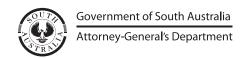


SA Government Radio Network

# **SAGRN Pinery Fire Review**

Action Plan, 2016



# Contents

1. Purpose	4
2. Action Plan - Structure	4
3. Action Plan - Interdependencies	5
4. SAGRN Governance	6
4.1 Action 1 – Enhance/Establish SAGRN Advisory Function	7
4.2 Action 2 – Review SAGRN Traffic Mitigation Agreement	8
4.3 Action 3 - Review SAGRN Standard Conditions of Service	10
4.4 Action 4 - Regular Reporting of Agency SAGRN Utilisation	12
5. SAGRN Education and Training	14
5.1 Action 5 - Include Major Event Scenarios in Radio Terminal Training	15
5.2 Action 6 - Reinforce the Impact of Call Duration and Call Volume on Capacity	17
5.3 Action 7 - Reinforce Emergency Call Dependence on Coverage	18
5.4 Action 8 - Reinforce Impact of Remote Listening on Capacity	20
6 Operational Impacts on SAGRN Performance	21
6.1 Action 9 - Investigate High SAPOL Call Volume and Call Duration	22
6.2 Action 10 - Revise use of Patched Talkgroups in Incident Areas	23
6.3 Action 11 - Review Current SAGRN Site Talkgroup Mapping	24
6.4 Action 12 - Investigate Remote Radio Terminals Communicating with the Fireground	26
7 Agency Operational Readiness	27
7.1 Action 13 - Provide Agencies with SAGRN Coverage Predictions	28
7.2 Action 14 - Document Agency SAGRN Concept of Operations	29
7.3 Action 15 - Consider Radio Communications Resource Requirements for IMT Locations	31
8 SAGRN Operational Alignment	32
8.1 Action 16 - Re-Benchmark SAGRN Coverage and Capacity Requirements	33
9 Document Information	35

# 1. Purpose

This plan has been developed by the Attorney-General's Department, together with the SA Country Fire Service and the SA Police. The plan has been developed in consultation with and the assistance of Mingara Australasia.

It describes the actions considered necessary to address the recommendations of the Mingara Australasia[1] report on its independent review of the use and performance of the SAGRN during the Pinery Fire that confronted South Australia in late November 2015.

The objective is to ensure the SAGRN continues to provide what is widely acknowledged as one of the largest and most effective public safety (emergency) communications networks in the world.

# 2. Action Plan - Structure

The twenty-one (21) recommendations of Mingara's report are grouped into the themes of:

SAGRN Governance (Section 4)

- addressing recommendations: 14, 15, 16 & 17

SAGRN Education and Training (Section 5)

- addressing recommendations: 3, 5, 11, 19, 20 & 21

Operational impacts on SAGRN Performance (Section 6)

- addressing recommendations: 4, 6, 7, 8 & 12

Agency Operational Readiness (Section 7)

- addressing recommendations: 1, 2, 9 & 13

SAGRN Operational Alignment (Section 8)

- addressing recommendations: 10 & 18

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The plan proposes 16 actions to address the 21 recommendations in the Mingara report:

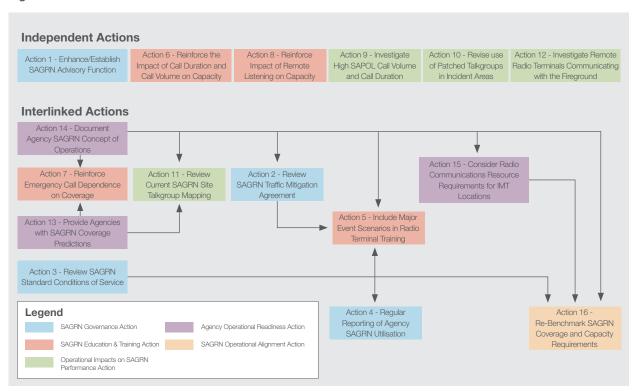
Figure 1



# 3. Action Plan – Interdependencies

Of the 16 actions, six (6) are independent of all other actions; ten (10) are interlinked.

Figure 2





# 4.1 Action 1 – Enhance/Establish SAGRN **Advisory Function**

### 4.1.1 Purpose

To address:

 Recommendation 14 – "Public Safety Solutions unit, AGD be engaged to provide a SAGRN advisory function to the State Controller Communications during major events".

### 4.1.2 Lead Agency

Attorney-General's Department.

#### 4.1.3 Consultation/Participation

This action requires consultation and participation of:

- State Controller Communications (SCC).
- AGD Executive.
- SAGRN Service Provider.

#### 4.1.4 Target Timeframes

Q3 2016 - Interim support arrangements agreed between the SCC and AGD.

Q3 2017 - Support arrangements and procedures completed.

#### 4.1.5 Objectives

• Provide dedicated support from the AGD Public Safety Solutions unit to monitor SAGRN network activity and provide recommendations to the SCC that will assist in optimising SAGRN network capacity for key combatant agencies during major events.

#### 4.1.6 Prerequisites for this Action

There are no prerequisite actions for Action 1.

#### 4.1.7 Source Data/Information Required

There is no source data/information required for Action 1.

#### 4.1.8 Recommended Approach

- In consultation with the SCC and the SAGRN Board (including role activation, communications protocols, authority, SEC/Communications Centre access privileges, etc.), define and agree the terms of reference for the AGD Public Safety Solutions advisory role.
- In consultation with the SCC and the SAGRN Board. define and agree the position description of the AGD Public Safety Solutions advisory role.
- Review the impact of the AGD Public Safety Solutions advisory role on existing policies and agreements.
- Identify information, systems and SAGRN Service Provider services required to support the AGD Public Safety Solutions advisory role.

#### 4.1.9 Key Considerations

- · Identification/engagement of suitably qualified AGD resources to fulfil the SAGRN advisory function during major events.
- An AGD Public Safety Solutions advisory resource will need to be available at all times, and at short notice, to fulfil the SAGRN advisory function.

#### 4.1.10 Outputs/Deliverables

• The establishment of a dedicated pool of resources from AGD Public Safety Solutions, that is appropriately skilled and trained, to monitor the performance of the SAGRN network and provide recommendations to the SCC during major events.

#### 4.1.11 Success Criteria

• That during major events, the SCC is provided with evidence based information that assists in implementing traffic mitigation measures during major events and therefore optimising SAGRN site capacity available to combatant Agencies.

# 4.2 Action 2 – Review SAGRN Traffic Mitigation Agreement

### 4.2.1 Purpose

To address:

 Recommendation 15 –
 "State Controller Communications initiate a review of the SAGRN traffic mitigation agreement".

#### 4.2.2 Lead Agency

Attorney-General's Department.

#### 4.2.3 Consultation/Participation

This action requires consultation and participation of:

- State Controller Communications (SCC).
- All SAGRN user agencies impacted by SAGRN traffic mitigation arrangements.
- SAGRN Service Provider.

#### 4.2.4 Target Timeframes

Q4 2016 – Initial revision of SAGRN Traffic Mitigation Agreement by SCC and AGD.

Q3 2017 - Complete, following inclusion of relevent agencies 'Concept of Operations' (Action 14).

