



Integrated Risk Management Plan

2019

Contents

- 4. Report Rationale, Introduction
- 6. IRMP Review Process
- 7. Review Methodology
- 8. New Technology, Staffing Arrangements, Mobilising
- 9. Current Position in SYFR - Community Safety
- 11. Fig.1 2016 Community Risk Map Model Image
- 12. Fig.2 2018 Community Risk Map Model Image
- 13. Emergency Response and Resilience Arrangements
- 14. Fig.3 Current Service Provision Emergency Response
- 15. Response Activity
- 16. Fig.4 Mobilisations for SYFR Stations
- 17. Incident Types and Geographical Locations, Weight of Response
- 18. Specialist Attributes
- 19. Heavy Rescue Pumps, Water Rescue
- 20. Rope and Working at Height, Animal Rescue
- 21. Bariatric Rescue, Fig.5 Mobilisations per Attribute
- 23. False Alarms, Fig.6 False Alarms Final Incident Type
- 24. Over the Border Risk, National and Community Risk Registers
- 25. Cross Border Response
- 26. Response Times in SYFR
- 27. Scenario Modelling for Duty Systems
- 28. Scenario A
- 29. Scenario B and C
- 32. Comparative Metropolitan Response in West Midland Fire Rescue
- 33. Fig.7 Additional Response Requirements and West Midlands Brigade Response Vehicles
- 34. Fig.8 Small Incident Units
- 35. Grey Book Compliance
- 37. IRMP Options – Option 1
- 38. Option 2
- 39. Fig.9 Example Duty System Working Hours
- 40. Fig.10 Example 8 Week Duty System Cycle
- 41. Conditions of Service
- 44. Fig.11 and Fig.12 Example Duty System Weekday Working and 8 Week Cycle
- 45. Option 3
- 46. Option 4
- 49. Option 5
- 51. Fig.13 Fire & Rescue Service Demonstrating a Ridership of 4
- 53. Option 6
- 54. Fig.14 Station Transition Numbers for Cost Saving Requirements

Appendices:

- A - Incidents Density Map
- B - Injuries Density Map
- C - Fatalities Density Map
- D - Scenario Base Case Table Data
- E - Water Rescue Cluster Map
- F - Rope Rescue Heat Map
- G - Scenario A Base Case Isochrone Map
- H - Scenario A, B, C Isochrone Map
- I – Scenario Analysis
- J - Sub Options Resource and Costing Spreadsheet
- K - Riding 5 Availability Chart

1. Report Rationale

The purpose of this report is to present the Integrated Risk Management Plan (IRMP) data analysis, collated following the Close Proximity Crewing (CPC) Judicial Review 2018. The report sets out the analysis undertaken, the resulting data collated and options for South Yorkshire Fire Rescue (SYFR) Senior Management and Fire Authority to consider, as the service replaces CPC with a duty system that is compliant with the Grey Book (GB) (2009).

2. Introduction

In SYFR we aspire to be the best that we can possibly be, given our particular circumstances.

SYFR is a Metropolitan Fire and Rescue Service covering the county of South Yorkshire serving a geographic area of 600 square miles and a noticeably diverse population of approximately 1.375 million people. Our county reflects a significant variety of risks associated with a large, urban area including; several sports stadia, major shopping centres numerous heritage risks, 3 major motorways and mainline rail networks including Doncaster iPort. Additionally, there are 8 COMAH sites an Advanced Manufacturing Park, national and country Parks, Doncaster-Sheffield Robin Hood airport and 4 Prisons.

However, our Metropolitan status does not tell the whole story. Our area is amongst the largest of the Mets but we have the fewest resources. We have the 5th largest city in the country, though conversely we also have extensive rurality. We are not well served by the existing fire-funding formula, effectively falling through the gap between density and sparsity weightings.

SYFR has a number of statutory duties that it must achieve to maintain its legal compliance. The Fire Services Act (2004), places the primary statutory duty on all fire and rescue authorities to respond to fires and a range of other emergencies. Further legislation includes the Civil Contingencies Act (2004) the Health and Safety at Work Act (1974) and the Police and Crime Act (2017). Additionally, the legal obligations are enacted through the National Framework for Fire and Rescue Services (2018) which includes the provision of an IRMP:

"Each Fire and Rescue Authority must produce an integrated risk management plan that identifies and assesses all foreseeable fire and rescue related risks that could affect its community, including those of a cross-border, multi-authority or national nature. The plan must have regard to the community risk registers produced by Local Resilience Forums and any other local risk analyses as appropriate".

SYFR should also acknowledge and reflect best practice and guidance from other influencing sectors e.g. Fire Brigades Union (FBU) IRMP Guidance.

The IRMP referred to herein as '*the plan*' encapsulates a variety of risk management issues and service delivery activities, as a reflection of the risk profile in the communities of South Yorkshire and our capacity to respond to and where possible, reduce such risks as, SYFR remains committed to providing the best possible service to the public of South Yorkshire with the resources at our disposal.

Further, the plan seeks to identify, prioritise and address (through a risk based approach) demands from all aspects of our work i.e. Prevention, Protection, Response and Resilience.

The plan provides the platform for change, which may be of significant scope, to the profile of our service delivery within South Yorkshire. The analysis of data, reflected against our evaluation of risk, ensures the balance of efficiency and community risk when planning, implementing and delivering services. The risk assessment processes undertaken, with verified data, allows us to assess our priorities and formulate a proportionate response. This informs our final strategy, linked to an all-inclusive review and monitoring process.

Our previous plans have consistently built upon the transformations required to ensure SYFR not only achieved its legal obligations, but effected change to strengthen prevention whilst responding to changes in risk through a climate of austerity. Over the last five years SYFR has made significant efficiency savings however, as a result of the CPC Judicial Review (a loss of £1.4m of savings) and the emerging revised actuarial valuation of the public service pension scheme for Fire Fighters (circa £2.5m increase), the service must now achieve further ongoing savings in the region of £3.9m per annum.

Our Efficiency Plan was accepted by the Government in 2016 and resulted in a three year fixed term grant funding settlement. This gave us greater certainty over the resources available to us, to deliver our service to the public during the three year period of the current plan. However, we still face a cut on our Government grant of £3.2m over the same period and must continue to find ways of providing our service more efficiently. The sustainable funding of the service will be undertaken through the IRMP, linked to our operational and resourcing plans.

The key purpose of this report and its resulting options are based on maximising our operational effectiveness while minimising any impact from spending cuts on the services delivered to the public as a whole, across South Yorkshire.

The potential positive impact of utilising new and emerging technology within the IRMP has been identified and assessed for data and risk management purposes and the continuance of placing risk and severity at the heart of our planning. Ultimately, our response and attendance times should be driven by the risk and severity profile of our communities, in conjunction with prevention activity as a county wide representation.

The options for change ensure our continued commitment to service delivery, through utilising our staff and resources efficiently and effectively with appropriate regard to risk both locally and nationally.

Our previous plan for 2013 -17 (approved by the Fire Authority in 2013) stated we would make changes to our frontline cover as follows:

- *Change the staffing of the second appliance at Doncaster so that it would be available permanently in the day and become 'On Call' at night*
- *Change the staffing of the aerial appliance at Doncaster fire station so that it would be 'On Call'*

This was amended in autumn 2017, as a consequence of greater clarity in financial planning up to 2020, resulting in the second appliance at Central and Doncaster remaining Whole Time and the aerial appliance at Doncaster also remaining Whole Time (dual staffed). This position was stated to remain until further potential changes in our funding allocation, post 2020 are finalised and the (then pending) outcome of the CPC Judicial Review. The latter now being known and therefore a key instigator for reform of the service's duty systems.

The options and considerations presented in this paper will require further integrated planning through project groups and formal reporting structures, to ensure they are achievable against our Emergency Response, Service Delivery Support and Prevention and Protection Departmental Plans. The options take account of the priorities and outcomes of the above plans however, moving forward, additional inclusive cross service change will be necessary to ensure the effective implementation of change in Emergency Response.

3. IRMP Review process

Our objectives for the plan:

- Deliver a legally compliant IRMP within the Medium Term Financial Plan (MTFP)
- Ensure our duty systems are Grey Book compliant (including our current Day Staffing and Shift or '224' duty systems which have collective agreements with the FBU)
- Carry out robust consultation to help the Fire Authority in its decision making
- Ensure our staff and the public feel they have an opportunity to contribute to the decision making process

Our High Level Priorities:

- Focus on flexible arrangements to achieve a response model driven by risk and supported by evidence based data
- Consider our staffing arrangements for appliances and Grey Book compliance
- Identify options for efficiency savings
- Review incidents attended and their risk categorisation
- Review distribution of resources based on risk and demand

Terms of reference for the review:

Review our:

- Current Community Risk Model and its ability to dynamically reflect risk and direct resources in SYFR
- Historical and current incident profile relating to attendance times and weight of response (number of appliances)
- Current specialist attributes and their utilisation
- Resources available for deployment throughout the day and peak/low demand periods
- Our response to identify possible areas for improvement, efficiency and flexibility, alongside any necessary changes in line with local/national risk databases
- New and emerging technology which may change our response in a more efficient and/or safe manner
- Our station locations applicable to the risks in our area

- Neighbouring services IRMPs, risks and resources to identify possible areas for collaboration and shared response
- Future risk mapping, relating to housing, industry (including HS2) and changing societal demographics
- Impact on other areas of SYFR and other services/partner agencies, if changes are made, including our organisational culture and behaviours

The following areas were in scope for the purposes of the report based on the current and projected future risk:

- All resources for emergency response
- Staffing arrangements for all operational resources across the service
- Organisational structure requirements to support proposals

The following areas were out of scope for the purposes of the report:

- Service Delivery Support
- Prevention and Protection

The Officer involved undertook a range of consultation and comparative research of other Metropolitan Fire and Rescue Services across the country. The outcomes and information from that research has been important to assist in the generation of proposed options. The analysis undertaken provides an appraisal of how SYFR currently responds to all incidents and how we target those most vulnerable in our communities. It highlights areas where we need to re-examine our current response in relation to achieving our aspirations, and commitment to the public, in light of our current and future financial position.

The plan forms part of the strategy for performance management of our staff and resources, ensuring we provide an equitable service to communities in South Yorkshire, founded on a transparent and consultative approach. It is significant to note that our response times, as a Metropolitan fire service, vary across the county, due to our finite number of resources which are predominately located within areas of high population density. Therefore, it is difficult to achieve a single response standard across all boroughs, with our current resources and budget.

Due to this, our response standard is dependent on location within South Yorkshire however; the public justifiably anticipate a uniformity of response across all demographics and locations in the county, denoting that we may need to implement additional measures in support of and to achieve our organisational aspirations. The plan represents continuous improvement and is far more than an offer to the public; it is a key performance management instrument and a primary focus of Her Majesty's Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS).

4. Review Methodologies

Data Analysis

The data collation undertaken throughout the review focused on developing the work achieved through the previous IRMP, which provided a baseline from historical data, to highlight changes required to achieve potential future demands on the service.

Additionally, the questions being posed by HMICFRS further focus the data collation in regards to ensuring any final outcomes are wholly evidence based and able to withstand inquiry from internal and external sources. The data gathered drew on as many aspects of our service as possible, to understand our performance, achievements, areas for development (both in scales of economy and efficiency) and how the service without CPC, may continue to provide a comprehensive, proportionate response to our community risk profile.

New Technology

The review considered what advancements are available since the last IRMP, and how those aspects could be incorporated in to the service and the new plan. A key system that has been introduced in to other metropolitan services and the Fire and Rescue Nation Co-ordination Centre (FRSNCC), is the Dynamic Cover Tool. This is a system used to assist decision making in Fire Service Control rooms, which improves incident and risk coverage to ensure our resources are used as efficiently as possible.

Further, this system can also be used for organisational risk management to bring together a number of internal systems and provide a single data source and map for risk management. The system is able to function as a strategic driver for risk reduction and analysis, as it constantly reflects, through visual representation, the risk map of the county and all work/interventions undertaken by the service which in turn, drives strategic and organisational plans.

Staffing Arrangements

The review was predicated on providing data based change, around Grey Book compliant duty systems whilst maintaining an immediate response from all stations. This focused on our existing duty systems provision (achieved through collective agreements) and their ability to achieve the required response model.

The consequence of each aspect must also ensure any changes are achievable through the plan.

Mobilising

A new data modelling tool (Cadcorp) was utilised to provide statistical data detailing the impact of changes on attendance times, both positive and negative, by reviewing every station in the county against a set mobilising criterion e.g. Whole Time, Day Staffing, On Call. The result of applying each model across our current station locations provided a ‘base case’ and uniformed scenario for options to be explored.

Further, this ensured the analysis was applied equitably across the county and any outcomes represent changes to emergency response as a whole and not an isolated area.

Horizon Scanning

The review sought to understand and capture the potential future requirements of our service, from a local perspective and as part of the government's programme for reform in the fire and rescue sector. Locally this included reflection of our:

- People Strategy;
- Retirement profile;
- Financial planning;
- Health and Wellbeing;
- Social responsibilities;
- Functional and department plans.

5. Current Position within SYFR

Community Risk Profile

- Current position
- Considerations

A vast amount of data has been collated and analysed during the planning process, to ensure we are able to direct our risk based resources, whilst remaining within our current and projected budgetary restraints. To determine the risk in our communities, we utilise the [Community Risk Model \(CRM\)](#) which informs our prevention activity by operational crews and staff within the Joint Community Safety Dept (JCSD), assisting us to identify vulnerable people and those most at risk from fire. Another key activity is setting up and monitoring Safe and Well referral partnerships to ensure that partners are referring the most vulnerable occupants across South Yorkshire, through identifying key risk factors and setting up further partnerships where gaps are highlighted.

Fig.1 and fig.2 show the change in risk within South Yorkshire, as modelled by the CRM.

It is essential to note that one incident resulting in injuries (even minor) can turn an area red, having a significant effect on the distribution of high risk areas. Therefore, the changes do not necessarily represent a sudden and sustained transition to high risk however, continuous assessment and analysis of this determines how we direct our resources to reduce the risk in residual and new high risk areas.

SYFR (as stated in the 2017 IRMP) has the following approach to risk management:

1. Identify the risks
2. Consider the key influences
3. Analyse the risk
4. Develop strategies to reduce the risks
5. Develop a plan to deliver on those strategies
6. Consult on our approach
7. Continually review our approach

The CRM identifies people, areas and groups that are statistically high risk from fire and other emergencies, which allows us to prioritise the most vulnerable in society with targeted intervention work and reduce the risk as effectively as possible. The key data for this relates to deprivation, age and lifestyle.

Considerations:

In light of the changing societal risk in our communities and our diminishing financial resources, it may be prudent to revisit the phase 2 intentions of the CRM (2013):

Phase 2 – IRMP 2017 onwards

1. Consider how this model (and the non domestic risk model) can be used to determine organisational and operational response
2. Combine this with our predictive modelling activity, which identifies how changes to fire cover will potentially affect risk of fire & injury

Reviewing the CRM and its potential to accurately reflect societal risk which, in turn can direct operational resources may assist the organisation in assessing and applying professional judgement to strategic planning. Further, the outcome of the strategic direction will allow the service to understand and integrate all departmental plans to ensure the service is able to continue providing an equitable service to the communities of South Yorkshire.

The service deals with anomalies relating to Emergency Response and Prevention and Protection in the following ways:

- Dynamic Cover is constantly facilitated by control, ensuring they move other resources to areas with the highest potential risk when incidents occur in those areas
- Target Address Lists provide crews with key areas to undertake Home Safety Checks for those of high risk and vulnerability, residing in areas furthest away from stations and in areas of high incidences of life risk incidents. This is to ensure we make all possible interventions to reduce and mitigate the risk and severity of a fire or other event, considering the drive time of resources from our stations. Our Prevention principle is to reduce accidental fire deaths and injuries in the first instance
- When fire deaths and/or injuries unfortunately occur, the service conducts a Fire Death and Serious Injury Review Panel to ensure we continuously learn from and recognise methods to improve our service delivery and prevention activity

