

making our communities safe places to live, work and visit



Review of service provision in the areas served by Yorkhill and Knightswood

2010

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I. Executive Summary

Knightswood and Yorkhill Fire Stations both provide emergency cover to the North West of the City of Glasgow. As the demographics and operational response activity has changed over time, there is a requirement to review emergency cover arrangements provided in both these locations. This is in line with our Integrated Risk Management Plan (IRMP) commitment to ensure our service provision adequately reflects the risks to the communities we serve.

Initial fire cover in the Knightswood area is provided by one appliance. Yorkhill is currently served by two, one Rescue Pump and one Aerial Rescue Platform.

Research undertaken for this report suggests the redeployment of the Rescue Pump from Yorkhill to Knightswood would provide a more effective approach to resource allocation within North West Glasgow as required under our IRMP.

It is the intention of the Corporate Management Team of Strathclyde Fire & Rescue to pilot this strategy for a period of six months to allow for a full evaluation of resource allocation to be carried out.

In adopting this approach, SFR can demonstrate its commitment to Best Value and provide evidence based emergency cover in areas where it is required most.

2. Introduction

As part of Strathclyde Fire & Rescue (SFR)'s Integrated Risk Management Plan (IRMP), a review of service provision within the operational area of North West Glasgow has been undertaken to ensure all resources are in the correct location in relation to the current and future risk profile of the area.

This process involves analysis of historical data, scenario modelling, speed and weight of response, community safety activity and cost of service provision. From the early results of this modelling, it was identified that to provide the optimum service delivery further investigation into resource allocation in Knightswood and Yorkhill areas would form the focus of this research

Provision of emergency response

Following the introduction of the Fire (Scotland) Act 2005, the requirement for fire and rescue services to adhere to the historical national standards of fire cover, last revised in 1985, no longer exists. Instead a risk based approach is adopted. This considers that there are many variable factors that affect SFR's ability to save lives in emergency situations, attendance times being just one of those factors.

Under its Integrated Risk Management process, SFR has to endeavour to have the right resources in the right place at the right time to deal with the risks faced by the communities we serve. This risk based model takes account of average attendance times when calculating speed and weight of response. SFR is also conscious of the risk to public safety presented by hazards other than fire, such as road transport, watercourses and many other emergency situations from which rescue may be required.

3. Current service provision

Knightswood



Knightswood Community Fire Station serves the communities of Knightswood, Temple, Anniesland, Jordanhill, Scotstounhill and Drumchapel. The area covers 40 high-rise buildings, with some of up to 23 storeys in height.

The station areas population is approximately 82,000.

Knightswood Fire Station currently has 28 personnel crewing one rescue pump, one Supplementary Equipment Vehicle

Yorkhill



Yorkhill Community Fire Station is located on the north side of the River Clyde with the station area extending along the north bank; it provides emergency cover to the Hayburn, Hillhead, Kelvingrove, Partick and Woodside areas of the city.

It covers 19 residential high-rise buildings and covers a population of approximately 36,000.

Yorkhill Fire Station currently has 56 personnel crewing one rescue pump and one aerial rescue pump.

The above figures for multi storey flat numbers are taken from the current Areas Plan, all SFR multi storey flat numbers are currently under review.

4. Emergency Response

Incidents Attended

Details are shown below of the number of incidents attended in both station areas over a 5-year period. In this period, 2334 more incidents were attended in the Knightswood area with significantly more attendances made to dwelling and refuse fires.

The statistics show that Yorkhill has less activity in the majority of areas, with the main exception being attendance at automatic fire alarms.

Knightswood								
Fiscal Year	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	TOTAL		
FIRE	757	885	815	807	696	3960		
Primary Building	258	254	296	251	239	1298		
Dwelling	172	150	208	170	176	876		
Non Residential	130	118	173	138	148	707		
Other Residential	41	32	35	31	28	167		
Outdoor	1			1		2		
Road Vehicle	26	32	21	12	9	100		
Secondary	60	72	67	69	54	322		
Chimney	499	631	519	555	457	2661		
FALSE ALARM	863	888	798	919	903	4371		
Fire alarm due to Apparatus	420	397	374	517	644	2352		
Good Intent false alarm	335	376	297	338	208	1554		
Malicious False Alarm	108	115	127	64	51	465		
SPECIAL SERVICE	305	351	319	239	218	1432		
Non-RTC	283	325	301	208	189	1306		
RTC	22	26	18	31	29	126		
Knightswood	1925	2124	1932	1965	1817	9763		

