



Service Standard 5.1.9 Breathing Apparatus

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1. Purpose

The use of breathing apparatus (“BA”), in particular approved self-contained compressed air breathing apparatus, enables firefighters to carry out rescue and firefighting activities at structure fires and similar incidents in ways not otherwise safely possible. However, such operations also have potential hazards and it is essential that BA is always used within its safe limitations. This service standard and associated SOPs define the proper acquisition, use, training and maintenance associated with BA in the RFS.

2. Policy

- 2.1 BA shall only be acquired by brigades that have both a need for it, and the capability to use it safely and effectively.
- 2.2 BA shall only be used in accordance with appropriate safe operating and firefighting procedures.
- 2.3 Personnel involved in the use of BA shall be appropriately selected and trained.
- 2.4 BA shall be maintained in accordance with good fire service practice and the manufacturer’s instructions.
- 2.5 **Standard Operating Procedures**
The RFS BA SOPs detail the procedures to be used by members involved in the use of BA.

3. Links

- Australian Standards
 - 1715
 - 1716
 - 2030
 - 2865 and
 - 3848.2
 - [BA Medical Examination Information Booklet](#)

4. Who is responsible for implementing this Service Standard?

Director Operational Services

5. Amendments

- Complete review November 2007
- Re-format of BA medical examination information into booklet September 2009



Breathing Apparatus

Standard Operating Procedures

(2008)



A publication for the reference of:

- *Local RFS Managers*
- *Captains*
- *Learning and Development Officers*
- *Trainers*
- *Assessors*
- *Technicians*
- *others using or concerned with the use of Breathing Apparatus in the RFS.*

Recommended distribution:

Those listed above – one copy each.

Prepared by:

*Learning and Development Systems
NSW Rural Fire Service
15 Carter Street
Lidcombe
NSW 2141*

*(Locked Bag 17,
PO Granville, 2142)*

Tel: (02) 8741 5555, Fax: (02) 8741 5195

Author: Phil Robeson

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Note: *Throughout this document "District" means an RFS district, team or zone, as applicable.*

1. Significant Changes from Last Edition

- 2.1 The old RFS Compressed Air Breathing Apparatus SOPs were fairly long, prescriptive and repeated some material already specified in other RFS publications. They have been replaced with this edition which is significantly shorter, 'outcome-based' (rather than prescriptive) and refers to other relevant publications when needed
- 2.2 Each SOP now contains a section titled "Compliance Evidence" which indicates the records and other evidence that needs to be retained and presented during any audit of the use of Breathing Apparatus (BA) in the area. Generally speaking, auditors will use the evidence to ensure a system of records (or similar) exists, then examine representative samples of such records to check they are being used properly and consistently.
- 2.3 The acquisition and use of breathing apparatus has been linked to a brigade's classification under the RFS Standards of Fire Cover system.
- 2.4 The type of breathing apparatus and associated equipment approved for use has been linked to its listing in the RFS Equipment Catalogue, and/or as approved by the RFS Manager, Infrastructure Services.
- 2.5 The detailed description of the BA Control System has been deleted as it is included in the RFS Breathing Apparatus training material.
- 2.6 The required frequency of the BA medical has been reduced for younger members as firefighter safety statistics indicate that the medical risks associated with firefighting using BA are significantly greater once volunteers approach the age of 50.
- 2.7 The AS 1715 requirement that members using BA have no facial hair and no unusual facial features (e.g. size, shape or deformities) that could prevent obtaining an effective face mask seal when using BA has been made explicit.
- 2.8 Provision has been made for persons who are not BAO qualified, or who are no longer BAO qualified, to work more effectively in support of BAOs (including as a Breathing Apparatus Control Officer – BACO) through gaining optional Breathing Apparatus Support (BAS) training and certification.
- 2.9 Separate approval to acquire breathing apparatus (BA) is no longer required. However, a modified version of the old approval form has been retained in the appendices as a checklist for RFS staff to use when analysing if BA should be acquired in an area.
- 2.10 Diagrams of sample BACO tabards, BA cylinder branding and BA control boards have been deleted. (All equipment design and selection matters are dealt with by RFS Infrastructure Services.)

