Scrabster Harbour
Economic Impact Assessment
2016

Final Report

To

Scrabster Harbour Trust

June 2017

grangeston

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1 INTRODUCTION

This is the Final Report of an Economic Impact Assessment of Scrabster Harbour. The research was undertaken by Grangeston Economics for Scrabster Harbour Trust between January and June 2017.

1.1 PROJECT OBJECTIVES

The overall objective of the study was to assess the role and impact of Scrabster Harbour in relation to the Caithness economy. The core objectives were to:

- Review historic trends in activity at Scrabster Harbour.
- Assess the present (2016) impact of Scrabster Harbour Trust and the harbour as a whole on the Caithness economy.
- Evaluate the challenges and opportunities for Scrabster and future plans for harbour development.
- Assess the potential impacts of proposed new developments.

1.2 STUDY METHOD

The research was undertaken through:

- Review of reports and statistics provided by Scrabster Harbour Trust.
- Survey of businesses based at Scrabster Harbour.
- Consultations with Serco NorthLink.
- Analysis of a range of data sources, including:
  - Scottish Annual Business Statistics (SABS).
  - Scottish Input-Output Tables.
  - Scottish Transport Statistics.
  - Cruise Line International Association (CLIA) Reports.

1.3 STRUCTURE OF THE REPORT

- **Chapter 2:** Scrabster Harbour-Facilities
- **Chapter 3:** Scrabster Harbour-Trends and Performance
- **Chapter 4:** Economic Impacts
- **Chapter 5:** Challenges, Opportunities and Future Plans
- **Chapter 6:** Future Impacts

2 SCRABSTER HARBOUR-FACILITIES

This Chapter provides the background to Scrabster Harbour and an analysis of the facilities that are available.

Scrabster Harbour is a trust port founded in 1841. Trust ports are independent statutory bodies, each governed by its own, unique, local legislation and controlled by an independent board. Their common feature is their unique status as trusts. There are no stakeholders or owners. Any surplus is ploughed back into the port for the benefit of the stakeholders of the trust. The stakeholders are all those using the port, employees of both the port and its users and all those individuals, organisations and groups having an interest in the operation of the port.

Scrabster has evolved into a modern port (see plan over). It is strategically located to service the fishing industry in the north Atlantic and the energy sector, in particular in relation to oil and gas activity on the Atlantic Margin as well as marine and offshore wind renewable energy developments in the Pentland and Moray Firths. Scrabster has benefited from significant investments in infrastructure over the last 25 years-since 2001 £35 million has been invested in port infrastructure.

In 2008, Scrabster Harbour Trust set out an ambitious programme of port infrastructure development. The first stages of the programme, the £17.6 million redevelopment of the Old Fishmarket Pier to create the new Jubilee Quay, was completed in June 2013.

These and previous major investments such as the Queen Elizabeth Pier and the creation of a deepwater basin have created significant opportunities for the harbour that has been reflected in the growth of activity such as:

- Fishing: one of the top landing ports in the UK. This activity is supporting an expansion of fish and shellfish processing at Scrabster. In addition, there is a weekly link to the Faroe Isles, bringing in primarily farmed Faroese salmon.
- Oil industry: ideally placed for activity on the Atlantic Margin and offering a wide range of engineering, repair & maintenance, and supply services.
- Offshore renewables: with the availability of significantly more lay-down areas and proximity to the Pentland Firth, Scrabster has experienced an important increase in activity associated with the deployment of offshore renewables projects, for example the first phase of the MeyGen project.
- Ferry service: the Northlink service to Orkney.
- Cruise ships: although the number of ships arriving at Scrabster has not increased over the past 5 years, the average tonnage is some 63% greater and the number of visitors has grown by almost 30%.

However, Scrabster is also facing competition in all of these markets from other Scottish and UK ports. In addition, each of these markets is susceptible to global changes in circumstances that can rapidly erode these markets. For example, changes in oil prices has had significant impacts in the past few years on the level of oil & gas sector related activity. Similarly, the expected activity associated with marine and offshore renewables developments has not appeared as quickly as expected.

Scrabster Harbour Trust recognises the challenges it faces and the available opportunities, and continues with a programme of investment and improvement to the harbour.

A summary of Scrabster Harbour's facilities is reported in **Table 2.1**.

TABLE 2.1: SUMMARY OF HARBOUR SPECIFICATION		
Quay	**Length**	**Depth at Chart Datum**
QE Ro-Ro	160m	9.0m
QE Lay By	180m	8.0m
St Ola Ro-Ro	115m	5.5m
St Ola Lay By	100m	5.5m
Fish Market Quay	120m	4.5m
South Wall	85m	4.5m
Fuel Berth	65m	4.5m
Jubilee Quay	120m	7.5m
Tanker Berth[1]	73m	7.5m
Inner Basin	130m	4.5m

Note 1: Tanker berth is designed to accommodate vessels up to 95m LOA.

In addition, pontoons are available for approximately 35 vessels up to 15m LOA. The pontoons are located in the Inner Basin and dredged to -2.0m at CD.

3 SCRABSTER HARBOUR-TRENDS AND PERFORMANCE

3.1 INTRODUCTION

This Chapter provides an analysis of the key trends for Scrabster Harbour based on information provided by the Harbour Trust.

3.2 FERRY AND CRUISE

Scrabster is the gateway port to the Orkney Islands, providing the basis for the lifeline ferry service to Stromness. Currently (2017) ***Serco NorthLink*** offers two sailings daily in each direction, increasing to three sailings daily during the peak period (mid-May to early September). Trends in ferry activity is reported in **Table 3.1**. Scrabster also handles cruise business.

TABLE 3.1: DEVELOPMENT OF SERCO-NORTHLINK FERRY BUSINESS THROUGH SCRABSTER

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Ship arrivals	962	914	768	794	806	798
Passengers	138,917	136,817	111,593	122,421	126,808	134,111
Annual growth (%)						
Ship arrivals	-	-5.0	-16.0	3.4	1.5	-1.0
Passengers	-	-1.5	-18.4	9.7	3.6	5.8

Since the introduction of the Hamnavoe in 2003, up until 2012-13, NorthLink offered three return trips daily throughout the year. In 2013-14, the combination of the reduced sailing schedule and the disruption of the ferry service arising from the Hamnavoe breaking a crankshaft in May 2013 and the vessel going into dry dock in January 2014, there was a 16% reduction in ship arrivals and an 18% reduction in the number of passengers transported.

Since then there has been steady growth in the number of sailings and passengers carried, with a total growth in number of passengers carried of over 20% between 2013-14 and 2016-17. However, the total number of passengers carried in 2017 compared to 2007 (the time of the previous impact assessment) is almost 17% lower.

