

PREPARATION GUIDE ON-SITE PLAN FOR RESERVOIR DAM INCIDENTS

DEFRA GUIDANCE ON RESERVOIR EMERGENCIES

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PURPOSE OF THIS GUIDE

This guide is a supplement to the 'DEFRA Guidance on Reservoir Emergencies, On-site Plan for Reservoir Dam Incidents' document and is to be used in the preparation of On-site Emergency Plans for Reservoir Dam Incidents, hereafter termed 'the Plan'.

The aim of this On-site Plan guide is to outline the type of information a reservoir undertaker should include in the Plan. What goes into the Plan is intended to be flexible and will vary from reservoir to reservoir. For some reservoirs information referred to in this guide may not be applicable and therefore is not needed in the Plan. For other reservoirs additional relevant information may be applicable and therefore should be included. As each reservoir is site specific, all information that is considered to be relevant should be included in the Plan, even if it is not listed in this guide. Advice can also be sought from your Supervising or Inspecting Engineer if required.

The Plan may need to be developed in consultation with the Local Authority (LA) and the Off-site Plan maintained by the LA. An individual undertaker may be approached by the LA for this purpose. The Plan should still be able to be completed even if the Off-site Plan is still in preparation but may have to be updated upon finalisation of the Off-site Plan. Specific Off-site plans will not be produced for all reservoirs and may be aggregated into the LA generic reservoir Off-site plan.

HOW TO USE THIS GUIDE

This guide provides the typical information that is required in the Plan. It is divided into 'Sections' and 'Data Sheets'. The Sections contain the most important data that is required to be at the front in the Plan. The Data Sheets contain additional information to supplement the information in the Sections. Not all the information required in the Data Sheets will be available for every reservoir however where available this information should be provided to simplify and speed up the response during an emergency.

Information may also be available in other documents / locations. If this is the case and the information can't be easily inserted into the Plan, the exact location of the information should be indicated in the Plan. The information should be stored in a location and format that can be readily accessed in an emergency. It is preferable to keep copies of all the information relating to the Plan in the one location, with the Plan itself. If electronic, a link in the Plan could be made to the data.

The guide is structured to reflect the structure of the Plan example blank template that is included in Appendix A. When preparing the Plan, a reservoir undertaker may wish to start with the example template and use the information included in this guide to complete the relevant template Sections and Data Sheets. Appendix B and C of this guide contain completed example Plans that provide additional guidance on the typical information required for a Plan for an individual private undertaker with a single reservoir (Appendix B), and for an owner with a large number of reservoirs (Appendix C).

FRONT COVER

The front cover of the Plan should contain the following:

- a header containing a reference, date and version number that is updated every time the Plan is reviewed and updated;
- the reservoir name as it appears on the Ordnance Survey map and also any common name(s) used for the reservoir , where applicable;
- the date that the Plan was issued, the names of the people involved in the compilation of the Plan, and details of who holds a copy;
- a footer containing the undertakers name and the name of the person responsible for the Plan content.

INSIDE COVER

The inside cover of the Plan should contain the document history. The document history should be updated every time the Plan is changed in any way. An example of the document history required is provided below.

			DOCUMENT REF: Version 2			
03	Revised following Inspection	Ken Smith	John Carter	Al Williams	Chris Mann	25/011/09
02	Revised following exercise	Ken Smith	John Carter	Al Williams	Chris Mann	12/07/09
01	Issue	Ken Smith	John Carter	Al Williams	Chris Mann	06/02/09
Revision	Purpose Description	Originated	Checked	Reviewed	Authorised	Date

CONTENTS

The contents page should be clear and easy to read and indicate the page number on which each Section and Data Sheet is located for quick reference. An example is provided below.

Page No.	Sections
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2	2. RESERVOIR INCIDENT ALERT
3	3. ON-SITE ACTION AND TRIGGER LEVELS
4	4. OFF-SITE ACTION AND TRIGGER LEVELS
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SECTIONS

1. RESERVOIR / PLAN DETAILS

This section should include the following reservoir information.

Location - Include address (including post code), directions to the site from nearest 'A' road or motorway, National Grid Reference and a map of the site location including all access routes, site parking and marshalling point. The location of the nearest hospital should also be included on the map (including address and emergency phone number), or if this is not possible, another map should be provided.

