



West Yorkshire
Fire & Rescue Service

Rawdon and Otley Fire Station Business Case

At a Glance - the Key Points for this Proposal

Proposal:

The construction of a new fire station to replace Rawdon fire station with the removal of 11 fulltime posts from the establishment by way of planned retirements and the closure of Otley fire station with the removal of 12 Retained Duty System posts.

Key Points:

- Otley and Rawdon are both classed as very low risk areas. ¹
- In the 5 year period between 2004/5 and 2009/10 operational demand in these areas reduced by 19% (there has been a reduction of 44% of serious fires). ²
- The Otley fire appliance was unavailable for fire calls for 9% of the time during 2009/10. ³
- The location and full-time staffing at Menston would deliver a large increase in community safety activities such as home fire safety checks.
- The new station would deliver significant improvements to fire appliance response times into
- Otley and Burley-in-Wharfedale and maintain appropriate response times into Rawdon.
- The station would be staffed on the Day Crewing (Close Call) system i.e. wholetime firefighters who are on-call from nearby accommodation at night.

1. Foreword

- 1.1. This proposal forms one of a number of similar initiatives developed by West Yorkshire Fire and Rescue Service (WYFRS) as part of its plans for the future provision of a highly effective and professional Fire and Rescue Service.
- 1.2. Each proposal is based on sound and comprehensive research, using real data from past performance and predictions of future demand and risk. Multiple sources of analysis have been used, allied to professional judgment and experience, to form the basis of robust business cases for change. The proposals are also reflective of the significant improvements in fire and community safety achieved over the past 10 years and represents a return on the investment made by the Authority on behalf of the public of West Yorkshire.
- 1.3. The proposals also incorporate a number of new and innovative approaches to addressing the challenge of maintaining high standards of performance for an emergency response service, within ever tightening financial constraints. The proposals have been developed as a package of inter related initiatives, representing major capital investment in local communities, whilst at the same time delivering annual recurring savings.

2. Introduction

- 2.1. Rawdon fire station was constructed in 1974; it provides the initial emergency response cover for the residential and commercial areas of Rawdon, Yeadon, Guiseley, Hawksworth and Apperley Bridge.
 - The fire station area covers approximately 15.62 square miles.
 - The population is 34,464.
 - There are approximately 1,070 commercial properties including those located at the Leeds/Bradford International Airport site at Yeadon.
- 2.2. The Retained Duty System (RDS) fire station at Otley was built in 1956; it provides the initial emergency response for Otley, Menston, Weston and Askwith.
 - The fire station area covers approximately 7.03 square miles.
 - The population is 19,255.
 - There are approximately 706 commercial properties.
- 2.3. Both fire station areas are classified as very low risk using the WYFRS Risk Matrix methodology. During 2009/10 there were 281 operational incidents within the Rawdon area including 12 dwelling fires and 11 road traffic collisions. During the same period there were 177 operational incidents in the Otley area including 9 dwelling fires and 9 road traffic collisions. ¹
- 2.4. The Rawdon appliance is crewed by 24 whole-time firefighters working shifts to provide 5 firefighters on duty at any one time. The appliance based at Otley is crewed on a variable basis by Retained Duty System firefighters. The operational demand in these areas has reduced by 19% between 2004/5 and 2009/10 (there has been a reduction of 44% of serious fires) yet the provision of operational resources has remained the same over this period of time. ²
- 2.5. The Otley fire appliance was unavailable for fire calls for 9% of the time during 2009/10. ³ When fires occurred during this period a fire appliance from Ilkley, Rawdon or Cookridge would have attended the incident. It is becoming increasingly difficult to maintain the availability of Retained Duty System appliances and it is very likely that the future availability of the Otley appliance will reduce.

