

APPENDIX C1

Review of stations which present serious sustainability issues - FLOTTA

1.0 Introduction

This report provides an analysis of Flotta's performance based on statistics gathered over the 36 month Sustainability Review period extending from 1st April 2006 to 31st March 2009. The report also examines operational activity over the five year period 1st April 2004 to 31st March 2009.

1.1 Background

In performing an analysis of information appertaining to Flotta, as much relevant data relating to the station area as possible has been considered. As such, information gathered has included: station personnel employed (including potential recruitment pool), operational incidents, risk information etc. Data from the 2001 census provides the base line demographic information for the study with subsequent reports and local intelligence being considered as appropriate.

Figure 1 illustrates the census output area associated with Flotta highlighted in green. The traditional area to which the station provides a response to emergency incidents is indicated by the red boundary line.

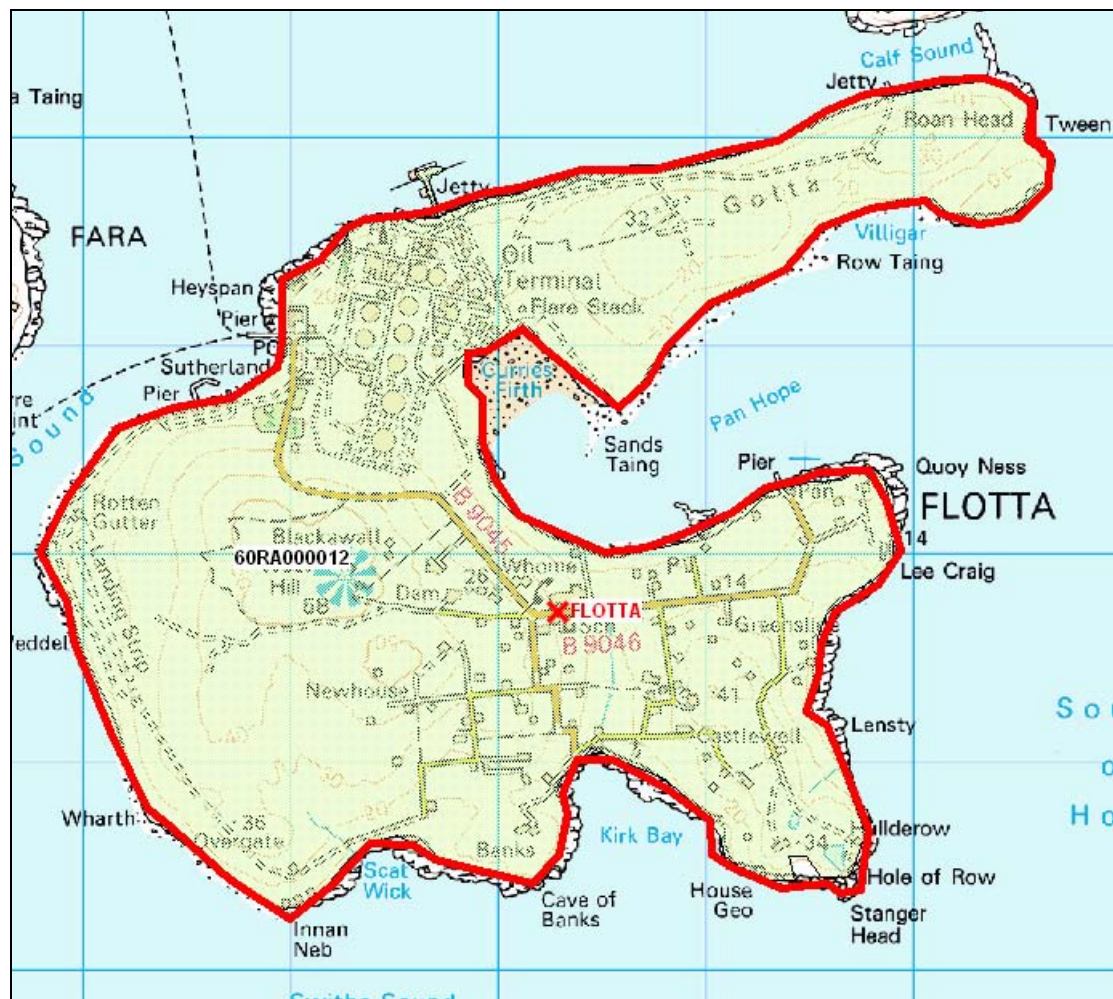


Figure 1 - Census output area associated with Flotta

2.0 Summary of sustainability review data

To date, eight Sustainability Review reports have been created extending over a 36 month period. The results from each have been widely circulated to operations command, district offices and stations. The following **Tables** present a cumulative summary of the information supplied.

Table 1 - Contract availability – target 672 hours

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	600	600	600	480
2007 – 2008		480		480
2008 – 2009		480		480

NB - six monthly reports produced for years 2007/08 and 2008/09

Table 2 - Crew confidence – target 100%

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	No Calls	No Calls	Achieved 1/1	No Calls
2007 – 2008		No Calls		Failed 1/1
2008 – 2009		Failed 1/1		No Calls

Turnout times

It is important that emergency fire appliances and crews respond and mobilise to operational incident promptly. Highlands and Islands Fire and Rescue Service (HIFRS) have established a benchmark figure of seven minutes¹. The average turnout time for the three incidents attended over the 36 month reporting period was 00:06:33. However on two of these occasions the Flotta appliance responded with insufficient crew.

Table 3 - CFS activity – home fire safety checks (HFSC) performed

	Target for year	Total performed
2006 – 2007	14 visits	1 Visit
2007 – 2008	7 visits	0 visits
2008 – 2009	4 visits	4 visits

3.0 Analysis of operational incident data

Operational incident performance data from the 36 month Sustainability Review period has been the subject of analysis along with operational incident data for the last five year period (1st April 2004 to 31st March 2009).

Operational figures present a potential indicator of the level of risk within the station area. For Flotta:

- Incident Frequency – an average of one call per annum received for 36 month Sustainability Review period

¹ Comprising of five minutes to respond to station and two minutes to mobilise appliance with sufficient crew members; station personnel are alerted for a second time if no response is made in five minutes

- An average of 0.8 calls per annum received over the five year reporting period

Figure 2 illustrates the emergency calls attended by Flotta for the 1st April 2004 to 31st March 2009 broken down into general incident types. There were four incidents in total.

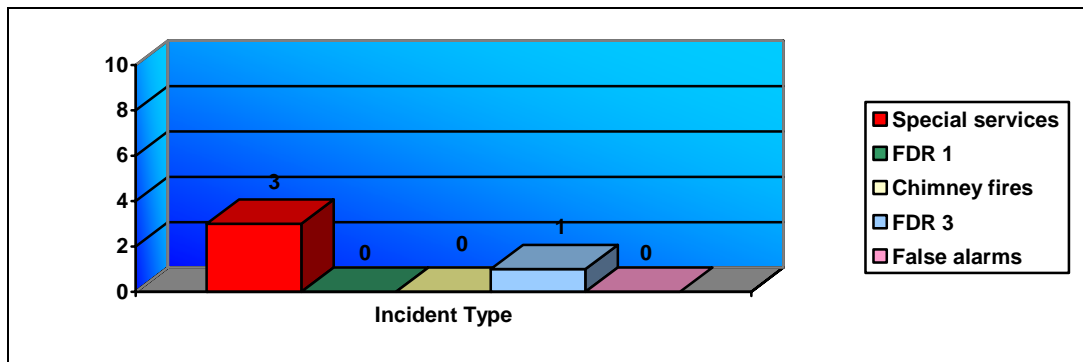


Figure 2 - Summary of total incidents received 1st April 2004 to 31st March 2009

In analysing all the service's emergency incident statistics it must be recognised that not all incidents present an equal potential threat to life and across the service area a significant proportion of incidents present little or no potential threat to life.

As such, from the general classification of incidents used in **Figure 2**, it should be considered that only incidents falling within the following groups may present a potential to threaten life:

- Fire damage report 1 (FDR1) – with life critical incidents mainly occurring in domestic properties
- Special services – with life critical incidents occurring mainly in road traffic collisions

Taking the analysis of actual life critical incidents further it must be recognised that even using these two broad categories a numbers of non life critical incidents would still be included e.g. a garden shed fire would be classed as an FDR1 and a person stranded in a malfunctioned lift would be classed as a special service. As such, for the purposes of performing a more accurate analysis of life critical incident occurrence, the following definition of a life critical incident has been employed:

“An incident that has the potential to endanger life from fire or other emergency occurrence.”

As such, within each of the defined groups the following could be classed as incidents which present a significant threat to life:

FDR1 incident:

- Chip pan fires
- Careless use of cigarettes/matches
- Fires with known alcohol involvement
- Fires that spread from room of origin (indicating potential extent/development of fire)
- Time of call (potential where occupants may be asleep and reaction time is delayed)

- Whether or not smoke detection fitted (indicating that occupants could be alerted to fire)
- If premises were occupied
- Age of occupants (possibly infirm/very young and in need of assisted escape)

Special service:

- All road traffic collisions where FRS personnel have assisted with the extraction of occupants
- All other non-fire incidents where FRS personnel have had to affect a significant rescue

Over the five year reporting period 1st April 2004 to 31st March 2009, of the four incidents that occurred none could be considered to be life critical incidents.

Figure 3 illustrates the total number of calls received by Flotta over the period extending from 1st April 2004 to 31st March 2009 by time of day in one hour time bands. From the graph (incidents with insufficient crew available are illustrated in red) it can be seen that for 50% of incidents there were insufficient personnel to form a crew. As a result the station failed to provide an effective response to these incidents.

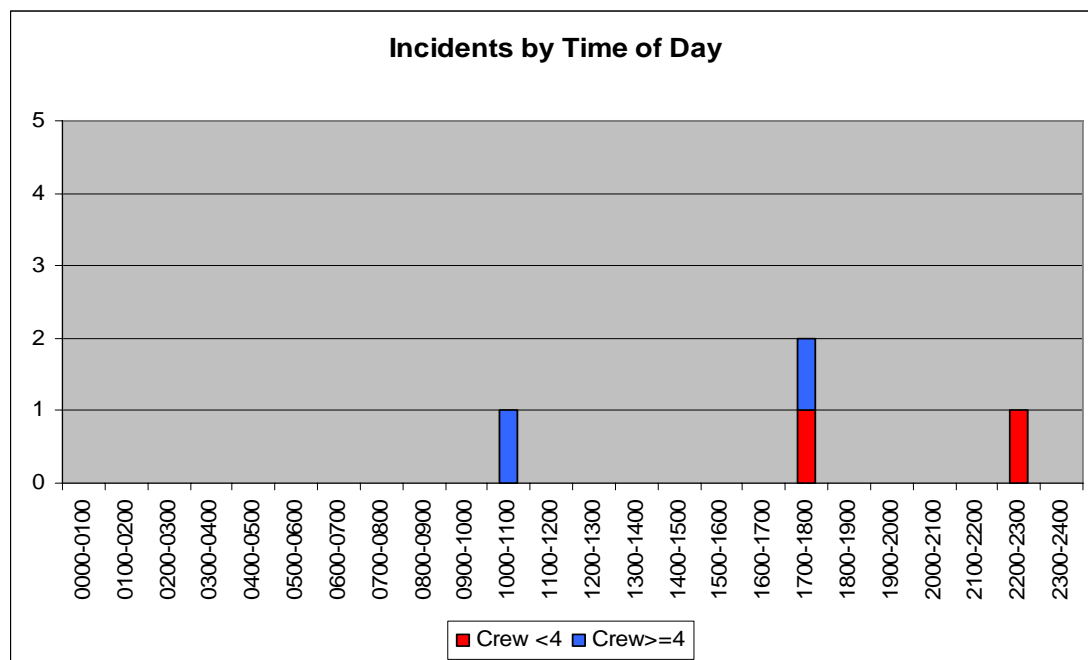


Figure 3 - Number of calls received by time of day for period 1st April 2004 to 31st March 2009

It is essential that when an appliance and crew are mobilised to an incident sufficient crew are available to ensure a safe system of work can be employed. To achieve the required safe system of work the minimum number of personnel required by HIFRS to form a safe crew is four.

