Department
for Environment,
Food & Rural Affairs

Flood Rescue Concept of Operations

Version	Date of issue	Change history
1	December 2025	This version replaces the 2019 Flood Rescue Concept of Operations.

We are responsible for improving and protecting the environment. We aim to grow a green economy and sustain thriving rural communities. We also support our world-leading food, farming and fishing industries.

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1. Introduction

Background

In spring 2006 the Department for Environment, Food and Rural Affairs (Defra) undertook a detailed capability assessment of flood emergency planning and preparedness in England and Wales. The analysis showed a shortfall in capability to rescue people when compared against the planning assumptions for a severe East Coast flood.

The floods in summer 2007 tested flood rescue capability across England. Sir Michael Pitt's review praised the role of many organisations carrying out flood rescue, including both statutory and voluntary organisations. The Pitt Review concluded that a national framework (Concept of Operations) was required, establishing standards for typing and accreditation of rescue teams and setting standards for equipment and training.

The Defra Flood Rescue Concept of Operations (FRCO) was produced as part of the project along with a Flood Rescue National Asset Register (NAR). This register contained accredited teams which met the team typing standards, enabling them to be deployed nationally in the event of a wide area flood incident.

Scope of this document

The FRCO sets out the processes for managing and maintaining a national flood rescue capability and the national coordination of flood rescue assets in England.

This document serves as a basis for coordination between emergency responders including the blue-light services, and other agencies, in meeting the country's requirements for flood rescue. The intended audience for this document is:

- flood rescue assets that are currently on, or who may wish to join the NAR
- other organisations involved in flood rescue but who do not have assets on the NAR
- responders who may attend or support flooding incidents including, Category 1 responders, and those who may undertake command roles during a flood incident

The FRCO will:

- provide the operational guidance for the management and engagement of flood rescue assets
- identify the standards relating to response, training and equipment for flood rescue assets

- provide a scalable approach, which can inform the safe and efficient incorporation of local and cross-border resources and the NAR

When partner bodies of a Local Resilience Forum (LRF) are developing or revising Multi-Agency Flood Plans they should use the Flood Rescue Concept of Operations (FRCO) as a guide to ensure appropriate flood rescue resources can be mobilised during times of flooding. This should include reference to the use of both local, cross-border and national assets.

This document will be reviewed periodically and updated as necessary to ensure it reflects current legislation and recognised best practice.

2. Response to Flood Rescue

A range of partners are involved in planning for and dealing with flooding events at national and local levels. The Civil Contingencies Act 2004 requires Category 1 Responders to maintain plans for preventing emergencies and for reducing, controlling or mitigating the effects of emergencies in both the response and recovery phases.

Central government response

At a national level, Defra is the lead government department (LGD) for planning and responding to flooding. The Ministry of Housing, Communities, and Local Government (MHCLG) is the LGD for flood recovery.

When flooding is forecast, using information from the Flood Forecasting Centre (FFC) and other sources, Defra will coordinate with other government departments, so they can be prepared to respond to potential flooding.

During a flooding incident, Defra will provide oversight of the incident, coordinate the cross-government response and advise ministers and other government departments about the incident. MHCLG will provide a government liaison officer (GLO) who will attend Local Resilience Forum (LRF) meetings, such as Tactical and Strategic Coordinating Groups, ensuring the flow of information between the local area and central government.

Depending on the scale of the event, the government response can be escalated as required. Initially the response is managed within Defra through its Emergency Operations Centre. For significant flood events, the National Flood Response Centre may be opened, with all relevant government departments and agencies working together from the same location or in a hybrid setting. More severe incidents can be further escalated with central coordination, within Cabinet Office Briefing Room (COBR), by the Cabinet Office COBR Unit. Further information on the central government role in a crisis can be found in The Amber Book: Managing crisis in central government.

Local response

LRFs are encouraged to develop a multi-agency flood plan (MAFP), to complement other partners' plans and to provide more detail to generic Major Incident Plans. Defra guidance on developing a multi-agency flood plan was published in 2020.

Each MAFP should adequately address river, coastal/tidal, surface water and groundwater flood risk and the associated emergency response arrangements. All partner organisations within an LRF area should work collaboratively to provide an effective flood response that protects the public, property and the environment, regardless of the source of the flooding.

A MAFP should set out the roles and responsibilities of responding agencies. It should include information on resources available within the LRF to respond to a flood. This should include details on the role of local voluntary organisations as well as information on the use of the Defra Flood Rescue National Asset Register.

National Flood Rescue Assets

Flood Rescue National Asset Register

Defra holds the Flood Rescue National Asset Register (NAR), a list of assets that voluntarily join the register and maintain availability for national deployment. The NAR includes assets from Category 1 responders and voluntary organisations. Some organisations will have multiple assets declared on the register.

An asset includes the personnel and the equipment/resources they deploy with according to their capability. A system of asset typing (type A to type D) has been developed to provide a scalable and consistent response. The NAR only records declared and assured assets, who meet the ‘asset type B’ (powered boat) or ‘asset type C’ (boat without engine) criteria.

An asset type A is the inclusion of personnel with specialist skills, such a Registered Paramedic, a police officer or RSPCA officer into a type B or C asset. These assets are not pre declared but are established at a local level during an incident to meet a specific need. These personnel may wear different coloured helmets, e.g. NHS responders such as Registered Paramedics will wear green helmets, and have different equipment to that of type B or C asset member. They should be given a safety briefing before being tasked as part of an asset.

Asset type B is a water and flood rescue boat asset with the following capability:

- Technical water rescue
- Search operations within the water environment
- Powerboat rescue operations
- In-water operations
- Flood response

Asset type C is a water and flood rescue technician asset with the following capability:

- Technical water rescue
- Search operations within the water environment
- In-water operations
- Non-powered boat operations
- Flood response

Asset type D are local assets and are not recorded or assured as part of the NAR. They can provide limited in-water operations (non-buoyant wading activities) as well as bank based safety and search and support operations. The recommended requirements for an asset type D can be found in Annex H.

Local Resilience Forums (LRFs) should hold a list of local flood rescue assets. It is recommended that local assets, such as those from voluntary organisations, also meet the asset typing standards for B and C assets to better enable local and national assets working alongside each other during an incident. As part of their response to a flood incident, LRFs should utilise local assets identified within their MAFP and consider at the earliest opportunity if assets from the NAR will be needed. Further information on requesting assets and how assets are mobilised is outlined in Annex A.

Information on the additional specialist capabilities and rescue provision that are available from several agencies is detailed in the Specialist Capabilities section.

Flood Rescue Tactical Advisors

Defra has a register of suitably experienced and trained individuals from the flood rescue sector who are available to respond nationally to support wide area flooding events as well as supporting LRFs in planning and non-response activities

During flood incidents Flood Rescue Tactical Advisors (FRTA) perform a number of activities, they:

- provide advice to tactical and strategic commanders at Tactical Coordinating Groups (TCGs) and Strategic Coordinating groups (SCGs)
- credential assets within the multi-agency strategic holding area (MASHA)
- assess specific risks to support operational response
- provide water & flood response safety briefings to organisations

Planning and non-response activities include:

- supporting regional flood working groups
- supporting multi-agency flood plans and advising on the integration of national assets into local structures
- supporting flood/water exercises

FRTAs should be requested at the earliest opportunity during a flood event, or in the preparation stages, to give advice on the use of the NAR. This can be remotely or in person. Subject to availability, two or more FRTAs should be mobilised to an LRF, other FRTAs can be used in a supporting role, operating remotely. The mobilisation of at least two advisors facilitates 24-hour support, based on 12-hour shift working and the flexibility to establish early credentialing, if required. The supporting advisor may only be required in

the early stages of an incident, to support the gathering of information and relevant intelligence for the advisors who are travelling to the incident. The process for requesting FRTAs to provide support during incidents is outlined in Annex A.

LRFs who wish to utilise FRTAs during planning and non-response activities should contact flood.rescue@defra.gov.uk. They will be put in contact with the Flood Rescue Capability at National Resilience to discuss requirements and engage a FRTA.

Strategic Advice

The National Fire Chiefs Council National Strategic Advisor Team (NSAT) provide impartial peer support and professional advice, to LRFs and government, that may be required as a result of an incident's scale or complexity. NSAT support can be requested through National Resilience Fire Control.

3. Incident Command

Joint Emergency Services Interoperability Principles (JESIP)

A successful response to flood incidents is based on a joint response involving multi-agency partners. The Flood Rescue Concept of Operations is based on JESIP. This helps to ensure a successful response to a flood event is delivered and that the complex coordination required is provided.

The police have the duty for coordination during major flood events at both a strategic and tactical coordination level. During a major flood event, flood rescue assets will be deployed from a wide range of organisations including Category 1 and 2 responders as well as voluntary organisations. In order to ensure a safe and efficient response, it is essential that the multiple organisations are capable of operating under a unified command structure. Further information on the roles and responsibilities of Emergency Responder Organisations can be found here Emergency Responder Organisations: Roles and Responsibilities - JESIP Website

Command, control and coordination are essential concepts in a multi-agency response. In a large-scale, multi-agency coordination situation a control structure is convened at strategic, tactical and operational levels. The principles of command and control are scalable and can be applied across different levels from national to local, and in a multi-agency setting. Command roles can be found under the JESIP Website under: Roles & Responsibilities - JESIP Website

Asset Commanders

Asset commanders will manage a typed asset appropriate to their Defra training module qualifications and the asset type they are commanding. They should operate within the principle of subsidiarity; that means making local on-scene decisions based upon their own assessment of the situation whilst meeting the objectives of the overall plan. Asset commanders must ensure that they operate within the overall incident command system.

Asset commanders must carry out a dynamic risk assessment to ensure that it remains safe for their asset to deploy. They should also, wherever possible, inform sector/operational command of any hazards. They must liaise with sector or operational commanders to confirm the plan of action in the event of a flood responder indicating that they have an emergency. Assets on the Defra Flood Rescue National Asset Register will routinely be tasked by operational commanders in both operational and sector structures, but all organisations retain control of their own resources and personnel deployed at a

scene and must coordinate with other organisations via the established command structure.

Water and Flood Incident Managers

Water and Flood Incident Managers (WFIM) advise at or command at water and flood incidents at a tactical or operational level. They ensure that incident commanders can identify, select, develop and manage appropriate tactical and operational plans in water and flood environments. The WFIM role has different functions to that of a Defra Flood Rescue Tactical Advisor but the two roles may work closely together.

Briefing model

Once commanders have made decisions and decided on actions, information must be relayed in a structured way that can be easily understood by those who will carry out actions or support activities. Using JESIP's IIMARCH (Information, Intent, Method, Administration, Risk Assessment, Communications and Humanitarian Issues) as a guide a brief can be prepared in appropriate detail, https://jesip.org.uk/briefing.