3. Community Impact Assessment

- 3.1. The following statement is taken from the 2011-2015 Community Risk Management Strategy and emphasises WYFRS commitment to deliver an efficient, economic and effective range of services; *“Every area within WYFRS will be considered in order to provide a better service at reduced cost”*.
- 3.2. To enable WYFRS to deliver against this commitment a range of analysis and modelling tools have been used to determine the current and predicted levels of risk and activity and the corresponding level of service delivery required, together with their associated costs. These tools have also been used to undertake four separate impact assessments, which seek to:
 - Identify options which are likely to result in the least significant reductions in service delivery standards and/or where there is scope for service delivery improvement.
 - Develop measures that will mitigate any reduction of service delivery and where possible maximise opportunities to achieve improvements.
- 3.3. WYFRS has developed a risk matrix which allocates a separate score/rating for hazards within communities. It is possible to use this risk rating in conjunction with the costs for providing services to each fire station to compare the cost of fire and rescue cover for each area. ⁶
- 3.4. Both stations have high costs compared to the risk in the areas. The efficiencies brought about by this proposal ensure that resource allocation is more aligned with that which can be found in other areas of the West Yorkshire.
- 3.5. The operational demand on resources based at the new station will be comparable to those of equally resourced fire stations. Figure 1 (overleaf) compares the predicted average operational activity levels for the new station with those of two other single fire appliance stations. It indicates that operational activity levels will be comparable to those in Bingley but will be much lower than those present in Idle, particularly during evening hours, providing strong justification for the new duty system. ⁷

