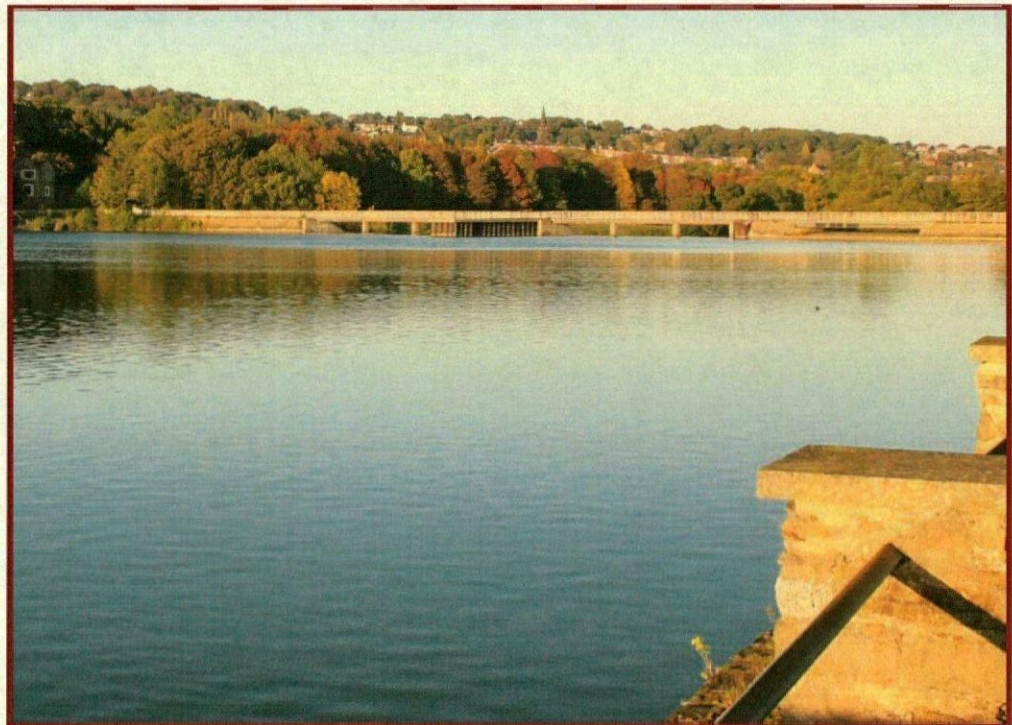


PROTECT



BARNSLEY
Metropolitan Borough Council

Worsbrough Reservoir Off-Site Plan



Draft v0.5.3
October 2015

PROTECT

All the information in this plan is believed to be correct as at September 2015 or later as indicated by the date in the top right hand corner of each page.

Any amendments to be made should be notified as soon as possible to:

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Revision Schedule

Worsbrough Reservoir Off-Site Plan

October 2015

Document Preparation

Revision	Date	Details	Prepared by	Signature	Date
01	October 2015	Draft Plan	Allan Abu-Smeihah Network Management & Resilience		

Document Review

Revision	Date	Details	Reviewed by	Signature	Date
01	October 2015	Draft Plan (for Internal Distribution)	Derek Bell Principal Flood Resilience Manager		
			Martin Sunderland Principal Engineer Structures		
			Richard Moss Assistant Manager Worsbrough Reservoir		
			Simon Dobby Head of Corporate Health, Safety & Emergency Resilience		
			Rachael Kingsley Head of Highways, Engineering and Transport		
			Paul Castle Assistant Director Operational Services		

Document Control

This plan is distributed by Barnsley MBC's Network Resilience Team. The plan will be reviewed at least annually, updates will be made where appropriate and it will be distributed to the following organisations:

Copy No.	Department / Organisation	Holder
1	Barnsley MBC, Network Resilience,	Derek Bell
2	Barnsley MBC, Health, Safety & Emergency Resilience	Simon Dobby
3	Barnsley MBC, Worsbrough Mill & Country Park	Sue Theideman
4	SY Police, Contingency Planning	Insp Craig Patchett
5	Environment Agency, Flood Incident Management	Adrian Gill

Important Information Regarding Reservoir Flood Maps

Disclaimers

Each of the attached Reservoir Flood Maps is included with following disclaimer:

1. Environment Agency maps and the other information contained within this Plan remain the property of the Environment Agency. They may not be copied, scanned (or reproduced in any format), or transmitted in any way other than those which are set out in the latest version of the national protocol issued by Defra in relation to information sharing of data, maps and intelligence in relation to dams and reservoirs for England and Wales
2. This map IS NOT INTENDED FOR any use other than for lawful purposes by bodies responsible for emergency planning who should follow their own appropriate procedures for such purposes.
3. The information contained in this map DOES NOT in any way reflect the structural integrity or likelihood of failure of the dam.
4. This map gives an indication only of the areas that may be flooded if the dam completely failed. It is based on a simplified modelling approach. Actual reservoir failure may give rise to conditions (flooded areas, flood depth, extent, velocity, hazard, and timing) which vary from those indicated.
5. The data used to create this map was gathered from various independent sources. Defra and the Environment Agency have no control over the quality of the input data and accept no responsibility for same.
6. To the extent permitted by law, neither Defra nor the Environment Agency shall be liable to a party using this map in contract, tort, negligence, breach of statutory duty or otherwise for any loss, damage, costs or expenses of any nature whatsoever incurred or suffered by that other party whether of a direct nature (whether such losses were foreseen, foreseeable, known or otherwise) or of an indirect or consequential nature including without limitation any economic loss or other loss of turnover, profits, business or goodwill.

This map is based on a simplified approach; actual conditions (flood depth, extent, velocity, hazard and timing) may vary considerably.

General

A pre-requisite for the effective operation of this Plan is the existence and maintenance by Category 1 and 2 responders, and other responding agencies, of their own plans and procedures for a response to an Off-Site Reservoir Emergency being declared at Worsbrough Reservoir.

This plan should be used in conjunction with Worsbrough Reservoir On-Site Plan. There is some duplication of material between these documents as each is intended to serve as a standalone document in the event of an emergency.

Links To Other Plans

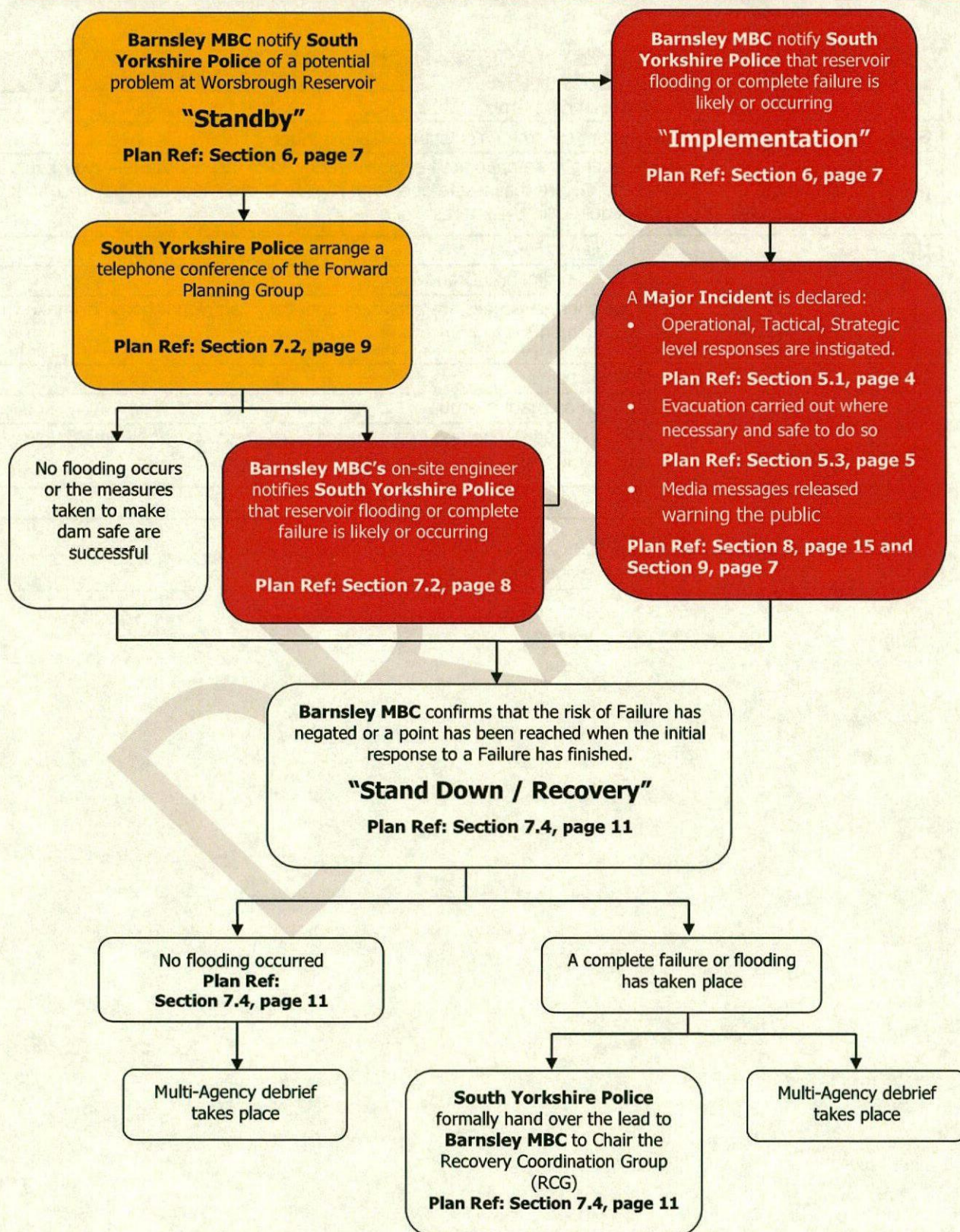
This plan should be used alongside the following plans:

