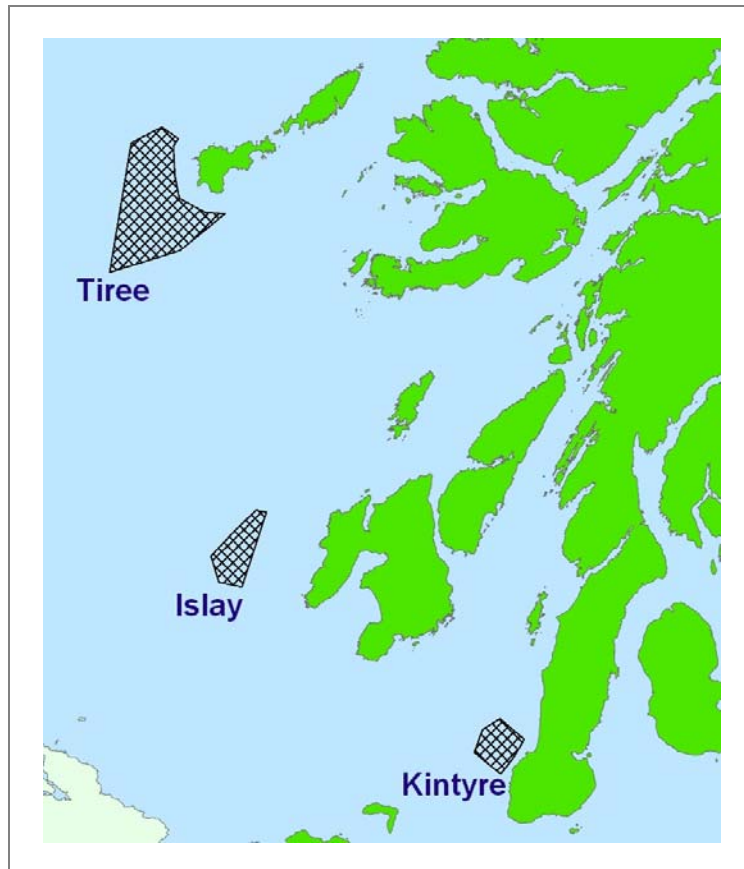


# Socio-economic Impact Assessment Scoping Study

## Proposed Argyll Offshore Wind Farms Argyll Renewables Communities (ARC)

5th February 2010



Source: The Crown Estate



Highlands and Islands Enterprise  
Iomairt na Gàidhealtachd 's nan Eilean



SQWenergy SQWconsulting



## Foreword

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The ARC Consortium (“Argyll Renewables Communities”) - founded by the community owned Islay Energy Trust and Kintyre Energy Trust, and the Tiree Community Development Trust - has commissioned this study by SQW Energy in order to define the scope for a detailed socio-economic impact assessment (SIA) of the three communities most affected by the development and operation of the proposed Argyll offshore wind farms. The main objectives of this report are to set the context for the SIA by establishing baseline data and identifying the main areas of concern to the communities, and to make recommendations for the communities’ ongoing engagement with stakeholders.

In March 2009, the Crown Estate announced plans for large-scale offshore wind farms in Scottish Territorial Waters. Specifically, three project sites located off the Argyll coast: there are exclusivity agreements for the development of the sites with Scottish and Southern Renewables (SSE) for Kintyre (378MW) and Islay (680MW), and with ScottishPower Renewables (SPR) for Tiree (1500MW). The development process for these sites will be subject to the outcome of the Scottish Government’s Strategic Environmental Assessment (SEA) of offshore wind resources, which is due to be published early in 2010.

Local communities often have the feeling that industrial-scale renewable energy developments are imposed by remote forces with little or no effective local participation, let alone influence or control. The overarching purpose of the ARC Consortium is to ensure the best possible outcomes for their respective communities, as well as for all stakeholders, by being active participants in the development processes rather than just bystanders. All three communities face their own particular social and economic challenges with Highlands and Islands Enterprise (HIE) designating both Islay and Tiree as “fragile economies” and Kintyre as being an “area of employment deficit”.

ARC members recognise the potential of these projects to enhance the long term socio-economic sustainability of their communities; for example, comparisons can be made with the Shetland Islands and the exploitation of North Sea oil. However, there are also significant risks that project activities could impact negatively on the local socio-economic fabric and cultural heritage. With the proposed Argyll projects, the opportunities and risks for the respective communities are magnified compared with those similarly affected on the mainland, because of their status and identities as islands (the Kintyre peninsula exhibits similar characteristics to the islands).

This report sets the scene by organising baseline data, and identifying the main areas of concern and potential opportunities that require the thorough research, analysis and consultation which will be at the core of the full SIA. In addition it makes recommendations regarding the engagement processes for ARC and all stakeholders to ensure the SIA is most effective. The objectives of the full SIA will be to present detailed information and analysis in an objective manner such that communities, developers and other stakeholders can all understand the implications of the proposed developments enabling informed and optimal decision-making. The SIA will also make recommendations so as to enable all three

communities to maximise the benefits and minimise the negative impacts of the proposed projects. ARC is now seeking funding for the full SIA.

By definition there are limitations to this study. It is a scoping exercise, and as such the issues raised are not subject to detailed analysis, and there are inevitably omissions, e.g. for each community, key local stakeholders need to be identified, and the roles of the voluntary and charitable sectors will form part of expanded socio-economic baseline data. In addition, details of project development activities are not yet available. Developers, understandably, have not started detailed planning pending the result of the SEA; for this report reasonable assumptions have been made about likely activities and options. These issues will be addressed more fully in the SIA.

A fair challenge is whether this study is premature, given both the early stage of the process and the obligation on developers to include an SIA in the Environmental Statement (ES) submitted as part of the applications for consent. In response, firstly, The Crown Estate's early announcement and developers' visits have already raised interest and concerns within the communities. By taking their own, early initiative in to examine the potential implications of the proposed wind farms, the relevant communities can have confidence that their interests will be represented, and that they will eventually be able to contribute informed input to the development and consenting processes when more realistic and credible information about development plans/options is available. Secondly, there is a perception that SIAs funded by developers often lack credibility because their focus is on "ticking a box" in the consents process rather than on generating the best outcomes for communities.

A community-driven SIA is an innovative process for which there are few precedents. However, it is ARC's contention that genuine collaboration between communities, corporate interests and consenting authorities can lead to enhanced value for the developers and optimisation of benefits to communities, thereby facilitating the passage through the consenting process. Indeed, the proposed unique corporate-community cooperation presents opportunities for developers to set new world class benchmarks for social performance, as well as for communities to enhance socio-economic and cultural sustainability.

ARC Consortium members wish to acknowledge the financial support provided by the Highlands and Islands Enterprise and the Argyll and Bute Council in the publication of this Report, as well as the voluntary work of many people within their communities without whom this initiative would not have been possible. Also, on a personal basis, I would like to thank Titus Fossgard-Moser from Shell Canada and Dr Jill Shankleman for their wise counsel before and during the preparation of this Report.



Philip Maxwell

Chairman, Islay Energy Trust, on behalf of the ARC Consortium, 5<sup>th</sup> February 2010

## Executive Summary

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### Introduction

1. Approval by The Crown Estate was announced in March 2009 for the development of three offshore wind farms located off the Argyll coast. This followed an application process to The Crown Estate to secure the exclusive development rights for the following sites: Scottish and Southern Renewables (SSE) for wind farms for Kintyre (378MW, 126 turbines, 3 kms offshore) and Islay (680MW, 138 turbines, 13 kms offshore), and ScottishPower Renewables (SPR) for wind farms for Tiree (1500MW, 250 turbines, 5kms offshore). The proposed wind farms are large infrastructure projects; the total investment, including associated grid, is likely to be in the region of £7-9 billion. Developments of such scale will have significant impacts on social, environmental and economic aspects of the host communities.
2. Managed effectively through every stage of development and operation these projects have the potential both to enhance the long term socio-economic sustainability of the communities that are nearest to them, and to add shareholder value for the developers. To achieve this it should be recognised that:
  - Part of the management process must be to ensure that the social, economic and cultural life of these ‘fragile’ communities is not exposed to undue risk, but that potential benefits are maximised.
  - For developers, there are significant opportunities to benefit from local knowledge and services.
3. Aware of these opportunities and risks, and committed to active participation in the development process the respective communities (Tiree, Kintyre and Islay) formed Argyll Renewables Communities (ARC) to ensure the best possible outcomes for their respective communities, as well as for all stakeholders. Commissioning this Scoping Study is a first step to develop an informed approach and ‘tool kit’ for ARC to take forward on behalf of the communities.

### Purposes of the Study

4. The purposes of this scoping study are to:
  - Highlight key development activities that may impact on the socio-economic and cultural fabric of the affected communities.
  - Identify areas and issues in the consenting process where communities can add value to the consultation process (including the Scottish Government’s SEA).
  - Identify the key potential impacts (+ve and –ve) of the project activities.
  - Recommend methodology for identifying winners and losers, analysing the significance of impacts and how to maximise +ve and minimise –ve impacts.

- Propose further community commissioned research work.
- Recommend structures for engagement between communities and developers.

## Approach

5. The Study team carried out desk based research and consultation with developers and with ARC to:
  - provide the foundations for socio-economic baselines for each community
  - ascertain key impacting development activities, or make reasonable assumptions where specific information was not available
  - Outline key stages in the consenting process at which ARC could intervene.
6. Using the above, conclusions are drawn about the scope of the full SIA, recommendations made about the points of engagement between communities and developers, and areas for further research in the SIA identified.

## The Communities of Tiree, Kintyre and Islay

7. The three communities of Tiree, Islay and Kintyre share a number of characteristics but there are also important differences between the communities which may affect the way in which they are impacted by offshore wind developments.
8. All three areas are predominantly rural. Both Tiree and Islay are classified as fragile areas by HIE, characterised by a history of population loss, low incomes, limited employment opportunities, poor infrastructure and remoteness. Campeltown in Kintyre is recognised as an area of employment deficit. Outwith Campeltown in Kintyre, the populations of the three areas are small, with a low population density. Each of the three areas is different in terms of employment and businesses. The island economies of Tiree and Islay are both reliant on a number of key sectors including agriculture, fishing and tourism. The businesses operating in these sectors on the islands are relatively small scale and therefore more sensitive to any potential impacts. The same is true of rural Kintyre, although there is also a relevant manufacturing base in Kintyre (SkyCon) which may directly benefit from offshore developments.

## Project Development

### ***Development***

9. Development may take 5-7 years including consenting, planning, installation<sup>1</sup>. Annual operation and maintenance will last throughout the lease periods, expected to be 50 years. The most significant development and operational activities that are of interest to ARC communities are show in Table 1 below:

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<sup>1</sup> [www.bwea.com](http://www.bwea.com)

Table 1 Key areas of community interest

Category	Vector	+ve outcome	-ve outcome	Comments
Locations/ siting	Visual	Minimum impact	Major impact	Scope for array design changes and positioning
	Noise	None	Intrusive	Existing studies Consultation and siting of operations
Economic	Fishing	No –ve impact, New fishing activities possible	Exclusion zone restrictions	Mitigate through consultation and seeking alternatives.
	Construction	Business opportunities Work Jobs	Mainland-based contracts Local structures not in keeping with local styles	Early discussion between developers and community
	Tourism	No impact, or array seen as an attraction	Tourists stay away	Experience elsewhere. Understanding current profile and how this might change.
	Employment	New jobs New skills Career opportunities Long term work	All mainland labour Imported or contract staff	Discuss supply chain opportunities Train potential employees. Draw back community leavers
Infrastructure	Medical	New capacity or updated facilities	Pressure on services. High influx, no expansion possible	Depends on influx Discuss with local service providers
	Housing	No impact Additional demand for B&B	Lack of housing Falls in property prices Squeeze on locals	Depends on influx
	Schools	Increased diversity New facilities	Lack of capacity	Depends on influx
	Transport and communications	New port and airport facilities	Services mainland based Helicopter movements: noise	Discussions between developers and community interests
	Public Services	Ability to absorb	Insufficient capacity	Depends on influx
Cultural heritage	Language	Expansion of Gaelic	Dilution of Gaelic	Address through Gaelic medium schooling and adult learning.
	Crofting	No impact	Existing land use patterns affected	Consultation on options
	Way of life	Improved services	Loss of marine wilderness	Consultation 'value' profile of way of life.

Source: SQWE

10. To date, the developers have been communicating with each of the communities through a number of local meetings and provision of presentations. However, at this stage there is a lack of specific project information. While this is understandable due to the forthcoming SEA and the stage of the development process (pre-scoping) it has resulted in some mixed messages in terms of variable statements regarding the potential impact of construction and operation of the wind farm (SPR) or very limited information (SSE). This has not helped the development of open and trusted communication between parties resulting in community concerns regarding scale of impact, reliability of information and commitment to community dialogue.

## Conclusion

11. This scoping study is the first step of an iterative process initiated by ARC in which the development of the offshore wind farms can proceed in step with the realisation of community benefits and the minimisation of any negative impacts. Through the scoping study we have identified the main development activities which are likely to have major impacts on the communities (based on available information), and provided a socio-economic baseline for each community which will help to determine the significance of such impacts.
  - The scoping study has been able to highlight some key areas for consideration from the aspect of the socio-economic impact on each community.
  - The study has been limited to some extent by the level of detail available from the developers. This is in part due to the early stage of this study in the developers' process who are awaiting the outcome of the Scottish Government's Strategic Environmental Assessment (SEA) of offshore wind resources, due to be published early in 2010.
  - Key considerations (+ve & -ve) of the affected communities relate to the influx of people connected with installation and operations, visual and noise impacts of the arrays, affects on fishing and crofting, potential helicopter movements and local infrastructure e.g. port installations.
  - The scoping study and recommended research provides a toolkit for ARC to take forward on behalf of the communities. This will enable ARC to work proactively with the developers and communities to ensure the best possible outcome for the respective communities.
  - The key points of potential engagement in the development of the offshore wind farms for ARC are the SEA consultation, the Scoping Opinion and the EIA process.

## Recommendations

12. The scoping study provides an initial platform to identify further research and take due consideration of the social and economic process in these fragile areas. The potential developments are huge in comparison to the scale of economic activity in these three communities and careful consideration and management of the development process is crucial to prevent avoidable negative impacts and to make the most of the potential benefits.

13. At the next stage, the SIA will address the ways to maximise the positive and minimise the negative impacts for each community, through detailed consultation within communities themselves and with the developers, consenting authorities and other key stakeholders, to the ultimate benefit of all.
14. There needs to be a structure for regular engagement between the affected communities and the developers. The existing arrangement between Islay Energy Trust and Scottish Power Renewables for the Sound of Islay Tidal Energy Project suggests a model that could be replicated for the development phase of the proposed wind farm projects.

### ***Further Research***

15. This scoping exercise is essentially desk based and further work is advised to:
  - review the SEA and how it influences the development of these offshore wind farms
  - verify the socio-economic baseline through consultation with data providers
  - undertake further research into the areas of potential impact for each community and assess the capacity to absorb these (social, economic and cultural)
  - conduct community consultations
  - conduct further industry consultations
  - research the supply chain and procurement process
  - identify case studies that will provide learning points of relevance to the developments and the socio-economic context
  - undertake a full socio-economic impact analysis
  - undertake a SWOT analysis with community stakeholders
  - develop possible partnership and finance options, including whether there is a basis for finance to the community
  - develop a number of community engagement scenarios for consultation with developers.

### ***Engagement between communities and developers***

16. Engagement between the communities and the developers has already commenced in the summer of 2009. However, further work is required to establish the structure and communication channels for this to be taken forward and sustained throughout the development process and operation of the wind farms. It is suggested that:
  - the developers take the opportunity to discuss the findings of this report with ARC
  - the developers agree a consultation and communication strategy with ARC
  - ARC is invited to represent the communities at the Crown Estate supplier forums

- the developers and ARC explore a variety of options in terms of community benefit
- SSE and SPR assess the possibility of basing community liaison officers in each respective community
- it is agreed to work in partnership towards the successful development of the offshore wind farms with a positive balance of benefit to all.

# 1: Introduction

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## Background

- 1.1 Approval by The Crown Estate (TCE) was announced in March 2009 for the development of three offshore wind farms located off the Argyll coast. This followed an application process to TCE to secure the exclusive development rights in Scottish Territorial waters for the following sites:
- Scottish and Southern Renewables (SSE) wind farm for Kintyre (378MW, 126 turbines, 3 kms offshore)
  - SSE wind farm for Islay (680MW, 138 turbines, 13 kms offshore)
  - ScottishPower Renewables (SPR) for Tiree (1500MW, 250 turbines, 5kms offshore).
- 1.2 The proposed wind farms are large infrastructure projects, total investment, including associated grid, is likely to be in the region of £7-9 billion. Developments of such scale will have significant impacts on social, environmental and economic aspects of the host communities. However, managed effectively through every stage of development and operation these projects have the potential both to enhance the long term socio-economic sustainability of the communities that are nearest to them, and to add shareholder value for the developers.

## Purpose of this study

- 1.3 A scoping study is a technical exercise that allows the statutory and wider consultees to set out what information should be included in the EIA for a wind farm development. This allows the developers to carry out all the correct studies so that consultees can make informed decisions about the scheme and allow them to provide a more efficient response to any future application for development consent.
- 1.4 This particular scoping study is unusual in that it covers three different developments and locations but only one aspect of the Environmental Impact Assessment process: that of socio-economic impact assessment (SIA). It is therefore envisaged that it will be used to provide additional detail to the scoping studies undertaken by the respective developers and the information that may be requested by the consultees.
- 1.5 This study has been initiated by a consortium of community interests who have joined to form Argyll Renewables Communities (ARC) such that they can take an informed view and involvement in the development process from a community perspective. The focus on socio-economic impact has been led by the communities closest to the proposed development areas and is an early initiative by them to understand how they might pro-actively interlink with this process. The intention is to inform communities and enable engagement with developers and other stakeholders but not duplicate the developers' SIA process. In so doing this independently commissioned study seeks to:

- Highlight key development activities that may impact on the socio-economic and cultural fabric of the affected communities.
- Identify areas and issues in the consenting process where communities can add value to the consultation process (including the Scottish Government's SEA).
- Identify the key potential impacts (+ve and -ve) of the project activities.
- Recommend methodology for identifying winners and losers, analysing significance of impacts and how to maximise +ve and minimise -ve impacts.
- Propose further community commissioned research work.
- Recommend structures for engagement between communities and developers.

## 2: Scoping Study Approach and Context

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### Introduction

2.1 This chapter sets out the policy context for socio-economic impact assessment and the approach to the study. It provides:

- scene setting in terms of policy context for socio-economic impact assessment
- Scoping Study methodology and reporting.

### Policy context

2.2 The UK Renewable Energy Strategy 2009<sup>2</sup> was established to secure a clear route to achieving 15% of energy from renewable sources by 2020. This strategy aims to strengthen the coordinated effort of a number of groups from central government through to community groups and individuals. The strategy believes that an integral part of achieving UK wide renewable energy targets is a successful relationship between developers and the local communities in which these technologies will arise:

*“At the heart of our Strategy is an approach that is based on an assessment of the renewables capacity and constraints to deployment in each region and which seeks to ensure willing engagement by regional bodies, Local Authorities and communities. Through the planning system, communities will play an integral role in decisions on where renewable generation is located. Developers of large-scale projects will be encouraged to share the benefits of those developments with local communities...”*

- DECC (2009) UK Renewable Energy Strategy p. 18

2.3 The Scottish Government’s National Outcomes<sup>3</sup> highlight the 15 key areas for government focus and priority. In the process of striving towards national targets and development opportunities, all of these areas must be acknowledged and the subsequent impacts from action taken into consideration.

- business
- employment
- research & innovation
- young people
- children
- health

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<sup>2</sup> DECC (2009) *UK Renewable Energy Strategy*

<sup>3</sup> Scottish Government (2008) *National Outcomes*

- inequality
- children, young people & families
- crime
- sustainability
- communities
- environment
- national identity
- environmental impact
- public services.

### **Socio-economic impact assessment**

- 2.4 Socio-economic impact assessment of wind farm sites has to date tended to form a relatively minor element of the EIA process, especially where visual or issues of designation have dominated.
- 2.5 Increasingly the social and economic benefits are to be assessed alongside the environmental as stipulated by the Scottish Government in Scottish Planning Policy 6 (SPP6).

*Applications should include details of the environmental, social and economic benefits that will arise from the project, both locally and nationally, including the overall number of jobs and economic activity associated with the procurement, construction and operation of the development. Planning authorities should consider whether any such benefits could or should be secured by way of a planning condition or planning agreement<sup>4</sup>.*

- 2.6 The concept of economic benefit as a material consideration being explicitly confirmed in SPP 6 chimes closely with the priority of the Government to grow the Scottish economy and, more particularly, with their published policy statement “Securing a Renewable Future: Scotland’s Renewable Energy”, and the subsequent reports from the Forum for Renewables Development Scotland (FREDS), all of which highlight the manufacturing potential of the renewables sector.
- 2.7 This indicates that there should be a strengthening of the socio-economic assessment in the planning application process. The Scottish Government has stated that this should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction, operation and decommissioning of the development<sup>5</sup>.

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<sup>4</sup> Scottish Government (2007) *Scottish Planning Policy SPP 6 Renewable Energy*

<sup>5</sup> Scottish Government (2000) *The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000: Scoping Opinion for the Proposed Wind Farm on the Central Mainland, Shetland*

- 2.8 This interest in the overall economic activity related to the development of renewable generation has the potential to raise the status of the socio-economic impact assessment and increase leverage in this area in particular through the procurement process and possible reinforcement through planning condition or agreement.
- 2.9 The Scottish Government Economic Strategy<sup>6</sup> further reinforces this and sees the ‘green’ economy as central to the growth of Scotland’s economy. This includes the start up and growth of Scottish business, encouraging and supporting key manufacturing industries and supporting innovation and technology transfer to grow high value and high skills businesses with the potential for expansion. Going for Green Growth: a Green Jobs Strategy for Scotland<sup>7</sup> sets out how this priority should be delivered through sustainable economic development.
- 2.10 The Scottish Government believe that a thriving renewables industry in Scotland has the potential to develop new indigenous industries, particularly in rural areas; to provide significant export opportunities and to enhance Scotland’s manufacturing capacity. The planning system has a key role in supporting Scotland’s economic competitiveness and employment market. The scope for developments to contribute to national or local economic development priorities should be a material consideration when considering policies and decisions.
- 2.11 This policy context indicates that the scope of socio-economic assessment for the development of offshore wind farms in Scottish Territorial Waters should have a strong focus on the potential for these developments to contribute to sustainable economic development. For the Argyll offshore wind farms the impact and the points of potential engagement with the respective communities’ local economic development priorities should be central to the socio-economic assessments of these sites.

## Scoping study methodology

- 2.12 The scoping study has undertaken the following research tasks:
- Researched the policy context to the development of offshore wind farms including the Strategic Environmental Assessment (SEA) and the increasing emphasis on socio-economic outcomes.
  - Mapped the formal consenting channel for the projects so that the communities can be aware of the stages and content of the developers’ work.
  - Outlined the grid infrastructure issues and Argyll’s role in this.
  - Developed an initial discussion around the case for community benefit and a social performance approach.
  - Developed detailed local analysis of the socio-economic status of each community presenting some of the information that all stakeholders (community, developers, consultees, consenting bodies) should take account of.

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<sup>6</sup> Scottish Government (2007) *Economic Strategy*

<sup>7</sup> Scottish Government (2005) *Going for Green Growth; a Green Jobs Strategy for Scotland*

- Held initial meetings with the developers, members of ARC and the communities.
- Identified the potential points of engagement between the communities and the development process of each project with a particular focus on the potential impacts for each community.
- Identified key research areas to help inform the communities and prioritise their limited funding without duplicating developers' activities.

## Socio-economic baseline for each community

- 2.13 At the core of this report is the socio-economic baseline for each community. This is presented in full in the Annexes. Within the body of the report the summary of these findings is discussed within the context of the respective project proposed, identifying the potential points of engagement and further research.
- 2.14 The approach to these research elements is described below:

### ***Project Description***

- 2.15 It is expected that developers will submit Scoping Studies for each of the proposed offshore wind farms which will include a 'project description' detailing the main components of the development. The project description enables a Scoping Opinion to be produced by Scottish Government based on the feedback from consultees which will provide a scope and suggested methodologies for the assessment of the social, economic and environmental impact to be made. This should cover:
- site selection
  - proposed turbine units
  - method of fixing substructure to the seabed
  - electrical connection of units
  - fabrication and installation
  - operation maintenance and monitoring of performance
  - decommissioning.
- 2.16 This study summarises the 'project description' of each development based on information currently available.

### ***Socio-economic baseline***

- 2.17 This socio-economic baselines present an analysis of current and changing economic and social conditions in the three areas of interest; Tiree and Coll, Islay and Kintyre. This is crucial for two primary reasons:

- Firstly, the data allows us to understand the context, key strengths and challenges of the three regions as they currently stand. In looking ahead we need to know how the areas perform relative to the Argyll and Bute region and compared to Scotland.
- Secondly, and closely related to this, we need to be aware of trends and changes so that opportunities that the new offshore development may present work with, rather than counter to, wider socio-economic trends in the areas.

2.18 In the main, our analysis focuses on the three regions themselves using data zone level data. However, socio-economic data at such a fine grained spatial level may be limited and cannot capture intangibles that are clearly important to the areas such as the value of the scenery and beauty of the three regions. Similarly, the data may not capture important features of the local economies, such as the fact that there is likely to be high levels of ‘hidden’ employment in the form of second jobs and self-employment that is not captured in the data. Therefore, the baselines should be treated with some caution.

2.19 In order to start to build up a picture of the social, economic and cultural baseline of the three regions we have accessed relevant published data sources. These include:

- Scottish Neighbourhood Statistics
- Annual Business Inquiry
- Calmac carrying statistics
- Central Aviation Authority airport visitor statistics.
- GROS 2001 Census
- NOMIS Claimant Count Data
- ONS Annual Survey of Hours and Earnings
- ONS Mid-year population estimates
- ONS Regional, sub-regional and local gross value added statistics, <http://www.statistics.gov.uk/pdfdir/gva1208.pdf>
- Scottish Schools Online
- Scottish Government’s Scottish Index of Multiple Deprivation.

### ***Points of potential engagement***

2.20 This scoping study provides an initial identification of the potential points of engagement between the communities and the development process.

2.21 However, the following limitations of the study must be born in mind:

- The socio-economic baseline has been established but requires verification through specific consultation, for example with HIE, local authorities, Caledonian MacBrayne and Logan Air.

- Although indicative figures have been made available, the developers do not yet have the confirmed design, exact location of turbines within the agreed development zone, number of turbines that will be constructed and their installed capacity (MW).
- The supply chain requires further exploration.
- The SEA may also bring a new perspective to the approach to these developments.

### **Further Research**

2.22 Key areas of further research are identified, these include:

- sectors specific to each community
- case studies that will provide learning points of relevance to the developments and the socio-economic context.

### **Reporting of findings**

2.23 Chapters 3 and 4 provide an outline of the offshore wind farm development process and a contextual section on the role of electricity generation and transmission in meeting our renewable energy targets.

2.24 Chapter 5 looks at some of the specific issues to be considered in wind farm development for the communities affected.

2.25 Chapter 6 discusses approaches and the case for community benefits within the context of sustainable development.

2.26 Chapters 7, 8 and 9 report the key findings for each of the communities.

2.27 Chapter 10 presents the conclusions and recommendations.

## 3: The development of offshore wind farms

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### Introduction

- 3.1 This section outlines the role of The Crown Estate, Scottish Government and the statutory obligations to be fulfilled by developers including the Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) regulatory framework.

#### ***Role of The Crown Estate (TCE)***

- 3.2 TCE has a portfolio valued at over £6 billion, manages a wide range of land and property across the United Kingdom (urban, rural, Windsor and marine), including over 55 per cent of the foreshore and almost the entire seabed out to the 12 nautical mile limit. Every year TCE pay all of their surplus revenue (over £200 million<sup>8</sup>) to the UK Treasury for the benefit of all taxpayers.
- 3.3 TCE has two main objectives: to benefit the taxpayer by paying the revenue from their assets directly to the Treasury; and to enhance the value of the estate and the income it generates.
- 3.4 In efforts to increase renewable energy generation, TCE has established procedures to award development rights to a number of offshore sites around the UK. Following awards in the initial rounds 1 and 2, a UK Government SEA for the waters of England and Wales was implemented to accelerate movement into Round 3, which has now been awarded.
- 3.5 In a similar process, the Scottish Government is carrying out a SEA in Scottish Waters to enable initial development proposals for sites in the area. Following a request for expressions of interest in Scottish Territorial Waters, TCE has awarded exclusive development rights to ten companies allowing for progress into the survey, assessment and consents phases of Scottish offshore wind farm development.

#### ***TCE Awards***

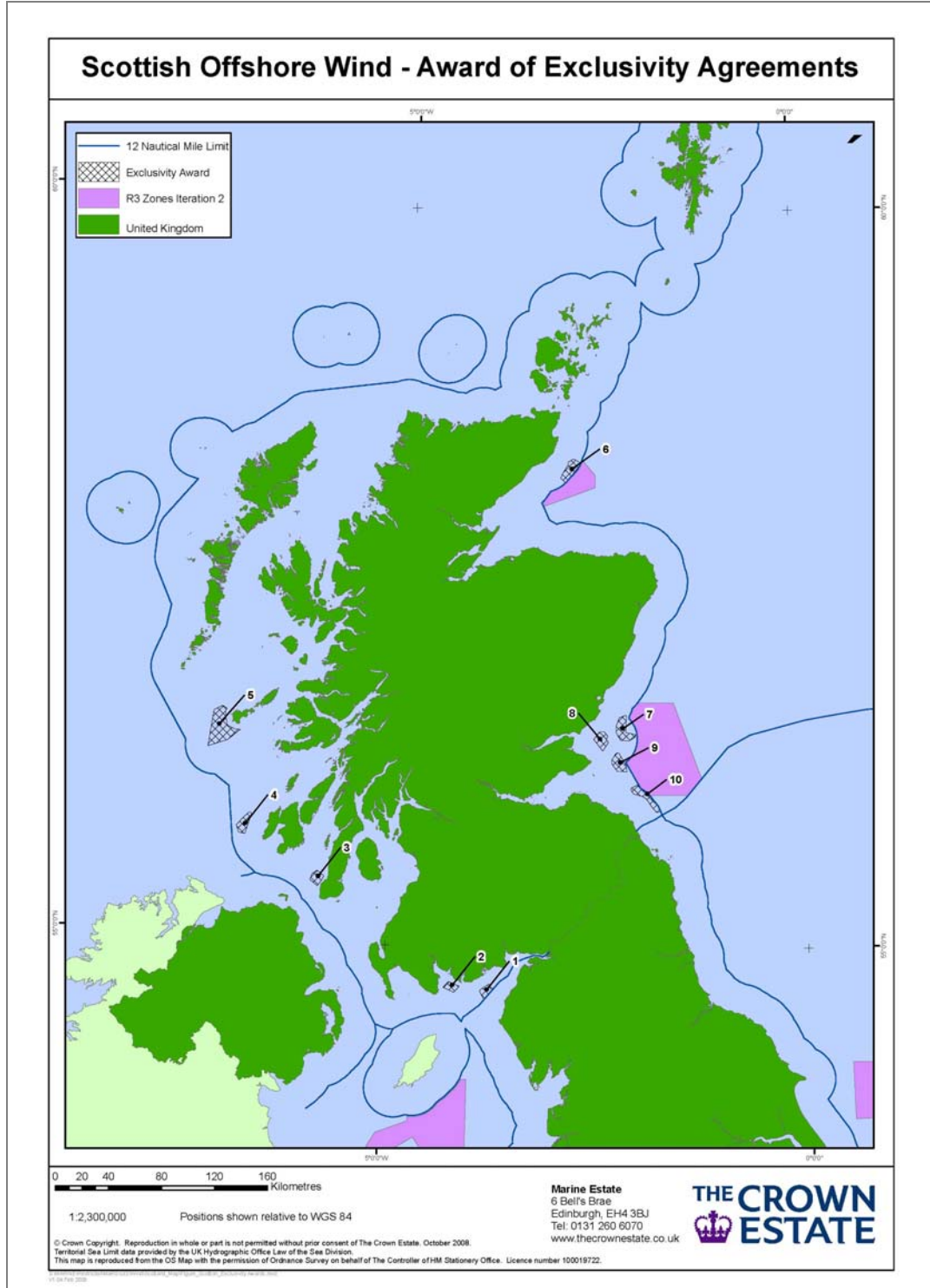
- 3.6 Through the initial Expression of Interest for offshore wind farms ten companies and consortia were awarded exclusive development rights:
1. Solway Firth – E.ON Climate & Renewables UK
  2. Wigtown Bay – Dong Wind (UK) Ltd
  3. Kintyre - Airtricity Holdings (UK) Ltd
  4. Islay – Airtricity Holdings (UK) Ltd
  5. Argyll Array – Scottish Power Renewables
  6. Beatrice – Airtricity Holdings (UK) Ltd

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<sup>8</sup> The Crown Estate Annual Report 2009

7. Inch Cape – Npower Renewables Ltd/ SeaEnergy Renewables Ltd
  8. Bell Rock – Airtricity Holdings (UK) Ltd/ Fluor Ltd
  9. Neat na Gaoithe – Mainstream Renewable Power Ltd
  10. Forth Array – Fred Olsen Renewables Ltd.
- 3.7 The areas of exclusivity are shown in Figure 3-1.

Figure 3-1 Scottish Exclusivity Awards



Source: The Crown Estate

- 3.8 The above companies and consortia were required to undergo the following procedure before awards were announced in February 2009. This indicates the timeframe and level of commitment already invested by the developers.

**Table 3-1 The Crown Estate Expression of Interest process for exclusive development rights**

Closing date for expressions of interest:	23 June 2008
Application packs sent to registered companies:	11 July 2008
Closing date for applications:	10 October 2008
Assessment of applications:	Oct–November 2008
Applicant interviews:	January 2009
Allocation of exclusive development rights over sites:	30 January 2009
Announcement of the successful applicants and awarded sites:	16 February 2009

Source: *The Crown Estate*

### **Scottish Government consents process**

- 3.9 Scottish Government requires a different consents process to that undertaken for marine developments in England and Wales. The approval of Scottish Ministers is required under Section 36 of the Electricity Act 1989 “for construction etc. of generating stations” and under Section 37 “for overhead lines” and grid connections, including a number of legislative and regulatory requirements.
- 3.10 Detailed below are the primary legislation and corresponding regulations that all developments must adhere to and are governed by. As each development is unique, there are requirements that may differ and be additional to those listed.

**Table 3-2 Environmental Planning Requirements**

<b>Primary Legislation</b>	<b>Regulation</b>	<b>Detail</b>
Section 36 and 37 Electricity Act 1989	The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000	Covering: <ul style="list-style-type: none"> <li>• screening</li> <li>• Environmental Statements (ES)</li> <li>• publicity and procedures</li> </ul> <a href="http://www.hmso.gov.uk/legislation/scotland/ssi2000/20000320.htm">http://www.hmso.gov.uk/legislation/scotland/ssi2000/20000320.htm</a>
	The Electricity (Applications for Consent) Regulations 1990	Covering: <ul style="list-style-type: none"> <li>• publicity</li> <li>• objections</li> <li>• consent fees payable</li> </ul> <a href="http://www.opsi.gov.uk/si/si1990/Uksi19900455_en_1.htm">http://www.opsi.gov.uk/si/si1990/Uksi19900455_en_1.htm</a>
	The Electricity (Application for Consent) Amendment (Scotland) Regulations 2006	Amendments. <a href="http://www.opsi.gov.uk/legislation/scotland/ssi2006/20060018.htm">http://www.opsi.gov.uk/legislation/scotland/ssi2006/20060018.htm</a>
	Planning Permission: section 57 of the Town and Country Planning (Scotland) Act 1997	Covering all onshore planning proposals. <a href="http://www.opsi.gov.uk/acts/acts1997/ukpga_19970008_en_1">http://www.opsi.gov.uk/acts/acts1997/ukpga_19970008_en_1</a>

Source: *SQW Energy*

- 3.11 In addition developers must comply with and consult the regulatory requirements shown in Table 3-3.

Table 3-3 Regulatory requirements		
Regulatory/gov body	Area of responsibility	Detail
BERR	Decommissioning and Safety Zones	Consultation documents to review the offshore decommissioning regimes. <a href="http://www.berr.gov.uk/consultations/page39781.html">http://www.berr.gov.uk/consultations/page39781.html</a>
CPA	Coastal Protection Act legislation	Ensure safety of navigation through the requirement for licensing of potentially hazardous marine works. <a href="http://www.scotland.gov.uk/Topics/Transport/ferries-ports-canal/17699/9608">http://www.scotland.gov.uk/Topics/Transport/ferries-ports-canal/17699/9608</a>
FRS	Food & Environmental Protection Act legislation	Ensure protection against environmental degradation through licensing for deposits in or under the seabed. <a href="http://www.marlab.ac.uk/Delivery/standalone.aspx?contentid=2184">http://www.marlab.ac.uk/Delivery/standalone.aspx?contentid=2184</a>
Crown Estate	Seabed leasing is dealt with by the Crown Estate	Permission required to “place structures on or pass cables over the seabed and its foreshore”. Other consents to be dealt with first. <a href="http://www.thecrownestate.co.uk/offshore_wind_energy">http://www.thecrownestate.co.uk/offshore_wind_energy</a>

Source: SQW Energy

- 3.12 The proposed development must also comply with the Energy Act 2004, in particular the sections indicated in The Energy Act 2004 Table 3-4.

Table 3-4 The Energy Act 2004	
Consideration	Information
The Energy Act 2004 (Part 2) – Chapter 2 (Renewable Energy Zones)	Covering: Renewable Energy zone <a href="http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1">http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1</a>
The Energy Act 2004 (Part 2) – Chapter 2 (Marine Safety Zones)	Covering: Safety zones for installers <a href="http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1">http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1</a>
The Energy Act 2004 (Part 2) – Chapter 3 (Decommissioning of Offshore Installations)	Covering: Decommissioning programmes and regulations <a href="http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1">http://www.opsi.gov.uk/acts/acts2004/ukpga_20040020_en_1</a>

Source: SQW Energy

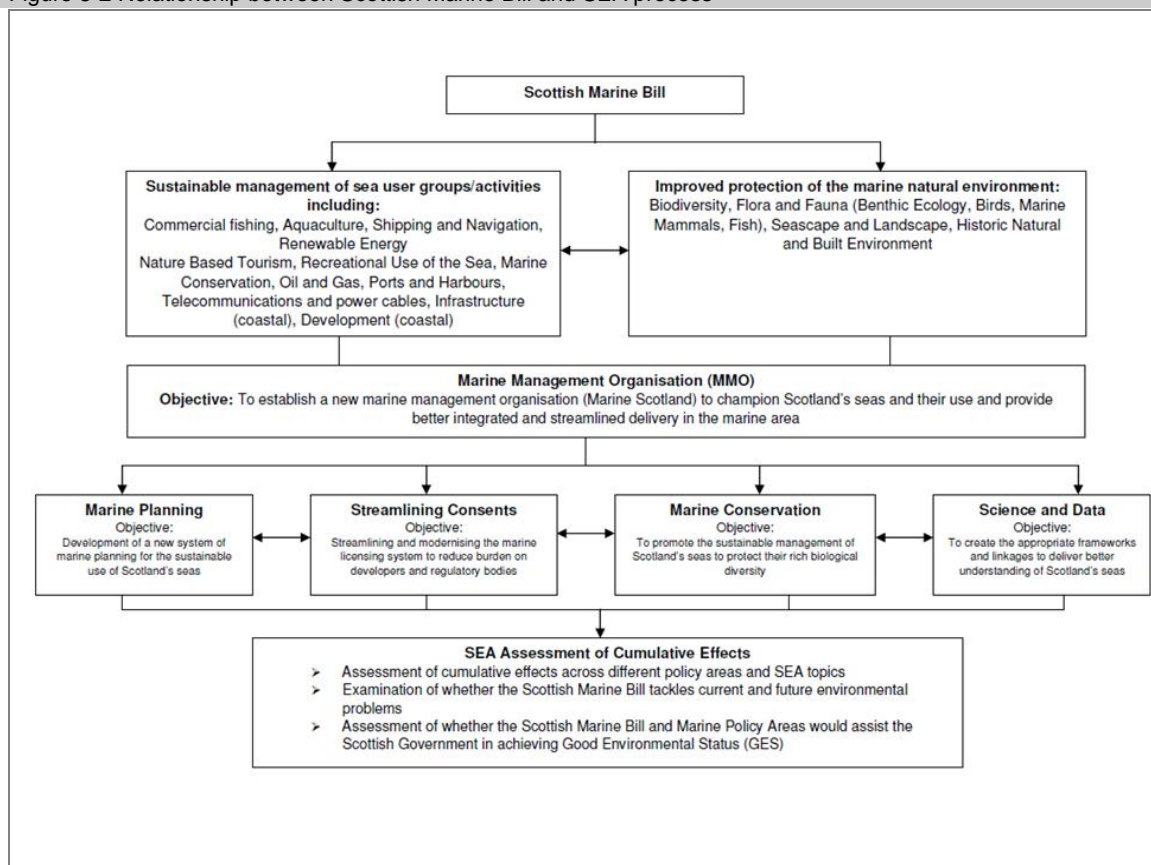
### **Strategic Environmental Assessment (SEA)**

- 3.13 The Strategic Environmental Assessment (SEA) assesses the environmental impact of potential policies and procedures within a given region. Under the EU SEA Directive 2001, a SEA will address potential impacts of changing procedures at a stage where necessary mitigation can be applied “for high level protection of the environment”. This directive

ensures that the same procedural quality and objectives are adopted across the EU member states.

- 3.14 Operating at an earlier stage and with higher level detail than the Environmental Impact Assessment, the SEA can map potential impact of the changing way we manage our environments, providing a useful foundation and baseline on which to discuss individual developments.
- 3.15 In this case the SEA in question relates to the Marine (Scotland) Bill (April 2009)<sup>9</sup> which is intended to provide a framework for how future marine management should be operated. The SEA will determine the impact of such a Bill on Scottish waters and the associated repercussions for all marine operations (fishing, transport, etc). All proposed initiatives under the Marine Bill must be examined by the SEA as listed in the figure below:

Figure 3-2 Relationship between Scottish Marine Bill and SEA process



Source: Faber Munsell and Metoc (2008) "Scottish Marine Bill: Strategic Environmental Assessment. Non-technical summary"

### Environmental Impact Assessment (EIA)

- 3.16 Unlike the SEA, the Environmental Impact Assessment (EIA) examines the case of a particular development and its immediate impacts (both positive and negative). The EIA will complement the wider SEA by addressing how particular developments will impact the environment under the new Marine (Scotland) Bill.

