LANCASHIRE COMBINED FIRE AUTHORITY
PLANNING COMMITTEE
Meeting to be held on 17 July 2017

EMERGENCY COVER REVIEW 2017
(Appendices 1 and 2 to be published on the website and available for Members at the meeting)

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Executive Summary

Aligned to the Integrated Risk Management Plan (IRMP) 2017-22, a key objective within the Annual Service Plan 2017-18 is the requirement to carry out and consult on an Emergency Cover Review (ECR), to ensure appropriate future provision of our resources and crewing arrangements.

Undertaking an Emergency Cover Review is a key component of the Combined Fire Authority's Risk management framework, carried out to ensure that our emergency response provision is commensurate with fire risk in Lancashire and is both efficient and effective.

The review was scheduled to take place in 2016; however it was moved to facilitate consolidation of the impacts, through the implementation period of the 2013 review.

In practical terms the 2017 review seeks to ensure that our resources are such, that when an emergency happens and we have to respond, we do it quickly, with the right fire appliances, the right specialist vehicles and the right crewing arrangements to deal with the incident effectively and safely.

The review has concluded and supports a no change proposal in terms of our fire appliances, specials appliances and associated crewing arrangements. There are recommendations that support changes to our mobilising practices in terms of reducing the levels of Unwanted Fire Signals (UWFS), increasing the speed of response through pre-alerting methods and also the potential to uplift emergency response levels through further collaboration arrangements with partners.

Recommendations

The Planning Committee is asked to consider the approval of the ECR proposals, these being:

1. Adopt an UWFS and Pre-Alerting Policy, which unlocks the potential to strengthen the Collaborative Response Arrangements;
2. Propose a no change ECR for 2017-20 with regards to Lancashire Fire and Rescue Service's 58 Fire Appliances and the associated Crewing Arrangements;
3. Undertake a 12 week consultation commencing 19th July - 11th October 2017.

Information

During the life-cycle of the Integrated Risk Management Plan 2017-22, our aim remains the same: to make Lancashire safer. Aligned to this Lancashire Fire and Rescue (LFRS) seeks to deliver high standards of operational response and in doing so we prepare and plan for emergencies so that when an emergency happens and we have to respond, we do it quickly, with the right fire appliances, the right specialist vehicles and the right crewing arrangements to deal with the incident effectively and safely.

We recognise that the community of Lancashire changes dynamically through commercial and residential growth and retraction, new road and other infrastructure provision and these along with many other factors may create a differing emergency response requirement from Service LFRS[1].

The analysis that we undertake along with our key partners, indicates a trend of an ever-growing and ever-aging population; increasing weather related events; growing frequency of road traffic collisions; increasing demand on health and social care services and rising incidents relating to mental health issues.

To ensure that response arrangements remain appropriate and effective the Combined Fire Authority periodically commissions an Emergency Cover Review in order to validate current provision and to identify any appropriate proposals for change in response provision.

Scope

In order to validate the current response arrangements and to test predictive impacts LFRS commissioned the services of Process Evolution (consistent with the 2013 ECR) an external specialist organisation. This enabled the use of predictive modelling software in determining and subsequently validating the potential impact of any changes to the number, location and crewing of fire appliances across the county.

The commission further offered the opportunity to review the impacts of the previous 2013-17 ECR.

In determining the scope of the 2017 ECR, the following was agreed at the CFA Planning Committee on March 20th 2017:

A) Validating the deliverables / outcomes / actual performance from within the previous ECR as we operate within a business as usual period beyond the implementation.

B) Developing a subsequent Baseline Model for 2017 inclusive of the above.

C) Determining the theoretical potential impact of a series of changes to the number, location, response capabilities and crewing of fire appliances across the county.

More specifically but not exclusively:

i. Realising a wider Emergency First Responding capability.
ii. Determining a revised response to Automatic Fire Alarms.

[1] An annual Strategic Assessment of Risk (SAoR) supports this viewpoint.

iii. Developing a Pre-Alerting policy.
iv. Responding to emergent risk.
v. Acknowledging a strategic commitment in strengthening and improving LFRS Retained Duty Systems (RDS).

Validating the 2013 ECR and Developing the Baseline Model for 2017

As a measure of the 2013 ECR and the predictive element of the proposals derived through theoretical modelling, Process Evolution has undertaken a validation exercise, guided by a terms of reference; (theoretical versus actuals) measured against the proposals implemented during the three year cycle 2014-17.