Fig.1 2016 CRM Model

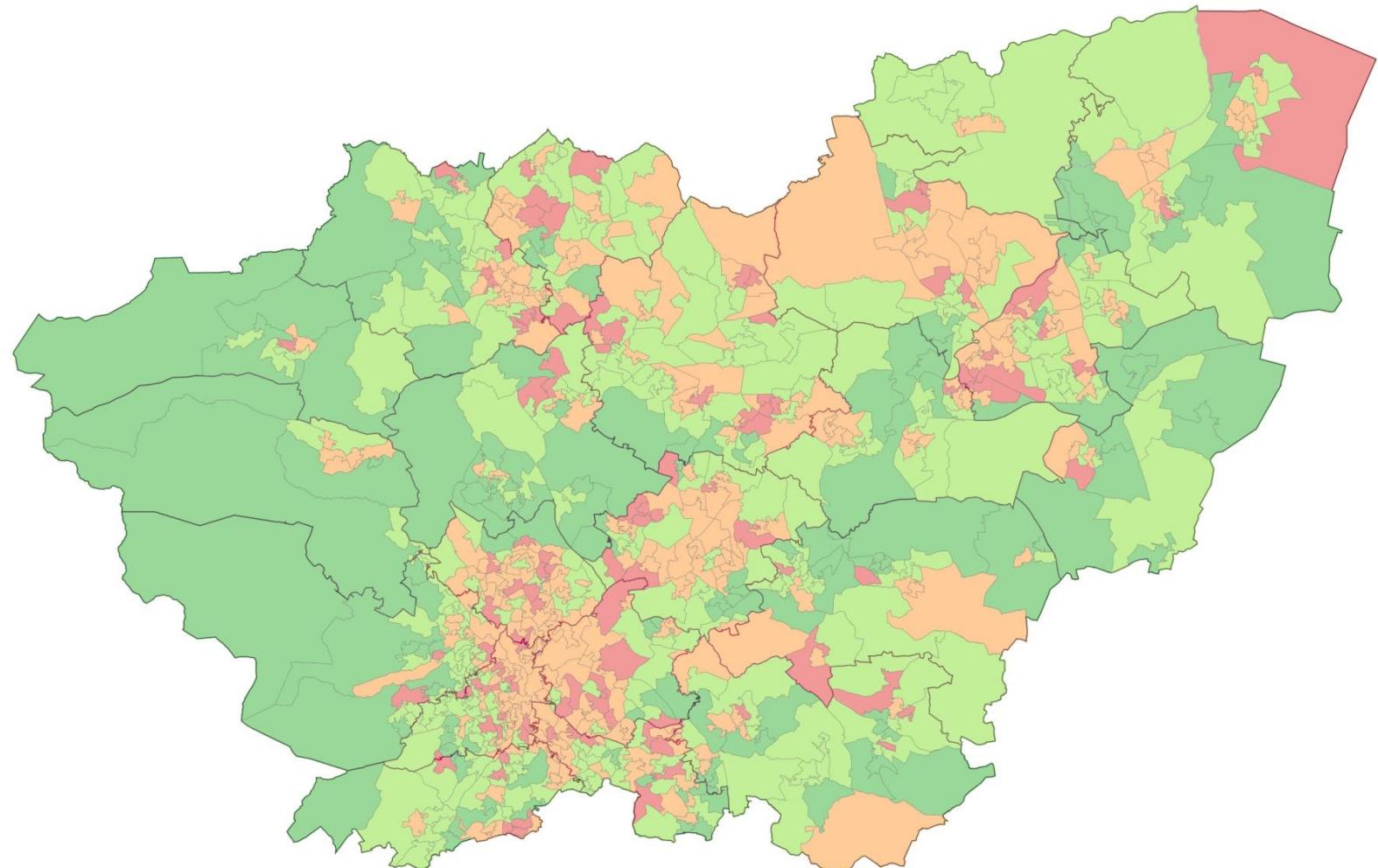
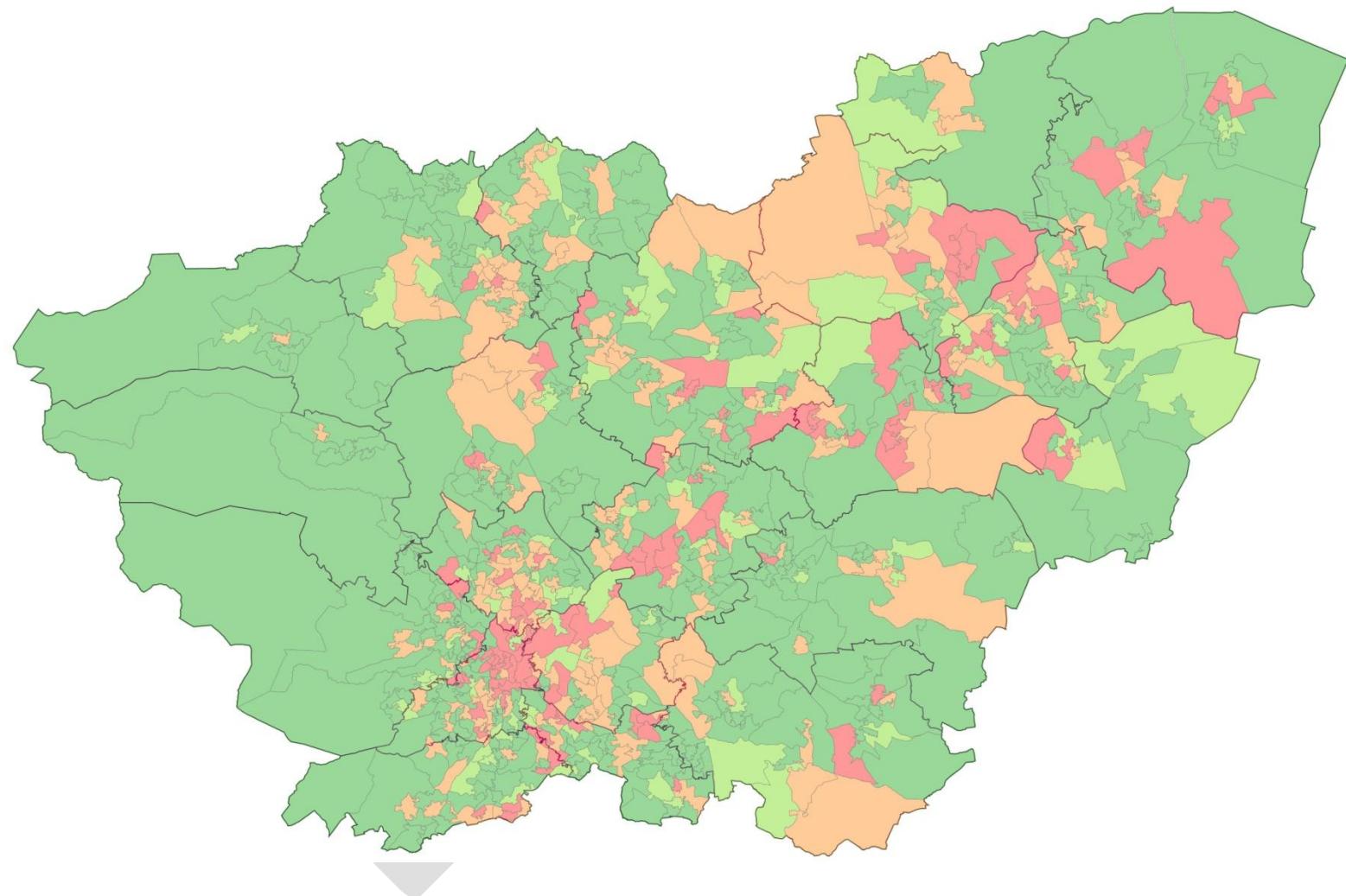


Fig.2 2018 CRM Model



Emergency Response and Resilience Arrangements

- Current position
- Considerations

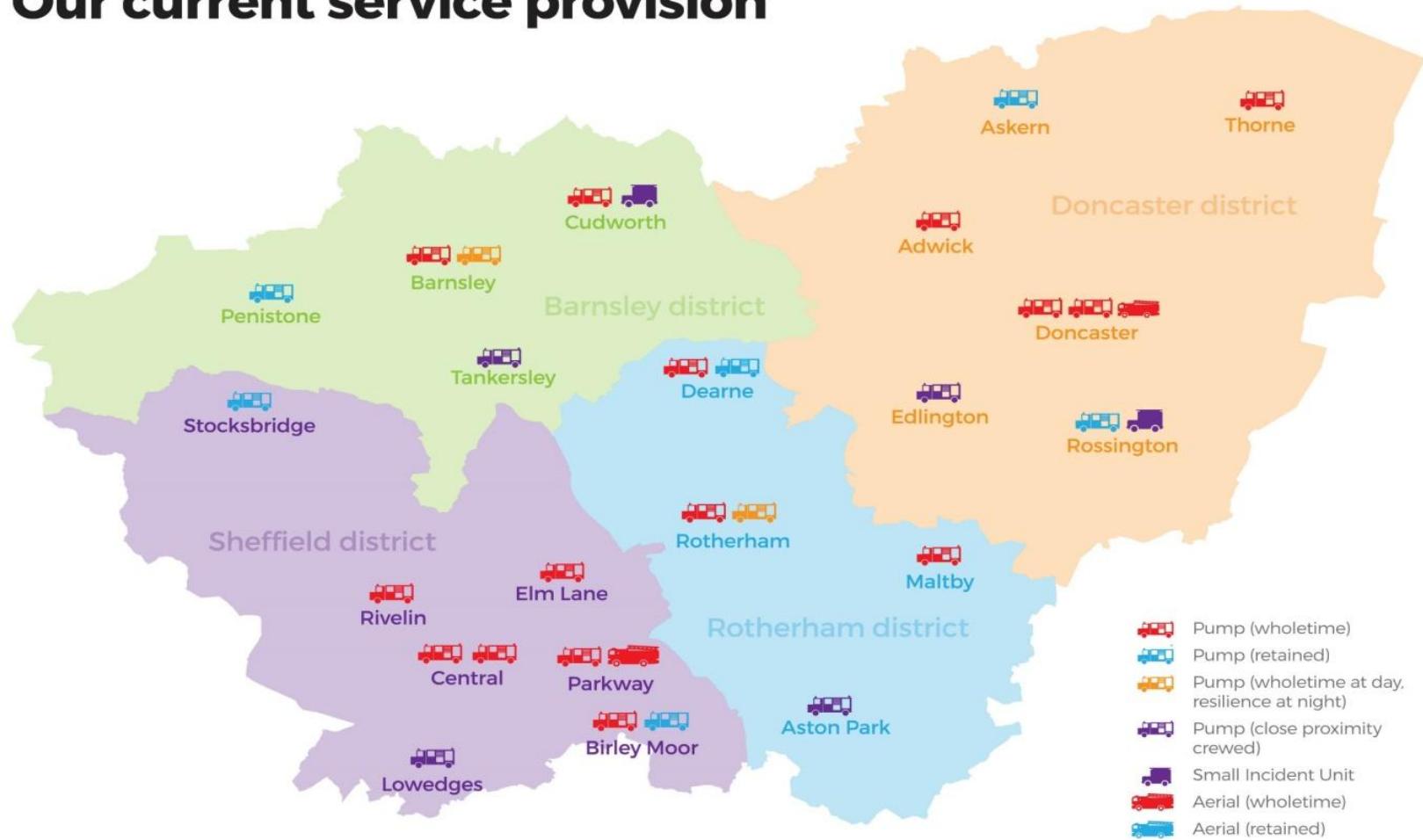
South Yorkshire is a densely populated metropolitan area with 1.374 million residents, covering 1552km². South Yorkshire's population density remains at 885 people per square kilometre, compared with the national average for England of 417 people per square kilometre. Not only is our population size increasing, but like many other areas of the country, it is also ageing, with the proportion of people aged 65 and over projected to rise from 22% in 2012 to 31% in 2037. The proportion of people over 75 years of age is predicted to increase by 101% over the same period.

The risks faced by and located in our communities, change in line with local demographics and indices of deprivation. The risks in South Yorkshire include:

- Major road networks
- Rivers and flood plains
- Rail networks, including the proposed HS2
- Rail tunnels
- Sports stadia and other leisure facilities
- Music and cultural venues
- Major retail centres and outlets
- Temporary risks, such as Tram Lines Festival
- Heritage sites
- COMAH sites
- High density housing
- Waste management sites

Fig.3 below shows the current resources available for response to incidents in South Yorkshire:

Our current service provision



As a metropolitan Fire Service, SYFR has an area comparable to London Fire Brigade and resources comparable to Tyne & Wear, due to the unique size and demographics of our county. However, this places a challenge on the service to provide a metropolitan response, across a significant geographical area.

In the period Jan 2015 – December 2018, SYFR mobilised a resource 82,589 times, reflecting a largely consistent number of mobilisations, per station per year. This is important to note considering SYFRs focus on and drive to retain an immediate response from each Whole Time station ensuring that, whilst our Community Safety work focuses on the most vulnerable and at risk people in our communities, when incidents do occur an immediate and proportionate response is mobilised. This is essential considering our aim to reduce the impact and severity of incidents on people and/or property involved, followed by the wider community as a whole.

Response Activity:

Fig.4 shows the percentage of mobilisations for each station during the period 2015 – 2018. The percentage indicates the level of activity per station, compared with others in South Yorkshire. The activity levels provide a reference when considering changes taking into account the risk based impact on changing resources and/or duty systems at stations with the lowest activity would potentially have the least impact from a demand perspective. However, before any changes are applied, the risk categorisation tables of Appendix D (discussed later) are required to consider the area impact and implications on a broader level than response alone.

Our consistent activity over the allotted period and the resources allocated to that risk/demand are brought in to focus when we consider the future financial landscape of the service. The ability to provide parity for all areas of the county cannot currently be met, and we must acknowledge that people living in rural areas are subsidising the maintenance of a ‘metropolitan’ response in our towns and cities. This provision will continue to be assessed through the CRM to ensure we align resources to risk, within the financial constraints of the MTFP.

Fig.4 Percentage of mobilisations for SYFR Stations

	2015	2016	2017	2018	TOTALS
ADWICK	4.4%	4.0%	4.1%	4.4%	4.2%
ASKERN	0.5%	0.4%	0.9%	1.2%	0.7%
ASTON PARK	3.3%	3.1%	3.1%	3.0%	3.1%
BARNESLEY	6.1%	6.0%	6.0%	6.2%	6.1%
BIRLEY MOOR	2.1%	4.3%	4.1%	4.0%	3.6%
CENTRAL	13.5%	14.1%	13.7%	13.2%	13.6%
CUDWORTH	6.0%	5.7%	6.0%	5.6%	5.8%
DARNALL	2.5%	0.0%	0.0%	0.0%	0.6%
DEARNE	5.8%	5.6%	5.6%	5.6%	5.6%
DONCASTER	11.5%	11.5%	11.7%	10.7%	11.4%
EDLINGTON	5.0%	5.3%	5.3%	5.4%	5.3%
ELM LANE	6.0%	6.3%	6.3%	6.0%	6.2%
LOWEDGES	1.9%	2.3%	2.4%	2.3%	2.2%
MALTBY	3.3%	3.1%	3.4%	3.4%	3.3%
MANSFIELD ROAD	2.7%	0.0%	0.0%	0.0%	0.7%
MOSBOROUGH	0.6%	0.0%	0.0%	0.0%	0.1%
PARKWAY	3.3%	6.2%	6.6%	6.6%	5.7%
PENISTONE	0.2%	0.2%	0.3%	0.6%	0.3%
RIVELIN	4.8%	5.2%	4.9%	5.2%	5.0%
ROSSINGTON	0.2%	0.4%	0.2%	0.5%	0.3%
ROTHERHAM	9.4%	9.9%	8.9%	9.0%	9.3%
STOCKSBIDGE	0.4%	0.5%	0.4%	0.7%	0.5%
TANKERSLEY	3.6%	3.4%	3.3%	3.6%	3.4%
THORNE	2.9%	2.5%	2.8%	2.7%	2.7%
TOTALS	100.0%	100.0%	100.0%	100.0%	100.0%

Incident Types and Geographical Locations

Having determined the high risk areas across the county, the next phase of analysis looked to the number and type of incidents across the four boroughs. Appendix A demonstrates heat mapping to show the location and concentration of life risk incidents whilst Appendix B shows the resulting fire related casualties - fire injuries and Appendix C shows fire related casualties - fire deaths. Please note that heat maps do not provide detail of individual incidents as pin point plotted data (cluster map), they collate and represent incidents as a group. The larger number of incidents in the group is shown as a more intense colour on the map i.e. low number of calls and casualties - yellow, high number of calls and casualties - blue.

It is important to note that our data collation follows an expected consistent theme of heat and cluster maps, with the greatest concentration of incidents located around the four main population centres of Sheffield, Rotherham, Barnsley and Doncaster. Further analysis shows sporadic heat/clusters around outlying areas e.g. Lowedges, Maltby, Dinnington, and Stainforth, which changes for each incident type yet overall, remains consistent within the main CRM maps.

It is prudent to note at this point that analysis has been undertaken (Appendix D) to demonstrate our current response performance vs changes in duty systems, with the resulting product being a risk matrix for population, incident and area impact.

Weight of Response:

Considering the above data and the requirement for public service business models (IRMPs) to reflect risk rather than demand; our assets are positioned for the most part, to respond to centres of high population and risk. Therefore, such areas generally receive greater resourcing in terms of weight and speed of attack, as a consequence of the higher risk levels.

Fig.5 provides cluster data for the number of appliances attending (weight of response), divided in to 4 categories, over a 3 year financial year period 2015 - 2017:

- 1 – 3 pumps 39,535 incidents
- 4 – 6 pumps 790 incidents
- 7 – 9 pumps 33 incidents
- 10 + pumps 22 incidents

From this, the weight of response for an incident involving multiple appliances is predominately focused towards the Sheffield district as the largest risk in terms of people, housing and industry. Once again, this aligns to the CRM and supports our requirement to ensure wherever possible an immediate response, per station is maintained. Nevertheless, this does not exclude the option to make changes to staffing and resource allocation.

The outlaying incident clusters and demographics that reside within them are a matter of focus when considering travel time and severity. Other metropolitan services have adopted a mobilising model that encompasses small incident response vehicles, similar to SYFRs Small Incident Units (SIUs) called Brigade Response Vehicles (BRVs) which cover areas with high incidences of secondary fires, as the small vehicle can be mobilised to none life risk incidents as the primary resource and as a secondary resource to incidents where further personnel are required.

Whilst this reduces the number of personnel that attend primary and secondary fires in the first instance, the reduced staffing model utilises a flexible approach to the meet the risk/demand of the station area. SYFR is able to maintain the availability of resources through a minimum staffing of 4 riders and on such occasions, Control mobilise more appliances to meet our mobilising protocols and our acknowledgement of the FBU Critical Attendance Standard (CAST) model.

SIUs/BRVs enable a rapid and proportionate response; particularly considering other services have risk assessed their mobilising protocol, arriving at a model which is not in line with the extant CAST document. It is important to note that Rossington's SIU has had low figure mobilisations since moving from Birley in 2018 and is therefore, an under used resource in its current location.

Consideration:

The SIU at Rossington presents an opportunity to move the resource to a station area which would benefit from the additional and rapid response to secondary fires, whilst bolstering the number of personnel available for primary fires e.g. Aston and Dearne. A move to Aston would also support the number of personnel required to provide the Swift Water Rescue Technician (SRT) attribute.

Any changes to duty systems or resource location would need to follow the risk matrix at Appendix D for community and service delivery impact, in line with the CRM. Also, any degradation of fire cover and/or staffing must consider, (also in line with Appendix D) our geographical distribution of appliances, against the impact of reducing fire cover in our remote locations vs community risk impact.

Once again, new technology such as the Dynamic Cover Tool would assist Control in ensuring our appliances are continuously located in strategic positions having the greatest impact on risk, when incidents occur.

Specialist Attributes:

Data analysis for mobilisations of specialist attributes across the county was undertaken to ascertain if our resources remain in suitable locations and understand their usage vs cost, when considered against the reasonably foreseeable risk in the county:

The assets reviewed were:

- Heavy Rescue Pumps (Paratech Shoring, Heavy Lifting, Heavy Vehicle Rescue, Animal Rescue, Bariatric Rescue)
- Water Rescue
- Rope (including Working at Height)
- Gaining Entry
- Casualty Lifting and Moving

Heavy Rescue Pumps (HRPs):

The data (Jan 2015 – Feb 2019) established HRP asset mobilisations are largely focused on the road network, mainly due to the ‘Heavy Vehicle Rescue’ (HVR) attribute and its mobilisation to Heavy Goods Vehicle (or similar) incidents on the M1, M18, M180 and A1 road network. The HRP locations remain well positioned for access to main arterial roads and the resultant positive area coverage across the county.