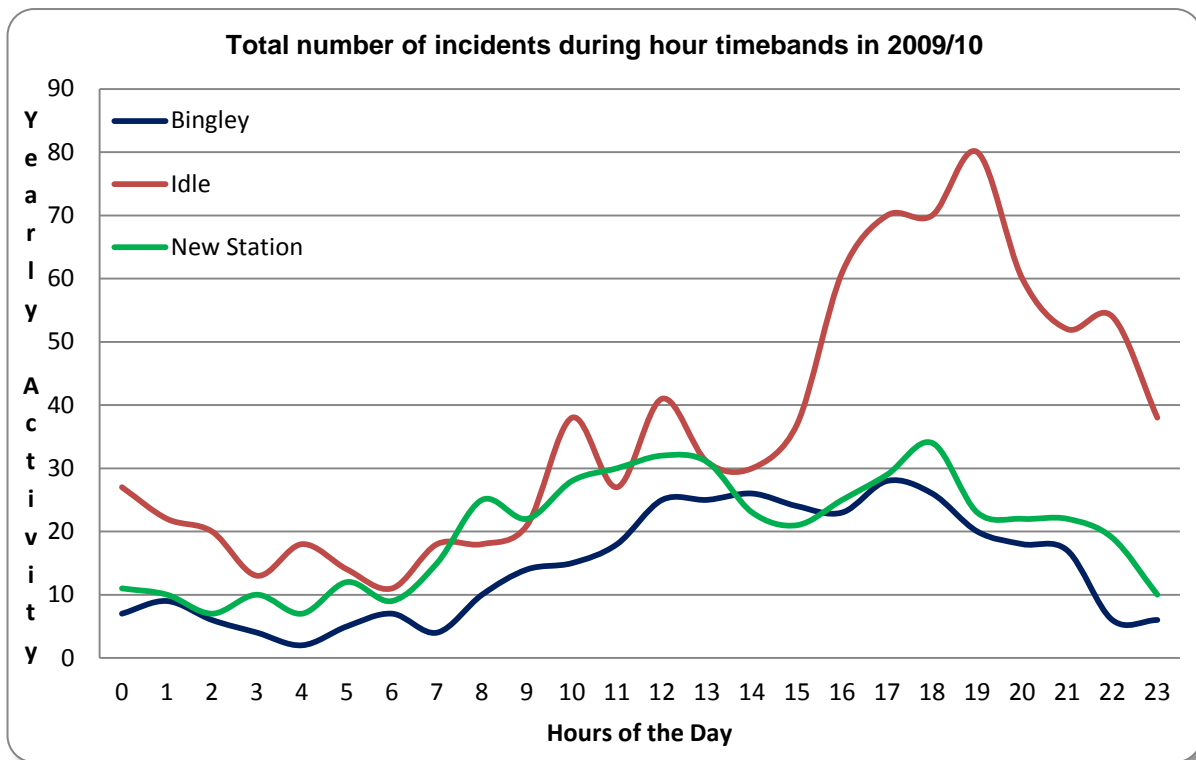


Figure 1: Activity Timeline for New Station

Site Locations

- 3.6. In order to identify the optimum location to build a new fire station, a broad range of issues are considered and a number of toolkits used together with professional judgement and local knowledge. It is possible to identify an appropriate area to build a fire station within which a number of sites would provide the best solutions. This is essential as sites need to be found that are available to be purchased. Other considerations include ensuring that the site has access to road networks, that it is not located within flood plans and that it meets local planning permission requirements.
- 3.7. Analysis is undertaken using the Fire Service Emergency Cover toolkit (FSEC – see paragraph 3.13 below), together with the Phoenix/Active resource modelling toolkit (used to identify the impact of any changes of the Risk Based Planning Assumptions). Detailed risk modelling work has also been completed independently by resource optimisation specialists.
- 3.8. The optimum area for the new fire station is between Menston and Guiseley, a fire station positioned within this general area will have the advantage of being situated approximately 2.7 miles from Rawdon and 2.2 miles from Otley. This location will also provide a quicker response into Ilkley (which is 5.9 miles away) as a second appliance or if the Ilkley fire appliance is unavailable.

Determining where resources should be located

- 3.9. Independent research has assisted WYFRS to determine the potential impact that the implementation of each proposal would have on fire appliance attendance times to operational incidents. A simulation model has been used to identify the performance impact of moving resources to the new fire station. This modelling measures how the location of a new fire station would have performed if it had been in existence and responded to the actual incidents that did occur in this area between 2007/8 and 2009/10. ⁴

3.10. Models have been run for locating a single fire appliance at Rawdon and closing Otley, and then run again for locating a single fire appliance at Otley and closing Rawdon. Both of these options provide a significantly lower level of response performance than would be achieved by locating the fire appliance at the Menston/Guiseley site. The Menston/Guiseley site provides a much better location for a single fire appliance. ⁴

3.11. County Wide Impact - The proposal is not predicted to have any significant county-wide impact upon first or second appliance attendance times against the Risk Based Planning Assumptions for life risk incidents. ⁴

3.12. Local Impact - Figure 2 identifies that:

- The new fire station will improve performance of first fire appliance attendance times for Otley against the Risk Based Planning Assumptions by 7.1% and for Ilkley of 7.2%, with only a very slight reduction in attendance times into Rawdon and other surrounding areas.
- The second appliance attendance time performance against the Risk based planning assumptions is appropriate for the risk. ⁴

1st Appliance Attendance Times

Station Admin. Area	LIFE			PROPERTY			OTHER		
	Base	Model	Impact	Base	Model	Impact	Base	Model	Impact
Cookridge	98.9%	98.6%	-0.3%	99.9%	99.9%	0.1%	99.3%	99.3%	0.0%
Idle	96.5%	93.3%	-3.2%	98.5%	97.1%	-1.5%	99.5%	99.2%	-0.2%
Shipley	93.4%	95.1%	1.6%	97.9%	98.7%	0.9%	98.5%	98.9%	0.3%
Bingley	97.2%	97.3%	0.0%	97.3%	97.3%	0.0%	99.4%	99.4%	0.0%
Ilkley	68.8%	76.0%	7.2%	86.4%	89.8%	3.4%	91.5%	94.7%	3.2%
Otley	89.7%	96.8%	7.1%	97.3%	97.7%	0.4%	99.0%	98.8%	-0.2%
Rawdon	98.0%	97.2%	-0.8%	99.8%	99.9%	0.0%	99.6%	99.6%	0.0%

2nd Appliance Attendance Times

Station Admin. Area	LIFE			PROPERTY			OTHER		
	Base	Model	Impact	Base	Model	Impact	Base	Model	Impact
Cookridge	94.8%	93.9%	-1.0%	94.9%	94.6%	-0.3%	98.5%	98.4%	-0.1%
Idle	97.3%	85.6%	-11.7%	99.8%	98.7%	-1.1%	99.3%	99.2%	-0.1%
Shipley	89.7%	96.8%	7.1%	95.1%	96.4%	1.3%	99.2%	99.3%	0.1%
Bingley	96.9%	97.0%	0.1%	96.3%	96.3%	0.0%	99.3%	99.3%	0.0%
Ilkley	44.7%	65.2%	20.5%	55.7%	66.0%	10.3%	88.7%	93.6%	4.8%
Otley	88.4%	81.1%	-7.3%	95.7%	93.0%	-2.7%	99.9%	99.6%	-0.3%
Rawdon	93.0%	94.3%	1.3%	95.3%	95.9%	0.6%	100.0%	100.0%	0.0%

Figure 2 ⁴

Fire Service Emergency Cover (FSEC) toolkit

3.13. The FSEC software toolkit has been developed by Central Government (Department for Communities and Local Government) for use by Fire and Rescue Authorities in determining appropriate fire and emergency cover. It enables the relationship between dwelling fire casualties and the social demographics of small areas in the county (super output areas) and the location of response resources (fire stations) to be determined. Four demographic benchmarks are used to demonstrate this relationship and to represent predicted risk associated with a range of appliance response times.

