Integrated Risk Management Plan 2020-2024

Review of Response Plans following Consultation

June 2020

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Contents

Replace the third aerial appliance with a high reach fire engine

Background

1.1. Fire and Rescue Services use aerial appliances (aerials) to tackle a range of emergencies. The aerials come in various forms such as a Hydraulic Platform or Aerial Ladder Platform (ALP). Cheshire Fire and Rescue Service (CFRS) has three aerials, based at Chester, Lymm and Macclesfield.

1.2. Aerials allow firefighters to work at heights that cannot be accessed using the ladders carried on standard fire engines, but most commonly, they are used as a 'water tower' to apply a large jet of water onto a fire from above. Whilst aerials are critical in resolving some operational incidents, their usage is typically infrequent. In an average year an aerial is used on 47 occasions across Cheshire. This workload is shared between the three aerials. When aerials are used they are not normally used immediately after arriving on scene; and will respond to support standard fire engines that are already in attendance.

1.3. Two of the aerials were replaced in 2016/17 with brand new Aerial Ladder Platforms (ALPs). The new ALPs (pictured below) included the latest available technology and each cost £588k. They are based at Chester and Lymm but they respond to emergencies across the whole of Cheshire, and beyond.

1.4. The third aerial based at Macclesfield was not replaced back in 2017, even though it was 15 years old and in need of replacement. This was because, at that time, following extensive review and consultation, it was recommended that the number of aerials be reduced from three to two. This was on the basis that two aerials are sufficient to meet risk and demand. The Macclesfield aerial

is used least of all; an average of 4 occasions per year.

1.5. However, at its meeting in February 2018, the Authority decided to defer the decision to reduce provision to two ALPs pending a further review. The scope of the review was to assess the impact of introducing the two brand new ALPs and moving one of them from Stockton Heath to the new fire station at Lymm. The review also considered alternative options and emerging technology.

1.6. The review is complete and has reaffirmed that the move from three to two aerials is appropriate. Furthermore, since 2017, the cost of a replacing the third aerial has increased from £588k to around £750k. The Service can obtain additional aerials from neighbouring fire and rescue services through existing mutual aid agreements.

1.7. Nonetheless, during the review the Service identified a cost effective solution that would maintain the provision of three aerials within Cheshire. Namely a High Reach Fire Engine (HRET). The HRET does not have all of the capability of an ALP but it would bring new technology and capabilities that we do not currently have. It can also fulfil the function of a standard fire engine, whilst also providing aerial capabilities, including an improved water tower capability and the ability to pierce through materials to apply water and extinguish the fire. This will be particularly useful when firefighting in complex buildings and roof spaces and will improve operational effectiveness and firefighter safety.

1.8. The following section includes an overview of the various options that were considered, along with further information on matters arising through the consultation.

Assessment of Options

1.9. Options considered:

Option A - Maintain three aerials by replacing the aerial at Macclesfield with a new vehicle, similar or identical to the ALPs at Chester and Lymm.

Option B - Remove the Macclesfield aerial and begin operating a two aerial model, retaining the ALPs at Chester and Lymm.

Option C - Implement Option B then reassess in 12 months to consider the aerial capability and locations.

Option D - Remove the Macclesfield aerial but replace one of the two fire engines at Macclesfield with a new ‘High Reach Fire Engine’ (HRFE).

1.10. Analysis focused primarily on risk and demand, including the frequency of mobilisations and utilisation of each aerial. During the two-year period from October 2017 to September 2019 the three aerials were used at 94 emergencies.

1.11. **Table 1** below provides a breakdown of use during the two-year period. Note that on most occasions the aerial is used as a water tower, to apply water from above the fire.

Table 1 – Aerial Utilisation 2017-19

Appliance	E09A1	E19A1	E28A1	Total
Usage	Chester	Macc.	Lymm	
Assess Fire from Above	3	0	2	5
Assist Police	1	0	1	2
Chimney Fire	8	4	3	15
Dangerous Structure	1	0	0	1
Launching Boat	1	0	8	9
Lighting	1	1	0	2
Rescue of Animal	1	0	3	4
Rescue of Person (Fire)	0	0	0	0
Rescue of Person (Non-Fire)	0	0	6	6
Roof Fire - Access in Cage	3	0	2	5
Water Tower (apply water from above)	16	3	26	45
Total Uses	**35**	**8**	**51**	**94**

1.12. These demand levels, particularly in relation to the Macclesfield aerial, support **Option B** (removal of the Macclesfield aerial). With two ALPs the Service would be able to meet risk and demand, and respond to all incidents in good time. However, in considering the options the Service was mindful of the need for resilience and the opportunity to bring in new technologies that could enhance our current capabilities and improve firefighter safety.

1.13. **Resilience** - a third aerial would support resilience. For example, the Service aims to have an ALP in the city of Chester at all times due to the unique heritage risk. If the Chester ALP is in use, the ALP from Lymm is temporarily relocated to Chester. A third aerial would allow the service to provide improved coverage and further support resilience.

1.14. **New Technology** - a third aerial would allow the opportunity to procure new technology. Most recently, a number of Fire and Rescue Services have begun

to invest in new 'High Reach Extending Turrets' (HRET). These are aerial booms fitted on top of a standard fire engine. Effectively this results in a 'High Reach' fire engine (HRFE). Examples pictured below.