2. Use of Breathing Apparatus

2.1 Scope

This SOP defines the general circumstances in which self-contained, compressed air breathing apparatus (BA) is used in the NSW Rural Fire Service (RFS).

Note: In some publications, the self-contained, compressed air breathing apparatus used in the RFS may also be referred to as CABA or SCBA.

2.2 Procedures

- (a) BA shall be used wherever firefighters may be subject to hazards, (such as toxic gases, hazardous dusts/fibres, hot atmospheres, smoke and oxygen deficiency) that may injure their respiratory system. Scenarios for its use may include interior structural firefighting, some vehicle incidents, and when assisting in some capacities at HAZMAT incidents.
- (b) The use of BA shall comply with the relevant parts of Australian Standards *AS/NZS 1715 Selection, use and maintenance of respiratory equipment*, *AS/NZS 1716 Respiratory protective devices* and *AS/NZS 2865 Safe working in a confined space*.
- (c) All BA and associated personal protective and BA control equipment shall be of a type listed on the RFS Equipment Catalogue, and/or as approved by the RFS Manager, Infrastructure Services.
- (d) Unless approved otherwise by the relevant Regional Operations Manager, BA shall only be supplied to brigades with a 'Village 2' classification under the Standards of Fire Cover system, and where there is evidence they also have the capability and willingness to use it safely and effectively.
- (e) All operations using BA shall always use the RFS BA Control System, as described in RFS BA training materials.
- (f) All BA operators are to operate in teams of at least two, in constant direct contact with each other. A BA team shall not be committed to action if a second team is not available or expected to arrive at least 10 minutes before the former's expected exit time.
- (g) Records shall be kept of all acquisition and disposal of BA equipment.
- (h) Any changes to BA operating procedures shall be advised for implementation to the relevant District Operations Officer by the Manager Operational Policy and Standards.
- (i) Any changes to BA maintenance procedures shall be advised for implementation to the relevant BA Technicians (via District Operations Officers) by the Manager, Infrastructure Services.

2.3 Compliance Evidence

For auditing purposes, evidence of compliance with this SOP shall be that the district has:

- (a) Records of acquisition (or visual examination) of representative samples of BA and associated equipment, confirming they are of an approved type.
- (b) Standards of Fire Cover classification of BA equipped brigades, and records or notes of an analysis of such brigades' willingness and capability to use BA.
- (c) Relevant local procedures and records that confirm that BA equipped brigades are responded when needed, and provided with appropriate and timely back-up.

3. Breathing Apparatus Personnel

3.1 Scope

This SOP defines the medical fitness and training certification requirements for Breathing Apparatus Operators (BAOs), Breathing Apparatus Support (BAS) personnel and Breathing Apparatus service technicians (BATs).

3.2 Procedures

(a) BAO Personnel

- (i) Breathing Apparatus Operators (BAOs) are members who are competent to carry out interior structural firefighting, and similar activities, while using breathing apparatus (BA). Sufficient members of BA equipped brigades should be trained and certified as BAOs such that two BA teams are likely to be available at incidents when needed.
- (ii) All BAOs shall be subject to a specified medical examination initially before they commence any hot fire training to become a BAO, and every two years after the age of 45 years. The examining physician may specify a more frequent examination schedule for an individual if they believe it is warranted.
- (iii) The BAO medical examination shall be as specified in the appendices to these SOPs.
- (iv) All BAOs are to have no facial hair and no unusual facial features (e.g. size, shape or deformities) that could prevent obtaining an effective face mask seal when using BA.
- (v) All BAOs shall be competent to the standard indicated in the RFS BAO Learning and Assessment Strategy, or equivalent; including that all BAOs shall have current RFS SFA certification or equivalent first aid qualifications.
- (vi) BAOs should practice their BA skills at least once every three months and record it in a suitable brigade practice log (see sample in the Appendices).