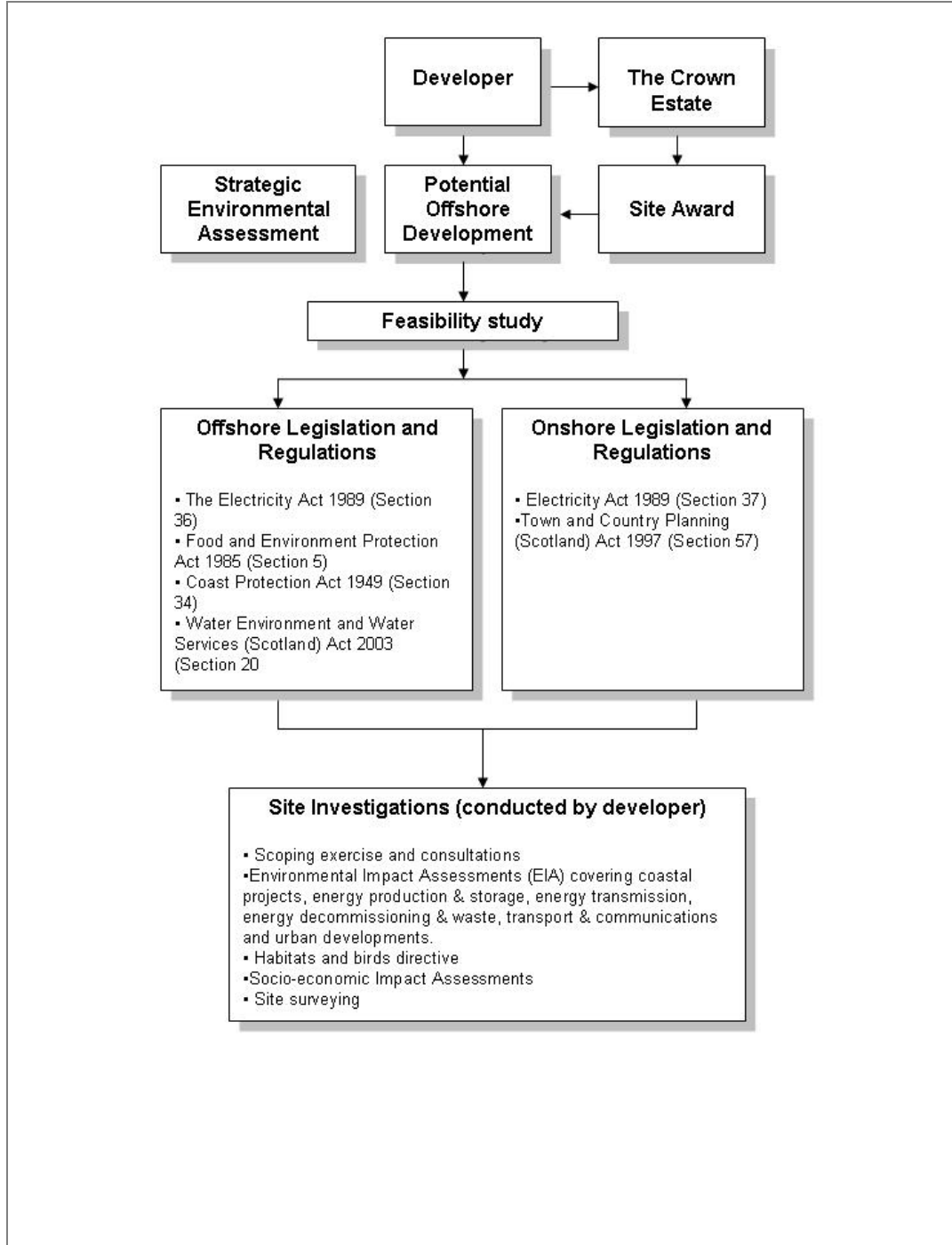
<sup>9</sup> Scottish Parliament *Marine Scotland Bill*

- 3.17 It is a requirement under the Electricity Works Regulations 2000 that developers provide the associated EIA for each proposed Offshore Wind development. Although not a formal requirement, the Harbour Works Regulations 1999 calls for the provision of information that is required at other points under the Food and Environmental Protection Act (FEPA) and this provides a good opportunity to address these concurrent regulations. The EIA will provide the consents process with the relevant, site specific issues that must be addressed before determining the feasibility of a development.

***Post planning work packages***

- 3.18 At this stage it is not possible to determine the exact post planning process that will be adopted by the developers of the Tiree, Kintyre and Islay offshore wind farms; however, based on previous case studies, large scale offshore wind farms will require similar stages to those outlined in the figure below. Additionally, scale, location, development contracts, regional supply chains and construction methodologies will all influence how a particular development may impact on the environment and surrounding communities. As yet, these factors are still to be disclosed.
- 3.19 Although the planning stages of an offshore wind development may hold the most potential for community engagement, the later stages of procurement, contracting and installation will present the greatest impact. Understanding these processes, and the work that will be required, will inform stakeholders of the key areas to mitigate negative impacts and maximise the potential for positive impacts.
- 3.20 A summary of the development process is provided in Figure 3-3.
- 3.21 The key points of potential engagement in the development of the offshore wind farms for ARC are the SEA consultation, the Scoping Opinion and the EIA process.

Figure 3-3 Summary of Development Process



Source: SQW Energy

## 4: Electricity Generation

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### Introduction

- 4.1 Electricity generation accounts for around 30% of UK carbon dioxide (CO<sub>2</sub>) emissions. In the next decade, many coal and nuclear plants will close, leaving the UK increasingly dependent on imported gas. UK Government set out two priorities in its Energy Review<sup>10</sup>: security of energy supply and emissions reductions. The development of the UK's offshore renewable capacity helps meet both of these targets.
- 4.2 The generation of electricity and how it is transmitted is relevant to this study because in the context of developing renewables we must also consider location of these resources and how best to transmit the power generated to the points of demand. The manner in which the national grid was first established has meant that similar to most developed countries Scottish society has grown used to a highly centralised energy infrastructure in which power stations are often remote from centres of population. This spatial remoteness has created a psychological distance between people and energy generation<sup>11</sup>. The combination of the need to meet targets, the grid upgrade requirements and the potential sources of new generation looks set to see substantial changes in the way electricity is generated and transmitted. This is likely to accelerate the remapping of electricity generation which will impact upon different host communities and environments through decentralisation of generation and new routes of transmission.

### Electricity generation and transmission

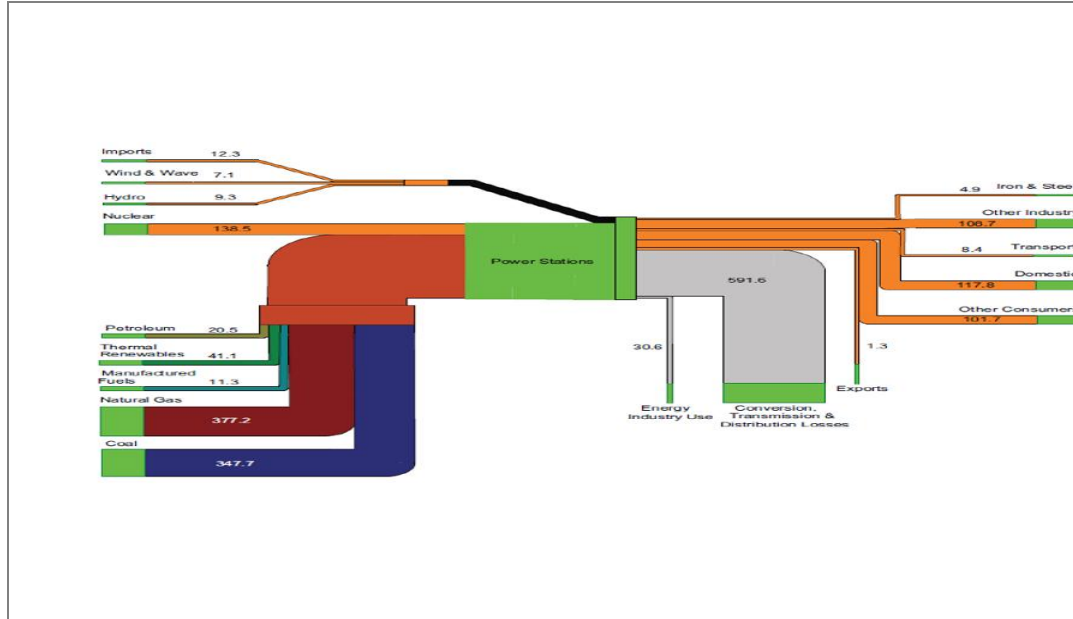
- 4.3 Generation is presently dominated by large power stations with a maximum electrical power output in the range 0.1 to 4 'GigaWatts' (1GW is enough to power ten million 100W lightbulbs) which are connected to the high voltage electricity transmission network.
- 4.4 Electricity generation has changed over the last two decades to include an increasing variety of supply and renewables contribution. This is shown in the flowchart below.

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<sup>10</sup> Department of Trade and Industry (DTI) (2006) *The Energy Challenge*

<sup>11</sup> Warren, C; McFadyen, M (2008) *Does community ownership affect public attitudes to wind energy? A case study from south-west Scotland* Elsevier Ltd

Figure 4-1 Electricity flow chart 2008 (Terra watt hours)



Source: Digest of United Kingdom Energy Statistics, 2009

- 4.5 The electricity transmission network or Grid transmits electricity across the UK from power stations, via ~25,000 km of ‘high-voltage’ overhead lines. High-voltage transmission minimises energy loss over distance.
- 4.6 Regional distribution networks consist of over 800,000 km of overhead lines and underground cables deliver lower voltage power (132kV and below<sup>12</sup>) from Grid ‘supply points’ to consumers.
- 4.7 There is potential for ‘distributed generation’ where small-scale generators feed power directly into the distribution networks

## The National Grid

- 4.8 Much of the National Grid was built in the 1950-60s, when it was deemed efficient to build large coal-fired plants in regions where there was an abundant fossil fuel (coal) resource and then to transmit the electricity across the UK through the national grid. Consequently, the electricity grid has developed most strongly around major power stations in these regions in order to have the capacity to transmit the electricity to the centres of demand for electricity. By contrast, some of the largest renewable energy resources are in areas that are distant from major electricity demand centres, and are often sparsely populated. As a result there are fewer high voltage transmission lines in many areas suitable for renewable electricity generation (such as in North West Scotland where wind speeds are high, or Mid-Wales). The net flow of electricity in the UK is generally from North to South.
- 4.9 Due to the structure of the grid there are points of constraint limiting the total power that can be transmitted. For example, the flow from Scotland to England is limited to 2.2GW. The Grid is also linked to France and Northern Ireland via high-voltage undersea cables.

<sup>12</sup> In Scotland, 132kV lines are classed as Transmission

- 4.10 Network Companies maintain, operate, and reinforce the electricity networks. They are:
- Transmission Network Owners (TNOs). National Grid is the TNO in England & Wales; Scottish Power (SP) and Scottish and Southern Energy (SSE) are TNOs in Scotland.
  - Distribution Network Operators (DNOs). The fourteen regions in GB are managed by seven companies (EDF Energy; Central Networks; CE Electric; Western Power Distribution; United Utilities; SP; and SSE).
  - National Grid (NG) acts as System Operator, responsible for balancing electricity supply with demand.

4.11 The geographical coverage of these companies is shown in Figure 4-2 below.

Figure 4-2 Distribution Network Operators

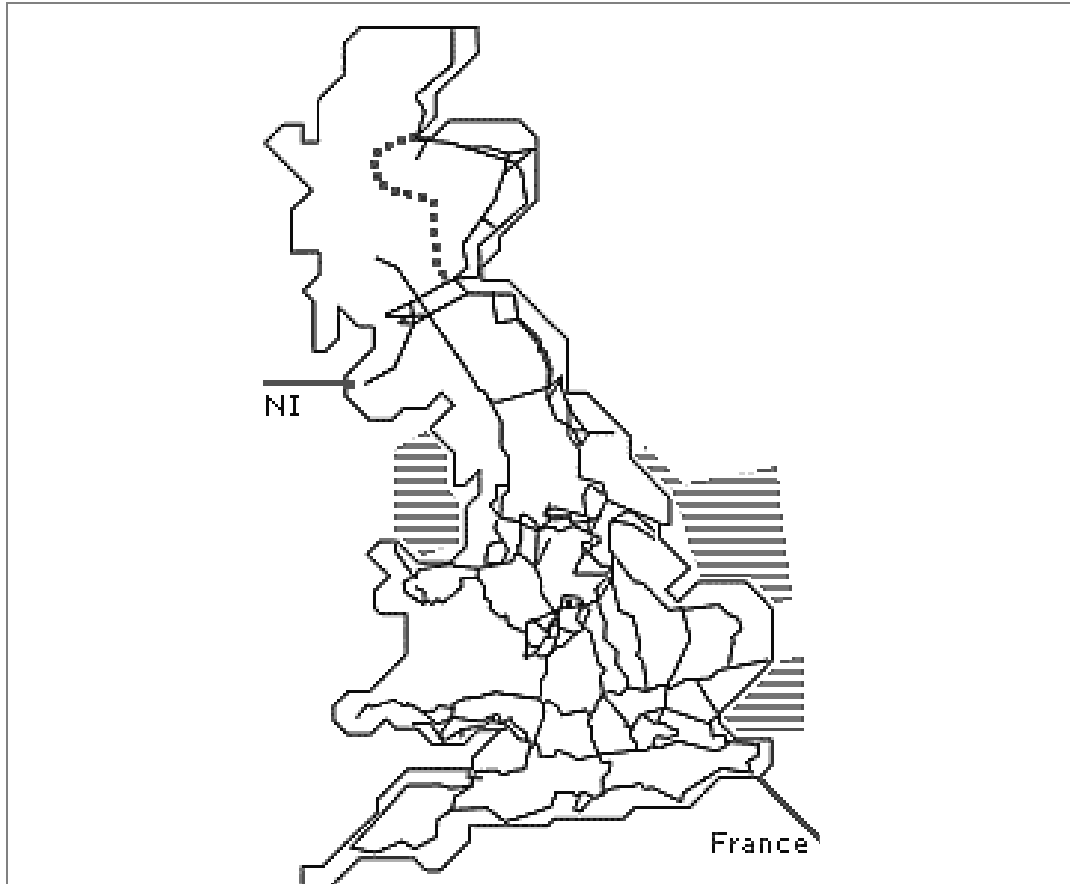


Source: Parliamentary Office of Science and Technology Postnote 280

## The Grid Network

- 4.12 The high voltage network across Scotland, Wales and England has not changed substantially since it was first developed. Figure 4-3 shows high-voltage network (lines of 275 kilovolts (kV) or above where one kV=1000 Volts). The dotted line is a proposed upgrade, between Beaully and Denny in Scotland (approved 6<sup>th</sup> January 2010). Interconnectors with France (2GW) and Northern Ireland [NI] (0.5GW) are shown. Three offshore development zones (striped) are marked. The extensive distribution networks (comprising 0.8 million kilometres of overhead lines and underground cables) are not shown.

Figure 4-3 High-voltage Network



Source: Parliamentary Office of Science and Technology Postnote 280

## Domestic Connection

- 4.13 For electricity to be useful in a home or business, the voltage level has to be reduced from the high levels at which it is transmitted, down to a voltage level that can be used locally. The UK is divided into a number of Distribution Network (DN) areas, where each DN delivers electricity to customers connected at lower levels such as factories, schools, businesses and homes. The DN contains a number of different voltage levels at which customers can connect depending on their size. The domestic home is the lowest level (230V).
- 4.14 The transformation of the electricity from high voltage levels to low voltage levels happens in stages or steps. A distribution substation transfers power from the transmission system to the distribution system of an area. It is uneconomical to directly connect electricity consumers to the high-voltage main transmission network, unless they use large amounts of power, so the distribution station reduces voltage to a value suitable for local distribution. A distribution substation has three basic elements:
- it has transformers that step transmission voltages (275kV and 400kV) down to distribution voltages (132kV down through a series of voltage levels to 230V for domestic homes)
  - it has a "busbar" that can split the DN electricity off in multiple directions

- it has circuit breakers and switches that allow the substation to be disconnected from the transmission grid or disconnect distribution lines from the substation when necessary.

4.15 From the distribution substation, the electricity is distributed to other areas at lower voltages, where further substations step down the voltage to service smaller load customers. Ultimately, a local transformer will ‘step down’ the voltage to 230V and deliver electricity to a few homes and/or businesses in a neighbourhood. A typical domestic connection would be a single phase supply of 230V along a buried cable or overhead wire that would bring the supply directly into the home.

## Key players in the Electricity Industry

4.16 The development of offshore wind farms will contribute to increasing the security of supply and decarbonising electricity generation. The key players and their roles in the industry are listed in the table below.

Table 4-1 Key players in the Electricity Industry

Player	Main interest/role
Ofgem	Regulates the gas and electricity markets in UK
Generators	Own and operate electricity generation plant, from small to large scale power stations and for fossil fuelled, nuclear and renewable energy technologies.
Suppliers	Purchase electricity from generators and sell to business/domestic customers. Under British Electricity Trading and Transmission Arrangements (BETTA) suppliers may purchase from anywhere in Britain.
Network Companies	Maintain, operate, and reinforce the electricity networks. They are:  Transmission Network Owners (TNOs). National Grid is the TNO in England & Wales; Scottish Power (SP) and Scottish and Southern (SS) are TNOs in Scotland.  The fourteen regions in GB are managed by seven companies (EDF Energy; Central Networks; CE Electric; Western Power Distribution; United Utilities; SP; and SS).
Distribution Network Operators (DNOs)	
National Grid (NG)	Acts as System Operator, responsible for balancing electricity supply with demand. Over times scales of up to a few hours, NG use fast response services like the hydro-electric facility at Dinorwig to do this. For long term fluctuations (such as increased demand during cold winters) ‘back up’ generation is needed.

Source: Parliamentary Office of Science and Technology Postnote 280

## Network Costs and Revenues

4.17 It is relevant here to understand how network companies raise revenue and its impact on the offshore wind projects. This is done by levying three broad types of network charges on generators and suppliers:

- Use of System charges. To pay for network reinforcement, maintenance and renewal, paid by generators and suppliers, broadly in proportion to their use of the network. Charges are highest for generators in remote regions, far from demand.
  - Connection charges. To cover costs of infrastructure required for new connections, paid by generators and customers wishing to connect.
  - Balancing charges. To meet costs of matching supply with demand, and providing reserve generation, paid by large generators and suppliers.
- 4.18 Ultimately, charges are passed to electricity consumers. Transmission and distribution costs make up around 4% and 17% of the average domestic bill, respectively. The Network Companies are regulated monopolies. To prevent overcharging, Ofgem sets caps on revenues every five years, through 'Price Control Reviews'. Reviews of transmission and distribution were recently completed.

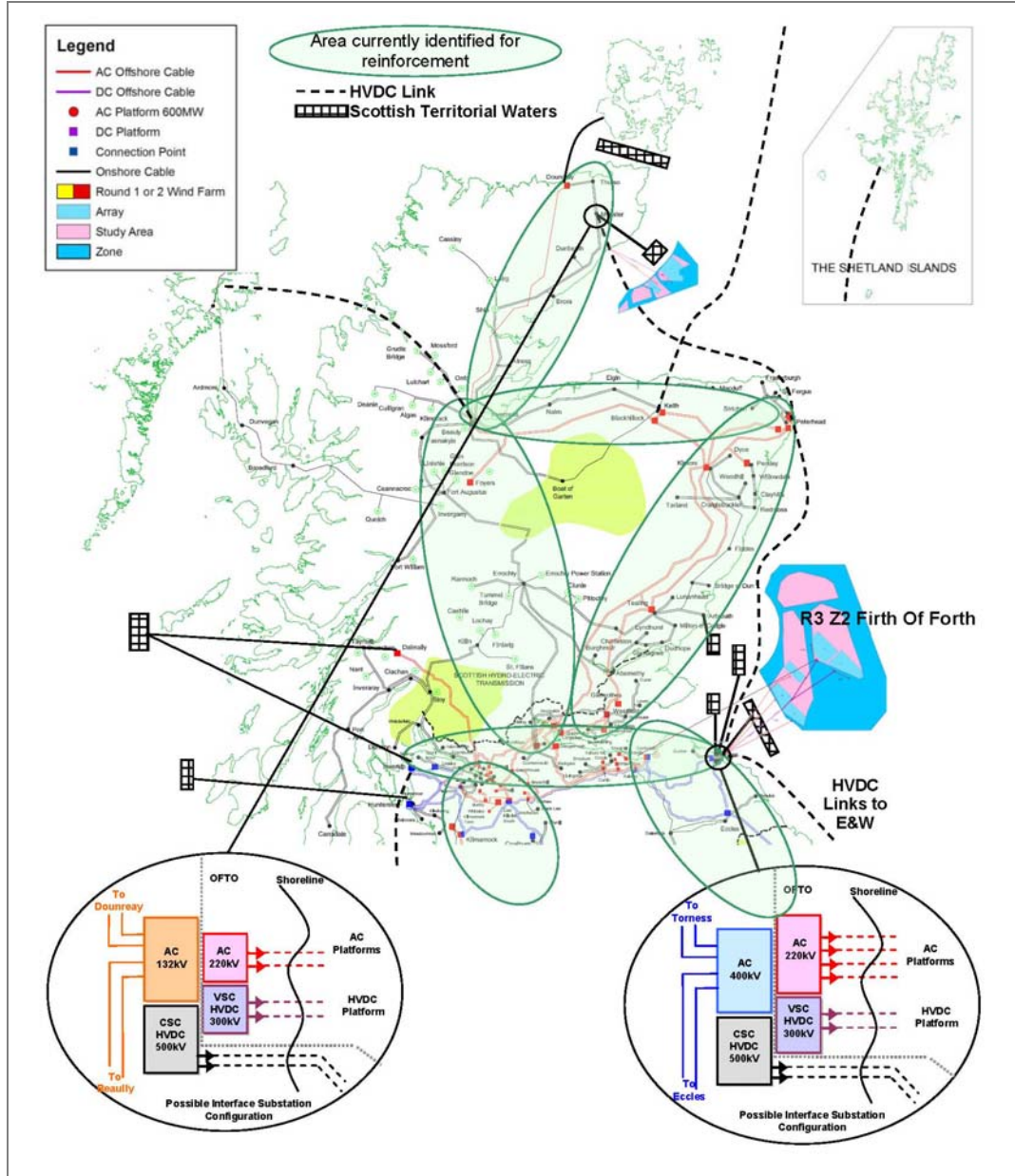
## The Grid in Scotland

- 4.19 The second national planning framework<sup>13</sup>, approved by Scottish Parliament, sets out a range of essential grid reinforcements to provide capacity to realise the potential of Scotland's renewable energy resources, maintain long-term security of electricity supply and support sustainable economic development. The eight upgrades are:
- overhead line and substation works to increase north-south transfer capacity in Central Scotland
  - a new 275kV South-West Scotland transmission line
  - strengthening the Scotland - England interconnectors to increase export capacity to 3.2GW
  - upgrading the East Coast transmission route to 400kV
  - upgrading the existing Beaulieu - Dounreay overhead transmission line
  - reinforcing the Beaulieu - Keith overhead transmission line
  - reinforcing the sub-sea cable link between Orkney and the Scottish mainland
  - new sub-sea cable links for the Outer Hebrides and the Shetland Islands.

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<sup>13</sup> Scottish Government (2008) *National Planning Framework (NPF2)*

Figure 4-4 Grid Development in Scotland



Source: National Grid, Transmission Networks Offshore Development Information Statement, Dec 2009

## Grid Capacity in Argyll

4.20 The current grid infrastructure in Argyll is considered by the grid operators to be effectively “saturated”<sup>14</sup>, with the result that any new projects (even very small ones) are being refused connections any earlier than 2018. This is a challenge for the development of Argyll’s abundant renewable resources, including wind, wave and tidal sectors. In addition, the proposed improvements to the grid infrastructure as indicated in Figure 4-4 are likely to have an impact on the Argyll communities whether or not the offshore wind farms are built.

<sup>14</sup> Scottish Power Renewables Briefing Note 2009

- 4.21 Strategic network upgrades are being considered for the UK as a whole are required to allow us to meet 2020 targets under the EU Directive on Renewable Energy. The Energy Network Steering Group (ENSG) is currently considering these upgrades and is expected to publish a report in February 2010. The critical point for Argyll is to make sure that the region's potential is fully accommodated within the proposals. It is understood that Hunterston may be considered as a hub to gather renewable generation from the whole of the West coast (including Argyll and the Western Isles), but this is not confirmed therefore it is possible that the idea is dropped. The most likely solution, if approved, would be a subsea cable running from Hunterston out to Islay via Kintyre.
- 4.22 Planning is also critical for new lines and the National Planning Framework has a key role to play. It is important that the Argyll link receives equal priority to the others. The Scottish Government is working with the energy industry and the UK Government through the Electricity Networks Strategy Group to develop the grid infrastructure needed to meet 2020 renewables targets. The group, involving Department for Energy and Climate Change, National Grid and Ofgem is assessing a range of options for reinforcing Grid. For Scotland it focuses on grid infrastructure options to transport up to 11.4 GW of renewable energy from Scotland - with significant plans for onshore reinforcement across Scotland and developing off shore sub sea cable links between the Scottish mainland and the Islands and links to the UK for export.

## Scottish Renewables Targets

- 4.23 The Scottish Government's target is to meet 50 per cent of electricity demand from renewables by 2020. In 2008, 22 per cent of electricity demand came from renewables. There is 6.5 Gigawatts of renewables capacity installed, under construction or consented around Scotland, which will take Scotland beyond the interim target of 31 per cent of Scotland's electricity demand from renewables by 2011.
- 4.24 The offshore wind developments of Kintyre, Islay and Tiree have the potential to contribute 2,558 MW (2.5 GW) or 38% of current consented capacity. The breakdown is as follows:
- 378 MW - Kintyre
  - 680 MW - Islay
  - 1500 MW – Tiree.
- 4.25 This underlines the significance of these developments on a local and national scale and the importance of effectively managing the opportunity that they present. All stakeholders should be appropriately and pro-actively engaged in the process, close attention should be paid to the policies we aim to implement, an integrated assessment process with social performance a core principle should be followed and a focus on the potential for a win-win outcome maintained at all stages of the projects development and operation..

## 5: Issues to be considered in offshore wind farm development

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### *Introduction*

- 5.1 To provide a development based context to the scoping study initial research has been undertaken to explore the key issues to be considered in offshore wind farm development. This has been informed by the socio-economic baselines established for each community, the development process for wind farms and relevant experience from other sectors, such as oil and gas.
- 5.2 The most important element of this to sit alongside the economically biased policy described in Chapter 5 is the concept of social performance. Lessons from the oil and gas sector in particular provide a useful perspective and approach that puts the ‘host’ community at the heart of the negotiating process and long term vision of such developments.

### *Social performance of offshore-wind farm development*

- 5.3 The establishment of onshore renewable energy generation in the UK has struggled over the years with its relationship with the community and the associated concepts of benefit, ownership and acceptance in the local environment. There have been ‘successes’ with individual projects (such as Fintry<sup>15</sup> and Baywind<sup>16</sup>) but so far a collectively agreed (amongst stakeholders) systematic approach to these issues and examples of good practice is relatively patchy. In the case of offshore wind there is also the factor of defining the community due to the perceived geographical dislocation between the development site and the community boundary. It is perhaps time to explore lessons learned from other offshore developments, in particular oil and gas. The similarity of scale of development and location in remote and often ‘fragile’ areas provide some useful pointers from a sector which is far more advanced in its understanding and approaches to social performance. For example, Shell has developed three social performance objectives:
- avoid/and or minimise the negative impacts to local communities and stakeholders from Shell operations
  - optimise the positive opportunities to local communities and other stakeholders from Shell operations
  - undertake activities to contribute more broadly to the societies and communities where Shell operates.
- 5.4 There is a strong business case for a social performance approach which can create a ‘win win’ situation for example through, adding to the developer’s credibility and ‘license’ to own and operate, reducing delays in the consenting process and operational issues, facilitating

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<sup>15</sup> Fintry Development Trust, Fintry Community Energy Project.

<sup>16</sup> [www.baywind.co.uk](http://www.baywind.co.uk)

access to sources of private finance that now regularly consider environmental and social risks of projects in their analysis and enhanced reputation with the ability to operate in sensitive locations.

- 5.5 The social and economic assessment of renewable energy in the UK has tended to take a back seat to more pressing issues of visual and noise impact. However, increasingly it is being accepted that these are very much interlinked and an Integrated Assessment approach may well be more appropriate and successful in the long run. Integrated assessment has been defined as:

*Integrated assessment (IA) is a reflective and iterative participatory process that links knowledge (science) and action (policy) regarding complex global change issues such as acidification and climate change. IA can be defined as an interdisciplinary process of combining, interpreting and communicating knowledge from diverse scientific disciplines in such a way that the whole cause-effect chain of a problem can be evaluated from a synoptic perspective with two characteristics: (i) it should have added value compared to single disciplinary assessment; and (ii) it should provide useful information to decision makers (Rotmans and Dowlatabadi, 1997<sup>17</sup>).*

- 5.6 It has been found in the oil and gas sector that this approach can help secure both a regulatory and ‘social’ license to operate<sup>18</sup>. In the case of offshore wind farm development in Argyll further research into social performance approaches and models of support, such as a developer funded community liaison officer is a priority. This should include research into parallel case studies that can offer lessons for communities and developments of this type.

### **Visual aspects**

- 5.7 The visual impact of the proposed development will need to be assessed; this will include a seascape assessment, any onshore developments in terms of grid connection, housing of operational and maintenance functions and the cumulative effect of other offshore wind farm developments. The west coast of Scotland poses particular challenges due to the intricate arrangement of islands and mainland and the interchange of views between them. Views from ferries are also very important in Scotland particularly on the west coast and due to the number of islands and intricacy of coastline one ferry journey can provide many varied and changing views and compositions.<sup>19</sup>
- 5.8 Case studies on the development of offshore wind farms at Horns Rev and Nysted found that both communities were concerned by the aesthetic impacts of such a large scale development but that judging the true impact of such a subjective issue is difficult<sup>20</sup>.

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<sup>17</sup> Encyclopaedia of Global Environmental Change (2000) Integrated Assessment, Definition of, Jeroen P van der Sluijs

<sup>18</sup> Orenstein et al *Case Study of an Integrated Assessment: Shell’s North Field Test in Alberta, Canada*.

<sup>19</sup> Scottish Natural Heritage, An assessment of the sensitivity and capacity of the Scottish seascape in relation to windfarms

<sup>20</sup> ECON Analyse (2005) *Sociological investigation of the reception of Horns Rev and Nysted offshore wind farms in the local communities* Status Report

- 5.9 Seascapes effects are the changes in the character and quality of the seascape as a result of development. Hence seascape assessment is concerned with direct and indirect effects upon specific seascape elements and features; more subtle effects on seascape character; and effects upon acknowledged special interests such as designated landscapes for their scenery, wildness or tranquillity. With offshore wind farms, the majority of the development is not on a landscape, so consideration should be given to the indirect visual effects on the setting or perception of coastal landscapes as a result of offshore development, as well as the landscape effects arising from the land based development components such as substations and grid connections<sup>21</sup>. For example, at a distance of 5km from the coast the Tiree Array will have a significant visual impact on both the landscape and seascape.

### **Tourism**

- 5.10 Studies on tourist attitudes to onshore wind farms in the region have found little cause for concern to the industry: “For most tourists, the existence of wind farms was not a factor in their decision-making, and while 5% did say that turbines in the landscape might make them stay away, this figure was exactly balanced by those who found the wind farms a positive draw”<sup>22</sup>
- 5.11 Similar studies have explored the impact of wind farms on local tourism after construction, including a 2002 report commissioned by the Scottish Renewables Forum (SRF) & the British Wind Energy Association (BWEA) to determine “Tourist Attitudes to Wind farms”<sup>23</sup> in the Argyll and Bute area. The study found that 43% of survey respondents found the wind farms provided a positive effect on their impression of Argyll as a place to visit, while only 8% found it had a negative effect.

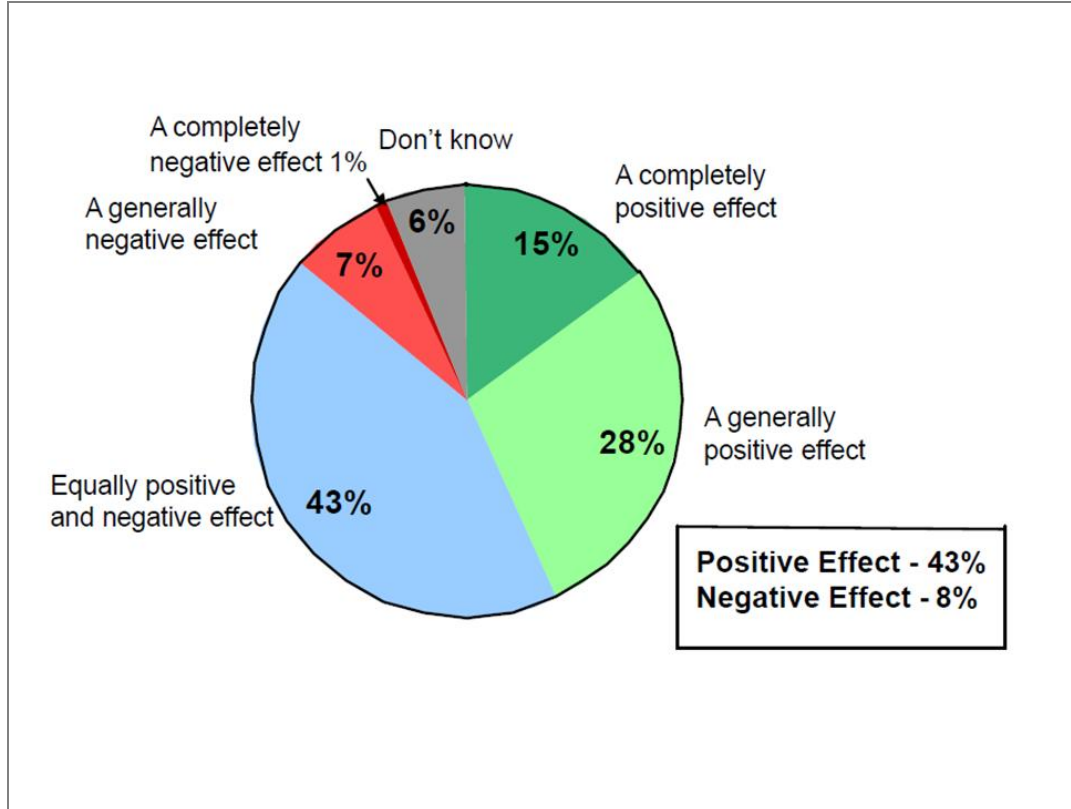
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<sup>21</sup> DTI/BERR, Guidance on the Assessment of the Impact of Offshore Wind Farms: Seascape and Visual Impact Report, 2006

<sup>22</sup> Warren, C; McFadyen, M (2008) “Does community ownership affect public attitudes to wind energy? A case study from south-west Scotland” Elsevier Ltd

<sup>23</sup> MORI (2002) *Tourist Attitudes to Windfarms*

Figure 5-1 Tourist Attitudes to Wind farms in Argyll



Source: : MORI (2002) "Tourist Attitudes to Wind farms"

- 5.12 A report for the Scottish Government on "The economic impacts of wind farms on Scottish tourism"<sup>24</sup> conducted research on areas with more established wind farms and found that tourist impressions of wind farms generally remained positive. The survey found that 39% of respondents felt the wind farms had a positive impact on the landscape while 25% found it had a negative impact.
- 5.13 The coastal areas of Islay, Kintyre and Tiree provide a wealth of marine ecotourism opportunities. The stunning coastlines and abundance of marine wildlife attract tourist throughout the year, offering a range of activities to experience it. Sea tours offer a chance to view marine birds, whales, sharks, dolphins and porpoises at close proximity.
- 5.14 The development of offshore wind farms will have the potential to impact on the marine ecotourism industry in similar ways to the fishing industry. If developments are placed in key ecotourism areas wildlife may be deterred and the industry will have to re-locate tours, potentially further offshore. If the developments interfere with breeding activities and migratory routes of wildlife then there is the possibility that the survival of marine ecotourism in the Islay, Kintyre and Tiree areas will be threatened<sup>25</sup>.

<sup>24</sup> Glasgow Caledonia University et al (2008) *The economic impacts of wind farms on Scottish tourism*

<sup>25</sup> Examples of marine ecotourism operators in the area:  
Mull of Kintyre Seatours - <http://www.mull-of-kintyre.co.uk/> Argyll Sea Tours - <http://www.argyllseatours.com/>  
Islay Sea Safari - <http://www.islayseasafari.co.uk/>

- 5.15 Tourism is one of the key sectors for the island economies and Kintyre, in addition to this, the businesses operating in these sectors on the islands are relatively small scale and therefore more sensitive to any potential impacts. The effect on tourism will be assessed as part of the developers' SIAs but it would be beneficial from the communities' perspective to gain a more in-depth understanding of the characteristics of the tourist trade and how this might be affected at a micro-scale. For example, will longstanding annual visitors experience a change of character resulting in the loss of repeat business?

### **Underwater noise**

- 5.16 The potential impact of the associated noise of wind farm construction and operation will need to be assessed. Studies have been conducted to determine these impacts and understand how they may affect planned developments.
- 5.17 A 2006 COWRIE study into the Effects of Offshore Wind Farm Noise on Marine Mammals and Fish<sup>26</sup> found that the noise associated with construction, operation and shipping to turbines could have an effect on marine wildlife (including porpoises, harbour seals, cod and herring) "at considerable distances". The exact impact on wildlife will vary across the different phases of construction and operation. However, such impacts may have a short term or long term effect on fishing which is a key economic activity for the communities.
- 5.18 Behaviour of marine mammals and fish are most likely to be affected during construction and decommissioning phases when there is likely to be an "avoidance of the area"<sup>27</sup> during this time. This will vary depending on the species and the type of construction/decommission activity but has been estimated at:

Table 5-1 Calculated Ranges for Avoidance Distance for Different Marine Species

Species	Distance
Salmon	1,000 m
Cod	5,500 m
Dab	100 m
Bottlenose dolphin	4,600 m
Harbour porpoise	1,400 m
Harbour seal	2,000 m

Source: EWEA "Wind Energy: The Facts"

- 5.19 A 2007 study conducted by the CSIC in Spain<sup>28</sup> found similar evidence to suggest that underwater noise impacts were significant during construction and that "mitigating measures should be accomplished". The study also concluded that the noise during operation "scarcely exceeds the background noise level" and was therefore not deemed to be of too much concern for local marine wildlife.

<sup>26</sup> COWRIE (2006) *Effects of Offshore Wind Farm Noise on Marine Mammals and Fish*

<sup>27</sup> EWEA (European Wind Energy Association) *Wind Energy: The Facts*

<sup>28</sup> Consejo Superior de Investigaciones Científicas (CSIC) (2007) *Underwater Noise Impact of Offshore Wind Farms during Construction and Operation Phases*

### **Helicopter noise**

- 5.20 A 2008 Defra report into the Improvement of Helicopter Noise Management in the UK<sup>29</sup> highlights the sociological impact of frequent helicopter noise to local communities. It was determined that the highest annoyance levels were based on “uncommon or exceptional helicopter events” and communities were typically less annoyed if the use of helicopters was associated with local industry boosting activity.
- 5.21 At this stage a range of scenarios are still being considered and tested for the development of the offshore wind farms. However, it is considered a possibility that routine servicing of offshore wind turbines could be undertaken through the transfer of personnel offshore via helicopter.
- 5.22 In the case of Tiree one possible scenario includes upgraded transport facilities in the form of storage hangars for 2-5 large helicopters at the airport and a large fuel store(s) for fuel for both helicopters and maintenance boats.
- 5.23 Each wind turbine is likely to need one maintenance visit per year and each visit takes approximately 3 days. Almost all of these visits will be done by helicopter due to the swell so maintenance of each turbine will involve 12 helicopter movements (2 return flights per day over 3 days). For 200 turbines this is the equivalent of 2,400 flights per year, for 300 turbines, 3,600 flights per year. There will be additional flights for break-downs etc and all these flights would be focussed on the "better-weather" days.
- 5.24 Firstly, this example illustrates the possible issues during the operational phase of the wind farm. The effects upon quality of life, tourism, livestock, and wildlife would require detailed assessment.
- 5.25 Secondly, in the context of the Defra research it underlines the importance of the development being seen, at least in part, as a local industry.
- 5.26 Finally, the possibility of this number of helicopter movements has raised serious concerns within the community, will this be the case, will it be assessed properly, will the community be able to influence the outcome etc. Although ARC appreciates more detail and certainty is not yet available for the Tiree wind farm sustained and open communication between SPR and the community representatives is required on this issue and all others raised during the development process.

### **Property prices**

- 5.27 A number of studies have been commissioned to determine the impact of wind farms on property prices in the surrounding area. These studies are important, as any findings to show a detrimental impact on property prices could cause community resistance to proposed developments. A FiBRE report in 2007<sup>30</sup> noted that a 2004 survey of RICS Estate Agents found that 60% of the 405 respondents considered there to be a “detrimental impact” on property prices from visual or proximal impacts of wind farms. The study also highlights that pinpointing the exact cause of local concerns over wind farms (and the subsequent impact on

<sup>29</sup> Waddington et al (2008) *The Improvement of Helicopter Noise Management in the UK*

<sup>30</sup> Findings in Built and Rural Environments (FiBRE) (2007) *What is the Impact of Wind Farms on House Prices?*

house prices) is an inexact science. Differentiating between “genuine local concerns” and “wider ideological issues” makes it difficult to draw a true parallel between public reception of wind farms and property prices. The report suggests that:

*“...there is evidence to suggest that the ‘threat’ of a wind farm may have a more significant impact than the actual presence of one. Even this may not translate into lower house prices if the community are actively involved in the process and enjoy some of the benefits through lower, or green, fuel costs”<sup>31</sup>*

- 5.28 A 2007 case study on the Crystal Rig wind farm in the Scottish borders<sup>32</sup> tracked the property prices in the town of Dunbar (10km from the Crystal Rig farm) over a 7 year period (2000-2006) showing an increase in value of 132.8% suggesting that the wind farm had a neutral (if not positive) impact on property prices. The study suggested that further research on similar case studies was required to establish the factors associated with these changing property values.
- 5.29 In the context of the Argyll wind farm developments the effect on property prices is unknown. If it is negative this could help redress the issue of property values increasing to be out of reach of local residents. If positive it could exacerbate this issue.