- Barnsley MBC - Corporate Resilience Plan
- Barnsley MBC - Multi-Agency Flood Plan
- Barnsley MBC - Recovery Plan
- Barnsley MBC - Rest Centre Plan and Humanitarian Assistance Plan
- Barnsley MBC - Sandbag Policy
- Barnsley MBC - Worsbrough On-Site Emergency Plan
- South Yorkshire LRF - Community Risk Register
- South Yorkshire LRF - Resilient Telecommunications Plan
- South Yorkshire LRF - Media Cell Operating Protocol
- Business Continuity Plans for responding organisations
- Any specific procedures maintained by individual partner agencies

Glossary

Term	Definition
FPG	Forward Planning Group
GOYH	Government Office for Yorkshire & The Humber
Inspecting Engineer	An inspecting is an appointed engineer required to inspect the reservoir every 10 years and ensure that a safe operating regime is specified, and may recommend works required 'in the interests of safety'.
LRF	Local Resilience Forum
RCG	Recovery Co-ordinating Group
Reception/Rest Centre	Premises where evacuees are sheltered until they can return home or make their own arrangements.
RVP	Rendezvous point
SCG	Strategic Co-ordinating Group
Supervising Engineer	Supervises the operation and maintenance of the reservoir at all times, unless the reservoir is under construction.
Undertaker	Reservoir owner, manager or operator
LP Mains	Low Pressure Mains (gas)
MP Mains	Medium Pressure Mains (gas)

Reservoir Emergency Response Stages



1 Purpose of the Plan

The purpose of the plan is to ensure that local responders are able to make a swift and effective response to an emergency at the **Worsbrough Reservoir** in Barnsley. This Off-Site plan details the alerting and activation procedures, management and co-ordination aspects of the response to a major incident occurring at the reservoir. It also outlines the type of response (rescue, setting up Rest Centres, etc) which may be necessary for an incident at this site.

1.1 Aim

The plan provides a framework of procedures to facilitate a co-ordinated multi-agency response to the off-site consequences of a potential or actual dam breach at Worsbrough Reservoir.

1.2 Objectives

The plan also has the following specific objectives to:

- Provide clear definitions of the roles, responsibilities and actions of each agency at particular stages of the response;
- Describe the actions of the first officers on the scene/to receive the incident notification;
- Provide a response escalation procedure to cover actions from the initial alert through to stand-down and post-incident recovery;
- Set-out the multi-agency co-ordination and control arrangements at each level of response;
- Specify the manner in which warnings may be communicated to the public and partner agencies in an accessible and consistent fashion;
- Provide contact details to facilitate an efficient call-out of resources.

The plan acknowledges that each responding organisation has its own systems and procedures for responding to an emergency. The procedures outlined in this plan describe how these arrangements are co-ordinated.

The advice contained within this plan should be treated as a guide. It offers a framework in order that those responding to an incident can work together as efficiently and effectively as possible. This plan also takes into consideration the duties outlined in the Civil Contingencies Act 2004.

The owner and undertaker for the Worsbrough Reservoir is Barnsley MBC. Full contact details are provided at **Appendix A**.

Location details of the reservoir are contained in **Annex 1**. Basic background information is available at **Annex 2**.

2 Scope of the Plan

This plan addresses the off-site, or downstream, consequences of flooding from Worsbrough Reservoir as a result of a potential or actual dam breach depicted in the inundation maps located at **Annex 3**.

The actions contained in this plan are based upon an assumption that there would be sufficient time to enact a response.

In a rising tide scenario, i.e. where water is escaping as the result of an emergency drawdown, the response will probably mirror the actions outlined in the Multi-Agency Flood Plans, but the dam will be monitored to assess the risk of a major failure.

The scope of the plan has been informed by the findings of a formal dam break analysis of Worsbrough Reservoir.

Planning assumptions and maps included in the plan are based on the recognised worst case scenario i.e. a catastrophic failure of the Worsbrough Reservoir.

3 Risk Assessment

3.1 Impact

As it retains a volume of water greater than 25,000m³; Worsbrough Reservoir is classified as a 'large raised reservoir' under the Reservoirs Act 1975. An assessment of the impact of a dam breach at Worsbrough Reservoir (see **Annex 5** for further details) concluded that such a breach would be likely to cause significant consequences, including:

- Death of, or injury to, those people caught in the flood wave;
- Flooding, structural damage or total destruction of significant numbers of properties;
- The severing and/or inundation of key parts of the local transport infrastructure, including arterial roads, bridges and the rail network. Closures of key parts of the transport network, such as major arterial roads and bridges linking different areas, could compromise the ability of key agencies to respond and deploy their resources where these are needed. Further details can be found at **Appendices E and F**.
- The severing and/or inundation of key parts of the local utility infrastructure in the shape of electricity, gas, water, telecommunications. Even where no other infrastructure assets have been identified above ground within the inundated area, underground assets may still be susceptible. A dam breach may result in the severing of power cables or inundation of electricity sub-stations supplying large numbers of the population. This has the potential to cause discomfort to a wider population and complicate the response. A loss of telecommunications would complicate this further, more details can be found at **Appendix F**.

3.2 Probability

With stringent monitoring work carried out by Barnsley MBC, the probability of a complete failure at any of these sites is low. However as the events at Ulley Country Park, in Rotherham during 2007 showed, reservoirs do pose a potential risk and planning should be carried out accordingly.

3.3 Overall Assessment

In light of the foregoing, Worsbrough Reservoir has been categorised as a 'Higher Priority' Reservoir by DEFRA.

The general risk of 'Reservoir Inundation' has been given an overall rating of 5 (Low) in the South Yorkshire Community Risk Register (Edition 7 – Nov 2011). Although the overall rating score is 'Low', the Community Risk Register does acknowledge that the consequences of a catastrophic failure would be severe.

Although there is currently no requirement under the Reservoirs Act 1975 (as amended by the Water Act 2004) for external agencies to prepare off-site plans, partner agencies have taken the view that On-site and Off-site Plans should be prepared as control measures in order to treat this risk.

4 Notification & Activation

If a dam breach has the potential to occur, is occurring or is deemed imminent, the initial alert or notification will normally be received from the Undertaker (Barnsley MBC) to South Yorkshire Police. If the message is received from another source, further confirmation should be sought where possible, before fully instigating this plan. A diagram showing the process of notification of a reservoir emergency can be found at **Appendix B**.

Barnsley MBC are responsible for activating this plan, whilst **South Yorkshire Police** are responsible for instigating and the co-ordination of the multi-agency response of the emergency services, Local Authorities and other key partners as defined in their Critical Incident Plan.

5 Command, Control and Co-ordination

5.1 Command & Control

Incidents occurring within the Barnsley MBC boundary are dealt with by the Health, Safety and Emergency Resilience Unit using existing resilience arrangements i.e. the Corporate Resilience Plan. These existing arrangements cover any handover which may be required following escalation.

The response may be divided into three levels, Strategic (Gold), Tactical (Silver) and Operational (Bronze).

- **Strategic** (Gold) – established to set the overall strategy to respond to the incident.
- **Tactical** (Silver) – introduced to provide overall management of the response.
- **Operational** (Bronze) – reflects the normal day-to-day arrangements for responding to smaller-scale emergencies. It is the level at which the management of the 'hands on' work is undertaken at the incident site(s) or elsewhere.

The requirement to implement one or more of the management levels will be dependent on the nature and size of the incident.

5.2 Management Zones

The plan is based upon 4 management zones which represent the potential inundation area for a worse case scenario (see maps located at **Annex 3**).

The Management Zones split the affected area into smaller and more manageable zones, to facilitate the Police's role in co-ordinating the response to the incident.

The Police will assign a Bronze Commander for each Management Zone as resources allow.

5.3 Evacuation Areas

Each Management Zone may have within it; smaller, more clearly defined evacuation areas, which have been agreed by partners to this plan (see maps located at **Annex 3**).