Within the Sustainability Review period 1st April 2006 to 31st March 2009 there were a number of instances where the Flotta appliance was recorded as unavailable for calls in the service's command and control centre due to lack of crew. **Figure 4** gives details of these instances.

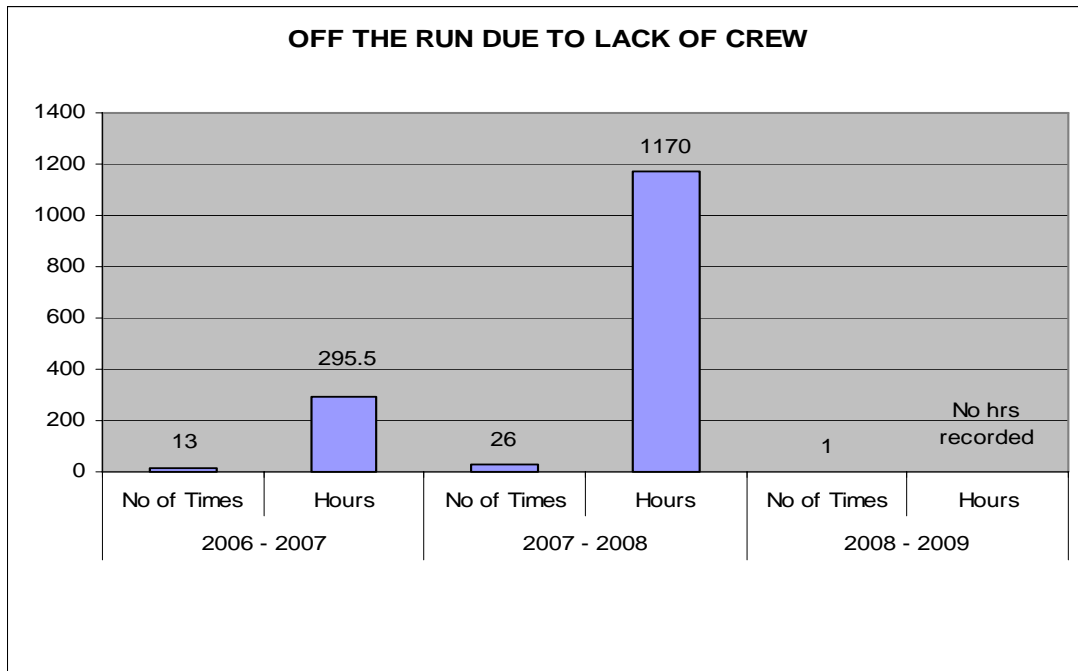


Figure 4 - Appliance “off the run” due to lack of crew 1st April 2006 – 31st March 2009

NB - The increase in recorded “*off the run*” incidents over the reporting period may be attributed to the station specific action plans drawn up by deputy area commanders as part of the Sustainability Review. The action plan will have been discussed and agreed by Flotta’s officer in charge (OIC).

4.0 Establishment history

To ensure an appropriate response, the service requires existing personnel (or potential employees) to attend their station promptly. Personnel are therefore required to live and/or work within close proximity of their station.

To ensure that stations are able to respond to all incidents 24hrs/day 7days/week and to allow firefighters to maintain the appropriate work/life balance the service maintains an average station establishment of ten to twelve personnel to crew one appliance, which generally allows a minimum of four and a maximum of six people to crew the appliance. To ensure sufficient crew are available to provide an emergency response at all times the minimum number of declared hours of individual availability for a one appliance station must exceed 672 hours in total. Assuming that staff are able to provide the full 120hrs of cover required per week, a minimum of six personnel are required to provide continuous cover.

The establishment for Flotta at 31st March 2009 was four, and consisted of four firefighters, this situation has not changed.

Figure 5 identifies the establishment history from 1st April 2004 to 31st March 2009.

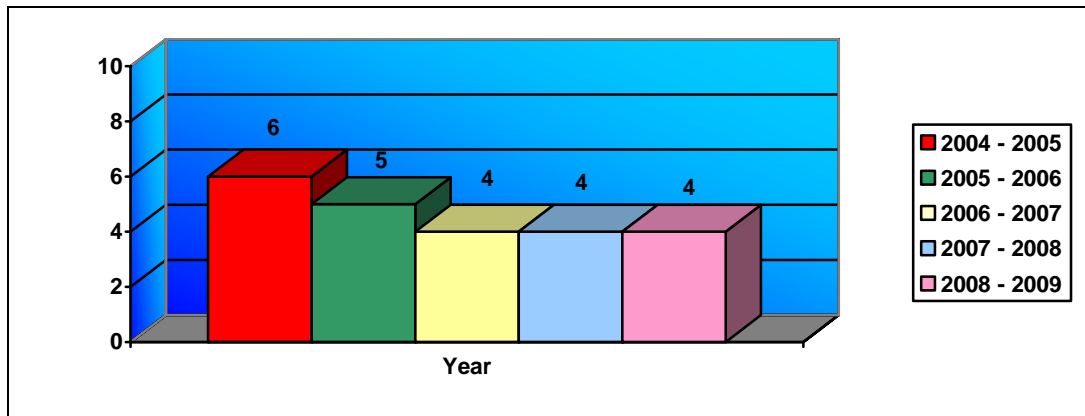


Figure 5 - Establishment history 1st April 2004 to 31st March 2009

5.0 Demographic profile

In order for a station to be able to contribute to reducing community risk sufficient personnel must be available to form an appropriate station establishment. To explore the sustainability of a station, an analysis of the total population resident on Flotta was drawn from 2001 census information.

While this analysis may not represent the definitive number of residents available to the service it serves as a good indicator from which further investigation can commence.

Table 4 shows the community age profile of the census output area associated with Flotta and represents residents who may be close enough to the station to provide an appropriate response. From the information provided by the 2001 census it can be considered that those below the age of 18 and above the age of 65 years are not able to perform the role of operational firefighter and as such unable to support the establishment of the station.

Table 4 - Community age profile per output area from census - 2001

Output area	no. of under 18s	no. of 18-29 yrs	no. of 30-44 yrs	no. of 45-65 yrs	no. of over 65s	Total residents	Area sq/km
60RA000012	16	3	16	33	13	81	9.53

NB - Consideration has to be given to the time that has elapsed between the collection of census 2001 data and that of the present.

From further information contained in the census output area sub-categories, it can be assumed that all residents recorded in the 'number of under 18s' sub-category 10 to 17 will now be of age for consideration as potential recruits, provided they still reside on Flotta. Conversely all residents recorded in the 'number of 45 to 65' sub-category can be broken down further to show those aged 60-64, will no longer be considered as potential recruits.

6.0 Employment profile - Orkney

While no specific information per census output area is available, it can be assumed that residents employed in some professions will not be available for immediate response to the station on receipt of an emergency call. In the majority of cases it could be assumed that residents employed in ‘agriculture and fishing’ and ‘transport and communication’ would not be available for a significant proportion of the day.

Extracted from Highland and Islands Enterprise (HIE) information derived from census 2001 statistics, **Figure 6** illustrates the employment profile for the geographic area in which Flotta is located.

Sector	Male	Female	Total	Percentage
Agriculture and Fishing	1,038	263	1,301	13.8
Manufacturing	458	279	737	7.8
Energy & Water	68	9	77	0.8
Construction	872	75	947	10.1
Wholesale, Hotels & Restaurants	729	1,091	1,821	19.3
Transport & Communications	655	169	824	8.8
Banking, Finance & Real Estate, etc.	385	368	753	8.0
Public Admin., Education & Health	625	1,741	2,365	25.1
Other Sectors	331	264	595	6.3
Total	5,161	4,259	9,420	100.0

Source: GRO S 2001 Census

Note: Numbers may not total due to errors in rounding percentages.

Figure 6 - Employment profile for the specified geographic area

Using 2001 census information **Table 5** identifies the cumulative population analysis for Flotta.

7.0 Travel to work

While the island status of Flotta is acknowledged the census information illustrates that 13 people travel more than 10km to work. Due to the geographical size of the island it is assumed that these people work away from the island.

Table 5 - Cumulative population analysis

Flotta population details	No.	Running total
Total resident population (census 2001)	81	81
Residents under the age of 18	16	65
Residents over the age of 65	13	52
Residents already in the retained unit	4	48
Residents remaining		48

This theoretical ‘residents remaining’ figure does not consider that some of the population will not be suitable or willing to be employed as a firefighter and as such the potential number of possible recruits may be lower.

While not definitive, additional information can also be considered:

- As a general assumption, if a person lives or works at a location greater than 10km from the station they would be unable to provide a suitable response to an emergency incident. However, considering the geographical size of Flotta, travel distance should have little or no bearing on attendance times
- While no specific information per census output area is available, it can be assumed that residents employed in some professions will not be available for immediate response to the station on receipt of an emergency call. In the majority of cases it could be assumed that residents employed in 'agriculture and fishing' and 'transport and communication' would not be available for a significant proportion of the day.

The potential cumulative population analysis for Flotta can therefore be further projected as illustrated in **Table 6** below.

Table 6 – Potential cumulative population analysis

Flotta population details		Running total
Residents remaining – carried forward		48
Residents working in 'agriculture and fishing'	13.8% of 48 = 7	41
Residents working in 'transport and communication'	8.8% of 48 = 4	37
Number of residents working > 10km of station (on mainland)		13
Total suitable residents remaining		24

Further analysis was performed by operations command in October 2008 and June 2009 to examine and update 2001 census information, as well as revisiting the issues relating to recruitment. The information captured is presented in **Table 7** below.