The 'actual' performance, which is obtained through drawing upon a two year pre implementation and up to a three year post implementation data set, representative of the period and creating a baseline position, has indicated:

i. A marginal increase in overall response times.
ii. Overall activity levels lower than predicted.
iii. Some improvement in RDS response times.
iv. An increase in the number of Critical Incidents (specifically Critical Special Services.)

Acknowledging the operating environment, and the requirement to realise efficiency savings during the life-cycle of the 2013 ECR, the impact across the organisation in terms of performance has been comparable and in some cases better than predicted.

Summary of Findings

The critical fire risk score has decreased by 4% within Lancashire between the 2013-14 and 2016-17 periods.

There are 8 fewer Very High Risk Super Output Areas (SOA's) and 17 fewer High Risk.

Since 2011-14 critical fire incidents have decreased by 13%; a trend also shown during the last 3 fiscal years, exceeding the standard we set ourselves.

However, our first pump attendance times, though an improvement over the previous year, are below the standard which we set ourselves. Our second pump attendance times are within standard.

The spate conditions recorded during the end of 2015 and the beginning of 2016, along with the collaborative work being undertaken by LFRS has had the effect of critical special service incidents increasing by 24%; a trend continued over the last 3 years.

Non critical primary fires have decreased by less than 1% whereas secondary fires have decreased by 18%.

Non critical special service incidents have risen by 41% during the period/s 2011-14 and 2014-17, largely due to the storm related flooding incidents of 2015 and the additional collaborative work we are undertaking with the North West Ambulance Service and Lancashire Constabulary.

A further illustration of the effectiveness of the above is outlined in the Critical Fire Risk Score at both County and District level.

Critical Fire risk score

Risk is determined using fire activity over the previous three fiscal years along with a range of demographic data, such as population and deprivation. Specifically, the risk score for each SOA is calculated using the following formula:

$$\frac{\text{Dwelling fires}}{\text{Total dwellings}} + \left[\frac{\text{Dwelling fire casualties}}{\text{Resident population}} \times 4\right] + \text{Building fire count} + \left[\text{IMD} \times 2\right] = \text{Risk Score}$$

The districts below the LANCASHIRE baseline are ordered according to their risk change from the previous period.

LANCASHIRE

Year / Risk Grade	V High	High	Medium	Low	Total risk score
2013-14	40	93	301	507	34228
2016-17	32	76	314	519	32990
Trend	⬇	⬇	⬆	⬆	⬇
% change	-20%	-18%	4%	2%	-4%

DISTRICTS

WEST LANCASHIRE

2013-14	4	6	14	49	2410
2016-17	0	3	19	51	2152
Trend	⬇	⬇	⬆	⬆	⬇
% Change					-11%

CHORLEY

2013-14	1	5	17	43	2054
2016-17	0	4	14	48	1876
Trend	⬇	⬇	⬇	⬆	⬇
% Change					-9%

BURNLEY

2013-14	5	4	29	22	2528
2016-17	1	7	25	27	2326
Trend	⬇	⬆	⬇	⬆	⬇
% Change					-8%

BLACKPOOL

2013-14	12	20	38	24	4678
2016-17	9	15	42	28	4366
Trend	⬇	⬇	⬆	⬆	⬇
% Change					-7%