The HVR asset provides equipment that is able to be utilised in all road traffic collision situations, it is not exclusive to HVR and therefore, the asset remains invaluable to the service in meeting its legal obligations through enhanced provision for rescue of persons trapped.

The HRP attributes signify a significant investment in equipment and training for personnel since their inception in 2012 and equipment such as Paratech and Heavy Lifting (which is an extension of Paratech) have only been used 19 times over the 6 year period to date. When the cost of purchase, maintenance and training are amalgamated against their usage, the attributes become extremely expensive to justify, when other attributes are used extensively and could have further investment.

Water Rescue:

Appendix E shows our Water Rescue mobilisations are mainly focused on three areas, representing incidents along the river Rother, Cadeby and Doncaster areas. The Cadeby heat map results from 19 incidents over a two year period (2015 – 17) where a spate of incidents occurred however, of the 19 incidents, only 3 related to a physical rescue with the remaining incidents consisting of false alarms, animal incidents and special service calls with partner agencies (e.g. suicide attempts).

All our operational crews are water awareness trained. In addition to this, we have 6 stations strategically placed around our county that are trained to a higher standard of water response. Four stations are enhanced First Responders, giving them increased capabilities to carry out additional tasks during normal weather conditions. We also have Water Rescue Technicians which were based at 2 stations and now solely Aston Park as part of the CPC transition plan. These crew members are water rescue boat trained.

The teams conform to national recommendations mapped out in the DEFRA Flood Rescue Concept of Operations. It states water awareness teams should consist of four members one being a team leader, the same arrangement applies to our First Responder teams.

The Water Rescue Technician team consists of six members, once again one of these being a team leader.

The locations of our water attributes provide an objective coverage across South Yorkshire, in response to and having cognisance of the water risk throughout the county.

Flooding is a local and national risk, representing significant risk when it occurs and further incidences of flooding are happening at an increasing rate. Our water rescue attribute and training is imperative to ensure we protect all our staff when responding in or near water and also to ensure we are able to meet the demands of the public, for rescue, in times of flood and water risk incidents.

Rope and Working at Height:

All appliances carry working at height equipment in SYFR, to meet our legal requirements under the Safe Working at Height (WaH) Regs (2005). This attribute is adaptable for public and responder rescue, whilst also being utilised when crews are working in any situation that presents a risk due to being at height e.g. working off a ladder.

Rope rescue defines the National Fire Chiefs Council (NFCC) level 3 Team Typing for rescue. This requires specialist training for Rope Operator and Rope Supervisor qualifications. The teams currently fulfil two roles in SYFR; firstly they are mobilised to rescues from height and depth, where a complex level of knowledge and understanding is required, over and above that of the WaH level 1 skill set. Secondly, they fulfil the role of WaH Supervisor, which is required under the NFCC Team Typing once again. This level of supervision is suggested to ensure all procedures and techniques undertaken by crews are to the required standards and have considered the appropriate means for rescue, within the constraints of the WaH packs on all frontline appliances.

Therefore, our rope rescue crews, when mobilised to incidents, may fulfil one or both roles simultaneously. Appendix F shows the rope rescue cluster map which has a very high concentration of mobilisations centered on Hatfield Woodhouse, representing mobilisations in to or near the prisons at this location. The rope rescue team are called to support prison teams for rescue of persons trapped at height internally and externally. The use of this attribute is minor in comparison to other attributes e.g. Bariatric however, the dual use of the rope rescue teams knowledge and understanding cannot be overlooked.

Animal Rescue:

This attribute adapted and enhanced SYFRs provision for dealing with incidents involving animals. The training undertaken by the crews involves both practical and theoretical application of skills that not only provides a rescue provision for animals, but also for members of the public who try to help distressed animals, which often results in them becoming a life risk due to their inexperience of animals and the dangers they present.

This provision meets both our legal and moral obligations to our staff and members of the public and has been well received by crews. It represents part of our 'responding to other emergencies' legislative criterion and for many crews, such incidents will be low frequency, high risk incidents. Having specialist staff to support and lead on this, represents a first-rate investment in risk reduction and education.

Bariatric and Casualty Lifting and Moving:

SYFRs data and that published by partner agencies, states the incidence of bariatric/incapacitated persons requiring safe transport to hospital is increasing. SYFR proactively recognised this and throughout 2018, implemented training with new equipment for all appliances and crews, in addition to the two specialist bariatric rescue appliances (Tankersley & Adwick). This new training facilitates the lifting and moving of any size casualty, which improves the outcome for the individual and crucially, significantly reduces the risk of injury to our crews.

Fig.5 Number of Mobilisations per attribute

Mobilisations per attribute from January 2015 to February 2019	
Paratech	19
Heavy Vehicle Rescue	49
Rope Rescue Incidents	26
Animal Rescue	294
Water Rescue (Swift Water Rescue and Water First Responder	310
Bariatric	208
Working from Heights	101
Casualty Lifting and Moving	233

(NOTE – these statistics were derived from appliance mobilisations, where the attribute may not subsequently have been required).

This chart shows a disparity in the activity of attributes (considering their reasonably foreseeable risk) and the resultant cost vs benefit of providing the equipment, training and maintenance of competence (MOC) for crews with specialist attributes that are utilised on an ad-hoc basis. For example, the cost of providing the rope rescue attribute over a three year period equates to an average of £26,011, excluding overtime which has been used to maintain the attribute availability. The attributes availability averages 50% per annum due to numerous factors, including sickness. Additionally, the crews have an increased training provision of 16 hours MOC per month, removing crews from their vital Community Safety intervention. This is set against the 26 line rescue mobilisations in fig.6, meaning each call cost in the region of £2,551.

Considerations:

A review of all specialist attributes would allow the organisation to ascertain if alternative models can be explored to maintain our specialist provision more efficiently, whilst still meeting the reasonable foreseeable risks within the community. For example, the provision of the Fire Services Act 2004 Section 13 (assistance in discharge of functions) and section 16 (discharge of functions by others) provides arrangements for neighbouring services that can make specialist attributes available.

However, it must be acknowledged that any change to our immediate response through using partner agencies (and Memorandum of Understanding agreements) may lead to delays in mobilising and intervention, which has an increased risk outcome. Further, we can risk assess our position and if required, transition away from NFCC Team Typing compliance to achieve a local solution that makes the attribute provision viable on a local level. At the juncture of SYFR fully transitioning from CPC the Swift Water rescue attribute would gain resilience once again through being located in a suitable location, either as a single entity or multi station approach.

False Alarms

In the period 1st January 2015 to 30th September 2018, SYFR attended 9,584 false alarm incidents with the final incident type as follows in Fig.6:

INITIAL ALARM FINAL INCIDENT TYPE	AFA	FIRE ALARM AT FRS PROPERTY	GAS ALARM	SMOKE ALARM	TOTALS
Advice Only				2	2
Assist other agencies			1	5	6
Effecting entry/exit	1			11	12
Evacuation (no fire)			3		3
False Alarm due to Apparatus	5369	3	11	1167	6550
False Alarm Good Intent	1492		19	770	2281
False Alarm Malicious	249			41	290
Flooding	8			2	10
Hazardous Materials incident	2		1		3
Lift Release	2				2
Making Safe (not RTC)	1		4		5
Medical Incident – Co-responder	1			1	2
Medical Incident - First responder	1		2	4	7
No action (not false alarm)	1			1	2
Other rescue/release of persons	2			2	4
Primary Fire	222		1	162	385
Secondary Fire	11			1	12
Spills and leaks (not RTC)	1		1	4	6
Suicide/attempts	1				1
(blank)				1	1
TOTALS	7364	3	43	2174	9584

False alarms have a major impact upon our service as they divert essential resources rendering them unavailable with the possibility of delayed attendance to genuine calls; creating avoidable risks to Firefighters and members of the public when appliances respond under emergency conditions. Further, false alarms represent a large percentage of our total call volume that diverts crews away from Community Safety and Fire fighter safety activities, notwithstanding the financial impact due to potential overtime at calls and increased vehicle fleet usage.

Having cognisance of the reducing number of operational incidents and the potential increased risk to fire fighters as a result of low exposure to experiential learning, SYFRs priority remains to minimise risk to the safety of the public and to our own members of staff. However, to reflect the requirement for MOC, the training requirement for staff must increase to accommodate the drop in operational exposure. Reducing the time spent at none life risk incidents, is a potential opportunity to develop this.

The response to actuations of automatic fire alarms and the possibility of fire has to be balanced against the legal duties of the Fire and Rescue Authority, from the Health & Safety at Work Act and the Management of Health and Safety at Work Regulations.

Considerations:

A review of our policy and mobilising protocol to false alarms may present scope for efficiency and economy savings through:

- Reducing the number of appliances attending none sleeping risk alarms – a single appliance could be mobilised to investigate the cause of the alarm and request mobilisation of further resources as required. Over the stated period, from the 9,584 calls, crews only provided an intervention at 753 incidents
- Reduce the scope of incident types that appliances are mobilised to on receipt of the first call, without appropriate call challenge and/or investigation and confirmation of the incident type by the caller
- Do not attend any alarm incidents without confirmation of an incident by the caller

Over the Border Risk

SYFR utilises the Resilience Direct Platform for sharing over the border risk information. The NFCC Resilience Direct working group have agreed that this platform should be utilised by all FRSs. Where we have identified High Risk premises, which have a potential to attract over the border assistance, we make Site Specific Risk Information (SSRI) available to those surrounding services which may be required to assist at the time of an incident. This is a reciprocal arrangement with our surrounding services.

The work on sharing of risk information is still very much in its infancy, but we already have risks on Resilience Direct shared with a number of other services and partner agencies. This informs our decision making and mobilising protocols for over the border risks and where required, joint training is undertaken to ensure our staff are able to respond safely when required.

National and Community Risk Registers

The Government produces a National Risk Register of Civil Emergencies to provide an assessment of the likelihood and potential impact of a range of different civil emergency risks (including naturally and accidentally occurring hazards and malicious threats) that may directly affect the UK. The South Yorkshire Local Resilience Forum (SYLRF) Risk Management and Planning Group use this and other guidance, plus local knowledge, to produce the Community Risk Register in order to inform emergency planning arrangements.

The Community Risk Register identifies potential hazards – the circumstances, situations or events with the potential to lead to civil emergencies in South Yorkshire. The National Risk Register and the SYLRF Community Risk Register have the same top 5 risks:

- Pandemic Influenza – medium/high likelihood of occurring within the next five years. Catastrophic impact
- Cold and Snow – medium/high likelihood of occurring within the next five years. Significant impact
- Widespread Electricity Failure – medium likelihood of occurring within the next five years. Significant impact
- River Flooding - medium likelihood of occurring within the next five years. Significant impact
- Coastal Flooding - medium likelihood of occurring within the next five years. Significant impact

The Community Risk Register is used as the basis for all the work within the Local Resilience Forum, making risk the foundation of resilience efforts in the county. The plan acknowledges and continues to make provision for response to the above risks where applicable e.g. High Volume Pumps and water rescue crews.

Cross Border Response

Discussion has been undertaken with neighbouring services to identify any impact that changes in our IRMP may have on their resources (in respect of Fire Services Act 2004 Section 13 and 16 arrangements) and any areas for increased or improved interoperability that would ensure and maintain the effective and efficient cross border response for all services.

For example, a joint direction has been instigated with Humberside Fire and Rescue Service focusing on shared resources from our current locations in each respective service, as opposed to a station merger proposal for a fully co-located resource at this time. SYFR has mapped the impact of Grey Book duty systems on all stations in the county, in consideration of bordering stations and the risk vs demand profile in such areas. Plausible options exist to transition away from our current shift systems and replace them with more cost effective models, though still within the constraints of Grey Book compliance and maintenance of fire cover.

Both services Data Teams are mapping the impact of changes across both counties to identify opportunities and locations in both services where fire cover may be improved through shared resources and bolster resilience in the surrounding areas. The outcome of this will feed in to management and future IRMP decisions.

High Speed 2:

The proposed route for HS2 has a major impact on South Yorkshire's housing, industry and road infrastructure. Consultation is underway to ascertain the full impact on SYFR and its communities including:

- New construction sites and storage facilities
- Large numbers of workers who will be accommodated in temporary housing within the construction compounds
- Road closures, both temporary and permanent
- New infrastructure e.g. rail line, tunnels, viaducts and electricity stations
- Over the border risks that SYFR may be requested to attend
- Requirement for new/enhanced training to meet changing risks to public and responder

The final risks for the build and infrastructure will not be known until (if) the Hybrid Bill achieves Royal Ascension and the concluding route is published. When released, SYFR will be in a position to respond to the risks, as a result of the consultation process and consideration thought the new plan.

Response Times in SYFR

The latest Home Office statistics (<https://www.gov.uk/government/statistical-data-sets/fire-statistics-data-tables#response-times>) have been used as the performance indicator for our average response time, over a three year period (2015 – 2018 financial years) for dwelling fires. This data allows comparison with other services and informs our attendance time reporting which is monitored internally.

Our average time to dwelling fires equates to a total of seven minutes fifty three seconds (7m53s), stated as a 'response time' which is broken down in to:

- Call handling by Control - time from point of Control taking a call to mobilising the appliance(s) – 1m28s
- Mobilising - time from point of Control mobilising to the crew booking mobile to the incident – 1m7s
- Drive time – time from booking mobile to booking in attendance at the incident – 5m18s

The Home Office statistics demonstrate that we are comparable with West Yorkshire (7m54) when responding to dwelling fire incidents against the UK Metropolitan average of 6m37s. The increased time for our attendance is, as previously discussed, dependant on the geographical area covered and the number of resources at the services disposal. Metropolitan services such as Tyne and Wear and West Midlands have a larger amount of resources covering a considerably smaller area.

As discussed in 'response activity' our current risk based approach and resources available cannot provide an equal level of response to every dwelling across the county. However, this data does reinforce SYFRs position of maintaining an immediate response at each station to ensure we achieve the fastest response available, to the greatest risk area possible.

Considerations:

Our response times may be improved upon and further analysis to understand the reasoning behind our faster and slower response periods will enable SYFR to improve its service to the public, by ensuring we reduce severity by attending in a faster with the available resources.

Having cognisance of the possibility that fire cover and or personnel numbers may be affected by the requirement to meet financial constraints; this places a duty upon SYFR to consider the impact of changes on response times and severity in line with the CRM. An example of this rests in the spate period through summer 2018 where Control were faster in their handling of calls and mobilising appliances in comparison to periods of 'normal' service provision. Using Department, District and Station plans, performance indicators can be applied to ascertain station statistics and reasons for any increase/decrease in response time, providing a direction of travel for performance.

Such measures would also impact on other areas of the service, i.e. Community Safety who, in conjunction with Emergency Response are inextricably linked in reducing risk through proactive and when required, reactive measures. Further, Property Services in consideration of 'making every second count' are able to contribute through considered building design, which initiates a faster response by having crews rest and accommodation areas nearer to appliance rooms, reducing physical travel time.

6. Scenario Modelling for Duty Systems:

To understand the operational impact of transitioning from CPC to Grey Book compliance, each Grey Book duty system was mapped against each Whole Time station in SYFR. This provided parity in results across the county and enabled a risk categorisation for each station on a high to low basis to be formed.

Further, the data provides 'isochrones' (footprint mapping) which represents the area an appliance can cover, in a specific time period i.e. 5m18s shown on a map as a shaded area. This footprint changes per station area, as it is based on the Integrated Transport Network (ITN) which allocates each type of road (Motorway, A, B etc) a specific speed and the modeller calculates the area covered within the available drive time and allotted speed. Therefore, Stations with access to a motorway or A road network may have a larger isochrone than a station surrounded by B roads.

Appendix G demonstrates the isochrones for SYFRs stations based on the 5m18s drive time and the percentage of area covered.

The isochrones allows us to count:

- The total area covered in square kilometres
- The number of households in the area
- The total number of all incident types attended in the area
- The total number of life risk (category A & B) incidents in the area

The data above creates a 'base case' scenario to measure the resulting theoretical impact on fire cover and community risk to any proposed changes.

The scenarios tested have been used to demonstrate a gap analysis for our current fire cover, against another metropolitan fire services and provide a risk analysis of the impact in any delay added to a response time. Two methods were developed to illustrate the potential impact of any shift/resource changes within SYFR:

- Isochrones defining a theoretical area that an appliance could cover using predetermined road network speeds
- Workload Modeller (Cadcorp) to demonstrate the outcomes of various resourcing scenarios, e.g. closing, relocating and/or merging stations and/or changing shift patterns. This tool is designed specifically for fire and rescue services

The Scenarios modelled:

- Risk based modeling impact for Grey Book compliance on stations/community
- Data to model: January 2015 – December 2017 (due to time constraints)
- Target Response Time: 7m53 sec for Life Risk categories A & B

For the purposes of data collation the definition of duty systems reflects ‘a pump available in the day’ encompassing both Day Staffing and Day Crewing as they operate on the same basis and would be available on the same/similar times.

The scenarios modeled:

- Scenario A: Base case model - 17 Whole Time stations with 24 hour immediate response, reflecting the current Shift and CPC duty systems (Appendix D)
- Scenario B - Day Staffing/Crewing with On Call at night (1min delay)
- Scenario C - Day Staffing/ Crewing with On Call at night (3min delay)
- Scenario D - Day Staffing/ Crewing with On Call at night (using average On Call delay)
- Scenario E - Close all CPC Stations with no further response being provided from that station location.

Scenarios using the Workload Modeller are retained within the Data Team.

Scenarios A to C using isochrone mapping, are detailed in Appendix H with comparisons of the impact for B and C being measured against A, as the base case scenario. This has been formatted in to a risk table that demonstrates the potential impact on the community of each station area relating to:

- SqKm coverage reduction within the reduced travel time (due to the time delay in scenarios B & C)
- The number of households affected in that station area and county wide (due to the time delay in scenarios B & C)
- The reduced number of incidents that SYFR could theoretically attend within the newly defined isochrone footprint (due to the time delay in scenarios B & C)
- The reduced number of life risk only (category A & B) incidents that SYFR could theoretically attend within the newly defined isochrone footprint (from historical data due to the time delay in scenarios B & C)

The risk modelling chart reflects the risk, post scenario comparison, against the base case. This chart details the most and least affected station areas. An outcome of the risk impact and resulting location choice for any duty system must be overlaid with the current level of Community Safety intervention, as in theory, if we reduce the attendance time footprint in a given area, we must offset this with an increase in Community Safety to counter any risk increase.