### **Fishing**

- 5.30 Based on an expert group workshop conducted as part of a COWRIE funded project exploring the “Options and Opportunities for Marine Fisheries Mitigation associated with Wind farms” a development of this size has the potential for both positive and negative impacts on the industry.

Table 5-2 Possible Impacts on fishing of offshore wind farms

Positive	Negative
Wind farms may act as fisher/broodstock reserves	Loss of access to fishing grounds, during construction and the operational phase
Some target species may benefit from turbines acting as new reef habitat	Safety concerns associated with new features both above and below the surface
Opportunities for fishery diversification within wind farms, e.g. static gears or angling, including for higher value species? Some ‘winners’ have been reported from existing wind farms – better crab/lobster fishing at one site	Need to change gear or practices to work around or within wind farms
Increased port activity associated with wind farms may help to keep ports and services going and available for fishing	Increased activity associated with wind farms pushes fishing industry into smaller spaces at ports/harbours
Opportunities for alternative/new employment with wind farm construction and maintenance	Potential habitat loss for some species
	Loss of fishing crew to wind farm service vessels

Source: Ichthys Marine (2009) “Options and opportunities for marine fisheries mitigation associated with wind farm: note of key points from the Expert Group Workshop”

<sup>31</sup> Ibid

<sup>32</sup> Crystal Rig Case Study (2007) *Impact of Wind Farms on Residential Property Prices – Crystal Rig Case Study*

- 5.31 Fishing is also one of the key sectors for the island economies and Kintyre, in addition to this, the businesses operating in these sectors on the islands are relatively small scale and therefore more sensitive to any potential impacts. The next step of the SIA process would be to consult directly with the people whose livelihoods depended on local fishing and assess the potential impacts highlighted in the table above.

### ***Transport***

- 5.32 There is potential for a degree of interference to shipping routes and onshore civil infrastructure routes in the area surrounding the turbines. Possible impacts will need to be mapped to understand just how these routes will be affected, if at all.
- 5.33 The capacity on ferry, road and air transport will also be affected depending upon numbers of people and frequency of use. It was noted in consultation with Islay and Tiree that this can mean limited capacity for local people travelling by air or ferry in addition to road congestion and higher risk of accidents. Additional road traffic in Kintyre could also cause congestion due to the narrowness of some of the main access routes.
- 5.34 There is also the potential for the wind farm developments to help build a business case for improving port facilities. An example of this is the Port of Lowestoft, England, part of Associated British Ports (ABP) which has become the operations centre for the Greater Gabbard offshore wind farm. The turbines are located 15 miles off the Suffolk coast, and Lowestoft's Outer Harbour is being used to house the necessary operational support facilities.
- 5.35 ABP has carried out significant investment in the construction of facilities and enabling the port to also play host to a fleet of high-speed offshore catamarans, capable of reaching the wind farm in approximately one hour. The wind farm is being developed by Scottish and Southern Energy plc and RWE Innogy in a 50:50 joint venture.
- 5.36 Transport by road and sea is critical to the sustainability of the communities' economies and the proposed developments have the potential to impact negatively due to under capacity or to support planned expansion of infrastructure capacity that could be of long term benefit.

### ***Additional People***

- 5.37 The requirement to host additional people within the local area is an important issue to consider as it has a bearing on the infrastructure required (health, schools, roads, housing) and the capacity to absorb these demands. In addition to the infrastructure requirements the influx of a number of people (e.g. construction workers, operational staff and project managers) could have a profound cultural effect in small, rural and fragile communities.
- 5.38 It is essential to know the likely scale of this potential impact (i.e. numbers), the duration and probability of it occurring. For example, if a developer were to base all personnel within the community for both the construction and maintenance phases this could amount to 100-150 additional people. Together with partners and families, and depending if local residents were directly employed, this could be in the region of up to 300 new people to arrive in phases over a five-year period. There would be significant consequences for housing, water, sewerage,

schooling and transport as well as potential impacts on the island's social, cultural and architectural heritage.

- 5.39 In addition to this communities may be concerned that the newcomers may benefit from higher incomes and better housing possibly resulting in a 'them and us' culture.
- 5.40 Alternatively it may be that limited or no personnel are based locally which would limit impacts as well as possible benefits.
- 5.41 The future SIA requires as much detail on additional people as possible to assess this from the community perspective and at an early stage. To date the communication around this issue has resulted in mixed messages raising possibly unnecessary concerns and compromising the trust so essential in stakeholder communication. Research into how well recent expansions of population have been integrated into the local community would also be informative.

### **Community acceptance**

- 5.42 Community acceptance is closely linked to all of the above issues and demonstrates the need to involve the community at the earliest possible stage and ensure their involvement throughout the project. The purpose of this community-led study is to help inform the process and enable all parties to build a win win relationship.
- 5.43 Recent studies have shown that community acceptance is strongly influenced by the perceived social and economic impact. In a case study of wind farms on the west of Scotland<sup>33</sup> it was found that the reasons for supporting new wind farms if they were community owned included economic benefit and a perception of greater fairness.
- 5.44 Warren and McFadyen (2008) also identified that the current development model does not necessarily lead to public support and a change of approach is desirable. A degree of ownership of the process and possibly the outputs if not the physical wind farm may help fulfil the need for these large scale developments to integrate with the social construct of the local communities, their values and culture. To impose such large scale developments without this degree of ownership may have deep repercussions in the area, possibly leading to loss of local culture, community cohesion and dwindling populations.

### **Socio-economic baseline**

- 5.45 In order to understand the potential implications of the proposed projects in terms of their social and economic impact and consequences on the local communities it is important to ensure that there is a sound baseline of local economic and social contextual information. From this baseline, it will be possible to identify and track any impacts and potential points of engagement that the proposed developments will have.
- 5.46 Therefore, a profile has been developed for each of the communities of Tiree, Islay and Kintyre, providing a 'snapshot' of these areas in terms of the social and economic aspects of the communities. Such a snapshot provides an important starting point to understand how the

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<sup>33</sup> Warren, C; McFadyen, M (2008) *Does community ownership affect public attitudes to wind energy? A case study from south-west Scotland* Elsevier Ltd

potential implications of offshore wind farm projects proposed in the seas around Tiree, Islay and Kintyre will change certain aspects of life in the regions, be it economic or social change.

- 5.47 Two of the communities (Tiree and Islay) are classified as ‘fragile’, the definition of which is as follows:

*Fragile areas are characterised by weakening of communities through population loss, low incomes, limited employment opportunities, poor infrastructure and remoteness. HIE gives these areas priority, with support targeted at projects that will grow the economy and contribute to the long-term strengthening of these communities.<sup>34</sup>*

- 5.48 Campbeltown on Kintyre is designated as an area of employment deficit<sup>35</sup>

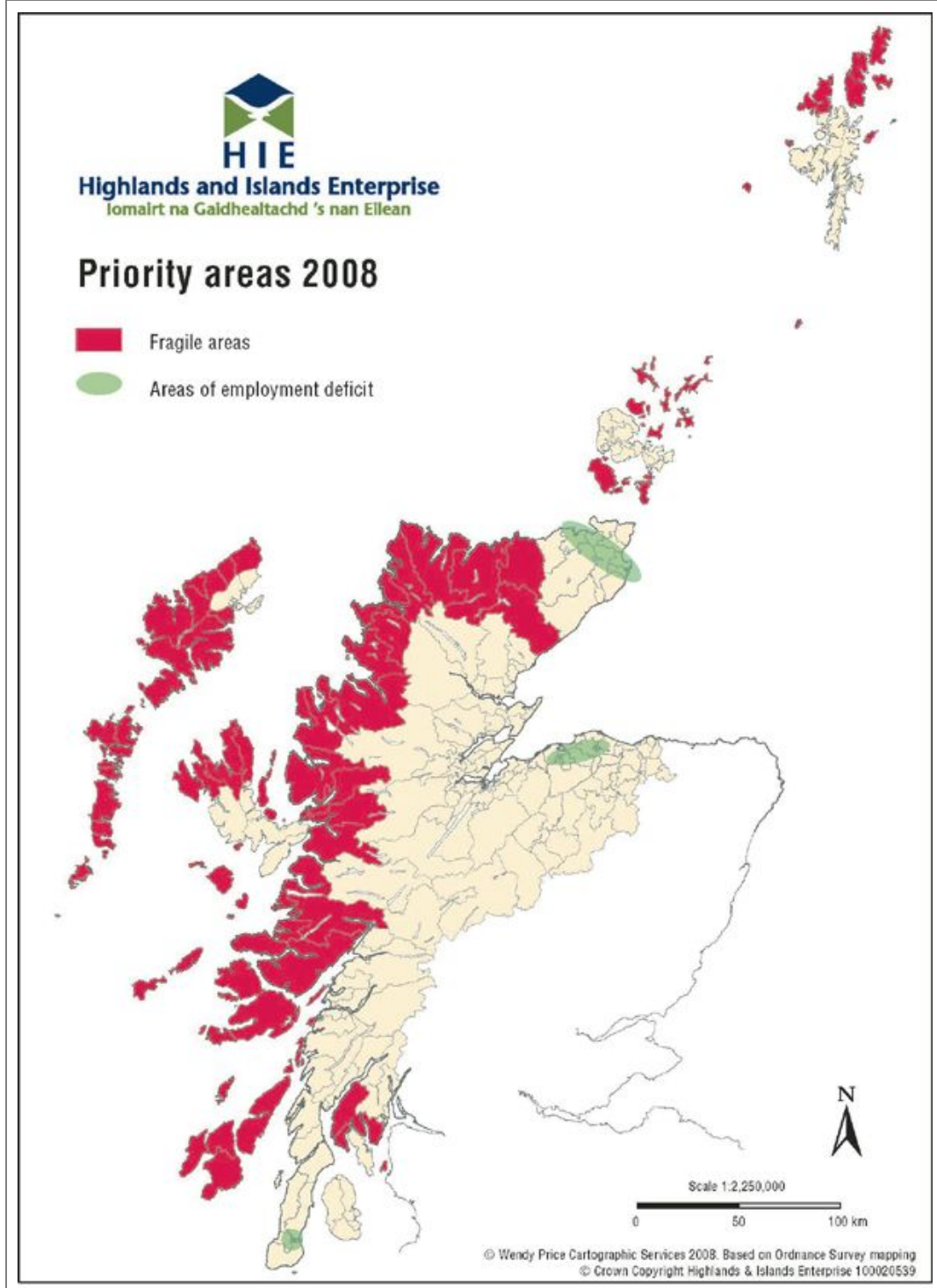
- 5.49 The areas under these classifications in Scotland are shown in Figure 5-2.

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<sup>34</sup> Scottish Government (2009) *Use and Understanding of the Scottish Government Urban Rural Classification*

<sup>35</sup> Highlands and Islands Enterprises (HIE) (2008) *Operating Plan 2008 – 2011*

Figure 5-2 Fragile areas in Scotland



Source: Highlands and Islands Enterprise

### Employment

5.50 In general, one has to be careful about using typical assumptions on employment in remote areas like the North West Highlands. A regular 9-5 job with a pensionable salary is often the

exception. Most households exist on several small incomes (known as ‘pluri-activity’) rather than one main income stream.

- 5.51 It may be true that even in the Highlands agriculture accounts for only 2% of employment, but that is 2% full time employment or full time equivalent, not 2% of the population. For example, on Tiree (which is one of the most productive agricultural locations in the crofting counties), it is probable that as much as 25% of households derive some income from agriculture. This means that any impact on agriculture will likely be a smaller impact but on a bigger number of people.
- 5.52 The next most important part-time income earner is the tourism trade, the same argument can be made – a smaller impact but on a larger group of people. The upshot is that the impacts are going to be felt by everyone and they will be felt in more than a purely economic sense. It may well be that the negative impacts are felt by everyone to some degree, but the positive impacts (certainly jobs) are felt by only a few, albeit to very great extent for those few. Such disparity could create great social tension within the community.

## Potential Supply Chain Opportunities in wind farm development

- 5.53 Central to the socio-economic impact assessment will be an analysis of the supply chain opportunities during the planning, construction and operation of the wind farms. As plans become more detailed a more comprehensive list will be generated. The procurement process should also be examined to enable local businesses to bid where appropriate.
- 5.54 The first stage is planning including the Environmental Impact Assessment. Some of this is already underway but it will continue for at least a further 12 months. The table below illustrates some of the supply opportunities within the planning process.

Table 5-3 Potential Supply Chain Opportunities in wind farm planning

Stage	Activities	Types of goods and services
<b>Environmental Impact Assessment</b>	Impact Assessments	Bird surveys
	Community Consultations	Marine surveys
	Statutory Consultations	Socio-economic surveys
		Traffic surveys
		Visual assessment
		Photography
		Arranging community meetings
<b>Related services</b>	EIA	Local transport (taxi, car hire)
		Accommodation
		Catering

Source: SQW Energy

- 5.55 Table 5-4 illustrates the different stages within the construction process followed by the goods and services required for this process. Further research will allow an understanding to be developed of the scale of the requirement and whether this can be met within the community, by a supplier or chain of suppliers.

Table 5-4 Potential Supply Chain Opportunities in wind farm construction

Stage	Activities	Types of goods and services
<b>Source major components of wind farm</b>	Towers	
	Blades	
	Nacelle	
	Foundations and piles	
	Offshore cable	
	Onshore cable	
<b>Intermediate Construction – Engineering and Project Management</b>	Onshore cable installation	
	Onshore cable connection	
	Offshore cable supply	
	Offshore cable installation	
	Installation of turbines	
	Maintenance	
	Quality assurance and control	
<b>Small scale services</b>	Supply of barge, tug, MPV	
	Accommodation for labour	
	Catering	
	Emergency Services	
	Medical Services	
	Logistics	

Source: SQW Energy

- 5.56 Table 5-5 illustrates the different services post planning. Further research will allow an understanding to be developed of the scale of the requirement and whether this can be met within the community, by a supplier or chain of suppliers.

Table 5-5 Potential Supply Chain Opportunities in post planning

Stage	Activities	Types of goods and services
<b>Operation and maintenance</b>	Control centre	Office and IT
	Turbine maintenance	Transport (eg. Helicopter flights)
	Monitoring	Supply of barge, tug, MPV
		Data analysis
<b>Related services</b>	Emergency Services	Emergency transport
	Medical Services	Medical staff and supplies

Source: SQW Energy

## 6: Community Benefits

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### Introduction

- 6.1 Although there is some experience in applying sustainable development principles to wind farm development, the experience is somewhat patchy and haphazard and appears not to be guided by a coherent set of democratically agreed or otherwise accepted principles in the same way as in some other sectors.
- 6.2 Traditionally, community benefits can range from non-existent, through to proportionate and equitable. Some are transparent and visible, engaging the community actively and some are passive and ubiquitous, demonstrating no “additionality” to communities being close to impossible to distinguish from business as usual.
- 6.3 The application of community benefit is more developed in some sectors than in others. Indeed, at first glance, it might appear that offshore wind developments should be immune from community contributions in the way that offshore funds escape tax through legal loopholes, simply because they are offshore. In either case, such practices can be regarded as wrong if not illegal. Offshore oil, for example, discovered long ago the critical importance of bringing their local proximate communities within the scope of benefits received.
- 6.4 Even general legal obligations on companies have changed significantly in the last decade. The Companies Act 2006 now incorporates a duty to promote the success of the company and requires certain factors to be taken into account in doing so, which include a statutory requirement to take account of “the impact of the company’s operations on the community and the environment”.
- 6.5 Renewables policy offers some general guidance too. If the aim of offshore wind development were purely shareholder return, then clearly offshore wind farms would not be pursued. They have no pure economic justification in today’s energy markets without a heavy subsidy by the electricity consumer in order to contribute to our sustainable development in a manner that does not transfer excessive reward (as a condition of the Renewable Obligation State Aid approvals). It appears therefore right and justified that the Government, electricity consumers and stakeholders should expect that the Government’s policy of enforcing financial support for offshore wind from electricity consumers should be matched by applying the principles of sustainable development to the maximum extent possible. Equally, avoiding excessive profiteering through community investment provides a safeguard against bringing the Renewables Obligation support mechanism into disrepute in the way that free European Emissions Trading Allowances for coal stations brought the EU Emissions Trading Scheme into protracted disrepute.
- 6.6 In this section we aim to provide the sustainable development context of the offshore wind farm and focus how the distribution of an appropriate level of targeted financial benefits within proximate communities may emanate from the principles of sustainable development to the benefit of the developer and the wider proximate community. This suggests areas for further investigation in any future consultation to validate or amend these initial suggestions.

## Case Study example

- 6.7 An example of a coherent set of principles guiding the sustainable development of projects (where the projects themselves are motivated by the promotion of sustainable development) is the Roundtable on Sustainable Biofuels (“RSB”). By reviewing the RSB, we can find some guidance that can be applied to offshore wind development.
- 6.8 The RSB has a membership spanning farmers and growers of biofuels, industrial biofuels producers, retailers, blenders, transporters, banks, investors, rights-based NGOs, rural development and food security organisations, environment and conservation organisations, climate change and policy organisations, trade unions, smallholder farmers’ and indigenous peoples representatives, IGOs, governments, standards setters, specialist advisory agencies, certification agencies and consultant experts amongst others.
- 6.9 Over a period of years, the RSB has developed core principles of sustainable development<sup>36</sup> and has expanded these principles into detailed guidance. Attached to the guidance is the “Annex to the Guidelines for environmental and social impact assessment, stakeholder mapping and community consultation specific to the biofuels sector – Social Specialist Guidelines<sup>37</sup>” (“RSB Social Guidelines (2009)”). Although these guidelines are specific to biofuels this of course does not imply that the thinking and intention does not carry over into other areas of sustainable development.
- 6.10 Our suggestion therefore is that in assessing the social impact of a project such as those which are the subject of this report, and whose primary national and international policy purpose is sustainable development, that experience from other sectors could be drawn to provide guidance as to reasonable practice. Here we suggest some areas where the guidance could be highly relevant to the specifics of wind farm development.

## Relevant Guidance for wind farm development

- 6.11 The document, RSB Social Guidelines (2009), draws out principles with social relevance. Principles 1 and 2 covering the commitment to follow applicable laws and regulations and to carry out an Environmental and Social Impact Assessment and economic viability analysis, as well as the need for “Free, Prior and Informed Consent” (“FPIC”) as the basis for the process to be followed during all stakeholder consultation resulting in consensus driven negotiated agreements appear to be obvious ‘givens’ in the particular cases in question here, as would be expected from any large, international energy company.
- 6.12 Nevertheless, Principle 2 implies that as a matter of good process, there needs to be direct involvement and ownership of community representatives in the consensus building process. The RSB Social Guidelines (2009) also give extremely considered advice on the approach to impact assessment. It points out that over the past 30 years there has been a shift away from the top down manner to participatory approaches and provides a methodology for establishing a baseline.

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<sup>36</sup> Roundtable on Sustainable Biofuels (RSB) (2009) *Annex to the Guidelines for environmental and social impact assessment, stakeholder mapping and community consultation specific to the biofuels sector – Social Specialist Guidelines*

<sup>37</sup> Ibid

- 6.13 For these reasons, a representative of the relevant community could be appointed through due process to liaise between the community and developer and to act on behalf of the community in the design and execution of the Social element of the Impact Assessment. The Developer should pay the salary and expenses of the community liaison representative (“CLR”) and should call for such an appointment as soon as detail and formalities regarding such employment can be agreed.
- 6.14 Similarly, RSB principle 4 covering the welfare of workers is not in question.
- 6.15 Principle 5, however, states:
- “In regions of poverty, biofuels production shall contribute to the social and economic development of local, rural and indigenous people and communities.”*
- 6.16 Although the community may not suffer poverty on the scale and intensity that can be found in many areas of the developing world, the concept that the development should make a meaningful and measurable contribution to the economic development of local communities who face local economic challenges is inescapable. Applying the same principle in the context of the offshore wind development, implies that it is right to use a reasonable proportion of the proceeds to make an auditable and meaningful contribution to the development of the proximate communities. Therefore it follows that:
- 6.17 The Impact Assessment should make explicit how a transparent process can be put in place to decide and implement an auditable and meaningful contribution to the development of proximate communities.
- 6.18 Principle 9 requires that Biofuels operations shall respect land rights and land use rights. Importantly, this does not refer merely to formal and legally established rights and nor does it refer to land that is owned or controlled by proximate communities. If this were the case, then new development might proceed on the basis of anachronistic legal demarcations that were developed to serve completely different purposes and which have no modern relevance to offshore wind development.
- 6.19 Indeed, the principle demands that informal rights should be considered and that FPIC must be the process through which the consequent negotiated agreements for any compensation.
- 6.20 Similar principles drawn up in a much narrower, academic and less democratic manner were prepared for the Renewables Advisory Board in a report prepared by the Centre for Sustainable Energy with Garrad Hassan & Partners Ltd and Peter Capener & Bond Pearce LLP and published in July 2009<sup>38</sup> (“RAB (2009)”). That report focuses more on comparative analysis and certain practicalities than principles and is in no sense the “social contract” that the RSB represents. Nevertheless, it distils some very helpful findings that are of value to the consideration of the social benefits that should, and in many parts of the world, do flow from proximity to wind farm developments.
- 6.21 The opening observation from RAB (2009) comments on the wider benefits of community benefits:

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<sup>38</sup> Renewables Advisory Board (2009) *Delivering community benefits from wind energy development: A toolkit*

*“.....the routine provision of meaningful benefits to communities hosting wind power projects is likely to be a significant factor in sustaining public support and delivering significant rates of wind power development.”*

- 6.22 The connection between meaningful community benefits and delivering wind power development is almost too obvious to state. The expectation of reward for proximate communities provides a powerful incentive for those proximate communities to do all in their power to attract, support and advocate wind development both on their land and off their shores.
- 6.23 Regarding the quantum of the benefits, any impact assessment should seek to establish criteria to help set the benefits in context. These criteria could take account of the following:
- Does the benefit result in a quantifiable, significant and enduring contribution to the sustainable development of the proximate community?
  - Taking account of the need for the developer to secure a reasonable rate of return on investment, and the fact that income above this is purely excess contribution made by the UK electricity consumer delivered through the Renewables Obligation; does the benefit represent a reasonable share of this over-reward?
  - Does the benefit extended to the community parallel the best practice of the developer in other parts of the world and in other sectors of sustainable development where communities may have more influence, thereby demonstrating that the intention behind community benefits is not to bribe but to foster sustainable development?
- 6.24 The above point referring to the developer's reasonable rate of return can be quantified and accepted very easily provided the transparency principle is applied and validated via the Community Liaison Representative.
- 6.25 By way of example, RAB (2009) carried out a sensitivity test on the return to a developer of a very small 20MW, 10 turbine onshore wind farm with a development costs of £1,100,000 per MW, only a 30% capacity factor and a very small 20% developer's equity stake. Even for such very small investment, it was found that a community distribution of just £1,500 per MW installed per annum (just under 1.5% of the development cost, amounting therefore to £30,000 per annum for what is effectively an investment in 4MW of wind) almost imperceptibly reduced the profitability baseline from 11.9% return to shareholders to 11.3%.
- 6.26 Although the RAB analysis is helpful for illustration purposes, we would point out that Internal Rate of Return and Shareholder Returns appear to be taken as synonymous. In reality, Internal Rate of Return is an objective, formulaic calculation, whereas shareholder returns are determined by the Board of Directors in accordance with dividend policy and the law. We believe therefore that the impact on the company may be overstated in this example.
- 6.27 The distribution that could be expected from the projects proposed that are the subject of this report are of a completely different order and depend on the risk sharing involved in any specific mechanism. The corresponding scale of anticipated community benefit is of a scale that can make a genuine difference to the proximate community and therefore significant focus on this matter is not only desirable, it is necessary.

## Implications for the SIA

- 6.28 The distribution of surplus profit into community benefits can give the illusion of being one sided. Large corporations, however, whose licence to operate is rooted in public acceptance (and particularly where government subsidy is involved), routinely invest in their proximate communities and reap indirect benefits from those investments. An example amongst many is the Rossing Foundation in Namibia<sup>39</sup>. The Foundation was set up through a Deed of Trust to implement corporate and social responsibility obligations of Rossing Uranium Limited. Responsible buyers of uranium now increasingly impose contractual clauses relating to corporate and social responsibility and the Rossing Foundation is the strongest evidence of solid action in relation to these duties. Likewise, there is a parallel opportunity to market energy from wind farms differentially based on the depth of their contribution to sustainability. Therefore:
- 6.29 Any impact assessment should explicitly define and quantify the investment value of the developer's investment in community benefits.
- 6.30 In considering how to take forward the question of community benefits, a number of very practical questions arise that would need to be considered in detail in any impact assessment. These practical questions divide broadly into three areas:
- defining the community that are entitled to a financial benefit
  - identifying and quantifying the benefits
  - proposing and deciding a benefit delivery mechanism.
- 6.31 The first issue, defining the potential beneficiary community, will require input from the proximate community itself. In order that the community, including its transient elements, benefit in an equitable manner for the long term, it appears that the proximate community for this purpose is most likely to be defined at an administrative level rather than at the level of the individual. This has a number of strengths in that the benefits to the proximate community can be channelled into well defined, transparently accountable and generally accessible projects, the nature of which can be decided later through democratic processes. Such an approach may also strengthen the arguments relating to entitlement to those benefits as well.
- 6.32 The second issue should be developed in accordance with the principles described above.
- 6.33 The third issue is the delivery mechanism itself. We anticipate that this will be a relatively technical question. The range of possibilities has already been scoped and can be developed and refined on the basis of criteria agreed with the beneficiaries' representative. The recommendation will be driven by considerations such as:
- optimal fit between the organisation initially collecting the benefit and the beneficiaries' representative based on agreed functional criteria
  - financial efficiency

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<sup>39</sup> Rio Tinto Communities: The Rossing Foundation

- financial security, transparency and auditability
- optimal fit with the developer's interests in promoting the success of the wind farm business.

## 7: Tiree Offshore Wind Farm Development

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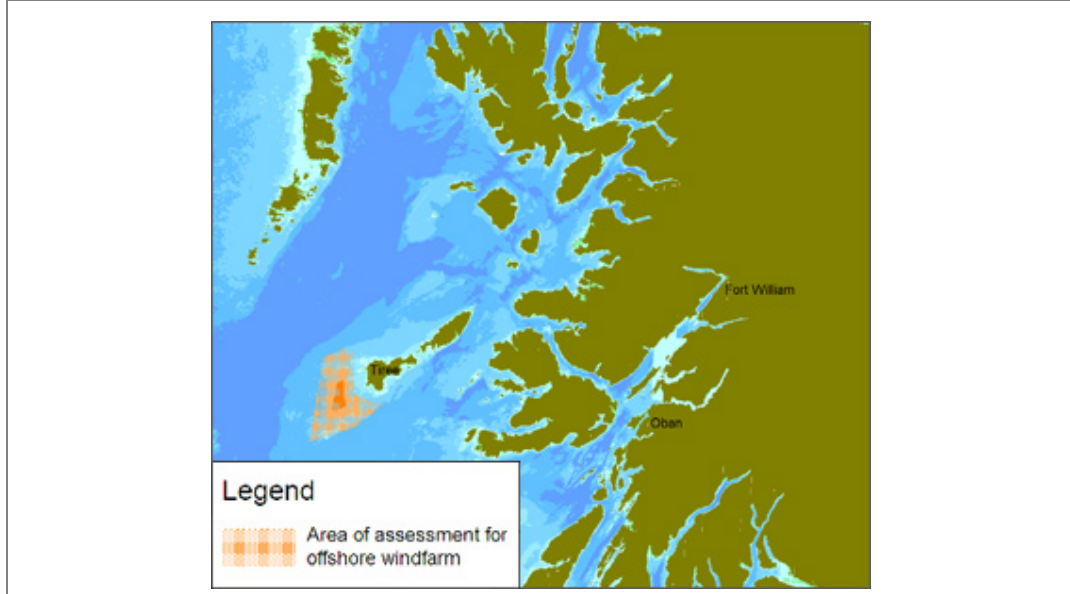
### Introduction

- 7.1 This chapter sets out:
- the project description of the proposed offshore wind farm
  - a summary of the socio-economic baseline for Tiree
  - key points of potential engagement
  - further research required.
- 7.2 This brings together the key aspects, based on the information available at this time; to be considered with regards the proposed development in the context of the local community's potential interface with its construction and operation.

### Tiree project description

- 7.3 The Crown Estate awarded ScottishPower Renewables (SPR) an exclusivity agreement in order that it can investigate the potential for an offshore wind farm west of Argyll and the island of Tiree, following the recent Scottish Territorial Waters tendering process.
- 7.4 SPR has secured rights to examine the Argyll site and, over the next year, the company will conduct in-depth feasibility assessments and begin an extensive consultation process.
- 7.5 It is believed that the site has the potential to generate anywhere between 500MW to 1800MW of clean green energy - enough to power 270,000 to 1,000,000 households.
- 7.6 SPR have co-developed the 500MW West of Duddon Sands offshore wind project and are working in partnership with Vattenfall in the Round 3 offshore wind farm developments in the UK. The company is already the largest developer and generator of on-shore wind energy in the UK, with Europe's largest wind farm at Whitelee due to be completed in summer 2009. SPR is the renewable energy development division of Ibredrola (Scottish Power's parent company).
- 7.7 The proposed Tiree offshore development project is located some 5km off the west coast of Tiree. The map below displays the proposed project assessment area.

Figure 7-1 Location of Tiree offshore development project



Source: ScottishPower Renewables

7.8 The current development timetables for the Tiree Offshore Wind Farm are shown in Table 7-1. The bird survey has commenced and depending on the results this will confirm whether the next step of the development process can proceed by mid 2011. Exclusivity development rights will also be influenced by the outcome of the SEA.

Table 7-1 Tiree Offshore Wind Farm development timetable

Activity	Timescale
High level technical assessment	Completed 2010
<ul style="list-style-type: none"> <li>• How to build?</li> <li>• What foundation types?</li> <li>• Where to build?</li> <li>• Assessment of ports</li> </ul>	
Bird survey	Mid 2011
Offshore and onshore planning applications	2011/2012
Grid connection	End of 2014
Civil infrastructure	End of 2014
Turbine installation	2015 – 2020 (3-400MW installed per year)

Source: SQW Energy/SPR

7.9 The turbine size is expected to be a minimum 6MW, which may restrict the supply chain as fewer manufacturers provide this. SPR anticipate there to be in the region of 250 turbines.

7.10 At present SPR are modelling a variety of scenarios for the construction of the wind farm. These range from no construction being expected to take place on Tiree, to the possibility of, ancillary construction such as:

- marine control permit office
  - centre for operation and maintenance
  - control of site operations
  - mothership or work boats and helicopters
  - material storage
  - harbour/berthing
  - Development at the airport.
- 7.11 There could be the potential to have an office sited on Tiree to cover the above services and house technicians (usually one technician for every 80 turbines). As a multi-billion pound project there are several stages to go through before appointing an operations and maintenance contractor (O&M). It will be important to follow this supply chain and liaise directly with the O&M contractor both pre and post procurement.
- 7.12 Onshore construction will also potentially include an HVDC inverter station of approximately 4,000m<sup>2</sup>. While any cable routes are likely to be underground, Scottish Power plan to submit up to five plans for connection corridors including overland, buried, and offshore submarine cables – the acceptance and delivery of the grid connection will be the responsibility of the Offshore Transmission Operator (OFTO) that is awarded this project. This will have a potential impact on existing infrastructure during the development of these connections. Generally, construction will be limited and it is not anticipated that there will be requirements for significant numbers of employees to support onshore developments.
- 7.13 In summary the project description will remain relatively fluid until further studies are completed (bird survey and technical feasibility) and the SEA consultation is concluded. However, this provides time to further identify and consider the potential points of engagement for the community and undertake consultation and research that may be required.

## **Tiree and Coll summary of socio-economic baseline**

- 7.14 The main data limitation for this baseline is that Tiree and Coll are combined in much of the published statistical data under the smallest area at which data is commonly available; the data zone. Therefore this baseline includes both Tiree and Coll using the data zone S01000831. This represents a considerable limitation to the secondary data that is available for Tiree or Coll as distinct geographical units from official statistical sources such as Scottish Neighbourhood Statistics, the Scottish Household Survey and the Annual Business Inquiry. The 2001 census does provide information for Tiree and Coll as separate geographic entities but this data is now quite dated.
- 7.15 This section briefly summarises the key socio-economic issues for Tiree and Coll that are identified by the full socio-economic baseline (see Annex B).
- 7.16 Tiree and Coll are the most westerly of the Inner Hebrides and are located around 20 miles from the mainland. Tiree is about twelve miles long and three miles wide while Coll is

thirteen miles long and four miles wide. The islands are accessible by ferry from Oban and by air from Oban and Glasgow. The islands are ranked in the top one percent of least accessible regions of Scotland.

### **Population**

- 7.17 In 2008, Tiree and Coll had a combined population of less than 1,000 (993) residents with around 80% living on Tiree and the remainder on Coll. Over the last twenty years the population of the islands has been relatively stable and between 2001 and 2008, Tiree and Coll have seen a 7% increase in population compared to a 1% fall in Argyll and Bute.
- 7.18 The population structure of Tiree and Coll varies in two key ways from the rest of Argyll and Bute and Scotland. Firstly, there are fewer people between the age of 16 and 40 as a proportion of the total population in Coll and Tiree compared to Scotland. This may be due to limited availability of higher education and a shortage of employment opportunities on the islands. The second significant difference is the higher proportion of Tiree and Coll's population that is made up of pension aged residents (21% compared to 17% in Scotland as a whole).
- 7.19 The consequence of a larger pension age population and fewer people of working age is that the dependency ratio is higher than Argyll and Bute as a whole and the rest of Scotland.

Table 7-2: Dependency Ratio (2008)

	<b>Tiree and Coll</b>	<b>Argyll and Bute</b>	<b>Scotland</b>
Children	18.3%	16.5%	17.7%
Working age	57.7%	58.8%	62.6%
Pension age	24.0%	24.7%	19.7%
Dependency ratio	0.73	0.70	0.60

Source: Scottish Neighbourhood Statistics

### **Industry and employment**

- 7.20 According to the Annual Business Inquiry, there were a total of 63 data units<sup>40</sup> on Tiree and Coll in 2007. The sectors which make up the greatest proportion of the business are distribution (retail), hotels and restaurant sector and the public administration, education and health sectors with 14 and 12 data units respectively. Construction and transport and communication are also significant sectors.
- 7.21 In comparison to the rest of Scotland, agriculture and fishing, energy and water, construction, transport and communications and public sector are all overrepresented within Tiree and Coll's business base. Tiree and Coll have smaller relative business bases in the manufacturing, distribution, hotels and restaurants and banking and finance sectors.

<sup>40</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

- 7.22 The 2001 census shows that a much higher proportion of the adult population of Tiree and Coll were economically active than in Argyll and Bute or Scotland. The most significant difference between Tiree and Coll and the rest of Scotland is the very high level of self employment on the islands (16.5% compared to 11.5% in Argyll and Bute and 6.6% in Scotland). In addition to self-employment, consultees have stated that a high proportion of people on the islands hold more than one job. The employment statistics do not effectively capture the importance of self-employment or multi-job holdings, in particular for sectors such as agriculture, fishing and tourism related activity.

## Key points of potential engagement

### *The development process*

- 7.23 As described above following the technical assessment and application for the offshore development consents, Scottish Power has a timeline for the project that places the confirmation of approval to commence construction of the Argyll Array in 2013.
- 7.24 On this basis, initial work on civil infrastructure and grid connection would be completed by 2014. Turbine installation would commence in 2015 and over a period of 5 years, subject to final design confirmation the site could see approximately 250, 6MW turbines installed.
- 7.25 The key points of potential impact are shown in Table 7-3.

Table 7-3 Potential impacts on the community of Tiree

Category of Impact	Vector	Scale and type of impact	Comment
Local amenity	Coastal setting	Medium/High	There will be a visual impact both offshore and potentially onshore that will affect residents with a view of the wind farm, local residents and visitors. Distance from shore and size of turbine will influence this significantly.  Noise may be an issue during construction and operation depending on location of base, for example, helicopter movements may be 'continuous' if turbines must be visited on a frequency which means several trips per day.  Funnelling of noise from offshore turbines to the shore may be an issue and case study research will be important to assess this.
	Visual	Medium/High	
	Noise	Medium/High	
Economic Activity	Crofting	Medium/High	As a fragile community the economic activities are likely to be sensitive to change and close to thresholds were economic activity becomes unsustainable.  Tourism may be affected in different ways, for example, loyal annual visitors may be displaced by new 'wind farm' tourists.
	Fishing	Medium/High	
	Construction	Low/Medium	
	Tourism	Medium/High	
	Public sector	Low/Medium	
Culture	Language	Medium	If a significant number of non-Gaelic speakers were to be based on the island this will reduce the proportion of Gaelic speakers and affect the local use of language.  The way of life may be affected if large numbers of contract workers are based on the island, for example the balance of people who making a living from varied and diverse sources to those who may work for one large corporation.
	Way of life	Medium/High	

Category of Impact	Vector	Scale and type of impact	Comment
Infrastructure	Medical	Low/Medium/High	As with most impacts this very much depends on the scale and location of the development. If significant numbers (> 50) are to be based on the island for a length of time there will need to be public infrastructure provision.
	Housing	Low/Medium/High	
	Schools	Low/Medium/High	
	Transport	Low/Medium/High	
Population	Local residents	Low/Medium/High	Again very much depends on scale but also how the process of development is management. The involvement or not of residents may influence whether they continue living on the island.

Source: SQW Energy

## Further Research

7.26 The baseline research highlights the importance of a number of industries, as listed below. The potential impacts of any new development on these sectors should be fully considered by any future research.

- Agriculture and fishing - although only 2% of employment (full or part time) on the islands is in agriculture and fishing, this is four times greater than in Scotland as a whole. However, the official statistics are likely to significantly underestimate the importance of agriculture and fishing to the islands due to the structure of land ownership, with the majority of land under crofting tenure. Crofting and fishing are important to the islands not only for employment but also represent a key cultural aspect of life on Tiree and Coll. Given the potential that the offshore wind farms may have on Tiree and Coll's fishing industry, this is an area which needs further investigation, especially given the limited statistical data.
- Construction - accounts for almost 10% of employment on the islands, a significantly higher share than for Scotland as a whole. Between 2003 and 2007, there has been strong growth in construction employment, up by 16%. Since construction firms may play a significant part in the early stage development of any offshore wind farm (particularly for any potential onshore elements) it is important that further research is done to understand the capabilities of the construction sector on the island and to see whether local firms have the capability to benefit from any aspects of future offshore wind projects, particularly at the construction stage.
- Public administration and education - accounts for almost half of all jobs on Tiree and Coll. This sector is particularly important for female employment, with over 60% of females in employment working for the public sector. While the public sector is unlikely to be directly affected by any new developments, an influx of new workers could put a strain on public services such as the doctor, General Practitioner (GP) or schools. Any increase in population could, however, act as a catalyst for further investment in the expansion of facilities. The likely impact on the public sector is therefore dependent on the number of new workers who would move to the islands and the length of their stay.

- Distribution (retail), hotels and restaurants - almost one in three jobs on the islands are in retail or hotels, reflecting the importance of tourism to the islands. Given the importance of this sector for generating income for the island, it is important to understand the potential impacts of any new developments. For example, on one hand a new development may create demand for short term accommodation for those associated with the project. The impact of the project on tourism demand should also be considered: will the increased noise and visual impact deter people from visiting the islands or will they become an attraction? There is also a possibility of alienating loyal repeat visitors if accommodation is overbooked by construction workers or new 'wind farm' tourists or even a 'Wimbledon' or Edinburgh Festival' effect where local residents move out and rent out their homes.
- Where there is an impact on employment this also has a potential impact on population. For example, only 2% employment may be in agriculture or fishing, but for example, if one fisherman loses his livelihood on the island he may move away with his family possibly resulting in fewer school pupils and the loss of his partner's economic activity.

## **8: Islay Offshore Wind Farm Development**

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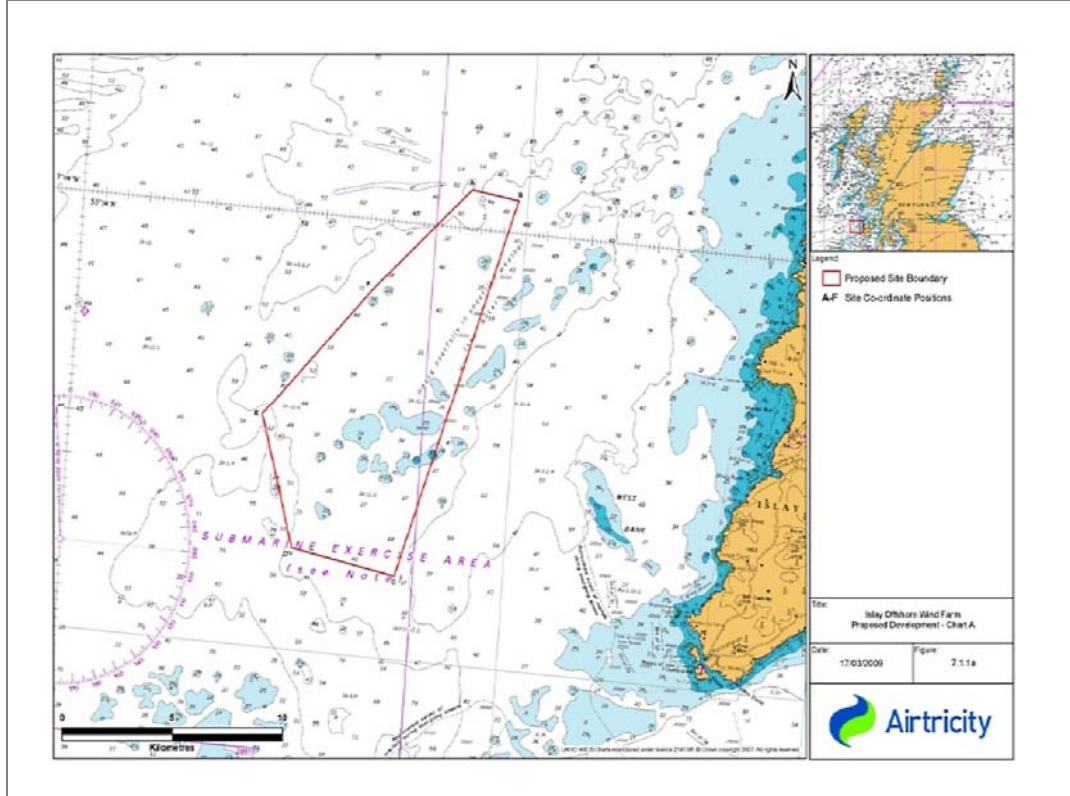
### Introduction

- 8.1 This chapter sets out:
- the project description of the proposed offshore wind farm
  - a summary of the socio-economic baseline for Islay
  - key points of potential engagement
  - further research required.
- 8.2 This brings together the key aspects, based on the information available at this time; to be considered with regards the proposed development in the context of the local community's potential interface with its construction and operation.