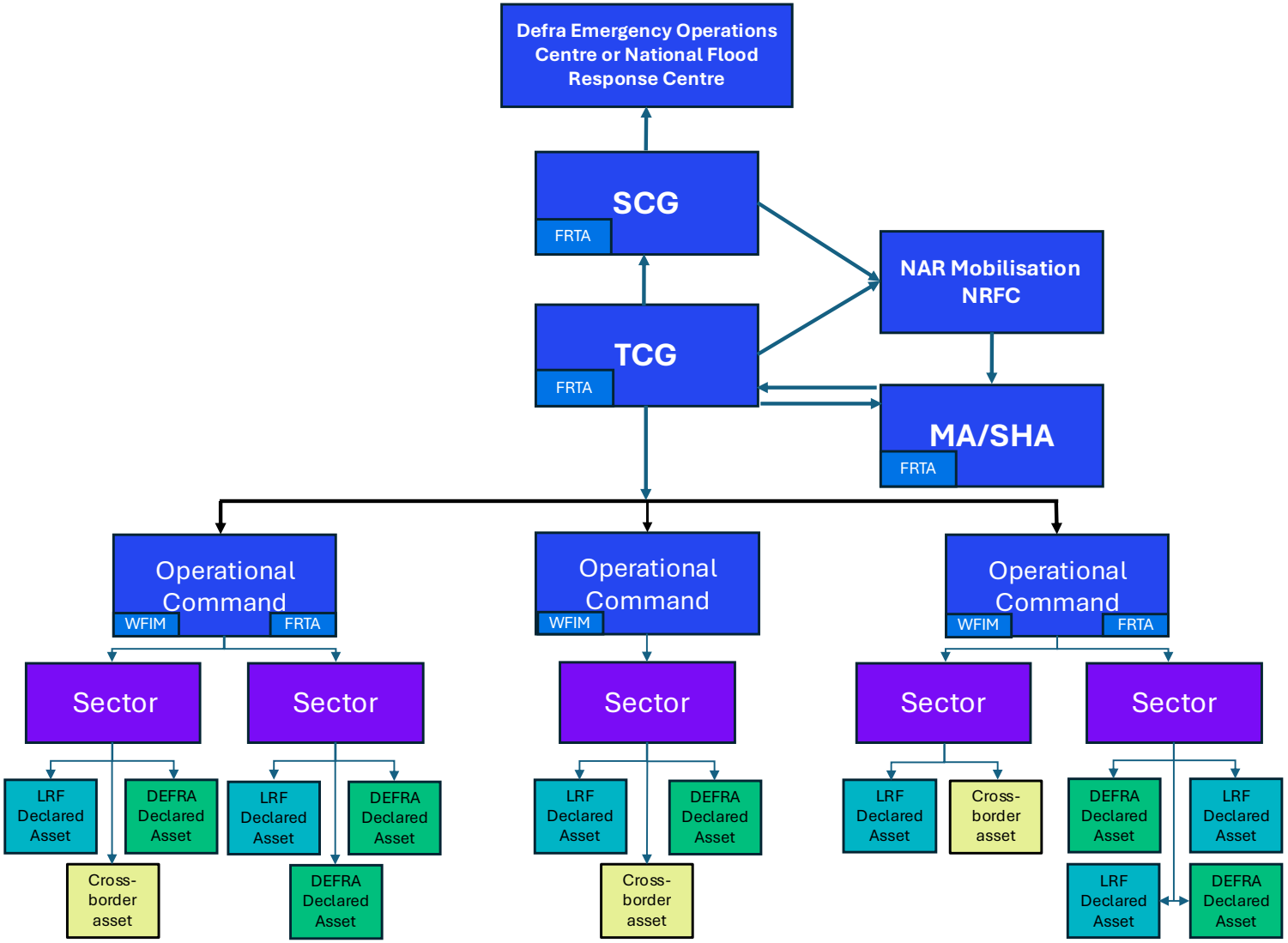
Incident command structure

The following example structure has been developed to demonstrate how flood rescue assets can be used during a flood response in a single local resilience forum (LRF). It shows how local, cross-border and national assets can be integrated into the command structure to provide a coordinated response. This does not show how all partner agencies in the Strategic Coordinating Group (SCG) and Tactical Coordinating Group (TCG) would operate during an incident. The specific roles identified at different levels in the command structure are where those roles may be required to operate during an incident. However these roles may also operate at different levels for example a Water and Flood Incident Manager may also be included in a TCG.

This structure can be scaled up for a widespread flood incident where multiple LRFs are responding. The structure would be replicated in each LRF with multiple sectors, operational command areas, TCGs and SCGs. In some cases where an incident spans a number of SCGs and would benefit from further coordination or enhanced support a Multi-SCG Response Coordinating Group (ResCG) may be set up by central government.

Key:

- NAR – Defra Flood Rescue National Asset Register
- NRFC – National Resilience Fire Control
- MA/SHA – Multi agency/strategic holding area
- FRTA – Flood Rescue Tactical Advisor
- WFIM – Water and Flood Incident Manager


Defra Emergency Operations Centre or National Flood Response Centre
SCG
FRTA
NAR Mobilisation NRFC
TCG
FRTA
MA/SHA
FRTA
Operational Command
WFIM
FRTA
Operational Command
WFIM
Operational Command
WFIM
FRTA
Sector
Sector
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Search

The overall responsibility for missing persons search management in the UK lies with the police, this continues when land suffers the effects of flooding. In some areas HM Coastguard have the delegated responsibility from the relevant Police Services for the coordination of maritime search and rescue in specific inland areas. Further information on the scope of search and rescue in the UK can be found in the Strategic Overview of Search and Rescue in the United Kingdom of Great Britain and Northern Ireland.

In the flooded environment, the majority of persons reported missing are located without suffering any harm. A small number will require search operations to be conducted. The police will coordinate search operations, though they will engage other agencies and organisations such as Mountain Rescue and Lowland Search and Rescue to assist and support the management of operations.

The Police Search Advisor (PolSA) holds a Home Office licence and has responsibility to plan, organise and manage missing persons search. Whilst the PolSA will coordinate the overall search operations it is recognised that some functions will be supported by partner agencies with specific flood expertise including Flood Rescue Tactical Advisors (FRTA) and Water and Flood Incident Managers (WFIM). This group can establish a search cell.

Aim of missing person search

The aim of a missing persons search is to locate a person who is missing or otherwise establish and confirm the person's whereabouts.

Categories of Missing Person

Missing persons can be categorised in four ways:

- **Missing persons who are ill or injured** – Those persons who do not want to be missing but have suffered some injury or illness that has resulted in them not completing a journey or have been swept away.
- **Lost persons** – These are persons who are temporarily disorientated and would wish to be found, e.g. people who do not know where they are or who are unaccounted for.
- **Missing persons who have voluntarily gone missing** – These are persons who have control over their actions and who have decided on a course of action, e.g. they wish to leave home.
- **Missing persons under the influence of a third party** – These are persons who have gone missing against their will, e.g. abduction or murder victims.

Of the four categories, it is expected that the main two categories relating to the flood environment are ‘missing through illness or injury’ and ‘lost’, though other categories will at times be relevant.

While many people may be considered as high-risk missing persons in the flood environment, often many of the calls received by agencies are ‘concern for welfare’. These are calls from concerned relatives/friends unable to contact relatives/friends in affected areas. Each police service area will have a methodology to assess these as high or low risk. For major incidents, a casualty bureau may be required to manage these calls. A search cell may be required at an incident/sector level, or both, to match the complexity of the incident.

Incident Search Cell

The Search Cell will be led by a PolSA with the additional consideration of the following:

- Water & Flood Incident Manager or Flood Rescue Tactical Advisor
- Tasking and Logistics Officer
- Debriefing and Intelligence Officer
- Loggist/RD mapping operative

Search techniques

It is recognised agencies vary in the use of terminology for search techniques. Whilst many include line search, corridor search, parallel track searches etc., assets will be tasked to complete a search of a sector and will use a number of different search patterns according to the specific task.

Search taskings will often see partners from varying agencies working together to complete a search tasking. Therefore, it is important that sector commanders work closely with asset commanders to ensure a common language and understanding of how the search will be conducted. It is important that during training and debriefings plain language is used to ensure a clear understanding of what the search brief was, what and how the search was conducted (including the geographical and physical area completed) and limitations of the search.

4. Communications

Communication structures will vary between Local Resilience Forums (LRFs). Arrangements for communication and information exchange between responders and incident command should be contained within a generic emergency plan or a separate communication plan. If this is not the case, it is recommended that LRFs include this information in their Multi-Agency Flood Plan.

Not all agencies involved with the response will have access to the same methods of communication that are used by the emergency services. An appropriate primary method of communication, such as Airwave, to be used during the incident should be agreed by incident command. All agencies involved should be informed of this.

Where flood rescue assets are in use, the means of communication with them should be agreed. This may be the same primary communication method used by the other responders or another method such as Very High Frequency radio or mobile phones. Flood rescue assets should ensure they are aware of the communication method to be used prior to tasking.

Operational command should maintain contact with all assets within their command and confirm updates at agreed regular intervals to monitor welfare and maintain lines of communication. Sector commanders (when in use) may complete this, and sector commanders will then confirm communication with operational command. In the event of a loss of communications with an asset, an agreed strategy should have been communicated to all assets prior to tasking.

The use of Communication Tactical Advisors to develop a communication plan should be considered. They are available nationally, and can be requested through National Resilience Fire Control via the Strategic/Tactical Coordinating Groups.

5. Operational Considerations

Flood victim and casualty management

The majority of people affected by the impacts of flooding do not need medical interventions that require the NHS Ambulance Services or onward hospital care. This group are classified as flood victims.

Those people who have pre-existing conditions, injuries or require urgent medical care are referred to as casualties. These people may need support to ensure medical supplies/equipment are taken with them when they are rescued. The NHS Ambulance Services are the lead agency for patient care and casualty management within water and flood incidents and have a specific legal duty of care to avoid any unreasonable delay in accessing and stabilising casualties. Healthcare providers play a key role in mitigating the risks associated with removing people from their properties.

Ambulance Service on scene commander will be required to ensure a casualty management and distribution plan is in place, which is suitable and sufficient to support the scale and requirements of the incident. Hazardous Area Response Team (HART) paramedics can provide clinical care to casualties within the flood environment as required.

At flood operations where persons are being rescued from either the water or properties, it is important that provision for a suitable casualty clearing station is established. This should be appropriately resourced by the Ambulance Trust. This will ensure casualties can be counted and tracked, receive medical attention and/or be transported to the right hospital for definitive care, be decontaminated as necessary or be discharged from the scene if safe and appropriate. Operational command will nominate an area for a casualty clearing station, where required, which should be determined through liaison with the NHS Ambulance Service. Consideration should be given to:

- accessibility of rescue assets
- likely development of the incident
- number of casualties
- media access
- security
- access to decontamination
- access for onward transport to reception centres
- access for medical services
- consideration of disabled access.

LRFs should outline a management plan for both flood victims and casualties who have been evacuated and/or rescued, as they will need onward support.

Water and flood hazards and risks

It is essential that responders appreciate the hazards associated with working in, on, or near water (examples provided in Figure 1) so that resources used can be matched to the risk. Operating in flood environments is dangerous and the appropriate training, equipment and command are required to reduce risks as far as reasonably practicable. It is important that organisations risk assess their activities prior to and during deployment/tasking. Responders should have an awareness of basic health and safety, risk assessment processes and manual handling and training in these areas should be appropriate to the level at which the responder operates.

Figure 1 – Examples of some common hazards personnel may face

Access	River current/flow	Slips, trips and falls
Variable flow rates	Number of rescues	Low visibility
Manual handling	Strainers/siphons	Falling equipment
Drowning	Entrapment	Hazardous materials & waterborne diseases
Hypothermia/fatigue/heat exhaustion	Driving/vehicles in water	Electricity
Helical flow	Debris	Force of water
Laminar flow	Electrical hazards	Inspection covers
Weirs/stoppers	Eddies	Weather
Actions & transportation of casualties/animals	Water level liable to change continually	Moral pressure to act/decision to deploy team/mission creep

Hierarchy of rescue

Rescue Philosophy - The basic principles of any rescue organisation are:

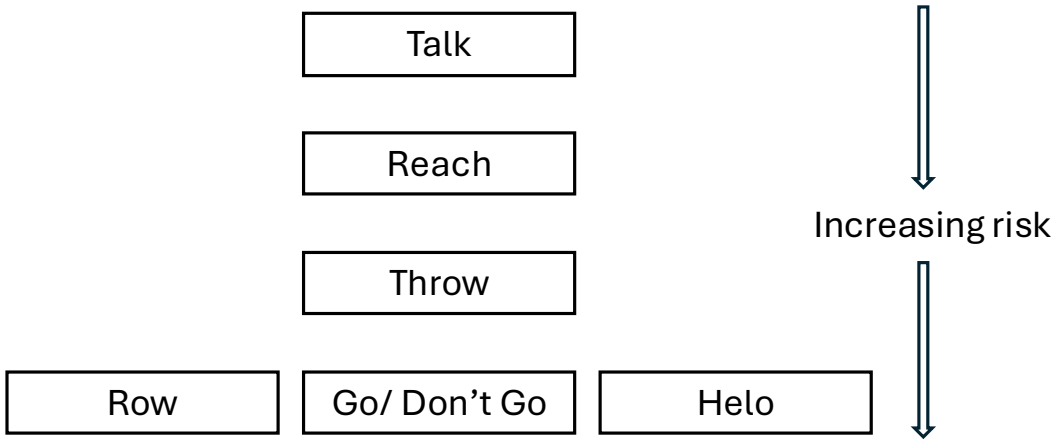
1. Self
2. Team
3. Casualty/victim

There are two types of rescue:

- *Conditional rescue* – Relies upon the casualty/victim doing something to assist in their rescue, e.g. a throw line rescue.
- *True Rescue* – Requires no assistance from the casualty/victim in their rescue, e.g. unconscious or injured people.