1.15. HRFEs provide an enhanced 'water tower' capability and are quicker to deploy than the current ALPs. They could be used at half of the aerial deployments listed in **Table 1** (Page 5), which would free up the ALPs to cover other risks. A HRFE would also provide the added benefit of being able to pierce through buildings and roofing at height; a capability we do not currently have. Most significantly, the HRFE can perform the function of a standard fire engine so is effectively two vehicles in one. This is reflected in the cost, but the HRFE is still much cheaper than an ALP.

[1]

1.16. The cost of a HRFE is c. £550k and the cost of a standard fire engine is £250k. The HRFE can perform both roles so after deducting the cost of the standard fire engine the net cost is £300k*. The estimated costs of the four options is included below.

Table 2 – Option Cost Appraisal

Option A (3 ALP's)	£750k
Option B (2 ALP's)	£0k
Option C (2 ALP's, review in 12 months)	£0k
Option D (2 ALP's + 1 HRFE)	£300k*

[1] *(£550k - £250k = £300k).

Considerations

1.17. The HRFE does not have all of the capabilities of the ALP; notably it cannot be used to rescue people from height. Rescues of people are broken down into two categories, rescues at fires and non-fire **Table 1** (Page 5). As can be seen there were zero rescues from fires over the two-year reference period. The review team reviewed incidents over the last decade and could not find a single occasion when an aerial was used to rescue a person from a fire. Rescue at non-fires do occur, on average of two or three occasions per year. For example, a rescue of a person who has been injured at height and cannot safely get to the ground. The ALPs at Lymm and Chester will still be available for such rescues.

1.18. Feedback from consultees and Greenstreet Berman's independent report highlights that Macclesfield may not be the optimum location for the HRFE. Instead, a more central/south east location may offer improved efficiency and effectiveness. Therefore, in common with all projects, the Service will conduct a post implementation review and will make recommendations to the Authority as required. The review will form part of the wider "Specialist Response Vehicle" review detailed within the IRMP 2020-2024.

Summary

1.19.

- Replacement of the Macclesfield aerial with an ALP costing £750k is not justified.
- The preferred option is to replace one of the fire engines at Macclesfield with a High Reach Fire Engine (HRFE), net cost £300k.
- A HRFE can perform many of the functions of an ALP and could be used instead at around 50% of emergencies requiring an aerial.
- The deployment of the HRFE will mean the Chester and Lymm ALPs can remain available to provide cover and a rescue capability.
- The HRFE will provide new technology for firefighters with an enhanced capability to tackle fires, particularly in complex buildings and roof spaces, which will improve effectiveness and firefighter safety.
- The HRFE project will include a post implementation review, which will specifically assess the efficiency and effectiveness of it being located at Macclesfield.

Recommendation

1.20. **Option D** - Remove the Macclesfield aerial but replace one of the two fire engines at Macclesfield with a new 'High Reach Fire Engine'. (HRFE).

Introduce a Day Crewing System at Wilmslow Fire Station

Background

2.1. Since 2010 Wilmslow fire station has operated using nucleus crewing, which uses a combination of both wholetime and on-call staff to maintain availability of the fire engine 24/7. Wholetime (full time) staff work at the station between 7am and 7pm and they respond to emergencies within 90 seconds of notification. Overnight cover (7pm to 7am) is provided by on-call staff, who are part-time firefighters that live or work near to the fire station. They are alerted by pager and then travel to the station to respond to emergencies within five minutes of notification. On average, the on-call firefighter response is three and a half minutes slower than for wholetime.

2.2. Recruitment and retention of on-call firefighters is challenging in Wilmslow. Currently staff numbers are low which affects fire engine availability. During 2019, the on-call team were able to maintain availability of the fire engine for an average of 19% of the time between 7pm-7am. Through the use of surplus firefighters from other locations, overtime and standby moves we were able to ensure availability of a fire engine in Wilmslow 99% of the time.

2.3. This crewing model has ensured that the fire engine is available, whilst keeping spend within the agreed station budget, but it relies on surplus staff being available elsewhere and a willingness for staff to work overtime.

Assessment of Options

2.4. The Authority commissioned a review to explore alternative crewing options for Wilmslow and identify the optimum solution.

Option A - Convert it to Wholetime duty system 24/7

Option B - No change - retain the current arrangements.

Option C - Convert it to Day Crewing duty system.

Option D - Maintain current daytime crew (7am-7pm) but remove overnight crewing (7pm to 7am) and rely on neighbouring fire engines to respond into Wilmslow.

Option E - Convert it to On-Call duty system 24/7

2.5. As an integral part of the review, the Service completed an assessment of the current and emerging risks and activity levels in the Wilmslow area. The intention of this analysis was to understand if there has been any significant change in risk and/or demand in the area.

Considerations

2.6. In common with the rest of Cheshire, the population, number of dwellings and road users have all increased in the Wilmslow area. The number of emergencies in the Wilmslow area has risen slightly over the last eight years compared with a 5% decrease in emergencies across Cheshire. We now attend an average of 36 additional incidents per year in Wilmslow. Many of these are attributed to the introduction of a new scheme where the Service responds to 'gain entry' to premises for North West Ambulance Service so they can swiftly treat casualties. Other than this increase, the assessment did not highlight any notable issues or concerns relevant to the operational provision in the area.