(b) BAS Personnel

- (i) Breathing Apparatus Support (BAS) personnel are members of brigades who may provide support to BAOs, including acting as a Breathing Apparatus Control Officer (BACO), but are not themselves BAOs.
- (ii) All BAS personnel shall be competent to the standard indicated in the RFS BAS Learning and Assessment Strategy, or equivalent. Note: Previously certified BAOs may be given recognition as BAS personnel, or a member may be trained specifically in BAS.
- (iii) It is recommended (but not mandatory) that non-BAO members of BA equipped brigades and non-BAO certified officers who are reasonably likely to be an Incident Controller at an incident where BA is in use are trained and certified in BAS.

(c) BAT Personnel

- (i)** Breathing Apparatus Technicians (BATs) are members who have been trained and certified as competent to service breathing apparatus sets to the standard specified by the BA set manufacturer or supplier.
- (ii)** BATs normally need to re-certify every three years unless the BA supplier specifies otherwise (e.g. if monitoring of their maintenance activity confirms it is not required).

3.3 Compliance Evidence

For auditing purposes, evidence of compliance with this SOP shall be that the district has:

- (a)** BA equipped brigade member lists, indicating persons certified in BAO, BAS, and BAT.
- (b)** Records of BAO, BAS and BAT training and certification activities.
- (c)** Records of outcomes of BAO medicals.
- (d)** Brigade BAO practice logs.

4. Breathing Apparatus Maintenance

4.1 Scope

This SOP defines the system of maintenance required for breathing apparatus (BA).

4.2 Procedures

- (a) All BA sets in service are to be properly maintained and kept in good repair. Registers of BA sets, face-masks and cylinders are to be maintained. All maintenance of BA sets is to be appropriately scheduled and recorded. The maintenance forms included in the Appendices shall be used if no equivalent BA maintenance record system is in use.
- (b) BA cylinders may be filled by an external contractor or at an RFS fill station. External contractors, if used, are to provide a quarterly air purity test results report to the RFS district/s concerned. RFS fill stations are to be operated and maintained according to the manufacturer's instructions and so as to satisfy *AS 3848.2 Filling of portable cylinders for non-underwater self-contained breathing apparatus - Safe procedures*.
- (c) All BA cylinders shall be subject to hydrostatic pressure testing in accordance with *AS 2030 SAA Gas Cylinders Code* by an approved testing station. Fibreglass wrapped aluminium cylinders normally have a shelf life of 15 years and should be pressure tested every three years. Steel cylinders should be pressure tested every 5 years.
- (d) Unless contra-indicated by the manufacturer or supplier, the general maintenance required for breathing apparatus sets and associated equipment is as follows:
 - (i) Weekly Inspection – A weekly inspection of each BA set in service shall be conducted or supervised by a qualified BAO, BAS or BAT – Consisting of a check of cylinder pressure, a leak test, a positive pressure test, a bypass/constant flow test, low pressure warning test, and visual inspection of components, webbing, hoses and ancillary equipment – Normally incorporated with an appliance check – Torches, distress signal units and personal lines associated with BA should also be included in the inspection.
 - (ii) Monthly Test – A monthly test of each BA set shall be conducted or supervised by a qualified BAO – Consisting of the set being donned, started up and operated for the full duration of one cylinder – The cylinder is to be replaced and sent for refilling, and a weekly inspection of the BA set conducted – Normally integrated with practice by BAOs to maintain their competency in using BA.
 - (iii) Annual Test – An annual test shall be conducted by a qualified BAT in accordance with the manufacturer's or supplier's instructions, followed by a weekly inspection.
 - (iv) Reconditioning – Each BA set shall be reconditioned in a manner and at intervals as specified by the manufacturer or

supplier – An annual test shall also be conducted on the set before restoration to service.