In the event that a large scale evacuation is required response organisations could utilise:

- South Yorkshire Police helicopter's 'Skyshout' system
- Multi-agency door knocking (where safe to do so)
- Vehicles fitted with loudhailers (where available and safe to do so)
- Local media (Connecting In A Crisis)
- EA Flood Warning Service

Due to the risks associated with door knocking within a potential reservoir flood area, this will only take place after a full dynamic risk assessment has been carried out and a decision has been made by the Strategic Coordinating Group. The effectiveness of door knocking would rely heavily on the amount of available resources and time to carry out this operation.

If door knocking is considered safe, appropriate and practical this will be facilitated by a pre-prepared Evacuation Card to alert residents that they may need to evacuate. A copy of this can be found at **Appendix G**. The Evacuation Card should be pre-prepared before dissemination to residents requiring evacuation and provide details of the management zone and Reception Centre or Evacuation Assembly Point being used. Details from returned cards should be recorded by the Police Operational (bronze) Commander or nominated deputy in each Management Zone. These records should be held for the co-ordination of any subsequent search and rescue operations. Premises whose occupants are at Reception Centres need to be identified and this information made known to the Police Operational (bronze) commanders responsible for search and rescue.

These cards will be used if the:

- Decision is taken to evacuate at the **Standby** level of the Off-Site Plan; or
- Decision is taken to evacuate at the **Implementation** level, where an emergency drawdown is required to mitigate the impact, i.e. at the On-Site Plan's trigger level **Alarm**.

5.4 Identification of Vulnerable Groups

The majority of residents should be able to evacuate the area without assistance, but there may be individuals and vulnerable groups who require assistance in leaving and/or being cared for by the Local Authority or ambulance service. Details of specific vulnerable establishments, such as Care Homes, hospices and Sheltered Accommodation should be identified promptly by the Local Authority. Priority will be given to warning these groups where possible.

Those unable to evacuate in their own transport in rural areas or on foot in urban areas, will be advised to report to designated Evacuation Assembly Points. There may be specific arrangements required for the evacuation of vulnerable groups. Where possible the Local Authority with the assistance of South Yorkshire Passenger Transport Executive may provide transport from Evacuation Assembly Points to Rest Centres.

For details on specific premises that house multiple vulnerable people (inc. Schools and Residential Homes) see **Appendix J**.

5.5 Road Closures

A number of potential road closures/blocks are outlined at **Appendix E** and on the map located at **Annex 4**. The activation of 1 or more of the road blocks will be determined by the Police, in liaison with the Barnsley MBC and also the Highways Agency, if required.

5.6 Rendezvous Points (RVPs)

The plan has identified a number of Rendezvous Points (RVPs) for operational responders, the locations of which have been agreed by all agencies (see **Appendix E** and map located at **Annex 3**). The activation of 1 or more of the RVPs will be decided by the Police, in liaison with other emergency responders.

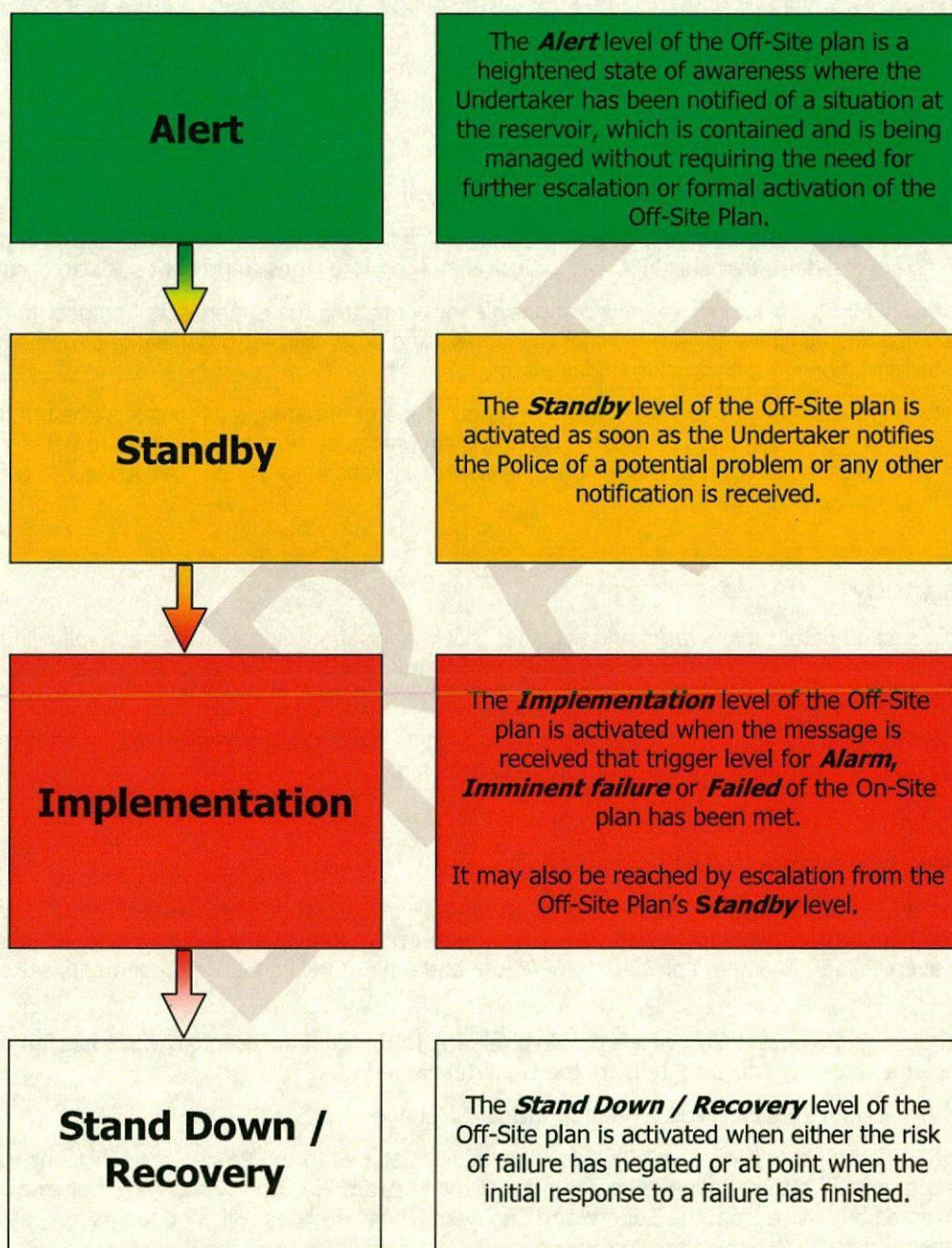
5.7 Reception Centres

A number of buildings have been identified within the Barnsley borough for use as Reception Centres. Where appropriate Reception Centres will be opened in line with the arrangements as detailed within the Barnsley MBC Reception Centre Plan, this will be dependant on the circumstances of the incident at the time.

Barnsley MBC will organise transport in conjunction with South Yorkshire Passenger Transport Executive and other local partners to move evacuees from assembly points direct to the centres, where necessary.

6 Trigger Levels

The diagram below shows the pre-identified Trigger Levels for all Off-Site Reservoir Emergency Plans. For a full description of Trigger Levels see **Appendix C**.



7 Key Roles and Responsibilities at Trigger Points

Health and Safety

Health and Safety should be a key consideration in any emergency response activity and a risk assessment should be undertaken before any personnel are dispatched to areas that may potentially be affected by reservoir flooding.

7.1 Alert

Barnsley Metropolitan Borough Council

On identification of an incident at the reservoir which has the potential to escalate to a catastrophic breach of the dam, Barnsley MBC will initiate all appropriate steps to prevent such an occurrence.

Barnsley MBC's Structures Team is responsible for contacting the Supervising Engineer in the first instance and also liaising with internal colleagues, and other partner organisations to raise awareness of the situation without causing undue alarm.

Following dialogue with the Supervising Engineer the appropriate mitigations shall be put in place to stabilise the situation and reduce the risk of the circumstances worsening. A more detailed work program shall be devised to ensure that the necessary repairs to the dam structure are carried out without unnecessary delay.

7.2 Standby

This section details initial tasks and activities that organisations should undertake following notification that a dam breach is possible. A list of ownership and location of specialist equipment can be found at **Appendix I**.

The **Standby** level of the Off-Site plan is activated as soon as the Barnsley MBC notifies the Police of a potential problem or any other notification is received.

The Undertaker (Barnsley MBC)

The Undertaker is responsible for issuing an urgent notification of a heightened risk of a dam breach, together with any relevant details (e.g. status of warning; anticipated failure mode; actions being taken to avert failure; estimated probability of failure and timing) in line with arrangements set out in the On-Site Plan.

On detecting a potentially serious problem relating to the dam or reservoir which has led to the implementation of the On-Site plan, the Undertaker alerts:

- South Yorkshire Police – Force Incident Manager

The Undertaker, or their nominee, provides regular updates to the Police Force Incident Manager by telephone or via the telephone conferences of the Forward Planning Group (see **Appendix I** for remit), informed by advice from the Supervising Engineer. These updates will continue as long as deemed necessary.