Scenario B

The risk matrix for scenario B (1 minute delay on immediate response), when using the data filter for life risk, states the following stations are least affected by the change:

4. Barnsley – 1.8%
3. Adwick – 1.6%
2. Cudworth – 1.4%
1. Thorne – 0.9%

The change represents the theoretical decrease in the number of incidents SYFR would be able to attend, within the response time allocated - as a percentage. When this change is compared against the base case scenario, we are able to begin the process of identifying which stations may provide an option for duty system changes as previously discussed, without isolating the change to CPC stations alone. Further, whilst we aim to place resources to reflect risk not demand, changes in duty systems that also achieve financial savings can be compared against the risk profile and activity level of the station as per fig.4.

For example, if the risk profile and demand period for a station is between 10am and 10pm, it is viable (and is extant in other services) to introduce Grey Book compliant duty systems that are available across this time as positive hours and replace the system with On Call, outside of these hours. Such changes maintain legal compliance and duty to the community they serve, whilst realising savings against SYFRs MTFP.

Further, these 4 stations remain the least affected across 3 of the data categories and only change when considered against the ‘total area’ covered in the 1 minute reduced drive time. However, two new stations enter the ranks here – Birley and Lowedges, as a result of the large area they are able to cover through their immediate access to an A road network consequently, a 1 minute delay reduces their available drive time and area coverage outcome.

Scenario C

This data set changed the delay from 1 minute to 3 minutes to provide the service with a larger isochrone considering the need to possibly purchase housing for a Day Crewed duty system and the availability of such within the stated footprint. The 3 minute response represents a midpoint comparison between the average On Call response time and 1 minute response delay of scenario B.

The following results represent the changes using the life risk filter:

4. Doncaster – 5.1%
3. Maltby – 4.4 %
2. Barnsley – 4.2%
1. Thorne – 1.5%

Thorne station constantly achieves low impact ratings against the outcome criteria, due to (as per the CRM) the low risk and demand level in the station area. The ranks contain the same stations, albeit in different positions when applying the ‘all incidents’ filter. Another station enters the ranks for ‘number of households’ – Adwick, due to the dense housing around the station locality. Lowedges and Birley are brought to the fore once again when filtered against ‘area’ for reasons discussed in scenario B.

Doncaster represents an anomaly considering they have the second highest activity levels in the service (11.4%) however, the activity does not solely represent life risk incidents and a change to this station, or other high activity station impact can be offset by alternative resourcing options (e.g. SIUs), to remove the activity of secondary fires and ensure the principal resource is available for primary incidents.

The data for scenarios D and E is presented in Appendix I.

Appendix I provides an in-depth analysis of our scenario modelling and presents an immense amount of data to model what impact scenarios B – D would have on the service as a whole and is therefore, a primary source of data to triangulate changes on each station and district when considering primary, secondary and tertiary attendance of resources, life risk and impact on the CRM from a risk/severity perspective.

The appendix details the base case modelled from our historic demand and location of incidents, theoretical use of resources based on current stations, current shift patterns and selected appliances (Pump, ALP, SIU).

Scenarios modelled from the historic demand and location of incidents, theoretical use of resources based on X stations, X Shift patterns and X Appliances:

- Scenario B
 - Day shifts = same as base case
 - Night Shifts = all Whole Time with 1min delay on night
- Scenario C
 - Day shifts = same as base case
 - Night Shifts = all Whole Time with 3min delay on night
- Scenario D
 - Day shifts = same as base case
 - Night Shifts = all Whole Time with On Call average delay of 5m35s and average availability of 48%

- Scenario E
Day shifts = base case day shifts excluding Lowedges/Tankersley/Aston Park/Edlington
Night Shifts = base case night shifts excluding Lowedges/Tankersley/Aston Park/Edlington

This data provides the service with the preparatory information for any changes which may be necessary to achieve the cost savings required. This includes a breakdown of:

- The response standard for each individual station – performance management
- The number of times the appliance has been the first and second call to an incident and the theoretical increase in activity with changes to neighbouring stations and the resultant number of times they have achieved the response standard of 7m53s
- The number of times the appliance has been the first and second call to an incident and the theoretical increase in activity with changes to neighbouring stations and the resultant number of times they have achieved the response standard of 7m53s with a breakdown of all life risk categories
- Ranking tables showing the position, positive or negative (as a percentage) change to activity, response standard achievement and average response standard

This detailed analysis allows us to understand where the additional calls would be directed if, for example scenario B was enacted and we placed a 1 minute delay on Thorne, the service would still be required to respond. The knock on effect of diverting calls to alternative locations e.g. Doncaster (as it may now be the fastest to respond due to the delay in Thorne's mobilising), also impacts on Doncaster's demand and risk profile, if the resource(s) is available less due to the increased workload from elsewhere.

This data will inform options/decisions when used in conjunction with Fig.14 discussed later in the document.

Considerations:

Whilst the data places the incidents etc. into statistical outcomes presented as a risk matrix, any changes that reduce any of the categories in the scenarios, must acknowledge that these are potential incidents that SYFR could not, in theory, achieve an attendance to within the stated time required. Any increase in life risk impact, must have a proportionate and immediate intervention (possibly ongoing) to address this and continue to mitigate the impact of any changes.

The geographical spread of stations across the county must be considered when changing the immediate response of resources, as the weight of attendance in areas such as Doncaster will rely upon the second and third appliances arriving in a timely manner to provide the resources necessary, as per SYFRs mobilising protocols and risk assessments for Safe Systems of Work.

Any changes to our staffing profile would need to have degradation system in line with the resources available in the area and the specialist attributes required to be kept available.

A working group should be implemented to look at specific areas for potential change:

- Operational considerations of duty system and staffing profile changes
- Health and Safety
- Equality Impact Assessment of the points above on the service and communities of South Yorkshire

The findings of the working group(s) would feed in to the Operational Research and Development Board and aid the staff and public consultation phase of the future plan.

Comparative Metropolitan Response in West Midlands Fire and Rescue

The following examples provide a basic comparison of our service to West Midlands Fire and Rescue service, which achieves a near 5 minute county wide response. This is to demonstrate the difference in our resources and geographical area, which highlights the specific circumstances of SYFR.

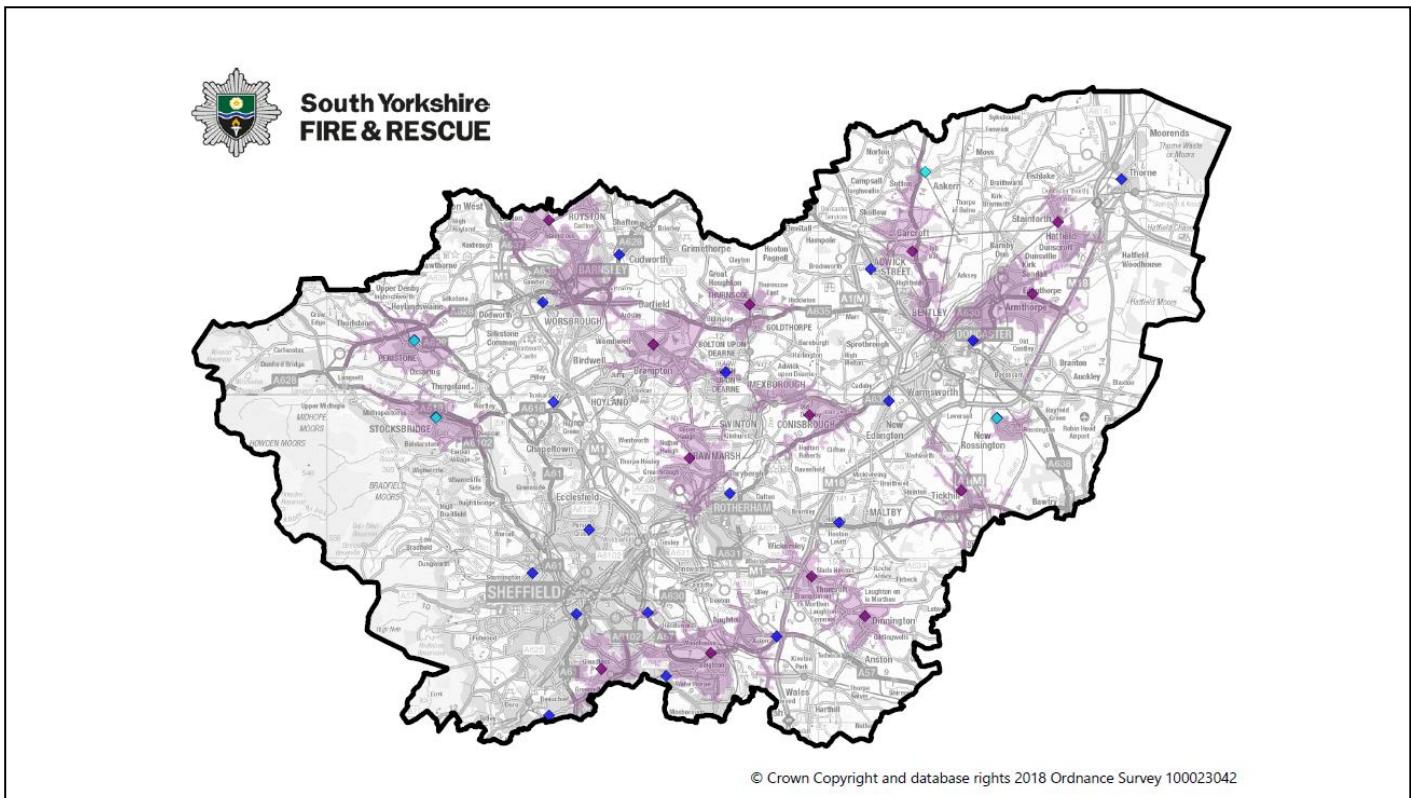
Rationale:

To implement a standard response time of 5 minutes across the county, based on risk and severity to the communities of South Yorkshire (first resource booking in attendance) would require SYFR to implement a total of 13 new Whole Time (or equivalent immediate response duty system) stations and convert 4 current On Call stations to Whole Time (Stocksbridge, Penistone, Askern and Rossington).

The addition of and conversion to Whole Time for this response scenario and assuming that the stations are based upon statutory responsibilities for fire and RTC only (e.g. Lowedges) would require the following:

- 408 additional staff (based on 4 x 24 personnel, 1 pump station at 17 locations)
- Circa 11,424 training days
- Increased costs in the region of £23,331,167.88 over current revenue budget

Fig 7. Illustrates the location of the additional 13 Whole Time stations (burgundy diamonds) and conversion from On Call to Whole Time (blue diamond's) stations required to provide a cross county 5 minute response to areas of life risk.



This represents a significant and unfeasible increase in our budgetary requirement and training provision. However, it highlights the impact of our status as a metropolitan service and the large geographic area we cover.

Comparative Metropolitan Response in West Midlands Fire and Rescue – Brigade Response Vehicles

Rationale:

To provide a Metropolitan emergency response based on risk and severity to the communities of South Yorkshire by implementing a standard response time of 7m53s to the high risk area across the county.

Method of implementation:

To implement a standard response time based on a 7m53s attendance time (first resource booking in attendance to a life risk) would require SYFR to put into operation a minimum of 3 further resources, in addition to our current provision, in the Stainforth, Thurcroft and Thurnscoe areas.

The additional resources do not have to replicate a pump and 5 personnel, as an SIU or similar vehicle could be an option to respond to small/none life critical incidents and ensure the nearest appliance is available for mobilisation to life risk incidents. The additional new resources for this response scenario would require the following based on an SIU model (none exhaustive):

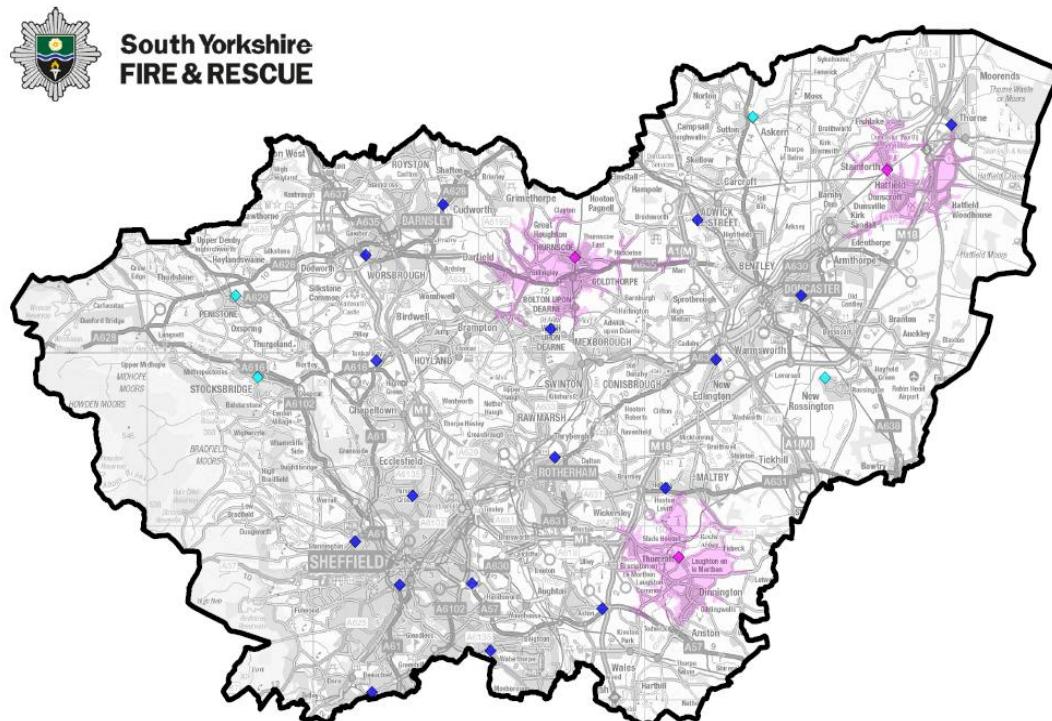
- 16 additional staff
- Circa 96 training days
- Increased personnel costs in the region of £718,682.68
- SIU x 3 circa £240,000 (the service has 2 SIUs that can be redeployed)

The duty system for this resource could be aligned to the primary risk periods of emergency response in the following categories:

- Deliberate primary vehicle fire
- Deliberate Secondary fire

The key times for such incidents cover a 12 hour period being 10am – 10pm (based on 3 years data - number of incidents/per hour of the day).

Fig.8 Demonstrates the potential SIU locations with a 5m18s isochrone



© Crown Copyright and database rights 2018 Ordnance Survey 100023042

Advantages:

- Grey Book compliant
- Provision of a resource that affords incident cover across the county, targeting small and deliberate fires and reducing the severity factor for life risk incidents with primary resource attendance
- Ensures appliances in the district/area have greater opportunity and availability for primary life risk incidents/Community Safety activity
- The resource could be mobilised in support of a Whole Time/On Call resources to augment numbers at an incident
- Resources can move across the county on request of Control to maintain a fire resource in the event of large scale incidents

Disadvantages:

- Increase in budgetary requirement now and ongoing
- Increase in training provision with resultant cost and personnel requirements

5. Grey Book compliance

The specific conditions of service that govern duty systems working hours are as follows:

Grey Book 2009 P13, PART A - HOURS OF DUTY AND DUTY SYSTEMS

1. All working arrangements will operate on the basis that employees will undertake the duties appropriate to their role and be deployed to meet the requirements of the fire and rescue authority's Integrated Risk Management Plan. This may include a requirement to work at different locations. Full-time and part-time employees on any duty system are free to undertake retained duties where appropriate.

2. The conditions of service of part-time employees will be the same as those of full time Employees (pro-rata where appropriate) unless otherwise stated.

3. Duty systems will need to meet the requirements of the fire and rescue authorities Integrated Risk Management Plan. Any proposed system should be discussed with the recognised trade unions and be based on the following principles:

(1) Basic working hours should average forty-two per week (inclusive of three hours of meal breaks in every twenty-four hours) for full-time employees. Hours of duty should be pro-rata for part-time employees.

(2) There should be at least two periods of twenty-four hours free from duty each week.

(3) It should comply with relevant United Kingdom and European law, including the Working Time Regulations 1998, and Health, Safety and Welfare at Work legislation.

(4) It should have regard to the special circumstances of individual employees and be family friendly.

The service ardently sought to maintain CPC as it maintained an immediate response at a reduced cost to the service. The Grey Book provides limited scope for a CPC replacement duty system that delivers an immediate operational response outside of the 'Shift' duty system (224). The options offered retain the core element of maintaining, as closely as possible, an immediate operational response from all stations, within the allotted budget.

The Grey Book's nearest provision to the Shift system, is the Day Crewing duty system which facilitates personnel undertaking positive (immediate response) hours at the station or available with the appliance and retained duties (On Call) with a response delay outside of the pro-rata positive hours.

Grey Book 2009 P14 Existing national duty systems

Day-crewing duty system:

8. The hours of duty of full-time employees on this system shall be an average of forty-two per week. The hours of duty of part-time employees shall be pro-rata. The rota will be based on the following principles:

- (1) An average of thirty-five hours per week shall be worked at the station.*
- (2) An average of seven hours per week shall be on standby at home. Employees are required to respond to any emergency call received during this standby period.*
- (3) Employees on this system may be requested to undertake retained duties outside the hours at (1) and (2).*
- (4) There shall be at least two complete periods of twenty-four hours free from any duty each week.*
- (5) One hour per day shall be specified as a meal break. Account shall be taken of meal breaks interrupted by emergency calls.*

The positive and On Call hours can be amalgamated to provide a continuous 24 hour response, with the same personnel albeit that a delay is accepted outside of their positive hours as they respond from 'home' or suitable accommodation within the footprint specified by the Fire Authority. The delay can be minimised i.e. maximum 1 minute, to ensure as close as reasonably practicable, a near immediate response for minimal risk increase to the communities of South Yorkshire.

