Developed Coast includes towns and cities as well as substantial free standing industrial and energy developments. It may also contain sites of significance for national and international nature conservation, important cultural heritage resources as well as valuable areas of open space and recreation such as golf courses.
- The Undeveloped Coast includes agricultural and forestry land, low intensity recreational uses and smaller settlements which depend on the coast for their livelihood. Extensive sections of the undeveloped coast are protected by national and international natural heritage designations and contain important cultural heritage resources.
- The Isolated Coast is distant from centres of population and lacks obvious signs of development or other human activity. Such areas, which are likely to be limited in number and extent, are also likely to be relatively inaccessible. Some parts of the isolated coast may be protected by national and international natural heritage designations and may contain important cultural heritage resources.

“It is for planning authorities, in their structure and local plans, to identify which stretches of coast should be regarded as developed, undeveloped or isolated and set out the policies which should apply in these areas. In categorising the coast planning authorities should seek the views of SNH who can provide a perspective on the protection and enjoyment of the national and international interest in landscape and nature conservation but also of other key interests such as local enterprise companies, Scottish Environment Protection Agency, tourism bodies, representatives of the fishing industry, the local authority archaeological service, amenity groups and local communities. This categorisation is intended to serve as a planning policy framework for the coast and not as an additional statutory designation. Further elaboration of the criteria to be used in classifying the coast for planning purposes will be provided in due course.

“15. The coast of Scotland is attractive and varied, but it is also a complex environment where many of the interactions between natural processes and human activities are not always well understood. To achieve sustainable

development and maintain and enhance its biodiversity requires an approach based on the following principles:

- **development for which a coastal location is not required should not normally be permitted on the coast**
- **development which requires a coastal location should generally be accommodated on the developed coast**
- **development for which a coastal location is required should preferably look to reuse available and suitable brownfield land**
- **conservation and, where appropriate, enhancement of the natural and cultural heritage should be promoted and opportunities for its enjoyment should be identified**
- **understanding the natural processes at work on the coast is a key input to planning policies and decisions**
- **where potential damage to the environment is both uncertain and significant, a precautionary approach is required**
- **the criteria required by the various bodies responsible for environmental protection should be met.**

“16. Where development on the coast is to be allowed, planning authorities should:-

- **give careful consideration to the siting and seek high standards in the design of new development**
- **protect the special interests of sites of natural heritage significance particularly those identified by national or international designations**
- **safeguard cultural heritage resources**
- **protect existing public open space unless replacement provision can be provided as part of the development**
- **retain or, where possible, provide additional opportunities for public access to and along the coast.**

The Developed Coast

“17. The developed coast should be the focus for developments requiring a coastal location or which contribute to the economic regeneration or well-being of settlements whose livelihood is dependent on coastal or marine activities and features or which meet the social needs of these communities. Where development on the coast is justified, opportunities for the development or re-use of vacant land and buildings should be considered in the first instance as this should:-

- avoid the use of greenfield sites
- reduce pressure on more sensitive stretches of the coast
- contribute to renewal and regeneration.

It is not, however, always possible to re-use vacant land: in some areas there will be little or no potential to recycle land, or the sites may be too small, or they are located close to developments which restrict the uses that can be accommodated in close proximity.

“18. Where there are recognised opportunities for development on the coast these provide considerable scope for imaginative approaches to layout and design; but, with imagination, must come sensitivity to setting, character and sense of place. Indeed many coastal towns and villages display a distinctive character which should be maintained and enhanced. While the public sector can act as a catalyst for promoting waterfront opportunities, private sector investment is likely to be important in delivering these projects.

“19. Where there are no, or only very limited, opportunities for the regeneration of waterfront areas, planning authorities should seek to accommodate new development on the landward side of settlements rather than permitting additional development on the coast although topographic, landscape, infrastructure and other considerations may limit the options. It is, however, particularly important to consider the effect of new development on the landscape setting of coastal towns.