South Yorkshire Police

On receiving a **Standby** alert from Barnsley MBC (or other party) notifying them that a potentially serious problem has been detected, South Yorkshire Police Contingency Planning Unit considers convening a telephone conference of the Forward Planning Group to discuss preparatory and precautionary measures appropriate to the situation.

In the event of the Forward Planning Group being convened, the Police Contingency Planning Unit (or their nominee) arranges for the following organisations to be contacted to request their attendance at the telephone conference:

- Barnsley MBC
- Environment Agency
- Lead PCT (NHS Sheffield)
- South Yorkshire Fire and Rescue
- Yorkshire Ambulance Service
- Yorkshire Water
- Any other identified organisation, as required

Barnsley Metropolitan Borough Council

Where a **Standby** message has been issued by Barnsley MBC liaison with other appropriate agencies will take place to provide a multi-agency support.

Barnsley MBC's Health, Safety & Emergency Resilience Team is responsible for contacting the following downstream Local Authorities and other partner organisation including:

- Emergency services
- Utility companies
- Transport providers e.g., Network Rail, SYPTC etc.

On receipt of a **Standby** message from Barnsley MBC, the Emergency Planning Teams in Doncaster and Rotherham Metropolitan Borough Council's and Sheffield City Council will, where appropriate, begin to carry out any necessary activities to safeguard the residents of their respective authorities.

South Yorkshire Fire & Rescue

On receipt of a **Standby** message from South Yorkshire Police, South Yorkshire Fire & Rescue will look to redeploy equipment nearer to the affected reservoir. This may include deploying the High Volume Pump to the reservoir as a precautionary measure.

7.3 Implementation (Imminent or Actual Dam Breach/Flooding)

This section details the tasks or activities which each organisation should undertake following notification that a dam breach may be imminent against the agreed trigger levels (see **Appendix C** for a full breakdown of the Trigger Levels) for action, which are directly linked to the triggers contained within the On-Site Plan.

The **Implementation** level of the Off-Site plan is activated when the message is received that trigger level for Alarm, Imminent Failure or Failed of the On-Site plan has been met.

The **Implementation** level may also be reached by escalation from the Off-Site Plan's **Standby** level.

It is crucial that the Police liaise with the Barnsley MBC to determine the timing of any expected failure and whether the anticipated dam failure will involve the:

- Complete collapse of a dam wall and a sudden influx of water; or
- Rising tide scenario

If a complete collapse is forecast the maps at **Annex 3** indicate the potential inundation area in the worse case scenario. This should be used only a guide and wherever possible responders should use the local knowledge of the Reservoir Undertaker on the day.

The Undertaker (Barnsley MBC)

The Undertaker is responsible for issuing urgent notification of any potential or actual occurrence of a dam breach together with any relevant details (e.g. status of warning; anticipated failure mode; actions being taken to avert failure; estimated probability of failure and timing) in line with arrangements set out in the On-Site Plan.

On the activation of the *Alarm*, *Imminent Failure* or *Failed* trigger level in the On-Site plan, the Undertaker (or their nominee) alerts:

- South Yorkshire Police – Force Incident Manager

The Undertaker, or their nominee, provides regular updates to the Police Incident Commander by telephone or through attendance at the Police Tactical (Silver) Group, informed by advice from the On-Site Supervising Engineer. These updates will continue as long as deemed necessary.

South Yorkshire Police

The Police receive notification of an **Implementation** alert from the Undertaker (or other party) notifying them that either:

- An emergency drawdown is required to mitigate the impact (**Alarm**);
- Control of the situation has been lost and failure is inevitable (**Imminent Failure**);
- A large uncontrolled release of water has occurred (**Failed**).

The Police Incident Commander, in consultation with officers in partner agencies as appropriate, considers whether the hazard requires an immediate evacuation or may give rise to an evacuation in the near or immediate future and invokes the Off-Site Plan.

Barnsley Metropolitan Borough Council

On receipt of an alert relating to the **Implementation** level from South Yorkshire Police, the Health, Safety & Emergency Resilience Team assesses the implications of the message and determines the need to activate Barnsley MBC's emergency procedures, including the invocation of their Corporate Resilience Plan.

The Health, Safety & Emergency Resilience Team will liaise with the Police Incident Manager to determine what further actions are, or may be required. If required, and if safe to do so, Barnsley MBC may assist the Police in any evacuation process.

Barnsley MBC's Health, Safety & Emergency Resilience Team is responsible for contacting downstream Local Authorities and other partner organisation including:

- Utility companies
- Transport providers e.g., Network Rail, SYPTE etc,

On receipt of a **Standby** message from Barnsley MBC, the Emergency Planning Teams in Doncaster and Rotherham Metropolitan Borough Council's and Sheffield City Council will, where appropriate, begin to carry out any necessary activities to safeguard the residents of their respective authorities.

The affected Local Authorities will send representatives to a Strategic Co-ordinating Group as required.

South Yorkshire Fire & Rescue

South Yorkshire Fire and Rescue have equipment, which can assist in breach mitigation actions, i.e. High Volume Pump and other pumping equipment. If the deployment of pumping equipment would be beneficial this will be co-ordinated by South Yorkshire Fire & Rescue.

Following liaison with South Yorkshire Police and depending on the size and urgency of the incident, South Yorkshire Fire & Rescue personnel may assist the Police in the evacuation process. They may also be required to undertake search and rescue activity. However this will only be carried out if it is believed safe to do so.

South Yorkshire Fire and Rescue cannot carry out search and rescue activities in fast flowing water.

South Yorkshire Fire & Rescue will send representatives to a Strategic Co-ordinating Group as required.

7.4 Stand Down and Recovery

Following the dissemination of an '**All Clear**' communication, action should be taken in accordance with the local Recovery Plan co-ordinated by Barnsley MBC.

On the activation of the **Stand-down** trigger level in the On-Site plan, local responders will review the need to stand down. The decision to move from the response phase to the recovery stage is likely to occur when the immediate response efforts to save life, property and recover evidence have concluded.

The **Stand-down** trigger level may also be invoked in the event that no flooding has occurred and the dam has been made safe. In this event there is still likely to be a multi-agency debrief, however the instigation of the following Recovery procedures may not be required.

South Yorkshire Police

If an uncontrolled breach has been averted and the structure made safe, the Incident Commander, in conjunction with Barnsley MBC and other stakeholders, considers whether to allow a controlled return of evacuees to properties and affected parts of the Management Areas. The following factors are considered as a part of this process by the Police:

- The return of people to evacuated zones should be phased and controlled as much as possible
- Normal transport services should be resumed as soon as possible
- Increase police visibility in the affected areas e.g. extra patrols etc

Once the decision to allow a controlled return has been taken, South Yorkshire Police will liaise with Barnsley MBC to advise evacuees of the situation, along with any specific information that is deemed necessary in line with their strategy for a controlled re-occupation of the affected areas.

They may also be involved in assisting with the recovery and undertaking or assisting with any subsequent investigations where appropriate.

South Yorkshire Fire & Rescue

On receipt of a **Stand Down** message from South Yorkshire Police, South Yorkshire Fire & Rescue will move into their recovery phase of operations.

In the event a breach/flooding has taken place, fire fighters and equipment may still be operating in floodwater in the 'Recovery' phase of the incident downstream of the reservoir.

Environment Agency

The Environment Agency may be responsible for:

- Undertaking clean-up operations, recovery from environmental pollution, containment and decontamination activity;
- Investigating the cause of the incident and the emergency response and taking appropriate follow-up action.

Barnsley Metropolitan Borough Council

The Council may establish an Emergency Recovery Team which brings together the key services, and where appropriate external agencies involved and is led by a senior officer most appropriate to the task. Due to the location of Worsbrough Reservoir; Barnsley MBC will take the lead in the recovery phase. However, other agencies may also play a key role.

Further details of the Emergency Recovery Team and the role it will play are outlined below.

Barnsley MBC - Emergency Recovery Team

On the activation of the **Stand-down** trigger level in the Off-Site plan, Barnsley MBC will review the need to stand down emergency operations. In the event that there has been substantial damage, and any evidence gathering process has been completed, Barnsley MBC will take formal control of the incident and initiates its Recovery Plan.

The Emergency Recovery Team will seek to ensure:

- That longer-term recovery priorities are reflected in the planning and execution of the response;
- That relevant organisations in the public, private and voluntary sectors are engaged in the recovery effort from the earliest opportunity; and
- Continuity of the management of the emergency once the response phase has been concluded.

Community engagement and ownership is fundamental to most recovery operations, and both will contribute to the recovery of the community itself and its members. Whereas urgency and decisiveness are the key features of the response phase, recovery requires thorough consultation, stakeholder management and related activities – effective communication with the public is essential.

In some cases, the private sector will deliver much of the recovery operation, the assets and resources deployed, and the work undertaken. In addition, if the physical losses caused by the emergency are insured, then the insurance companies will be heavily engaged with individual policyholders and contractors through loss adjustment and settlement.

