

CREWE

Review of second fire engine

ALEX WALLER / ANDY ROYLE / DAVID ROBINSON

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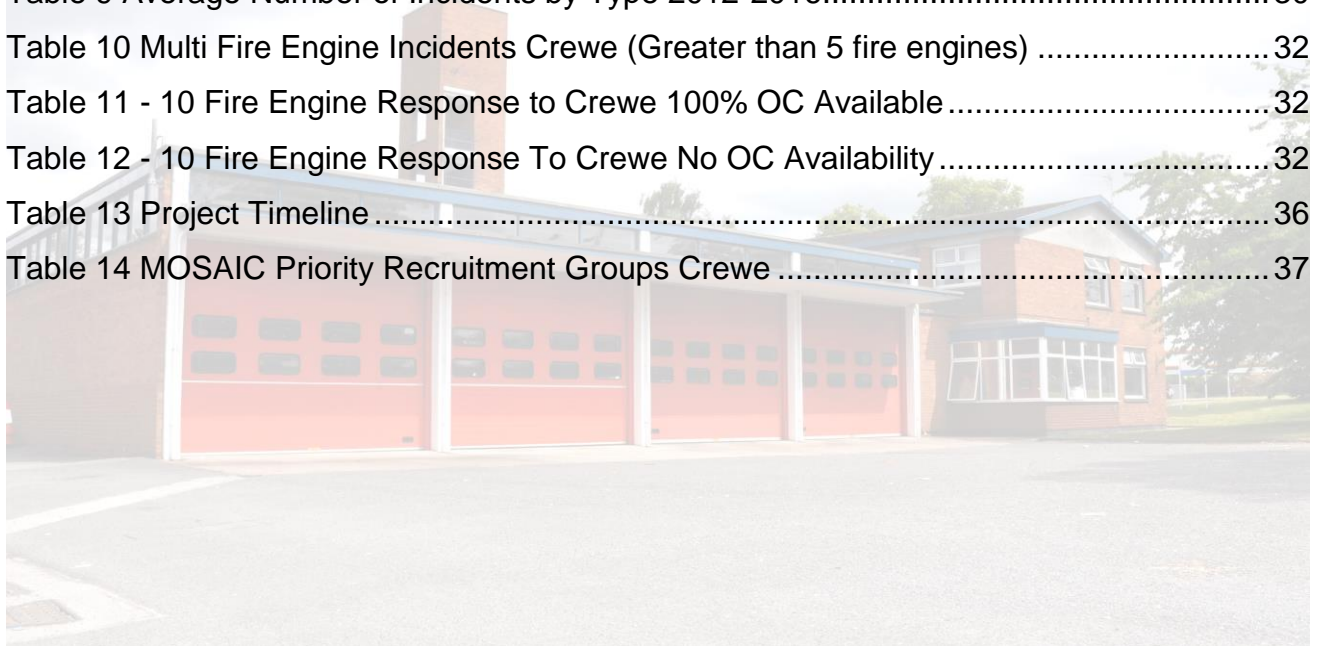
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Introduction

After a comprehensive public consultation, Members agreed at the meeting of Cheshire Fire Authority on 13 February 2013 to embark upon a programme of change (Emergency Response Programme) to improve the efficiency of Cheshire Fire and Rescue Service and to deliver required savings to reflect reductions in central government grant.

Proposals to change the duty system for the second fire engines at Crewe and Ellesmere Port from the wholetime duty system to an on-call duty system were two specific elements of the Emergency Response Programme.

Other elements of change within the Emergency Response Programme – with most elements delivered by April 2017 - included the construction of four new fire stations to improve emergency cover and response times across Cheshire; reviewing working patterns across the organisation; furthering collaboration with local partner agencies and the introduction of a response standard to life-risk incidents of ten minutes on 80% of occasions.

At the February 2013 meeting, when agreeing proposed elements of the Emergency Response Programme (2013/14 to 2016/17), Members agreed the following provisions relating to the second fire engines at Crewe and Ellesmere Port:

2015/16 – Start recruiting for on-call staff at Crewe and Ellesmere Port, and
 2016/17 – Introduce new crewing arrangements for the second fire engine at Ellesmere Port and,
 2016/17 – Introduce new crewing arrangements for the second fire engine at Crewe

Following consultation on the draft Integrated Risk Management Plan (IRMP) for 2017-18, at the meeting of Cheshire Fire Authority on 14 February 2017 Members agreed to review the plans to change the duty system from wholetime to on-call for the second fire engines at Crewe and Ellesmere Port to determine whether they were still appropriate to reflect the local risk and demand. Members then resolved to add the following amendment to the approved IRMP for 2017/18:

“No change to the current arrangements in Crewe and Ellesmere Port in 2017-18 pending a review, the outcome of which is to be considered by Members”

The scope of the review was agreed by Members at the Fire Authority meeting on 26 April 2017, where it was resolved that the review would focus on the following areas:

1. An assessment of the current and emerging risks;
2. An analysis of current and anticipated activity levels (broken down into day and night) and set against current performance against the ten-minute response standard for life-risk incidents; and
3. An analysis of the types of incident dealt with.

The report also noted that when the review was to be considered, Members would need to understand the up-to-date position in relation to on-call firefighter recruitment and training, with an assessment of the likely ongoing situation.

The information within this appendix has been prepared in line with the above scope and should be read in conjunction with the covering report to the Cheshire Fire Authority titled, “Review of the

Authority’s plans to change the duty system from wholetime to on-call for the second fire engines at Crewe and Ellesmere Port fire stations”.



1. Assessment of the Current and Emerging Risks in Crewe

Methodology

Aim and Scope of Assessment

The aim of the assessment is to identify if current risk, identified emerging risks or risk trends, will place an additional future demand on the operational activity of Cheshire Fire and Rescue Service in Crewe. Officers will make an assessment of the data compiled and will note within the report their professional judgement.

The scope of the assessment is to identify risk and respond to Fire Authority Member queries related to current and emerging risk.

Key issues are:

- Has there been an increase in population in Crewe?
- Has there been an increase in the number of Dwellings in Crewe?
- Has there been an increase in the number of Business Units in Crewe?
- Has there been an increase in traffic volumes in Crewe?
- Has an increase impacted on the number of incidents that Cheshire Fire and Rescue Service have attended in Crewe?

Assessment of the Current and Emerging Risks in Crewe

The areas of current risk that have been considered are:

- Service Wide Population vs Crewe Population
- Service Wide Dwellings vs Crewe Dwellings
- Service Wide Dwelling Fire vs Crewe Dwelling Fires
- Service Wide Non Domestic Premises vs Crewe Non Domestic Premises (Business Units)
- Service Wide Non Domestic Fires vs Crewe Non Domestic Premises Fire
- Service Wide Road Traffic Volume vs Crewe Road Traffic Volumes
- Service Wide Road Traffic Collisions vs Crewe Road Traffic Collisions (RTC's attended by Cheshire Fire and Rescue Service)
- Houses in Multiple Occupation (HiMO) within the Crewe station area.

The areas of emerging risk that have been considered are:

- Population Growth
- Housing Growth
- Business Growth
- Traffic Volume Growth
- Local Plans/HS2

Approach to the assessment

Officers have worked with the Business Intelligence Unit, Cheshire East Council and Michael Wright of Greenstreet Berman to gather and interrogate intelligence. Cheshire Fire and Rescue Service have produced a report, with this appendix as an integral part, along with the report from Greenstreet Berman, which validates officers' work.

Data Sources and Information requested

- Mid year population estimates from the office of national statistics (ONS).
- Cheshire Fire and Rescue Incident Recording System Data
- Department for Transport Volume of Traffic within Cheshire between 2002/03 – 2016/17

- Department for Transport Volumes of Traffic within Crewe Station Area between 2007/08 – 2016/17
- Cheshire Fire and Rescue Service – Incident Recording System Data.

Assessment criteria

- Acquire data from internal and external sources, relevant to the areas of scope for the whole of Cheshire between 2002/03 and 2016/17 to give an indication of long-term trends over a 15-year period.
- Acquire data from internal and external sources, relevant to the areas of scope for the Crewe station area for the 5 year period prior to the initial decision making process (2007/08 – 2011/12) and the for the 5 year period post the initial decision making process (2012/13 - 2016/17).
- The assessment of all data will be undertaken between the time period 2007/08 to 2016/17, excluding Crewe Dwellings and Business Units as the Service have only been able to secure limited data from the census (this is identified in the relevant sections of the appendix).
- Officers will draw comparisons between the whole of Cheshire and Crewe specific data
- Officers will assess Crewe data to provide information related to the key issues identified in the scope and methodology.



1.1. Current Risk in Crewe

1.1.1. Population

Service Wide Population

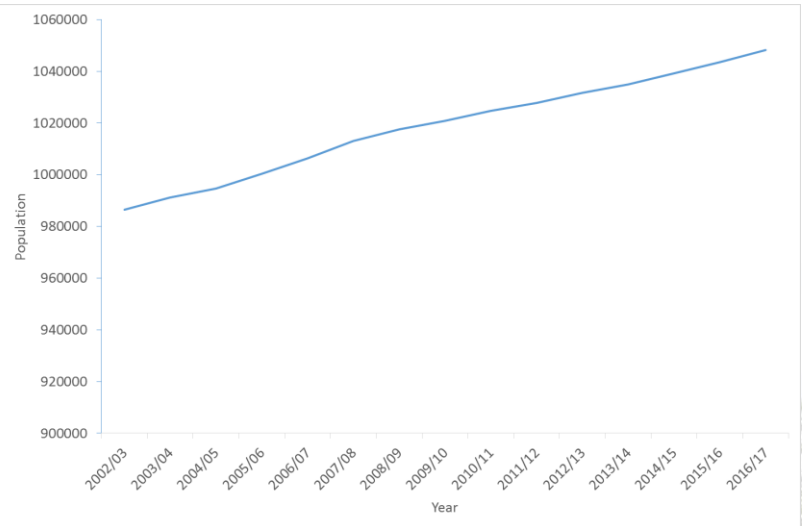
Service wide population shows an increased trend since 2002 (Figure 1)

The population across Cheshire since 2012 has increased by 1.59%, rising from 1,031,690 to 1,048,087 (Figure 1).

Population growth in Crewe over the same period increased 0.89% from 78,776 to 79,480 (Figure 2).

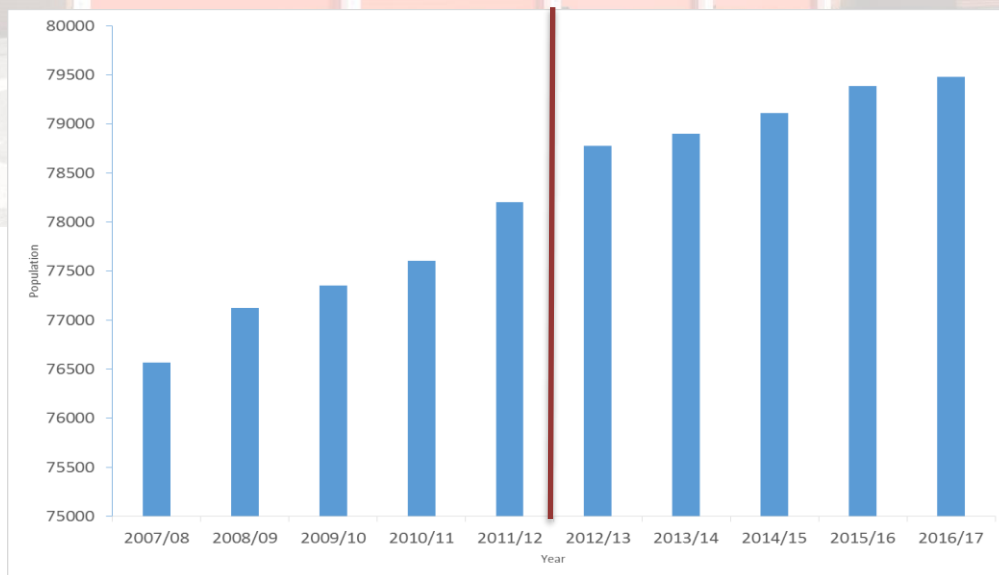
Data source: Mid year population estimates from the office of national statistics (ONS). Note: the mid year estimate for 2016 was used to calculate the population estimate for 2016-17

Figure 1 Population Estimates for Cheshire 2002/03 -2016/17¹



Crewe Population

Figure 2 Estimated Population within Crewe Station Area Between 2007/08 – 2016/17



Data source: Mid year population estimates from the office of national statistics (ONS) Note: Data has been compiled at ward level, the ward boundaries are not coterminous with the station boundaries, therefore a degree of estimation has been utilised for wards on station boundaries (3 wards have estimations)

1.1.2. Housing – Dwellings

Service Wide Dwellings

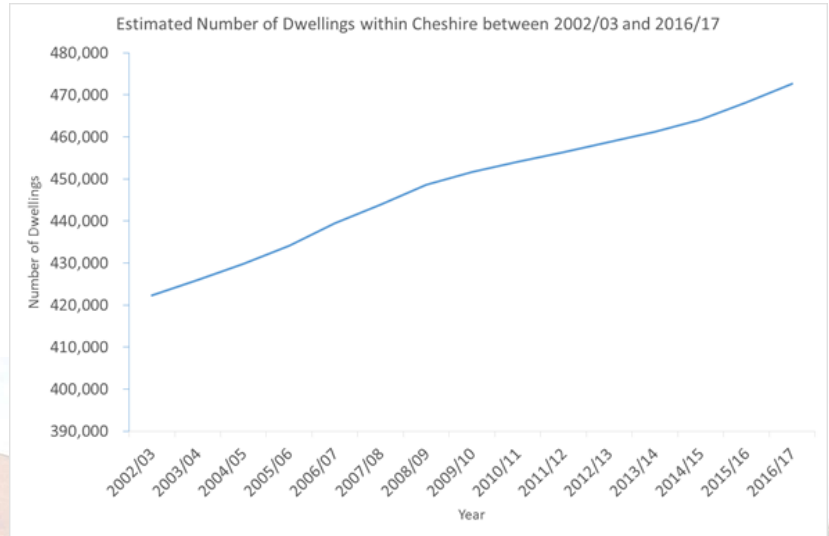
Service wide dwellings show an increased trend since 2002 (Figure 3)

Note: The Service have been unable to secure data related to the number of Dwellings in Crewe between 2007/08 and 2010/11. Therefore to draw a consistent comparison for this particular data set Officers have compared the growth in Cheshire and Crewe between 2012/13 and 2016/17

Dwellings across Cheshire have increased by 3.02% since 2012, rising from 458,800 to 472,650

Dwelling growth in Crewe over the same period was 0.65%, rising from 36,294 to 36,529 (Figure 4).