2.7. When considering changes to the emergency response crewing arrangements, the Service used Phoenix software to assess the impact of different models on response times and the CFRS response standard. This standard is to attend life risk incidents (e.g. house fires and road traffic collisions) within 10 minutes on 80% of occasions. This modelling is presented in **Table 3** below for each of the options and includes the impact on salary costs for each scenario.

Table 3 - Phoenix Simulation[1] Wilmslow Fire Engine Crewing Options

OPTION		Attendance Time (Ave.)	Response Standard[3]	Salary Cost (Annual)
A	Convert to Wholetime	6m 09s (-1m 02s)	93.46%	+223k
B	No change	7m 11s	85.62%	£0k
C	Convert to Day Crewing	7m 01s (-10s)	90.20%	-£183k[4]
D	Remove overnight crewing	8m 05s (+54s)	68.63%	-£162k
E	Convert to On-Call, 24/7[2]	10m 15s (+3m 4s)	43.79%	-£480k

[1]Phoenix simulation tool uses actual historical emergencies data to predict outcomes. Actual outcomes may differ.
[2]Assumes on-call availability of 19% based on current performance
[3]Percentage of life risk incidents in the Wilmslow area to which the first fire engine would arrive within 10 minutes
[4]Would require the Service to provide subsidised living accommodation for the firefighters

2.8. **Option A** – This option would improve average response times by 1m 02s but it would cost around £223k more per year than the current system. This cost is not justifiable when considering risk, demand and balance of resources. **Table 4** shows the average annual mobilisations (operational demand) for fire engines crewed by each duty system type.

Table 4 - Average annual mobilisations in 2019 for fire engines crewed by each duty system.

Duty System	Operational Demand
Wholetime 24/7	**755**
Day Crewing / Nucleus	**498**
On-Call	**166**

2.9. In comparison, the Wilmslow fire engine was mobilised on **451** occasions during 2019, placing it below average for all duty systems except on-call.

2.10. Some consultation feedback specifically called for a wholetime crewing model at Wilmslow to meet the risks presented by Manchester Airport. Response to an airport emergency is provided jointly by CFRS, Greater Manchester Fire and Rescue Service and the airport's own fire service. Wholetime crewing is therefore not essential to providing this response which would continue to be provided under Options B or C.

2.11. **Option B –** Retain current arrangements. Whilst this is effective, it depends on having surplus staff elsewhere and a willingness for staff to work overtime.

2.12. **Option C** – Convert to Day Crewing. This option is in place at other stations in Cheshire and has proven to be efficient and effective, but it would require suitable living accommodation adjacent to the fire station for the firefighters.

2.13. Day Crewing provides guaranteed 100% availability of the fire engine 24/7 without the need to bring in supplementary resources. The annual salary cost is £183k less than the current nucleus duty system. These savings are sufficient to cover the cost of the long-term loan for the capital investment in living accommodation. Once the loan is repaid, the Authority will own the assets and will benefit from lower annual salary costs.

2.14. A potential site has been identified for the living accommodation through a collaboration with Cheshire Constabulary but this will take time to implement and is not guaranteed. The interim arrangement and fall-back position will be to maintain, strengthen and adapt the current model.

2.15. Day Crewing would affect response times. The average fire engine response time will be slightly faster, but it will vary across the week. Weekend daytimes are predicted to be two minutes slower whilst response times overnight should be one and a half minutes faster due to the proximity of the living accommodation.

2.16. **Option D** – Remove overnight cover. This would worsen response times. Overnight cover for the first fire engine into Wilmslow would be provided by neighbouring fire stations, predominantly Greater Manchester Fire and Rescue Service because they have several fire engines, which are closer than the next nearest Cheshire fire engines. Whilst our mutual aid arrangements and partnership at North West Fire Control would facilitate this option, the Service would prefer to continue to base a fire engine in Wilmslow.

2.17. **Option E** - Converting to on-call would decrease response times and reduce performance. Given the historical challenges in recruiting on-call Firefighters at Wilmslow, the availability of a fully on-call fire engine is likely to be poor. Furthermore, the removal of wholetime firefighters would reduce capacity to deliver prevention activities in the area.

Summary

2.18.

- The preferred option is to convert to Day Crewing
- It provides guaranteed 100% availability of the fire engine 24/7 without the need to recruit and retain on-call firefighters or bring in supplementary resources.
- The salary costs are £183k less than the current system.
- The savings will be used to fund the capital investment loan.
- After the loan is repaid, the Authority will own the assets and benefit from lower annual salary costs.
- Overall, the fire engine response times will be slightly quicker, though response times will vary throughout the week.
- Provides a sustainable and proportionate level of cover for the risk and activity levels in the area.

- The Authority will need to secure suitable living accommodation adjacent to the fire station which will take time and is not guaranteed.
- The interim arrangement and fall-back position will be to maintain, strengthen and adapt the current model.

Recommendation

2.19 **Option C** - Convert Wilmslow to a Day Crewing duty system

Relocate Ellesmere Port's second fire engine to Powey Lane

Background

3.1. In 2014 the Authority embarked upon a five-year programme of change (called the Emergency Response Programme). The changes aimed to improve the efficiency and effectiveness of the Service and achieve a balanced budget. This included proposals to change the crewing arrangements for the second fire engine at Ellesmere Port from wholetime to on-call from 2018.

