



Fire Cover Review: Efficiency Savings

Nottinghamshire Fire and Rescue Service

Final Report

30 September 2022

Executive Summary

Some of the key points arising are as follows:

- It is possible to make £1.5m of savings with an optimal reduction in pumping appliance provision while expected response times remain within the NFRS response target.
- It is possible to make £0.8m of savings and to improve expected average first pump performance to all incidents.
- Ashfield station was often selected as a station to deploy a wholetime pump from (currently it is a day-crewed and on-call station), even in options with an overall reduction in pumping appliance provision.
- A relevant outcome from the fire cover review that ORH undertook for NFRS in 2021 was that there is potential for NFRS to improve wholetime turnout times. This could negate some of the response performance impacts associated with reducing pumping appliance provision.
- NFRS currently performs narrowly within its response target. There is the potential that, even with no material changes to the service, response times could fall just outside target due to natural variation.
 - In this report, while it comments on whether expected performance will remain in target, the closer times are to eight minutes, the greater likelihood that they could fall just outside depending on the reporting period.

Introduction

Nottinghamshire Fire and Rescue Service (NFRS) commissioned Operational Research in Health Limited (ORH) to undertake this independent review of alternative pumping appliance deployments.

ORH undertook a comprehensive assessment of risk in 2021 to provide a Community Risk Review and Assessment of Risk. This report builds on that review, but with a focus on the operational service. ORH have identified where changes could be made, while best maintaining operational response times, to meet the needs of efficiencies that may be required.

The models that ORH set up and validated for the 2021 Fire Cover Review are still fit for purpose and were used for this project.

This report does not constitute a stand-alone piece of work, but needs to be considered in the wider NFRS context alongside professional judgement, local knowledge, statutory duties, financial considerations and other strategic priorities.

ORH has significant experience of working with fire and rescue services and other emergency services, with more information provided on the following pages and at <http://www.orhltd.com/>



ORH helps emergency services around the world to optimise resource use and respond in the most effective and efficient way.

We have set the benchmark for emergency service planning, with a proven approach combining rigorous scientific analysis with experienced, insightful consultancy. Our expert team uses sophisticated modelling techniques to identify opportunities for improvement and uncover hidden capacity. Simulating future scenarios ensures that solutions are objective, evidence-based and quantified.

Every organisation faces a unique set of challenges, so remaining independent and flexible allows us to deliver an appropriate solution every time. The outputs of our work enable clients to make robust, data-driven decisions and explain them clearly to stakeholders.

ORH's approach is always tailored to the needs of the client. Above all, we are committed to getting it right, for the good of our clients and the people who rely on their services.



Scope

The agreed scope between NFRS and ORH is summarised as follows:

Undertake resource modelling, based on the NFRS risk profile and maintaining response standards, to deliver approximate savings from pumping appliance provision of:

- £1m
- £1.5m
- £2m
- £2.5m
- £3m

The optimal deployments should be identified, and associated impacts provided.

Current Position And Approach Overview

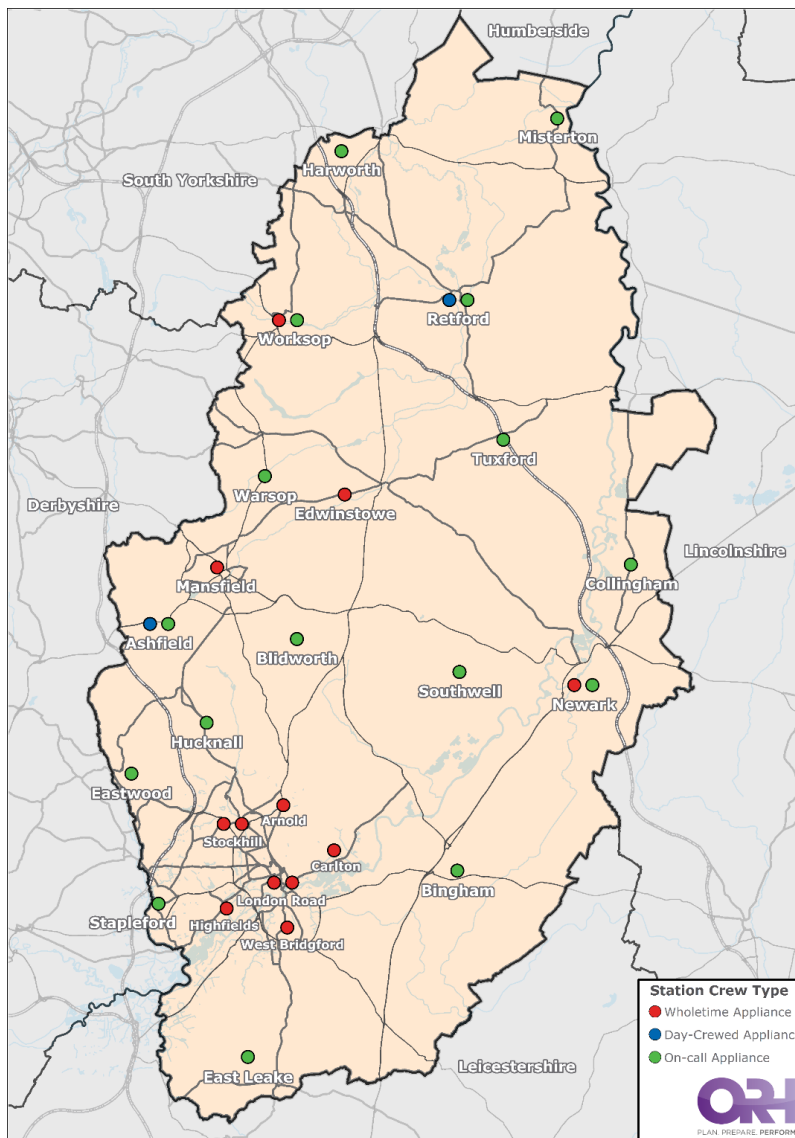


Current Deployment Position

NFRS deploys 30 pumps across 24 stations. There are a mix of wholetime, day-crewed and on-call resources.

As part of this review, NFRS was willing to consider day shift crewing (DSC), which would be wholetime in the day and not crewed at night.

| | Pump 1 | Pump 2 | Current |
|-----------------|--------|--------|---------|
| WT-WT | WT | WT | 2 |
| WT-DSC | WT | DSC | 0 |
| WT-OC | WT | OC | 2 |
| WT-X | WT | - | 6 |
| DC-OC | DC | OC | 2 |
| DSC-X | DSC | - | 0 |
| OC-X | OC | - | 12 |
| Number of Pumps | | | 30 |
| Total Stations | | | 24 |

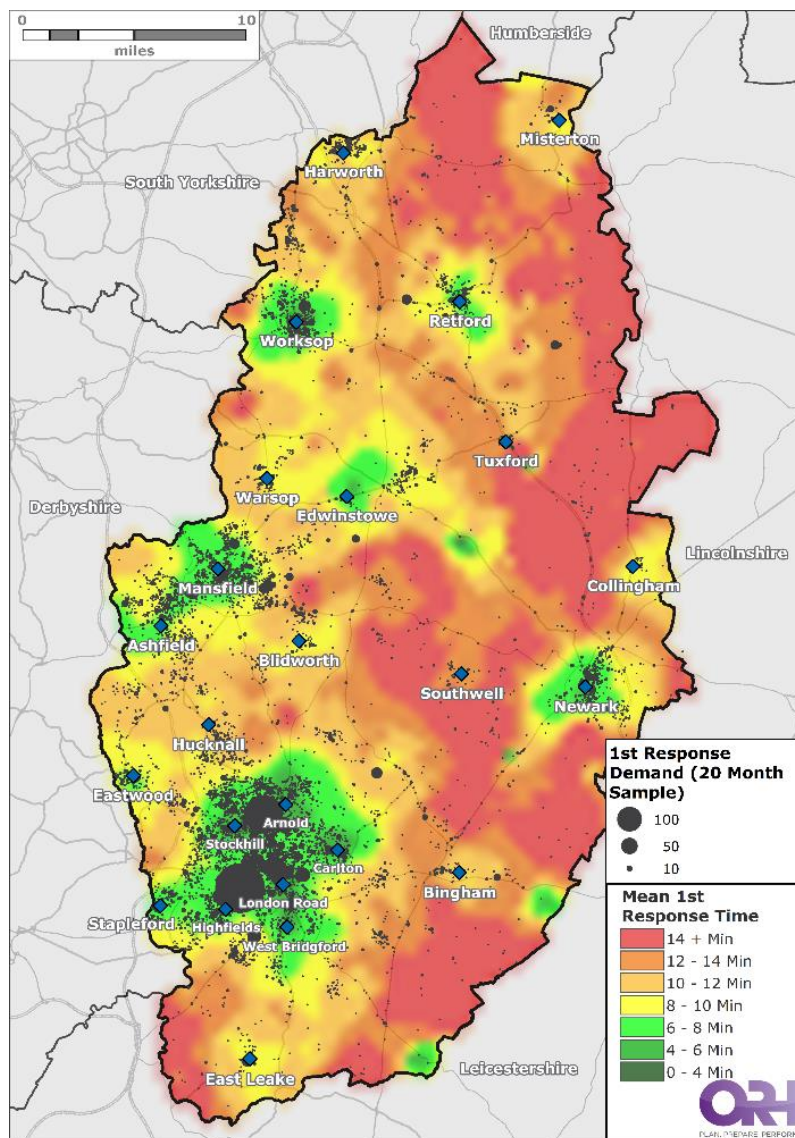


Current Response Performance

As stated in NFRS's 2019-22 strategic plan, the response target is for the first pump to arrive in an average of eight minutes at all incidents service-wide, from the time the pump is assigned. NFRS currently performs narrowly within this target.