BLACKBURN WITH DARWEN

2013-14	4	11	44	32	3730
2016-17	4	6	49	32	3512
Trend	⬌	⬇	⬆	⬌	⬇
% Change					-6%

WYRE

2013-14	3	3	15	48	2126
2016-17	1	4	14	50	2020
Trend	⬇	⬆	⬇	⬆	⬇
% Change					-5%

PRESTON

2013-14	4	12	36	34	3456
2016-17	3	10	37	36	3332
Trend	⬇	⬇	⬆	⬆	⬇
% Change					-4%

SOUTH RIBBLE

2013-14	1	0	13	56	1918
2016-17	0	4	10	56	1884
Trend	⬇	⬆	⬇	⬌	⬇
% Change					-2%

LANCASTER

2013-14	4	7	27	51	3130
2016-17	2	6	36	45	3126
Trend	⬇	⬇	⬆	⬇	⬇
% Change					0%

PENDLE

2013-14	0	9	23	25	2208
2016-17	3	5	21	28	2218
Trend	⬆	⬇	⬇	⬆	⬆
% Change					0%

HYNDBURN

2013-14	1	9	24	18	2178
2016-17	4	7	22	19	2194
Trend	⬆	⬇	⬇	⬆	⬆
% Change					1%

RIBBLE VALLEY

2013-14	0	0	2	38	906
2016-17	0	0	4	36	930
Trend	⬌	⬌	⬆	⬇	⬆
% Change					3%

FYLDE

2013-14	1	2	4	44	1364
2016-17	1	2	9	39	1414
Trend	⬌	⬌	⬆	⬇	⬆
% Change					4%

ROSSENDALE

2013-14	0	5	15	23	1542
2016-17	4	3	12	24	1640
Trend	⬆	⬇	⬇	⬆	⬆
% Change					6%

Critical Fire Risk Score

A requirement placed upon Service Development Department aligned to the ECR is the cleansing of performance data. This is subsequently drawn upon in constructing the pan Lancashire, District and Station Profiles (Appendix 1) that support the review.

In addition, the baseline data is subsequently the foundation for the predictive modelling element of the review undertaken by Process Evolution.

Determining Theoretical Impacts

i. Realising a wider Emergency First Responding capability.

This deliverable has been broadened in scope to be representative of an increase in operational activity, framed around Collaborative Response Arrangements.

A projection in terms of a numerical increase in Special Service calls has been developed, outlining the impact of a potential increase in operational activity across the organisation. An uplift of 1000, 5000 and 10,000 incidents has been modelled for illustration only in determining both the impact on Key Performance Indicator (KPI) performance and potential numerical increases at an Organisational, District and Station level.

An increase of call volume to emergent response arrangements will have a small negative impact upon LFRS' core KPI's which is summarised in the below table:

Incident	Base	+1000 incidents	+5000 incidents	+10000 incidents
Overall	92.55%	93.09%	93.88%	94.45%
Critical Fire - Appliance 1	86.77%	86.99%	85.97%	85.62%
Critical Fire - Appliance 2	86.73%	86.69%	85.89%	85.41%
Critical Special Service - Appliance 1	87.05%	88.66%	87.35%	87.46%
Critical Fire	86.75%	86.86%	85.93%	85.52%
Critical Special Service	87.05%	88.66%	87.35%	87.46%
Primary Fire	84.33%	84.76%	85.45%	83.88%
Secondary Fire	99.33%	99.33%	99.26%	99.25%
Special Service	98.70%	99.03%	98.73%	98.54%
False Alarm	92.61%	92.58%	92.47%	91.82%
Other	94.25%	94.28%	94.90%	94.39%

In order to place some context to the scale of the figures utilised for illustration purposes, it should be noted that an increase of some 10,000 incidents per annum would create comparable response levels to the 2006/07 year, this being circa 25,000 emergency response calls.

Naturally the proportionate impact will be delivered in a variable manner dependent upon the specific call set. If the emergent work reflected LFRS' current special service call data the changes to each district response levels would be:

District	Base	+1000 Incidents	+5000 Incidents	+10000 Incidents	+1000 Prop Increase	+5000 Prop Increase	+10000 Prop Increase
Fylde	742	806	1052	1370	8.7%	41.9%	84.7%
Blackpool	2951	3191	4158	5277	8.1%	40.9%	78.8%
Wyre	757	841	1023	1384	11.1%	35.1%	82.8%
South Ribble	1752	1950	2352	2924	11.3%	34.2%	66.9%
Rossendale	790	857	1040	1309	8.5%	31.6%	65.7%
Pendle	1149	1262	1488	1787	9.9%	29.5%	55.6%
Lancaster	2566	2640	3263	4101	2.9%	27.2%	59.8%
Hyndburn	1638	1709	2058	2485	4.3%	25.6%	51.7%
Ribble Valley	383	383	481	522	-0.1%	25.5%	36.4%
Chorley	816	833	1017	1243	2.0%	24.6%	52.3%
Blackburn With Darwen	2526	2633	3120	3709	4.3%	23.5%	46.9%
West Lancashire	1583	1636	1931	2260	3.3%	22.0%	42.7%
Preston	2277	2380	2776	3311	4.5%	21.9%	45.4%
Burnley	1542	1621	1797	2095	5.1%	16.6%	35.8%

ii. Determining a revised response to Automatic Fire Alarms / Unwanted Fire Signals.