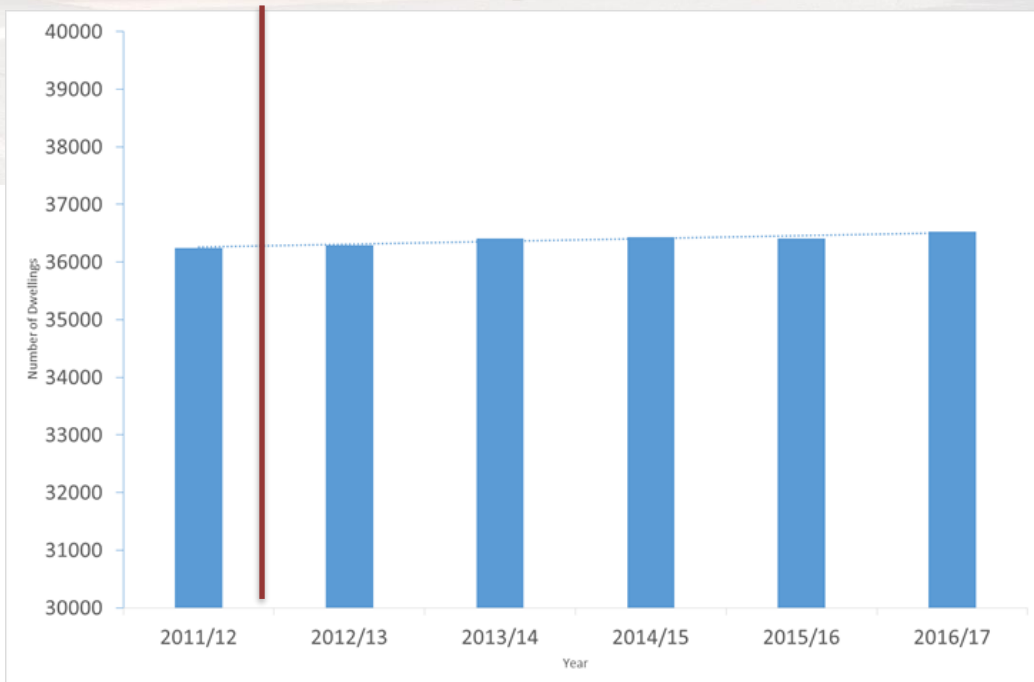
Figure 3 Dwelling Estimates Within Cheshire Between 2002/03 – 2016/17



Data source: The Office Of National Statistics (ONS)

Crewe Dwellings

Figure 4 Dwelling Estimates Within Crewe Between 2002/03 – 2016/17



Data source: MOSAIC Household data

Note: Data has been compiled in MapInfo and account has been taken of each household within the station boundary.

Dwelling Fires

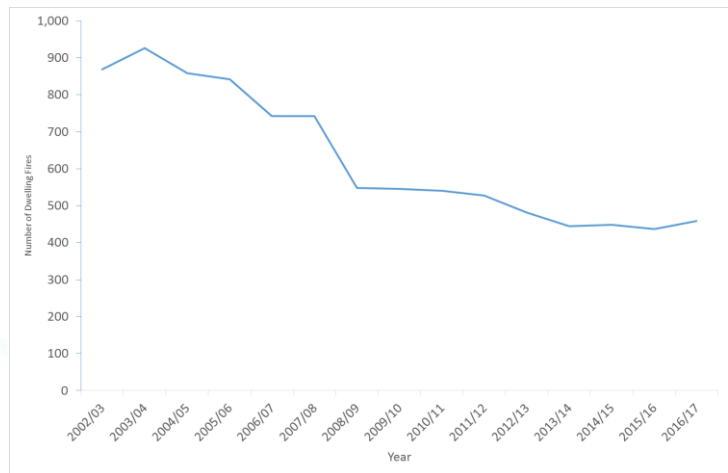
Service Wide Dwelling Fires

Service wide dwellings show a decreased trend since 2002 (Figure 5)

When comparing Service Wide the average number of dwelling fire incidents per year, over the five-year periods 2007-2011 and 2012-2016, there has been a 22% reduction on average.

When comparing over the same periods, there were 12% less dwelling fires in the Crewe area, from an average of 49 to 43 incidents per year (Figure 6).

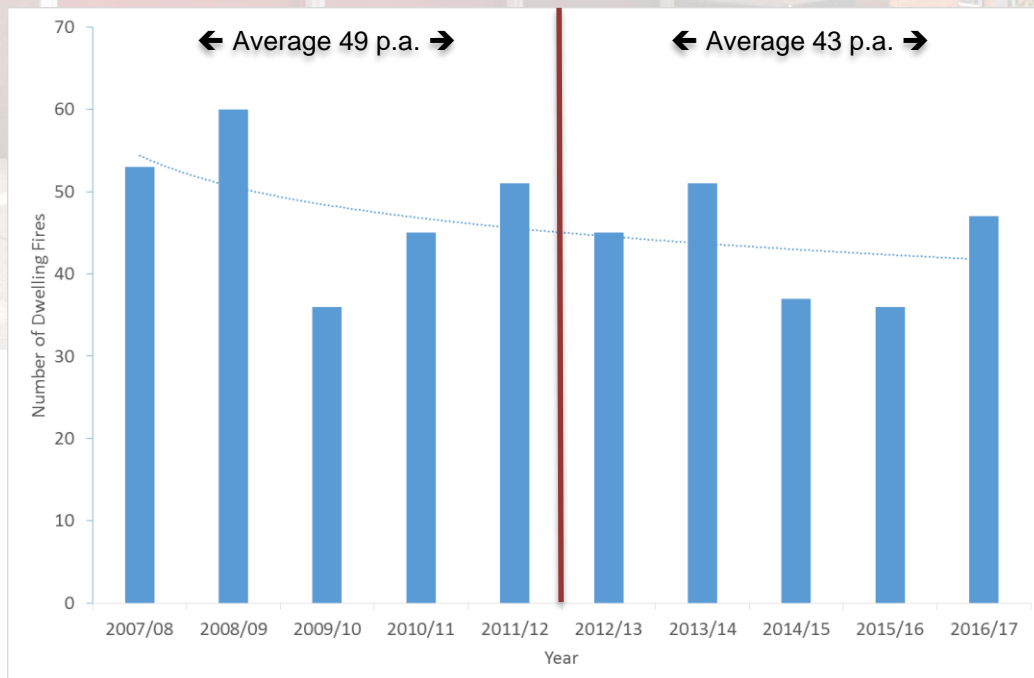
Figure 5 Number of Dwelling Fires Within Cheshire 2002/03 - 2016/17



Data source: Cheshire Fire and Rescue Service Incident Recording System

Crewe Dwelling Fires

Figure 6 Number of Dwelling Fires Within Crewe Station Area Between 2007/08 – 2016/17



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

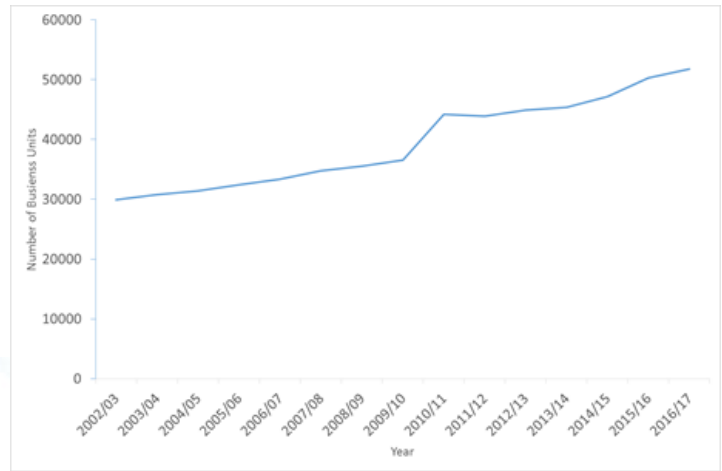
1.1.3. Non Domestic Premises - Businesses

Service Wide Non Domestic Premises - Businesses

Service wide non-domestic properties show an increased trend since 2002 (Figure 7).

Note: The Service have been unable to secure data related to the number of Business Units in Crewe between 2007/08 and 2010/11. Therefore to draw a consistent comparison for this particular data set, Officers have compared the growth in Cheshire and Crewe between 2012/13 and 2016/17

Figure 7 Non Domestic Property Estimates Within Cheshire Between 2002/03 – 2016/17



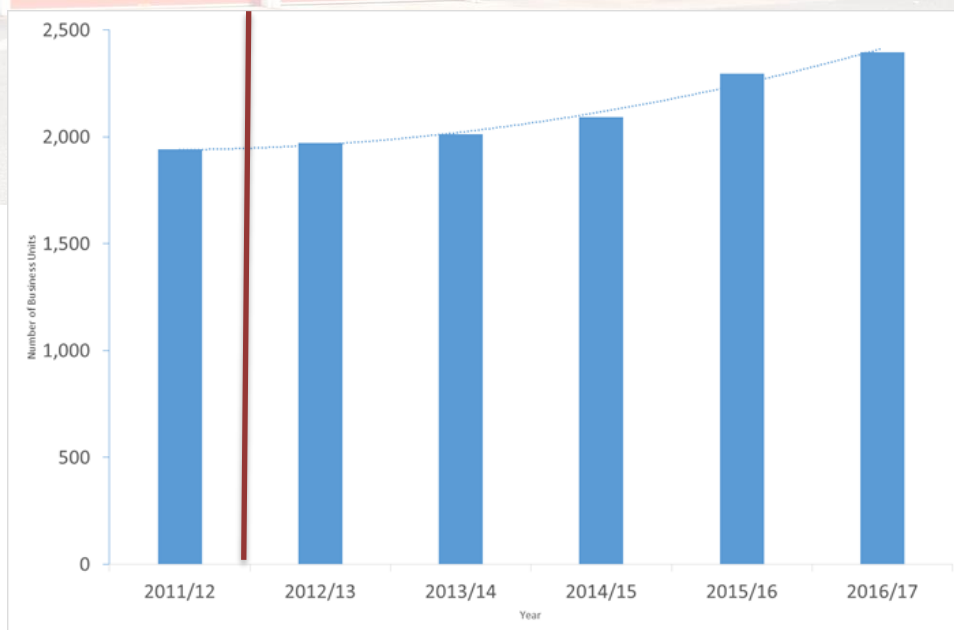
Data source: The Office Of National Statistics (ONS)

The number of Business Units across Cheshire have increased by 15.19% since 2012, rising from 44,940 to 51,765 (Figure 7)

Business Units growth in Crewe over the same period was 21.57%, rising from 1,970 to 2,395 (Figure 8).

Crewe Non Domestic Premises - Businesses

Figure 8 Non Domestic Property Estimates Within Crewe Between 2011/12 – 2016/17



Data source: Number of Business Units from the office of national statistics (ONS), broken down by ward.

