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# Proposed Solution

Merseyside Fire and Rescue Service  
Enhanced Mobilisation

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## Table of Contents

<b>1</b>	<b>Description</b> .....	<b>4</b>
<b>2</b>	<b>Exclusions</b> .....	<b>4</b>
2.1	No stand-down message will be automatically generated, the management of Pre-Alerts will be via internal management.....	4
2.2	Only Merseyside FRS resources will be Pre-Alerted, appliances from other services that may be closer to an incident will not be Pre-Alerted. ....	4
2.3	The Pre-Alert solution will recognise and only consider calls for Pre-Alert if they were originally initiated by transfer from the ICCS. ....	4
<b>3</b>	<b>Design Assumptions</b> .....	<b>5</b>
3.1	Stand-down functionality:.....	5
<b>4</b>	<b>Proposed Solution</b> .....	<b>5</b>
4.1	Triggering an Enhanced Mobilisation Automated Pre-Alert .....	5
4.2	Enhanced Mobilisation Automated Pre-Alert appliance eligibility control .....	6
4.3	Recording Pre-Alert notifications.....	6
4.4	Issuing the Enhanced Mobilisation Automated Pre-Alert .....	6
4.5	Subsequent Automated Pre-Alerts for the same incident .....	6
4.6	Functionality enabling the operator to quickly understand the Automatic Pre-Alert status during Call Collection .....	6
4.7	Facility to ensure resources that have already received an Automatic Pre-Alert cannot receive another for a configured period .....	7
4.8	Ability to disable Automated Pre-Alerts system-wide .....	7
4.9	Ability to control resource eligibility based on response time .....	7
4.10	Ability to control which areas are eligible to trigger Enhanced Mobilisation .....	7
4.11	Ability to configure if the Station bells/tones are activated on mobilisation if they have gone off prior due to Enhanced Mobilisation.....	7
4.12	Reporting based on narrative updates .....	8
4.13	Automated Pre-Alert acknowledgements.....	8
4.14	Incoming number eligibility for triggering Automated Pre-Alerts .....	8
4.15	Naming convention control for Enhanced Mobilisation functionality.....	8

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4.2	Proposed Configuration Settings .....	8
4.2.1	Resource list filter to quickly determine which appliances have been enabled for Auto Pre-Alert .....	8
<b>5</b>	<b>Proposed Configuration Settings .....</b>	<b>9</b>
5.1	Resource setting in Vision .....	9
5.2	WebAdmin Config settings.....	9
5.3	File>'Enhanced Mobilisation' settings .....	9
5.4	Administrator.....	9
5.5	Vision Settings .....	10
	<b>Document Reference .....</b>	<b>11</b>

## 1 Description

Change Required / 'Enhanced Mobilisation' facility Deliverables.

The project will deliver a number of configurable settings that will support the overall business objectives detailed below:

- 1.1 Nearest Station based resource of any available status will be Pre-Alerted, available status means an appliance or resource available to respond to operational incidents.
- 1.2 The Pre-Alert message will be sent automatically to the nearest appliance.
- 1.3 If an adequate match has been made (to the gazetteer) at one of a number of set trigger points:
  - 1.3.1 Caller's address verified,
  - 1.3.2 Incident's location verified.

Note: The trigger point will be configurable on a system-wide basis.

- 1.4 All Merseyside FRS appliances (P1 & P2) will be able to receive a pre-alert message. The customer has confirmed, that only certain resources (i.e M10P1 and M14P2) are to be included in the Pre-Alerting process. This could be via a managed list of by selecting a "tick-box" in the resource settings. (Options/Methods to be discussed with SSS).
- 1.5 Automated Pre-alerting will be based on the appliances AVL location and proximity to the incident.
- 1.6 When a Pre-Alert message is sent it will be visible on the resource log (and incident log where one exists) including which resource it was sent to and at which trigger point.
- 1.7 The Fire Control supervisor must be able to turn off the Pre-Alert function, so that Pre-Alerts are no longer generated, e.g. depending on circumstances such as spate conditions.
- 1.8 Once a Pre-Alert is sent no further Pre-Alerts will be sent to that resource for a pre-determined time (in excess of 2 minutes).
- 1.9 Pre-Alerts will not be sent, to resources that are some considerable distance away, determined by time and estimated travel distance. Currently 10 minutes' drive time.
- 1.10 The presence of Pre-Alerts will be auditable, via existing systems.
- 1.11 It will be possible to report on which incidents had Pre-Alerts and which Pre-Alerts did not result in incidents or mobilisation.
- 1.12 Pre-Alert messages will be acknowledged in the same manner as mobilising messages by crews. The Pre-Alert should be acknowledged using the Airbus MDT on the chosen appliance. The expectation being that this would be recorded in the appliance / incident narrative in the same manner as the current mobilisation acknowledgement.
- 1.13 Pre-Alert messages will not be sent to MDTs when they are in station. -- Removed by customer.
- 1.14 The facility to exclude certain telephone numbers from generating Pre-Alerts. Only 999 calls which include the EISEC location data are to be considered for Pre-Alert.
- 1.15 GD92 messages of the appropriate type will be sent to Station End Equipment.