#### 4.2.5 Objectives

- Establish agreed principles, policies and procedures for key responding agencies and the Communications Functional Service (SEC), to monitor and manage traffic demand in an informed and effective way during major events.
- Review and update the existing SAGRN traffic mitigation agreement to list all current talkgroups, including details of associated permitted operational use during various levels of traffic mitigation and policies for dynamically varying assigned permitted use during a major event.
- Establish a functional SAGRN traffic mitigation agreement that will assist the SCC in implementing measures to optimise SAGRN site capacity during major events and is reflective of user behaviour requirements appropriate for a shared multi-agency environment.
- Optimise availability of SAGRN site capacity for combatant and key supporting agencies during major events.

#### 4.2.6 Prerequisites for this Action

 Recommendation 9 (Action 14 – Document Agency SAGRN Concept of Operations).

#### 4.2.7 Source Data/Information Required

- Current SAGRN traffic mitigation agreement (sourced from AGD).
- Current list of talkgroups for each user agency, including associated operational classification (sourced from the outcome of Action 14).

#### 4.2.8 Recommended Approach

- SCC to be briefed by AGD on the intent, principles and structure of the SAGRN traffic mitigation agreement.
- SCC to review the main body of the current SAGRN traffic mitigation agreement and consider any necessary changes for the purpose of improving the effectiveness of traffic mitigation during major events.
- Workshop any proposed changes to the SAGRN traffic mitigation agreement with impacted user agencies.
- Update relevant sections of the SAGRN traffic mitigation agreement with content available from the outcomes of Action 14 (Recommendation 9).
- SCC to seek endorsement of the revised SAGRN traffic mitigation agreement from all SAGRN user agencies.

#### 4.2.9 Key Considerations

- Availability of key user agency stakeholders for consultation.
- Timely completion of the prerequisite action (Action 14).
- Endorsement of the SAGRN traffic mitigation agreement by all SAGRN user agencies.
- Ensuring the SAGRN traffic mitigation agreement reflects processes that are actionable by the SCC during major events.

# 4.2.10 Outputs/Deliverables

- A revised and endorsed SAGRN traffic mitigation agreement.
- Pragmatic guidelines and mechanisms to help ensure traffic mitigation can be applied simply and effectively during times of peak demand.

#### 4.2.11 Success Criteria

- The endorsed SAGRN traffic mitigation agreement is actioned by the SCC, and followed by user agencies, during major events.
- As a result of the SCC implementing measures from the SAGRN traffic mitigation agreement, the availability of SAGRN site capacity for combatant agencies is optimised during major events.



# 4.3 Action 3 – Review SAGRN Standard Conditions of Service

### 4.3.1 Purpose

#### To address:

 Recommendation 16 – "The SAGRN Board initiate a review of the SAGRN Standard Conditions of Service, with a view to incorporating policies regarding expected agency radio communications behaviour when operating in the SAGRN shared environment".

#### 4.3.2 Lead Agency

Attorney-General's Department.

#### 4.3.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN user agencies.
- SAGRN Service Provider.

### 4.3.4 Target Timeframes

Q4 2016 - Revised SAGRN Conditions of Service agreed and complete.

#### 4.3.5 Objectives

- · Review and update the existing SAGRN Standard Conditions of Service to reference all current and proposed policies and/or conditions that govern agency permitted use and access to the network.
- Reinforce the need for inter-agency co-operation in the SAGRN shared environment such that the actions of one agency does not compromise network availability and access during major events.

#### 4.3.6 Prerequisites for this Action

There are no prerequisite actions for Action 3.

#### 4.3.7 Source Data/Information Required

- Existing SAGRN Standard Conditions of Service (sourced from AGD).
- Current and proposed policies and/or conditions governing agency permitted use and access to the SAGRN (sourced from AGD).

• Details of existing reporting capabilities of the SAGRN relevant to the assessment of network performance as a result of agency use (sourced from the SAGRN Service Provider).

#### 4.3.8 Recommended Approach

- AGD to review the existing SAGRN Standard Conditions of Service.
- · AGD to complete an internal workshop reinforcing the intent, principles and network implications of the SAGRN Standard Conditions of Service.
- AGD to identify changes, including those necessary to address lessons learnt from the Pinery Fire Review, to the SAGRN Standard Conditions of Service giving consideration to current and proposed policies and/ or conditions that govern agency permitted use and access to the network.
- Workshop any proposed changes to the SAGRN Standard Conditions of Service with all SAGRN user agencies (or their delegated representatives).
- Update the SAGRN Standard Conditions of Service and seek endorsement from the SAGRN Board.
- · Reissue and execute the revised SAGRN Standard Conditions of Service.
- Brief all SAGRN user agencies reinforcing the permitted use and access conditions to the network.

#### 4.3.9 Key Considerations

- · Availability of key user agency stakeholders for consultation.
- Availability of the SAGRN Service Provider for consultation.
- Implication of changes to the SAGRN Standard Conditions of Service on any related documentation and policies.



### 4.3.10 Outputs/Deliverables

- The endorsement of the revised SAGRN Standard Conditions of Service.
- Completion of a briefing to all SAGRN user agencies reinforcing the policies and/or conditions that govern agency permitted use and access to the network.

### 4.3.11 Success Criteria

- Evidence that SAGRN user behaviour, by all agencies, demonstrates adherence to policies reflected in the SAGRN Standard Conditions of Service.
- Evidence of user agency adherence to the policies reflected in the SAGRN Standard Conditions of Service during major events, therefore optimising the availability of site capacity for combatant agencies.

# 4.4 Action 4 – Regular Reporting of Agency SAGRN Utilisation

#### 4.4.1 Purpose

#### To address:

• Recommendation 17 -"AGD and the agencies review the current governance arrangements around regular reporting on SAGRN agency utilisation, and compliance with the SAGRN Standard Conditions of Service, as amended by recommendation 16".

#### 4.4.2 Lead Agency

Attorney-General's Department.

#### 4.4.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN user agencies.
- SAGRN Board.
- SAGRN Service Provider.

#### 4.4.4 Target Timeframes

Q2 2017 - Review and revision of SAGRN reporting requirements complete.

#### 4.4.5 Objectives

- Provide agencies with regular reports (both nearreal-time and historical) that objectively highlight the impact of operational behaviour on the SAGRN.
- · Provide a reporting capability that will confirm compliance or otherwise with the SAGRN Standard Conditions of Service and reinforce user behaviour expectations, especially during major events.

#### 4.4.6 Prerequisites for this Action

• Recommendation 16 (Action 3 - Review SAGRN Standard Conditions of Service).

#### 4.4.7 Source Data/Information Required

- Updated SAGRN Standard Conditions of Service (sourced from outcome of Action 3).
- Current governance arrangements around regular reporting on SAGRN agency utilisation (sourced from AGD).
- Templates of near-real-time and historical reports currently available to agencies (sourced from AGD).

### 4.4.8 Recommended Approach

- Review the current governance arrangements around regular reporting on SAGRN agency utilisation, and compliance with the SAGRN Standard Conditions of
- Review reporting capability to be provided as part of the SAGRN Upgrade program.
- · Workshop reporting requirements with SAGRN user agencies.
- Establish metrics for benchmarking agency usage of the SAGRN (for the purpose of identifying unusual or non-compliant usage patterns).
- · Identify gaps between reporting capability and requirements.
- Develop reporting requirements specification/ description and update SAGRN reporting capability (if required).
- Implement solution for regular reporting on SAGRN agency utilisation.