The Emergency Recovery Team will need to consider and assess –

- The scale of any required clean-up operation
- Number and location of residential properties flooded
- Number and location of businesses affected
- Damage to the infrastructure
- Disruption to transport
- Financial assistance to both businesses and individuals
- Charitable donations
- Recovering costs
- Disruption to residential and social care
- Health implications
- Humanitarian Assistance Centre(s)
- Public meetings
- Media / VIP visits
- Waste and pollution
- Damage to bio-diversity, ecosystems and natural resources
- Damage to the built environment.
- Social Impacts

Responsibilities may include the following which is not an exhaustive list:

- Clearing debris from the highway and blocked street gullies;
- Making emergency repairs to road bridges and evaluating whether bridges affected by floods should remain open for use;
- Liaising with transport operators to ensure their bridges and infrastructure is safe
- Ensuring the safety and stability of the Council's primary and local road networks;
- Providing public information on the clean-up and restoration of properties;
- Providing environmental health advice and support after the floodwaters have subsided in relation to: the decontamination of businesses; fitness of properties for re-occupation after cleaning and disinfection (e.g. food businesses); clean-up, clearance of sludge and drying-out in houses and flats; disease, e.g. arising from sewage mixing with water supplies; rodent infestation and animal welfare;
- Assessing the impact on burial grounds;
- Examining the safety of buildings which have experienced flooding where there are potential concerns for their structural integrity, identifying areas for remedial work and authorising repair or demolition where buildings constitute a threat to public safety.

7.5 Debriefing, Inquiries and Lessons Identified

It is essential to keep records in order to facilitate operational debriefing and to provide evidence for inquiries (whether judicial, public, technical, inquest or of some other form). Single-agency and inter-agency debriefing processes should aim to capture information while memories are fresh.

A comprehensive record should be kept of all events, decisions, reasoning behind key decisions and actions taken. Each organisation should maintain its own records.

Good record-keeping also allows lessons to be identified and made more widely available for the benefit of those who might be involved in future emergencies. Additionally, chief officers and chief executives will wish to ensure that there is appropriate follow-up to any lessons that emerge from the debriefing process.

Debriefing should be honest and open, and its results disseminated widely. This is particularly important when it comes to disseminating lessons identified, which should be considered at local, regional, or central government level as appropriate.

DRAFT

8 Warning and Informing Strategy

8.1 Public Awareness

As a Category One Responder, Barnsley MBC is required to warn and inform the public and businesses of any hazards that are within their local community/area. To allow the Local Authority to discharge this duty with regard reservoir and dam inundation planning, a public information leaflet has been developed and distributed. This leaflet provides information on two different aspects; general information and pre-emptive warning.

General Information – this part of the leaflet will cover the following;

- General information and statistics regarding the specific reservoir and its dam
- Usual maintenance regimes for dams
- Purpose of the leaflet

Pre-emptive warning – this will provide information to those residents directly within the inundation area and will cover the following;

- Methods of alerting residents of evacuation
- Rendezvous points for evacuation purposes
- List of items to take during evacuation
- Ability to list important contact details

The leaflet will only be distributed to those properties, both residential and commercial, that are situated within the immediate inundation area. It is recognised however, that the wider community may wish to have information on the reservoir and its dam. Therefore, the leaflet will be freely available on the internet; copies will be located in libraries and Barnsley Connects Offices and will be issued to community groups for them to post on notice boards as they see appropriate.

8.2 Public Warning

The very nature of a dam breach means that the speed at which the event occurs and the released water travels down the inundation area is very fast. Given this situation the warning of residents cannot be limited to one method. The list below gives possible methods of warning and is by no means and extensive list.

- Multi-agency door knocking (where safe to do so)
- Use of vehicles fitted with loudhailers (where available and safe to do so)
- Local media (Connecting In A Crisis)
- EA Flood Warning Service

Dependant upon the specific incident and following a risk assessment, the most appropriate method(s) will be chosen and acted upon.

8.3 Informing and Advising the Public

Providing relevant and timely information about the nature of the emergency as it develops is crucial. The media may be essential in conveying to the public key messages about the emergency. It is vital that there are established contingency arrangements to ensure that the media are quickly and accurately briefed with timely and consistent information.

Further information to the public may also be provided through:

- Specific internet sites used for emergencies (e.g. Local Authorities or South Yorkshire Police)
- BBC local news via 'Connecting in a Crisis' arrangements
- Public information lines invoked for the event (if available)
- Social networking sites (e.g. Facebook, Twitter)

DRAFT

9 Media

The media may be present in large numbers from an early stage of a reservoir emergency, arriving locally within hours, and seeking information probably before the emergency services co-ordinated response is operational. They will attempt to get as close to the site as possible, in search of information and images.

In the event of a major potential or actual dam breach incident the police will take the co-ordinating lead in the response to the media in its overall public information role. The following arrangements may be established:

- A media briefing centre will be established
- Responder organisations will provide agreed (see below) media briefing on their own areas of responsibility through the media briefing centre.
- A media strategy will be developed to provide a clear framework for press officers and reporters detailing the regularity of press conferences, briefings, locations etc.
- Press releases from the various organisations will be shared and agreed prior to issue, and should be displayed at one focal point within the media briefing centre and also within the Strategic Co-ordinating Centre.
- Efforts should be made to provide a steady stream of information in order to recognise the needs of the broadcast media.
- All media representatives should be directed to the media briefing centre. (Media representatives must have appropriate professional identification in order to gain access to the media briefing centre).
- Updated information should be placed on response organisations' websites

For full details of the media arrangements in South Yorkshire please see the South Yorkshire Media Cell Operating Protocol.

Annexes

Annex 1 Worsbrough Reservoir Location Details

Annex 2 Reservoir Background Information

Annex 3 Potential Inundation Maps

Map 3.1

Map 3.2

Map 3.3

Map 3.4

Annex 4 Road and Footpath Closure Map

Annex 5 Detailed Risk Assessment

Annex 1

Worsbrough Reservoir Location Details

Narrative description of reservoir location.

Name:	Worsbrough Reservoir
Grid Reference:	SE 434700, 403300
Town:	Barnsley
Post Code:	S70 5LJ
Location:	Situated approx 2.5km South of Barnsley town centre, approx. 500m from Worsbrough Bridge on Park Road (A61)

Details of which mobile telephone networks function well.

Signal strength around Worsbrough Reservoir is good

Details of any On-Site Control Centre.

Sue Theideman, the assistant manager of Worsbrough Reservoir has an office at Worsbrough Mill, adjacent to the museum; this office has been identified as the On-Site Control Centre.

Sue has 24 hour access to the office which has a phone line and broadband internet connection including access to the Barnsley Council Intranet system. Toilet and light refreshment facilities are also available including hot drinks.

NOTE: There is a possibility that the assistant manager's office could be re-sited to a different building within the Worsbrough Mill site, this could result in the office being within the potential inundation area, rendering it unsuitable for use as the On-Site Control Centre, and therefore this will be reviewed at least annually and updated as necessary.

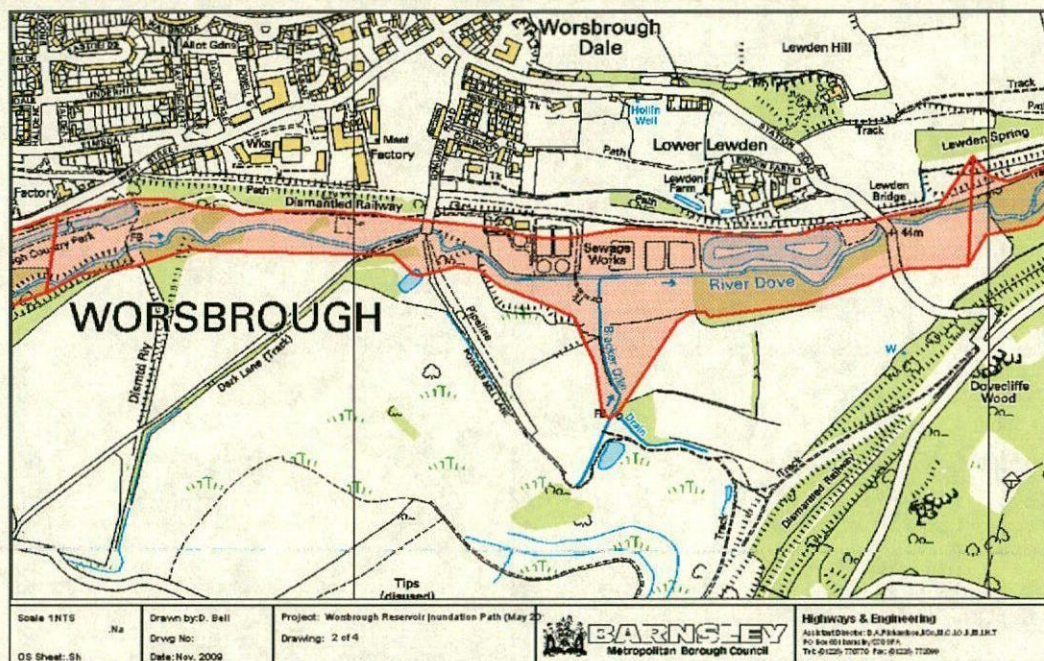
Wigfield Farm, Haverlands Lane, S70 5NQ (Grid Ref: SE 434500,403750) has been identified as a suitable On-Site Control Centre should there be any problem with access to the assistant manager's office at Worsbrough Mill.