Owner - Include undertaker and if different, legal owner. Also include address and out of hours and alternative telephone numbers here.

Use - Main reservoir use i.e., water supply, tailings storage, fishing.

Type - Type of structure, i.e., earth fill, rock fill, masonry, concrete.

Supervising Engineer - Name and company / affiliation, and address and telephone numbers.

Plan Contents

Purpose

To ensure that relevant staff are aware of their responsibilities and the process to be followed in the event of a possible, probable or actual reservoir incident at (Reservoir Name).

Scope

From: The planning of what is required and what actions are to be taken, should a reservoir incident arise, to reduce the impacts of the incident.

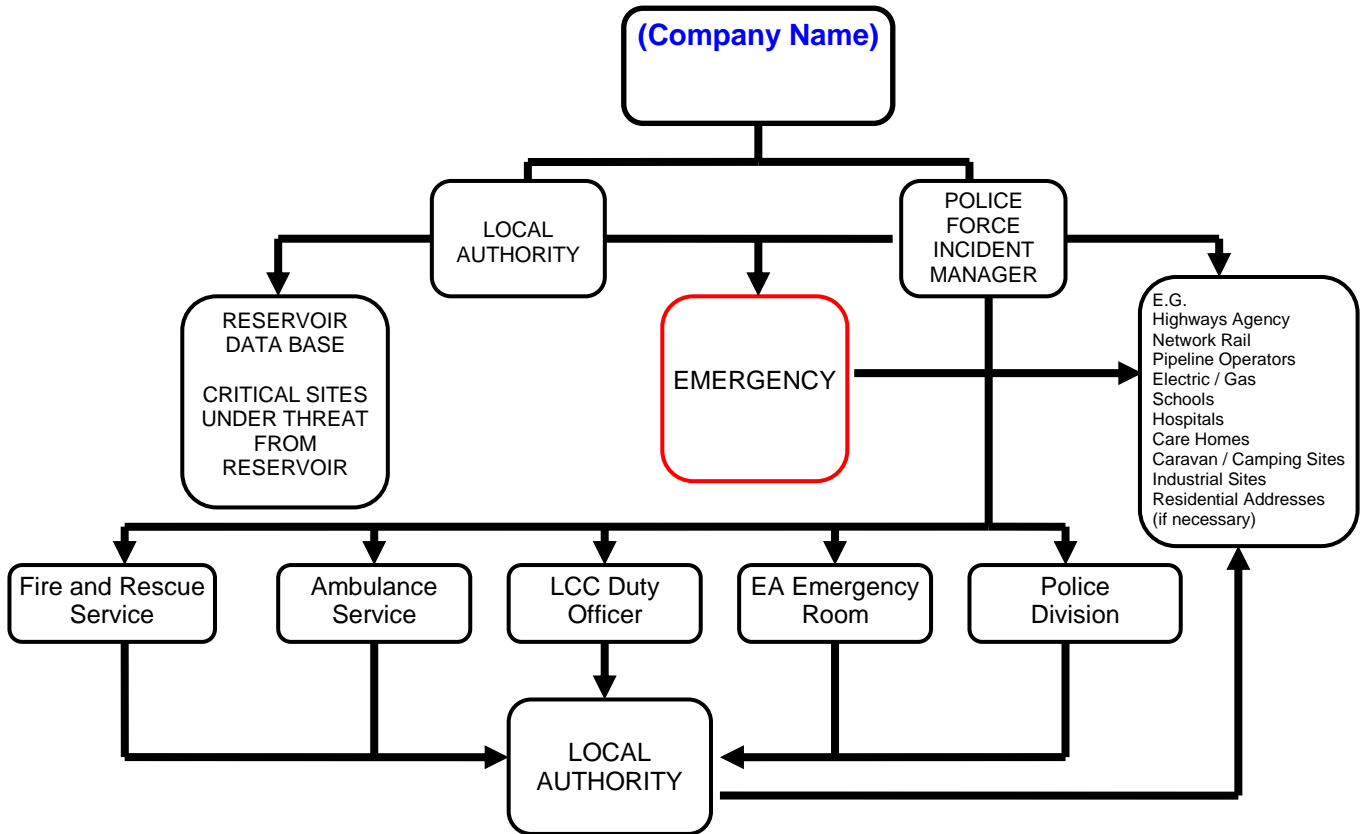
To: How to undertake the required actions during an actual reservoir incident.