Table 7 – Updated population details

Flotta Population Details	No.	Running Total
Total resident population	98	98
Residents under the age of 18	18	80
Residents over the age of 65	22	58
Residents not physically fit for fire and rescue service duties	0	58
Residents already employed as retained firefighters	4	54
Residents not eligible for employment	22	32
Residents unwilling to join the fire and rescue service	1	31
Residents remaining		31

8.0 Conclusions

For the Sustainability Review period 1st April 2006 to 31st March 2009 and incident statistics over the five year period 1st April 2004 to 31st March 2009, the analysis of Flotta station concludes:

Sustainability Review period 1st April 2006 to 31st March 2009:

- Flotta's appliance was booked 'off the run' for calls due to lack of crew on 40 occasions. The station was unavailable to respond to emergency calls for a declared total period of 1465.5 hours, being "off the run" for an average of 36.6 hours per occurrence
- Flotta station personnel were unable to achieve the minimum crew confidence level (four personnel) for 67% of all calls they received
- Flotta's appliance met the turnout time performance standard for the three emergency calls attended with an average response time of 00:06:33
- Flotta station does not achieve the defined performance standards relating to the minimum total number of hours of contracted availability required to provide an effective intervention response. To achieve the minimum hours of contracted availability the station would require a minimum of 192 additional hours per week
- Flotta station personnel did not fulfil their allocated target for CFS HFSC only completing 20% of their allocation

For the five year period 1st April 2004 to 31st March 2009:

- The station attended three special service incidents but none are classed as life critical
- From the four incidents which occurred, insufficient crew attended on two occasions (50%). Only one of these incidents (25%) occurred between 0800 and 1800 hours

Demographic profile:

- During the five year reporting period 1st April 2004 to 31st March 2009 unit members have decreased from six to four, therefore reducing the total station contracted hours of availability to 480, below the minimum figure of 672 required to maintain continuous operational cover
- It is therefore emphasised that at the current level of establishment Flotta station cannot maintain a 24hrs/day 7days/week a week intervention role employing a safe system of work for any type of operational incident. This ongoing situation impacts upon the long-term sustainability of the unit
- To ensure the safety of firefighters at incidents a minimum crew of four firefighters is required to form a response to each incident. To ensure this minimum response level is at least possible it is required that for a unit to be

viable a minimum of at least six unit members be present. As only 31 people appear to be available for possible recruitment it is crucial that the community on Flotta support the station to ensure future sustainability in maintaining an intervention role

- While the establishment of the station has reduced which impacts on operational response, this should not affect the ability of the station to undertake CFS activities as only two crew members are required to undertake a HFSC. Despite this, station personnel did not fulfil their target for CFS HFSC, only completing 20% of their allocation
- Extensive efforts have been made by station personnel and district managers to recruit new members to the unit. Recruitment has more recently been highlighted in a station specific action plan developed by operations command working in conjunction with station personnel, aimed at facilitating performance improvements
- In a positive attempt to recruit appropriate personnel operations command and district managers attended a community council meeting on 14th October 2008 and presented an overview of the sustainability review and the current situation regarding station establishment. It was emphasised that the current members were providing an intervention/prevention service, albeit limited. However it was vital that more members were attracted and encouraged to join to ensure health, safety and welfare of current members, as well as the long-term sustainability of the unit. To date recruitment is still proving difficult which has resulted in station establishment remaining at four

Recent recruitment campaigns have included:

- April 2004 - a recruitment session on the island facilitated by operations command via district staff identified 2 potential recruits. However both applications were not progressed as they were deemed not eligible
- Summer 2004 - house to house calls performed by operations command via district staff
- Ongoing - local poster campaigns supported by station personnel
- Ongoing - local newspaper advertisements supported by station and district personnel
- Ongoing - radio broadcasts via Radio Orkney on the local news slot highlighting the recruitment issues on all island locations within Orkney
- 2008/2009 - evening session at the station promoting community safety facilitated by station personnel, in addition promoting local recruitment
- Ongoing – Flotta station officer-in-charge aiming to identify members of the community as potential firefighters and approach as appropriate
- August 2008 – application received and currently in recruitment process

9.0 Recommendations

- **The Flotta unit should be allocated a twelve month period in which to recruit sufficient members and demonstrate that they can provide a safe and effective intervention response**
- **It is hoped, that with the commitment of the existing personnel and the support of the community and service, the sustainability issues can be resolved within the twelve months**
- **If this does not prove possible and the unit and local community are not able to demonstrate an appropriate level of performance, the Board should consider changing the role to that of a CRU delivering CFS information and education only**
- **The CRM department will continue to review the risk associated with Flotta as part of the ongoing Risk Review Process**

APPENDIX C2

Review of stations which present serious sustainability issues - FOULA

1.0 Introduction

This report provides an analysis of Foula's performance based on statistics gathered over the 36 month Sustainability Review period extending from 1st April 2006 to 31st March 2009. The report also examines operational activity over the five year period 1st April 2004 to 31st March 2009.

1.1 Background

In performing an analysis of information appertaining to Foula, as much relevant data relating to the station area as possible has been considered. As such information gathered has included: station personnel employed (including potential recruitment pool), operational incidents, risk information etc. Data from the 2001 census provides the base line demographic information for the study with subsequent reports and local intelligence being considered as appropriate.

Figure 1 illustrates the census output area associated with Foula highlighted in green. The traditional area to which the station provides a response to emergency incidents is indicated by the red boundary line.



Figure 1 - Census output area associated with Foula

2.0 Summary of sustainability review data

To date, eight Sustainability Review reports have been created extending over a 36 month period. The results from each have been widely circulated to operations command, district offices and stations. The following **Tables** present a cumulative summary of the information supplied.

Table 1 - Contract availability – target 672 hours

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	720	720	720	720
2007 – 2008		480		360
2008 – 2009		360		360

NB - six monthly reports produced for years 2007/08 and 2008/09

Table 2 - Crew confidence – target 100%

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	0 calls	0 calls	1 call/1 failed	0 calls
2007 – 2008		2 calls/2 failed		0 calls
2008 – 2009		1 call/1 failed		2 calls/2 failed

Turnout times

It is important that emergency fire appliances and crews respond and mobilise to operational incident promptly. Highlands and Islands Fire and Rescue Service (HIFRS) have established a benchmark figure of seven minutes¹.

During the period 1st April 2006 to 31st March 2009 the fire service command and control centre attempted to mobilise Foula to attend six incidents. On each of the 6 occasions sufficient crew was not available to provide an appropriate response. However on four of these occasions the appliance did respond with insufficient crew creating an average turnout time of 00:07:12 minutes.

The six incidents are detailed in **Table 3** below.

¹ Comprising of five minutes to respond to station and two minutes to mobilise appliance with sufficient crew members; station personnel are alerted for a second time if no response is made in five minutes

Table 3 – Incident information

Incident date/time	Type	Crew members attending	Turnout time	Outcome	Life critical
28/10/2006 11:02:31	Chimney Fire	3	00:06:14	Extinguished on arrival, inspection only.	No
22/07/2007 13:08:15	SS – Vessel taking in water	2	00:06:32	Pumped out vessel (15 mins)	No
02/08/2007 14:14:59	FDR1 – Chip pan fire	0	No attendance	Extinguished by occupier using fire blanket.	Yes
04/10/2007 14:48:53	FAGI	0	No attendance	Blowback from chimney. District officer contacted occupier's carer.	No
18/12/2008 17:20:47	FDR1 – 3 chalets on fire.	2	00:08:28	3 chalets 100% destroyed by fire	Yes
01/01/2009 10:47:04	FAA	2	00:07:52	Cause unknown	No

Table 4 - CFS activity – home fire safety checks (HFSC) performed

	Target for year	Total performed
2006 – 2007	20 visits	0 visits
2007 – 2008	10 visits	6 visits
2008 – 2009	5 visits	0 visits

3.0 Analysis of operational incident activity

Operational incident performance data from the 36 month Sustainability Review period has been the subject of analysis along with operational incident data for the last five year period (1st April 2004 to 31st March 2009).

Operational figures present a potential indicator of the level of risk within the station area. For Foula:

- Incident Frequency – an average of two calls per annum received for 36 month Sustainability Review period
- An average of three calls per annum received over the five year reporting period

Figure 2 illustrates the emergency calls attended by Foula for the period 1st April 2004 to 31st March 2009 broken down into general incident types. There were 15 incidents in total.

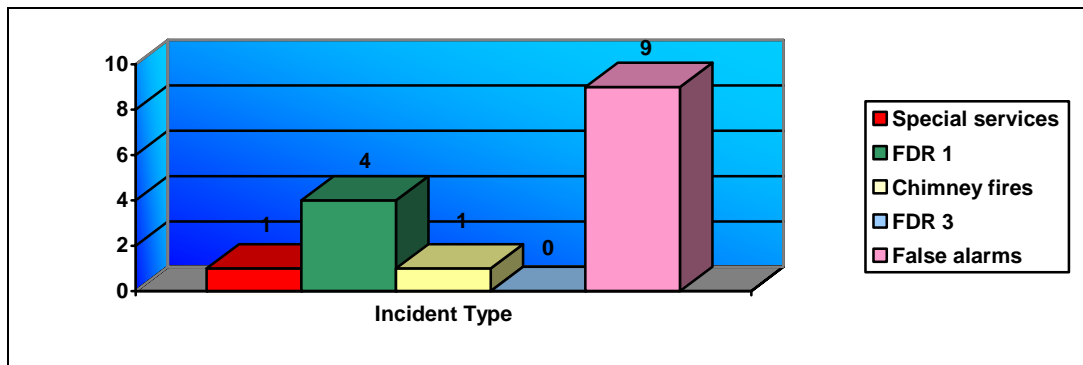


Figure 2 - Summary of total incidents received 1st April 2004 to 31st March 2009

In analysing all the service's emergency incident statistics it must be recognised that not all incidents present an equal potential threat to life and across the service area a significant proportion of incidents present little or no potential threat to life.

As such, from the general classification of incidents used in **Figure 2**, it should be considered that only incidents falling within the following groups may present a potential to threaten life:

- Fire damage report 1 (FDR1) – with life critical incidents mainly occurring in domestic properties
- Special services – with life critical incidents occurring mainly in road traffic collisions

Taking the analysis of actual life critical incidents further it must be recognised that even using these two broad categories a numbers of non life critical incidents would still be included e.g. a garden shed fire would be classed as an FDR1 and a person stranded in a malfunctioned lift would be classed as a special service. As such for the purposes of performing a more accurate analysis of life critical incident occurrence the following definition of a life critical incident has been employed:

“An incident that has the potential to endanger life from fire or other emergency occurrence.”

As such within each of the defined groups the following could be classed as incidents which present a significant threat to life:

FDR1 incident:

- Chip pan fires
- Careless use of cigarettes/matches
- Fires with known alcohol involvement
- Fires that spread from room of origin (indicating potential extent/development of fire)
- Time of call (potential where occupants may be asleep and reaction time is delayed)
- Whether or not smoke detection fitted (indicating that occupants could be alerted to fire)
- If premises were occupied
- Age of occupants (possibly infirm/very young and in need of assisted escape)

Special service:

- All road traffic collisions where FRS personnel have assisted with the extraction of occupants

- All other non-fire incidents where FRS personnel have had to affect a significant rescue

Over the five year reporting period 1st April 2004 to 31st March 2009, of the 15 incidents that occurred, four could be considered to be life critical incidents.

Figure 3 below identifies the total number of casualties, fatalities and rescues for Foula which occurred from all incidents over the five year reporting period 1st April 2004 to 31st March 2009. It illustrates that from the four incidents that could be considered to be life critical, one casualty resulted.

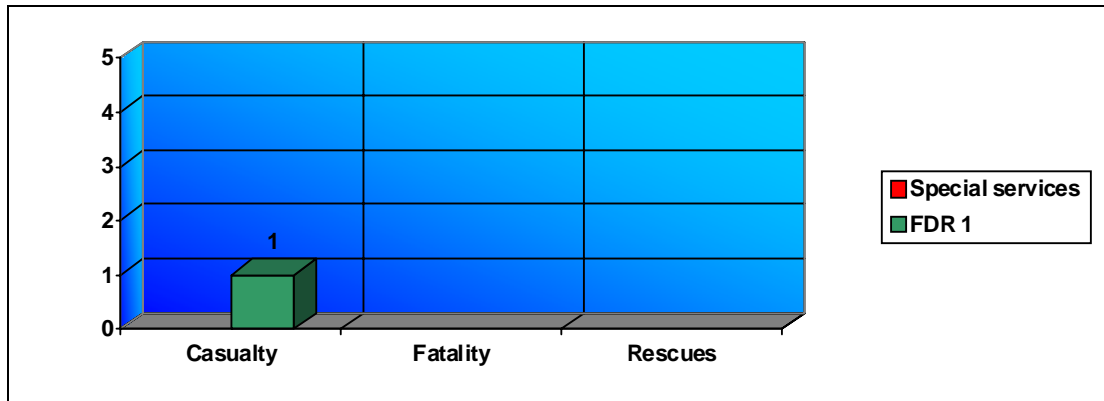


Figure 3 - Summary of life critical data April 2004-March 2009

Figure 4 illustrates the total number of calls received by Foula over the period extending from 1st April 2004 to 31st March 2009 by time of day in one hour time bands. From the graph (incidents with insufficient crew available are illustrated in red) it can be seen that for 87% of incidents there were insufficient personnel to form a crew. As a result the station failed to provide an effective response to these incidents. It must be noted, since 7th November 2007 the Foula appliance has been “off the run” due to insufficient crew.