### 4.4.9 Key Considerations

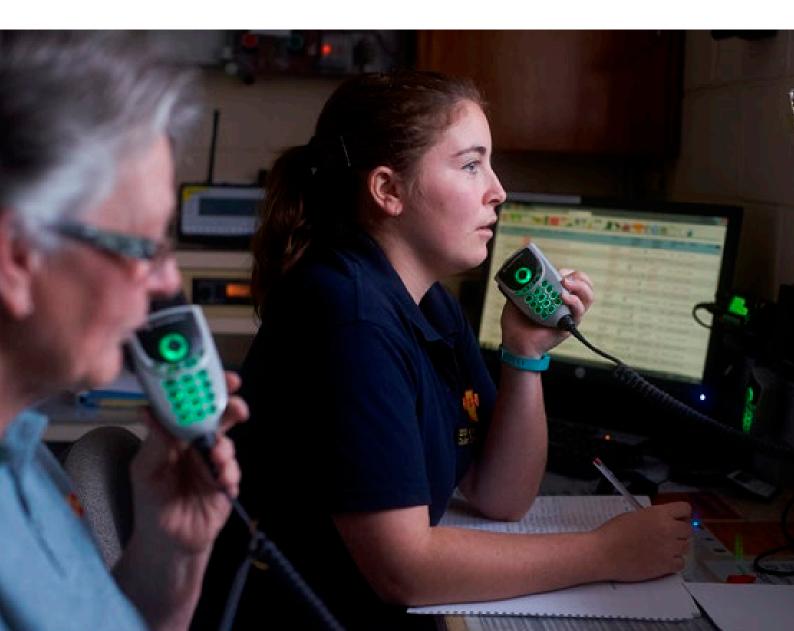
- · Availability of key user agency stakeholders for consultation.
- Availability of the SAGRN Service Provider for consultation.
- Timely completion of the prerequisite Action 3.

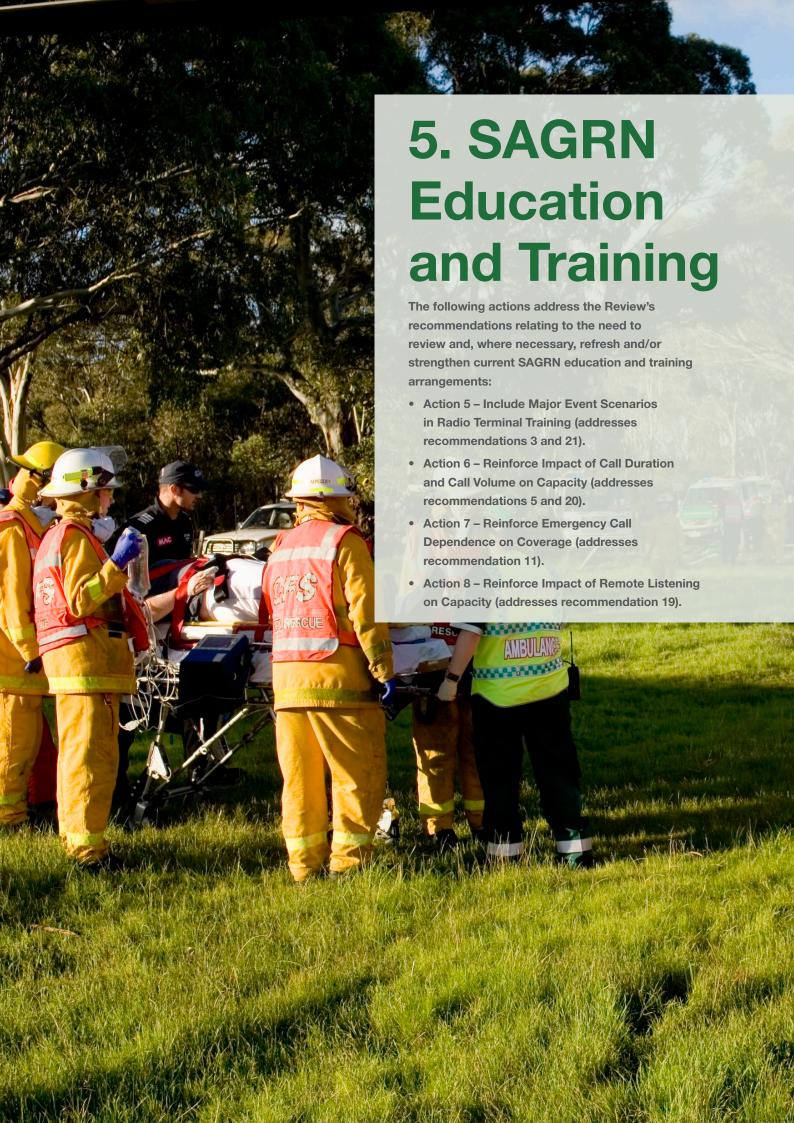
## 4.4.10 Outputs/Deliverables

 Establishment of regular reports (both near-real-time and historical) that objectively highlight the impact of operational behaviour on the SAGRN and identify compliance, or otherwise, with the SAGRN Standard Conditions of Service.

### 4.4.11 Success Criteria

 Established reporting demonstrates that agency utilisation of SAGRN is normally within agreed benchmarks for business-as-usual (BAU) and reflects compliance with the SAGRN Standard Conditions of Service during major events.





# 5.1 Action 5 – Include Major Event Scenarios in Radio Terminal Training

### 5.1.1 Purpose

#### To address:

- Recommendation 3 -
  - "Due to the infrequent nature of major events similar to the Pinery Fire, agencies include similar scenarios in their radio terminal training programs; in the case of CFS and MFS, especially immediately prior to the fire danger period".
- Recommendation 21 "Due to the infrequent nature of major events similar to the Pinery Fire, agencies and the relevant area within the Communications Functional Service reflected in the SEMP (State Emergency Management Plan), include similar scenarios in their radio terminal training programs, especially the operational and WHS impact of SAGRN busies".

### 5.1.2 Lead Agency

All SAGRN user agencies expected to respond to major events as either a control or key supporting user agency.

#### 5.1.3 Consultation/Participation

This action requires consultation and participation of:

- · Groups responsible for training within the relevant SAGRN user agencies.
- SAGRN Service Provider.
- · Communications Functional Service, SEMP.

#### 5.1.4 Target Timeframes

Q3 2016 - Interim communications to users on optimal radio terminal usage practices (e.g. CFS 5 min lessons).

Q3 2017 - User agency standard training material and programs updated.

#### 5.1.5 Objectives

- · Reinforce optimal radio terminal usage practices for major events through radio terminal training.
- Improve user awareness of the impact their behaviour has on the SAGRN such that efficient use of available SAGRN site capacity during major events can be maximised.
- Improve SAGRN user safety by reinforcing their understanding of network behaviour, including whole busies, during major events.

#### 5.1.6 Prerequisites for this Action

- Recommendation 9 (Action 14 Document Agency SAGRN Concept of Operations).
- Recommendation 15 (Action 2 Review SAGRN Traffic Mitigation Agreement).
- Recommendation 16 (Action 3 Review SAGRN Standard Conditions of Service).

#### 5.1.7 Source Data/Information Required

- Existing radio terminal training programs (sourced from SAGRN user agencies).
- User agency concept of operations documentation (sourced from the outcome of Action 14).
- Updated SAGRN traffic mitigation agreement (sourced from the outcome of Action 2).
- Updated SAGRN Standard Conditions of Service (sourced from the outcome of Action 3).