Modelled Base

| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | |
| Service-Wide | 7:55 | 11:13 | 95.0% | 7:57 |
| Ashfield | 8:52 | 12:34 | 95.6% | 9:06 |
| Bassetlaw | 9:07 | 14:53 | 91.4% | 9:37 |
| Broxtowe | 7:26 | 11:33 | 97.0% | 7:26 |
| City of Nottingham | 6:56 | 8:01 | 97.5% | 6:31 |
| Gedling | 6:30 | 10:24 | 97.8% | 7:01 |
| Mansfield | 7:19 | 13:06 | 98.0% | 7:52 |
| Newark & Sherwood | 9:23 | 14:55 | 89.5% | 10:02 |
| Rushcliffe | 9:24 | 12:13 | 88.9% | 9:47 |



Approach: ORH Models

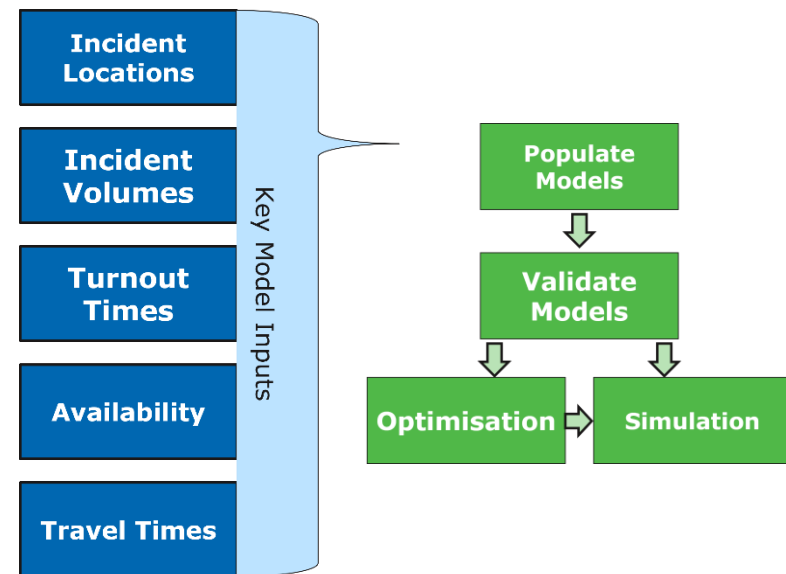
The models that ORH set up and validated for the 2021 Fire Cover Review are still fit for purpose and were used for this project.

ORH used optimisation modelling to identify different configurations of pumping appliances that meet different levels of savings.

Constraints and criteria were required to ensure resulting options are feasible.

The criteria and constraints were defined by NFRS and are described on the next page.

Simulation modelling was used to fully evaluate the alternative deployments and impacts on performance.



Approach: Modelling

Optimisation Criteria and Constraints

| Criteria/Constraint | Notes |
|--|---|
| Minimise average attendance times | Aligned to NFRS attendance target of average within 8 minutes |
| First pump attendance | Optimisation will likely remove/reduce second pump crewing in favour of first pumps |
| Nottinghamshire-wide performance | There could be large differences in performance in some areas compared to others |
| Only existing station locations considered | |
| Would not introduce new on-call crews | |

Optimal Deployments



Station Costs

NFRS provided the following costs per type of station, depending on the number of pumps and crewing types, to feed into the optimisation modelling:

| | Pump 1 | Pump 2 | Expected Cost |
|--------|--------|--------|---------------|
| WT-WT | WT | WT | £ 2,245,424 |
| WT-DSC | WT | DSC | £ 1,807,454 |
| WT-OC | WT | OC | £ 1,459,978 |
| WT-X | WT | - | £ 1,234,978 |
| DC-OC | DC | OC | £ 797,476 |
| DSC-X | DSC | - | £ 572,476 |
| OC-X | OC | - | £ 225,000 |

Approach: Deployment Configurations

Using example of £1m Savings (£0.9m to £1.1m)

ORH found all the combinations of station types that result in £1m of savings (with a £100k tolerance).

| Station Type | Current | Alternative Combinations | | | | | | | | | | | |
|--------------|---------|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| WT-WT | 2 | 2 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 1 |
| WT-DSC | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| WT-OC | 2 | 3 | 2 | 0 | 2 | 3 | 1 | 3 | 3 | 1 | 2 | 2 | 0 |
| WT | 6 | 5 | 8 | 9 | 6 | 7 | 9 | 5 | 6 | 7 | 7 | 8 | 10 |
| DC-OC | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| DSC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| OC | 12 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 |
| Stations | 24 | 21 | 22 | 22 | 22 | 23 | 23 | 23 | 24 | 23 | 24 | 24 | 24 |
| Savings (£m) | - | £ 1.02 | £ 1.02 | £ 0.90 | £ 1.02 | £ 1.01 | £ 1.02 | £ 1.01 | £ 1.01 | £ 1.02 | £ 1.01 | £ 1.01 | £ 1.02 |

Modelling was used to identify the optimal deployment and measure the impact on response times.

The same process was carried out for the different levels of savings.

ORH also identified some options that did not fit within the savings thresholds but could be worth further consideration. For example, a deployment that resulted in £0.8m of savings, which improved average first pump attendance times.

Deployment maps and full performance impacts are presented on the following pages.

£0.8m Savings Deployment

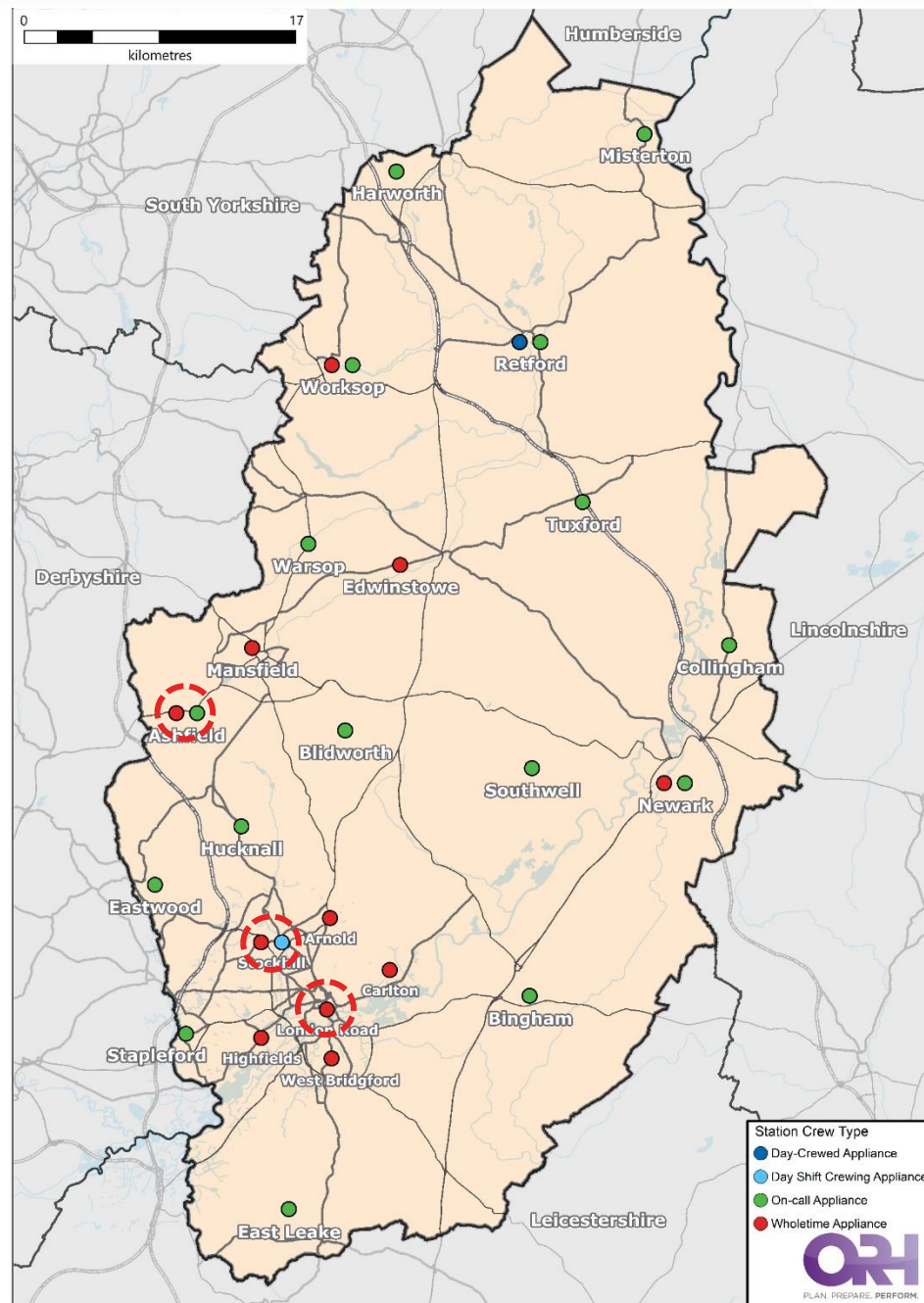
| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 1OC | 1WT 1OC |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT 1DSC |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 1 |
| 2 | 3 |
| 6 | 7 |
| 2 | 1 |
| 0 | 0 |
| 12 | 12 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |

| | |
|----|----|
| 30 | 29 |
| 24 | 24 |



£0.8m Savings Performance

Model Output

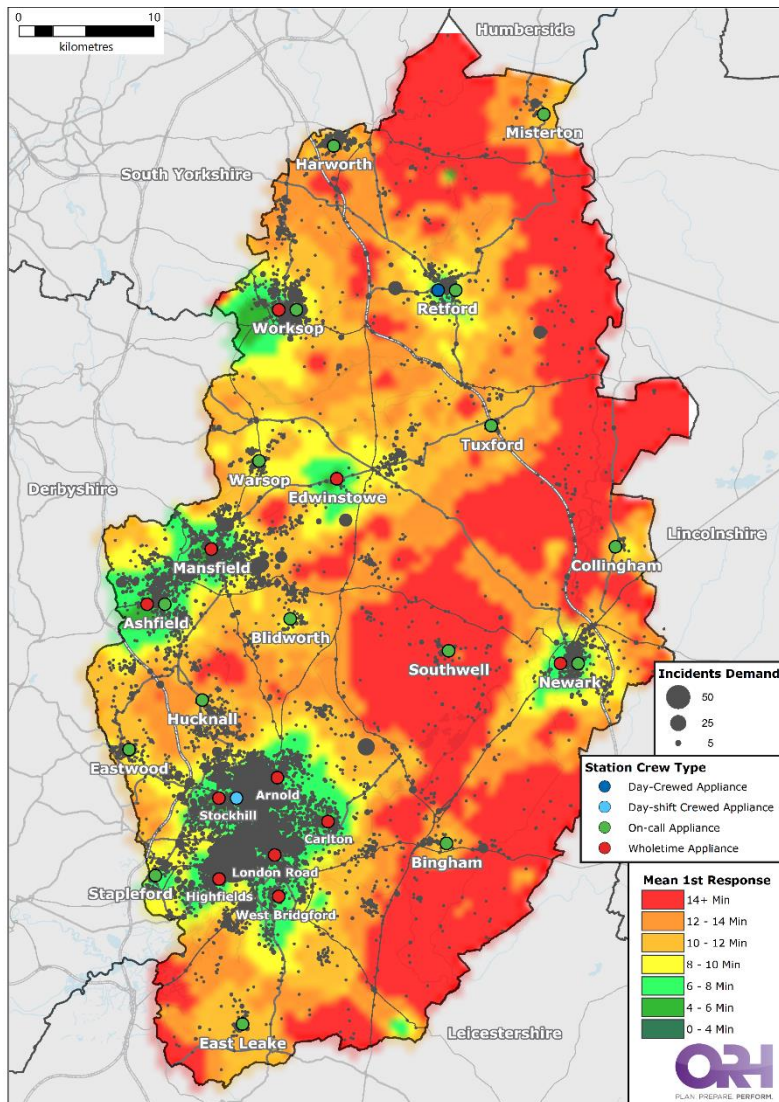
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 7:56 | 11:31 | 95.0% | 7:56 |
| Ashfield | 8:06 | 12:11 | 97.0% | 8:17 |
| Bassetlaw | 9:07 | 14:53 | 91.3% | 9:37 |
| Broxtowe | 7:29 | 11:49 | 96.8% | 7:29 |
| City of Nottingham | 7:09 | 9:06 | 97.3% | 6:41 |
| Gedling | 6:34 | 10:30 | 97.5% | 7:05 |
| Mansfield | 7:17 | 12:32 | 98.3% | 7:49 |
| Newark & Sherwood | 9:23 | 14:55 | 89.5% | 10:02 |
| Rushcliffe | 9:31 | 12:36 | 88.4% | 9:53 |