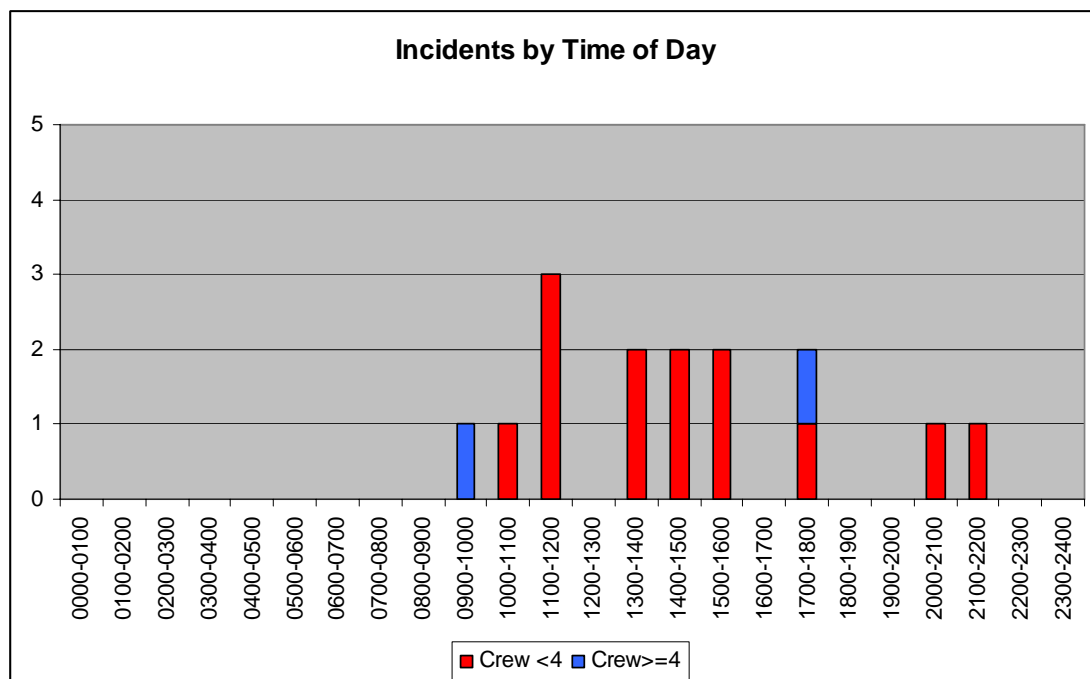


Figure 4 - Number of calls received by time of day for period 1st April 2004 to 31st March 2009

NB - The two incidents achieving crew confidence occurred in 2004

It is essential that when an appliance and crew are mobilised to an incident sufficient crew are available to ensure a safe system of work can be employed. To achieve the required safe system of work the minimum number of personnel required by HIFRS to form a safe crew is four.

Within the Sustainability Review period 1st April 2006 to 31st March 2009 there were a number of instances where the Foula appliance was recorded as unavailable for calls in the service’s command and control centre due to lack of crew. **Figure 5** gives details of these instances. In addition to these recorded instances, the Foula appliance has been “*off the run*” since 7th November 2007 due to insufficient crew.

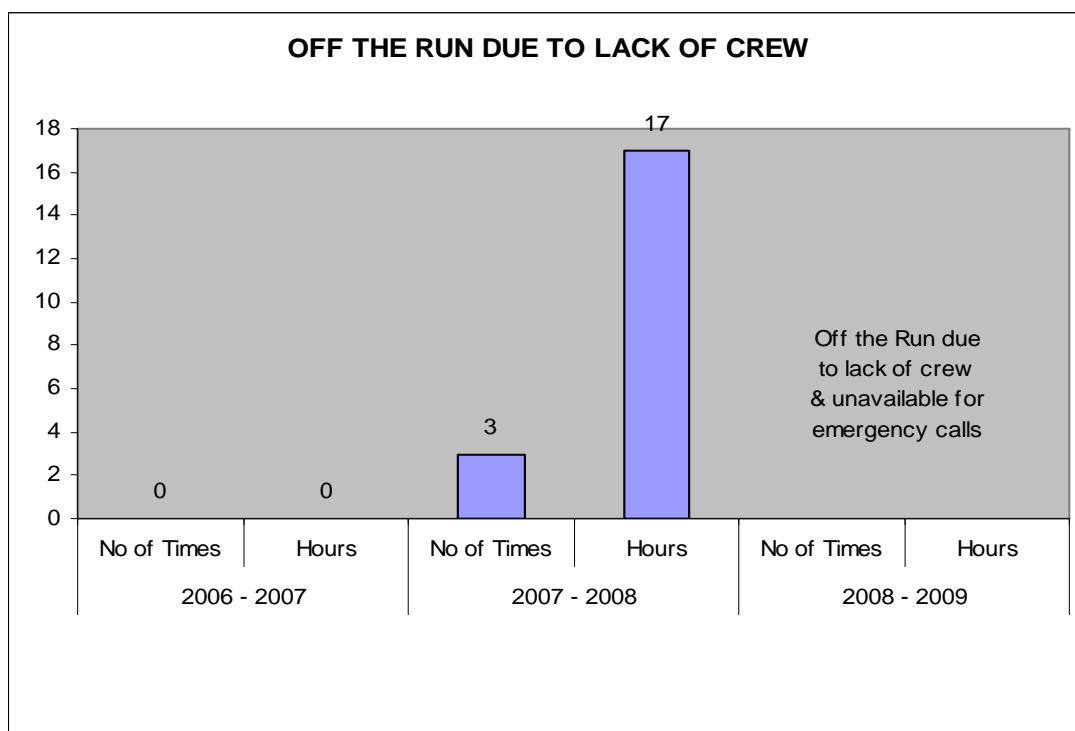


Figure 5 - Appliance “off the run” due to lack of crew 1st April 2006 – 31st March 2009

4.0 Establishment history

To ensure an appropriate response, the service requires existing personnel (or potential employees) to attend their station promptly. Personnel are therefore required to live and/or work within close proximity of their station.

To ensure that stations are able to respond to all incidents 24hrs/day 7days/week and to allow firefighters to maintain the appropriate work/life balance the service maintains an average station establishment of ten to twelve personnel to crew one appliance, which generally allows a minimum of four and a maximum of six people to crew the appliance. To ensure sufficient crew are available to provide an emergency response at all times the minimum number of declared hours of individual availability for a one appliance station must exceed 672 hours in total. Assuming that staff are able to provide the full 120hrs of cover required per week then, a minimum of six personnel are required to provide continuous cover.

The establishment for Foula at 31st March 2009 was three, and consisted of one watch manager, one crew manager and one firefighter. **Figure 6** identifies the establishment history from 1st April 2004 to 31st March 2009. To date, the establishment of three has not changed.

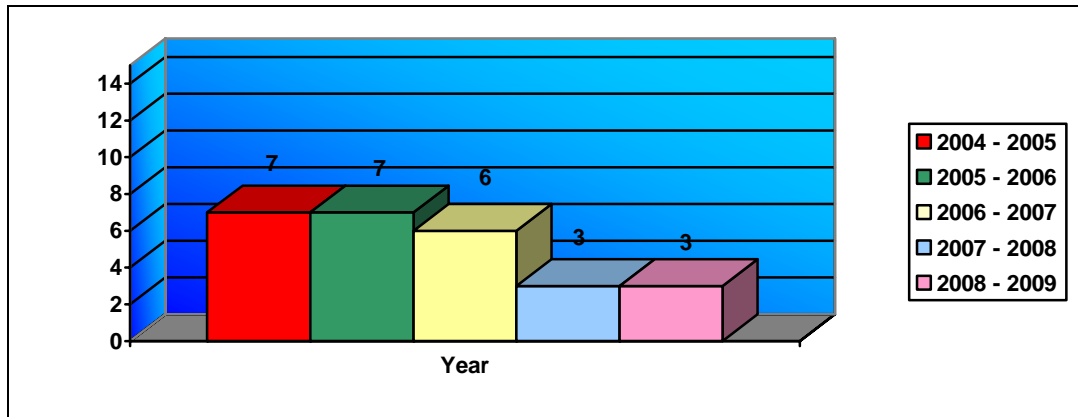


Figure 6 - Establishment history 1st April 2004 to 31st March 2009

5.0 Demographic profile

In order for a station to be able to contribute to reducing community risk sufficient personnel must be available to form an appropriate station establishment. To explore the sustainability of a station, an analysis of the total population resident on Foula was drawn from 2001 census information.

It must be noted that Foula station is located in census output area 60RD000180. However as this output area incorporates part of mainland Shetland, census 2001 information does not accurately reflect the precise population details of Foula.

Due to the fact that Foula shares an output area with part of mainland Shetland this analysis does not represent the definitive number of persons available to the service, it rather serves as a starting indicator from which further investigation can commence. To obtain an accurate figure for Foula the methodology would require to be applied to the specific island population.

Table 5 shows the community age profile of the census output area and represents residents who may be close enough to the station to provide an appropriate response. From the information provided by the 2001 census it can be considered that those below the age of 18 and above the age of 65 years are not able to perform the role of operational firefighter and as such unable to support the establishment of the station.

Table 5 - Community age profile per output area from census 2001

Output area	No. of under 18s	No. of 18-29 yrs	No. of 30-44 yrs	No. of 45-65 yrs	No. of over 65s	Total residents	Area sq/km
60RD000180	15	5	20	16	10	66	16.90

NB - Consideration has to be given to the time that has elapsed between the collection of census 2001 data and that of the present.

From further information contained in the census output area sub-categories, it can be assumed that all residents recorded in the 'number of under 18s' sub-category 10 to 17, will now be of age for consideration as potential recruits, provided they still reside on Foula. Conversely all residents recorded in the 'number of 45 to 65' sub-category can be broken down further to show those aged 60-64, will no longer be considered as potential recruits. Updated figures are represented in **Table 8**.

6.0 Employment profile - Shetland

Extracted from Highland and Islands Enterprise (HIE) information derived from census 2001 statistics, **Figure 7** illustrates the employment profile for the greater geographic area in which Foula is located.

Sector	Male	Female	Total	Percentage
Agriculture and Fishing	767	165	93	8.2
Manufacturing	729	348	1,077	9.5
Energy & Water	130	20	150	1.3
Construction	1,011	66	1,077	9.5
Wholesale, Hotels & Restaurants	871	1,179	2,050	18.0
Transport & Communications	900	207	1,107	9.7
Banking, Finance & Real Estate, etc.	609	505	1,114	9.8
Public Admin., Education & Health	809	2,252	3,060	26.9
Other Sectors	511	301	813	7.1
Total	6,337	5,043	11,380	100.0

Source: GROS 2001 Census

Note: Numbers may not total due to errors in rounding percentages.

Figure 7 - Employment Profile for the Specified Geographic Area

Using 2001 census information **Table 6** shows the cumulative population analysis for Foula.

Table 6 – Cumulative population analysis

Foula Population Details	No	Running Total
Total resident population (census 2001)	66	66
Residents under the age of 18	15	51
Residents over the age of 65	10	41
Residents already in the unit	6	35
Residents remaining		35

This theoretical ‘residents remaining’ figure does not consider that some of the population will not be suitable or willing to be employed as a firefighter and as such the potential number of possible recruits may be lower.