3.2. However, in February 2018, following a review and public consultation, the Authority resolved that:

"Officers be instructed to determine if the second fire engine at Ellesmere Port could be relocated to another area or station in order to satisfy the sustainability question and value for money challenge presented by the review."

3.3. The Service subsequently carried out a review in 2019 in line with the above instruction. The review was conducted on the basis that the fire engine would, regardless of its location, continue to be crewed on a wholetime basis.

3.4. It is important to note that the other elements of the Emergency Response Programme continued as originally planned. This included the opening of a new fire station at Powey Lane (near Mollington) in 2017 and the relocation of one of the two fire engines from Chester to this location, in anticipation of the change at Ellesmere Port.

Assessment of Options

3.5. Options Considered:

Option A - Retain the fire engine in its current location at Ellesmere Port.

Option B - Relocate the fire engine to another station that does not currently have a wholetime fire engine

Option C - Relocate the fire engine to another station that already has a wholetime fire engine

3.6. As an integral part of the review, the Service completed an assessment of the current and emerging risks and demand. The intention of the assessment was to provide assurance that there has not been any significant change.

3.7. The assessment did not highlight any notable issues or concerns. For example, in common with the rest of Cheshire, the population, number of dwellings, non-domestic premises and road vehicles/users have all increased in Ellesmere

Port, whilst the number of emergency incidents in the area has decreased.

3.8. When considering changes to the emergency response crewing arrangements, the Service used Phoenix software to assess the impact of different models on response times and the CFRS response standard. This standard is to attend life risk incidents (e.g. house fires and road traffic collisions) within ten minutes on 80% of occasions.

3.9. The Service modelled each of the options above and compared the impact including the Cheshire-wide average for first and second fire engine response times to emergencies.

3.10. **Option A – Retain the fire engine in its current location at Ellesmere Port**. This option did not prove efficient or effective when compared with other options. Nor did it provide value for money. It was also counter to the Authority decision at its meeting in February 2018. At that meeting a motion to keep two wholetime fire engines at Ellesmere Port was not supported by the Authority.

3.11. **Option B – Relocate the fire engine to another station that does not currently have a wholetime fire engine**. The Service identified that the optimum locations for the fire engine to improve first fire engine average response times would be Holmes Chapel or Middlewich, both on-call fire stations. Response times in those station areas would improve by 4m 20s and 3m 39s respectively.

3.12. **Option C - Relocate the fire engine to another station that already has a wholetime fire engine**. When assessed against improving second fire engine response times, relocating the fire engine to Chester would deliver the most benefit. The average response time for the second fire engine arriving at emergencies in the Chester area would improve by a predicted 4m 49s. This was the biggest improvement for any location across Cheshire.

3.13. The findings demonstrate that **Options B** and **C** would deliver improvements.

3.14. In determining the optimum solution, the Service was mindful of the instruction from the Authority to consider value for money and sustainability.

3.15. The annual salary costs for operating a wholetime fire engine are £865k. Whilst relocating the wholetime fire engine from Ellesmere Port to on-call stations at Holmes Chapel or Middlewich would improve response times in these localities, the risks and number of emergencies in these areas is relatively low, which would result in very low activity levels when compared with other

wholetime fire engines.

3.16. The presence of the wholetime fire engine in these areas would mean that the local on-call fire engine would suffer a significant reduction in call volumes and is unlikely to be sustainable, in the long-term reducing the number of fire engines in those areas from two to one.

3.17. Conversely, having two fire engines on a wholetime station will be sustainable and would mean that one of the fire engines can be released to cover and support other areas when required, such as to facilitate operational training courses. The second fire engine at Ellesmere Port is currently used for this purpose around 9% of the time.

3.18. Finally, the community size and demographics in Holmes Chapel and Middlewich would limit the amount of risk based prevention and protection activity that could be carried out by a wholetime crew based at these locations. The crew would provide more benefit in urban areas where there is for example, significantly more prevention work, including targeted safe and well addresses.

3.19. **Table 5** provides a summary of the population, dwellings and activity levels in each of the station areas highlighted in **Options B** and **C** above.

Table 5 - Comparison between three locations (2018/19)

	Holmes Chapel	Middlewich	Chester
Population	12,604	18,053	98,313
Dwellings	5698	6,601	45,980
Emergency incidents in station area	93	127	801

3.20. In summary, the above assessment determined that both **Options B and C** allow the second fire engine to add benefit elsewhere when compared to its current location.

Considerations

3.21. In 2019, on 276 occasions the second fire engine at Ellesmere Port was required to move to another station to provide operational cover, for example if the Chester fire engine was at an incident. 71% of these were to cover the Chester area. If Chester has two fire engines this demand will reduce significantly.