- (v) Defects/Repairs – The Brigade Captain and District Operations Officer shall be notified of any defects found – The set shall be withdrawn from service, repaired as soon as practicable, and given at least a weekly inspection prior to return to service.

4.3 Compliance Evidence

For auditing purposes, evidence of compliance with this SOP shall be that the district has:

- (a) A schedule of maintenance of BA, and registers of BA sets, face-masks and cylinders.
- (b) Records of BA maintenance and repairs, BA cylinder pressure tests and air purity tests.

5. Acquisition of Breathing Apparatus

5.1 Scope

This SOP defines the procedures for acquiring breathing apparatus (BA) that are above and beyond the RFS purchasing practices used for acquiring other equipment.

5.2 Procedures

- (a) BA should only be acquired where an objective analysis shows that there is a need for it, and that it will be used safely and effectively to improve the protection of the community. (This analysis may use the BA Acquisition Analysis Form in the Appendices to these SOPs or an equivalent process.)
- (b) Unless approved otherwise by the relevant Regional Operations Manager, BA shall only be supplied to brigades with a 'Village 2' classification under Standards of Fire Cover.
- (c) BA shall not be acquired for offensive structural firefighting purposes unless a personal issue of a full kit of offensive firefighting protective clothing and equipment is provided to all relevant BA Operators (BAOs).
- (d) Any major firefighting vehicle carrying BA in a brigade must:
 - (i) carry at least two BA sets, two spare cylinders and a BA Control Board,
 - (ii) carry all BA sets located in a manner that enables safe, easy and rapid donning,
 - (iii) be able to carry at least 1500 litres of water available for firefighting,
 - (iv) be able to provide two attack hoselines, each 90 metres long and fitted with a fog nozzle with a flow rate of at least 250 l/min at 700 kPa, using a static water supply;
 - (v) be able to obtain water through a 65mm hose from a hydrant up to 90 metres away,
 - (vi) be able to obtain water from an open source directly into the main pump, and
 - (vii) provide a range of tools and equipment to enable associated forcible entry, lighting, ventilation and salvage activities to be conducted.

(Note: The above does not preclude supplementary BA sets being carried on lighter firefighting vehicles in the same brigade or district.)
- (e) Sufficient BA sets shall be acquired such that at least four sets are likely to be available for use in the first response to a typical structure fire in BA-equipped brigade areas.

Note: The former requirement for approval from the RFS Head Office to acquire BA has been removed from these SOPs.

5.3 Compliance Evidence

For auditing purposes, evidence of compliance with this SOP shall be that the district has:

- (a)** A completed BA Acquisition Analysis (or equivalent) indicating the need for BA, and the capability and willingness of the relevant brigade/s to use it safely and effectively.
- (b)** Standards of Fire Cover reports (and approvals from Regional Ops Officers if relevant).
- (c)** Records or a visual check of the proposed or actual fitting of BA to suitable vehicles.
- (d)** Documentation showing how pre-determined initial responses ensure at least four BA sets are likely to be in the first response to a structure fire in relevant areas.

Appendix A - BA Operator Practice Log Sheet

Brigade _____		District _____		Year _____
Operator	<u>Jan-Feb-Mar</u>	<u>Apr-May-Jun</u>	<u>Jul-Aug-Sep</u>	<u>Oct-Nov-Dec</u>

Instructions

This form is designed for keeping a log of when Breathing Apparatus Operators (BAOs) in your brigade complete their quarterly practice of using BA.

- Keep the form in a place at your station where it is easily accessible by BAOs.
- Write in the name of the Brigade, District and the Year to which the form applies.
- Write the names of Breathing Apparatus Operators (BAOs) in the left hand column.
- Note the date when each BAO completes their quarterly practice session in the relevant column.
- Have each operator initial the date entered to verify completion of their practice.

