aquatera
environmental services and products

Marine and Coastal Tourism and Recreation in the Pentland Firth and Orkney Waters: A Case Study

Version 2

Report to The Scottish Government

Issued by Aquatera Ltd, in cooperation with LUC and ICIT

P590 – July 2015

This study was completed for:

The Scottish Government

Contact: Sarah Brown
Email: sarah@clydeforum.org

This study was completed by:

Aquatera Ltd
Old Academy Business Centre
Stromness
Orkney
KW16 3AW

Contact: Ian Johnstone
Tel: 01856 850 088
Email: office@aquatera.co.uk

Issue record

The version number is indicated on the front cover.

Version	Date	Details
1	17.07.2015	Submitted to client
2	13.11.2015	Submitted to client

Members of:

Contents

List of Figures

List of Tables

1 INTRODUCTION

1.1 OVERVIEW OF THE STUDY

This pilot study on marine and coastal tourism and recreation in the Pentland Firth and Orkney Waters (PFOW) area is part of a larger study on marine and coastal tourism and recreation being carried out for all of Scotland. This pilot study has been carried out to fulfil two key aims:

- To provide information on marine tourism and recreation activities to inform preparation of the PFOW pilot Marine Spatial Plan. A key output from the work will be more comprehensive and accurate spatial mapping of marine recreation provision and activity, an understanding of the economic importance of the sector, and better information about the interaction between tourism and recreation and other policy areas and sectors.
- To test the approach being developed for the national survey of marine tourism and recreation. The pilot provides an excellent opportunity to test and refine the methodology that underpins the national survey. While the PFOW work will focus around stakeholder and user workshops rather than an online survey, this will allow the team to better understand any methodological issues, challenges and opportunities and to address these as the PFOW work progresses, and subsequently in the national survey methodology.

This case study involved the following stages:

- Developing a comprehensive list of stakeholders in the region
- Collating existing information on marine and coastal tourism and recreation
- Holding workshops to gather spatial information from participants and to engage them in planning challenges relevant to the area
- Gathering additional data and spatial information through targeted contacts
- Trialling the questionnaire to be used for the national study
- Summarising data collected to contribute to the Draft MSP
- Collating any lessons learned for the national study

1.2 STUDY AREA

The study area for this pilot study is the same as the planning area used for the PFOW Marine Spatial Planning area and covers the Orkney and the North Coast Scottish Marine Regions. This includes the entire Orkney Archipelago and surrounding waters, together with the north coast from Cape Wrath to Duncansby Head (see Figure 1.1).

Figure 1.1   Pilot study area
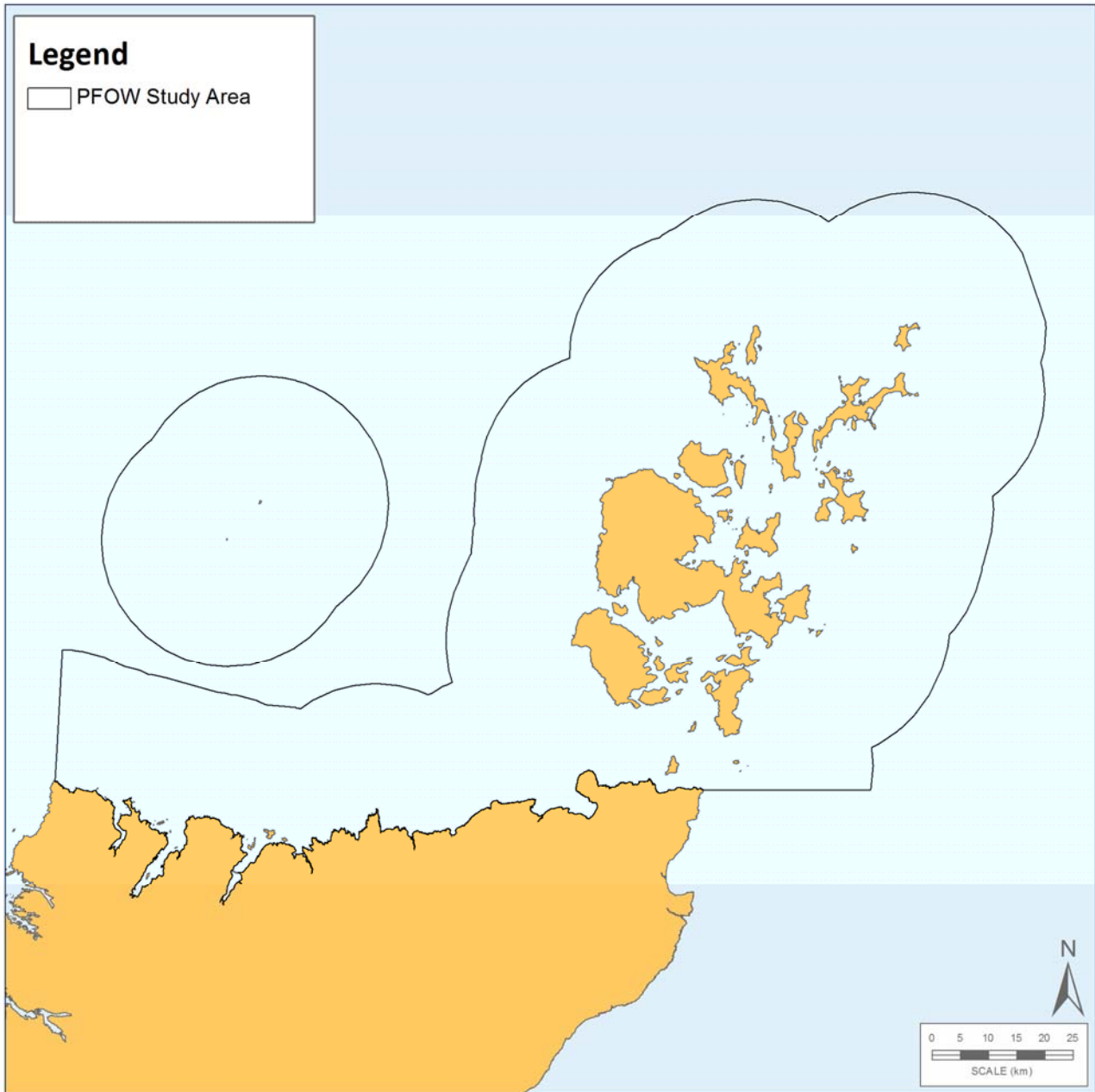
1.3 STRUCTURE OF THIS REPORT

This report begins with a review of the existing data on tourism and recreation, providing a summary of any data gaps and limitations relevant to this study. An overview of the process of developing the stakeholder database and the methods for data collection is then provided. A summary of the feedback from workshops and an analysis of the data collected are provided in Section 4. Finally, Section 5 provides a summary of the key findings and recommendations for the national study. A number of appendices are provided to support this work and are included at the end of this report.

2 REVIEW OF EXISTING DATA

2.1 INTRODUCTION

This chapter highlights the main sources of information connected with tourism and recreation in the PFOW, as well as the identified gaps in this available data. Some information has already been summarised in the Pilot PFOW Marine Spatial Plan Consultation Draft: Regional Locational Guidance (Marine Scotland Science 2015a) and the Pilot PFOW Marine Spatial Plan Consultation Draft: Socio-economic Baseline Review (Marine Scotland Science 2015b). This section aims to provide more detail regarding participation in tourism and recreation activities to supplement this information and to highlight data gaps.

The tourism section focusses on existing published information on tourism and tourist activities in Orkney and the North of Scotland while the recreation section is organised by activity. Information about providers of marine and coastal recreation, such as tour operators or charter boats, are discussed in the Recreation section, 2.3.

2.2 TOURISM

2.2.1 Sources of information

The documents below were reviewed for information relevant to this project. Additional web based sources are referenced as and when they are used.

- 'Orkney Visitor Survey 2012/13' by Scotinform Ltd and Reference Economics
- 'Kirkwall Survey Report' by G.P. Wilde and Business Research & Economic Advisors (2009)
- 'Orkney Economic Review 2012-13' by Orkney Island Council
- 'A framework for destination development: Ambitious for Tourism Caithness and North Sutherland' by the Tourism Resources Company (2011)
- 'The 2009 Visitor Attraction Monitor' by the Moffat Centre for Travel and Tourism Business Development
- 'Tourism in Scotland's Regions 2013' by VisitScotland
- 'Scotland Visitor Survey 2011 – Regional Results: Highlands', produced by TNS Research International for VisitScotland
- 'Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Regional Locational Guidance for Marine Energy' by Marine Scotland Science (2015)
- 'Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Socio-Economic Baseline Review' by Marine Scotland Science (2015)
- 'Shipping Study of the Pentland Firth and Orkney Waters', produced by Anatec Ltd and Halcrow for Marine Scotland (2012)

The following sections discuss these documents in terms of their relevance to this project, the methods used within these reports to gather and process the data as well as any perceived data gaps or limitations.

2.2.2 Overview of tourism literature

The 'Orkney Visitor Survey 2012/13'[1], details the findings from interviews of visitors to Orkney. In total, 1,328 face-to-face interviews and 821 online surveys were completed. A survey of 4,902 passengers at the key gateways was

---

[1] Scotinform Ltd and Reference Economics, 2014

used to calibrate data provided by the operators of the transport links. This report provides profiles of the visitors, including: gender; why they are visiting; holiday, business or visiting friends or relatives; how they are arriving; where they are originating from; how long they stayed; and how they planned/booked their trip. A measure of visitor economic impact was also gathered including: average amount spent on different expenses; average amount spent per type of visit; and the total annual value of each type of visitor. Visitors were asked to review aspects of their visit including: any issues when booking; levels of satisfaction with getting to Orkney; accommodation; travel among the islands; whether the trip reached expectations; and their overall satisfaction.

The 'Scotland Visitor Survey 2011 – Regional Results: Highlands'[2] reports the results of a survey conducted between July and October 2011 of 1,027 visitors to the Highlands. The study significantly resembled the 'Orkney Visitor Survey'. Respondents were asked to comment upon multiple aspects of the visit including: planning; booking; travelling to and within the Highlands; activities; expenditures; and barriers to their visit. However, as with other surveys, all of the Highlands are considered as one region, and it is not possible to look at trends within the PFOW region separately. However, it represents the only source of this kind of data across this region.

The 'Kirkwall Survey Report' (G.P. Wilde, 2009) details the findings of a study investigating the impact of visiting cruise liners in 2007 and 2008. The report analyses details from omnibus surveys of passengers and crew on cruise liners once they have visited and departed Kirkwall. It covers age, nationality, satisfaction with numerous aspects of their visit and the average amount individuals and parties spend on Orkney, as well as estimated total economic impact as a result of visiting cruise liners. In the 2009 published report, the data came from 658 completed passenger surveys and 121 crew surveys, conducted within the summer months of 2008. Due to a low number of crew respondents, results from all ports within the UK and Ireland were combined. The same study was conducted in 2013, but only a summary of the full report has now been made available.

The objective of the 'Orkney Economic Review'[3] was to bring together and review the most up to date data available on the Orkney economy, statistics and information which might influence its economy. The information detailed within the 'Orkney Economic Review' is predominantly sourced from the 2001 and 2011 census, the General Register Office of Scotland (GROS), the Office of National Statistics (ONS) and Orkney Island Council Marine Services and is updated on an annual basis. It gives details of the trends within Gross Value Added (GVA), employment, main industries, population, housing, weather, etc. However, there is no data specifically focussed on tourism. Data related to travel to and from Orkney does not distinguish between local people and visitors.

The document, 'A Framework for Destination Development: Ambitious for Tourism Caithness and North Sutherland'[4], used workshop events with key stakeholders conducted in Helmsdale and Tongue in Sutherland, and Wick and Thurso in Caithness. This report discusses the economic impact of tourism, such as daily expenditure; the volume of which different types of accommodation is used; and exhaustive lists and maps of all of the accommodation and attractions within the areas. These data were gathered by conducting an audit of facilities within the region and combining this with economic statistics from the 'United Kingdom Tourism Study' and the 'International Passenger Survey'. These data do cover the target area of the North Coast, but since they include information for a wider area, some caution would be needed in interpreting the data for the coastal area only.

---

[2] VisitScotland & TNS Research International, 2011

[3] Orkney Island Council (OIC), 2013

[4] Tourism Resources Company (TRC), 2011

'The 2009 Visitor Attraction Monitor'[5] breaks down data collected on visitors to Scotland and its separate regions. Data collected include the number of visitors, origins of these visitors, average amount spent, average time spent at various kinds of attractions, visitor number trends and also a ranking of the numbers to the main attractions within these areas, of which 76 were within the Highlands of Scotland and 19 within Orkney. The monitor includes estimates on the average amount visitors spend on certain aspects of their visit (e.g. admittance, donation, catering, etc.). This information provides an insight into the trends of the most popular locations within the two regions and the economic impact they have to the local economy. The data are also compared to the same survey produced in 2008. The report was published by the Moffat Centre on an annual basis up until 2009. In 2010, a summary of survey results was published. No more recent information is available. Within this report, Orkney is considered a separate region, while Caithness and Sutherland are part of the 'Highlands of Scotland', along with the other counties within the region.

'Tourism in Scotland's Regions 2013'[6], contains data from the different regions of Scotland including the most visited attractions; employment in the tourism industry; length of stay; reason for visiting; visitor seasonality; where visitors are coming from; the amount spent within each region; and also a breakdown of the occupancy level of the different kinds of accommodation through the year. However, it is not possible to aggregate these data for the PFOW region. Caithness and Sutherland are included within the Highlands, and Orkney information is presented with other Islands. However, this document includes more up to date information on visitor numbers to the most popular attractions, some of which are located in PFOW.

The 'Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Regional Locational Guidance'[7] and 'Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Socio-economic Baseline Review'[8] provides an overview of recreation and tourism in the study area, along with other uses of the sea, and the associated Socio-economic Baseline Review outlines the available information on economic value and employment that is associated with sea uses, including recreation and tourism. Where additional information could be found on these topics, this is highlighted in this report.

2.2.3   Summary of existing information

A fair amount of information is available on the tourism sector in the region as reported in these studies. The main limitation is in tourism data specific to the portion of the study area located on the North Coast, which is typically aggregated with other information on the Highlands.

The following section highlights the information from these studies as relevant to this study.

Demographics

The latest Orkney Visitor Survey estimated 142,000 visitors came to Orkney between October 2012 and September 2013[9]. Of these, 65% were on holiday and the remainder either on business or Visiting Friends and Relatives (VFR). In addition, in 2014 alone Orkney saw approximately 64,000 cruise liner passengers[10].

In 2011, 1.86 million visitors from the UK and 0.39 million international visitors travelled to the Highlands and Islands[11]. No information was found on visitor numbers to the study area specifically, though it would be expected to

---

[5] Moffat Centre for Travel and Tourism Business Development, 2010

[6] VisitScotland, 2014

[7] Marine Scotland Science, 2015a

[8] Marine Scotland Science, 2015b

[9] Scotinform Ltd and Reference Economics, 2014

[10] OIC Marine Services & OIC, 2015

be considerably smaller than this total. The number of cruise liner passengers visiting Scrabster is much smaller than that visiting Orkney, with an average of 2,500 per year over the last five years[12].

Origins

Each year Orkney attracts a large number of visitors from many international locations. According to the Orkney Visitor Survey 2013, 43% of Orkney's visitors originated in Scotland; 31% from the rest of the UK; 14% from Europe, of which Germany (5%) and France (2%) were the most frequent; and the remaining 11% were made from the rest of the world, predominantly from visitors from the USA (4%), Australia (3%) and Canada (2%) (see Figure 2.1).

Figure 2.1   Origins of visitors to Orkney 2013 (Scotinform Ltd and Reference Economics, 2014)
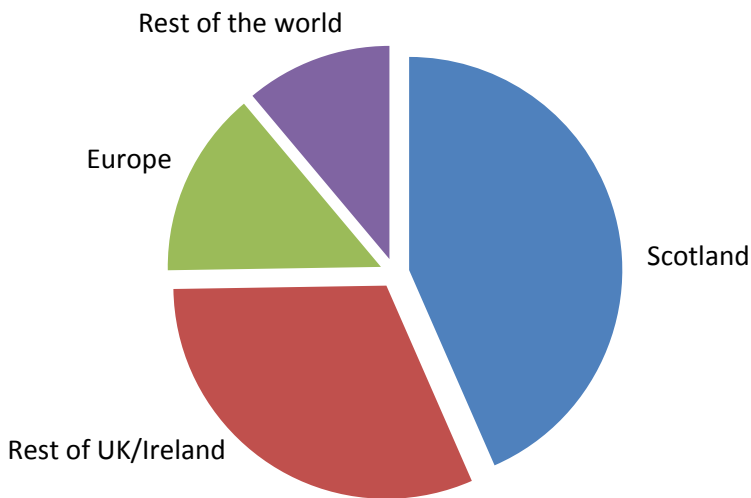
In 2014, a significant number of cruise liner visitors to Orkney originated from North America: 53% from USA and 10% from Canada. Passengers from the UK made up 24% of the total, and Germany made up 1%. The remaining 12% are described only as "Other"[13]. In contrast, in 2009 UK visitors made up 96% of the total cruise liner passengers visiting Orkney. Italian and "Other" passengers made up 1% and 3%, respectively[14].

According to VisitScotland (2011) the highest proportion of visitors to the Highlands in 2011 originated from within Scotland (46.3%), followed by England (35.5%). Wales contributed 0.8% of the visitors to the Highlands that year. With reference to international visitors, 17.3% of the total visitors to the Highlands originated from outside the UK, which included visitors from Germany (3.6%), USA (2.1%), and less than 2% from Spain, France, Australia, the Netherlands, Italy and Canada. Although the tourist numbers in the study area are probably a small percentage of the total numbers in the Highlands, the trends in demographics within the study area may be similar to the demographics of visitors to the rest of the Highlands (see Figure 2.2).

---

[11] VisitScotland & TNS Research International, 2011

[12] Cruise Europe, 2014

[13] G.P. Wilde, 2013

[14] G.P. Wilde & Business Research and Economic Advisors, 2009

Figure 2.2   Origins of visitors to the Highlands 2011 (VisitScotland, 2011)
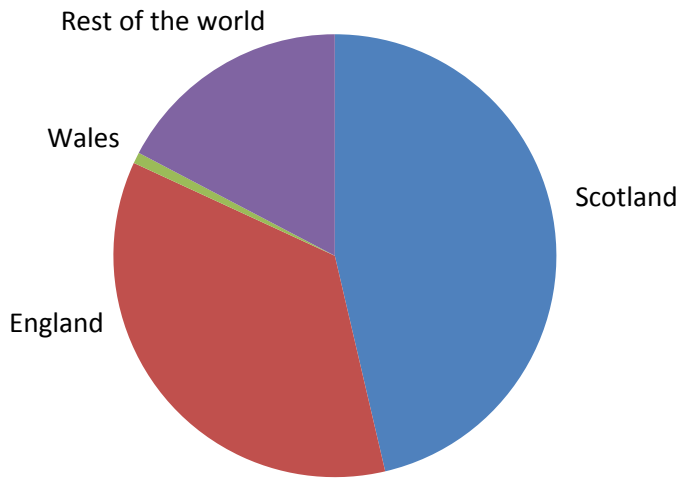
British nationals have made up the majority of the cruise liner visitors to Scrabster, ranging between 38.7% in 2010 to 78.4% in 2014. The USA is another significant nationality visiting the north of Scotland by cruise liner over the last six years. Figure 2.3 below, demonstrates the changing trend in visiting nationalities arriving at Scrabster via cruise liners.

Figure 2.3   Scrabster cruise liner nationalities (2009 - 14) (Cruise Europe, 2014)
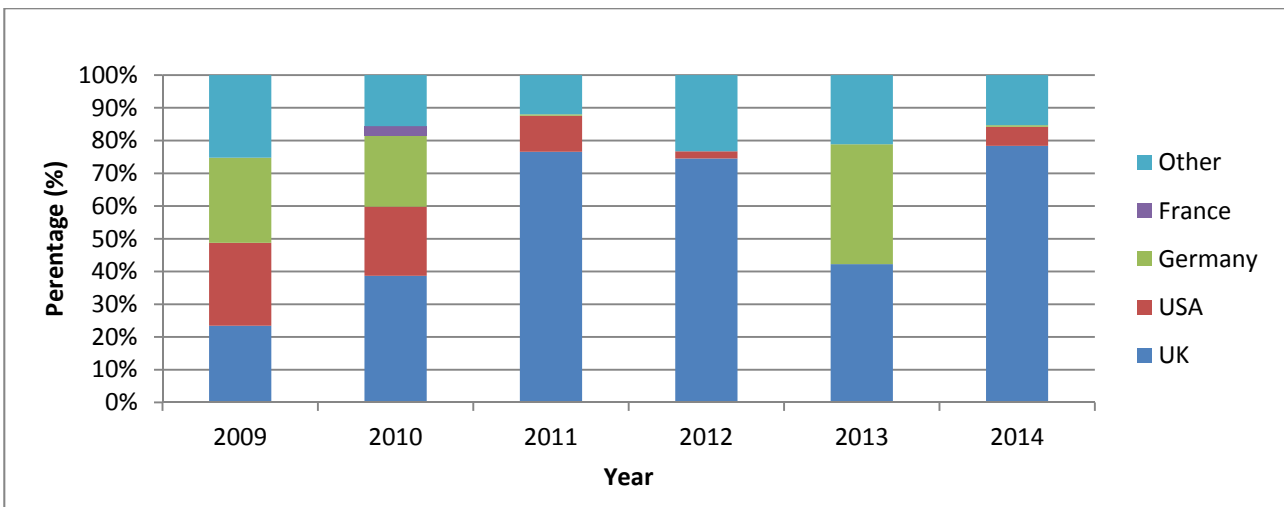
Age

Excluding cruise liner visitors, a greater percentage of older visitors visited Orkney in 2012/13 compared to younger age groups, while the largest age group visiting the Highlands was in the 25-34 age group, (see Figure 2.4). Cruise liner visitors to Orkney are very strongly represented by those over 65 (see Figure 2.5); the same information was not available for cruise liners calling at Scrabster.

Figure 2.4 **Visitor age brackets (2012/13) (Scotinform Ltd and Reference Economics, 2014 and VisitScotland, 2013)**
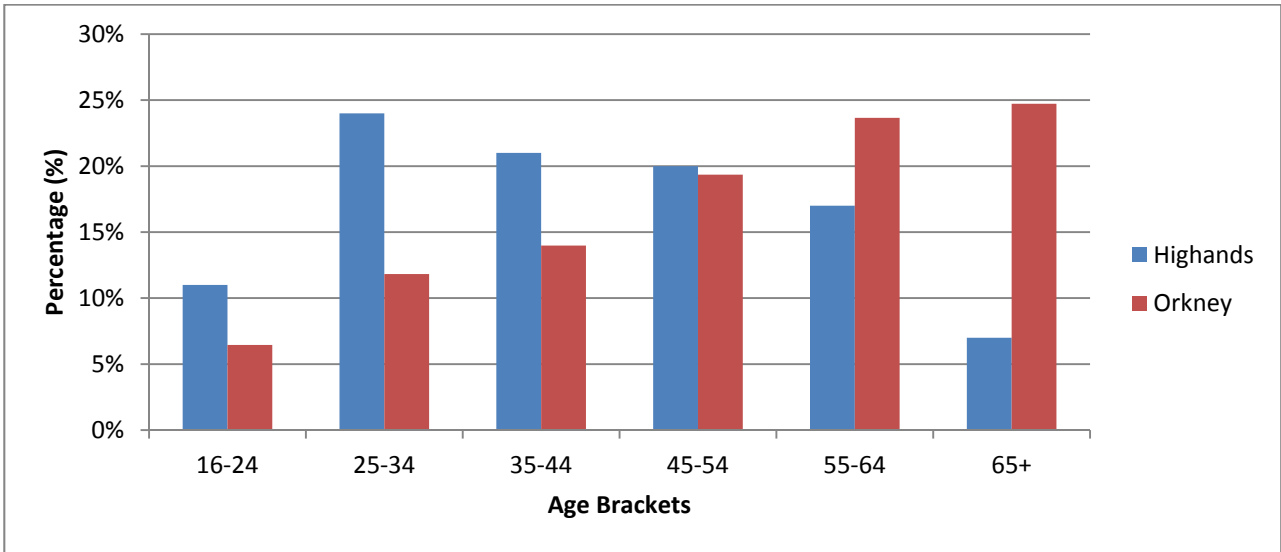
Figure 2.5 **Cruise liner passenger age brackets for cruise liners visiting Orkney in 2013 (G.P. Wilde, 2013)**
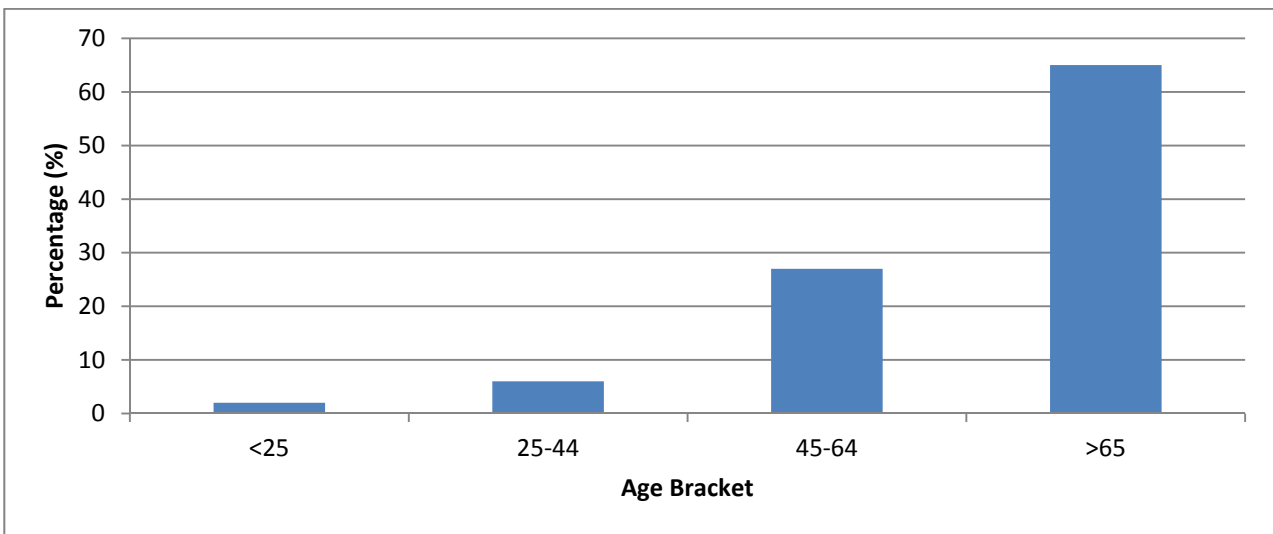
Motivations

As part of the Orkney Visitor Survey, an online survey of 689 visitors who came to Orkney on holiday highlighted that around half of those visited because of an interest in archaeology and history. An interest in scenery and landscape also rated high as a motivation[15]. Table 2.1 illustrates the top 15 reasons stated for visiting Orkney.

