

**IRMP Risk Review Methodology**

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## Methodology

### Background

The Methodology described in this Appendix A details the background to the Appendix B of the overall report. The Appendix B Combined Sustainability score will in the future assist the Service in deciding the appropriate allocation of resources within the fields of Prevention, Protection and Intervention.

The data sets that have been considered include;

- Data gathered from the Sustainability Review.
- Demographic information on communities including the distribution of vulnerable persons.
- The potential for future life critical incidents.
- Critical elements of the current intervention resources provision.

## 1 Identifying Station/Unit Impact on Lives Saved

### Sub Appendix 1

In developing the Fire Services Emergency Cover (FSEC) model the Service is able to predict the time period in which it is probable that a station will save a life based on empirical data from actual operational incidents and statistical demographic evidence. This risk based predictor includes the potential for all life critical incidents which could be attributed to the area the station covers as first response. Potential incidents include; domestic risk, commercial risk and the possibility of fatalities resulting from road traffic collisions.

**Table 1.1** Illustrates the scoring distribution for the “FSEC Years per Additional Lives Saved” scoring sheet which is calculated and produced by the Fire Service Emergency Cover (FSEC) model. The figure i.e. 11.36040897 represents that it is predicted from demographic information, risk information and the distribution of previous life critical incidents that the station will save a life, either at a fire or at a road traffic collision, once every 11 years (approximately).

**Table 1.2 (Graph)** illustrates the distribution of Stations/Units using a logarithmic scale. This exercise has been completed to ensure that scoring bands allocated allow for comparative spread of stations across all the bands.

**Table 1.3 and A4** contain lists of all stations in the Service area (Retained and CRU with RTC/Wildfire role) scored and graded for their potential intervention contribution to life safety. The Comparative Score column, allocates a score from of 1 to 20 in relation to the “FSEC Years per Additional Lives Saved” scoring sheet column.

The wide distribution scale of 1 to 20 is used to emphasise the importance of the “Years per additional lives saved” in comparison to the other data sets analysed.

## 2 Quantifying the Potential Recruitment Pool

To ensure a station’s sustainability into the future there must be sufficient people living in an area who are eligible and willing to serve as firefighters. The “Predicted Population for Recruitment” figure attempts to quantify the number of persons who could be available for potential recruitment to ensure the Station can maintain operational availability at all times.

### Sub Appendix 2

**Table 2.1** Illustrates the scoring distribution for each station’s resultant population that could be available to be recruited to provide emergency day time response.

**Table 2.2** and **2.3** identifies the total resident population associated with the area each station covers (Retained and CRU with RTC/Wildfire role) as first response drawn from 2001 Census figures and predicts the potential number of persons who could be available to provide emergency ‘day cover’, during the period 08.00 – 18.00hrs. The potential Day Cover recruits figure is derived by subtracting the total number of residents who it would appear are unable/unsuitable to become firefighters, from the total resident population.

The measure of Day Cover potential is critical to HIFRS as the majority of the stations are crewed by personnel working the Retained Duty System. This involves Retained personnel being able to respond to the station and answer emergency calls from their place of employment, if continuous emergency response is to be maintained.

An example calculation is detailed below - **Example Potential Day Cover Recruits**

Population Details	Number	Running Total
Total Resident Population*	161	161
Persons under the age of 18	21	140
Persons over the age of 65	29	111
Persons already in the Retained Unit	8	103
<b>Persons remaining</b>		<b>103</b>
Persons working in ”Agriculture and Fishing”	5.9% of 103 = 6	97
Persons working in “Transport and Communications”	7.3% of 103 = 7	90
Number of Persons living/working > 5km from Station (this has a direct impact on mobilising time by ensuring that it does not exceed 7 minutes from initial call to appliance turn-out)		33
<b>Total Potential Persons Remaining</b>		<b>57</b>

\* Drawn from 2001 Census data

For a number of stations which appear to have very low numbers of Potential Day Cover Recruits further investigation will be undertaken during the later stages of the IRMP Risk Review. i.e. the 2001 Census details the island of Foula as having a resident population of 66, but this is combined with an area of the mainland. It is believed the current island figure is less than 30.

### **3 Examining Establishment Figures by Station**

#### **Sub Appendix 3**

Key to maintaining the required availability at a Retained Duty System Station is the provision of an appropriate establishment group comprising of skilled and available employees.

For any given station there are a minimum total number of contracted hours of employment required if the station is to be available 24/7. For a one pump station this is 672 hours and for a two pump station 1344 hours.

The Station establishment figures must also cater to ensure, sufficient numbers of personnel are available during periods of annual leave (and other associated leave as required by current Employment legislation e.g. special leave, maternity/paternity leave etc), sickness and potential fluctuations in periods of unavailability through primary work commitments.

**Tables 3.1 and 3.2** illustrate the scoring distribution used for scoring the trends in establishment for one and two pump stations.

**Table 3.3** identifies station establishment figures over a 6 year reporting period (2002 to 2008).

**Table 3.4** identifies the establishment comparative grading score for CRUs (RTC/Wildfire Only) since taking up their new role in 2005.

**NB** Station “benchmark” establishment levels for stations across the Service area are 10 persons for a 1 pump station and 20 persons for a 2 pump station. However it is accepted that these figures will vary due to local circumstances.

### **4 Crew Confidence Levels**

#### **Sub Appendix 4**

The crew confidence level is a measure of the number of firefighters who respond to an incident on the appliance.

To ensure safe systems of work at operational incidents are adopted it is essential that a minimum team of 4 firefighters crew each appliance on all occasions.

**Table 4.1** illustrates the scoring distribution allocated to Crew Confidence Levels achieved.

**Tables 4.2 and 4.3** identify the Crew Confidence Levels achieved for all (1 and 2 pump) stations and CRUs across the Service area and score them in terms of their percentage of total calls received when the station could not achieve the minimum Crew Confidence Level.

**NB** In following Service procedures at no time should a station with insufficient crew be solely alerted as availability should be proactively managed locally. In the eventuality of

no solution being available the appliance should be booked unavailable with the Service Control Centre. Following this procedure will avoid delays in intervention response times.