#### 5.1.8 Recommended Approach

- The relevant SAGRN user agencies review existing radio terminal training programs.
- Where possible, update or generate radio terminal training documentation with user agency specific operational language to describe related functionality.
- SAGRN user agencies develop training scenarios, inline with their concept of operations (Action 14), that reflect typical multi-agency major events.
- SAGRN user agencies workshop developed training scenarios with AGD Public Safety Solutions to ensure alignment with the SAGRN traffic mitigation agreement and SAGRN Standard Conditions of Service.
- SAGRN user agencies update radio terminal training programs to include major event scenarios.
- SAGRN user agencies execute updated radio terminal training programs.

### 5.1.9 Key Considerations

- Availability of existing user agency training material for review.
- Participation of all nominated agency users in updated radio terminal training programs.
- Alignment with existing agency user training program scheduling.
- Completion of updated radio terminal training programs.
- Availability of users to attend radio terminal training programs.
- Impact of new SAGRN radio terminal equipment on training material.
- Impact of functionality being delivered by the SAGRN Upgrade on radio terminal training material.

#### 5.1.10 Outputs/Deliverables

 Updated and/or generated SAGRN radio terminal training material reflecting user agency specific operational language and the inclusion of multiagency major event scenarios.

#### 5.1.11 Success Criteria

- Agencies, and their users, have been trained in operating on the SAGRN such that they are aware of and practiced in current operating procedures to ensure all relying on the SAGRN during a major event have reasonable access to its services.
- Analysis of SAGRN statistical data during a major event confirms changes in user agency user behaviour on the SAGRN that assisted in optimising the availability of SAGRN capacity, reflecting the effectiveness of the scenario based training material.



# 5.2 Action 6 – Reinforce the Impact of Call Duration and Call Volume on Capacity

#### 5.2.1 Purpose

#### To address:

- Recommendation 5 -
  - "The impact of relatively lengthy call durations on SAGRN site capacity, especially during major events, be reinforced with SAPOL".
- Recommendation 20 -"Agencies reinforce with their users the impact of both large call volumes and long call durations on the

availability of site capacity during major events".

### 5.2.2 Lead Agency

Attorney-General's Department.

#### 5.2.3 Consultation/Participation

This action requires consultation and participation of:

• All SAGRN user agencies.

#### 5.2.4 Target Timeframes

Q3 2016 - Presentation material developed and distributed.

Q3 2017 - User agency standard training material and programs updated.

#### 5.2.5 Objectives

• Reinforce the importance of limiting radio communications to operationally imperative information interchanges, especially during major events, to optimise available SAGRN site capacity.

#### 5.2.6 Prerequisites for this Action

There are no prerequisite actions for Action 6.

#### 5.2.7 Source Data/Information Required

There is no source data/information required for the completion of Action 6.

#### 5.2.8 Recommended Approach

- AGD Public Safety Solutions to compile presentation material explaining the impact of high call volumes and lengthy call durations on available SAGRN site capacity.
- AGD Public Safety Solutions to facilitate a workshop with nominated SAGRN user agency representatives.
- User agency representatives to communicate the impact of high call volumes and lengthy call durations on available SAGRN site capacity to all end-users.
- If not already addressed, Agencies to update SAGRN user training material to emphasise the importance of limiting radio communications to operationally imperative information interchanges, especially during major events.
- Review individual user agency SAGRN call statistics at regular intervals (e.g. monthly) to monitor changes in average and median call durations.

#### 5.2.9 Key Considerations

• User agency training material may need to be updated.

#### 5.2.10 Outputs/Deliverables

• Agencies acknowledge the importance of limiting radio communications to operationally imperative information interchanges, especially during major events, with special consideration given to the impact of high call volumes and lengthy call durations.

#### 5.2.11 Success Criteria

• Analysis of SAGRN statistical data, especially during a major event, confirms an overall reduction in call volumes and call durations compared with user agency historical norms, assisting in optimising the availability of SAGRN site capacity.

# 5.3 Action 7 – Reinforce Emergency Call Dependence on Coverage

#### 5.3.1 Purpose

#### To address:

 Recommendation 11 – "Agencies reinforce with their users that emergency (duress) calls can only be processed by the SAGRN infrastructure if the terminal device is within the respective coverage type".

#### 5.3.2 Lead Agency

All SAGRN user agencies that make use of the SAGRN emergency (duress) call function.

#### 5.3.3 Consultation/Participation

This action requires consultation and participation of:

• AGD Public Safety Solutions.

#### 5.3.4 Target Timeframes

Q3 2016 - Interim communications to users on emergency (duress) call usage (e.g. CFS 5 min lessons).

Q3 2017 - User agency standard training material and programs updated.

### 5.3.5 Objectives

• Reduce the number of SAGRN users reporting an inability to successfully initiate an emergency (duress) call when operating in an area that does not have predicted SAGRN coverage corresponding to the radio terminal in use.

#### 5.3.6 Prerequisites for this Action

- Recommendation 1 (Action 13 Provide Agencies with SAGRN Coverage Predictions).
- Recommendation 9 (Action 14 Document user agency SAGRN Concept of Operations).

#### 5.3.7 Source Data/Information Required

- The emergency (duress) call configuration for all user agency talkgroups (sourced from SAGRN user Agencies).
- SAGRN coverage predictions (sourced from AGD Public Safety Solutions).

#### 5.3.8 Recommended Approach

- AGD Public Safety Solutions review the emergency (duress) call configuration for each user agency talkgroup (for example, identify if each talkgroup is configured to operate in tactical or revert mode).
- Prepare presentation material for workshops with SAGRN agencies (presentation material to be customised for each user agency and include SAGRN coverage predictions). The intent of the workshops includes:
  - > Clarifying current emergency (duress) call configuration.
  - > Confirming alignment of current emergency (duress) call configuration with user agency concept of operations.
  - > Explaining implications associated with current emergency (duress) call configuration.
  - > Reinforcing user agency understanding of how emergency (duress) calls operate on the SAGRN.
- In consultation with Agencies, revise emergency (duress) call configuration.
- User agency representatives to reinforce the functional operation of emergency (duress) calls to all end-users.

#### 5.3.9 Key Considerations

- Any changes to user agency emergency (duress) call configurations will need to be reflected in user agency Concept of Operations documentation established in Action 14.
- Any changes to user agency emergency (duress) call configurations will need to be reflected in agency training material.
- Any changes to user agency emergency (duress) call configurations will need to be reflected in agency fleetmaps and associated radio terminal codeplugs.

### 5.3.10 Outputs/Deliverables

- Confirm, and if necessary update, user agency emergency (duress) call configurations.
- Reinforce the relationship between SAGRN coverage types, terminal equipment being used and the successful initiation of emergency (duress) calls on the SAGRN with all agency users.

#### 5.3.11 Success Criteria

- That all SAGRN users have an improved understanding of the co-dependence of coverage type and terminal equipment in relation to successful initiation of emergency (duress) calls on the SAGRN.
- Reduce the occurrence of users reporting that an emergency (duress) call attempt has failed, when the call attempt was initiated in an area where SAGRN coverage and the terminal equipment being used are not compatible with call success.



# 5.4 Action 8 – Reinforce Impact of Remote Listening on Capacity

### 5.4.1 Purpose

#### To address:

• Recommendation 19 -"Agencies reinforce with their users the impact of remote listening on available site capacity".

#### 5.4.2 Lead Agency

All SAGRN user agencies.

### 5.4.3 Consultation/Participation

This action requires consultation and participation of:

• AGD Public Safety Solutions.