---

[15] Scotinform Ltd and Reference Economics, 2014

Table 2.1   Reasons given for visiting Orkney (Scotinform Ltd and Reference Economics, 2014)

Influence on Visit	Percentage
Interest in the archaeology/history	51
Interest in scenery/landscape	46
Experience of previous visit/know area	31
Recommendation from friend/relative	24
Family connections with the area	18
Internet/website	18
Interest in particular attractions	15
Guide Books	14
Tourist Brochure	11
Specific activities such as walking or golf	10
To undertake particular activities	9
Radio or TV programme about Orkney	6
Particular events/festivals	4
Newspaper or magazine article	3
To stay in particular accommodation	3

Figure 2.6, below, illustrates the breakdown of the top four reasons stated within Table 2.1 by regions of where the visitors are originating from: Scotland, UK and Ireland, Europe and the rest of the world. 'Interest in the archaeology/history' and 'interest in scenery/landscape' were generally the most common influences across all visitors. Visitors coming from outside Scotland chose archaeology and history as their main influence, whereas those coming from inside Scotland indicated that it was mainly experience on a previous trip that attracted them to visit in 2013.

Figure 2.6   Influence of visit to Orkney by region (Scotinform Ltd and Reference Economics, 2014)
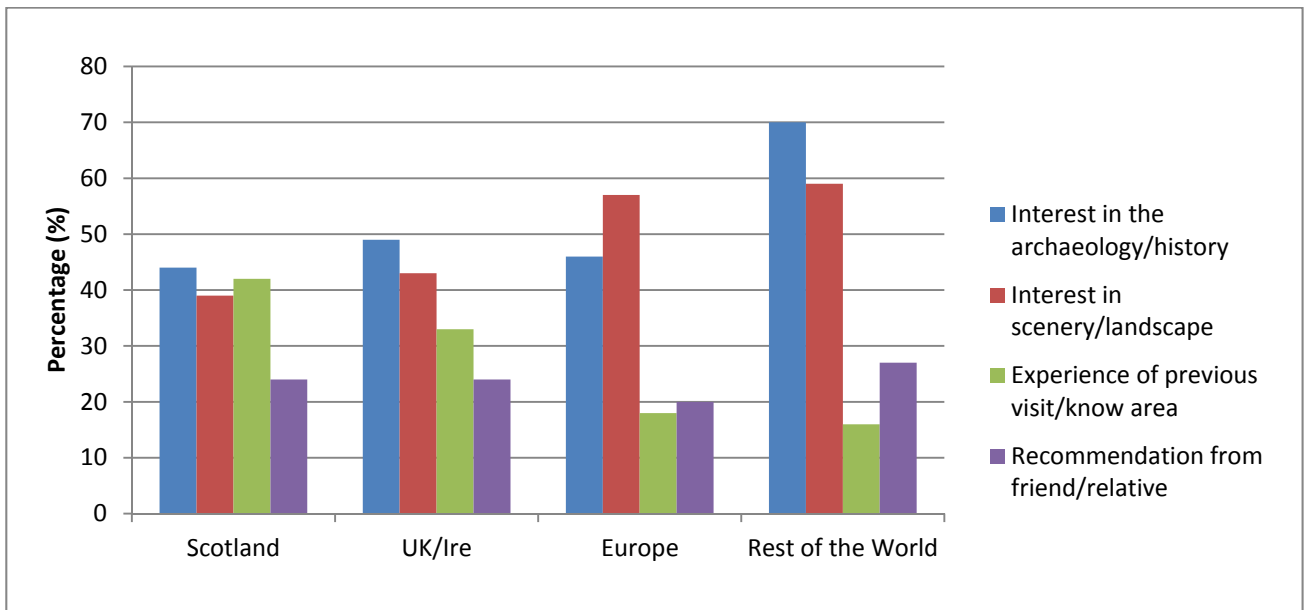
The Scotland Visitor Survey details the main motivations for visitors to visit the Highlands. Even though this is a much larger region encompassing Caithness and Sutherland, this provides an insight into the nature of many tourists in the area. Table 2.2, below, highlights the top ten reasons provided by visitors who came to the Highlands on holiday. Where in Orkney the majority of visitors are there for the archaeology, the majority are in the Highlands for the scenery. However, these two categories are the top two reasons in both surveys.

Table 2.2   Stated motivations for visiting the Highlands (VisitScotland & TNS Research International, 2013)

Motivation	Percentage (%)
Particular interest in scenery	57
Particular interest in history of this area	23
Recommendation	22
Particular attraction	20
Area I know well	20
Specific activities available	18
Undertake particular activity	15
Accommodation deal	10
Tourist Board brochure	8
Family connections	7
Particular accommodation	4

Marine and Coastal Tourist Attractions

The top ten visited attractions in Orkney in 2009 are shown in Table 2.3 below. The majority of the most visited sites are of archaeological or historical significance. Most of these are also situated close to the coast, so that the marine environment will be an important part of the surrounding landscape, for example, the Italian Chapel, Skara Brae, Skaill House, the Scapa Flow Visitor Centre and Museum and also the Tomb of the Eagles.

These data include only those attractions that have the capacity to monitor visitor numbers. Other coastal attractions that are visited frequently but for which visitor numbers are not monitored, such as the Brough of Birsay or the Ring of Brodgar, would not be represented in this list.

Table 2.3   Visitor attraction numbers for Orkney 2008-09 (Moffat Centre for Travel and Tourism Business Development et al., 2010)

Attraction	Numbers of visitors
St Magnus Cathedral	120,193
Italian Chapel	92,148
Skara Brae	69,361
Skaill House	49,975
Orkney Museum	26,656
Maeshowe	21,357
Highland Park Distillery	15,453
Orkney Fossil and Vintage Centre	13,395

Attraction	Numbers of visitors
Scapa Flow Visitor Centre and Museum	12,308
Tomb of the Eagles	11,088

The Orkney Visitor Survey gathered information from questioning exiting visitors rather than relying on monitors, allowing other sites without monitors in place to be included. The most visited attractions according to this report are shown in Table 2.4, below. The report also highlights whether or not visitors were aware of the attractions before their visit.

Table 2.4   Tourist attraction awareness and visitation (2012/13) (Scotinform Ltd and Reference Economics, 2014)

Attraction	Visited (%)	Aware of (before visit) (%)	Visited/Aware (%)
Ring of Brodgar	70	59	18.6%
Skara Brae	68	66	3.03%
Standing Stones	67	59	13.6%
St Magnus Cathedral	67	61	9.8%
Italian Chapel	58	63	-7.9%
Brough of Birsay	45	45	0%
Maeshowe	41	56	-26.8%
Skaill House	39	48	-18.8%
Bishop's Palace and/or Earl's Palace	34	52	-34.6%
Broch of Gurness	28	38	-26.3%

The Moffat report for Caithness and Sutherland details the results from monitoring 76 individual attractions; however, only three of these sites are within the study area: Caithness Horizons, the Castle and Gardens of Mey and Strathnaver Museum. Visitor numbers to these attractions in 2009 are show in Table 2.5.

Table 2.5   Visitor attraction numbers (Caithness and Sutherland) 2009 (Moffat Centre for Travel and Tourism Business Development et al., 2010)

Attraction	Visitor numbers
Caithness Horizons	76,931
The Castle & Gardens of Mey	28,598
Strathnaver Museum	3,618

What is not clear from these reports is to what extent the coastal and marine environment is a motivating factor in bringing visitors to these attractions. The three attractions listed all have a heritage interest, but do not have a direct connection to the marine environment. While the coastal environment may be a key motivation for visitors to come to the region, they may visit a number of different attractions during their holiday. On the other hand, the primary motivation for a visitor may not be related specifically to the marine environment (e.g. coming for a music festival). Nevertheless, the coastal environment is an integral characteristic of the region.

Figures A.39-A.44 in Appendix A show some of the visitor attractions in the study area.

Cruise Liners

In Orkney, most cruise liners call at Hatston pier or the nearby Kirkwall Bay, while a few call at Stromness Harbour every year. In 2013, these three ports saw more cruise liners than any other port within Scotland. A total of 75 cruise liners brought 50,765 passengers to Orkney[16]. Figure 2.7 compares the number of visiting cruise liners at different Scottish ports.

Figure 2.7   Ports of call in Scotland visited by cruise liners in 2013 (Cruise Scotland, 2014)
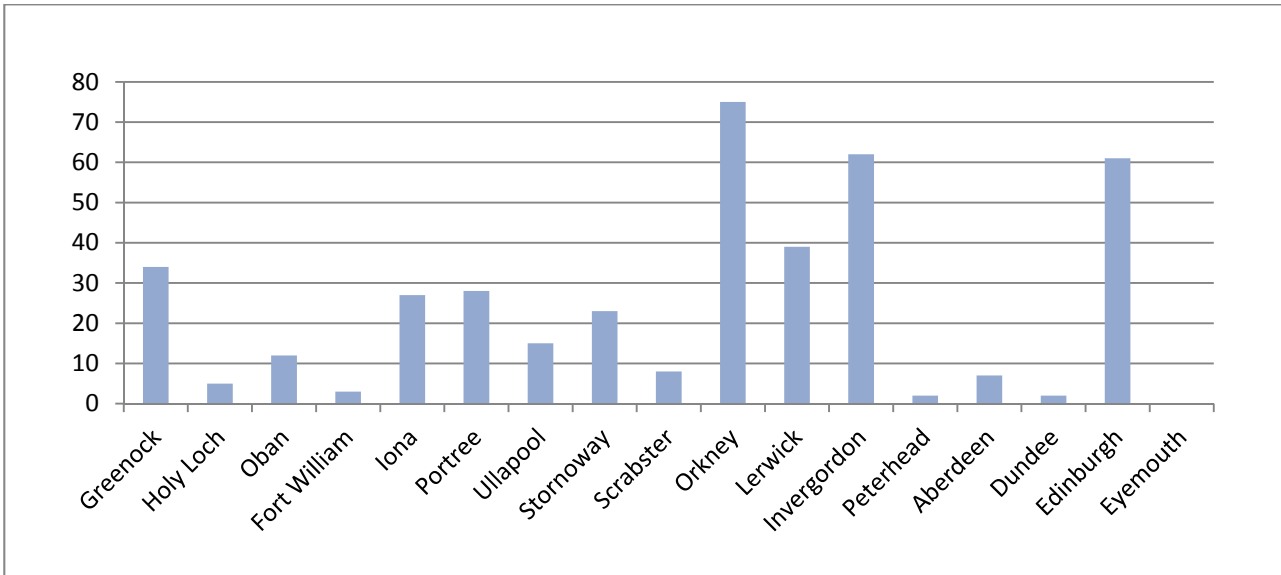
There has been a growing trend in the number of vessels visiting Orkney since 2000 (Figure 2.8). Although the numbers of vessels and passengers does not increase or decrease continuously year on year, the trend is for a general increase in both. So far there are no indications on Orkney's maximum capacity for servicing visiting vessels. In 2015, 84 cruise liners are scheduled to be sailing into Orkney, with a potential combined maximum passenger capacity of 89,208.

---

[16] Orkney Islands Council Marine Services, 2014

Figure 2.8   Orkney visiting vessels and passengers 2000 to 2013 (Orkney Island Council, 2013)
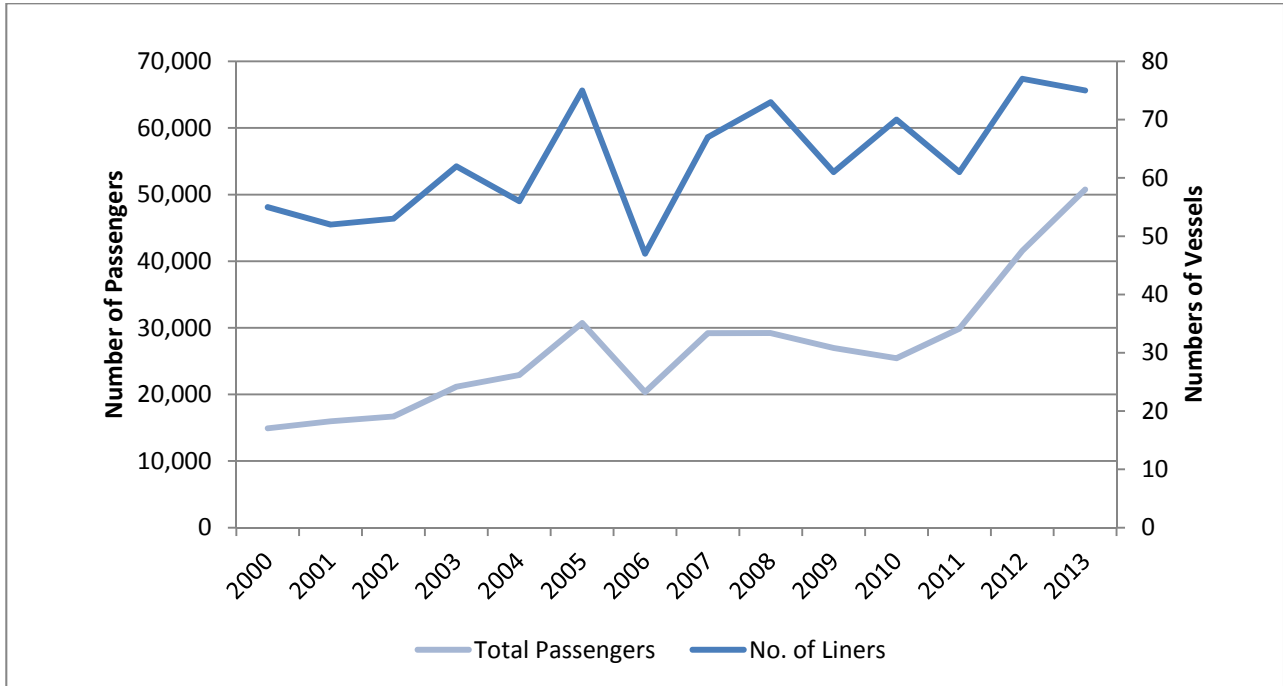
Many fewer cruise liners visit Scrabster Harbour. At the time of this report there were six vessels scheduled to call at Scrabster throughout 2015 carrying a combined total of 3,556 passengers. Gordon MacKenzie, Scrabster Harbour Master, has stated that further development is required to make the region more attractive to tourists[17]. Figure 2.9 illustrates the numbers of cruise liners and their passengers that have called into Scrabster Harbour between 2009 and 2014.

Figure 2.9   Scrabster visiting vessels and passengers (Cruise Europe, 2014)

---
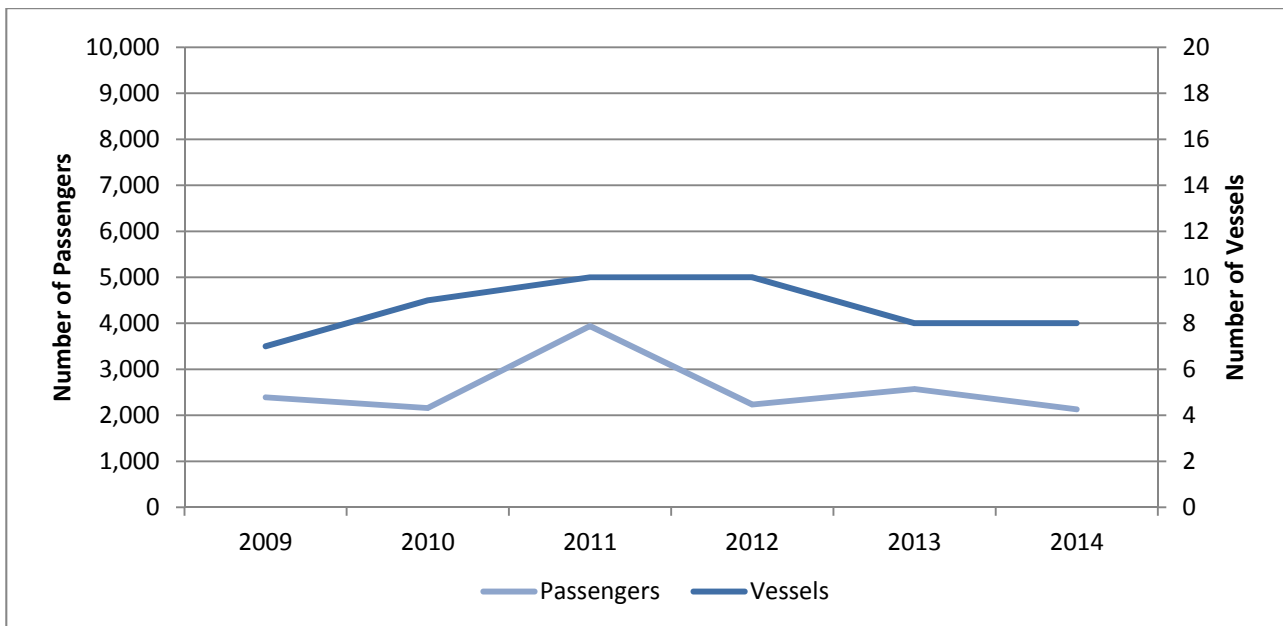
[17] Cruise Europe, 2014

Seasonality and Trends

In Scotland most tourist activity occurs in the spring and summer months. Orkney experiences a much greater difference in visitor numbers between the summer months and winter months compared to Scotland as a whole. In 2009 58% of the visitors to Orkney came between July and September; whereas in Scotland 37% of the visitors came during the same period.

In the Highlands the seasonal trends are similar to those in Orkney. Figure 2.10 demonstrates the quarterly seasonality of the Highlands, Orkney and Scotland. As these figures are obtained by the attraction operators, this will include all visitors to the regions: cruise line passengers, day-trippers, etc.

Cruise liner visits are a contributing factor to the seasonality, as illustrated in Figure 2.11.

Figure 2.10 Quarterly visitation seasonal analysis 2009 (Moffat Centre for Travel and Tourism Business Development et al., 2010)
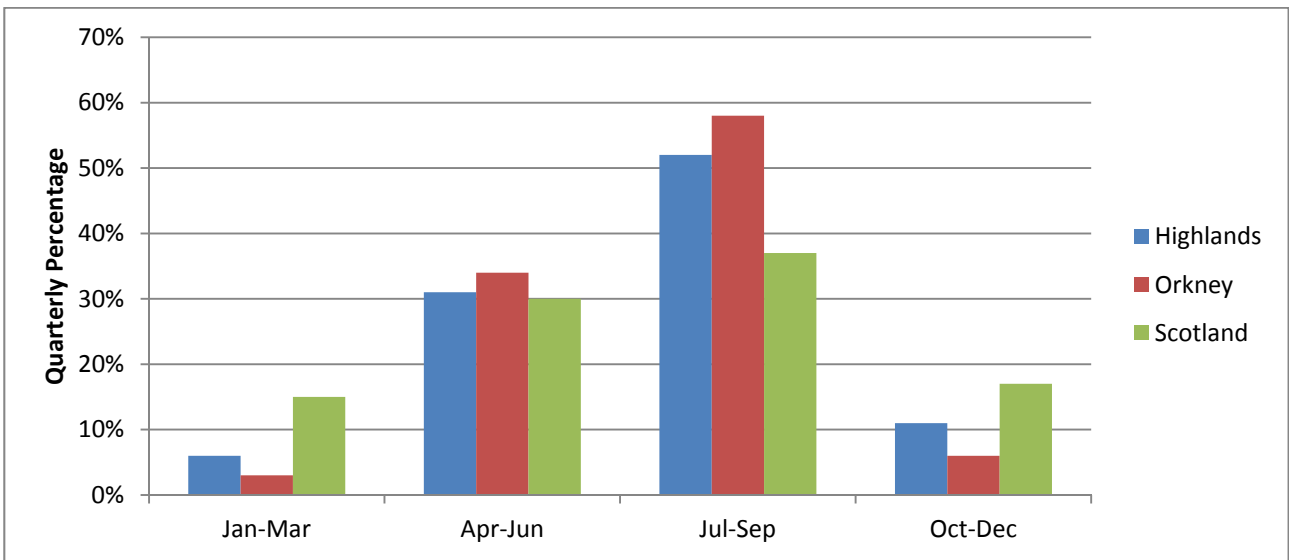
Figure 2.11 Orkney visiting cruise liners 2015 (OIC Marine Services Cruise Liner List 2015)
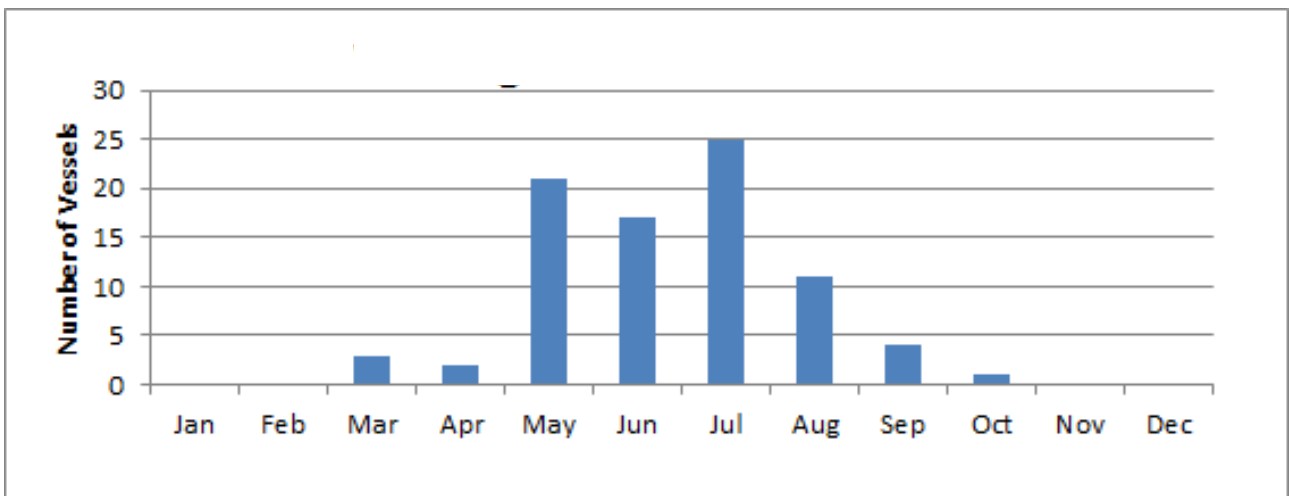
Marinas

The marinas located throughout PFOW hold significant value in the tourism industry as ports of call for visitors. Development of these marinas in the last decade has led vessels from many international locations coming to the region and injecting funds into the local economy. Figures A.27 and A.28 (See Appendix A) illustrate the spatial distribution of the marinas in Orkney and Caithness. The current capacities at each of the three marinas located in Orkney are: 95 berths in Kirkwall; 72 berths in Stromness; and 17 berths in Westray. Wick Marina has 70 berths and represents the most northerly marina on the Scottish mainland. The exact capacity of Scrabster harbour for accommodating visiting yachts is unclear; however, there are data on the level it is used.

A combined total of 892 vessels called at the three Orkney marinas, Scrabster harbour and Wick marina in 2011. June and July were generally the busiest months of the year for all five locations (Figure 2.12). There has been a slight increase in the number of vessels using the Orkney marinas since 2008, although there was a dip in 2012 (Figure 2.13).

Figure 2.14 illustrates an increasing trend in visitor numbers at Wick marina between 2006 and 2011[18].

It is not clear from data whether every vessel is unique. For example, the same vessel may have called at all three marinas within a given year, or may have called into the same marina more than once, e.g. on their return back to home port.