References

Insert titles of reports, plans, manuals, etc. from which information contained in the Plan has been taken and where they are held.

2. RESERVOIR INCIDENT ALERT

This section should contain an outline description of the existing on-site incident alert procedure. An example of such a procedure is presented below.



3. ON-SITE TRIGGER LEVELS AND ACTIONS

This section should contain a detailed description of the on-site triggers and action levels required in a ‘standby’ situation where there is a possibility for ‘dam breach’.

The description should be in an easy to read format to allow for quick reference in an emergency situation. An example of a tabulated description is provided in the table below.

STAGE	STATUS	DETAILS OF TRIGGER(S)	UNDERTAKER'S ACTIONS	LOCAL RESPONDERS' ACTIONS
STANDBY (dam breach possible)	ALERT	<ul style="list-style-type: none"> <input type="checkbox"/> Earthquake/landslip affects local area <input type="checkbox"/> Movement in dam crest/slope/toe <input type="checkbox"/> Instrumentation reading exceeds predefined levels. <input type="checkbox"/> Uncontrolled release of water, embankment/tunnel etc. <input type="checkbox"/> Movement in up or downstream embankment. <input type="checkbox"/> Advice from Inspecting/Panel Engineer 	<ul style="list-style-type: none"> <input type="checkbox"/> Arrange immediate visit by Supervising and/or Inspecting Engineer <input type="checkbox"/> Increase frequency of readings and surveillance <input type="checkbox"/> Consider notifying the Police and LA when there is any on-site activity related to a significant potential problem 	<ul style="list-style-type: none"> <input type="checkbox"/> Police/LA may contact all relevant partners to place on standby.
	ADVISORY	<ul style="list-style-type: none"> <input type="checkbox"/> A structural problem in the dam has been detected or reported to the Undertaker. <input type="checkbox"/> A precautionary drawdown is to be carried out to reduce the likelihood of failure to an acceptable level. 	<ul style="list-style-type: none"> <input type="checkbox"/> Undertaker reports details of incident to Police and/or Local Authority. <input type="checkbox"/> Undertaker attends scene and provides updates to local responders and Supervising Engineer. <input type="checkbox"/> Undertaker implements On-site Plan and relevant actions in conjunction with relevant Engineer. 	<ul style="list-style-type: none"> <input type="checkbox"/> Police contact relevant Cat 1 (Local Authority, EA etc) and Cat 2 partners to place on standby. <input type="checkbox"/> Police, in conjunction with Cat 1 partners, consider possible activation of Tactical (Silver) Control on precautionary basis to review procedures, undertake relevant forward planning including evacuation, public information and warning. <input type="checkbox"/> Police, in conjunction with Cat 1 partners, consider possible activation of Strategic Coordinating Group (Gold Control) on precautionary basis to review procedures and undertake relevant forward planning including evacuation, public information and warning.

4. OFF-SITE TRIGGER LEVELS AND ACTIONS

This section should contain a detailed description of the off-site triggers and action levels required in an ‘implementation’ situation where there a dam breach is ‘imminent’ and has ‘failed’ and in a ‘stand down’ situation where the ‘floodwaters have subsided’.

The description should be in an easy to read format to allow for quick reference in an emergency situation. An example of a tabulated description is provided in table below.

STAGE	STATUS	DETAILS OF TRIGGER(S)	UNDERTAKER'S ACTIONS	LOCAL RESPONDERS' ACTIONS
IMPLEMENTATION (dam breach imminent dam has failed)	ALARM	<input type="checkbox"/> An emergency drawdown is required to avert failure of dam structure.	<input type="checkbox"/> Undertaker attends scene and provides updates to local responders and Supervising/ Inspecting Engineer. <input type="checkbox"/> Undertaker implements On-site Plan and relevant actions to mitigate failure or limit impact in conjunction with the relevant Engineer.	<input type="checkbox"/> Police activate and implement Off-Site Plan in conjunction with partners and undertake all necessary mitigatory actions. <input type="checkbox"/> Police implement all relevant multi-agency command and control arrangements with participation of Undertaker and relevant Engineers.
	IMMINENT FAILURE	<input type="checkbox"/> Control of the reservoir has been lost and failure is inevitable.		
	FAILED	<input type="checkbox"/> The dam has failed and large uncontrolled release of water has occurred.		
STAND-DOWN (floodwaters subsided or return to properties permitted).	POST – STANDBY	<input type="checkbox"/> Serious problem averted.	<input type="checkbox"/> Undertaker agrees and implements any urgent recommendations from the relevant Engineers.	<input type="checkbox"/> ‘All clear’ given. <input type="checkbox"/> Cat 1s review plans in light of response and any ensuing recommendations.
	POST-IMPLEMENTATION	<input type="checkbox"/> Water flows from the reservoir are minimal and efforts are focussed on consequences in zones of total and partial devastation.		<input type="checkbox"/> Cat 1s focus on on-going response and recovery operations affecting the needs of local populations, buildings, critical infrastructure etc.