“20. Planning authorities should:-

- **give priority to promoting the imaginative re-use of redundant land and buildings, particularly where there are opportunities to restore or enhance degraded coastal environments**
- **unless a coastal location is required, promote locations on the landward side of existing settlements before considering new development on the coastal strip**
- **avoid coalescence of development along the coast.**

“21. Even on the developed coast there will be areas where special care should be taken to assess the effects of development on the environment. This is particularly true in estuaries where there are sites which are nationally and internationally important for their natural and cultural heritage value and where it will be important to assess proposed developments not just in relation to their immediate surroundings but also their wider impact; in some areas previously developed land has become important for nature conservation. Potential risks from flooding, erosion or pollution should also be carefully assessed. In formulating structure and local plan policies and making development control decisions, planning authorities should:-

- **take particular care to assess the impact of development, individually or cumulatively, on natural and cultural heritage interests and on open space**
- **consider the potential risks from flooding, erosion or pollution for the location of development.**

The Undeveloped Coast

“22. Over 3400 kms of Scotland's mainland coastline, which is 88% of the total length, can be regarded as undeveloped in the context of this NPPG. Along its length can, however, be found smaller towns and villages, including dispersed settlements which are characteristic of many parts of the Highlands and Islands. It is important that the development requirements of these communities, including for example the provision of affordable housing, community facilities

and workshop space locally, are fully addressed. In addition, development opportunities, for example related to tourism, leisure and recreation, can make an important contribution to the economy of rural areas. Many of these developments which can assist in sustaining the long-term viability of coastal communities are likely to be on a modest scale. Ill considered development, however, can have a detrimental effect on ecology and scenery as well as on cultural heritage interests; a key objective for the planning system is to provide a framework for investment in development while protecting the undeveloped coast from unjustified and inappropriate development.

“23. Proposals which, for technical and other reasons, require a coastal location include ports and harbours, some tourism, leisure and recreation projects, coastal exporting superquarries, some sewage treatment plants, the onshore elements of North Sea oil and gas developments and of fish farms, some energy schemes and specific defence establishments. Large development proposals are likely to present the greatest threat to the natural, cultural or scenic environment but the cumulative effect of smaller developments can be just as damaging. As relatively few types of development require a coastal location, the undeveloped coast should generally be considered for development only where:-

- **the proposal can be expected to yield social and economic benefits sufficient to outweigh any potentially detrimental impact on the coastal environment**
- **there are no feasible alternative sites within existing settlements or on other previously developed land**

In other cases robust reasoned justification will be required in support of development. Applications for major developments on the coast are likely to require an environmental statement (see paragraphs 33-35).

The Isolated Coast

“24. The qualities of the isolated coast can be easily damaged but are difficult to recreate. Such areas which are likely to be limited in number and extent are becoming increasingly rare nationally and internationally and, as a result, their special characteristics need to be recognised and safeguarded. A presumption against development should apply in these areas. Planning authorities should, therefore, consider:-

- **whether there are sections of the coast which should be regarded as isolated and where there should be a presumption against new development**
 - **where there are such areas, policies to safeguard their character based on sound, reasoned justification should be set out in structure and local plans.”**
-

Action Required

“52. A strategic planning policy context for the coast is required because the impact of development on natural and cultural heritage interests and effects of natural processes are not always confined to local areas nor are the impacts or effects always evident in the short term. This may result in:

- damage elsewhere to habitats, fisheries, cultural heritage or recreational resources
- alteration to the natural processes of erosion and deposition
- increased risks to existing development and coastal defences.

It is therefore important, particularly in estuaries, that planning authorities work together on coastal planning at the strategic level and take a long term view of the potential impact of natural processes on existing and future development as well as on the natural and cultural heritage. Planning Advice Note 37 Structure Planning (revised December 1996) stresses the importance of a partnership approach to structure plan preparation; in view of the range and nature of issues the importance of involving national and local agencies and organisations as well as local communities in drawing up policies for the coast cannot be overstated. This process should enable particular policies and proposals on the coast to be drawn up in the context of the wider planning objectives for an area.

“53. Structure plans should:

- **distinguish between the developed, undeveloped and isolated coast**
- **set out general policies for the protection of the coastal environment, including in particular Special Areas of Conservation and Special Protection Areas**
- **indicate priority locations for investment in enhancement and regeneration**
- **identify areas at risk from coastal erosion and flooding and set out their policy in relation to the location of new development in such areas**
- **suggest priority areas where a co-ordinated approach to coastal zone management should be pursued.**

This should generally be done as part of and in the context of the normal process of structure plan preparation rather than by promoting a specific alteration dealing with the coast.

Local Plans

“54. The strategic framework and policies of the structure plan should be translated into more detailed policies for the promotion and control of development and safeguarding the environment on the coast. These should:

- **define in the proposals map the extent of the coastal zone and in particular the developed, undeveloped and isolated coast**
- **set out detailed policies for the protection of the environment on the coast**

- **identify priority sites for enhancement and regeneration and opportunities for restoring degraded coastal environments**
- **outline the criteria which will be applied with respect to the location and design of new development having regard to the risk from erosion and flooding, cultural and natural heritage interests**
- **incorporate policies developed in Local Agenda 21 or Local Biodiversity Action Plans to meet local biodiversity objectives.**

Again the partnership approach to policy formulation is central to achieving relevant and effective local plans.”