Responders should choose the most appropriate rescue tactic (see Figure 2) for the situation they are faced with. This should include considering their level of training, capability to perform the rescue, the safety of both the rescuer and the casualty/victim and the risk level of different types of rescue.

Figure 2 – Rescue Tactics



Zoning

Zoning is required to ensure the appropriate response resources are used and that responders operate in the correct locations.

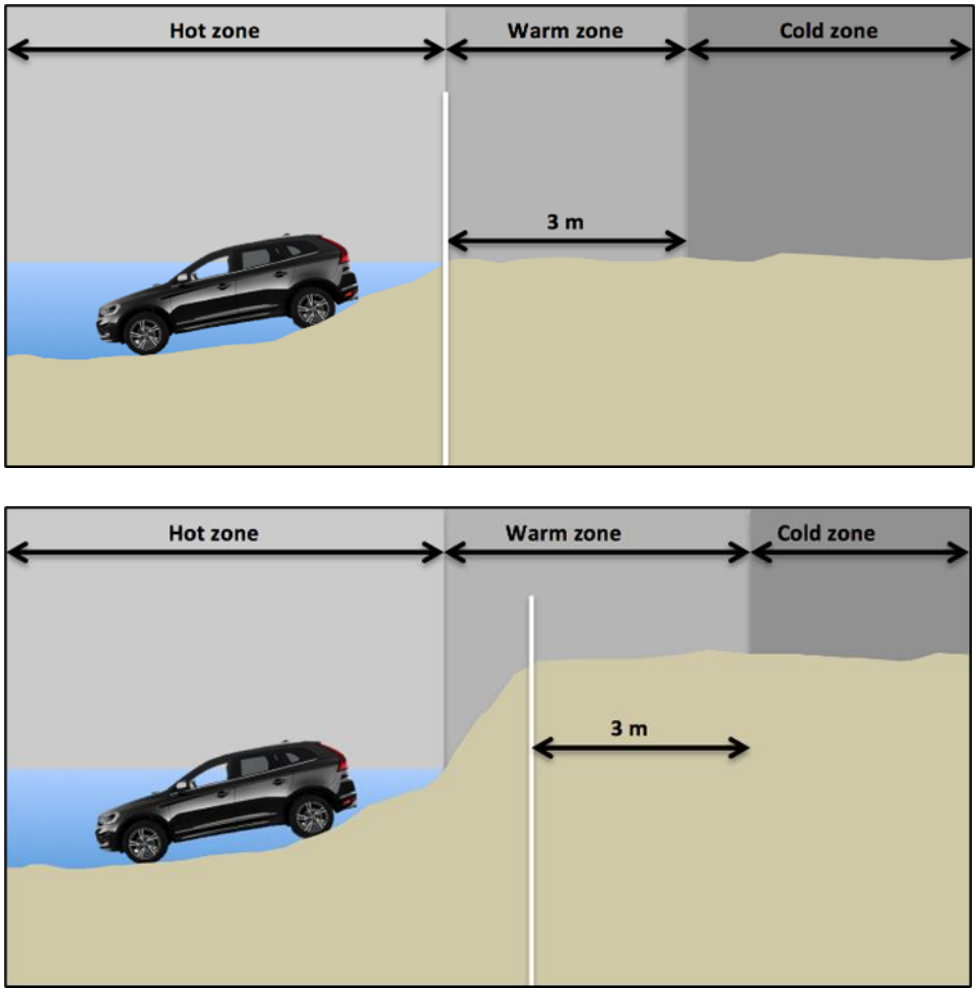
Hot Zone - This is the area covered by water and is the high-risk area. Operations in the hot zone should be restricted to trained in-water responders who are appropriately equipped for the environment.

Warm Zone - This is the area from the waters edge and up to three meters away. It is a risk area to responders depending on the terrain and features present e.g. a road by the water may be a safer area than a steep bank. The three meter distance should be increased depending on terrain for example, if there is an upwards slope at the edge of the hot zone the warm zone might begin at the top of the slope rather than the edge of the

water (see Figure 3). Responders working in the warm zone should be appropriately trained in self-rescue techniques and equipped for the environment with appropriate personal protective equipment.

Cold Zone - The cold zone is the safe area located outside the warm zone.

Figure 3 – Zoning



Individual identification and lighting

A system of identification using helmet and light colours is used, to ensure that all asset types and personnel are identifiable. This ensures that operational and sector commanders, tasking officers and others can determine capability and that assets and personnel are correctly tasked.

Table 1 – Helmet and light colours

Role	Helmet Colour	Light Colour
Asset Commander – Asset type B & C	White helmet	Red light
Water & Flood Rescue Technician	Red Helmet	Red light
Water & Flood Rescue Boat Operator	Red Helmet	Red light
Equipment & throw lines	N/A	Green light
Hazard marking	N/A	Blue light

Hand and whistle signals

To ensure interoperability between assets regardless of their agency, it is essential that all assets use a standard set of signals for communication.

Table 2 – Hand signals

Signal	Meaning
One hand flat on head	OK
One arm raised above head	Distress
Pointing with one arm outstretched	Move in that direction
Both arms crossed in front of chest	Need medical help or bring medical kit.
One arm outstretched in front of chest showing palm	Stop
Whilst in boat - arm outstretched to one side	Move in that direction
Whilst in boat - both arms raised above head	Stop

Whilst in boat - one arm outstretched at side of body bent upwards at 90°	Holding position

Table 3 – Whistle blasts

Signal	Meaning
One blast	Stop or attention towards signaller
Two blasts	Attention to upstream or move upstream
Three blasts	Attention to downstream or move downstream
Three blasts repeated	Emergency
One long blast followed by a short blast	Carry On

Night Operations

During hours of darkness and poor visibility, responders are required to have suitable lighting for activities undertaken. This includes team and personal lighting. Personal lighting should include a hands-free head torch and a solid coloured light visible and attached to the helmet; this may be battery powered or a chemical light stick. Lights on buoyancy aids are not sufficient to meet this requirement. It is important that responders use the correct colour of helmet and light as detailed in Table 3. Helmet and light colours for type D asset are detailed in Annex H.

In addition, each asset will be equipped with search lighting to enable the asset to illuminate an area sufficiently for carrying out searches and navigation of both urban and rural areas on foot or by boat. Rescue throw lines should have the bag marked with a green light, so this is more easily located if deployed into the water.

Consideration should be given to the use of thermal imaging cameras to assist with navigation and searches, bearing in mind their limitations in some circumstances. The use of night vision devices may also assist with night operations. Care must be given to the use of lighting when working with helicopters as the aircrew may use night vision goggles, which would be adversely affected by powerful search lights shining directly at the helicopter.

Additional control measures need to be considered for night operations, including the suspending or restriction of activity according to the safety of responders. Other control measures may include increased supervision, lighting, safety officers, upstream spotters and downstream back-up.

Lily pads and asset deployment

Areas that are totally cut off by floodwater (lily pad) may still require search and rescue activities. When planning operations for areas such as these, assets that are deployed to these locations need to consider how they can provide an effective search and rescue service. Assets deploying into lily pads using boat or aircraft should ensure that they identify suitable capabilities, resources and have sufficient endurance to conduct a full range of flood search and rescue operations, potentially for an extended period. A suitable location to act as an operational or sector command point, and if required a survivor reception centre, should be identified and its position reported to incident or operational command. Incident command should consider emergency evacuation plans for lily pad areas, in case the situation starts to rapidly deteriorate.

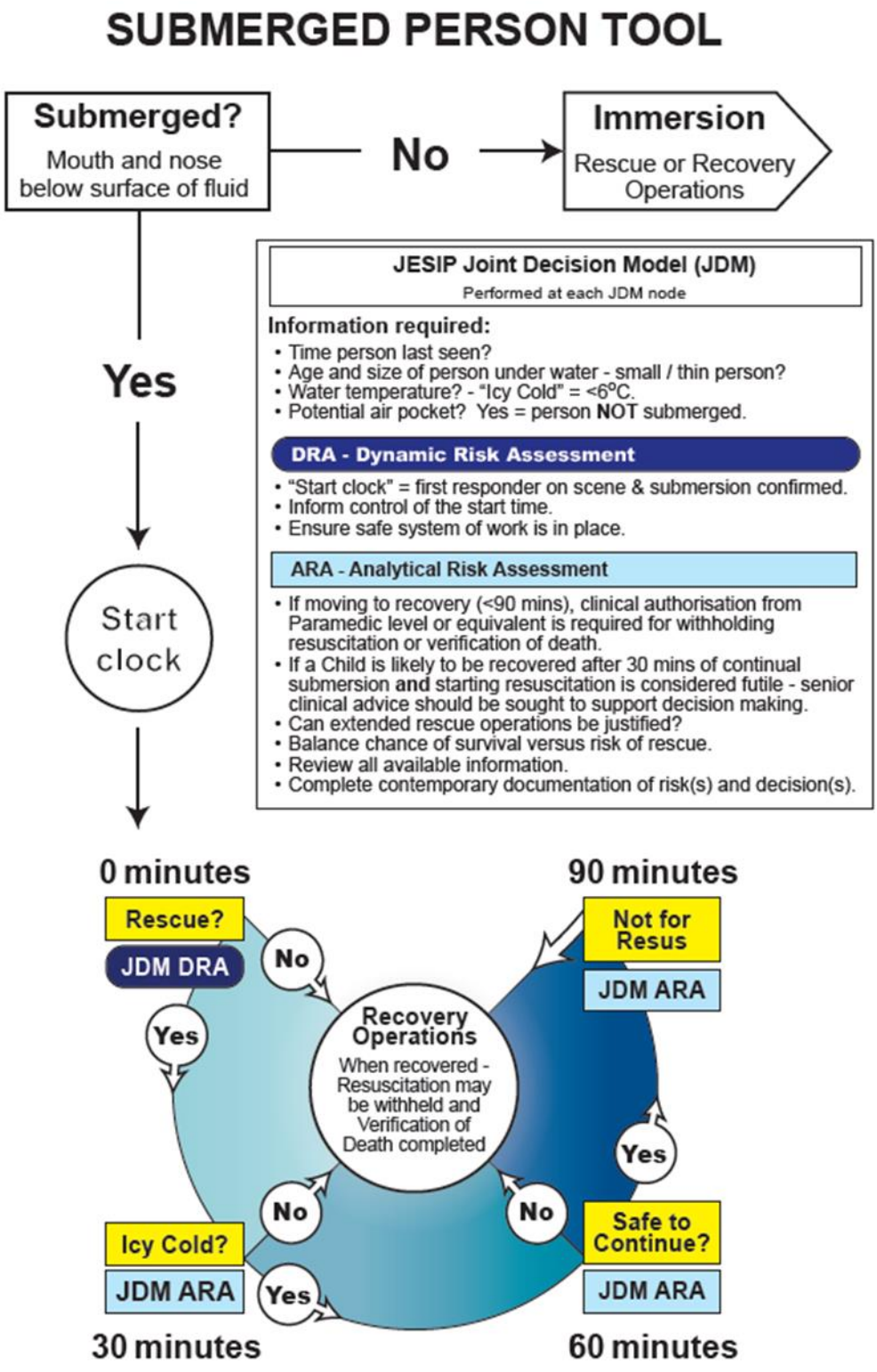
While assets would normally be mobilised in pairs, a single asset may be mobilised to a lily pad or to remain at a building such as a nursing home if the decision is made to leave the residents in-situ. Assets that may contain special responders, such as health care professionals, may be tasked to remain at a specific location.

Rescue or recovery operations

When responding during a flood event, it is important for commanders and responders to differentiate between rescue operations and body recovery operations. A tool (figure 4) has been developed to help commanders decide upon casualty survivability. Use of the tool should involve all agencies on scene.

Underwater search for a submerged person is a specialist capability and requires extensive training. It is not a skill that is covered in the training standards detailed in Annex E and should only be carried out by trained professionals such as Police Underwater Search Units.

Figure 4 - Submerged person tool



6. Specialist Capabilities

To support Flood Rescue Operations, there are many stakeholders that have various additional training skills or equipment that can support a flood rescue operation. This can range from medical support to air support, below is a list of some organisations and the capabilities they have to support national incidents. Local Resilience Forums should detail the type of support available and how to access support from these stakeholders in their multi-agency flood plans.