During 2016/17 LFRS mobilised to 4103 Automatic Fire Alarms (AFA) / Unwanted Fire Signals (UWFS). This is an increase on previous years whereby this call type accounted for 3618 incidents in 2015/16 and 3410 in 2014/15.

A review of the organisational policy has been undertaken with proposals having been developed: (Appendix 2), a summary of the AFA / UWFS recommendations is provided below:

- Option 1: non-attendance for all non-domestic, non-sleeping buildings during 08:00 to 18:00 (Reduction of 22%, 900 less call-outs).

- Option 2 – Non-attendance for all non-domestic non-sleeping risk premises (extending our Option 1 policy to 24 hours) (Reduction of 41%, 1,700 less call-outs).

- Approve the phased approach to the implementation of Option 1 for 12 months in 2018 / 19. At this point (April 2019) the Combined Fire Authority undertake to reviewing the analysis of 2018 / 19, prior to determining the appropriate risk based decision in terms of any potential implementation of Option 2.

It is worth noting that this approach is consistent with the approach already adopted by many Services, both nationally and regionally.

The reduction in AFA call volume as described above will naturally deliver benefits in terms of reduced risk of vehicle accidents whilst travelling to such calls, reduced fuel use and subsequent emissions. Moreover it will provide an opportunity to better utilise in the region of 1700 hours of time per annum; this becoming available for critical emergency incidents and other non-emergency response work such as preparedness or prevention related activities.

iii. Developing a Pre-Alerting policy and evaluating a Dynamic Cover tool.

Pre-Alerting is a method of operation at North West Fire Control (NWFC) whereby once an addressable location is identified, a mobilising type message is dispatched. This enables the responding crews to cease any current tasks and position themselves upon the fire appliance. The call handler at NWFC will continue with the emergency call whilst this simultaneous activity is ongoing, and once the full details of the incident is attained, they will mobilise the appliance in the usual manner. Early pilot data from Greater Manchester FRS demonstrates that they are currently mobilising circa 15 seconds quicker to incidents on average. After 10 months the success rate of mobilisation when pre-alerted is over 80%.

Dynamic Cover tool type software systems are utilised by emergency response organisations in order to maximise the available response resources through geographic movement. This has particular benefit when there are large scale incidents or multiple incidents in close proximity. It is proposed that further work is commissioned to identify if LFRS could yield benefits such as increased pump attendance time performance through such systems.

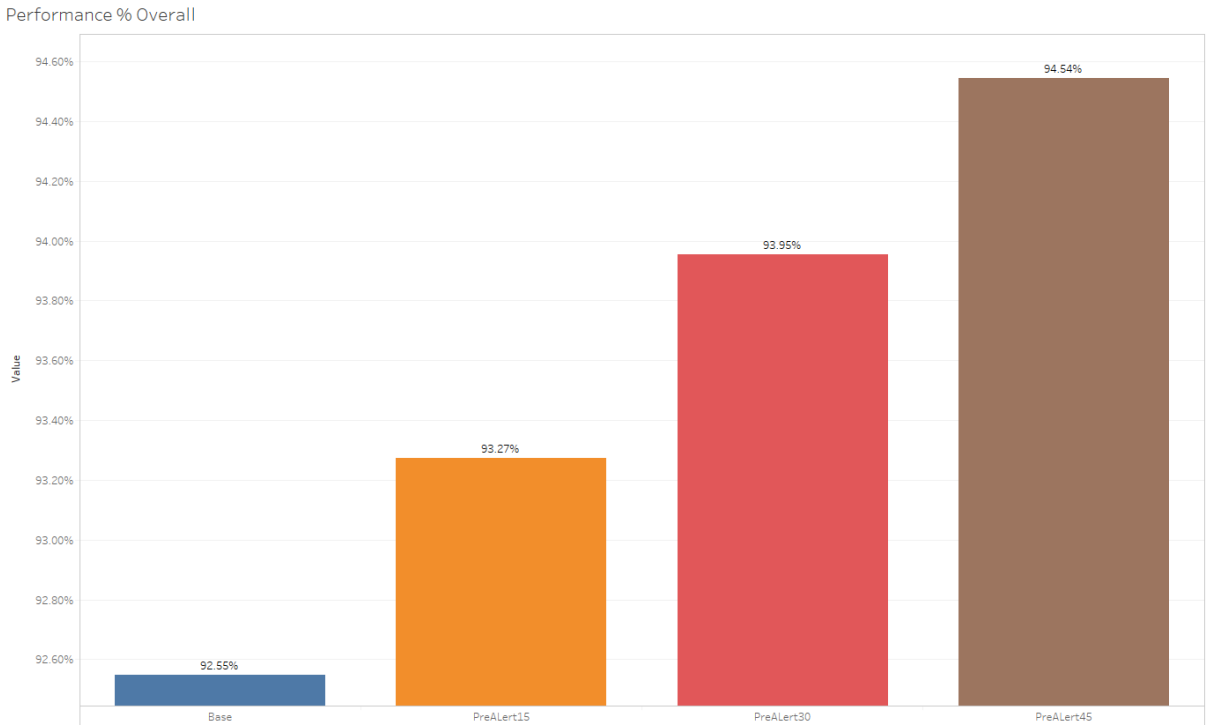
Pre-alerting will naturally deliver benefits in terms of performance as outlined in the tables below, but moreover pre-alerting will provide an opportunity to mobilise appliances sooner to critical emergency incidents. Recommendation is provided below:

- Approve pre-alerting as a policy position, utilising an initial pilot approach across appropriate duty systems at stations where a performance benefit may be attained.

Within the terms of reference developed to commission Process Evolution, a specific element was in determining the net benefit that a ‘15’ ‘30’ and ‘45’ second improvement in response times would achieve, via a transition to Pre-Alerting.

Modelled across:

a. Organisational Performance as a collective improvement.



Incident	Base	Pre-Alert 15 sec	Pre-Alert 30 sec	Pre-Alert 45 sec
Overall	92.55%	93.27%	93.95%	94.54%
Critical Fire - Appliance 1	86.77%	88.73%	90.29%	91.71%
Critical Fire - Appliance 2	86.73%	88.09%	89.30%	90.36%
Critical Special Service - Appliance 1	87.05%	88.10%	89.17%	90.20%
Critical Fire	86.75%	88.44%	89.85%	91.10%
Critical Special Service	87.05%	88.10%	89.17%	90.20%
Primary Fire	84.33%	85.59%	86.99%	88.28%
Secondary Fire	99.33%	99.38%	99.45%	99.49%
Special Service	98.70%	98.84%	98.93%	98.99%
False Alarm	92.61%	93.23%	93.88%	94.39%
Other	94.25%	94.76%	95.18%	95.57%

b. Identification of the preferred (hierarchal) districts that would see the greatest potential improvement in performance.

District	Base	Pre-Alert 15 sec	Pre-Alert 30 sec	Pre-Alert 45 sec
Ribble Valley	75.18%	77.25%	78.48%	79.77%
Fylde	83.27%	84.57%	86.07%	87.46%
West Lancashire	85.97%	87.24%	88.45%	89.39%
Chorley	81.96%	83.16%	84.39%	85.46%
South Ribble	92.94%	94.21%	95.11%	95.92%
Wyre	83.75%	84.54%	85.67%	86.48%
Rossendale	93.79%	94.74%	95.56%	96.29%
Hyndburn	93.44%	94.20%	95.11%	95.70%
Lancaster	89.12%	89.89%	90.60%	91.38%
Preston	96.85%	97.34%	97.73%	98.01%
Burnley	97.22%	97.70%	98.04%	98.36%
Pendle	95.38%	95.83%	96.17%	96.55%
Blackburn with Darwen	97.03%	97.25%	97.69%	98.05%
Blackpool	98.51%	98.88%	99.12%	99.33%

c. A tabulated view mapped against each LFRS pumping appliance.