Figure 2.12 Marina seasonality (2011) (Anatec Ltd and Halcrow, 2012)

---
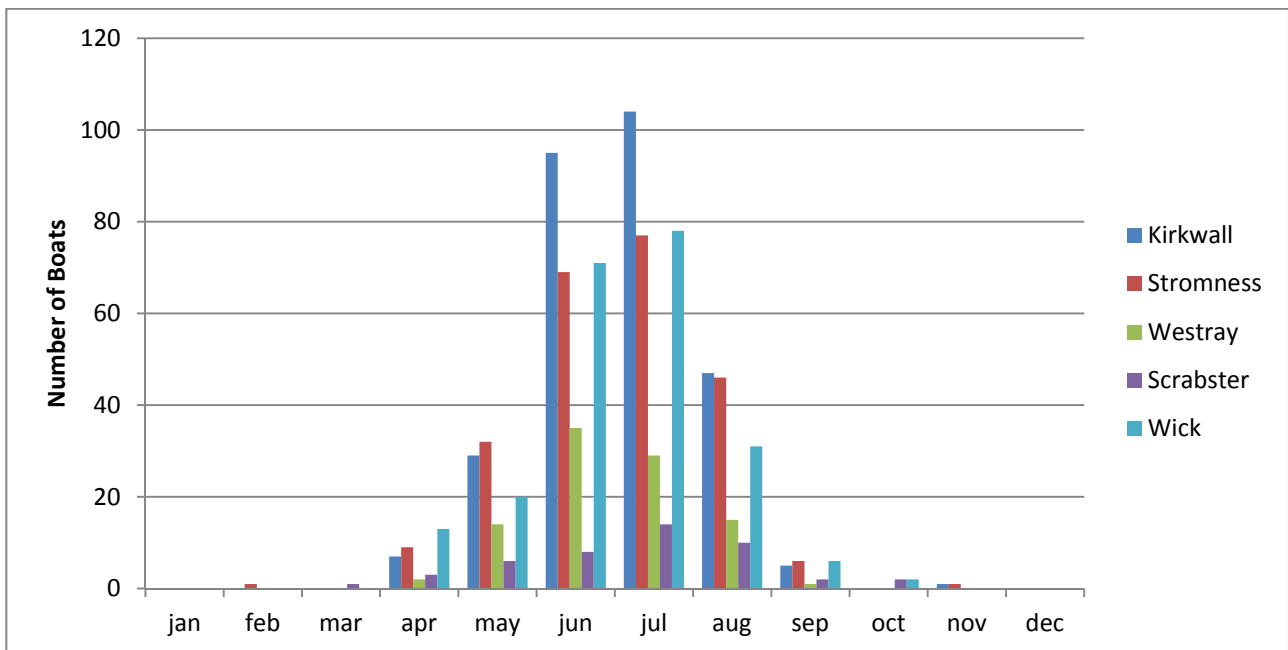
[18] Anatec Ltd and Halcrow, 2012

Figure 2.13 Orkney marinas visitor numbers 2008-2014 (Orkney Marinas)
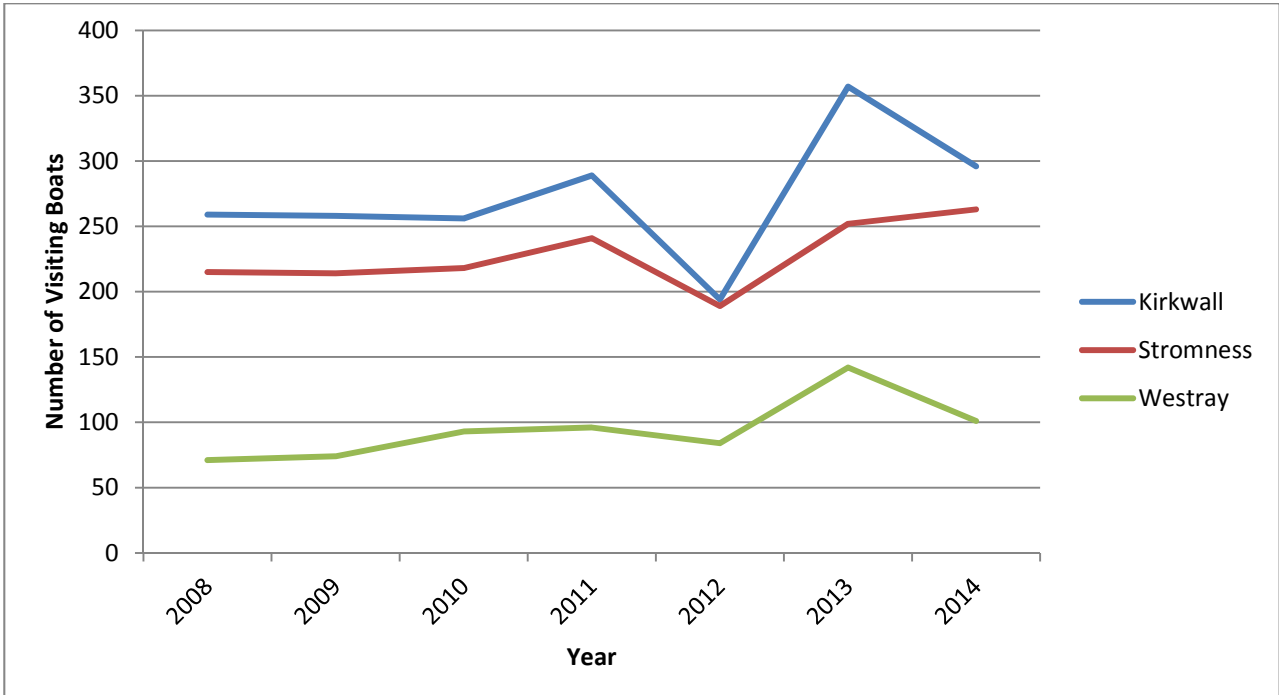
Figure 2.14 Wick marina visitor numbers 2006-2011 (Anatec and Halcrow, 2012)
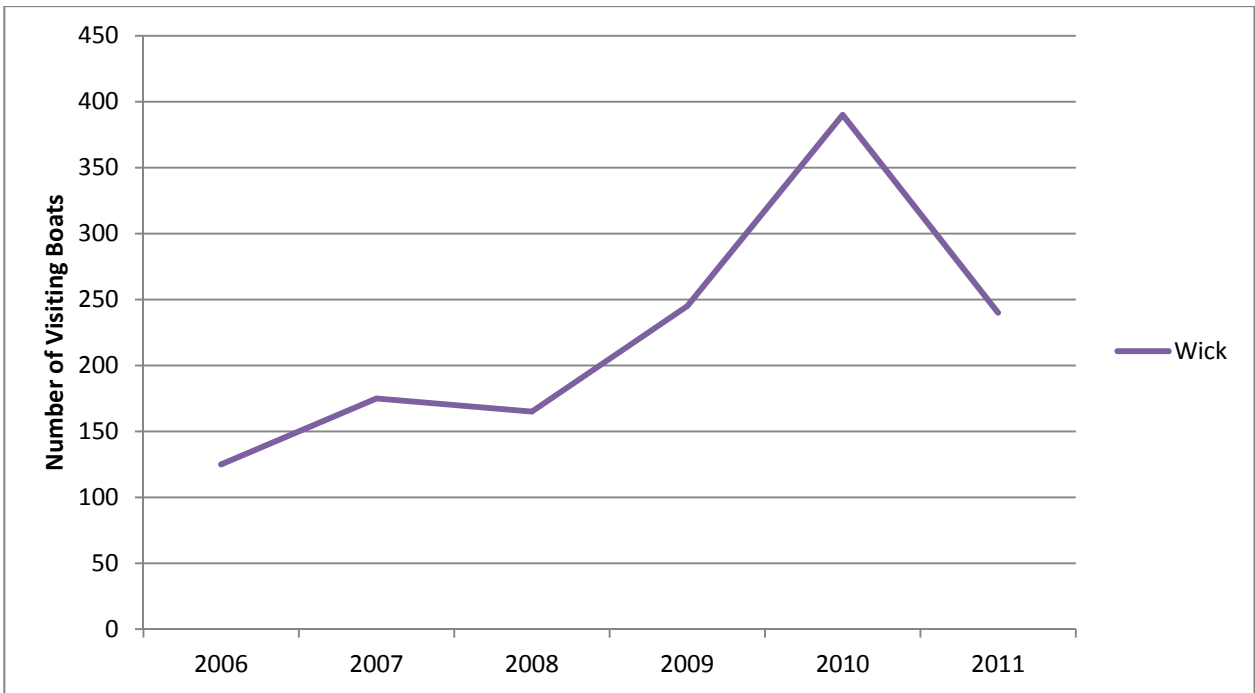
Visitor Origins

Most of the yachts visiting the Orkney marinas in 2014 were from the UK (55%), with 22% from Scandinavian countries, 21% from other European countries, and 2% from North America. Figure 2.15 below, illustrates the number of international vessels calling at the three Orkney marinas in 2014. Origins of visitors to the Wick marina in 2011 were similar, with approximately 60% of visiting recreational vessels from UK, followed by The Netherlands (9%), Norway (8%), Germany (7%) and France (almost 5%), and the remainder under 5%.

Figure 2.15 International vessels calling at Orkney in 2014 (Orkney Marinas, 2014)
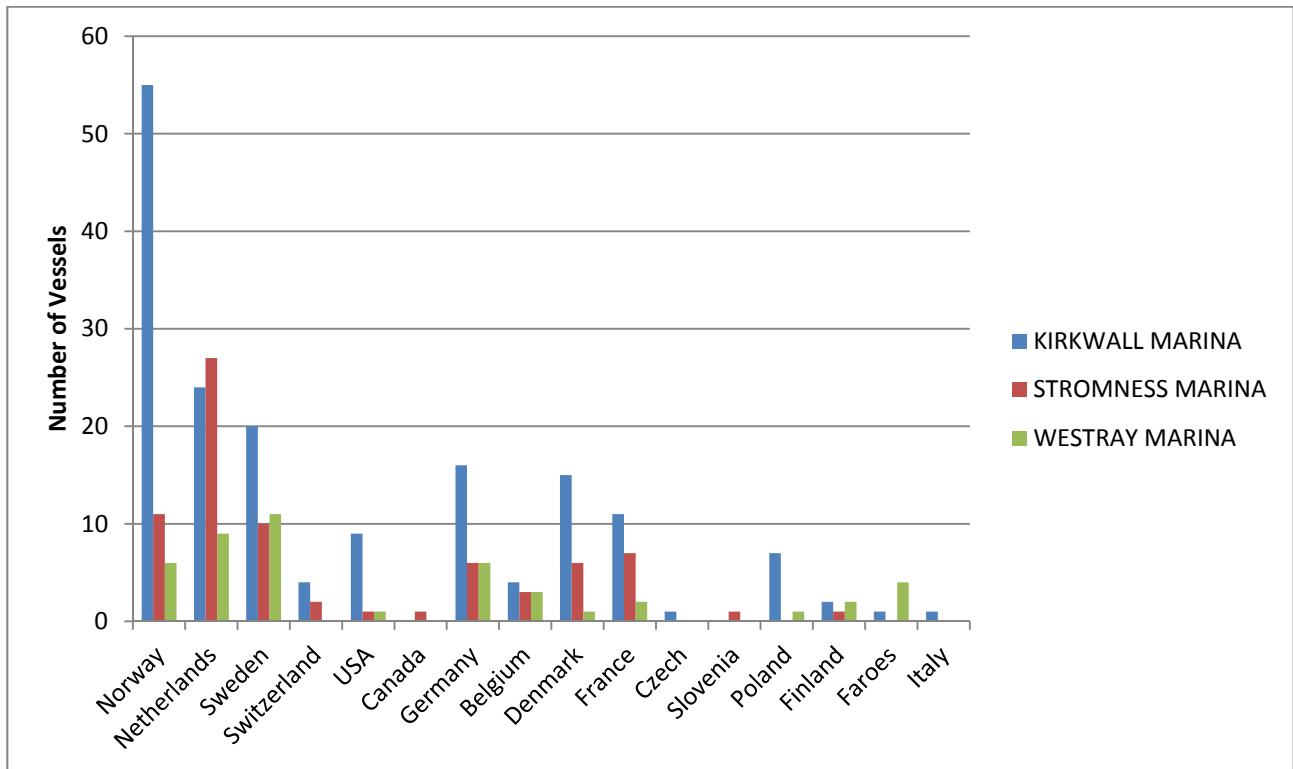
Tourism Journey

There are also a number of reports and studies on the separate aspects of the visitor's journey: from planning and booking to travel to and from and accommodation during their stay.

Prior to arrival

According to the Orkney Visitor Survey, the majority of holidaymakers are planning and booking their trip three to six months prior to their trip. With reference to the seasonality of tourism in the region, this would suggest that this period occurs between January and March. This was also found to be the case for those visiting the Highlands.

Access to information

A variety of sources of information are used prior to travelling; however, a large majority of visitors (83%) to Orkney used the internet. The most common web-based sources included local travel operators, accommodation resources and attraction information (i.e. Historic Scotland, VisitScotland, etc.). More traditional means of sourcing information still remain popular though and nearly half of all holiday visitors also use brochures and guidebooks (see Figure 2.16). Although the same level of information was not available for The Highlands, it is expected to be similar.

Figure 2.16 Sources of information for holiday visitors to Orkney (pre-visit) (Scotinform Ltd and Reference Economics, 2014)
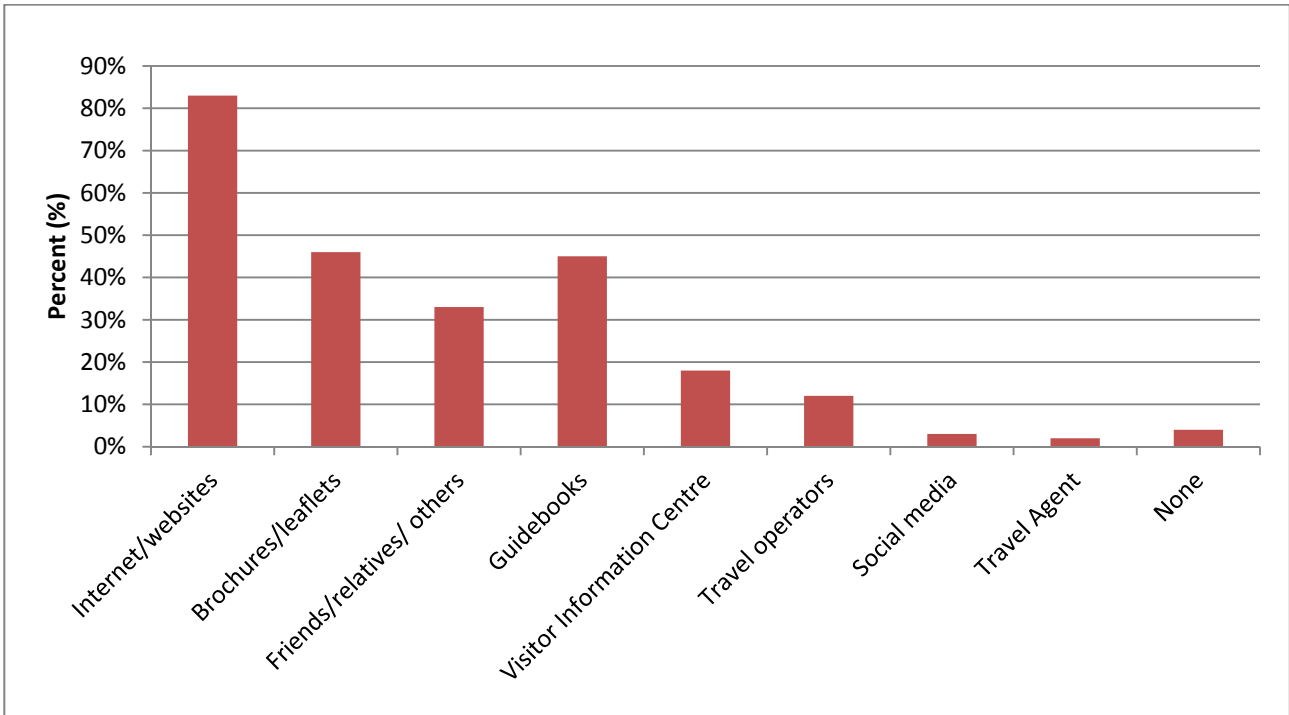
Travelling to and from Orkney, Caithness and Sutherland

According to the Orkney Visitor Survey and Kirkwall Survey report, of 140,868 visitors to Orkney in 2013, most came by ferry, with a significant number of cruise liner passengers coming ashore (Figure 2.17).

Figure 2.17 Comparison of methods of holiday travel to Orkney in 2013 (Scotinform Ltd and Reference Economics, 2014)
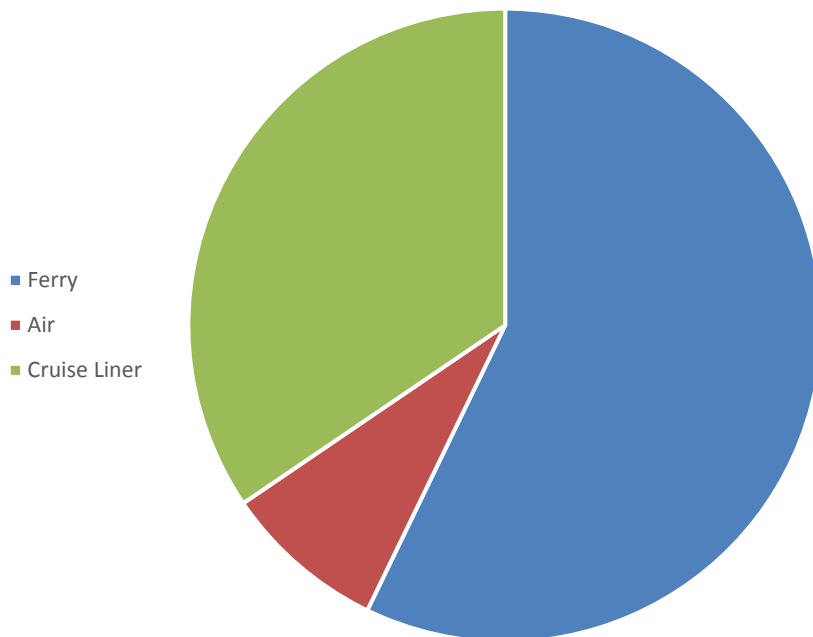
For the Highlands and Islands region in 2011, 64% arrived by car, 12% by train, 8% by plane, 6% by regular bus/coach, 3% by organised coach, and 7% by 'Other'[19]. Due to the limited air, rail and bus links in the study area, it is expected that the percentage travelling by car within the study area is much higher than in the Highlands and Islands as a whole.

The Orkney Visitor Survey and the Scotland Visitor Survey also include an investigation into how satisfied visitors were with their travel to Orkney and the Highlands respectively. A majority of visitors to Orkney reported being very satisfied with their travel be sea to Orkney, while satisfaction with air travel was lower. For the Highlands, while the majority of respondents reported being satisfied or very satisfied with travel options, 45% were less than satisfied with the cost of travel.

Some of the listed barriers to the satisfaction of visitors to Orkney included: the age of the current ferries in Orkney; the facilities on boards the ferries; the ferries are too expensive; bus times do not adequately match other services; lack of available taxis at the airport; it is difficult to access some key tourist attractions; and unsatisfactory bus maps. It was also noted for the Highlands that better transportation services would improve the visitor experience.

Economic Impact

The three main sources of economic data related to tourism that are relevant to this study are for general tourist expenditure, cruise liners and marinas. Each of these is discussed below.

Tourist expenditure

The Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Socio-economic Baseline Review (Marine Scotland 2015b) describes existing information on economic value and employment for tourism in Orkney and Caithness and Sutherland, summarising information from the Orkney Visitor Survey and the Orkney Cruise Survey as well as information from Ambitious for Tourism Caithness and North Sutherland (2011).

The Orkney Visitor Survey 2012/13 estimates that there were 142,816 visitors to Orkney during 2012-2013, including holiday visitors, those visiting friends and relatives, and business tourism. The total spend of all visitors was estimated at 31m[20].

Looking at the total value of visitors to Orkney for 2012-2013, approximately 29% was attributable to visitors from Scotland, 35% was attributable to visitors from elsewhere in the UK and overseas visitors accounted for 32%.

The Ambitious for Tourism Caithness and North Sutherland study looked at income only from accommodation providers, estimating a total expenditure from overnight tourism section of £18.3m.

A different estimate has been made by The Highland Council based on the Scottish Tourism Economic Activity Monitor (STEAM) report for the Highlands. This report estimates the following economic impact of tourism for the Highlands:

- £748m of direct expenditure
- £175m of indirect expenditure
- 21,301 jobs

---

[19] VisitScotland, 2011

[20] Scotinform Ltd and Reference Economics, 2014

For Caithness and Sutherland, the total revenue estimate is £89.85m for overnight visits. From this it has been estimated that day visits account for £5.67m and that tourism sustains 2,205 jobs in the region[21]. These figures likely overestimate the amount of spend attributable to marine and coastal tourism to some extent as they will include non-coastal areas as well as coastal, although it should be noted that the largest populations in this area reside in coastal towns and settlements.

Cruise liners

As the sea is an integral part of a cruise holiday, cruise liners have a direct connection to marine tourism. On cruise liners which called at an Orkney port in 2009, a total of 658 passengers and 121 crew members took part in exit surveys for the Kirkwall Survey Report. Of the passengers questioned, the report concluded that 94.5% came ashore at Orkney. Of this, 77% of passengers made at least one purchase, which included tours and excursions; purchases of local crafts, clothing and souvenirs; and café, bars and restaurants. Expenditures in 2007 and 2013 are compared in Table 2.6.

Currently, there is no available literature to determine the economic impact of cruise liners to Scrabster.

Table 2.6   Passenger and crew expenditure comparison (G.P. Wilde, 2013)

	2007	2013
Passenger Impact		
Passenger Numbers	23,400	38,219
Per Person Expenditure	€56.11	€69.86
Total Passenger Expenditure	€1,315,218	€2,669,979
Crew Impact		
Crew Numbers	5,040	7,400
Per Person Expenditure	€29.54	€10.03
Total Crew Expenditure	€148,881	€74,222
Total	€1,464,100	€2,744,201

Marinas

Marinas charge visiting sailors according to the length of their vessels (Table 2.7; data from Orkney Marinas, 2015). Anatec Ltd and Halcrow (2012) report that the majority of vessels at all marinas in Orkney in 2011-12 were 10-12m in length. A breakdown for different size classes for each marina is given in Figure 2.18. However, no data were available on the overall revenue from the marinas and there were no data available on the length of stay of individual vessels from which to calculate an economic contribution.

---

[21] The Highland Council (THC), 2013

Table 2.7   Orkney marinas berthing costs (Orkney Marinas, 2015)

		Vessel Length (m)							
		6	8	10	12	14	16	18	20
Length of Stay	1 Day	£12	£16	£20	£24	£28	£32	£36	£40
	1 Week	£72	£96	£120	£144	£168	£192	£216	£240
	1 Month	£180	£240	£300	£360	£420	£480	£540	£600
	6 Months	£480	£640	£800	£960	£1,120	£1,280	£1,440	£1,600
	1 Year	£600	£800	£1,000	£1,200	£1,400	£1,600	£1,800	£2,000

Figure 2.18 Vessels by length at each location (Anatec Ltd and Halcrow, 2012)
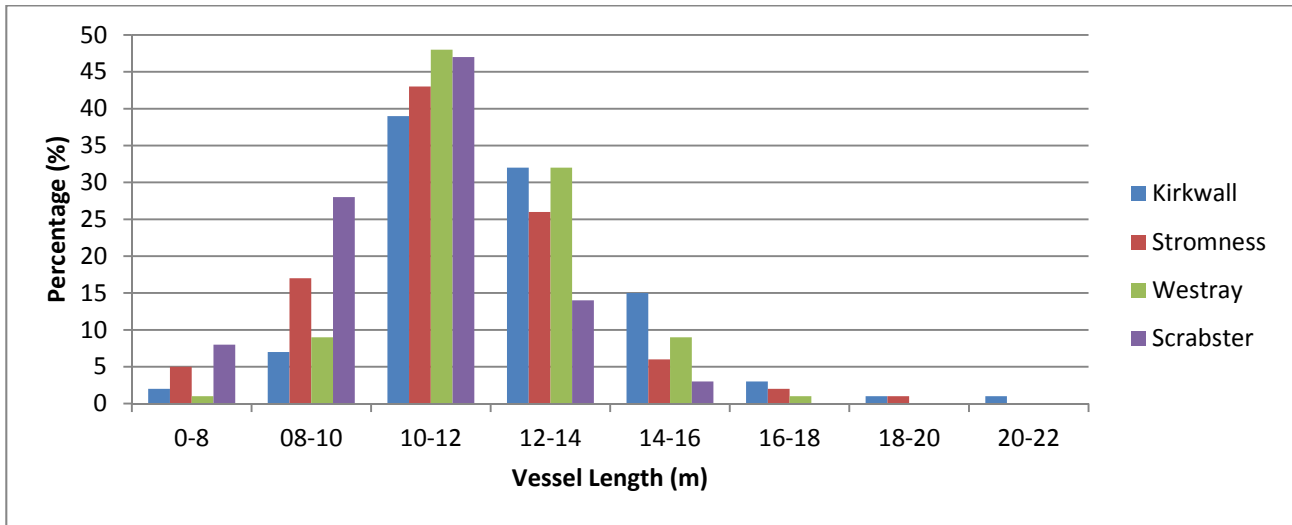
2.2.4   Data gaps and limitations

There is a reasonable level of information summarising participation in tourism for Orkney, including:

- Demographic of participants/customer profiles
- Motivations for participation or tourism
- Tourism journey – from access to information about the destination through to booking, arrival and experiences
- Participation journey – barriers and opportunities to participation
- Activity levels – when and how often do people participate
- Economic value of tourism as a whole

However it is not possible to sort out from the existing information to what extent the coastal and marine environment is a motivating factor in bringing visitors to the region and what the value of the marine/coastal experience is specifically.

There is a lack of data for the portion of the study area in Caithness and Sutherland, as this region has historically been included within the larger Highlands region when tourism data have been collected and summarised.