[NB: At the time of writing, the planning system is in the process of changing. The Planning etc (Scotland) Bill 2006 replaces the system of structure and local plans with a requirement for strategic development plans for the four main city regions and local development plans. These will set out detailed policies and proposals for development and land use. Outwith the city regions a local development plan will be prepared for the whole of each local authority area. This will include a vision statement which will set out in broad terms the local authority’s views as to how development within the area should occur]

Conclusion

“59. This NPPG supersedes the 1974 and 1981 Guidelines on coastal planning. The importance of the coast is recognised and the guidelines provide a framework within which planning authorities can address the issues which arise in a complex and sensitive environment. Not all of these issues can, of course, be addressed through the planning system but the guidelines recognise that development plans can make an important contribution to achieving sustainable development and maintaining and enhancing biodiversity. Planning authorities should also be able to play a prominent role in coastal fora where the nature and scale of the issues require a more comprehensive approach than can be achieved through statutory planning procedures and mechanisms.”

[The above extracts are taken from ‘National Planning Policy Guideline NPPG 13: Coastal Planning’, published by the Scottish Office Development Department in August 1997. The full text of this document can be accessed on the Scottish Government’s website or it can be inspected at Highland Council HQ, Glenurquhart Road, Inverness.]

METHODOLOGY USED FOR THE AREA CLASSIFICATION

Definition of the coastal zone

The seaward boundary of the coastal zone for terrestrial planning purposes has traditionally been the Mean Low Water Mark of Spring Tides (MLWS). However, the immediate inshore area within ready view of the coast is also subject to certain types of development pressure (e.g. for aquaculture installations or harbour/marina development) which affect the value of the coastal zone and can impact on other interests. The classification is intended to inform future Local Development Plans and Aquaculture Framework Plans and can guide development in the nearshore zone as well as the land adjacent. For the purposes of this study, the outer (indicative) limit of the coastal zone has been taken as 3 nautical miles from MLWS. The landward (indicative) limit of the coastal zone has been taken as 1 km inland from MHWS.

Primary Indicator

PAN 53 set out a list of primary and secondary indicators to be used in classifying the coast. The primary indicator for deciding whether a stretch of coast should be regarded as Developed, Undeveloped or Isolated is settlement size (see Appendix 1). The relatively sparse population levels in Highland (by UK and European standards) mean that most of the Highland coast qualifies as Undeveloped or Isolated under the terms of NPPG 13.

Highland towns and villages are relatively small but they are important as service centres for the wider rural communities surrounding them. For the purposes of this classification, the settlement population criterion used to identify Developed coast has therefore been reduced from a figure of 1000-2000+ population (as recommended in PAN 53) to circa. 500-1000+. Consequently, smaller settlements with a population of less than 500-1000 fall into the category of Undeveloped coast. The development needs and opportunities in these areas are addressed in detail in the Council's various Development Plans.

The NPPG 13 definition of Isolated coast is "distant from centres of population and lacking in obvious signs of development or other human activity." The suggested criterion is the absence of settlements (including individual farms). However, in the Highland context, it is not uncommon for an individual property to be present in an otherwise totally isolated coastline. For the purposes of classifying the Highland coastline, this criterion has therefore been modified to take into account the presence of such existing discreetly located development.

Secondary Indicators

A number of secondary indicators allow the classification to be fine-tuned. These indicators, which are also set out in PAN 53, relate to infrastructure, the degree of industrial/commercial/power/port/military presence, tourism/recreation

presence, the level of offshore activity (essentially in the form of fixed installations such as oil rigs and fish farms), and the character of the coastline (the extent to which it is urban, rural or lacking in signs of human activity).

Some further modifications to the criteria contained in PAN 53 have been necessary to take account of the specific characteristics of the Highland area. These modifications are set out in Appendix 2.

Industrial, commercial, power, ports and military uses

Areas where major infrastructure associated with these activities is present will usually be designated as Developed. The Developed coast in Highland is at Nairn, Inverness, Invergordon, Wick, Thurso, the Dounreay complex, Kinlochbervie, Lochinver, Ullapool, Kyle of Lochalsh, Portree, Mallaig, and Fort William. Areas where these features are present on a smaller scale and coincide with settlements of less than 500 population, e.g. Uig, were considered not to be substantial enough to warrant classification as Developed.