Annex 2

Reservoir Background Information

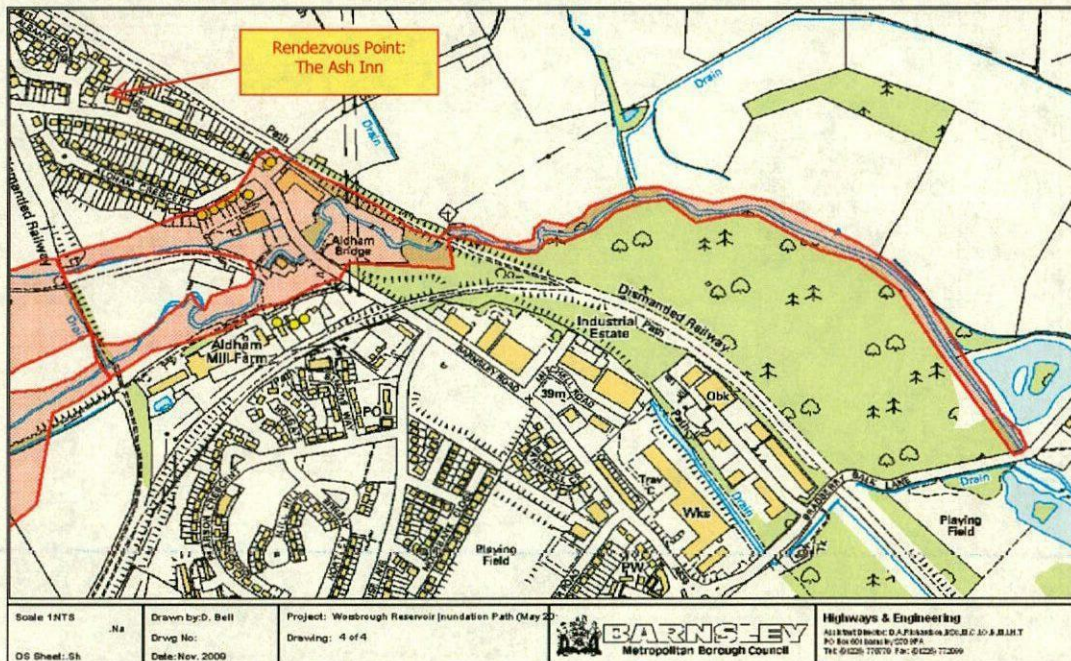
Name of structure	Worsbrough Reservoir	
Name of owner/operator	Barnsley Metropolitan Borough Council	
Type of reservoir and purpose	Nature reserve and recreational angling (feeds Worsbrough Waste Water Treatment Works)	
Part of a cascade with other reservoirs? (Provide details)	Not applicable	
Possible to bypass/isolate reservoir?	Impossible to fully isolate due to surface water run off from the upland areas.	
Consequence Class under Reservoirs Act 1975	A	
Date built	1801	
Capacity at top water level (m³)	266,000	
Type of construction	Earthfill	
Max. height of dam (m)	8.48	
Length of dam (m)	250 (approx)	
Normal frequency of inspection and date of last s.10 inspection	At least once every 10 years	Last S.10 Inspection: 29 August 2005
Normal frequency of inspection and date of last s.12 inspection	Annually	Last S.12 Inspection: 21 April 2011

Map of Potential Inundation Area



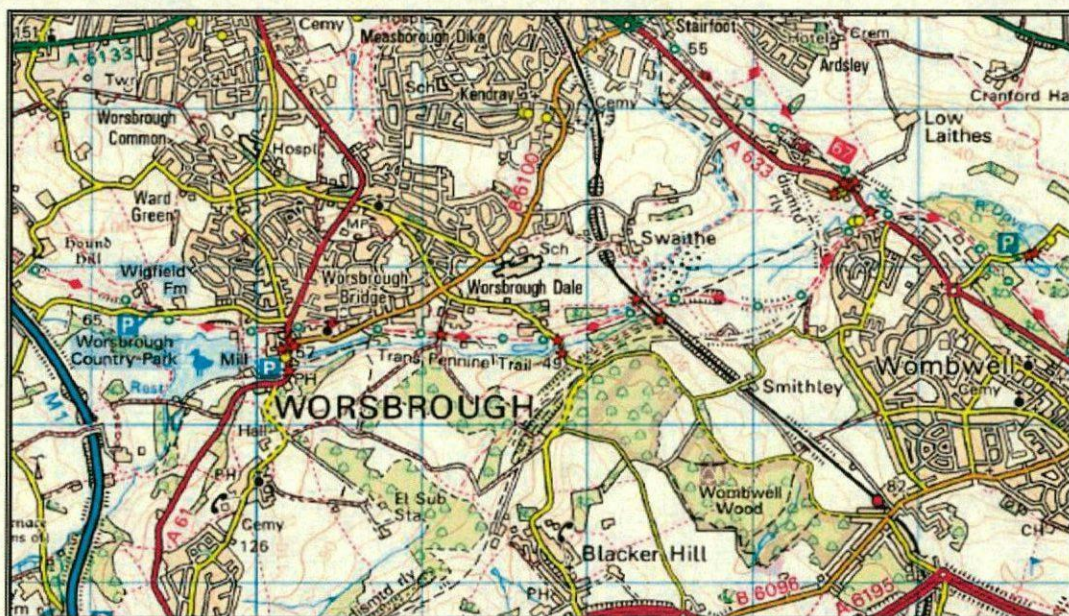
Reproduced from the Ordnance Survey mapping with the permission of the Ordnance Survey. All rights reserved. Reproduction of this document is prohibited without the permission of the Ordnance Survey. Ordnance Survey 100022364, 2009.

Map of Potential Inundation Area



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Road and Footpath Closure Map



Scale: 1:125	Drawn by: D. Bell	Project: Worsbrough Reservoir Road Closures	BARNSELY Metropolitan Borough Council	Highways & Engineering Assistant Director: G.A. Rotherham BSc (Hons) C10 BSc (Hons) PO Box 901 Barnsley S70 9EA Tel: (01226) 770770 Fax: (01226) 772066
OS Sheet: 50	Drawn No: 1	Drawing: 1		

Detailed Risk Assessment

This section includes relevant extracts from the dam breach impact assessment.

Under Development

Appendices

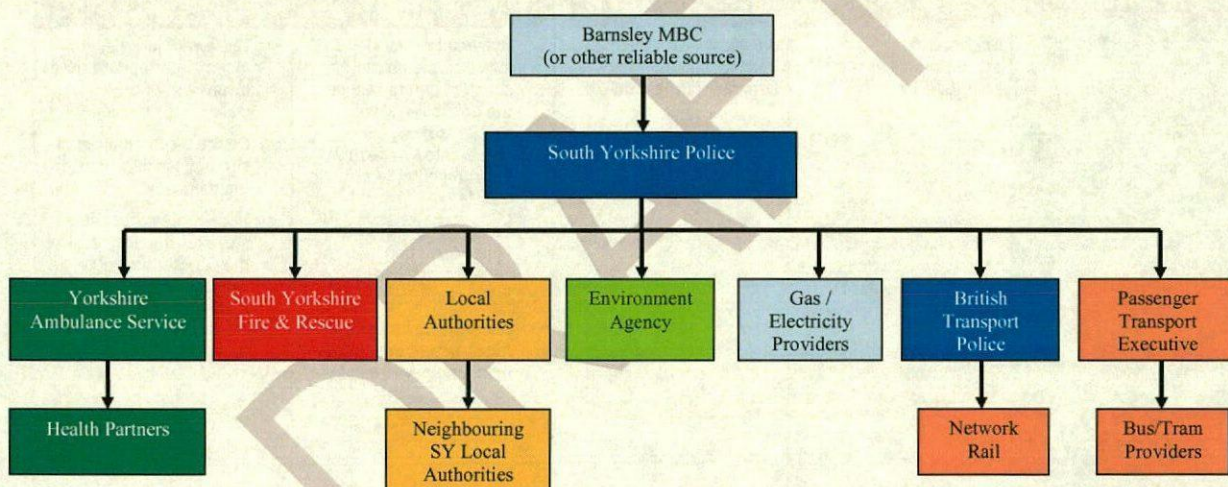
Appendix A	Contact Details Numbers for Key Agencies
Appendix B	Off-Site Notification Chain
Appendix C	Trigger levels for activating Off-Site Plan
Appendix D	Barnsley MBC Dam Breach Warning Statements
Appendix E	Specific Contingency Arrangements
Appendix F	Impact on Critical Infrastructure
Appendix G	Evacuation Card
Appendix H	Specialist Equipment
Appendix I	Forward Planning Group
Appendix J	Impact on the Vulnerable