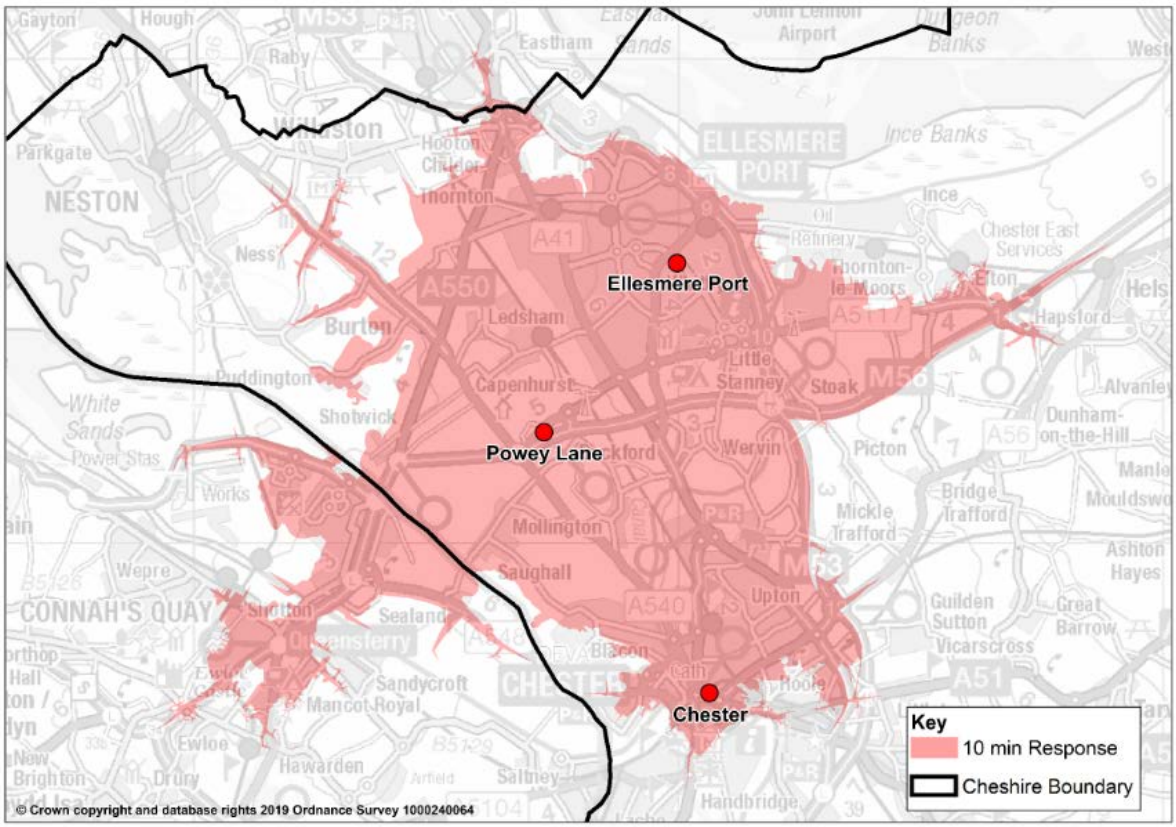
3.22. If Ellesmere Port has only one fire engine, its second fire engine response will be provided by Powey Lane, which is 3.3 miles from the Ellesmere Port fire station.

3.23. If **Option C** is implemented the resources across the three wholetime stations in Cheshire West and Chester will be balanced optimally, whilst maintaining the operational improvements achieved from the Authority's £3.6m capital investment in the new station at Powey Lane.

3.24. Powey Lane opened in 2017 and its station area covers a geographical footprint of around 115 square kilometres. Since opening, response times to emergencies within its station footprint have improved by around two minutes on average. Improvement are greater in some areas, for example, response times are three minutes faster in Neston, and Powey Lane is the first fire engine to arrive at eight out ten emergencies in this area. Powey Lane's fire engine is strategically placed to support neighbouring areas including Chester and Ellesmere Port, and often arrives at emergencies before the local fire engine. Moreover, Powey Lane houses numerous specialist operational resources including our High Volume Pump, bulk foam stocks and Environmental Protection Unit. These are all available to serve locally and across the whole of Cheshire.

3.25. Currently the resources are not balanced which means slower response times when a second fire engine is required in Chester. **Fig. A** shows that the fire engine from Powey Lane is able to reach all of the town of Ellesmere Port within 10 minutes yet it can only cover around half of the city of Chester. Effectively, this means that the current provision allows three fire engines to attend all of the Ellesmere Port area within 10 minutes, yet parts of Chester can only be reached in 10 minutes by one fire engine.

Fig. A - 10-minute response reach from Powey Lane fire station.



3.26. This is not sustainable when you consider that Chester has the most risks of the three station areas. It has the largest population, number of dwellings, non-domestic (business premises), road traffic collisions (RTCs), and number of emergencies requiring two or more fire engines (shown in **Table 6**). In addition, 42% of Cheshire's Grade 1 and Grade 2* listed buildings are located in Chester (a total of 206, compared to two in Ellesmere Port).