Where the Fire Authority opts to provide accommodation, within their allotted footprint, the following Grey Book conditions also apply:

Accommodation, rent, fuel and light allowances

12. A fire and rescue authority may provide residential accommodation to an employee and may also provide free fuel and light. Where the authority charges rent for such accommodation a suitable independent avenue of appeal should be available to the employee.

13. A fire and rescue authority may pay a rent and/or fuel and light allowance to an employee on the day-crewing duty system who undertakes retained duties.

An employee who is paid such an allowance shall also be paid a compensatory grant equal to the income tax paid in the previous tax year on both the allowance and on any previous compensatory grant received.

The provision of the Fire Authority purchasing housing (note 12 above), in respect of staff responding from 'home' must be taken in to account when considering the appropriate options and costs associated with changes within the IRMP.

IRMP Options

Option 1:

Convert our current CPC stations to a Grey Book Whole Time shift system (224).

Rationale:

To provide Grey Book compliance and maintain a Whole Time immediate response.

Method of implementation:

Transitioning from CPC to a Whole Time Shift system (224) would facilitate the opportunity for the existing staff to remain at the station, with additional staff being posted to the station through recruitment (or transfer). The conversion to Whole Time for this response scenario, assumes the stations maintain their current specialist attributes and agreed establishment of 6 per watch (this would be variable depending on the option(s) chosen for staffing/cost efficiency).

Therefore, the following would be required:

- Extra 47 staff based on:
 - Tankersley now 19 would be 36
 - Lowedges now 14 would be 24
 - Edlington now 14 would be 24
 - Aston Park now 14 would be 24
- Circa 400 training days (this figure only represents the influx of new staff)
- Increased costs in the region of £989,522

Conditions of service:

No changes to any conditions of service

Advantages:

- Staff familiarity with the duty system and preferred duty system of the majority of staff in SYFR
- Grey Book compliant
- Maintains Whole Time fire cover and availability of appliances for immediate county wide and cross border deployment

Disadvantages:

- Increase in budgetary requirement now and ongoing for personnel and all associated factors for contractual provision
- Increase in training provision with a resultant cost and personnel requirements
- Lead time for training may be significant with the high level of specialist attributes

Option 2:

Convert our current CPC stations to a Grey Book Whole Time shift system - Day Crewing with the same staff providing On Call cover within a 1 minute or maximum 3 minute delay isochrone.

Rationale:

To provide Grey Book compliance and maintain a Whole Time immediate response whilst removing the requirement to change our collective agreement for Day Staffing to include an On Call element.

Method of implementation:

Converting from CPC to Whole Time Day Crewing would facilitate the opportunity for the existing staff to remain at the station, with additional staff joining through recruitment (or transfer) where required. The conversion assumes the stations maintain their current specialist attributes.

This option would also require the Fire Authority to purchase property or pay the allowances required, within the 1 to 3 minute isochrone of the station to ensure the option was viable (considering that the number of staff required will not live within the confines of the isochrone). This cost cannot be accounted for in the example, due to the variable nature of property availability and cost in individual areas.

Conditions of service:

The standby period (2) would constitute one of the following for a rapid response:

- I. Personnel working/on standby at station to retain an immediate response as standby is paid at the full hourly rate
- II. Personnel staying in purchased/rented accommodation within a 1 or maximum 3 minute isochrone

Day Crewing Duty System Working Hours:

Operational personnel working the Day Crewing (DC) duty system may follow a 4 on 4 off rota, working 42 hours per week - 8 week average, with additional On Call cover.

The duty system will fulfil an average working week consisting of:

1. 35 hours per week worked at station (positive hours)
2. 7 hours per week on standby
3. On Call provision outside of 1 and 2

Fig.9 illustrates an example division of Positive (P), Standby (S) hours and On Call (O) hours.

Fig.10 details an 8 week cycle and average hours. The shift system would rotate two watches with example start and finish times drawing a near parallel with the 224 shift system. However, these can be changed to match the risk profile of the station area.

Fig.9 Example division of Positive (P), Standby (S) hours and On Call (O) hours

Day	Start Positive	Finish Positive	Start Standby	Finish Standby	Start On Call	Finish On Call
Day 1	08:00	18:00	18:01	20:00	20:01	07:59
Day 2	08:00	18:00	18:01	20:00	20:01	07:59
Day 3	08:00	18:00	18:01	20:00	20:01	07:59
Day 4	08:00	18:00	18:01	20:00	20:01	07:59
Day 5	Rota					
Day 6	Rota					
Day 7	Rota					
Day 8	Rota					

Fig.10 Example 8 week cycle and average hours

	Mon			Tue			Wed			Thu			Fri			Sat			Sun			Total Hours			
	P	S	O	P	S	O	P	S	O	P	S	O	P	S	O	P	S	O	P	S	O	P	S	O	ALL
WK 1	10	2	12	10	2	12	10	2	12	10	2	12	R	R	R	R	R	R	R	R	R	40	8	48	96
WK 2	R	R	R	10	2	12	10	2	12	10	2	12	10	2	12	R	R	R	R	R	R	40	8	48	96
WK 3	R	R	R	R	R	R	10	2	12	10	2	12	10	2	12	10	2	12	R	R	R	40	8	48	96
WK 4	R	R	R	R	R	R	R	R	R	10	2	12	10	2	12	10	2	12	10	2	12	40	8	48	96
WK 5	R	R	R	R	R	R	R	R	R	10	2	12	10	2	12	10	2	12	10	2	12	30	6	36	72
WK 6	10	2	12	R	R	R	R	R	R	R	R	R	R	R	R	10	2	12	10	2	12	30	6	36	72
WK 7	10	2	12	10	2	12	R	R	R	R	R	R	R	R	R	R	R	R	10	2	12	30	6	36	72
WK 8	10	2	12	10	2	12	10	2	12	R	R	R	R	R	R	R	R	R	R	R	R	30	6	36	72
																						280	56	336	672

P - Positive Hours
S - Standby Hours
O - On Call Hours
R - Rota Day

8 wk av = 35 7 42 84

Conditions of Service

1. Staffing:
 - a. 12 personnel – 1WMB, 2CMs, 9FFs split over 2 watches (current DS model which could be varied by agreement)
2. Detachments:
 - a. Personnel from any duty system can be detached in to a DC station. None DC personnel detached in to a DC station would report at 08:00 till 19:00 hours, with the provision of dropping to a ridership of 4 at 19:00 (if the DC pump is staffed at 5). Alternatively, the detached individual would accrue casual over time to maintain optimum availability until 20:00.
 - b. Where DC staff are required to attend a 224 or other duty system station, they would attend for the shift duration 08:00 – 19:00 and receive standard detached duty allowance with mileage and standard rate of pay for the extended duty in to their Standby period.
 - c. N.B. The CPC (or other) stations converting to a DC system may continue to run a ‘command group’ model, where detachments to other duty systems do not occur, only detachments to other DC stations, depending on the global availability required.
3. Annual Leave:
 - a. The DC crews would adhere to SYFRs current/revised Leave and Availability Policy.
4. Pay:
 - a. The duty system achieves the average working hours for standard National Joint Council (NJC) FF - WMB role related payments. Further, as the staff would continue to provide 24 hour immediate availability, other services opt to pay an increase in the region of 22%. This represents a single payment encompassing the NJC On Call retainer fee.
 - b. Where staff opt to provide On Call cover from private rented accommodation within the stated times and footprints, a single compensatory rent and utility allowance of 8% - 12% (average from neighbouring services) NJC Fire fighter competent pay (£30,991) may be made. This allowance would be dependent on the rental prices in the station area equating to £2,479.28 – £3,718.92 per person, per annum. This would not be required if SYFR purchased housing or provided an all inclusive rented accommodation package.
 - c. Any personnel that already reside within the allocated footprint of their station would not receive the compensatory allowance.

5. Overtime:

- a. As the system follows the 224 duty system rota and comparable times, any requirement for overtime can be met with personnel from 224 stations, DS or other DC stations, subject to the points raised in Detachments - paragraph 1.
- b. Payments for additional time worked, would be accrued where personnel are not rostered for duty on the immediate shift following their On Call duty period i.e. last night shift. Payments would be in line with SYFRs current policy.

6. Training and MOC:

- a. Undertaken as per the current 224 and DS work routine. No training would be required during Standby or On Call periods, except at the discretion of the Watch Manager (WM). Any changes to the general policy would be applied to DC also.

7. Inter Service Transfers:

- a. Personnel who transfer in to SYFR on a DC system, providing Positive, Standby and On Call provision (as continuous 24 hour availability) may access SYFRs Relocation Package with a maximum tax free allowance of £6,500 to purchase property within the isochrone/postcodes.

Advantages:

- Staff familiarity with the system and preferred duty system of the majority of staff in SYFR
- Grey Book compliant
- Maintains Whole Time fire cover and availability of appliances for immediate county wide and cross border deployment during positive hours
- No additional staff or training required, if the current personnel chose to remain at the allocated station

Disadvantages:

- Increase in budgetary requirement relating to costs for housing and ancillary payments
- Increase in training provision with resultant cost and personnel requirements to fulfil specialist attributes (if the current CPC stations are chosen for conversion)
- The provision of and staffing arrangements for this duty system would need to be reviewed in line with any changes to the staffing profile of the service

A further sub option is to provide Whole Time fire cover on week day shifts only, with evening and weekend cover facilitated by On Call personnel or roving appliances. This has the impact of increased attendance times during non DC positive hours, but provides a shift system which meets the positive aspects of DS – evening and weekends off duty.

Fig.11 illustrates an example division of positive (P) and standby (S) hours for a week day shift rota.

Fig.12 details the 8 week cycle periods of On Call/roving appliance cover. Note the reduction in immediate fire cover after 3pm (5pm if standby is at station). This duty system could be aligned to the risk profile of the station area.



Fig.11 Example DC Duty System Monday to Friday with On Call cover at evening and weekends

Day	Start Positive	Finish Positive	Start Standby	Finish Standby	Start On Call	Finish On Call
Day 1	08:00	15:00	15:01	17:00	17:01	07:59
Day 2	08:00	15:00	15:01	17:00	17:01	07:59
Day 3	08:00	15:00	15:01	17:00	17:01	07:59
Day 4	08:00	15:00	15:01	17:00	17:01	07:59
Day 5	08:00	15:00	15:01	17:00	17:01	07:59
Day 6	Rota					
Day 7	Rota					

Fig.12 Example 8 week rota

	Mon			Tue			Wed			Thu			Fri			Sat	Sun	Total Hours			
	P	S	O	P	S	O	P	S	O	P	S	O	P	S	O	R	R	P	S	O	ALL
WK 1	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 2	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 3	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 4	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 5	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 6	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 7	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
WK 8	7	2	15	7	2	15	7	2	15	7	2	15	7	2	15	R	R	35	10	75	120
																		280	80	600	960
P - Positive Hours																					
S - Standby Hours																					
O - On Call Hours																					
R - Rota Day																					

8 wk av = 35 10 75 120

N.B. In this example, the standby hours exceed the Grey Book average of 7 per week but afford longer WT availability and provision for training. Alternatively this could be reduced to 1.4 hours standby per day, to achieve an average of 7 hours per week. The result is an increase in the number of On Call hours required but remains within the scope of the Grey Book.

Conditions of Service

Staffing:

7 personnel – 1WMB, 1CMs, 5FFs. This provides a reduction in staff and associated costs. An option exists to provide this staffing with 6 also.

Detachments:

SYFRs policy for detachments would remain extant however; if detachments are required the times would not correlate with our other shift systems. The person detached would be expected to report at 0800 to 1700 hours, (if 2 hours standby) then return to their base station or remain at station and bolster the On Call response.

All other conditions would remain as per option 1.

The example start and finish times aim to provide alignment to our 224 stations however, it would be prudent to align the working times to the demand and risk profile of the service and/or station area.

A roving pump could be used instead of On Call Firefighters.

Option 3:

Fulfil our current IRMP transitioning Doncaster 2 and Central 2 to DS, with On Call at night and Doncaster's Turntable Ladder (TL) to On Call only.

Rationale:

To achieve potential savings under the current IRMP in the region of £355,925.40

Method of implementation:

Doncaster and Central's staffing profile would reduce from 46 - 224 staff to 36 - 224 staff – 24 staff working 224 and 12 staff working Day Staffing, then implement the On Call provision at each station for night time fire cover. (Staffing is variable per option chosen).

Advantages:

- Staff familiarity with the duty systems
- Grey Book compliant
- Maintains 27 appliances for immediate county wide and cross border deployment during the day shift

Disadvantages:

- Low level savings are realised by this option due to the increase in On Call staff which costs in the region of £219k per On Call resource before overtime etc. and the anticipated increase in on-costs in 2019/20
- Challenge from Trade Unions on the reduction of staff and evening fire cover
- The level of savings is also reduced due to the services intention to achieve an Operational Resource Team (ORT) of 40 personnel
- Loss of fire cover in Doncaster and Centrals area at night

Option 4:

To be read in conjunction with Appendix J

A number of sub options have been explored to transition our current staffing and resourcing arrangements away from the extant model, to achieve varying levels of savings. These sub options can also be implemented in line with other options e.g. Option 5 to ensure the continued prerequisite cost savings.

Rationale:

To provide Grey Book compliance and utilise alternative duty and/or resourcing models to maximise our immediate response and achieve cost savings.

Method of implementation:

The varying models would be implemented in line with the level of savings required, and direction of supporting plans, e.g. training. The models are not finite or exhaustive in their offer for change. They represent options for a staged approach based primarily on ensuring the risk profile of the area is met with a proportional resource response.

All options A – F provide a comparison against our current resourcing position and funding model. Some options demonstrate an increase in the budget for Emergency Response that may be achieved through cost savings elsewhere in the organisation, to maintain our immediate response from each station.

Please note: the On Call staffing figure for each model has been set at zero to facilitate clear calculation for Whole Time staffing and does not represent the current On Call establishment per station. All options are Grey Book compliant.

Option A costs: £103,166.56 saving

Advantages:

- Cost saving
- Increases the number of pumps available in the day and maintains the current number at night
- Bolsters fire cover in Thorne through the implementation of an On Call appliance to support the introduction of a Day Crewed appliance (and a resulting 1 minute delay on turnout). This also reduces the travel time for a second appliance from Doncaster or Rossington as the appliance will be based at Thorne.
- Rotherham and Barnsley stations revert to two - 224 appliances, with the second appliance providing fire cover at new DS stations (Aston and Cudworth) at night

Disadvantages:

- Conversion of two stations from 224 to Day Staffing will require the displacement of 12 staff per 1 pump station (this is increased in line with other staffing numbers at multi pump stations across the options) and a reduction in fire cover at night (although this will be covered through a roving appliance in this example)
- The implementation of an On Call appliance requires a significant amount of time and resources to reach the requisite numbers of staff (18 per station in SYFR) and over two years for all staff to gain full competency, depending on their prior experience i.e. none Dual Contract staff
- Reduced fire cover in Sheffield District as Central 2 would cover Lowedges at night
- Variable crewing availability from On Call staff

Option B: £17,209.27 increase

Advantages:

- Increases the number of pumps available in the day and night
- Bolsters fire cover in Thorne through the introduction of an On Call appliance to support the introduction of a Day Crewing appliance (and a resulting 1 minute delay on turnout). This will reduce the travel time for a second appliance e.g. from Doncaster or Rossington as the appliance will be based at Thorne
- Fire cover is maintained in Lowedges with a Whole Time Day Crewing appliance
- Rotherham and Barnsley stations revert to two - 224 appliances, with the second appliance providing fire cover at new Day Staffing stations (Aston and Cudworth) at night

Disadvantages:

- Lowedges transitions to Day Crewing, with a resultant potential 1 minute delay on turnout
- Increased costs as a result of the implementation of an extra On Call appliance and further costs arising from Day Crewing through the purchase of property or allowances
- Savings will be required in other areas of the organisation to aid funding
- The implementation of an On Call appliance requires a significant amount of time and resources to reach the requisite numbers of staff (18 per station in SYFR) and over two years for all staff to gain full competency, depending on their prior experience i.e. none dual contract staff
- Variable crewing availability from On Call staff

Option C: £137,585.10 increase

Advantages:

- Increases the number of pumps available in the day and maintains the current number at night
- Bolsters fire cover in Thorne through the implementation of an On Call appliance to support the introduction of a Day Crewed appliance (and a resulting 1 minute delay on turnout). This also reduces the travel time for a second appliance from Doncaster or Rossington as the appliance will be based at Thorne.

- Fire cover is maintained in Lowedges and Aston with a Whole Time Day Crewing appliance
- Barnsley station reverts to 224, with the second appliance providing fire cover at Cudworth as a new Day Staffing station at night
- Variable crewing availability from On Call staff

Disadvantages:

- Increased costs as a result of the implementation of an extra On Call appliance and further costs arising from Day Crewing through the purchase of property or allowances
- Savings will be required in other areas of the organisation to aid funding
- Lowedges and Aston Park transition to Day Crewing, with a resultant 1 minute potential delay on turnout
- Displaced staff from Cudworth (12) due to the implementation of Day Staffing
- The implementation of an On Call appliance requires a significant amount of time and resources to reach the requisite numbers of staff (18 per station in SYFR) and over two years for all staff to gain full competency, depending on their prior experience i.e. none dual contract staff
- Variable crewing availability from On Call staff

Option D: £661,552.69 saving

Advantages:

- Cost saving
- Increases the number of pumps available in the day and maintains a Whole Time immediate response across the county day and night
- Rotherham and Barnsley stations revert to two - 224 appliances

Disadvantages:

- Decrease in the number of pumps available at night (though each station will retain 1 appliance plus an On Call appliance where applicable)
- Conversion of four stations from 224 to Day Staffing will require the displacement of staff
- Reduced county wide weight of response at night as our second appliances would move across the county as follows:
 - Central 2 to Lowedges
 - Doncaster 2 to Edlington
 - Rotherham 2 to Aston
 - Barnsley 2 to Cudworth

Option E: £419,628.55 increase

Advantages:

- Maintains the current number of pumps available in the day and night
- All stations revert to the 224 duty system which is the preferred system with SYFR staff

Disadvantages:

- Increased costs with service wide impact
- Removal of flexible staffing options i.e. Day Staffing

Option F: £360,742.53 saving

Advantages:

- Cost saving
- Maintains the number of pumps available in the day
- All stations revert to 224/DS duty system

Disadvantages:

- Decrease in the number of pumps available at night
- Conversion of two stations from 224 to Day Staffing will require the displacement of staff
- Reduced weight of response in Sheffield and Doncaster

Option 5:

Reduce ridership and establishment levels to reflect a ridership of 4 across all appliances, with cost savings being realised through a change in the overall establishment figure.