### Islay Project Description

- 8.3 Airtricity is the renewable energy development division of Scottish and Southern Energy (SSE). The company has responsibility for the development and construction of all SSE Renewable projects across Europe including onshore and offshore wind farms, hydro, marine and solar projects.
- 8.4 The proposed Islay offshore development project is located some 13km off the west coast of Islay. The area of farm is 93 sq kms with potential capacity of 690 MW deploying 138 turbines. It is possible that there could be an overland grid connection on Islay and this would be subject to an additional planning application. The map below displays the proposed project area.

Figure 8-1 Location of Islay offshore development project



Source: SSE Airtricity

- 8.5 The current development timetables for the Islay Offshore Wind Farm are shown in Table 8-1. The bird surveys have already commenced and the EIA Scoping is due to commence.

Table 8-1 Islay Offshore Wind Farm – Current Development Timescales

Activity	Timescale
Exclusive development agreement awarded by Crown Estate	February 2009
Commence boat based bird surveys	October 2009
EIA Scoping	Late 2009/early 2010
SEA Consultation	January 2010
Application for Statutory Consent and Licenses	Aim is late 2011/early 2012
Consent Granted	Aim is 2013
Construction Commencing	Aim is 2014/2015

Source: SSE Airtricity Dec 2009

- 8.6 Airtricity wish to wait until the outcome of the SEA before providing further information on the project as this may influence their approach and design of the wind farm.

## Socio-economic baseline summary

- 8.7 This section briefly summarises the key socio-economic issues for Islay that are identified by the full socio-economic baseline (see Annex C).

- 8.8 Islay is the most southerly of the Inner Hebrides and is located to the west of the Kintyre peninsula and around 35 miles north of Northern Ireland. The island is around 40km wide and 25km long. The smaller island of Jura lies to the east of Islay and is around 30 miles long and 7 wide. Colonsay is located to the north-east of Islay. The main settlements on Islay are Bowmore, Port Ellen and Port Charlotte.
- 8.9 The majority of the data used (4 data zones) is for Islay only however, one data zones covers Islay, Jura and Colonsay.

### **Population**

- 8.10 The population for the combined area of Islay, Jura and Colonsay was 3,822 in 2008<sup>41</sup>, an increase of 1.5% since 2001 as compared to a fall of almost 1% in Argyll & Bute as a whole. This overall increase has been driven by a 20% increase in the pension age population but there has been an 11% fall in the number of children on the islands. The working age population has also fallen slightly by 1%.
- 8.11 The population of Islay, Jura and Colonsay is structured differently from that of Scotland. The islands have a smaller proportion of working age people between the ages of 20 and 34 which may be explained by the need to move to the mainland to study or in search of employment opportunities. The second main difference is the higher proportion of older people within the island's population which reflects the in-migration of people moving into the area for retirement or 'lifestyle' reasons. This is an on-going trend: in 2001, those of pension age made up 21.4% but this increased to 25.4% by 2008 while the proportion of the total population made up of children has fallen from 19.6% to 17.2% across the same period.
- 8.12 The result of this 'top heavy' population is a dependency ratio which is slightly higher than the Argyll and Bute average and much higher than the dependency ratio for Scotland. The potential impact of a new offshore development on the local population would need to be addressed: any influx of people of working age may help to boost the population but this would depend on the type of employment as short term contractors are unlikely to stay on the islands. However, longer term employment may act as a draw for new residents.

### **Industry and employment**

- 8.13 The Annual Business Inquiry reports that there were a total of 236 data units<sup>42</sup> in 2007 across Islay, Jura and Colonsay in 2007. In absolute terms, the most important sectors were distribution, hotels and restaurants (67 units), followed by the public sector (32 units) and agriculture and fishing (30 units). Compared to Argyll & Bute and Scotland, a number of sectors are over-represented on the island economies of Islay, Jura and Colonsay: agriculture and fishing, transport and communications and manufacturing (principally due to the high number of whisky distilleries on Islay) have around double the proportional representation on the islands compared to the rest of Argyll & Bute and Scotland.

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<sup>41</sup> ONS mid-year population estimates

<sup>42</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

- 8.14 In terms of employment, the three islands are characterised by high levels of self employment (with 15% of all 16 - 75 year olds on Islay and Jura and 24% on Colonsay reporting that they were self-employed in the 2001 census), above average levels of part time employment and below average levels of full time employment.

## Key points of potential engagement

### *The development process*

- 8.15 As described above following the technical assessment and application for the offshore development consents, Airtricity has a timeline for the project that places the confirmation of approval to commence construction of the Islay offshore wind farm in 2014/5.
- 8.16 It is assumed until more information is available that initial work on civil infrastructure and grid connection would be completed by 2015. Turbine installation would commence in 2016 and over a period of 2.5 years, subject to final design confirmation the site could see approximately 138, 3 MW turbines installed. The key points of potential impact are shown in Table 8-2.

Table 8-2 Potential impacts on the community of Islay

Category of Impact	Vector	Scale and type of impact	Comment
Local amenity	Coastal setting	Medium/High	There will be a visual impact that will affect residents with a view of the wind farm, local residents and visitors. Distance from shore and size of turbine will influence this significantly.  Noise may be an issue during construction and operation depending on location of base, for example, helicopter movements may be 'continuous' if turbines must be visited on a frequency which means several trips per day.  Funnelling of noise from offshore turbines to the shore may be an issue and case study research will be important to assess this.
	Visual	Medium/High	
	Noise	Medium/High	
Economic Activity	Fishing	Medium/High	Fishing is very important to the Islay community. Fish populations and access to these would need to be investigated.  Distilleries are of local and national importance direct or indirect impacts (positive or negative) require to be investigated.  Port Ellen is the main port and a major employer, how this will be affected during the construction phase is a major consideration.  Tourism may be affected in different ways, for example, loyal annual visitors may be displaced by new 'wind farm' tourists.
	Manufacturing	Medium/High	
	Transport and communications	Medium/High	
	Tourism	Low/Medium	
Culture	Language	Medium	If a significant number of non-Gaelic speakers were to be based on the island this will reduce the proportion of Gaelic speakers and affect the local use of language.  The way of life may be affected if large numbers of contract workers are based on the island, for example the balance of people who making a living from varied and diverse sources to those who may work for one large corporation.
	Way of life	Medium/High	

Category of Impact	Vector	Scale and type of impact	Comment
Infrastructure	Medical	Low/Medium/High	As with most impacts this very much depends on the scale and location of the development. If significant numbers (> 150) are to be based on the island for a length of time there will need to be public infrastructure provision.
	Housing	Low/Medium/High	
	Schools	Low/Medium/High	
	Transport	Low/Medium/High	
	Public services	Low/Medium/High	
Population	Local residents	Low/Medium/High	Again very much depends on scale but also how the process of development is management. The involvement or not of residents may influence whether they continue living on the island.

Source: SQW Energy

## Further Research

8.17 There are a number of industries which are of particular significance to the islands of Islay, Jura and Colonsay. The impacts of any new offshore wind farm development on these sectors would need to be investigated given their importance to the islands.

- Agriculture and fishing - is almost 12 times more important in terms of jobs to the islands than to Scotland as a whole. In particular, Islay North, Jura and Colonsay and Port Ellen are reliant on the agriculture and fishing industries for employment. There are currently around twenty commercial fishing boats operating from Islay: five larger boats with three crew catch scallops or lobsters and crabs while around 15 boats with two man crews (PT or FT) catch crabs and lobsters<sup>43</sup>. Again further investigation would be necessary to ensure that any 'hidden' employment that is not captured by the official statistics (e.g. second jobs or self employment) is accounted for. The effects of any offshore development on fish populations or the ease of access to these fisheries would need to be closely investigated through consultation with representatives of the local fishing industry.
- Manufacturing - there are proportionately almost twice as many jobs in manufacturing on the islands as there are in Scotland as a whole. In particular, Islay South and Islay West are between three and four times more reliant on manufacturing for employment than Scotland. This reliance is explained by the world famous whisky distilleries that are based on the island of Islay in particular. The distilleries account for 80% (180 jobs) of all manufacturing employment in Islay, Jura and Colonsay. The high value added output of the distilleries is an important source of wealth for not only the islands but for the Scottish economy as a whole. Therefore, any future research should consider whether there will be any direct or indirect impact (positive or negative) on the distilleries from an off-shore wind farm.
- Transport and communications - unsurprisingly, a greater proportion of people are employed in the transport and communications sector on the islands compared to Scotland. At Port Ellen in particular, this is an important sector in terms of employment because Port Ellen is the main port for the island. In relation to sea

<sup>43</sup> Isle of Islay (2009) *Online Guide to the Isle of Islay*

transport, the introduction of a large offshore wind farm may have a number of potential impacts which would need to be investigated. On the positive side, there may be demand for port facilities but if any new installation affected other users of the port (e.g. fishing boats or pleasure boats) then demand may fall. These issues would need to be addressed.

- Distribution, hotels and restaurants - accounted for 28% of jobs on the islands in 2007.<sup>44</sup> The greater reliance on tourism related businesses for employment reflects the importance of visitors to the local economies of Islay, Jura and Colonsay. Retail and tourism related employment is particularly important in Islay West and Port Ellen where there are proportionately almost twice as many jobs in this sector as in Scotland as a whole.
- Public administration, education - accounts for 30% of all jobs on Islay, Jura and Colonsay. While the public sector is unlikely to be directly affected by any new developments, an influx of new workers could put a strain on public services such as the GP or schools. The likely impact on the public sector is therefore dependent on the number of new workers who would move to the islands and the length of their stay.

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<sup>44</sup> ONS Annual Business Inquiry

## **9: Kintyre Offshore Wind Farm Development**

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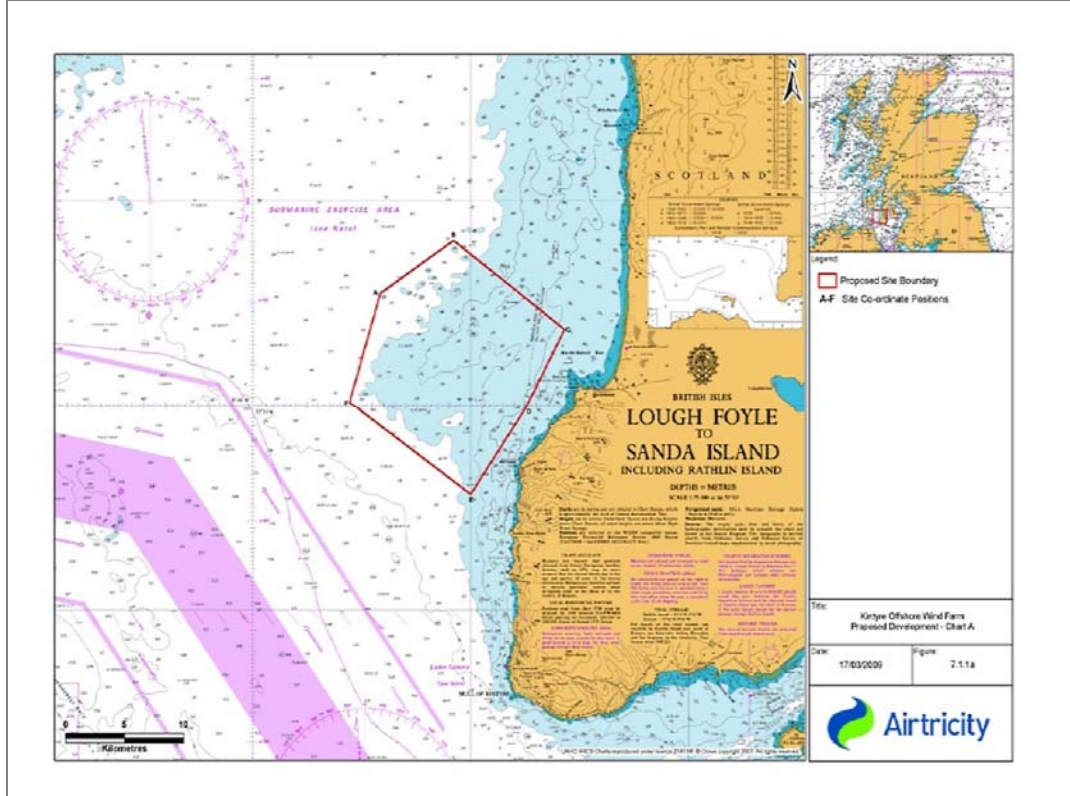
### **Introduction**

- 9.1 This chapter sets out:
- the project description of the proposed offshore wind farm
  - a summary of the socio-economic baseline for Kintyre
  - key points of potential engagement
  - further research required.
- 9.2 This brings together the key aspects, based on the information available at this time; to be considered with regards the proposed development in the context of the local community's potential interface with its construction and operation.

### **Kintyre Project Description**

- 9.3 Airtricity is the renewable energy development division of Scottish and Southern Energy (SSE). The company has responsibility for the development and construction of all SSE Renewable projects across Europe including onshore and offshore wind farms, hydro, marine and solar projects.
- 9.4 The proposed Kintyre offshore development project is located 3km from the coastline of the Kintyre Peninsula (west of Machrihanish). The map below displays the proposed project area.
- 9.5 The wind farm will include approximately 126, 3 MW turbines generating 378 MW.

Figure 9-1 Location of Kintyre offshore development project



Source: Airtricity

- 9.6 The current development timetables for the Kintyre Offshore Wind Farm are shown in Table 9-1.

Table 9-1 Kintyre Offshore Wind Farm – Current Development Timescales

Activity	Timescale
Exclusive development agreement awarded by Crown Estate	February 2009
Commence boat based bird surveys	October 2009
EIA Scoping	Early 2010
SEA Consultation	February 2010
Application for Statutory Consent and Licenses	Aim is late 2011/early 2012
Consent Granted	Aim is 2013
Construction Commencing	Aim is 2014/2015

Source: Airtricity

### Socio-economic baseline summary

- 9.7 The Kintyre peninsula is located on the West coast of Scotland and is about 40 miles long, connected to the rest of the mainland by a narrow strip of land at West Tarbert.

- 9.8 The total population of the area of interest for this report was 8,169 in 2008. Just over half of this population is located in the largest settlement in the area, Campbeltown with the rest of the population spread throughout the rest of Kintyre.
- 9.9 Kintyre is classified by Highlands and Islands Enterprise (HIE) as a fragile area due to the relatively weak economy and past population decline. Campbeltown has been defined as an area of employment deficit by HIE. For Kintyre, agriculture, crofting and fishing was previously the mainstay of the economy, but now the most important sectors of the economy in terms of employment are the public sector, retail and tourism.
- 9.10 The area of interest for this baseline report is the area covered by the census wards of Campbeltown Central, South Kintyre, North and West Kintyre and East Central Kintyre. The use of data zones represents both an opportunity for both increased analysis and potential risk of loss of accuracy. Firstly, and most importantly, the use of 11 different data zones allows the baseline to explore differences between areas within Kintyre and not just compare the sub-region with Argyll and Bute and Scotland. This is important given the different characteristics of, for example, the more rural areas compared to the essentially urban Campbeltown.
- 9.11 The Kintyre baseline is provided in Annex D.

### ***Population***

- 9.12 The 2008 mid-year population estimate for Kintyre was 8,169, with just over half (52%) of the population of living in Campbeltown<sup>45</sup> and the rest living throughout South Kintyre.
- 9.13 Kintyre's population fell by 129 (1.6%) between 2001 and 2008, compared to a 0.9% fall in the overall Argyll & Bute population and a 2.1% in Scotland's population. Within Kintyre, there is a contrasting story of population change. The population of Campbeltown has continued its long term decline with a fall of 7.8% between 2001 and 2008. Within the town, the data zone covering Campbeltown North has seen an even greater population fall of almost 20%. Across the same period, the population of the rest of Kintyre has grown strongly by 6.4%. S01000714 (West of Campbeltown and near Machrihanish) in particular, has seen very strong population growth of over 30%.
- 9.14 As with the other geographies of interest, Kintyre has an aging population with a higher representation of over 50s and much lower proportion of people aged 16 to 39. Kintyre's top heavy population means that the dependency ratio (i.e. the ratio of children and people of pension age to the working age population) is 0.8 to 1, much higher than the Scottish ratio of 0.6 to 1. Within Kintyre, there is wide variation in the dependency ratio. In the more rural areas outwith Campbeltown, there are higher proportions of children and pensioners, which is likely to put increasing pressure on limited rural services.

### ***Industry and employment***

- 9.15 This section gives an overview of the size and of the business base in Kintyre and the key sectors in terms of employment.

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<sup>45</sup> Campbeltown includes data zones S01000712, S01000713, S01000715, S01000716, S01000717 and S01000718

9.16 In 2007, there were a total of 368 data units<sup>46</sup> across Kintyre with 59% of these businesses located in Campbeltown. In absolute terms, the sector with the largest number of businesses was the distribution (retail), hotels and restaurants sector with 128 data units. This reflects the importance of tourism to the region. The top ten sectors in terms of the number of business units in South Kintyre are, in descending order:

- retail and wholesale trade
- hotels and restaurants
- construction
- fishing
- other business activities
- health and social work
- public administration and defence; compulsory social security
- education
- recreational, cultural and sporting activities.

9.17 In 2001, a lower proportion of adults in Kintyre were in any form of employment (FT, PT or self-employed) than either Argyll and Bute or Scotland. Across the four Census wards that make up the area of interest for this study, the average proportion of adults in full time employment was 29.9% compared to 37.7% and 40.3% in Argyll and Bute and Scotland as a whole. This much lower level of full-time employment is partially offset by the higher number of self-employed in Kintyre compared to Scotland as a whole. This is particularly true of the more rural areas of Kintyre which have more than twice the rate of self-employment as the Scottish average. However, in Campbeltown there are lower rates of full time employment and self-employment.

## Key points of potential engagement

### ***The development process***

9.18 As described above following the technical assessment and application for the offshore development consents, Airtricity has a timeline for the project that places the confirmation of approval in 2013 with a view to commence construction of the Kintyre offshore wind farm in 2014/5.

9.19 It is assumed until more information is available that initial work on civil infrastructure and grid connection would be completed by 2015. Turbine installation would commence in 2016 and over a period of 2.5 years, subject to final design confirmation the site could see

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<sup>46</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

approximately 126, 3 MW turbines installed. The key points of potential impact are shown in Table 9-2.

Table 9-2 Potential impacts on the community of Kintyre

Category of Impact	Vector	Scale and type of impact	Comment
Local amenity	Coastal setting	Medium/High	<p>There will be a visual impact that will affect residents with a view of the wind farm, local residents and visitors. Distance from shore and size of turbine will influence this significantly.</p> <p>Noise may be an issue during construction and operation depending on location of base, for example, helicopter movements may be 'continuous' if turbines must be visited on a frequency which means several trips per day.</p> <p>Funnelling of noise from offshore turbines to the shore may be an issue and case study research will be important to assess this.</p> <p>Kintyre already hosts a number of large wind farms the addition of an offshore site will increase the cumulative impact.</p>
	Visual	Medium/High	
	Noise	Medium/High	
	Cumulative	Medium/High	
Economic Activity	Fishing	Medium/High	<p>Fishing is very important to South Kintyre. Fish populations and access to these would need to be investigated.</p> <p>Freight and road transport provide employment and may be affected during construction process.</p> <p>There is a skilled construction workforce in the area that may benefit from development.</p> <p>Tourism may be affected by road congestion during the construction period.</p>
	Transport and communications	Medium/High	
	Construction	Medium/High	
	Manufacturing	Low/Medium	
	Tourism	Low/Medium	
Culture	Way of life	Medium/High	<p>The way of life may be affected if large numbers of contract workers are based in the area, for example the balance of people who making a living from varied and diverse sources to those who may work for one large corporation.</p>
Infrastructure	Medical	Low/Medium/High	<p>As with most impacts this very much depends on the scale and location of the development. If significant numbers (&gt; 150) are to be based on the Kintyre for a length of time there will need to be public infrastructure provision.</p>
	Housing	Low/Medium/High	
	Schools	Low/Medium/High	
	Transport	Low/Medium/High	
	Public services	Low/Medium/High	
Population	Local residents	Low/Medium/High	<p>Again very much depends on scale but also how the process of development is management. The involvement or not of residents may influence whether they continue living in the area.</p>

Source: SQW Energy

## Areas of further research

- 9.20 Despite the high unemployment in Campbeltown, it is the key location of employment with 2,174 jobs located in the town in 2007 and a further 1,275 in the rest of South Kintyre. Important sectors in terms of employment for the region which may be affected by any large scale offshore development include :

- Agriculture and fishing - accounts for four times as many jobs in South Kintyre as in Scotland as a whole. Over two thirds of this employment is in the fishing industry which focuses mainly on shellfish. Kintyre East in particular relies on the fishing industry as a source of employment. Again, it is very important that any future impact assessment of the proposed offshore development fully considers the impact on the local fishing industry given the potential for directly impacting on fish stocks and the ease of reaching these stocks.
- Transport and communication - with around 1.6 times as many jobs in South Kintyre as in Scotland as a whole, transport and communication is an important source of employment. The geography of the peninsula and the lack of rail transport are reflected by the importance of freight transport (129 jobs) and scheduled road passenger transport (79 jobs). As well as employment, this sector provides an essential link to the rest of Scotland. The likely impact on the region's transport links depend on how materials involved in the construction stage are to be transported and where they are to be transported to. It may be that there will be no impact at all if the large parts used in the construction process are brought in by ship and do not dock at Campbeltown. On the other hand, if the project relies heavily on the local road network for moving heavy machinery, this impact would need to be considered.
- Construction - accounts for a 1.5 times larger share of employment in Kintyre as in Scotland as a whole. Given the relatively high number of construction workers in the Kintyre area, there may be an opportunity for local contractors to win work during the construction stage. However, it would be important to understand the needs of the developers and the capabilities of firms located in Kintyre.
- Manufacturing - although there are much fewer manufacturing jobs in Kintyre relative to Scotland as a whole (the location quotient for manufacturing was also 0.5 in 2003) the Welcon takeover of the Vestas wind turbine factory in 2009 provides local expertise which may be directly relevant to any offshore wind farm. Again it would be necessary to consult with both the project developers and Welcon in order to understand the likely impact on the factory and the jobs that it supports.
- Public administration, education & health - the public sector is by far the largest employer in Kintyre but this dominance is also true for Argyll and Bute and for Scotland. However, the public sector proportionately supports 1.3 times as many jobs in South Kintyre as in Scotland as a whole.
- Distribution, hotels and restaurants - although the tourism industry is a key employer in Kintyre, it is not substantially over-represented compared to the rest of Scotland. Nonetheless, there may be an impact on the areas tourism industry if the new development is perceived as a negative aspect which detracts from the areas natural beauty. However, the development may provide a source of demand for local hotels at various stages of the development. These potential impacts would need to be investigated by consulting with local hotels to understand the market and also with the developers in order to understand their needs.

## 10: Conclusions and recommendations

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### Introduction

10.1 This scoping study is the first step of an iterative process initiated by ARC in which the development of the offshore wind farms can proceed in step with the enhancement of positive impacts and the minimisation of any negative impacts. Through the scoping study we have identified the main development activities which are likely to have major impacts on the communities (based on available information), and provided a socio-economic baseline for each community which will help to determine the significance of such impacts. In this section we draw our conclusions and:

- propose further community commissioned research work
- recommend structures for engagement between communities and developers

### Conclusions

10.2 The scoping study has been able to highlight some key areas for consideration from the aspect of the socio-economic impact on each community, the overarching development of renewable generation in the Scotland and the way in which such projects are developed.

10.3 Most importantly this study has brought together various strands of evidence from Scottish Government policy, international experience of other sectors and initial assessment of the communities' perspective that strongly point to the need to take an integrated assessment approach with social performance principles in the development of these offshore wind farm sites. Such an approach will provide direction and guidance to effectively manage the development process at every stage of construction and operation.

10.4 These projects have the potential both to enhance the long term socio-economic sustainability of the communities that are nearest to them, and to add shareholder value for the developers. To achieve this it should be recognised that:

- Part of the management process must be to ensure that the social, economic and cultural life of these 'fragile' communities is not exposed to undue risk, but that potential benefits are maximised.
- For developers, there are significant opportunities to benefit from local knowledge and services.

10.5 The current view within the communities is generally positive although there will be differences of opinion, concerns and degrees of support there is a commitment to work with the developers and other stakeholders to create a 'win-win' outcome to this significant opportunity.

### Summary of key areas of community interest

10.6 The Scoping Study has identified in consultation with ARC the key areas of community interest, these are summarised in the table below.

Table 10-1 Key areas of community interest				
Category	Vector	+ve outcome	-ve outcome	Comments
Locations/ siting	Visual	Minimum impact	Major impact	Scope for array design changes and positioning
	Noise	None	Intrusive	Existing studies Consultation and siting of operations
Economic	Fishing	No –ve impact, New fishing activities possible	Exclusion zone restrictions	Mitigate through consultation and seeking alternatives.
	Construction	Business opportunities Work Jobs	Mainland-based contracts Local structures not in keeping with local styles	Early discussion between developers and community
	Tourism	No impact, or array seen as an attraction	Tourists stay away	Experience elsewhere. Understanding current profile and how this might change.
Infrastructure	Employment	New jobs New skills Career opportunities Long term work	All mainland labour Imported or contract staff	Discuss supply chain opportunities Train potential employees. Draw back community leavers
	Medical	New capacity or updated facilities	Pressure on services. High influx, no expansion possible	Depends on influx Discuss with local service providers
	Housing	No impact Additional demand for B&B	Lack of housing Falls in property prices Squeeze on locals	Depends on influx
	Schools	Increased diversity New facilities	Lack of capacity	Depends on influx
	Transport and communications	New port and airport facilities	Services mainland based Helicopter movements: noise	Discussions between developers and community interests
Cultural heritage	Public Services	Ability to absorb	Insufficient capacity	Depends on influx
	Language	Expansion of Gaelic	Dilution of Gaelic	Address through Gaelic medium schooling and adult learning.
	Crofting	No impact	Existing land use patterns affected	Consultation on options
	Way of life	Improved services	Loss of marine wilderness	Consultation 'value' profile of way of life.

Source: SQWE

- 10.7 Some of these areas of concern may be assessed within the developers' EIA, however, their articulation at this stage and the importance of these issues to the communities indicate that further community-led research is required.

## Recommendations

- 10.8 The scoping study provides an initial platform to identify further research and take due consideration of the social and economic process in these fragile and employment deficit areas. The potential developments are huge in comparison to the scale of economic activity in these three communities and careful consideration and management of the development process is crucial to prevent avoidable negative impacts and to make the most of the potential benefits.
- 10.9 At the next stage, the SIA will address the ways to maximise the positive and minimise the negative impacts for each community, through detailed consultation within communities themselves and with the developers as well as with the consenting authorities and other key stakeholders, to the ultimate benefit of all.

### ***Further Research***

- 10.10 This scoping exercise is essentially desk based and further work is advised to:
- review the SEA and how it influences the development of these offshore wind farms
  - verify the socio-economic baseline through consultation with data providers
  - undertake further research into the areas of potential impact for each community and assess the capacity to absorb these (social, economic and cultural)
  - conduct community consultations
  - conduct further industry consultations
  - research the supply chain and procurement process
  - identify case studies that will provide learning points of relevance to the developments and the socio-economic context
  - undertake a full socio-economic impact analysis
  - undertake a SWOT analysis with community stakeholders
  - develop possible partnership and finance options, including whether there is a basis for finance to the community
  - Develop a number of community engagement scenarios for consultation with developers.

***Engagement between communities and developers.***

10.11 Engagement between the communities and the developers has already commenced in the summer of 2009. However, further work is required to establish the structure and communication channels for this to be taken forward and sustained throughout the development process and operation of the wind farms. It is suggested that:

- the developers take the opportunity to discuss the findings of this report with ARC
- the developers agree a consultation and communication strategy with ARC
- ARC is invited to represent the communities at the Crown Estate supplier forums
- the developers and ARC explore a variety of options in terms of community benefit
- SSE and SPR assess the possibility of basing community liaison officers in each respective community
- it is agreed to work in partnership towards the successful development of the offshore wind farms with a positive balance of benefit to all.

## Annex A: Bibliography

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## **Annex B: Socio-economic baseline for Tiree**

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### ***Introduction***

- B.1 In order to understand the potential implications of the proposed projects in terms of their social and economic impact and consequences on the local communities it is important to ensure that there is a sound baseline of local economic and social contextual information. From this baseline, it will be possible to identify and track any impacts and potential points of engagement that the proposed developments will have.
- B.2 Therefore, these Annexes (A, B and C) profile each of the communities of Tiree, Islay and Kintyre in order to provide a ‘snapshot’ of these areas in terms of the social and economic aspects of the communities. Such a snapshot provides an important starting point to understand how the potential implications of offshore wind farm projects proposed in the seas around Tiree, Islay and Kintyre will change certain aspects of life in the regions, be it economic or social change.

### ***Geographical Focus***

- B.3 Data zone level statistics are used to help create a profile of the three project areas. Data zone level data is a key geographic area for Scottish Neighbourhood Statistics, although relatively new as a geographic area (it was only introduced in 2004). Since then the range of indicators available at this level has been steadily growing with indicators available under a number of topics relating to employment and industry, access to services, community care, crime and justice, economic activity, benefits and tax credits, education skills and training, health, housing, index of deprivation, physical environment and population.
- B.4 There are a total of 6,505 data zones in Scotland, which have been created by combining 2001 Census output areas by the Scottish government. The data zone geography covers the whole of Scotland and nests within local authority boundaries. Data zones have populations of between 500 and 1,000 household residents, and some effort has been made to respect physical boundaries.
- B.5 The main data limitation for this baseline is that Tiree and Coll are combined in much of the published statistical data under the smallest area at which data is commonly available; the data zone. Therefore this baseline includes both Tiree and Coll using the data zone S01000831. This represents a considerable limitation to the secondary data that is available for Tiree or Coll as distinct geographical units from official statistical sources such as Scottish neighbourhood Statistics, the Scottish Household Survey and the Annual Business Inquiry. The 2001 census does provide information for Tiree and Coll as separate geographic entities but this data is now quite dated.

### ***Tiree and Coll***

- B.6 Tiree and Coll are the most westerly of the Inner Hebrides and are located around 20 miles from the mainland. Tiree is about twelve miles long and three miles wide while Coll is thirteen miles long and four miles wide. The islands are accessible by ferry from Oban and by

air from Oban and Glasgow. The islands are ranked in the top one percent of least accessible regions of Scotland.

- B.7 Tiree and Coll have a combined population of less than 1,000 residents with around 80% living on Tiree and the remainder on Coll. Although over the last twenty years the population of the islands has been relatively stable, there has been dramatic long term population decrease, with Tiree’s population falling from around 4,500 in the 1830s. The main settlement on Coll is Arinagour while Tiree’s main centre of population Scarinish.

Table B-1 Coll and Tiree main settlements


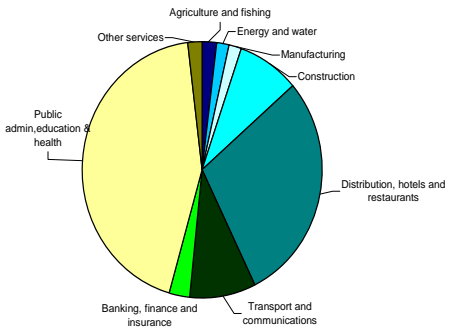
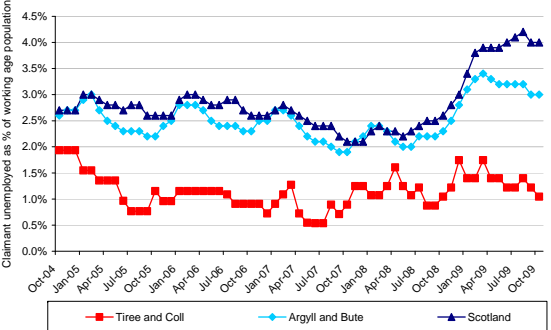
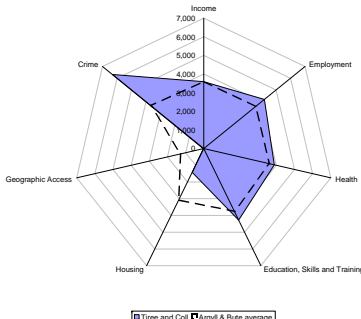
Island	Main Settlements	Minor Settlements	
Coll	Arinagour		
Tiree	Scarinish	Crossapol	Kenovay
		Sandaig	A’Chrois
		Hynish	Cornaigmore
		Balevullin	Balemartine
		Balephuill	North Balemartine

Source: Coll and Tiree Housing Market Study

- B.8 The islands are classified by Highlands and Islands Enterprise (HIE) as fragile areas due to their relatively weak economies and past population decline. Tiree traditionally relied on agriculture and this is reflected in the unique structure of land ownership, with the majority of land under crofting tenure. The most important sectors of the economy in terms of employment are the public sector, retail and tourism which together accounted for around 85% of employment in 2007.
- B.9 Both islands have primary schools and Tiree High school also provides pre-school and secondary education. Both islands have resident GPs, with visiting dentists and opticians. However, the nearest hospital care is Oban or Glasgow and subsidised flights are available for medical visits.

### Approach

- B.10 The focus of this baseline report is to explore the characteristics of Tiree and Coll’s economies and communities and identify significant differences between the islands and the rest of the Local Authority in which they sit, Argyll & Bute and the rest of Scotland. This baseline report will also identify trends across time, seeing how the communities have changed in recent years.
- B.11 The baseline analysis for each community is structured as follows:
- population
  - industrial and employment structure
  - education and skills
  - housing
  - quality of life
  - transport and access to services.

<b>Tiree and Coll</b>							
Tiree and Coll, as defined by this study, includes the following Scottish Government data zones: • S01000831		Total population 2008	Working age population - 2008	Dependency ratio			
		993	573	0.73			
		% change 2001-2008	% change in WAP 2001-2008	% change in ratio 2001 -2008			
		6.4%	+ 12%	- 12%			
							
<b>Headline economic conditions</b>		<b>Labour market and skills conditions</b>		<b>Social and physical conditions</b>			
Work-based employment in 2007	299	Number of JSA claimants in October 09	6	Housing stock 2008	662		
Change 2003 - 2007	0      0%	Change Oct. 04-Oct. 09	- 4      - 40%	Change 2003-2008	+ 57      + 9%		
Business data units	61	SIMD Skills indicator 09	04 Rank	4,257	SIMD Overall indicator 09	04 Rank	2,568
Change 2003 - 2007	3      + 5%		06 Rank	4,594		06 Rank	2,700
			09 Rank	4,265		09 Rank	2,955
<b>Industrial structure of employment in 2007</b> 		<b>Unemployment 2004-2009</b> 		<b>SIMD 2009 Indicator Rankings</b> 			

## Population

### Resident Population

- B.12 Table B-2 shows the change in population between 2001 and 2008 for Tiree and Coll compared to the rest of Argyll and Bute and Scotland. Across this period, Tiree and Coll have seen a 7% increase in population compared to a 1% fall in Argyll and Bute.

Table B-2 Population estimates, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	2001 - 2008 % change
Tiree and Coll	929	898	944	931	930	968	962	993	6.9%
Argyll and Bute	91,300	91,030	91,300	91,190	90,870	91,390	91,350	90,500	-0.9%
Scotland	5,064,200	5,054,800	5,057,400	5,078,400	5,094,800	5,116,900	5,144,200	5,168,500	2.1%

Source: Mid-year population estimates

- B.13 The latest mid-year population estimates (2008) gives Tiree and Coll a total population of 993. Based on the 1991 and 2001 censuses, it is estimated that 82% of the combined Tiree and Coll population are based on Tiree. Therefore, we have estimated that the 2008 mid-year population for Tiree is 814 and for Coll this is 179. However, the majority of analysis throughout this baseline report will not differentiate between the two islands due to the data limitations already discussed.

### Population Structure

- B.14 Figure B-1 shows the population structure of Tiree and Coll compared to Scotland's population structure in terms of age and sex. The population structure of Tiree and Coll varies in two key ways from the rest of Argyll and Bute and Scotland: there are fewer people under the age of 40 as a proportion of the total population in Coll and Tiree compared to Scotland. While children make up a greater proportion of the population on the islands than in Scotland as a whole, there are significant falls in the proportion of the population aged 16 - 35. This is because of the unavailability of higher education and the limited employment opportunities on the islands. The second significant difference is the higher proportion of Tiree and Coll's population that is made up of pension aged residents (21% compared to 17% in Scotland as a whole).

Figure B-1 Population structure, 2008



Source: Scottish Neighbourhood Statistics

- B.15 The consequence of a larger pension age population and fewer people of working age is that the dependency ratio is higher than Argyll and Bute as a whole and the rest of Scotland.

Table B-3 Dependency Ratio (2008)

	Tiree and Coll	Argyll and Bute	Scotland
Children	18.3%	16.5%	17.7%
Working age	57.7%	58.8%	62.6%
Pension age	24.0%	24.7%	19.7%
Dependency ratio	0.73	0.70	0.60

Source: Scottish Neighbourhood Statistics

## Industry and employment

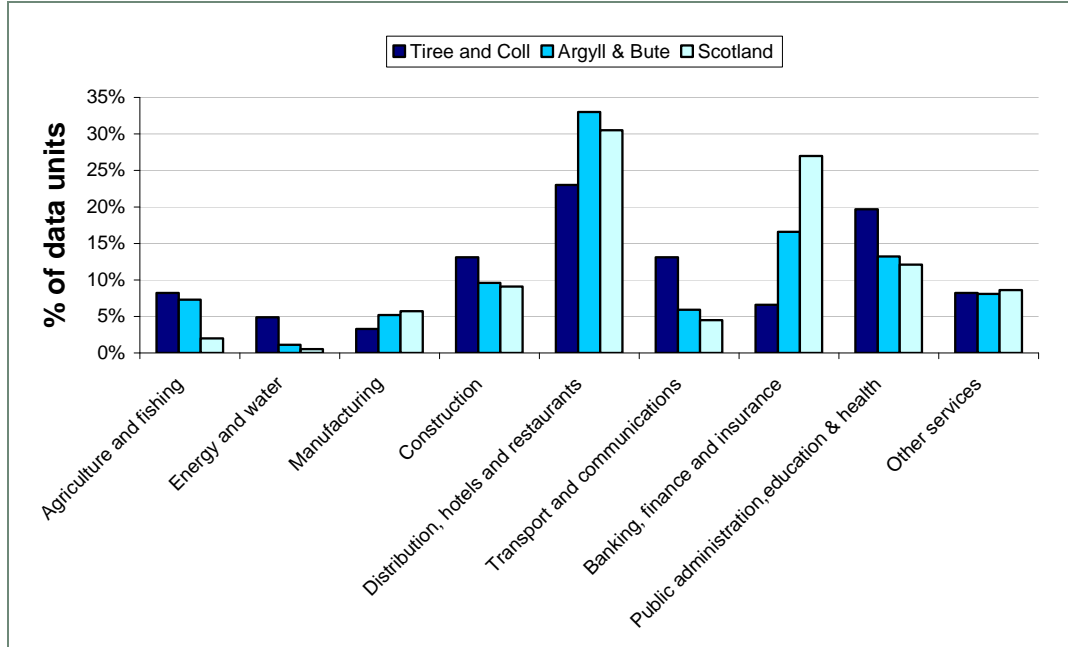
### Industry

- B.16 According to the Annual Business Inquiry, there were a total of 63 data units<sup>47</sup> on Tiree and Coll in 2007. The sectors which make up the greatest proportion of the business are distribution, hotels and restaurant sector and the public administration, education and health sectors with 14 and 12 data units respectively. Construction and transport and communication are also significant sectors.

<sup>47</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

B.17 In comparison to the rest of Scotland, agriculture and fishing, energy and water, construction, transport and communications and public sector are all overrepresented within Tiree and Coll's business base. Tiree and Coll have smaller relative business bases in the manufacturing, distribution, hotels and restaurants and banking and finance sectors.