Table 6 - Comparison of the three stations (2018/19)

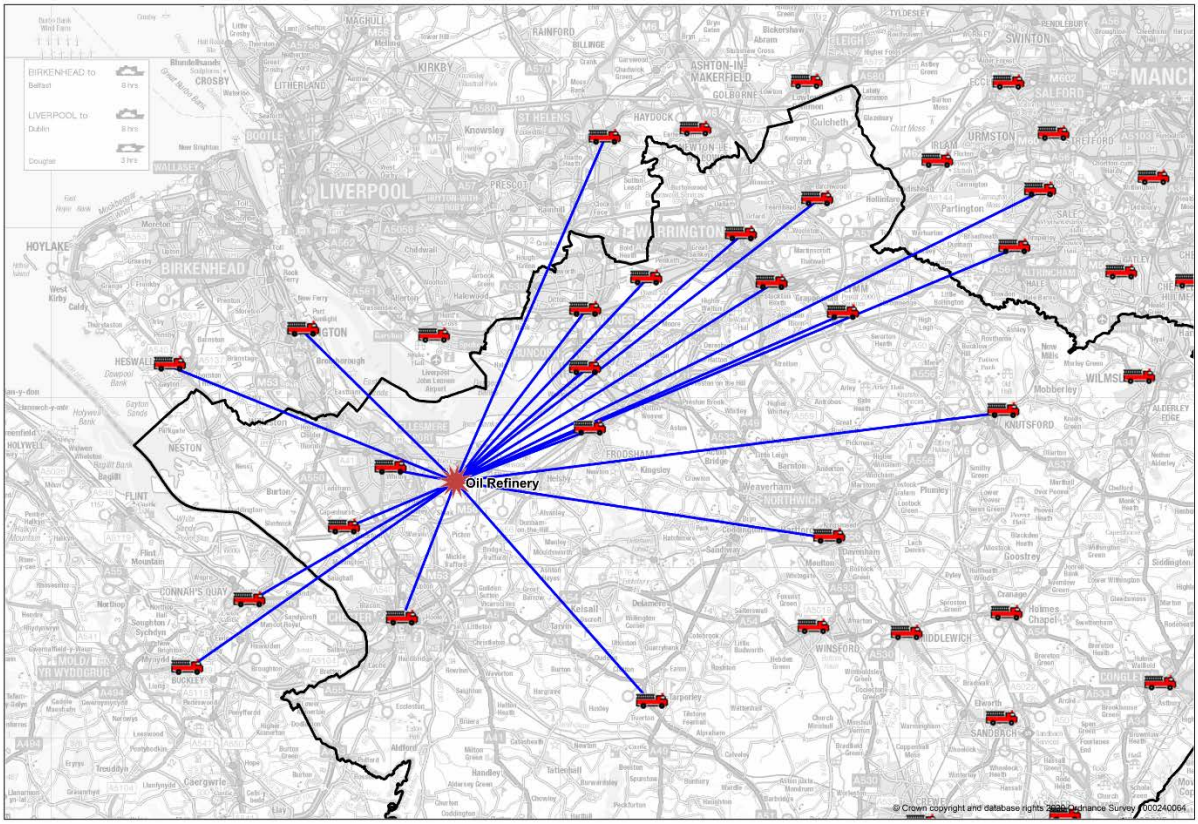
	Powey Lane	Ellesmere Port	Chester
Population	**30,981**	**60,969**	**98,313**
Dwellings	**13,216**	**28,658**	**45,980**
Emergencies requiring two or more fire engines (per year average)	**47**	**93**	**122**

3.27. The only risk area that is greater in Ellesmere Port is that it has a higher number of Control of Major Accident Hazard (COMAH) sites; seven in total.

3.28. COMAH sites carry some of the highest risks of any sites in Cheshire but they are very safe. This is because they are heavily regulated and work to the highest safety standards. Some of the sites employ their own emergency response teams, including firefighters. The result is that they have extremely low number of accidents and emergencies. During the last five years, the Service has attended only one fire at a COMAH site in Ellesmere Port station area. The fire involved a tree in the outdoor grounds.

3.29. Despite the safety record, there is no place for complacency. The Service prepares meticulously for major emergencies, working with the high-risk sites to develop plans and partaking in exercises, including those delivered through the Cheshire Resilience Forum. If a major incident does occur at a COMAH site, it will require dozens of fire engines and many specialist resources, which will come from all over Cheshire and beyond. Below is an example of response to a major incident at Essar Oil Refinery in Stanlow.

Fig. B – Major Incident Response



3.30. The number of fire engines based at Ellesmere Port fire station has negligible impact on the overall response. Moreover, the relocation of Ellesmere Port's second fire engine will not change the overall number of fire engines in Cheshire, nor would it change the Services capacity to respond to major incidents.

3.31. Implementation of **Option C** would maintain the current four fire engines across the Chester and Ellesmere Port areas whilst balancing out provision and response times across the three stations (**Fig. C)**. It would mean that Ellesmere Port and Chester each have two fire engines covering their area.

3.32. Fig. C – Fire engine locations following implementation of option C

3.33. **Table 7** (page 20) shows the results from Phoenix modelling, including the impact on response times across the three station areas.

3.34. Response times across the three stations would be balanced if two fire engines were located at Chester. The average second fire engine response times in Ellesmere Port would increase by a predicted 2m 23s but would still be quicker than the Cheshire average and would be the third fastest of any town in Cheshire. Additionally, Powey Lane would provide a response to all parts of Ellesmere Port within 10 minutes, which is not currently possible for all parts of Chester.

Table 7 - First and Second fire engine response times in each station area compared with the Cheshire average

	Ellesmere Port	Chester	Powey Lane	Cheshire Average (Wholetime)
First Fire Engine	5m 26s	6m 46s	8m 48s	7m 45s
Second Fire Engine (Two fire engines at Ellesmere Port)	5m 36s	11m 47s	10m 45s	10m 21s
Second Fire Engine (Two fire engines at Chester)	7m 54s (+2m 23s)	6m 58s (-4m 49s)	10m 45s (0m 0s)	10m 06s (-0m 15s)

3.35. The second fire engine response time in Chester would improve by 4m 49s if a second fire engine was located there.

3.36. The location of the second fire engine will not change the response time for the first fire engine to the three areas. Most emergencies, roughly eight out ten, require only one fire engine.