3.14. Analysis of FSEC outputs (which is a cost-benefit analysis with regard to property and life risk) predicts that relocating the fire station to the Menston/Guiseley area is likely to result in a very slight/negligible increase in risk; however it would deliver significant efficiencies. The risk will be mitigated by improvements in targeting risk reduction activities.

3.15. The FSEC modelling indicates that the impact of the Rawdon/Otley proposal would be less than other relocation options considered. ⁹

Phoenix/Active toolkit

- 3.16. The Phoenix/Active software tool is another analysis tool used to identify the impact of any changes of the Risk Based Planning Assumptions referred to above. It predicts that locally there is likely to be a very slight impact on performance against Risk Based Planning Assumptions. Across the county this impact is negligible.¹⁰

Predicted Risk Level

- 3.17. If a new fire station is located within the Menston/Guiseley area the fire station area will be classified as low risk. Targeted risk reduction activity will help to reduce the risk even further, with the aim of reducing it to an area of very low risk in the future.¹
- 3.18. Isochrones (travel distance) can be drawn around the proposed location of the new fire station (Section 8). These indicate the distance the appliance would be able to travel within the Risk Based Planning Assumption time of 10 minutes.
- 3.19. Section 8 also illustrates that for this area of West Yorkshire a single fire station in the new location provides first fire appliance coverage which is more proportionate to risk than the current arrangements.

Risk Reduction

- 3.20. During 2010 a comprehensive and integrated framework for service delivery was developed, this is outlined in the Community Risk Management Strategy 2011-15. This was implemented in 2011 and is proving to be a very effective means for targeting resources and reducing risk and is an essential method for reducing negative impact of changes in fire cover. Fundamental to this approach is the introduction of District and Local Area Risk Reduction Teams.
- 3.21. The location of a new fire station in the Menston/Guiseley area will enable a significant increase in community safety activities, including Home Fire Safety Checks to be undertaken in Otley and surrounding areas. The station will also increase community safety activity in the Ilkley area.

High Risk Sites

- 3.22. Leeds Bradford International Airport is located within the Rawdon fire station area and is one of the highest risk sites within West Yorkshire. A number of contingency plans have been drawn up for potential emergencies, which may occur at this site and these include a standard deployment of fire appliances to incidents known as a pre-determined attendance.
- 3.23. In conjunction with Civil Aviation Authority requirements all airports are required to provide their own rescue and firefighting capability and the pre-determined attendance from WYFRS to incidents located at the Airport site is therefore in addition to resources mobilised by the Airport.
- 3.24. Analysis of appliance attendance times has indicated that resources based at Cookridge provide a quicker response to the Airport site than those currently based at Otley whilst those based at Idle and Stanningley provide comparable response times. The mobilisation of other resources will not reduce the pre-determined attendance to incidents located at Leeds Bradford International Airport and a similar response standard will continue to be made by WYFRS fire appliances.

4. Firefighter Safety Impact Assessment

Risk and firefighters gathering risk information about premises.

- 4.1. One of WYFRS's risk indicators is dedicated solely to "Firefighter safety" and has taken cognisance of the following statement within the 2009 WYFRS Firefighter Safety Strategy; *"Effective gathering and analysis of information prior to operational incident attendance is of critical importance"*.
- 4.2. The firefighter safety indicator captures the following information to reflect this statement:
 - The predominance of commercial properties within each fire station area.
 - The availability of risk information held for commercial properties.
 - The predominance of high-rise properties within each fire station area.
- 4.3. The swift arrival of supporting resources can have a beneficial impact upon the safe management of operational incidents and is the rationale for this information being captured by way of the indicator.
- 4.4. Following the 2009/10 evaluation process the firefighter safety risk bandings for Rawdon and Otley have been determined as being very low and low respectively. ¹
- 4.5. The targets for operational risk information for the 2012/13 IRMP Action Plan will be set in a proportionate manner, with areas of higher risk levels receiving a greater number of operational risk information inspections. The proposed location for the fire station and proposed shift pattern will allow firefighters to gain a better understanding of the risk posed by premises in Otley and support the risk inspections carried out in Ilkley.
- 4.6. Whilst half of the commercial properties within Rawdon have received operational risk inspections approximately 95% and 85% of commercial properties in the Otley and Ilkley area have yet to be visited. This imbalance will be addressed over forthcoming years as part of the District Risk Reduction Plans (DRRP's) and specific targets set for fire stations. ¹¹
- 4.7. It is also anticipated that the availability of risk information to firefighters via the Mobile Data Terminals (MDT's) on all fire appliances, will be considerably improved by 2012.