- The NHS Ambulance Service Hazardous Area Response Teams provide an interoperable capability. They are normally NHS Paramedics qualified to Water and Flood Rescue Technician (Defra Module 3) and can provide triage, patient assessment (including mental capacity), care, and stabilisation within the flooded environment as required. They are not a dedicated team, however early consideration should be given to form type A amalgamated assets with other responders that ensures a NHS clinical response.
- NHS Ambulance Services have specialist capabilities that may be deployed to support mass casualty events including decontamination.
- Critical Care and Air Ambulance teams have the ability to provide NHS specialist care in some environments, such as lily pad (areas that are totally cut off by floodwater) communities.
- the Environment Agency has a range of specialist equipment capable of measuring watercourse depth and water speed; this information can be linked to digital mapping. The capability includes over 30 remote control vessels that are available nationally.
- the Maritime Coastguard Agency has numerous helicopters, fixed wing planes and drones that are available for search and rescue operations in wide area flooding events.
- National Police Air Service have helicopter bases around the country that may be able to assist with air support.
- drone capability exists within many Category 1 and 2 and voluntary responders and could be considered to improve situational awareness and safety control during the management of wide area flooding. Drones should be used in accordance with relevant legislation and bylaws and considerations should be given to how drones are used when other aircraft are in the area.
- Coastguard Rescue Teams and some voluntary organisations such as Mountain Rescue and Lowland Search and Rescue have close working experience with helicopters. They are aware of helicopter operations and are used to operating in areas that are difficult to access.
- voluntary organisations have a range of other expertise that they can bring to support a wide area flood. This includes capabilities such as rope rescue/ technical

rescue, advanced medical care, incident command vehicles, knowledge of search procedures, access to Airwave etc.

National Resilience Capabilities

National Resilience provides specialist capabilities to support an effective response to many types of large scale incidents. The National Coordination and Advisory Framework supports the delivery of National Resilience capabilities. The following capabilities can be used to support a flood rescue operation:

- Urban Search and Rescue (USAR) teams will respond to a range of catastrophic incidents, including natural and deliberate events, and specifically including response to large-scale structural collapse and serious transport incidents. A USAR Tactical Advisor should be contacted in the first instance to ascertain if they can assist with any requests with regards to flood rescue.
- Enhanced Logistic Support capability provides the requisite support to manage the logistical complexities of incidents involving the mass mobilisation of national flood assets. Thus, providing logistical support during the deployment to incidents that require co-ordination, and logistics support at local, cross-border and national events.

Animals and pets

Experience has shown that many people requiring evacuation or rescue will often not leave homes or properties without ensuring family pets are also evacuated. Learning from previous UK flooding events acknowledges that the RSPCA are best placed to provide the necessary skills and the range of equipment for an effective response.

Operational and asset commanders should decide on whether to carry out animal rescue or evacuation based upon the dynamic risk assessment. A safe system of work should be in place, which may include portable pet cages for cats and small animals and muzzles for dogs. To maximise the use of RSPCA officers, it should be considered embedding them in assets to create amalgamated assets (asset type A).

Larger animals, including farm animals, may require evacuation to minimise losses for farmers. Larger animals require specialist equipment and considerations for moving. It may be safer for the animals to be left in some situations and, if so, plans for shelter, fresh water and feeding arrangements should be made.

Information on keeping farm animals and horses in extreme weather is available and the Animal Plant Health Agency, local councils and the RSPCA can be contacted for advice about animals during a flood incident.

Helicopter Operations

Helicopters offer an essential search and rescue capability during wide area flood events and can be requested by any Category 1 responder. Helicopters may be required to rescue stranded people in difficult-to-access locations, transfer the injured, and conduct search operations over areas that are inaccessible to other responders. Some air assets are able to support with logistics such as deploying responders to lily pads and isolated communities as part of the overall response strategy.

Annex A – Mobilisation of national assets

Requests for assets

Once a decision is made by a Strategic Coordinating Group (SCG), or Tactical Coordinating Group (TCG) if the SCG has yet to be established, that assets from the Defra Flood Rescue National Asset Register (NAR) are required, the request should be made to National Resilience Fire Control (NRFC) through the local fire and rescue service's control room. Requests for flood rescue tactical advisors (FRTA) should also be made through the same mechanism.

National Resilience will select which of the national assets will be mobilised based on a number of considerations including the type of incident, urgency, location, equipment and asset suitability. Potential future weather impacts and the likelihood of incident escalation will also be considered.

Asset confirmation

The assets identified for mobilisation will be contacted by National Resilience and the organisation will initially have 30 minutes to confirm if the asset is able to mobilise. The asset must be available to deploy to the incident for a minimum of 3 consecutive days from arrival at the multi-agency/strategic holding area (MA/SHA), not including travel time.

Deployment to a multi-agency/strategic holding area

On confirmation of mobilisation, the details of the rendezvous point (RVP) or strategic holding area will be provided to the asset. For smaller localised incidents where national assets have been requested, it is likely that they will be mobilised to a rendezvous point coordinated by the SCG or TCG. For wide-area flood incidents requiring a greater number of assets and greater coordination, it is expected that a MA/SHA will be established. The MA/SHA should be supported by National Resilience's Enhanced Logistics Support (ELS) teams.

If any problems occur when an asset is travelling to the RVP or MA/SHA they should contact NRFC.

Credentialling

Flood rescue assets will be required to comply with the RVP or MA/SHA booking-in procedure upon arrival, which will be completed prior to tasking. When an asset arrives at the RVP or MA/SHA, it will be credentialed by a FRTA, to ensure it meets the minimum

standards for the declared asset type. All asset members will be checked to ensure they are correctly equipped and qualified.

Asset commanders or welfare officers will be required to provide information to enable a FRTA to complete and sign off the Flood Rescue Credentialing Form. This will include providing details of the equipment used by the asset and the flood rescue qualifications of asset members. It is recommended that copies of this form are downloaded in readiness for any potential mobilisation, so that basic information such as asset members' details, vehicle details and contact details can be completed in advance of arrival. The credentialling form for assets on the NAR can be found on the National Resilience website.

Whilst all assets are required to meet asset typing specifications, it is acknowledged that organisations often have additional unique skills, qualifications and equipment and can deploy in a number of configurations.

Driving

The use of blue lights is not a requirement for flood rescue assets from any organisation. Mobilisation of national assets often occurs over long distances and as such blue light response journeys pose a significant risk to the public, driver and crew. For this reason, routine mobilisation of flood rescue assets will be at normal road speed.

In the event that a decision is made to make a blue light response is made this information must be communicated to NRFC via the host control and the response must be made in accordance with the responding organisations management of road risk policies.

Costs and Expenses

It can be expensive for any organisation to respond to out-of-area flood rescue operations both for equipment and personnel. Any equipment lost will have to be re-purchased through fundraising or cost recovery.

Some organisations will deploy with no charge being made to the requesting agency; they consider it as part of their organisation's ethos. Whereas some organisations may have a costs policy already in place with requesting agencies.

Joint Organisational Learning

Fully embedding a joint organisational learning strategy nationally was one of the original objectives for JESIP and is a key element of the Joint Doctrine:The Interoperability Framework

Joint Organisational Learning (JOL) Online, hosted on ResilienceDirect, is a simple way to capture lessons identified that may impact on multi-agency working and allow responders to continually improve Lessons identified, or notable good practice may come from training, testing and exercising or incidents, as well as a range of external sources.

Organisations can submit learning directly on JOL Online if they have access to ResilienceDirect. Organisations who do not have Resilience Direct can submit learning to the National Resilience Flood Rescue Capability who can submit learning on their behalf.

The key to the capture of all interoperability and national capabilities lessons is through local single and multi-agency debriefs. All debriefs should have interoperability as a core theme and any lessons identified should be captured in line with JOL guidance and inputted onto JOL Online.

Annex B – Welfare and decontamination

Welfare Officer

The role of the Welfare Officer is to provide support to assets and not in a command role of the asset. They will:

- maintain links as required with relevant contacts within the multi-agency/strategic holding area (MA/SHA) or rendezvous point
- ensure welfare arrangements are being provided including food and accommodation. This must include ensuring post-deployment and pre-travel rest is managed as required
- liaise with ELS regarding decontamination support
- maintain links as required with key contacts in the asset's organisation and with National Resilience
- maintain records of feedback from asset deployments
- consider the need and management of reliefs
- act as an emergency contact for responders

They may look after up to five assets of their own organisation, if they are all provided accommodation and welfare arrangements in close proximity to each other and effective communication is maintained. Alternatively, a welfare officer can be deployed with each asset if an organisation wishes to provide this level of support.

Longer term welfare and accommodation will be managed by the affected LRF where assets have been deployed and should ideally be confirmed prior to deployment.

Welfare

The partner organisations of an LRF are responsible, so far as reasonably practicable, for the health, safety and welfare of responders from assisting organisations in the same satisfactory manner as those from the impacted authority. This responsibility is in addition to the requirement for the Welfare Officer to ensure the welfare of the asset and an asset commander to ensure the health and safety of the asset when deployed. General considerations include:

- adequate provision of food and drink while at the MA/SHA and during deployments
- accommodation, including the provision of ideally 11 hours rest and recovery time upon completion of a sustained period of deployment
- decontamination, for equipment, personal protective equipment (PPE) and personnel after each tasking
- provision for responders to dry PPE and kit

Operational deployments considerations include:

- operational/sector commanders supported by asset commanders should manage the working duration of teams. This should take into consideration factors such as task being performed and environmental considerations
- within the 72-hour availability for deployment period, crews should not exceed individual deployments for more than 12 hours in duration, i.e. no more than three in a 72-hour deployment
- each 12-hour deployment should include approximately 3 to 4 hours of breaks. This may need to be increased for teams carrying out more strenuous activities such as wading. During this time, PPE should be relaxed and refreshments taken on board. This break should be in a suitable location with toilet provision
- on completion of a 12-hour deployment, a minimum of 11 hours rest should be provided with necessary meals and sleeping accommodation provided
- if an asset is asked to work beyond the considerations above, asset commanders should escalate to operational commanders regarding the need for additional assets.

Fitness for responders

Any responder that is part of a flood rescue asset should have a level of health and fitness that ensures that they are capable of carrying out their role. The level of fitness needed is to be determined by the responder's organisation.

Asset decontamination

Assets operating in water are required to have a decontamination capability and procedure for people and initial on-site PPE decontamination. Organisations should consider the exact need for decontamination provision and carry out suitable and sufficient risk assessments. A decontamination capability could include, for example:

- Pressure Sprayer
- Measuring jug x 1
- Three days provision of Disinfectant Cleaner (1 L bottle) x 3
- Anti-bacterial hand wipes (pack of 100) x 4
- Dust Mask FFP3 x 20
- Goggles x 2
- Bags to hold contaminated kit
- Standard soap

Annex C – Equipment

The following tables set out the minimum required equipment standards for assets on the Defra Flood Rescue National Asset Register. This outlines standards for both personal protective equipment (PPE) and asset equipment by asset type.

Additionally, many declared assets have specialist capabilities and are encouraged to deploy with equipment that may be of use. Such equipment as marine band radios, rope rescue and animal rescue equipment is welcomed and should be declared during the credentialing process.

Assets should ensure that they are trained in the use of all equipment that they carry and that the equipment complies with all relevant safety standards.

Personal Protective Equipment

Drysuits

- **Required:**
  - size specific to the responder
  - fitted with internal braces/belt
  - latex or Fabric socks, not integral boots
- **Recommended:**
  - to ensure the appropriate thermal protection, drysuits should be constructed from a Trilaminate (or similar) fabric recommended to be between 220 and 430 gsm
  - fabric reinforcement in high wear areas
  - ability to regulate own drysuit. For example; a front zip or alternative breather zip. A front zip improves rescuer welfare and enables the rescuer to self-regulate temperature
  - toilet access zip
  - latex seals for neck and wrist seals for ease of decontamination
  - neoprene protection is an optional extra over neck, boot and wrist seals providing added protection to seals
  - reflective strips on both arms and legs to aid visibility of rescuer
  - pockets are not recommended due to increased entrapment risks and increased drag
- **Consideration:**
  - whilst rare, consider the risk of latex allergy of wearer

Buoyancy aid

- **Required:**
  - size specific to the rescuer

    - comply with ISO 12402 pt 5, and all sizes must have a minimum of 70 Newton minimum floatation
    - must not be fitted with hydration systems due to the potential for contamination and resultant infection
    - a releasable chest harness and a cowtail is required on all buoyancy aids with a locking karabiner which meets the standard of EN 362
    - front access/waistcoat style to reduce contamination and aid decontamination procedures. This is also a welfare requirement enabling wearer to relax PPE during rest periods
- **Recommended:**
    - high visibility reflective patches

Knife

As part of Buoyancy Aid ancillary equipment.