Impact

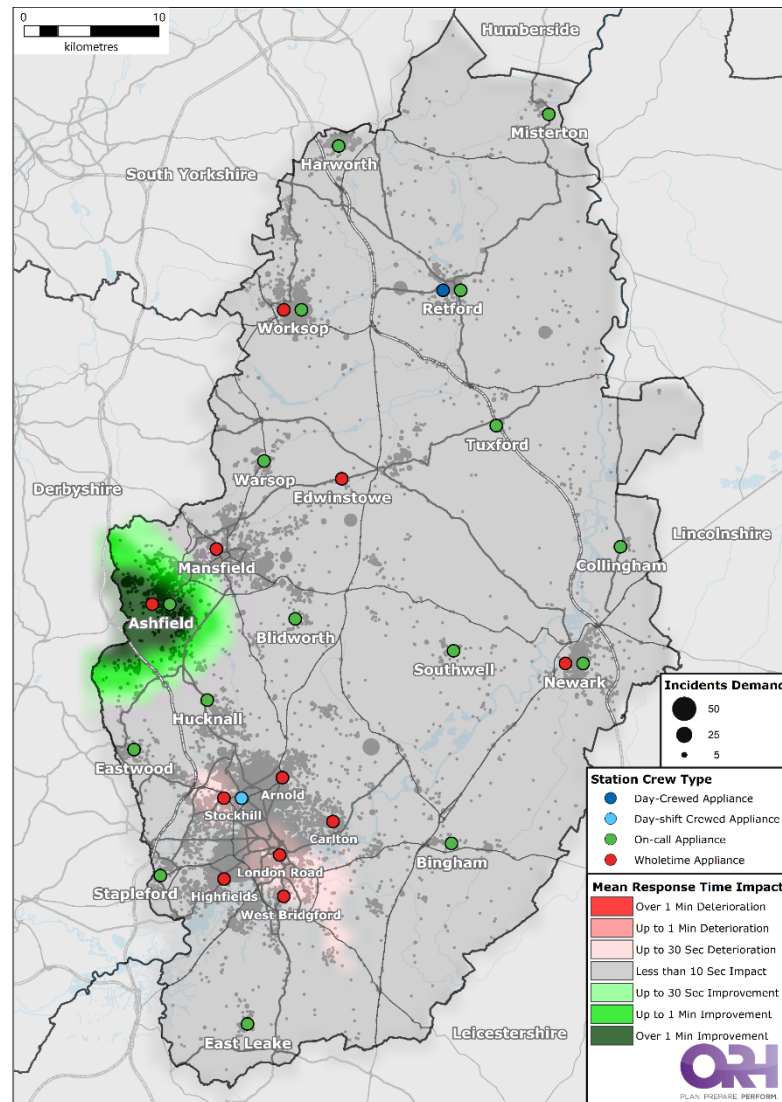
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:01 | +0:18 | 0.0% | -0:01 |
| Ashfield | -0:46 | -0:23 | 1.4% | -0:49 |
| Bassetlaw | 0:00 | 0:00 | -0.1% | 0:00 |
| Broxtowe | +0:03 | +0:16 | -0.2% | +0:03 |
| City of Nottingham | +0:13 | +1:05 | -0.2% | +0:10 |
| Gedling | +0:04 | +0:06 | -0.3% | +0:04 |
| Mansfield | -0:02 | -0:34 | 0.3% | -0:03 |
| Newark & Sherwood | 0:00 | 0:00 | 0.0% | 0:00 |
| Rushcliffe | +0:07 | +0:23 | -0.5% | +0:06 |

£0.8m Savings Performance

Mean First Response Time



Mean First Response Time Impact



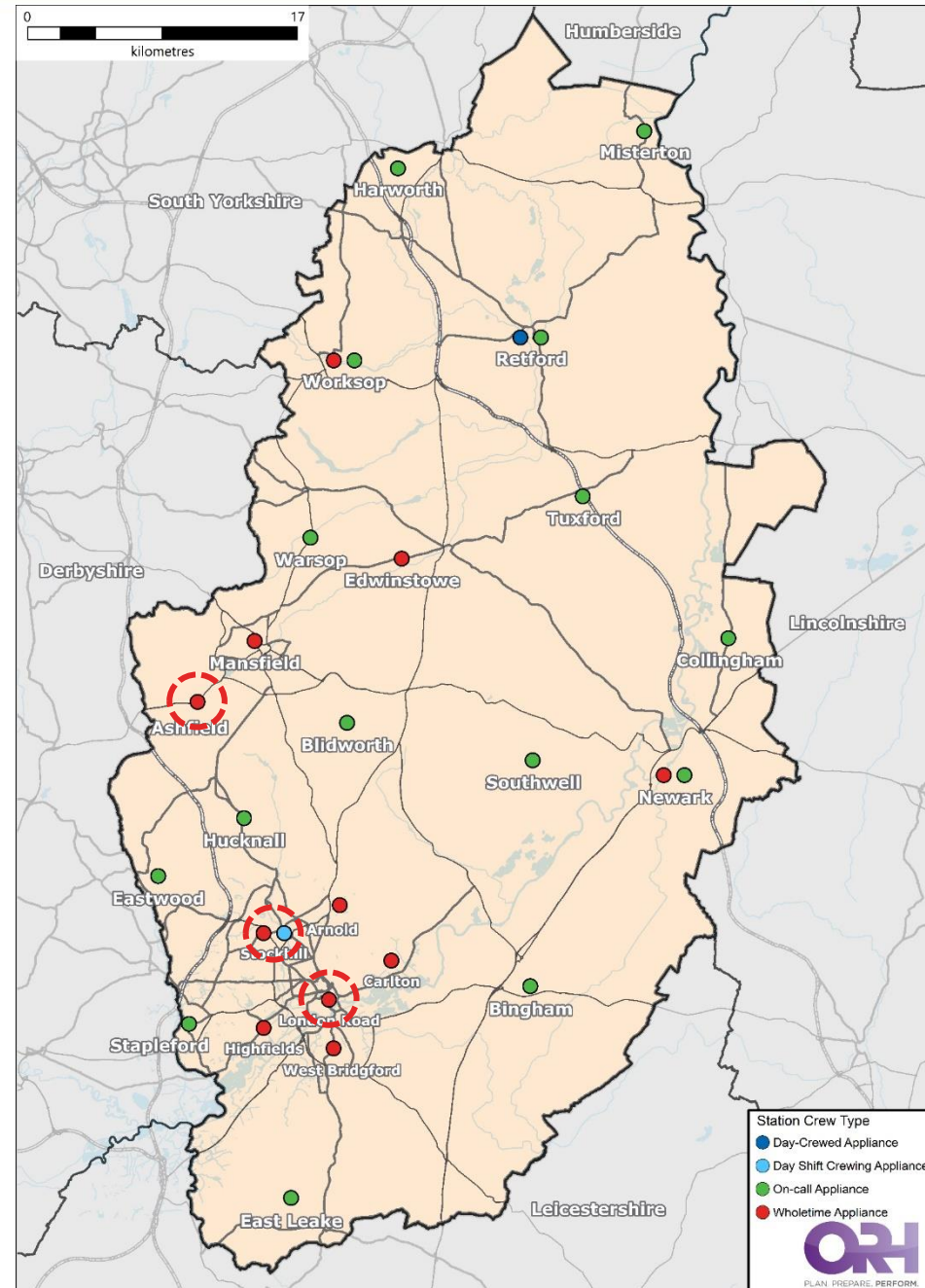
£1m Savings Deployment

| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 1OC | 1WT |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT 1DSC |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 1 |
| 2 | 2 |
| 6 | 8 |
| 2 | 1 |
| 0 | 0 |
| 12 | 12 |
| 30 | 28 |
| 24 | 24 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |



£1m Savings Performance

Model Output

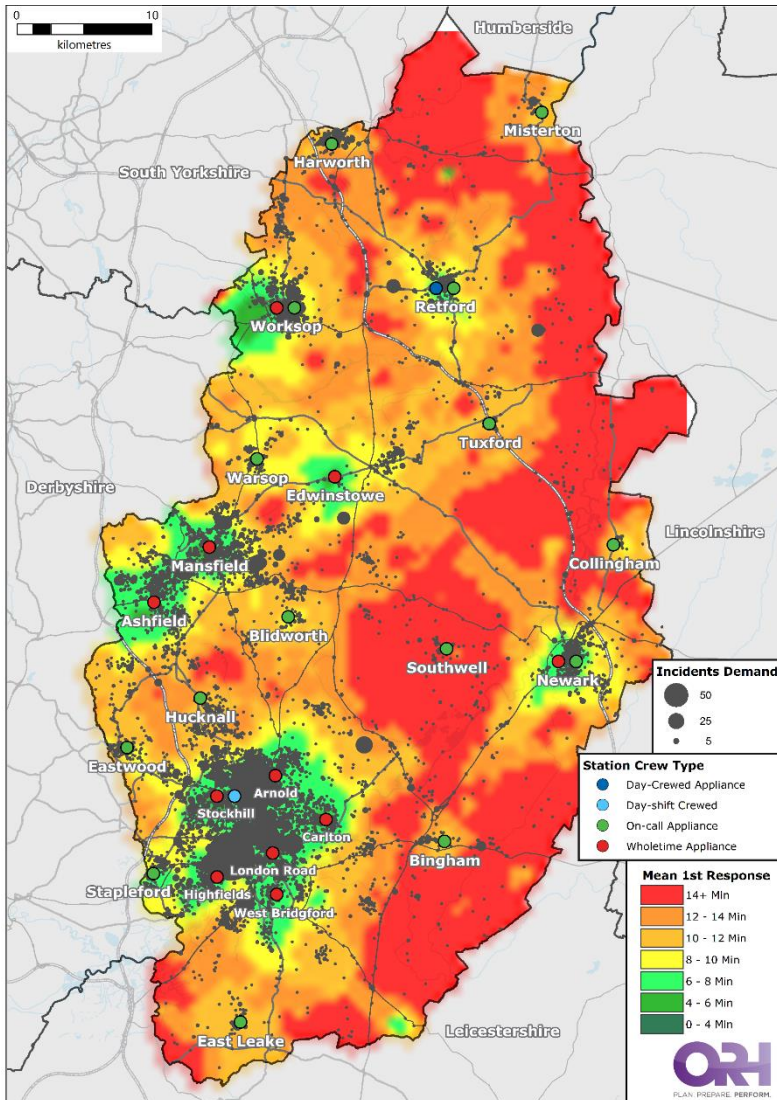
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 7:57 | 11:38 | 94.8% | 7:58 |
| Ashfield | 8:18 | 13:18 | 95.5% | 8:29 |
| Bassetlaw | 9:07 | 14:54 | 91.3% | 9:37 |
| Broxtowe | 7:29 | 11:49 | 96.7% | 7:29 |
| City of Nottingham | 7:09 | 9:06 | 97.3% | 6:41 |
| Gedling | 6:34 | 10:29 | 97.5% | 7:06 |
| Mansfield | 7:20 | 12:42 | 98.0% | 7:52 |
| Newark & Sherwood | 9:23 | 14:55 | 89.5% | 10:03 |
| Rushcliffe | 9:30 | 12:35 | 88.5% | 9:53 |