**Tables 4.2 and 4.3** Titled columns explained:

The Station column - details the station name.

The Failed column - details the actual number of calls where no appliance attendance from the specific station could be made.

Total Number of Calls including Standby column - details the actual number of operational calls/standby received for the specific station.

Overall %age Failure column - details percentage of non-attendance/failure to attend for all calls received.

Comparative Grading Score column - details the station specific score allocated to that station for Crew Confidence Level performance.

The History column - details data relating to the reporting period, 1<sup>st</sup> April 2006 to 30<sup>th</sup> September 2008 and colour coded as per key.

## **5 Summary of Sustainability Review Information**

**Appendix B to this report gives the ‘Combined Sustainability Score’** which combines the information from these sections 1 – 4.

**Appendix B** explained:

The Station column - details the station name.

FSEC Years per Additional Lives Saved Score column – details the station specific figure from Appendix 1 tables 1.3 & 1.4.

Potential Day Cover Recruits Score column - details the station specific figure taken from Appendix 2 tables 2.2 & 2.3.

Current Establishment Score column - details the station specific Figure taken from Appendix 3 tables 3.3 & 3.4.

FSEC Years + Potential Day Cover Score + Current Establishment Score column - details a sum of all Comparative Grading Scores of the previous columns.

Crew Confidence Score column - details the station specific figure taken from Appendix 4 Tables 4.2 & 4.3.

Total Sustainability Result Score column - details the overall Total Sustainability Result Score (Crew Confidence Score subtracted from the Sub-Total Score)

Applying the Methodology to the captured data and presenting it in the Combined Sustainability Score format provides a robust and measured reflection of how stations and units perform.

Table 1.1 FSEC Years per Additional Lives Saved Scoring Sheet

Years per additional lives Saved	Score
0 to <5	20
5 to <7	19
7 to <9	18
9 to <12	17
12 to <16	16
16 to <21	15
21 to <28	14
28 to <38	13
38 to <50	12
50 to <67	11
67 to <90	10
90 to <120	9
120 to <160	8
160 to <210	7
210 to <280	6
280 to <375	5
375 to <500	4
500 to <670	3
670 to <900	2
900 to <1250	1
>= 1250	0

Table 1.2 FSEC Years per Additional Lives Saved – Station Distribution Graph

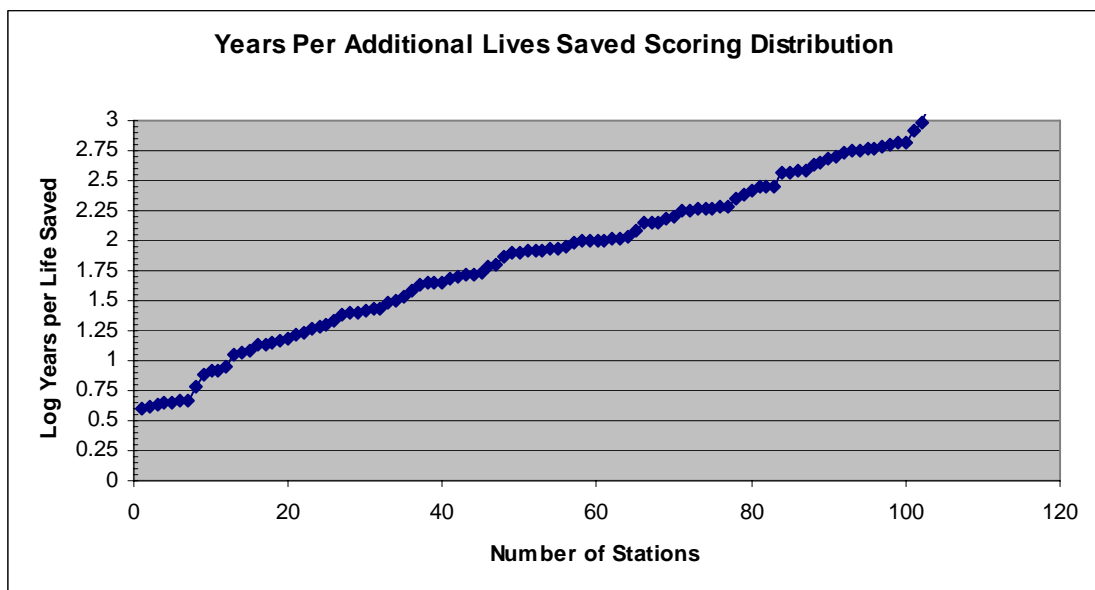


Table 1.3. FSEC Years Per Additional Lives Saved (Retained Stations)

No	Station Name	Years per additional lives Saved	Score
1	Inverness Retained	-3.920354086	20
2	Fort William - Pump 1	-4.148964418	20
3	Nairn - Pump 1	-4.268906989	20
4	Stornoway - Pump 1	-4.419616024	20
5	Invergordon - Pump 1	-4.462393181	20
6	Wick - Pump 1	-4.622631479	20
7	Thurso - Pump 1	-4.685684297	20
8	Kirkwall - Pump 1	-6.037590036	19
9	Dingwall - Pump 1	-7.773873566	18
10	Grantown - Pump 1	-8.148896639	18
11	Lerwick - Pump 1	-8.333819473	18
12	Aviemore	-9.04502614	17
13	Tain	-11.36040897	17
14	Stornoway - Pump 2	-11.75391993	17
15	Nairn - Pump 2	-12.20390281	16
16	Fort William - Pump 2	-13.3639814	16
17	Kingussie	-13.50840223	16
18	Wick - Pump 2	-13.909947	16
19	Thurso - Pump 2	-14.69464527	16
20	Invergordon - Pump 2	-14.98082454	16
21	Kirkwall - Pump 2	-16.38860664	15
22	Stromness - Pump 1	-16.96583082	15
23	Golspie	-18.51063436	15
24	Grantown - Pump 2	-19.0923497	15
25	Portree	-19.57406827	15
26	Dornoch	-21.36752137	14
27	Beaulay	-24.59056706	14
28	Kyle of Lochalsh	-24.64754018	14
29	Drumnadrochit	-25.23659306	14
30	Lerwick - Pump 2	-26.45082791	14
31	Kinlochleven - Pump 1	-27.43710045	14
32	Fortrose	-27.52773419	14
33	Dingwall - Pump 2	-30.98757398	13
34	Ullapool	-31.4159153	13
35	Helmsdale	-33.55704698	13
36	Broadford	-38.81083599	12
37	Brae - Pump 1	-42.78807069	12
38	Stromness - Pump 2	-44.32034747	12
39	Benbecula	-44.63289444	12
40	Port of Ness	-45.28165187	12
41	Strontian	-48.2695371	12
42	Fort Augustus	-50.671396	11
43	Bonar Bridge	-51.94805195	11
44	Castlebay	-52.22477543	11
45	Shawbost	-54.54049632	11
46	Lairg	-59.74786401	11
47	Sandwick	-63.91818472	11
48	Mallaig	-74.93443237	10
49	Kinlochleven - Pump 2	-78.49909726	10
50	Tarbert	-80.90614887	10
51	Dunvegan	-81.36034497	10
52	Dunbeath	-81.95377807	10
53	Lochboisdale	-82.83631544	10
54	Staffin	-85.11362669	10