While not definitive, additional information can also be considered:

- As a general assumption, if a person lives or works at a location greater than 5km from the station they would be unable to provide a suitable response to an emergency incident. However, considering the geographical size of Foula, travel distance should have little or no bearing on attendance times
- While no specific information per census output area is available, it can be assumed that residents employed in some professions will not be available for immediate response to the station on receipt of an emergency call. In the majority of cases it could be assumed that residents employed in ‘agriculture and fishing’ and ‘transport and communication’ would not be available for a significant proportion of the day.

The potential cumulative population analysis for Foula can therefore be further projected as illustrated in **Table 7** below.

Table 7 - Potential cumulative population analysis

Foula population details		Running total
Residents remaining – carried forward		35
Residents working in 'agriculture and fishing'	8.2% of 35 = 3	32
Residents working in 'transport and communication'	9.7% of 35 = 3	29
Number of residents working > 5km of station (on mainland)		All eligible residents work on Foula
Total potential residents remaining		29

Further analysis was performed by operations command in October 2007 and January 2009 to examine and update 2001 census information, as well as revisiting the issues relating to recruitment. The actual information captured from this recent review and confirmed by local intelligence is presented in **Table 8** below.

Table 8 – Updated population details

Foula population details	No.	Running total
Total resident population as at 15 January 2009	26	26
Residents under the age of 18	6	20
Residents over the age of 65	8	12
Residents not physically fit for fire & rescue service duties	1	11
Residents already employed as retained firefighters	3	8
Residents not eligible for employment	1	7
Residents unwilling to join the fire & rescue service	2	5
Residents remaining		5

7.0 Conclusions

For the Sustainability Review period 1st April 2006 to 31st March 2009 and incident statistics over the five year period 1st April 2004 to 31st March 2009, the analysis of Foula station concludes:

Sustainability Review period 1st April 2006 to 31st March 2009:

- Since 7th November 2007 the Foula appliance has been off the run due to insufficient crew
- During the period 1st April 2006 to 7th November 2007 Foula's appliance was booked 'off the run' due to lack of crew on three occasions. The station was unavailable to respond to emergency calls for a declared total period of 17 hours, being off the run with an average of 5.6 hours per occurrence. However during the entire period from 7th November 2007 to March 2009 Foula's appliance was unavailable for calls due to lack of crew, this situation remains
- Foula station personnel were unable to achieve the minimum crew confidence level of four crew members for all six incidents they received
- Foula's appliance did not meet the standard turnout time performance standards for the calls they received. However, on four of these occasions the appliance did respond with insufficient crew creating an average turnout time of 00:07:12 minutes
- Foula station does not achieve the defined performance standards relating to the minimum total number of hours of contracted availability required to provide an effective intervention response. To achieve the minimum hours of contracted availability the station would require a minimum of 312 additional hours per week
- Foula station personnel did not fulfil their allocated target for CFS HFSC only completing 17% of their allocation

For the five year period 1st April 2004 to 31st March 2009:

- From the 15 incidents which occurred on Foula over the reporting period, four incidents could be classed as life critical
- During the period 1st April 2004 to 7th November 2007 the Foula appliance received calls to three incidents classed as having the potential to be life critical (LCI). Of these, one incident was attended with a crew of five, one was attended with a crew of three and one received no attendance. No fatalities, casualties or rescues were recorded for the three LCI
- During the period 7th November 2007 to 31st March 2009 the Foula appliance was off the run due to insufficient crew, however mobilised and attended one incident that could be classed as life critical with a crew of two. On this occasion, as in other incidents occurring across the service area, the occupant was able to leave the premises unaided. In responding to this incident with a crew of two, it was not possible to undertake effective firefighting operations utilising practices and procedures that would facilitate safe systems of work

- Therefore, from the 15 incidents which occurred, insufficient crew attended on 13 occasions (87 %), two (13%) of which received no attendance. Eleven of these incidents (73 %) occurred between 0800 and 1800 hours.

Demographic Profile:

- During the five year reporting period 1st April 2004 to 31st March 2009 unit members have decreased from seven to three, therefore reducing the total station contracted hours of availability to 360, below the minimum figure of 672 required to maintain continuous operational cover. It is therefore emphasised that at the current level of establishment Foula station is not able to undertake an intervention role employing a safe system of work for any type of operational incident. This ongoing situation impacts upon the long-term sustainability of the unit
- To ensure the safety of firefighters at incidents a minimum crew of four firefighters is required to form a response to each incident. To ensure this minimum response level is at least possible it is required that for a unit to be viable a minimum of at least 6 unit members be present. Information captured from this recent review in January 2009 and confirmed by local intelligence identifies that only five people appear to be available for possible recruitment. Therefore it is probable that the community on Foula are highly unlikely to be able to sustain a unit with an intervention role
- Whilst the establishment of the station is limited for operational purposes this should not effect the ability of the station to undertake CFS activities as only two crew members are required to undertake a HFSC. Despite this, station personnel did not fulfil their target for CFS HFSC only completing 17% of their allocation
- Extensive efforts have been made by station personnel and district managers to recruit new members to the unit. Recruitment has more recently been highlighted in a station specific action plan developed by operations command working in conjunction with station personnel, aimed at facilitating performance improvements
- In a positive attempt to recruit appropriate persons operations command and district managers met with the community council in January 2007 to discuss performance issues. Following a detailed discussion relating to recruitment and its long term impact on Foula's sustainability, eight recruitment packs were issued to members of the community between January 2007 and January 2008. From these it was not possible to progress five applications, two applications were not returned and one is currently being processed for potential recruitment

Due to Foula's island location, supporting/alternative appliance attendance would require to come from an adjacent location out with Foula and therefore, any decision as to the future provision of emergency response cover for the island of Foula should be given detailed consideration based on identified risk. As such:

- Due to the current low level of establishment for the station and the identified extremely limited potential for recruiting future firefighters from the current demographic profile of the island, the population of Foula can no longer

support the provision of an intervention resource for the island. This recommendation is made based upon the need to establish safe systems of work for firefighters responding to operational incidents. Foula station with its current establishment is unable to establish the minimum crew of four required to implement safe systems of work for each and every operational incident

- For Foula to be able to operate effectively as an intervention unit a minimum of 672 hours of contracted availability would require to be secured
- The low level of historical incident frequency data, combined with the predicted very low FSEC derived level of risk present supports the decision not to continue with the provision of an intervention response on Foula. It is accepted that community risk could be reduced still further by the progression of community fire safety education through the continued delivery of HFSC. As such all households on Foula should be offered the opportunity to have a follow-up HFSC conducted
- To ensure the risk levels are maintained at the lowest possible levels into the future it is recommended that risk reduction initiatives, including repeat HFSC, are continued into the future as appropriate
- To ensure the most appropriate level of safety for the vulnerable groups on Foula identified as being at high or very high risk of fire the service will, based on the outcomes of the HFSC, work with partner agencies to provide the most effective measures to reduce risk
- As appropriate in order to reduce commercial risk the service will undertake planned audits under the Fire (Scotland) Act 2005 Part 3 for all/any relevant premises on the island
- As with all other extremely remote locations, should the need for an intervention resource be required, a response will be provided through the existing mobilising contingencies utilising resources from the nearest appropriate station
- The CRM department will continue to review the risk associated with Foula as part of the ongoing Risk Review process

8.0 Recommendations

- **The Board accept that the local community is unable to support a safe and effective intervention response. Therefore the board should no longer support the provision of an intervention role on Foula**
- **All households on Foula will be offered follow-up HFSC**
- **The status of the Foula unit be changed to that of a CRU, having the role to undertake CFS information and education only**
- **The CRM department will continue to review the risk associated with Foula as part of the ongoing Risk Review process**

APPENDIX C3

Review of stations which present serious sustainability issues – TORRIDON

1.0 Introduction

This report provides an analysis of Torridon's performance based on statistics gathered over the 36 month Sustainability Review period extending from 1st April 2006 to 31st March 2009. The report also examines operational activity over the five year period 1st April 2004 to 31st March 2009.

1.1 Background

In performing an analysis of information appertaining to Torridon, as much relevant data relating to the station area as possible has been considered. As such, information gathered has included: station personnel employed (including potential recruitment pool), operational incidents, risk information etc. Data from the 2001 census provides the base line demographic information for the study with subsequent reports and local intelligence being considered as appropriate.

Figure 1 illustrates the census output areas associated with Torridon highlighted in green. The traditional area to which the station provides a response to emergency incidents is indicated by the red boundary line.

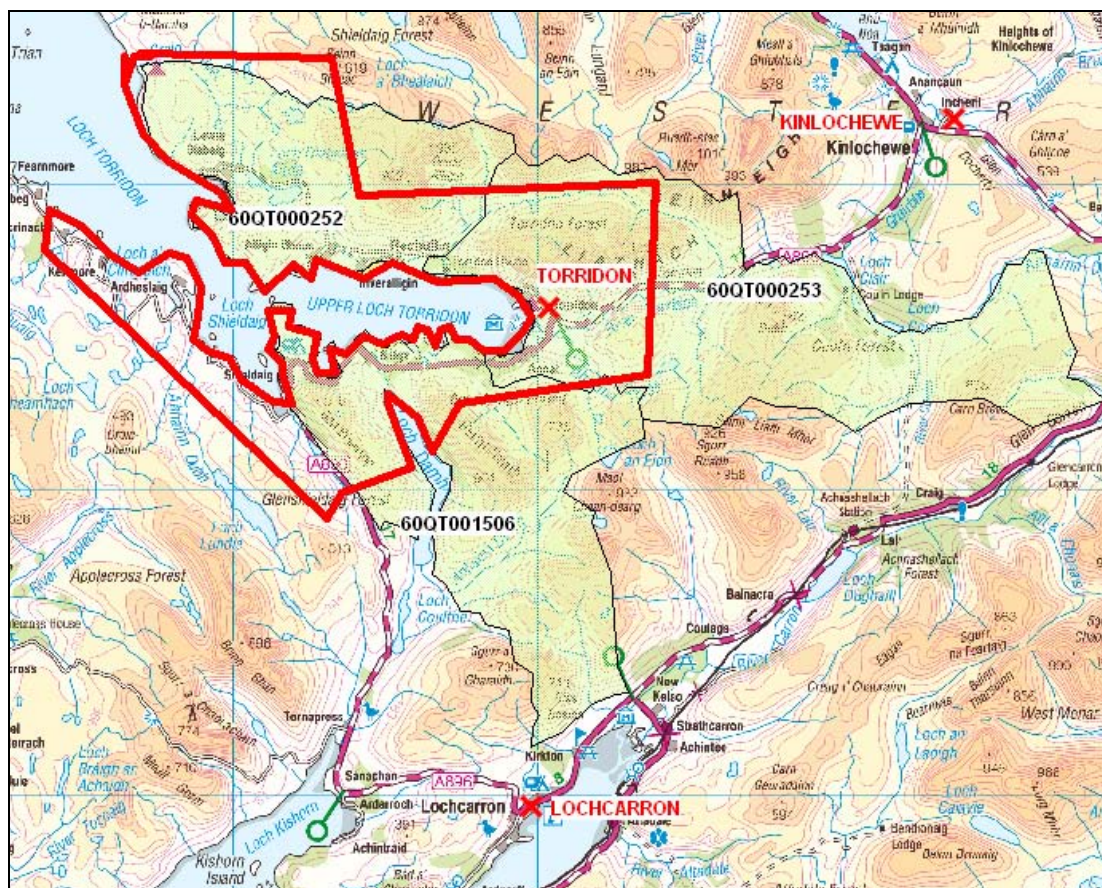


Figure 1 - Census output areas associated with Torridon

2.0 Summary of sustainability review data

To date, eight Sustainability Review reports have been created extending over a 36 month period. The results from each have been widely circulated to operations command, district offices and stations. The following **Tables** present a cumulative summary of the information supplied.