Tourism and recreation

Tourism and recreation play a major role in the economy of Highland. One of the main attractions for visitors is the rugged character of much of the Highland coast and the many sheltered inlets which give communities a foothold in what is predominantly an upland area. The more mellow scenery of the inner Moray Firth also has its attractions and is important as a recreation area for the main centres of population here. All the major coastal leisure activity centres such as marinas are located in Developed areas. Installations associated with a significant but lower intensity of coastal leisure activity, i.e. jetties, are generally located on Undeveloped coasts. Swinging moorings tend to be located near coastal communities where they are supplied and maintained by the local harbour authority or the local community moorings association. The presence of such moorings in numbers is therefore not generally associated with the Isolated coast.

Coastal footpaths are often a tourist attraction and were suggested in PAN 53 as an indicator for the Undeveloped category. However, in practice many of the coastal footpaths in Highland run through remote and unpopulated areas so may be present on some coasts classified as Isolated (e.g. Sandwood Bay).

Offshore activity

At the time of writing, apart from marine aquaculture installations few offshore developments are visible from the coast. This is likely to change in the longer term however, as marine renewable energy resources are harnessed on a wider scale.

The Beatrice oil and gas field is relatively close at approximately 15-20 km off the eastern coast of Caithness. However, if, as seems likely, this offshore area is

developed for large-scale wind-farming purposes, it will still be too far away from the Caithness coast to justify a general classification of the coast as Developed.

Fish farming and shellfish farming installations are generally close to the coast and have been located in many of the sea lochs, sometimes at sites remote from other forms of development. If discreetly located, moderate in scale and sensitively designed, their presence may be barely noticeable, so in some cases they may be compatible with the classification of a stretch of coastline as Isolated. In other cases, the presence of an aquaculture installation is more obvious, particularly if it uses high-profile equipment, or is associated with shore-based structures nearby and frequent boat movements. In such cases the category Undeveloped coast is more appropriate. The particular nature of the terrain also has a bearing here in that some coastlines make it easier to locate a fish farm unobtrusively than others. The value of remote coastlines without development, as wildlife havens and as resources for wilderness recreation, is also relevant.

Mapping

For the purposes of the area classification, the initial assessment was made using the Ordnance Survey's 1:50,000 scale map coverage and by drawing on the project team's collective professional knowledge of the Highland coast. Areas of uncertainty were then scrutinised in more detail using larger scale (1:10,000) OS maps which generally show all buildings or other significant structures present at the time of survey. In addition to this, field visits were made to selected areas to "ground-truth" the map-based observations.

The results of the classification were compiled on computer-based Geographic Information System using ArcInfo software. Printed versions of the maps are provided in Appendix 3. The maps will also be posted in electronic form on the Highland Council website.

This page is blank to allow for double-sided printing.

PAN 53 RECOMMENDED INDICATORS AND AMENDED CRITERIA USED FOR HIGHLAND

Table 1: Scottish Office recommended indicators for classifying the coast for planning purposes (from PAN 53)

Primary Indicators	Developed	Undeveloped	Isolated
Settlement Size	Settlements 1000/2000	Settlements 1000/2000	No settlements (including individual farms)
Secondary Indicators	Developed	Undeveloped	Isolated
Infrastructure	Major road/rail/power	Minor road/rail/power	No road/rail/power
Industrial Commercial Power Port Military	Major centre of activity eg Grangemouth	Minor centre of activity eg Jetty	No presence
Tourism, Leisure and Recreation	Major centre of activity eg Inverkip	Minor low intensity development eg coastal path	No presence
Offshore Activity	Significant presence e.g. oil rig	Noticeable presence e.g. fish farms	No presence
Character	Predominantly urban	Predominantly rural	Extended views lacking obvious signs of human activity (on/off- shore) and generally wild or natural

Table 2: Adapted PAN 53 Indicators used for classifying the Highland coast (criteria which have been modified are shown in italics)