Nevertheless, it is clear from the documents that are available that tourism is a priority area for development for this region[22].

There was little existing information on the economic benefit of marine and coastal tourism specifically. In particular, with respect to marinas, no data were available on the overall revenue from the marinas and there were no data available on the length of stay of individual vessels from which to calculate an economic contribution. It was not possible to estimate average spend per night, broken down by activity and boat size, or the size of the potential market broken down by various nationalities. Although there was information on the economic value of cruise liners to Orkney, there was no similar information for Scrabster, although the use of this port by cruise liners is considerably less than Orkney.

Given that Orkney and Caithness and Sutherland are located in different counties, finding information that would apply to the entire PFOW region was also a challenge.

Some of these data gaps may be filled by the data collection strategy for the National Study.

2.3 RECREATION

2.3.1 Sources of information

Most data on recreation within the study area are available from the following sources of spatial information:

- Data held by the Scottish Government which is available to view on the National Marine Plan Interactive (NMPi) interactive tool (https://marinescotland.atkinsgeospatial.com/nmpi/)
- Ordnance Survey's Strategi vector dataset which has locations of various tourist attractions and recreation sites
- Data collected by Land Use Consultants as part of their study 'A Review of Marine and Coastal Recreation in Scotland'[23]

The 'Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Regional Locational Guidance'[24] and 'Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Consultation Draft: Socio-economic Baseline Review'[25] summarise some marine-based recreational activities within the study area.

There is not a large quantity of additional published information dedicated to recreation within the PFOW. The following documents were reviewed for this report:

- 'Shipping Study of the Pentland Firth and Orkney Waters' [26]
- 'A Socio-economic Methodology and Baseline for Pentland Firth and Orkney Waters Round 1 Wave and Tidal Developments'[27]
- 'A Review of Marine and Coastal Recreation in Scotland'[28]

---

[22] see Tourism Resources Company, 2011 and The Highland Council, 2013

[23] Land Use consultants (LUC), 2006

[24] Marine Scotland Science, 2015a

[25] Marine Scotland Science, 2015b

[26] Anatec Ltd and Halcrow, 2012

[27] ABP Marine Environmental Research Ltd (ABPmer) and Risk & Policy Analysis (RPA), 2012

[28] LUC, 2006

The existing spatial data are shown in Appendix A and are described further below in the relevant sections.

The 'Shipping Study of the Pentland Firth and Orkney Waters', produced by Anatec Ltd and Halcrow for Marine Scotland is predominantly focused on the commercial and recreational shipping within the PFOW strategic area. It includes a literature review of available information and details on questionnaires sent to relevant parties within the area. It outlines the results of some of these questionnaires and also analyses GIS data and AIS shipping data to highlight significant locations within the PFOW area. The majority of the data are dated from 2010 and 2011.

The report details the use of anchoring points within the area and also berths (e.g. marinas and harbours). Responses from the questionnaires also highlight the importance of certain areas for particular activities. This study provides some insights into the activities such as yachting, diving and angling and recognises the need for a separate study to investigate the level at which canoeing and kayaking, and other activities, is conducted. This report provides details on visiting yachts to the marinas and harbours in the PFOW, including nationality, sizes, intensity and seasonality.

The 'Socio-economic Methodology and Baseline for Pentland Firth and Orkney Waters Round 1 Wave and Tidal Developments' (ABP Marine Environmental Research Ltd (ABPmer) and Risk & Policy Analysis (RPA), 2012) provides a summary of some marine recreational activities including recreational boating, angling, surfing, wind-surfing, sea-kayaking, small sail boat activities and SCUBA diving, utilising various sources of information. The report provides a discussion of current economic value, location and intensity and historical and future trends.

'A Review of Marine and Coastal Recreation in Scotland' produced by LUC includes some older information on marine and coastal recreation in Scotland. This study collated existing data on the types and locations of marine and coastal recreation in Scotland and conducted an online survey using questionnaires and interactive mapping tools. The survey asked respondents to identify the types of recreational activities participated in, to indicate where these activities took place, and asked questions related to motivation and spending.

2.3.2 Summary of existing information

Introduction

The following introduces the recognised coastal and marine recreational activities that can be, and are currently, conducted in and around the PFOW region. Coastal activities have been defined as those occurring within a kilometre of the coastline. Maps displaying available spatial data on recreation are provided in Appendix A.

General recreation

General recreation may include a number of different activities, including but not limited to beach combing, beach games, rock pooling, painting, kite flying, sunbathing, artwork, picnicking, yoga, paddling, walking less than two miles, general sightseeing, fossil hunting, beach team sports, body boarding, coastal cycling, swimming and dog walking. Although these activities may occur anywhere along the coast, a beach is the usual focus for these activities. Figures A.1 and A.2 in Appendix A show the location of beaches in the study area. As there are no fees for the use of beaches in the PFOW area, there is no direct economic benefit known from participation in these activities. For the main part little information is available about these activities as they are mostly carried out by individuals rather than clubs or associations, although additional information is described below where it was available.

Picnicking facilities can be found at various locations around the coast and Ordnance Survey's Strategi vector dataset shows 18 picnic sites in Orkney and five picnic sites in Caithness and Sutherland (see Figures A.3 and A.4 in Appendix A). It is likely that these facilities are mainly used in the summer when the weather is more suitable.

General sightseeing

Specific sightseeing attractions are discussed in the review of existing data on tourism (Section 2.2.3). However this does not include the coast as an attraction in itself. Ordnance Survey's Strategi vector dataset highlights a number of viewpoints around the coast (See Figures A.35 and A.36 in Appendix A).

Sea swimming

In Orkney there is an Orkney Polar Bear Club which maintains a Facebook page. This club is known to participate in wild sea swimming activities weekly throughout the year. There is other informal sea swimming which takes place in Stromness harbour by the local swimming club and there is an annual swimming race during Stromness Shopping Week in July. A mini triathlon held in Longhope on Hoy includes a 400m open water sea swim. Recreational sea swimming has also been observed in Thurso Bay, and is likely to take place informally at other locations along the north coast. On occasion, the most recent being 2011, swimmers will attempt to cross the Pentland Firth (http://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-14112724).

Visiting Historic Sites

There are a number of sites of historic interest in the study area, including the Heart of Neolithic Orkney World Heritage Site (see Figure A.10 in Appendix A), numerous scheduled monuments (see Figures A.11 and A.12 in Appendix A), some of which are also considered Landmarks and Antiquities (see Figures A.13 and A.14), and finally Conservation Areas (Figures A.15 and A.16). These sites are often the destination of a recreational activity such as walking or cycling, and they are often the focus of tourist visits as well.

Walking

Walking is popular along the coastline and there are numerous published routes in the study area. Some of these are available to view at http://www.walkingworld.com, http://www.walkhighlands.co.uk/, http://www.scotways.com/ (specifically for Scotland's old paths and roads) and via various publications. It is likely that most of the coastline in the PFOW is used for walking on occasion (Scottish Natural Heritage, 2010).

As part of their role as access authorities, the local authorities and national park authorities have a specific duty to develop core paths. Core paths within the study area are the responsibility of Orkney Islands Council and Highland Council. These can be viewed at http://www.orkney.gov.uk/Service-Directory/C/Core-Paths-Plan-and-Maps.htm and http://www.highland.gov.uk/info/1457/tourism_and_visitor_attractions/163/paths_in_the_highlands respectively.

The 'North Highland Way' was launched in 2013 and links the Cape Wrath Trail in the west and the Moray Firth trail in the east. The challenge can be completed in different ways, with a route by road of 93 miles and a route along paths of 153 miles (usually done in 13 stages). These can be viewed at http://www.walkingworld.com/Articles/Walk-articles/North-Highland-Way.aspx and are shown in Figure A.7 in Appendix A.

A small number of clubs exist for those trekking and rambling, including the Hoy Ramblers Club; the Orkney Ramblers Club; the Caithness Waybaggers, which also occasionally covers walks in Sutherland; and the Sutherland Walkers' Group. In addition, the Field Clubs, located in Orkney and Caithness, frequently organise walks along the coast.

Horse riding

There are various riding organisations located in the study area; however it is unclear to what extent these organisations use the coastal environment. Torrisdale Pony Trekking in Bettyhill is reported to use Torrisdale Beach for horse riding. Clubs or businesses that provide horse riding events or facilities can be found in Appendix B.

Climbing, bouldering and coasteering

The Old Man of Hoy is a well-known climbing destination which attracts climbers from outside of the area every year. Indeed the coastlines of Orkney, Caithness and Sutherland provide a wealth of coastal cliffs and sea stacks to climb. Details of climbs are given in:

- Northern Highlands North Scottish Mountaineering Club Climbers' Guide. The Scottish Mountaineering Club (2004)
- UKHillwalking.com webpage dedicate to hillwalking and climbing including a page with a clickable/zoom able map showing climbs in the region selected (http://www.ukclimbing.com/logbook/map/)
- A local website intended as a guide for climbers to the sandstone sea cliffs and stacks found around the islands of Orkney (http://www.orkney-seastacks.co.uk/stacksindex.htm).

In terms of clubs for this activity, there is an Orkney Climbing Club (http://www.orkney-climbing-club.com/), but no organised climbing group in Caithness and Sutherland was identified during this study.

Coasteering is the movement along the intertidal zone of a rocky coastline without the aid of boats, surf boards or other craft. Depending on the coastline it will include swimming, climbing, scrambling, canyoning, sea level traversing, jumping and diving. There is currently no available information on coasteering along the coastlines of Orkney, Caithness and Sutherland.

Wildlife watching, bird watching and snorkelling

Wildlife watching is promoted as a tourist and recreational activity throughout the PFOW. It is particularly known for seals, whales and birds including the Atlantic puffin and other seabirds which nest abundantly on the sea cliffs in the area. There are a number of RSPB and Scottish Wildlife Trust and Local Nature Reserves as shown in Figures A.8 and A.9 in Appendix A.

There are a number of wildlife tour operators in both Orkney and Caithness and Sutherland. See Appendix B for a list of wildlife tour operators in the study area. There is no published information about income from these tours specifically.

Organised clubs in the area include both the Orkney Field Club (http://www.orkneycommunities.co.uk/FIELDCLUB/) and Caithness Field Club (http://www.caithness.org/caithnessfieldclub/). There is also an organised Snorkelling Club (http://snorkelorkney.blogspot.co.uk/) in Orkney which is centred around wildlife and has a social media presence (https://www.facebook.com/groups/371185452913250/?fref=ts).

Scotland's Bird Club (Scottish Ornithologists' Club- http://www.the-soc.org.uk/) operates across the country with branches in Orkney and Caithness.

In addition there are ranger services at various locations in Orkney, often featuring wildlife watching as an activity.

- World Heritage Site Rangers - Historic Scotland have established a Ranger Service for the Heart of Neolithic Orkney World Heritage Site. The Rangers provide information for visitors to Orkney's World Heritage Site, which includes the natural and historical landscape as well as the archaeology and culture of Orkney.
- Sanday Ranger - The Sanday Development Trust employs a Ranger for the island to promote awareness and understanding of the heritage of the island. Ranger led events may include minibus excursions, guided walks, and practical investigations involving lichens, rock pools, seashells and Storm petrels.

- Eday Ranger - The Eday Ranger, employed by the Eday Community Association, provides guided walks and general information about Eday's natural history, archaeology and heritage. Ranger led activities include regular guided walks along the Eday Heritage Trail, wildlife walks and activities such as rock pooling, beach combing and birdwatching.

In the Highland region the Countryside Rangers run many events and guided walks (http://www.outdoorhighlands.co.uk/calendar/) which aim to help raise awareness and encourage appreciation of the scenery, wildlife and heritage of the Highlands. There is a North Caithness Ranger based at Dunnet, a North Sutherland Ranger based at Bettyhill, and a Northwest Sutherland Ranger based at Durness.

Land yachting, power kiting, kite buggying

Land yachting used to be popular in Caithness in the late 60's and there was formerly a club that particularly used Dunnet Beach (http://www.caithness.org/earlypictures/sandyachtclub/). Similarly there is information on the Caithness.org website about kite buggying at Dunnet Beach that dates to around 2002 and 2003 but there is no information to suggest that this activity is currently taking place in an organised fashion.

Scuba diving

Scuba diving is a popular activity in the PFOW area. In particular Scapa Flow is recognised as within the top five dive sites around the world. The scuttled German fleet from the First World War attracts many visitors from all around the world every year. There are a number of other areas around Orkney and along the north coast of Caithness and Sutherland that are popular with divers, including shore dives, wrecks and scenic dives (see Figures A.17 and A.18 in Appendix A). A map of all shipwrecks in Scotland can be found on the RCAHMS website: http://canmoremapping.rcahms.gov.uk/index.php?action=do_advanced&maritimeevidencecode=Wreck&sitediscipline=3http://www.rcahms.gov.uk/news/shipwreck-map-of-scotland-published-as-maritime-record-enhanced.

Annually, it is estimated that diving contributes £3 million to Orkney's economy[29] with approximately 12 commercial dive boats and an estimated 3,000 visiting divers annually[30]. A list of dive boat operators can be found in Appendix B.

There are diving clubs in both Orkney and Caithness: the Orkney Sub Aqua Club (http://www.orkneycommunities.co.uk/ORKNEYSUBAQUA/index.asp) and the Caithness Diving Club (http://www.caithnessdivingclub.co.uk/) which has around 30 members.

Surfing, windsurfing and kite surfing

Surfing has a long history in the region. Surfers started visiting the north coast of Scotland over 40 years ago and in 1973 the first Scottish Surfing Championships were held at Bettyhill near Thurso. Since then, there has been numerous surf competitions focused in the Thurso area at local, national and international levels. In 2006 Thurso hosted the inaugural O'Neill Highland Open World Qualifying Series surfing competition and from 2006-2011 O'Neill sponsored an international surf contest at this location. More recently the National Surfing Championships were held here in April 2015. These surfing competitions are a source of income to the local economy. The O'Neil Coldwater Classic was estimated to contribute £440,000 to the local economy in 2010[31].

---

[29] ABPmer & RPA, 2012

[30] Marine Scotland Science, 2015

[31] ABPMer & RPA, 2012

The North Shore Surf Club (http://northshoresurfclub.co.uk/) operates along the Caithness coast, mainly out of Thurso. Though not as popular as Thurso and the North Coast, surfing does enjoy some popularity in Orkney. There is a surfing group in Orkney with a social media presence https://www.facebook.com/groups/118615381332/?fref=ts).

According to Marine Scotland (2015), surfing locations are generally located along the west coast of Orkney and north facing coasts of Caithness and Sutherland. These are listed in Table 9 of the Regional Locational Guidance[32]. Available spatial data on surfing locations are shown in Figures A.19 and A.20 in Appendix A. In addition, 'The Stormrider Surf Guide' describes surfing locations throughout Europe, including Scotland[33].

Canoeing and kayaking

Kayaking and canoeing is a popular activity within the PFOW, and there are a number of clubs in the region: The Orkney Sea Kayaking Association, Caithness Kayak Club, East Sutherland Kayak Club and the Pentland Canoe Club.

It is recognised that sea kayaking and canoeing is generally not limited to any particular locations throughout the PFOW region, beyond remaining generally closer to shore for safety reasons. Available spatial data on kayaking routes are shown in Figures A.21 and A.22 of Appendix A.

Slipways and piers may be used by canoeists and kayakers as well as other boat-based recreational activities. Slipways in the study area are shown in Appendix A in Figures A.23 and A.24 and piers are shown in Figures A.25 and A.26.

Some books describing canoeing and kayaking routes in the area include:

- 'North and East Coast of Scotland Sea Kayaking' [34]
- 'Scottish Sea Kayaking'[35]

Kayaking occurs all year round; as long as the weather conditions make it safe to do so. However, in the previously mentioned report by Marine Scotland, respondents highlight that the summer months are more favourable.

Coastal rowing

The Scottish Coastal Rowing Association was formed in May 2012 and presently there are 28 Scottish clubs who have built or are currently building a total of 50+ skiffs. Among these in the study area are Wick Coastal Rowing Club and Hoy Rowing Group. There is also a club in Kirkwall, established in 2014 where they currently row in a Shetland Yoal.

The Scottish Coastal Rowing Project was initiated by the Scottish Fisheries Museum with the aim of providing a relatively inexpensive route into the sport by using a purpose designed boat (the St Ayles Skiff) which can be built by the communities who will be rowing the boats.

---

[32] Marine Scotland 2015

[33] Sutherland, 2015

[34] Cooper, 2014

[35] Cooper and Reid, 2005

Sailing

Recreational sailing is conducted throughout the study area and is confined to the summer months for most club activities. As shown in Appendix A, RYA sailing routes cover most parts of the study area (see Figures A.29 and A.30). In particular the areas between the islands of Orkney are designated by the RYA as an RYA Sailing Area. There are a number of clubs within the region (See Figures A.31 and A.32 in Appendix A and also Appendix B), including:

- Stromness Sailing Club
- Orkney Sailing Club
- Orkney Yole Association
- Westray Sailing Club
- Longhope Sailing Club
- Holm Sailing Club
- Pentland Firth Yacht Club

Investments in infrastructure over the last decade have seen the numbers of visitors increase. In Orkney alone a number of marinas (in Stromness, Kirkwall and Westray; see Figures A.27 and A.28) have been constructed and therefore there has been a large increase in the number of berths available for visiting vessels (see Section 2.2.3).

Sail Orkney is a charter company operating Bareboat and Skippered Charters from its base at Kirkwall Marina (http://www.sailorkney.co.uk/).

A number of regattas are organised by the various club throughout the summer as shown in Table 2.8.

Table 2.8   Timing of sailing regattas in the study area

Regatta	Location	Month
RFYC Granton Race	Orkney waters/Kirkwall, Orkney	June
Round Gairsay - Yacht Race	Gairsay, Orkney	June
Midsummer regatta	Thurso, Caithness	June
Convoy Cup Race	Orkney waters/Kirkwall, Orkney	July
Longhope Regatta	Hoy, Orkney	July
Stromness Regatta	Stromness, Orkney	July
Westray Regatta	Westray, Orkney	July
Kirkwall Regatta	Kirkwall, Orkney	August
Holm Regatta	Holm, Orkney	August
Round Shapinsay	Shapinsay, Orkney	August
Kemp Cup Regatta	Kirkwall, Orkney	September

Angling

The study by Radford et al. (2009) provides a good summary of recreational angling in Scotland that has been broken out by region. Orkney is included regionally with Shetland, and northern Caithness and Sutherland are included in the Northern Scotland region. Cod, pollack, ling and mackerel are the most commonly fished species in the study area.

Porbeagle is another species that is fished more popularly in Northern Scotland. In Orkney, conger eel is fished among the wrecks. Skate is also found in the area and is the target of some chartered fishing. The current British halibut and common skate records are from Orkney waters.

Fishing and angling clubs in the study area include Orkney Trout Fishing Association and Orkney Island Sea Angling Association in Orkney and Caithness Sea Angling Association; St Clair, Castletown and Caithness Fishing Club; and Thurso Angling Association in Caithness. No successful contacts were made with the clubs in Caithness, so it is unclear if they are still in operation.

Orkney Trout Fishing Association is a non-profit making voluntary body dedicated to the preservation and enhancement of game fishing throughout the Orkney Islands. Its focus is mainly on the trout fishing lochs in the county.

Orkney Islands Sea Angling Association runs sea angling competitions from May to October. They also operate their own boat "M.V.Welcome Home" which can be hired out.

In 2009, a study was published on the Economic Impact of Recreational, Sea Angling in Scotland[36]. This study used a variety of methods including an omnibus telephone survey, an internet questionnaire of sea anglers, a stakeholder survey, an on-site survey and interviews with suppliers. In this study, annual sea angler expenditure in Northern Scotland has been estimated at £11.2m and in Orkney and Shetland at £6.1m. Income from jobs has been estimated at £5m for Northern Scotland and £2.5m for Orkney and Shetland[37]. This estimate has been greeted with some scepticism locally in Orkney as seeming high, so it may be that the assumptions behind these numbers may need to be examined more closely and the findings used with caution.

Chartered fishing trips

There are a number of companies offering boat charters for both fishing and wildlife watching/scenic boat trips. In addition some of the diving boats can be chartered for fishing trips when they are not busy with diving trips. Charter companies are listed in Appendix B. Boats that can be chartered are also listed in Appendix B.

Other

A number of other recreational activities occur in the study area, such as water skiing, wakeboarding, small craft, motor cruising, power boating and personal watercraft. However, these are usually undertaken by individuals rather than organised clubs, and little information was available.

No evidence was found that paddle boarding occurs in the study area. There are no canals in the study area.

National Cycle Route 1 is a long distance cycle route connecting Dover and the Shetland Islands and passes through the study area travelling on coastal roads between Tongue and John O' Groats, and across to Orkney and then along mainly coastal roads between Burwick on South Ronaldsay and Stromness, via the coast around West Mainland of Orkney (see Figures A5 and A6 in Appendix A). This National Cycle Route also forms the majority of the British section of the North Sea Cycle Route, EuroVelo 12, which links Britain to other countries that share a coastline on the North Sea.

---

[36] Radford et al, 2009

[37] Ibid.

Camping

There are a number of caravan and camping sites throughout the study area which are close to the coastline as listed in Appendix B and shown in Figures A.36 and A.37.

Access rights put in place by the Land Reform (Scotland) Act mean that in Scotland wild camping is legal as long as it is undertaken responsibly. The Scottish Outdoor Access Code provides guidance on wild camping.

No data on income from campsites in the PFOW were available for this study.

2.3.3 Data gaps and limitations

There is fairly good existing information on the spatial location of a number of recreational activities, including SCUBA diving, surfing, angling and walking. However, for a number of other activities, information was sparse or lacking altogether. Very little information is available on informal activities, such as dog walking or picnicking, which are classified as general recreation. The intensity and frequency of most activities is also unknown.

Outside of the estimates made in the Pilot PFOW Marine Spatial Plan Consultation Draft: Socio-economic Baseline Review (Marine Scotland Science 2015b), little information was available on the economic benefit or other value of recreational activities in the region specifically.

3 DATA COLLECTION

3.1 INTRODUCTION

The objectives of the data collection part of the study were twofold.

In the first instance, there was a need to provide information on marine tourism and recreation activities to inform preparation of the PFOW Pilot Marine Spatial Plan. A key output from the pilot study is intended to be more comprehensive and accurate spatial mapping of marine recreation provision and activity, an understanding of the economic importance of the sector, and better information about the interaction between tourism and recreation and other policy areas and sectors.

A second objective of the pilot study was to test the approach being developed for the national survey of marine tourism and recreation and refine the methodology that underpins the national survey.

The specific data to be collected by the study was outlined in the tender document, and included:

- Participation data: who is participating in marine tourism and recreation and why
- Activity levels - when and how often do people participate
- Spatial information: locations of facilities and service providers, areas of interest, interchange points and routes, participating boat specifications, etc.
- Economic information: Breakdown of the economic benefit

3.2 OVERVIEW METHODOLOGY

While the National Survey will be based on an online survey, the methodology for the web-based approach was not developed at the time of the pilot study. Therefore, the approach for the pilot study involved distributing paper surveys and maps through a series of workshops and targeted contacts and interviews.

Initially, a list of stakeholders was developed and agreed with Marine Scotland. This list was then the basis for targeting invitations to workshops and follow up interviews and contacts.

A preliminary questionnaire was developed by our partners at LUC and this questionnaire was then refined following input from the Steering Group. Although developed for a web-based survey, the questionnaire was modified to be used in paper form at the workshops for the pilot study.

Workshops were held in Thurso and Kirkwall, and following these a series of direct contacts were made with targeted stakeholders through the PFOW area to cover gaps in information.

Each of these stages is described in more detail below.

3.3 STAKEHOLDER LIST

A preliminary list of potential stakeholders for the study was derived from stakeholder lists used in other studies in the PFOW area. Additional lists of stakeholders maintained by Marine Scotland and other members of the Steering Group were then compared with this list and any missing stakeholders were added and information was updated as appropriate. A search for additional relevant contacts was made through an internet search for existing groups

involved in recreation and/or tourism in the PFOW area that were specific to the list of activities developed for the study.

Some of the key sources of information included:

- Welcome to Scotland (http://www.welcometoscotland.com)
- VisitScotland (http://www.visitscotland.com)
- ALISS (http://www.aliss.org/) (A Local Information System for Scotland)
- Caithness Business Index (http://caithness-business.co.uk/) and Sutherland Business Index (http://sutherland-business.co.uk/)
- Facebook pages provided up-to-date information for many interest groups and activity-based clubs
- Individual websites
- Regional guidebooks
- Local knowledge

The stakeholder list is included in Appendix B and is separated by activity groups and providers.

3.4 QUESTIONNAIRES

A preliminary questionnaire for use with the PFOW pilot study was developed and agreed with the Steering Group. This questionnaire can be found in Appendix C. A number of refinements were made to an initial questionnaire in order to ensure that the questionnaire was not too long, which limited the type and amount of information that could be collected in the survey.

The final questionnaire contained 30 questions relating to the types and frequency of recreational activities participated in, motivation, spend and demographic information such as age, gender and ethnicity. In addition to this survey, designed to be completed by individuals (as 'recreation users'), a separate questionnaire was designed for use with coastal and marine recreation and tourism providers. This business questionnaire can also be found in Appendix C. It asked respondents to describe the types of activities that they offer, to describe the demographics of their clientele, what parts of the marine and coastal environment that they use, and general information on business trends.

3.5 WORKSHOPS

Two workshops were held for the purpose of collecting data on use of the coastal and marine environment using the questionnaires described above and also using maps to collect spatial data on the locations of recreation and tourist activities. These workshops were also used to trial the questionnaires.