Yorkhill								
Fiscal Year	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	TOTAL		
FIRE	288	330	261	272	270	1421		
Primary Building	144	182	136	132	140	734		
Dwelling	111	140	99	113	114	577		
Non Residential	75	85	76	78	73	387		
Other Residential	30	49	20	33	33	165		
Outdoor	6	6	3	2	8	25		
Road Vehicle	7	14	4	6	4	35		
Secondary	26	28	33	13	22	122		
Chimney	143	148	124	140	130	685		
FALSE ALARM	1024	970	1116	999	969	5078		
Fire alarm due to Apparatus	716	727	732	664	742	3581		
Good Intent false alarm	244	203	317	269	181	1214		
Malicious False Alarm	64	40	67	66	46	283		
SPECIAL SERVICE	142	180	193	206	209	930		
Non-RTC	114	159	171	177	179	800		
RTC	28	21	22	29	30	130		
Yorkhill	1454	1480	1570	1477	1448	7429		

Casualty Details

Details are shown below of combined casualty & fatality statistics. It can be seen that Knightswood has a much higher number of dwelling fire casualties compared to Yorkhill, with numbers increasing from a significant drop in 2005-2006 to last year's total.

Knightswood Casualty & Fatalities

Fiscal Year	2004 -2005	2005 -2006	2006 -2007	2007 -2008	2008 -2009	TOTAL
FIRE	43	18	30	36	36	163
Primary	43	18	30	36	36	163
Building	43	18	30	35	36	162
Dwelling	41	18	29	35	36	159
Non Residential	2		1			3
Other transport vehicle				1		1
SPECIAL SERVICE	33	35	22	35	42	167
Non-RTC	12	9	9	6	19	55
RTC	21	26	13	29	23	112
Knightswood	76	53	52	71	78	330

Yorkhill Casualty & Fatalities

Fiscal Year	2004 -2005	2005 -2006	2006 -2007	2007 -2008	2008 -2009	TOTAL
FIRE	19	17	12	16	17	81
Primary	19	17	12	16	17	81
Building	19	16	12	16	17	80
Dwelling	14	16	12	16	15	73
Non Residential	3				2	5
Other Residential	2					2
Outdoor		1				1
SPECIAL SERVICE	58	35	47	47	30	217
Non-RTC	14	9	26	14	14	77
RTC	44	26	21	33	16	140
Yorkhill	77	52	59	63	47	298

Fatalities

Fatalities are similar for both stations

Knightswood Fatalities

Fiscal Year	2004 -2005	2005 -2006	2006 -2007	2007 -2008	2008 -2009	TOTAL
FIRE	1	1	1	1	1	5
Primary	1	1	1	1	1	5
Building	1	1	1	1	1	5
Dwelling	1	1	1	1	1	5
SPECIAL SERVICE	1	3	1	5	2	12
Non-RTC	1	2	1	4	2	8
RTC	1	1	1	1	2	4
Knightswood	2	4	2	6	3	17

Yorkhill Fatalities

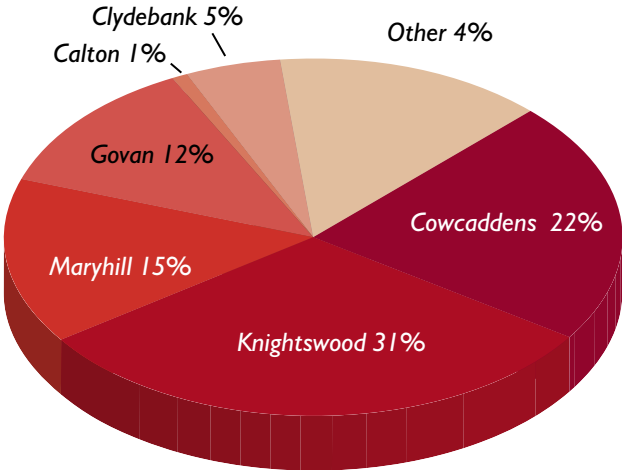
Fiscal Year	2004 -2005	2005 -2006	2006 -2007	2007 -2008	2008 -2009	TOTAL
FIRE	1	0	2	1	0	4
Primary	1	0	2	1	0	4
Building	1	0	2	1	0	4
Dwelling	1	2	2	1	1	4
SPECIAL SERVICE	0	4	8	1	1	14
Non-RTC	3	3	8	1	1	13
RTC	1	1	1	1	1	1
Yorkhill	1	4	10	2	1	18

Mobilisation of Yorkhill appliances outwith Yorkhill's area:

It is recognised that Yorkhill appliances will attend incidents outwith its own area and the table below shows number of incidents attended over the three year period from 1st April 2006- 31st March 2009.

