REPORT AUTHOR: **DEPUTY CHIEF FIRE OFFICER**

SUBJECT: **EMERGENCY COVER REVIEW – PROGRESS UPDATE**

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Background Papers: CRMP 2019/23

Implications (tick ✓):

LEGAL			FINANCIAL	
HUMAN RESOURCES			EQUALITY IMPACT	
ENVIRONMENTAL			POLICY	
CORPORATE RISK	Known		OTHER (please specify)	
	New			

Any implications affecting this report are noted at the end of the report.

PURPOSE:

To provide Members with an overview of progress to review our emergency cover provision in order to better understand how we are currently performing and to develop a data driven evidence base from which the FRA can develop options that seek to improve the efficiency and effectiveness of our emergency response both now and into the future.

RECOMMENDATIONS:

That Members:

1. **Note** and **comment** on the progress of the review and the emerging findings;
2. **Agree** to receive a more detailed explanation on the work of the review and potential future options at a specific Members workshop at a date to be confirmed.

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1. <u>Background</u>

1.1 The current Community Risk Management Plan 2019/23 (CRMP) seeks to improve our self-awareness of the foreseeable fire and rescue related risks within Bedfordshire and ensure the Service is 'fit for the future' challenges as we pursue our mission to *provide outstanding fire and rescue services that help make Bedfordshire safer*.

1.2 The risks within Bedfordshire are constantly evolving and our emergency response cover needs to keep pace with the major growth planned across our County in the next 20-30 years.

1.3 We also need to ensure any future policy changes or investment decisions are data driven and evidence based. This is particularly important when considering future investment in our estates portfolio, particularly as we seek to co-locate with our partners. It has been some years since we saw major change in our fire station locations; the most recent being Dunstable in 2009 and the opening of Stopsley fire station in 1984.

1.4 Put simply, we want to be confident we are doing the right thing, using the right people and resources, provided in the right place and at the right time.

2   Scope of the Emergency Cover Review – Phases 1 & 2

2.1   The review has so far comprised two distinct phases, as set out in the CRMP annual action plans for 2019/20 and the current one for 2020/21.

2.2   The Service does not currently have the full capability and capacity to undertake this type of analysis so an external company (ORH Ltd) were engaged to support this work. ORH Ltd are a well established company with extensive experience of supporting emergency services and other agencies in risk and performance analysis and modelling.

Phase	CRMP Action	Objectives
Phase 1 (2019/20)	Utilising the latest technology, commission an in-depth analysis of our emergency cover arrangements.	Work with ORH to develop a risk and response analysis methodology that enables: • A review of incident, response and availability data • Analysis of response times and utilisation rates • Trend analysis and incident projections • Understanding of response times and risk profiles
Phase 2 (2020/21)	Using the outcomes from our 2019/20 review, develop options for improving our emergency response cover to meet current and future risks and demand.	Work with ORH to develop the methodology to enable future demand scenario planning with simulation modelling: • Station and appliance locations. • Appliance configuration options. • Incident projections and resilience More detail on conclusion and assessment of the analysis activity outputs from Phase 1 and explore a range of options that improve cover arrangements.

2.3   To support the analysis, an extensive suite of historical incident, mobilising and availability datasets covering a 5 year period were provided along with a range of available intelligence on community risk and the future growth plans within each of the three unitary authority areas. Appendix A is a heat map of all incidents over the 5 year period. Appendix B shows the future growth areas within Bedfordshire.

2.4   The Service area is broken down into Local Super Output Areas (LSOA) to aid comparisons. This provides a small enough geographical area to focus on local changes but gives large enough incident numbers to be meaningful.

2.5   The Service emergency response standards are set out in our CRMP as follows:

- For emergency calls, we will:
  - Answer 90% of 999 calls within 7 seconds or less
  - Mobilise required resources within 60 seconds or less on 80% of occasions.
- For critical fire incidents, (threaten life, structures or the environment), we will provide an initial response of:
  - 2 fire appliances (total 9 riders) on 90% of occasions
  - Arrive within 10 mins on 80% of occasions.
- For road traffic collisions (RTCs), we will:
  - Arrive within 13 mins on 80% of occasions.
- For secondary incidents (non-life risk), we will provide an initial response of:
  - 1 fire appliance with 5 crew
  - Arrive within 20 mins on 96% of occasions.