The week targeted for these workshops by the Steering Group was the week of 16 March 2015. The first workshop was held on 16 March, 2015 at Caithness Horizons in Thurso and the second on 17 March, 2015 at the Ayre Hotel in Kirkwall. Both workshops had an afternoon (2-5pm) and an evening (6-9pm) component.

Email invitations were sent to the contacts on the stakeholder list, and posted to those without email addresses. A few days prior to the workshops, follow up phone calls were made to selected contacts who had not replied to the email. The workshops were also advertised through a press release to local newspapers and radio stations, and through posters distributed throughout mainland Orkney and in Caithness between Wick and Melvich.

Prior to the workshops in Thurso and Kirkwall, an internal workshop was held at the Aquatera office in Stromness for the purposes of trialling the methods and gathering additional data. Twelve people attended this workshop and completed questionnaires and maps for the survey. They also provided feedback that allowed the questionnaire and maps to be refined prior to the other workshops.

3.5.1 Workshop locations

The PFOW is a rural and dispersed area. While the majority of the population of Orkney lives on the Mainland, and in particular in the town of Kirkwall, the population living on the northern and southern isles was not targeted for a specific workshop. Due to the nature of islands and the dispersed population, a centralised workshop would be unlikely to reach more than the immediate population of an area. It is beyond the scope of the PFOW pilot study, and the National Study as well, to conduct intensive workshops in every community. For this reason, in Orkney, Kirkwall was selected as the location for the workshop, being the centre of government and having the largest population and therefore the best opportunity for reaching a variety of recreational and tourist interests.

Similarly, in the North of Scotland, the PFOW study covers an area of some 145km by road between Durness and John O' Groats. The area is very sparsely populated with small villages and settlements dispersed along the coastline. Thurso was selected as the most reasonable place for a workshop, as having largest centre of population in the area. As with Orkney, it was felt that a workshop at one of the outlying areas would be likely to only reach the immediate local population. This was confirmed by some of the workshop participants. Therefore, following the workshop in Thurso, it was decided to approach data collection in this area by a more targeted approach (see Section 3.6).

3.5.2 Workshop agenda

At the workshops, maps were displayed showing existing information on tourism and recreation activities (see Appendix A). Participants were asked to complete the questionnaire as well as to show on blank OS or Admiralty chart maps places in the coastal and marine environment that they used for leisure activities. Each participant's completed questionnaire and map were linked together. At the end of each workshop, participants were asked to discuss the following:

- the strengths and opportunities of marine and coastal recreation and tourism
- weaknesses and threats of the marine tourism and recreation sector in PFOW
- gaps in provision
- conflicts and
- any feedback on the process including the mapping exercise and the questionnaires

3.5.3 Participation

The timing of the workshops in March prior to the Easter holiday meant that there were few tourists in the area and therefore the workshops were attended by local people only.

Ten people attended the workshop in Thurso: four at the afternoon session and six attended the evening session. Those attending represented the following groups or organisations:

- CVS North
- Highland Council Ranger
- Melness & Tongue Community Development Trust

- Pentland Firth Yacht Club

- Pentland Canoe Club

- Pentland Lodge House (tour operator)

- Tourist Office John O' Groats

- Three local people representing surfing in particular, and other recreational activities

Fifteen people attended the workshop in Kirkwall: ten in the afternoon session and five in the evening session. Those attending represented the following organisations and interests:

- Kirkwall Small Boat Owners Association

- OIC Sport & Leisure Service

- Orcadian Wildlife Tours

- Orkney Adventures (tour operator)

- Orkney College

- Orkney Field Club

- Orkney Islands Council

- Orkney Marinas

- Orkney Sea Kayaking Association

- Orkney Sub Aqua Club

- Orkney Trout Fishing Association

- Royal Society for the Protection of Birds (RSPB)

- Royal Yachting Association

- VisitScotland

- Wind Surfing and surfing interests

- General public

3.6 INTERVIEWS AND FOLLOW UPS

Following the Kirkwall and Thurso workshops, a number of stakeholder groups were identified that had not been able to attend the workshops, but who represented interests or activities for which there were gaps in the data. Additionally, a list of stakeholders considered local knowledgeable experts was obtained in the area between Bettyhill and Durness, which was not targeted for a specific workshop. Emails were sent to these targeted contacts, and follow up interviews were scheduled or questionnaires and maps were posted where the stakeholders indicated they preferred that to an interview.

Table 3.1 below lists the successful follow up contacts that were made. In total, an additional 16 contacts were made in Caithness and Sutherland and 11 questionnaires returned from these contacts. In Orkney, an additional eight contacts were made and seven questionnaires returned.

Table 3.1   Post workshop targeted contacts and interviews

Area	Organisation or Contact	Nature of follow up	Feedback
Caithness and Sutherland	Caithness Waybaggers	Sent questionnaire and maps through the post	Questionnaire and map completed
Caithness and Sutherland	Caithness Field Club	Interview	Questionnaire and map completed
Caithness and Sutherland	Local contact from Skerray	Interview	Questionnaire and map completed
Caithness and Sutherland	Local contact from Durness	Sent questionnaire and maps	Questionnaire completed; email list of activities sent (no map)
Caithness and Sutherland	Local contact from Bettyhill	Sent questionnaire and maps through the post	Questionnaire and map completed
Caithness and Sutherland	Local contact from Melness/Talmine	Sent questionnaire and maps	Sent information back via email
Caithness and Sutherland	Smoo Cave tours	Sent questionnaire and maps through the post	Business questionnaire and map returned
Caithness and Sutherland	Cape Wrath Minibus	Sent questionnaire and maps through the post; not returned	Not returned
Caithness and Sutherland	Caithness Diving Club	Sent questionnaire and maps	Questionnaire and map returned
Caithness and Sutherland	Durness Visitor Centre	Sent questionnaire and maps through the post	Not returned
Caithness and Sutherland	General public in Halkirk/Skerray/Bettyhill	Nine questionnaires and maps sent	Three questionnaires and one map returned
Caithness and Sutherland	Sutherland Walking Club	Sent questionnaire and maps	Not returned
Caithness and Sutherland	Wick Coastal Rowing Club	Initial contact made	No postal address supplied for questionnaire
Caithness and Sutherland	Sutherland Walking Club	Sent questionnaire and maps	Not returned
Orkney	Orkney Shore Angling Association	Interview	Questionnaire and map returned
Orkney	Orkney Rowing Club	Sent questionnaire and maps	Questionnaire and map returned
Orkney	Orkney Island Sea Angling Association	Interview	Questionnaire and map returned
Orkney	Orkney Ramblers Club	Sent questionnaire and maps	Questionnaire and map returned
Orkney	Orkney Polar Bear Club	Sent questionnaire and maps	Questionnaire and map returned
Orkney	Scapa Flow Charters	Interview	Questionnaire and map returned
Orkney	Orkney Marinas (David Bowdler)	Interview	Questionnaire and map returned
Orkney	Orkney Climbing Club	Interview	Map completed but questionnaire not returned

4 DATA ANALYSIS

4.1 INTRODUCTION

This chapter reports on the feedback received from the workshops and discusses the types of spatial data provided. GIS maps compiled for the study are provided in Appendix D. In addition, the results of the questionnaire are briefly summarised. A detailed summary of all responses is provided in Appendix F. In Chapter 5 the results are discussed in the context of the overall objectives of the study.

4.2 WORKSHOPS

4.2.1 Feedback

This section covers the discussions with stakeholders that were held at the end of each workshop. A complete list of the feedback can be found in Appendix E.

Strengths

The strengths for marine and coastal tourism and recreation that were listed for both sides of the Pentland Firth included:

- scenery
- wildlife
- good access
- freedom in terms of opportunities and access

For Orkney, archaeology in particular was also noted as a strength, as well as the size and diversity of the coastline. There seemed to be a fair degree of satisfaction with the way things are. For Caithness and Sutherland, particular strengths that were noted included scenery, lack of commercialisation, abundance of attractions and challenging recreational opportunities.

Weaknesses

In terms of weaknesses, the area has a short season, which means there can be crowding in areas during the season. The weather is a limitation for some recreational activities. A lack of signage and a shortage of facilities were also noted.

For Orkney, the cost of travelling to Orkney was noted as a weakness, while in Caithness and Sutherland it was noted that public transport is limited and that there is a lack of organised activities and a perceived bias by tourism organisations to direct people to larger population centres.

Gaps in provision

Notable gaps in provision included:

- toilet, changing and shower facilities
- access to drinking water
- slipways
- parking

- signage
- cafes
- facilities for boat maintenance in Orkney
- harbour space for small boats at Scrabster

Conflicts

There are some conflicts between users of the coastal and marine areas, but this did not seem to be of high concern amongst the people interviewed. Some existing conflicts noted included conflicts between recreational users and wildlife, occasional conflicts with landowners over access, conflicts with creeling, and potential future conflicts with renewable energy developments.

Other feedback

The workshops also provided an opportunity to trial the questionnaire, and useful feedback was received that has been used in refining the questionnaire for use in the national study.

Participants also noted other sources of information for recreational activities and provided a sense check of the existing information that was provided, providing clarification and pointing out errors.

Participants in the Thurso workshops pointed to the North Highland Initiative, which is a partnership between the farming community, local businesses and the tourism industry to try to address some of the challenges facing rural communities in the far north of Scotland by creating a powerful regional identity for the area through project management and marketing. A key project of this initiative is "The North Coast 500," a northern coastal route way designed to attract visitors to the Northern Highlands running from Inverness to the Kyle of Lochalsh on the West Coast, via the north coast.

4.3 ANALYSIS OF QUESTIONNAIRE RESULTS

4.3.1 Introduction

A total of 58 questionnaires were returned, including 36 from Orkney (62%) and 22 from Caithness and Sutherland (38%). In addition to the 12 completed as part of the trial at Aquatera, 28 questionnaires were completed at workshops and 18 additional questionnaires were returned from the follow up targeted contacts.

It became apparent in analysing the results that some questions weren't clear to the respondents. As a result, there are fewer responses for some of the questions than for others. This was particularly the case for Question 9 (How many of the following types of visit did you make to the coast for these activities during the past 12 months?) and for Question 19 (How many people were in your party?). For Question 9, 20 respondents put a number of trips per year (the correct response) and the rest (36) ticked the relevant categories. For Question 19, most people incorrectly assumed that the numbers for each category were the number of people in the party rather than the age group. As a result, we did not summarise the results for this question.

In addition, many of the respondents felt that the way the questions were worded didn't particularly make sense to people who are living on the coast. Prior to the workshops, an additional question was added asking people to say how far they lived from the coast so that proximity to the coast could be taken into account in the analysis. All but one of the 46 respondents who were asked how closed they live to the coast lived within five miles of the coast, with 87% of these living within one mile of the coast.

Appendix F provides a detailed analysis for all questions. A summary of this analysis is provided below. For all the graphs provided below, responses are shown in number of respondents unless otherwise stated.

4.3.2 General participation

In the first part of the questionnaire, respondents were asked to tick boxes for all activities that they participate in and then asked to choose three of those activities about which to answer more detailed questions.

Activities

A number of different recreational activities were engaged in by the respondents, with the most popular activities overall being general recreation, visiting historic sites and walking. Fifty percent of all activities engaged in by respondents included these pastimes. While many respondents listed tourism activities as one of the activities participated in, very few included it as one of the top three activities. Other popular activities include bird and wildlife watching, canoeing and kayaking, sailing and angling. Figure 4.1 below shows the distribution of the types of recreation undertaken over the past year by the respondents.

Figure 4.1   Types of recreation undertaken in the past 12 months
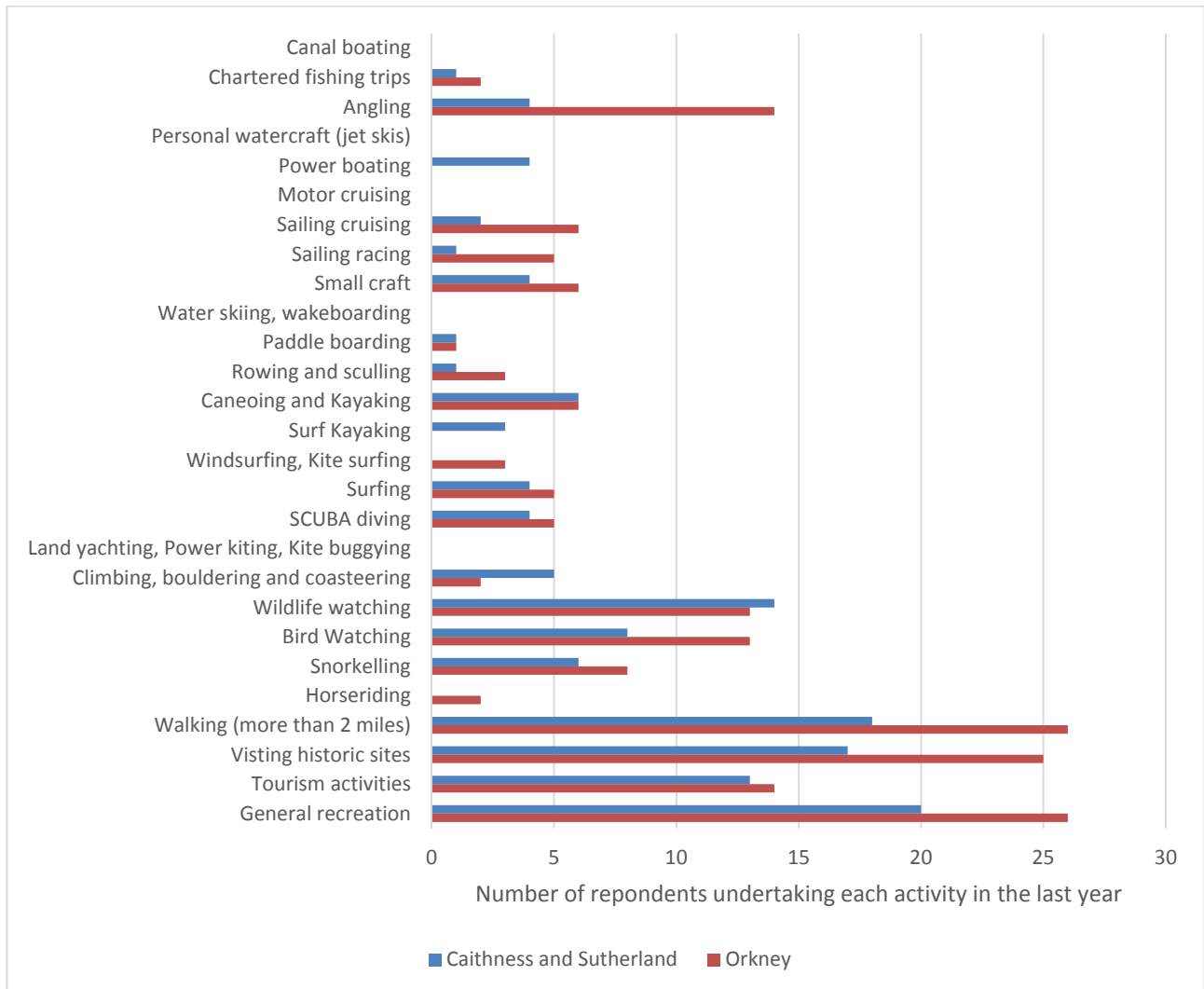
Number of respondents = 58

Tourism journey

People's own knowledge of the Scottish coast was the primary source of information used by people in deciding where to go across most activities, with word of mouth being the second most popular response. Websites and guidebooks were also used frequently, and clubs and associations were important sources of information for some activities, particularly sailing. A number of respondents pointed out that the physical conditions of a site and the weather are also important considerations when deciding where to go on a given day. The availability of facilities such as car parking or harbour facilities was also a key consideration.

Question 4 dealt with motivations for deciding where to go (as opposed to motivations for participation in a more general sense). The responses here were varied. Wildlife was noted most often, and was particularly motivating for walking, general recreation, wildlife watching, snorkelling, diving and angling. Historic and cultural heritage was also a motivation for walkers as well as those specifically visiting historic sites. The distance from home and ease of access was an important determinant for all of the activities mentioned. The presence of other facilities such as shops, cafes or pubs was also an important motivation for where people chose to participate in leisure activities.

In addition to these motivations, others mentioned included underwater geography, subsea characteristics, coastline geography, car parking, harbour facilities, weather and the quality of surfing breaks on a particular day.

A large majority of respondents owned their own equipment, and a number noted that the question was not applicable to their chosen activity as no equipment was required.

Cars and walking were the main means of transport used for getting to the coast, while public transport was noted as a means of transport in only three instances (out of 148 total responses).

Activity levels

People visited the coast to undertake activities fairly frequently, with the most common responses being once a month or at least once a week. A number of activities were engaged in most days, especially general recreation and walking, but also including visiting historic sites, birds and wildlife watching, running and cycling, diving, surfing and sailing (see Figure 4.2).

Figure 4.2   Frequency of activity participation
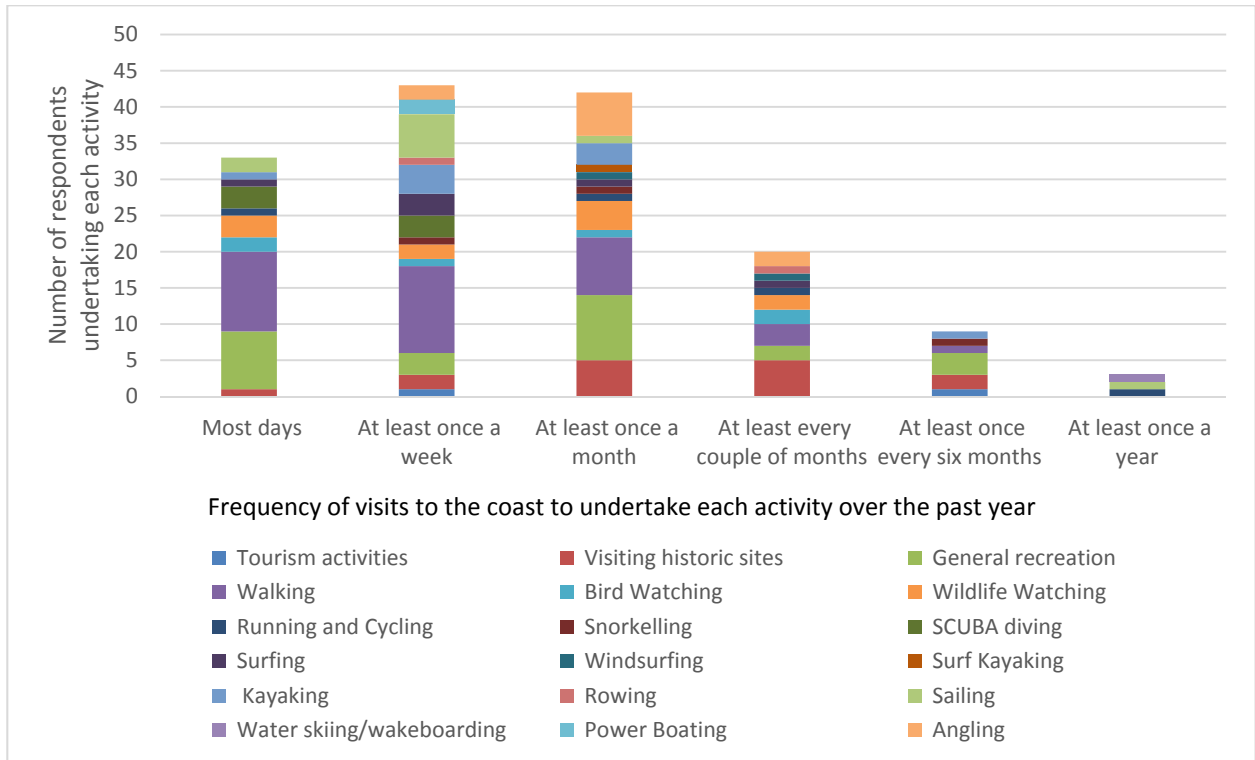
Number of respondents = 55

Recreational activities were also spread out over the seasons. Although most activities were undertaken in spring and summer, a lot of activity was also noted during autumn and winter. Walking and general recreation, the most common responses, were spread evenly throughout all seasons. A few of the activities that were noted by few respondents including windsurfing and surf kayaking, were noted as taking place only in spring and summer. However the sample sizes are low and it is likely that these activities also occur occasionally at other times of year (see Figure 4.3).

Figure 4.3   Seasonality of participation
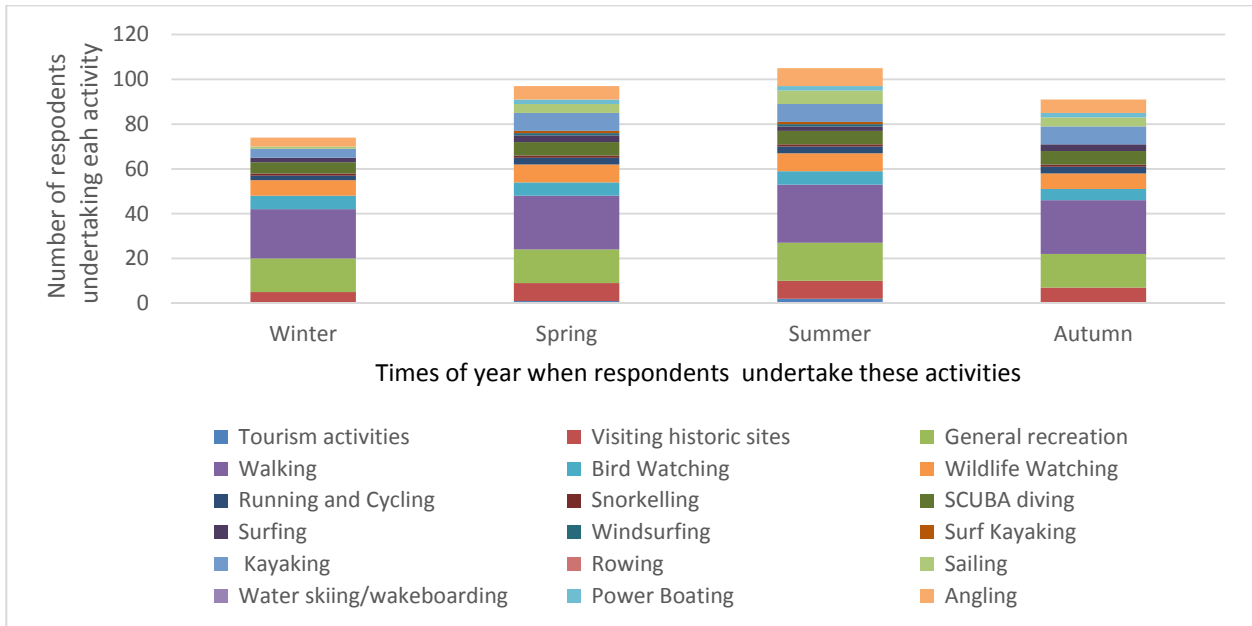
Number of respondents = 40

Most activities were reported as being day trips, with an average of 28 day trips, three short breaks and two long breaks being reported. Longer breaks were associated with visiting historic sites, general recreation, walking, wildlife watching, running and cycling, windsurfing, sailing and angling.

Respondents reported spending an average of four hours per activity, with a range of one to six hours. Only eight activities were reported for trips of a day or more: tourism, visiting historic sites, walking, wildlife watching, bird watching, kayaking, rowing and sailing, with sailing being the only activity for which participants reported spending more than one day, with an average of 3 days per visit.

Issues and concerns

Parking and visitor facilities were noted as the main things that could be improved to make trips easier and more enjoyable, with parking noted in particular for walking, general recreation, surfing, kayaking and visiting historic sites, and visitor facilities noted particularly for walking and general recreation. Transport, signage, and online information were also noted as issues for walking. Accommodation was not a limiting factor, presumably because the majority of recreation is taking place as day trips.

4.3.3   Economic information

A number of those questioned did not answer the questions related to how much they spent on activities. This lack of response may be related to a discomfort with providing this information, with not having the information to answer, or possibly with a feeling that the question was not relevant to their activities. Of those that did answer, the average spend per trip and per year is shown in Figure 4.4 and Figure 4.5 below.

Figure 4.4   Amount spent during last trip to the coast

Activity	Average of responses						Total of averages for each activity	No of responses
	Transport	Accommodation	Food	Entrance fees	Hire of equipment	Other		
Visiting historic sites	£13	£13	£10	£4	£0	£0	£40	11
General recreation	£1	£1	£1	£1	£20	£0	£23	20
Walking	£7	£8	£8	£0	£0	£9	£31	26
Bird watching	£11	£0	£3	£0	£0	£13	£26	4
Wildlife watching	£21	£20	£17	£0	£0	£0	£58	7
Running and cycling	£5	£10	£10	£0	£0	£0	£25	3
Snorkelling	£0	£0	£0	£0	£0	£0	£0	2
Scuba diving	£57	£25	£26	£0	£0	£6	£114	2
Surfing	£0	£0	£0	£0	£0	£0	£0	5
Windsurfing	£1	£0	£0	£0	£0	£0	£1	2
Surf kayaking	£5	£0	£0	£0	£0	£0	£5	1
Kayaking	£61	£14	£15	£0	£0	£65	£155	7
Rowing	£28	£0	£5	£0	£1	£4	£37	2
Sailing	£0	£0	£14	£0	£1	£0	£16	7
Water skiing/wakeboarding	£0	£0	£0	£0	£0	£0	£0	1
Angling	£1	£6	£9	£21	£50	£0	£88	8
Average for category	**£13**	**£6**	**£7**	**£2**	**£5**	**£6**	**£618**	**108**

Number of respondents = 42

Note: If they responded not applicable we assigned a value of £0 for that category

The average spend per trip for activities varied from £0 (for snorkelling, surfing and water skiing/wakeboarding) to over £200 (scuba diving and kayaking). Transport tended to be the item involving the highest spend.