Note: Data has been compiled at ward level, the ward boundaries are not coterminous with the station boundaries, therefore a degree of estimation has been utilised for wards on station boundaries (3 wards have estimations)

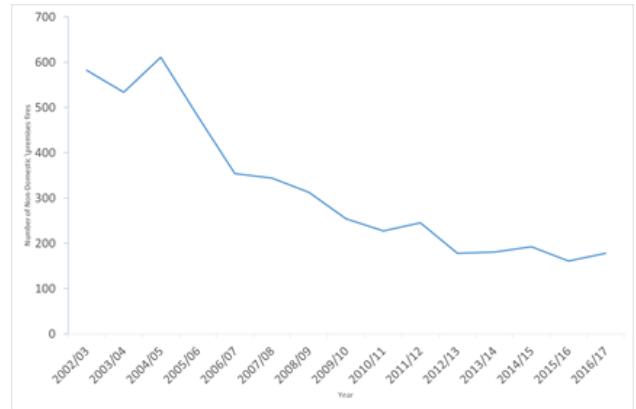
Non Domestic Premises Fires – Businesses

Service Wide Non Domestic Premises Fires

Service wide non domestic premises fires show a decreased trend since 2002 (Figure 9)

Figure 9 Non Domestic Premises Fires Within Cheshire Between 2002/03 - 2016/17

When comparing Service Wide the average number of non-domestic premises fire incidents per year, over the five-year periods 2007/08 - 2011/12 and 2012/13-2016/17, there have been on average a 36% reduction in incidents.

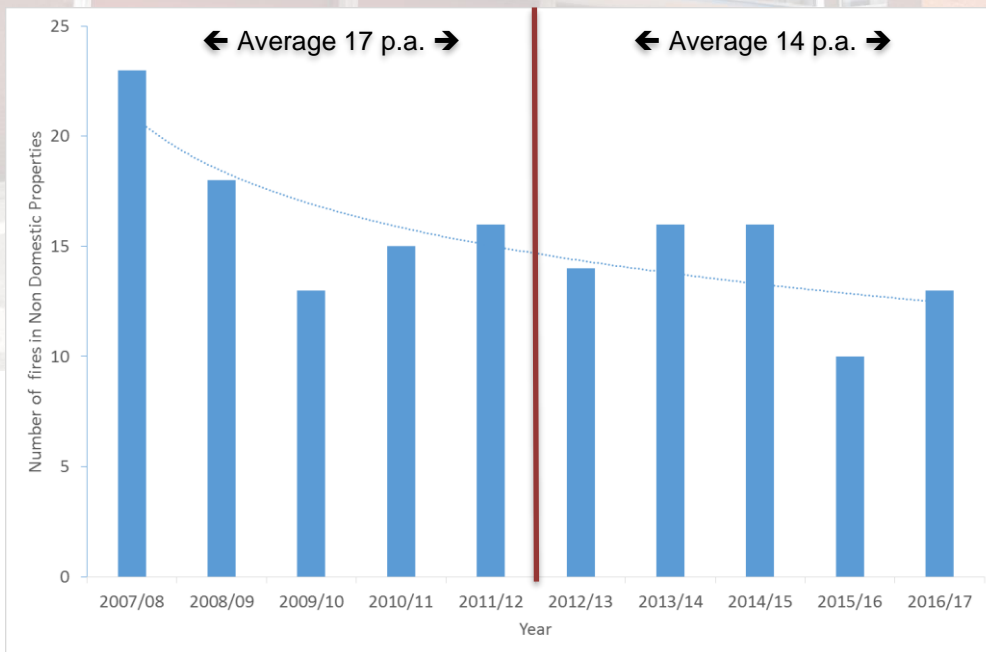


When comparing over the same periods, the average number of non-domestic premises fire incidents per year in the Crewe station area, there have been on average 19% less, from an average of 17 to 14 per year (Figure 10).

Data source: Cheshire Fire and Rescue Service (CFRS) – Incident Recording System Data from 2008/09 prior to this the data has been sourced from CFRS national indicator Home Office returns.

Crewe Non Domestic Premises Fires

Figure 10 Number of Fires in Non-Domestic Premises Within Crewe Station Area Between 2007/08-2016/17



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

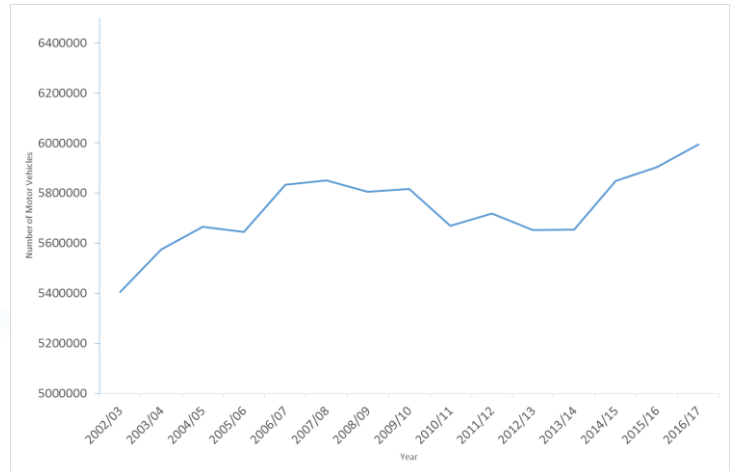
1.1.4. Road Traffic Volume

Service Wide Road Traffic Volumes

Service wide traffic volumes shows an increased trend since 2002 (Figure 11)

Figure 11 Estimated Volume of Traffic Within Cheshire Between 2002/03 – 2016/17

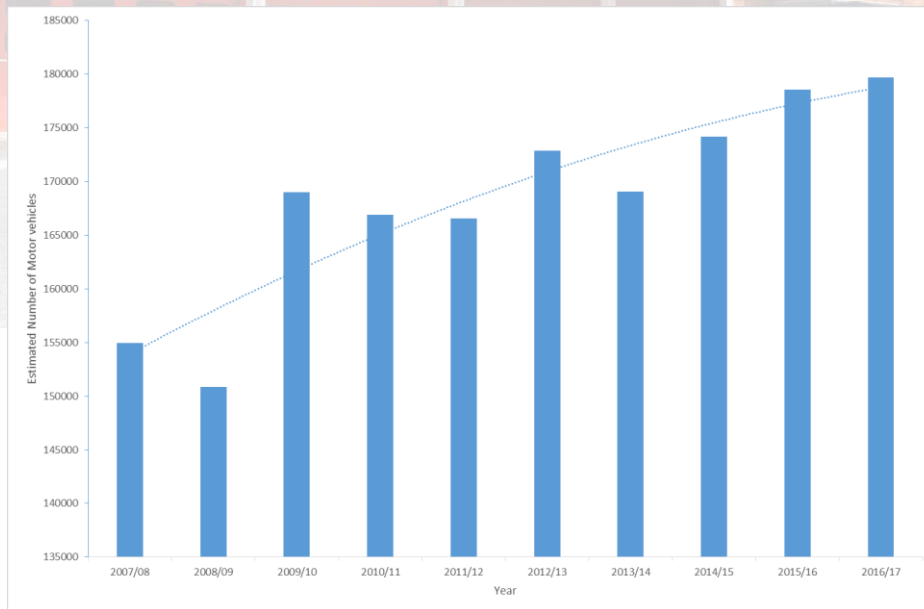
When comparing traffic volumes, over the five-year periods 2007-2011 and 2012-2016, there has been on average a 0.66% growth in volume (Figure 11).



Data source: Department for Transport

Crewe Road Traffic Volumes

Figure 12 Volumes of Traffic Within Crewe Station Area Between 2007/08 – 2016/17



Data source: Department for Transport

Road Traffic Collisions (RTC) attended by Cheshire Fire and Rescue Service

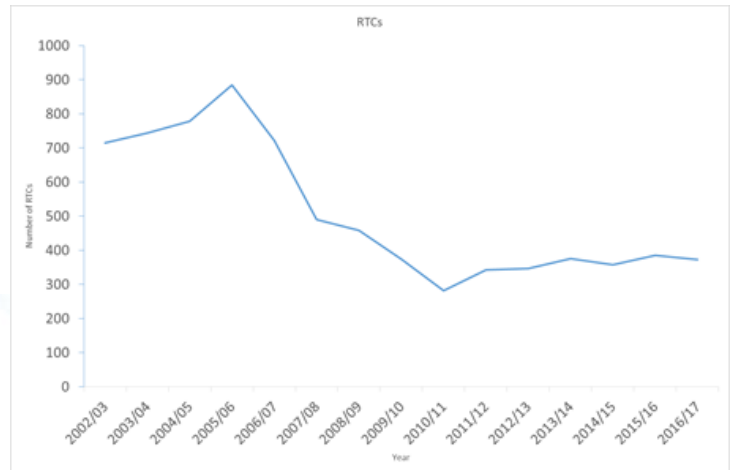
Service Wide Road Traffic Collisions (RTC) attended by Cheshire Fire and Rescue Service

Service wide road traffic accidents show a decreased trend since 2002 (Figure 13)

When comparing Service Wide the average number of Road Traffic Collisions (RTC) per year, over the five-year periods 2007-2011 and 2012-2016, there has been on average a 6% reduction in RTC's (Figure 13).

When comparing the average number of RTC's per year in the Crewe station area, over the same periods, there has been on average 6% less RTC's, from an average of 23 to 21 per year (Figure 14).

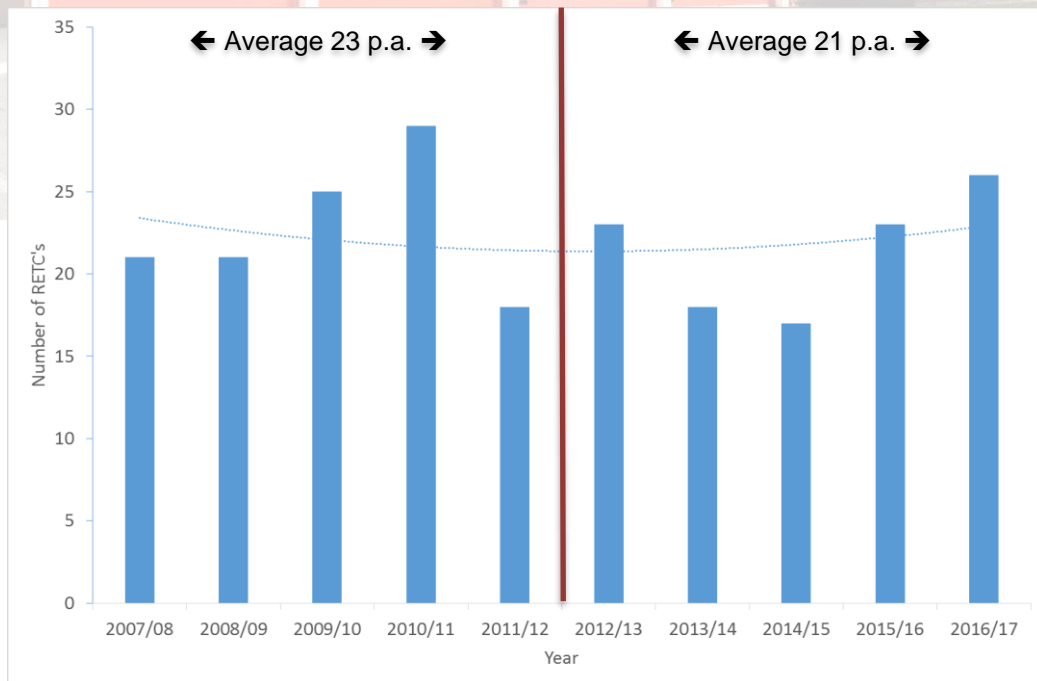
Figure 13 Number of RTC's Within Cheshire Between 2002/03 - 2016/17



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.
 Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

Crewe Road Traffic Collisions (RTC) - RTC's attended by Cheshire Fire and Rescue Service

Figure 14 Number of RTC's Within Crewe Between 2007/08 – 2016/17



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.
 Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

1.1.5. Houses in Multiple Occupation (HiMO)

In addition to the risk from population, dwellings, business growth and traffic, Members were also concerned about houses in multiple occupation (HiMO), therefore work was undertaken to identify the HiMO's in Crewe and determine if there had been any trend of incidents within them. The project team obtained 440 addresses for HiMO's from Cheshire East Council, 415 of these were unlicensed.

Incident analyses confirmed that during the last 8 years the Service has attended 25 incidents at these addresses, which amounts to 3 incidents per year. At this point Officers are unable to confirm if the property was a HiMO at the time of the fire i.e. it may not have been a HiMO 8 years ago - but they can confirm that 25% of the incidents required no action and none of them resulted in injury or death.

The number of HiMO related incidents can be seen in Table 1.



Table 1 Numbers of Potential HiMO Related Fires in Crewe

HiMO - Crewe	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	Total	Average
Fire	1	4	3	6	3	3	2	3	25	3.13
Grand Total										



1.2. Emerging Risk in Crewe

This section provides an outline of emerging risks. These potential risks have emerged since Members' decision in 2013 and relate in particular to the Cheshire East Local Plan regarding housing and economic development, the planned redevelopment of Crewe town centre and the designation of Crewe as a hub station for HS2. The plans are ambitious and the assumptions within them forecast significant growth in population, dwellings, business and traffic in Crewe.