5. ON-SITE ROLES AND RESPONSIBILITIES

This section should contain the roles and responsibilities of on-site personnel in an emergency situation. An example of typical roles and responsibilities for a larger owner is contained in the table below.

Role	Typically Undertaken By	Responsibilities Include
Incident Controller (IC)	The Treatment Manager or Area Manager	<ul style="list-style-type: none"> • Direction of ALL (Company Name) staff in the field associated with any aspect of the incident response. • Implement a range of measures to avert failure including the on-site plan. • Agreement of overall response & recovery strategy with Incident Manager. • Providing ongoing surveillance and situation assessments. • Communication with Incident Manager. • Overall H&S of all personnel addressing incident. • Notification of and liaison with emergency service leaders on site.
Marshalling Officer	The IC or their appointee	<ul style="list-style-type: none"> • All (Company Name) staff arriving on site must 'check in' with the marshalling officer and 'check-out' when leaving. • Checking on continuity of response i.e. that if someone is leaving site their responsibilities are either fully executed or properly handed over. • Providing of safe approach routes and details of rendez-vous points (RVPs) to the emergency services. • Assists in information flows to incident team via the Information Officer. • Establishing an emergency control centre.
Problem Assessment Team	Headworks Controller; Reservoir Safety Manager; Supervising and Inspecting Engineers	<ul style="list-style-type: none"> • Assess the problem. • Agree responses with IC and Incident Manager. • Monitor reservoir & assess response. • Report outputs to Information Officer. • Valve operations (Headworks Controller).
Emergency Plant Controller	Senior Manager with engineering delivery experience	<ul style="list-style-type: none"> • Agrees technical solutions with Inspecting Engineer, (Company Name) Reservoir Safety Manager and Incident Manager. • Leads delivery on the ground of agreed solution with Partners and other suppliers
(Insert Company Name) Press Officer	(Insert Company Name) Press Officer or nominee	<ul style="list-style-type: none"> • To collate information for (Company Name) Comms Team, sole point of contact on site for central Comms Team.
Information Officer		<ul style="list-style-type: none"> • Info flows to Operational Response Centre (ORC) / Incident Team / task teams. • Maintaining a log. • Record keeping.
Administration Officer		<ul style="list-style-type: none"> • Staff welfare, accommodation & meals, • Rotas for local incident control personnel. • Accommodation for staff drawn in from other areas. • Working Time Directive monitoring

6. INCIDENT MANGEMENT PROCEDURE

This section should contain an overview of the on-site incident management procedure, if one exists.

An example of on-site incident management procedure is provided below.

An impending dam failure at impounding reservoirs, or a structural failure of a service reservoir covered by the Reservoirs Act 1975 will be managed in accordance with:

(Name of Undertaker) Operational Incident Management Procedure

Local Incident Control

Local incident control is the structure in which the field based response to an incident operates (ie. the Incident Controller's (IC) team). It refers to essential activities and how they are organised. **Incident Control is an essential element of managing MINOR and MAJOR incidents at our reservoirs.**

The IC is the leader of all (Company Name) staff in the Field. To ensure properly coordinated response, all other (Company Name) personnel must ensure that the IC is aware of and approves of their activities.

The IC will agree with the Duty Operational Response Manager (DORM) where local incident control is to be established, it could be one of the following:

- fixed safe marshalling point/RVP at the site of the incident perhaps with (Company Name) mobile incident centre
- local (Company Name) office or depot; third-party office (e.g. Police Station, Local Authority Offices etc)

In choosing the location consider the following

- How many people are likely to arrive on site and for how long? What are the duties they will need to undertake?
- How will they be briefed and coordinated?
- Safe car parking and health and safety when undertaking their work.
- How will any public and media who assemble at the site be managed?
- If it is to be an operational site, is the normal business or treatment process at that site secure?
- Will you need office facilities for: incident meetings, communication with the Incident Team at other sites, welfare etc?