Figure 4.5   Amount spent per year on recreational activities

Activity	Average of responses					Total of averages for each activity	No of responses
	Average of Equipment	Average of Storage	Average of Memberships	Average of Insurance	Average of Other		
Visiting historic sites	£0	£0	£21	£0	£0	£21	9
General recreation	£64	£11	£3	£0	£1	£79	19
Walking	£44	£2	£4	£2	£0	£51	25
Bird watching	£0	£0	£10	£0	£0	£10	4
Wildlife watching	£44	£0	£0	£0	£0	£44	9
Running and cycling	£50	£0	£0	£0	£0	£50	3
Snorkelling	£73	£0	£0	£0	£0	£73	3
Scuba diving	£833	£0	£93	£0	£100	£1,027	3
Surfing	£180	£0	£4	£0	£220	£404	5
Windsurfing	£500	£0	£0	£75	£0	£575	2
Surf kayaking	£1,000	£0	£75	£200	£0	£1,275	1
Kayaking	£433	£0	£50	£37	£0	£520	6
Rowing	£0	£0	£13	£0	£13	£25	2
Sailing	£1,005	£150	£284	£325	£0	£1,764	8
Water skiing/wakeboarding	£0	£0	£0	£0	£0	£0	1
Power boating	£1,000	£0	£0	£0	£0	£1,000	1
Angling	£211	£0	£20	£111	£444	£787	9
Average	**£320**	**£10**	**£34**	**£44**	**£46**	**£453**	**110**

Number of respondents = 42

The average spend per year on activities varied from £0 to £1,764. Activities involving a spend more than £1,000 per year included scuba diving, surf kayaking, sailing and power boating. For these activities, the highest amount was spend on equipment. Many activities involved a spend of less than £100 per year.

Most respondents reported spending the same on activities as in previous years, though some reported spending more and slightly fewer spending less.

4.3.4   Information on last trip to the coast

Respondents were then asked some specific questions related to their last trip to the coast. Walking following by general recreation and visiting historic sites were noted as the most common activities participated in during the last trip to the coast. Eighty percent of these trips were day trips, with 10 percent short breaks and a further 10 percent long breaks. Because most of these trips were day trips, no visitor accommodation was used. Most people were by themselves or with family and/or friends, although 26% reported being with club members (see Figure 4.6).

Figure 4.6   Who people visited the coast with
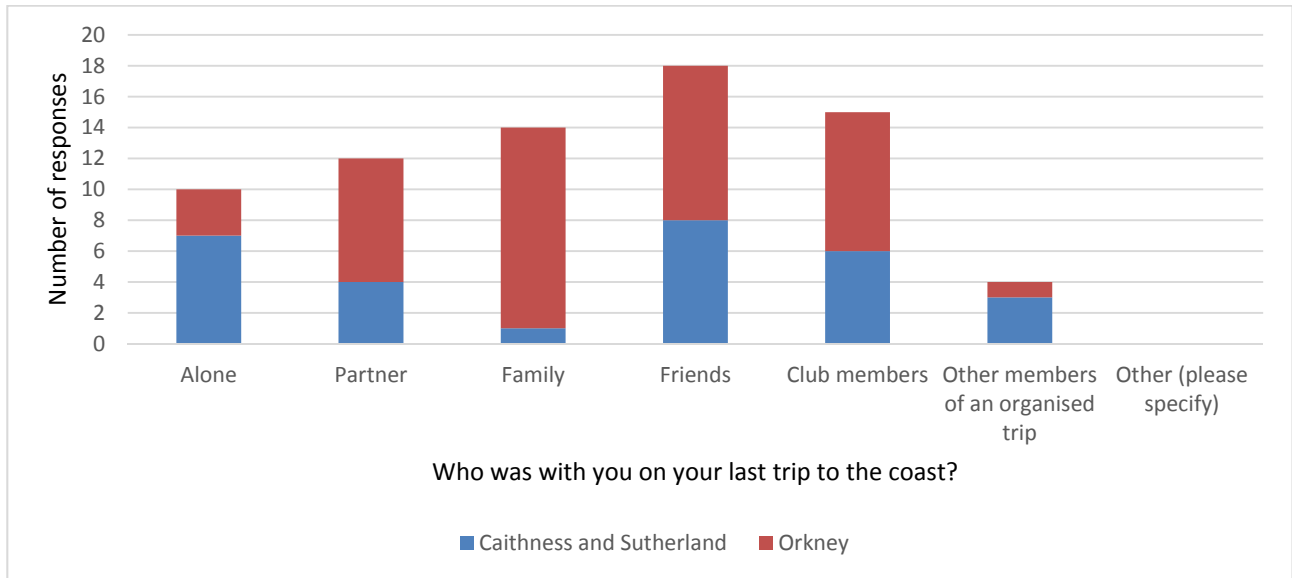
Number of respondents = 57

4.3.5   Club membership and awareness

Participants were asked about their awareness of codes of conduct and membership of local clubs and national organisations. Seventy-one percent of respondents were aware of codes of conduct. Sixty-one percent of respondents were members of a local club supporting their activity and 46% were members of a national organisation.

4.3.6   Demographic of participants

Sixty-four percent of the respondents were male and 36% were female.

Approximately half of the respondents (51%) were between 45 and 65 years of age, with only one respondent between 16-24 and seven respondents in the over 65 age group.

Figure 4.7 displays the distribution of age and gender of the completed questionnaires.

Figure 4.7   Age and gender distribution of respondents

	16-24	25-34	35-44	45-65	65+
Female		2	6	9	2
Male	1	6	4	18	5

■ Female ■ Male
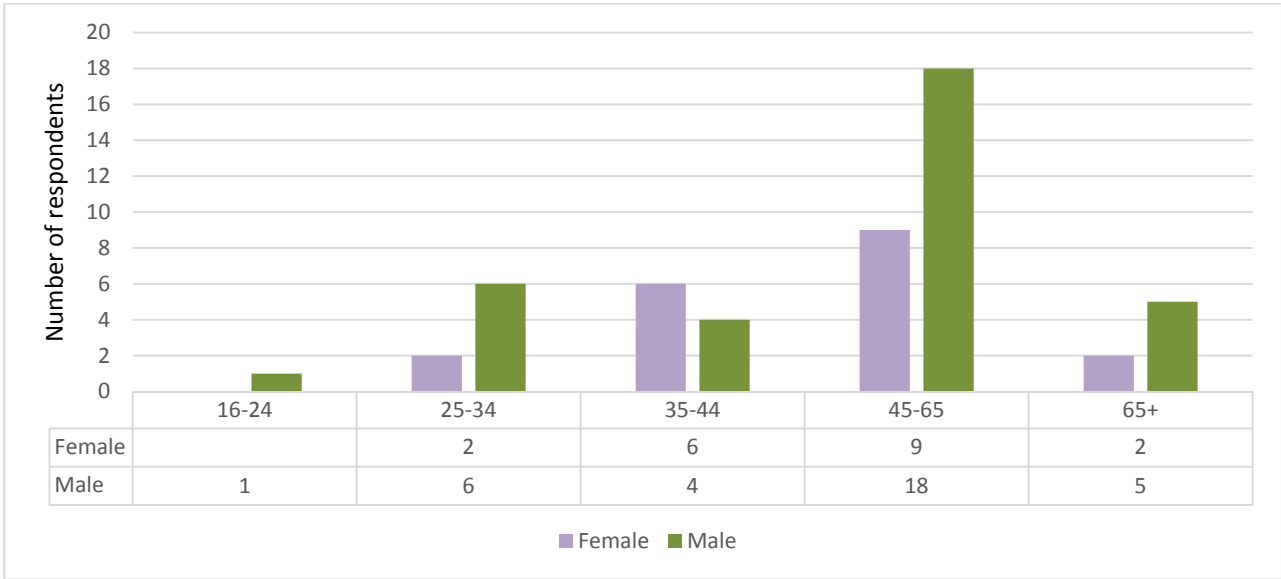
Number of respondents = 53

A large majority of the respondents were Scottish (35%) with 15% reporting other British and 3% from other ethnicities.

Twenty-nine percent of the respondents chose not to answer the question about household income. Of those that did respond, 49% reported an income between £20K and £40K and another 39% reported more than £40K. Figure 4.8 shows the distribution of household income from those respondents who answered this question.

Figure 4.8   Distribution of household income
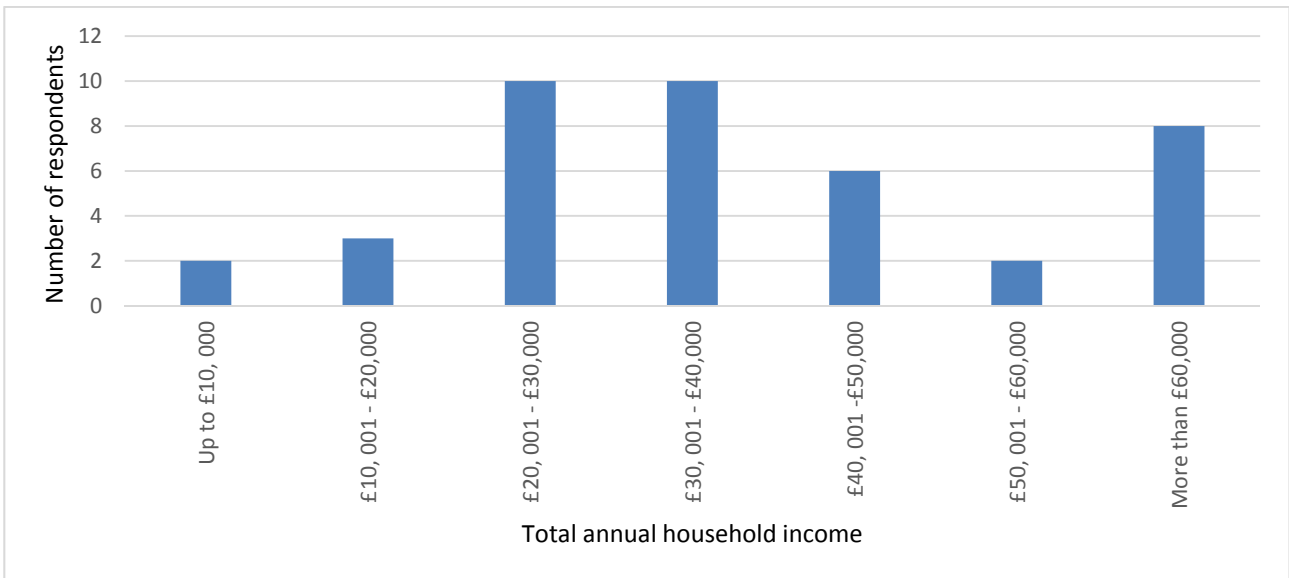
Number of respondents = 41

4.3.7   Provider questionnaires

A total of eight business questionnaires were returned, although two of these were completed by club members rather than businesses. These were not included when summarising the findings below. A summary of all the questionnaires returned can be found in Appendix F.

Four of the returned questionnaires were from Orkney businesses and two from Caithness and Sutherland businesses. These businesses including the following activities:

- Outdoor Activities
- Accommodation Provider & Tour Guide
- Charter Boats
- Vessel Charter
- Cave Tours

Coastal and marine recreation was the primary focus for all of these businesses surveyed, and all of the businesses brought clients to the same places year after year. The weather was noted as the primary factor influencing the choice of where to take clients. Although all but one of the businesses claimed to be available all year, there was a lot of variation in the frequency of coastal trips, from once or twice a year to daily tours between April and October. The weather was noted as a limiting factor in the wintertime. Trip lengths varied by the type of business from 20 minutes to ten hours. Day trips were most common, with a couple of providers noting that overnight trips were also provided. The number of day trips provided in the last 12 months varied from less than ten to more than 200, and party sizes from four to 15. Only two of the businesses provide transport for the clients to get to the coast, using a minibus, or van and cars. All were small businesses either using volunteers only, or employing from one to three full time staff and up to three part time staff. Most of the businesses reported their income was the same in the previous two years and expected business in the next five years to stay the same or to increase.

4.4   SPATIAL DATA

Spatial information was gathered by asking participants to draw on paper maps to show where they used the marine and coastal environment. Printed A2 maps with either Ordnance survey or UKHO admiralty data were used to gather the data, with participants then using colour pens to draw on the maps to indicate where they undertook recreation activities. These maps were then digitised using standard industry software. This included:

- Where people are using the marine environment (which may be indicated by either points or areas)
- Transit routes, if applicable
- Arrival and departure points

A total of 51 maps were returned, including 32 from Orkney (65%) and 18 from Caithness and Sutherland (35%). The majority of these were from individuals (76%), with the rest coming from clubs or associations (20%) and service providers (4%) as shown in Figure 4.9. The data from these maps were digitised and have been combined by activity as displayed in the maps in Appendix D.

Figure 4.9   Maps returned by type of respondent
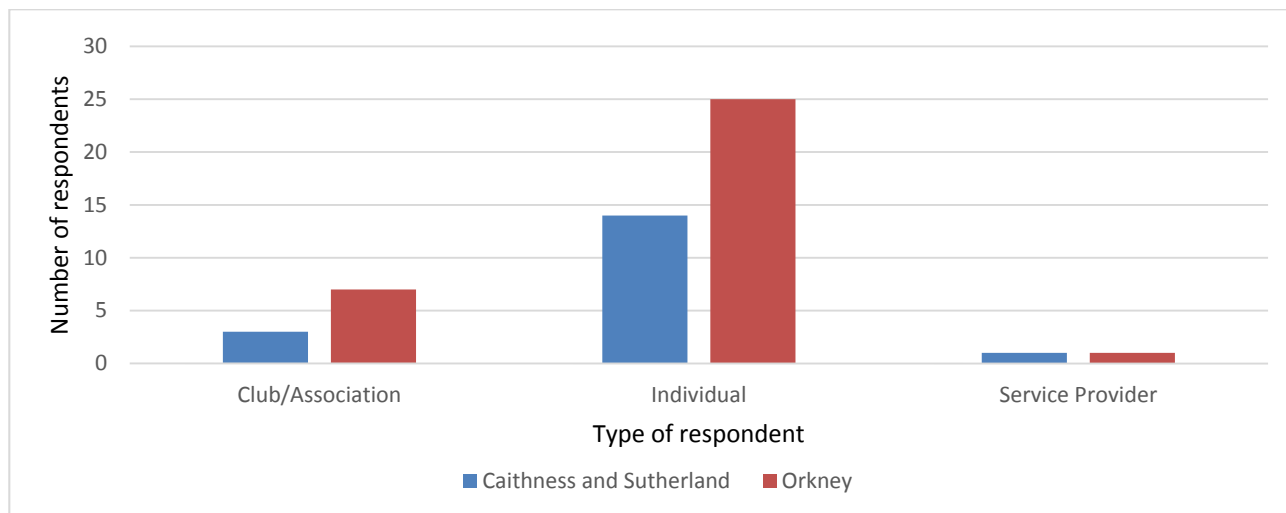
Figure 4.10 and shows the number of maps return by activity. The most common activity by far was walking (more than two miles) and there was a good spread of maps across the other activities. For a number of the activities categories there were no responses which reflect either:

- These activities do not occur in the area:
    - Land yachting, power kiting, kite buggying
    - Canal boating
- They occur within the area but the people doing these activities were not surveyed:
    - Personal watercraft (jet skis)
    - Motor cruising
    - Power boating
- They occur within the area but these activities were not among the activities that people chose to tell us about on their maps:
    - Small craft
    - Water skiing, wakeboarding
    - Paddle boarding
    - Visiting historic sites

Figure 4.10 Maps returned by activity
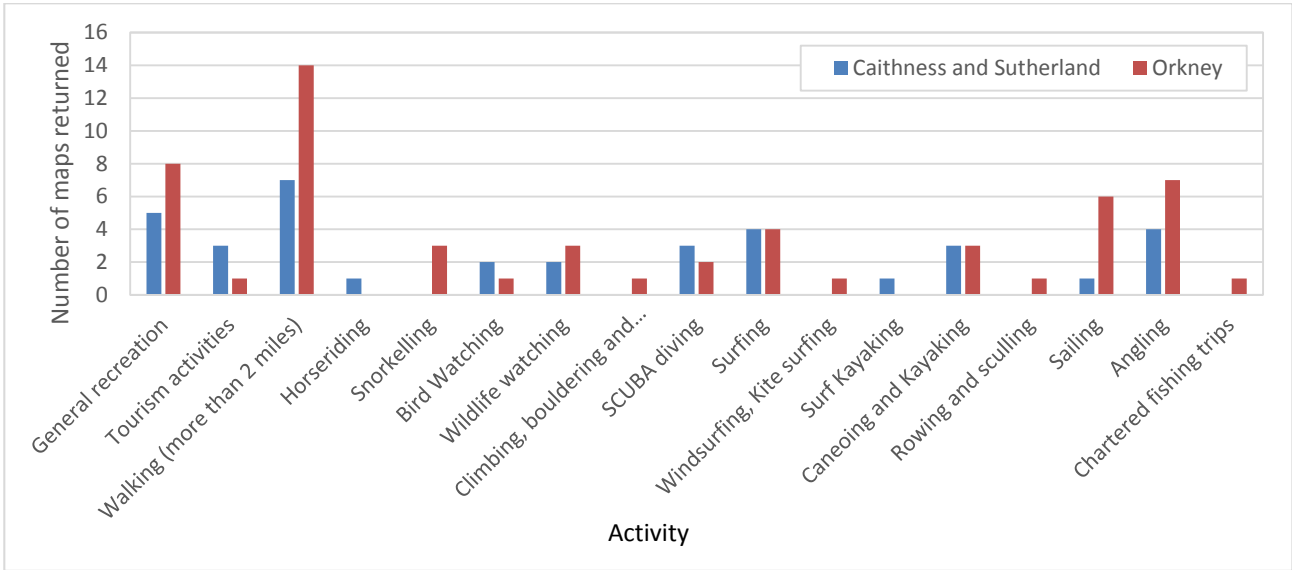
In addition, two respondents provided information in the form of descriptive email responses. These have been incorporated to the extent that the information could be interpreted to spatial locations. These responses are included in Appendix G.

4.4.1 Frequency of use

Each participant's activities were separated into different maps based on activity and rasterised on a 1km grid. Values for each 1km square were assigned based on the presence or absence of the activity for each participant. An overall map was produced by adding the values for each grid square from all the different participants and maps to give the number of responses per square. Essentially this is a measure of the frequency each grid square is used for all activities (see Figure 4.11 and Figure 4.12).

Figure 4.11 Frequency of use - Caithness and Sutherland
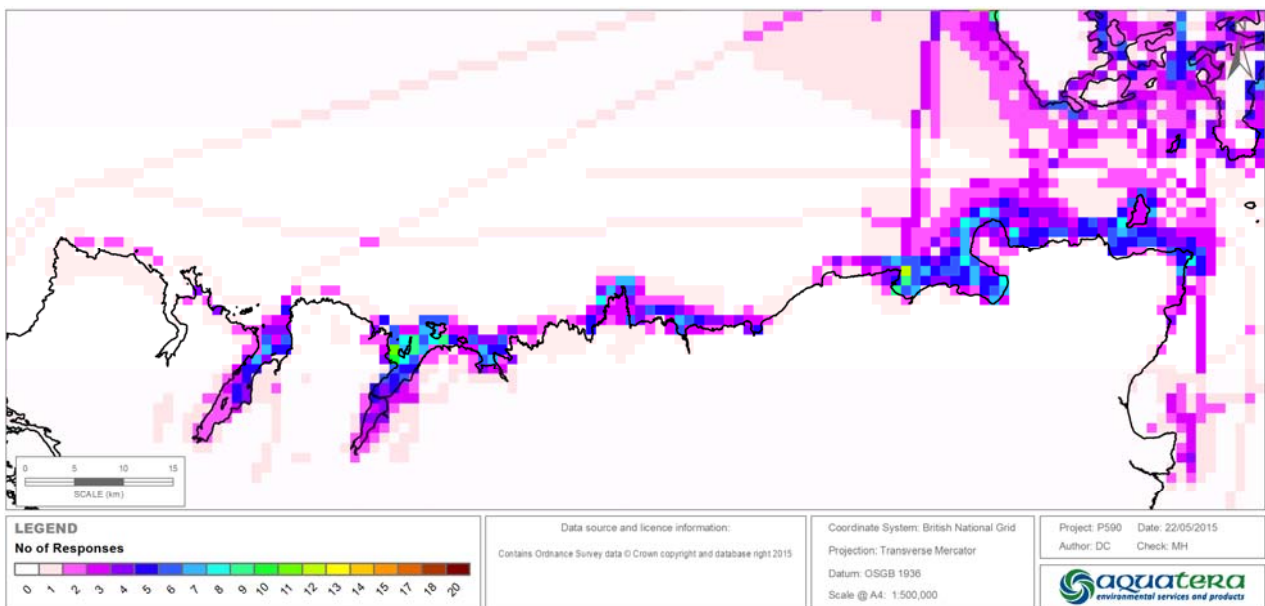
Figure 4.12 Frequency of use - Orkney
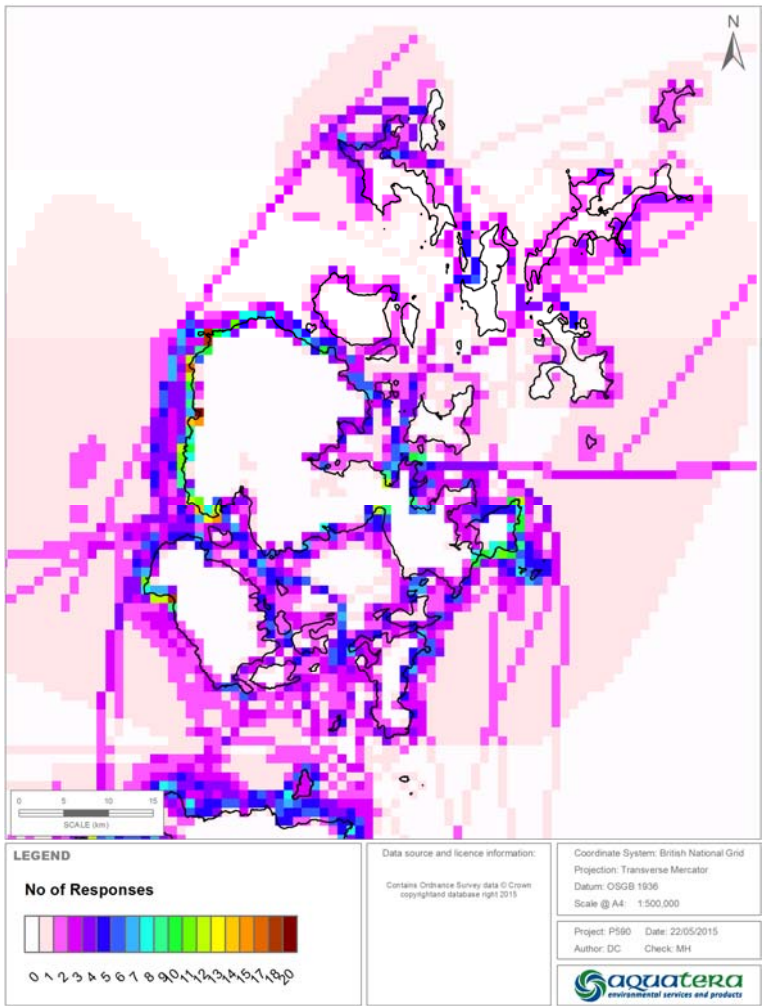
4.4.2   Diversity of use

Each participant's activities were separated into different maps and rasterised on a 1km grid as above. Values for each 1km square were assigned based on the presence or absence of the activities as a whole from all the participants. An overall map was produced by adding the values for each grid square from all the different activities to give the number of activities per square. Essentially this is a measure of how many activities use an area, or the diversity of use of an area.