In contrast to the situation in 2007, the summer only ***Smyril Line*** service from the Faroe Islands is no longer operating.

Table 3.2 reports the trend in cruise ship activity at Scrabster.

TABLE 3.2: DEVELOPMENT OF CRUISE SHIP BUSINESS THROUGH SCRABSTER						
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Ship arrivals	10	10	9	8	6	10
Passengers	3,938	2,234	3,182	2,227	3,117	5,100
Tonnage	139,873	80,073	133,767	81,431	131,498	228,395
Average per ship						
Tonnage	13,987	8,007	14,863	10,179	21,916	22,840
Passengers	394	223	354	278	520	510
Annual growth (%)						
Ship arrivals	-	0	-10	-11	-25	67
Passengers	-	-43.3	42.4	-30.0	40.0	63.6

The cruise business through Scrabster has been developing since 2004 when 4 ships carrying just under 1,400 passengers visited Scrabster. At the time of the previous impact assessment 5 cruise ships stopped at Scrabster carrying a total of 1,164 passengers, an average 233 passengers per ship. In 2016-17 10 cruise ships, carrying a total of 5,100 passengers visited Scrabster, an average of 510 passengers per ship-over double the average in 2007.

Since 2004 there has been a general upward trend in the number of cruise ships and passengers visiting Scrabster. Although the number of ships declined between 2012-13 and 2015-16, average vessel tonnage and average number of passengers per vessel have broadly been on an upward trend reflecting that larger ships are being attracted (and also reflecting the general trend in the cruise market as a whole).

3.3 WHITE FISH

This section analyses the performance of Scrabster Harbour in terms of white fish landings.

Based on information provided by SHT, there are seven locally based fishing vessels, four vessels that are based out of Scrabster but whose home port is elsewhere and in the region of twenty-three vessels based elsewhere but who periodically land at Scrabster.

Table 3.3 provides a summary and analysis relating to white fish landings at Scrabster.

TABLE 3.3: WHITE FISH LANDINGS

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Vessel arrivals	959	823	977	1,068	1,125	1,049
Box landings		210,673	249,265	288,233	290,651	298,943
Vessel tonnage	223,647	181,371	214,733	241,272	243,873	245,613
Average per vessel						
Vessel tonnage	233.2	220.4	219.8	225.9	216.8	234.1
Box landings		256.0	255.1	269.9	258.4	285.0
Annual growth (%)						
Vessel arrivals		-14.2	18.7	9.3	5.3	-6.8
Box landings			18.3	15.6	0.8	2.9

Note 1: Projected based on 9 months' data.

Overall, the total number of vessel arrivals has been increasing since 2011-12, from 959 to an estimated 1,049 in 2016-17. In fact the previous year, 2015-16, had some 7% more fishing boat arrivals. However, the growth in the number of boxes landed has increased steadily over the period to almost 300,000.

As noted elsewhere, the fishing activity is important in terms of the level of other activity in the harbour, most notably the continuing growth in fish and shellfish processing. The sector is also important for the wider supply chain including refrigerated transport and engineering activities.

3.4 FISH CARGO

This section analyses the performance of Scrabster Harbour in terms of fish cargoes.

Table 3.4, reports the trends in fish cargo trade.

TABLE 3.4: FISH CARGO						
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Vessel arrivals	100	96	96	75	55	53
Tonnes fish	19,557	20,380	12,423	14,714	19,484	16,836
Vessel tonnage	246,200	236,106	236,352	248,896	244,890	235,906
Average per vessel						
Vessel tonnage	2,462	2,459	2,462	3,319	4,453	4,451
Tonnes fish	195.6	212.3	129.4	196.2	354.3	317.7
Annual growth (%)						
Vessel arrivals	-	-4.0	0.0	-21.9	-26.7	-3.6
Tonnes fish	-	4.2	-39.0	18.4	32.4	-13.6

Note 1: Projected based on 9 months' data.

The trend in fish cargo trade dipped in 2013-14 from an average of around 20,000 tonnes per annum to 12,500 tonnes. It is likely that this reduction was related to the previous operator, P/F Fresh Linked ceasing operation during September 2014 (and being declared bankrupt in the Faroese Courts in November 2014). However, a new weekly service from the Faroes, operated by Eimskip, started in September 2014 and the tonnes of fish landed has increased towards historical level. Notably, the average size of the vessels landing cargo fish has increased by around 80%.

3.5 GENERAL CARGO

Table 3.5 reports trends in general cargo activity since 2011-12.

TABLE 3.5: GENERAL CARGO						
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Vessel arrivals	80	96	73	85	56	55
Tonnes cargo	46,111	47,260	36,407	50,332	16,482	19,340
Vessel tonnage	98,657	95,096	136,532	138,222	61,473	74,766
Average per vessel						
Vessel tonnage	1,233	991	1,870	1,626	1098	1,359
Tonnes cargo	576	492	499	592	294	352
Annual growth (%)						
Vessel arrivals	-	20.0	-24.0	16.4	-34.1	-1.8
Tonnes cargo	-	2.5	-23.0	38.2	-67.3	17.3

Note 1: Projected based on 9 months' data.

General cargo covers a range of products including, timber, rock salt, salmon smolts, and in the last couple of years transformers. However, the general trend in general cargo activity has been declining. Projected vessel arrivals in 2016-17 has fallen to 55, from a high of 96 in 2012-13, with cargo tonnage estimated at around 38% of the 50,000+ tonnes of cargo in 2014-15.

3.6 OIL TANKERS

Table 3.6 reports oil tanker activity.

TABLE 3.6: OIL TANKERS						
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Vessel arrivals	24	19	13	24	45	37
Tonnes cargo	28,221	24,201	25,967	34,261	38,747	39,750
Vessel tonnage	30,626	27,513	39,951	37,681	44,892	48,100
Average per vessel						
Vessel tonnage	1,276	1,448	3,073	1,570	998	1,300
Tonnes cargo	1,176	1,274	1,997	1,428	861	1,074
Annual growth (%)						
Boat arrivals	-	-20.8	-31.6	84.6	87.5	-17.8
Tonnes cargo	-	-14.2	7.3	31.9	13.1	2.6

Note 1: Projected based on 9 months' data.

Over the period since 2011-12 there has broadly been growth in the number of oil tanker arrivals and in the tonnage of oil cargo.

3.7 OIL & GAS SECTOR AND MARINE/OFFSHORE RENEWABLES

Table 3.7 reports activity relating to both the offshore oil & gas sector and to marine and offshore renewables (it should also be noted that onshore wind farm components will also pass through Scrabster).