Note: More than one date per quarter may be entered if desired. This is not a mandatory form: You may use other methods to ensure quarterly practice is completed if desired.

Appendix B - BA Maintenance Forms

Appendix B.1 - BA Set and Facemask Register

District: _____				
BA Set/Facemask Serial Number:	Issued to: (Brigade)	Last Annual Test:	Next Annual Test:	Recondition Due:

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix B.2 - BA Cylinder Register

District: _____					
Cylinder Serial No.	Type of Cylinder	Date of Purchase	Last Hydro Test	Next Hydro Test	End of Life Date

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix B.3 - Inventory Card

D/D No: _____	Batch No: _____	Part No: _____
Description: _____		
Set Serial No.	Location	

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix B.4 - BA Cylinder Fill Station Log

District: _____		Manufacturer: _____
Test Cycle: _____		
Date	Activity	Comments

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix B.5 - BA Technician's Log Book

Technician's name: _____

Number: _____ District: _____

Set Serial #	Task Performed	District	Date

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix B.6 - BA Set Reconditioning Report

District: _____	Set serial # _____	Date: _____
Renewable parts and Inspection	Part #	Batch
Facemask <input type="checkbox"/> Renew exhalation valve c/w o-ring <input type="checkbox"/> Renew valve flap		
Demand Valve <input type="checkbox"/> Renew diaphragm <input type="checkbox"/> Renew quick-fit o-ring <input type="checkbox"/> Inspect supply hose <input type="checkbox"/> Renew valve disc <input type="checkbox"/> Renew inlet stem, including o-ring <input type="checkbox"/> Renew reset button		
Pressure Reducer <input type="checkbox"/> Renew o-rings <input type="checkbox"/> Overhaul pressure reducer		
Cylinder Connector <input type="checkbox"/> Renew o-rings <input type="checkbox"/> Renew sintered filter <input type="checkbox"/> Inspect high pressure hose		
Pressure Gauge and Whistle Assembly <input type="checkbox"/> Renew crush seal <input type="checkbox"/> Renew o-rings <input type="checkbox"/> Renew whistle seal <input type="checkbox"/> Inspect whistle clip <input type="checkbox"/> Renew nylon washer <input type="checkbox"/> Inspect supply hose		
Backplate and Harness <input type="checkbox"/> Inspect backplate, harness and airline		
Rescue 2 nd mask attachment, buddy line (if appl.) <input type="checkbox"/> Renew gauze filter <input type="checkbox"/> Renew o-ring		
Other		

Note: This is not a mandatory form. You may use other formats to achieve the same effect.

Appendix C - BA Acquisition Analysis Form

District: _____ Date: _____

Compiled by (Name/Title): _____ / _____

Breathing apparatus provides respiratory protection for firefighters undertaking interior structural firefighting and other activities where respiratory hazards are present. In so doing it often enables firefighting to be conducted in ways that can save life and significantly reduce the loss of property in comparison with alternative methods. However, it also enables firefighters to operate in areas where a whole new set of potential hazards may be present and it adds significantly to the costs of firefighting.

In determining whether or not a rural fire brigade should be equipped with breathing apparatus (BA), the relevant district should carry out an objective assessment of whether it is likely to provide overall advantages in the particular area, and whether the brigade is capable of using it safely and effectively. This Acquisition Analysis Form is designed to take district staff, and other interested persons, through that process. It will help them to answer the questions “Do we need BA?” and “Are we likely to be able to use BA properly?”.

Note: This document is based on the previous “Approval for supply of BA” form. In the past it was submitted to gain approval for BA. From 2008, that is no longer a requirement, but using this form will help the local district decide whether it is doing the right thing in acquiring BA for a brigade or brigades.