Figure 4.13 Diversity of use - Caithness and Sutherland
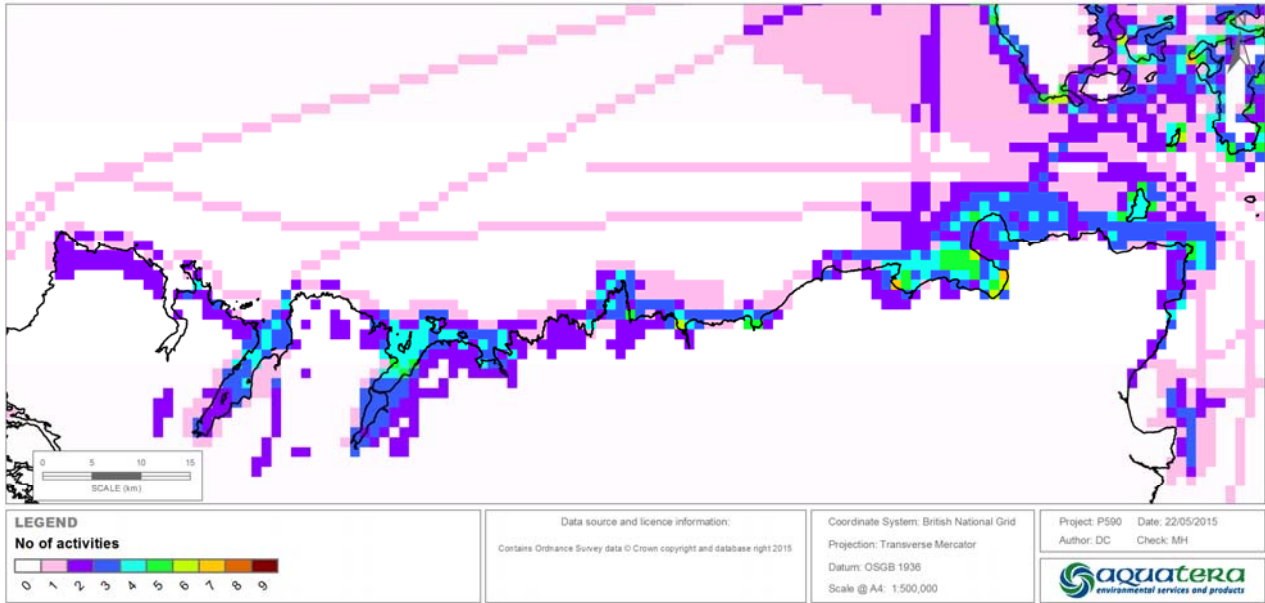
Figure 4.14 Diversity of use - Orkney
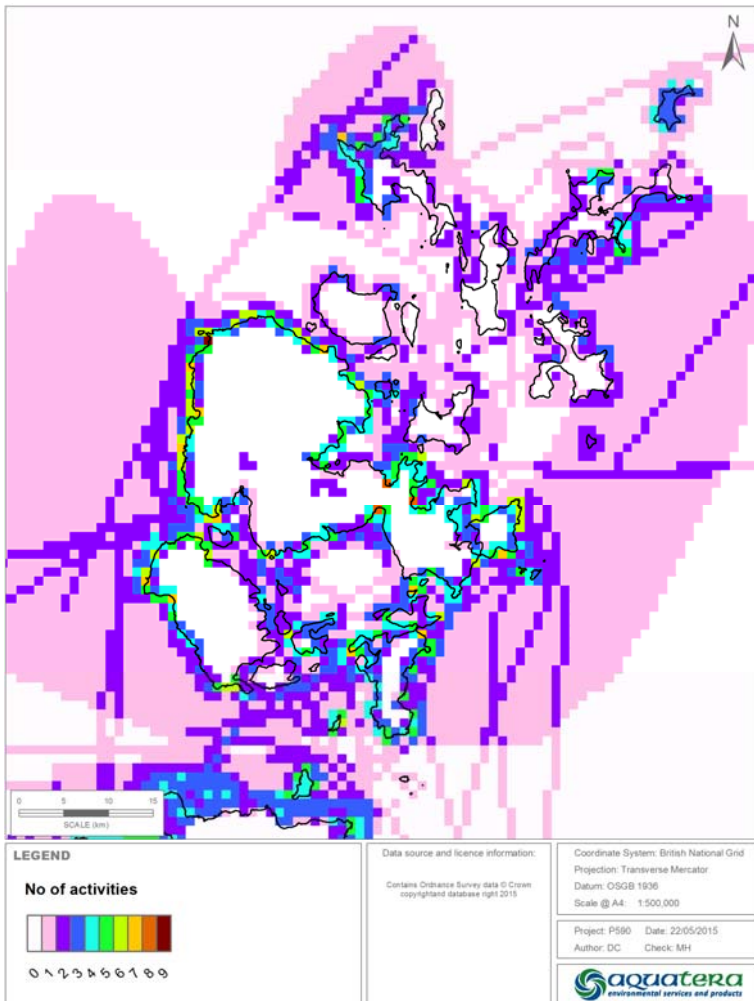
5 CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The PFOW pilot study has accomplished the following:

- Developed a comprehensive stakeholder list for the marine and coastal tourism and recreation in the PFOW area

- Held workshops in Thurso and Kirkwall which sense checked existing spatial information, gathered additional spatial information and garnered feedback on the process for the national study as well as feedback on wider issues affecting marine and coastal recreation and tourism in the PFOW area

- Collected spatial data for marine and coastal recreational uses from ten clubs or user groups, three providers and 39 individuals in a broad cross section of the PFOW area

- Collected survey responses from 58 questionnaires relevant to the PFOW area

- Provided feedback to inform the national study

The PFOW pilot study has proved to be a useful exercise giving some important insights into coastal leisure and recreation in the area. Some of the lessons learned will be taken forward into the Scottish-wide study. This chapter summarises the key findings and recommendations of the pilot study.

5.2 WORKSHOPS

5.2.1 Participation

For the PFOW study, the workshops had a dual purpose, to inform stakeholders about the wider study and to gain their support for this, and also to collect data to support the PFOW case study. Unlike the national study, the PFOW workshops were the primary means of collecting data for the study. In contrast, the workshops for the national survey are intended to be fairly high level focussing on sector-wide issues and requirements.

The PFOW workshops were relatively sparsely attended, with only ten attending the workshop in Caithness and 15 at the workshop in Orkney. Most of the people attending the workshops were stakeholders who had received an invitation to the workshop. There were a few who learned of the workshops through advertising or word of mouth, but by far the majority of attendees had been invited.

We believe the workshops were not well attended for the following reasons:

- Incentive for people to come was weak (e.g. not clear how the study would directly benefit participants or improve recreation and tourism)

- Busy schedules (e.g. business owners)

- Long travel distances

The workshops were offered as an opportunity for participants to share information and have their voices heard in the planning process. However, this apparently wasn't sufficient motivation for many of the stakeholder contacts to take time to participate in the workshop. It also did not draw in the general public, who may not be aware of the planning process and how it would affect them. Those who did attend the workshops seemed to be aware of the planning process and to have participated previously. However, this may not be true of all stakeholders contacted.

Some ideas to increase participation in the workshops include having something tangible at the workshop that would benefit the participants, such as a speaker. Another option would be to schedule a workshop to coincide with another event already happening in the community, such as a local coffee morning, where people would already be present. Local contacts would be very beneficial for understanding the best times and places to hold a workshop. Indeed, we found the workshops to be a useful way to establish local contacts.

The local contacts who were interviewed separately to the workshops, particularly in the Caithness and Sutherland area, were very informed and willing to participate to the extent they were able (time was a factor), and the information they were able to provide, particularly in terms of the use of local coastal and marine resources, was valuable to the study. We would suggest that there may be other areas of the country which also have small and dispersed populations which would benefit from a similar approach. It would be important to establish these local contacts early on and to try to make sure that they are invited to the workshop.

Indeed, given the strategic nature of the national workshops, putting energy into developing a comprehensive list of stakeholders and making contact with key people ahead of the workshops would be a more efficient approach. Publicising workshops is a relatively expensive undertaking, and the benefit of the advertising that was done was fairly small. In the case of the pilot study, the general advertising that was done had limited effectiveness.

At the time of the PFOW case study there was no social media presence for the study; therefore there was not an opportunity of using social media to inform about the workshop. Disseminating information via social media would be highly recommended for the national study.

Another challenge in the pilot study area that will be applicable to other areas in Scotland, is the dispersed nature of the population and the large travel distances. A web-based survey, as is planned for the national study, is likely to be a good approach for reaching such dispersed populations, and is likely to be more effective than getting people to travel to workshops.

Another recommendation is to keep participants informed about the process so they can see how their input has been used and provide direct feedback. This will be the best way to keep people motivated to participate in future data gathering and consultation efforts.

5.2.2 Workshop format

The anticipated format for the workshops involved dividing up participants for the discussion of wider issues. In reality, due to the small attendance at the workshops, participants were not split up for the discussions. However, in the case of having a large group, it may be sensible to divide participants into smaller groups to facilitate the discussion. Groups might be based on activity, such as sea based activities versus land based activities, or by boat based activities versus other activities. It should also be noted that not all stakeholders will represent a specific activity (e.g. governing bodies, general public, etc.).

For the purposes of the pilot study, the format of the workshops worked reasonably well in terms of providing information to stakeholders about the study, establishing local contacts, sense checking existing data and facilitating some data collection. These workshops were valuable for gathering feedback on the questionnaires and the data collection process to inform the larger study and for discussing some of the wider issues surrounding tourism and recreation in the area.

We would recommend holding the stakeholder workshops for the national study prior to or in conjunction with the launch of the national survey in order to better engage stakeholders and to use the workshops as a way to garner

participation in the survey. We would also recommend prompting stakeholders with the questions for discussion prior to the workshops, to give participants an opportunity to query others in their organisations. We also suggest that these discussion questions could be included at the end of the survey questionnaire to provide respondents to the survey a place to address some of the wider issues.

5.3 QUESTIONNAIRES

5.3.1 Individual questionnaires

Limitations with the paper-based survey resulted in incorrectly answered questions and non-responses for some questions, limiting the data that could be collected for the pilot study. Beyond this, an analysis of the results from the completed questionnaires has brought out a number of areas where questions could be clarified for the national survey.

In addition to these clarifications, the following issues were noted:

- The survey questions seem designed for tourists who visit the coast occasionally and not necessarily for people that live on the coast

This point was made by a number of respondents who felt that the questions didn't apply to them. Some refinements were made to the questionnaire to address this, including a question that asks people how far they live from the coast, and the addition of a 'not applicable' response for some questions. It may be helpful to provide more introductory text to explain the purpose of the survey so respondents don't feel deterred by how the questions are worded.

- Spend questions don't capture value well

This was another comment made by a number of respondents who clearly value the coastal environment, but don't spend much using it due in part to their proximity to the coastal environment and participation in activities that don't involve spending money such as visiting beaches or historic sites, or walking. This point is discussed in more detail in Section 5.4.2 below.

- The survey doesn't lend itself to club responses

The questionnaires were built to be completed by individuals and don't make sense to be completed for clubs and organisations. Due to the format of the pilot study, there was not an opportunity for questionnaires to be distributed widely to club members. It may be beneficial for the national study to develop a separate questionnaire that could be completed by clubs and organisations that would facilitate understanding the use of the marine and coastal environment by these groups and would capture the value that these organisations have. In many cases, the clubs are the main channel for contacting recreational users and it would be valuable to have more information on how active these clubs are, how many active members, frequency of use of the marine environment, etc. However, the intention would not be to replace club representatives distributing the questionnaire amongst club members as the individual responses are also valuable.

5.3.2 Business questionnaires

For the pilot study, there was a very low response rate by providers. We think that this was in large part due to the format of the pilot study which used workshops and paper-based surveys to collect information. There were not many providers who attended the workshops, and the targeted follow ups, which were limited in scope due to the paper-based format, focussed on user groups rather than providers. The online format that minimises response time is likely to suit providers better, especially as these people tend to have more limited time in general than user groups representatives.

There are many different types of providers, and it may be beneficial to prioritise the types of providers who would be most useful for this type of study. For example, those who conduct tours or provide specific recreational services (e.g. diving boats, sea angling trips), are more likely to provide information useful to the study than visitor centres and heritage centres.

We think it would be useful to target the providers separately to users to make sure that the purpose of the survey is clear as well as why their input is needed and how they can benefit from the study.

We suggest that these questionnaires be modified in such a way so that the data can be more easily summarised. The paper surveys used in the pilot study collected only text-based data, which are valuable, but would be difficult to summarise if there were a large number to be processed.

It may also be useful to include more economic questions in the business questionnaire in order to address some of the information needs, such as type of employment, demographic of employees, skills gaps, and income turnover related specifically to provision of marine and coastal recreation and tourist activities. In its current format, this questionnaire asks only how many staff are employed, and whether the turnover has increased or decreased in recent years, and what the growth projection is.

The business questionnaire was completed by a couple of user groups, which demonstrated that it may be useful to consider a user-group/club questionnaire in a similar format or with similar questions.

5.3.3   Spatial data capture

The method used for gathering spatial data using printed maps worked reasonably well but had some limitations. The resolution of the maps was adequate for some activities, such as sailing which tends to be widespread over an area and uses large spaces, but for activities at a finer scale, such as surfing, the resolution of the maps was not ideal. The accuracy with which the respondents drew on the maps was variable and in some cases it was difficult to make out what had been drawn on the maps depending on the colour and fineness of the pens used. Another limitation is that at the workshops people had only their memories to go on, and in some cases, people may have benefitted from being able to refer to other resources they might have at their homes. This issue is not expected to be of concern for the national study which will use online maps with scales that can be adjusted, and where the user input will be clear. Nevertheless, it has limited some of the spatial data capture for the PFOW area.

Although participants were asked to indicate the frequency which they used each of the sites or routes, this information was not provided. It appears that this additional level of information gathered added too much complexity to the exercise.

There was a lack of information on the number of people using these areas based on the individual maps (i.e. is the participant filling the map in on behalf of only themselves or a wider group of people that they visit the coast with on a regular basis). In addition even though the instructions were to fill in the maps according to what that individual did, a number of the participants wanted to tell us all the different things that they knew were undertaken (even though they did not participate themselves) or where (as tourism/accommodation service providers) they would suggest to their clients to visit. While this provides good information on the locations of marine and coastal activities, it makes it more difficult to understand the frequency of use of different areas. Consideration will need to be made for this in the national study. For the national study it may be that this problem can be resolved by attaching a number of standard questions to the online spatial data collection that can ask the respondents to indicate numbers of people that are represented for each area, point or location or to indicate a category such as individual, club, or clients.

The analysis of frequency of use therefore looks at the number of times respondents indicated a specific location as being used, providing a relative indication of frequency of use. While this analysis provides an indication of areas that are likely to receive frequent use, it cannot be necessarily assumed to indicate areas of low use, due to the small number and non-random nature of the respondents. The analysis of diversity of activities provides another way of looking at the value of locations by measuring the number of different types of activities taking place at any given location.

5.4 KEY FINDINGS

5.4.1 Recommendations for the national study

A list of the recommendations for the national study can be found in Table 5.1 below.

Table 5.1   Recommendations for the national study

Workshops
Develop a comprehensive list of stakeholders
Keep track of user groups and providers separately and target these audiences specifically to make sure that the purpose of the survey is clear
Establish local contacts to advise on the best times and places to hold a workshop
Focus workshops on stakeholders rather than the general public, using targeted invitations rather than widespread advertising
Establish a social media presence and disseminate information using social media
Hold the stakeholder workshops for the national study prior to or in conjunction with the launch of the national survey to use the workshops as a way to garner participation in the survey
Prompt stakeholders with the questions for discussion prior to the workshops
Keep participants informed about the process so they can see how their input has been used
Questionnaires
Target questionnaires to specific audiences, especially user groups or clubs, businesses and individuals
Provide more introductory text to explain the purpose of the survey so respondents aren't deterred by how the questions are worded
Include discussion questions at the end of the survey questionnaire
Develop a separate questionnaire to be completed by clubs and organisations, with similar content to the business questionnaire
Modify business questionnaire to more easily summarise responses and to include more economic data
Consider additional questions to better establish a non-monetary value for marine and coastal tourism and recreation
Maps
Include a number of standard questions to the online spatial data collection to ask respondents to indicate numbers of people that are represented for each area, point or location or to indicate a category such as individual, club, or clients

This pilot study was able to collect a substantial amount of user-generated data regarding spatial use of the coastal and marine environment for tourism and recreation in the PFOW area. However, there was a lack of data from providers.

In terms of non-spatial data, there are limitations in the data collected through the questionnaires. In the first instance, it was necessary to limit the length of the questionnaire in order to ensure that people would take the time to

complete it, so some questions were eliminated. Secondly, some questions were misunderstood and not completed correctly, limiting the number of useful responses.

5.4.2 Valuing marine and coastal tourism and recreation

A particular limitation of the pilot study was in gathering information to address the economic valuation of the services provided by marine and coastal tourism and recreation. The data collected for the PFOW area show that there are a lot of activities which take place for which direct and indirect spend is very low. Therefore, spend is not necessarily a good indication of the value placed on the marine and coastal environment for recreation in particular.

The results of the study's attempts at assessing values, at first, appear paradoxical. Participants/respondents clearly placed great value in maintaining access to marine and coastal recreation. However the study was unable to capture these values in questions designed to reveal spending on recreation activity. Approximately 20% of questionnaire respondents declined to answer the questions related to activity spend. Of those that did answer, a spend of nil was reported 56% of the time. To understand this, and make recommendations for the wider study, we should first do two things:

- consider the make-up of the respondents
- reconsider the taxonomy of economic values likely to be present at the coast

Respondents

Attendees of the workshops were predominantly local and generally represented specific interest groups (e.g. kayakers) or official stakeholders (RSPB). Numbers of general public attending were low. Furthermore the workshops did not capture the views of tourists or indeed interested parties from outside the region. This is largely due to the time of year and the use of workshops as a tool to capture opinions. Even in the summer, without an incentive to do so, it is unlikely that many visitors would willingly give up vacation time to attend a workshop.

The targeted interviews also were predominantly aimed at specific interest groups and organisations in an effort to fill gaps in spatial information and to cover as wide a geographic area as possible.

It is worth noting that representatives of groups may also express personal views on certain issues. For example a local fisheries representative may have a view on the relationship between fishing and the leisure industry (e.g. recreational diving). However this participant may also express opinions on coastal paths and the taking of casual recreations that are not a collective view of the industry, or indeed an issue that necessarily connects with fishing in any obvious way. Without very careful briefing it is difficult to differentiate between personal opinions and values and those of the represented interest group.

Taxonomy of Values

Figure 5.1 below was first presented in the briefing note "Economic Valuation Methodologies" (see Appendix H). The diagram divides values two ways. Firstly we can identify market values and non-market values. Market values involve an actual market transaction (e.g. paying for boat hire). Non-market values are unpaid for benefits (e.g. enjoying the view on a daily walk). We can also sub divide values a second way, into use values and non-use values. Use values involve active participation (e.g. sailing or angling). Non-use values are associated with the knowledge that an environment exists (e.g. an iconic view). Non-use values also include value associated with retaining the option of a future visit.

Overlap exists between these two value streams. For example we can have Use/Market which would be a paid for activity (e.g. whale watching trip), while Use/Non-market are unpriced activities (e.g. a walk on a clean beach). Non-use values are generally considered to be non-market as no actual participation or transaction is required.

Figure 5.1   Economic values at the coast
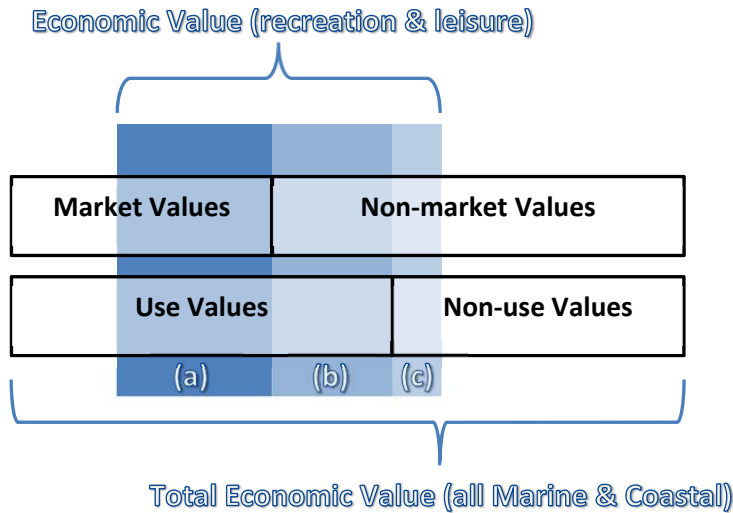
The blue shaded area, in Figure 5.1, represents recreation and leisure values. Clearly the marine and coastal environment generates many other values. For example value created by fisheries would sit to the left hand side of Figure 5.1 – this is a clear market/use value not associated/recreation and leisure. By contrast conservation values would sit to the right hand side. While distinctions between some value types may be difficult to make, Figure 5.1 is based on widely accepted principals. This taxonomy can help us to understand observed workshop responses; it is a useful reference point for discussion; and it should guide the survey methodology.

Discussion

The pilot study has revealed a great deal of information about the nature of recreation in the region: identifying what activities are happening where; seasonality; opportunities for future development as well as threats and concerns. Participants clearly placed a high value on the availability of recreation and leisure opportunities which add significantly to the quality of their lives. However attendees were reluctant or felt unable to reveal expenditure figures. The PFOW pilot study appeared to capture values represented by shaded area (b) in Figure 5.1; i.e. local people valuing, highly cherished, but unpaid for, recreation opportunities. Value types (a) and (c) were not revealed by the pilot study format. This is largely because no tourists or other non-local views were involved in the workshop.

The pilot study also revealed the difficulties in differentiation between the views of individuals and views which represent those of an organisation. Where the views of an organisation are sought this should be clearly stipulated. Furthermore post workshop feedback may be a better way to get pieces of data (distance travelled, money spent etc.). Explaining the purpose of the questions and then trying to elicit answers during a workshop, with other stakeholders present, may be challenging for respondents.

A previous report and briefing note discussed the monetarisation of values and valuation methods at some length (Appendix H). It is worth reconsidering these comments in light of the PFOW pilot study. In principle monetary values can be placed against all value types (a), (b) and (c). However this is particularly challenging for (b) and (c). In the case of non-market values, where no measurable monetary transaction occurs, surrogate markets (e.g. Travel Cost Method) or hypothetical markets (e.g. Contingent Valuation) may be utilised, however these methods are labour intensive and beyond the scope of this study. If the purpose of the study is to better understand the use of Scotland's coasts and what locations are important; then monetary valuation will not necessarily add richness to the analysis. Furthermore significant controversy exists regarding these methods, both in terms of their robustness/accuracy but also ethical concerns about using narrow economic measures to assess the well-being experienced by individuals. Indeed this concern was expressed by some workshop participants. In the case of market values (a), it is generally easier to produce a valuation.

Taking Things Forward

As a general principle it is important that the research strategy recognises the following:

- that a range of values exist
- these values do not reside in one sector of the community and cannot necessarily be assessed through one tool or technique
- in the context of this study it is not possible, nor necessary, to try and monetarise each value type and
- the study should try to identify questions and target sections of the population such that each of the value types is covered

(a) Market, Use Values

These are values already expressed in monetary terms on existing markets. The obvious way to assess these is to look at expenditure by visitors to the coast. It will be important to have a survey strategy which will achieve two things: (i) identify the typical expenditure of different groups of visitors; and (ii) explain visitor rates at different locations. Put simply we need to be able to turn an average, derived from a sample of questionnaires, into a total for the whole population. Determining the total numbers of users is critical. This may be available from existing recreational studies, this should be checked. An alternative to asking visitors would of course be to ask businesses directly. This has the benefit of an apparently smaller and more focussed group to target. However, getting businesses to divulge commercial information, regarding expenditure, may be challenging. The PFOW case study did distribute "business questionnaires" to recreation and leisure service providers, but the response rate was low. This route would also make it difficult to capture all peripheral spend (e.g. travel, accommodation, food etc.).

An estimate of employment can be made based on total expenditure and average earnings (within the leisure and tourism sector) in the region. Second order impacts may be estimated by applying employment and income multipliers.

As an alternative a database of leisure and recreation based businesses and their location would give a more superficial indication of locations that exhibit these values.

(b) Non-Market Use Value

The previous briefing document (Appendix H) spent some time examining valuation techniques for assessing non-market values. Distance travelled and number of visits to a site is a useful indicator of non-market values. A measure of cumulative distance travelled would be a reasonable proxy for non-market value. Ideally this measure would include all visits to a location. Local visitors may travel less but more frequently. So once again data on total visitor

use will be important. This approach would allow the comparison of locations and highlight sites that are particularly important for different activities. While the means of presenting this data will need to be considered carefully this may provide a relatively straightforward solution. It will not give a monetary value; however this may not matter as the study is not intended to make cost-benefit decisions about specific projects. It will let us understand the nature of coastal leisure and recreation and see the relative importance of different locations.

The questionnaire does ask how far users have travelled to get to the coast. This information may provide the basis for an assessment of non-market value. However it will be important to understand: (i) the total number of visitors (i.e. visits) by location; (ii) the distances travelled; (iii) be able to disaggregate this by category; and (iv) consider carefully how the final results will be presented in order to illustrate preferences between regions and locations.

An even simpler approach would be to ask knowledgeable stakeholders to identify and rank locations which are highly used and those to which people travel. This would give some indication of which locations are most important.

(c) Non-Market, Non-Use

These are the most challenging values to conceptualise - values placed on retaining an option to visit a location in the future. This value exists irrespective of whether the option is ever exercised. It is not possible to observe this value from existing behaviour. The only way to assess this value is to directly ask respondents. A Contingent Valuation approach would require a separate question about all potential locations and this is hardly feasible.

However it may however be possible to identify locations that exhibit high option value by asking where respondents would like to visit. An appropriate question may take the form:

> *Ignoring existing personal constraints, consider where in Scotland you would like to visit to [.....*
> *undertake specific leisure activity...] if the opportunity should ever arise*
> *Rank your top three locations. 1..., 2..., 3...*

Results would allow us to identify locations that hold option value for specific groups or leisure and recreational users, although once again consideration needs to be given as how to represent this data.

Finally it would be worth identifying any iconic locations which may hold existence value. For example in the climbing world the Old Man of Hoy sea stack is truly iconic and recognised as such by climbers even if they have no plans to visit the location.

6 REFERENCES

ABP Marine Environmental Research & RPA 2012, "A Socio-economic Methodology and Baseline for Pentland Firth and Orkney Waters Wave and Tidal Developments", [Online]. Available from: http://www.thecrownestate.co.uk/media/5468/socio-economic-methodology-and-baseline-for-pfow-wave-tidal-develop ments.pdf.

Anatec Limited & Halcrow 2012, "Shipping Study of the Pentland Firth and Orkney Waters", [Online]. Available from: http://www.gov.scot/resource/0041/00410623.pdf.

Cooper, D. 2014. North & East Coasts of Scotland Sea Kayaking. Pesda Press. 260pp.