#### 5.4.4 Target Timeframes

Q3 2016 - Interim communications to users regarding impact of remote listening (e.g. CFS 5 minute lessons).

Q3 2017 - User agency standard training material and programs updated.

## 5.4.5 Objectives

• Maximise the SAGRN site capacity availability on all sites not directly involved in a major event by eliminating SAGRN users monitoring event traffic on these sites, unless operationally required to do so.

#### 5.4.6 Prerequisites for this Action

There are no prerequisite actions for Action 8.

#### 5.4.7 Source Data/Information Required

There is no source data/information required for the completion of Action 8.

#### 5.4.8 Recommended Approach

- AGD Public Safety Solutions to compile presentation material explaining the impact of listening at SAGRN sites not directly involved in a major event on the corresponding site capacity.
- AGD Public Safety Solutions to facilitate a workshop with nominated SAGRN user agency representatives, including a discussion regarding the actions that may be taken by the SCC.

- User agency representatives to communicate and reinforce the impact of remote listing on SAGRN site capacity to all end-users.
- Conduct post incident reviews of SAGRN call statistics in order to monitor non-operational remote listening activity by SAGRN users.

#### 5.4.9 Key Considerations

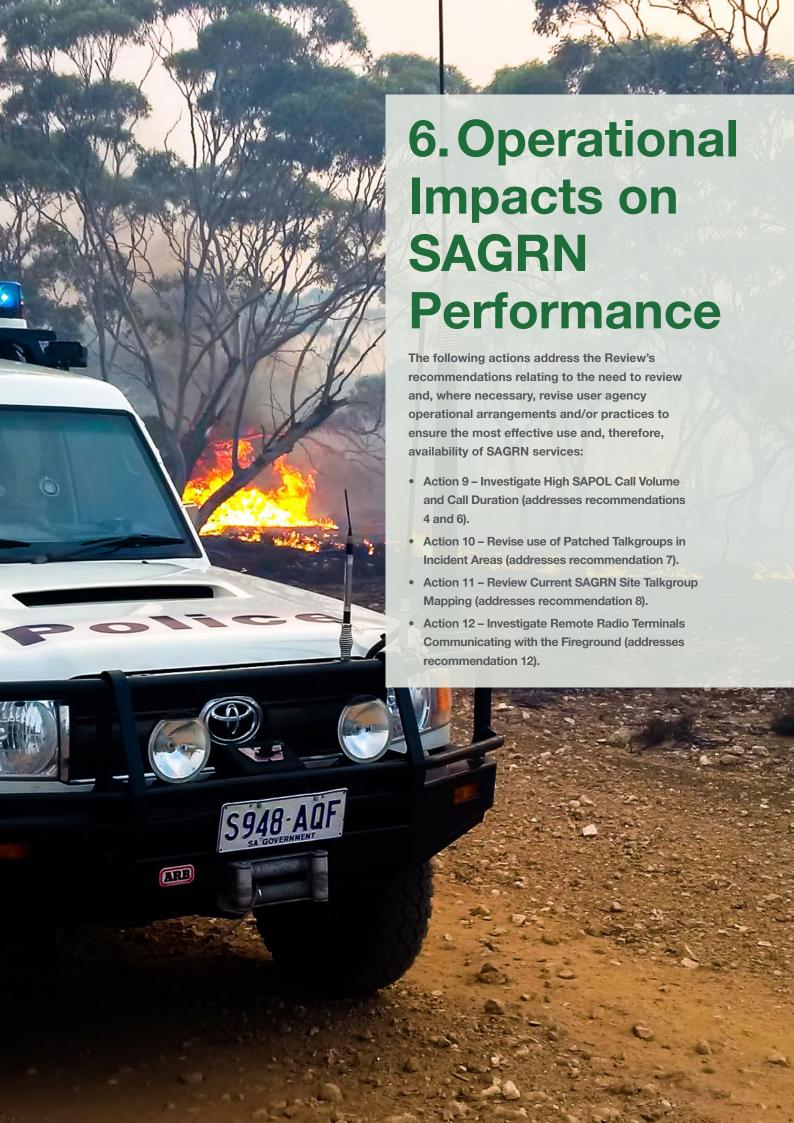
• SAGRN user training may need to be updated to reflect an increased emphasis on educating users about the impact remote listening has on site capacity.

#### 5.4.10 Outputs/Deliverables

• The impact of remote listening on SAGRN site capacity being communicated throughout all SAGRN user Agencies.

#### 5.4.11 Success Criteria

• A reduction in incidents of remote listening during major events being observed through analysis of call statistics.



# 6.1 Action 9 – Investigate High SAPOL Call Volume and Call Duration

### 6.1.1 Purpose

#### To address:

- Recommendation 4 -"SAPOL undertake an investigation to determine if the operational use of the SAGRN specifically relating to the Pinery Fires explains the high SAPOL call volumes generated in the area."
- Recommendation 6 -"SAPOL undertake an investigation into the length of calls employed during the Pinery Fire and, where operationally feasible, implement procedures that can be used to minimise the related impact on the capacity of sites involved in future major events".

#### 6.1.2 Lead Agency

SA Police.

#### 6.1.3 Consultation/Participation

This action requires consultation and participation of:

• AGD Public Safety Solutions.

#### 6.1.4 Target Timeframes

Q4 2016 -Investigations complete with learnings and/or proposed actions presented.

#### 6.1.5 Objectives

- SAPOL to determine whether the extensive use of the SAGRN at the Pinery Fire aligned with the operational needs associated with the event.
- SAPOL to identify if there were any areas where their use of the SAGRN could have be reduced to operationally imperative information interchanges in order to optimise the availability of SAGRN site capacity.

#### 6.1.6 Prerequisites for this Action

There are no prerequisite actions for Action 9.

#### 6.1.7 Source Data/Information Required

- SAGRN data for all SAPOL calls during the Pinery Fire (sourced from the SAGRN Service Provider).
- SAPOL communications centre radio console audio recordings associated with communications on the SAGRN during the Pinery Fire (sourced from SAPOL).

#### 6.1.8 Recommended Approach

- Determine the approach for the investigation to be undertaken.
- AGD Public Safety Solutions to provide SAPOL with a detailed analysis of SAGRN call statistics, specific to SAPOL radio terminal and console usage, during the Pinery Fire event.
- SAPOL to conduct an internal investigation into their operational use of the SAGRN during the Pinery Fire.
- AGD Public Safety Solutions to assist SAPOL with the investigation, in relation to the analysis and interpretation of SAGRN call statistics where necessary.
- SAPOL to communicate the results of the investigation internally.
- SAPOL to present learnings and/or proposed actions resulting from the investigation to AGD Public Safety Solutions that may assist all agencies in their planning for future major events.

#### 6.1.9 Key Considerations

- Outcomes of the investigation may impact on the SAPOL concept of operations document (established
- Outcomes of the investigation may impact on SAPOL SAGRN user training documentation.

#### 6.1.10 Outputs/Deliverables

- Learnings and/or proposed actions resulting from the investigation that may assist all agencies in their planning for future major events and to optimise the availability of SAGRN site capacity.
- An understanding of what SAPOL call volumes generated in the area.

#### 6.1.11 Success Criteria

• Analysis of SAGRN statistical data following major events confirms a reduction in SAPOL generated SAGRN traffic, as compared to the Pinery Fire, whilst maintaining operationally imperative information interchanges.