TABLE 3.7: OIL & GAS AND MARINE & OFFSHORE RENEWABLES						
	2011-12	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Oil & Gas						
Vessel arrivals	96	72	89	76	97	136
Tonnes cargo	5,148	3,745	4,131	2,199	5,295	9,026
Vessel tonnage	385,774	298,897	372,671	318,943	525,090	679,676
Average per vessel						
Vessel tonnage	4,018	4,151	4,187	4,197	5,413	4,998
Tonnes cargo	53.6	52.0	46.4	28.9	54.6	66.4
Annual growth (%)						
Vessel arrivals	-	-25.0	23.6	-14.6	27.6	40.2
Tonnes cargo	-	-27.3	10.3	-46.8	140.8	70.5
Renewables						
Vessel arrivals	3	11	3	17	20	11
Tonnes cargo	1,409	6,886	84	8,727	5,481	5,157
Vessel tonnage	22,049	44,970	2,552	27,906	19,272	49,611
Average per vessel						
Vessel tonnage	7,350	4,088	851	1,642	964	4,510
Tonnes cargo	469.7	626.0	28.0	513.4	274.1	468.8
Annual growth (%)						
Vessel arrivals	-	266.7	-72.7	466.7	17.6	-45.0
Tonnes cargo	-	388.7	-98.8	10,289.3	-37.2	-5.9

Note 1: Projected based on 9 months' data.

Both of these offshore energy sectors are seen as areas with considerable potential for growth. The nature of these cargoes, especially in relation to the exploration and development phases of offshore energy resources, tend

to be 'lumpy' and this is evident in the sometimes significant changes in growth/decline in the level of activity.

This pattern is still evident in the more mature oil & gas sector although a significant proportion of the activity through Scrabster will reflect the exploration/development activity West of Shetland/Atlantic Margin. However, the general trend in oil & gas related activity appears to be positive with a close to doubling of tonnes of cargo through Scrabster over the past two years. In relation to these trends SHT note that this is encouraging given the difficulties facing the sector, and attribute, at least part of this performance to improved port infrastructure, increased activity West of Shetland and an increased focus on cost.

Activity relating to renewables has been variable over the past 5 years. It should be noted that over the two years 2014-15 and 2015-16, a significant factor was the shipment of components for Strathy North Wind Farm, whereas the more recent increase in activity, evident in 2016-17 for example, relate to the deployment of tidal turbines in the Pentland Firth. It is expected that marine and offshore renewables will present a far greater opportunity to Scrabster in the future.

4 ECONOMIC IMPACTS

4.1 INTRODUCTION

This Chapter provides estimates of the key economic impacts of Scrabster Harbour on Caithness. This is reported in terms of:

- Employment.
- Gross Value Added (GVA).
- Income.
- Output.

4.2 METHODOLOGY

4.2.1 Definition of Impacts

- **Direct Impacts:**
  - **Operational**: relating to the operation of the port including the activities of Scrabster Harbour Trust, ship to shore handling (including ship agents), and provision of services such as fuel/bunkers.
  - **Dependent** on harbour: activities that depend on the harbour. This category, for example, includes:
    - Fishing boats.
    - Ferries.
    - Fish sellers and processors.
  - **Wider**: largely associated with the impacts of users of the ferry services, in particular in relation to visitors and tourists who are travelling on the ferry services. For example, some visitors may spend a night in Caithness because of the ferry timetable or may decide to spend time in Caithness as part of a holiday in Orkney before or after using the ferry services.
- **Indirect**: relating to the supply chain associated with direct impacts.
- **Induced**: impacts associated with household expenditures of direct, dependent and wider impacts.

4.2.2 Measuring Economic Impacts

The economic impacts are estimated in terms of direct, indirect and induced employment, GVA, income and output impacts:

- Direct impacts:
  - Employment was based on a survey of the organisations and businesses based within the harbour precincts, including Scrabster Harbour Trust. For companies that were either unavailable or unable to supply the required information employment estimates were based on information provided by Scrabster Harbour Trust.
  - Gross Value Added estimates were based on GVA per employee for each of the industrial sectors identified and on the direct employment estimates. From these, direct total GVA was estimated in 2016 prices.
  - Income estimates were based on income per employee for each of the industrial sectors identified and expressed in 2016 prices.

  - Output estimates were based on average output per employee for each of the industrial sectors identified and expressed in 2016 prices.
- Indirect impacts for employment, GVA, income and output were estimated by applying the appropriate Type I multipliers scaled down to reflect the extent of impacts within Caithness.
- Induced impacts were calculated using induced multipliers based on the ratio of Type II and Type I multipliers. These were scaled down to reflect the extent of impacts within Caithness.

4.3 EMPLOYMENT IMPACTS

4.3.1 Operational

Based on a survey of businesses involved in the operation of Scrabster Harbour and discussions with Scrabster Harbour Trust it is estimated that in the region of 62 direct FTE jobs are supported through the operation of, and generally based in, the harbour. The largest direct employer is the Trust which accounts for over one-third of the direct employment involved in the operation of the harbour.

Other significant employers relate to the provision of oil, ice, craneage, stevedoring and the loading/unloading of the Serco NorthLink ferry service to Orkney.

A further 21 FTE indirect jobs are estimated to be supported in Caithness through the purchases of goods and services by those companies involved in the operation of the harbour.

Finally, 12 FTE induced jobs are supported in Caithness through the spending of wages and salaries by those directly and indirectly employed.

In total the operation of Scrabster harbour supports 95 direct, indirect and induced FTE jobs in Caithness.

4.3.2 Harbour Dependent

Businesses that depend on the harbour include:

- Serco NorthLink Ferries (most of the associated impacts are included as harbour operational jobs).
- Fishsellers.
- Fish/Shellfish processors.
- Fishing fleet based at Scrabster.
- Visiting fishing boats.
- Oil supply vessels.

Based on a survey of businesses dependent on Scrabster Harbour it is estimated that in the region of 109 direct FTE harbour dependent jobs are based at Scrabster. The largest individual component relates to fish merchants and processors followed by the local fishing boats. The direct employment impacts of stranger fishing vessels are not included within this category although the impact of their purchases at Scrabster are taken into account in the estimates of indirect impacts.

Harbour dependent activity supports a further 102 indirect and 29 induced FTE jobs.

In total harbour dependent activity supports in the region of 240 direct, indirect and induced FTE jobs in Caithness.