<p>Housing Growth</p> 	<p>Cheshire East Council's Local Plan Strategy outlines planned housing and economic development for the borough up to 2030. Within this, it specifies Crewe as a strategic area of growth, forecasting the development of 8,189 homes up to 2030, the population of Crewe will expand to 100,000 by 2030.</p> <p>Between 2010 and 2016, housing growth has resulted in 907 completions and committed development of 1,979 properties (Cheshire East Local Plan Strategy, p.400, Appendix A: proposed Housing Growth Distribution).</p> <p>Going forward, key growth areas for housing will be situated around the South of Crewe (Basford East & West) and the North of Crewe (Leighton & Leighton West).</p>
<p>Business Growth</p> 	<p>The housing growth will sit alongside the release of 65 hectares of employment land for commercial/industrial development (Cheshire East Local Plan Strategy, 2017, p.77).</p> <p>This is reinforced by a further strategy titled 'All Change for Crewe - A High Growth City', which forecasts that as a result of continued focus on economic development locally.</p> <p>This economic development is predicted to encompass continued investment from major employers such as Bentley Motors, as well as the redevelopment of Royal Arcade section of the town centre (expected completion late 2020).</p> <p>See below HS2 development section.</p>
<p>Traffic Volume Growth</p>	<p>The Cheshire East local transport plan indicates that there will be a requirement to deliver a road network that will support a 40% increase in demand on the M6 and M62 strategic road corridors and that there may be a rise of between 30-35% in demand through local road corridors. Although the transport plan references Cheshire East as a whole and is not specific to Crewe, it is given the ambitions in the Cheshire East Plan for housing and business growth that there would be some expected traffic volume growth.</p>

<p>HS2</p>	<p>The Government has announced that Crewe will be a destination for a high-speed rail hub station under the HS2 project. The hub is expected to become operational in 2027 and in realising the economic benefits of the station through the development of a commercial hub, Cheshire East are estimating that this will deliver 37,000 additional jobs in or around central Crewe, 350,000sq metres of new commercial floor space and deliver an additional 7,000 homes, above existing plans, by 2043.</p> <p>As the HS2 implementation develops, the Service will be involved in planning and preparation. This approach was adopted in recent years during construction of the Mersey gateway.</p> <p>The £600m Mersey Gateway took three years and six months to complete and significantly changed the infrastructure, road network and activity within Halton over the entire period. Officers participated in multi-agency planning meeting and events to identify and manage risks and issues. Despite fears of increased activity and demand, this did not materialise and appropriate fire cover was maintained throughout.</p>
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2. An analysis of current and anticipated activity levels (broken down into day and night) and set against current performance against the ten-minute response standard for life-risk incidents.

Methodology

Aim and Scope of Analysis

The aim of the analysis is to identify the current and anticipated operational activity levels in the Crewe station area, set against the Cheshire Standard of '80% of Life Risk incidents being attended by the 1st fire engine in 10 minutes'. Officers will also provide an analysis of the current and anticipated 'Protection and Prevention' activities undertaken by operational staff in the Crewe station area. Officers will make an assessment of the analysis compiled and will note their professional judgement within the report.

The scope of this analysis is related to 'Life Risk' incidents.

Key issues are:

- Has there been an increase in all operational activity levels in Crewe?
- How does the operational activity level impact on fire engines used per incident?
- Has there been an increase in the number of 'Life Risk' incidents in Crewe?
- What are the actual and predicted attendance time of fire engines to life risk incidents?
- What are the average attendance times of neighbouring fire engines into Crewe?
- What would be the utilisation rate of an on-call second fire engine at Crewe?
- What are the current and predicted Community Prevention activities undertaken by the operational staff at Crewe?

Analysis of the Current and Anticipated Activity levels in Crewe

Service wide activity levels vs Crewe activity levels pre & post ERP1

Fire engine utilisation per incident in Crewe

Average number and time of day of Life Risk Incidents - Dwelling Fires

Average number and time of day of Life Risk Incidents – Road Traffic Collisions (RTC's)

Fire engine attendance times in Crewe station area set against the Cheshire Standard

Attendance times for neighbouring fire engines to the Crewe station area

Predicted fire engine incident mobilisations

Community Safety / Prevention-Protection activity levels

Approach to the assessment

Officers have worked with the Business Intelligence Unit, to gather and interrogate intelligence. Cheshire Fire and Rescue Service have produced a report, with this appendix as an integral part, along with the report from Greenstreet Berman, which validates officers' work.

Data Sources and Information requested

- Cheshire Fire and Rescue Service – Incident Recording System Data.
- Modelling by Active Informatics – 'Phoenix'

Assessment criteria

- Acquire data from Cheshire Fire and Rescue Incident Recording System relevant to the areas of scope for the whole of Cheshire between 2002/03 and 2016/17 to give an indication of trends over a 15-year period.

- Acquire data from Cheshire Fire and Rescue Incident Recording System, relevant to the areas of scope for the Crewe station area for the 5 year period prior to the IRMP 12 decision making process (2007/08 – 2011/12) and the for the 5 year period post the IRMP decision making process (2012/13 - 2016/17).
- The assessment of all data will be undertaken between the time period 2007/08 to 2016/17 unless stated within titles or the narrative.
- Provide predictive modelling of operational response configurations including attendance times and performance set against the Cheshire Standard



2.1. Analysis of Current and Anticipated Activity Levels

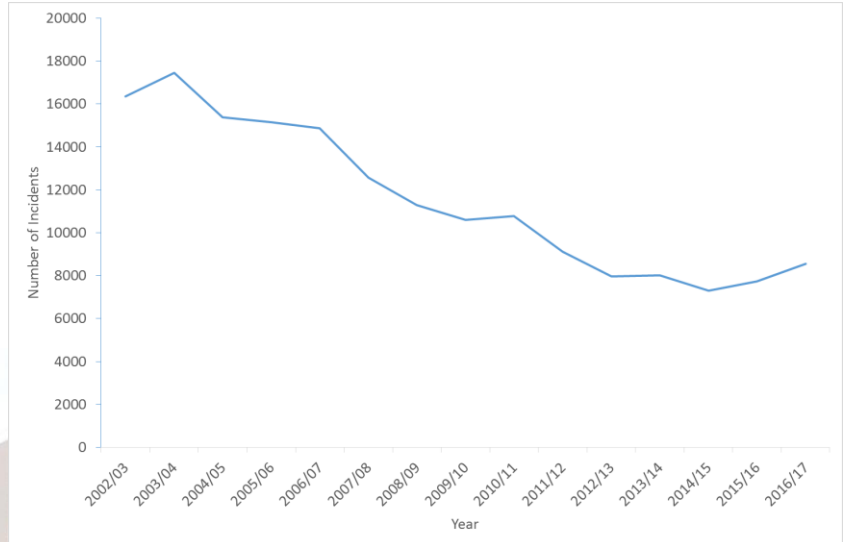
2.1.1. Service Wide Activity Levels

Service wide operational activity levels show a decreased trend since 2002 (Figure 15)

When comparing Service wide the total number of incidents per year, over the five-year periods 2007-2011 and 2012-2016, there has been on average a 27% reduction in incidents (Figure 15).

When comparing the average number of incidents per year in the Crewe station area, over the same periods, there has been on average 29% less incidents, from an average of 850 to 603 per year (Figure 16, Figure 17).

Figure 15 Total number of incidents in Cheshire Between 2002/03 – 2016/17



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

2.1.2. Crewe Activity Levels Pre – Post ERP1 Decision

Figure 16 Total number of incidents within Crewe between 2007/08 – 2011/12

Average Incidents per year = 850

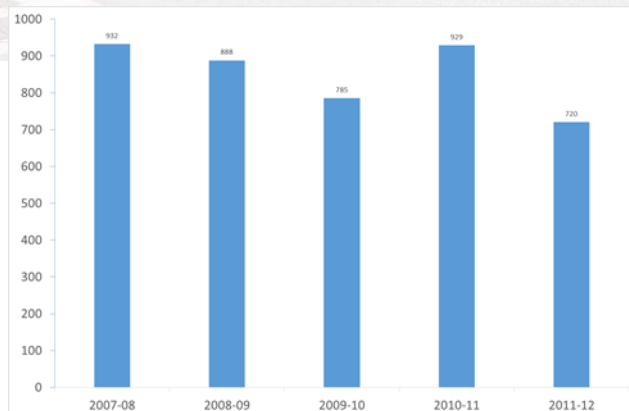
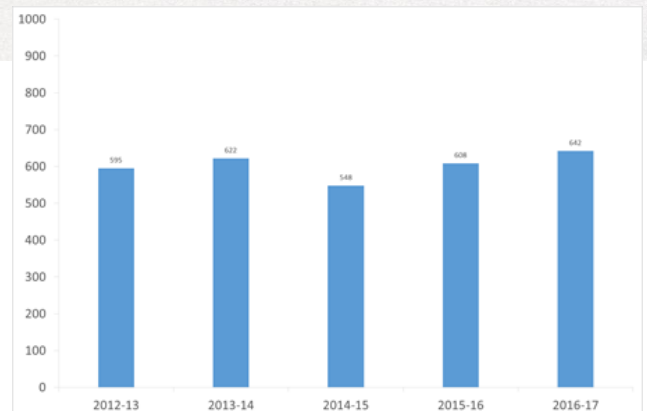


Figure 17 Total number of incidents within Crewe between 2012/13 – 2016/17

Average Incidents per year = 603

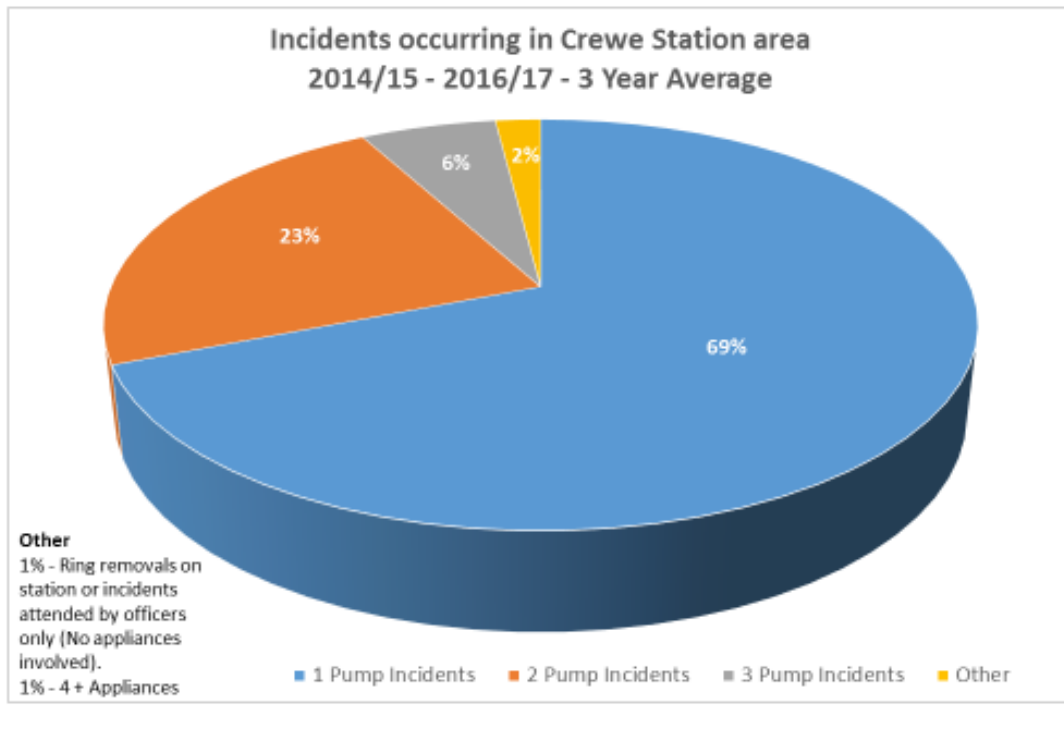


Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

2.1.3. Incidents in Crewe – Number of Fire Engines Required per Incident

Figure 18 Percentage of incidents occurring in Crewe station area by number of fire engines utilised (3 years data 2014/15 – 2016/17)



Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

Note: this data is based on station boundary as now and not as at time of incident, this is due to station boundary changes since ERP1 plan implemented.

To determine the utilisation of fire engines in the Crewe area, data was sourced from Cheshire Fire and Rescue Service Incident Recording System.

It has been identified that the majority of incidents attended within the Crewe station area (69%) required the use of one fire engine, a further 23% of incidents required the use of two fire engines and 8% of incidents required three or more fire engines (Figure 18).

North West Fire Control determines the number of fire engines initially attending an incident by implementing a fire engine pre-determined attendance (PDA) and action plan criteria, which is supplied by CFRS. There are lots of PDA's, some examples are listed below:

- Small Fires – one fire engine
- Building Fires – two fire engines
- Person Reported Fire – three fire engines
- Road Traffic Collision (small) – two fire engines

2.1.4. Life Risk Incidents - Dwelling Fires

Cheshire Fire and Rescue Service categorise Dwelling Fires² as life risk incidents.