No	Station Name	Years per additional lives Saved	Score
55	Scalloway	-87.12319219	10
56	Uig	-89.43743851	10
57	Baltasound	-95.52923194	9
58	Lochcarron	-99.83028851	9
59	Whalsay	-100.4419446	9
60	Lochinver	-100.7658202	9
61	Lochmaddy	-101.4404545	9
62	Aultbea	-103.9392994	9
63	Gairloch	-105.1635293	9
64	St Margaret's Hope	-109.3135111	9
65	Brae - Pump 2	-119.5171507	9
66	Sumburgh	-139.2175971	8
67	Bayhead	-141.1233418	8
68	Kinlochbervie	-141.6029453	8
69	Leverburgh	-154.3686323	8
70	John O'Groats	-156.2255898	8
71	Walls	-175.8705593	7
72	Acharacle	-179.0510295	7
73	Westray	-184.0942563	7
74	Bettyhill	-186.8460389	7
75	Foyers	-188.2884579	7
76	Mid Yell	-191.0584639	7
77	Hillswick	-192.6782274	7
78	Sanday	-225.9887006	6
79	Scalpay	-240.442414	6
80	Bressay	-258.1311306	6
81	Longhope	-276.6251729	6
82	Great Bernera	-284.8191398	5
83	Fair Isle	-285.6326764	5
84	Lochaline	-366.8378577	5
85	Stronsay	-369.139904	5
86	Shapinsay	-384.4675125	4
87	South Lochs	-386.3987635	4
88	Papa Westray	-437.0629371	4
89	Bixter	-455.1661356	4
90	Scourie	-488.997555	4
91	Eday	-505.5611729	3
92	Cannich	-546.149645	3
93	Raasay	-558.9714925	3
94	Fetlar	-568.1818182	3
95	Achiltibuie	-587.5440658	3
96	Flotta	-593.824228	3
97	Durness	-595.9475566	3
98	North Ronaldsay	-627.7463905	3
99	Tongue	-663.5700066	3
100	Applecross	-665.3359947	3
101	Valtos	-810.3727715	2
102	Rousay	-979.4319295	1
103	Kilchoan	-1201.923077	1
104	Glenelg	-1215.066829	1
105	Skerries	-1529.051988	0
106	Torridon	-2444.987775	0
107	Kinlochewe	-4310.344828	0
108	Foula	-15384.61538	0

**Table 1.4. FSEC Years Per Additional Lives Saved  
(Community Response Units with RTC Role)**

No	Station Name	Years per additional lives Saved	Score
1	Carrbridge	-38.6294279	12
2	Newtonmore	-59.70862193	11
3	Sleat	-1183.431953	1
4	Spean Bridge	-2604.166667	0
5	Lybster	-5025.125628	0
6	Balintore	No Value is attributed due to the location of occurring incidents and the close proximity of other Stations	
7	Cromarty		
8	Ratagan		

**Table 2.1 Potential Population for Day Cover Recruitment Scoring Sheet**

Recruitment Potential - Possible Number of persons available to recruit for day cover		
1 Pump station	2 Pump station	Scoring
0 – 25	0 – 50	1
26 – 50	51 – 100	2
51 – 100	101 – 200	3
101 – 200	201 – 400	4
201 – 300	401 – 600	5
301 – 400	601 – 800	6
401 – 500	801 – 1000	7
501 – 750	1001 – 1500	8
751 – 1000	1501 – 2000	9
1000 +	2001 +	10
N.B. Benbecula, Castlebay, Ullapool = one pump stations		

Table 2.2 Demographics - Resident Population and Potential Day Cover Recruits (Retained)