Appendix A

Contact Details for Key Agencies

Organisation	Contact	Office N°	Emergency N°
Barnsley MBC (Undertaker)	Dave Lacey	01226 772037	01226 296800
Inspecting Engineer	Paul Williams	0113 220 8289	
Supervising Engineer	Ian Edmunds	0113 220 8289	07894 491280
SY Police			999
SY Fire & Rescue			999
Yorkshire Ambulance Service			999
Environment Agency	Incident Communication Service		0845 8503518 NOTE - Ask for Flood Incident Duty Officer
Environment Agency	Reservoirs Act Co-ordinator		0845 8503518 NOTE - Ask for Flood Incident Duty Officer
Environment Agency	Post Incident Reporting	01392 442001	
National Grid Gas	Refer to the Corporate Resilience Plan for contact details		
CE Electric			
BT			
SY Passenger Transport Executive			
Network Rail			

Off-Site Reservoir Emergency Notification Chain



PROTECT

Appendix C

Trigger Levels for Activating Off-Site Plan

Off-Site Trigger Level	On-Site Status	Details of Trigger	Actions	
			Undertaker	Emergency Responders
ALERT (Damage to reservoir or increased risk of failure has been identified)	Increased surveillance and monitoring	Significant damage has been identified in the structure of the dam	- Remedial works are initiated to stabilise the situation and to reduce the possibility of the problems being exacerbated by natural, environmental or climatic effects - Contact and liaise with Supervising Engineer to initiate a detailed inspection - Increase surveillance of the structure and install monitoring systems	- Liaise with internal and external partners to raise awareness of the developing situation - Devise a communication strategy for dealing with the media - Initiate the preparatory steps for the activation of the Off-Site Reservoir plan and also other Emergency Resilience Plans

PROTECT

Appendix C

Off-Site Trigger Level	On-Site Status	Details of Trigger	Actions	
			Undertaker	Emergency Responders
STANDBY (Dam breach possible)	Alert/Advisory	A serious problem has been detected Precautionary measures are being carried out to reduce the likelihood of failure to an acceptable level.	- Implement On-Site Plan and associated actions to mitigate failure or limit impact (contact and liaise with Supervising or Inspecting Engineer; increase surveillance and readings; attend scene). - Alert Police with details of incident, situation assessment and trigger level. - Provide regular contacts and updates to Police until such time as the incident is deemed to be routine maintenance.	- Police contact all relevant partners to place on standby. - Police, in conjunction with Cat 1 partners, consider possible (precautionary) activation of Silver (Tactical) Control planning meeting group to review procedures, undertake relevant forward planning including evacuation, public information and warning. - Police, in conjunction with Cat 1 partners, consider possible activation of Strategic Co-ordinating Group on precautionary basis to review procedures and undertake relevant forward planning including evacuation, public information and warning.

PROTECT

Appendix C

Off-Site Trigger Level	On-Site Status	Details of Trigger	Actions	
			Undertaker	Emergency Responders
IMPLEMENTATION (Dam breach imminent or dam has failed)	Alarm	An emergency drawdown is required to mitigate impact	- Implement On-Site Plan and associated actions to mitigate failure or limit impact (contact and liaise with Inspecting or Supervising Engineer; increase surveillance and readings; attend scene). - Alert Police with details of incident, situation assessment (including timings) and trigger level. - Identify breach sites, safe access routes, and rendezvous points. - Provide regular contacts and updates to Police until such time as the incident is deemed to be routine maintenance.	- Police activate and implement off-site plan, in conjunction with partners, in line with specific actions in the Off-site Plan. - Police implement all relevant control and co-ordination arrangements, including convening a multi-agency Silver/Tactical control. - Appropriate responders carry out their responsibilities in line with the Off-site Plan.
	Imminent failure	Control of the situation has been lost and failure is inevitable.		Responders undertake evacuation duties in line with Off-Site Plan while it is still safe to do so.
	Failed	Dam has failed and a large uncontrolled release of water has occurred.		Continue downstream activity while it is safe to do so.

PROTECT

Appendix C

Off-Site Trigger Level	On-Site Status	Details of Trigger	Actions	
			Undertaker	Emergency Responders
STAND-DOWN (Floodwaters subsided and return to properties being permitted, or 'All Clear' signal received)	Stand-down	Initial impact has dissipated or serious problem averted.	- Take steps to minimise consequential environmental impacts in and adjacent to the reservoir - Undertaker agrees and implements any urgent recommendations from the Supervising and/or Inspecting Engineers.	- Police contact all relevant partners and stand-down. - Strategic Co-ordinating Group discuss methodology to disseminate 'All Clear' - Strategic Co-ordinating Group discuss a methodology for a return to properties - Strategic Co-ordinating Group considers transfer to Strategic Recovery Group

YELLOW

DAM BREACH

WARNING STATEMENT

FROM Barnsley MBC

TEL: [INSERT PHONE NO.]

TO SY Police
Force Incident Manager

Statement issued for:

WORSBROUGH RESERVOIR

ISSUE DATE:

TIME: (GMT):

[INSERT DATE]

[INSERT TIME]

DETAILS OF WARNING:

1. A potential dam breach situation has been identified, which poses a risk to life and property in the areas identified on the flood inundation map for this reservoir.
2. A warning to the general public is not advised at this stage. However, local warnings to properties near the reservoir are recommended.
3. Barnsley MBC staff are monitoring the situation.
4. No press publicity required. If press require information they are requested to contact Barnsley MBC on the above telephone number.

RED

DAM BREACH

WARNING STATEMENT

FROM Barnsley MBC

TEL: [INSERT PHONE NO.]

TO SY Police
Force Incident Manager

Statement issued for:

WORSBROUGH RESERVOIR

ISSUE DATE:

TIME: (GMT):

[INSERT DATE]

[INSERT TIME]

DETAILS OF WARNING:

1. A dam breach situation has been identified, which poses a risk to life and property in the areas identified on the flood inundation map for this reservoir.
2. Immediate evacuation of the flood inundation area is recommended.
3. Press publicity is required. If press require additional information they are requested to contact Barnsley MBC on the above telephone number.

Appendix E

Specific Contingency Arrangements

This section should include information on the following:

1. Description and map of the management zones, highlighting zones of total and partial devastation, speed and depth of flows and estimated arrival times and peak flow times for water in specific locations/zones.
2. Description and maps of LA/LRF boundaries and neighbouring LRFs for the extent of the inundation zone.
3. Description and map of location of Management Areas
4. Description and map of any Blue routes/Emergency Services Priority Access Routes – including whether or not they are suitable for FRS HVP equipment, etc.
5. Description and map of location of Evacuation Areas
6. Description and map of location of Control and Rendezvous Points (RVPs), marshalling areas, and any helicopter landing sites, as well as access to the site:

The table below details the locations of the RVPs. They can also be found on the maps of the management and evacuation areas in **Annex 3**.

RVP	Description	Grid Reference
RVP 1	The Ship - Park Rd, Barnsley, S70 5BA	435180, 403680
RVP 2	The Ash Inn - 105 Wombwell Lane, Barnsley, S73 8EP	438374, 404630

7. Description and map of locations of footpath and road closures

The table below details the locations of public right of way closures required in the event of inundation from Worsbrough reservoir. These locations can be found on the Road Closure Map in Annex 4.

Footpath Closure Point	Description	Area	Grid Reference
1	Trans-Pennine Trail	Swaithe (East of viaduct)	437500, 403790
2	Trans-Pennine Trail	Swaithe (West of viaduct)	436830, 403544

Appendix E

The table below details the locations of road closures required in the event of inundation from Worsbrough reservoir. These locations can be found on the Road Closure Map in Annex 4.

Road Closure Point	Description	Area	Grid Reference
1	A61 Sheffield Road (North)	Worsbrough Bridge	435200, 403340
2	A61 Sheffield Road (South)	Worsbrough Bridge	435200, 403540
3	Kendall Vale	Worsbrough Bridge	435150, 403480
4	Kendall Crescent	Worsbrough Bridge	435190, 403500
5	B6100 West Street	Worsbrough Bridge	435230, 403500
6	Edmunds Road	Worsbrough Dale	436120, 403570
7	Station Road (North)	Lewden Bridge	436850, 403460
8	Station Road (South)	Lewden Bridge	436820, 403540
9	A633 Wombwell Lane (East)	Aldham Bridge	438710, 404350
10	A633 Wombwell Lane (West)	Aldham Bridge	438560, 404530
11	Aldham Crescent (North)	Aldham Bridge	438500, 404520
12	Aldham Crescent (South)	Aldham Bridge	438500, 404470
13	Old Farm Lane (North)	Aldham Bridge	438620, 404540
14	Old Farm Lane (South)	Aldham Bridge	438600, 404520
15	Bradberry Balk Lane (North)	Netherwood	439710, 404090
16	Bradberry Balk Lane (South)	Netherwood	439680, 404070

8. Description and maps of location of evacuation priorities, escape routes, evacuee assembly points and premises requiring special consideration including hospitals.