# 6.2 Action 10 – Revise use of Patched Talkgroups in Incident Areas

#### 6.2.1 Purpose

#### To address:

• Recommendation 7 -

"All agencies do not operate on patched talkgroups in the incident area where members of the patch involve operational jurisdictions well outside the affected area".

#### 6.2.2 Lead Agency

Attorney-General's Department.

#### 6.2.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN Agencies that use talkgroup patching.
- State Controller Communications (SCC).

#### 6.2.4 Target Timeframes

Q4 2016 - Guidelines developed as part of AGD advisory role to SCC.

Q2 2017 - Agency (SAPOL) internal procedures updated.

### 6.2.5 Objectives

- Maximise the SAGRN site capacity availability on all sites directly involved in a major event by removing remote BAU traffic from these sites (subject to operational requirements).
- Maximise the SAGRN site capacity availability on all sites not directly involved in a major event by removing event traffic from these sites (subject to operational requirements).

#### 6.2.6 Prerequisites for this Action

There are no prerequisite actions for Action 10.

#### 6.2.7 Source Data/Information Required

There is no source data/information required for the completion of Action 10.

### 6.2.8 Recommended Approach

- AGD Public Safety Solutions to compile a presentation outlining the potential impact of patched talkgroups on SAGRN site capacity.
- Conduct a workshop with SAGRN Agencies addressing:
  - > Network implications associated with using patched talkgroups during a major incident.
  - > Planned approaches for the use of patched talkgroups during major incidents.
- Document recommendations for the use of patched talkgroups during major incidents.

#### 6.2.9 Key Considerations

- · Outcomes may need to be included in user agency SAGRN concept of operations documents (established in Action 14).
- Outcomes may need to be included in the SAGRN Traffic Mitigation Agreement (established in Action 2) and Standard Conditions of Service document (established in Action 3).

#### 6.2.10 Outputs/Deliverables

• Documented recommendations on the use of talkgroup patching during major incidents.

#### 6.2.11 Success Criteria

• Analysis of SAGRN statistical data following major events confirms the impact of any talkgroup patching on the availability of SAGRN site capacity has been reduced, as compared to the Pinery Fire.

# 6.3 Action 11 – Review Current SAGRN Site Talkgroup Mapping

### 6.3.1 Purpose

#### To address:

Recommendation 8 –
 "AGD and SAGRN user agencies engage to review
the current SAGRN site talkgroup mapping to reduce
the probability of remote, unrelated operational traffic
occurring at the incident".

#### 6.3.2 Lead Agency

Attorney-General's Department.

#### 6.3.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN user Agencies.
- SAGRN Service Provider.

#### 6.3.4 Target Timeframes

Q4 2016 – Operational guidelines developed as part of AGD advisory role to SCC.

Q3 2017 – User agency talkgroup profiling complete.

#### 6.3.5 Objectives

- Optimise the alignment between BAU operational boundaries and the SAGRN sites talkgroups are permitted to access.
- Reduce the probability of traffic unrelated to an incident impacting on capacity availability for combatant agencies during an event.

#### 6.3.6 Prerequisites for this Action

- Recommendation 9 (Action 14 Document user agency SAGRN Concept of Operations).
- Recommendation 1 and 2 (Action 13 Provide Agencies with SAGRN Coverage Predictions).

### 6.3.7 Source Data/Information Required

- Details of existing SAGRN site affiliations for all talkgroups (sourced from SAGRN Service Provider).
- User agency BAU operational boundaries (sourced from agencies).

- Description of the operational use of each talkgroup (sourced from agencies).
- SAGRN coverage predictions (sourced from Action 13).
- Details of agencies' business-as-usual patching needs and practices.

#### 6.3.8 Recommended Approach

- Map the predicted SAGRN coverage affiliated with each talkgroup, and the associated agency operational boundaries.
- Facilitate workshops with SAGRN agencies for the purpose of reviewing their talkgroups, with regard to optimising the alignment of:
  - > Operational use.
  - > Associated BAU operational boundaries.
  - > Site affiliations.
- Document proposed changes to talkgroup site affiliations.

#### 6.3.9 Key Considerations

- Any changes to talkgroup SAGRN site affiliations will need to be actioned by the SAGRN Service Provider.
- Talkgroup site affiliations profiles should align with user agency Concept of Operations documents (delivered for Action 14).
- There may be a need to update the SAGRN Traffic Mitigation Agreement (established in Action 2) to reflect talkgroup site affiliations.
- User agency Concept of Operations documents may need to be updated as a result of changes to talkgroup site affiliations.
- All necessary user agency documentation will need to be updated to reflect changes to talkgroup site affiliations.

### 6.3.10 Outputs/Deliverables

- Endorsed documentation, for each user agency, outlining proposed changes to user agency talkgroup site affiliations.
- Documentation formally requesting the SAGRN Service Provider to implement proposed talkgroup site affiliation changes.

#### 6.3.11 Success Criteria

- Where possible, BAU operational communications on the SAGRN is contained within the respective operational boundaries.
- Analysis of SAGRN statistical data following major events demonstrates that BAU and patched talkgroup traffic, from operational areas not involved in the incident, had a minimal impact on the availability of SAGRN site capacity as compared to the Pinery Fire.

# 6.4 Action 12 – Investigate Remote Radio Terminals Communicating with the Fireground

#### 6.4.1 Purpose

#### To address:

 Recommendation 12 – "CFS and SAPOL investigate the operational role and necessity of geographically remote radio terminals communicating with the fireground".

#### 6.4.2 Lead Agency

SA Country Fire Service (CFS) and SA Police.

#### 6.4.3 Consultation/Participation

This action requires consultation and participation of:

- AGD Public Safety Solutions.
- SAGRN Service Provider.

#### 6.4.4 Target Timeframes

Q4 2016 - Agencies' 'remote' communications needs clarified.

#### 6.4.5 Objectives

- Maximise the SAGRN site capacity available on all sites not directly involved in a major event by eliminating user communications from these sites on incident talkgroups (unless operationally required to
- Maximise the SAGRN site capacity available on all sites directly involved in a major event by eliminating user communications from sites not directly involved in the event on incident talkgroups (unless operationally required to do so).

#### 6.4.6 Prerequisites for this Action

There are no prerequisite actions for Action 12.

#### 6.4.7 Source Data/Information Required

· SAGRN call data for all SAPOL and CFS activity during the Pinery Fire event (sourced from the SAGRN Service Provider).

#### 6.4.8 Recommended Approach

- Determine the approach for the investigation to be undertaken.
- AGD Public Safety Solutions to provide a detailed analysis of SAGRN call statistics, specific to SAPOL and CFS radio terminal and SAGRN site usage, during the Pinery Fire event.
- SAPOL and CFS to conduct an internal investigation into the operational role and necessity of geographically remote radio terminals communicating on incident talkgroups.
- SAPOL and CFS to communicate the results of the investigation internally.
- SAPOL and CFS to present learnings and/or proposed actions resulting from the investigation to AGD Public Safety Solutions that may assist all agencies in their planning for future major events.