## 2 Exclusions

- 2.1 No stand-down message will be automatically generated, the management of Pre-Alerts will be via internal management.
- 2.2 Only Merseyside FRS resources will be Pre-Alerted, appliances from other services that may be closer to an incident will not be Pre-Alerted.
- 2.3 The Pre-Alert solution will recognise and only consider calls for Pre-Alert if they were originally initiated by transfer from the ICCS.

### 3 Design Assumptions

The Automated Pre-Alert functionality is specific only to appliances and not officers.

#### 3.1 Stand-down functionality:

As requested, no stand-down messages will be automatically generated, the management of Pre-Alerts will be via internal management.

### 4 Proposed Solution

The proposed solution for the new Enhanced Mobilisation functionality is as follows:

#### 4.1 Triggering an Enhanced Mobilisation Automated Pre-Alert

As part of this request, a new configuration setting named 'ManualCCFtoTriggerAutoPreAlert', will be introduced to control whether the Enhanced Mobilisation's Automated Pre-Alerts will - in addition to incoming calls - also be able to be triggered from a manually generated Call Collection form. Specifically, this setting would operate as follows:

- ManualCCFtoTriggerAutoPreAlert setting on>Upon generating a manual call Collection form (i.e. not via taking an incoming call) and the Incident Address is validated an automatic Pre-Alert will be triggered.
- ManualCCFtoTriggerAutoPreAlert setting off>Upon generating a manual call Collection form (i.e. not via taking an incoming call) and the Incident Address is validated an auto pre-alert will not be triggered. Auto Pre-Alerts will only be sent if triggered via an incoming call part of a call queue with the pre-alert config enabled.

As requested, there will be two methods capable of triggering an Enhanced Mobilisation Automated Pre-Alert:

- Caller location verification - triggered if the incoming call is via a call queue with the new Auto Pre-Alert option enabled and validated caller location coordinates are supplied. Validated caller location coordinates being classed as verifiable coordinates passed over to Vision or added directly into the Call Collection Form, or a Caller Location address with verifiable coordinates.
- Incident address location verification - Triggered via validated address coordinates being added. validated address coordinates being classed as verifiable coordinates added to the Address Position, either added directly or via an address, or What3Words location ect

In the event that either a caller's location coordinates are verified, or the Incident's address location coordinates are verified, then granted the respective File>'Enhanced Mobilisation' configuration setting has been configured and depending on what the 'ManualCCFtoTriggerAutoPreAlert' option is set to, the Automated Pre-Alert functionality will be triggered.

Once the Automatic Pre-Alert functionality has been triggered, a calculation will be run, where the most eligible appliances that fit the following criteria will automatically receive a Pre-Alert notification:

- At a status where the status type is set as 'Available', To elaborate, our definition of an 'Available' status is taken from the WebAdmin>Resources>Statuses>Status Type field.
- Are within the File>'Enhanced Mobilisation' configured parameters for pre-alert radius and response time based on their AVL.
- Have the Resources>Advanced Config>Automated Pre-Alert eligibility tick box ticked.
- Meet the configured Response criteria set within the File>'Enhanced Mobilisation' configuration settings area,

## 4.2 Enhanced Mobilisation Automated Pre-Alert appliance eligibility control

To ensure only specifically approved appliances are eligible to receive Automated Pre-Alerts a new Automated Pre-Alert eligibility tick box will be added to the Resources>AdvancedConfig tab. Only appliances with this new setting ticked will be factored into the Automated Pre-Alert calculation. This ensures that over-the-border appliances will not be considered.