- **Required:**
    - must be carried by all responders
- **Recommended:**
    - fixed bladed and accessible for immediate use

Whistle

As part of Buoyancy Aid ancillary equipment.

- **Required:**
    - must be carried by all responders

Helmet

- **Required:**
    - must comply with PAS 028; 2002
    - size specific to the responder or adjustable

Helmet colours are outlined in section 5 – Operational Considerations

Eye protection

- **Required:**
    - All rescuers who declare they are skilled to work with helicopters must carry eye protection to meet the relevant safety standards as risk assessed by the organisation
- **Recommended:**
    - All responders to have eye protection available

Torch

- **Required:**

- a hands-free torch should be attached to the rescuer during hours of low light and darkness
- adequate provision must be considered for all responders and be sufficient for 3 nights of deployment

Helmet light/light sticks

- **Required:**
  - all type B and C rescuers must have a red light and a solid forward white light attached to helmet during low light and night operations
  - this is to be solid light and not flashing
  - sufficient lights and consumables, e.g. rechargeable/ batteries for all responders for 3 nights of deployment
  - 50 blue light sticks for marking hazards
  - 30 green light sticks for throw lines and equipment
  - 30 red light sticks for helmets
  - lights can be LED

Thermal protection

- **Required:**
  - skull cap or a neoprene hood should be available to all responders
  - gloves should provide thermal protection for the responder environment
  - suitable under thermal garments with flexibility to layer up or down depending on the environment and tasks being completed

Footwear

- **Required:**
  - suitable water safety boots with reinforcement and good grip

Throw line/belt

- **Required:**
  - six 15 metre throwlines (one per responder)
  - two 20 metre throwlines available within the asset
  - method of attachment for throw line bag to responder with a quick release mechanism that can release under load
  - the running end of the line should be attached inside the bag via a suitable method such as a rethreaded figure of eight knot

Asset Equipment

Transport

- **Required:**
    - any vehicle(s) should be suitable to carry personnel and equipment and have the ability to provide basic welfare needs during deployment

Logistics

- **Required:**
    - facility for financing asset for up to 3 days of deployment
    - credit card and cash should be considered for wide area flood incidents where failure of electricity prevents card usage
    - food and snacks for all asset members for the initial 8 hours from deployment from the multi agency/strategic holding area (MA/SHA). This may be purchase enroute
    - drinking water
- **Recommended:**
    - Hi-Vis vests to be worn by each asset member and the welfare officer when at the MA/SHA

Asset Type B boat and ancillary equipment

- **Required:**
    - minimum capacity to drive upstream against 10 mph flow whilst carrying six persons
    - the design and construction of the boat should comply with ISO 6185 part 1,2,3 or 4 based on the motor power rating

Boats that do not comply with the standard may be acceptable based on the written advice of a competent person who has considered the full structural information of the boat.

    - prop guarded
    - ancillary equipment:
        - means to light the boat for navigation purposes to comply with International Regulations for the Prevention of Collision at Sea
        - anchor and anchor line
        - fuel containers to enable 8 hours of activity
        - lifelines
        - attachment points for tethers
        - four paddles
        - towing equipment suitable for boat

All equipment must be able to be secured in the boat in case of capsize.

Asset Type C boat and ancillary equipment

- **Required:**
    - raft or boat with minimum six persons capacity for tethering operations or basic paddle boat handling

    - suitable for wading/paddling rescue of persons without unduly getting the casualties wet
    - ancillary equipment:
        - lifelines
        - attachment points for tethers
        - four paddles
- raft or boat does not include open-backed sleds

All equipment must be able to be secured in the boat in case of capsize.

Communications

- **Required:**
    - handheld communications for all asset members, spare batteries and charger (all waterproofed)
    - mobile phone (waterproofed) with asset commander and welfare officer

First aid equipment

See Annex D - First Aid

Technical equipment

- **Required:**
    - one 50m floating line
    - set of technical rescue equipment to achieve efficient 3:1 mechanical advantage and to achieve 4-point tethering of boat/raft/sled
    - resealable waterproof (minimum size 20 cm x 15 cm) bags for use to ensure evacuated flood victims can transport vital personal possessions, such as medications, and does not slow down the evacuation process during handover from boat/raft
    - scene lighting
    - search lighting
    - six Wading poles
    - four adult casualty flotation devices: casualty flotation device standard to be determined by individual organisation to enable effective stowage on craft and vehicles
    - two child casualty flotation devices: casualty floatation device standard to be determined by individual organisation to enable effective stowage on craft and vehicles

Decontamination

- **Required:**
    - anti-bacterial hand gel
    - anti-bacterial face & hand wipes
    - anti-bacterial decontamination spray for PPE
    - standard soap

Navigation

- **Required:**
  - asset Type B & C: Handheld GPS system with street mapping facility

Data logging

- **Required:**
  - suitable means of logging incident briefings and deployment information. This should include both electronic and paper-based options to enable exchange of information

Inspection/Testing

- **Required:**
  - all equipment should be suitably inspected, maintained, logged, and certified in accordance with manufacturers' guidelines and current legal standards
  - organisations require a defined procedure in place to ensure that equipment is being maintained appropriately. Therefore, organisations will be required to evidence the following:
    - equipment and PPE should be checked regularly, within a defined procedure and in accordance with the manufacturer's guidelines and current legal standards
    - safety critical PPE such as Dry Suits and PFDs should be checked regularly i.e. before, after and on acceptance, in accordance with the manufacturer's guidelines, to ensure items are safe for use, clean and free from damage

All inspections should be recorded in an appropriate manner.

Annex D – First Aid

Assets will operate in dangerous environments with a primary function of rescue and evacuation of people in the flooded environment. Due to the likely remoteness or possible time delay of access to care from a registered health care professional, lifesaving interventions and the prevention of further deterioration of casualties will be managed by the flood rescue asset until the arrival of an NHS health care response.

Organisations listed on the Defra Flood Rescue National Asset Register must ensure that their personnel are equipped and trained to the standards set by their respective National Representative Organisation for delivery of casualty care to those persons attended to during flood rescue operations and care. This should also include casualty care of operational persons if injured or ill. The operational delivery of casualty care must be within a framework of Clinical Governance system which will include as a minimum: Casualty/Patient Reporting system, policy and procedures for casualty care in the flood operation environment. These standards must align with nationally recognised frameworks and reflect the operational context in which the organisation is deployed. Welfare officers do not require first aid training.

Within operational command points and sectors, health and safety and welfare of responders will be assessed and managed by operational, sector and asset commanders.

Tactical & strategic medical management will be incorporated into the wider incident management structure.

Annex E – Water and flood rescue training standards

The following modules define the appropriate training for water related activities:

- **Module 1: Water & Flood Awareness** - General water safety awareness training
- **Module 2: Water & Flood First Responder** - To work safely near and in water using land based and wading techniques
- **Module 3: Water & Flood Rescue Technician** - Specialist rescue operation
- **Module 4: Water & Flood Rescue Boat Operator** - Rescue boat operations
- **Asset Commander** - Water team related incident command
- **Module 5: Water & Flood Incident Management** - Water-related operational and tactical incident command
- **Module 6: Flood Rescue Tactical Advisor** - Provide advice to tactical and strategic commanders and credentialing

Organisations on the Defra Flood Rescue National Asset Register should meet the training requirements for an asset type B or asset type C, as outlined in the asset typing matrix (Annex H).

Training hours identified are the minimum face-to-face contact hours and do not include travel time or rest periods. It is recognised some organisations may choose to deliver blended learning in addition to the minimum training hours to improve responder competence and to increase success when attending the course.

Training Venue

It is essential that training courses are delivered by appropriately qualified instructors, using adequately risk-assessed locations especially with regards to access, features of water, and water quality. Organisations are responsible for ensuring that they are using appropriately qualified instructors to provide their training.

Organisations should comply with the relevant Bye Laws of the Local Authority, port/harbour authority in which the boat is operating.

Water

Water used for training should be suitable for all aspects of training to be carried out safely and effectively and should be suitable to meet the needs of the learning outcomes for each course.

The water used for Module 2 and 3 courses should be similar to that which could be faced in spate flooding conditions and have, as a minimum, the following features:

- obstacles
- rocks and stoppers
- small rapids
- eddies

Water of this type should be used for initial courses, CPD and recertification.

Module 4 initial courses, CPD and recertification courses should take place at venues with water features equal to those they would expect to face in spate flooding conditions. This would normally be Category B or C water as designated by MSN 1837 (M) Amendment 3: Categorisation of waters - GOV.UK

Continual Professional Development and Recertification

Responders and instructors will be required to show evidence of Continual Professional Development (CPD) to maintain operational competence and meet recertification standards. CPD must be undertaken annually and is assessed over a 12-month period from the date the initial course was passed, rather than by calendar year.

The minimum CPD hours and associated requirements are based upon responders already carrying out associated response skills in other roles. However, individuals must reflect on their own levels of exposure and experience and consider whether additional CPD is necessary to prevent skill fade.

Each year, responders must complete a minimum of 12 hours of CPD. 6 hours must be completed in the defined water environment relevant to the operational requirements of the module.

An additional 6 hours must be completed in a water environment, although this does not need to be in the defined environment. This CPD must be able to facilitate the learning outcomes of the module and contribute meaningfully to skills maintenance.

Recertification must be undertaken with specific reference to the module requiring renewal. It is important to note that participation in upskilling courses—such as a Module 3 responder undertaking advanced rope rescue in a water environment, advanced vehicle rescue, or obtaining a Module 4 qualification—does not constitute recertification for a previously completed module.

Timescales

When undertaking initial courses or recertification, it’s appreciated that organisations may have to carry this out over a few weeks due to availability of personnel (for example splitting a Mod 3 course over 2 weekends). In this instance there should be no more than 6 weeks between the first and second lot of training. An example of how the CPD and Recertification should work can be seen in the below table for clarity.

Example – Module 3 – Covering CPD and Recertification

Year 1	Initial Course: Completion of a 4-day Module 3 training course in the defined water environment. This accounts for 6 hours of CPD. A further 6 hours of CPD must be completed within 9 months of the initial course. This can be delivered in any water environment, provided it meets the module's learning outcomes. All CPD may be instructor-led or peer-led.
Year 2	First CPD Session: 6 hours of CPD in the defined water environment. Second CPD Session: 6 hours of CPD in any water environment, completed within 9 months of the previous session. All CPD may be instructor-led or peer-led.
Year 3	Recertification to be carried out. If CPD in previous years was instructor-led, recertification is completed over 12 hours (2 days). If CPD was peer-led, recertification must be completed over 18 hours (3 days). The recertification must take place in the defined water environment, contributing 6 hours of CPD. Additional CPD: A further 6 hours of CPD in any water environment must be completed within 9 months of the recertification, ensuring alignment with the module's learning outcomes.
Year 4 and 5	First CPD Session: 6 hours of CPD in the defined water environment. Second CPD Session: 6 hours of CPD in any water environment, completed within 9 months of the previous session. All CPD may be instructor-led or peer-led.
Year 6	Recertification to be carried out. If CPD in previous years was instructor-led, recertification is completed over 12 hours (2 days). If CPD was peer-led, recertification must be completed over 18 hours (3 days). The recertification must take place in the defined water environment, contributing 6 hours of CPD. Additional CPD: A further 6 hours of CPD in any water environment must be completed within 9 months of the recertification, ensuring alignment with the module's learning outcomes.

Defra Training Module 1 – Water and Flood Awareness training module

Scope

This training is designed to make responders who may, as part of their role, work near water aware of the hazards associated with water and the flooded environment. The dangers of working near water are explained and basic safety measures are introduced. The session includes awareness of water-related hazards, water hydrology, typical water and flood search and rescue scene organisation, principles of water safety, varying rescue options including low to high risk options, and introduction to basic water safety.