Figure 19 Average Number of Dwelling Fires Crewe 2007/08 – 2011/12

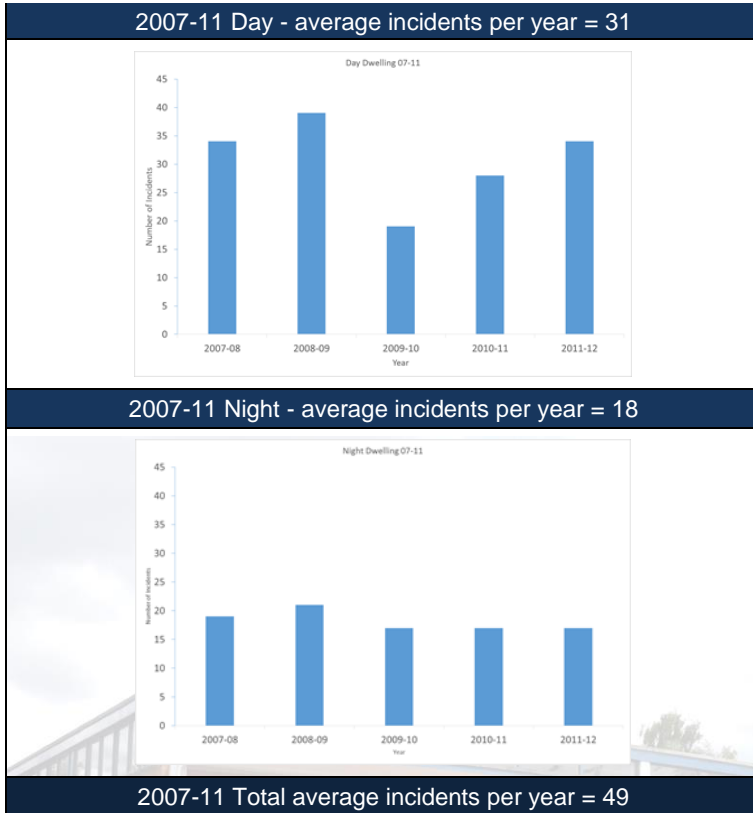


Figure 20 Average Number of Dwelling Fires Crewe 2012/13 – 2016/17

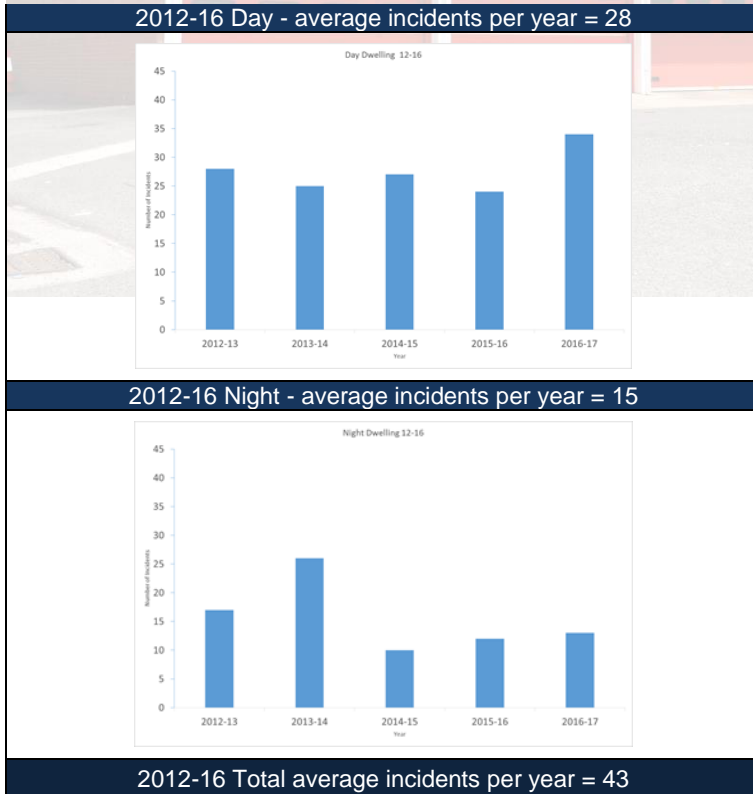


Table 2 Crewe Dwelling Fires by % Time of Day

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total	Shift
0	0.2%	0.7%	0.7%	0.4%	0.4%	0.9%	0.7%	3.9%	NIGHT SHIFT
01	0.4%	0.0%	0.7%	0.7%	0.9%	0.7%	0.9%	4.1%	
02	0.9%	0.7%	0.0%	0.7%	0.2%	0.0%	0.2%	2.6%	
03	0.4%	0.0%	0.0%	0.0%	0.7%	0.2%	0.9%	2.2%	
04	0.0%	0.2%	0.4%	0.0%	0.4%	0.0%	0.4%	1.5%	
05	0.4%	0.4%	0.2%	0.0%	0.0%	0.2%	0.2%	1.5%	
06	0.0%	0.7%	0.0%	0.0%	0.4%	0.2%	0.0%	1.3%	
07	0.2%	0.4%	0.2%	0.2%	0.2%	0.2%	0.2%	1.7%	DAY SHIFT
08	0.2%	0.7%	0.0%	0.4%	0.2%	0.2%	0.7%	2.4%	
09	0.4%	0.2%	0.7%	0.9%	0.2%	0.0%	0.7%	3.0%	
10	0.4%	0.4%	1.1%	0.0%	0.4%	0.4%	0.2%	3.0%	
11	0.7%	0.4%	1.1%	0.7%	0.4%	0.9%	1.3%	5.4%	
12	0.7%	0.2%	1.5%	0.7%	0.7%	0.7%	0.9%	5.2%	
13	0.9%	0.4%	0.9%	0.0%	0.7%	0.4%	0.4%	3.7%	
14	1.5%	0.4%	1.1%	0.9%	1.3%	1.5%	0.2%	6.9%	NIGHT SHIFT
15	1.1%	1.3%	0.2%	0.4%	1.1%	0.4%	1.5%	6.1%	
16	1.3%	1.1%	0.0%	0.4%	0.9%	0.4%	0.9%	5.0%	
17	0.2%	0.7%	0.2%	1.7%	0.4%	0.9%	1.3%	5.4%	
18	0.9%	0.7%	1.3%	0.9%	1.3%	0.7%	1.7%	7.4%	
19	1.7%	1.1%	0.9%	1.7%	1.5%	2.0%	0.9%	9.8%	
20	0.7%	1.3%	0.4%	1.1%	1.1%	0.7%	1.3%	6.5%	
21	0.7%	0.7%	0.9%	0.9%	1.5%	0.2%	0.7%	5.4%	DAY SHIFT
22	0.7%	0.0%	0.7%	0.4%	0.4%	0.7%	0.7%	3.5%	
23	0.0%	0.4%	0.7%	0.4%	0.4%	0.2%	0.2%	2.4%	
Total	14.5%	13.0%	13.7%	13.4%	15.8%	12.6%	16.9%	100.0%	

Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.

Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

When comparing the five year time period 2007/08 to 2011/12 and 2012/13 to 2016/17 dwelling fires in Crewe station area have reduced from an average of 49 to 43 incident per year (Figure 19, Figure 20).

The time of day identified as having the greatest percentage of incidents by volume, is between 19:00 to 20:00 hours (Table 2).

² Dwelling Fires Are fires in properties that are a place of residence i.e. place occupied by households such as houses and flats, excluding hotels/hostels and residential institutions. Dwellings also includes non-permanent structures used solely as a dwelling, such as houseboats and caravans.

2.1.5. Life Risk Incidents – Road Traffic Collisions (RTC's)

Cheshire Fire and Rescue Service categorise Road Traffic Collisions³ (RTC's) as life risk incidents

Figure 21 Average Number of RTC's Crewe 2007/08 – 2011/12

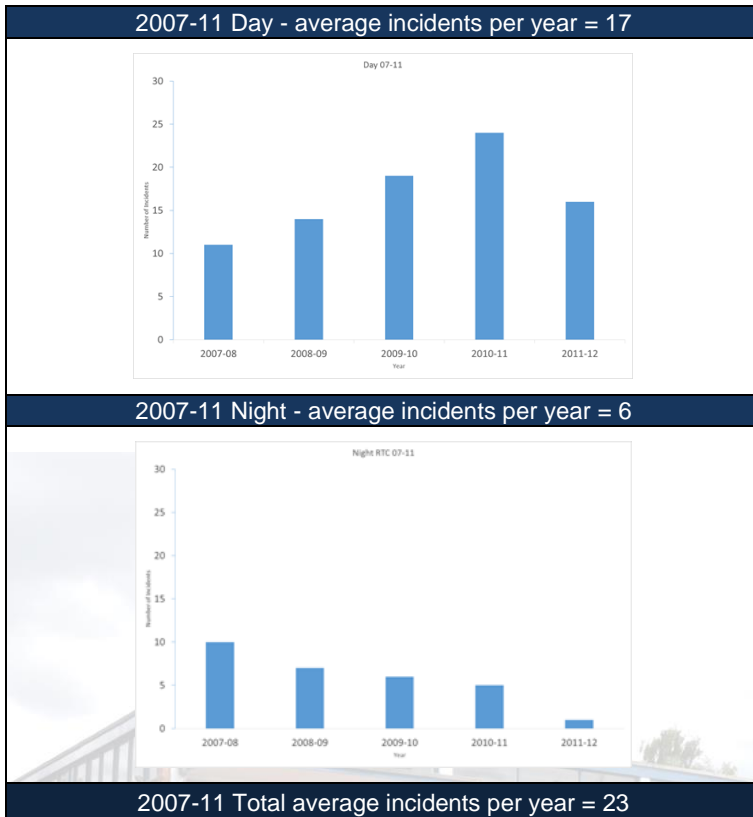


Figure 22 Average Number of RTC's Crewe 2012/13 – 2016/17

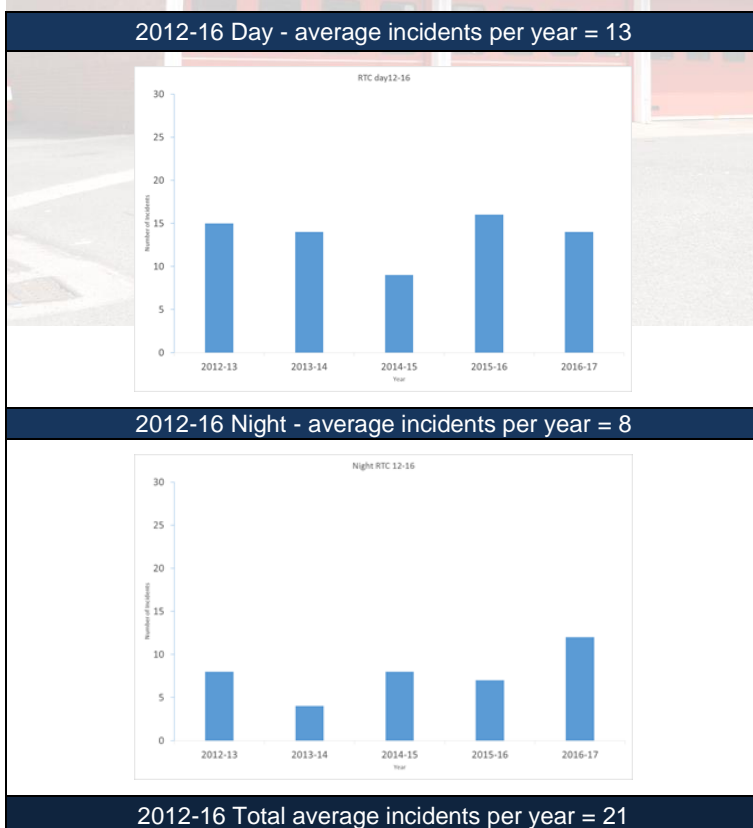


Table 3 Crewe RTC's by % Time of Day

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Total	
0	0.5%	0.9%	0.0%	0.0%	0.0%	0.9%	0.9%	3.2%	NIGHT SHIFT
01	0.0%	0.5%	0.0%	0.0%	0.0%	0.9%	0.0%	1.4%	
02	0.0%	0.5%	0.5%	0.0%	0.0%	1.4%	0.5%	2.7%	
03	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.9%	
04	0.0%	0.0%	0.5%	0.5%	0.5%	0.0%	0.5%	1.8%	
05	0.5%	0.5%	0.5%	0.5%	0.0%	0.9%	0.0%	2.7%	
06	0.0%	0.9%	0.5%	0.0%	0.9%	0.0%	0.0%	2.3%	
07	0.5%	0.9%	1.4%	0.9%	0.9%	0.0%	0.0%	4.5%	
08	1.8%	1.4%	0.0%	2.3%	2.7%	0.0%	0.0%	8.2%	DAY SHIFT
09	0.9%	0.9%	0.0%	1.4%	0.0%	0.0%	0.0%	3.2%	
10	0.0%	0.5%	0.5%	0.5%	0.5%	0.9%	0.0%	2.7%	
11	0.5%	0.5%	0.5%	0.9%	0.0%	0.9%	0.5%	3.6%	
12	0.0%	0.0%	0.9%	0.5%	2.3%	1.4%	0.9%	5.9%	
13	1.4%	0.9%	1.8%	0.0%	0.5%	0.9%	0.5%	5.9%	
14	0.5%	0.9%	0.9%	0.5%	0.9%	1.4%	0.0%	5.0%	
15	0.9%	0.9%	0.9%	0.9%	0.9%	0.5%	0.9%	5.9%	
16	0.5%	2.7%	0.9%	1.8%	0.5%	0.5%	0.9%	7.7%	NIGHT SHIFT
17	0.5%	1.8%	1.4%	0.9%	1.8%	0.5%	0.0%	6.8%	
18	0.9%	1.8%	0.9%	0.0%	2.3%	1.4%	1.4%	8.6%	
19	0.0%	0.5%	0.5%	1.4%	2.7%	0.5%	0.0%	5.5%	
20	0.5%	0.5%	1.4%	0.5%	0.9%	0.5%	0.5%	4.5%	
21	0.9%	0.5%	0.0%	0.5%	0.0%	0.0%	0.5%	2.3%	
22	0.9%	0.0%	0.0%	0.0%	1.4%	0.0%	0.5%	2.7%	
23	0.0%	0.5%	0.5%	0.0%	0.5%	0.5%	0.0%	1.8%	
Total	11.4%	18.2%	14.1%	13.6%	20.0%	13.6%	9.1%	100.0%	

Data source: Cheshire Fire and Rescue Service – Incident Recording System Data.
 Note: this data is based on station boundary as it is now and not as it was at the time of incident. This is due to station boundary changes since ERP1 plan implemented.