Station Ground	Base	Pre-Alert 15 sec	Pre-Alert 30 sec	Pre-Alert 45 sec
W34 - Wesham	56.37%	58.93%	62.53%	66.12%
N33 - Preesall	64.39%	66.38%	69.52%	70.94%
E72 - Great Harwood	75.61%	77.93%	80.72%	82.93%
N18 - Garstang	45.06%	47.09%	49.85%	52.33%
E59 - Longridge	68.84%	71.74%	73.33%	75.07%
S58 - Tarleton	71.43%	72.90%	75.42%	76.26%
N14 - Carnforth	60.75%	62.50%	64.50%	66.50%
P92 - Padiham	86.45%	88.72%	90.09%	91.80%
S51 - Ormskirk	84.77%	86.33%	88.00%	89.16%
S53 - Bamber Bridge	93.32%	94.69%	96.17%	96.82%
E91 - Clitheroe	79.16%	80.71%	81.71%	82.71%
S54 - Chorley	81.96%	83.16%	84.39%	85.46%
P75 - Haslingden	92.76%	94.19%	95.01%	95.92%
S55 - Leyland	90.91%	92.10%	92.90%	93.79%
P73 - Bacup	92.20%	93.22%	94.17%	94.85%
N11 - Lancaster	88.35%	89.25%	90.16%	91.17%
W35 - Lytham	93.03%	94.06%	94.84%	95.74%
S57 - Penwortham	94.53%	95.79%	96.30%	97.15%
S56 - Skelmersdale	89.06%	90.06%	90.70%	91.48%
C52 - Fulwood	95.07%	95.85%	96.54%	96.97%
P93 - Barnoldswick	85.57%	86.36%	86.76%	87.55%
N16 - Hornby	47.27%	48.05%	48.44%	49.61%
P74 - Rawtenstall	96.63%	97.03%	97.72%	98.32%
E70 - Hyndburn	96.82%	97.29%	97.84%	98.13%
W30 - Blackpool	97.94%	98.65%	98.95%	99.22%
N13 - Bolton le Sands	95.19%	95.67%	96.15%	96.15%
N12 - Morecambe	95.31%	95.84%	96.25%	96.69%
N15 - Silverdale	78.90%	79.82%	79.82%	79.82%
P94 - Nelson	96.81%	97.32%	97.68%	97.91%
E76 - Darwen	94.27%	94.55%	95.07%	95.72%
W36 - St Annes	98.09%	98.57%	98.89%	98.89%
N32 - Fleetwood	97.02%	97.30%	97.70%	97.98%
C50 - Preston	97.53%	97.91%	98.18%	98.40%
E71 - Blackburn	97.75%	97.96%	98.37%	98.65%
P96 - Colne	96.27%	96.54%	96.81%	97.16%
P95 - Earby	96.54%	96.54%	96.92%	98.08%
P90 - Burnley	98.90%	99.10%	99.27%	99.38%
W37 - South Shore	98.89%	98.99%	99.22%	99.41%
W31 - Bispham	99.17%	99.22%	99.35%	99.44%

Business Risk

LFRS is required to review the emergency cover arrangements on a periodic basis to ensure that response provision remains efficient and effective. This review and subsequent consultation will address this issue and proposals for change will be changed or endorsed dependent upon the feedback attained.

It is proposed that consultation is developed digitally with feedback requests to a specific email account. We will cascade the proposals and consultation arrangements through our website, social media and press release resources for engagement with the community of Lancashire. An electronic notification will be sent to all formal partners including Members of Parliament, Representative Bodies and Parish, Local Authority and County Councillors. We will also focus our consultation on the business community due to the proposed UWFS changes.

Whilst the consultation strategy declares that the duration is variable dependent upon the scale and complexity of the topic it is recommended that the ECR is made available for 12 weeks due to the summer holiday period.

Sustainability or Environmental Impact

There are projected fuel savings based upon the reduction of some 1700 AFA's and subsequent travel of circa 2400 appliances. Any increases in mobilisations through collaborative response workloads will impact negatively upon this aspect.

There will be some reduction of carbon emissions / exhaust fumes from the reduction of 2400 appliance mobilisations. Any increases in mobilisations through collaborative response workloads will impact negatively upon this aspect.

There will be an impact on staff or local community travel patterns.

Equality and Diversity Implications

None identified.

HR Implications

None identified.

Financial Implications

There will be some variance in fuel costs that would be reviewed on a specific project scope basis.

RDS personnel are now paid on a turnout and attendance basis, additional call volume or incorrect pre-alerting triggers will impact upon existing budgets. Some small savings will be made after the 3 year pay protection period with regards to RDS pay in terms of AFA reductions.

The sustainability of these proposals is dependent upon the accuracy of current budget projections, and any significant change in these may result in a need to revisit the ECR earlier than currently planned.

Local Government (Access to Information) Act 1985
List of Background Papers

Paper	Date	Contact
Pan Lancashire, District and Station Profiles	1 April 2011 - 31 March 2017	J Johnston
Review of Organisational Policy relating to Automatic Fire Alarms / Unwanted Fire Signals	July 2017	J Johnston
Reason for inclusion in Part 2, if appropriate: N/A		