The arrival times of the 2nd fire appliance

- 4.8. The demand for a second appliance in this area is comparable if not lower in comparison to other areas of the county provided with just one fire appliance. ¹²
- 4.9. The Otley fire appliance was unavailable for fire calls for 9% of the time during 2009/10 during these periods supporting appliances were deployed from other surrounding stations. During these periods appliances from Rawdon, Cookridge and Silsden responded to operational incidents. The relocation of a wholetime (continually staffed) fire appliance to Menston/Guiseley will therefore improve fire cover for the area. ³
- 4.10. Increased arrival times for second fire appliances require the first attending crew to manage the initial stages of incidents in isolation. There is potential for fires to become more developed in such cases. The low occurrence of multi-pump incidents and the anticipated improved availability of operational risk information reduce that potential in the Rawdon and Otley area.

- 4.11. Due to the improved availability of operational risk information and the relatively low occurrence of multi-pump incidents within these areas of the county the risk posed to firefighters from extended arrival times for the second appliance is also low.

5. Equality Impact Assessment

- 5.1. The new Public Sector Equality Duty places a requirement on the organisation to ensure where changes affect service delivery to the community or employees, WYFRS assesses those changes for any possible negative impact on equality. In this context equality refers to the protected characteristics in the Equality Act 2010, race, gender, disability, religion and belief, sexual orientation, age, gender-reassignment, maternity and pregnancy and marriage and civil partnerships.
- 5.2. This Equality Impact Assessment has been completed by using information drawn from the Office for National Statistics in regard to the Guiseley/Rawdon and Otley area and has been used to determine whether the removal of a fire appliance from the area will lead to an adverse or disproportionate impact upon any sections of the population.¹³
- 5.3. A 2008 report provided by the Communities and Local Government (CLG) department analysed the correlation between dwelling fires and socio demographics. This report has been used to provide an indication of whether any particular groups within the population are at heightened risk from fire. The report indicates that sick/disabled persons, lone pensioners and Black Caribbean/African groups were associated with a greater incidence of dwelling fires.
- 5.4. The Guiseley and Rawdon population was estimated as being 21,328 during 2001 with a fairly equal gender distribution. The predominant ethnic group within the population is White British (96%) with an extremely low number of other groups. Approximately 77% of the resident population are Christians, with 22% declaring no religious preference and less than 1% being of Muslim faith. In 2001 19% of the population was aged over 60 and 15% of the population had a limiting long-term illness.
- 5.5. The Otley population was estimated as being 2186 during 2001 with a fairly equal gender distribution. The predominant ethnic group within the population is White British (98%) with an extremely low number of other groups. Approximately 78% of the resident population are Christians, with 21% declaring no religious preference and less than 0.2% being of Hindu faith. In 2001 22% of the population was aged over 60 and 13% of the population had a limiting long-term illness.
- 5.6. The findings of the Equality Impact Assessment indicates that this proposal will not lead to any negative changes in the delivery of Prevention, Protection and Response services and consequently there will be no anticipated impact upon any under-represented groups.
- 5.7. In respect of firefighters conditioned to the Day Crewing Close Call duty system the Equality Impact Assessment has identified that there is potential for slight adverse impact upon those with parental responsibilities by reduced off-duty periods and to a lesser extent upon individuals who are of certain religions or faiths by restricting their ability to attend religious establishments. The potential for adverse impact upon WYFRS employees will be minimised by the following being incorporated within the Day Crewing Close Call duty system arrangements:
- The provision of family friendly accommodation for individuals who are providing a response capability whilst away from the workplace.
 - Flexible working arrangements, which facilitate the rostering or rotation of individuals.
- 5.8. These arrangements will reduce the need for firefighters to be away from their families for four consecutive days and will provide greater flexibility for individuals to practice their chosen faith.