1. Life Safety Benefit

The use of BA can enable firefighters to conduct rescues in circumstances where it would otherwise not be possible. However, statistics indicate that the overwhelming majority of structural fire deaths occur in family-type homes and that the person or persons are usually overcome by toxic fumes rather than being burnt to death. They are usually deceased before the fire is reported and before any firefighters arrive. A disproportionate number of such deaths involve the very young, very old or infirm. BA can make little difference in most of these circumstances. If the risk in an area primarily involves family dwellings then a strong campaign to encourage the appropriate use of home smoke alarms and home fire escape plans/practices will do much more than acquiring BA to reduce the risk to people.

However, the same is not true of people in fires in larger residential or assembly facilities such as nursing homes, hospitals, conference centres, hotels, boarding houses, malls, clubs, schools and prisons. In these cases the presence of BA equipped and trained firefighters can make a real difference in facilitating the safe evacuation and rescue of large numbers of people. If an area has these sorts of risks, it has a powerful argument for needing BA.

Briefly describe the type and approximate number of residential/assembly risks you have in the area being considered for BA:

2. Economic Benefit

The use of BA can enable firefighters to prevent property losses at many fires in a way much better than the (defensive) alternatives. However, BA also costs money to acquire and maintain (including the associated PPE, medicals and training). There is a 'break-even' below which, statistically, the costs of BA is more than it is likely to save and above which it is an economic proposition. Studies show this 'break-even' point occurs when the population of an area is between about 200 to 800 people. Just where it occurs in this range depends on the typical costs of assets in the area and/or the economic effects of their loss. If the population is above about 800 (or above 200 with very high value assets) then there is a powerful argument for needing BA.

What is the population of the area being considered for BA? Does it contain any high value property or any assets that would lead to other losses if they were destroyed by fire?

3. Current Training

The safe and effective use of BA requires operators to engage in comprehensive and ongoing BA training. Their likelihood of doing so is probably fairly well indicated by their current 'training culture', and whether many members are already VF qualified and therefore already at the prerequisite level for BAO. If there are plenty of active trainers and members regularly engage in appropriate training and have a positive, preferably enthusiastic, attitude towards it, then it is strong evidence that they will participate effectively in BA training. If their training is minimal, or if their attitudes to training are generally negative, there is a risk that they will not participate in BA training to the extent necessary to ensure safe and effective BA operations. The latter is evidence that the members might not be capable of safely using BA.

What is the current 'training culture' like in the area being considered for BA? Are there sufficient members competent to VF level to create a pool of potential BAOs? Are there sufficient instructors and assessors available to create a BA training pool?

4. Proposed BA Training

The safe and effective use of BA requires operators to engage in comprehensive and ongoing training. Areas considering the introduction of BA need to 'think through' how they will establish and maintain an appropriate BA training program. Initial BA training may need to begin with training a cadre of local BAO trainers and assessors and setting up the appropriate facilities. An inability to provide an appropriate BA training regime is a strong argument against having BA.

How do you plan to introduce BAO training? Do you have trainers and assessors willing and potentially able to provide BAO programs? Do you have arrangements with other areas or the Region for support during the initial training phase? What arrangements do you have planned for BAOs to maintain their skills? Do you have a suitable training venue for theory and most practical training in BAO? Do you have access to a hot fire training facility for peak practical training activities?

5. Current maintenance

The safe and effective use of BA requires proper maintenance of BA and associated equipment. The likelihood of good BA maintenance is probably fairly well indicated by the current 'maintenance culture'. If members regularly engage in appropriate maintenance activities and have a positive, preferably enthusiastic, attitude towards it, then it is strong evidence that they will participate effectively in BA maintenance. If their maintenance activities are minimal, or if their attitudes to it are generally negative, there is a risk that they will not maintain BA to the extent necessary to ensure safe and effective BA operations. The latter is evidence that the members might not be capable of safely using BA.

What is the current 'maintenance culture' like in the area being considered for BA? Is there an effective maintenance system? Are there appropriate maintenance schedules, checklists and records in use? Are complex pieces of existing equipment (e.g. pumps) well maintained?