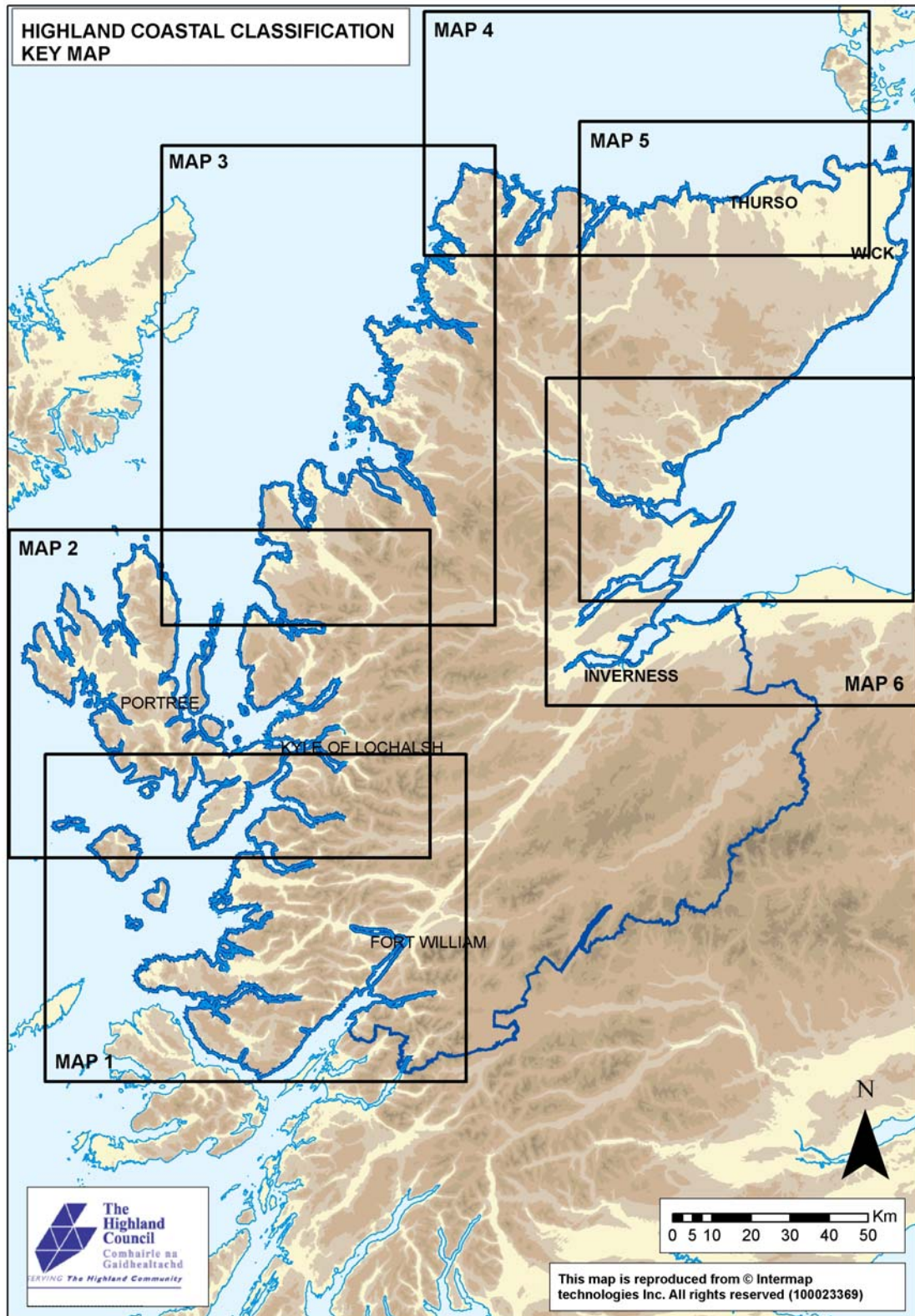
Primary Indicators	Developed	Undeveloped	Isolated
Settlement Size	<i>High density settlements greater than 500-1000</i>	<i>Low density settlements less than 500-1000</i>	<i>No settlements, in some cases discrete isolated individual property may be present⁽¹⁾</i>
Secondary Indicators	Developed	Undeveloped	Isolated
Infrastructure	Major roads, rail & power installations	Minor roads, rail & power installations	No roads, rail & power installations
Industrial Commercial Power Port Military	Major centre of activities e.g. Invergordon	Minor centre of activities e.g. jetty	No presence
Tourism, Leisure and Recreation	Major centre of activities e.g. marina	Minor low intensity development e.g. coastal path, jetty, swinging moorings	No presence
Offshore Activity	Significant presence e.g. oil rig	Noticeable presence e.g. fish farms	<i>No significant presence, although existing discrete minor aquaculture installations may be present⁽²⁾</i>
Character	Predominantly urban	Predominantly rural	<i>Extended view lacking obvious signs of human activity and generally wild and natural⁽³⁾</i>

(1) In certain cases an individual property may be present which has discrete pedestrian and no vehicular access

(2) Aquaculture installations are temporary structures and may be completely removed (or relocated elsewhere) during the life of a plan.