When comparing the five year time period 2007/08 to 2011/12 and 2012/13 to 2016/17 road traffic collisions (RTC) in Crewe station area have reduced from an average of 23 to 21 incidents per year (Figure 21 & Figure 22)

The times of day identified as having the greatest % of incidents by volume, are between 08:00 to 09:00 and between 18:00 to 19:00 hours (Table 3).

³ An RTC is any collision, classified as a special service, attended by an appliance or officer within Cheshire.

2.1.6. Fire Engine Attendance Times in Crewe Station Area – Cheshire Standard

Current and Predicted Attendance Times - Wholetime Duty System

Table 4 Crewe - Average Attendance Times for First, Second and Third Fire Engine to Incidents

		Duty System Configuration		Average attendance time for 1 st fire engine to arrive	Average attendance time for 2 nd fire engine to arrive	Average attendance time for 3 rd fire engine to arrive	Performance - Cheshire Standard
		Fire engine 1	Fire engine 2				
A	Crewe Current Actual Performance	Wholetime	Wholetime	5min 52sec	7min 38sec ^a +1min 46sec	13min 26sec	98.7%
B	Crewe (Phoenix Predicted Performance) ¹	Wholetime	On-call	^b 5min 42sec	10min 09sec ^c +2min 31sec	12min 46sec	98.4%
C	Crewe (Officers Professional Judgment)	Wholetime	On-call	5min 52sec	10min 09sec	13min 26sec	98.4%
D	Cheshire Current Actual Performance	Various		7min 55sec	10min 16sec	14min 37sec	88%

^aData complied with fire engine delay of 90secs Wholetime and 5minutes for on-call.

Table 4 reports the attendance times to life risk incidents and the performance against the Cheshire Standard, whilst comparing the average performance for Crewe station area verses the whole of Cheshire.

The data in Table 4 has been compiled from Cheshire Fire and Rescue Service Incident Recording System and Phoenix. Phoenix was designed in conjunction with UK fire services and is a powerful workload modelling and deployment application for Public Safety organisations. Phoenix analyses mobilisations and resources to model current performance and then compares that to any changes that are made to the configuration of the Service.

Table 4, Row A: This row shows the current average attendance time for the first, second and third fire engine to incidents in Crewe. It can be seen that the second fire engine arrives 1 min 46 sec after the first fire engine^a. Given both fire engines in Crewe are currently wholetime one would expect that they would arrive at the same time. However, this falsely assumes that both fire engines are on station and that for all incidents requiring two fire engines both are the first two fire engines to arrive. Crewe's fire engines constantly move around, especially during the day. For example, one of Crewe's fire engines spends over 100 day shifts out of the Crewe station area which means a neighbouring fire engine attends if two pumps are required. Furthermore, depending on the location of the incident, Crewe's first fire engine may be mobilised with a neighbouring fire engine rather than Crewe's second fire engine. All of these complications emphasise the importance of modelling software, such as Phoenix, to support judgements on the effects on fire engine attendance times as a result of changing the crewing arrangements and the operational configuration of CFRS.

Table 4, Row B: This row shows the Phoenix modelling software prediction for average attendance time of the first, second and third fire engine to life risk incidents in Crewe with one wholetime and one on-call fire engine at Crewe. The prediction for the first fire engine attendance time appears accurate in that it shows a minor variation (-10 sec^b) against the current actual (Row A). The second fire engine attendance time has increased by ^c2mins 31secs when compared with the actual (Row B vs Row A). Again, this prediction appears realistic after considering the explanation above. It is however less than the original assumption that second fire engine

attendance time would increase by 3min 30secs. The original assumption was a crude estimate, based on the difference between on-call and wholetime turnout times (5min vs 1.5min).

Reference the third fire engine response, the Phoenix software predicts that its' response time will improve on the current performance by 1m 11sec. This improvement is because Phoenix assumes¹ that Crewe's second on-call fire engine will be on station whereas the current actual performance is influenced because Crewe's second fire engine moves around its station area and also spends around 100 days out of the station area. To validate the prediction further, Officers have assessed the actual attendance times for neighbouring pumps into Crewe. The results are included within Table 5, p26 and average at 13:38, which concurs with the third fire engine actual attendance time. After considering above, Officers believe it would be prudent to assume that third fire engine response time will remain as now.

Table 4, Row C: This row brings together the above analyses and Officers professional judgement to determine the most likely response times in Crewe if the second fire engine changes to on-call. It can be seen that the first and third fire engine response times are not expected to change and will remain faster than the service average. (Row C vs Row D). The second fire engine response time will increase by 2min 31sec but will still be in line the Service average. (Row C vs Row D). In relation to the Cheshire Standard performance, it is anticipated that this will remain as now at 98%, which is above the Service average of 88%.

Table 4, Row D: This row shows the actual service average for first, second and third fire engine attendance.

Notes:

¹ Phoenix modelling software provides an indication of performance based on the operational configuration/crewing models for the Service. Following feedback and suggestions from the independent consultant Officers have refined some of the assumptions within Phoenix as follows:

1. 100% availability for wholetime fire engines and located on their home station.
2. Actual availability for on-call fire engines and located on their home station.
3. 85% availability for Crewe's on-call fire engine and located on its home station.
4. 40.4% Day and 63.7% Night availability for the on-call fire engine at Ellesmere Port and located on its home station.
5. A delay of 90 seconds for wholetime and a delay of 5 minutes for on-call.

The above changes have improved accuracy but there is still some variance with actual performance and therefore the outcome should be used as an indication to support Officers professional judgement.

2.1.7. Actual Attendance Times for Neighbouring Fire Engines (5 years data includes mobilisation and travel time)

Table 5 Average Attendance Times of Neighbouring Fire Engines into Crewe

Neighbouring Stations	5 Year Average (2012/13 – 2016/17)	No. Attended	Average per year
E12 Nantwich	00:12:17	244	49
E27 Winsford	00:12:25	28	6
E26 Middlewich	00:14:28	31	6
E16 Sandbach	00:14:38	70	14
E17 Holmes Chapel	00:15:18	14	3
E14 Alsager (Shadowing)	00:18:08	-	-

Average Attendance for Neighbouring Stations	00:13:38
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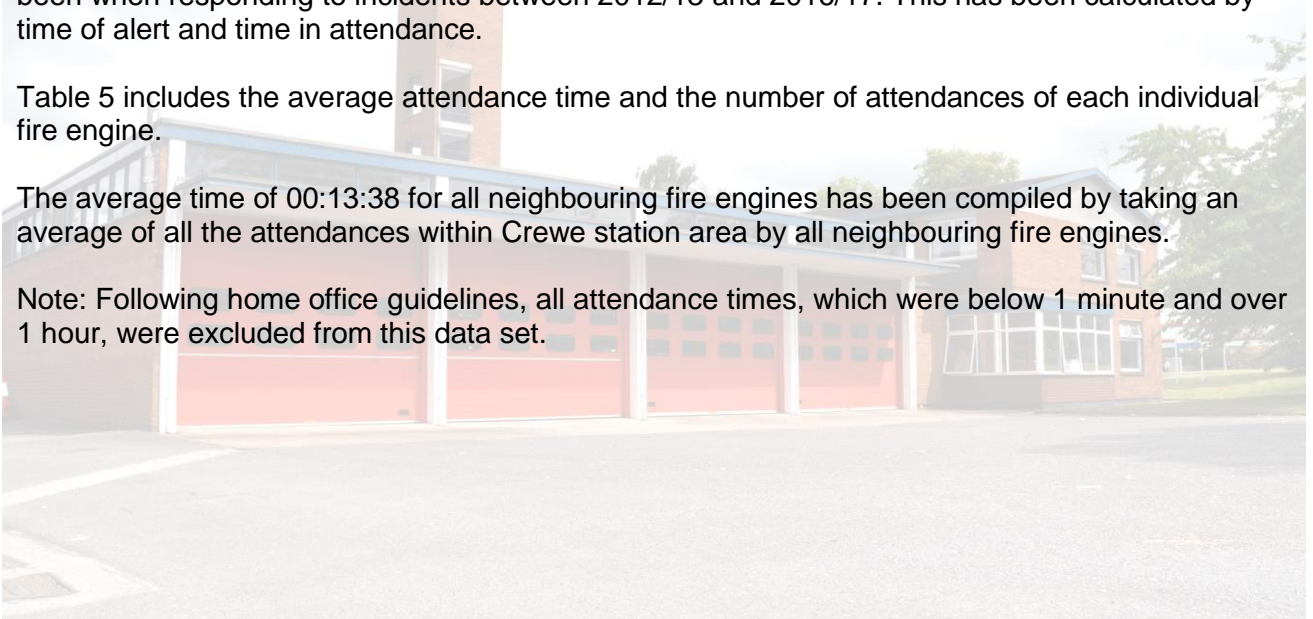
Data Source Cheshire Fire and Rescue Incident Recording System

To provide further rigour and evidence of the attendance times of neighbouring fire engines to Crewe, Officers have interrogated the Cheshire Fire and Rescue Service Incident Recording System to identify what the average attendance time of neighbouring fire engines to Crewe has been when responding to incidents between 2012/13 and 2016/17. This has been calculated by time of alert and time in attendance.

Table 5 includes the average attendance time and the number of attendances of each individual fire engine.

The average time of 00:13:38 for all neighbouring fire engines has been compiled by taking an average of all the attendances within Crewe station area by all neighbouring fire engines.

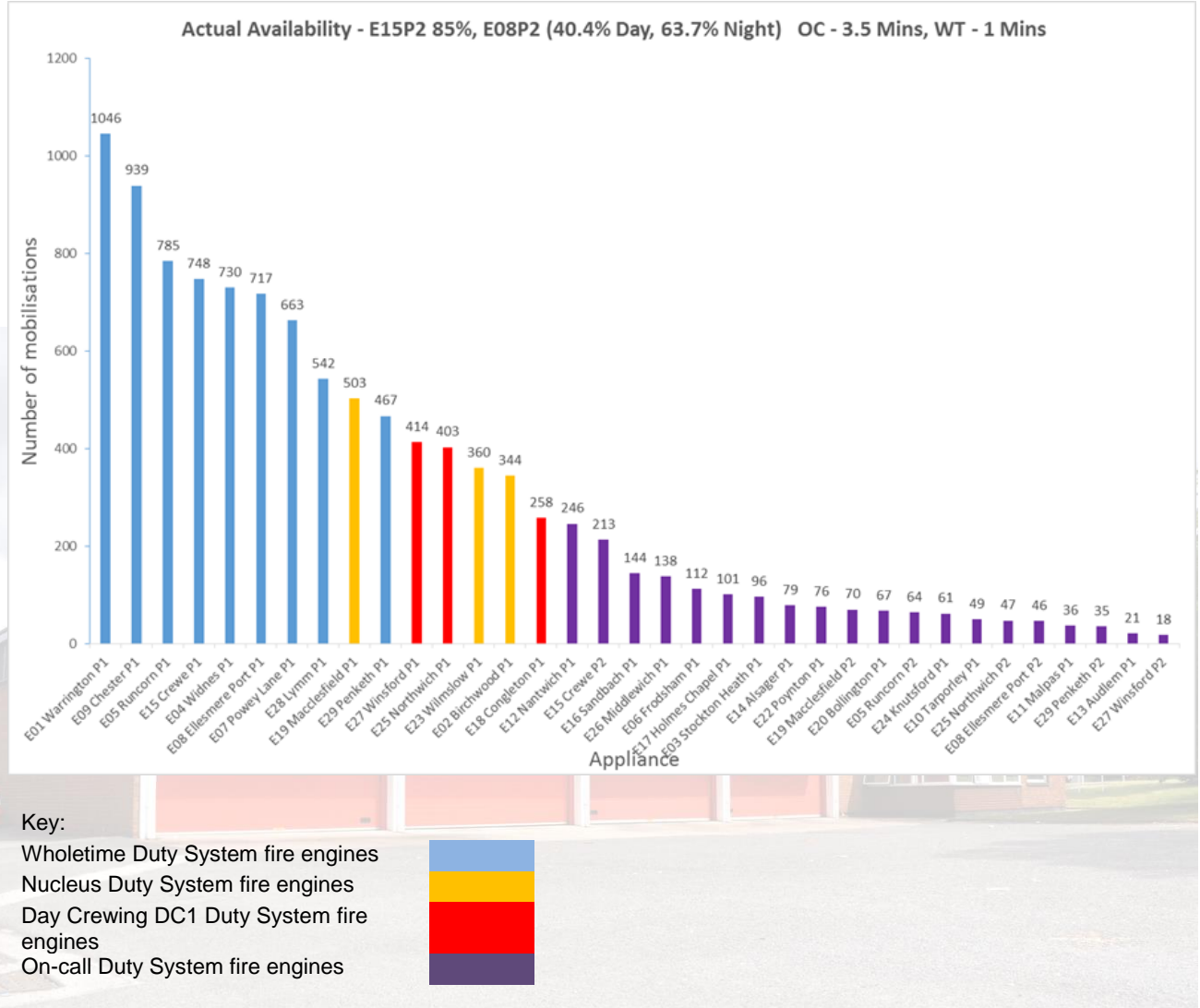
Note: Following home office guidelines, all attendance times, which were below 1 minute and over 1 hour, were excluded from this data set.