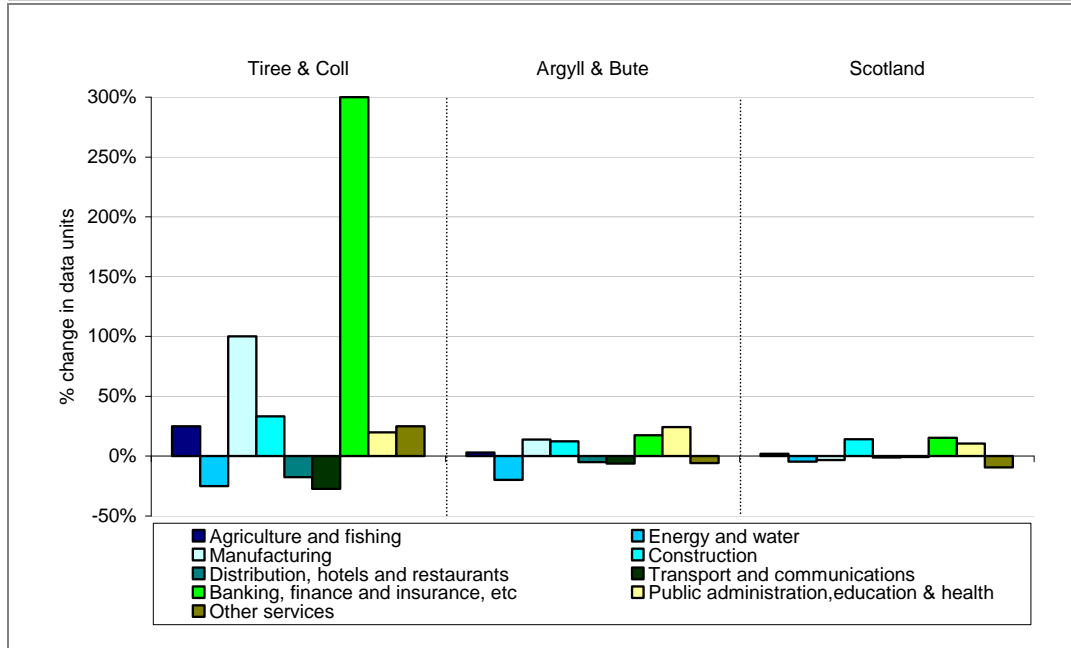
Figure B-2 Sectoral breakdown of business base in Tiree and Coll, 2007



Source: Annual Business Inquiry

B.18 Figure B-2 shows the changes in the business stock for Tiree & Coll, Argyll & Bute and Scotland over the period 2003 to 2007. The clearest finding is that the business base on Tiree & Coll is much more volatile than that of Argyll and Bute or Scotland, with small absolute changes having a larger percentage impact given the much smaller business base.

Figure B-3 Changes in business units by industrial group 2003-2007



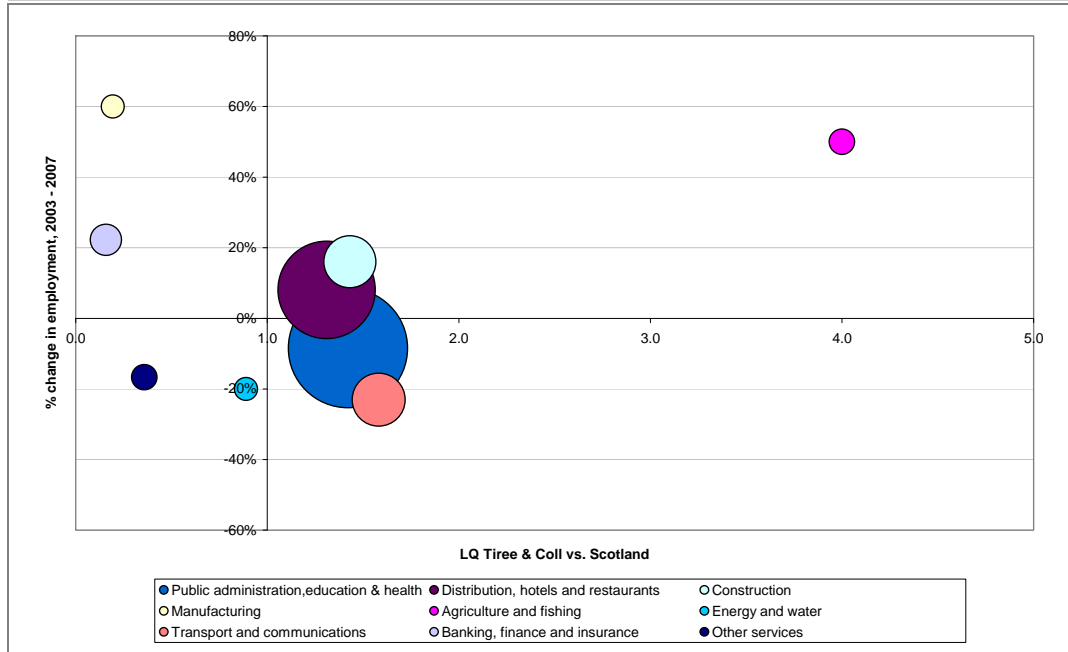
Source: Annual Business Inquiry

### Employment

B.19 Figure B-4 shows three important aspects of the labour market in Tiree and Coll:

- the change in employment by sector between 2003 and 2007
- the comparative importance of each sector in terms of employment relative to Scotland
- the absolute size of employment in each sector.

Figure B-4 Broad sectoral structure and employment change 2003 - 2007, Tiree and Coll



Source: Annual Business Inquiry

B.20 The vertical axis provides location quotient (LQ) scores for Tiree and Coll relative to Scotland as a whole. A location quotient shows how represented an individual sector is within the economy of Tiree and Coll. A score of 1 would mean that representation locally is equal to the representation of that sector at a Scottish level. Therefore the sectors with scores above 1 (those on the right hand side of the vertical axis) are over-represented in the Tiree and Coll economy. These sectors are ( in descending order of over-representation):

- Agriculture and fishing - accounts for a share of total employment on the islands that is four times greater than agriculture and fishing's share of employment in Scotland as a whole. According to consultations, there are around 8 to 10 fishing boats, each with a crew of between 1 and 3.
- Construction - on the islands, the construction industry is significantly over-represented, with almost 40% proportionately more employment in this sector.
- Public administration, education.
- Distribution (retail) , hotels and restaurants - the importance of tourism to the islands is reflected in the higher than average number of jobs in this sector.

B.21 Those sectors on the left hand side of the vertical axis are under-represented in the Tiree and Coll economy and include (in ascending order of under-representation):

- energy and water
- other services
- manufacturing
- banking, finance and insurance.

- B.22 The employment change within each of the nine broad industrial categories is shown horizontally. This shows that employment has fallen between 2003 and 2007 in the distribution, hotels and restaurants sector, the energy and water industry and the transport and communications sectors.
- B.23 Finally, the bubble size reflects the size of each sector in terms of its share of employment on the islands in 2007. Visually it is clear that the public sector dominates, followed by the distribution, hotels and restaurant sector. In fact, these two sectors make up around 85% of employment on Tiree and Coll.
- B.24 The breakdown of employment by broad industrial group in 2005 is set out in more detail in Table B-4 below. However, it should be noted that this employment does not include the self-employed so the accuracy of sectoral employment at the Tiree and Coll level is likely to be more inaccurate given the much higher proportion of self-employed people on the islands. Similarly, the ABI does not give information about the proportion of people who work more than one job.

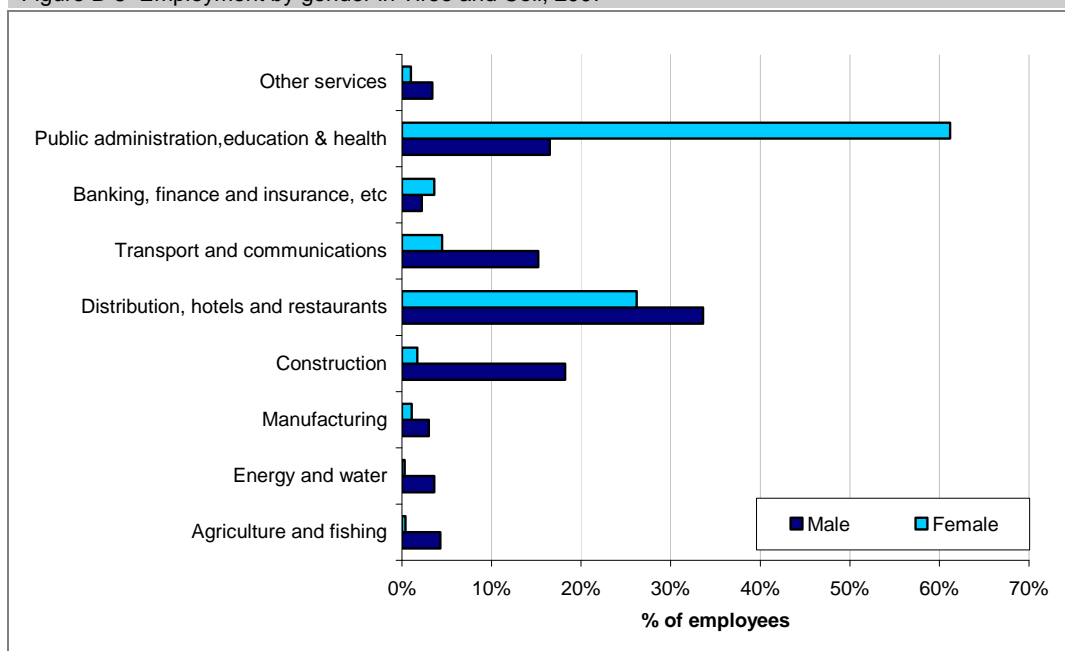
**Table B-4 Sector of employment in Tiree and Coll, 2007**

<b>2007 Employees (%)</b>	<b>Tiree and Coll</b>	<b>Argyll &amp; Bute</b>	<b>Scotland</b>
Agriculture and fishing	2.0%	2.6%	0.5%
Energy and water	1.6%	1.3%	1.8%
Manufacturing	1.8%	4.1%	9.3%
Construction	8.3%	5.8%	5.8%
Distribution, hotels and restaurants	29.1%	24.8%	22.2%
Transport and communications	8.7%	4.7%	5.5%
Banking, finance and insurance	3.0%	13.0%	19.0%
Public admin, education & health	43.5%	38.5%	30.6%
Other services	1.9%	5.3%	5.3%

*Source: Annual Business Inquiry*

- B.25 There are significant gender differences within the Tiree and Coll labour market. Over 60% of the female workforce works for the public sector compared to just 16% of the male workforce. The male workforce is more evenly spread across the different industries on the islands whereas almost 90% of women are employed in just two sectors (public sector and distribution, hotels and restaurants).

Figure B-5 Employment by gender in Tiree and Coll, 2007



Source: Annual Business Inquiry

### Economic activity

B.26 Although dated, the census is the only source of data at the appropriate geographic level which give details of economic activity. In 2001, a much higher proportion of the adult population of Coll were economically active compared to Argyll and Bute and Scotland, primarily due to Coll's high proportion of self-employed and a smaller proportion of retired residents. In Tiree, the proportion of the population that is economically active is slightly below that of Argyll and Bute or Scotland. This is explained by the fact that over 20% of the Tiree population is retired, compared to 16% and 14% for Argyll and Bute and Scotland respectively.

Table B-5 Economic activity status, 2001 (% of 16 - 75 year olds)

	Tiree	Coll	Argyll and Bute	Scotland
<b>Economically active</b>	<b>62.4</b>	<b>73.8</b>	<b>66.8</b>	<b>65.0</b>
Employee - FT	28.4	18.9	37.7	40.3
Employee - PT	13.0	14.8	11.9	11.1
Self-employed	16.5	32.8	11.5	6.6
Un-employed	3.8	7.4	4.0	4.0
FT Student	0.8	0.0	1.7	3.0
<b>Economically inactive</b>	<b>37.6</b>	<b>26.2</b>	<b>33.2</b>	<b>35.0</b>
Retired	21.2	9.0	16.3	13.9
Other <sup>48</sup>	16.3	17.2	16.9	21.1

Source: GROS 2001 Census

<sup>48</sup> Other includes students, those looking after home/family or permanently sick/disabled

### Valuing the output of the local economy

- B.27 Gross Value Added (GVA) comprises the difference between the value of goods and services produced and the cost of raw materials and other inputs used in production; it represents the difference between output and immediate consumption, and is principally made up of compensation paid to employees (largely salaries and other benefits) and profit<sup>49</sup>.
- B.28 There are no published gross value added (GVA) figures for Tiree and Coll. A 2004 report<sup>50</sup> estimated the total GVA (excludes income generated and spent on the islands) of Tiree at £5.3 million or £17,125 per head of working population.
- B.29 By applying the GVA per employee values from the NUTS level 3 region of Lochaber, Skye & Lochalsh, Argyll & the Islands geography to the number of employees in each sector on Islay and Jura, it is possible to estimate the GVA generated by the two island economies.
- B.30 Table B-6 shows the total GVA estimate for Tiree and Coll for 2007. In 2007, this estimates the GVA generated in Tiree and Coll at £8.1 million.

Table B-6 GVA and GVA per head estimates, Tiree and Coll, 2007

Sector	Estimated GVA per employee (Lochalsh, Skye and Argyll and the Islands)	No. of employees in Tiree and Coll	Estimated GVA for Tiree and Coll (£m)
Total GVA	n/a	299	8,145,949

Source: SAC (2004) and <http://www.statistics.gov.uk/pdfdir/gva1208.pdf>

### Education and skills base

- B.31 Tiree High School provides pre-school, primary and secondary education. On Coll, primary education is provided by Arinagour Primary School. Secondary pupils on Coll attend Oban High School and stay on the mainland during the week. The Tiree Learning Centre at Crossapol is part of the Argyll College UHI and provides adult learning courses.
- B.32 Since 1999, there have been some significant changes in the primary school rolls, with Coll seeing a large increase of over a third while Tiree has seen the school roll fall by two-thirds. This suggests that there is capacity within the primary school on Tiree for future growth in pupil numbers.

Table B-7 Tiree and Coll school rolls

	1999	2001	2003	2007	1999 - 2007 & change
Coll (Arinagour) Primary	12	18	22	19	+ 37%
Tiree Primary (includes Gaelic unit)	65	64	63	39	- 67%
Tiree Secondary	51	52	49	55	+ 7%

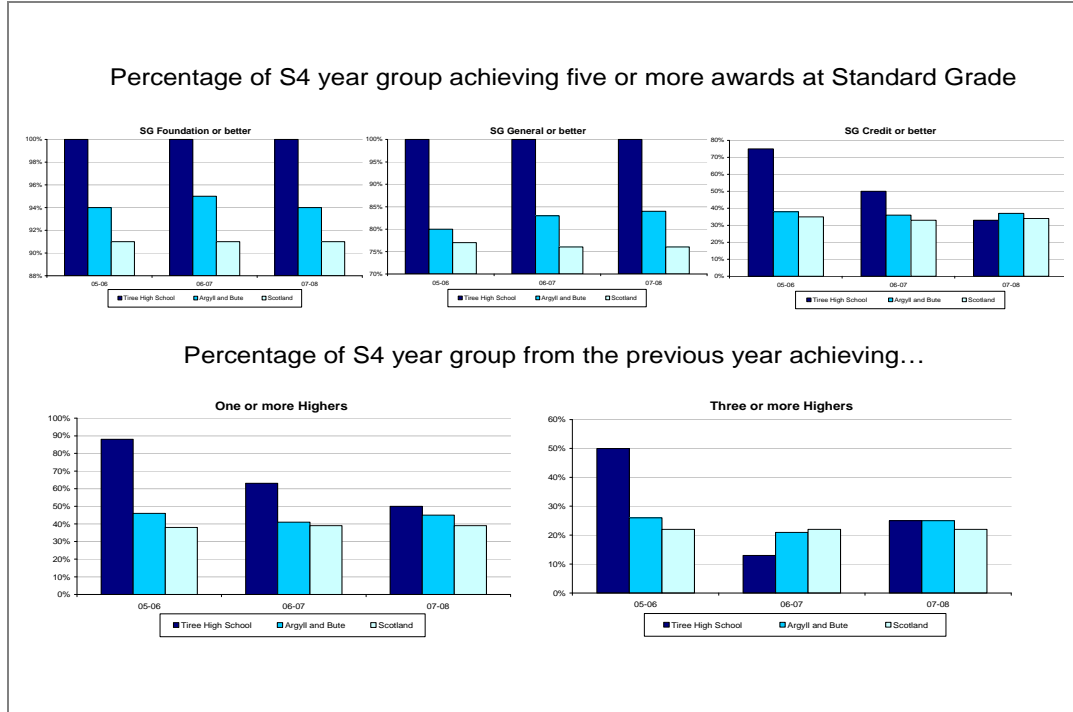
Source: Scottish Schools Online

<sup>49</sup> National Statistics *Economic Terms*

<sup>50</sup> SAC (2004) Tiree Socio-economic Assessment

B.33 The school attainment figures in Figure B-6 show that educational achievement at Tiree High School is higher than the average performance for the Local Authority region or for Scotland as a whole. This higher performance is not simply down to a particularly bright year group in 2007/08 as the school has outperformed the average attainment in the majority of the measures shown below over the last three years.

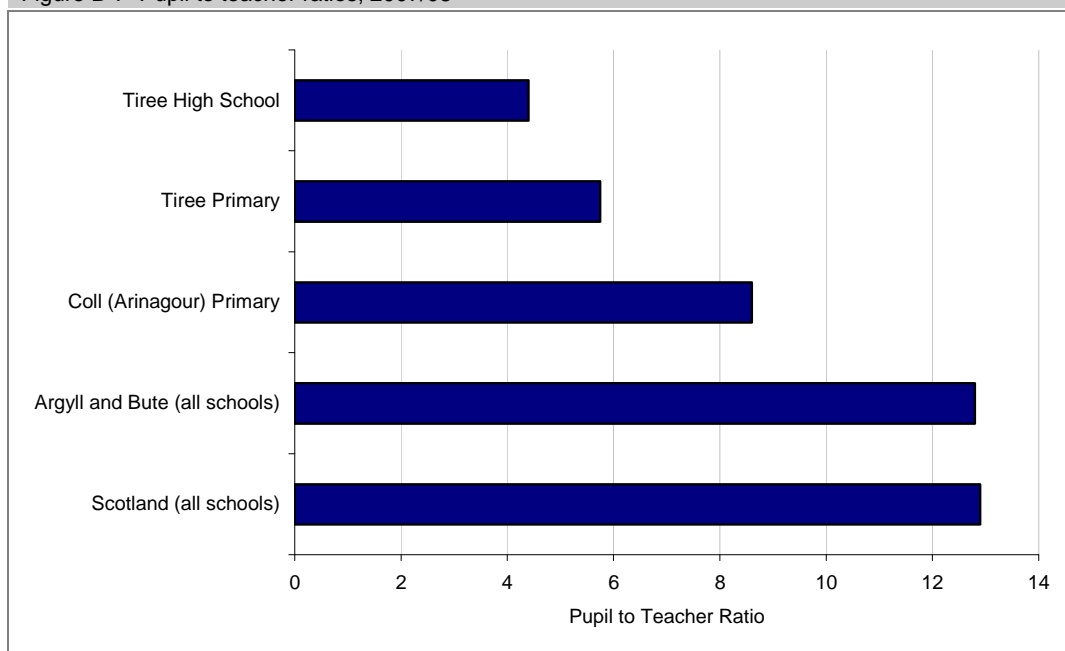
Figure B-6 School level educational attainment 07/08



Source: Scottish Schools Online

B.34 This above average school attainment may be explained, at least in part, by the very low number of pupils per teacher at Tiree High School (and the two primaries). Figure B-7 shows that the average number of pupils per teacher in Argyll and Bute and Scotland is slightly fewer than 13 compared to less than five pupils per teacher at Tiree High School.

Figure B-7 Pupil to teacher ratios, 2007/08



Source: Scottish Schools Online and <http://www.scotland.gov.uk/Resource/Doc/293703/0090773.pdf>

B.35 A slightly higher proportion of 2007/08 school leavers from Tiree entered employment compared to Scotland (31% and 25% respectively) and a slightly lower proportion were unemployed (8% and 12% respectively). The most significant destination for Tiree school leavers is full-time higher education, with over 60% of 2007/08 school leavers from Tiree High School went on to full-time higher education compared to 31% of all Scottish school leavers. This is likely to have significant implications for the Tiree workforce as these pupils will all have to leave the island to attend university. The impact of this drain of young people can be seen in the population pyramid in Figure B-1. However the extremely small sample size (13) of school leavers from Tiree High in 2007/08 means that conclusions must be drawn with caution.

Table B-8 Leavers Destinations 07/08

	Tiree High	Argyll and Bute	Scotland
<b>Total no. of leavers</b>	<b>13</b>	<b>978</b>	<b>58,791</b>
Full-time higher education	62%	32%	31%
Full-time further education	0%	20%	25%
Training	0%	3%	5%
Employment	31%	33%	25%
Unemployed, seeking employment	8%	10%	11%
Unemployed, not seeking employment	0%	1%	2%
Not known	0%	1%	1%

Source: Scottish Schools Online

Gaelic

- B.36 There is a strong emphasis on Gaelic education within Tiree High School with the Primary school offering Gaelic Medium education that consists of Gaelic immersion for P1-3 pupils. Thereafter English language is introduced while still ensuring that Gaelic remains the predominant language for teaching and learning. This is reflected in the high proportion of primary children receiving Gaelic medium education compared to the rest of Argyll and Bute.

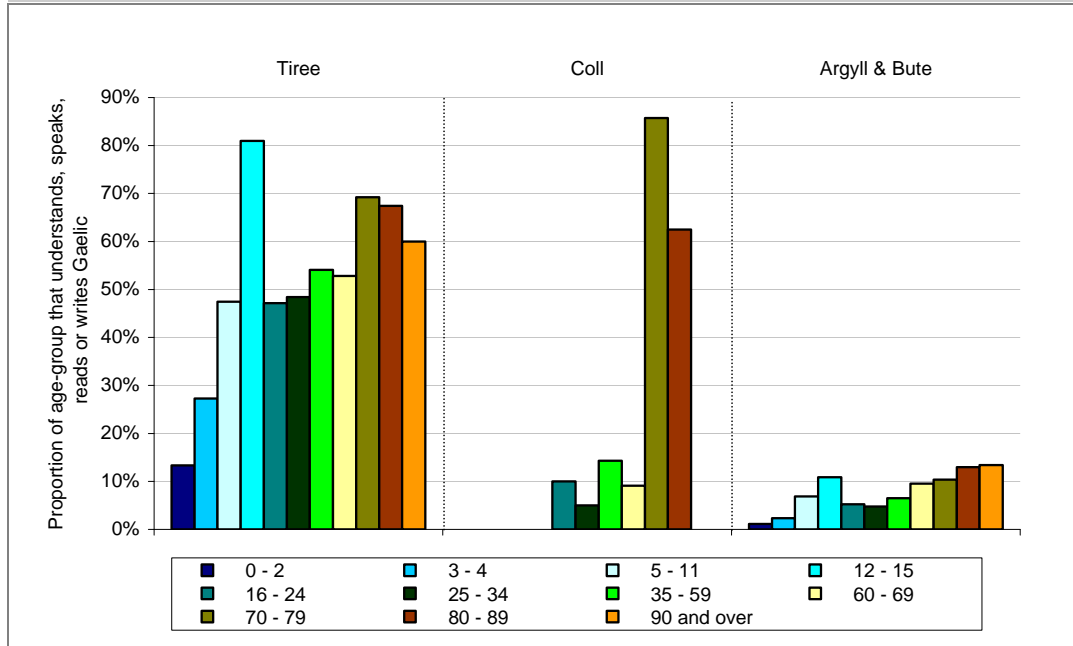
Table B-9 Proportion of primary children receiving Gaelic medium education

	2005	2006	2007	2008
Tiree and Coll	28.4%	31.6%	19.0%	33.9%
Argyll and Bute	0.8%	1.0%	2.2%	2.2%
Scotland	0.5%	0.5%	0.6%	0.6%

Source: Scottish Neighbourhood Statistics

- B.37 Gaelic is also an important part of adult life on the islands of Tiree and Coll. Although the evidence is dated, the proportion of residents that understand, speaks, reads or writes Gaelic is very high in Tiree among all age groups and among those over the age of 70 on Coll.

Figure B-8 Proportion of age-group that understands, speaks, reads or writes Gaelic, 2001



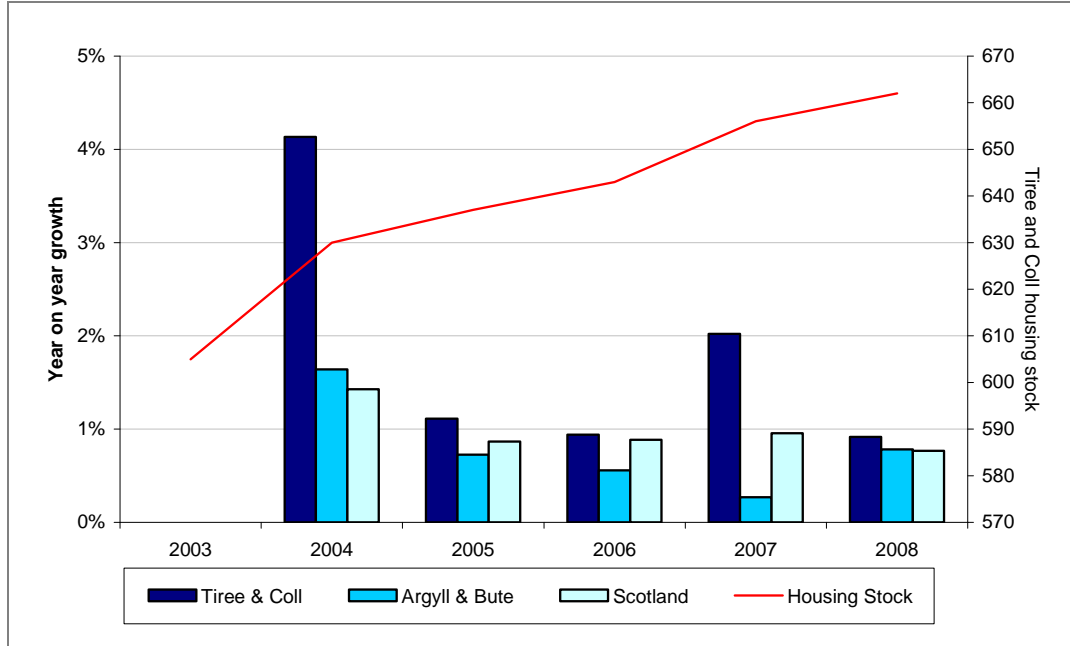
Source: GROS Census 2001

Housing

- B.38 The housing stock in Tiree and Coll has increased to 662 in 2008, up by 35 units since the 2001 census. ODS (2005<sup>51</sup>) report that almost 80% of this housing stock is on Tiree, which is in line with the population split.

<sup>51</sup> Coll and Tiree Housing Market Study

Figure B-9 Change in housing stock, 2003 to 2008



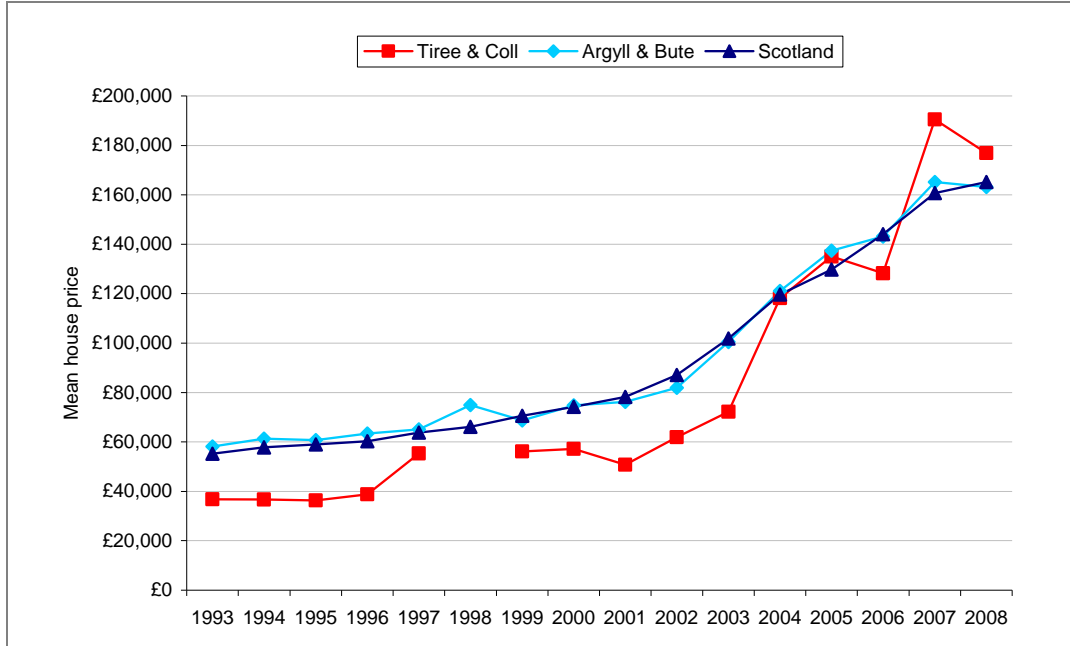
Source: Scottish Neighbourhood Statistics

B.39 Tiree and Coll have seen a significant increase in house prices: between 1999 and 2008, house prices have increased by 215% on the islands compared to 138% in Argyll & Bute and 134% in Scotland. This strong growth in house prices has meant that in 2007 and 2008 the average house price on Tiree and Coll was actually higher than the Scottish average. ODS (2005) report that this strong growth is because of competing demands from local people and people moving from elsewhere as incoming workers or those moving to the island for ‘lifestyle’ or retirement reasons. This influx is reflected by the fact that between 1997 and 2004, “less than one third of house sales were to buyers local to Coll or Tiree, with over half of all sales to people from outwith the Argyll and Bute area”<sup>52</sup>. This influx of people from outwith Argyll and Bute meant that in 2008 30% of homes on the islands were reported as second homes, compared to 8% in Argyll and Bute and just 1% in Scotland as a whole.<sup>53</sup>

<sup>52</sup> Organisational Development and Support (ODS) (2005) *Coll and Tiree Housing Market Study*

<sup>53</sup> Scottish Neighbourhood Statistics

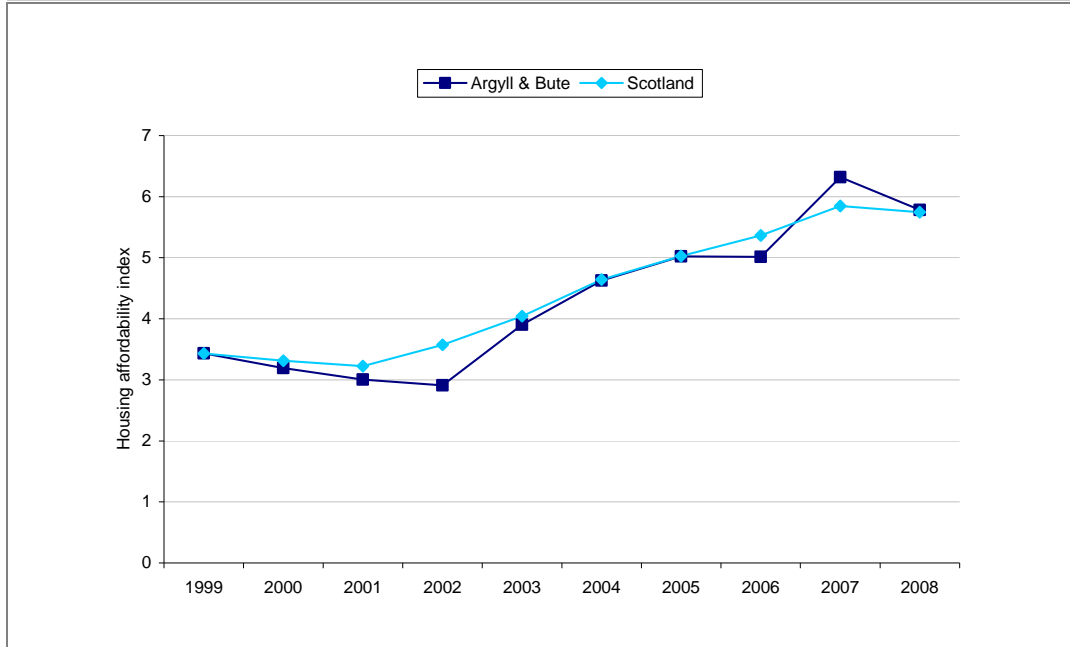
Figure B-10 Mean house prices, 1993 to 2008



Source: Scottish Neighbourhood Statistics

- B.40 Affordability of housing is a key concern for rural areas, and particularly in areas such as Tiree and Coll that have experienced the above average house price growth. As an indicator of affordability, the average house price can be divided by mean workplace-based annual earnings; this gives a measure of the extent to which people working in local jobs can afford to purchase a property in the same local area. The average house in Argyll and Bute cost 3.0 times the mean workplace-based annual earnings in 2002, increasing to almost 6.0 times by 2008.
- B.41 Although we cannot calculate these ratios for Tiree and Coll since up to date income is not available at this level, the substantially lower GVA per head figures identified by the 2004 Tiree Socio-economic Assessment reflect the lower income on the islands compared to Argyll and Bute. This lower income, combined with the higher house prices seen in Figure B-11 suggests that housing on Tiree and Coll is less affordable for local residents than the averages for the Local Authority region and Scotland.

Figure B-11 Housing affordability ratio (average house price divided by mean workplace-based annual earnings) 1999 to 2008

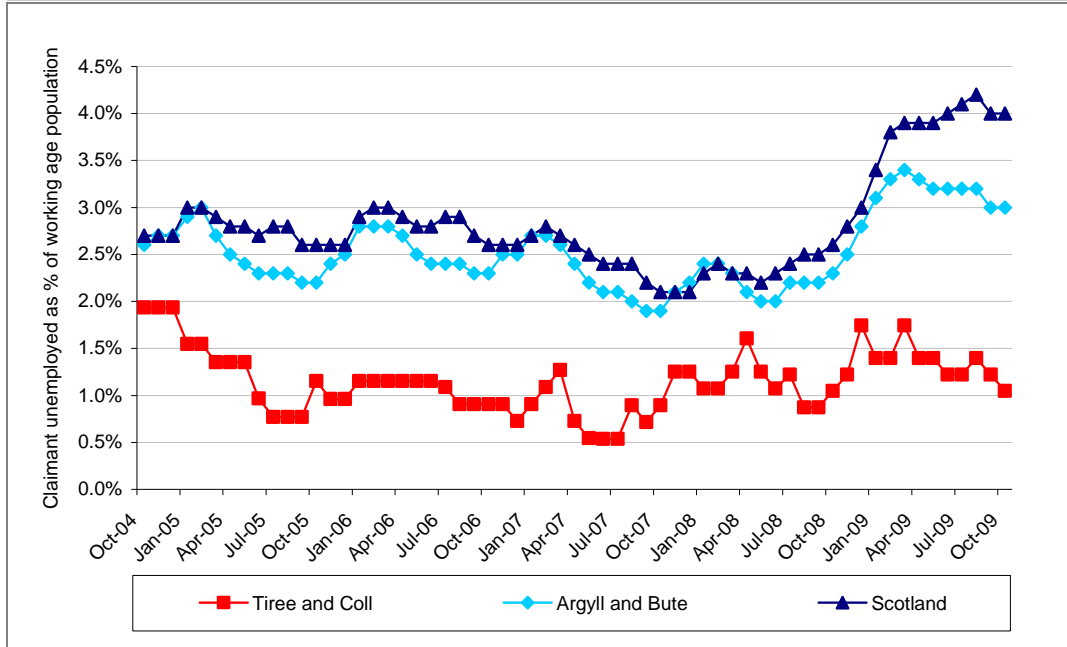


Source: Scottish Neighbourhood Statistics and ASHE survey

## Quality of Life

- B.42 Although quality of life is subjective, there are a number of measures which can be used as a proxy. These measures are primarily concerned with (a) income and unemployment and (b) measures of deprivation such as isolation and crime.
- B.43 Tiree and Coll have lower levels of unemployment than Argyll and Bute or Scotland as a whole. Figure B-12 shows that the islands of Tiree and Coll have a smaller proportion of the working age population claiming unemployment benefits and that the islands have not experienced the same increase in unemployment as the rest of Scotland. The pattern of unemployment follows a seasonal pattern, with lower unemployment in the summer months compared to the winter months across 2007 and 2008, reflecting the higher proportion of employment in tourism and primary sectors such as agriculture.

Figure B-12 Percentage of working age population claiming unemployment benefits, October 2004 to October 2009



Source: NOMIS Claimant Count Data

B.44 The Annual Survey of Hours and Earnings provides average earnings at the local authority and national level but not at the data zone level. However, the lower estimates of GVA per head for Tiree and Coll suggest that income levels are similarly lower compared to the Argyll and Bute or Scottish average.

Table B-10 Average weekly earnings (£), 2002 to 2009

Year	Argyll and Bute	Scotland
2002	349.20	369.30
2003	380.10	381.80
2004	400.10	390.60
2005	396.60	409.80
2006	442.20	427.90
2007	406.10	440.90
2008	434.90	462.90
2009	452.90	472.20

Source: Annual Survey of Hours and Employment

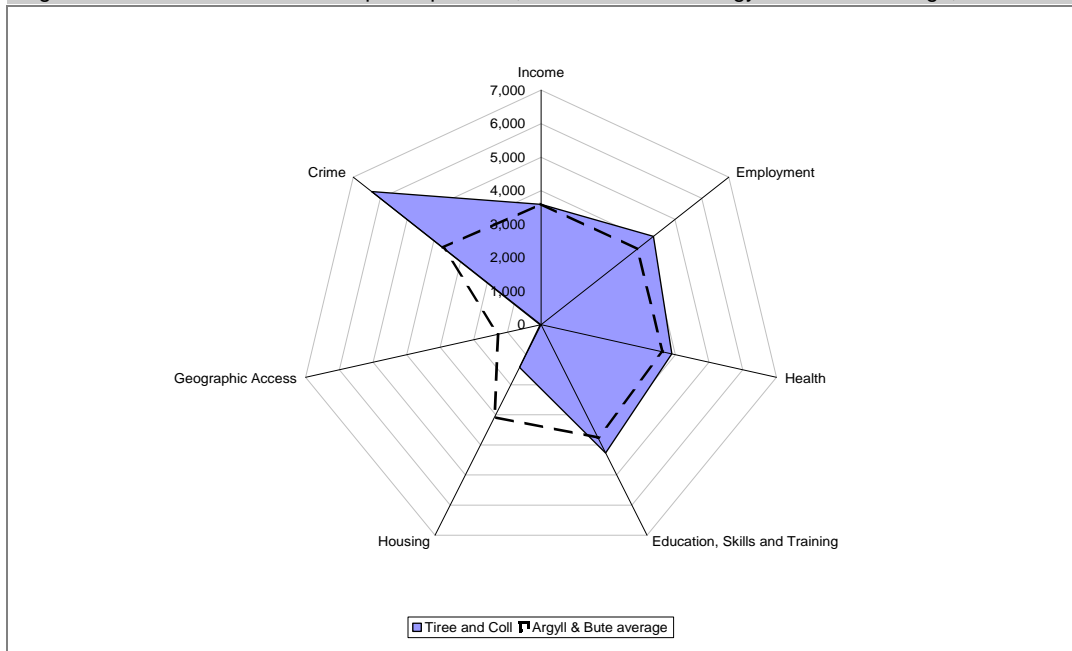
*Scottish Index of Multiple Deprivation (SIMD)*

B.45 The SIMD is the Scottish Government’s official tool for identifying small area concentrations of multiple deprivation across Scotland. The SIMD ranks each of the 6,505 Scottish data zones against each other on seven different measures. The data zones are ranked from one, being the most deprived, to 6,505, being the least deprived.

B.46 In 2009, Tiree and Coll has a ranking of 2,955, placing the islands well within the top 50% least deprived data zones in Scotland. Compared to Argyll and Bute, made up of 122 data zones, Tiree and Coll are ranked 61st, just within the top half of data zones in terms of least deprivation.

B.47 Figure B-13 shows Tiree and Coll’s ranking for each of the seven elements of the composite ranking as the shaded box with the average score for Argyll and Bute given by the broken line. This shows that Tiree and Coll performs significantly better than the Argyll and Bute average in terms of crime and slightly outperforms the rest of the Local Authority region in terms of income, employment, health and education. However, it is also clear from Figure B-13 that Tiree and Coll face serious issues under two of the measurements: housing and access to services. The housing issues have already been discussed while geographic access is discussed in the next section.

Figure B-13 Scottish Index of Multiple Deprivation, Tiree and Coll vs. Argyll and Bute average, 2009



Source: Scottish Government

## Transport and access to services

### Transport

B.48 Tiree and Coll’s external transport links are by ferry and air.

#### Ferry service

B.49 The ferry service from Oban serves both Coll and Tiree. There are seven return sailings per week during the summer and four during the winter. Between 2002 and 2008, there has been close to a 20% increase in passenger numbers and a similar increase in the number of cars being carried by the service. There has been a dramatic rise in the number of coaches travelling to the Islands, with numbers increasing by over half in the same period. This

suggests that the number of visitors to Tiree and Coll is increasing. The number of commercial vehicles using the ferry service has remained broadly static across the period.

Table B-11 Oban - Tiree/Coll ferry carrying statistics

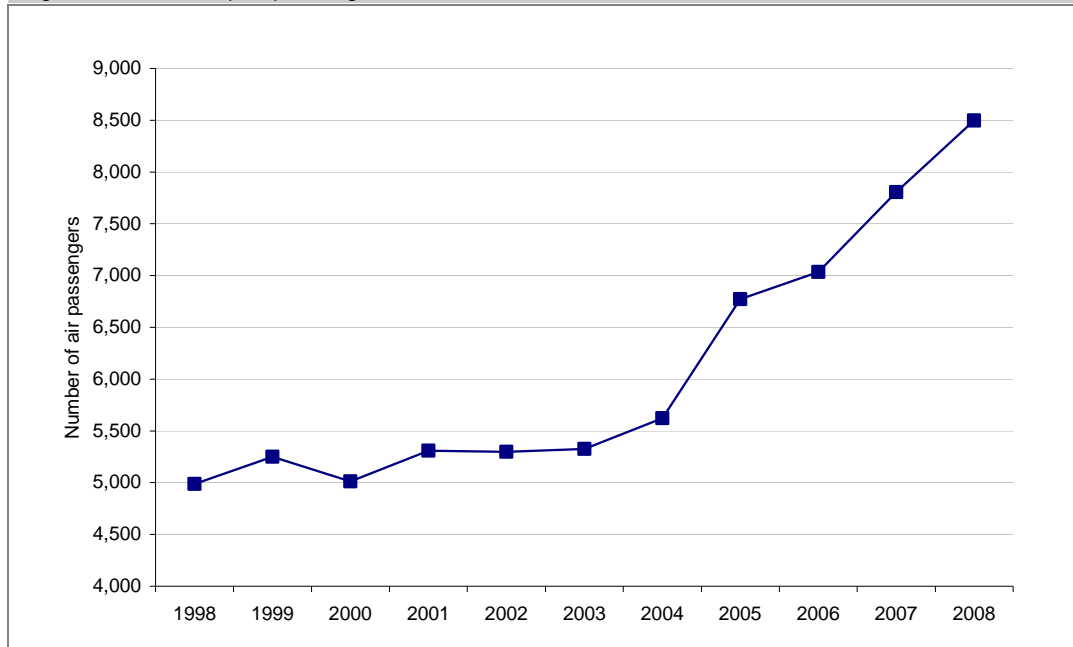
Year	Passengers	Cars	Coaches	Commercial Vehicles
2002	39,484	10,953	30	1,587
2003	42,845	11,301	35	1,505
2004	44,583	12,379	30	1,504
2005	45,689	12,745	32	1,786
2006	44,125	12,373	44	1,719
2007	46,411	13,024	42	1,878
2008	46,538	13,026	46	1,634

Source: <http://www.calmac.co.uk/carryingstatistics.html>

#### Air service

- B.50 Flights run by Loganair connect Tiree with Glasgow Monday to Saturday. Highland Airways operate flights connecting Tiree with Coll and Oban twice a week. Figure B-14 shows passenger numbers arriving at Tiree airport between 1998 and 2008, when passenger numbers reached 8,496.