Station Name	Total Resident Population 2001 Census	Potential Day Cover Recruits	Score
Inverness Retained	57,088	18316	10
<b>Fort William - Pump 1</b>	11,130	4779	10
<b>Fort William - Pump 2</b>	11,130	4779	10
<b>Invergordon - Pump 1</b>	10,714	3612	10
<b>Invergordon - Pump 2</b>	10,714	3612	10
<b>Wick - Pump 1</b>	9,937	3321	10
<b>Wick - Pump 2</b>	9,937	3321	10
<b>Dingwall - Pump 1</b>	11,909	3203	10
<b>Dingwall - Pump 2</b>	11,909	3203	10
<b>Kirkwall - Pump 1</b>	9,801	3142	10
<b>Kirkwall - Pump 2</b>	9,801	3142	10
<b>Lerwick - Pump 1</b>	7,609	2959	10
<b>Lerwick - Pump 2</b>	7,609	2959	10
<b>Nairn - Pump 1</b>	8,771	2864	10
<b>Nairn - Pump 2</b>	8,771	2864	10
<b>Thurso - Pump 1</b>	12,614	2539	10
<b>Thurso - Pump 2</b>	12,614	2539	10
<b>Stornoway - Pump 1</b>	5,657	1659	10
Tain	5,478	1483	10
<b>Grantown - Pump 1</b>	3,295	1200	10
Aviemore	2,721	1091	10
Golspie	3,458	1014	10
<b>Stornoway - Pump 2</b>	5,657	1659	9
Portree	2,209	866	9
Fortrose	4,232	830	9
<b>Grantown - Pump 2</b>	3,295	1200	8
Kingussie	2,043	673	8
Ullapool	1,758	659	8
<b>Stromness - Pump 1</b>	3,884	656	8
Dornoch	2,186	633	8
Drumadrochit	1,887	540	8
Kyle of Lochalsh	2,099	528	8
Mallaig	1,438	502	8
Gairloch	1,480	439	7
<b>Stromness - Pump 2</b>	3,884	656	6
Benbecula	1,249	397	6
Broadford	1,466	376	6
Shawbost	2,044	372	6
Fort Augustus	1,219	362	6
Bonar Bridge	1,629	352	6
Castlebay	1,172	338	6
Whalsay	1,034	320	6
<b>Kinlochleven - Pump 1</b>	1,340	312	6
Lochinver	876	284	5
Port of Ness	1,341	276	5
Tarbert	1,078	271	5
Lairg	1,162	250	5
Bettyhill	1,041	243	5
Lochcarron	1,064	234	5
Aultbea	914	229	5
Lochboisdale	1,212	223	5
Scalloway	1,129	221	5
Helmsdale	902	220	5
St Margaret's Hope	1,380	217	5
<b>Kinlochleven - Pump 2</b>	1,340	312	4

Station Name	Total Resident Population 2001 Census	Potential Day Cover Recruits	Score
Baltasound	720	192	4
<b>Brae - Pump 1</b>	820	168	4
John O'Groats	1,289	161	4
Dunbeath	621	155	4
Dunvegan	705	149	4
Tongue	602	146	4
Uig	676	144	4
Kinlochbervie	384	137	4
Stronsay	358	137	4
Westray	563	133	4
Bressay	384	129	4
Strontian	419	125	4
Beaully	6,896	119	4
Sumburgh	1,045	115	4
Sandwick	877	111	4
Foyers	497	111	4
Staffin	599	110	4
Lochaline	317	105	4
Acharacle	374	102	4
<b>Brae - Pump 2</b>	820	168	3
Torridon	309	97	3
Walls	897	96	3
Cannich	430	91	3
Valtos	322	83	3
Scalpay	322	82	3
Mid Yell	355	79	3
Bixter	708	78	3
Bayhead	739	76	3
Kilchoan	290	75	3
South Lochs	463	74	3
Glenelg	277	64	3
Achiltibuie	271	61	3
Great Bernera	299	60	3
Shapinsay	300	59	3
Durness	201	57	3
Applecross	161	57	3
Scourie	222	50	2
Longhope	186	49	2
Lochmaddy	225	48	2
Sanday	144	46	2
Raasay	194	44	2
Rousay	144	43	2
Eday	121	36	2
Kinlochewe	155	35	2
Skerries	76	26	2
Foula	66	26	2
North Ronaldsay	70	23	1
Flotta	81	22	1
Hillswick	352	19	1
Fair Isle	69	19	1
Fetlar	86	16	1
Leverburgh	584	15	1
Papa Westray	65	15	1

**Table 2.3 Demographics - Resident Population and Potential Population for Recruitment (CRU with RTC Role)**

Station Name	Total Resident Population 2001 Census	Potential Day Cover Recruits	Score
Newtonmore	1,090	451	7
Balintore	2,019	375	6
Carrbridge	1,228	354	6
Cromarty	1,314	296	5
Lybster	1,126	225	5
Spean Bridge	830	113	4
Sleat	505	99	3
Ratagan	202	32	2

**Table 3.1 Establishment Scoring Sheet****Over 6 Years as at Year End and 2008 column = last 6 months Sustainability figure**

<b>1 Pump Stations</b>	
<b>Score</b>	<b>Reason</b>
1	Current establishment <6 + history trend indicates little change
2	Current establishment >6 + history trend indicates little change Current establishment 7 + history fluctuations give a negative trend over last 3 years
3	Establishment reasonably consistent at 7
4	Current establishment 7 + history fluctuations indicate increase trend over last 3 years Current establishment 8 + history fluctuations give a negative trend over last 3 years
5	Establishment reasonably consistent at 8
6	Current establishment 8 + history fluctuations indicate increase trend over last 3 years Current establishment 9 + history fluctuations give a negative trend over last 3 years
7	Establishment reasonably consistent at 9
8	Current establishment 9 + history fluctuations indicate increase trend over last 3 years Current establishment 10 + history fluctuations give a negative trend over last 3 years
9	Establishment reasonably consistent at 10 over last 3 years
10	Current establishment 10 + consistent over reporting periods

**Table 3.2 Establishment Scoring Sheets for Second Pump (Stations with 2 Pumps)**

<b>2 Pump Stations</b>	
<b>Score</b>	<b>Reason</b>
1	Current establishment <16 + history trend indicates little change
2	Current establishment >16 + history trend indicates little change Current establishment 17 + history fluctuations give a negative trend over last 3 years
3	Establishment reasonably consistent at 17
4	Current establishment 17 + history fluctuations indicate increase trend over last 3 years Current establishment 18 + history fluctuations give a negative trend over last 3 years
5	Establishment reasonably consistent at 18
6	Current establishment 18 + history fluctuations indicate increase trend over last 3 years Current establishment 19 + history fluctuations give a negative trend over last 3 years
7	Establishment reasonably consistent at 19
8	Current establishment 19 + history fluctuations indicate increase trend over last 3 years Current establishment 20 + history fluctuations give a negative trend over last 3 years
9	Establishment reasonably consistent at 20 over last 3 years
10	Current establishment 20 + consistent over reporting periods