2.1.8. Predicted Fire Engine Incident Mobilisations – Emergency Response Plan 1

Figure 23 Predicted ERP1 Incident Mobilisations per Fire Engine (5 year average)

Delay Times: Wholetime 1min, On-call 3.5mins. Actual on-call availability: Crewe On-call modelled at 85% and Ellesmere Port modelled at the average of the on-call fire engines at Penketh and Runcorn.



Data Source Cheshire Fire and Rescue Incident Recording System – Modelled with Phoenix Active Software

As stated in section 2.1.6 the assumptions within 'Phoenix' when providing predictive modelling were refined after recommendations made by Michael Wright of Greenstreet Berman.

Figure 23 utilised the new assumptions to predict mobilisations per fire engine and by applying this criteria the Service have obtained a more accurate prediction of fire engine mobilisations.

In relation to mobilisations it is now predicted that the on-call fire engine at Crewe would be mobilised on 213 occasions per annum. This operational workload fits with the on-call model and would mean Crewe's on-call fire engine was the second busiest on-call fire engine in the service after Nantwich which has a predicted 246 mobilisations per year.

2.1.9. Community Safety / Prevention-Protection Activity Levels

Table 6 Community Safety and Prevention/Protection Work – Safe and Well Visits

Crewe	Current 2 WT	Anticipated 1 WT 1 OC	Average 1 WT Fire Engine
Safe and Well (High Risk, Platinum/Gold)	735	735	Various
Safe and Well (Other)	1953	609	Various
Total	2688	1344	1344

This section explores the potential impact on prevention activities in Crewe as a result of reduced capacity due to one of the fire engines changing from wholetime to on-call.

Officers have assessed the prevention workload demand and compared it with existing wholetime stations with one fire engine to determine the extent to which the current performance outputs at Crewe will not be maintained. It can be seen that the number of visits to high-risk homes will not change, neither will the number of school visits, road safety initiatives, safety campaigns and thematic inspections of business premises. However, the number of visits to lower risk homes would be expected to reduce by 1344 per year.

Table 7 Community Safety and Prevention Work - Road Safety, Business Safety and Key Stage 2

Crewe	Current 2 WT	Anticipated 1 WT 1 OC	Average 1 WT Fire Engine
Road Safety Initiatives	9	9	9
Businesses (Thematic)	176	176	176
School - KS2	43	43	20
Community Initiatives/Campaigns	6	6	6

3. An analysis of the types of incidents dealt with.

Methodology

Aim and Scope of Analysis

The aim of the analysis is to identify the type of operational activity in the Crewe station area and the impact this has on the community.

Officers will make an assessment of the analysis compiled and will note within the report their professional judgement.

Key issues are:

What are the average numbers of incidents per year in Crewe by type?

What are the most frequent incident types attended in the Crewe area?

What has been the impact of dwelling fires in Crewe compared with Cheshire?

What has been the impact of road traffic collisions in Crewe compared with Cheshire?

Have there been incidents in Crewe that have required a response from wider areas of Cheshire?

Analysis of the Types of incident in Crewe

The incident type and average number of incidents in Crewe station area.

Life Risk – dwelling fires & impact on the community

Life Risk – road traffic collisions & impact on the community

Incidents that have required an attendance of appliance from across Cheshire, 5 or more fire engines.

Approach to the assessment

Officers have worked with the Business Intelligence Unit and Michael Wright of Greenstreet Berman to gather and interrogate intelligence. Cheshire Fire and Rescue Service have produced a report, with this appendix as an integral part, along with the report from Greenstreet Berman, which validates Officers' work.

Data Sources and Information requested

Cheshire Fire and Rescue Service – Incident Recording System Data

Assessment criteria

Acquire data from Cheshire Fire and Rescue Incident Recording System, relevant to the areas of scope for the Crewe station area for the 5 year period prior to the initial decision making process (2007/08 – 2011/12) and the for the 5 year period post the initial decision making process (2012/13 - 2016/17).

The assessment of all data will be undertaken between the time period 2007/08 to 2016/17 unless stated within titles or the narrative.

3.1. Incident Type and Average Number of Incidents in Crewe Station Area – 2007-2001 and 2012 – 2016

Table 8 Average Number of Incidents by Type 2007-2011

	Incident Type	Total
Fire	Dwelling Fires	49
	Non Domestic Property Fires	17
	Primary Vehicle Fires	63
	Other Primary Fires	19
	Secondary Fires	213
	Chimney Fires	6
SSC	RTCs	23
	Other Special Service Calls	100
False Alarm	Fire alarm due to Apparatus	243
	Good Intent False Alarm	94
	Malicious False Alarm	23
Total		850

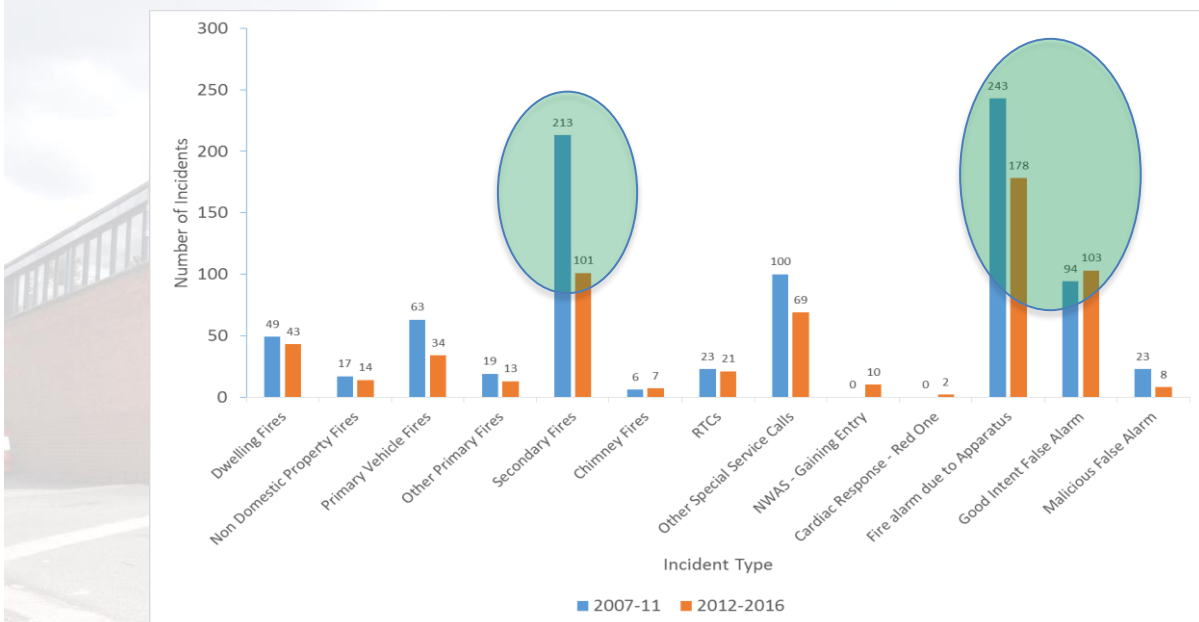
Table 9 Average Number of Incidents by Type 2012-2016

	Incident Type	Total
Fire	Dwelling Fires	43
	Non Domestic Property Fires	14
	Primary Vehicle Fires	34
	Other Primary Fires	13
	Secondary Fires	101
	Chimney Fires	7
SSC	RTCs	21
	Other Special Service Calls	69
	NWAS - Gaining Entry	10
	Cardiac Response - Red One	2
False Alarm	Fire alarm due to Apparatus	178
	Good Intent False Alarm	103
	Malicious False Alarm	8
Total		603

Crewe Average Number of Incident p.a.2007-2011

Crewe Average Number of Incident p.a.2012-2016

Figure 24 Annual Average Incidents Within Crewe Station Area – Comparing 2007-11 against 2012-16



Data Source Cheshire Fire and Rescue Incident Recording System

Table 8 & 9 show the average number of incidents in Crewe split by type; two new categories have been added to Table 9:









- NWAS - Gaining Entry (Forced Entry) - now business as usual
- Cardiac Response – Red One (suspended at present due to national pay negotiations).

When comparing the five-year time period 2007/08 to 2011/12 and 2012/13 to 2016/17 for each incident type it can be seen that all categories except ‘chimney fire’ have reduced.

The most frequent types of incident attended are false alarms, which make up 46% of incidents attended, followed by secondary fires.

While the number of false alarms has reduced slightly, the number of secondary fires has decreased by over 50% when comparing the averages.





3.2. Life Risk – Dwelling Fires Community Impact

Cheshire	Crewe
 <p>40% Dwelling Fires were out on arrival/no firefighting intervention</p>	 <p>39% Dwelling Fires were out on arrival/no firefighting intervention</p>
 <p>88% Dwelling Fires were confined to the room of origin</p>	 <p>84% Dwelling Fires were confined to the room of origin</p>
 <p>86% of Dwelling Fires attended had a smoke alarm fitted</p>	 <p>87% of Dwelling Fires attended had a smoke alarm fitted</p>
 <p>26 Fatal (over 5 years) 16 Severe Injuries (over 5 years) 205 Slight Injuries (over 5 years)</p>	 <p>1 Fatal (over 5 years) 1 Severe Injuries (over 5 years) 32 Slight Injuries (over 5 years)</p>

Specifically in relation to life risk incidents and the impact of dwelling fires on the community in the five years since the original IRMP decision-making process, there have been an average of 43 dwelling fires attended per year in the Crewe station area.

Of the dwelling fires, 84% were confined to the room of origin and 39% were out on arrival or required no firefighting intervention. Over five years, these incidents have resulted in one fatality, one severe injury and 32 slight injuries⁴.

3.3. Life Risk – Road traffic Collisions Community Impact

Cheshire	Crewe
 <p>33% of RTCs attended involved an extrication</p>	 <p>30% of RTCs attended involved an extrication</p>
 <p>65 Fatal (over 5 years) 370 Severe injuries (over 5 years) 974 Slight injuries (over 5 years)</p>	 <p>3 Fatal (over 5 years) 16 Severe injuries (over 5 years) 46 Slight injuries (over 5 years)</p>

Data Source Cheshire Fire and Rescue Incident Recording System

Specifically in relation to life risk incidents and the impact of road traffic collisions on the community in the five years since the original IRMP decision-making process, there have been an average of 21 road traffic collisions attended per year in the Crewe station area.

30% of these incidents attended required the Service to extricate a casualty and in the five years to 2016/17, there have been 3 fatalities, 16 severe injuries and 46 slight injuries resulting from road traffic collisions in the Crewe station area.

⁴ 'Serious injury' – can be defined as: At least an overnight stay in hospital as an in-patient; 'Slight injury' - can be defined as: 1. Attending hospital as an outpatient (not precautionary check), 2. First Aid given at scene (by anyone), 3. A precautionary check was recommended.

3.4. Large / Major Incidents

Table of multi fire engine incidents - starting at 5 fire engines

Table 10 Multi Fire Engine Incidents Crewe (Greater than 5 fire engines)

Multi fire engine incidents - Crewe						
Number of fire engines	Year					Grand Total
	2012-13	2013-14	2014-15	2015-16	2016-17	
5			2	1	2	5
6			1			1
7		2				2
8						0
9						0
10+						0
Grand Total	0	2	3	1	2	8

Data source: Cheshire Fire and Rescue Incident Recording System

This section outlines the number of larger incidents within the Crewe station area between 2012 – 2016 (Table 10) and the predicted response time to provide ten fire engines in the event of a large-scale incident in Crewe. (Table 11,12)

It can be seen that the number of incidents requiring an immediate response of 5 fire engines or more is very low, amounting to 1-2 occasions per year (Table 10)

The attendance of 5+ fire engines to an incident is usually at the request of the incident commander after undertaking a situational assessment and a dynamic risk assessment of the incident they are attending.