6. Proposed BA Maintenance

The safe and effective use of BA requires operators to engage in comprehensive and ongoing BA maintenance activities. Areas considering the introduction of BA need to 'think through' how they will establish and maintain an appropriate BA maintenance program. An inability to provide appropriate BA maintenance is a strong argument against having BA.

How do you plan to maintain BA? Do you intend having your own BA Technician/s or how will BA otherwise be serviced? How will you ensure appropriate air purity levels for cylinder filling? How will cylinder hydrostatic pressure tests be conducted? Who will monitor and/or coordinate overall BA maintenance?

7. Willingness of Volunteers

The safe and effective use of BA requires a conscious commitment by relevant brigade members. Members should be informed 'up-front' what it will involve and what will be expected of them. While it is normal and acceptable for members to have some doubts and uncertainties about BA, a clearly expressed unwillingness to take on the responsibilities associated with BA is a strong argument against having it.

Do the affected members understand the implications of having BA? Have they expressed a clear willingness to take on the responsibilities of having BA? How was their willingness evaluated?

8. BA Medical Examinations

The use of BA for interior structural firefighting and associated activities can, in some cases, aggravate or trigger a medical condition. BA medicals are designed to check for any such conditions or factors leading to them, especially in older members at potentially higher risk. They are required initially and every two years once members are over 45 years old.

What arrangements are proposed for the funding and provision of (mandatory) BA medicals? Can members use their own GP or is a specified examiner proposed?

9. Response Times

Breathing apparatus enables operations such as offensive interior structural firefighting. But fires are likely to be well beyond the stage when that is possible unless firefighters can respond in meaningful times (e.g. within 5 to 10 minutes of the call). Long brigade response times generally argue against the meaningful use of BA.

What are the typical response times in the area/s being considered for BA? If more than 5-10 minutes, can anything reasonably be done to reduce those times to a suitable level?

10. Associated Equipment

BA is only safe and meaningful when used in association with other equipment. It is pointless and possibly dangerous to have BA without the full set of such associated equipment. Have you taken into account the acquisition of the following equipment for use with BA?

Items of Equipment		Comments
<input type="checkbox"/>	Adequate locker storage (for at least 2 sets per vehicle)	
<input type="checkbox"/>	BA control system board and tags (per vehicle)	
<input type="checkbox"/>	Guideline (at least one per vehicle where applicable)	
<input type="checkbox"/>	Spare BA cylinders (one spare per set on vehicles)	
<input type="checkbox"/>	Distress signal unit (one per set)	
<input type="checkbox"/>	Offensive structural jacket and over-trousers (per BAO)	
<input type="checkbox"/>	Structural firefighter's boots and gloves (per BAO)	
<input type="checkbox"/>	Structural firefighter's helmet (per BAO)	
<input type="checkbox"/>	Personal line (at least one per BAO).	

11. Allocation of sets

Sufficient BA sets need to be supplied to reasonably ensure that two teams, each with two sets, are available to operate together at a fire or incident. What arrangements have been made to make this possible? Given all the information considered, how many sets will be allocated to brigades and/or units within relevant brigades in the area being analysed?

Brigade Name/Unit	# BA Sets	Brigade Name/Unit	# BA Sets	Brigade Name/Unit	# BA Sets

Note:

Improving the occupational health and safety of firefighters is sometimes advanced as an argument for rural firefighters to have BA. However, it should be noted that this argument is a two edged sword. On the one hand, BA provides respiratory protection for activities such as interior structural firefighting (a comparatively rare scenario in true rural areas). However, non-BA equipped/trained firefighters can be equally protected (if not more so) by limiting themselves to purely defensive firefighting practices clear of such hazards. BA also enables firefighters to enter areas where they may be subject to significant non-respiratory hazards, so the use of BA can actually significantly increase their level of risk if exposure to such hazards not comprehensively controlled.

End of form.