



South Yorkshire  
Fire & Rescue

WORKING FOR A SAFER  
SOUTH YORKSHIRE

# **Water Rescue Response Strategy**

**2009 to 2012**

November, 2008.

## Contents

1. Background
2. Water Risks within South Yorkshire
3. Regional Picture
4. National Picture
5. Current Facilities available within SYFR
6. Other Planned Improvements
7. Options for Change
8. Recommendation
9. Proposed Phases and Costs of Implementation
10. Conclusion



## 1. Background

During recent years the county of South Yorkshire, like many other counties, has faced an increasing number of localised or wide spread flooding situations. Following the major floods of the Summer of 2007 within South Yorkshire and subsequent flooding situations elsewhere in the UK South Yorkshire Fire and Rescue (SYFR) needs to review its current emergency response capability to localised and wide spread flooding situations and to water rescues in general.

The Pitt Review “Lessons Learned from the 2007 Floods” acknowledged that the floods experienced during 2007 were both tragic and exceptional whilst also recognising that the summer of that year was the wettest since records began. The review went on to acknowledge that *“the impact of climate change means that the probability of events on a similar scale happening in the future is increasing”*. The report identified that climate change has the potential to cause even more extreme scenarios than were previously considered possible.

It is generally accepted that current arrangements within SYFR provide an adequate level of response for water rescue scenarios anticipated under **normal circumstances**. However, in order to ensure that these arrangements continue to meet anticipated “every day” needs, the increasing expectations of the community it serves and the needs that may be experienced during extreme activity periods caused by flooding scenarios of increased severity and frequency a review of current water rescue response facilities has been undertaken. Recommendation of the Pitt report supports the need for Category 1 responders (FRS) to *“assess the effectiveness of their emergency response facilities”*.

## 2. Water Risks within South Yorkshire

With the exception of coastal waterways the county of South Yorkshire has every type of open waterway including;

- swift flowing streams and rivers – with associated weirs and sluices
- slow flowing rivers and tidal waterways – with associated weirs and sluices
- canals and associated lock facilities
- a range of “still” waters from large lakes/reservoirs through to small ponds.

Dependant on a wide range of circumstances, during normal or adverse weather conditions each of these waterways can require a water rescue response from SYFR.

The topography, geological, social and industrial profile of South Yorkshire also provides a wide variation of flood profile challenges. The county has low mountainous regions to the west through to low lying, flatland areas to the east. Large areas of potential flood zones have concentrations of social housing and industrial heartlands each providing an expectation from occupants that an appropriate level of emergency response for water rescue and associated incidents will be provided for during flooding situations.

In addition to these water risks the county also has a number of other risks which have, at times, necessitated a water rescue response capability to be mobilised. These include;

- numerous slurry pits (due to historical industrial/mining background)
- mud related risks
- ice conditions from any of the above open waterways.

The wide range of potential rescue scenarios and the increasing potential for a water rescue response facility to be needed due to climate change and other affecting factors supports the need to review and, where appropriate, enhance our current emergency response capability.

### 3. Regional Picture

Each of the Fire and Rescue Services (FRS) within the Yorkshire and Humber region has recently reviewed, or is in the process of reviewing their emergency response capability in respect to water rescue scenarios. The experiences of 2007 and 2008 within the region and the developments on a national basis have catalysed the formation of a Regional Working Group that is tasked with looking at the overall arrangements currently available within the region and those that are planned over the forthcoming years. The group is tasked with ensuring that development work is jointly undertaken where possible whilst ensuring that systems and equipment used or developed complement each other. The primary aim being to allow response capabilities to respond into each neighbouring Service when required to do so and if operational circumstances in the base Service area allow this to be facilitated.

### 4. National Picture

Flooding events have now directly impacted on most regions within the UK. The Pitt report and the review undertaken by Sir Ken Knight (the Governments Chief Fire and Rescue Advisor - CFRA) titled "Facing the Challenge" confirm the need to review local, regional and national emergency response capabilities. Recommendation 12 of the CFRA review states that *"where FRAs provide a response to flooding they must ensure that personnel are appropriately **equipped and trained**"*. This, when combined with the accepted requirements of the Health and Safety Act, the communities expectations and the Services moral obligations, makes it essential that SYFR reviews and, where appropriate enhances its Water Rescue Response capability.

Mutual aid response and support arrangements on a national basis have been improved since 2007 and various reviews within CFOA working groups and CFRA continue to be undertaken. National guidance regarding response arrangements, training and related Health and Safety issues have provided clear guidelines for FRS to work towards.