**Table 3.3. Establishment by Station over 6 years (as at year end) Retained**

Station Name	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	To Sep 2008	Potential Day Cover Recruits	Comparative Grading Score
Inverness Retained	12	11	11	12	12	12	11	18316	10
<b>Fort William - Pump 1</b>	20	19	20	20	19	19	20	4779	10
<b>Invergordon - Pump 1</b>	20	20	19	19	18	16	16	3612	10
<b>Wick - Pump 1</b>	20	21	20	20	20	19	19	3321	10
<b>Dingwall - Pump 1</b>	20	20	19	23	21	21	20	3203	10
<b>Kirkwall - Pump 1</b>	20	20	19	19	16	18	21	3142	10
<b>Lerwick - Pump 1</b>	20	18	19	20	21	20	20	2959	10
<b>Nairn - Pump 1</b>	20	19	19	19	19	18	18	2864	10
<b>Thurso - Pump 1</b>	19	19	19	17	18	18	21	2539	10
<b>Stornoway - Pump 1</b>	19	23	14	28	20	19	18	1659	10
Tain	12	12	12	11	12	11	11	1483	10
<b>Grantown - Pump 1</b>	19	18	18	18	19	19	19	1200	10
Aviemore	13	11	12	12	13	12	12	1091	10
Golspie	12	12	12	11	12	12	12	1014	10
Portree	12	12	12	12	11	12	12	866	10
Fortrose	11	10	10	12	11	10	11	830	10
Kingussie	11	11	11	12	12	12	11	673	10
Ullapool	14	14	14	14	14	14	14	659	10
<b>Stromness - Pump 1</b>	20	19	18	18	19	18	18	656	10
Dornoch	11	11	11	11	12	12	12	633	10
Kyle of Lochalsh	12	12	12	12	12	12	11	528	10
Mallaig	10	11	12	12	13	12	11	502	10
Benbecula	13	13	13	13	14	14	15	397	10
Broadford	12	12	12	11	10	11	11	376	10
Shawbost	10	11	11	11	12	10	12	372	10
Fort Augustus	12	12	11	11	11	11	11	362	10
Castlebay	11	12	10	12	12	10	12	338	10
Whalsay	12	10	12	12	11	13	13	320	10
<b>Kinlochleven - Pump 1</b>	18	16	18	17	16	17	16	312	10
Lochinver	11	12	13	11	10	12	12	284	10
Tarbert	11	11	12	12	12	12	12	271	10
Lochboisdale	12	11	11	11	11	11	11	223	10
Scalloway	12	12	13	13	13	12	11	221	10
Baltasound	11	12	11	10	11	11	11	192	10
<b>Brae - Pump 1</b>	19	19	19	19	18	16	18	168	10
John O'Groats	9	10	9	11	10	10	11	161	10
Dunbeath	13	11	12	11	11	9	12	155	10
Dunvegan	10	9	10	12	11	12	12	149	10
Strontian	11	11	13	12	12	11	10	125	10
Sumburgh	12	12	12	11	10	11	11	115	10
Sandwick	12	14	14	12	12	12	13	111	10
Walls	12	10	12	12	11	11	11	96	10
Bixter	10	10	11	11	11	10	10	78	10
Great Bernera	9	11	11	11	11	11	11	60	10
Durness	9	10	11	11	11	11	11	57	10
Skerries	13	14	9	10	10	9	11	26	10
Hillswick	12	12	13	12	12	12	11	19	10

**APPENDIX A Sub Appendix 3**

Station Name	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	To Sep 2008	Potential Day Cover Recruits	Comparative Grading Score
<b>Fort William - Pump 2</b>	20	19	20	20	19	19	20	4779	<b>9</b>
<b>Dingwall - Pump 2</b>	20	20	19	23	21	21	20	3203	<b>9</b>
<b>Lerwick - Pump 2</b>	20	18	19	20	21	20	20	2959	<b>9</b>
Gairloch	9	9	9	9	10	9	10	439	<b>9</b>
Lairg	12	12	12	12	10	10	10	250	<b>9</b>
Bettyhill	9	10	10	9	10	8	10	243	<b>9</b>
Lochcarron	8	9	10	9	10	10	10	234	<b>9</b>
Stronsay	10	10	9	9	9	11	11	137	<b>9</b>
Beaully	11	12	10	10	11	10	10	119	<b>9</b>
Staffin	9	8	9	10	11	11	10	110	<b>9</b>
Acharacle	11	11	8	10	10	10	10	102	<b>9</b>
Achiltibuie	11	11	9	9	10	10	10	61	<b>9</b>
Longhope	9	9	10	9	10	9	10	49	<b>9</b>
Leverburgh	10	10	10	11	9	10	10	15	<b>9</b>
<b>Wick - Pump 2</b>	20	21	20	20	20	19	19	3321	<b>8</b>
<b>Kirkwall - Pump 2</b>	20	20	19	19	16	18	21	3142	<b>8</b>
<b>Thurso - Pump 2</b>	19	19	19	17	18	18	21	2539	<b>8</b>
Helmsdale	10	9	10	12	12	11	10	220	<b>8</b>
Kinlochbervie	12	11	12	11	11	9	9	137	<b>8</b>
Lochaline	7	7	7	9	9	10	10	105	<b>8</b>
Glenelg	10	10	9	9	9	10	10	64	<b>8</b>
Applecross	6	6	8	7	8	10	10	57	<b>8</b>
Scourie	9	10	11	9	9	9	10	50	<b>8</b>
<b>Grantown - Pump 2</b>	19	18	18	18	19	19	19	1200	<b>7</b>
Drumnadrochit	10	10	10	9	11	10	9	540	<b>7</b>
Port of Ness	11	11	11	10	11	9	9	276	<b>7</b>
Aultbea	8	8	9	9	8	8	9	229	<b>7</b>
Uig	9	7	10	10	10	10	9	144	<b>7</b>
Westray	9	8	7	9	9	10	9	133	<b>7</b>
Valtos	9	9	11	8	9	7	9	83	<b>7</b>
Scalpay	8	11	10	10	10	10	9	82	<b>7</b>
Bayhead	9	7	7	9	8	7	9	76	<b>7</b>
South Lochs	10	10	11	10	8	9	9	74	<b>7</b>
Rousay	9	8	8	8	9	9	9	43	<b>7</b>
Eday	7	7	8	10	10	9	9	36	<b>7</b>
Fetlar	9	9	9	9	9	9	9	16	<b>7</b>
Sanday	9	6	6	5	6	7	9	46	<b>6</b>
<b>Nairn - Pump 2</b>	20	19	19	19	19	18	18	2864	<b>5</b>
<b>Stornoway - Pump 2</b>	19	23	14	28	20	19	18	1659	<b>5</b>
<b>Stromness - Pump 2</b>	20	19	18	18	19	18	18	656	<b>5</b>
<b>Brae - Pump 2</b>	19	19	19	19	18	16	18	168	<b>5</b>
Tongue	8	7	7	8	8	8	8	146	<b>5</b>
Bressay	8	8	9	9	9	8	8	129	<b>5</b>
Foyers	9	9	7	7	6	7	8	111	<b>5</b>
Cannich	9	8	7	9	7	8	8	91	<b>5</b>
Mid Yell	10	10	10	9	9	9	8	79	<b>5</b>
Kilchoan	8	8	9	8	8	9	8	75	<b>5</b>
Shapinsay	8	8	7	6	8	8	8	59	<b>5</b>
Lochmaddy	7	6	7	6	9	9	8	48	<b>5</b>