Impact

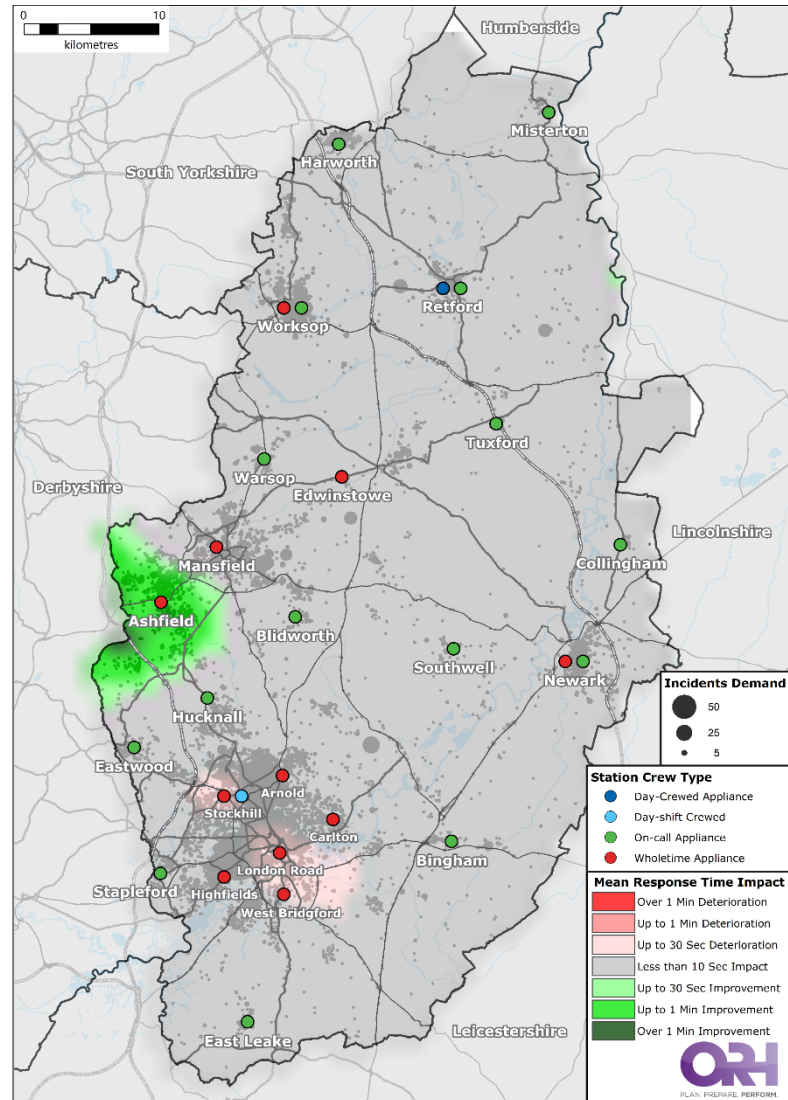
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:02 | +0:25 | -0.2% | +0:01 |
| Ashfield | -0:34 | +0:44 | -0.1% | -0:37 |
| Bassetlaw | 0:00 | +0:01 | -0.1% | 0:00 |
| Broxtowe | +0:03 | +0:16 | -0.3% | +0:03 |
| City of Nottingham | +0:13 | +1:05 | -0.2% | +0:10 |
| Gedling | +0:04 | +0:05 | -0.3% | +0:05 |
| Mansfield | +0:01 | -0:24 | 0.0% | 0:00 |
| Newark & Sherwood | 0:00 | 0:00 | 0.0% | +0:01 |
| Rushcliffe | +0:06 | +0:22 | -0.4% | +0:06 |

£1m Savings Performance

Mean First Response Time



Mean First Response Time Impact



£1.5m Savings Deployment

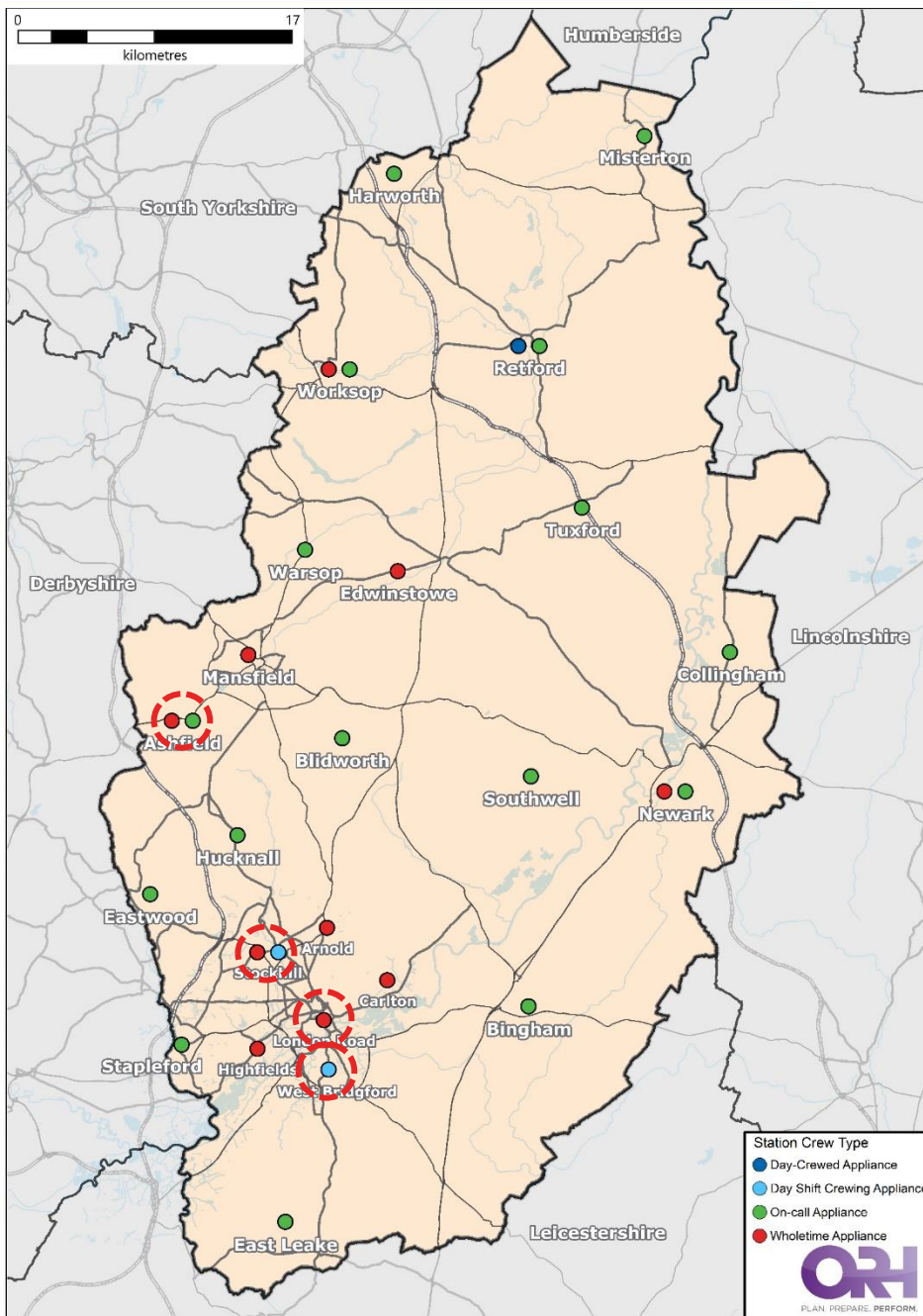
| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 10C | 1WT 10C |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT 1DSC |
| West Bridgford | 1WT | 1DSC |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 1 |
| 2 | 3 |
| 6 | 6 |
| 2 | 1 |
| 0 | 1 |
| 12 | 12 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |

| | |
|----|----|
| 30 | 29 |
| 24 | 24 |



£1.5m Savings Performance

Model Output

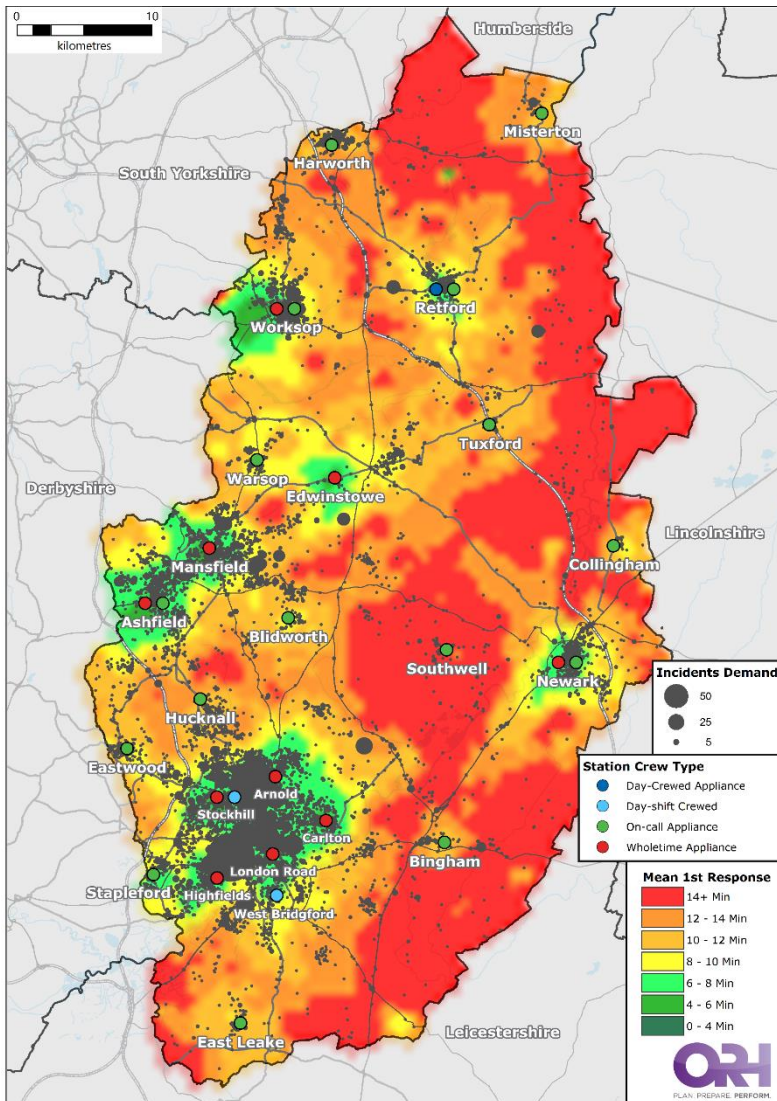
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 7:59 | 11:38 | 94.7% | 8:00 |
| Ashfield | 8:06 | 12:11 | 97.0% | 8:17 |
| Bassetlaw | 9:07 | 14:53 | 91.3% | 9:37 |
| Broxtowe | 7:30 | 11:51 | 96.7% | 7:30 |
| City of Nottingham | 7:13 | 9:12 | 97.0% | 6:44 |
| Gedling | 6:35 | 10:32 | 97.4% | 7:07 |
| Mansfield | 7:17 | 12:32 | 98.3% | 7:49 |
| Newark & Sherwood | 9:23 | 14:55 | 89.5% | 10:02 |
| Rushcliffe | 10:01 | 13:27 | 86.2% | 10:29 |

Impact

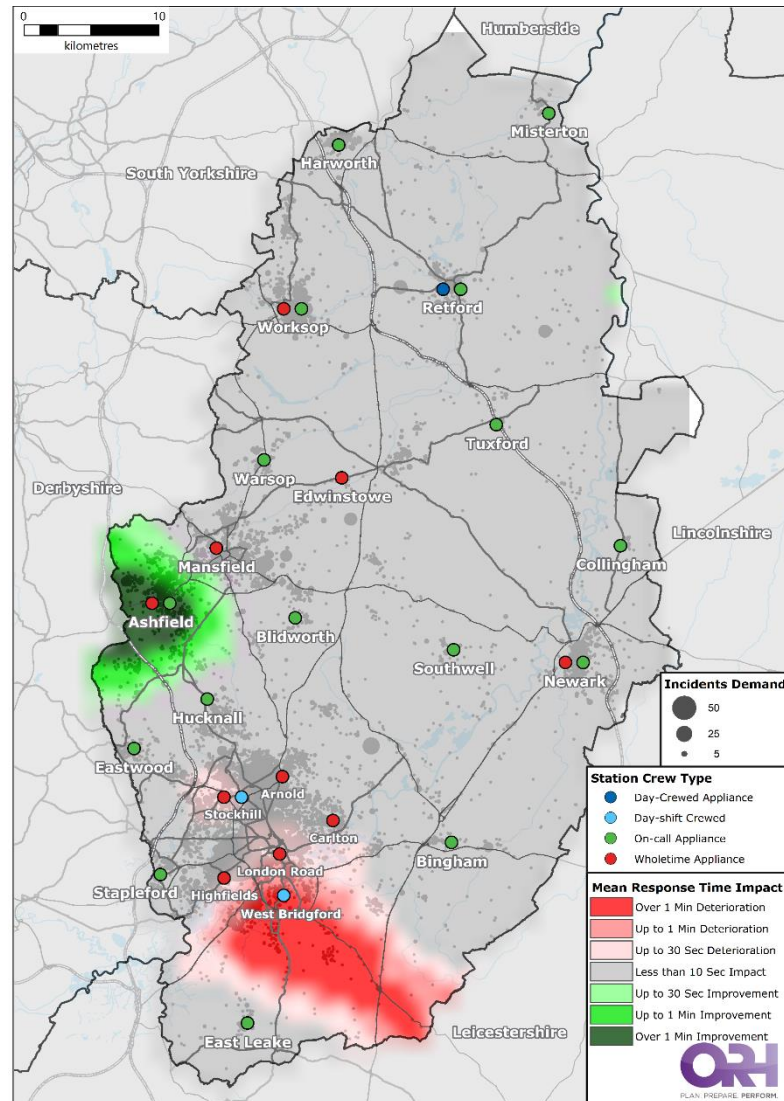
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:04 | +0:25 | -0.3% | +0:03 |
| Ashfield | -0:46 | -0:23 | 1.4% | -0:49 |
| Bassetlaw | 0:00 | 0:00 | -0.1% | 0:00 |
| Broxtowe | +0:04 | +0:18 | -0.3% | +0:04 |
| City of Nottingham | +0:17 | +1:11 | -0.5% | +0:13 |
| Gedling | +0:05 | +0:08 | -0.4% | +0:06 |
| Mansfield | -0:02 | -0:34 | 0.3% | -0:03 |
| Newark & Sherwood | 0:00 | 0:00 | 0.0% | 0:00 |
| Rushcliffe | +0:37 | +1:14 | -2.7% | +0:42 |

£1.5m Savings Performance

Mean First Response Time



Mean First Response Time Impact



£2m Savings Deployment

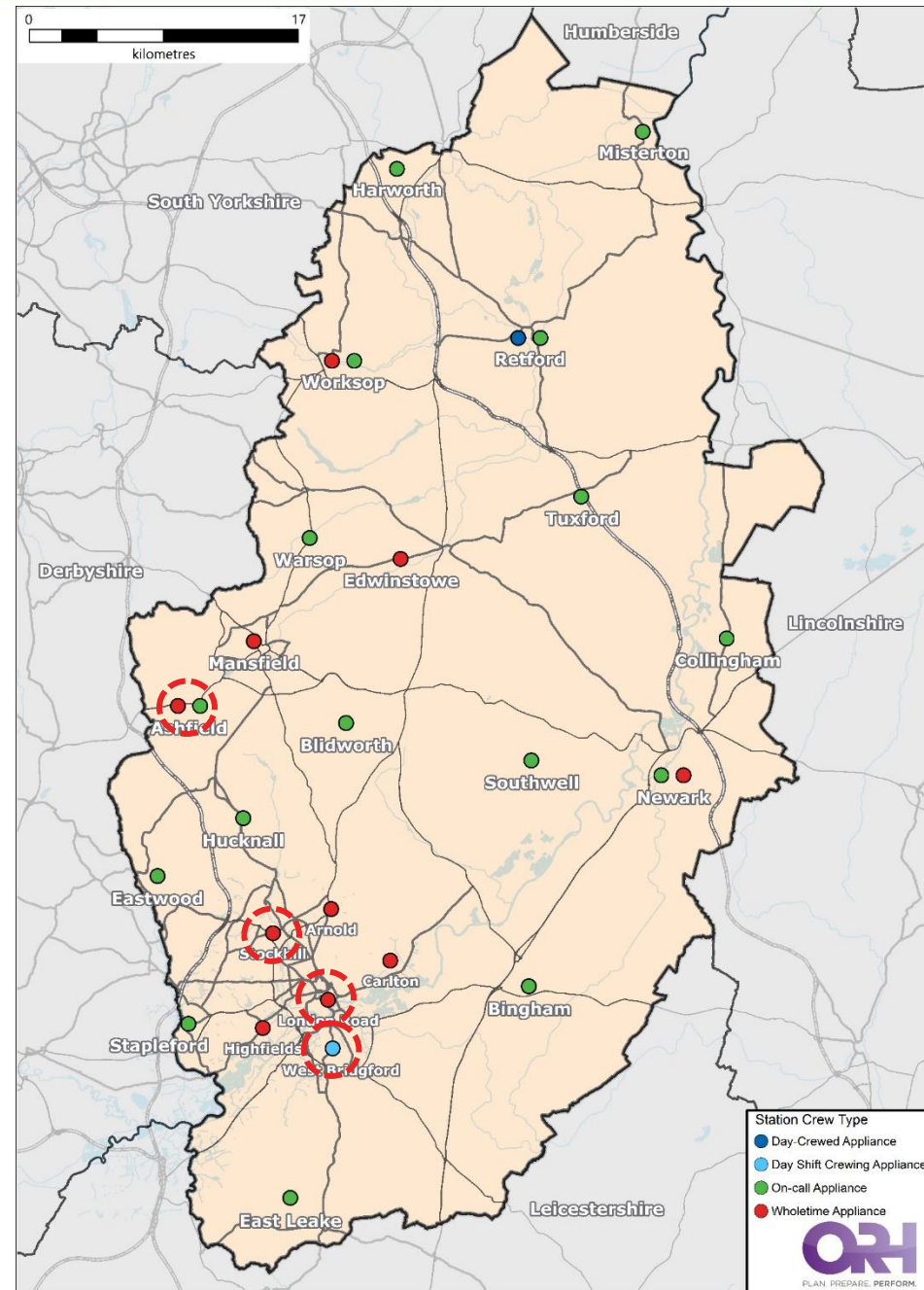
| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 10C | 1WT 10C |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT |
| West Bridgford | 1WT | 1DSC |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 0 |
| 2 | 3 |
| 6 | 7 |
| 2 | 1 |
| 0 | 1 |
| 12 | 12 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |

| | |
|----|----|
| 30 | 28 |
| 24 | 24 |



£2m Savings Performance

Model Output

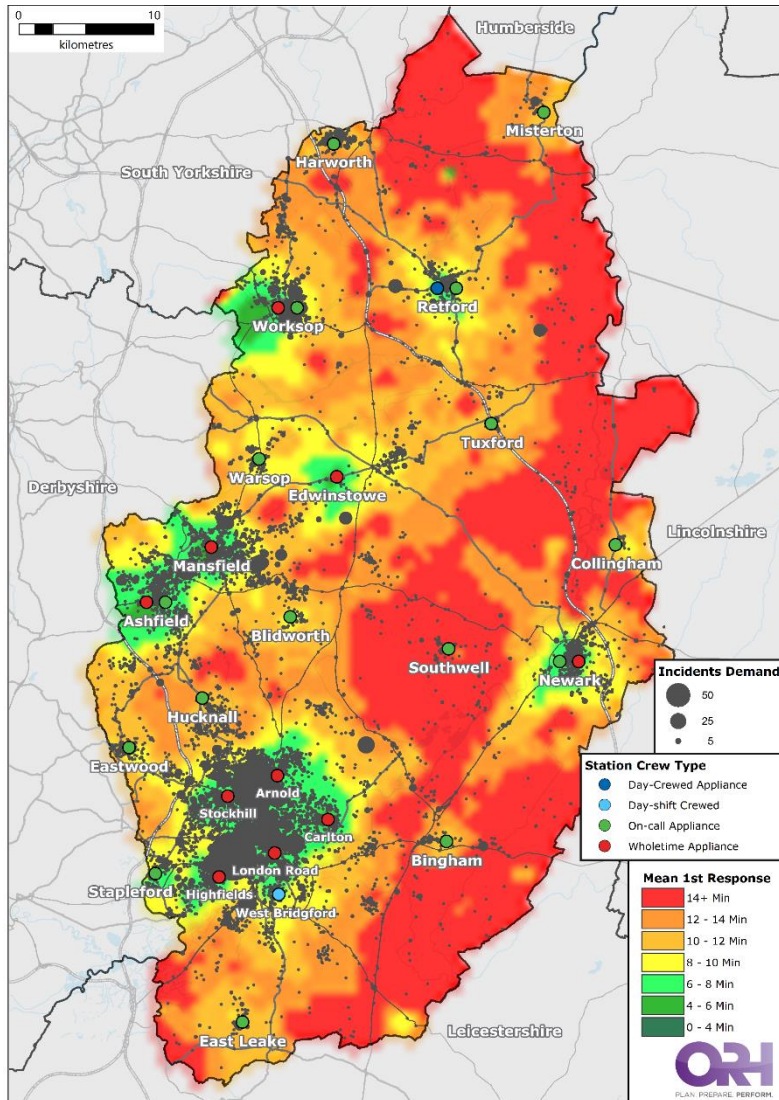
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 8:03 | 11:55 | 94.6% | 8:04 |
| Ashfield | 8:06 | 12:15 | 96.8% | 8:18 |
| Bassetlaw | 9:07 | 14:53 | 91.4% | 9:37 |
| Broxtowe | 7:36 | 12:28 | 96.2% | 7:35 |
| City of Nottingham | 7:24 | 9:59 | 96.8% | 6:52 |
| Gedling | 6:39 | 10:41 | 97.1% | 7:11 |
| Mansfield | 7:17 | 12:33 | 98.3% | 7:49 |
| Newark & Sherwood | 9:23 | 14:56 | 89.6% | 10:02 |
| Rushcliffe | 10:01 | 13:28 | 86.0% | 10:30 |

Impact

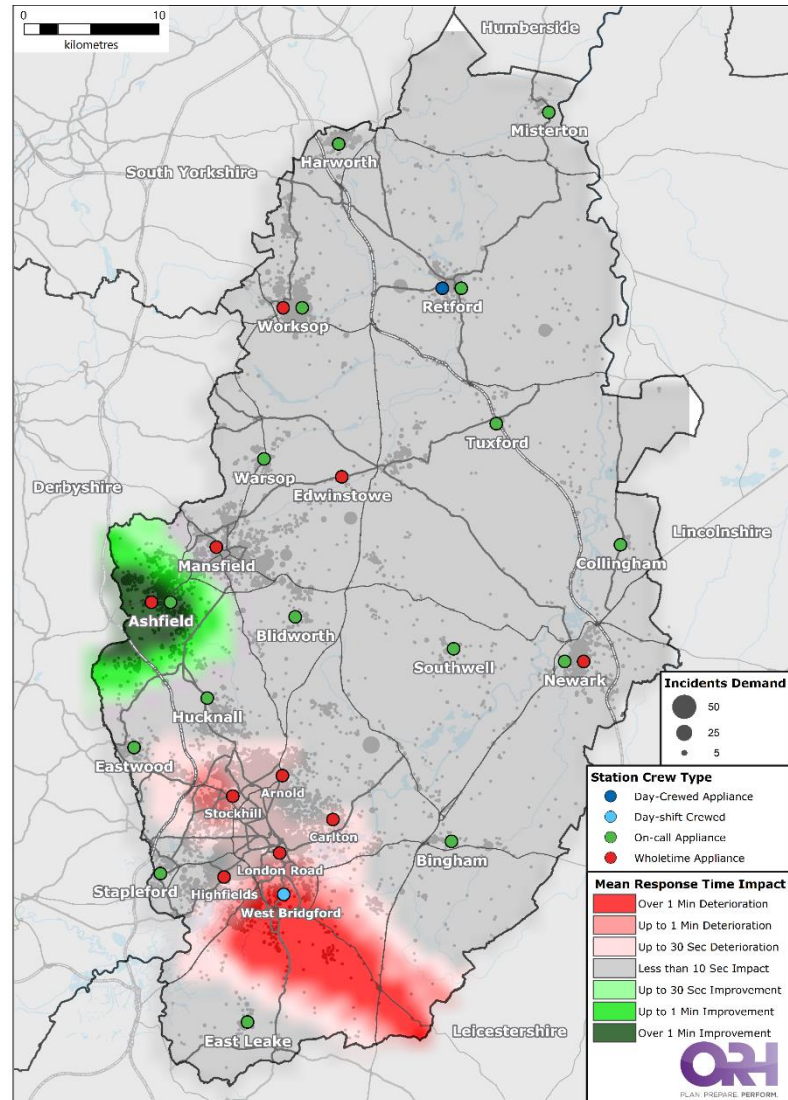
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:08 | +0:42 | -0.4% | +0:07 |
| Ashfield | -0:46 | -0:19 | 1.2% | -0:48 |
| Bassetlaw | 0:00 | 0:00 | 0.0% | 0:00 |
| Broxtowe | +0:10 | +0:55 | -0.8% | +0:09 |
| City of Nottingham | +0:28 | +1:58 | -0.7% | +0:21 |
| Gedling | +0:09 | +0:17 | -0.7% | +0:10 |
| Mansfield | -0:02 | -0:33 | 0.3% | -0:03 |
| Newark & Sherwood | 0:00 | +0:01 | 0.1% | 0:00 |
| Rushcliffe | +0:37 | +1:15 | -2.9% | +0:43 |

£2m Savings Performance

Mean First Response Time



Mean First Response Time Impact



£2.5m Savings Deployment

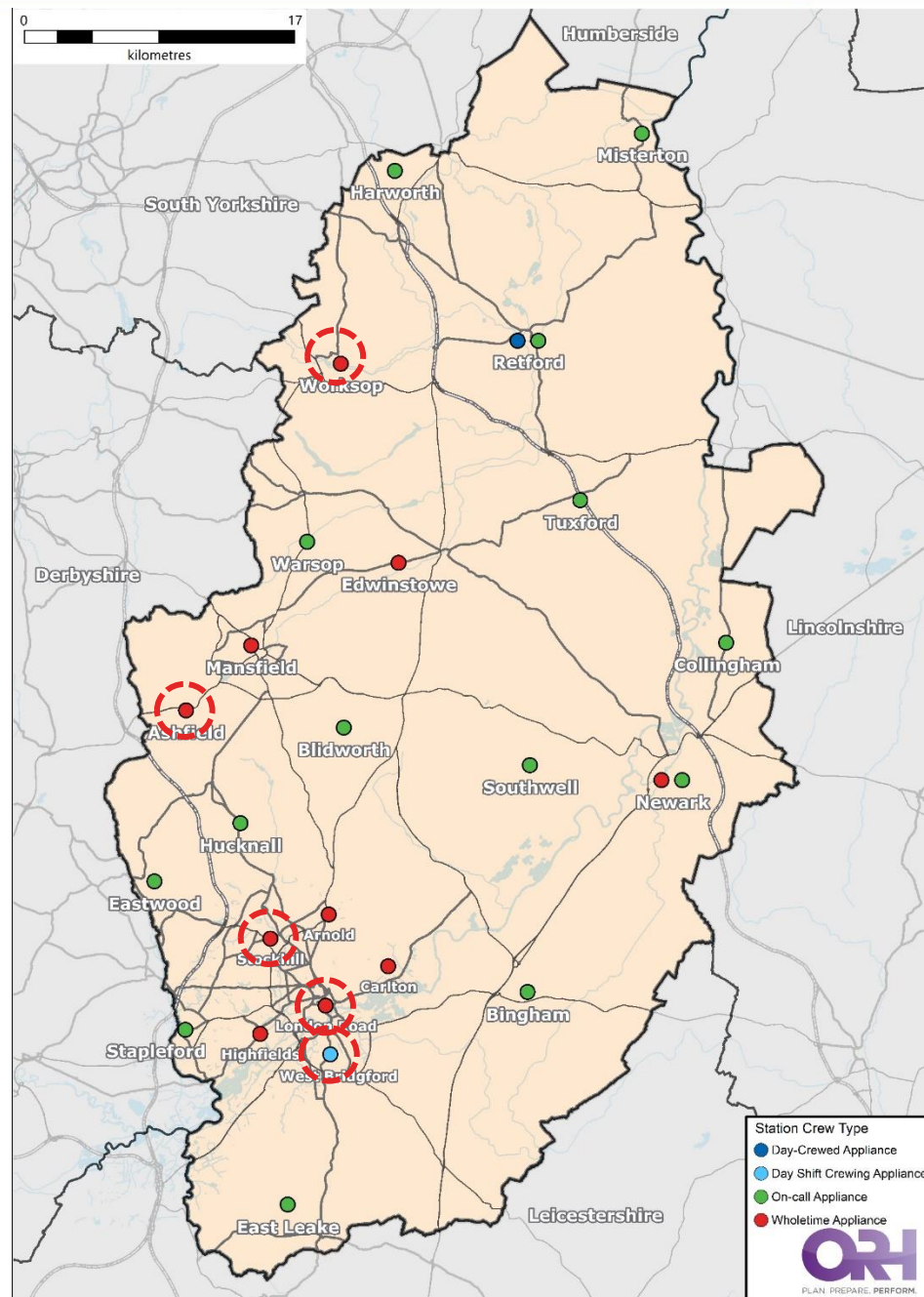
| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 1OC | 1WT |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT |
| West Bridgford | 1WT | 1DSC |
| Worksop | 1WT 1OC | 1WT |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 0 |
| 2 | 1 |
| 6 | 9 |
| 2 | 1 |
| 0 | 1 |
| 12 | 12 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |

| | |
|----|----|
| 30 | 26 |
| 24 | 24 |



£2.5m Savings Performance

Model Output

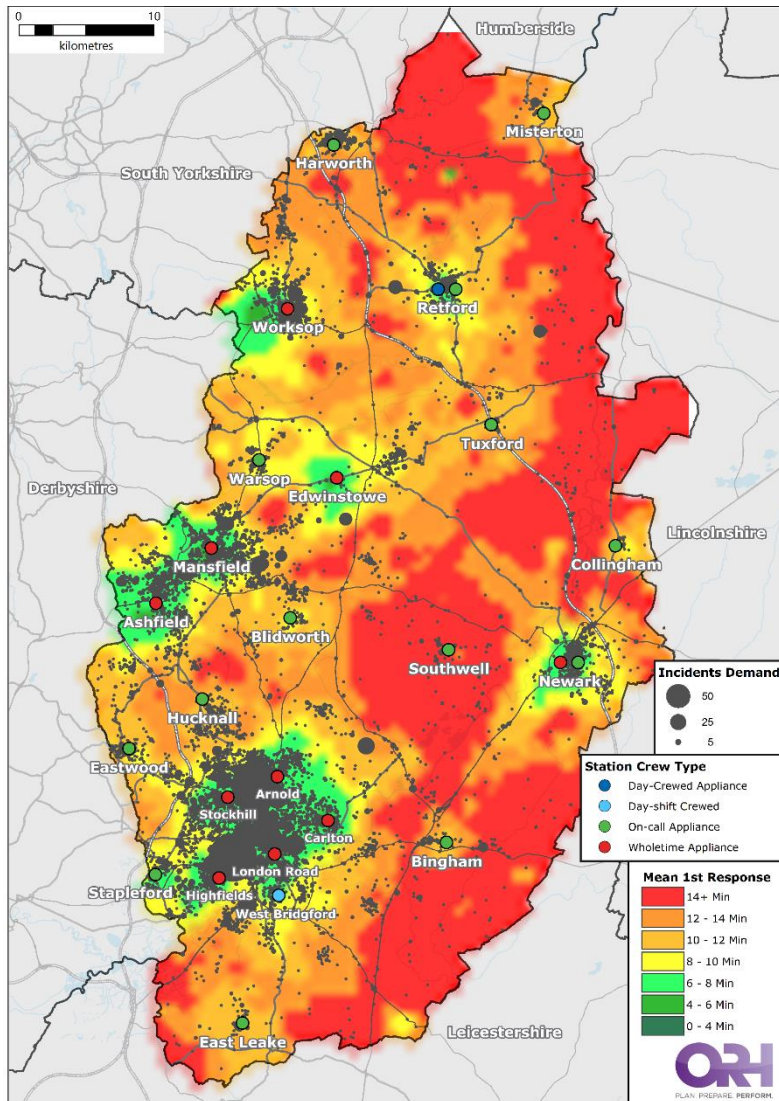
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 8:07 | 12:27 | 94.2% | 8:07 |
| Ashfield | 8:19 | 13:21 | 95.4% | 8:30 |
| Bassetlaw | 9:16 | 17:29 | 89.8% | 9:47 |
| Broxtowe | 7:36 | 12:27 | 96.2% | 7:35 |
| City of Nottingham | 7:24 | 9:59 | 96.8% | 6:52 |
| Gedling | 6:40 | 10:41 | 97.1% | 7:11 |
| Mansfield | 7:21 | 12:43 | 98.0% | 7:53 |
| Newark & Sherwood | 9:25 | 14:57 | 89.3% | 10:05 |
| Rushcliffe | 10:01 | 13:27 | 86.0% | 10:30 |

Impact

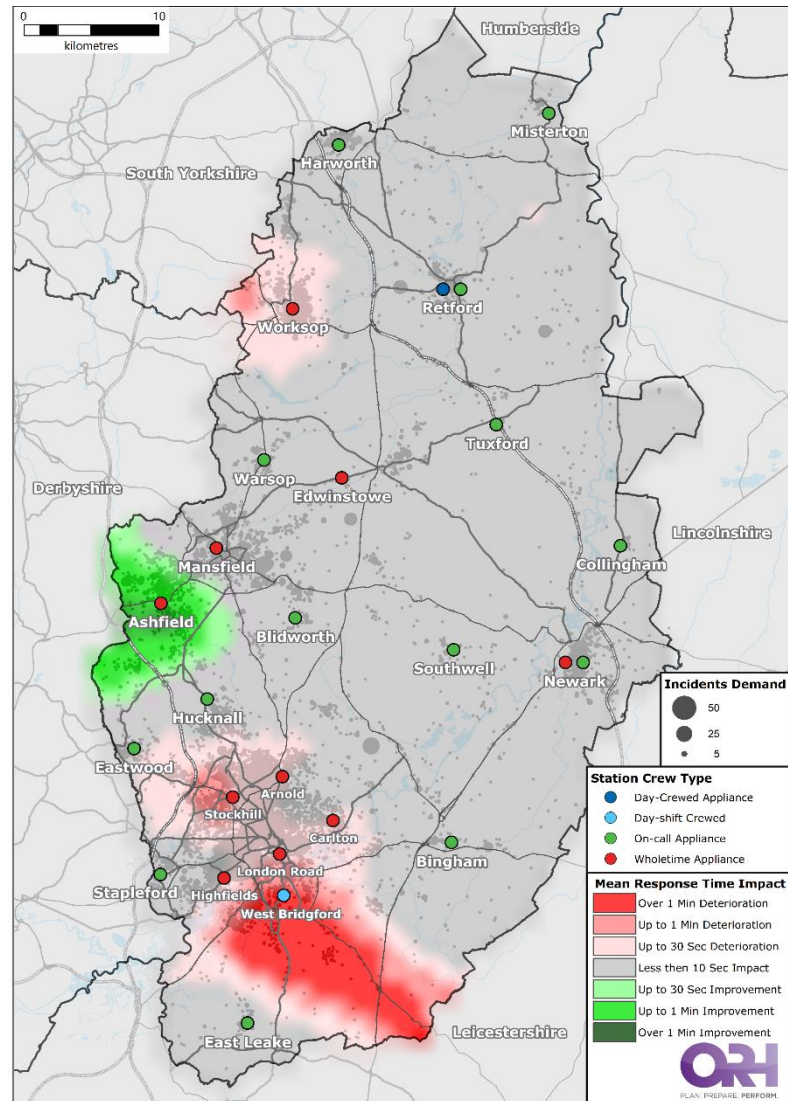
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:12 | +1:14 | -0.8% | +0:10 |
| Ashfield | -0:33 | +0:47 | -0.2% | -0:36 |
| Bassetlaw | +0:09 | +2:36 | -1.6% | +0:10 |
| Broxtowe | +0:10 | +0:54 | -0.8% | +0:09 |
| City of Nottingham | +0:28 | +1:58 | -0.7% | +0:21 |
| Gedling | +0:10 | +0:17 | -0.7% | +0:10 |
| Mansfield | +0:02 | -0:23 | 0.0% | +0:01 |
| Newark & Sherwood | +0:02 | +0:02 | -0.2% | +0:03 |
| Rushcliffe | +0:37 | +1:14 | -2.9% | +0:43 |

£2.5m Savings Performance

Mean First Response Time



Mean First Response Time Impact



£3m Savings Deployment

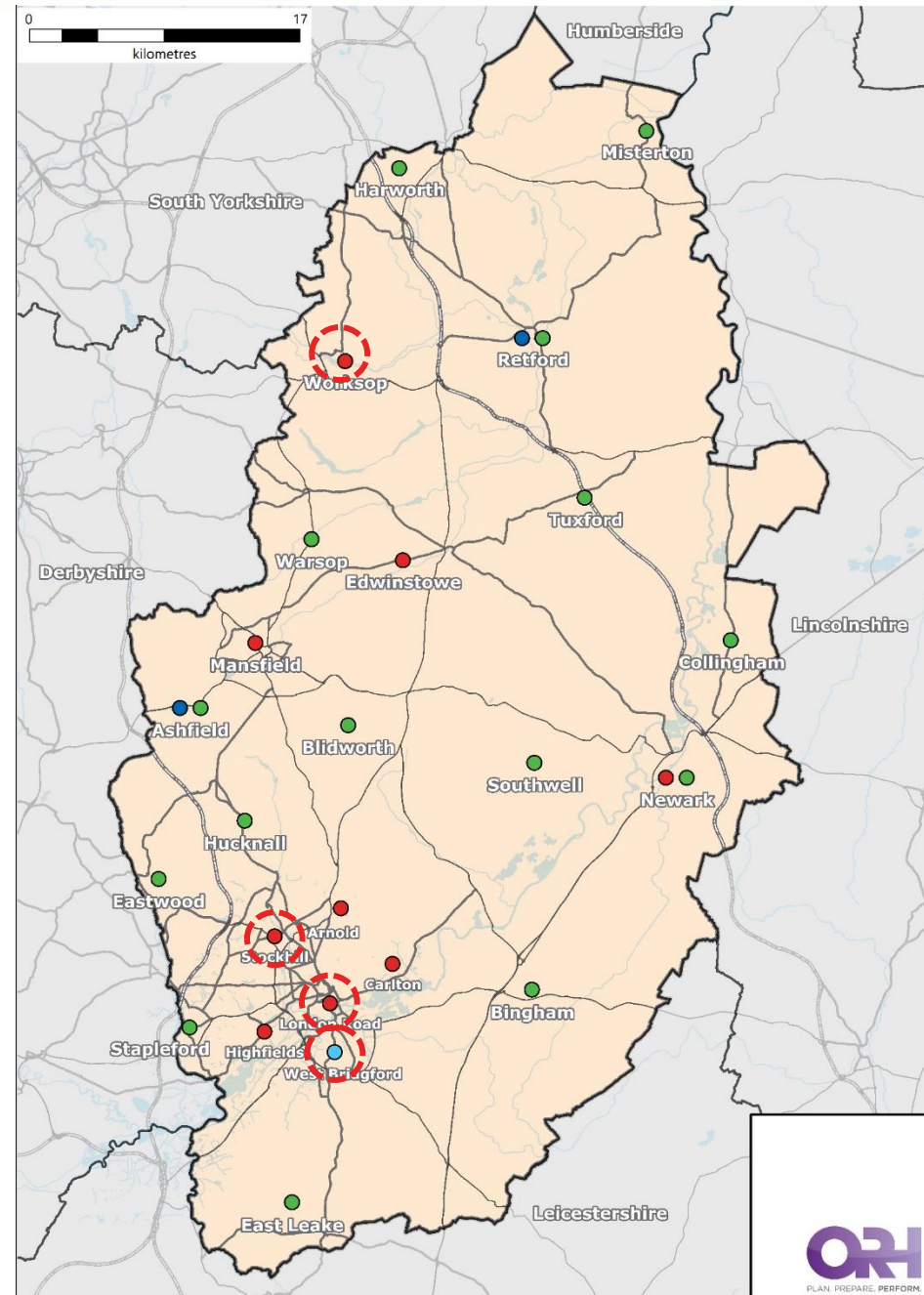
| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT |
| West Bridgford | 1WT | 1DSC |
| Worksop | 1WT 1OC | 1WT |

| | Pump 1 | Pump 2 |
|--------|--------|--------|
| WT-WT | WT | WT |
| WT-DSC | WT | DSC |
| WT-OC | WT | OC |
| WT-X | WT | - |
| DC-OC | DC | OC |
| DSC-X | DSC | - |
| OC-X | OC | - |

| Current | Modelled Option |
|---------|-----------------|
| 2 | 0 |
| 0 | 0 |
| 2 | 1 |
| 6 | 8 |
| 2 | 2 |
| 0 | 1 |
| 12 | 12 |