4.3.3 Wider Impacts

The wider, or catalytic, impacts of the harbour are primarily driven by the effects of users of the ferry service and cruise boats that serve/use Scrabster Harbour. First, is the regular Serco NorthLink ferry service between Scrabster and Stromness (Orkney). The ferry operates throughout the year with three return trips on weekdays and two return trips on Saturdays and Sundays. The ferry is based at Stromness.

In addition, a number of cruise ships make stops at Scrabster and passengers come ashore, usually to visit the main attractions in the area, for example, the Castle of Mey and the Old Pulteney Distillery in Wick. While the cruise passengers are transported by coaches from the Harbour to their various destinations, as in 2007, the majority of these coaches are sourced from outwith Caithness.

In addition to the direct impacts of these ferry services on Scrabster harbour, they also have a wider impact across the Caithness and Scottish economies. Specifically, passengers travelling on the ferry will be a combination of visitors to the area (on holiday and business visitors) as well as local (Orkney residents) travelling to and from home. These passengers will make expenditures for a range of products and services while they are in Caithness, which in turn will support businesses and employment in the area. Expenditures will range from minimal expenditures for those who are passing through Caithness to much larger expenditures for visitors staying for one or more nights in the area.

Estimates of these impacts are based on:

- Carryings data for the ferry service split into locals and visitors.
- Visitor expenditure data for Caithness.
- Tourism expenditure: employment ratios.

From **Table 4.1**, it is estimated that 51,654 journeys are made by residents of Orkney on the **Serco-NorthLink** service to Scrabster and 77,657 by visitors to Orkney. Thus, Orkney residents account for 40% and visitors for 60% of total passenger traffic on this route. This translates into approximately 25,827 unique (i.e. individuals that are assumed to make a return journey on the ferry) Orkney residents and 38,829 visitors travelling to/from Stromness from/to Scrabster.

TABLE 4.1: SERCO NORTHLINK SCRABSTER-STROMNESS PASSENGER NUMBERS (2016)						
	Orkney Residents			Visitors		
	Scrabster to Stromness	Stromness to Scrabster	Total	Scrabster to Stromness	Stromness to Scrabster	Total
January	1,588	1,363	2,951	925	1,280	2,205
February	1,433	1,346	2,779	728	697	1,425
March	1,835	1,949	3,784	1,243	928	2,171
April	2,323	1,890	4,213	2,047	1,974	4,021
May	2,174	1,845	4,019	4,907	4,067	8,974
June	2,494	2,686	5,180	5,751	5,909	11,660
July	3,516	3,268	6,784	7,273	6,614	13,887
August	3,083	2,702	5,785	7,519	7,725	15,244
Sept	2,037	2,203	4,240	4,549	4,591	9,140
October	3,004	2,635	5,639	2,491	2,682	5,173
November	1,774	1,644	3,418	961	1,043	2,004
December	1,454	1,408	2,862	991	762	1,753
Total	***26,715***	***24,939***	**51,654**	***39,385***	***38,272***	**77,657**

Source: Serco-NorthLink

To estimate the expenditures in Caithness by visitors using the ferry service it has been assumed that 50% of the visitors (19,415) stay overnight in Caithness on either their inbound or outbound journey. On the other leg of their ferry journey and for the remaining visitors it has been assumed that they do not stay overnight in Caithness and thus for expenditure purposes are considered as day-trippers.

Based on the ***Highland Visitor Survey: Caithness and Sutherland*** for 2002-03 it is reported that the average expenditure per person staying overnight in Caithness is £67[1] (2016-17 prices). It has been assumed that expenditures for those not staying overnight is one-third of the overnight expenditure or £22 per person.

For Orkney residents, it has been assumed that for each inbound/outbound leg of their journey they spend on average £12[2] (2016-17 prices) on goods and services in Caithness (i.e. £24 in total).

Expenditure figures are converted into full time equivalent (FTE) jobs by applying the relevant expenditure: employment ratio. These are reported in the ***Scottish Tourism Multiplier Study (1992)***. Based on data for 'remote

[1] This calculation is based on the ratio used in *SHT Economic Impact Assessment (2009)* updated to 2016-17 prices.

[2] This value is based on the assumed spend used in *SHT Economic Impact Assessment (2009)* updated to 2016-17 prices.

rural areas' expressed in 2016-2017 prices it is estimated that 1 FTE (direct, indirect and induced) job is created in Caithness for every £52,110[3] of expenditure in the area.

Total estimated expenditures and employment impacts are reported in **Table 4.2**.

TABLE 4.2: IMPACT OF PASSENGERS TRAVELLING ON SCRABSTER-STROMNESS FERRY

Category	Numbers (trip legs)	Spend (per trip leg) (£)	Total Expenditure (£)	FTE (direct, indirect & induced)
Visitor staying overnight	19,415	67	1,300,805	25
Visitors not staying	58,242	22	1,281,324	25
Orkney residents	51,654	12	619,848	12
Total	**129,311**	**24.76 (ave)**	**3,201,977**	**62**

The scale of the onshore impact associated with cruise ships stopping at Scrabster depends on:

1. The numbers of passengers arriving at Scrabster and visiting various locations across the Highlands.
2. The number of crew disembarking and visiting Scrabster/Thurso.
3. The average onshore spend per passenger at ports of call (as opposed to embarkation/disembarkation to the cruise).
4. The average onshore spend per crew member disembarking at Scrabster.

Passenger numbers: it is estimated by SHT that in the region of 5,100 cruise ship passengers arrived at Scrabster in 2016.

Crew numbers: it is estimated, based on available data for cruise ship lower berth capacity and crew complement, that the crew complement tends to be around 35% of the passenger numbers. In the case of cruise ships visiting Scrabster this is equivalent to a crew complement of 1,785.

It is also estimated, based on information contained in CLIA[4] that on average around 40% of the total crew complement will disembark at each of the ports of call. On this basis, it is assumed that in the region of 714 crew members disembarked at Scrabster in 2016.

Passenger onshore spend: CLIA estimate that the average expenditure by cruise passengers at each port visit on their cruise itinerary was €62 per passenger (in 2013 prices). This estimate has been assumed to reflect the average spend by all passengers onboard rather than just those that

[3] This calculation is based on the ratio used in *SHT Economic Impact Assessment (2009)* updated to 2016-17 prices.

[4] *The Cruise Industry: Contribution of Cruise Tourism to the Economies of Europe* 2014 Edition, Cruise Lines International Association (CLIA)

disembarked (i.e. the actual average spend by those disembarking will be more). This is equivalent to £54.73[5] (in 2016 prices).

Crew onshore spend: CLIA estimate crew spending was estimated at €23 per crew member **disembarking** at each port (in 2013 prices). This is equivalent to £20.30 (in 2016 prices).