2.6   These standards are not subject to review but instead are used to benchmark our current response performance and changes over the 5 year reference period and when modelling potential future options to improve the efficiency and effectiveness of our response.

3   Summary of Phase 1 findings:

3.1   During Phase 1, the review has analysed:

- The numbers, types and locations of incidents
- Response times to incidents
- The level of resource availability
- Performance changes at a local level
- How key risk factors align to incident numbers

3.2   Spreadsheet tools have been produced to evaluate:

- Response times for multiple performance measures
- Availability of pumps by month and by hour
- Daily profile of resources at incidents and unavailable

3.3   Key Findings

- The incident profile is broadly consistent year-on-year
- Appliance availability has a greater effect on response performance than incident demand
- Parts of Bedfordshire are reliant on an 'over the border' (OTB) response
- IMD is a good predictor of incidents
- There are pockets of the county where there are long response times and relatively high risk levels, therefore key focus areas for prevention and protection?

3.4   The biggest changes are in the more rural areas and on the borders of Bedfordshire with some areas seeing decreases and other seeing increases as shown at appendix C and D. The area covered by on-call appliances at Shefford, Potton, Biggleswade and Sandy were a particular focus of the analysis with an average increase in response time of 1:28, mainly due to challenges in recruitment and retention of on-call firefighters in those areas.

3.5 The review has also analysed the relationship between the number of Fire and Special Service incidents within an LSOA and various measures. Previous work by ORH has shown that these are related to the risk of an incident occurring. The measures considered were:

- The Index of Multiple Deprivation (IMD) score by LSOA
- % of households which are Council Tax Band A
- The mean house price of an area
- The percentage of the population that is aged 65+
- The population density

3.6 Appendix E combines IMD score (shading) with response times (colours).

3.7 This highlights that areas around Harrold and Shefford have longer response times and are in the 30% most deprived areas in the country. Deprived areas within the major urban areas are well covered.

4 Phase 2 Summary

4.1 During Phase 2, the review has:

- Modelled the impacts of removing individual appliances and stations for both current availability and BFRS 90% target availability
- Investigated the optimal locations of all stations within Bedfordshire along with the optimal appliance configuration
- Modelled appliance configuration options in the Luton area
- Modelled appliance configuration options for the Bedford area

4.2 Key findings

- The largest performance contributions are made by wholetime appliances and wholetime stations.
- Achieving the 90% target for on-call availability would lead to large performance gains across BFRS.
- The optimal station configuration is fairly similar to the current position; the biggest difference was in Luton district.

- Adding a station at Leagrave with existing appliances improves 1st appliance response time, however 2nd appliance response time deteriorates.
- BFRS is well configured to absorb large increases in incident volumes if the geographical pattern of demand remains similar.

5   Conclusion & Next Steps

5.1   At this stage, the review has highlighted that a range of opportunities to improve our response performance but these need developing further in the context of our future estates strategy and available funding.