All (Company Name) staff and partners must be aware that if they arrive on site and commence activities they are responsible for ensuring the handover/continuity of those activities when they leave site.

The IC will appoint personnel to cover the following roles (or agree with the Incident Manager why a particular role is not required). Individuals may be asked to cover more than one role. Additional staff may be needed to be drafted into the area to undertake roles. If a role cannot be filled locally the Incident Manager should resource it from the wider business.

The IC will appoint personnel to cover the following roles (or agree with the Incident Manager why a particular role is not required). Individuals may be asked to cover more than one role. Additional staff may be needed to be drafted into the area to undertake roles. If a role cannot be filled locally the Incident Manager should resource it from the wider business.

7. MAINTENANCE OF THE ON-SITE PLAN

This section should contain details of the maintenance of the Plan. This should include details of the Plan training, equipment testing and exercises. Any changes to the Plan that arise from the maintenance should be included in the Plan. The changes should be recorded in the 'document history' table at the front of the Plan.

An example of the information required in this section for large and small organisations is provided below.

Type of Organisation	Annual Review	Exercise Level 1	Exercise Level 2
<p>Private Members Club / Small owner operators (e.g. agriculture, fishery)</p> <p>Responsible for <5 reservoirs.</p>	<p>Annual review of plan confirming details are correct and all equipment / information referenced in the plan is available.</p> <p>Review to include all organisations members with a role in the plan.</p> <p>May coincide with Supervising / Inspecting Engineers' inspection.</p>	<p>When required, participate in exercise of off-site plan for reservoir (which will be lead by a Cat 1 organisation) and any on or off-site plan exercise involving a reservoir which is part of a cascade which includes your reservoir.</p>	<p>One full exercise every 10 years for each reservoir. May coincide with S10 inspection.</p> <p>Exercise to involve all personnel in the organisation with a role in responding to a major reservoir incident, and should include:</p> <ul style="list-style-type: none"> • deployment of staff as per plan requirements. • contacting of equipment/materials suppliers to confirm availability during emergency. • involvement of Supervising or Inspecting Engineer. • operation of valves and drawdown facilities. • participation of organisations managing reservoirs in cascade. • relevant Cat 1s should be invited as observers.
<p>Large Organisation</p> <p>Responsible for =>5 reservoirs.</p>	<p>Annual review of every plan by its author. Revised plan approved according to organisations arrangements. Ideally the review should include all front-line personnel who operate the reservoir.</p>	<p>As above for individual reservoirs.</p>	<p>One full exercise per year per organisation.</p> <p>Exercise to involve all personnel in the organisation with a role in responding to a major reservoir incident, and should include:</p> <ul style="list-style-type: none"> • deployment of staff and emergency equipment (if organisation owned) as per plan requirements. • involvement of Supervising or Inspecting Engineer. • operation of valves and drawdown facilities. • participation of organisations managing reservoirs in cascade. • relevant Cat 1s should be invited as observers.

Testing Equipment

The testing of emergency draw-down equipment is to be carried out in accordance with the Draw-down Operations Manual.

Plan Updates and Review

The review and update of this On-site Plan should be undertaken as follows:

- As part of the Section 10 Inspection; and
- Following every exercise of the On-site Plan.

The 'document history' table at the front of this plan should be updated following any review and update.

DATA SHEETS

DATA SHEET A – Key Contact Details

This Data Sheet should contain a table clearly identifying the contact details of the key site personnel and authorities that may need to be contacted in an emergency. When listing individual names, take into account absenteeism due to sickness, holidays and staff turnover and include a backup name.

An example of a suggested key contact details table is presented below.

Role	Name / Job Title	☎ Office	☎ Home	☎ Mobile
Undertaker's 24 hr emergency incident reporting number.				
Undertaker's Responsible Officer				
Undertaker's Reservoir Safety Manager				
Contact for Access to Site				
Supervising Engineer				
Inspecting Engineer*				
Police				
Undertaker for Reservoirs in Cascade				
EA / DEFRA emergency contact numbers				
Local Authority Emergency Planning 24-hour number				
Multi-Agency Control Room Telephone No's.				