As discussed above, it is estimated that 1 FTE (direct, indirect and induced) job is created in Caithness for every £52,110 of expenditure in the area.

Total estimated expenditures and employment impacts associated with cruise ship visits are reported in **Table 4.3**.

TABLE 4.3: IMPACT OF PASSENGERS/CREW FROM CRUISE SHIPS (2016)

Category	Numbers	Spend (per person) (£)	Total Expenditure (£)	FTE (direct, indirect & induced)
Visitors	5,100	54.73	279,123	5.36
Crew	714	20.30	14,494	0.28
Total	**5,814**	**£50.50 (ave)**	**293,617**	**5.64**

In total, the Serco-NorthLink ferry service and cruise ship passengers/crews are estimated to support in the region of **68 direct, indirect and induced FTE jobs in Caithness**.

We have also estimated the total (direct, indirect and induced) wages/ salaries, GVA, and output associated with these wider/catalytic jobs. These estimates only provide a broad indication and are based on income, GVA and output per FTE derived from SABS 2014 ratios (expressed in 2016 prices) for Sustainable Tourism in the Highland Council area.

4.3.4 Total Employment Impacts

Table 4.4 reports the total employment impact of Scrabster Harbour on Caithness.

TABLE 4.4: IMPACT OF SCRABSTER HARBOUR ON EMPLOYMENT IN CAITHNESS

Category	Direct	Indirect	Induced	Total
Operational	62	21	12	95
Harbour Dependent	109	102	29	240
Sub-total	*171*	*123*	*41*	*335*
Catalytic/Wider	55	6	7	68
Total	**226**	**129**	**48**	**403**

In total Scrabster Harbour supports 403 direct, indirect and induced FTE jobs in Caithness. Of these 83% are associated with operational and harbour

[5] *Credit Suisse Average Foreign Exchange Rates* 2013 report that the average value of €1 over the period January to December 2013 was £0.8492.

dependent activities and the balance of 17% is associated with the wider impacts of ferry and cruise liner passengers.

4.4 GROSS VALUE ADDED

Estimates of the gross value added[6] impact associated with the activities supported by Scrabster Harbour on Caithness are reported in **Table 4.5**.

TABLE 4.5: IMPACT OF SCRABSTER HARBOUR ON GVA IN CAITHNESS (£m)				
Category	Direct	Indirect	Induced	Total
Operational	5.9	1.9	1.4	9.2
Harbour Dependent	6.7	5.3	1.6	13.6
Sub-total	*12.6*	*7.2*	*3.0*	*22.8*
Catalytic/Wider	1.5	0.2	0.3	2.0
Total	**14.1**	**7.4**	**3.3**	**24.8**

In total it is estimated that the economic activities attributable to Scrabster Harbour generated £24.8m in gross value added within Caithness. Of this £9.2m (37%) is accounted for by the operation of the port and £13.6m (55%) by harbour dependent activities.

4.5 INCOME

Estimates of the income (gross wages and salaries) associated with the activities supported by Scrabster Harbour on Caithness are reported in **Table 4.6**.

TABLE 4.6: IMPACT OF SCRABSTER HARBOUR ON INCOME IN CAITHNESS (£m)				
Category	Direct	Indirect	Induced	Total
Operational	2.4	0.7	0.3	3.4
Harbour Dependent	2.2	3.2	0.6	6.0
Sub-total	*4.6*	*3.9*	*0.9*	*9.4*
Catalytic/Wider	0.7	0.1	0.1	0.9
Total	**5.3**	**4.0**	**1.0**	**10.3**

In total it is estimated that the economic activities attributable to Scrabster Harbour generated £10.3m in wages and salaries within Caithness.

[6] Gross value added is the difference between output and intermediate consumption for any given sector or industry. That is the difference between the value of goods and services produced and the cost of raw materials and other inputs which are used up in production.

4.6 OUTPUT

Estimates of the output associated with the activities supported by Scrabster Harbour on Caithness are reported in **Table 4.7**.

TABLE 4.7: IMPACT OF SCRABSTER HARBOUR ON OUTPUT IN CAITHNESS (£m)				
Category	Direct	Indirect	Induced	Total
Operational	9.6	2.8	1.6	14.0
Harbour Dependent	18.5	10.3	2.2	31.0
Sub-total	*28.1*	*13.1*	*3.8*	*45.0*
Catalytic/Wider	2.5	0.4	0.3	3.2
Total	**30.6**	**13.5**	**4.1**	**48.2**

In total it is estimated that the economic activities attributable to Scrabster Harbour generated gross output of £48.2m in Caithness.

4.7 SUMMARY-TOTAL IMPACTS

Table 4.8 provides a summary of the impacts of Scrabster Harbour on Caithness.

TABLE 4.8: IMPACT OF SCRABSTER HARBOUR ON CAITHNESS				
Category	**Direct**	**Indirect**	**Induced**	**Total**
Employment				
Operational	62	21	12	95
Harbour Dependent	109	102	29	240
Sub-total	*171*	*123*	*41*	*335*
Catalytic/Wider	55	6	7	68
Total	**226**	**129**	**48**	**403**
GVA (£m)				
Operational	5.9	1.9	1.4	9.2
Harbour Dependent	6.7	5.3	1.6	13.6
Sub-total	*12.6*	*7.2*	*3.0*	*22.8*
Catalytic/Wider	1.5	0.2	0.3	2.0
Total	**14.1**	**7.4**	**3.3**	**24.8**
Income (£m)				
Operational	2.4	0.7	0.3	3.4
Harbour Dependent	2.2	3.2	0.6	6.0
Sub-total	*4.6*	*3.9*	*0.9*	*9.4*
Catalytic/Wider	0.7	0.1	0.1	0.9
Total	**5.3**	**4.0**	**1.0**	**10.3**
Output (£m)				
Operational	9.6	2.8	1.6	14.0
Harbour Dependent	18.5	10.3	2.2	31.0
Sub-total	*28.1*	*13.1*	*3.8*	*45.0*
Catalytic/Wider	2.5	0.4	0.3	3.2
Total	**30.6**	**13.5**	**4.1**	**48.2**

5 CHALLENGES, OPPORTUNITIES AND FUTURE PLANS

5.1 INTRODUCTION

This Chapter discusses the main challenges facing Scrabster Harbour, in terms of servicing their current clients/users and in attracting new clients. The chapter explores potential future opportunities and reports SHT's future investment plans.

Specifically, this Chapter focusses on:

1. General requirements of shipping and port users.
2. Potential growth in activity of existing users.
3. Development of new opportunities and new users, including:
   - Oil and gas exploration west of Shetland.
   - Offshore renewables in the Pentland Firth area.