6. Organisational Impact Assessment

Efficiencies

- 6.1. This proposal will contribute to the management of the financial position caused by reduced government funding.
- 6.2. Over the past 15 years a number of detailed reviews and studies have concluded that the traditional approach to crewing emergency appliances can be replaced with systems that are more relevant to the levels of risk and demand. Following extensive research, WYFRS has successfully introduced a variation of the traditional Day-Crewing duty system at Normanton fire station called Day Crewing Close Call which provides a comparable response service to that of a four shift duty system with fewer firefighters working more flexibly. This duty system was approved by the WYFRA Personnel Committee on 8 April 2011 following Collective Agreement with the Fire Brigades Union and the Fire Officers Association.
- 6.3. The proposal has considered the location of existing fire stations and appliances together with the reduced operational demand placed upon the resources deployed there and associated costs. The most cost effective solution is to provide a new fire station and to ensure that the fire appliance is crewed and is able to respond to emergencies in less than two minutes from being mobilised. Off duty accommodation will be provided close to the fire station which will enable firefighters to rest during the night but still be able to respond to calls as quickly as they were when they were at the fire station.
- 6.4. This can be achieved by reducing the number of staff by 11 fulltime posts, which will be done by way of planned retirements.
- 6.5. The closure of Otley Fire Station will result in the Retained Duty System firefighters working there being removed from the establishment via redundancies.
- 6.6. The removal of the fulltime posts to coincide with forecasted retirements will achieve significant revenue savings.
- 6.7. Although capital investment will be required to construct a new fire station, part of these costs can be off-set by the sale of the two existing fire station sites.
- 6.8. There will be other associated savings delivered by this proposal, including:
 - Reduction of Personal Protective Equipment.
 - Reduction in consumables and station maintenance costs.
 - The new station will be more efficient with reduced impact on the environment.
- 6.9. The analysis undertaken for Rawdon and Otley has identified that there are overlaps in the existing Risk Based Planning Assumption (RBPA) isochrones (footprints) for these areas. This overlap represents a duplication of resource coverage and therefore more efficient arrangements would address the duplication. ¹⁴