| |
|----------------------|
| Number of Appliances |
| Total Stations |

| | |
|----|----|
| 30 | 27 |
| 24 | 24 |



£3m Savings Performance

Model Output

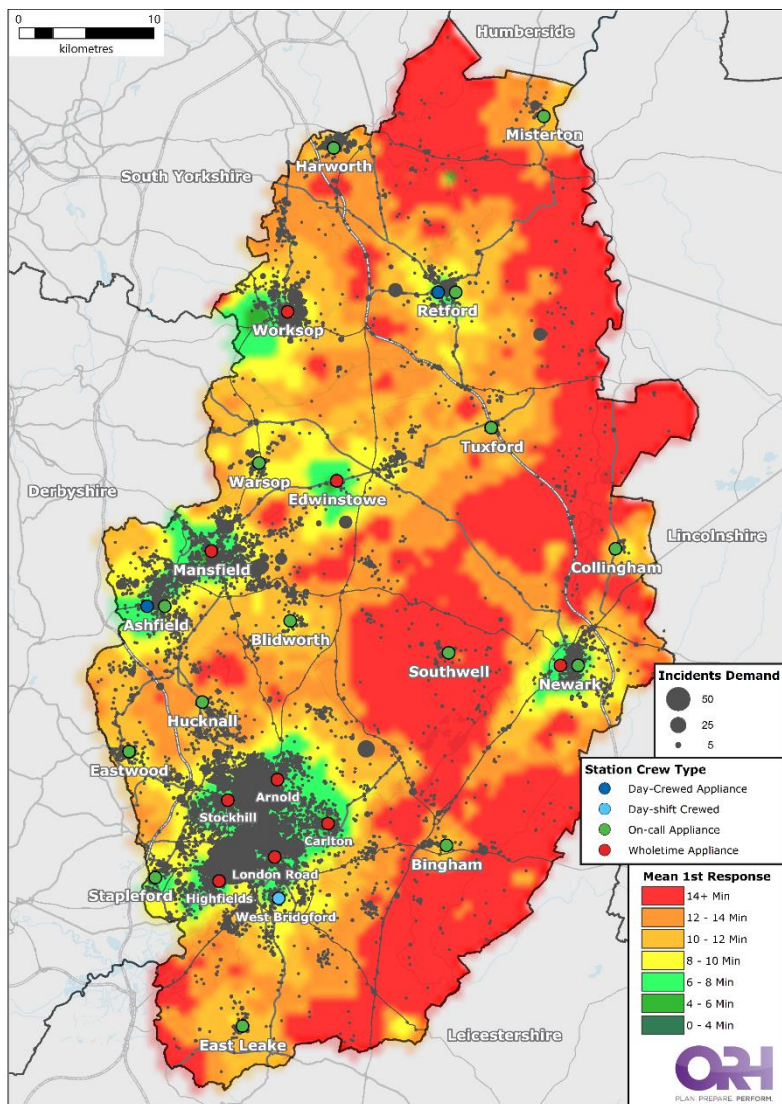
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | 8:10 | 12:25 | 94.2% | 8:10 |
| Ashfield | 8:53 | 12:39 | 95.4% | 9:07 |
| Bassetlaw | 9:16 | 17:29 | 89.8% | 9:47 |
| Broxtowe | 7:36 | 12:28 | 96.2% | 7:35 |
| City of Nottingham | 7:24 | 9:59 | 96.8% | 6:52 |
| Gedling | 6:40 | 10:42 | 97.1% | 7:11 |
| Mansfield | 7:20 | 13:09 | 98.0% | 7:52 |
| Newark & Sherwood | 9:25 | 14:57 | 89.3% | 10:04 |
| Rushcliffe | 10:01 | 13:27 | 86.0% | 10:30 |

Impact

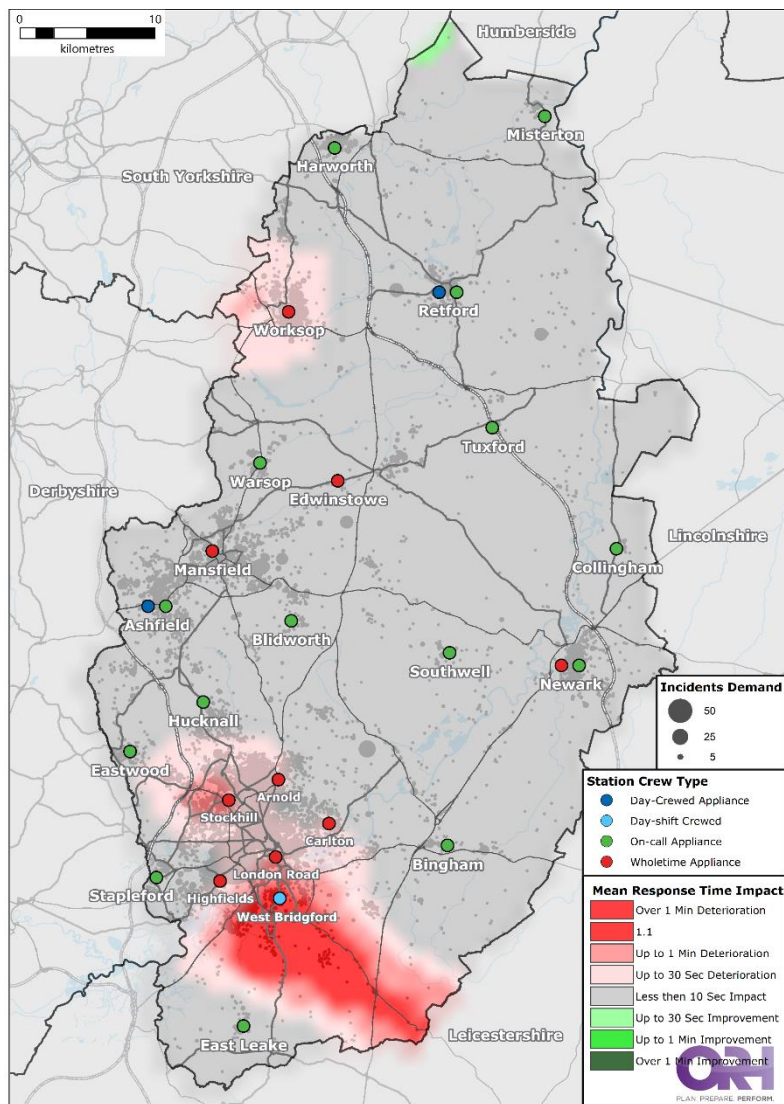
| District | Life-Risk Incidents | | | All Incidents |
|--------------------|---------------------|-------------|------------------------|---------------|
| | Average 1st | Average 2nd | % of 1st in 15 Minutes | Average 1st |
| Service-Wide | +0:15 | +1:12 | -0.8% | +0:13 |
| Ashfield | +0:01 | +0:05 | -0.2% | +0:01 |
| Bassetlaw | +0:09 | +2:36 | -1.6% | +0:10 |
| Broxtowe | +0:10 | +0:55 | -0.8% | +0:09 |
| City of Nottingham | +0:28 | +1:58 | -0.7% | +0:21 |
| Gedling | +0:10 | +0:18 | -0.7% | +0:10 |
| Mansfield | +0:01 | +0:03 | 0.0% | 0:00 |
| Newark & Sherwood | +0:02 | +0:02 | -0.2% | +0:02 |
| Rushcliffe | +0:37 | +1:14 | -2.9% | +0:43 |

£3m Savings Deployment

Mean First Response Time



Mean First Response Time Impact



Modelling Results

Initial Optimal Scenarios

| | | Base Position | £0.8m | £1m | £1.5m | £2m | £2.5m | £3m |
|------------------------------|-----------------|---------------|-------------|-------------|-------------|------------|--------|------------|
| Actual Saving | | - | £0.79m | £1.01m | £1.45m | £2.02m | £2.47m | £2.91m |
| Average 1st to All Incidents | | 07:57 | 07:56 | 07:58 | 08:00 | 08:04 | 08:07 | 08:10 |
| Optimal Deployment Changes | Ashfield | 1DC 1OC | 1WT 1OC | 1WT | 1WT 1OC | 1WT 1OC | 1WT | 1DC 1OC |
| | London Road | 2WT | 1WT | 1WT | 1WT | 1WT | 1WT | 1WT |
| | Stockhill | 2WT | 1WT 1DSC | 1WT 1DSC | 1WT 1DSC | 1WT | 1WT | 1WT |
| | West Bridgeford | 1WT | 1WT | 1WT | 1DSC | 1DSC | 1DSC | 1DSC |
| | Worksop | 1WT 1OC | 1WT 1OC | 1WT 1OC | 1WT 1OC | 1WT 1OC | 1WT | 1WT |

Deployments at all other stations remain unchanged

Modelling Results

Initial Optimal Scenarios

It is possible to make £1.5m of savings with an optimal reduction in pumping appliance provision while expected response times remain within the NFRS response target. This involves the following changes to the deployment:

| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 1OC | 1WT 1OC |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT 1DSC |
| West Bridgford | 1WT | 1DSC |

It is possible to make £0.8m of savings and to improve expected average first pump performance to all incidents with the following changes:

| Station Changes | Current | Modelled Option |
|-----------------|---------|-----------------|
| Ashfield | 1DC 1OC | 1WT 1OC |
| London Road | 2WT | 1WT |
| Stockhill | 2WT | 1WT 1DSC |

Station Workload

| Station | Model Base: Responses by Station | Impact: Estimated difference in responses by station and savings option | | | | | |
|----------------|--|---|------|-------|------|-------|------|
| | | £0.8m | £1m | £1.5m | £2m | £2.5m | £3m |
| London Road | 2,115 | -517 | -517 | -439 | -334 | -334 | -334 |
| Stockhill | 2,049 | -34 | -30 | 0 | -416 | -413 | -413 |
| Arnold | 1,002 | 111 | 112 | 126 | 253 | 255 | 255 |
| Carlton | 566 | 119 | 119 | 167 | 204 | 205 | 205 |
| Highfields | 845 | 76 | 76 | 155 | 204 | 205 | 204 |
| West Bridgford | 728 | 188 | 188 | -96 | -64 | -63 | -63 |
| Worksop | 705 | 0 | 0 | 0 | 0 | -140 | -140 |
| Ashfield | 629 | 89 | -33 | 89 | 93 | -29 | 5 |
| Edwinstowe | 403 | -11 | 4 | -11 | -11 | 72 | 68 |
| Stapleford | 199 | 17 | 17 | 26 | 52 | 52 | 52 |
| All Others | 3,332 | -38 | 63 | -18 | 18 | 190 | 159 |
| Overall | 12,571 | 0 | 0 | 0 | 0 | 0 | 0 |

Initial Responses. Does not include relief attendances etc.
Only stations impacted by over 50 incidents per year presented

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