3.37. There are no cost implications. The crewing costs will not change because there will be no change to the number of wholetime fire engines.

Summary

3.38. **Option B**; relocating the fire engine to Holmes Chapel or Middlewich on-call fire stations would not provide value for money and is unlikely to be sustainable. It would also affect capacity to facilitate standbys, operational training and deliver risk based prevention and protection activities.

3.39. **Option C**; locating two fire engines at Chester offers the greatest improvement to the average second fire engine response times in both the locality and Cheshire-wide and is recommended.

3.40. The risks and operational demands are greater in Chester than Ellesmere Port, hence it makes sense to have two fire engines at Chester.

3.41. Average second fire engine response times in Chester would improve by a predicted 4m 49s whilst maintaining excellent response times in Ellesmere Port.

3.42. Two fire engines, one based at Ellesmere Port (Wellington Road) and one at Powey Lane (located 3.3 miles south of Wellington Road) will continue to cover Ellesmere Port area.

3.43. Second fire engine response times into Ellesmere Port would be slower than present but would still be the third fastest of any town across the whole of Cheshire.

3.44. Two fire engines will arrive to emergencies in Ellesmere Port within eight minutes on average.

3.45. The total number of fire engines will not change, nor will capacity to respond to major incidents. Capacity to respond to major incidents has improved since the specialist resources were re-located to Powey Lane.

3.46. The benefits from investment in Powey Lane's fire station would continue. This includes provision of specialist operational resources and faster response times across Cheshire West and Chester.

3.47. Powey Lane's fire engine can respond to the whole of Ellesmere Port within 10 minutes and is quicker than Ellesmere Port's fire engines into many areas, including Neston.

Recommendation

3.48. **Option C** - Relocate the fire engine to another station that already has a Wholetime fire engine, as follows:

- Relocate Ellesmere Port's second fire engine to Powey Lane.
- This will facilitate the return of Chester's second fire engine from Powey Lane to its original pre 2017 location at Chester.
- Therefore, two fire engines will be based at Chester, one at Ellesmere Port and one at Powey Lane.

Expand our response to road traffic collisions

Background

4.1. CFRS responds to road traffic collisions (RTCs) to rescue people and help to save lives. In recent years the number of fatal road traffic collisions has increased in Cheshire. There were 46 deaths in 2018, twice as many as the previous year. Within its draft IRMP the Authority sets out a two fold response to this risk. Firstly, it proposes to increase its prevention activities and partnership work relating to road safety with the aim of preventing road accidents. Secondly, it proposes to improve its operational response to RTCs by introducing a fleet of Rapid Response Rescue Units (RRRU) across all of its on-call fire stations.

4.2. CFRS has operated two RRRU since 2009; these are located at Holmes Chapel and Sandbach (pictured below). The locations were chosen due to the volume of RTCs in these areas and their proximity to the motorway network. The RRRU provide a nimble vehicle and faster response. They have proven to be efficient and effective. They have been mobilised on 377 occasions during the last eleven years. Expansion of RRRU provision into other areas will improve operational availability and response times. The RRRU will be crewed by on-call firefighters.

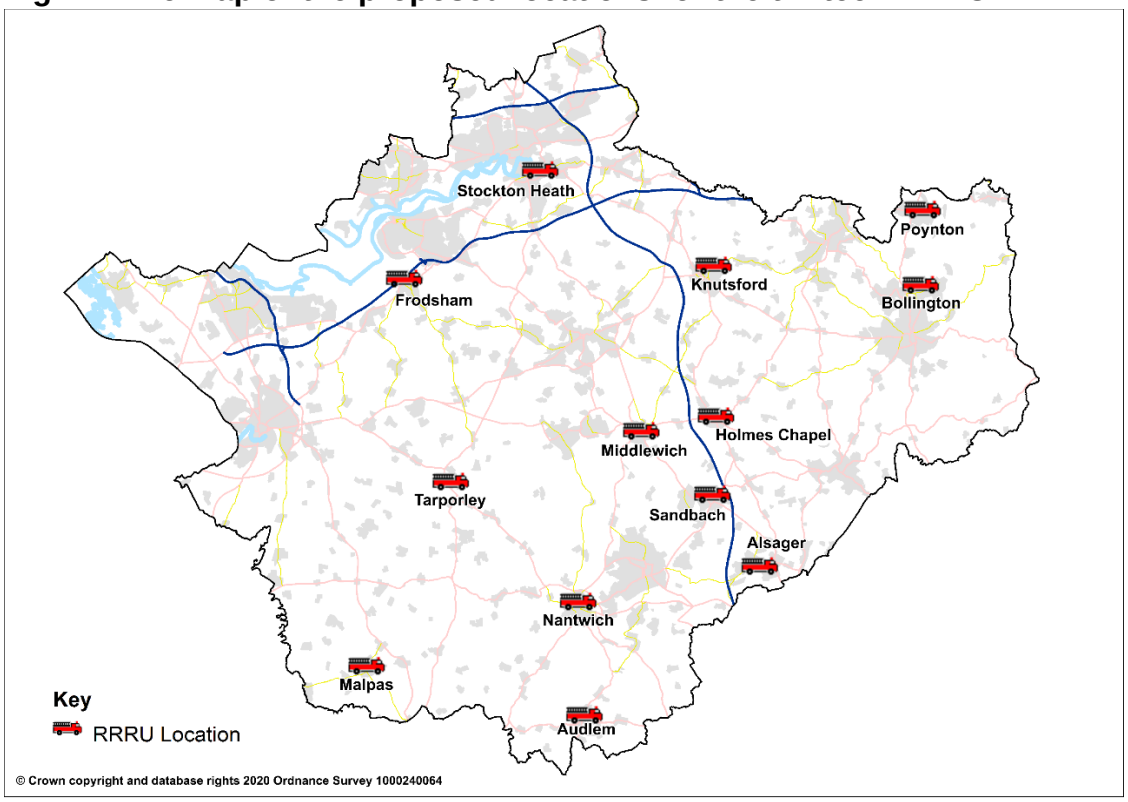
4.3. On-Call firefighters either live or work within a five-minute radius of the fire station. When required they are alerted by pagers and respond to the station to collect the fire engine and respond to the emergency within five minutes of being notified.