Aim

Highlight the dangers of working near water.

Minimum delivery hours

Two hours.

Instructor

Module 2 instructor who is in-date with current recertification and CPD requirements. This module can also be delivered online.

Instructor ratio

No required ratio, however suggested ratio of one instructor to twenty-four delegates.

Learning Outcomes

- state the hazards associated with working near water
- state safety measures to be put in place when working near water
- describe selection of safety personal protective equipment (PPE)
- awareness of the use of rescue equipment provided

Outline of requirements

- **Knowledge and understanding relating to learning outcomes:**
    - understand the Flood Rescue Concept of Operations modules
- **Identification of the basic characteristics and hazards of the water environment:**
    - water temperature; current/flow; pollution/contamination; public, bystanders; moral pressure; training; equipment; locks; weirs; ice, mud and other unstable surfaces; access; entrapment; debris; casualty (human and animal); noise; communications; visibility; time of day/year; tide; effects of weather; changeable water conditions; other water users, boats etc

- **Safety measures when working near water:**
    - understand the defensive swimming position; understand the concept of zoning near to the water
- **Awareness of the physiological effects of entry into cold water:**
    - cold water reflex; short- and long-term effects
- **Have an appreciation of the physiology of drowning**
- **Understanding of the limitations of non-water rescue PPE in various water environments:**
    - cold; drag; weight; helmets; self-rescue/recovery; breathing apparatus sets; clothing worn by non-water equipped personnel
- **Have an understanding of flowing water hydrology:**
    - eddies; force of water; strainers; main current; helical/laminar flow; flood water
- **Awareness of the range and limitations of PPE:**
    - life jackets; buoyancy aids; ancillary equipment
- **Have a knowledge of the prioritised approach to rescue attempts:**
    - understanding of talk, reach and throw techniques; awareness of row and go hazards
- **Night Operations:**
    - awareness of hazards and limitations of night operations
- **Flood:**
    - awareness of hazards associated with flooded areas

Continual Professional Development

N/A

Recertification

Personnel trained to this level are required to recertify on an annual basis. This training should include all learning outcomes as detailed above.

Defra Training Module 2 – Water and Flood First Responder training module

Scope

The module introduces water rescue equipment including its safe and effective use to selected search and rescue personnel who respond to water and flood incidents. It progressively develops the student to be confident in and around water. As well as learning how to read the water, the student will practice non-buoyant rescues including wading rescues and self-rescue techniques appropriate to the risk, bank-based rescues, and shallow water crossings. The session will also provide an awareness of unstable surface hazards such as mud and ice which may also be encountered at water and flood incidents.

Aim

To train responders to identify their limitations and safely and effectively use appropriate water rescue equipment, whilst operating near or in moving water appropriate to the limits of a non-buoyant rescuer.

Minimum delivery hours

Minimum of fourteen hours over a minimum of two days.

Instructor

Module 2 or 3 Instructor who is in-date with current recertification and CPD requirements.

Instructor ratio

Minimum of two Module 2 instructors to twelve delegates.

Pre-requisites

This module can be delivered as a standalone course.

Learning Outcomes

- **Demonstrate water rescue scene management and dynamic assessment of risk:**
    - understand the limitations of the water rescue wading responder capability; rescue team organisation; communication systems including hand, audible and radio; hazard recognition and preplanning; risk and incident zones; incident management structure; team roles and responsibilities
- **Identify and apply the role of the Water and Flood First Responder within the incident management structure:**

    - incident management structure; team health, safety and welfare
- **Apply a working knowledge of hydrology and associated hazards:**
    - recognition of water features and their impact
- **Have an understanding of search procedures in the water environment:**
    - when and how to search; types of search, deployment of teams; sectors, point last seen and areas of possible detection
- **Identify and use appropriate PPE:**
    - types of PPE; donning and doffing; care maintenance and inspection; record keeping
- **Demonstrate self-rescue from water**
- **Understand and apply relevant rescue techniques:**
    - talk, reach, throw; first responders to only demonstrate talk, reach, throw
- **Have a working knowledge of specialist rescue equipment within team:**
    - inflatable adjuncts
- **Demonstrate techniques for movement in shallow water:**
    - supported crossing (poles/tethers); 1-2-3 person teams; wedge and line astern; casualty crossing
- **Demonstrate casualty management issues specific to the water environment:**
    - medical problems associated with water; in-water spinal care considerations; managing the non-compliant casualty
- **Identify and explain an understanding of the hazards and implications associated with:**
    - entrapment - supporting tag lines, use of cinches
    - mud and ice - characteristics, medical issues, extrication techniques, contamination
    - locks and sluices - characteristics, design/hydrology, specific rescue techniques
    - vehicles and objects in water - behaviour, hydrology, access and stabilisation techniques with flood rescue equipment and safety considerations.
    - animals - hazards and safety protocols
- **Identify and explain the additional hazards and difficulties associated with working in darkness and reduced visibility and application of suitable control measures:**
    - equipment issues; lighting; additional marking requirements; audible signals
- **Raft/sled:**
    - use of sled as an evacuation device during wading operations, not used as a platform for water and flood first responders to work from or on as a means of movement.
- **Search:**
    - awareness of search techniques and capabilities
- **Flood:**
    - awareness of flooding and associated hazards; pollution; location and incident specific hazards; topography

<u>Continual Professional Development</u>

A minimum of eight hours per year with a minimum of two sessions per year with a maximum gap of nine months between training sessions. Of the eight hours, at least two hours must be in water with features detailed in the training venue section .

Recorded activity-based training should cover the following subjects as a minimum:

- donning, doffing and care of water rescue PPE
- water Rescue Incident Management
- self-rescue techniques
- throw bag skills
- shallow water crossing techniques
- swift water hydrology

Recertification

Recertification is required every three years.

Responders with the Module 2 qualification who have maintained competency using internal or peer-led CPD as detailed above are required to complete a minimum of twelve hours over a minimum of two days with learning outcomes, instructor and instructor ratio and venue as detailed above.

Responders with the Module 2 qualification who have completed CPD as detailed above delivered by suitably qualified instructors, are required to complete a minimum of six hours over a minimum of one day with learning outcomes, instructor and instructor ratio and venue as detailed above.

Defra Training Module 3 – Water and Flood Rescue Technician training module

Scope

This module is aimed at selected search and rescue personnel. The module introduces appropriate water rescue equipment including its safe and effective use and progressively develops an individual to be confident in, on and around moving water. As well as learning how to read the water, an individual will spend time swimming, practicing self-rescue techniques and performing in-water and on-water rescues as part of a rescue team.

The syllabus also includes boat/pathway handling, basic line rescue techniques and consideration of still water and unstable ground hazards such as mud and ice.

Aim

To train responders to identify their limitations and safely and effectively use appropriate water rescue equipment, whilst operating near, on, or in moving water.

Minimum delivery hours

Minimum of twenty-six hours over a minimum of four days.

Instructor

Module 3 Instructor who is in-date with current recertification and CPD requirements.

Instructor ratio

Minimum of one Module 3 instructor and one Module 3 trained technician who is in-date with current recertification and CPD requirements, to act as safety, to twelve delegates.

Pre-requisites

This module can be delivered as a stand-alone course.

Learning Outcomes

- **Demonstrate water rescue scene management and dynamic assessment of risk:**
    - understand the limitations of the role; rescue team organisation; communication systems; hazard recognition and preplanning; risk and incident zones; Incident Management Structure including providing tactical advice; team health, safety and welfare
- **Identify and apply the role of the water and flood rescue technician within the Incident Management Structure:**
    - team health, safety and welfare; team roles and responsibilities

- **Apply a working knowledge of hydrology and associated hazards:**
    - recognition of water features and their impact
- **Have an understanding of search procedures in the water environment:**
    - when and how to search; types of search; deployment of teams; sectors; point last seen and areas of possible detection
- **Identify and use appropriate PPE:**
    - types; standards; donning and doffing; care maintenance and inspection; record keeping
- **Demonstrate swimming and manoeuvring in moving water:**
    - ferry glide concept; negotiating obstacles; entry – egress; defensive swimming; aggressive swimming; tethered swims
- **Understand and apply relevant rescue techniques:**
    - talk; reach; throw; row; go/tow
- **Demonstrate basic boat handling by paddle:**
    - types and suitability of systems; safety briefings; tethered boat options; wading skills
    - use of paddles to manoeuvre and control the craft
    - demonstrate capsize drill skills in a suitable boat or raft and have awareness in powered boat operations in preparation for operating with or being transported by an asset type B
- **Demonstrate rigging & operating of rope systems:**
    - equipment; anchors; tensioned diagonals; tensioning lines; efficient 3:1 mechanical advantage; knots and hitches
- **Have a working knowledge of specialist rescue equipment (where in use by organisation):**
    - inflatable adjuncts; lines for water rescue; technical hardware; unstable surfaces equipment
- **Demonstrate techniques for movement in shallow water:**
    - supported crossing (poles/tethers); 1-2-3 in teams; wedge and line astern; casualty crossing
- **Awareness of flooding and associated hazards:**
    - pollution; location and incident specific hazards; topography
- **Demonstrate casualty management issues specific to the water environment:**
    - medical problems associated with water; in-water spinal care considerations; managing the non-compliant casualty
- **Identify and explain and understanding of the hazards and implications associated with:**
    - entrapment - supporting tag lines, use of cinches; mud and ice - characteristics, medical issues, extrication techniques
    - contamination
    - locks and sluices – characteristics; design/hydrology; specific rescue techniques
    - vehicles and objects in water – behaviour; hydrology; access and stabilisation techniques with flood rescue equipment and safety considerations

    - working with helicopters - hazards and safety protocols
    - animals - hazards and safety protocols
- **Identify and explain the additional hazards and difficulties associated with working in darkness and reduced visibility and application of suitable control measures:**
    - equipment issues; lighting, additional marking requirements; audible signals
- **Search:**
    - demonstrate search techniques

Continual Professional Development

A minimum of twelve hours per year with a minimum of two sessions per year with a maximum gap of nine months between training sessions. Of the twelve hours, at least six hours must be in water with features detailed in the training venue section.

Recorded activity-based training should cover the following subjects as a minimum:

- donning, doffing and care of water rescue PPE
- Water Rescue Incident Management
- self-rescue techniques
- throw bag skills
- shallow water crossing techniques
- swift water hydrology
- ferry glide concept; negotiating obstacles; entry – egress; defensive swimming; aggressive swimming; tethered swims
- basic boat handling

Recertification

Recertification is required every three years.

Responders with the Module 3 qualification who have maintained competency using internal or peer-led CPD as detailed above are required to complete a minimum of eighteen hours over a minimum of three days with learning outcomes, instructor and instructor ratio detailed above and venue as detailed in the training venue section.

Responders with the Module 3 qualification who have completed CPD as detailed above delivered by suitably qualified instructors, are required to complete twelve hours over a minimum of two days with learning outcomes, instructor and instructor ratio as detailed above and venue as detailed in the training venue section.

Defra Training Module 4 – Water and Flood Rescue Boat Operator training module

Scope

This module is aimed at selected search and rescue personnel who are required to helm a powered craft for a range of activities as part of a crew. The module develops Module 3 Water & Flood Rescue Technicians to be able to helm a powered craft in a variety of waters, including still, moving and flood. The module covers basic and advanced boat rescue operations such as casualty pickups, throw lines, evacuations and includes night search and rescue activities.

Aim

To train technicians to identify their limitations and safely and effectively use powered boats and associated equipment in inland waters and flooding, by day or night, in a wide range of water conditions.

Minimum delivery hours

Minimum of twenty-eight hours over a minimum of four days.

Instructor

Module 4 Instructor who is in-date with current recertification and CPD requirements.

Instructor ratio

Minimum of one Module 4 instructor to a maximum three delegates per rescue boat.

Pre-requisites

Defra Module 3 - Water & Flood Rescue Technician.

Royal Yachting Association (RYA) Level 2 Powerboat Handling or equivalent.

Training venue

In the circumstances when there are three delegates or fewer so only one training boat is required, a second boat must be used and operated by competent Module 4s to provide both a safe system of work and a second craft to enable compliance with the learning outcomes.