Station Area	Primary Fires	Secondary Fires	Special Services	UFAS	Good intent / malicious	Total
Cowcaddens	115	44	37	1291	482	1969
Knightswood	131	96	43	322	191	783
Maryhill	64	48	20	256	139	527
Govan	49	31	23	130	58	291
Calton	5	3	4	60	20	92
Clydebank	19	22	7	12	11	71
Other	50	37	34	55	27	203
Total	433	281	168	2126	928	3936

This chart shows a breakdown of the location of fires and special services attended outwith Yorkhill's Area

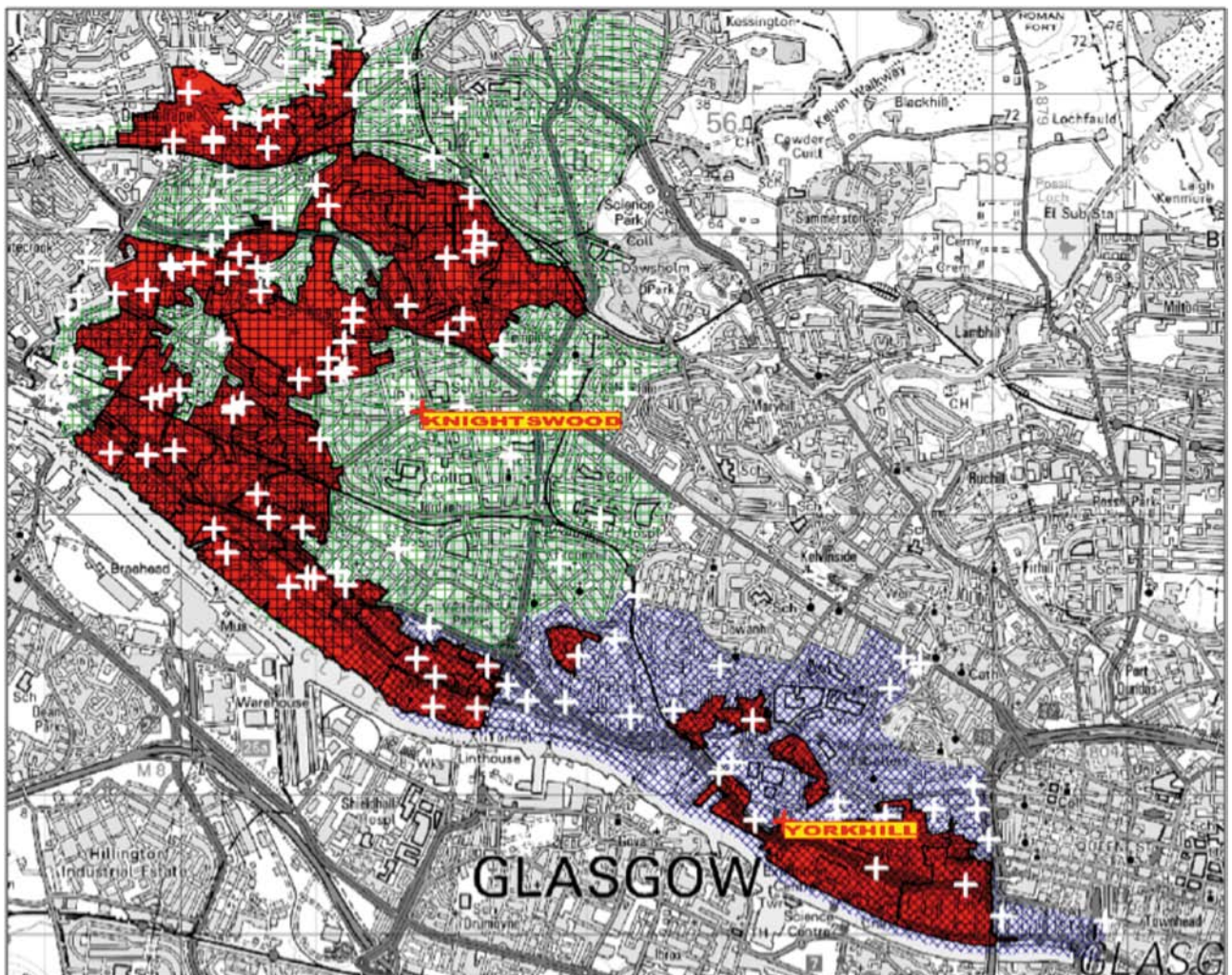


6. Risk Profile

The Fire Service Emergency Cover Toolkit (FSEC) uses information from incidents occurring over a three-year period, along with census data, data from the Scottish Index of Multiple Deprivation and the results of property surveys to identify where fires are likely to occur and assess the level of risk within community output areas.