Table 1 - Contract availability – target 672 hours

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	1020	1020	1140	1260
2007 – 2008		1020		1020
2008 – 2009		690		570

NB - six monthly reports produced for years 2007/08 and 2008/09

Table 2 - Crew confidence – target 100%

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
2006 – 2007	Failed 1/3	No Calls	Achieved 2/2	Achieved 2/2
2007 – 2008		Achieved 4/4		Failed 4/10
2008 – 2009		Achieved 3/3		Failed 1/1

Turnout times

It is important that emergency fire appliances and crews respond and mobilise to operational incidents promptly. Highlands and Islands Fire and Rescue Service (HIFRS) have established a benchmark figure of seven minutes¹. Average turnout times for incidents attended over the 36 month reporting period for Torridon is 00:15:44.

Table 3 - CFS activity – home fire safety checks (HFSC) performed

	Target for year	Total performed
2006 – 2007	30 visits	30 visits
2007 – 2008	13 visits	13 visits
2008 – 2009	10 visits	4 visits

3.0 Analysis of operational incident activity

Operational incident performance data from the 36 month Sustainability Review period has been the subject of analysis along with operational incident data for the last five year period (1st April 2004 to 31st March 2009).

Operational figures present a potential indicator of the level of risk present within the station area. For Torridon:

¹ Comprising of five minutes to respond to station and two minutes to mobilise appliance with sufficient crew members; station personnel are alerted for a second time if no response is made in five minutes.

- Incident Frequency – an average of eight calls per annum received for 36 month Sustainability Review period
- An average of seven calls per annum received over the five year reporting period

Figure 2 illustrates the emergency calls attended by Torridon for the period 1st April 2004 to 31st March 2009 broken down into general incident types. There were 34 incidents in total.

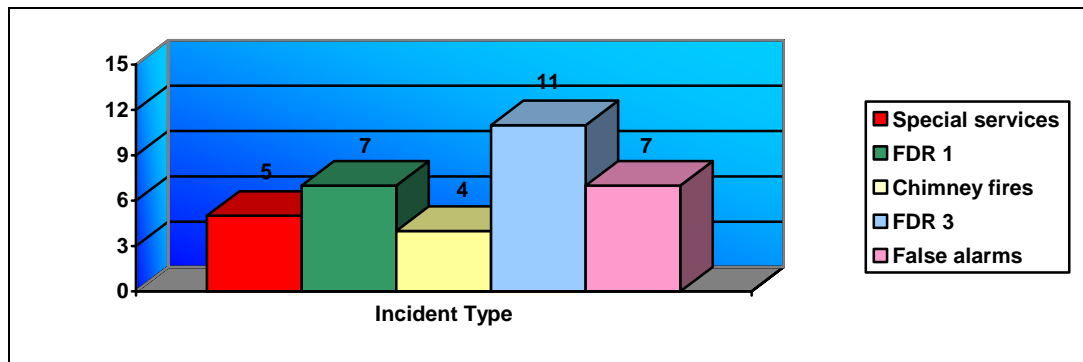


Figure 2 - Summary of total incidents received 1st April 2004 to 31st March 2009

In analysing all the services emergency incident statistics it must be recognised that not all incidents present an equal potential threat to life and across the service area a significant proportion of incidents present little or no potential threat to life.

As such, from the general classification of incidents used in **Figure 2**, it should be considered that only incidents falling within the following groups which may present a potential to threaten life:

- Fire damage report 1 (FDR1) – with life critical incidents mainly occurring in domestic properties
- Special services – with life critical incidents occurring mainly in road traffic collisions

Taking the analysis of actual life critical incidents further it must be recognised that even using these two broad categories a numbers of non life critical incidents would still be included e.g. a garden shed fire would be classed as an FDR1 and a person stranded in a malfunctioned lift would be classed as a special service. As such for the purposes of performing a more accurate analysis of life critical incident occurrence the following definition of a life critical incident has been employed:

“An incident that has the potential to endanger life from fire or other emergency occurrence.”

As such, within each of the defined groups the following could be classed as incidents which present a significant threat to life:

FDR1 incident:

- Chip pan fires
- Careless use of cigarettes/matches

- Fires with known alcohol involvement
- Fires that spread from room of origin (indicating potential extent/development of fire)
- Time of call (potential where occupants may be asleep and reaction time is delayed)
- Whether or not smoke detection fitted (indicating that occupants could be alerted to fire)
- If premises were occupied
- Age of occupants (possibly infirm/very young and in need of assisted escape)

Special service:

- All road traffic collisions where FRS personnel have assisted with the extraction of occupants
- All other non-fire incidents where FRS personnel have had to affect a significant rescue

Over the five year reporting period 1st April 2004 to 31st March 2009, of the 34 incidents that occurred, five could be considered to be life critical incidents.

Figure 3 below identifies the total number of fatalities, casualties and rescues for Torridon, which occurred for all incidents over the five year reporting period 1st April 2004 to 31st March 2009. It illustrates that from the five incidents which could be classed as life critical, three casualties resulted.

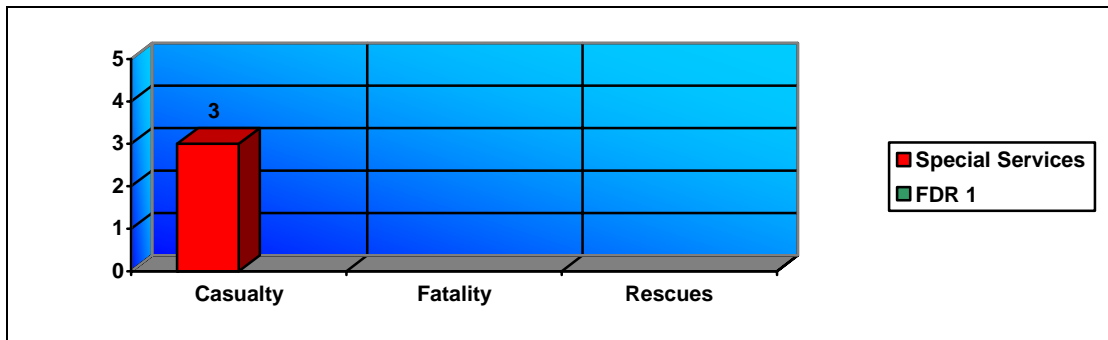


Figure 3 - Summary of life critical data 1st April 2004 to 31st March 2009

Figure 4 illustrates the total number of calls received by Torridon over the period extending from 1st April 2004 to 31st March 2009 by time of day in one hour time bands. From the graph (failed incidents illustrated in red) it can be seen that Torridon failed 24% of their crew confidence levels.

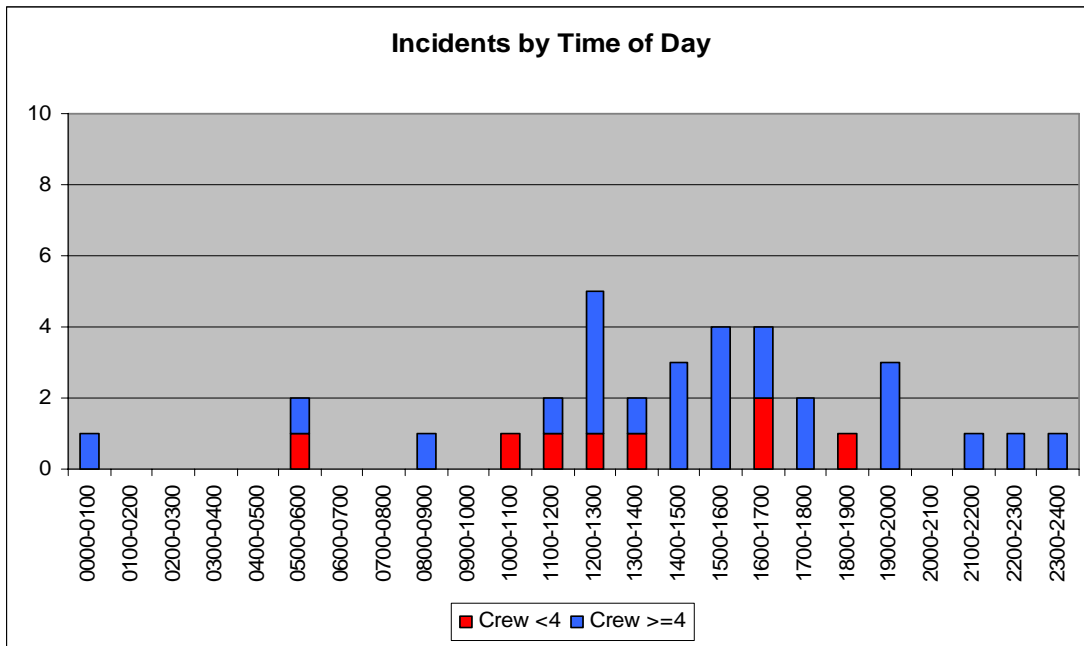


Figure 4 - Number of calls received by time of day for period 1st April 2004 to 31st March 2009

It is essential that when an appliance and crew are mobilised to an incident sufficient crew are available to ensure a safe system of work can be employed. To achieve the required safe system of work the minimum number of personnel required by HIFRS to form a safe crew is four.

Within the period 1st April 2006 to 31st March 2009 there were a number of instances when the Torricon appliance was recorded as unavailable for calls in the service's command and control centre due to lack of crew. **Figure 5** gives details of these instances.

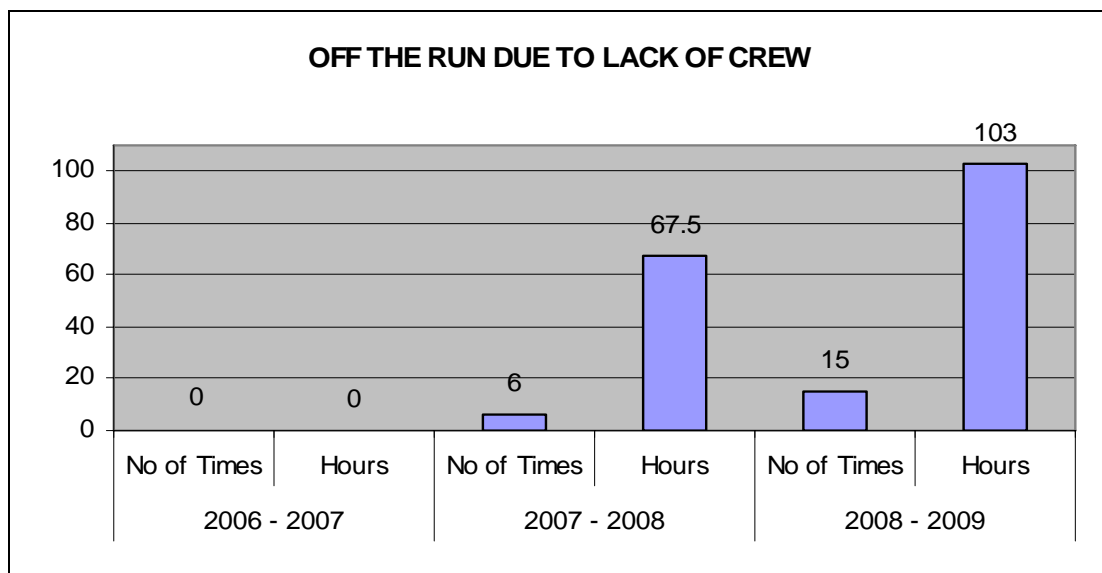


Figure 5 - Appliance "off the run" due to lack of crew 1st April 2006 to 31st March 2009

NB - The increase in recorded "off the run" incidents over the reporting period may be attributed to the station specific action plans drawn up by deputy area commanders as part of the Sustainability Review. The action plan will have been discussed and agreed by Torricon's officer in charge (OIC).