5.2   It is proposed that a half-day Members workshop be arranged to provide more dedicated time to develop Members awareness of the analysis undertaken so far and explore the potential options to improve response performance and maximise ROI in our Estate portfolio.
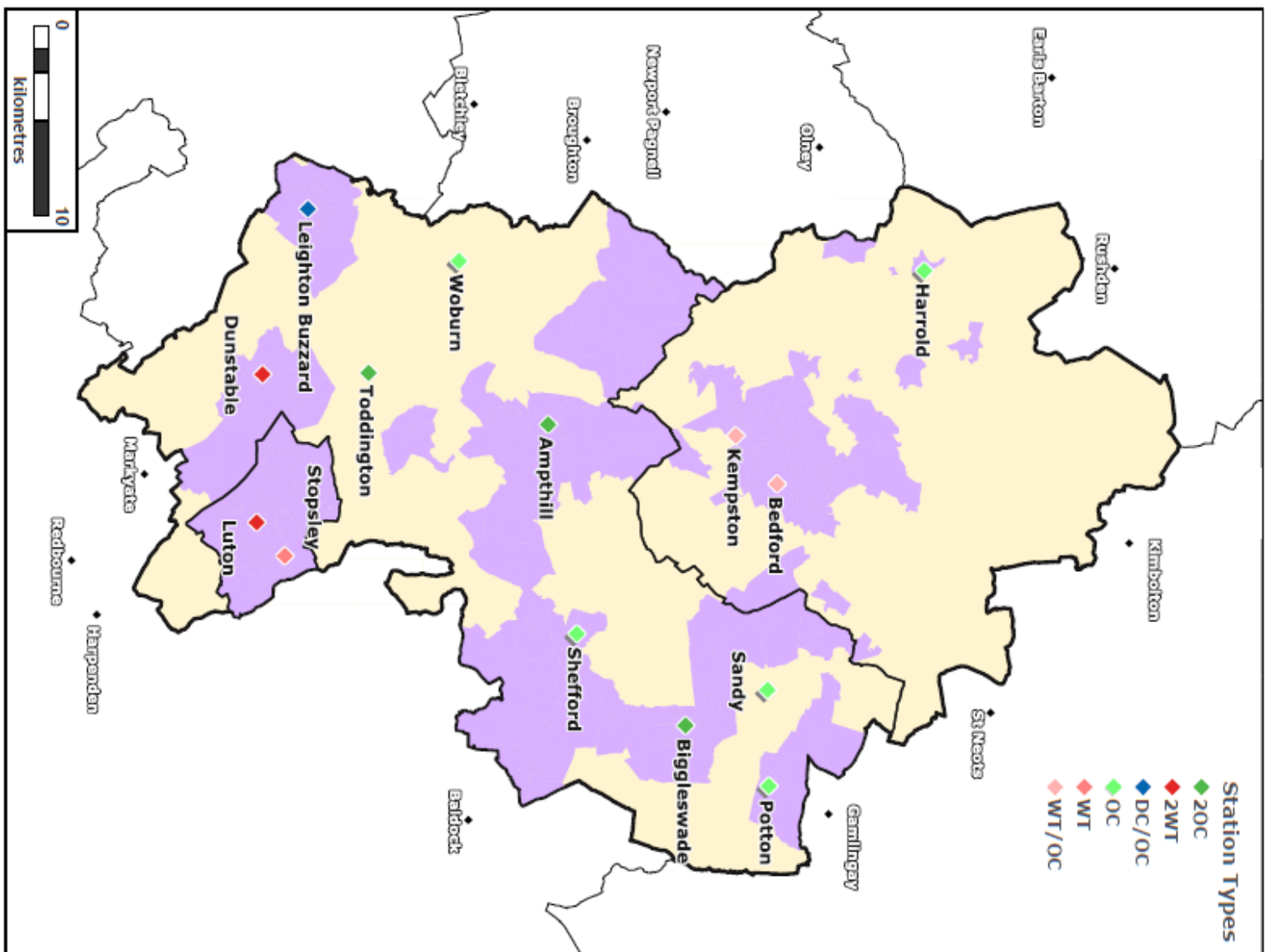
6   RECOMMENDATIONS:

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ANDREW HOPKINSON
DEPUTY CHIEF FIRE OFFICER
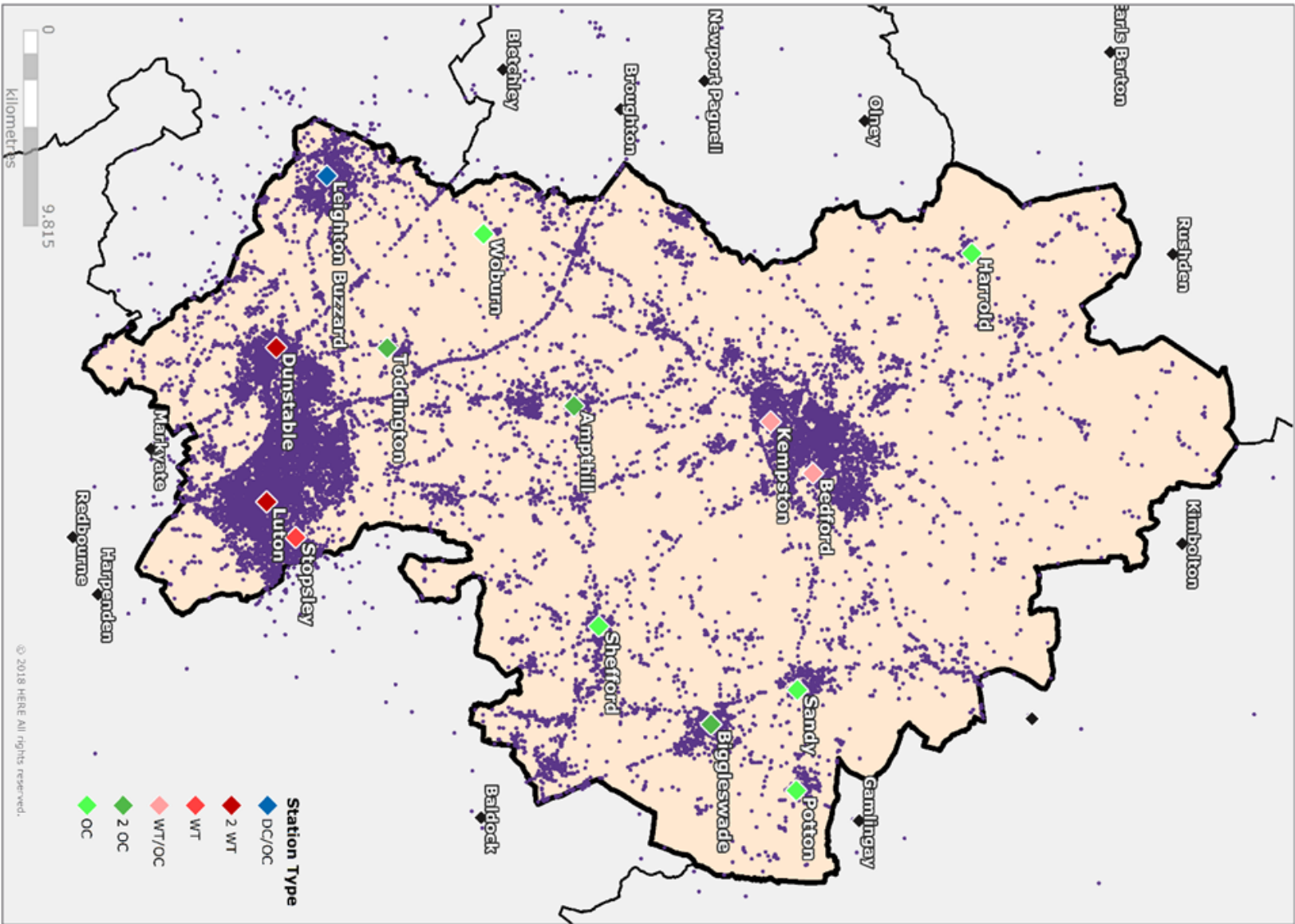
Appendix A – Heat map of all incidents from 2015/16 to 2018/19

Appendix B – Areas of predicted growth

Appendix C – Analysis of average response time by LSOA

Appendix D – Changes in response times 2015/16 to 2018/19

Change In Response Time
15-16 to 18-19

5+ mins Increase
3-5 mins Increase
1-3 mins Increase
<60 second Change
1-3 mins Decrease
3-5 mins Decrease
5+ mins Decrease

Station Type
DC/OC
2 WT
WT
WT/OC
2 OC
OC

Appendix E – Map combining IMD score (shading) with response times (colours)