The FSEC toolkit was used to analyse both Knightswood and Yorkhill risk profile. The results show that of the two areas, Knightswood has 48 areas within the two higher deprivation zones, compared to eight in Yorkhill area. This statistical information is consistent with the activity levels shown in the previous tables. Analysis of Home Fire Safety Visit statistics also show that when comparing both areas, Knightswood has double the number of private dwellings in the high risk category.

The map below details this coverage with areas of high deprivation shown in red and crosses indicating all primary fires within the last 3 years.



7. Options

Maintain existing provision

Yorkhill

The existing service provision does not now reflect the demographics of the area, with a large proportion of incidents attended within its area being false alarms (68%).

Knightswood

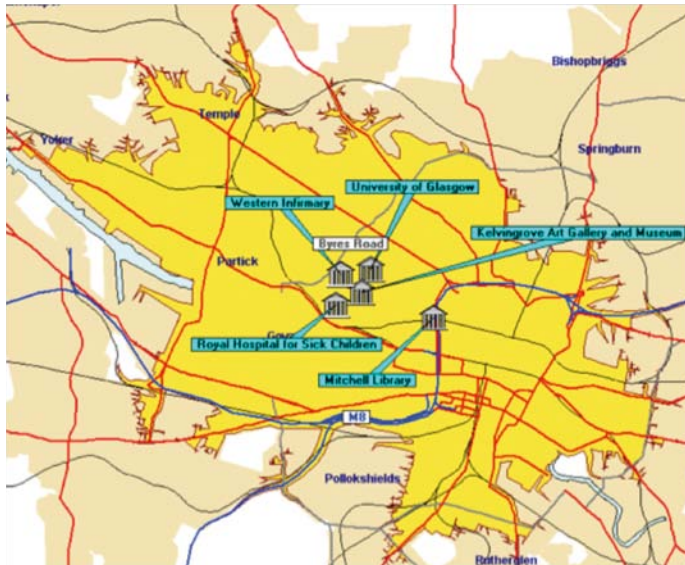
As can be seen from the statistics, the Knightswood area has a much higher proportion of incidents other than automatic fire alarms. Knightswood also attend approximately 100 water related incidents a year which, in many cases, requires a standby appliance to be utilised to cover this area.

Maintaining this allocation of resources is not the preferred option.

Move 2nd appliance from Yorkhill to Knightswood

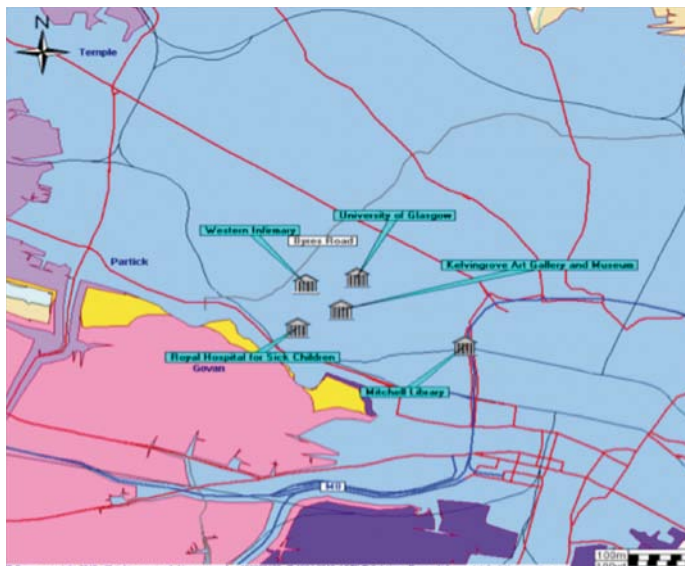
Analysis and modelling has been carried out using the Fire Services Emergency Cover Toolkit (FSEC) and external consultants ORH, into the feasibility of this proposal.