Figure B-14 Tiree airport passenger numbers, 1998 to 2008



Source: CAA

- B.51 It is not possible to distinguish between resident and visiting passengers although evidence suggests that visitors may make up around 12% of all passengers<sup>54</sup>.

<sup>54</sup> SAC 2004 *Tiree Socio-economic Assessment*

- B.52 The dramatic increase in air passenger numbers from 2004 reflects the introduction of a new joint Public Service Obligation (PSO) contract in that year which had the effect of reducing airfares to and from Tiree and Glasgow by 22%<sup>55</sup>. Capacity on this route was increased in 2005 with a larger 34 seater substituting for the smaller 18 seater on some flights<sup>56</sup>.
- B.53 Internal transport relies heavily on private car ownership with a higher ratio of cars to households in Coll and Tiree than Argyll & Bute or Scotland. There are also more households which have access to two or more cars on Coll and Tiree.

Table B-12 Access to cars/vehicles, 2001

Region	Number of cars per household	Proportion of households with access to....number of cars/vans			
		0	1	2	3+
Coll	1.24	24	39	29	9
Tiree	1.17	21	47	26	5
Argyll & Bute	1.03	28	47	21	4
Scotland	0.93	34	43	19	4

Source: GROS Census 2001

- B.54 The high car ownership is unsurprising given the limited public transport available on the islands: for example it takes on average more than an hour by public transport for Tiree and Coll residents to reach their GP or shopping facilities.

<sup>55</sup> HIE and Highlands and Islands Transport Partnership (Hi Trans) (2006) *Evaluation of Fare Reductions on Air Services to Barra, Campbeltown and Tiree*

<sup>56</sup> Highlands and Islands Airports (2005) *Upgrade to Glasgow-Tiree Air Service by Loganair*

## Annex C: Socio-economic baseline for Islay

### Geographical Focus

- C.1 The main data limitation for this baseline is that Islay specific data is only available from the 2001 Census. Although the census does provide a lot of information for Islay this data is now quite dated. Therefore most of this baseline report describes Islay in terms of the five data zones which make up the island. These data zones and the areas they each cover are shown in C.1.

Table C-1 Islay, Jura and Colonsay data zones breakdown

Data zone	Area (SQW descriptions)
S01000722	Port Ellen
S01000723	Islay South
S01000724	Bowmore
S01000726	Islay West
S01000755	Islay North, Jura and Colonsay

Source: SQW Energy

- C.2 The use of data zones represents both an opportunity for increased analysis and creates a potential risk of loss of accuracy. Firstly, and most importantly, the use of five different data zones within Islay allows the baseline to explore differences between areas within the island and not just compare the island with the rest of Argyll and Bute and Scotland. This is important given the different characteristics of, for example, the rural areas on the island compared to the more built up areas of Port Ellen or Bowmore. However, one of the data zones used (S01000755) covers Islay North and the islands of Jura and Colonsay. As there is no way to differentiate or ‘split out’ this data zone, most of the analysis in this baseline report includes Jura and Colonsay.

### Islay, Jura and Colonsay

- C.3 Islay is the most southerly of the Inner Hebrides and is located to the west of the Kintyre peninsula and around 35 miles north of Northern Ireland. The island is around 40km wide and 25km long. The smaller island of Jura lies to the east of Islay and is around 30 miles long and 7 wide. Colonsay is located to the north-east of Islay.
- C.4 The total population of the three islands is around 3,800 with the majority of these people living on Islay (3500), around 200 on Jura and 100 on Colonsay. The main settlements on Islay are Bowmore, Port Ellen and Port Charlotte.

Table C-2 Islay, Jura and Colonsay main settlements

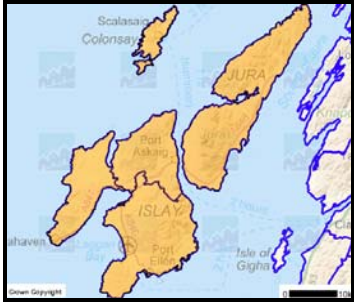
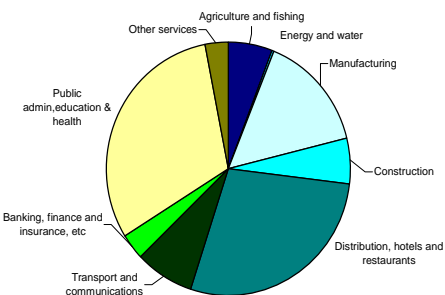
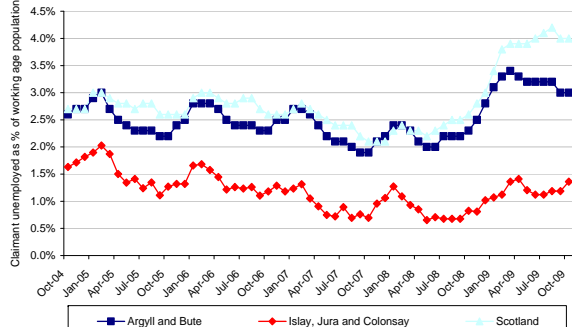
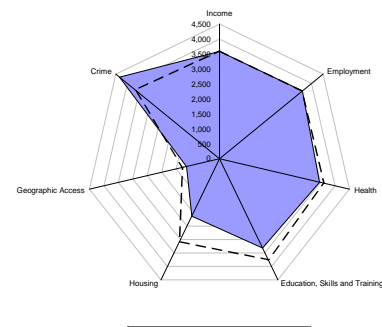
Island	Main Settlements	Minor Settlements
Islay	Bowmore	Portnahaven
	Port Ellen	Bridgend
	Port Charlotte	Ballygrant Port Askaig
Jura		Craighouse Tarbert
	Colonsay	Scalasaig

Source: SQW Energy

- C.5 The islands are classified by Highlands and Islands Enterprise (HIE) as fragile areas due to their relatively weak economies and past population decline. The most important sectors of the economy in terms of employment are the public sector, retail and tourism and the eight whisky distilleries on the island, which together accounted for around three quarters of employment. These are also the most important sectors in terms of the GVA that they create for the islands.

### **Approach**

- C.6 The focus of this baseline report is to explore the characteristics of Islay, Jura and Colonsay's economies and communities and identify significant differences between the islands and the rest of the Local Authority in which they sit, Argyll & Bute and the rest of Scotland. The working paper will also identify trends across time, seeing how the communities have changed in recent years
- C.7 The rest of this chapter outlines the baseline analysis, structured as follows:
- section 2: population
  - section 3: industrial and employment structure
  - section 4: education and skills
  - section 5: housing
  - section 6: quality of life
  - section 7: transport and access to services.

Islay, Jura and Colonsay (data zones)								
Islay, Jura and Colonsay, as defined by this study, includes the following Scottish Government data zones: <ul style="list-style-type: none"> <li>S01000722</li> <li>S01000723</li> <li>S01000724</li> <li>S01000726</li> <li>S01000755</li> </ul>			Total population 2008	Working age population - 2008	Dependency ratio			
			3,822	2,195	0.74			
			% change in total population 2001-2008	% change in WAP 2001-2008	% change in ratio 2001 -2008			
			+ 1.5%	- 1.1%	+ 5.7%			
								
Headline economic conditions			Labour market and skills conditions			Social and physical conditions		
Work-based employment in 2007	1,484		Number of JSA claimants in October 09	3		Housing stock 2008	2,087	
Change 2003 - 2007	- 22	- 1.46%	Change Oct. 04-Oct. 09	- 1	- 25%	Change 2003-2008	122	6.2%
Business data units	236		Average SIMD Skills indicator	04 Rank	3,650	Average SIMD Overall indicator	04 Rank	2,629
				06 Rank	3,431		06 Rank	3,092
Change 2003 - 2007	- 9	- 3.7%		09 Rank	3,317		09 Rank	3,011
<b>Industrial structure of employment in 2007</b> 			<b>Unemployment 2004-2009</b> 			<b>SIMD 2009 Indicator Rankings</b> 		

## Population

### Resident Population

- C.8 Table C-3 shows mid year population estimates for the combined area of Islay, Jura and Colonsay, Argyll & Bute and Scotland between 2001 and 2008. Across this period, the population of this area has increased by 1.5% to 3,822 in 2008 compared to a fall of almost 1% in Argyll & Bute as a whole. This overall increase has been driven by a 20% increase in the pension age population but there has been an 11% fall in the number of children on the islands. The working age population has also fallen slightly by 1% across the same period.

Table C-3 Population estimates, 2001 to 2008

Area	2001	2002	2003	2004	2005	2006	2007	2008	2001 - 2008 % Change
Islay, Jura and Colonsay	3,767	3,817	3,802	3,793	3,862	3,803	3,810	3,822	1.5%
Argyll & Bute	91,300	91,030	91,300	91,190	90,870	91,390	91,350	90,500	-0.9%
Scotland	5,064,200	5,054,800	5,057,400	5,078,400	5,094,800	5,116,900	5,144,200	5,168,500	2.1%

Source: Mid-year population estimates

- C.9 There are substantial differences in population growth between the five relevant data zones: Islay South and Islay West have seen positive population increases of 6% and 9% respectively between 2001 and 2008. The population growth in Islay South has been driven by a 44% increase in the number of pension aged residents while Islay West's population increase is mainly down to a 26% increase in the number of children. The other three data zones (Port Ellen, Bowmore and Islay North, Jura and Colonsay) have all seen slight reductions in population across the same period.

Table C-4 Population estimates, 2001 to 2008

Data zone	2001	2002	2003	2004	2005	2006	2007	2008	2001 - 2008 % change
Port Ellen	820	836	838	828	823	812	793	800	-2.4%
Islay South	528	533	538	535	566	561	556	558	5.7%
Bowmore	865	869	858	860	841	862	843	847	-2.1%
Islay West	755	759	782	785	814	779	817	823	9.0%
Islay North, Jura and Colonsay	799	820	786	785	818	789	801	794	-0.6%

Source: Mid-year population estimates

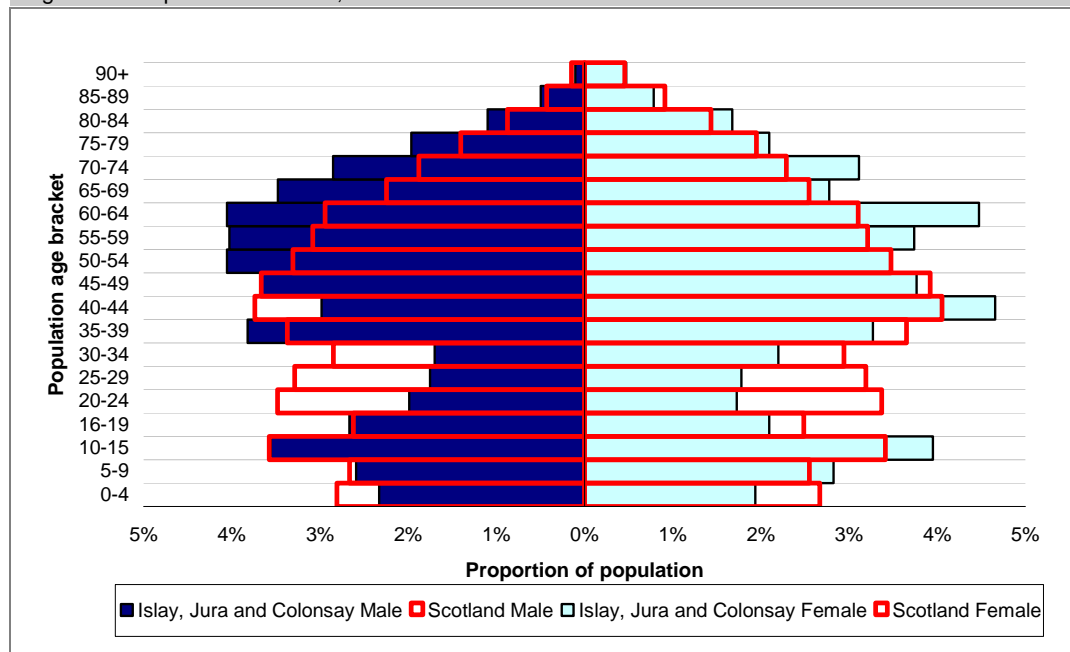
### Population Structure

- C.10 The population of Islay, Jura and Colonsay is structured differently from that of Scotland. Figure C-1 compares the population structure of the Islands and of Scotland in terms of age and sex. This shows that in comparison to Scotland the islands have a smaller proportion of

working age people between the ages of 20 and 34 which may be explained by the need to move to the mainland to study or in search of employment opportunities.

- C.11 The second main difference is the higher proportion of older people within the island’s population which reflects the in-migration of people moving into the area for retirement or ‘lifestyle’ reasons. This is an on-going trend: in 2001, those of pension age made up 21.4% but this increased to 25.4% by 2008 while the proportion of the total population made up of children has fallen from 19.6% to 17.2% across the same period.

Figure C-1 Population structure, 2008



Source: Scottish Neighbourhood Statistics

- C.12 The result of this ‘top heavy’ population is a dependency ratio which is slightly higher than the Argyll and Bute average and much higher than the dependency ratio for Scotland.

Table C-5 Dependency ratio (2008)

	Islay, Jura & Colonsay	Argyll & Bute	Scotland
Children	17.2%	16.5%	17.7%
Working age <sup>57</sup>	57.4%	58.8%	62.7%
Pension age	25.4%	24.7%	19.7%
Dependency Ratio	0.74	0.70	0.60

Source: Scottish Neighbourhood Statistics

- C.13 There are also differences within Islay, Jura & Colonsay; both Port Ellen and Islay North, Jura and Colonsay have much lower dependency ratios which reflect the higher proportion of working age adults in these data zones. However, Bowmore, Islay West and Islay South have much higher dependency ratios. The main reason for these higher dependency ratios is the

<sup>57</sup> Working age includes females aged 16 - 59 and males aged 16 - 64

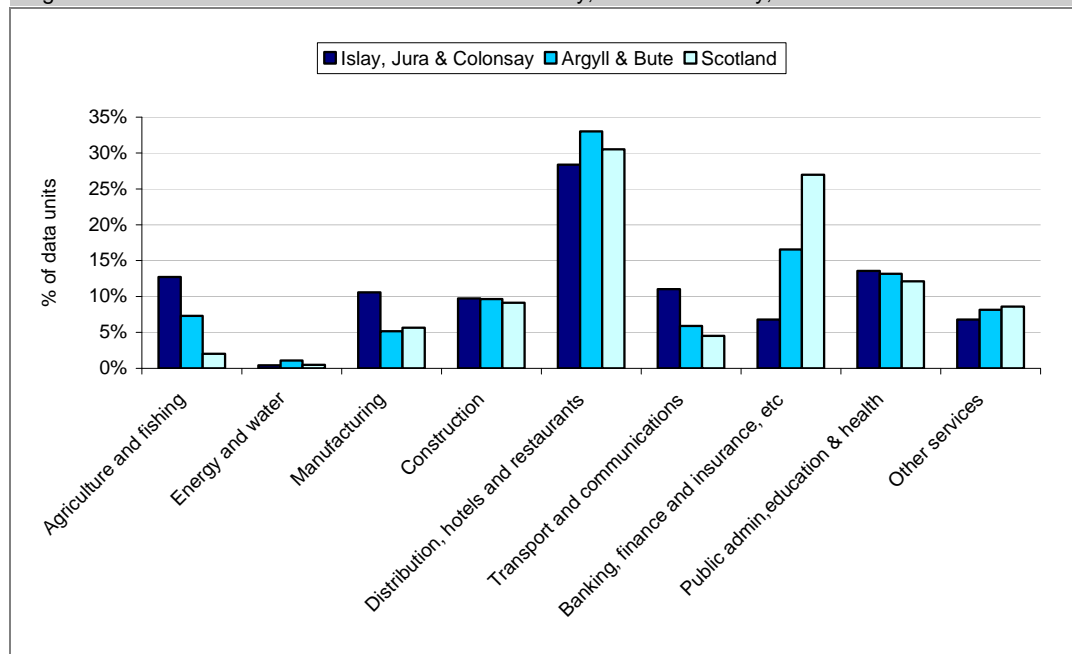
high number of pensioners who live in these areas, possibly due to easier access to services and housing.

## Industry and employment

### Industry

- C.14 The Annual Business Inquiry reports that there were a total of 236 data units<sup>58</sup> in 2007 across Islay, Jura and Colonsay. In absolute terms, the most important sectors were distribution, hotels and restaurants (67 units), followed by the public sector (32 units) and agriculture and fishing (30 units). Figure C-2 shows the proportional breakdown of the business base for Islay, Jura and Colonsay, Argyll & Bute and Scotland. Compared to Argyll & Bute and Scotland, a number of sectors are over-represented on the island economies of Islay, Jura and Colonsay: agriculture and fishing, transport and communications and manufacturing (principally due to the high number of whisky distilleries on Islay) have around double the proportional representation on the islands compared to the rest of Argyll & Bute and Scotland.

Figure C-2 Sectoral breakdown of business base in Islay, Jura & Colonsay, 2007



Source: Annual Business Inquiry

- C.15 There are also stark differences in the sectoral make up of the business base within each of the five data zones. There is a greater reliance on agriculture and fishing in the southern data zones of Port Ellen and Islay South. Islay South also has a much larger representation of manufacturing businesses which is explained by the large number of distilleries located in this part of the island. Around one third of businesses in the more built up areas of Port Ellen and

<sup>58</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

Bowmore are involved in distribution, hotels and restaurants. The majority of public sector data units are located in Bowmore which reflects its status as the administrative capital of the island. The more rural areas of Islay West and Islay North, Jura and Colonsay have a more even spread of industries.

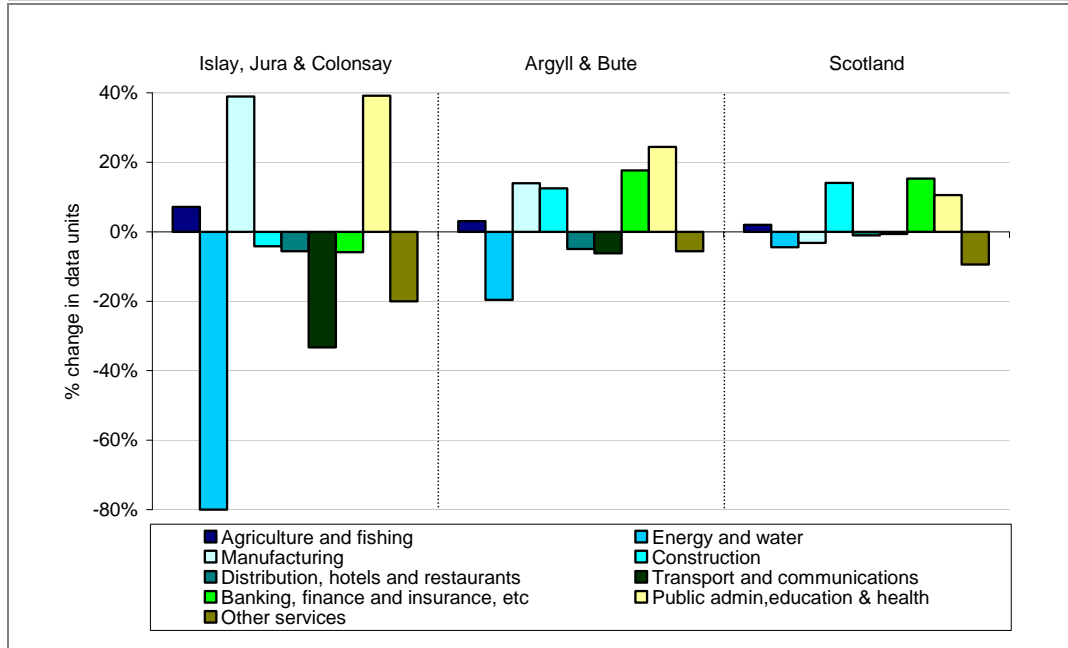
Table C-6 Sectoral breakdown of business base in Islay, Jura & Colonsay, 2007

	Port Ellen	Islay South	Bowmore	Islay West	Islay North, Jura and Colonsay
Agriculture and fishing	26.2%	20.0%	0.0%	9.1%	13.7%
Energy and water	0.0%	0.0%	0.0%	0.0%	1.4%
Manufacturing	4.8%	26.7%	1.7%	15.2%	12.3%
Construction	4.8%	10.0%	12.1%	6.1%	12.3%
Distribution, hotels and restaurants	33.3%	10.0%	32.8%	36.4%	26.0%
Transport and communications	19.0%	10.0%	5.2%	6.1%	13.7%
Banking, finance and insurance, etc	4.8%	10.0%	10.3%	3.0%	5.5%
Public administration, education & health	4.8%	3.3%	29.3%	12.1%	11.0%
Other services	2.4%	10.0%	8.6%	12.1%	4.1%
<b>Total (N)</b>	<b>42</b>	<b>30</b>	<b>58</b>	<b>33</b>	<b>73</b>

Source: Annual Business Inquiry

- C.16 There have been a number of significant changes in the business base of Islay, Jura and Colonsay between 2003 and 2007. The overall number of data units fell by nine (3.7%) from 245 to 236. Across the same period, the number of data units in Argyll and Bute increased by 4.3% and the overall number of data units in Scotland increased by 4.7%. Figure C-3 shows that the number of data units involved in the energy and water sector fell by 80% while the transport and communication sector also fared badly, with a 30% reduction in the number of business units. Both manufacturing and the public sector saw growth of 40% across the same period.

Figure C-3 Changes in business units by industrial group, 2003 - 2007



Source: Annual Business Inquiry

C.17 However, given the small number of businesses located in Islay, Jura and Colonsay, it is more useful to identify the *absolute changes* in the business base. The sector which saw the most significant absolute change was the transport and communications sector, with a fall of 13 data units (33%). This fall was particularly felt in Islay North, Jura and Colonsay which saw the disappearance of 8 of these units. Despite this decrease in transport and communication businesses, the Islay North, Jura and Colonsay data zone saw an overall increase of 7 data units. Port Ellen also experienced strong growth, with an additional 13 businesses in 2007 compared to 2003. There were, however, significant falls in the business stock in Islay South and Bowmore which saw falls of 10 and 16 business units respectively.

Table C-7 Absolute change in business units by industrial group, 2003 - 2007

	Port Ellen	Islay South	Bowmore	Islay West	Islay North, Jura and Colonsay	Islay, Jura & Colonsay
Agriculture and fishing	2	0	-1	0	1	2
Energy and water	0	0	-1	-2	-1	-4
Manufacturing	2	0	-1	1	5	7
Construction	-1	1	-3	0	2	-1
Distribution, hotels and restaurants	7	-6	-7	-1	3	-4
Transport and communications	2	0	-4	-3	-8	-13
Banking, finance and insurance, etc	0	-1	-2	0	2	-1
Public admin, education & health	0	-2	3	3	5	9
Other services	1	-2	0	-1	-2	-4
Total change	13	-10	-16	-3	7	-9

Source: Annual Business Inquiry



South and Islay West are between three and four times more reliant on manufacturing for employment than Scotland. This reliance is explained by the high number of distilleries on Islay.. Between them, these distilleries account for 80% of all manufacturing employment in Islay, Jura and Colonsay.

- Transport and communications - unsurprisingly, a greater proportion of people are employed in the transport and communications sector on the islands compared to Scotland. At Port Ellen in particular, this is an important sector in terms of employment because Port Ellen is the main port for the island.
- Distribution, hotels and restaurants - the greater reliance on tourism related businesses for employment reflects the importance of visitors to the local economies of Islay, Jura and Colonsay. Retail and tourism related employment is particularly important in Islay West and Port Ellen where there are proportionately almost twice as many jobs in this sector as in Scotland as a whole.

C.20 The employment change within each of the nine broad industrial categories is shown horizontally in Figure C-4. There was a large proportional fall in employment in the energy and water sector but given the very small number of people involved in the sector, the change is unlikely to impact on the local economy. There were also falls in the other services and financial services sectors. The main growth sectors across the same period were construction, which saw employment increase by over a third, manufacturing saw an increase of almost a quarter and agriculture and fishing employment also increased by almost 20%.

C.21 Finally, the bubble size reflects the size of each sector in terms of employment on the islands in 2007. Visually it is clear that the most important sectors are the public sector and tourism and retail related employment in the distribution, hotels and restaurants sector which together make up almost 60% of employment. The next single biggest sector of employment is the manufacturing sector with around 15% of jobs in this sector. Employment in this sector is dominated by the distilleries, with around 80% (180 jobs) of manufacturing employees working for the distilleries.

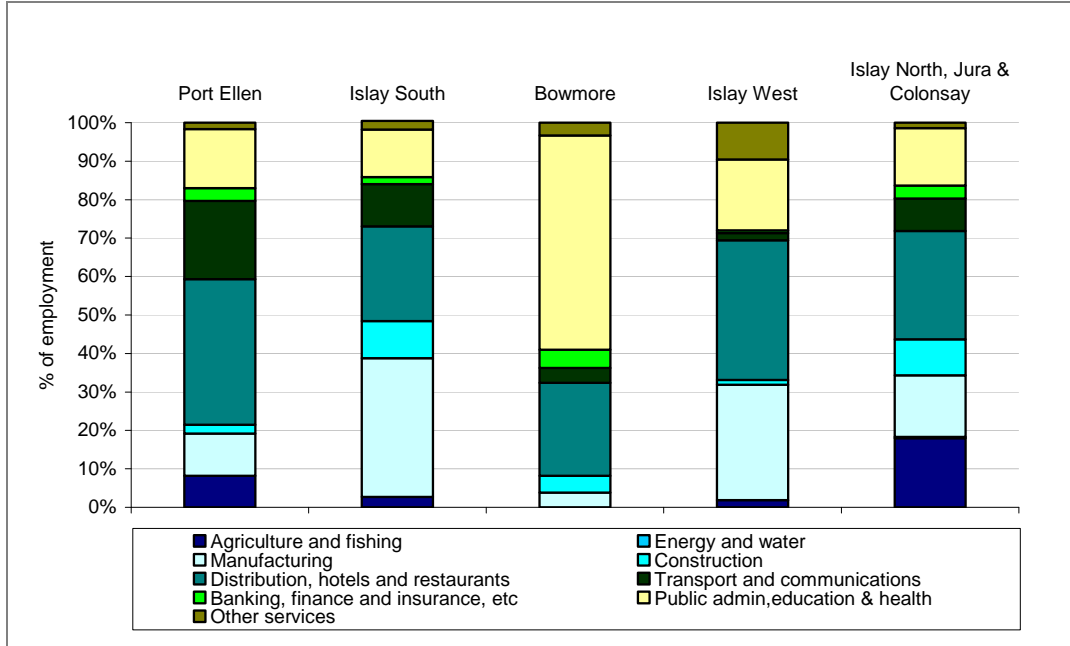
C.22 The breakdown of employment by broad industrial group in 2007 is set out in more detail in Table C-8.

Table C-8 Sector of employment, 2007

	Islay, Jura & Colonsay	Argyll & Bute	Scotland
Agriculture and fishing	5.9%	2.6%	0.5%
Energy and water	0.1%	1.3%	1.8%
Manufacturing	15.2%	4.1%	9.3%
Construction	5.7%	5.8%	5.8%
Distribution, hotels and restaurants	28.2%	24.8%	22.2%
Transport and communications	7.8%	4.7%	5.5%
Banking, finance and insurance, etc	3.4%	13.0%	19.0%
Public admin, education & health	30.7%	38.5%	30.6%
Other services	3.2%	5.3%	5.3%

Source: Annual Business Inquiry

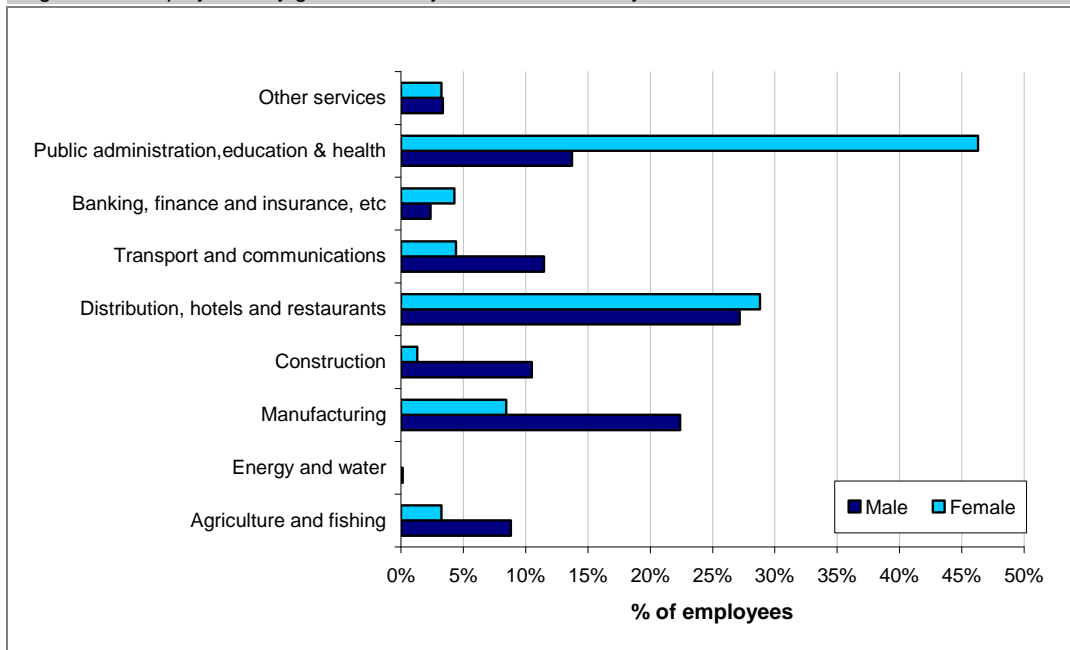
Figure C-5 Sectoral employment in Islay, Jura and Colonsay data zones



Source: Annual Business Inquiry

C.23 There are significant gender differences within the Islay, Jura and Colonsay labour market. Over 40% of female employment is in the public sector compared to less than 15% of the male workforce. Between 25% and 30% of both the male and female workforces are employed in the distribution, hotel and restaurants sector. A further 22% of the male workforce is involved in manufacturing compared to less than 10% of the female workforce.

Figure C-6 Employment by gender in Islay, Jura and Colonsay, 2007



Source: Annual Business Inquiry

### **Economic activity**

- C.24 Although dated, the 2001 Census is the only source of data at the appropriate geographic level which gives details of economic activity. In 2001, the proportion of 16 to 75 year olds who were economically active in Islay (63.8%) and Jura (65.5%) was slightly below the Argyll & Bute average (66.8%). Colonsay had a higher proportion of economically active people.
- C.25 The most significant difference between the island economies of Islay, Jura and Colonsay and Argyll & Bute as a whole and Scotland is the much greater proportion of people who are self-employed on the islands. On Islay and Jura, 15% of the population is self-employed and almost a quarter (23.5%) of the population of Colonsay is self-employed compared to 11.5% self-employment in Argyll & Bute and 6.6% in Scotland as a whole. These high levels of self-employment are an important characteristic of the economies of Islay, Jura and Colonsay.

Table C-9 Economic activity status, 2001 (% of 16 - 75 year olds)					
	Islay	Jura	Colonsay	Argyll & Bute	Scotland
<b>Economically active</b>	<b>63.8</b>	<b>65.5</b>	<b>71.8</b>	<b>66.8</b>	<b>65.0</b>
Employee - FT	29.9	24.7	23.5	37.7	40.3
Employee - PT	12.5	16.9	22.4	11.9	11.1
Self-employed	15.1	15.5	23.5	11.5	6.6
Un-employed	5.5	6.3	2.4	4.0	4.0
FT Student	0.8	2.1	0.0	1.7	3.0
<b>Economically inactive</b>	<b>36.3</b>	<b>34.5</b>	<b>28.3</b>	<b>33.2</b>	<b>35.0</b>
Retired	16.9	13.4	16.5	16.3	13.9
Other <sup>60</sup>	19.4	21.1	11.8	16.9	21.1

Source: GROS 2001 Census

### **Valuing the output of the local economy**

- C.26 Gross Value Added (GVA) comprises the difference between the value of goods and services produced and the cost of raw materials and other inputs used in production; it represents the difference between output and immediate consumption, and is principally made up of compensation paid to employees (largely salaries and other benefits) and profit<sup>61</sup>.
- C.27 There are no published gross value added (GVA) figures for Islay, Jura and Colonsay. Published data is available for the Nuts Level 3 geography which covers Lochaber, Skye & Lochalsh, Argyll & the Islands at a sectoral level. By applying the GVA per employee values from this geography to the number of employees in each sector on Islay and Jura, it is possible to estimate the GVA generated by the two island economies.
- C.28 Table C-10 shows the total GVA estimates broken down by sector for Islay and Jura for 2007. This shows the importance of the whisky industry to the islands. However, given the ownership structure of the distilleries, a significant proportion of this GVA may not stay

<sup>60</sup> Other includes students, those looking after home/family or permanently sick/disabled

<sup>61</sup> National Statistics *Economic Terms*

within the islands. The second largest contributor to total GVA is the sector which includes retail and tourism businesses and again this confirms the importance of attracting visitors to the islands.

Table C-10 GVA and GVA per head estimates, Islay, Jura and Colonsay, 2007

Sector	Estimated GVA per employee (Lochaber, Skye and Lochalsh and Argyll and the Islands)	No. of employees in Islay, Jura and Colonsay	Estimated GVA (£m) In Islay, Jura and Colonsay
Agriculture, forestry and fishing	64,899	87	5.6
Production	55,972	89	5.0
Whisky	195,900 <sup>62</sup>	180	35.3
Construction	45,596	85	3.9
Distribution, transport and communication	25,167	538	13.5
Business services and finance	44,121	50	2.2
Public administration, education, health and other services	20,706	512	10.6
Total GVA	n/a	1,541	46.1

Source: SAC (2004) and <http://www.statistics.gov.uk/pdfdir/gva1208.pdf>

## Education and skills base

- C.29 There are four primary schools on Islay; at Port Charlotte, Port Ellen, Keills near Port Askaig and Bowmore. The secondary school on the island is Islay High School which is located in Bowmore. Table C-11 shows the number of pupils at each of the schools as at September 2007. The primaries at Bowmore and Port Ellen have larger rolls than the more rural primaries at Keills and Port Charlotte. The average ratio of pupils per teacher on the island is 11.9, around one pupil per teacher fewer than the Argyll and Bute average.

Table C-11 Islay school roll, September 2007

	School Roll	No. of teachers (FTE)	Pupil: teacher ratio
Bowmore Primary - Gaelic Unit	10	1.3	7.7
Bowmore Primary	88	5.3	16.6
Keills Primary	32	2.5	12.8
Port Charlotte Primary	41	3.2	12.8
Port Ellen Primary	73	5.4	13.5
Islay High School	227	28	8.1
Argyll and Bute (all schools)	n/a	n/a	12.8
Scotland (all schools)	n/a	n/a	12.9

Source: Scottish Schools Online

<sup>62</sup> Scottish Government (2009) *Profile of Scottish Spirits Sector (including Whisky)*

- C.30 The pattern of school leavers' destinations from Islay is very different to that of Argyll & Bute or Scotland. In 2007/08, two-thirds of pupils from Islay High School went straight into the labour market compared to one-third in Argyll & Bute and just a quarter in Scotland. Higher or further education was the next destination for just 12% and 9% of Islay High School pupils respectively. This is in stark contrast to Argyll & Bute and Scotland where more than half of school leavers went onto higher or further education. This may have implications for the skill level of the local economy with few higher skilled young people entering the local labour market.

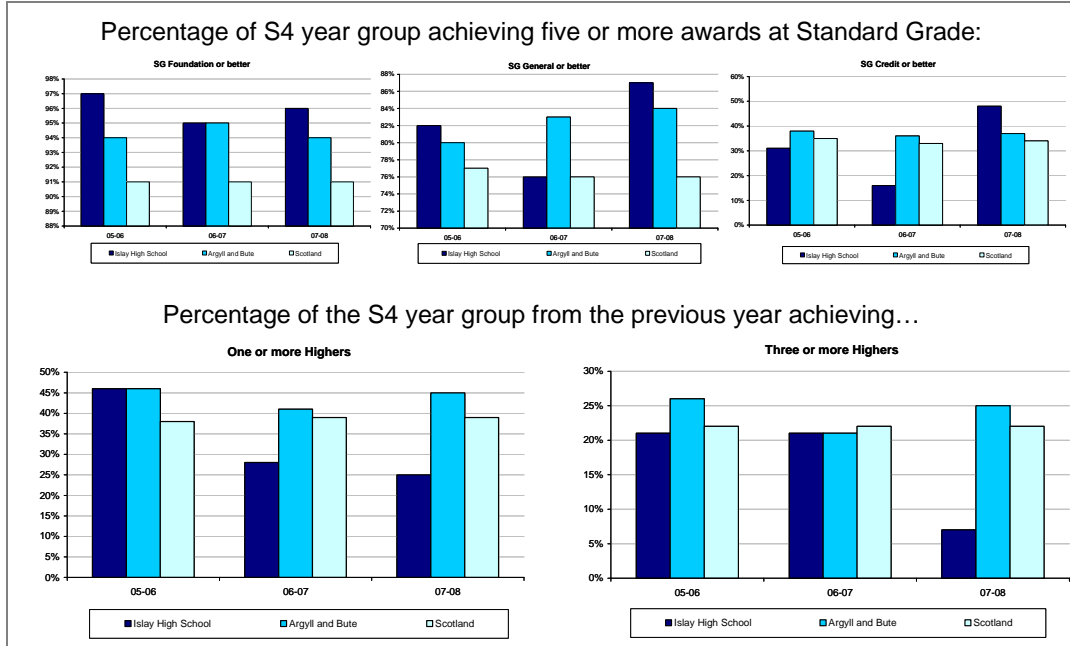
Table C-12 Leaver's destinations 07/08

Leavers Destinations 07/08	Islay High School	Argyll and Bute	Scotland
Total no. of leavers	43	978	58,791
Full-time higher education	12%	32%	31%
Full-time further education	9%	20%	25%
Training	0%	3%	5%
Employment	67%	33%	25%
Unemployed, seeking employment	12%	10%	11%
Unemployed, not seeking employment	0%	1%	2%
Not known	0%	1%	1%

Source: Scottish Schools Online

- C.31 Figure C-7 compared the school level educational attainment for Islay High School compared to the Argyll & Bute and Scottish averages for each year between 05/06, 06/07 and 07/08 at Standard Grade and Higher. In the last two years, the proportion of Senior 5 pupils achieving at least one higher has been falling at Islay High while the national average has broadly remained the same.

Figure C-7 School level educational attainment 07/08



Source: Scottish Schools Online

### Gaelic

- C.32 On Islay, primary and secondary education is provided in Gaelic through the Gaelic medium units at Bowmore Primary and Islay High School. Unfortunately, data for the proportion of secondary pupils that receive Gaelic medium education are unavailable but Table C-13 shows that the proportion of primary school children receiving Gaelic medium education is higher than in Argyll & Bute as a whole.

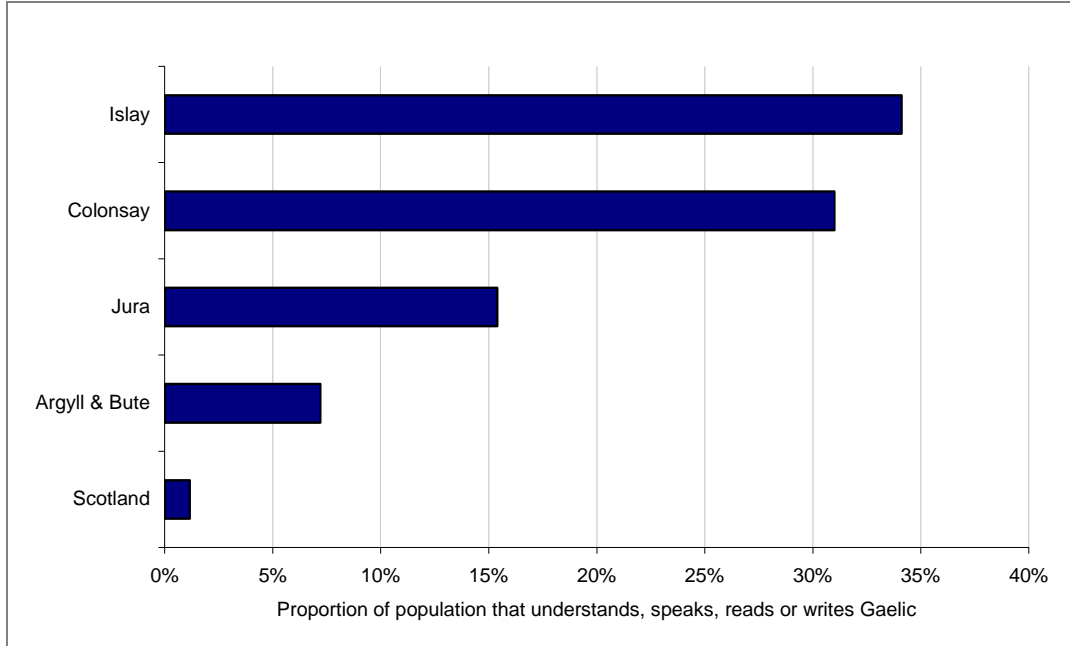
Table C-13 Proportion of primary children receiving Gaelic medium education

Data Zone	2006	2007	2008
Port Ellen	3.0%	1.8%	1.8%
Islay South	14.3%	2.8%	2.5%
Bowmore	3.3%	8.1%	4.7%
Islay West	3.6%	4.9%	4.8%
Islay North, Jura and Colonsay	1.8%	0.0%	0.0%
Argyll and Bute	1.0%	2.2%	2.2%
Scotland	0.5%	0.6%	0.6%

Source: Scottish Neighbourhood Statistics

- C.33 The 2001 Census shows that the use of Gaelic is an important aspect of life on Islay, Colonsay and Jura. On all three of the islands, understanding or use (speaking, reading or writing) of Gaelic is higher among older age groups.