5.2 GENERAL REQUIREMENTS

As noted previously in our 2009 report, the shipping industry is always searching for economies of scale and this is evident across all sectors from ferries, cruise ships, container shipping or bulk cargoes. Basically, comparing the 'economics' of operating a 1,500 DWT ships compared to a 4,000 DWT vessel shows that the larger ship has a very similar crew complement, bunker consumption and maintenance costs that are relatively lower, and construction costs per tonne of capacity that favour the larger vessel. This general trend is reflected, for example, in the average tonnage of cruise ships visiting Scrabster, increasing from just under 14,000 tonnes in 2011-12 to almost 23,000 tonnes in 2016-17. A similar trend was observed in the average tonnage of the vessel landing fish cargo from the Faroes (from 2,500 tonnes to 4,500 tonnes) and of oil & gas supply vessels (from 4,000 to 5,000 tonnes). However, this trend was not evident across all sectors, for example white fish boats, oil tankers and general cargo boats did not show any significant change in average vessel size.

It is clear that in some important sectors, ports that cannot handle larger ships will face increasing difficulty in attracting this type of business-for example cruise ships, oil & gas supply boats and vessels associated with the construction/installation of offshore renewables projects.

At the same time it is expected that inland distribution systems will continue to become more efficient and will focus on those ports that can offer long term effective and economic deliveries/collections. This implies and continuing focus on logistics and supply chain management and in turn on the associated infrastructure, including warehousing and inventory management.Consequently, ports will increasingly require to have access to adequate back-up land for these activities as well as the capability to handle larger vessels.

Over the past ten years Scrabster Harbour has benefitted from substantial investment in infrastructure to accommodate both larger vessels and the required back-up warehousing infrastructure. However, SHT is also aware that further investment is required if they are to continue to meet the requirements of those sectors offering them the best opportunities for future growth, including cruise ships and the offshore energy sector.

5.3 OIL AND GAS EXPLORATION WEST OF SHETLAND

Scrabster is ideally placed to offer a mainland supply base for offshore exploration and eventually development and operational activity. Scrabster is about 120 nautical miles closer to the Shetland Basin than Aberdeen or Peterhead. Evidence still suggests that closer proximity to the target area is crucial for a successful port.

Scrabster offers significant cost and time savings compared to Aberdeen and Peterhead. Currently, the savings of using Scrabster compared to Peterhead for a number of vessel types is significant. The savings of 240 NM round trip is about a day's extra steaming. Not only does this save bunkers, but it saves a day's hire of the ship.

Despite the collapse of the oil price in 2014/15 and its subsequent recovery to around $50 a barrel Scrabster has managed to maintain a reasonable level of activity. And despite the continued uncertainty (political and economic) in the market SHT believe that the prospects for activity West of Shetland remains upbeat with some commentators estimating over £25 billion of CAPEX one over $30 billion of OPEX to be spent over the next decade West of Shetland.

5.4 MARINE RENEWABLE ENERGY

At the time of the previous impact assessment, the Scottish Government had a target to meet 50% of electricity demand from renewables by 2020. However, by 2015, renewables generated the equivalent of 59.4% of Scotland's electricity requirements, from just over 10% in 2001. Most of this growth can be attributed to onshore wind, complementing the post-war investment in large-scale hydro.

Currently, the (consultative) draft Scottish Energy Strategy (published January 2017) reveals a new target to meet 50% of Scotland's ***final energy consumption*** (i.e. heat, transport and electricity energy) by renewables by 2030. In comparison, only 13% of Scotland's total final energy consumption came from renewable sources in 2013. The draft Strategy sets out a vision for the transition away from oil and gas dependency and towards a low-carbon economy by 2050. However, it is also stressed that exploration and production of oil and gas in Scottish waters will continue to provide high-value employment and a stable energy supply for decades to come.

The main technologies that generate renewable electricity are onshore and offshore wind, wave and tidal, hydro- power, solar photovoltaic panels and bioenergy. In the immediate future, the renewable energy sector faces investment challenges. Current uncertainties over the support for renewables under UK revenue support schemes–including remote island wind, offshore wind (both floating and fixed) and wave and tidal under the Contracts for Difference scheme–are now, according to the Scottish Government, jeopardising the future deployment of renewable electricity technologies in Scotland, and "calls on the UK Government to provide greater long-term certainty over these support mechanisms–and for greater clarity on the future of the Levy Control Framework, under which the costs of renewables support is currently managed".

Onshore wind is now a mature renewable electricity generation sector and is now the lowest cost renewable electricity technology. But new projects now face a highly uncertain route to market. With the right regulatory framework, new onshore wind projects can be economically viable without

subsidy. The draft Energy Strategy sets a challenge to the renewables industry to make Scotland the first area in the UK to host commercial onshore wind development without subsidy.

With appropriate regulatory support, offshore wind development has a very bright future in Scotland. The offshore resource in Scottish waters is amongst the best in the world and the cost of offshore wind continues to fall. There are several fixed offshore wind projects in development and now a substantial pipeline of innovative floating wind projects, offering a glimpse of the enormous potential for this technology. Scotland is at the forefront of offshore renewables generation with world-leading innovative projects in offshore wind, including the European Offshore Wind Deployment Centre, Beatrice offshore wind farm, Aberdeen Bay and Hywind Scotland, the world's largest floating offshore wind farm.

It has been recognised for many years now that Scotland has a significant marine renewables resource. The draft Scottish Energy Strategy states that Scotland has a third of UK's tidal stream resources and two thirds of its wave resources. In terms of the tidal stream resource it is understood that Peatland Firth, between the North Atlantic Ocean in the west and the North Sea in the east, connateness six of the top ten tidal stream sites in UK waters. Researchers from Edinburgh and Oxford Universities estimated that turbines in the Inner Sound stretch of water could generate 1.9 GW of renewable energy for Scotland.

The strategy states that the potential exists to generate more electricity than we currently need from the waters around the Scottish coast. To support the future development of marine energy in Scotland, the Scottish Government proposes to work with the sector to demonstrate to the public and private investment community the strong industrial potential of marine energy and to press for continued UK Government support; continue to offer support through REIF and other financial mechanisms; and support innovation and cost-reduction through the continued funding of Wave Energy Scotland.

The timing and growth in the commercialisation of marine renewables has not progressed as quickly as expected, and SHT assess their experience since 2008 as disappointing compared to expectations at the time. However, Scrabster was able to accommodate large heavy projects such as MeyGen Phase 1A and is in a strong position to attract the Dounreay Tri Wind Project[7] to use Scrabster as their O&M base.