9. Description of specific rest or reception centres

The table below details the buildings identified to act as rest centres or reception centres for the management areas, for use in evacuations.

Zone(s)	Rest Centre / Reception Centre	Capacity
All Zones	Evacuate to the rest centre at Barnsley Metrodome , utilise locally sourced temporary accommodation.	200+

10. Contingency Arrangements For Utility Losses:

Gas

Northern Gas Networks can supply residents affected by a gas shortage with (insert details).

Appendix E

Electricity

CE Electric UK has contingency arrangements in place for a loss of electricity, including preparatory switching and alternative feeds. Diesel generators (415 Volt) can also be hired in from a contractor supplier. The buildings listed below are at risk from an electricity outage due to damage from a substation or cable in the inundation area. The buildings identified and listed are key buildings that facilitate the emergency response or have been identified as vulnerable. Restoration times can only be used as a guide as actual times will be dependant upon system conditions at the time of an incident and where manual 11kV switching is required dependant on the ability to gain access to the area.

Key Building	Address	Contact N ^o
Worsbrough Bridge Sports & Development Club	Park Road S70 5LJ (Grid Ref: SE 435180, 403420)	01226 284452

Water

Yorkshire Water can supply residents affected by loss of water supplies.

Telecommunications

British Telecom can provide a mobile telecommunications unit, which can be deployed to (insert details). This vehicle contains facilities to link into a communications system.

NOTE - Do not include information that identifies or defines sites as 'Critical National Infrastructure'

Appendix F

Impact on Critical Infrastructure

Impact on Road Network

Although many local roads are affected by the inundation area, only a few major roads are affected as follows.

Arterial Road / Bridge	Length affected (to nearest 10m)	Grid Reference
A61 Sheffield Road	250m	435200, 403340
Lewden Bridge (Station Road)	100m	436850, 403460
A633 Wombwell Lane (Incl Aldham Bridge)	270m	438710, 404350
Bradberry Balk Lane (Incl road bridge)	50m	439680, 404070

(See **Annex 4**).

Impact on Rail Infrastructure

Describe the rail infrastructure likely to be affected.

Line	Length affected (to nearest 10m)	Grid Reference
<i>No affected rail infrastructure identified</i>		

Impact on Gas Supplies

Describe the gas pipes likely to be affected.

Type of Pipework	Street	Grid Reference
LP Mains	Park Road (A61)	435200, 403350
MP Mains	Station Road	436840, 403520
LP Mains	Bradberry Balk Lane	439700, 404075

(Insert maps as appropriate).

Appendix F

Impact on Electricity Supplies

Describe the electricity substations likely to be affected.

This sub-station is at risk in the inundation area.

Location	Street	Grid Reference
To rear of 11 Aldham Crescent, 100m from A633 Wombwell Lane (Accessed from Wombwell Lane)	Wombwell Lane, Aldham	SE 438515, 404410

Impact on Clean and Waste Water Assets

Describe the clean and waste water assets likely to be affected.

Asset	Location	Grid Reference
Worsbrough Waste Water Treatment Works	Worsbrough Dale	436260, 403530

Evacuation Card

Evacuation Areas:

Worsbrough Bridge - Lewden Bridge - Aldham Bridge

MAJOR INCIDENT IN YOUR AREA

There is a concern that you and your property are at risk from flooding from;

WORSBROUGH RESERVOIR

EVACUATE YOUR PROPERTY NOW

Make your way to:

THE SHIP

Park Rd, Barnsley, S70 5BA

THE ASH INN

105 Wombwell Lane, Barnsley, S73 8EP

*(delete as appropriate)

If you need assistance please alert one of Police Officers in the area.

Before leaving your home remember to:

- Switch off gas, electricity and water at mains
- Close and lock all windows and doors
- Take any medication and medical equipment with you
- Take your pets and some pet food

If a neighbour has particular needs, please inform one of the officials or Police Officers

If you choose to go elsewhere, complete the details overleaf
and hand this to one of the Police Officers in your area.

Remember to tune-in your local radio stations to keep up-to-date on the situation;

- **BBC Radio Sheffield** – 88.6 FM or 104.1 FM & DAB
- **Dearne FM** – 97.1 FM or 102 FM

Appendix H

ONLY COMPLETE THIS IF YOU ARE NOT GOING TO

THE SHIP

Park Rd, Barnsley, S70 5BA

THE ASH INN

105 Wombwell Lane, Barnsley, S73 8EP

*(delete as appropriate)

NAME:

CURRENT ADDRESS:

.....

POST CODE:

NUMBER OF PEOPLE IN HOUSEHOLD:.....

CONTACT NUMBER (MOBILE NUMBER IS PREFERRED):

.....

WHERE WILL YOU BE STAYING (PLEASE COMPLETE EVEN IF STAYING AT YOUR PROPERTY):

.....

.....

POST CODE:**TEL. NO.**.....

THANK YOU FOR YOUR COOPERATION

IF YOU CHOOSE NOT TO LEAVE YOUR HOME PLEASE READ AND SIGN THE STATEMENT BELOW –

I have been informed that I should evacuate my home/premises, due to a reservoir emergency.

I understand that if I choose to remain in my home/premises, I do so at my own risk.

Signed.....

Appendix H

Specialist Equipment

Barnsley MBC

The Council has access to large amounts of sandbags, sand and aggregate that could be used in an emergency if required and has its own 'Sandbag Policy', outlining how and when they will be deployed.

South Yorkshire Police

Material/Item	Amount	Comments
Rescue Boats	2	Manned by underwater search unit

South Yorkshire Fire & Rescue

Material/Item	Amount	Comments
Rescue Boat	2	
High Volume Pumps (HVP)	1	Further HVPs can be obtained nationally

In addition to these resources South Yorkshire Fire & Rescue also has stocks of temporary walkways, small pumps, waders, and life jackets that can be carried on appliances at the appropriate stage in a flood response. They are all strategically located.

Yorkshire Ambulance Service

The Hazardous Area Response Team (HART) is currently being trained in water rescue techniques.

Yorkshire Water

Material/Item	Amount	Comments
High Volume Pumps (HVP)	6	Trailer Mounted
Bagging	6km	
Inspecting Engineers		Provision of specific reservoir construction advice
Supervising Engineers		Provision of specific reservoir surveillance and monitoring advice
Reservoir Safety Team		Provision of specific reservoir safety advice

Appendix I

Forward Planning Group

Context

The Forward Planning Group meets, via telephone conference, once the trigger for the 'Standby' alert/advisory level have been met. It is activated when a serious problem has been detected by the undertaker, who then alerts South Yorkshire Police.

Aim

The aim of the Forward Planning Group is to agree preparatory measures to mitigate the impact of a potential large uncontrolled release of water from the Worsbrough reservoir.

Objectives

- To provide a tactical lead in the preparatory stage of the response.
- To ensure efficient and continuous liaison is established with the off-site plan.
- To ensure all organisations are aware and up-to-date on the alert level and included on situation updates.
- To identify areas potentially at risk, and any vulnerable establishments and individuals (accessing available records) within these areas.
- To agree appropriate methodology if evacuation was required.
- To identify availability and suitability of reception and rest centres.
- To discuss and agree appropriate messages to provide to the media for public information.
- To ensure appropriate levels of staff are on stand-by to respond if required.
- To identify any additional resources available that can be utilised to alert residents to evacuate, and are placed on stand-by if required.
- To identify potential disruption to travel infrastructure (road and rail) and agree mitigation measures.
- To identify potential disruption to critical infrastructure and agree mitigation measures.
- To identify adequacy of resources available to evacuate and assess feasibility of mutual aid.
- To assess additional information and unforeseen circumstances as they arise and identify appropriate response measures.
- To agree frequency of telephone conferences, dependant on the situation as it evolves.

Appendix I

Membership

- (Chair) Police Incident Commander (Silver/Tactical)
- Undertaker representative (Barnsley MBC)
- South Yorkshire Fire & Rescue
- Yorkshire Ambulance Service
- Sheffield City Council Emergency Planning Officer and Land Drainage Engineer
- Other affected Local Authorities representatives, where appropriate
- Environment Agency
- Lead PCT
- Any other identified organisation as required

Frequency of Meetings

The group will convene telephone conferences on a regular basis, with meetings arranged by the chair dependent on actions set by the objectives of the group.

NB A note of all meetings and policy decisions should be maintained for future reference and audit purposes

Appendix J

Impact on the Vulnerable

Description of Local Community and its Composition

- Overall population
- Age profile
- Ethnicity
- Minority languages

Description of Vulnerable Establishments in Inundation Area

The following vulnerable establishments have been identified in the consequence zone.

Type of Establishment	Name and Address of Establishment	No. of People Affected	Grid Ref
School	<i>No vulnerable establishments have been identified within the Worsbrough Reservoir inundation area.</i>		
Hospital			
Residential Home			
Sheltered Housing			

Description of procedure for accessing details of vulnerable individuals

Liaison would take place with the Adults and Communities representative within the Emergency Control Team (Silver Team) at the time of the incident