(3) In certain cases discrete evidence of historic human activity (e.g. certain ruined structures) may be present.

APPENDIX 4: COASTAL CLASSIFICATION MAPS



Overview of individual maps

[NB: when printing off electronic copies of the maps, use A3 to maintain correct scale]

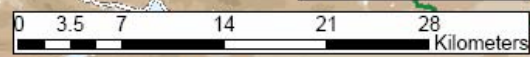
This page is blank to allow for double-sided printing.

HIGHLAND COASTAL CLASSIFICATION MAP 2



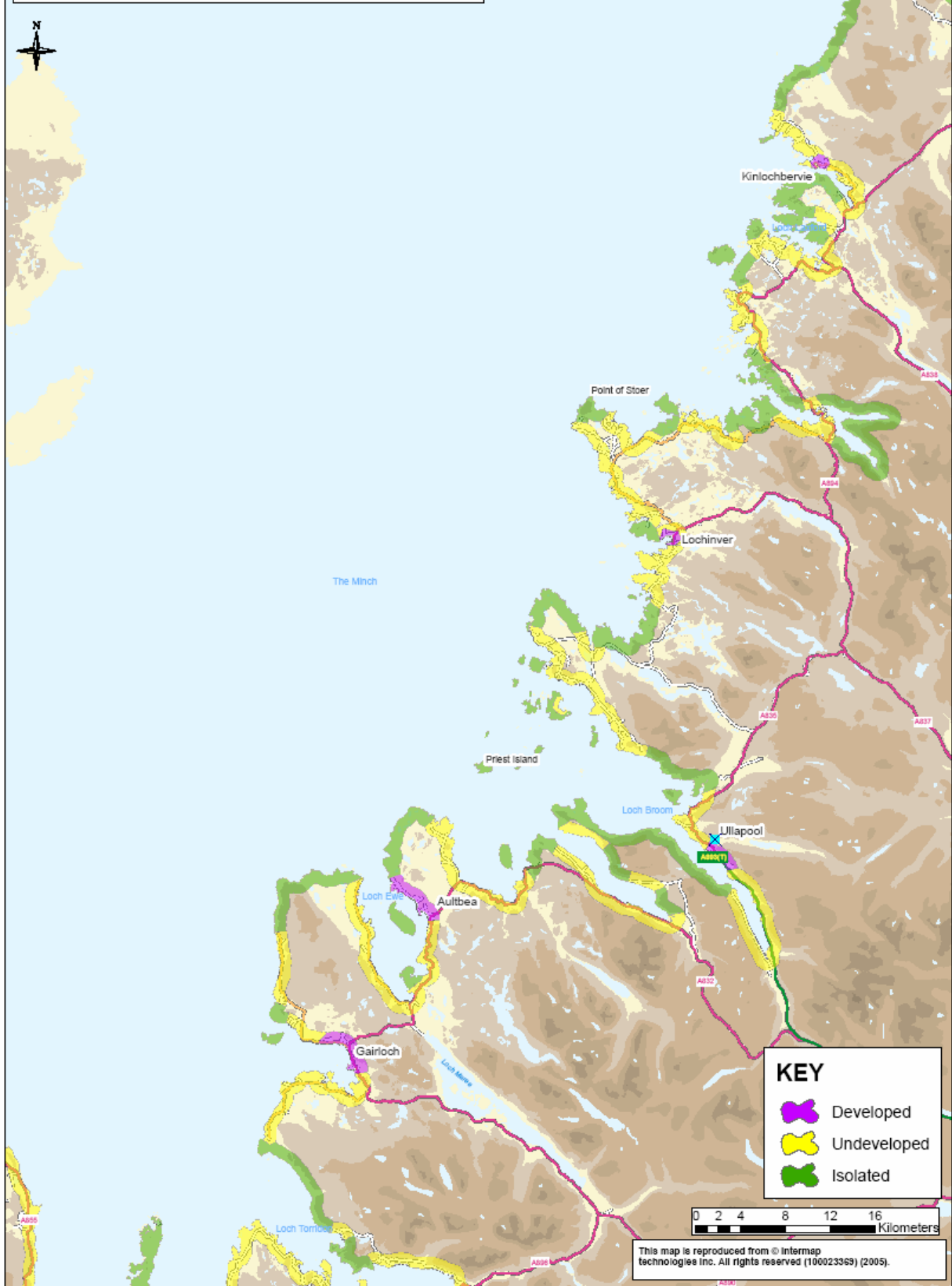
KEY

- Developed
- Undeveloped
- Isolated



This map is reproduced from © Intermap technologies inc. All rights reserved (100023369) (2005).