Using this approach supersedes any need to control eligibility via callsign.

## 4.3 Recording Pre-Alert notifications

Any Automated Pre-alerts that are sent will add an entry to the affected resource's narrative, and the incident narrative where one exists, confirming which resource or incident it was sent to and at which trigger point i.e. Caller location verification, Incident Address location verification, the Automated Pre-Alert was issued against.

## 4.4 Issuing the Enhanced Mobilisation Automated Pre-Alert

Enhanced Mobilisation automated Pre-Alerts that meet the required criteria are then sent out to eligible appliances, or their stations. This would work as follows:

- If the appliance is at a station the Automated Pre-Alert notification would go to both the station end equipment and the MDT's for nominated appliances that are at the station.
- If the appliance is available but not at a station, then it would only go to the MDT.

It should be noted this is a deviation from existing Manual Pre-Alert behaviour in Vision 5 whereby currently only appliances at a station are contacted for Manual Pre-Alert, not mobile available appliances.

Acknowledged automated Pre-Alerts will add an entry to both the Resource Narrative, and the Incident Narrative, should it exist.

## 4.5 Subsequent Automated Pre-Alerts for the same incident

If the caller's location or incident address is updated, or if the incident address is added after a caller location-based automated pre-alert has previously been issued, then a subsequent Automated Pre-Alert will be triggered. If in the event the same resources are deemed to be the most eligible, then as a result, granted the 'Automatic Pre-Alert subsequent notification interval' is not set to zero, then they will not receive a subsequent Automated Pre-Alert (see the relevant section below for more details).

## 4.6 Functionality enabling the operator to quickly understand the Automatic Pre-Alert status during Call Collection

As part of the proposed Automatic Pre-Alert functionality, a new status icon would be added to the Call Collection Form. The Pre-Alert button will adhere to one of the following states:

- Yellow: auto pre-alert active (default if call collection triggered by incoming call)
- Green: auto pre-alert sent (the details for which are confirmed in the incidents Pre-Alert tab)
- Red: auto pre-alert inhibited (default if call collection initiated by F9 key depending on the ManualCCFtoTriggerAutoPreAlert setting)
- Grey: auto pre-alert disabled globally

This Pre-Alert status icon will be able to be disabled globally from the File>'Enhanced Mobilisation' configuration settings option within the Vision Command Client, granted the user has the relevant permissions to do so.

On reopening an incident, the button will be automatically deactivated.

It should be noted, although this was not part of the original request the feeling is this could be useful functionality to have.

#### **4.7 Facility to ensure resources that have already received an Automatic Pre-Alert cannot receive another for a configured period**

Once an Automated Pre-Alert has been issued, the same appliance cannot receive another Automated Pre-Alert for a configured interval. This will be controlled via a new configuration setting. We have assumed here on the fact that regardless of any status change the appliance in question will not be eligible for another automated pre-alert again within that time. Also worth noting, in the event an update to the Caller location or Address location is verified then granted the appliances that were already Automatically Pre-Alerted are the most eligible then they would not receive another Automated Pre-Alert with any updated details.

If the new 'Automatic Pre-Alert subsequent notification interval' setting is set to zero, it will be disabled.

#### **4.8 Ability to disable Automated Pre-Alerts system-wide**

The ability to turn off the Automated Pre-Alert function, so that Pre-Alerts are no longer generated, e.g. depending on circumstances such as spate conditions, can be controlled via the new File>'Enhanced Mobilisation' configuration setting section within the Command Client. To do this you would set the Automated Pre-Alert Pre-set Response to blank. Updates made to these settings will be recorded in the System Log.

#### **4.9 Ability to control resource eligibility based on response time**

To control which appliances will be eligible to receive a potential Automated Pre-Alert based on travel time configuration options will be available to set a minimum and maximum response time within the Vision File>'Enhanced Mobilisation' configuration setting area. This functionality works using Vision's underlying response logic. Updates made to these settings will be recorded in the System Log.

#### **4.10 Ability to control which areas are eligible to trigger Enhanced Mobilisation**

To control which areas of Merseyside are capable of triggering a new Enhanced Mobilisation functionality a checklist option will be added to the File>Enhanced Mobilisation config area. The checklist would work based on selecting specific station grounds.