**APPENDIX A Sub Appendix 3**

Station Name	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	To Sep 2008	Potential Day Cover Recruits	Comparative Grading Score
North Ronaldsay	10	9	9	9	9	8	8	23	5
Bonar Bridge	9	9	11	11	9	9	7	352	4
Raasay	8	8	7	7	7	7	7	44	3
Kinlochewe	8	6	5	5	7	6	7	35	3
<b>Invergordon - Pump 2</b>	20	20	19	19	18	16	16	3612	2
<b>Kinlochleven - Pump 2</b>	18	16	18	17	16	17	16	312	2
St Margaret's Hope	9	9	9	9	8	8	7	217	2
Torrison	18	13	13	9	11	9	7	97	2
Fair Isle	10	10	10	9	7	5	6	19	2
Foula	11	11	7	7	6	3	3	26	1
Flotta	6	7	6	5	4	4	4	22	1
Papa Westray	10	10	9	9	9	8	5	15	1

**Table 3.4. Establishment for CRUs (RTC/Wildfire Only) since taking up their New Role in 2005**







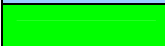

Station Name	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	To Sep 2008	Potential Day Cover Recruits	Comparative Grading Score
Newtonmore				10	9	11	11	451	10
Carrbridge				10	11	11	11	354	10
Lybster				7	10	9	9	225	7
Spean Bridge				9	9	9	9	113	7
Balintore				7	8	8	8	375	5
Cromarty				6	6	8	8	296	5
Sleat				6	8	8	7	99	3
Ratagan				9	8	6	6	32	2

**Table 4.1 Crew Confidence Scoring**

Score	Reason
0	Stations attending all calls
1	Stations failing to attend between 1% - 10% of all calls
2	Stations failing to attend between 11% - 20% of all calls
3	Stations failing to attend between 21% - 30% of all calls
4	Stations failing to attend between 31% - 40% of all calls
5	Stations failing to attend between 41% - 50% of all calls
6	Stations failing to attend between 51% - 60% of all calls
7	Stations failing to attend between 61% - 70% of all calls
8	Stations failing to attend between 71% - 80% of all calls
9	Stations failing to attend between 81% - 90% of all calls
10	Stations failing to attend between 91% - 100% of all calls

**Table 4.2 and 4.3 Crew Confidence Levels Key**

**Key to coloured dots assigned to station**

Dot Colour	No attendance %
	75%+ of incidents
	50% - 74% of incidents
	31% - 49% of incidents
	21% - 30% of incidents
	11% - 20% of incidents
	Up to 10% of incidents
	Stations Achieving all calls
	No Calls Received

**Key to coloured dots assigned to station**

Dot Order	Reporting Period
First	April 2006 to March 2007
Second	April 2007 to September 2007
Third	October 2007 to March 2008
Fourth	April 2008 to September 2008

Please Note: The total number of calls and failures covers the period 1<sup>st</sup> April 2006 to 30<sup>th</sup> September 2008. The coloured dots in the history column relate to the key colourings and depict a history of migration of stations from columns in the Sustainability Analysis Report. A black dot signifies no calls and a green dot represents stations fully achieving Crew Confidence Levels.

**Table 4.2 Crew Confidence from April 2006 to September 2008 (Retained)****1st Appliance**

Station	Failed	Total No of Calls Inc Standby	Overall %age Failure	Score	History
North Ronaldsay	0	0	-	No Calls	●●●●
Skerries	0	0	-	No Calls	●●●●
Foula	4	4	100	10	●●●●
Fair Isle	4	5	80	9	●●●●
Flotta	2	3	67	7	●●●●
Cannich	21	40	53	6	●●●●
Lochmaddy	20	44	45	5	●●●●
Bixter	7	17	41	5	●●●●
Foyers	20	49	41	5	●●●●
Kinlochewe	10	28	36	4	●●●●
Walls	3	9	33	4	●●●●
Raasay	4	13	31	4	●●●●
Aultbea	23	75	31	4	●●●●
Glenelg	5	17	29	3	●●●●
St Margaret's Hope	8	30	27	3	●●●●
Bayhead	14	56	25	3	●●●●
Sanday	3	12	25	3	●●●●
Applecross	2	8	25	3	●●●●
Bettyhill	15	64	23	3	●●●●
Hillswick	2	9	22	3	●●●●
Valtos	3	14	21	3	●●●●
Westray	3	14	21	3	●●●●
Torrison	5	24	21	3	●●●●
Longhope	2	10	20	2	●●●●
Staffin	6	33	18	2	●●●●
Baltasound	4	22	18	2	●●●●
Sumburgh	8	56	14	2	●●●●
Dunbeath	8	62	13	2	●●●●
Tongue	6	46	13	2	●●●●
Sandwick	8	63	13	2	●●●●
Kilchoan	1	8	13	2	●●●●
Mid Yell	3	24	13	2	●●●●
Scourie	7	57	12	2	●●●●
Uig	12	105	11	2	●●●●
Lochaline	1	9	11	2	●●●●
Achiltibuie	3	27	11	2	●●●●
Bonar Bridge	12	123	10	1	●●●●
John O' Groats	4	47	9	1	●●●●
Acharacle	8	88	9	1	●●●●
South Lochs	4	47	9	1	●●●●
Drumnadrochit	11	138	8	1	●●●●
Leverburgh	2	27	7	1	●●●●
Gairloch	7	96	7	1	●●●●
Dunvegan	6	84	7	1	●●●●
Fortrose	9	151	6	1	●●●●
Kinlochleven	9	155	6	1	●●●●