HIGHLAND COASTAL CLASSIFICATION MAP 3



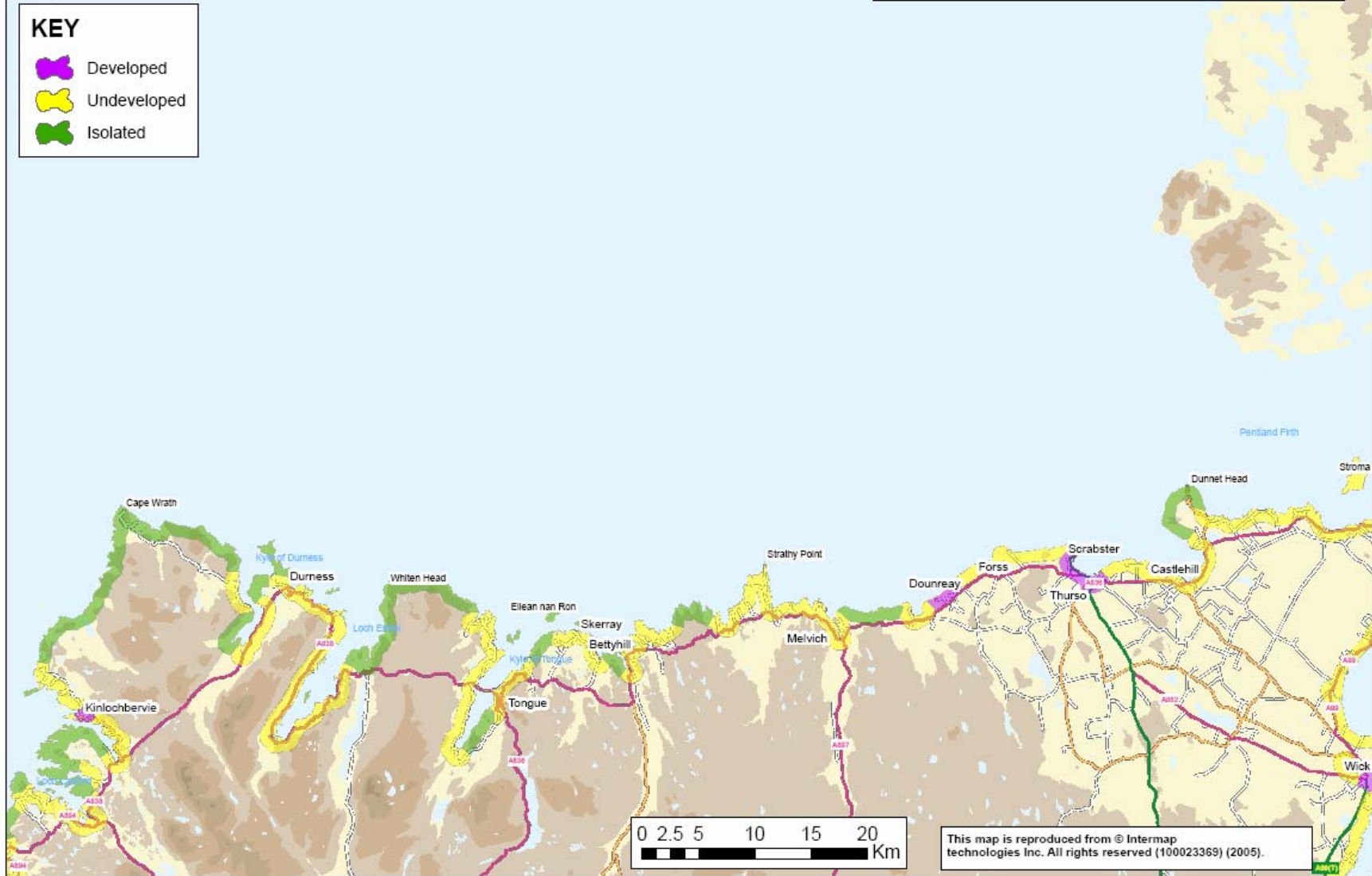
This page is blank to allow for double-sided printing.