## 5. Current Facilities available within SYFR

### Personnel;

- All operational personnel are currently trained to Level 1 Water Awareness standards.
- Crews at Edlington, Aston Park and the Technical Rescue Unit are trained to Swift Water Rescue level 3.
- A number of officers at various levels are trained to level 3 or Technical Rescue support level in order to provide managerial support and knowledge to crews at larger scale incidents.

### Appliances/Equipment;

- All front line appliances and officers carry life jackets and/or flotation devices
- All Rescue Pumps carry throw lines.
- Aston Park has a dedicated Water Rescue Unit complete with boat and specialist rescue equipment for use on water, mud or ice.
- Technical Rescue Unit – equipment as Aston Park with addition of a motorised boat.
- Edlington has specialist kit available but the appliance has been utilised for other purposes – other means of carrying equipment is presently being developed.
- New Dimensions – a High Volume Pump is based at Aston Park – associated hose facilities are based at Tankersley. Mass decontamination facilities (potentially for use during decontamination of crews or large numbers of the public during wide spread contaminated flooding) is available at Tankersley.



## 6. Other Planned Improvements

The following areas will be integrated into SYFR during 2009;

- Provision of two dry suits to all Rescue Pumps to allow a Water Rescue First Responder capability across the Service.
- Training of all operational personnel to level 2 – Water Rescue First Responder to complement above provision of equipment.
- All Rescue Pumps will carry “reach sticks”.

## 7. Options for Change

### i) Remove Water Rescue Response capability from SYFR

There is currently no statutory duty to undertake this area of work. Resources needed to support a Water Rescue Response require significant levels of support for equipment and staff training to maintain safe operations for personnel whilst meeting expected levels of response.

Should we therefore remove the Water Rescue Response capability from SYFR?

The option of not providing a Water Rescue Response capability is **not recommended** as SYFR would need to significantly change many working practices and review emergency response arrangements in a wide range of areas. The expectations of the community and the morale obligations of the Service would also be adversely affected.

### ii) Maintain Status Quo

The current water rescue response arrangements and facilities available under normal circumstances are generally accepted as being adequate. However, increasing legislation regarding safe systems of work for all personnel, the increasing public expectation placed upon the Service and potential changes in duties of FRS's would leave SYFR in a very vulnerable position during the forthcoming years. The desire to continuously review and improve our services does not support the status quo position. Maintaining status quo by procuring replacement equipment and training is therefore **not recommended**.

### iii) Increase Water Rescue Response Capability within SYFR

This option would provide an increased number of personnel trained to Swift Water Rescue level 3 and an increase in the amount of resources available within SYFR. With the exception of powered boat capabilities (currently only available on the Technical Rescue Unit) the current facilities available on Aston Park Water Rescue Unit (and previously the Edlington Water Rescue appliance) are generally deemed to be appropriate, in line with operational needs and consistent with local/national expectations. They are also in line with current and anticipated equipment and training developments in the region.

In order to provide a robust and resilient capability it is proposed that the current facilities are enhanced/developed in five phases;

**Phase 1;** Re-introduce the Edlington Water Rescue Response capability by developing a “Specialist Equipment Transportation System” (SETS). This system provides a significant increase in the equipment stowage capability of a standard Rescue Pump by replacing the 13.5<sup>1</sup> ladder with a specially developed demountable storage box. In this instance the additional storage space would be used to accommodate the range of equipment previously stored on the specialist appliance (Edlington IRU) – the only exception being the boat which would not be inflated. The re-introduction of Edlington Water Rescue Response capability in this manner would be classed as a pilot project to enable a full evaluation of the proposed SETS principle to be undertaken. The option to exchange the 10.5 ladder with a 12m ladder would also be evaluated during this pilot scheme. Documented evidence from other FRS is available to support the removal of the 13.5m ladder.

**Phase 2;** Increase provision of water rescue equipment and training arrangements to facilitate four Rescue Pumps at strategically sited stations to become Water Rescue Response appliances. These four appliances would have standard ladder stowage arrangements (including 13.5 ladder) and a SETS facility available on station. The SETS would replace the 13.5 ladder once Trigger level 2 of the SYFR Major Flooding Contingency Plan had been initiated. Equipment stowed would be consistent with that on the other Water Rescue attributes (Aston Park and Edlington).

**Phase 3;** Provision of foul weather clothing to all fire stations within SYFR including safety waders, overcoats and associated wading sticks. 10 sets per station plus 20 in Stores.