APPENDIX A Sub Appendix 4

Station	Failed	Total No of Calls Inc Standby	Overall %age Failure	Score	History
Beauly	16	282	6	1	●●●●●
Inverness Retained	56	1075	5	1	●●●●●
Scalpay	2	40	5	1	●●●●●
Durness	1	22	5	1	●●●●●
Great Bernera	2	48	4	1	●●●●●
Dingwall	12	379	3	1	●●●●●
Helmsdale	3	98	3	1	●●●●●
Lochcarron	2	66	3	1	●●●●●
Lairg	3	118	3	1	●●●●●
Kinlochbervie	1	40	3	1	●●●●●
Aviemore	7	403	2	1	●●●●●
Nairn	6	348	2	1	●●●●●
Shawbost	4	186	2	1	●●●●●
Lochboisdale	1	63	2	1	●●●●●
Castlebay	1	44	2	1	●●●●●
Golspie	3	210	1	1	●●●●●
Invergordon	3	356	1	1	●●●●●
Thurso	2	265	1	1	●●●●●
Lerwick	2	229	1	1	●●●●●
Tain	2	346	1	1	●●●●●
Fort Augustus	1	180	1	1	●●●●●
Broadford	2	179	1	1	●●●●●
Kirkwall	2	207	1	1	●●●●●
Stornoway	2	482	0	0	●●●●●
Wick	1	249	0	0	●●●●●
Portree	1	293	0	0	●●●●●
Grantown-On-Spey	1	322	0	0	●●●●●
Fort William	1	460	0	0	●●●●●
Fetlar	0	2	0	0	●●●●●
Papa Westray	0	2	0	0	●●●●●
Bressay	0	5	0	0	●●●●●
Stronsay	0	6	0	0	●●●●●
Eday	0	7	0	0	●●●●●
Rousay	0	8	0	0	●●●●●
Shapinsay	0	12	0	0	●●●●●
Whalsay	0	12	0	0	●●●●●
Brae	0	43	0	0	●●●●●
Scalloway	0	54	0	0	●●●●●
Port of Ness	0	63	0	0	●●●●●
Lochinver	0	67	0	0	●●●●●
Tarbert	0	67	0	0	●●●●●
Strontian	0	82	0	0	●●●●●
Ullapool	0	115	0	0	●●●●●
Stromness	0	119	0	0	●●●●●
Mallaig	0	121	0	0	●●●●●
Benbecula	0	200	0	0	●●●●●
Kyle of Lochalsh	0	222	0	0	●●●●●
Kingussie	0	242	0	0	●●●●●
Dornoch	0	317	0	0	●●●●●
<b>459</b>	<b>10,769</b>				

**Table 4.2 Continued****2<sup>nd</sup> Appliance**

Station	Failed	Total No of Calls Inc Standby	Overall %age Failure	Score	History
Grantown-On-Spey	25	127	20	2	
Nairn	43	262	16	2	
Invergordon	85	520	16	2	
Brae	10	67	15	2	
Stromness	15	126	12	2	
Kinlochleven	25	255	10	1	
Kirkwall	20	234	9	1	
Lerwick	16	238	7	1	
Dingwall	50	687	7	1	
Thurso	15	252	6	1	
Stornoway	34	552	6	1	
Wick	19	351	5	1	
Fort William	19	729	3	1	
	<b>376</b>	<b>4400</b>			

**Table 4.3 Crew Confidence from April 2006 to September 2008 (CRU – RTC/Wildfire Only Role)**

Station	Failed	Total No of Calls Inc Standby	Overall %age Failure	Score	History
Ratagan	19	20	95	9	
Sleat	1	2	50	5	
Balintore	7	35	20	2	
Spean Bridge	13	64	20	2	
Lybster	3	27	11	2	
Cromarty	1	13	8	1	
Carrbridge	3	57	5	1	
Newtonmore	0	70	0	0	
	<b>47</b>	<b>288</b>			