HIGHLAND COASTAL CLASSIFICATION MAP 4

KEY

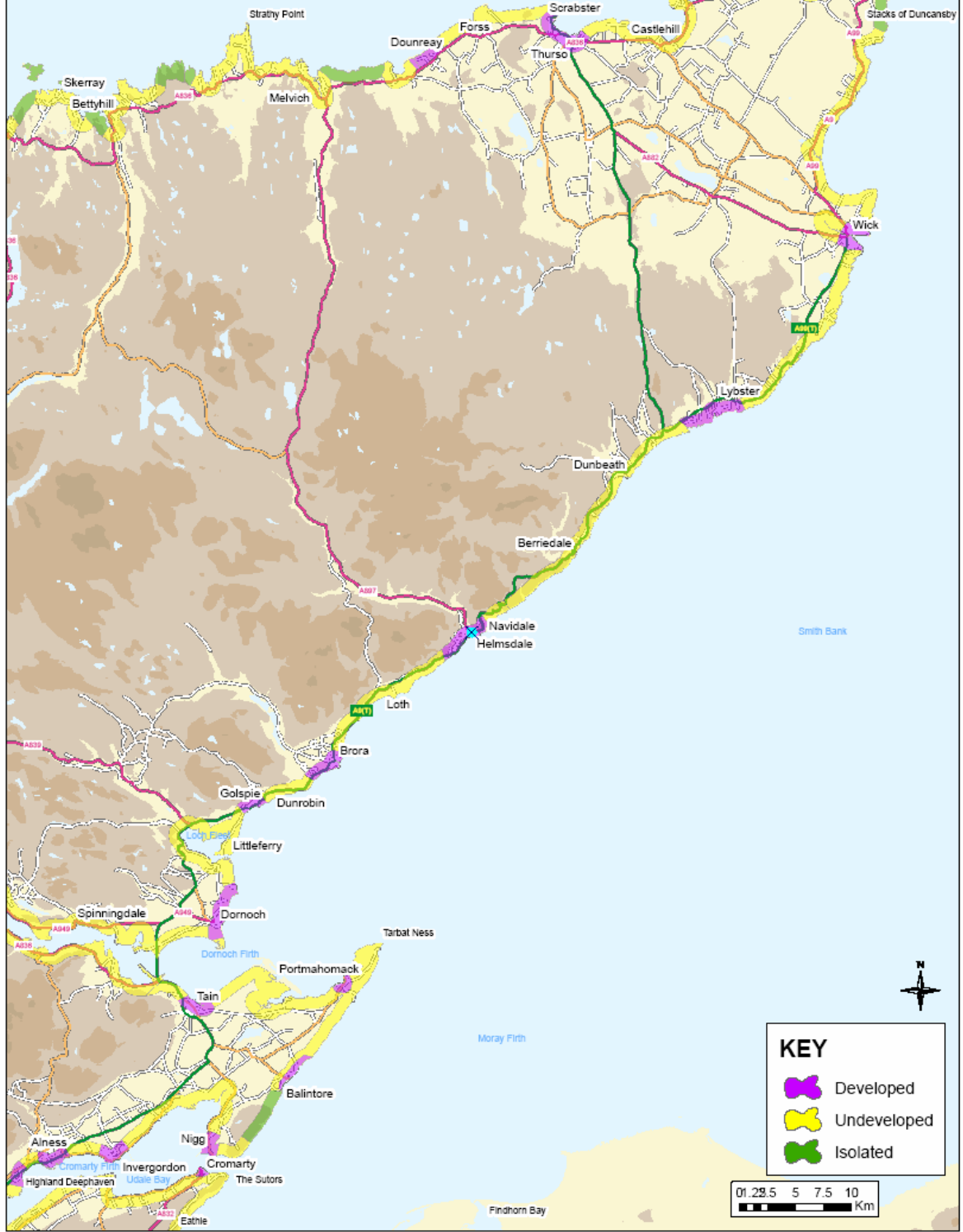
-  Developed
-  Undeveloped
-  Isolated



This page is blank to allow for double-sided printing.

HIGHLAND COASTAL CLASSIFICATION MAP 5

This map is reproduced from © Intermap technologies Inc. All rights reserved



This page is blank to allow for double-sided printing.

HIGHLAND COASTAL CLASSIFICATION MAP 6

This map is reproduced from © Intermap technologies Inc. All rights reserved (100023369) (2005).



KEY

-  Developed
-  Undeveloped
-  Isolated