Rationale:

To maintain the current level of operational appliance cover throughout the day and night and achieve savings in line with the MTFP.

Method of implementation:

Reduce the staffing levels of stations as follows:

- 1 pump station 20 personnel: 4WMA, 4CM, 12FF – 224 shift system
- 1 pump special station Parkway and Tankersley 28 personnel:
 4WMB, 8CM, 16FF – 224 Shift system
- 2 pump station Central and Doncaster 36 personnel:
 4WMB, 8CM, 24FF – 224 Shift system
- 2 pump station Rotherham and Barnsley 30 personnel:
 4WMB, 4CM, 12FF – 224 Shift system
 1WMB, 2 CM, 7FF – Day Staffing duty system

This would provide savings circa £2.9m (19/20 costs), whilst maintaining operational fire cover across the county. Our current retirement profile means we would achieve the required establishment figure through natural retirement levels and changes post CPC. (*Full financial details available from the Financial Services Manager*).

Another issue SYFR faces is the significant number of days lost to sickness which has a huge impact on the services ability to ride 5 personnel per appliance, per shift. Whilst our Central Staffing Team aims to fulfil this through the ORT, the large number of days lost, exceeds the ORT shifts available and often results in a ridership of 4.

The fire sector average for sickness is 6.5 and SYFR averages 9.65 days per Whole Time staff member. Over the last two years SYFR has maintained a ridership of 5 only 68%. Nevertheless, we have still facilitated the same number of appliances being available (27 in the day, 25 at night) throughout the same period, through the use of ORT, overtime and riding 4.

Appendix K details the services riding 5 availability over the last two years.

However, the ORT is a finite resource and cannot provide more availability to cover staffing shortfalls. Alternatively, if the overtime budget was increased, this would have a detrimental effect on the MTFP and the requirement to make cost savings, in light of the position we find ourselves following the Judicial Review. Therefore, in order to maintain the same number of appliances throughout the day and night, whilst also realising cost savings, it is necessary to explore the option of reducing the ridership of appliances to 4 personnel.

To provide a national comparison, all UK Fire and Rescue Services (UKFRSs) were asked to provide details on their ridership levels relating to:

- Those who state in their IRMP that they ride 4
- Those that state in their IRMP that they aim to ride 5, where staffing permits

The following responses were received (Fig.13), which demonstrates that over 50% of UKFRSs ride 4 as their normal staffing model, or aim, where staffing permits to ride 5 (which results in a default ridership of 4).

Also, it is significant to note that other Fire and Rescue Services (FRSs) have local and collective agreements to provide staffing models away from the Grey Book and therefore are able to aim to/achieve riding 5 with varied crewing models.

Fig.13 Ridership of 4

FRSs that confirmed a ridership of 4 as their normal staffing	FRSs that confirmed they still ride with 5 where availability permits
N. Yorkshire Cheshire Hereford and Worcester Leicestershire Lancashire Buckinghamshire Northumberland Warwickshire Northamptonshire West Sussex Cumbria Hampshire Tyne and Wear Durham & Darlington Dorset & Wiltshire Mid and West Wales	South Wales Staffordshire Humberside West Midlands Nottinghamshire Norfolk Bedfordshire and Luton Essex Merseyside Devon & Somerset

Considerations:

- Staffing levels of 20/28/30/36 only provides allowance for 1 person per watch to be off (for any reason) at any time, which will require changes to the Leave and Availability Policy.
- The number of days an individual undertakes training and the method of delivery must be changed to ensure staff are available on our appliances and not away from operational duty on courses, impacting on appliance availability
- A degradation system will need to be implemented for appliances that may go off the run, due to staffing shortfalls, based on risk and density of resources across the county
- Specialist attributes e.g. HRPs would be impacted as we maintain a ridership of 5, under current guidance for FF safety and NFCC Team Typing per HRP appliance. However, the attribute can remain available by increasing the number of appliances attending to ensure 5 competent personnel are in attendance (across all appliances) for the attribute required
- An ORT staffing profile of 40 would provide coverage for the average fire sector sickness levels of 6.5 days per person per year. However, this does not provide coverage for any increase in sickness levels, average training or special/carers leave currently provided to Whole Time staff. Therefore, this would impact on appliance availability and potentially mean two appliances per shift, per day, may be off the run using current sickness and training statistics. This is not an immediate impact as the changes to riding 4 are brought in over a tiered and managed method although an early intervention will be required to prevent and mitigate any future risk

- Thorough risk management must be considered and potential mitigations brought to fruition if the service moved to a riding 4 model and any potential impact on Fire Fighter/Public/other responder safety, be addressed before the option is brought to completion
- Compulsory transfers may be required to maintain the balance of establishment strength across each watch (and the service), in line with the retirement profile and maintenance of specialist attribute skill sets
- Equality Impact on staff and communities
- Review of our On Call provision to ensure the service is optimising its use of this invaluable, though somewhat expensive resource, when considered against the availability and productivity of the cadre. This is in addition to and in consideration of utilising this funding stream to accompany the services resources with SIUs (or similar) that can be staffed on a formal and contractual basis to match the services risk profile and reduce the burden of minor incidents on primary resource attendance

The working group discussed on page 37 would seek to address some of the above points.

Advantages:

- Staff familiarity with the system and preferred duty systems
- Grey Book compliant
- Maintains Whole Time fire cover and availability of appliances for immediate county wide and cross border deployment
- Achieves considerable savings
- SYFR remains able to meet its contractual obligations to employees for leave etc.

Disadvantages:

- Potential for appliances to be off the run due to the revised staffing ridership factor
- Any fall in ORT figures will impact on appliance availability
- Training and MOC delivery must be revised to reduce the burden on staffing
- The high level of sickness in SYFR will impact on staffing and appliance availability requiring an intervention to reduce this significantly
- Traditional Trade Union challenges may be brought due to the reduction in establishment figures

Option 6:

Maintain the current staffing levels and implement a degradation system for stations from 224 to Day Crewing or Day Staffing, based on the current agreed (or new) staffing profile (24 per 1 pump station etc).

Rationale:

To achieve potential savings required.

Method of implementation:

The required number of stations would be changed to the duty system required (possibly in line with the retirement profile) through the period of the next plan and MTFP.

The changes would need to consider the staffing profile of the new duty system and the potential requirement for compulsory transfers, if provision exists within current contracts or volunteers in the first instance.

Fig.14 The number of stations that would need to be changed to realise the required savings

	Maintaining 24/36/44				Notes
	Current Cost	Variance	No for stations saving 1.6m	No for stations saving 3.9m	
Current Budget	£ 24,744,241				
1 Pump Special	£ 1,619,587				
224/DS	£ 1,607,283				
2 Pump	£ 1,961,648				
1 Pump	£ 1,074,113	-£ 887,535	2	4	Variance from 2 pump
DS	£ 533,170	-£ 540,943	3	7	Variance from 1 pump
DC	£ 653,549	-£ 420,564	4	9	Variance from 1 pump
DC - On Call	£ 872,554	-£ 201,559	8	19	Variance from 1 pump
DS - On Call	£ 752,175	-£ 321,938	5	12	Variance from 1 pump
On Call	£ 219,005	-£ 855,108	2	5	Variance from 1 pump

DS - Day Staffing DC – Day Crewing

Advantages:

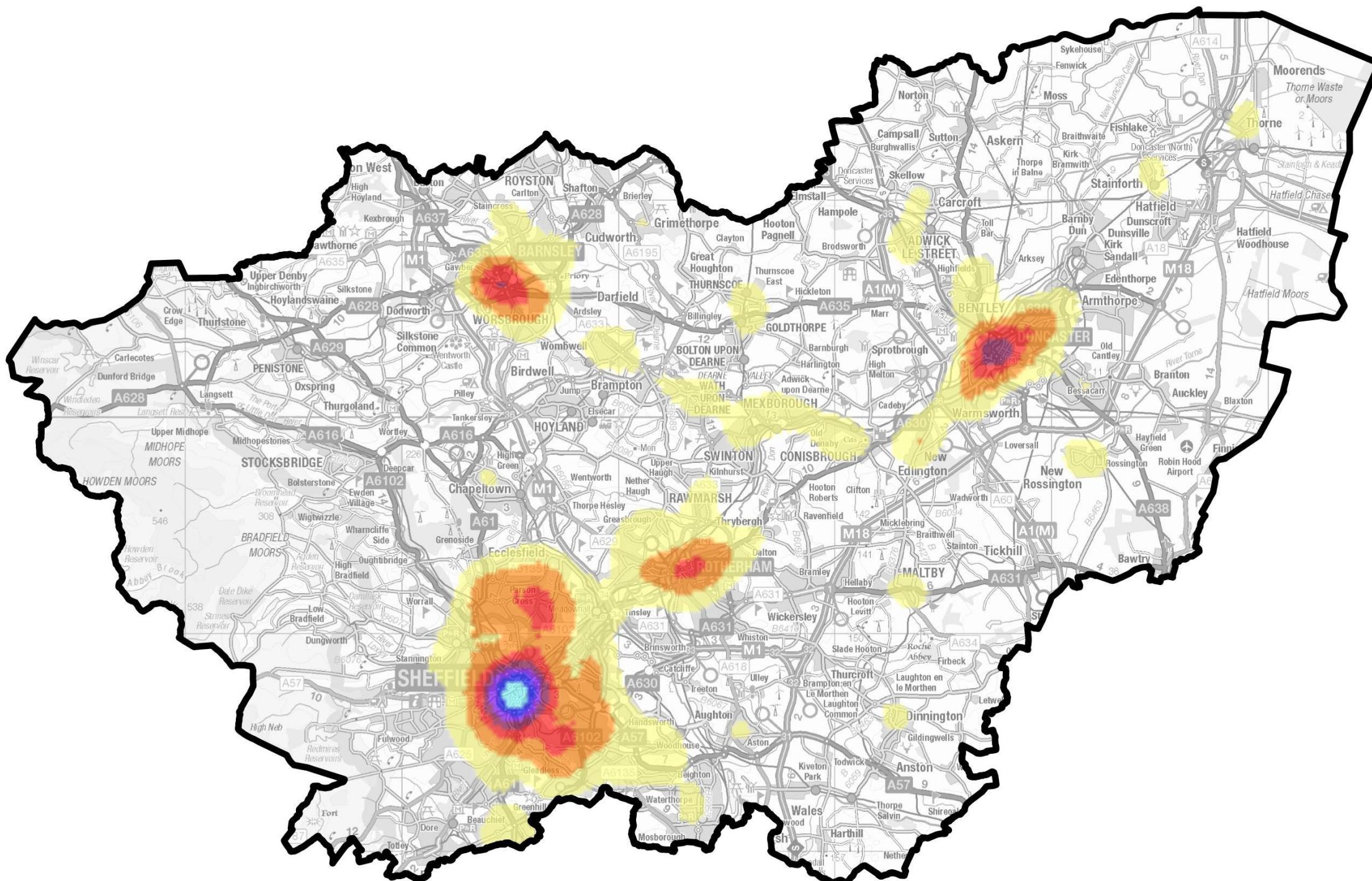
- Staff familiarity with the duty systems
- Grey Book compliant
- Achieves saving required through a tiered approach
- Achieves contractual obligations

Disadvantages:

- Reduction in fire cover
- Reduction in staffing profile
- Requirement for additional Community Safety intervention to meet any increase community risk, with resulting potential cost implication

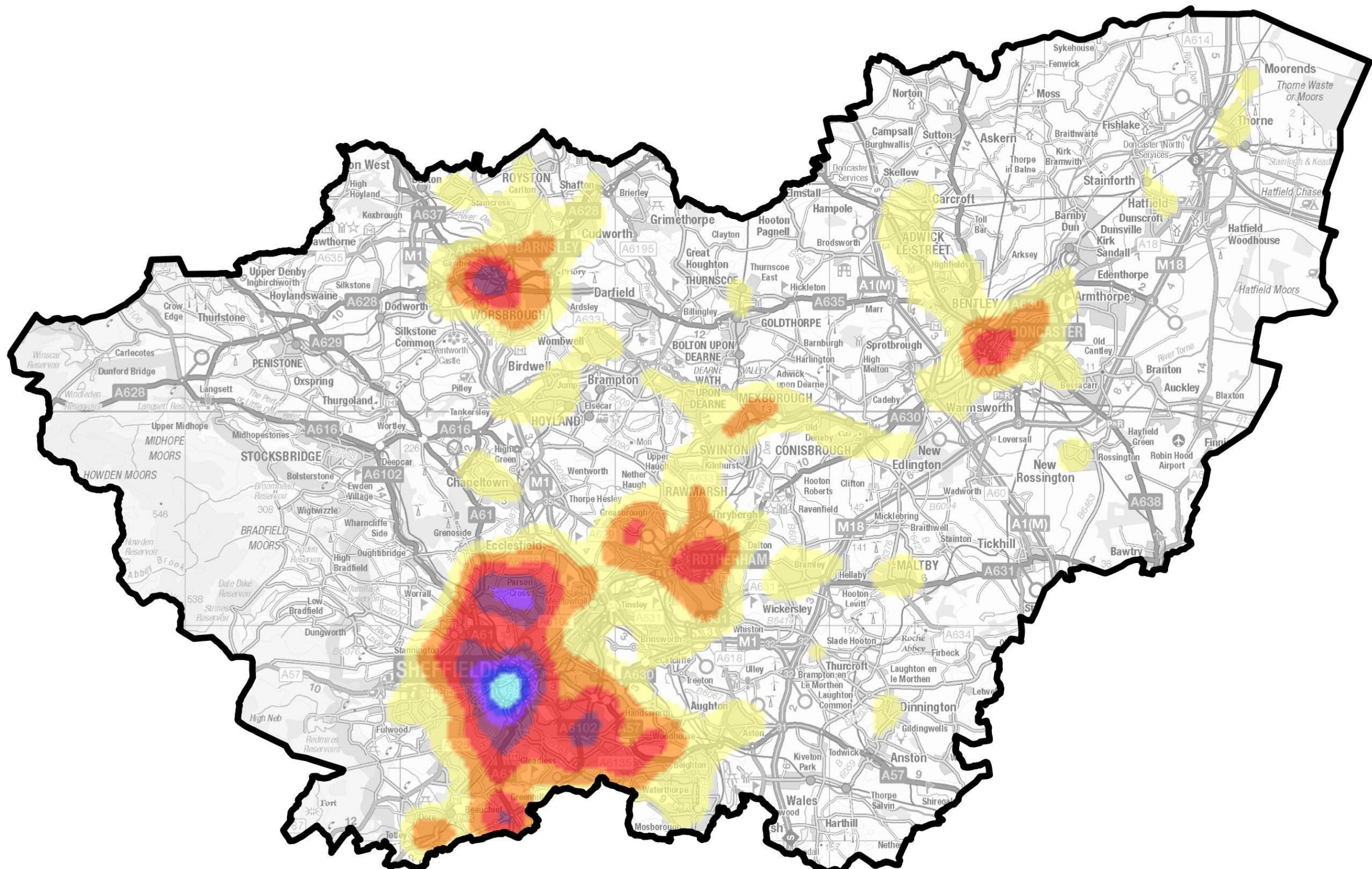
INCIDENTS DENSITY MAP (2015 – 2017): Total number 40,116

Appendix A



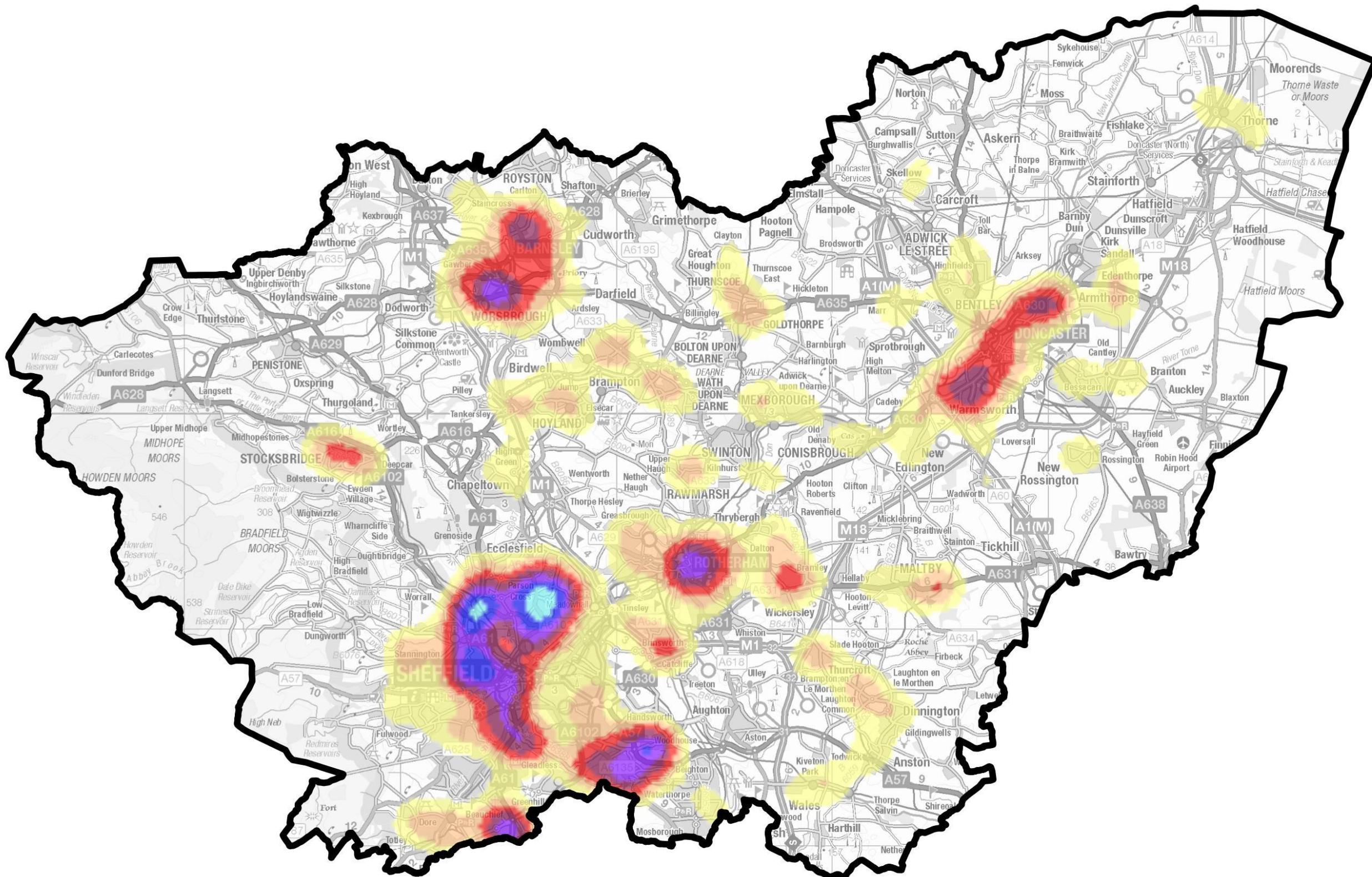
INJURIES DENSITY MAP (2015 – 2017)