**Table 1 Spreadsheet of Combined Sustainability Score – Retained**

Retained Station Name	FSEC Years Per Additional Lives Saved Score	Potential Day Cover Recruits Score	Current Establishment Score	FSEC Years + Potential Day Cover Score + Current Establishment Score	Crew Confidence Score (-VE)	Combined Sustainability Score
<b>Fort William - Pump 1</b>	20	10	10	40	0	40
<b>Stornoway - Pump 1</b>	20	10	10	40	0	40
<b>Wick - Pump 1</b>	20	10	10	40	0	40
<b>Invergordon - Pump 1</b>	20	10	10	40	1	39
Inverness Retained	20	10	10	40	1	39
<b>Nairn - Pump 1</b>	20	10	10	40	1	39
<b>Thurso - Pump 1</b>	20	10	10	40	1	39
<b>Kirkwall - Pump 1</b>	19	10	10	39	1	38
<b>Grantown - Pump 1</b>	18	10	10	38	0	38
<b>Dingwall - Pump 1</b>	18	10	10	38	1	37
<b>Lerwick - Pump 1</b>	18	10	10	38	1	37
Aviemore	17	10	10	37	1	36
Tain	17	10	10	37	1	36
<b>Fort William - Pump 2</b>	16	10	9	35	1	34
Kingussie	16	8	10	34	0	34
Golspie	15	10	10	35	1	34
Portree	15	9	10	34	0	34
<b>Wick - Pump 2</b>	16	10	8	34	1	33
<b>Thurso - Pump 2</b>	16	10	8	34	1	33
<b>Stromness - Pump 1</b>	15	8	10	33	0	33
<b>Kirkwall - Pump 2</b>	15	10	8	33	1	32
Dornoch	14	8	10	32	0	32
Kyle of Lochalsh	14	8	10	32	0	32
Fortrose	14	9	10	33	1	32
<b>Lerwick - Pump 2</b>	14	10	9	33	1	32
<b>Dingwall - Pump 2</b>	13	10	9	32	1	31
Ullapool	13	8	10	31	0	31
<b>Stornoway - Pump 2</b>	17	9	5	31	1	30
<b>Nairn - Pump 2</b>	16	10	5	31	2	29
<b>Kinlochleven - Pump 1</b>	14	6	10	30	1	29
<b>Grantown - Pump 2</b>	15	8	7	30	2	28
Drumnadrochit	14	8	7	29	1	28
Benbecula	12	6	10	28	0	28
Mallaig	10	8	10	28	0	28
Broadford	12	6	10	28	1	27
<b>Invergordon - Pump 2</b>	16	10	2	28	2	26
Beaully	14	4	9	27	1	26
<b>Brae - Pump 1</b>	12	4	10	26	0	26
Strontian	12	4	10	26	0	26
Castlebay	11	6	10	27	1	26
Fort Augustus	11	6	10	27	1	26
Shawbost	11	6	10	27	1	26
Helmsdale	13	5	8	26	1	25
Tarbert	10	5	10	25	0	25
Scalloway	10	5	10	25	0	25
Whalsay	9	6	10	25	0	25
Port of Ness	12	5	7	24	0	24
Lairg	11	5	9	25	1	24
Lochboisdale	10	5	10	25	1	24
Lochinver	9	5	10	24	0	24
Gairloch	9	7	9	25	1	24

## APPENDIX B

Retained Station Name	FSEC Years Per Additional Lives Saved Score	Potential Day Cover Recruits Score	Current Establishment Score	FSEC Years + Potential Day Cover Score + Current Establishment Score	Crew Confidence Score (-VE)	Combined Sustainability Score
Sandwick	11	4	10	25	2	23
Dunvegan	10	4	10	24	1	23
Dunbeath	10	4	10	24	2	22
Lochcarron	9	5	9	23	1	22
<b>Stromness - Pump 2</b>	12	6	5	23	2	21
Staffin	10	4	9	23	2	21
Baltasound	9	4	10	23	2	21
John O'Groats	8	4	10	22	1	21
Bonar Bridge	11	6	4	21	1	20
Sumburgh	8	4	10	22	2	20
Uig	10	4	7	21	2	19
Kinlochbervie	8	4	8	20	1	19
Acharacle	7	4	9	20	1	19
Bettyhill	7	5	9	21	3	18
Stronsay	5	4	9	18	0	18
Aultbea	9	5	7	21	4	17
Leverburgh	8	1	9	18	1	17
Great Bernera	5	3	10	18	1	17
Walls	7	3	10	20	4	16
<b>Kinlochleven - Pump 2</b>	10	4	2	16	1	15
<b>Brae - Pump 2</b>	9	3	5	17	2	15
Bayhead	8	3	7	18	3	15
Hillswick	7	1	10	18	3	15
Westray	7	4	7	18	3	15
Bressay	6	4	5	15	0	15
Longhope	6	2	9	17	2	15
Scalpay	6	3	7	16	1	15
Lochaline	5	4	8	17	2	15
Durness	3	3	10	16	1	15
St Margaret's Hope	9	5	2	16	3	13
Mid Yell	7	3	5	15	2	13
South Lochs	4	3	7	14	1	13
Achiltibuie	3	3	9	15	2	13
Shapinsay	4	3	5	12	0	12
Bixter	4	3	10	17	5	12
Scourie	4	2	8	14	2	12
Eday	3	2	7	12	0	12
Skerries	0	2	10	12	No Calls	12
Lochmaddy	9	2	5	16	5	11
Foyers	7	4	5	16	5	11
Sanday	6	2	6	14	3	11
Fetlar	3	1	7	11	0	11
Applecross	3	3	8	14	3	11
Tongue	3	4	5	12	2	10
Rousay	1	2	7	10	0	10
North Ronaldsay	3	1	5	9	No Calls	9
Valtos	2	3	7	12	3	9
Glenelg	1	3	8	12	3	9
Kilchoan	1	3	5	9	2	7
Papa Westray	4	1	1	6	0	6
Cannich	3	3	5	11	6	5
Raasay	3	2	3	8	4	4

## APPENDIX B

Retained Station Name	FSEC Years Per Additional Lives Saved Score	Potential Day Cover Recruits Score	Current Establishment Score	FSEC Years + Potential Day Cover Score + Current Establishment Score	Crew Confidence Score (-VE)	Combined Sustainability Score
Torridon	0	3	2	5	3	2
Kinlochewe	0	2	3	5	4	1
Fair Isle	5	1	2	8	9	-1
Flotta	3	1	1	5	7	-2
Foula	0	2	1	3	10	-7

**Table 2 Spreadsheet of Combined Sustainability Score – CRU RTC/Wildfire Only**

CRU - RTC/Wildfire Station Name	FSEC Years Per Additional Lives Saved Score	Potential Day Cover Recruits Score	Establishment Score	FSEC Years + Potential Day Cover Score + Current Establishment Score	Crew Confidence Score (-VE)	Combined Sustainability Score
Newtonmore	11	7	10	28	0	28
Carrbridge	12	6	10	28	1	27
Lybster	0	5	7	12	2	10
Spean Bridge	0	4	7	11	2	9
Balintore	0	6	5	11	2	9
Cromarty	0	5	5	10	1	9
Sleat	1	3	3	7	5	2
Ratagan	0	2	2	4	9	-5