Impact across West Yorkshire and Resilience

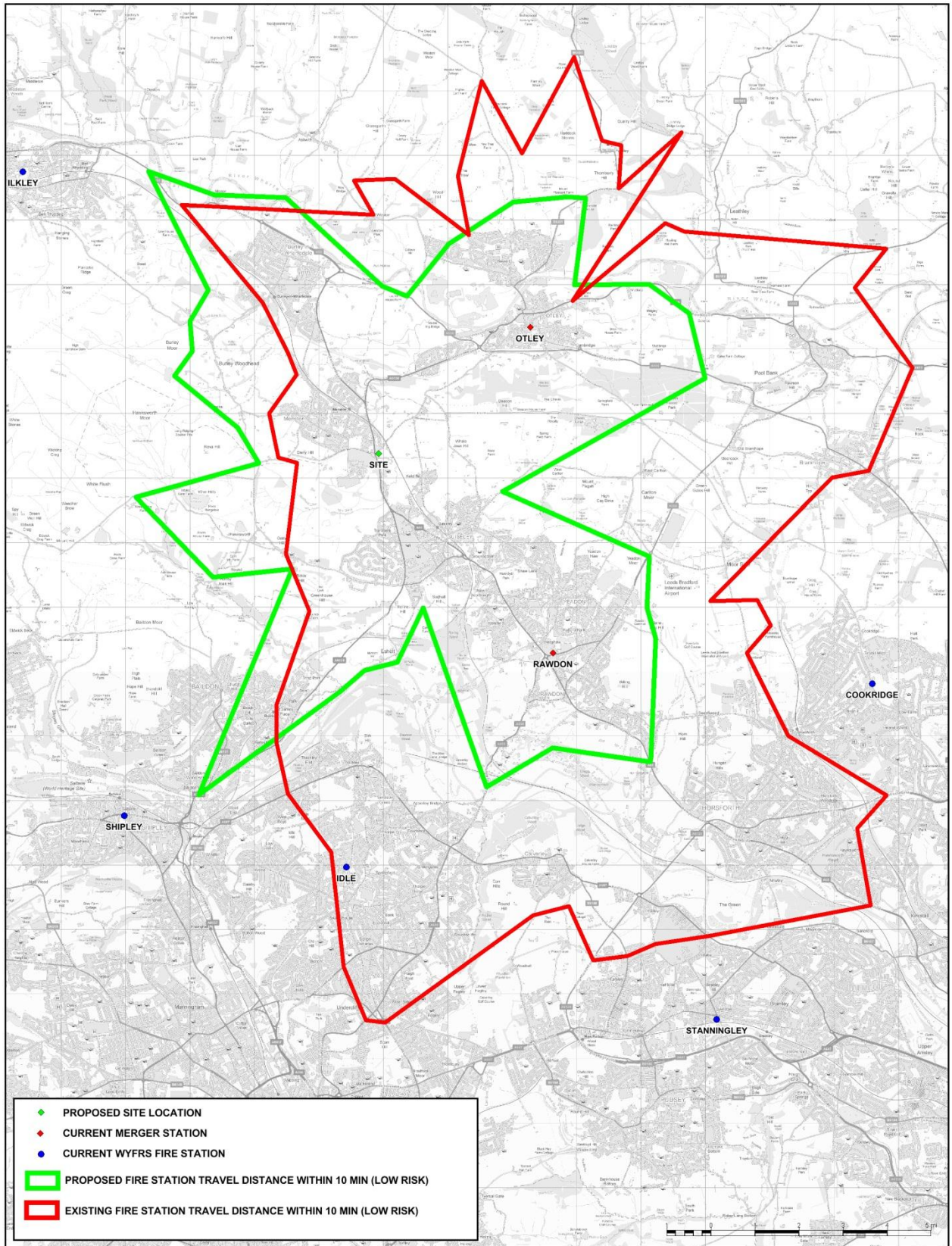
- 6.10. This proposal has no impact on first appliance attendance times against the Risk Based Planning Assumptions for all incidents across all of West Yorkshire, the impact on second fire appliance attendance times would be less than 0.1%.⁴
- 6.11. In order to maintain WYFRS's operational resilience, the fire appliance currently located at Otley will be strategically located at the new fire station. This fire appliance will not be continually staffed but will be activated during periods of anticipated or unexpected/unplanned high levels of operational activity and in response to significant events which could affect emergency response; such as wide area flooding, bonfire night, periods of bad weather or when very large incidents are ongoing.
- 6.12. The use of Resilience Pumps supports WYFRS strategy of staffing an appropriate number of fire appliances for normal levels of activity and having the ability to add further fire appliances when required. This strategy is important in maintaining an excellent fire and rescue service whilst meeting the efficiencies required by the reduction in public service funding.

7. Conclusions

- 7.1. The existing fire stations at Rawdon and Otley are situated in areas of low operational activity and the associated resources are currently being under-utilised. Consolidation of these resources at a new Day Crewing Close Call fire station is considered a cost-effective way of providing fire and rescue services for these areas.
- 7.2. The provision of one fire appliance staffed by Day Crewing Close Call firefighters is deemed to be appropriate resource provision for the Rawdon and Otley area and one which reflects the corresponding risk banding.
- 7.3. Targeted risk reduction initiatives co-ordinated by the Leeds Outer North West Local Area Risk Reduction Team will be undertaken in the Otley and Rawdon areas. The new station location improves WYFRS's ability to carry out community safety activities in Otley and Ilkley.
- 7.4. It is expected that the targets established for gathering safety critical risk information, will mitigate any impact upon the safety of WYFRS firefighters resulting from the removal of a fire appliance from this area.
- 7.5. The introduction of a Resilience Pump will maintain two appliances in the area and support WYFRS resilience arrangements.
- 7.6. The new station location will have a positive impact on response times into Otley and when supporting the Ilkley fire appliance, whilst only having a slightly negative impact on other areas in the locality.
- 7.7. The consolidation of Rawdon and Otley resources at a new fire station will deliver significant efficiency savings whilst maintaining a high level of service delivery and providing employees with greatly improved accommodation facilities.

8. Travel distance

PROPOSED MERGER BETWEEN OTLEY AND RAWDON FIRE STATIONS



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Ordnance Survey 100022450

9. References

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