4.0 Establishment history

To ensure an appropriate response, the service requires existing personnel (or potential employees) to attend their station promptly. Personnel are therefore required to live and/or work within close proximity of their station.

To ensure that stations are able to respond to all incidents 24hrs/day 7days/week and to allow firefighters to maintain the appropriate work/life balance the service maintains an average station establishment of ten to twelve personnel to crew one appliance, which generally allows a minimum of four and a maximum of six people to crew the appliance. To ensure sufficient crew are available to provide an emergency response at all time the minimum number of declared hours of individual availability for a one appliance station must exceed 672 hours in total. Assuming that staff are able to provide the full 120hrs of cover required per week, a minimum of six personnel are required to provide continuous cover.

The establishment at 31st March 2009 was five, and consisted of one watch manager, one crew manager and three firefighters. **Figure 6** identifies the establishment history from 1st April 2004 to 31st March 2009. It should be noted that since March 2009 the establishment dropped to five, to date this situation remains.

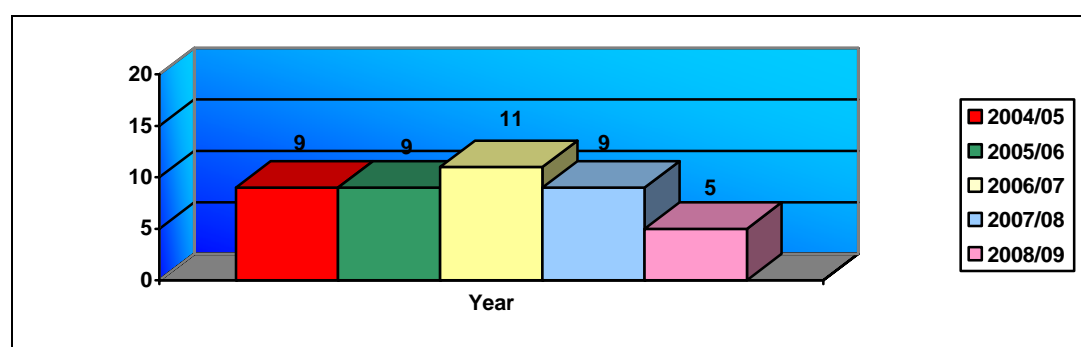


Figure 6 - Establishment history 1st April 2004 to 31st March 2009

5.0 Demographic profile

In order for a station to be able to contribute to reducing community risk sufficient personnel must be available to form an appropriate station establishment. To explore the sustainability of a station, an analysis of the total population resident in the census output area containing the station, and those census output areas sufficiently close to allow a rapid response to the station, has been completed.

While this analysis may not represent the definitive number of residents available to the service it serves as a good indicator from which further investigation can commence.

Table 4 shows the community age profile per output area. The green highlighted census output area contains the station while the other listed census output areas represent residents which may be close enough to the station to provide an appropriate response. From the information provided by the 2001 census, it can be considered that those below the age of 18 and above the age of 65 years are not able to perform the role of operational firefighter and as such unable to support the establishment of the station.

Table 4 - Community age profile per output area from census - 2001

Output area	No. of under 18s	No. of 18-29 yrs	No. of 30-44 yrs	No. of 45-65 yrs	No. of over 65s	Total residents	Area sq/km
60QT000252	12	9	10	39	31	101	55.13
60QT000253	10	7	23	34	14	88	5.11
60QT001506	26	21	21	36	16	120	78.02
	48	37	54	109	61	309	138.26

NB - Consideration has to be given to the time that has elapsed between the collection of census 2001 data and that of the present.

From further information contained in the census output area sub-categories, it can be assumed that all residents recorded in the 'number of under 18s' sub-category 10 to 17, will now be of age for consideration as potential recruits, provided they still reside in the Torridon area. Conversely all residents recorded in the 'number of 45 to 65' sub-category can be broken down further to show those aged 60-64, will no longer be considered as potential recruits. Taking these figures into account, a maximum of seven additional people may be available.

6.0 Travel to work

Table 5 drawn from 2001 census information, identifying the distance travelled to place of work or study for the above output areas.

Table 5 – Distance travelled to work or study census - 2001

	ALL PEOPLE	Not currently working or studying	Works or studies mainly at or from home	Less than 2km	2km - less than 5km	5km - less than 10km	10 km - less than 20km	20km - less than 40km	40km and over	No fixed place of work or study	Working or studying outside the UK	Working at offshore installation
60QT000252	101	48	6	5	4	4	11	4	8	11	0	0
60QT000253	88	35	8	19	4	5	3	5	2	6	0	1
60QT001506	120	45	11	33	0	2	3	13	7	5	0	1

7.0 Employment profile - Ross & Cromarty

Extracted from Highland and Islands Enterprise (HIE) information derived from census 2001 statistics, **Figure 7** below illustrates the employment profile for the geographic area in which the station is located.

Sector	Male	Female	Total	Percentage
Agriculture and Fishing	1,069	247	1,316	5.9
Manufacturing	1,764	687	2,451	11.0
Energy & Water	209	25	233	1.1
Construction	2,171	165	2,335	10.5
Wholesale, Hotels & Restaurants	1,910	2,694	4,602	20.7
Transport & Communications	1,104	505	1,609	7.3
Banking, Finance & Real Estate, etc.	1,453	1,257	2,713	12.2
Public Admin., Education & Health	1,455	4,005	5,458	24.6
Other Sectors	947	532	1,478	6.7
Total	12,082	10,116	22,198	100.0

Source: GROS 2001 Census

Note: Numbers may not total due to errors in rounding percentages.

Figure 7 – Employment profile for the specified geographic area

Using 2001 census information **Table 6** identifies the cumulative population analysis for Torridon.

Table 6 – Cumulative population analysis

Torridon population details	No	Running total
Total resident population (census 2001)	309	309
Residents under the age of 18	48	261
Residents over the age of 65	61	200
Residents already in the retained fire unit	5	195
Residents who have left the unit	6	189
Residents remaining		189

This theoretical ‘residents remaining’ figure does not consider that some of the population will not be suitable or willing to be employed as a firefighter and as such the potential number of possible recruits may be a lower.

While not definitive, additional information can also be considered:

- As a general assumption, if a person lives or works at a location greater than 5km from the station they would be unable to provide a suitable response to an emergency incident. However, it is accepted that for some stations with dispersed populations this figure may need to be reviewed
- While no specific information per census output area is available it can be assumed that persons employed in some professions will not be available for immediate response to the station on receipt of an emergency call. In the majority of cases it could be assumed that residents employed in ‘agriculture and fishing’ and ‘transport and communication’ would not be available for a significant proportion of the day.

The potential cumulative population analysis for Torricon can therefore be further projected as illustrated in **Table 7** below.

Table 7 – Potential cumulative population analysis

Torricon & Shieldaig population details		Running total
Residents remaining – carried forward		189
Residents working in ‘agriculture and fishing’	5.9% of 189 = 11	178
Residents working in ‘transport and communication’	7.3% of 189 = 14	164
Number of residents working > 5km of station		67
Total potential residents remaining		97

8.0 Conclusions

For the Sustainability Review period 1st April 2006 to 31st March 2009 and incident statistics over the five year period 1st April 2004 to 31st March 2009, the analysis of Torridon station concludes:

Sustainability Review period 1st April 2006 to 31st March 2009:

- Torridon's establishment decreased from eleven in March 2006 to five in March 2009. As a result the station does not achieve the defined performance standards relating to the minimum total number of hours of contracted availability required to provide an effective intervention response. To achieve the minimum hours of contracted availability the station would require a minimum of 102 additional hours per week
- Torridon station personnel were unable to achieve the minimum crew confidence level of four persons for 24% of the incidents they received
- Torridon personnel failed to meet the turnout time performance standard for 91% of calls they received. The average turnout time was 00:15:44
- Torridon station personnel achieved their CFS target in 2006/07 and 2007/08 however they failed to fulfil their 2008/09 target only completing 40% of their allocation
- Torridon station personnel booked off the run due to lack of crew 21 times totalling 170.5 hours, averaging eight hours per occurrence

For the 5 year period 1st April 2004 to 31st March 2009:

- Of the five life critical incidents, Torridon appliance mobilised and attended three within their own station area. The remaining two were in response to requests for assistance to incidents occurring in the Lochcarron area
- The life critical incidents in the Torridon area resulted in three casualties all from special service type incidents
- From the 34 incidents which occurred, insufficient crew attended on eight occasions (24%). 24 of these incidents (71%) occurred between 0800 and 1800 hours

Demographic Profile:

- During the five year reporting period 1st April 2004 to 31st March 2009 unit members have decreased from nine to five, (despite the short term establishment increase in year 2006/2007 to eleven) therefore reducing the total station contracted hours of availability to 600, below the minimum figure of 672 required to maintain continuous operational cover

It is therefore emphasised that at the current level of establishment Torridon station cannot maintain a 24hrs/day 7days/week intervention role employing a safe system of work for any type of operational incident. This ongoing situation impacts upon the long-term sustainability of the unit

- Information from the latest population census suggests that, within the output areas nearest the station 189 people are in the employment age group; however 67 work out with 5km of the station and 25 are employed in agriculture and fishing or transport and communication. With five people already employed by the service and six left the service, this would suggest that 97 people (or 104 if incorporating those who would now be over 18, using updated figures) could be suitable and available for the unit (this does not identify that some will not be employable)
- The employment profile indicates that 34% of people work out with the community

9.0 Recommendations

- **The Torridon unit should be allocated a twelve month period in which to recruit sufficient members and demonstrate that they can provide a safe and effective intervention response**
- **It is hoped, that with the commitment of the existing personnel and support from the community and the service, the sustainability issues can be resolved within twelve months**
- **If this does not prove possible and the station and local community are not able to demonstrate an appropriate level of performance, then the Board should consider changing the Torridon role to that of a CRU delivering CFS information and education only**
- **The CRM department will continue to review the risk associated with Torridon as part of the ongoing Risk Review process**

APPENDIX C4

Review of stations which present serious sustainability issues - ARDGOUR

1.0 Introduction

This report provides an analysis of Ardgour's performance based on statistics gathered over the 36 month Sustainability Review period extending from 1st April 2006 to 31st March 2009. The report also examines operational activity for the period 1st June 2005 to 31st March 2009 following Ardgour's designation as a community response unit (CRU) assigned a community fire safety (CFS) education and wildfire only intervention response status.

1.1 Background

In performing an analysis of information appertaining to Ardgour, as much relevant data relating to the unit area as possible has been considered. As such information gathered has included: station personnel employed (including potential recruitment pool), operational incidents, risk information etc. Data from 2001 census provides the baseline demographic information for the study with subsequent reports and local intelligence being considered as appropriate.

Figure 1 illustrates the census output areas associated with Ardgour highlighted in green. The traditional area to which the unit provides an immediate response to wildfire incidents is indicated by the red boundary line. In June 2005 the unit was designated as CRU assigned a CFS education and wildfire only intervention response status. It was the intention that Ardgour should form part of an integrated wildfire resource and as such be able to undertake wildfire fire fighting activities out with this traditional boundary.