**Phase 4;** Dependant upon the successful introduction of the SETS Water Rescue facility transfer the Aston Park Water Rescue Response arrangements to this system. Re-allocate the specialist appliance and staffing resources to other operational needs.

**The completion of phase 4 would provide three 24/7 available Water Rescue Response capabilities (Aston Park, Edlington and TRU) and four additional sets of Water Rescue Response resources that are initiated upon actuation of Trigger level 2 of the SYFR Flood Contingency Plan.**

**Phase 5;** Commission a special project to evaluate UNIMOG multi-purpose appliances. If identified as appropriate these appliances would facilitate an improved response capability to wide spread flooding incidents particularly in low lying areas. The appliances would provide significant improvements in the management of resources and widespread movement of logistics including personnel, equipment and potentially members of the community. The multi purpose UNIMOGs can also be utilised for other operational response circumstances including small fires incidents, moorland firefighting/rescues and specialist equipment mobility. The availability to part fund these appliances from external funding is a realistic ambition as they can be a very flexible resource that may be useful to a number of partner agencies.

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<sup>1</sup> Documented evidence to support the removal of a number of 13.5m ladders is available in Technical Services.



## 8. Recommendation

It is recommended that SYFR increases its Water Rescue Response Capability by implementing option iii) above in the proposed four phases. Relevant personnel have been involved in the formation of this phased approach option and it is viewed that Phase 1 to 4 are achievable within a six to eight month period once financial approval is given. Phase 4 of the proposals would need to be fully evaluated, developed and procured – anticipated timescales two to three years. This strategy also dovetails with other operational developments that are planned over the forthcoming months.

## 9. Proposed Phases and Costs of Implementation

Phase	Proposal	Appliances/Equipment	Training Required	Cost/Efficiency	Target Date
One	Provision of one SETS facility on Edlington Rescue Pump (pilot scheme)	Existing Water Rescue Equipment to be stored in SETS facility and placed on Rescue Pump as a permanent attribute in place of 13.5m ladder.	i) Use of SETS ii) Maintenance Water Rescue training	SETS - £12,500. Maintenance Trng – in existing Training Plan. 12m ladder - £2K (TBC)	February, 2009
Two	Provision of four demountable SETS and associated Water Rescue equipment at strategically located sites within SY.	Modify four existing Rescue Pumps to enable the interchange of 13.5m ladder with SETS. Full set of Water Rescue equipment to be stored in SETS – this to be placed upon appliance on actuation of Trigger level 2. SETS to be stored on station or at vehicle workshops.	i) Use of SETS ii) Swift water Rescue training for all personnel on the four identified stns. iii) Maintenance Water Resc. trng.	SETS - £50,000  Equipment - £90,000 (£22,500 x 4 sets) Initial Training – £94K  Maintenance Training – TBC	June, 2009.
Three	Provision of foul weather clothing to all fire stations within SYFR including safety waders and associated wading sticks.	Specially designed waders and Wading Sticks to be available upon actuation of Trigger Level 2.	Local training on use of equipment and integration with Level 2 training.	Special waders, Overcoats & Wading Sticks – 250 sets at approx £100. Ttl £25K.	June, 2009.
Four	Provision of one SETS facility on Aston Park Rescue Pump to replace specialist vehicle and crew.	Existing Water Rescue Equipment to be stored in SETS facility and placed on Rescue Pump as a permanent attribute in place of 13.5m ladder.	iii) Use of SETS iv) Maintenance Water Rescue training	SETS - £12,500 Maintenance Training – in existing training plan.  12m ladder - £2K (TBC)	January, 2010
Five	Provision of two multi-purpose UNIMOG vehicles strategically sited in SY.	2 x UNIMOG vehicles. Range of flooding, small fire and moorland firefighting kit. (TBC)	i) Specialist Driver Training ii) Other areas to be confirmed.	Initial estimate of 2x vehicles and selected equipment - £300K. Further work to be undertaken to fully establish cost.	December, 2011.

## 10. Conclusion

The South Yorkshire flood response needs of 2007 significantly exceeded SYFR water rescue response resources – it is therefore appropriate that the service reviews its current arrangements and resources in order to be better prepared for future events.

Current facilities including equipment, training and response criteria are consistent with national and regional guidelines/recommendations. They are also adequate for the “every day” Water Rescue Response needs of SYFR.

In order to continue with the drive to meet the Corporate Commitment of reducing deaths and injuries and safeguarding property it is imperative that we periodically review and evaluate our emergency response arrangements for the range of risks that we are likely to be faced with. Having experienced the challenges of 2007 it is recommended that we increase our Water Rescue Response capability by progressing this three year strategy.