Learning Outcomes

- **Individuals will demonstrate their ability to perform skills completed during the RYA Level 2 Powerboat Handling Course or equivalent including:**

- pre-launch checks
- launching
- leaving and coming alongside
- low and high-speed manoeuvring
- picking up a buoy
- anchoring
- towing
- person overboard
- recovery of boat
- International Regulations for the Prevention of Collision at Sea/Rules of the Road
- basic fault finding
- emergency procedures

- **Demonstrate boat handling in swift water:**
  - identification of safe launching sites and bail-out sites
  - launch and recovery into swift water
  - recognition of moving water characteristics and hazards
  - boat limitations
  - capsize avoidance and recovery
  - hull damage, emergency repairs and recovery of boat following sponson failure, watertight integrity, and free surface water effect
  - anchoring and methods of boat recovery, to place of safety, following engine failure.
  - veering down/controlled boat lower
  - holding station
  - stemming the flow and ferry gliding
  - use of water features, including eddy currents, lees and wash-outs
  - identify the hazards and operate in shallow water
  - manoeuvring in swift water, including running with the flow, moving aft over ground, power turns
  - closing/bearing away
  - coming alongside moving boats
  - suction effects and pressure waves
  - closing down procedures – returning equipment
  - reporting faults and problems
- **Paddle boat handling:**
  - use of paddles to manoeuvre and control the craft, in both still and moving water
- **Search and rescue operations from powered craft:**
  - safety equipment, communication with crew & other agencies
  - search techniques & incident management
  - methods of recovering personnel from water and techniques for lifting heavy casualties including extended reach rescue & throw line rescues
  - swimmer operations (including recovery of rescue swimmer)

    - use of loaded lines
    - twin boat working (e.g. two boats operating together in the same sector or carrying out rescues by use of protected boat should agree operational tactics prior to deployment)
    - towing & being towed – astern tow and alongside tow, length of tow- lines, position to pass a tow, using a bridle, towing alongside, casting off a tow
    - approaching, and dealing with entrapments from capsized boats
    - dealing with entrapments and capsize of own boat
    - awareness of rescue from vehicles and operating a boat around a vehicle in water (achievable using suitable object providing similar hydrology)
    - mass evacuation and use of lily pads
    - use of navigation systems
    - use of other specialist equipment
- **Identify and explain an understanding of the hazards and implications associated with working with helicopters**
- **Boat handling and Search and Rescue during darkness and poor lighting conditions:**
    - practical application of skills in darkness and poor light
    - demonstrate ability at keeping a proper lookout and identifying lit and unlit marks and hazard at night
    - students to conduct a search and rescue scenario during darkness

Continual Professional Development

A minimum of twelve hours per year with a minimum of two sessions per year with a maximum gap of nine months between training sessions. Of the 12 hours at least six hours must be in Category B or C water.

Recorded activity-based training should cover the following subjects as a minimum:

- launching and recovery
- manoeuvring the boat, forwards reverse and holding off
- coming alongside, mooring and swift off
- low and high-speed manoeuvring
- person overboard
- shallow water operations
- use of navigation system

*A module 4 responder must also maintain CPD for module 3.

Recertification

Recertification is required every three years.

Responders with the Module 4 qualification who have maintained competency using internal or peer-led CPD as detailed above are required to complete a minimum of

eighteen hours over a minimum of three days with learning outcomes, instructor and instructor ratio, and venue as detailed above.

Responders with the Module 4 qualification who have completed CPD as detailed above delivered by suitably qualified instructors, are required to complete twelve hours over a minimum of two days with learning outcomes, instructor and instructor ratio and venue as detailed above.

*A module 4 responder must also maintain module 3 recertification.

Defra Training Module – Asset Commander

Scope

This module is aimed at search and rescue personnel who have an in-date Module 2, Module 3 or Module 4 who will manage an asset type appropriate to their qualification.

The asset commander role is only valid within an asset type of that commander – for example, a Module 3 commander can only command an asset type C and a Module 4 commander can only command an asset type B.

Aim

To improve the coordinated response to a water or wide-area flood incident and improve command, control, welfare and support of flood responders.

Minimum delivery hours

Minimum of thirteen hours over a minimum of two days.

Instructor

Module 5 Instructor who is in-date with current recertification and CPD requirements. The use of other instructors to teach specific learning outcomes of the Asset Commander role should also be considered.

Instructor ratio

Minimum of one Module 5 instructor to twelve delegates.

Pre-requisites

Hold one of the following - Defra Module 2, Module 3 or Module 4 dependent on the asset type being commanded.

Training venue

Appropriate for learning outcomes.

Learning Outcomes

- asset commander should be able to command their asset
- demonstrate an understanding for the considerations related to incident management
- demonstrate an understanding of the roles and responsibilities of incident management across a range of appropriate agencies

- demonstrate an understanding the requirements of effective risk management within operational activities and deployments
- have an understanding of health and safety considerations, dynamic risk assessment and the challenges of risk appetite in relation to decision- making and the management of ‘mission creep’
- demonstrate an understanding of the need for effective lines of communication at incidents and show the skills required for an initial response for an incident
- demonstrate an understanding of the various stages of an incident and the ability to effectively close down an incident
- demonstrate an understanding of the need for clear effective briefing, debriefing and handovers during an operational incident
- demonstrate an understanding and identify the considerations when managing a scene of crime or body recovery
- have a working knowledge of welfare considerations and actions required when an accident or welfare consideration occurs within your team
- demonstrate an understanding of the Defra Flood Rescue Concept of Operations
- demonstrate an understanding of the levels of water rescue PPE and their associated uses and applications
- have an awareness of search management techniques relevant in the water environment including tasking and debriefing
- have an understanding of search, rescue and evacuation capabilities
- have an awareness of flood management commonalities such as: accessing and interpreting weather and flood warnings, flood warning schemes, multi-agency working, rainfall prediction, flood development, hazard identification and deployment of crews
- have an understanding of resources available, capabilities and team limitations
- have an awareness of the Civil Contingencies Act, responders and categories
- have an awareness of the skills required for incident planning and ensuring appropriate documentation and possible post-incident considerations
- have an understanding of all skills in-line with standards, including training, capabilities and limitations
- have an understanding of hazards and limitations of night operations
- have an understanding of hazards associated to the flooded urban and rural environment.
- have an awareness of the credentialing process.

Continual Professional Development

A minimum of four hours per year.

Recertification

Recertification is required every three years.

Responders with the asset commander qualification are required to complete a minimum of six hours over a minimum of one day with learning outcomes, instructor and instructor ratio as detailed above.

Asset commander is required to maintain Module 2, Module 3 or Module 4 dependent on the asset type being commanded.

Defra Training Module 5 – Water and Flood Incident Manager training module

Scope

This module is aimed at selected search and rescue personnel who are required to command and manage water and flood incidents at a tactical or operational level. The module covers water and flood specific incident command considerations, rescue, evacuation and search considerations and explores single and multiple incident scenarios.

Aim

To train personnel to identify, select, develop and manage appropriate tactical and operational plans in water and flood environments.

Minimum delivery hours

Minimum of twenty-six hours over a minimum of four days when delivered as a standalone course.

Thirteen hours over two days, if Defra asset commander course completed in previous six months.

Instructor

Module 5 Instructor. The use of other instructors to teach specific learning outcomes of Module 5 should also be considered.

Instructor ratio

Minimum of one Module 5 instructor to twelve delegates.

Pre-requisites

Module 2 or 3 with in date CPD and recertification.

Training venue

Appropriate for learning outcomes.

Learning Outcomes

- demonstrate an understanding for the considerations related to incident management
- demonstrate an understanding of the roles and responsibilities of incident management and of that from other key stakeholders

- demonstrate an understanding of the requirements of effective risk management within operational and tactical activities
- demonstrate an understanding of health and safety considerations, dynamic risk assessment and the challenges of risk appetite in relation to decision-making and the management of “mission creep” in a water and flood environment
- demonstrate an understanding of the need for effective lines of communication at all stages of the incident
- demonstrate an understanding of the need for clear effective briefing, debriefing and handovers during an operational incident using Joint Emergency Services Interoperability Principles
- demonstrate an understanding of the various stages of an incident and the ability to effectively close down an incident response
- demonstrate an understanding and identify the considerations when managing a scene of crime or body recovery
- have a working knowledge of welfare considerations and actions required when managing multiple water and flood rescue assets
- demonstrate an understanding of water safety policies, guidance and training standards
- demonstrate an understanding of the Defra Flood Rescue Concept of Operations (FRCO)
- have an awareness of the levels of water rescue PPE and their associated uses and applications.
- demonstrate understanding of search management techniques relevant in the water and flood environment
- have an understanding of search, rescue and evacuation capabilities.
- demonstrate effective use of flood information systems to access and interpret weather and flood warnings, flood warning schemes, rainfall prediction, flood development and hazard identification
- have an understanding of multi- agency working, resources available, capabilities, team limitations and deployment of teams
- demonstrate understanding of the Civil Contingencies Act, responders and categories
- demonstrate understanding and skills required for incident planning and ensuring appropriate documentation and post-incident considerations.
- demonstrate understanding of the standards, including training, capabilities & limitations within the FRCO.
- have an understanding of hazards and limitations of night operations.
- demonstrate an understanding of hazards associated to the flooded urban and rural environment.
- have an awareness of the credentialing process.

Continual Professional Development

A minimum of eight hours per year.

Recertification

Recertification is required every three years.

Responders with the Water and Flood Incident Manager qualification are required to complete a minimum of ten hours over a minimum of two days with learning outcomes, instructor and instructor ratio as detailed above.

Water and Flood Incident Managers to maintain Module 1 as per module 1 requirements.

Defra Training Module 6 – Flood Rescue Tactical Advisor (FRTA) training module

Target group

Water and flood rescue experts who have an in-depth knowledge of both operational and tactical water and flood incident management and wider considerations.

Scope

This module is for personnel who may be required to provide tactical advice on the use of flood rescue assets at a major or wide area flood or water rescue incident.

Aim

To develop advisors for national deployment to advise and support at Tactical and Strategic Coordinating Groups on behalf of Defra for wide-area flooding incidents.

To develop FRTAs to attend multi-agency strategic holding areas to assist with credentialing of flood rescue assets.

Minimum delivery hours

5 days

Instructor

This training module is only to be delivered by Defra. Instructors will be selected as appropriate.

Recruitment

Defra will advertise for FRTAs via a National Resilience Information note and notify all relevant stakeholders.

The suitability of each applicant will be reviewed.

Defra do not hold contact details from expressions of interest.

Pre-requisites

- hold Defra Module 5 (meeting the current Module 5 standard)
- have previously completed Module 3
- have previously completed Module 4
- Joint Emergnecy Services Interoperability Principles trained to tactical level
- experienced tactical commander

- membership of/or job in an organisation that carries out flood rescue and support of this organisation to apply for and carry out the Tactical Advisor role
- experience of Tactical Coordinating Groups and working at a tactical level
- knowledge and awareness of Category 1 & 2 and voluntary sector involvement in flood rescue
- recognised Health & Safety qualification
- experience of working at operational levels at water and flood incidents
- knowledge of Resilience Direct and its mapping capability

Assessment

Assessment on the course will be both practical and written.

Assessments will take the form of an initial exam to test level of knowledge, a practical credentialling exercise, presentation of a tactical plan and a final written assessment.

Continual Professional Development

Yearly led 2 day face to face event delivered by National Resilience.

Continuous CPD events through out the year delivered by National Resilience.

Annual completion of Maintenance of Competency to record CPD.

Annex F – Water and flood rescue instructor standards

Instructor courses give selected search and rescue personnel the ability to train and undertake development to teach the water and flood rescue training standards. Courses should be tailored to allow students to gain the skills needed to safely and effectively teach responders to meet the requirements of the different water and flood rescue training standards.

During instructor courses students should demonstrate, to a high level, the skills within the training standard of the course they are learning to teach e.g. on a Module 3 instructor course students should be able to demonstrate the skills within the Module 3 training standard.

All students are required to hold an appropriate first aid qualification to be determined by the training provider/organisation.