#### 6.4.9 Key Considerations

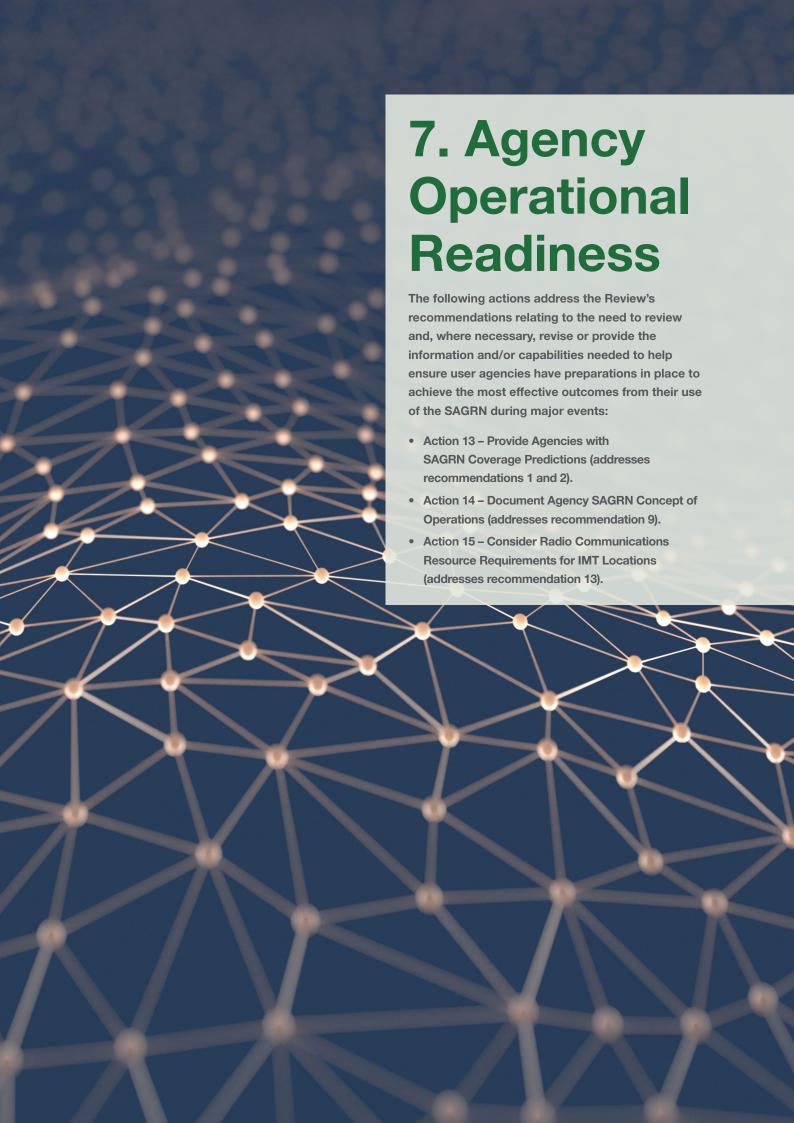
• User agency SAGRN user training may need to be updated to reflect an increased emphasis on educating users about the impact of communicating on incident talkgroups from sites not directly involved in the event.

#### 6.4.10 Outputs/Deliverables

• Educate all SAGRN user agencies on the impact of incident talkgroup radio traffic, generated from sites not directly involved in a major event, on local and incident ground SAGRN site capacity.

#### 6.4.11 Success Criteria

• A reduction in the volume of radio traffic being generated on incident talkgroups from sites not directly involved in a major event, as compared to the Pinery Fire event, being observed through analysis of call statistics.



# 7.1 Action 13 – Provide Agencies with SAGRN Coverage Predictions

#### 7.1.1 Purpose

#### To address:

- Recommendation 1 -
  - "All agencies are provided with the latest SAGRN coverage predictions to ensure end-users have an understanding of the operational limitations of the SAGRN coverage types (i.e. outdoor mobile and outdoor portable) when being deployed to an event".
- Recommendation 2 -"Agencies to include SAGRN coverage predictions in communications planning documentation, either pre-planned or for specific events".

### 7.1.2 Lead Agency

Attorney-General's Department.

#### 7.1.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN user agencies.
- SAGRN Service Provider.

#### 7.1.4 Target Timeframes

Q3 2016 - Coverage predictions provided to agencies.

#### 7.1.5 Objectives

- Ensure all agencies and their end-users understand the significance and importance of operating with SAGRN radio terminal equipment only in areas designed to deliver the respective coverage type (e.g. outdoor mobile or outdoor portable).
- Provide agencies with SAGRN coverage information that will assist them in the development of communications plans for pre-planned or specific events.
- Reduce the number of SAGRN users reporting an inability to successfully initiate a call when operating in an area that does not have predicted SAGRN coverage corresponding to the radio terminal in use.

#### 7.1.6 Prerequisites for this Action

There are no prerequisite actions for Action 13.

#### 7.1.7 Source Data/Information Required

• Current coverage predictions for each SAGRN site and each coverage type (sourced from AGD Public Safety Solutions).

#### 7.1.8 Recommended Approach

- Obtain/generate current coverage predictions (for each site and coverage type).
- AGD Public Safety Solutions provide agencies with a set of coverage maps for each coverage type, in required formats (e.g. hardcopy, PDF, GIS files).

#### 7.1.9 Key Considerations

- Coverage maps provided to SAGRN user agencies will need to be maintained and updated to reflect any network changes, in particular related to the SAGRN Upgrade project, as they occur.
- AGD Public Safety Solutions may consider establishing an on-line SAGRN coverage tool that allows agencies to generate event specific coverage maps.

#### 7.1.10 Outputs/Deliverables

• SAGRN coverage maps provided to each SAGRN user agency in formats compatible with their requirements.

#### 7.1.11 Success Criteria

• Reduce the occurrence of users reporting that a call attempt has failed, when the call attempt was initiated in an area where SAGRN coverage and the terminal equipment being used are not compatible with call success.

# 7.2 Action 14 – Document Agency SAGRN Concept of Operations

#### 7.2.1 Purpose

#### To address:

Recommendation 9 –

"Agencies consider and formally document their "concept of operations" to revise and/or revalidate their talkgroup and radio terminal requirements, to ensure the SAGRN is configured to meet the operational requirements of the agencies".

#### 7.2.2 Lead Agency

All SAGRN user agencies.

#### 7.2.3 Consultation/Participation

This action requires consultation and participation of:

- AGD Public Safety Solutions.
- SAGRN Board.
- SAGRN Service Provider.

#### 7.2.4 Target Timeframes

Q3 2017 – Concept of operations for principal SAGRN user agencies complete.

#### 7.2.5 Objectives

- Ensure each SAGRN talkgroup can be mapped to the relevant user agency's concept of operations.
- Ensure SAGRN talkgroups and radio terminals are configured to align with current user agency operational requirements (BAU and major events).
- Provide key parameters that will assist in rebenchmarking SAGRN coverage and capacity to ensure optimal alignment with current user agency operational requirements.

#### 7.2.6 Prerequisites for this Action

There are no prerequisite actions for Action 14.

### 7.2.7 Source Data/Information Required

 Existing documentation outlining user agency concepts/models for operating on the SAGRN (sourced from SAGRN user agencies).

- Current SAGRN fleetmap (sourced from AGD Public Safety Solutions), detailing:
  - > Talkgroups and associated configurations.
  - > Radio equipment and associated configuration.
  - Network settings relating to the operation of talkgroups and radio terminals.