Appendix B



FATALITIES DENSITY MAP (2015 – 2017)

Appendix C

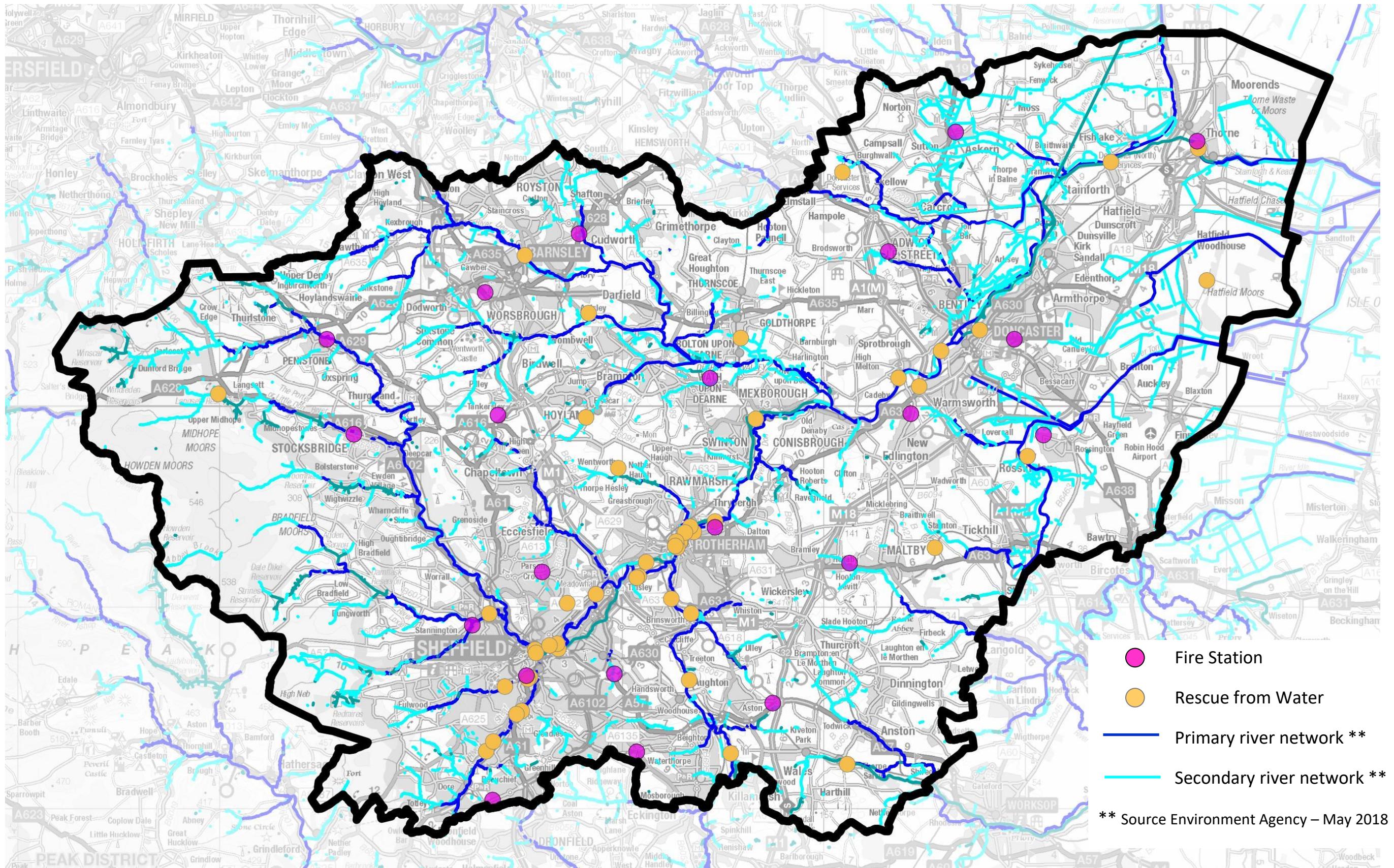


SCENARIO A (BASE CASE)
Appendix D

STN NUM	STN NAME	SHIFT	SCENARIO A (Base Case)										
			1) ISOCHRONES (Mins: Secs)	2) AREA (Square KMs)	3) NO OF HOUSEHOLDS			4) ALL INCIDENTS		5) DWELLING FIRE INCIDENTS		6) LIFE RISK A & B INCIDENTS	
			Number	%	Number	%	Number	%	Number	%	Number	%	
	SOUTH YORKSHIRE	Day (08:00 - 18:59)		1552.09	100.0%	631179	100.0%	20503	100.0%	1262	100.0%	7949	100.0%
		Night (19:00 - 07:59)		1552.09	100.0%	631179	100.0%	19613	100.0%	1037	100.0%	7485	100.0%
1	Barnsley (W/T)	Day (08:00 - 18:59)	5:18	35.08	2.3%	39611	6.3%	1366	6.7%	84	6.7%	453	5.7%
		Night (19:00 - 07:59)	5:18	35.08	2.3%	39611	6.3%	1512	7.7%	61	5.9%	550	7.3%
3	Cudworth (W/T)	Day (08:00 - 18:59)	5:18	29.30	1.9%	32525	5.2%	1167	5.7%	65	5.2%	370	4.7%
		Night (19:00 - 07:59)	5:18	29.30	1.9%	32525	5.2%	1278	6.5%	44	4.2%	429	5.7%
4	Dearne (W/T)	Day (08:00 - 18:59)	5:18	34.39	2.2%	36097	5.7%	1106	5.4%	73	5.8%	435	5.5%
		Night (19:00 - 07:59)	5:18	34.39	2.2%	36097	5.7%	1172	6.0%	58	5.6%	454	6.1%
4	Dearne (RDS)	Day (08:00 - 18:59)	1:42	3.09	0.2%	2805	0.4%	128	0.6%	7	0.6%	52	0.7%
		Night (19:00 - 07:59)	1:42	3.09	0.2%	2805	0.4%	154	0.8%	6	0.6%	48	0.6%
5	Penistone (RDS)	Day (08:00 - 18:59)	2:31	2.39	0.2%	3,228	0.5%	51	0.2%	5	0.4%	27	0.3%
		Night (19:00 - 07:59)	2:31	2.39	0.2%	3,228	0.5%	33	0.2%	1	0.1%	15	0.2%
6	Doncaster (W/T)	Day (08:00 - 18:59)	5:18	35.86	2.3%	46778	7.4%	1992	9.7%	92	7.3%	697	8.8%
		Night (19:00 - 07:59)	5:18	35.86	2.3%	46778	7.4%	1778	9.1%	92	8.9%	643	8.6%
7	Adwick (W/T)	Day (08:00 - 18:59)	5:18	20.74	1.3%	13474	2.1%	537	2.6%	33	2.6%	207	2.6%
		Night (19:00 - 07:59)	5:18	20.74	1.3%	13474	2.1%	429	2.2%	24	2.3%	138	1.8%
9	Thorne (W/T)	Day (08:00 - 18:59)	5:18	23.26	1.5%	8124	1.3%	356	1.7%	17	1.3%	144	1.8%
		Night (19:00 - 07:59)	5:18	23.26	1.5%	8124	1.3%	239	1.2%	8	0.8%	80	1.1%
10	Askern (RDS)	Day (08:00 - 18:59)	2:08	1.99	0.1%	2,013	0.3%	68	0.3%	6	0.5%	17	0.2%
		Night (19:00 - 07:59)	2:08	1.99	0.1%	2,013	0.3%	58	0.3%	5	0.5%	15	0.2%
11	Parkway (W/T)	Day (08:00 - 18:59)	5:18	55.02	3.5%	83496	13.2%	3685	18.0%	191	15.1%	1330	16.7%
		Night (19:00 - 07:59)	5:18	55.02	3.5%	83496	13.2%	3451	17.6%	187	18.0%	1187	15.9%
12	Rossington (RDS)	Day (08:00 - 18:59)	2:05	1.32	0.1%	2069	0.3%	104	0.5%	5	0.4%	45	0.6%
		Night (19:00 - 07:59)	2:05	1.32	0.1%	2069	0.3%	143	0.7%	7	0.7%	101	1.3%
13	Central (W/T)	Day (08:00 - 18:59)	5:18	49.52	3.2%	112907	17.9%	3850	18.8%	232	18.4%	1423	17.9%
		Night (19:00 - 07:59)	5:18	49.52	3.2%	112907	17.9%	3457	17.6%	206	19.9%	1271	17.0%
14	Rivelin (W/T)	Day (08:00 - 18:59)	5:18	43.48	2.8%	87602	13.9%	3070	15.0%	198	15.7%	1114	14.0%
		Night (19:00 - 07:59)	5:18	43.48	2.8%	87602	13.9%	2744	14.0%	166	16.0%	1064	14.2%
15	Lowedges (W/T)	Day (08:00 - 18:59)	5:18	13.08	0.8%	20100	3.2%	454	2.2%	30	2.4%	227	2.9%
		Night (19:00 - 07:59)	5:18	13.08	0.8%	20100	3.2%	420	2.1%	34	3.3%	214	2.9%
17	Stocksbridge (RDS)	Day (08:00 - 18:59)	2:52	3.40	0.2%	4414	0.7%	125	0.6%	7	0.6%	75	0.9%
		Night (19:00 - 07:59)	2:52	3.40	0.2%	4414	0.7%	111	0.6%	6	0.6%	71	0.9%
18	Rotherham (W/T)	Day (08:00 - 18:59)	5:18	44.41	2.9%	45069	7.1%	1637	8.0%	113	9.0%	631	7.9%
		Night (19:00 - 07:59)	5:18	44.41	2.9%	45069	7.1%	1774	9.0%	97	9.4%	602	8.0%
19	Birley Moor (W/T)	Day (08:00 - 18:59)	5:18	20.20	1.3%	33881	5.4%	906	4.4%	72	5.7%	444	5.6%
		Night (19:00 - 07:59)	5:18	20.20	1.3%	33881	5.4%	922	4.7%	58	5.6%	377	5.0%
19	Birley Moor (RDS)	Day (08:00 - 18:59)	2:30	3.11	0.2%	5326	0.8%	109	0.5%	8	0.6%	70	0.9%
		Night (19:00 - 07:59)	2:30	3.11	0.2%	5326	0.8%	93	0.5%	7	0.7%	42	0.6%
21	Maltby (W/T)	Day (08:00 - 18:59)	5:18	20.89	1.3%	18623	3.0%	489	2.4%	23	1.8%	175	2.2%
		Night (19:00 - 07:59)	5:18	20.89	1.3%	18623	3.0%	474	2.4%	25	2.4%	178	2.4%
22	Aston Park (W/T)	Day (08:00 - 18:59)	5:18	25.78	1.7%	13734	2.2%	453	2.2%	23	1.8%	218	2.7%
		Night (19:00 - 07:59)	5:18	25.78	1.7%	13734	2.2%	355	1.8%	13	1.3%	147	2.0%
24	Elm Lane (W/T)	Day (08:00 - 18:59)	5:18	34.34	2.2%	53513	8.5%	2343	11.4%	128	10.1%	846	10.6%
		Night (19:00 - 07:59)	5:18	34.34	2.2%	53513	8.5%	2209	11.3%	125	12.1%	823	11.0%
26	Tankersley (W/T)	Day (08:00 - 18:59)	5:18	30.98	2.0%	15538	2.5%	469	2.3%	32	2.5%	208	2.6%
		Night (19:00 - 07:59)	5:18	30.98	2.0%	15538	2.5%	467	2.4%	25	2.4%	210	2.8%
28	Edlington (W/T)	Day (08:00 - 18:59)	5:18	21.00	1.4%	23661	3.7%	1177	5.7%	66	5.2%	379	4.8%
		Night (19:00 - 07:59)	5:18	21.00	1.4%	23661	3.7%						

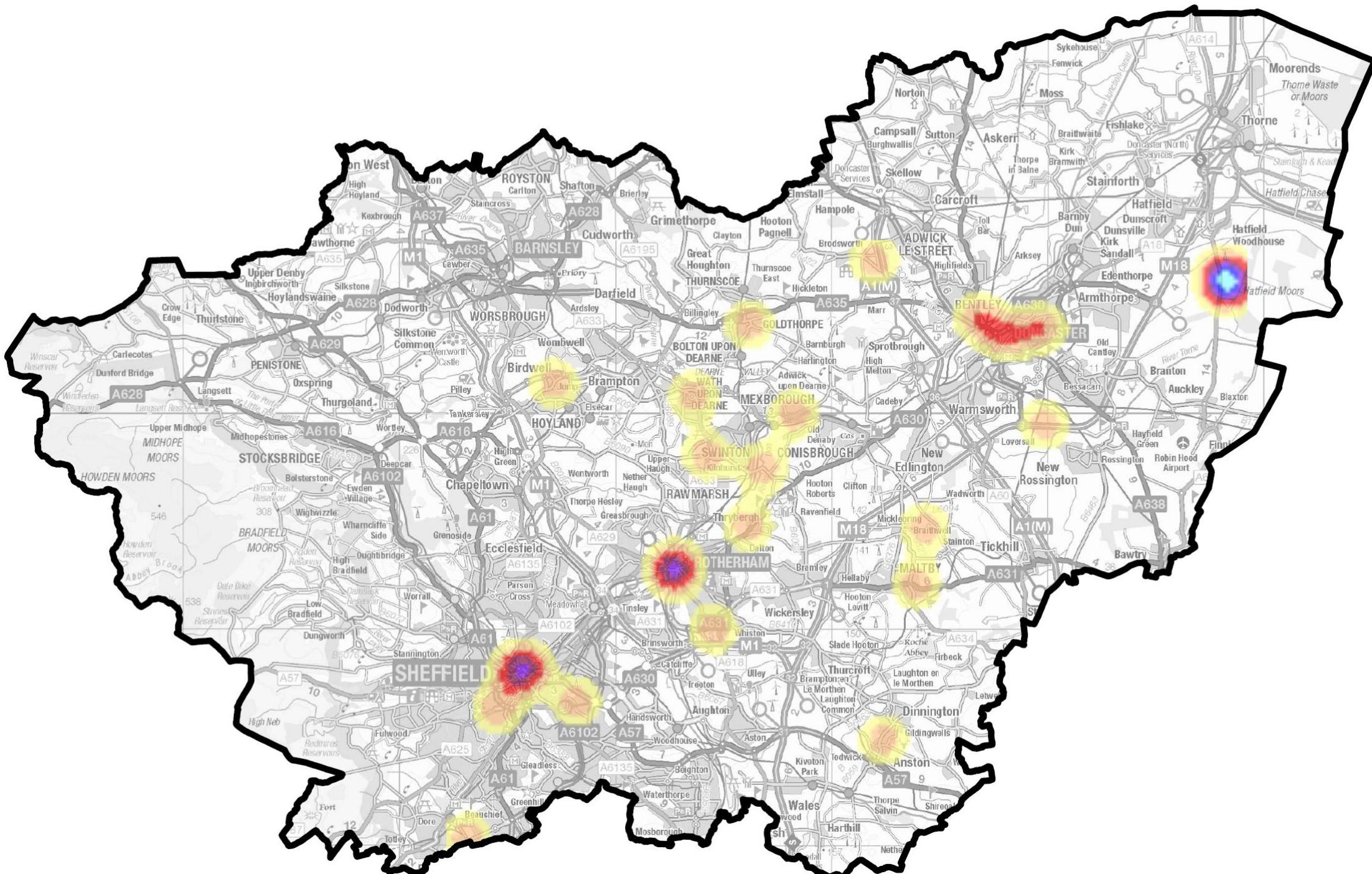
WATER RESCUES (2016-2018)