Pre-requisites

Module 2 instructor course:

- Module 2 in-date with current recertification and CPD requirements

Module 3 instructor course:

- Module 3 in-date with current recertification and CPD requirements

Module 4 instructor course:

- Module 3 in-date with current recertification and CPD requirements
- Module 4 in-date with current recertification and CPD requirements
- Royal Yachting Association (RYA) Powerboat Instructor or equivalent course
- RYA Advanced Powerboat Handling or equivalent course

Module 5 instructor course:

- Module 5 in-date with current recertification and CPD requirement
- Have operational experience in the role of a Water and Flood Incident Manager
- Have observed (or competed) a Module 3 Water and Flood Rescue Technician course
- Have observed (or completed) a Module 4 Water and Flood Rescue Boat Operator course

Minimum training delivery hours

Module 2 instructor course:

- 28 hours over four days

Module 3 instructor course:

- 56 hours over eight days

Module 4 instructor course:

- 56 hours over 8 days

Module 5 instructor course:

- 35 hours over five days

Instructor ratio

To be determined by the training provider/organisation to allow safe and effective delivery of the course.

Assessment

All course should uses appropriate assessment to confirm knowledge and competency of all skills. This should include a written assessment and practical assessment that is separate to the training course.

Instructor assessments must be completed in a training environment.

Learning outcomes

All courses should meet the following learning outcomes:

- water rescue scene management and dynamic assessment of risk
- understand the limitations of the role
- working knowledge of all the Defra water & flood modules
- ability to teach the training module

Training design and delivery:

- lesson Planning
- scenario implementation
- introducing subjects, principles and procedures
- subjects in logical sequence
- coaching complex skills
- training venue assessment
- group maintenance/management
- goal setting for varying levels of ability

Reviews/Assessment:

- run task reviews/question and answer sessions
- assess practical/team/command skills
- deliver feedback (group/individual)
- use of multiple methods of assessment
- maximise learning from scenarios and training sessions

Safety considerations:

- establishing and monitoring safe systems
- dynamic risk assessment of activities and venues
- written generic risk assessment activities and venues
- rescue students in difficulty

Evaluate complex scenarios:

- convey logical progressions of response
- convey command and control/multi-agency issues
- convey permutations of rescue systems/resources/environments

Continued professional development

Instructors are required to:

- Deliver a minimum of two initial courses in a three year period.
- Maintain a log of CPD activities
- Maintain first aid requirements

Recertification

Recertification of instructor courses is determined by the training provider/ organisation who delivered the initial instructor course. As a minimum recertification should take place every 3 years and should meet the learning outcomes above.

Annex G – Water and flood non-rescue support operations training module

This non-compulsory training module is aimed at workers and volunteers who work in support of flood response but do not come from rescue organisations. It covers general water safety awareness training and basic self-rescue techniques. Organisations who routinely carry out work near water outside of flood incidents should consider if the learning outcomes in this annex meet their required needs.

Scope

This module is aimed at workers and volunteers who support the wider response to water and flood incidents in a non-rescue role and have appropriate PPE. It is designed to prepare workers and volunteers for accidental immersion.

Aim

To train water and flood incident support operatives to identify their limitations and safely and effectively work near or in moving water.

Minimum delivery hours

Minimum of six hours over a minimum of one day.

Lead Instructor

Module 2 or 3 Instructor.

Instructor ratio

Minimum of two Module 2 instructor to twelve delegates.

Pre-requisites

This module can be delivered as a standalone course.

Training venue

The water selected for this module shall be appropriate to the limits of wading rescue with suitable and appropriate hydrology features for all aspects of training to be carried out safely and effectively.

Learning outcomes

- **Demonstrate water rescue scene management and dynamic assessment of risk:**
    - understand the limitations of the water rescue wading responder capability; rescue team organisation; communication systems: hand, audible and radio; hazard recognition and preplanning; risk and incident zones; incident management structure; team roles and responsibilities
- **Identify and apply the role of the water & flood non-rescue support operations training module within the Incident Management Structure:**
    - incident management structure; team health, safety and welfare
- **Apply a working knowledge of hydrology and associated hazards:**
    - recognition of water features and their impact
- **Identify and use appropriate PPE:**
    - types of PPE; donning and doffing; care maintenance and inspection; record keeping. This can include life jacket or use of personal flotation device (PFD)
- **Demonstrate self-rescue from water**
- **Understand relevant rescue techniques in the role as casualty:**
    - talk, receive reach pole, and throw line
- **Demonstrate techniques for movement in shallow water:**
    - supported crossing (poles), 1-2-3 person teams; wedge and line astern
- **Identify and explain the additional hazards and difficulties associated with working in darkness and reduced visibility, and application of suitable control measures:**
    - equipment issues; lighting; additional marking requirements; audible signals
- **Flood:**
    - awareness of flooding and associated hazards; pollution; location and incident specific hazards; topography

Continued Professional Development

A minimum of two hours per calendar year covering the learning outcomes above.

Recorded annual activity-based training should cover the following subjects as a minimum:

- donning, doffing, and care of water rescue PPE

Recertification

Recertification is required every three years. Responders should complete Annex G as recertification.

Annex H – Asset typing matrix

The following pages provide a summary outlining the minimum requirements for asset typing. These tables can be used as a reference when organisations are considering applying to join the Defra Flood Rescue National Asset Register (NAR) and they will form the basis of assurance visits made on behalf of Defra.

Although not registered as part of the NAR an example of the minimum requirements for asset type D is outlined in table 6.

Table 4 – Asset type B Water and Flood Rescue Boat Asset

Capability	**Logistics**	**Asset Structure**	**Competencies of responder personnel**
Technical water rescue. Search operations within the water environment. Powerboat rescue operations. In-water operations. Flood response.	Facility for financing asset members for up to 3 days of deployment. Food and snacks for all asset members for the initial 8 hours from deployment from the holding area. Drinking water Asset to be available for up to 72 hours deployed	One welfare officer. Two asset commanders. Four asset members NB Welfare officer is for support and welfare considerations and can support up to five assets from one organisation operating from one holding area.	Four Module 4 Two Module 3 All asset members: • minimum 18 years of age • first aid qualified • trained in manual handling • basic health and safety • physically fit to complete the role

	from arrival at holding area.			
Transport	**Communications**	**First aid equipment**	**Decontamination**	**Navigation**
Vehicle(s) suitable to carry personnel, equipment and welfare needs.	Handheld communications for all asset members, spare batteries and charger (all waterproofed). Mobile phone (waterproofed) with asset commander and welfare officer.	First aid kit to meet organisation standard.	Anti-bacterial hand gel. Anti-bacterial face and hand wipes. Anti-bacterial decontamination spray for equipment. Standard soap.	Handheld GPS system with street mapping facility.
Boat	**PPE**	**Technical equipment**	**Testing**	**Data logging**
Minimum capacity to drive upstream against 10 mph flow whilst carrying six persons. The design and construction of the boat should comply with ISO	Full PPE for all team members + one redundancy kit • drysuit • buoyancy Aid, BS EN 393 or ISO 12402 pt 5 (with 70N Minimum)	• one 50m floating line • one set of technical rescue equipment to achieve efficient 3:1 mechanical advantage and to achieve 4-point tethering of boat	All equipment should be suitably inspected, maintained, logged and certified in accordance with manufactures' guidelines and current legal standards.	Suitable means of logging incident briefings and deployment information.

6185 part 1,2,3 or 4 based on the motor power rating. • prop guarded Ancillary equipment: • means to light the boat for navigation purposes to comply with International Regulations for the Prevention of Collision at Sea • anchor • fuel container • lifelines • attachment points for tethers • four paddles • towing equipment suitable for boat	• correctly coloured helmets PAS 028;2002 • footwear • gloves • knife • whistle • thermal layers • personal lighting: Forward white light (i.e. head torch). Solid red light on helmet (enough for three x 12 hours of night operations, with spares)	• resealable waterproof bags • scene lighting • search lighting • six wading poles • 50 solid blue light sticks • 30 solid green light sticks • six 15m throwlines • two 20m throwlines • four adult casualty flotation devices • two child casualty flotation devices.		

Table 5 – Asset type C Water and Flood Rescue Technician Asset

Capability	**Logistics**	**Asset Structure**	**Competencies of responder personnel**	
Technical water rescue. Search operations within the water environment. In-water operations. Non-powered boat operations. Flood response.	Facility for financing asset members for up to 3 days of deployment. Food and snacks for all asset members for the initial 8 hours from deployment from the holding area. Drinking water. Asset to be available for up to 72 hours deployed from arrival at holding area.	One welfare officer. One asset commander (organisations should consider sending two asset commanders for resilience purposes and not to allow the splitting of an asset). Five asset members. NB Welfare officer is for support and welfare considerations and can support up to five assets from one organisation operating from one holding area.	Six Module 3 All asset members: • minimum 18 years of age • first aid qualified • trained in manual handling • basic health and safety • physically fit to complete the role	
Transport	**Communications**	**First aid equipment**	**Decontamination**	**Navigation**

Vehicle(s) suitable to carry personnel, equipment and welfare needs.	Handheld communications for all asset members, spare batteries and charger (all waterproofed). Mobile phone (waterproofed) with asset commander and welfare officer.	First aid kit to meet organisation standard.	Anti-bacterial hand gel. Anti-bacterial face and hand wipes. Anti-bacterial decontamination spray for equipment. Standard soap.	Handheld GPS system with street mapping facility.
Boat	**PPE**	**Technical equipment**	**Testing**	**Data logging**
Raft or boat with minimum six persons capacity for tethering operations or basic paddle boat handling. Suitable for wading/paddling rescue of persons without unduly getting the casualties wet. Ancillary equipment: • lifelines	Full PPE for all team members + one redundancy kit • drysuit • buoyancy Aid, BS EN 393 or ISO 12402 pt 5 (with 70N Minimum) • correctly coloured helmets PAS 028;2002 • footwear • gloves	• one 50m floating line • one set of technical rescue equipment to achieve efficient 3:1 mechanical advantage and to achieve 4-point tethering of boat • resealable waterproof bags • scene lighting • search lighting • six wading poles	All equipment should be suitably inspected, maintained, logged and certified in accordance with manufactures' guidelines and current legal standards.	Suitable means of logging incident briefings and deployment information.

• attachment points for tethers • four paddles	• knife • whistle • thermal layers • personal lighting: Forward white light (i.e. head torch). Solid red light on helmet (enough for three x 12 hours of night operations, with spares).	• 50 solid blue light sticks • 30 solid green light sticks • six 15m throwlines • two 20m throwlines • four adult casualty flotation devices • two child casualty flotation devices		

Table 6 – Asset type D Water and Flood Rescue First Responder Asset

Capability	**Asset Structure**	**Competencies of responder personnel**
Support operations. Limited in-water operations (non-buoyant wading activities). Bank based safety and response. Flood response	One welfare officer. One asset commander. Three asset members.	Four Module 2 All asset members: • minimum 18 years of age • first aid qualified • trained in manual handling • basic health and safety • physically fit to complete the role

Transport	**Communications**	**First aid equipment**	**Decontamination**	**Navigation**
Vehicle(s) suitable to carry personnel, equipment and welfare needs.	Handheld communications for all asset members, spare batteries and charger (all waterproofed). Mobile phone (waterproofed) with asset commander and welfare officer.	First aid kit to meet organisation standard.	Anti-bacterial hand gel. Anti-bacterial face and hand wipes. Anti-bacterial decontamination spray for equipment. Standard soap.	Mapping capability via electronic or physical maps.
Boat	**PPE**	**Technical equipment**	**Testing**	**Data logging**
Raft or sled, minimum three persons capacity for tethering operations or wading rescue of persons without unduly getting the victims wet. Ancillary equipment: • lifelines	Full PPE for all team members + one redundancy kit • drysuit • buoyancy Aid, BS EN 393 or ISO 12402 pt 5 (with 70N Minimum) • correctly coloured helmets PAS	• one set of technical rescue equipment to achieve 4-point tethering raft/sled • resealable waterproof bags • scene lighting • search lighting • four wading poles • 50 solid blue light sticks	All equipment should be suitably inspected, maintained, logged and certified in accordance with manufactures' guidelines and current legal standards.	Suitable means of logging incident briefings and deployment information.

• attachment point for tethers NB No paddles permitted. Asset type D is a non-buoyant rescue asset	028;2002 (Asset commander – white helmet, asset member – yellow helmet) • footwear • gloves • knife • whistle • thermal layers • personal lighting: Forward white light (i.e. head torch). Solid yellow light on helmet	• 30 solid green light sticks • four 15m throwlines • two adult casualty flotation devices • one child casualty flotation devices.		