Figure C-8 Proportion of population that understands, speaks, reads or writes Gaelic

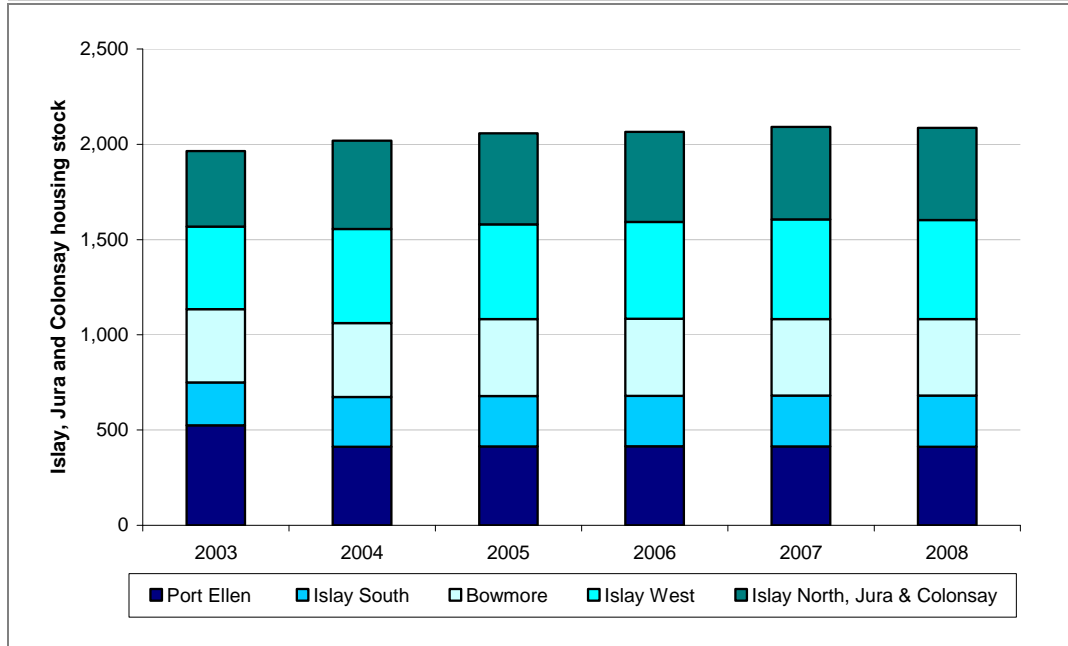


Source: GROS Census 2001

## Housing

- C.34 The Housing stock on Islay, Jura and Colonsay increased to 2,087 in 2008, up by 122 units since 2001. This rate of growth (6.2%) outstripped both Argyll and Bute (4%) and Scotland (5%). Figure C-9 shows the overall increase in the housing stock as well as the change experienced in each of the five data zones. Bowmore housing stock has remained broadly stable while Islay South, West and Islay North, Jura and Colonsay have all seen growth of around 20%. However there has been a dramatic fall in the housing stock of Port Ellen, which has seen a fall of over 20% due to a large fall between 2003 and 2004.
- C.35 While there are few second homes in the more urban areas of Port Ellen and Bowmore (6% and 5% respectively), almost a quarter (24%) of houses in Islay West and Islay North, Jura and Colonsay were reported as second homes in 2008.

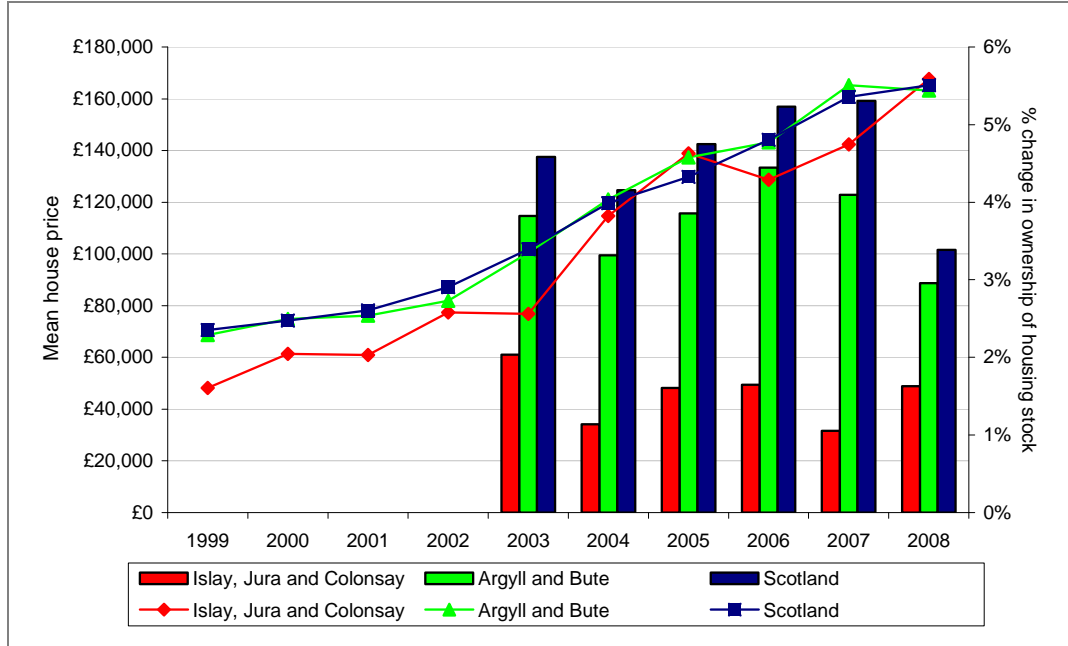
Figure C-9 Change in Islay, Jura and Colonsay housing stock, 2003 to 2008



Source: Scottish Neighbourhood Statistics

- C.36 Islay, Jura and Colonsay have seen significant increases in house prices over the last decade: between 1999 and 2008, house prices grew by almost 250% compared to increases of 138% in Argyll and Bute and 134% in Scotland. This strong house price growth has meant that in 2008, the average house price on Islay, Jura and Colonsay was higher than both the Argyll and Bute and Scottish average.
- C.37 As a proportion of the available housing stock, fewer sales are made on the islands than on the mainland with an annual average of just 1.5% of the Islay, Jura and Colonsay housing stock changing hands in a given year between 2003 and 2008 compared to 3.7% in the Argyll and Bute and 4.6% in Scotland. This relative lack of ‘churn’ of ownership suggests that there may be a limited amount of housing available to cope with an sudden increase in demand associated with any influx of long term workers.

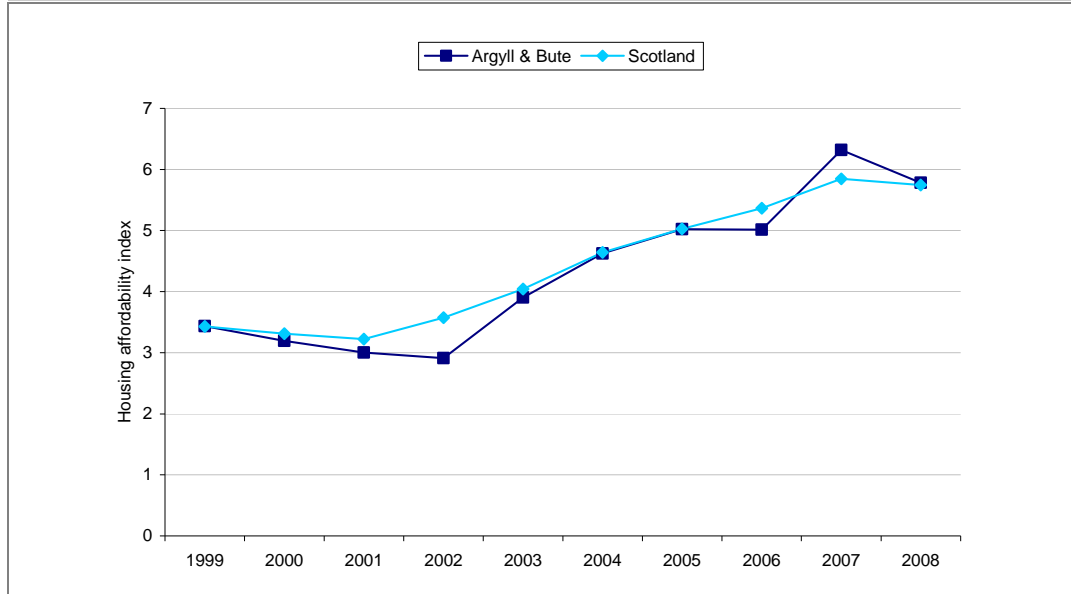
Figure C-10 Mean house prices and change in the ownership of housing stock, 1999 to 2008



Source: Scottish Neighbourhood Statistics

- C.38 Affordability of housing is a key concern for rural areas, and particularly in areas such as Islay, Jura and Colonsay that have experienced above average house price growth. As an indicator of affordability, the average house price can be divided by mean workplace-based annual earnings; this gives a measure of the extent to which people working in local jobs can afford to purchase a property in the same local area. The average house in Argyll and Bute cost 3.0 times mean workplace-based annual earnings in 2002, increasing to almost 6.0 times by 2008.
- C.39 Although we cannot calculate these ratios for Islay, Jura and Colonsay since up to date income is not available at this level, the higher house prices and lower levels of income suggests that housing on the islands is less affordable for local residents than the averages for the Local Authority region and Scotland.

Figure C-11 Housing affordability ratio (average house price divided by mean workplace-based annual earnings) 1999 to 2008

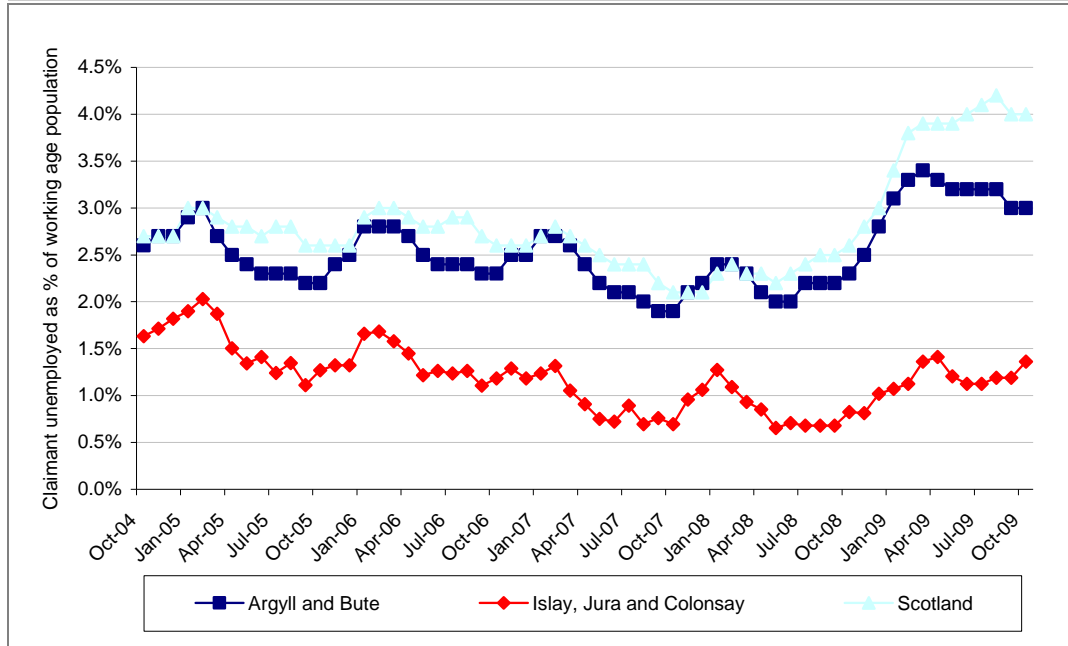


Source: Scottish Neighbourhood Statistics and ASHE survey

## Quality of Life

- C.40 Although quality of life is subjective, there are a number of measures which can be used as a proxy for quality of life. These measures are primarily concerned with (a) income and unemployment and (b) measures of deprivation such as isolation and crime.
- C.41 The islands of Islay, Jura and Colonsay have lower levels of unemployment than Argyll and Bute or Scotland. Figure C-12 shows that the islands have a smaller proportion of the working age population claiming unemployment benefits and that the islands have not experienced the same increase in unemployment as the rest of Scotland. The pattern of unemployment follows is seasonal, with lower unemployment in the summer months (1% average for the months May to September) compared to the rest of the year (1.3%) for the period October 2004 to October 2009. This difference reflects the higher proportion of employment in tourism and primary sectors on the islands.

Figure C-12 Percentage of working age population claiming unemployment benefits, Oct 04 to Oct 09



Source: NOMIS Claimant Count Data

### Income

C.42 While income data is not available at the data zone level needed to identify average earnings for Islay, Jura or Colonsay level, figures from the Annual Survey of Hours and Earnings (ASHE) estimates the median gross weekly income for full time workers in Argyll and Bute was £452.90 in 2009 and £472.20 in Scotland as a whole. Given the high proportion of self-employed people and the reliance on a number of relatively low paying, seasonal sectors such as tourism and primary sectors, it can be inferred that likely income levels on the islands are lower than those in Argyll & Bute as a whole. However, employee costs per employee in the Scottish Spirits Sector are much higher than average so those people working in the distilleries are likely to be well paid.

Table C-14 Average weekly earnings (£), 2002 to 2009

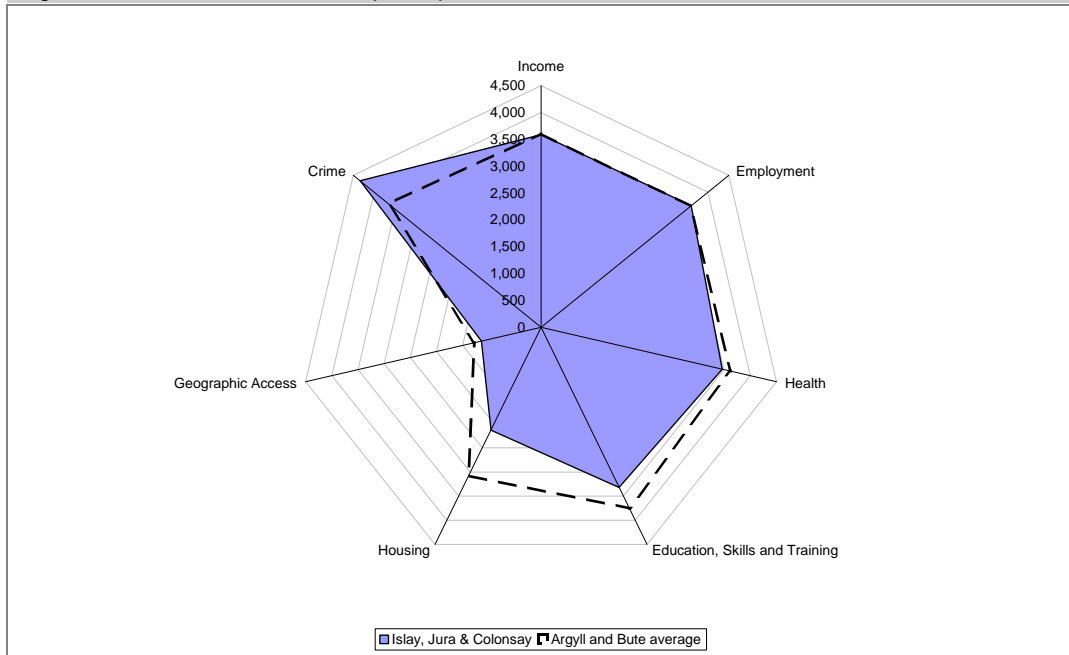
Year	Argyll and Bute	Scotland
2002	349.20	369.30
2003	380.10	381.80
2004	400.10	390.60
2005	396.60	409.80
2006	442.20	427.90
2007	406.10	440.90
2008	434.90	462.90
2009	452.90	472.20

Source: Annual Survey of Hours and Employment

### Scottish Index of Multiple Deprivation

- C.43 The SIMD is the Scottish Government’s official tool for identifying small area concentrations of multiple deprivation across Scotland. The SIMD ranks each of the 6,505 Scottish data zones against each other on seven different measures. The data zones are ranked from one, being the most deprived, to 6,505, being the least deprived.
- C.44 Figure C-13 shows the average ranking for the five data zones for each of the seven elements of the composite ranking as the shaded box with the average score for Argyll and Bute given by the broken line. This shows that Islay, Jura and Colonsay performs better than the Argyll and Bute average in terms of crime and has a very similar level of income deprivation as the Argyll and Bute as a whole. However, income deprivation is measured by the number of people in receipt of Income Support, Job Seekers Allowance, Guaranteed Pension Credits and Child and Working Tax Credits. There may be people who are not claiming these benefits but are self-employed or work in lower income sectors such as agriculture or tourism. Therefore, there may be a greater degree of income deprivation on the islands than the official statistics capture.
- C.45 The SIMD does identify that Islay, Jura and Colonsay are more deprived than the Argyll and Bute average in terms of health and education and much more deprived in terms of the housing stock. It is also clear from Figure C-13 that Islay, Jura and Colonsay face serious issues in terms of access to services which is unsurprising given their geographic isolation. The housing issues have already been discussed while geographic access is discussed in the next chapter.

Figure C-13 Scottish Index of Multiple Deprivation 2009



Source: Scottish Government

## Transport and access to services

### **Transport**

C.46 Islay can be reached by ferry and air.

#### *Ferry Service*

C.47 The majority of car, freight and passenger traffic to and from Islay goes by ferry using the route from Kennacraig on West Loch Tarbert to Port Ellen or Port Askaig which is operated by Caledonian MacBrayne. This route has operated with two ships all year round since 2007 “due to increased whisky production of the island's distilleries and an increase in tourism”<sup>63</sup>. Between 2002 and 2008, there have been an increase of more than 25% in the number of passengers and cars using the ferry service and a 16.5% increase in the number of coaches travelling to the island. The number of commercial vehicles travelling to the island has increased dramatically by 40% in the same period.

Table C-15 Kennacraig - Islay ferry carrying statistics

Year	Passengers	Cars	Coaches	Commercial Vehicles
2002	125,989	41,555	158	6,958
2003	139,859	45,859	178	7,334
2004	148,047	47,438	192	7,425
2005	150,890	48,919	169	8,151
2006	152,526	49,332	255	5,809
2007	157,408	51,377	201	9,340
2008	159,343	52,201	184	9,797

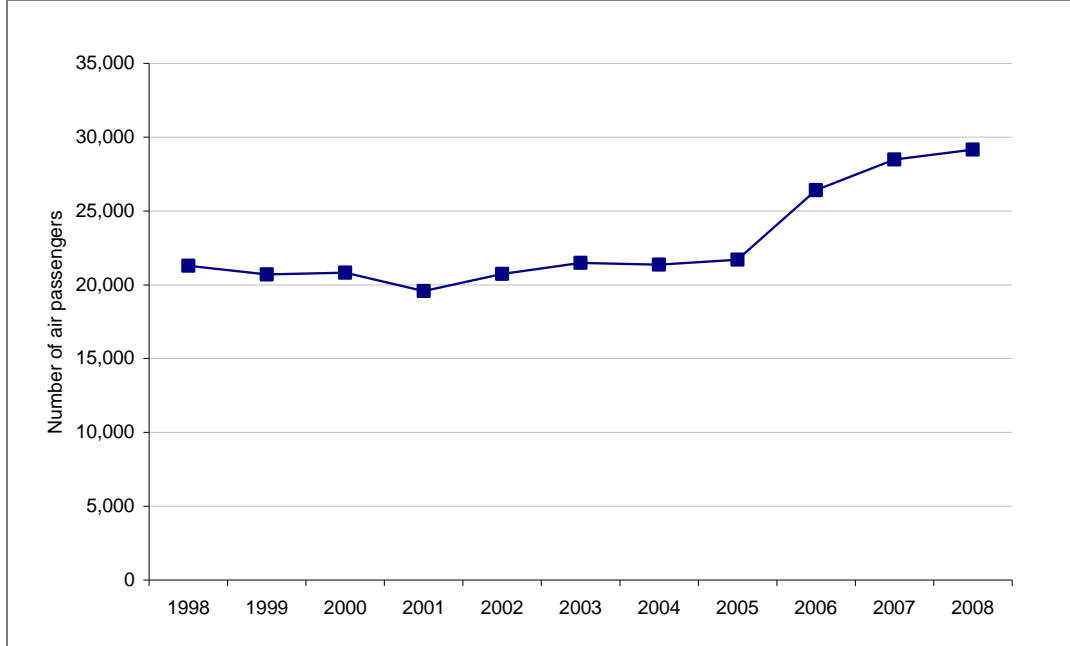
Source: <http://www.calmac.co.uk/carryingstatistics.html>

#### *Air services*

C.48 Flights run by Loganair (Flybe) connect Islay with Glasgow International. There are usually two departures daily and the journey takes forty five minutes. Passenger numbers have grown by 37% between 1998 and 2008 and stood at 29,146 in 2008. However, there is no data on the breakdown of these passengers between local residents and other visitors.

<sup>63</sup> Isle of Islay (2009) *The Islay Ferry*

Figure C-14 Islay airport passenger numbers 1998 to 2008



Source:

*Internal transport*

- C.49 There is a regular bus service which connects the main villages on Islay. Table C-16 shows the average travel times by public transport to reach a number of services.

Table C-16 Public transport drive time to...2009 (minutes)

	GP	Post Office
Port Ellen	14.0	7.5
Islay South	39.8	43.1
Bowmore	4.6	2.3
Islay West	19.1	8.7
Islay North, Jura and Colonsay	37.5	10.3
Argyll and Bute	18.8	13.0
Scotland	11.3	9.4

Source: SIMD 2009

- C.50 The availability of public transport can help to explain why Islay has lower number of cars per household than the Argyll and Bute average. Similarly, the much higher level of car ownership among Jura and Colonsay reflects the lack of alternatives.

Table C-17 Access to cars/vehicles, 2001

Region	Number of cars per household	Proportion of households with access to...number of cars/vans			
		0	1	2	3+
Islay	0.95	30%	49%	18%	2%
Jura	1.12	19%	58%	19%	0%
Colonsay	1.26	16%	47%	33%	4%
Argyll & Bute	1.03	28%	47%	21%	4%
Scotland	0.93	34%	43%	19%	4%

Source: GROS Census 2001

## Annex D: Socio-economic baseline for Kintyre

### Geographical Focus

- D.1 The area of interest for this baseline report is the area covered by the census wards of Campbeltown Central, South Kintyre, North and West Kintyre and East Central Kintyre. However, using these wards to source baseline statistics means relying on the 2001 census. Although the census does provide a lot of information for Kintyre this data is now quite dated. Therefore most of this baseline report describes Kintyre in terms of the 11 data zones which make up the area. These data zones and the areas they each cover are shown in Table D-1. The descriptions provide a ‘best fit’ as data zones are not given official descriptive names.

Table D-1 Kintyre data zones and description

Data Zone	Description
S01000711	Kintyre South
S01000712	Campbeltown (South East)
S01000713	Campbeltown (South West)
S01000714	West of Campbeltown and near Machrihanish
S01000715	Campbeltown (West)
S01000716	Campbeltown (Central)
S01000717	Campbeltown (North)
S01000718	Campbeltown (North West)
S01000719	North of Campbeltown
S01000720	Kintyre East
S01000721	Kintyre West

Source: SQW Energy

- D.2 The use of data zones represents both an opportunity for both increased analysis and potential risk of loss of accuracy. Firstly, and most importantly, the use of 11 different data zones allows the baseline to explore differences between areas within Kintyre and not just compare the sub-region with Argyll and Bute and Scotland. This is important given the different characteristics of, for example, the more rural areas compared to the essentially urban Campbeltown.

### Kintyre

- D.3 The Kintyre peninsula is located on the West coast of Scotland and is about 40 miles long , connected to the rest of the mainland by a narrow strip of land at West Tarbert.
- D.4 The total population of the area of interest for this report was 8,169 in 2008. Just over half of this population is located in the largest settlement in the area, Campbeltown with the rest of the population spread throughout the rest of Kintyre.

D.5 Kintyre is classified by Highlands and Islands Enterprise (HIE) as a fragile area due to the relatively weak economy and past population decline. Campbeltown has been defined as an area of employment deficit by HIE. For Kintyre, agriculture, crofting and fishing were previously the mainstay of the economy, but now the most important sectors of the economy in terms of employment are the public sector, retail and tourism.


### ***Approach***

D.6 The focus of this baseline report is to explore the characteristics of Kintyre's economies and communities and identify significant differences between the islands and the rest of the Local Authority in which they sit, Argyll & Bute and the rest of Scotland. The working paper will also identify trends across time, seeing how the communities have changed in recent years

D.7 The rest of this Annex outlines the baseline analysis, structured as follows:

- Section 2: population
- Section 3: industrial and employment structure
- Section 4: education and skills
- Section 5: housing
- Section 6: quality of life
- Section 7: transport and access to services.

<b>Kintyre</b>			
Kintyre, as defined by this study, includes the following Scottish Government data zones:			
S01000711	S01000712	S01000713	Total population 2008
S01000714	S01000715	S01000716	Working age population - 2008
S01000717	S01000718	S01000719	Dependency ratio
S01000720	S01000721		% change 2001-2008
			% change in WAP 2001-2008
			% change in ratio 2001 -2008
			- 1.6%
			-3.3 %
			+ 3.8%



<b>Headline economic conditions</b>		<b>Labour market and skills conditions</b>		<b>Social and physical conditions</b>		
Work-based employment in 2007	3,072	Number of JSA claimants in October 09	176	Housing stock 2008	4,313	
Change 2003 - 2007	+ 674	+ 28%	Change Oct. 04-Oct. 09	- 2	- 1.1%	
Change 2003-2008	+ 24	+ 0.6%	Average SIMD Overall indicator	04 Rank	2368	
Business data units	368	Average SIMD Skills indicator	06 Rank	3752	06 Rank	2807
Change 2003 - 2007	+ 21		09 Rank	3411	09 Rank	2723

Industrial structure of employment in 2007

Unemployment 2004-2009

SIMD 2009 Indicator Rankings

## Population

### Resident Population

- D.8 The 2008 mid-year population estimate for Kintyre was 8,169, with just over half (52%) of the population of living in Campbeltown<sup>64</sup> and the rest living throughout South Kintyre.

Table D-2 Kintyre data zone population, 2001 to 2008

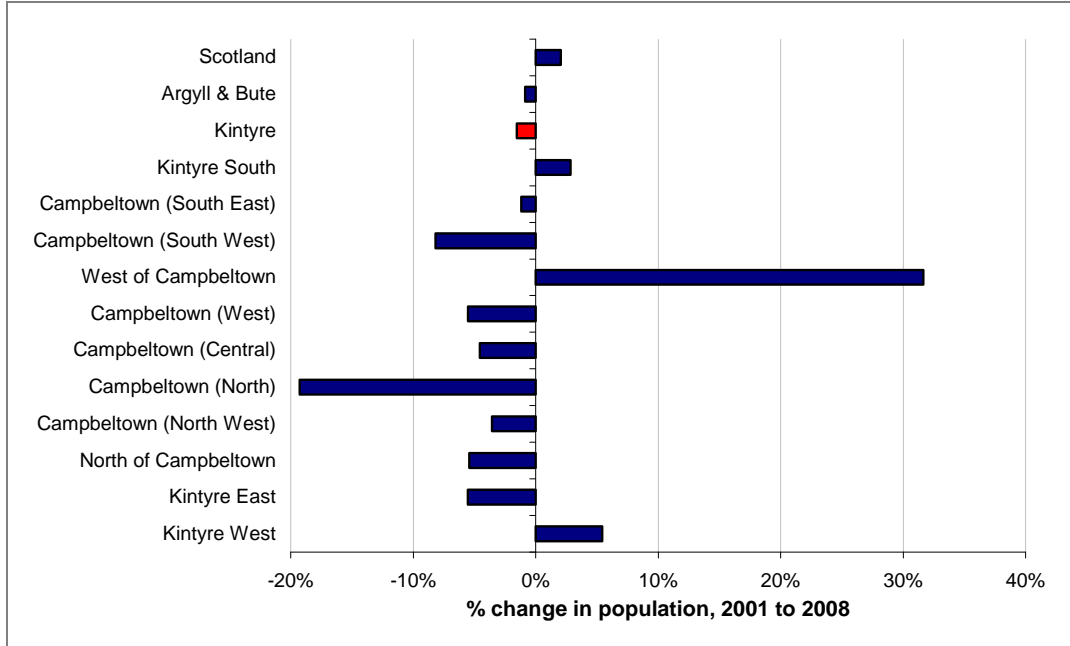
Data Zone	2001	2002	2003	2004	2005	2006	2007	2008
Kintyre South	631	651	650	651	676	675	650	649
Campbeltown (South East)	594	591	588	599	603	604	618	587
Campbeltown (South West)	831	821	811	823	806	804	791	763
West of Campbeltown and near Machrihanish	834	863	904	944	983	1016	1053	1098
Campbeltown (West)	670	669	669	665	673	679	666	633
Campbeltown (Central)	615	585	596	641	623	640	623	587
Campbeltown (North)	981	961	893	886	852	832	799	792
Campbeltown (North West)	951	934	972	948	961	918	923	917
North of Campbeltown	663	637	661	670	652	631	637	627
Kintyre East	864	858	857	844	837	832	855	816
Kintyre West	664	678	669	731	712	733	713	700

Source: Scottish Neighbourhood Statistics

- D.9 Table D-2 compares the population change of each of the data zones with Argyll and Bute and Scotland across the period 2001 and 2008. Kintyre's population fell by 129 (1.6%) since 2001, compared to a 0.9% fall in the overall Argyll & Bute population and a 2.1% in Scotland's population.
- D.10 Within Kintyre, there is a contrasting story of population change. The population of Campbeltown has continued its long term decline with a fall of 7.8% between 2001 and 2008. Within the town, the data zone covering Campbeltown North has seen an even greater population fall of almost 20%. Across the same period, the population of the rest of Kintyre has grown strongly by 6.4%. S01000714 (West of Campbeltown and near Machrihanish) in particular, has seen very strong population growth of over 30%.

<sup>64</sup> Campbeltown includes data zones S01000712, S01000713, S01000715, S01000716, S01000717 and S01000718

Figure D-1 Population change, 2001 to 2008

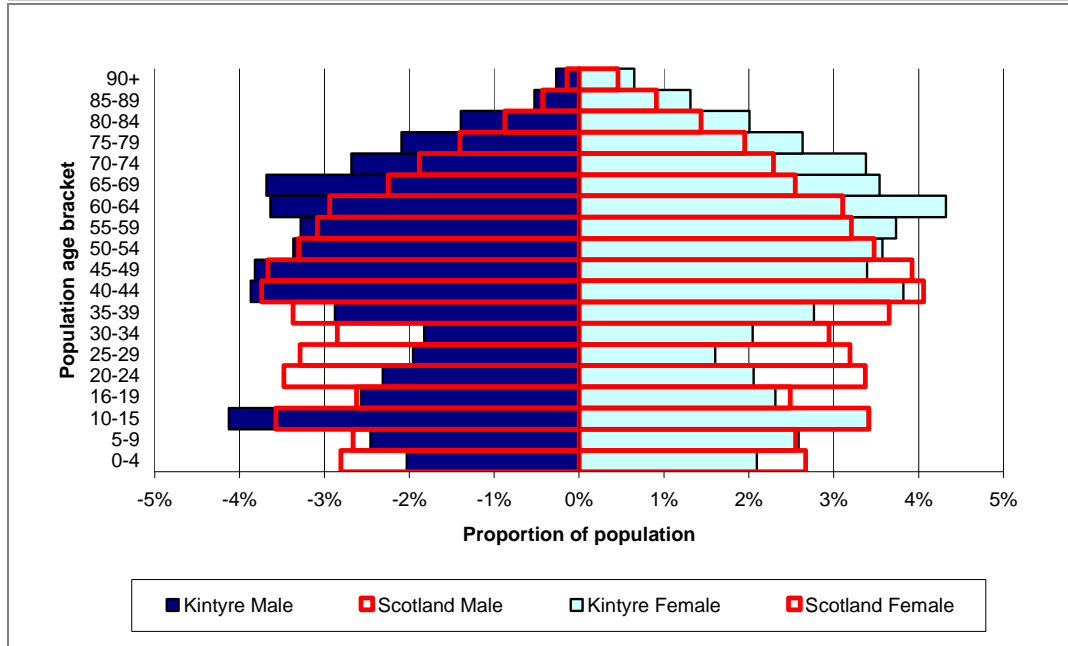


Source: Scottish Neighbourhood Statistics

### Population Structure

- D.11 Figure D-2 shows the 2008 population structure for Kintyre and for Scotland. There are significant differences between the two: the proportion of the population made up of both males and females aged between 16 and 39 is smaller in Kintyre than in Scotland as a whole. There are also proportionately fewer children in the Kintyre population compared to Scotland.
- D.12 The second key difference is that every age bracket beyond 50 years old for both the male and female population has a greater proportional representation within the Kintyre population than the Scottish population. This means that Kintyre has a much older population than that of Scotland (or Argyll and Bute as a whole).

Figure D-2 Population structure, 2008



Source: Scottish Neighbourhood Statistics

D.13 Table D-3 shows that Kintyre’s top heavy population means that the dependency ratio (i.e. the ratio of children and people of pension age to the working age population) is 0.8 to 1, much higher than the Scottish ratio of 0.6 to 1. Within Kintyre, there is wide variation in the dependency ratio. In the more rural areas outwith Campbeltown, there are higher proportions of children and pensioners, which is likely to put increasing pressure on limited rural services.

Table D-3 Dependency Ratios, 2008

	Children	Working age	Pensionable age	Dependency Ratio
Kintyre South	16.8%	57.6%	25.6%	0.74
Campbeltown (South East)	17.2%	49.1%	33.7%	1.04
Campbeltown (South West)	18.2%	57.3%	24.5%	0.75
West of Campbeltown and near Machrihanish	22.4%	57.2%	20.4%	0.75
Campbeltown (West)	13.4%	48.8%	37.8%	1.05
Campbeltown (Central)	11.1%	62.5%	26.4%	0.60
Campbeltown (North)	16.4%	57.6%	26.0%	0.74
Campbeltown (North West)	18.0%	57.5%	24.5%	0.74
North of Campbeltown	12.4%	49.4%	38.1%	1.02
Kintyre East	14.0%	49.0%	37.0%	1.04
Kintyre West	18.9%	54.6%	26.6%	0.83
Campbeltown Average	16.0%	55.7%	28.3%	0.79
Rest of Kintyre Average	17.5%	53.8%	28.7%	0.86
Kintyre Average	16.7%	54.8%	28.5%	0.82
Argyll & Bute	16.5%	58.8%	24.7%	0.70
Scotland	17.7%	62.7%	19.7%	0.60

Source: Scottish Neighbourhood Statistics

## Industry and employment

- D.14 This section gives an overview of the size and of the business base in Kintyre and the key sectors in terms of employment.

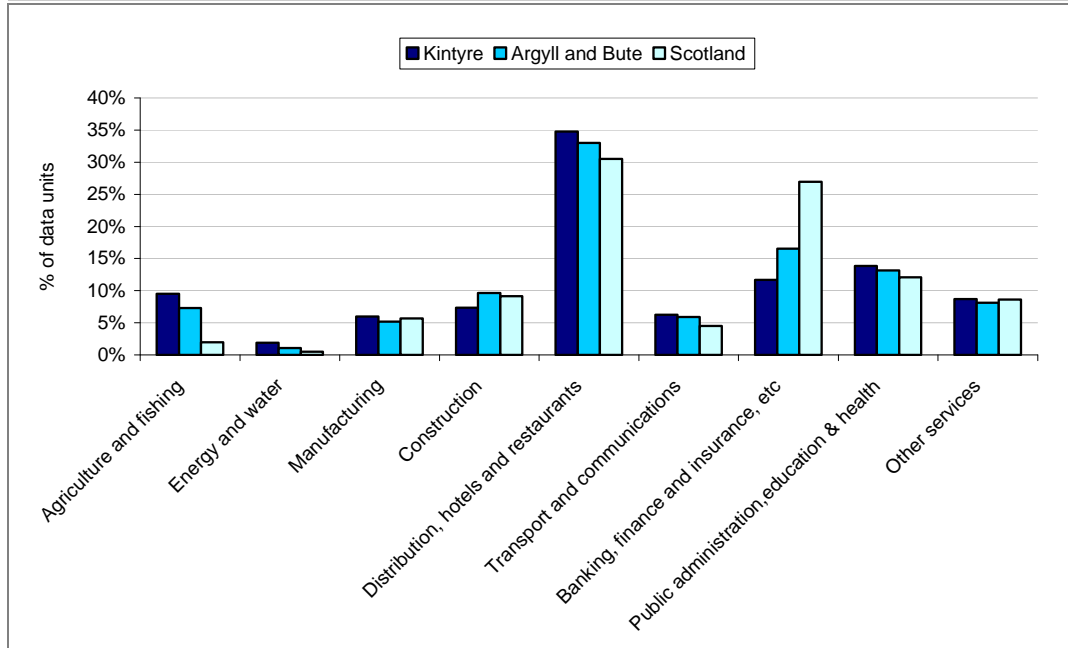
### **Industry**

- D.15 In 2007, there were a total of 368 data units<sup>65</sup> across Kintyre with 59% of these businesses located in Campbeltown. In absolute terms, the sector with the largest number of businesses was the distribution, hotels and restaurants sector with 128 data units. This reflects the importance of retail and tourism to the region. The next largest contributing sectors to the business base were the public administration, education and health (51 units) followed by banking, finance and insurance etc (43 units). Other significant elements of the business base include agriculture and fishing (35 units).
- D.16 Figure D-3 shows the proportional breakdown of the business base for Kintyre compared to Argyll & Bute and Scotland. The business base of Kintyre is broadly comparable to that of Argyll and Bute but is over-represented in energy and water and agriculture and fishing businesses. In addition, there are fewer construction and banking, finance and insurance businesses as a proportion of the overall business stock compared to Argyll and Bute.
- D.17 Compared to Scotland, agriculture and fishing has around five times and the energy and water sector has four times the proportional representation in Kintyre. All other sectors have a broadly similar share of the total business base in Kintyre as in Scotland except for the banking, finance and insurance sector which has half the share of Kintyre's business stock compared to Scotland's.

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<sup>65</sup> Data (or local) units do not readily correspond to the commonly used terms firms, companies or businesses by which employers are sometimes identified. They are roughly equivalent to workplaces but because of the way the data are collected two or more units can be present in the same workplace. For example, a bank may have several branches and offices in a city, each one of these would be counted as a separate data unit.

Figure D-3 Sectoral breakdown of business base in Kintyre, 2007



Source: Annual Business Inquiry

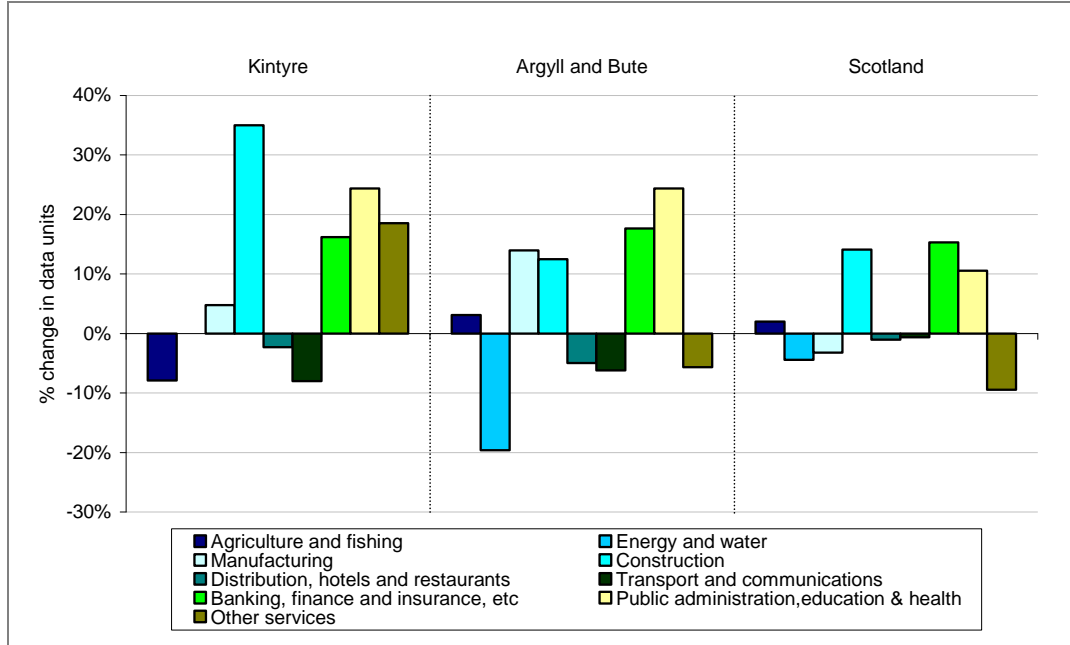
D.18 It is also possible to identify the sectors with the greatest share of the local business base at a greater level of detail by using standard industrial classification (SIC) codes. The top ten sectors in terms of the number of business units in South Kintyre are, in descending order:

- retail and wholesale trade
- hotels and restaurants
- construction
- fishing
- other business activities
- health and social work
- public administration and defence; compulsory social security
- education
- recreational, cultural and sporting activities.

D.19 There have been a number of significant changes in the business base of Kintyre between 2003 and 2007. The overall number of data units fell by nine (3.7%) from 245 to 236. Across the same period, the number of data units in Argyll and Bute increased by 4.3% and the overall number of data units in Scotland increased by 4.7%. Figure D-4 shows that the number of data units involved in the energy and water sector fell by 80% while the transport and communication sector also fared badly, with a 30% reduction in the number of business units. Both manufacturing and the public sector saw growth of 40% across the same period.