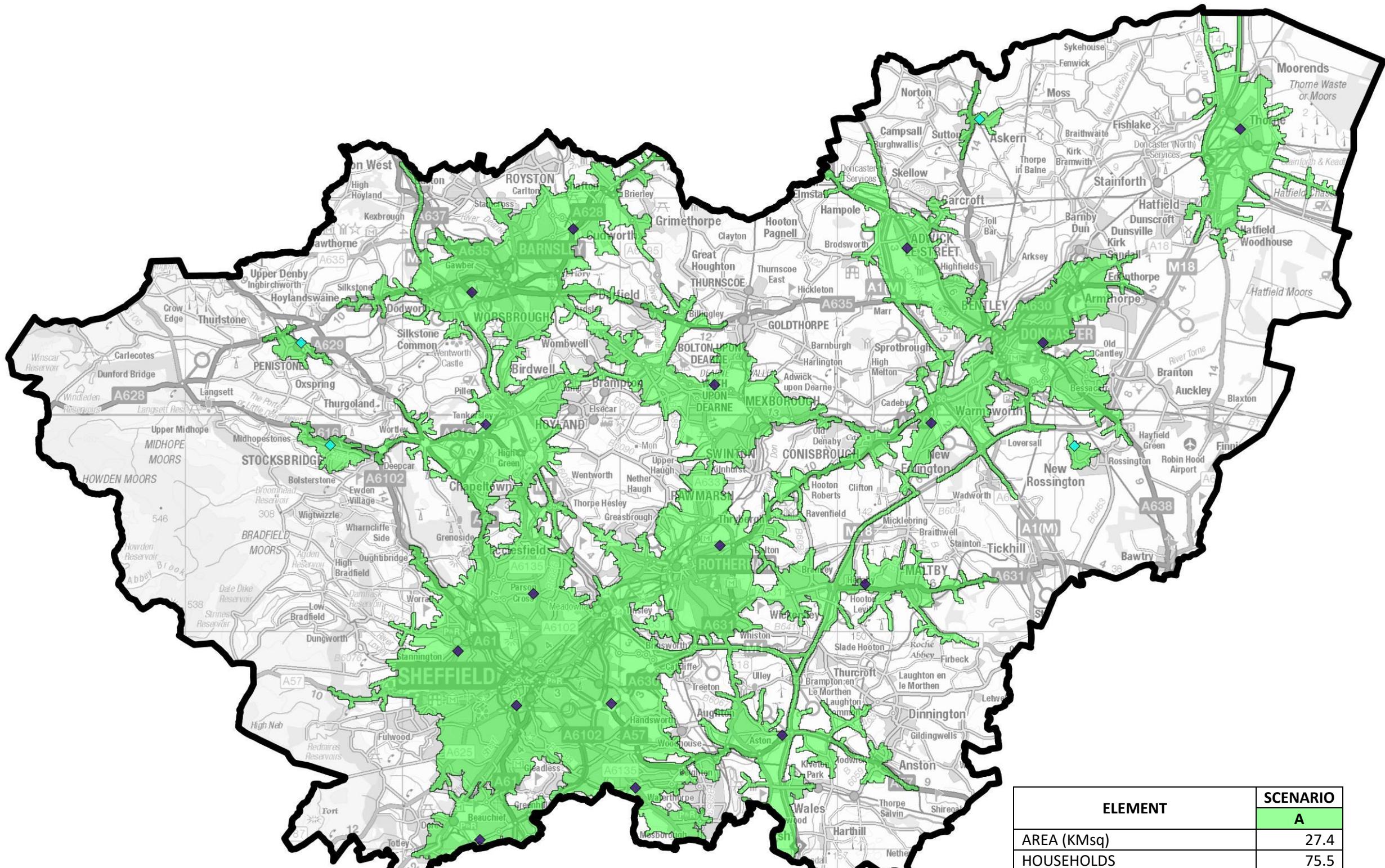
Appendix E



MOBILISATION ATTRIBUTE: ROPE RESCUE DENSITY MAP (2015 – 2017)

Appendix F

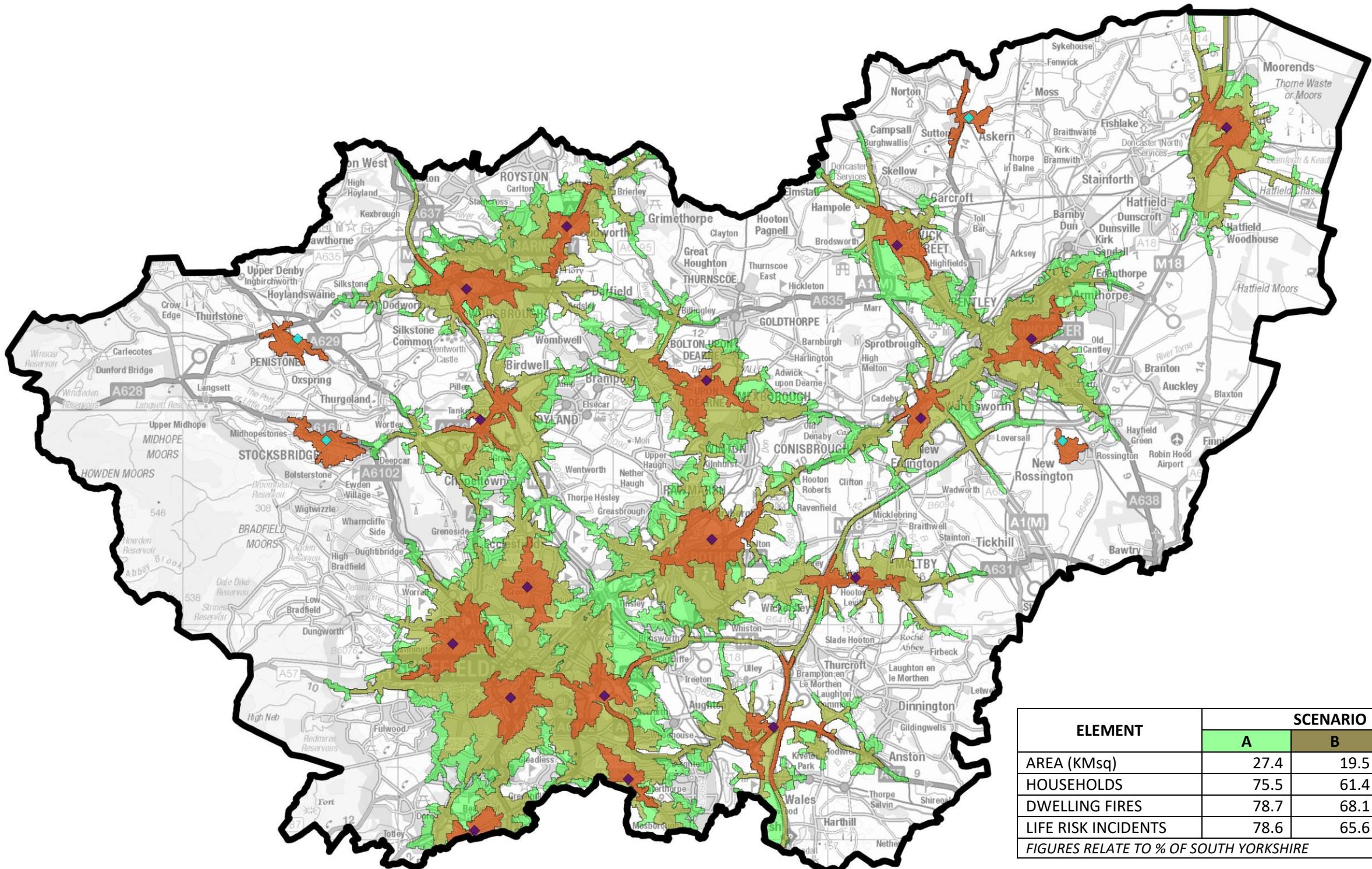


SCENARIO A (BASE CASE)**Appendix G**

ELEMENT	SCENARIO
	A
AREA (KMsq)	27.4
HOUSEHOLDS	75.5
DWELLING FIRES	78.7
LIFE RISK INCIDENTS	78.6

FIGURES RELATE TO % OF SOUTH YORKSHIRE



SCENARIO A (BASE CASE)**SCENARIO B (DAY STAFFING WHOLETIME; NIGHT WITH 1 MINUTE DELAY)****SCENARIO C (DAY STAFFING WHOLETIME; NIGHT WITH 3 MINUTE DELAY)****Appendix H**

PLEASE NOTE: The document containing the analysis is held by the Data Team. This can be requested by emailing datarequests@syfire.gov.uk



OPTION 4
Appendix J

Future Position				Pumps Available			Pumps per District	
A				WT Day Pumps	WT Night Pumps	On Call Pumps	Day	Night
District	Station	Duty System	Personnel	S PAR 224 36 S CEN 224 44 S RIV 224 24 S LOW DS 12 1 S BIR 224/RDS 24 1	1	1	7	6
D	DON	224	44		2	2		
D	ADW	224	24		1	1		
D	THO	DC/On Call	12		1	1		
D	EDL	224	24		1	1		
D	ROS	On Call	0			1		
D	ASK	On Call	0			1		
R	RHO	224	44	2	1		6	5
R	AST	DS	12	1	1			
R	DEA	224/RDS	24	1	1	1		
R	MAL	224	24	1	1			
B	BAR	224	44	2	1			
B	CUD	DS/SIU	12	1	1		7	6
B	ELM	224	24	1	1			
B	TAN	224	36	1	1			
B	STO	On Call	0			1		
B	PEN	On Call	0			1		
		ORT	40					
Total			504	21	18	7	28	25

Future Position				Pumps Available			Pumps per District	
B				WT Day Pumps	WT Night Pumps	On Call Pumps	Day	Night
District	Station	Duty System	Personnel	S PAR 224 36 S CEN 224 44 S RIV 224 24 S LOW DC 12 1 S BIR 224/RDS 24 1	1	1	7	7
D	DON	224	44		2	2		
D	ADW	224	24		1	1		
D	THO	DC/On Call	12		1	1		
D	EDL	224	24		1	1		
D	ROS	On Call	0			1		
D	ASK	On Call	0			1		
R	RHO	224	44	2	1		6	5
R	AST	DS	12	1	1			
R	DEA	224/RDS	24	1	1	1		
R	MAL	224	24	1	1			
B	BAR	224	44	2	1			
B	CUD	DS/SIU	12	1	1		7	6
B	ELM	224	24	1	1			
B	TAN	224	36	1	1			
B	STO	On Call	0			1		
B	PEN	On Call	0			1		
		ORT	40					
Total			504	21	18	7	28	26

Future Position				Pumps Available			Pumps per District	
C				WT Day Pumps	WT Night Pumps	On Call Pumps	Day	Night
District	Station	Duty System	Personnel	S PAR 224 36 S CEN 224 44 S RIV 224 24 S LOW DC 12 1 S BIR 224/RDS 24 1	1	1	7	7
D	DON	224	44		2	2		
D	ADW	224	24		1	1		
D	THO	DC/On Call	24		1	1		
D	EDL	224	24		1	1		
D	ROS	On Call	0			1		
D	ASK	On Call	0			1		
R	RHO	224	44	2	1		6	5
R	AST	DS	12	1	1			
R	DEA	224/RDS	24	1	1	1		
R	MAL	224	24	1	1			
B	BAR	224	44	2	1			
B	CUD	DS/SIU	12	1	1		7	6
B	ELM	224	24	1	1			
B	TAN	224	36	1	1			
B	STO	On Call	0			1		
B	PEN	On Call	0			1		
		ORT	40					
Total			516	21	18	7	28	26

Future Position				Pumps Available			Pumps per District	
D				WT Day Pumps	WT Night Pumps	On Call Pumps	Day	Night
District	Station	Duty System	Personnel	S PAR 224 36 S CEN 224 44 S RIV 224 24 S LOW DS 12 1 S BIR 224/RDS 24 1	1	1	7	6
D	DON	224	44		2	1		
D	ADW	224	24		1	1		
D	THO	DS	12		1	1		
D	EDL	224	24		1	1		
D	ROS	On Call	0			1		
D	ASK	On Call	0			1		
R	RHO	224	44	2	1		6	5
R	AST	DS	12	1	1			
R	DEA	224/RDS	24	1	1	1		
R	MAL	224	24	1	1			
B	BAR	224	44	2	1		7	6
B	CUD	DS/SIU	24	1	1			
B	ELM	224	24	1	1			
B	TAN	224	36	1	1			
B	STO	On Call	0			1		
B	PEN	On Call	0			1		
		ORT	40					
Total			504	21	18	7	28	24

Future Position				Pumps Available			Pumps per District	
E				WT Day Pumps	WT Night Pumps	On Call Pumps	Day	Night
District	Station	Duty System	Personnel	S PAR 224 36 S CEN 224 44 S RIV 224 24 S LOW DS 12 1 S BIR 224/RDS 24 1	1	1	7	7
D	DON	224	44		2	2		

RIDING 5 AVAILABILITY

Appendix K

Riding 5 Availability

This report shows the percentage of time that Stations have at least 5 members of staff available (9 if a two pump station) based on sample times of 05:00, 10:00, 14:00, and 21:00 and assuming enough skills are available to staff the pumps.

NOTE: Due to Systel issues, changes in staffing levels over weekends or because of unplanned leave cannot be reflected here so should be taken as a indication of what was planned and not what staffing levels actually were.

	Total Shifts	Adwick		Aston Park		Barnsley		Birley		Central		Cudworth		Dearne		Doncaster		Edlington		Elm Lane		Löwedges		Maltby		Parkway		Rivelin		Rotherham		Tankersley		Thorne		Total	
		%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%			
January 2017	62	81%	50.00	73%	45.50	64%	39.50	70%	43.50	65%	40.00	78%	48.50	69%	42.50	72%	44.50	84%	52.00	86%	53.50	69%	43.00	77%	47.50	98%	61.00	72%	44.50	83%	51.50	100%	62.00	90%	55.50	78% 48.50	
February 2017	28	77%	47.61	95%	58.68	46%	28.79	59%	36.54	54%	33.21	69%	42.63	57%	35.43	61%	37.64	79%	49.27	61%	37.64	93%	57.57	51%	31.55	100%	62.00	55%	34.32	62%	38.20	100%	62.00	79%	48.71	70% 43.63	
March 2017	62	79%	49.00	64%	39.50	61%	38.00	65%	40.50	62%	38.50	73%	45.00	65%	40.50	65%	40.00	67%	41.50	72%	44.50	48%	30.00	66%	41.00	100%	62.00	66%	41.00	69%	42.50	100%	62.00	77%	47.50	70% 43.71	
April 2017	60	70%	43.40	92%	56.83	43%	26.35	61%	37.72	38%	23.77	63%	39.27	58%	36.17	47%	28.93	74%	45.98	50%	31.00	78%	48.57	45%	27.90	100%	62.00	53%	32.55	67%	41.33	100%	62.00	77%	47.53	66% 40.66	
May 2017	62	78%	48.50	84%	52.00	47%	29.00	58%	36.00	40%	24.50	40%	24.50	56%	35.00	38%	23.50	77%	48.00	52%	32.00	72%	44.50	34%	21.00	100%	62.00	50%	31.00	60%	37.00	100%	62.00	56%	35.00	61% 37.97	
June 2017	60	66%	40.82	64%	39.78	48%	29.97	53%	33.07	44%	27.38	38%	23.25	55%	34.10	40%	24.80	60%	37.20	45%	27.90	52%	32.03	30%	18.60	100%	62.00	43%	26.35	68%	41.85	100%	62.00	66%	40.82	57% 35.41	
July 2017	62	81%	50.00	65%	40.00	34%	21.00	49%	30.50	18%	11.00	50%	31.00	71%	44.00	30%	18.50	65%	40.50	51%	31.50	56%	34.50	30%	18.50	100%	62.00	32%	20.00	48%	30.00	97%	60.00	85%	53.00	57% 35.06	
August 2017	62	70%	43.50	23%	14.00	26%	16.00	23%	14.50	6%	4.00	44%	27.00	54%	33.50	16%	10.00	45%	28.00	27%	17.00	65%	40.50	10%	6.00	98%	61.00	20%	12.50	42%	26.00	100%	62.00	47%	29.00	42% 26.15	
September 2017	60	67%	41.33	70%	43.40	61%	37.72	68%	41.85	36%	22.22	53%	33.07	67%	41.33	43%	26.87	73%	44.95	69%	42.88	65%	40.30	52%	32.03	95%	58.90	44%	27.38	72%	44.43	100%	62.00	59%	36.68	64% 39.84	
October 2017	62	74%	46.00	68%	42.00	81%	50.50	76%	47.00	46%	28.50	80%	49.50	79%	49.00	48%	29.50	79%	49.00	69%	43.00	71%	44.00	76%	47.00	100%	62.00	65%	40.50	89%	55.00	100%	62.00	77%	48.00	75% 46.62	
November 2017	60	79%	49.08	48%	29.97	65%	40.30	77%	47.53	39%	24.28	74%	45.98	72%	44.43	46%	28.42	77%	47.53	70%	43.40	52%	32.03	59%	36.68	97%	59.93	55%	34.10	78%	48.57	100%	62.00	82%	50.63	69% 42.64	
December 2017	62	66%	41.00	66%	41.00	45%	28.00	63%	39.00	31%	19.00	66%	41.00	72%	44.50	33%	20.50	71%	44.00	52%	32.50	71%	44.00	37%	23.00	98%	60.50	35%	21.50	53%	33.00	100%	62.00	85%	53.00	61% 38.09	
Average 2017	59	74%	45.85	68%	41.89	52%	32.09	60%	37.31	40%	24.70	61%	37.56	65%	40.04	45%	27.76	71%	43.99	59%	36.40	66%	40.92	47%	29.23	99%	61.28	49%	30.48	66%	40.78	100%	61.83	73%	45.45	64% 39.86	
January 2018	62	85%	53.00	95%	59.00	84%	52.00	94%	58.00	68%	42.00	86%	53.50	77%	48.00	67%	41.50	100%	62.00	85%	52.50	98%	61.00	68%	42.00	98%	60.50	76%	47.00	92%	57.00	100%	62.00	87%	54.00	86% 53.24	
February 2018	28	82%	50.93	80%	49.82	70%	43.18	86%	53.14	46%	28.79	86%	53.14	80%	49.82	55%	34.32	91%	56.46	81%	50.38	81%	50.38	70%	43.18	95%	58.68	66%	40.96	80%	49.82	100%	62.00	98%	60.89	79% 49.17	
March 2018	62	82%	51.00	79%	49.00	71%	44.00	88%	54.50	57%	35.50	82%	51.00	73%	45.00	60%	37.00	97%	60.00	76%	47.00	85%	52.50	69%	43.00	98%	61.00	69%	42.50	83%	51.50	100%	62.00	92%	57.00	80% 49.62	
April 2018	60	78%	48.57	97%	59.93	77%	47.53	83%	51.67	53%	33.07	87%	53.73	77%	47.53	61%	37.72	98%	60.97	77%	47.53	77%	47.53	72%	44.43	97%	59.93	65%	40.30	86%	53.22	100%	62.00	88%	54.77	81% 50.03	
May 2018	62	82%	51.00	85%	53.00	56%	35.00	87%	54.00	48%	30.00	81%	50.50	79%	49.00	42%	26.00	90%	55.50	76%	47.00	85%	52.50	66%	41.00	98%	61.00	52%	32.00	65%	40.50	98%	60.50	87%	54.00	75% 46.62	
June 2018	60	88%	54.77	62%	38.23	55%	34.10	65%	40.30	41%	25.32	78%	48.05	70%	43.40	38%	23.77	93%	57.87	59%	36.68	64%	39.78	83%	51.15	96%	59.42	58%	36.17	67%	41.33	100%	6				