Scrabster remains as the ideal location to serve as the main supply base to develop marine renewables projects in the Pentland Firth and SHT remains positive in looking forward looking as to how to accommodate future growth. In addition to existing infrastructure Scrabster has well developed plans to accommodate large scale activity, including development of the 32 acres at Scrabster Farm as well as potential further reclamation along the beach at Scrabster.

[7] The Dounreay Trì project is a commercial demonstration project, to be installed off the North coast of Scotland approximately 9 km off Dounreay, Caithness. Hexicon has developed a semi-submersible foundation for offshore wind power that is designed to be turbine agnostic, which means it can support any commercial turbine. The Dounreay design hosts two 5 MW wind turbine generators. Construction started in March 2017, and Offshore Commissioning is planned to commence latest September 2018.

The previous impact assessment report identified the urgent need for enhanced and dedicated facilities at Scrabster including laydown at the port and fabrication facilities at or near the port if Scrabster is going to maximise its potential opportunities. SHT has addressed these challenges through its major investment in the creation of the new Jubilee Quay and the purchase of development land at Scabster Farm.

5.5 CRUISE SHIPS

The North Sea/North European cruise market has been relatively strong over the past decade. According to Cruise Scotland, 2017 is expected to be the eighth successive record-breaking season, with almost 810 cruise ships and over 656,000 passengers expected to visit Scotland. This compared to 676 vessels and around 484,000 passengers during 2016. This represents a 20% increase in the number of ships, a 36% increase in the number of passengers and a 13% increase in the average number of passengers per boat. The value to the Scottish economy is expected to top £72 million.

Scrabster has benefited over the past five years from growth in the number of cruise ship visitors. This has mainly been driven by an increase in the average number of passengers per ship from 394 in 2011-12 to 510 in 2016-17 a total growth rate of almost 30% over the period. Scrabster is currently expecting 13 cruise ships with around 5,000 passengers during the 2017 season (June-September). This would represent a 14% increase in the number of cruise passengers compared to 2016.

Cruise ships up to 180 metres and 8 metres draft are normally berthed alongside on the Queen Elizabeth Pier, with larger ships using the deep water anchorage available within 0.2 nautical miles. The former St Ola Pier linkspan is used for tenders operating from the anchorage.

Scrabster's cruise activity is constrained by the size of the cruise berth and lack of a sheltered anchorage. The current berth is only 180 metres in length and given the continuing trend towards larger vessels Scrabster needs a larger berth if they are to capitalise on growth in Scottish Cruise activity. The need to accommodate larger vessels is reflected in the cruise ship activity expected in Orkney:

1. 2017: 141 vessel arrivals, 41% of arrivals are greater than 200 metres in length.
2. 2018: 120 bookings, 50% of arrivals are greater than 200 metres in length.

SHT see the cruise business, especially in the middle market, as a major growth target and is one of the drivers for the redevelopment of the St Ola Quay to provide a berthing face of +/- 250 metres. Increasing the available size of berth will greatly enhance Scrabster's ability to attract cruise activity. Scrabster has excellent potential to develop its cruise ship activity because:

1. A new destination such as Scrabster is attractive to the cruise industry which needs to refresh schedules, especially because of the importance of repeat business to the industry.
2. In addition to being a round UK cruise destination, the port can act as a call on a UK to Norway or Faroes/Iceland cruise, or a positioning cruise, e.g. American vessels returning across the Atlantic at the end of the European summer season.

SHT believe that: with the growth in the cruise market being experienced and forecast for Scotland; the growing attractiveness of Scrabster as a port of call; and the proposed redevelopment of St Ola Pier, the ***harbour could attract, at least, an additional ten vessels with an average GRT of 40,000***. Based on passenger capacity for cruise ships of around this size it has been assumed that each of these vessels would carry around 1,000 passengers.

5.6 FERRIES

The Scottish Government has made a commitment to reduce fares on ferry routes to the Northern Isles including for the Serco-Northlink service between Scrabster and Stromness. To date the exact mechanism (e.g. RET, direct subsidy etc) has not been agreed. Clearly, and reduction in the fares on the Scrabster-Stromness service should have a positive impact on carryings by first making the route more attractive in comparison to other island destinations that have already benefitted from reduced fares in the past and by generating more regular traffic on the route.

SHT have noted that there has been encouraging growth in ferry traffic over the last few years. With the potential for introduction of RET on the Scrabster-Stromness route, the continuing appeal of the Islands, NC 500 and the development of internet based marketing all point to increasing ferry traffic.

In addition, SHT believe that at some point in the future Scrabster may see a return of a weekly ferry service linking Scrabster with Faroes, Iceland and Scandanavia, similar to that operated by Smyril Line in 2007 and 2008.

6 FUTURE IMPACTS

6.1 INTRODUCTION

This Chapter provides estimates of the potential future economic impacts on Caithness associated with: previous investments in infrastructure; planned/potential investment in new infrastructure; and developments in the markets being targeted by SHT. These impacts are in addition to those already estimated in Chapter 4.

The estimated impacts are based on a set of assumptions or targets for growth in various areas of port activity. These targets are challenging but are achievable if the management team and Board take the initiative and promote Scrabster strongly, as they have being doing over the past five years and more.

6.2 OPPORTUNITIES

A number of the future developments that were identified in the previous (2009) impact assessment were, for various reasons largely outside of the control of SHT, not, or not fully, achieved. For example, the progress in marine renewables was slower than expected in 2009. Thus, some of the investments made in anticipation of certain opportunities are still relevant to future developments at Scrabster. These have been incorporated again in this impact assessment as potential future impacts associated with these as yet unrealised opportunities.

The key opportunities for Scrabster over the next five to ten years years are:

1. Growth in ferry services.
2. Growth of cruise ship market.
3. Development of oil supply base.
4. Supply base for offshore renewable projects.

The key physical developments over the next five to ten years to facilitate these opportunities are:

1. Redevelopment of the St Ola Quay. Estimated costs £15 million. Potential start date 2018-19.

2. Scrabster Enterprise Area-development of the 32 acres at Scrabster Farm. Estimated costs £3-3.7 million.

3. Seabed reclamation to create additional laydown at the port. Estimated costs £3-4 million.

6.3 IMPACTS ON CAITHNESS

The impacts of these future developments on the Caithness economy are estimated using a similar methodology to that used to estimate the economic impacts reported in **Chapter 4**.