Response to multi fire engine incidents

Table 11 - 10 Fire Engine Response to Crewe 100% OC Available

10 fire engines - Crewe	00:21:00
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Table 12 - 10 Fire Engine Response To Crewe No OC Availability

10 fire engines - Crewe	00:35:06
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The prediction shown in Table 11 & 12 shows that if 10 fire engines were required at an incident in the centre of Crewe, they are expected to attend within 21 mins; this assumes that all of the on-call fire engines are available. If no on-call fire engines were available then the response time would increase to 35 minutes. To draw a comparison, eight fire engines responded to the explosion at Bosley Wood Flour Mill within 47 minutes of the request from the Incident Commander. Note: the above estimates were provided by North West Fire Control (mobilising system) and assume that all attending fire engines are available at the time of call.

The NWFC created a simulation within the mobilising system to identify the fire engines and attendance times to incident at a central point in Crewe. The system assumes that all fire engines on all duty systems are available and on home station.

The assumptions used for Table 12 were the same assumptions, except that all Cheshire on-call fire engines were not available.



4. On-call Context

When the review is considered, Fire Authority Members will need to understand the up-to-date position in relation to on-call recruitment and training and be provided with an assessment of the likely ongoing situation.

Methodology

Aim and Scope

The aim of the information provided in this section is to identify the current status of the on-call recruitment at Crewe.

Within scope are the following key issues related to the 2nd fire engine at Crewe operating the on-call duty system:

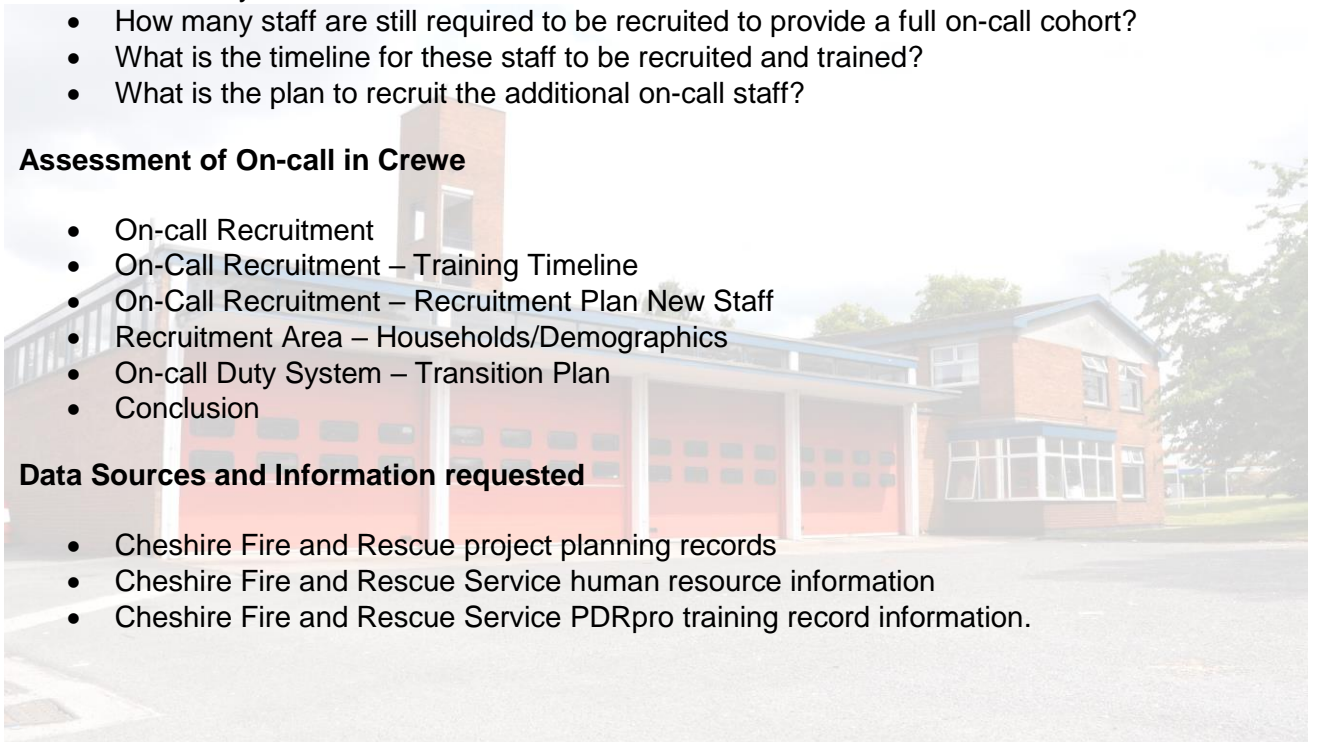
- How many on-call staff have been recruited at this time?
- How many staff are still required to be recruited to provide a full on-call cohort?
- What is the timeline for these staff to be recruited and trained?
- What is the plan to recruit the additional on-call staff?

Assessment of On-call in Crewe

- On-call Recruitment
- On-Call Recruitment – Training Timeline
- On-Call Recruitment – Recruitment Plan New Staff
- Recruitment Area – Households/Demographics
- On-call Duty System – Transition Plan
- Conclusion

Data Sources and Information requested

- Cheshire Fire and Rescue project planning records
- Cheshire Fire and Rescue Service human resource information
- Cheshire Fire and Rescue Service PDRpro training record information.



4.1. On-call Recruitment

On-Call Recruitment - Current Progress

Crewe On Call Firefighters

- 7 Firefighters (Development)
- 2 transfers from other stations (on hold pending outcome of review)

Total = 9

TIMELINE

- 6 months recruitment
- 18 months Units 3, 4 & 5
- Minimum 2 years from CFA approval before 'go live' – April 2020



On-call Recruitment activity at Crewe commenced in January 2015 as part of an overall on-call fire fighter recruitment campaign, this was part of simultaneous on-call recruitment across the Service at other new on-call station locations and the established on-call stations. During this period the Service successfully recruited full On-call cohorts at Penketh, Alsager, Knutsford and Stockton Heath.

The recruitment campaign for Crewe became more focused from July 2016, as follows:

- 21 media posts between and July 2016 and February 2017
- Face to Face with local businesses
- Numerous taster days at the station and various events
- Further leaflet drop by crews
- Writing to wholetime who lived within the 5 minute radius regarding wholetime/on-call contracts

On-call recruitment at Crewe was suspended as a result of Members requesting a review into the duty system for the second fire engine. At the time of suspending the recruitment there were no individuals pending in the recruitment system.

The 7 personnel recruited as on-call fire fighters at Crewe had either commenced employment or offered employment to commence on an initial course in January 2017. There are a further two wholetime staff who have expressed an interest in commencing on-call duties at Crewe; these are on hold until the outcome of the review.

4.2. On-call Recruitment – Recruitment Plan New Staff

Listed below is the key activities within the project plan to launch a new on-call fire engine at Crewe in April 2020.

- Re-establish the Crewe (cross departmental) on-call Recruitment Team – lead by Cheshire East Service Delivery Manager, supported by a local Station Manager and identified departmental leads.
- Re-establish the Service on-call media activities.
- Supply Recruitment Team with Crewe MOSAIC Data (see 4.3 p.37)
- Establish communication plan to engage the MOSAIC priority households identified within 5 minutes of Crewe Fire Station.
- Undertake bespoke on-call recruitment activities in Crewe.
- Validate proposed cover patterns of prospective recruits.
- Validate travel times to the fire station to ensure that the 5-minute standard can be achieved.
- New recruits to commence initial training.
- Shadow pump to launch at Crewe to expose recruits to operational incidents and provide opportunity to validate cover patterns and attendance times. (May 2018)
- Recruit full cohort - 1 WM, 2CM, 12 Firefighters (Sept 2018)
- Recruits to complete Units 3, 4 & 5. (March 2020)
- On-call fire engine to 'go live' with 85% availability. (April 2020)

Table 13 Project Timeline

	2018												2019												2020		
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Continued Training of Current On Call Staff at Crewe																											
Recruitment of New On Call Staff																											
Training of New On Call Staff																											
On Call Duty System Go Live																											

4.3. On-call Recruitment Area – Households/Demographics

Figure 25 Map Travel Time 5 & 7 minutes from Crewe Fire Station – normal road speed (no blue lights)

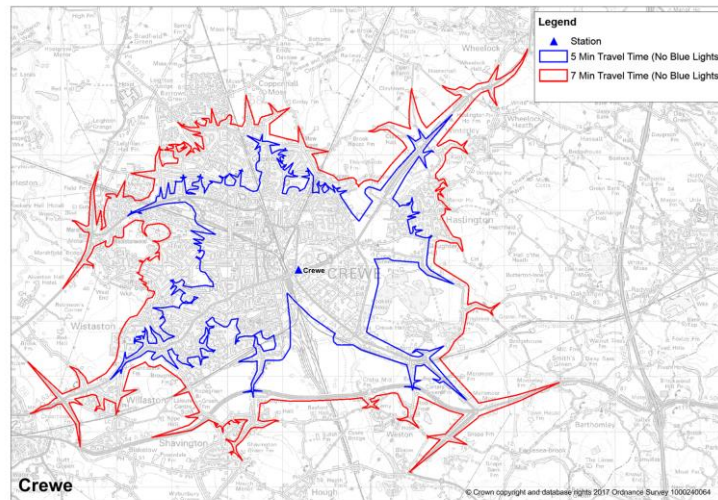


Table 14 MOSAIC Priority Recruitment Groups Crewe

Rank (based on current on-call cohort)	Mosaic Group	Crewe Household Count	%	Nantwich Household Count	%
1	D Domestic Success	356	2.2%	1129	13.2%
2	H Aspiring Homemakers	1450	9.0%	991	11.6%
3	E Suburban Stability	1416	8.8%	805	9.4%
4	G Rural Reality	19	0.1%	29	0.3%
5	A Country Living	22	0.1%	51	0.6%
6	J Rental Hubs	549	3.4%	468	5.5%
Total Households in Top Mosaic Groups		3,812	23.6%	3,473	40.5%
Total Households within 5 Mins		16,129	100%	8,566	100%

Data Source: MOSAIC Public Sector

Further recruitment will target specific households that meet the typical profile for an on-call firefighter using Mosaic Public Sector.

‘Mosaic Public Sector’ is a system for classifying UK households which uses household and individual data collated from a number of governmental and commercial sources.

Over 850 million pieces of information across 450 different data points are condensed using the latest analytical techniques to identify 15 summary groups and 66 detailed types that are easy to interpret and understand – every household in Cheshire will be categorised into one of these Groups & Types which will help with our targeting approach

Overall there are roughly 266 people across Cheshire employed as an on-call firefighter out of a potential 209,371 people within a 5min travel time catchment of stations that offer on-call posts – these postcodes can be run through a profiler tool to provide us with the Mosaic demographic ‘makeup’ of both these populations and compare them.

Table 14 shows the top 6 priority Mosaic groups that represent the current on-call employee profile. In total, 167 of the 266 on-call employees fall within the top 6 groups.

The analysis indicates that 3,812 of the 16,129 households within five minutes travel time of Crewe fire station that fall within the top six priority groups for on-call recruitment. This provides a large pool of potential applicants, which is similar to the number of priority households within the on-call catchment area for Nantwich Fire Station. This has given officers confidence that recruitment should be achievable with the right targeted activity.

4.4. On-call Duty System – Turnout Time and Availability

It is predicted that the on-call fire engine will be mobilised on 213 occasions per year, one mobilisation in every 41 hours on average. It is acknowledged that the time taken for on-call fire engines to turnout to incidents varies. For example, mobilisation is likely to be slower during the daytime (especially during rush hour) than at night time. However, overall the fire engine should achieve an average turnout time of 5 minutes (the current average turnout time for on-call fire engines is 4 mins 53 secs). On the occasions when the turnout is slower, it is likely that the on-call fire engine will still arrive at the incident before a neighbouring fire engine due to the travel distances involved.

To alleviate concerns about on-call availability, principally during the day time, officers have committed to ensuring that the on-call fire engine will achieve 85% availability at 'go live', even if it means using supplementary arrangements.

This level of fire engine availability, combined with the response model for the Crewe area, will mean that response times of the second fire engine will increase. However, actual response times for first, second and third fire engines to incidents in Crewe should be better than the Service average, and the Cheshire Standard will be achieved in Crewe more often than the service average.

4.5. On-call Conclusion

In relation to on-call recruitment, there are 16,129 target households within 5 minutes of the station which provides many opportunities to increase the current establishment of 9 firefighters up to 15 within 8 months. Achieving this timescale would result in an expected 'go live' date for the on-call fire engine of April 2020.

In preparation, a shadow fire engine will be launched at Crewe to provide opportunity to develop new recruits experience whilst validating cover patterns and turnout times.

It is expected that the on-call fire engine will be the second busiest on-call fire engine after Nantwich. It is anticipated that the high incident volume would support on-call recruitment and retention meaning the on-call duty system is likely to be achievable and sustainable in the longer term.