Cooper, D. and G. Reid. 2005. Scottish Sea Kayaking: Fifty Great Sea Kayak Voyages. Pesda Press. 272pp.

Cruise Europe 2014 , Scrabster. Available: http://www.cruiseeurope.com/port/scrabster.

Land Use Consultants (LUC) 2006, "A Review of Marine and Coastal Recreation F05AA608", [Online]. Available from: http://www.snh.org.uk/pdfs/strategy/cmnp/Finalreport_19_September_2006.pdf.

Marine Scotland 2015. National Marine Plan Interactive (NMPi). Available: https://marinescotland.atkinsgeospatial.com/nmpi/.

Marine Scotland Science 2015a, "PILOT PENTLAND FIRTH AND ORKNEY WATERS MARINE SPATIAL PLAN CONSULTATION DRAFT: Regional locational guidance", [Online], 2015. Available from: http://www.gov.scot/Resource/0047/00479176.pdf.

Marine Scotland Science 2015b, "PILOT PENTLAND FIRTH AND ORKNEY WATERS MARINE SPATIAL PLAN CONSULTATION DRAFT: Socio-Economic Baseline Review", [Online], pp. 2015. Available from: http://www.gov.scot/Resource/0047/00479181.pdf.

OIC Marine Services & Orkney Islands Council 2015, "Cruise Liner List 2015", [Online]. Available from: http://www.orkneyharbours.com/staff/upload/CruiseLinerWebVersion2015.pdf.

Ordnance Survey 2015, Strategi. Available: http://www.ordnancesurvey.co.uk/business-and-government/products/strategi.html.

Orkney Islands Council 2013, "Orkney Economic Review 2012-13", [Online], vol. 26, . Available from: http://www.orkney.gov.uk/Files/Business-and-Trade/Economic_Review/Orkney_Economic_Review_2012-13.pdf.

Orkney Islands Council Marine Services 2014, "Harbour Authority Annual Performance Report 2013-14", [Online]. Available from: http://www.orkneyharbours.com/pdfs/OIC_Harbours_report_2013-14.pdf.

Radford, A., Riddington, G. and Gibson H, 2009. Economic Impact of Recreational, Sea Angling in Scotland. Prepared for The Scottish Government. July 2009. ISBN: 978-0-7559-8130-4.

Scotinform Ltd & Reference Economics 2014, "ORKNEY VISITOR SURVEY 2012/13 RESEARCH RESULTS – FINAL REPORT", [Online]. Available from: http://www.visitscotland.org/pdf/Orkney%202013%20Visitor%20Survey_Final%20report.pdf

Sutherland, B. 2015. Stormrider Surf Guide Europe. Low Pressure Publishers.

The Highland Council 2013. Tourism in Caithness & Sutherland. Planning and Development Service Briefing Note. Report No. CS-01-13. February 2013. Available from: http://www.highland.gov.uk/meetings/committee/24/caithness_and_sutherland_area_committee

The Moffat Centre for Travel and Tourism Business Development, Martinolli, M. & Bereziat, C. 2010, "The 2009 Visitor Attraction Monitor", [Online]. Available from: http://www.visitscotland.org/pdf/visitorattraction-monitor2009.pdf.

Tourism Resources Company 2011, "A Framework for Destination Development: Ambitious for Tourism Caithness and North Sutherland", [Online]. Available from: http://www.hie.co.uk/regional-information/economic-reports-and-research/archive/caithness-and-sutherland-tourism-report.html.

VisitScotland & TNS Research International 2011, "SCOTLAND VISITOR SURVEY 2011 REGIONAL RESULTS: HIGHLANDS ", [Online], . Available from: http://www.visitscotland.org/research_and_statistics/visitor_research/all_markets/scotland_visitor_survey.aspx

VisitScotland 2011, "Tourism in Northern Scotland 2011", [Online], . Available from: http://www.visitscotland.org/pdf/Tourism%20in%20Northern%20Scotland%202011.pdf.

VisitScotland 2014, "Tourism in Scotland's Regions 2013", [Online], . Available from: http://www.visitscotland.org/pdf/Tourism%20in%20Scotland%27s%20Regions%202013.pdf.

Wilde, G.P. & Business Research and Economic Advisors 2009, "Kirkwall Survey Report", [Online]. Available from: http://www.orkneyharbours.com/pdfs/economic_benefit_of_cruise_to_orkney.pdf.

Wilde, G.P. 2013, "Overview Cruise Passenger and Crew Surveys Orkney Islands PowerPoint", [PowerPoint].

7 APPENDICES

APPENDIX A EXISTING SPATIAL DATA

(See separate document)

APPENDIX B STAKEHOLDER CONTACTS LIST

B.1 USER GROUPS

General
- Thurso Camera Club
- Orkney Camera Club
- Orkney Polar Bear Club

Walking
- Sutherland Walkers' Group
- Caithness Waybaggers
- Highland Ramblers
- Hoy Ramblers Club
- Orkney Ramblers Club

Horse riding
- Caithness Riding Club

Climbing, Bouldering and coasteering
- Orkney Climbing Club

Wildlife and bird watching
- Scotland's Bird Club
- Caithness Field Club
- Orkney Field Club
- Orkney Skate Trust
- Orkney Beachcombing
- Snorkel Orkney

SCUBA Diving
- Caithness Diving Club
- Orkney Sub Aqua Club

Surfing, Windsurfing and Kitesurfing
- North Shore Surf Club
- Orkney Surf Club
- Surf Wrath

Canoeing and kayaking
- Caithness Kayak Club
- East Sutherland Canoe Club
- Pentland Canoe Club
- Kirkwall Kayak Club
- Orkney Sea Kayaking Association

Coastal Rowing
- Wick Coastal Rowing Club
- Orkney Rowing Club
- Hoy Rowing Group

Sailing
- Pentland Firth Yacht Club
- Royal Yachting Association
- Orkney Yole Association
- Holm Sailing Club
- Orkney Sailing Club
- Westray Sailing Club
- Stromness Sailing Club
- Kirkwall Sailing Club
- Longhope Sailing Club

Power boating
- Deerness Small Boat Owner Association
- Stromness Small Boat Users Association
- Kirkwall Small Boat Owners Association
- Orkney Historic Boat Society
- Westray Boat Owners Association

Angling
- Caithness Sea Angling Association
- Thurso Angling Association
- The Royal British Legion Thurso Angling Section
- St Clair, Castletown and Caithness Fishing Club
- The Caithness Sea Angling Experience
- Orkney Shore Angling Association
- Orkney Islands Sea Angling Association
- Scottish Federation of Sea Anglers
- Bettyhill Angling Club

B.2   PROVIDERS

Transport

- Northlink Ferries
- Cape Wrath Ferry
- John O'Groats Ferries
- Pentland Ferries

Campgrounds

Caithness and Sutherland:

- Bayview Caravan Site
- Craigdhu Caravan Site
- Dunnet Bay Caravan Club Site
- Halladale Inn Chalet & Caravan Park
- John O'Groats Caravan and Camping Site
- No 1 West Murkle Caravan Site
- Sango Sands Oasis
- Stroma View Caravan and Camping Park
- Thurso Bay Caravan and Camping Park
- Thurso Caravan Park

Orkney:

- Ayres Rock Campsite
- Birsay Outdoor Centre Campsite
- Chalmersquoy Campsite
- Deerness Caravan and Camp Site
- Eday Youth Hostel
- Eviedale Cottages and Campsite
- Nigley Campsite
- Point Of Ness Caravan & Camping Site
- Pool Farmhouse Certified Location
- Rackwick Outdoor Centre
- Rufford Campsite
- The Pickaquoy Centre Caravan & Camping Park
- Wheems Bothies and Camping

Tourism

- Durness Visit Scotland Information Centre
- North Highland Initiative
- John O'Groats Tourist Office
- Caithness and Sutherland Visitor Attraction Group
- Bettyhill Tourist Information Point

- Dunnet Bay Countryside Ranger Base (Seadrift Visitor Centre); H. C. Ranger Service
- North Sutherland Ranger
- Northwest Sutherland Ranger
- VisitScotland
- Tourism Group
- Sanday Tourism and Business Group
- Eday Tourist Association
- Kirkwall Tourist Information
- Rousay Tourist Group
- Sanday Tourist Association
- Shapinsay Tourist Group
- Stromness Visitor Information Centre
- Westray and Papa Westray Tourist Association
- Sanday Ranger
- Eday Ranger
- WHS Ranger

Tour providers

Caithness and Sutherland:

- Caithness SeaCoast
- Cape Wrath Mini Bus
- Great Escape Tours
- John o' Groats Wildlife Cruise
- John O'Groats Ferries
- North Coast Marine Adventures
- Pentland Lodge House/ Pentland Tours
- Smoo Cave tours
- Wilderness Scotland

Orkney:

- Explore Orkney
- Great Orkney Tours
- Green Orkney Tours
- Nature Watch Orkney
- Orcadian Wildlife Tours (Wildlife)
- Orkney Adventures (Wildlife)
- Orkney Aspects Tour Services
- Orkney Uncovered
- Verona Boat Trips
- Westraak Tours
- Wildabout Orkney Tours

Charter boats
- Highland Sea Charters
- Pentland Firth Charters
- Dawn Star Boat Trips
- Explorer Fast Sea Charters
- Groat's Charters
- Lady Rose Boat Tours
- Orkan Adventures Scapa Flow Boat Trips
- Orkney and Shetland Charters
- Pettlandssker Boat Trips
- Roving Eye Boat Tours
- Sail Orkney Yacht Charter
- Seaorkney
- Viking Yacht Charters

Dive boats
- Halton Charters
- MV Valkyrie
- Radiant Queen Charters
- Diving Cellar Charters
- Scapa Flow Charters (Jean Elaine)
- Scapa Flow Diving Holidays (MV Invincible)
- Johns Diving Charters (MV Karin)
- Sunrise Charters
- Scapa Scuba
- Scapa Flow Diving Centre

Angling
- Harpers Fly Fishing Services
- Hugo Ross Fishing Tackle Shop
- Highland Wild Trout Fishing
- Silver Line Sea Angling
- Alba - Guided fishing in Scotland
- Orkney Islands Sea Angling Association

Canoeing and kayaking
- Ridgway Adventure

Heritage centres
- Caithness Horizons/ visitor centre
- Castle and Gardens of Mey

- Castlehill Heritage Centre and Trail
- Last House Museum
- Mary Ann's Cottage
- Strathnaver Museum
- Barony Mill
- Balfour Castle
- Corrigal Farm Museum
- Kirbuster Farm and Folk Museum
- Orkney Fossil and Vintage Centre
- Orkney Museum
- Orkney Wireless Museum
- Scapa Flow Visitor Centre
- Stromness Museum
- Tomb of the Eagles

Nature organisations
- RSPB

Sailing and boating
- Orkney Marinas

Surfing
- Thurso Surf School
- North Experience Surf School
- Surf School Scotland
- Surf Wrath

Horse riding
- Torrisdale Pony Trekking
- Achalone Activities
- Caithness Riding Club
- Cruan Riding School and Livery
- Free Spirit Trekking Centre
- Orkney Riding Centre

Training centres
- North Aid
- Mainstream Scotland Limited
- Stromness Nautical Academy

Repairs and maintenance
- Orkney Glass Fibre Ltd
- Reid Marine Ltd

APPENDIX C QUESTIONNAIRES

(See separate document)

APPENDIX D GIS MAPS FOR COLLATED DATA

(See separate document)

APPENDIX E FEEDBACK FROM WORKSHOPS

E.1 STRENGTHS AND OPPORTUNITIES

Strengths and opportunities	
Thurso:	**Kirkwall:**
Scenery: including long views, skyline, good visibility	Enormous coastline – there is always somewhere to go appropriate for conditions
Good light conditions	Potential in Orkney to sell the wildness of weather as an attraction to attract people in off peak months.
Quiet	Rich in natural areas, which are getting rarer in the rest of the country
Low pollution levels	Rich in archaeological sites which attract tourists
Good wildlife watching opportunities	Abundant wildlife, especially seal & cetacean populations
Easy access to the coastline	Cooperative landowners mean no access issues; no large estates
Freedom of movement	Freedom of movement: can choose to go where you please
Coastline that is largely not commercialised	Orkney is reasonably accessible from the Scottish mainland (only one hour away)
Good waves for surfing etc.	Economy is good
Challenging environment which can attract more advanced sea users (e.g. sailing)	Islands have a unique pull for tourists
Lots of attractions (beaches, wildlife, etc.)	Availability of good running paths and tracks
Lots of geological features to explore	Provision for yachting is good in Orkney (Marinas and moorings)
Clean and clear water	There is a lot to explore for kayaking (e.g. caves, passages); the kayak symposium brings in £30K a year
Opportunity for learning e.g. schools	General level of satisfaction with the state of things as they are

E.2 WEAKNESSES AND THREATS

Weaknesses and threats	
Thurso:	**Kirkwall:**
Debris and litter detract from the surroundings	Too many visitors at same site at specific times (e.g. Skara Brae)
Weather & strong tides make it a challenging sea to undertake activities in	Cost of travel to the islands may put some tourists off
Concern that people drive through Caithness on the way to Orkney rather than visit the area as a destination. More needs to be done to benefit smaller settlements along the way as Thurso and wick dominate the offering.	Lack of info signposting for paths and routes (could have different colour level for different levels of difficulty) but there is an on-going cost for this.
Perceived lack of activities for tourists. More signposting	Need long range (circular) routes
Finite visitor threshold before some people are put off as it's too busy	Short season (function of weather and distance from Mainland)
Marketing of tourist sites and bias of VisitScotland to population centres	Don't want no-go areas caused by renewable

Weaknesses and threats	
Thurso:	**Kirkwall:**
	developments as this is a high risk for kayakers and yachts as they could be forced into more dangerous areas
M.V. Hamnavoe has no Caithness tourist map	Sea Kayaking can be challenging - Kayakers that come are experienced rather than beginners
Missing signage for historic sites	Facilities for tourists could be better, e.g. toilets & showers; these should be mapped
Lack of public transport, poor frequency of public transport, transport distances are high,	Pump out facilities may be needed in the future
Local running paths are being developed all around the coast but lack of knowledge in short term	
North Highland Initiative NC500 still to be fully developed	
Good waves (hidden gem) but not necessarily consistent wave environment	
Waves – good but challenging conditions therefore not good for everyone all of the time	

E.3   GAPS IN PROVISION

Gaps in Provision	
Thurso:	**Kirkwall:**
Lack of harbour space for small boats especially in Scrabster	Need facilities for boat maintenance (sheds hardstanding) too keep boats in over the winter.
Lack of toilet facilities (especially in winter)	Marine Scotland predicting a 40% increase in Sailing, therefore we need more satellite facilities (Marinas, berths). This could be substantial income stream.
Lack of tea/coffee facilities	Lack of a Boat Museum
Changing facilities (e.g. for surfing)	More facilities out on the islands; however small islands don't always lend themselves to facilities
Lack of parking	A few more mooring facilities in the choice/key areas are needed
Lack of transport for youths (i.e. minibus service)	More facilities for sailors to tie up & come ashore – shower – self-catering, camping
Lack of dialog between the clubs	Places to hire kit, showers, changing, washing.
Lack of sign to historic sites	
No access to fresh water for drinking and for washing equipment	

E.4   CONFLICTS

Conflicts	
Thurso:	**Kirkwall:**
Possible conflict between public access versus landowner rights	Access to areas of renewables but conflict with existing users
Wild camping – can be a problem in some locations	Dog mess on beaches

Conflicts	
Thurso:	**Kirkwall:**
Tidal energy sites once developed may impinge on kayak, diving and sailing sites	Economic development and wildlife conservation (e.g. protection of seals)
Creels versus recreation	Decrease in wildlife numbers (don't know why)
Possible conflict between dog walkers versus wildlife	Surfers versus wave & tidal development – lack of understanding
Possible conflict between cliff climbing versus wildlife	Existing economic activity versus new development (e.g. wave & tide)
Some pathways missing to good surfing sites	Possible conflict between tourism (visual impact) and new development (especially wave & tidal and fish farms)
Legislation has changed recently which can lead to conflict (i.e. lack of knowledge of protected haul out sites can lead to unintentional disturbance)	Landowners versus Access to the land
	Marine Plan calls for areas to be designated which could lead to restrictions
	Some anchorages used by sailors have been taken over by fish farms
	Tourists come for wildlife, remoteness (Rackwick, Yesnaby) but economic activity does not match this aspiration
	Kayaking generally free of conflicts with other users
	Sailing generally able to avoid tidal energy developments but people do not always have updated charts
	Privately owned slip ways – implications of safety, etc.

E.5   GENERAL FEEDBACK

The follow table outlines some of the general feedback on the questionnaires and process that was received at the two workshops.

General feedback	
Thurso:	**Kirkwall:**
Business questionnaire doesn't really fit for accommodation providers	Questionnaire too sector specific
Some questionnaire questions – difficult to tell if you need ticks or numbers	Questionnaire doesn't measure health and wellbeing
Question 15 - No wildlife cruise, guided tours, or ranger lead walking	Other sources of information for sailing: • Orkney Marinas – lots of info and routes • Anatec maps – have zones rather than lines for sailing • Clyde Cruising Club instructions have routes (e.g. Eynhallow South)
Other sources of information for kayaking: • Kayaking guide books cover whole area	

General feedback	
Thurso:	**Kirkwall:**
Cost questions difficult to answer accurately	Costs questions – not particularly relevant, difficult to answer accurately, sharing costs
Missing tourist perspective	Questionnaire doesn't make much sense if you live locally
Questionnaire is a bit too long	This survey is not applicable to island residents. I live on the sea-front the coastline is endemic to my existence. I do not 'buy' access to it or expect to. As an atheist it is as near as I could get to identifying a 'spiritual' dimension to my existence – this depends on non-material non-human instruction in which the power of nature can be appreciated and provide time for contemplation and thinking.
Scale of maps too small for surfers, online it could be zoomed in	

APPENDIX F QUESTIONNAIRE RESULTS

(See separate document)

APPENDIX G WRITTEN FEEDBACK RECEIVED

G.1 FROM DURNESS

All these activities place at various and several places along the coasts and would not be easy to identify on a map without confusion.

- Military Exercises – in the Cape Wrath range involving air ship and shore. This can attract visitors for "Military Tourism"

  o Loch Eriboll has a history of military use stemming from the fact that it is the largest sheltered anchorage on the north coast. It is also quite close to the Cape Wrath Naval Bombardment and Air Weapons Range.

  o The loch was used as a fleet anchorage in both World wars and during WW2 was used for assembling North Atlantic convoys. German U-boats also surrendered to the Royal Navy here in 1945. In more recent times it has provided an important resource for naval training exercises, particularly for weather avoidance and aspects of amphibious and specialist training activity. This forms part of exercises around the North West coast which take place for three two week periods per year.

- Scenery varies from wild cliffs and tiny islands to lonely moorland and remote sandy beaches with superb panoramic mountain views attracting visitors.

- Bird Watching – The coastal and sea birds are abundant and many visitors spend time watching and recording their presence.

- Coastal mammals with ocean watch localities as part of a coastal trail.

- Coastal environment – especially the dune systems are an attraction for the machair and dynamic systems. Professional and amateur botanists.

- Wild flowers – The area during May, June and July is abundant with coastal wild flowers and this attracts professional and amateur botanists.

- Sailing & Windsurfing. The bays along the coast attract many surfers and body boarders

- Campsite – in Durness the campsite overlooks the Bay of Sango.

- Canoeing is popular in the sheltered bays

- Walking - there are several areas where coastal walking is popular, Rangers lead guided walks, some routes are waymarked through various web sites and wilderness walkers find their way out to Friesgill and Whiten Head

- Themed heritage trails from interpretation of the landscape

- Fishing inshore for lobster, muscle, oysters, crab are small scale enterprises that are operated all along the coast from the few operational piers.

- Wild salmon and sea trout are a key feature of the freshwater environment and angling for them has traditionally generated a significant income for the rural economy of Highland, via the estates and hotels.

- The T shaped Ard Neackie peninsula with its old limekilns is a key landscape feature within the loch which has merited the construction of a viewpoint and layby on the main road above. The buildings on the site are somewhat run-down and there may be some development potential as a tourist facility as this attracts a lot of interest.

- Diving is a popular sport and recreational activity from several localities around the coast but there are no facilities.

- Angling – from rocks and sea lochs. Game fishing, particularly on the Hope system which flows into Loch Eriboll, is perhaps the most significant specialist activity pursued by visitors.

- Salmon farming – from smolts to maturity are held in cages along the coast at various locations.

- Tourism excursions to Cape Wrath using passenger ferry across the Kyle. A popular, local economic attraction during the summer months.

- Smoo Cave has thousands of visitors each year and the Geo of Smoo and the cave have a tourist operation seasonally.

- Golfing at Durness has a 9 hole course along the Balnakeil and Kyle of Durness coast.

- Farming activities – 4 farms border the coast

- Crofting activities are common place along the coast as Durness crofts fringe the coast.

- The crofting township of Laid is also a key area where small scale tourism related developments have taken place.

- Geological interest from professional and amateur geology and a landscape of world class quality, significance and importance.

G.2 FROM MELNESS/TALMINE

- Bettyhill pier – recreational use

- Skerray Harbour – recreational use and small scale commercial

- Scullomie – recreational use

- Talmine – recreational use and commercial.

- Of the 4 above Talmine is the most important, and Skerray the second most.

- The Communities in Melness (Talmine) and Skerray both have ambitions to improve the facilities. In Melness there are plans (which are not progressing due to lack of funding) to extend the pier and improve the slipway. Skerray are talking about putting in pontoons and an overall improvement in facilities (including toilets).

- Recreational use includes taking trips out to Rabbit Islands, and other islands using dinghies and small yachts and fishing, but at Talmine and Skerray also includes larger craft generally stopping off on trips to or from Orkney and the West Coast (Loch Eriboll being the next stop westward)

- Farr beach and to a lesser extent Torrisdale beach are used by surfers. Surfers use Farr Beach all year round – there are nearly always surfers there particularly at weekends (they come from Thurso I think).

- Line fishing from rocks is prevalent along the whole coast – there are numerous outcrops considered safe enough to fish from without being swept away. 'Safe spots' such as Skerray Harbour, Tongue Pier (at Tongue House), the Kyle of Tongue Causeway and Talmine pier are heavily used.

- Wading and estuary fishing also occurs along the coast – particularly in the Naver estuary, Borgie estuary and Kyle of Tongue

- Torrisdale Beach is used extensively for horse riding.

- All beaches are used for dog walking.

- Many beaches are used for camping, particularly in summer – particularly Farr Beach and Torrisdale beach where you can camp in the dunes but also Talmine beach.

- Farr beach and Torrisdale is regularly used by the school for educational and recreational purposes. On Farr beach they hold football and sometimes shinty matches. Farr beach is used during the Bettyhill Gala, for example for sandcastle building competitions.

- Kyle of Tongue is the site of a large commercial oyster farm.

- In general the community view the beaches as an underused resource and want to see them more heavily promoted to visitors and with better facilities (e.g. toilets, but also access paths).

G.3   FROM BETTYHILL

This is an example of some coastal places I have visited with groups of pupils over the years 1978 – 2013, sometimes many times and sometimes only once, together with brief notes on each. This starts at the Caithness boundary and terminates in Strathy and is one of the areas most densely populated with interesting features, but not with people, along the whole coast.

- 920654 – Largest puffin colony on British mainland, sea cut archway accessible at low tide, sedimentary rock exposures, interesting glacial/periglacial overlays on clifftop.

- 883657 – Memorial to the Portskerra Fishing Disaster of 1918 and access to Portskerra Pier.

- 876664 – Geo in which the Snow Admiral was wrecked in 1842 with marker stone on top of cliffs. Best viewed from the road.

- 873664 – 866663 – Complex but reasonably accessible stretch of coastline including eider duck nesting area on cliff-foot beach, small natural arch on beach, steep-sided burn (cut in fluvio-glacial material) and series of small waterfalls, readily discernible remains of magnificent promontory fort but with hazardous access.

- 857664 – An Dun This means 'the fort' in Gaelic but is much more likely to be the robbed remains of a clifftop chambered tomb. The first in a group of really good visitor attractions.

- 856662 – A hundred metres south-west of An Dun are the remains of two 19th century lime kilns adjacent to the Baligill Burn. In dry weather it is possible to descend the very steep route taken by the burn over the cliff to a rocky shelf of sea-shore covered with large sea-wrought boulders. Great care required with a party.

- 855655 – A clapper type bridge, more characteristic of an English setting, crosses the Baligill Burn near to the remains of a large 19th Century water mill.

- 854664 – Dun Mhairtein, another promontory type fort but with an interesting feature, possibly a souterrain or passage grave, within it. It is possible to drop down inside this one, crawl along a bit and, if you a very confident about your balance, creep out on to the grassy cliff face and scramble back up to your entrance point. Not for the faint hearted!

- 846664 – 834665 – Strathy Beach with steep descents over grassy slopes densely patterned with lynchet-like 'sheep tracks'. The east side of the beach contains some lovely caves and hidden nooks and crannies including 'Captain Ivy's Cave' with an attached folk tale. Site of the 19th Century wreck of the Norwegian barque, Thorwaldsen and associated stories. Great surfing potential at times. Eco toilet south of the beach next to Strathy Graveyard. Crossing of the Strathy River is possible at low tide and low river levels otherwise hike up to the road bridge. East side of beach good, in reasonable weather, for scrambling along an approximately 3metre contour before ascending the cliff and regaining the road.

APPENDIX H ECONOMIC VALUATION METHODOLOGIES AND BRIEFING NOTE

(See separate document)