#### **4.11 Ability to configure if the Station bells/tones are activated on mobilisation if they have gone off prior due to Enhanced Mobilisation**

To resolve a scenario where the station bells/tones could be triggered in quick succession i.e. one from the initial Enhanced Mobilisation then subsequently from the ensuing mobilisation if the operator chooses to proceed to turnout, a new configuration tick-box option would be added to the existing turnout methods configuration options in WebAdmin. Once selected for that turnout method, a check will be performed and if the station bells/tones have already been activated prior due to an Enhanced Mobilisation then they will not be triggered.

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If for some reason an alternative station-based appliance is mobilised, the mobilised Station's bells/tones and MDT would still sound.

#### **4.12 Reporting based on narrative updates**

As all Automated Pre-Alerts issued will be documented within the resource and incident narratives, granted any reporting software you are running is able to query these tables, auditing will be possible.

It is worth noting, to be able to report on which incidents had Pre-Alerts and which Pre-Alerts did not result in mobilisation, call collections with Automated Pre-Alerts will need to be completed and turned into incidents.

#### **4.13 Automated Pre-Alert acknowledgements**

Pre-Alert messages will be acknowledged in the same manner as mobilising messages by crews.

#### **4.14 Incoming number eligibility for triggering Automated Pre-Alerts**

The facility to control which numbers can potentially activate the Automated Pre-Alert functionality is controlled via Call Queues. Specifically, this will involve adding a new tick box within Web Admin to control which call queues generate Automated Pre-Alerts. Only Call Queues which have this new config option ticked will be eligible.

#### **4.15 Naming convention control for Enhanced Mobilisation functionality**

To control the naming of the Enhanced Mobilisation functionality within the VisionCommandClient the ability to update these areas will be added to the localisation tool.

### **4.2 Proposed Configuration Settings**

#### **4.2.1 Resource list filter to quickly determine which appliances have been enabled for Auto Pre-Alert**

To enable users to quickly determine which appliances have been enabled for Auto Pre-Alert a list of all appliances and their tick box status. Filter to the resource list.



## 5 Proposed Configuration Settings

### 5.1 Resource setting in Vision

Under the resources>advanced config tab will be a new tick box to control whether the appliance is eligible to receive Pre-Alerts.

### 5.2 WebAdmin Config settings

- A new config option to control appliance pre-alert interval (amount of time that needs to elapse before an appliance can receive a subsequent pre-alert).
- Add tick box to control which call queues generate Pre-Alerts
- Add tick box to Turnout Methods to stop sounders/tones going off for mobilisation if they have already gone off for Enhanced Mobilisation

### 5.3 File>'Enhanced Mobilisation' settings

To be added to a new File>'Enhanced Mobilisation' settings:configuration screen and store in WORKING\_ITEMS SQL table:

- select pre-set response to use for pre-alert (allow selection of 'nothing' to disable the functionality)
- min pre-alert response time
- max pre-alert response time
- max pre-alert radius
- Station ground checklist to control which areas can trigger an Enhanced Mobilisation

This would look something to the effect of:

Pre Alert Response	1 Pump	Set
Max Pre Alert Response Time	10:00:00	Set
Min Pre Alert Response Time	00:00:01	Set
Pre Alert Exclusion Radius	1	Set
Auto Pre-Alert Button Enabled	<input checked="" type="checkbox"/>	Set

record updates are written to the system log.

- Addition of new tick boxes to confirm which 'trigger points' the system is currently accepting.

### 5.4 Administrator

A new permission to control which users can specifically amend the Automated Pre-Alert settings in the Vision>File>'Enhanced Mobilisation' configuration setting section.

## 5.5 Vision Settings

A new configuration setting named 'ManualCCFtoTriggerAutoPreAlert', will be introduced to control whether Automated Pre-Alerts will also work from a manually generated Call Collection form or not. This setting would operate as follows:

- Setting on>Upon generating a manual call Collection form (i.e. not via taking an incoming call) and the Incident Address is validated an automatic Pre-Alert will be triggered
- Setting off>Upon generating a manual call Collection form (i.e. not via taking an incoming call) and the Incident Address is validated an auto pre-alert will not go out. Auto Pre-Alerts will only be sent if triggered via an incoming call part of a call queue with the pre-alert config enabled.

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