Appliance travel times within Yorkhill's area



Shown in yellow is 5 minutes travel time from Yorkhill Station.

Several key premises are also indicated on that map to provide location context.



In this map Yorkhill's area is overlaid with 5 minutes travel time from surrounding stations. It shows only a small area that cannot be covered in 5 minutes. This area is adjacent to the River Clyde with a limited road network.

It should be noted that the average attendance for the first appliance attending would remain unchanged as nothing in this report affects this provision.

It does however show that an acceptable level of second and third pump response can still be achieved within the Yorkhill area.

FSEC analysis

The predictive model within the FSEC software has been utilised to determine the impact of the implementation of various fire cover strategies.

The FSEC software assesses the risk by means of a modular approach. There are four modules; Dwellings, Special Services, Other Buildings and Major Incidents. The predictive model does not apply to “Major Incidents” and at this time information is still being updated within the other buildings module.

The software can be used to predict fatalities for each of the four modules for the FRS over one year. This prediction takes into account the level of risk and attendance time of the response. The response is defined as one or more operational appliances that are professionally judged as being required for an initial attendance.

Fire cover strategies are explored by predicting fatalities from a ‘base case’ model which is representative of the current appliance deployment. Various changes are made to the appliance deployment as identified in the strategies and then the predicted fatalities for each deployment are noted. Direct comparisons between the existing deployment and that proposed are then made to quantify the predicted impact of such a change.

The existing resource deployment within SFR is shown below as the ‘base case’ for comparison with the proposed strategies.

Across the complete range of FSEC modelling predictions, the proposed relocation of the Rescue Pump from Yorkhill to Knightswood, has a positive impact across SFR as a whole.

FSEC	Fire Fatalities	Special Service Fatalities	Property Damage Cost	SFR Costs
Impact of proposed Rescue Pump move	Reduced	Reduced	Reduced	No Change

ORH Consultancy

ORH consultancy carried out analytical and modelling scenarios to ascertain attendance time impacts within the Glasgow area if Yorkhill's second appliance was relocated to Knightswood.

3 years worth of historical data was used to inform the modelling process with future planned road developments also taken into account.

In 95% of occasions, the average attendance time for two appliance incidents across Glasgow would improve by over 30 seconds with no negative impact on first appliance attendance times.

The table below shows changes in attendance time in seconds for one and two appliance attendances.

Service Delivery Area	1st pump at 1 pump attendance		1st pump at 2 pump attendance		2nd pump at 2 pump attendance		Aggregate Improvement	
	Average	95%	Average	95%	Average	95%	Average	95%
GLASGOW								
Improvement in attendance times (seconds)	1	2	0	1	8	34	4	8

All modelling results provide a favourable outcome with increase in performance throughout Glasgow as a whole.

This, taken together with the incident activity, and the number of high-risk groups within Knightswood's area, makes the relocation of Yorkhill's 2nd appliance to Knightswood the preferred option.

8. Further Considerations

Property

A building suitability survey at Knightswood will require to be carried by SFR Property Department with regards to appliance and personnel accommodation.

This will be carried out prior to commencement of the pilot project.

Personnel

Personnel will be required to transfer to Knightswood, on a temporary basis, in line with existing HR policies.

A skills analysis will be carried out to ensure relevant skills are provided for both Yorkhill's ARP and Knightswood's water rescue resources.

A full study of personnel issues, including travel expenses, pay protection and temporary promotions will be carried out by HR and Area Management prior to commencement of this pilot.

Financial Implications

During the pilot period all financial considerations will be monitored in relation to existing costs. No overall change in costs is expected, though overtime costs currently incurred may be reduced.

Water Rescue Capabilities

The Operations Directorate are currently reviewing SFR's water rescue response on the Clyde due to the unavailability of the Nautical College.

Any redeployment of resources will take current and future water rescue strategies into account.

9. Consultation Strategy

A consultation and communication strategy will be developed for this project and will include:

- ***Affected staff***
- ***Area Management Team***
- ***Representative Bodies***
- ***Fire Board Members***
- ***Local Elected Members***

A series of face to face meeting will be conducted to ensure all stakeholders are aware of the proposal and allow for any comments or concerns to be raised.

The pilot will be monitored by Area in conjunction with the Operations and Strategic Planning Directorates throughout the pilot period to ascertain the effectiveness of this strategy before a final decision is reached.