6.3.1 Construction Impacts

The construction of the physical developments at Scrabster Harbour are estimated to cost in the range £21.0-22.7 million, with a mid-point of £21.85 million. Based on the mid-point estimate, it is expected that this

level of construction/civil engineering expenditure will generate a total of 103 direct man years of employment and 93 indirect and induced man years of employment-a total impact of 196 man years. This is the equivalent of 10.3 direct permanent FTE and 9.3 indirect and induced permanent FTE-a total impact of 19.6 direct, indirect and induced permanent FTE.

These estimates assume that all of the direct labour involved in the construction works are sourced within Caithness.

6.3.2 Ferry Services

As discussed above, SHT believe that, with the potential for introduction of RET (or similar fare reductions) on the Scrabster-Stromness route, the growth in the number of passengers using the route will continue. It has therefore been assumed that over the next five years that passenger numbers will grow on average by 1.5% per annum. This means that by 2021 the carryings will increase from 129,311 in 2016 (January-December) to 139,305 in 2021, an increase of around 10,000 passengers. Over a ten year period, carrying would increase by 20,760 to 150,071.

We have assumed that this increase in carryings would have minimal impact on direct employment by Serco NorthLink, but will have an impact on the wider impacts across the Caithness economy from passenger expenditures in Caithness. It is estimated that over the five year period, in the region of 5 FTE (direct, indirect and induced) wider catalytic jobs would be created across Caithness as a result, and over the 10 year period a total of around 10 FTE jobs would be created.

In addition, SHT believe that at some point in the future Scrabster may see a return of a weekly ferry service linking Scrabster with Faroes, Iceland and Scandanavia, similar to that operated by Smyril Line in 2007 and 2008. Assuming that such a return of service would carry a similar number of passengers as it did previously, it is estimated that in the region of a further 5 FTE jobs would be created across Caithness.

Thus in total, growth in ferry services could create 10 FTE direct, indirect and induced jobs across Caithness over the five year forecast period and 15 jobs over the ten year forecast period.

6.3.3 Cruise Ships

It has been assumed that, given: the growth in the cruise market being experienced and forecast for Scotland; the growing attractiveness of Scrabster as a port of call; and the proposed redevelopment of St Ola Pier, the ***harbour could attract, at least, an additional ten vessels with an average GRT of 40,000***. Based on passenger capacity for cruise ships of around this size it has been assumed that each of these vessels would carry around 1,000 passengers and thus Scrabster could attract an additional 10,000 cruise ship passengers.

It is estimated that the impact of this increase in cruise passengers (and associated crew) visiting Scrabster, could generate, at least, an additional 11 FTE direct, indirect and induced jobs across Caithness.

6.3.4 Oil Supply Base

There are a number of factors which suggest that Scrabster could have the potential to develop as an oil supply base to service the exploration,

development and eventual operation of oil & gas projects West of Shetland. Scrabster has already benefited from providing services to oil & gas supply boats.

It has already been established that Scrabster is better located than Aberdeen and Peterhead for any activity on the Atlantic Margin, given its geographical proximity to this area, providing valuable time and cost savings compared to bases on the east coast of Scotland.

In addition to servicing West of Shetland, the 2009 Report also identified the potential to act as a supply base for Faroese oil exploration.

The 2009 Report, considered the possibility that Scrabster could support an oil supply base focussing on the warehousing and distribution of supplies and fuel to supply vessels that could generate in the region of 74 additional direct FTE jobs at Scrabster Harbour. However, given Scrabster's experience over the past five years, while there is a possibility of an oil supply base at Scrabster, this is much more likely to be a long-term proposition.

In the medium term, i.e. over the next 5-10 years, it is much more likely that Scrabster's role will continue to develop as a "flow-through" facility supporting supply boats with the potential to develop more higher value-added activities at the port. It is very difficult to provide an accurate estimate of the potential scale of activity associated with the oil & gas sector, and for the purposes of illustration, it has been assumed that growth in oil & gas related activity could support a further 10-20 additional direct FTE higher value adding jobs at Scrabster. In total, Caithness could benefit by an additional 19-38 (direct, indirect and induced) FTE jobs.

6.3.5 Offshore Renewables Base

As discussed above, Scrabster remains as the ideal location to serve as the main supply base to develop marine renewables projects in the Pentland Firth are and potentially to host the O&M base for these developments. In addition to existing infrastructure Scrabster has well developed plans to accommodate large scale activity, including development of the 32 acres at Scrabster Farm as well as potential further reclamation along the beach at Scrabster.

Currently, there are two projects that are of immediate interest to SHT-the Dounreay Tri Wind project and the MeyGen tidal stream project.

In terms of the Dounreay Tri Wind project, it is estimated that an O&M support base at Scrabster could support in the region of 7 FTE staff.

In relation to MeyGen, there is very little available evidence of the potential scale of employment impacts associated with this type of marine renewable project in the context of the Pentland Firth. It is accepted that the scale of O&M jobs for the MeyGen project is likely to be significantly less than those observed for offshore wind farms.

It is planned that on completion of the MeyGen project there will be in the region of 60 tidal stream devices installed in the Pentland Firth. The developers expect that there will be a requirement for these devices to be taken out the water for repair & maintenance every 5 years. Since the initial set of devices have been installed they have in fact been required to be taken out the water and returned to Nigg for repair & maintenance. It is expected that once the total capacity is installed, the devices would be

serviced at a closer location, for example Scrabster. Assuming that each device will be removed the water once every five years, would indicate that on average 12 devices per year (or one a month) would be taken out the water for repair and maintenance purposes.For the purposes of illustration, it has been assumed that this level of activity could support 5-10 direct maintenance staff at Scrabster.

Thus, between them, Dounreay Tri Wind project and MeyGen could support in the region of 12-17 direct O&M staff at Scrabster. In total, Caithness could benefit by an additional 23-32 (direct, indirect and induced) FTE jobs.

6.3.6 Summary

Table 6.1 reports the total (direct, indirect and induced) jobs impact of the development opportunities described above. ***It should be noted that these estimates are indicative and will ultimately depend on the detail of any developments that occur at Scrabster as well as on growth and development within SHT's target markets and SHT's engagement with existing and new clients.***

TABLE 6.1: IMPACT ON CAITHNESS OF FUTURE DEVELOPMENTS AT SCRABSTER HARBOUR (direct, indirect and induced FTE employment)

Category	FTE
Construction	20
Ferry Services	10-15
Cruise Ships	11
Oil Supply Base	19-38
Offshore Renewables Base	23-32
Total	**83-116**

In total it is estimated that the developments and potential opportunities identified for Scrabster could generate 83 to 116 FTE jobs (direct, indirect and induced) in Caithness, of which 20 would be attributable to the construction/civil engineering phases.