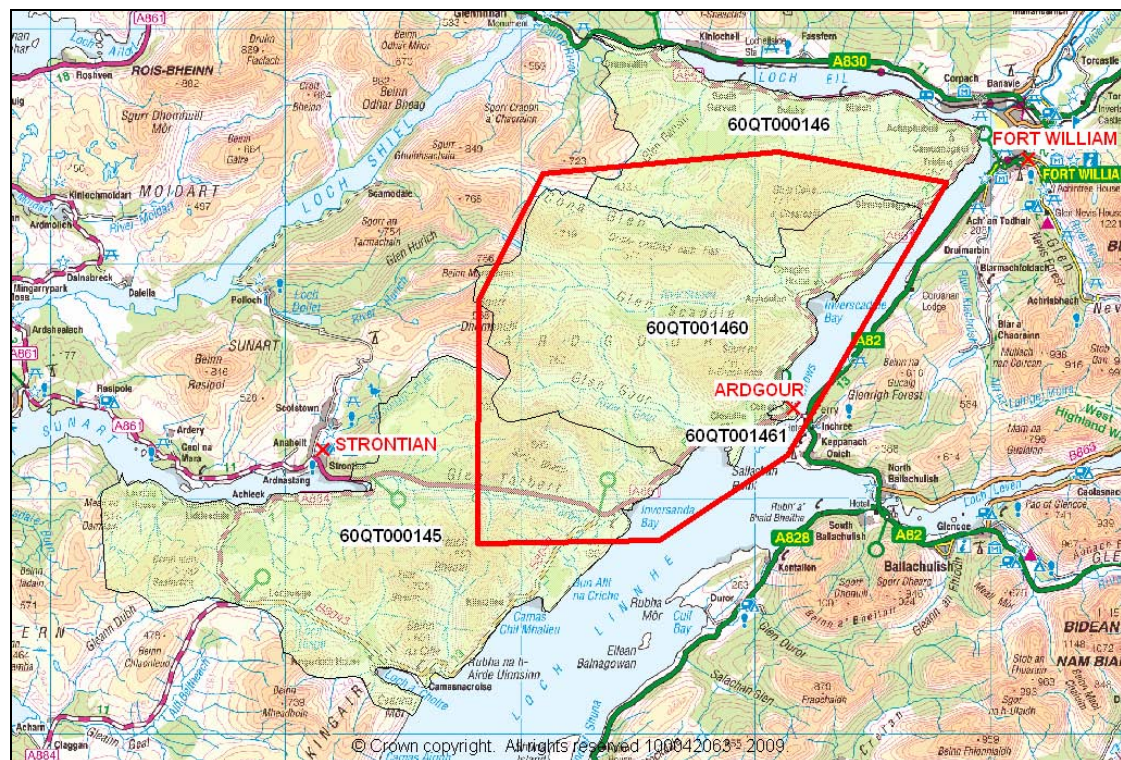


Figure 1 - Census output areas associated with Ardgour

2.0 Summary of information.

To date, eight Sustainability Review reports have been created extending over a 36 month period. The results from each have been widely circulated to operations command and district offices.

However, following Ardgour's designation as a CRU with CFS education and wildfire only intervention response, all existing members resigned. Therefore, Ardgour unit was unable to perform this role or deliver against the following performance targets:

- **Crew confidence** – **Target 100% of all incidents**
- **Turnout times** – **Target seven minutes¹**
- **CFS activity** – **Target 32 home fire safety checks (HFSC)**

3.0 Demographic profile

In order for a station to be able to contribute to reducing community risk sufficient personnel must be available to form an appropriate station establishment. To explore the sustainability of a station, an analysis of the total population resident for Ardgour area was drawn from 2001 census information.

While this analysis may not represent the definitive number of residents available to the service it serves as a good indicator from which further investigation can commence.

Ardgour station is located in census output area 60QT001461.

Table 1 shows the community age profile of the census output areas associated with Ardgour. From the information provided by the 2001 census it can be considered that those below the age of 18 and above the age of 65 years are not able to perform the role of operational firefighter and as such unable to support the establishment of the station. The green highlighted census output area contains Ardgour station and the area from where residents can provide an appropriate response.

Table 1 - Community age profile per output area from census - 2001

Output area	No. of under 18s	No. of 18-29 yrs	No. of 30-44 yrs	No. of 45-65 yrs	No. of over 65s	Total residents	Area sq/km
60QT001460	33	12	36	28	28	137	30.26
60QT001461	9	2	10	23	14	58	0.62
	42	14	46	51	42	195	30.88

NB - Consideration has to be given to the time that has elapsed between the collection of census 2001 data and that of the present.

From further information contained in the census output area sub-categories, it can be assumed that all residents recorded in the 'number of under 18s' sub-category 10 to 17, will now be of age for consideration as potential recruits, provided they still reside

¹ Comprising of five minutes to respond to station and two minutes to mobilise appliance with sufficient crew members; station personnel are alerted for a second time if no response is made in five minutes.

in the Ardgour area. Conversely all residents recorded in the ‘number of 45 to 65’ sub-category can be broken down further to show those aged 60-64, will no longer be considered as potential recruits. Taking these figures into account a maximum of 17 additional people may be available.

4.0 Travel to work

Table 2 drawn from 2001 census information, identifies the distance travelled to place of work or study for the above output areas.

Table 2 - Distance travelled to place of work or study from census - 2001

	ALL PEOPLE	Not currently working or studying	Works or studies mainly at or from home	Less than 2km	2km - less than 5km	5km - less than 10km	10 km - less than 20km	20km - less than 40km	40km and over	No fixed place of work or study	Working or studying outside the UK	Working at offshore installation
60QT001460	137	38	8	30	3	14	24	3	10	7	0	0
60QT001461	58	18	5	19	1	0	12	1	0	2	0	0

NB – To ensure an appropriate response, the service requires existing personnel (or potential employees) to attend their station promptly. Personnel are therefore required to live and/or work within close proximity to their station.

5.0 Employment profile – Lochaber

Extracted from Highland and Islands Enterprise (HIE) information derived from census 2001 statistics, **Figure 2** below, illustrates the employment profile for the geographic area in which Ardgour station is located.

Sector	Male	Female	Total	Percentage
Agriculture and Fishing	543	102	645	7.1
Manufacturing	802	184	986	10.9
Energy & Water	55	13	68	0.8
Construction	740	46	786	8.7
Wholesale, Hotels & Restaurants	1,006	1,635	2,641	29.1
Transport & Communications	508	175	683	7.5
Banking, Finance & Real Estate, etc.	343	357	700	7.7
Public Admin., Education & Health	515	1,444	1,959	21.6
Other Sectors	351	251	602	6.6
Total	4,863	4,207	9,070	100.0

Source: GROS 2001 Census

Note: Numbers may not total due to errors in rounding percentages.

Figure 2 - Employment profile for the specified geographic area

Using 2001 census information **Table 3** identifies the cumulative population analysis for Ardour.

Table 3 - Cumulative population analysis

Ardour Population Details	No	Running total
Total resident population (census 2001)	195	195
Residents under the age of 18	42	153
Residents over the age of 65	42	111
Residents already in the retained fire unit	0	111
Residents resigned from the unit	9	102
Residents remaining		102

This theoretical ‘residents remaining’ figure does not consider that some of the population will not be suitable or willing to be employed as a firefighter and as such the potential number of possible recruits may be lower.

While not definitive, additional information can also be considered:

- As a general assumption, if a person lives or works at a location greater than 5km from the station they would be unable to provide a suitable response to an emergency incident. However, it is accepted that for some stations with dispersed populations this figure may need to be reviewed
- While no specific information per census output area is available it can be assumed that residents employed in some professions will not be available for immediate response to the station on receipt of an emergency call. In the majority of cases it could be assumed that residents employed in ‘agriculture and fishing’ and ‘transport and communication’ would not be available for a significant proportion of the day

The potential cumulative population analysis for Ardour can therefore be further projected as illustrated in **Table 4** below.

Table 4 - Potential cumulative population analysis

Ardour population details		Running total
Residents remaining – carried forward		102
Residents working in ‘agriculture and fishing’	7.1% of 102=7	95
Residents working in ‘transport and communication’	7.5% of 102=8	87
Number of residents working > 5km of station		64
Total potential residents remaining		23

6.0 Conclusions

For the Sustainability Review period 1st April 2006 to 31st March 2009 and incident statistics over the reporting period 1st June 2005 to 31st March 2009, the analysis of Ardgour unit is identified below. However, following the adoption of their new CRU CFS/wildfire role on 1st June 2005, all nine members of Ardgour unit resigned. As such, for the Sustainability Review period 1st April 2006 to 31st March 2009:

- Ardgour unit was unavailable to provide a response to wildfire incidents
- As the unit had no personnel on all occasions the Ardgour unit failed to achieve the minimum crew confidence levels or turnout times
- As the unit had no personnel the Ardgour unit failed to fulfil their allocated target for CFS HFSC. As such all referrals were passed to and progressed by personnel from adjacent stations and the dedicated Community Safety Advocate (CSA) based in the Lochaber area

For the reporting period 1st June 2005 to 31st March 2009:

- Three emergency calls to wildfire incidents were received for the immediate Ardgour station area which were attended and successfully managed by appliances from Strontian and Fort William stations

Demographic Profile:

- Information from the latest population census, supported with local knowledge, suggests that only 23 people (or possibly 40 if including those who would now be over 18, based on updated figures) could be suitable and available for recruitment to the unit (this does not identify that some will not be eligible for employment or wish to undertake fire service duties)
- To ensure the safety of firefighters for wildfire operations a minimum crew of four firefighters are required to form a response to each incident. To ensure this minimum response level is at least possible it is required that for a unit to be viable a minimum of at least six unit members be present. As only 23 (or possibly 40) people appear to be available for possible recruitment it is probable that the Ardgour community are highly unlikely to be able to sustain a unit with a wildfire intervention role

Station Members:

- All nine members of the Ardgour unit resigned in July 2005 following their designation as a CRU assigned with CFS/wildfire intervention response status
- To be able to provide an effect level of crew confidence to attend wildfire incidents would require a minimum establishment of six. To undertake CFS activities including performing HFSC requires two unit members to be available. Despite this it has not been possible to attract sufficient recruits to the Ardgour unit to enable HFSC to be completed
- Extensive efforts have been made by the community council and district managers to recruit new members to the unit. This was undertaken through the

creation of a station specific action plan and the promotion of local recruitment campaigns in 2005 and 2007. The most recent campaign in April 2007, which was advertised widely in the village and surrounding area, resulted in no requests for recruitment application packs being received

Considering Ardgour's close proximity to adjacent stations with resources to provide an appropriate and measured response to potential wildfire incidents and requests for HFSC, it is recommended that:

- Due to Ardgour unit currently having no establishment and no suitable potential recruits having been generated from local community recruitment campaigns, it would appear that Ardgour can no longer support the provision of a wildfire intervention resource. Should the need for a wildfire intervention resource be required, a response will be provided through the existing mobilising contingencies utilising resources from the nearest appropriate station
- As CFS HFSC are currently being performed by personnel from adjacent stations and the dedicated Lochaber based CSA, appropriate CFS provisions can be provided for the Ardgour area. As such, all current and future requests for HFSC and CFS activities will be performed by personnel from adjacent stations and the dedicated Lochaber based CSA
- The CRM department will continue to review the risk associated with Ardgour as part of the ongoing Risk Review process

7.0 Recommendations

- **The unit currently has no members and it has not proven possible for the local community to support the unit at Ardgour. As such the Board accept that the local community is unable to support a safe and effective intervention response. Therefore the board should no longer support the provision of a unit at Ardgour**
- **A wildfire response to the area will be provided utilising the wider resources of the service**
- **All current and future requests for home fire safety checks and CFS activities to be performed by personnel from adjacent stations and the dedicated Lochaber based CSA**
- **The CRM department will continue to review the wildfire risk associated with the service area as part of the ongoing Risk Review process**