#### 7.2.8 Recommended Approach

- AGD Public Safety Solutions to Develop a SAGRN concept of operations document template and provide to user Agencies.
- Agencies to conduct internal workshops to discuss, review, validate and revise their existing concepts for operating on the SAGRN.
- Agencies to document their revised SAGRN concepts of operations, in accordance with AGD Public Safety Solutions provided document template.
- Agencies to present their draft SAGRN concept of operations documents to AGD Public Safety Solutions so that a network impact review can be completed.
- AGD Public Safety Solutions to review draft user agency concept of operation documents to identify if there are any potential adverse effects on the network (for example, site capacity) and other user agencies.
- Agencies review their draft SAGRN concept of operations document based on AGD Public Safety Solutions feedback.
- Agencies finalise their SAGRN concept of operations document and seek internal and SAGRN Board endorsement.
- Agencies, in consultation with AGD Public Safety Solutions, to review their existing SAGRN fleetmap for alignment with their developed SAGRN concept of operations.
- Document proposed changes/updates to user agency SAGRN fleetmaps.

#### 7.2.9 Key Considerations

- The concept of operations documentation developed in Action 14 relates to SAGRN use only and is not intended to be an organisation-wide concept of operations.
- Agency training documentation may need to be updated to reflect the established concept of operations.
- Existing SAGRN users may need to receive updated training as a result of the established concept of operations.
- The development of agency concept of operations documentation may lead to changes in agency talkgroup requirements.
- There may be a need to reconfigure/reprogram agency terminal equipment to reflect the developed concept of operations and subsequent fleetmap changes.

#### 7.2.10 Outputs/Deliverables

- Endorsed SAGRN concept of operations document for each agency.
- Reviewed/updated SAGRN fleetmap for each SAGRN user agency.
- Documented parameters that will assist in rebenchmarking SAGRN coverage and capacity to ensure optimal alignment with current agency operational requirements.

#### 7.2.11 Success Criteria

- · Agency adherence with their SAGRN concept of operations during major events.
- Evidence of combatant agencies establishing communications plans, reflecting their SAGRN concept of operations, for a major event.
- Analysis of SAGRN statistical data following major events demonstrates that the planned allocation of talkgroups during a major event resulted in improved or predicted availability of SAGRN site capacity for combatant agencies, as compared to the Pinery Fire.

# 7.3 Action 15 - Consider Radio Communications Resource Requirements for IMT Locations

#### 7.3.1 Purpose

#### To address:

 Recommendation 13 – "The establishment of IMT locations takes into consideration access to available radio communications resources (including capacity) necessary to carry out its function, whilst not compromising frontline communications requirements".

#### 7.3.2 Lead Agency

Attorney-General's Department.

### 7.3.3 Consultation/Participation

This action requires consultation and participation of:

- All SAGRN user agencies likely establish Incident Management teams or command centre locations during major incidents.
- SAGRN Service Provider.

#### 7.3.4 Target Timeframes

Q1 2017 - Internet Management Team (IMT) guidelines for SAGRN needs/use only completed (to be considered/progressed in conjunction with recommendations/actions resulting from the Noetic 'Project Pinery' report).

### 7.3.5 Objectives

• Identify and document the radio communication (SAGRN) considerations for an IMT that are necessary to support combatant Agencies during major events.

#### 7.3.6 Prerequisites for this Action

• Recommendation 9 (Action 14 - Document Agency SAGRN Concept of Operations).

### 7.3.7 Source Data/Information Required

• SAGRN user agency concept of operations documentation (sourced from the outcome of Action 14).

#### 7.3.8 Recommended Approach

- AGD Public Safety Solutions review agency SAGRN concept of operations documentation (for agencies that establish IMT locations during major incidents only).
- Hold separate workshops with each agency to identify and document SAGRN considerations and guidelines for the establishment of IMTs (limited to agencies who establish IMTs during major events).
- · Issue document for review and endorsement by SAGRN agencies (only agencies who establish IMTs during major events are required to endorse the document).

#### 7.3.9 Key Considerations

- The document identifying SAGRN considerations and guidelines for IMTs must be clear, succinct and actionable by agencies.
- Agencies may consider identifying and pre-selecting a number of suitable IMT locations strategically situated throughout the State in preparation for major events.
- In addition to SAGRN considerations and guidelines, agencies must take into account other requirements (including fixed and commercial communications, logistics, environmental conditions, working space) when selecting suitable IMT locations.

#### 7.3.10 Outputs/Deliverables

• A document outlining SAGRN considerations and guidelines for establishing an IMT.

#### 7.3.11 Success Criteria

· Post incident review of SAGRN statistics confirms that the IMT location had no material impact on SAGRN site capacity available for combatant agency frontline communications.



# 8.1 Action 16 - Re-Benchmark SAGRN Coverage and Capacity Requirements

#### 8.1.1 Purpose

#### To address:

- Recommendation 10 "Subject to recommendation 9, that the outcome of the "concept of operations" be used to assist in re-benchmarking the SAGRN coverage and capacity requirements".
- Recommendation 18 -"AGD review the SAGRN Upgrade Program to assess the impact of prioritising the upgrade of SAGRN site capacity in high risk areas of the State".

#### 8.1.2 Lead Agency

Attorney-General's Department.

#### 8.1.3 Consultation/Participation

This action requires consultation and participation of:

- SAGRN user agencies.
- SAGRN Service Provider.

#### 8.1.4 Target Timeframes

Q3 2017 - Revised benchmarking of agency operational needs complete.

#### 8.1.5 Objectives

• Identify any discrepancies between the coverage and capacity provided by the SAGRN and agency needs as described in their concept of operations documentation.

#### 8.1.6 Prerequisites for this Action

- Recommendation 9 (Action 14 Document Agency SAGRN Concept of Operations).
- Recommendation 15 (Action 2 Review SAGRN Traffic Mitigation Agreement).
- Recommendation 16 (Action 3 Review SAGRN Standard Conditions of Service.

#### 8.1.7 Source Data/Information Required

- Current SAGRN coverage and capacity requirements, including those to be provided by the SAGRN Upgrade Program (sourced from AGD Public Safety Solutions).
- Updated SAGRN traffic mitigation agreement (sourced from the outcome of Action 2).
- Updated SAGRN Standard Conditions of Service (sourced from outcome of Action 3).
- Agency concept of operations documentation (sourced from the outcome of Action 14).

#### 8.1.8 Recommended Approach

- AGD Public Safety Solutions to review available documentation for the purpose of re-benchmarking SAGRN coverage and capacity requirements. Documentation should include:
  - > Agency Concept of Operations documentation (as established in Action 14).
  - > SAGRN Traffic mitigation agreement (as revised in
  - > SAGRN Standard Conditions of Service (as revised in Action 3).
- · AGD Public Safety Solutions undertake a rebenchmarking assessment of the SAGRN coverage and capacity (including any changes planned through the SAGRN Upgrade Program) for alignment with agency Concept of Operations documentation.
- AGD Public Safety Solutions to document the outcome of the SAGRN coverage and capacity rebenchmarking review.

#### 8.1.9 Key Considerations

 Any coverage and/or capacity changes identified may require a variation to the SAGRN Upgrade Program, and/or additional works.

## 8.1.10 Outputs/Deliverables

 Re-benchmarked SAGRN capacity and coverage requirements to ensure alignment with agency Concept of Operations documentation.

#### 8.1.11 Success Criteria

- Alignment between the SAGRN coverage and capacity and user agency Concept of Operations.
- Post incident review of SAGRN statistics confirms that sites identified as not requiring any capacity upgrade performed as predicted, where combatant agencies operated in accordance with their SAGRN concept of operations.

# 9. Document Information

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# Document Approval

This draft has been endorsed by: Mark Hanson, Director, Public Safety Solutions, Attorney-General's Department.