4.4. The RRRU can be crewed with two firefighters whereas the fire engine requires that a minimum crew of three are available. Therefore, the RRRU will be available more often and will increase the frequency with which we can provide a response from the closest fire station to an incident.

4.5. Furthermore, RRRU can mobilise as soon as the two firefighters with the required skills arrive at the station whereas the fire engine has to wait until the full crew arrives, usually four firefighters. This improved efficiency, combined with improved operational availability and a smaller more agile response vehicle will mean local on-call stations respond to emergencies faster and more often.

4.6. On-call firefighters are trained to the same standards as their full time counterparts and therefore in all aspects of RTC response. On arrival at the RTC the RRRU crew can begin life saving trauma care including airway management, basic life support and at more serious collisions can begin triaging casualties or rapidly extricate them using high powered cutting gear. They are also able do preparatory work prior to the arrival of oncoming fire engines (RRRU are not sent to emergencies instead of a fully crewed fire engine; they are additional to the fire engines that will still attend as normal). The overall aim is to improve the speed with which we provide casualty care, reduce casualty extrication times, improve outcomes and save lives.

Fig. D - The map of the proposed locations for the thirteen RRRU.



Note: *Holmes Chapel and Sandbach fire stations already operate a RRRU, which will be replaced with newer vehicles as part of this proposal*

Additional Benefits

4.7. In addition to improved availability of operational resources and faster response times, the RRRU will provide additional benefits. They will transport additional firefighters to larger and more serious emergencies. For example, if there are 10 on-call firefighters available, six can respond in the fire engine with four following in the RRRU, so 10 firefighters can respond in total. This will improve the speed and weight of response to many emergencies across large areas of Cheshire.

4.8. Where the emergency is a fire, the RRRU would not proceed ahead of the fire engine but will follow on once the normal fire engine has mobilised. This ensures a safe system of work in line with well-tested arrangements, which have been in place with the RRRU at Holmes Chapel and Sandbach since 2009 and have proven to be 100% safe. There have been no accidents or near misses reported during the last decade relating to RRRU.

4.9. RRRU will also have a 4x4 capability so will be useful for responding to incidents in extreme weather, flooding and rural fires, which are all increasing risks identified in the IRMP.

4.10. The RRRU will be tailored to local needs and can be equipped to deal with local risks. For example, in areas prone to flooding, the RRRU could carry water rescue equipment, while in other areas at risk of moorland fire they could carry specialist wildfire equipment.

4.11. In future, the RRRU could be mobilised to a wider range of emergencies. For example, they could respond to support the ambulance service to ‘gain entry’ into locked premises to treat casualties or to provide life-saving treatment at cardiac arrest emergencies. The scope of the RRRU will be kept under review to ensure they provide optimum operational effectiveness and value for money.

4.12. All of the above will mean that on-call firefighters can respond to more emergencies. In turn, this will result in improved learning, operational experience, pay, reward and ultimately job satisfaction and staff retention.

4.13. Each RRRU and the associated equipment will require an upfront capital investment of around £40,000. This results in a total of £520,000 for 13 vehicles. The RRRU should will have a lifespan of between 10 and 15 years.

Summary

4.14. The RRRU will be located on all 13 of our on-call fire stations. They will provide many benefits, including:

- Faster response times to road traffic collisions
- Improved availability of resources at on-call stations
- Allow up to ten firefighters from the local station to emergencies.
- Provide 4x4 capability so will be useful for responding to extreme weather, floods and rural fires.
- Will be equipped and tailored to local risks to provide specialist capabilities and equipment. For example, wildfire or flood response.
- Provide opportunity and scope to respond to additional risks such as “gain entry” or cardiac response.
- Provide improved opportunities and turnouts that are more frequent for on-call firefighters which will support recruitment and retention.

Recommendation

4.15. Introduce a fleet of Rapid Response Rescue Units (RRRU) across all of the Service’s on-call Fire Stations. This will be achieved by expanding from two to thirteen RRRU.