D.20 The pattern of changes seen in the Kintyre business base between 2003 and 2007 broadly reflects the changes seen in Argyll and Bute and Scotland across the nine broad sectors shown in Figure D-4. However, the scale of change is greater given the smaller business base in Kintyre. In terms of absolute change there were an additional 21 data units in 2007 compared to 2003. The key contributors to this growth in the business base were the net addition of 10 public sector data units and 7 construction businesses. In terms of geographic change, there was an increase of 13 data units in S0100014 and a net increase of 7 units in the five data zones which make up Campbeltown.

Figure D-4 Changes in business stock by industrial group, 2003 - 2007



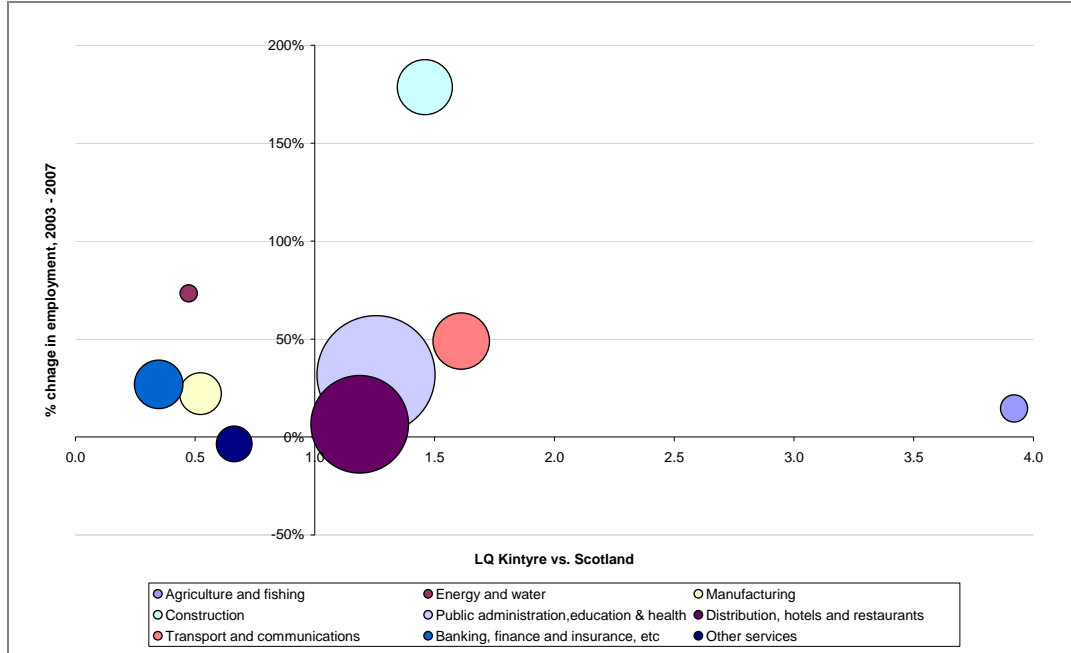
Source: Annual Business Inquiry

### Employment

D.21 Campbeltown is the key location of employment with 2,174 jobs located in the town in 2007 and a further 1,275 in the rest of South Kintyre. Employment has been analysed in a number of different ways, as shown in Figure D-5. This figure sheds light on three important aspects of the labour market in south Kintyre:

- the comparative importance of each sector in terms of employment relative to Scotland
- the change in employment by sector between 2003 and 2007
- the absolute size of employment in each sector.

Figure D-5 Broad sectoral structure and employment change 2003 - 2007, Kintyre



Source: Annual Business Inquiry

D.22 The vertical axis provides location quotient (LQ) scores for Kintyre relative to Scotland as a whole. A location quotient shows how represented an individual sector is within the economy of Kintyre. A score of 1 would mean that representation locally is equal to the representation of that sector at a Scottish level. Therefore the sectors with scores above 1 (those on the right hand side of the vertical axis) are over-represented in the Kintyre economy. These sectors are (in descending order of over-representation):

- Agriculture and fishing - accounts for four times as many jobs in Kintyre as in Scotland as a whole. Over two thirds of this employment is in the fishing industry which focuses mainly on shellfish. Kintyre East in particular relies on the fishing industry as a source of employment.
- Transport and communication - with around 1.6 times as many jobs in Kintyre as in Scotland as a whole, transport and communication is an important source of employment. The geography of the peninsula and the lack of rail transport are reflected by the importance of freight transport (129 jobs) and scheduled road passenger transport (79 jobs). As well as employment, this sector provides an essential link to the rest of Scotland.
- Construction - accounts for a 1.5 times larger share of employment in Kintyre as in Scotland as a whole.
- Public administration, education & health - the public sector is by far the largest employer in Kintyre but this dominance is also true for Argyll and Bute and for Scotland. However, the public sector proportionately supports 1.3 times as many jobs in Kintyre as in Scotland as a whole.

- Distribution, hotels and restaurants - although the tourism industry is a key employer in Kintyre, it is not substantially over-represented compared to the rest of Scotland.

D.23 Those sectors to the left hand side are under-represented in the Kintyre economy. These include (in descending order of under-representation):

- Banking, finance and insurance, etc - the importance of the financial and business sector to Scotland as a whole is reflected in the fact that this sector support almost 20% of Scottish employment and less than 7% of employment in Kintyre.
- Energy and water - this sector has half the number of employees in South Kintyre as in Scotland as a proportion of all workers.
- Manufacturing - although the location quotient for manufacturing was also 0.5 in 2003, there have been a number of high profile closures in recent years including the Jaeger clothing factory. The Welcon takeover of the Vestas wind turbine factory in 2009 is important in terms of safeguarding jobs in the region and this manufacturing facility may be of direct relevance to the proposed offshore development.

D.24 The size of the bubble in Figure D-5 reflects the size of each sector in terms of its share of employment in South Kintyre in 2007. The public sector is by far the largest source of employment, accounting for almost two in five jobs in Kintyre. The second largest source of employment is the tourist industry with over 25% of employment in the distribution, hotels and restaurant sector. Other significant sources of employment include the transport, communication and construction sectors. Table D-4 shows some of the key sectors of employment in Kintyre.

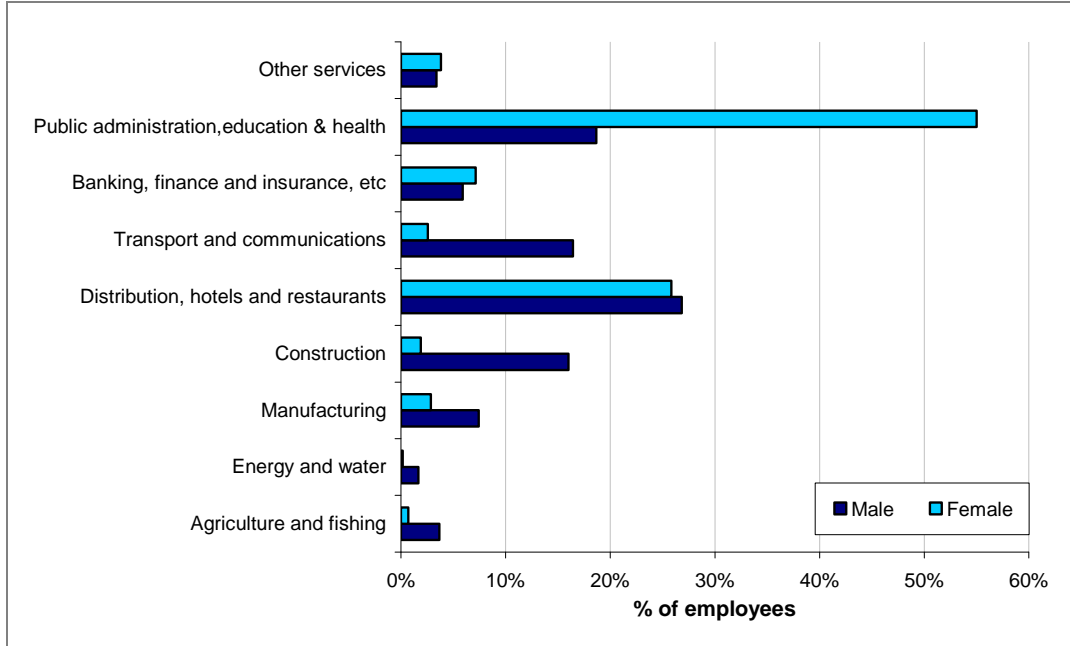
Table D-4 Key employment sectors, 2007

2 digit SIC sector	Data units	Employees
85 : Health and social work	19	458
75 : Public administration and defence; compulsory social security	17	403
52 : Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	51	326
80 : Education	15	319
55 : Hotels and restaurants	40	297
45 : Construction	27	259
60 : Land transport; transport via pipelines	10	210
51 : Wholesale trade and commission trade, except of motor vehicles and motorcycles	25	118
15 : Manufacturing of food and beverages	5	91

Source: Annual Business Inquiry

D.25 There are significant gender differences in the Kintyre labour market. For example, the public sector dominates female employment with over half of all female jobs in this sector compared to less than 20% of male employment. Male employment is more evenly spread across the economy.

Figure D-6 Employment by gender in Kintyre, 2007



Source: Annual Business Inquiry

### **Economic activity**

- D.26 Although the information which it contains is now dated, the 2001 Census is the only source which gives details of economic activity at the fine grained geographic level needed. In 2001, a lower proportion of adults in any form of employment (FT, PT or self-employed) in Kintyre than either Argyll and Bute or Scotland. Across the four Census wards that make up the area of interest for this study, the average proportion of adults in full time employment was 29.9% compared to 37.7% and 40.3% in Argyll and Bute and Scotland as a whole. This much lower level of full-time employment is partially offset by the higher number of self-employed in Kintyre compared to Scotland as a whole. This is particularly true of the more rural areas of Kintyre which have more than twice the rate of self-employment as the Scottish average. However, in Campbeltown there are lower rates of full time employment and self-employment.
- D.27 Unemployment is higher than the Argyll and Bute average for all four of the census wards but is highest in Campbeltown Central at 7.4% of the adult population. There is also a higher proportion of retired people in Kintyre than Argyll & Bute or Scotland.

Table D-5 Economic activity status, 2001 (% of 16 - 75 year olds)

	North and West Kintyre	Campbeltown Central	East Central Kintyre	South Kintyre	Argyll & Bute	Scotland
Economically active	59.9	61.2	59.9	67.1	66.8	65.0
Employee - FT	26.3	34.7	26.3	32.2	37.7	40.3
Employee - PT	12.1	11.7	12.1	13.4	11.9	11.1
Self-employed	14.1	6.2	14.1	15.5	11.5	6.6
Un-employed	6.2	7.4	6.2	4.8	4.0	4.0
FT Student	1.2	1.2	1.2	1.2	1.7	3.0
Economically inactive	32.5	38.8	40.1	33.0	33.2	35.0
Retired	16.5	20.0	18.1	16.9	16.3	13.9
Other	16.0	18.8	22.0	16.1	16.9	21.1

Source: GROS Census 2001

### Valuing the output of the local economy

- D.28 Gross Value Added (GVA) comprises the difference between the value of goods and services produced and the cost of raw materials and other inputs used in production; it represents the difference between output and immediate consumption, and is principally made up of compensation paid to employees (largely salaries and other benefits) and profit<sup>66</sup>.
- D.29 There are no published gross value added (GVA) figures for the Kintyre peninsula. However, published data is available for the Nuts Level 3 area which covers Lochaber, Skye & Lochalsh, Argyll & the Islands at a sectoral level. By applying the GVA per employee values from this geography to the number of employees in each sector in Kintyre, it is possible to estimate the GVA generated by the two island economies.
- D.30 Table D-6 shows the total GVA estimates broken down by sector for Kintyre for 2007. This shows the importance of the sector already identified as key to the area's economy: the public sector, retail and tourism.

<sup>66</sup> See [http://www.statistics.gov.uk/about/glossary/economic\\_terms.asp](http://www.statistics.gov.uk/about/glossary/economic_terms.asp)

Table D-6 GVA and GVA per head estimates, Islay, Jura and Colonsay, 2007

Sector	Estimated GVA per employee (Lochaber, Skye and Lochalsh and Argyll and the Islands)	No. of employees in Kintyre	Estimated GVA for Kintyre (£m)
Agriculture, forestry and fishing	64,899	66	4.3
Production	55,972	170	9.5
Construction	45,596	247	11.3
Distribution, transport and communication	25,167	944	23.8
Business services and finance	44,121	187	8.3
Public administration, education, health and other services	20,706	1,190	24.6
Total GVA	n/a	2,804	81.7

Source: SAC (2004) and <http://www.statistics.gov.uk/pdfdir/gva1208.pdf>

## Education and skills base

- D.31 Kintyre is served by six primary schools, three in Campbeltown and three throughout the rest of Kintyre and one secondary school, Campbeltown Grammar School. Table D-7 shows the number of pupils and teachers at each of the schools in 2007/08.
- D.32 The two main primary schools in Campbeltown (Dalintober covers the North of the town and Castlehill covers the area to the South and West) both have sizable school rolls, with 170 and 257 pupils respectively in 2007/08. In terms of the number of pupils per teacher, both of these primaries are well above the Argyll and Bute or Scottish average which suggests that capacity for further growth is limited without increasing the number of teachers. For the smaller, rural primaries of Carradale, Drumlemble and Southend there are much smaller school rolls of between 30 and 40. The danger for these schools is not the high number of pupils per teacher but the small rolls themselves. The 2008 South Kintyre Community Profile recognises this by stating that “in order to remain open there needs to be an injection of new families to the area”.

Table D-7 Kintyre school roll, 2007/08

School	School Roll	No. of Teachers (FTE)	Pupil: teacher ratio
Campbeltown Grammar	571	46	12.4
St Kieran's Primary	12	2	6.0
Dalintober Primary	170	10.2	16.7
Castlehill Primary	257	12.7	20.2
Carradale Primary	33	3.2	10.3
Drumlemble Primary	38	3.1	12.3
Southend Primary	38	2.8	13.6
Argyll & Bute	n/a	n/a	12.8
Scotland	n/a	n/a	12.9

Source: Scottish Schools Online

- D.33 The pattern of school leavers from Campbeltown Grammar School is broadly similar to that of the rest of Argyll and Bute and Scotland. In 2007/08, 30% of pupils progressed into higher education and a further 17% went on to further education. The proportion of pupils progressing into further education is lower than the Argyll and Bute or Scottish average. A further third of leavers went straight into the labour market. However, this is much lower than the 42% which entered employment in the 2004/05 year group.
- D.34 Given the relatively small number of school leavers from Campbeltown in a given year, these figures should be treated with caution.

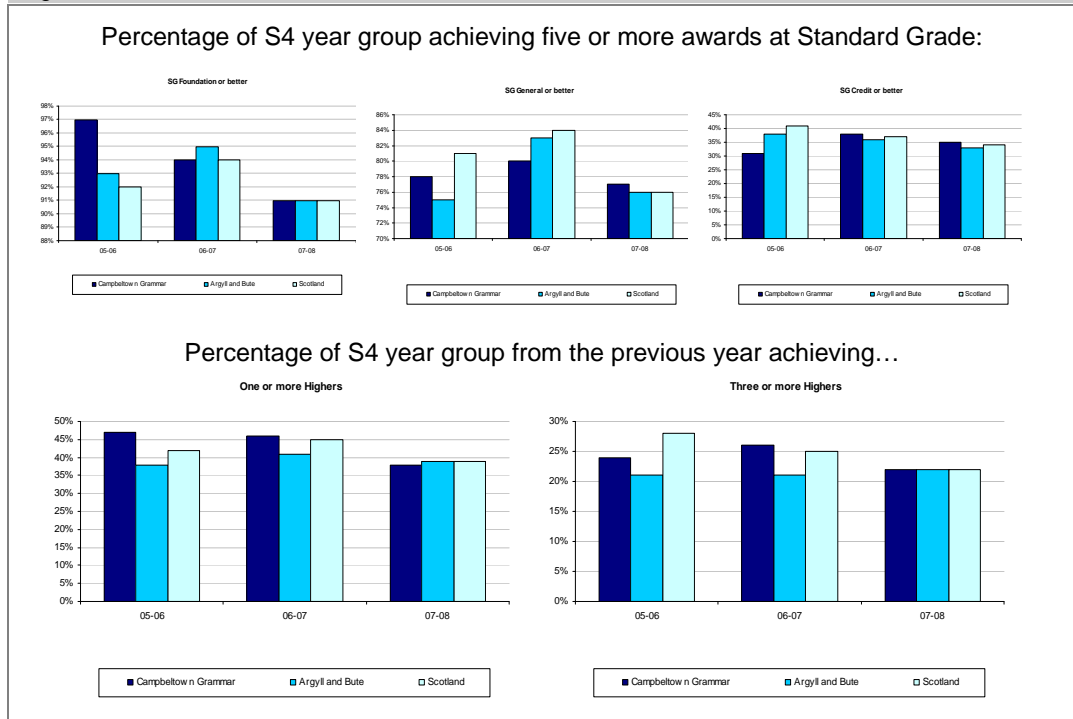
Table D-8 Leaver's destination's 07/08

Leavers Destinations 07/08	Campbeltown Grammar	Argyll and Bute	Scotland
Full-time higher education	30%	32%	31%
Full-time further education	17%	20%	25%
Training	4%	3%	5%
Employment	33%	33%	25%
Unemployed, seeking employment	13%	10%	11%
Unemployed, not seeking employment	0%	1%	2%
Not known	3%	1%	1%

Source: Scottish Schools online

- D.35 Figure D-7 compares school level education attainment for Campbeltown grammar with the Argyll and Bute and Scottish averages at Standard Grade and Higher for the years 2005/06, 2006/07 and 2007/08. Using a three year average, Campbeltown Grammar pupil's attainment is very similar to the national average.

Figure D-7 School level educational attainment, 05/06 - 07/08

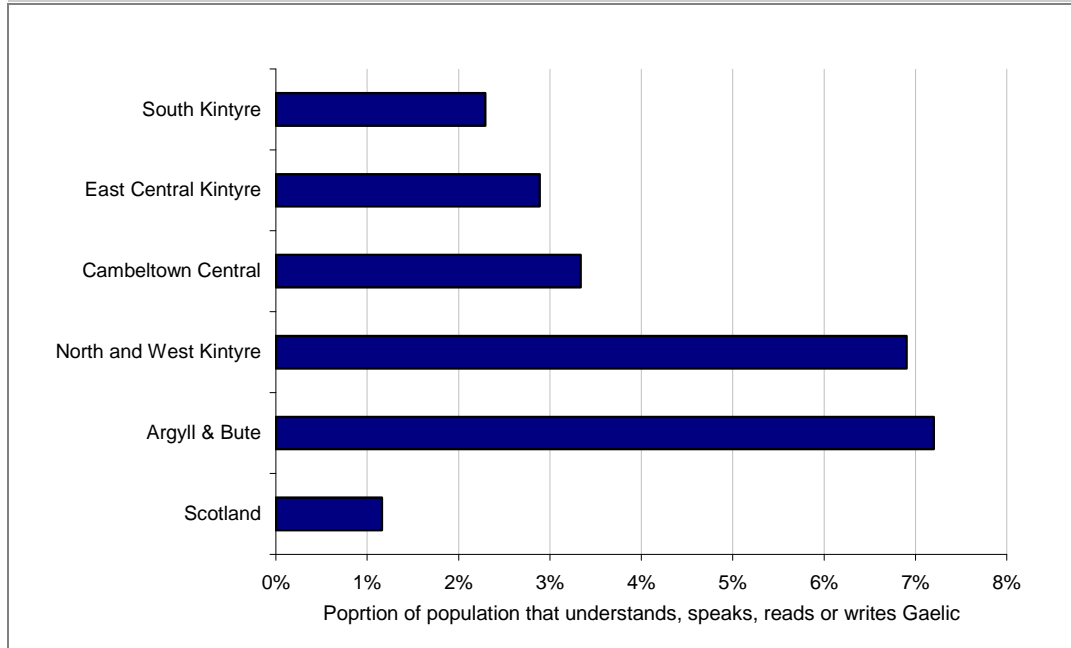


Source: Scottish Schools online

## Gaelic

- D.36 There is no Gaelic medium education provided in Kintyre. This is reflected in the low levels of people who understand, speak, read or write Gaelic compared to Argyll and Bute as a whole. The exception to this is the more rural Census ward of North and West Kintyre where almost 7% of the population understand or use Gaelic.

Figure D-8 Proportion of population that understands, speaks, reads or writes Gaelic

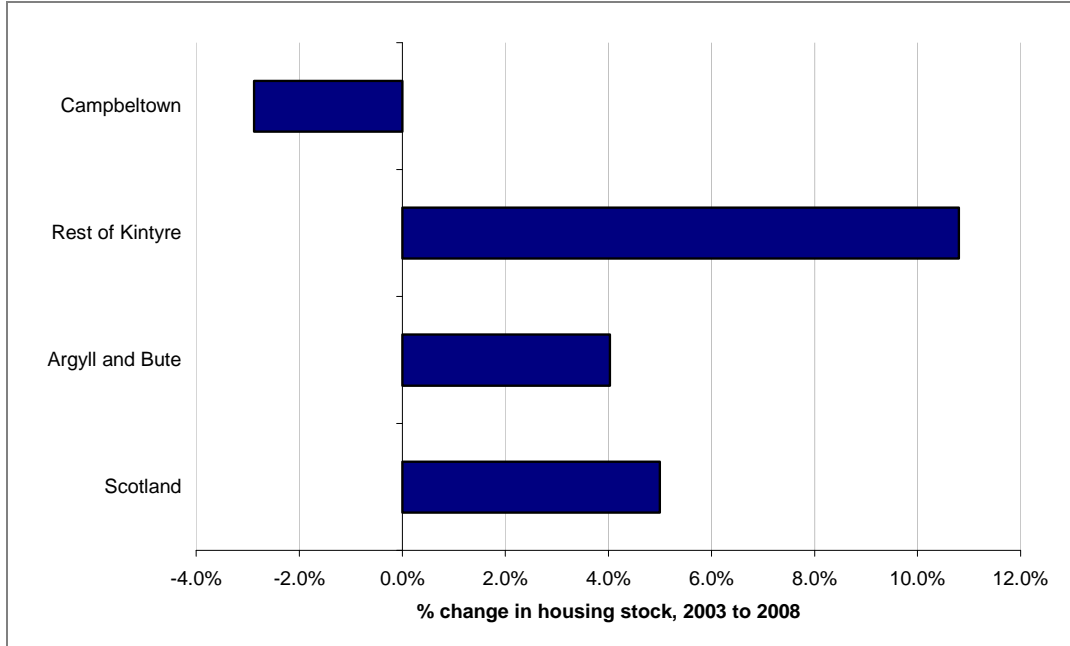


Source: GROS Census 2001

## Housing

- D.37 Kintyre's housing stock grew by 24 units between 2003 and 2008 to stand at 4,313 in 2008, an increase of just 0.6% compared to growth of 4% and 5% in Argyll and Bute and Scotland respectively. However, within Kintyre, there were significant differences with the housing stock in Cambeltown declining.

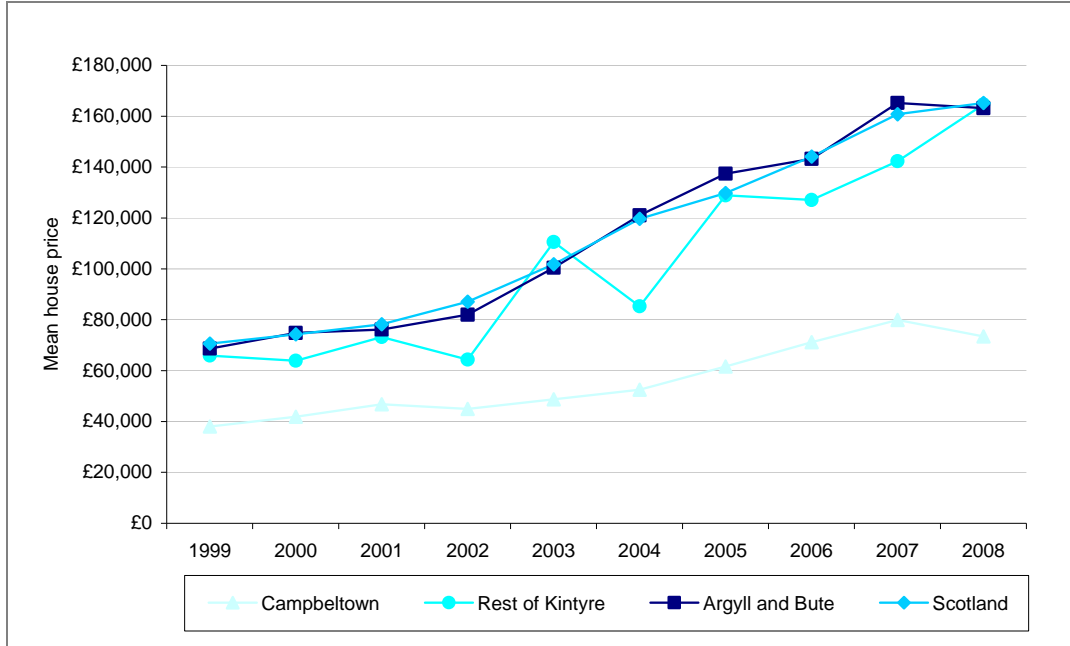
Figure D-9 2008 Housing Stock and change in stock, 2003 to 2008



Source: Scottish Neighbourhood Statistics

- D.38 As with the change in the housing stock in Kintyre, there is a distinct split between Campbeltown and the rest of the peninsula in terms of changes in house prices. In Campbeltown, house prices grew by 93% between 1999 and 2008 while in the rest of Kintyre, prices rose by 150%. House prices in Campbeltown are significantly lower than the Scottish average while house prices in the rest of Kintyre are now broadly in line with the Scottish average.
- D.39 As a proportion of the available housing stock, fewer sales are made in Kintyre than the rest of Argyll and Bute or Scotland with an annual average of 2.5% of the Kintyre housing stock changing hands in a given year between 2003 and 2008 compared to 3.7% in the Argyll and Bute and 4.6% in Scotland. These low levels of activity in the owner-occupier sector are noted in the Campbeltown and Kintyre Strategy (2005).

Figure D-10 Mean house prices, 1998 to 2008

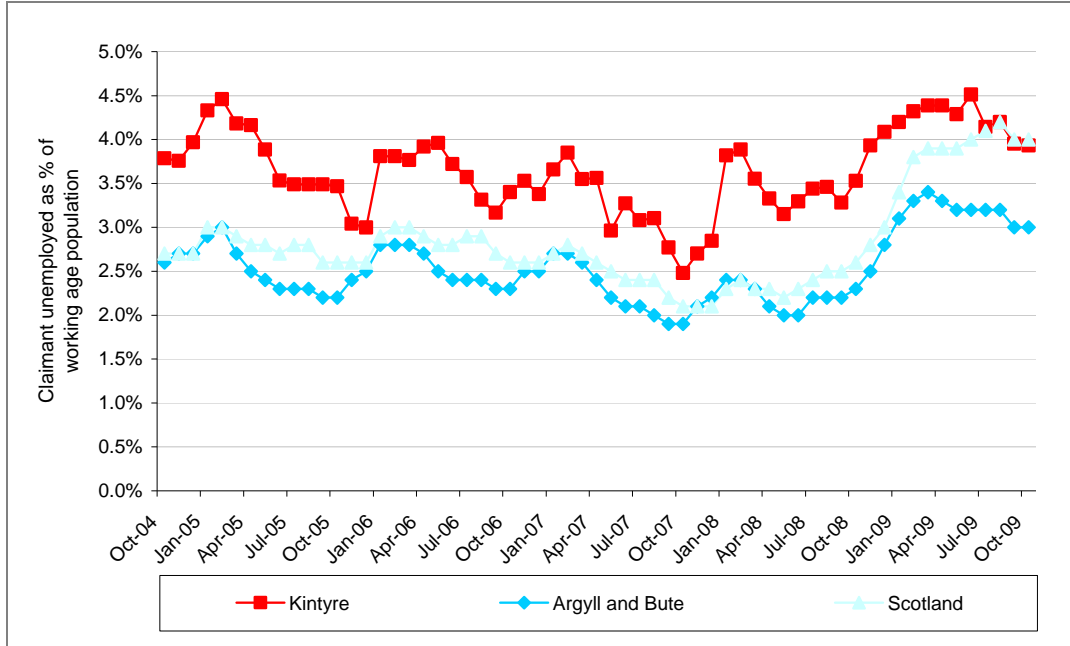


Source: Scottish Neighbourhood Statistics

## Quality of life

- D.40 Although quality of life is subjective, there are a number of measures which can be used as a proxy for quality of life. These measures are primarily concerned with (a) income and unemployment and (b) measures of deprivation such as isolation and crime.
- D.41 The Kintyre peninsula has historically had higher levels of unemployment than Argyll and Bute or Scotland. Figure D-11 shows that Kintyre has a larger proportion of the working age population claiming unemployment benefits than Argyll and Bute but there is a similar rate of unemployment in Kintyre as in Scotland. The majority of unemployment claimants are from the six Campbeltown data zones (73% in October 2009).

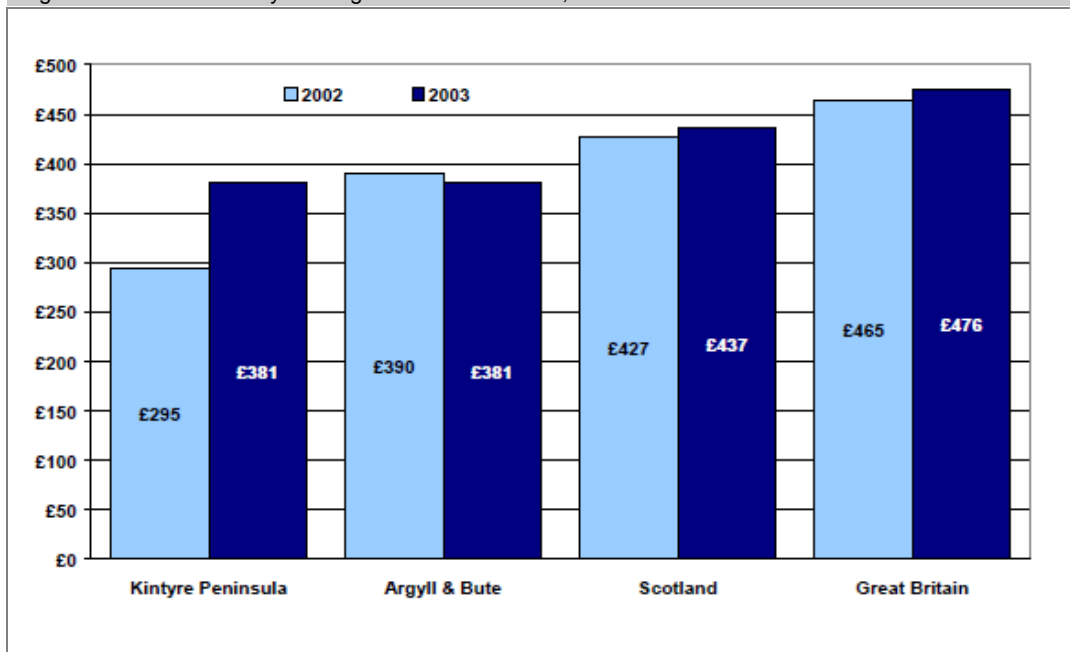
Figure D-11 Percentage of working age population claiming unemployment benefits, Oct 04 to Oct 09



Source: NOMIS Claimant Count Data

D.42 Although dated, a report published by Argyll and Bute Council (2005) shows that in 2002 and 2003, earnings on the Kintyre Peninsula were lower than the Scottish average. Although income data is not available at the data zone level, the available evidence does suggest that income levels are lower in Kintyre than the rest of Scotland.

Figure D-12 Gross weekly earnings of fulltime workers, 2002-03

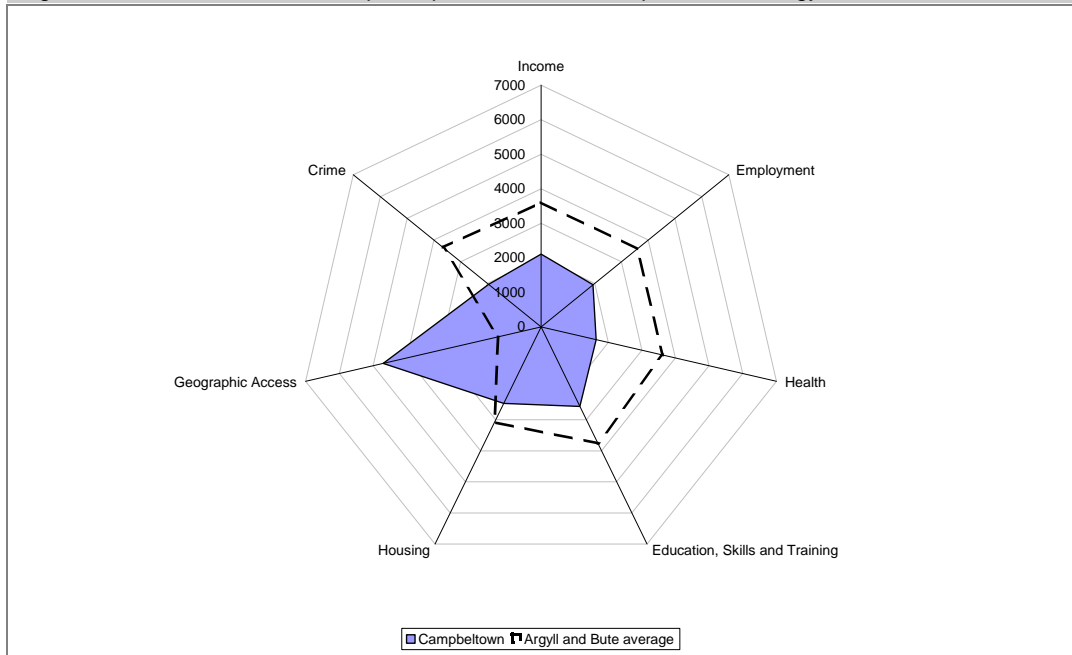


Source: Argyll and Bute Council 2005

**Scottish Index of Multiple Deprivation**

- D.43 The SIMD is the Scottish Government’s official tool for identifying small area concentrations of multiple deprivation across Scotland. The SIMD ranks each of the 6,505 Scottish data zones against each other on seven different measures. The data zones are ranked from one, being the most deprived, to 6,505, being the least deprived.
- D.44 Given the very different socio-economic characteristics of the data zones which make up Campbeltown compared to those which make up the rest of the area of interest for this baseline, both areas have been analysed separately.
- D.45 Figure D-13 shows the average ranking for the data zones which make up Campbeltown for each of the seven elements of the composite ranking as the shaded box with the average score for Argyll and Bute given by the broken line. This shows that Campbeltown performs better than the Argyll and Bute average in terms of geographic access. This is unsurprising given its role as one of the largest population centres and its essentially urban characteristics. However, on all of the other elements which make up the SIMD, Campbeltown is rated as significantly more deprived than the rest of Argyll and Bute. In fact, Campbeltown (Central) and Campbeltown (North) respectively are in the top 15% most deprived areas in Scotland.

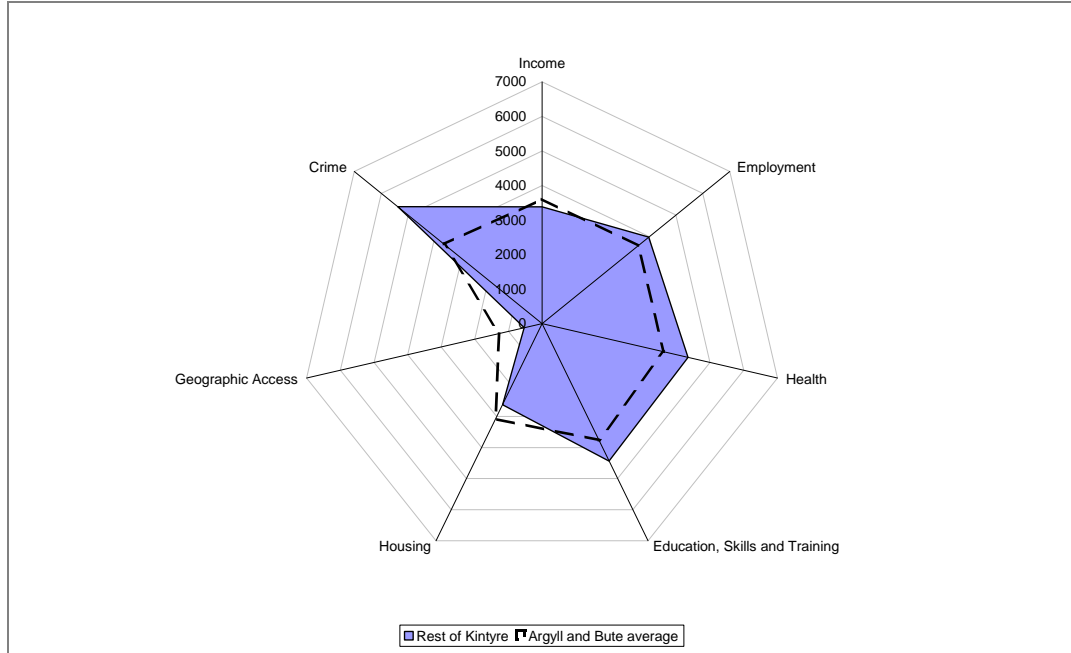
Figure D-13 Scottish Index of Multiple Deprivation 2009 - Campbeltown vs. Argyll and Bute



Source: Scottish Government

- D.46 Figure D-14 shows the average ranking for the data zones which make up the rest of Kintyre for each of the seven elements of the composite ranking as the shaded box with the average score for Argyll and Bute given by the broken line. Excluding Campbeltown, the rest of Kintyre outperforms the Argyll and Bute average score on crime, employment, health and education. Income and housing deprivation are both slightly below the average Argyll and Bute ranking while the average geographic access ranking is significantly below the Argyll and Bute average; unsurprising given the remote rural nature of much of Kintyre.

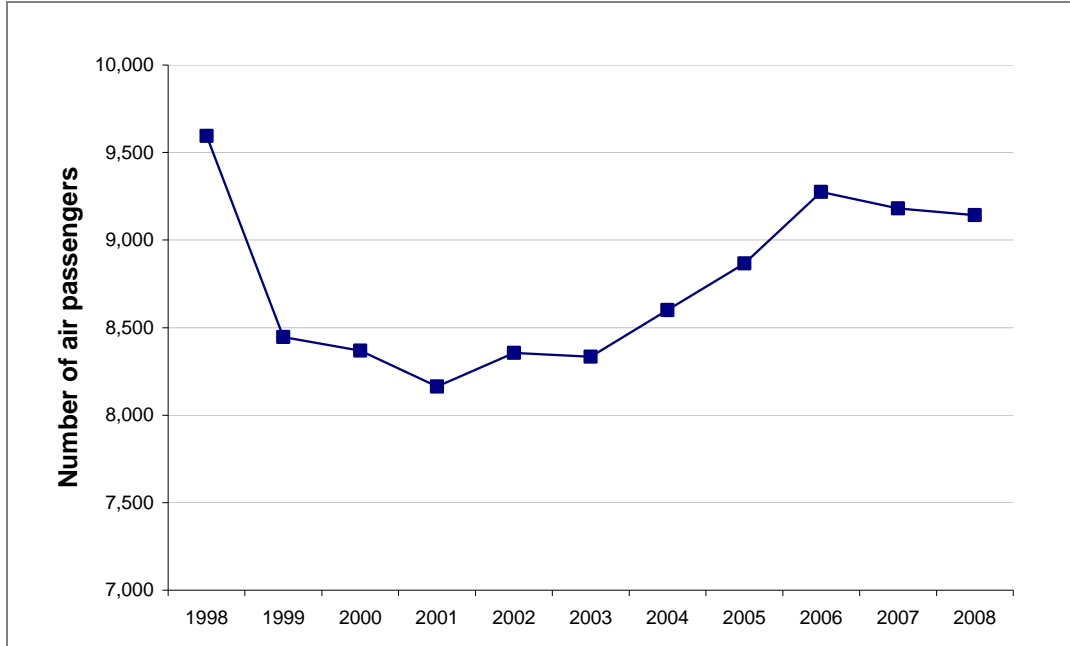
Figure D-14 Scottish Index of Multiple Deprivation 2009 - Rest of Kintyre vs. Argyll and Bute



## Transport and access to services

- D.47 For Kintyre, the main links with the rest of the mainland is by road using the A83 or by air from Campbeltown airport. There is no train line in Kintyre. Ferry services also operate on a number of routes in the area:
- Claonaig - Lochranza (in Summer)
  - Kennacraig - Islay
  - Tarbert - Lochranza (in Winter)
  - Tarbert - Portavadie
  - Tayinloan - Gigha.
- D.48 Public transport within the Kintyre peninsula is provided by West Coast Motor's bus services while long distance coach services to and from Glasgow are operated by West Coast Motors and Scottish Citylink.
- D.49 Flights connect Campbeltown with Glasgow International. There are usually two departures daily, five days a week and the journey takes thirty five minutes. Passenger numbers have grown by 8% between 1999 and 2008 and stood at 9,143 in 2008. However, there is no data on the breakdown of these passengers between local residents and other visitors.

Figure D-15 Campbeltown passenger numbers 1998 to 2008



Source: CAA

D.50 The level of car ownership increases with rurality with more than one car per household in North and West Kintyre and South Kintyre. The much lower number of cars per household in Campbeltown reflects its more urban status but more importantly the low average income and high unemployment. This pattern of high car ownership in the more rural areas is unsurprising given the limited public transport available in the more rural areas of Kintyre.

Table D-9 Access to cars/vehicles, 2001

Region	Number of cars per household	Proportion of households with access to....number of cars/vans			
		0	1	2	3+
Campbeltown Central	0.60	34	43	19	4
East Central Kintyre	0.89	37	42	17	4
North and West Kintyre	1.08	26	48	21	5
South Kintyre	1.12	20	53	22	5
Argyll & Bute	1.03	28	47	21	4
Scotland	0.93	34	43	19	4

Source: GROS Census 2001