* Note - Reservoir Inspecting Engineers are usually appointed by the Reservoir Safety Manager to carry out 10 year Statutory Inspections. In the absence of the Inspecting Engineer and the Supervising Engineer, one of the Panel Engineers found at the following Environment Agency website should be contacted for advice or to conduct an inspection / investigation: http://www.environment-agency.gov.uk/static/documents/Business/Panel_engineers.pdf.

Mobile Phone Reception Details

Information should be provided here where difficulties with mobile phone reception are experienced at the reservoir site. This should include the following:

- areas of weak, intermittent or no mobile reception;
- areas of good mobile reception;
- mobile phone providers with best and worst reception;
- a map indicating the best reception areas at the site, if necessary.

The location of the nearest fixed landlines should be provided. A minimum of two is recommended, both outside the dam breach inundation area.

DATA SHEET B – Communities at Risk

A copy of the outline dam breach inundation map should be included here to provide a visual indication of the extent of inundation possible and the communities at risk. If the inundation map is too large to be included in the plan its storage location should be specified. No further details are required.

Where maps are included in the Plan, they should include the following disclaimer:

1. *This map and the information contained within it remain the property of the Environment Agency. It 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 or 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.*

DATA SHEET C – Reservoir Operational Data

This Data Sheet should contain information relating to the operation of the reservoir that can be quickly referred to in an emergency.

An example of the general information required is provided below.

Location Details

Location:

Grid reference:

A4 Location / directions map with scale:

A4 Sketch of valve location and operation:

Site plan located at:

Details of Reservoir/Dam

Name:

Use:

Type:

Date built:

Height:

Crest length:

Overflow / top water level:

Total storage capacity:

Design flood category:

Outflows and Controls

Number:

Discharge Capacities:

Number of Scours:

Discharge Capacities:

Reservoir Capacities

Drawdown from TWL	Outflow Volume	Maximum Rate of Discharge	Time taken for Draw Down
1m down:			
2m down:			
3m down:			
4m down:			
5m down:			

Reservoir Operation

The Reservoir supplies:

Average Daily Volume:

The Reservoir also supplies:

Impact of Failure on Undertaker Operations

DATA SHEET D – Emergency Draw-Down Procedure

This Data Sheet should contain information relating to the reservoir emergency draw-down procedure that can be quickly referred to in an emergency. Please note that the rapid draw-down of any impounding reservoir may result in significant damage to its integrity. The Panel Engineer will provide advice on how to draw-down the reservoir, the level of supervision required during the drawdown procedure and any potential diversions.

An example of the general information required is provided below. A detailed map with diagrams and/or photographs may be required to clearly identify valve / control locations and operation details.

- 1) **Authorisation for Draw-Down from:**
 - a) Reservoir Safety Manager; or
 - b) Reservoir Supervising Engineer; or
 - c) Qualified Civil Engineer (QCE).

- 2) **Inform (Internal)**
Action normally undertaken by:
Reservoir Safety Manager
Reservoir Supervising Engineer
Duty Manager Operational Response Manager
Treatment Manager
And others according to Company Incident Procedure

- 3) **Inform (External)**
Action normally undertaken by:
Environment Agency
Police
Local Authority Emergency Planning Unit

- 4) **Equipment Required**
Pumps, generators, pontoons and required locations.

- 5) **Initiation**
Manual operation of penstocks and valves at the site. Refer to Operations Manual.

- 6) **Control**
The normal acceptable rate of draw down required and maximum allowable following authorisation from either the Reservoir Safety Manager, the Reservoir Supervising Engineer. For concrete dams it is more likely that the limiting factor to the rate of draw down would be the capacity of the outlet pipes or the inundation of properties downstream.

- 7) **Additional Requirements**
Size of pumps, length of hoses and lift head required. Also include details of where pumps are located or where they can be sourced from.

Requirements to minimise downstream impacts when drawing down reservoir may be required.

- 8) **Monitoring On-site**
Monitoring / supervision required during draw-down.
- 9) **Reservoirs Downstream**
Reservoirs that may be affected by cascade effects are to be notified and, where possible, actions are to be undertaken to reduce the affects. These actions are to be documented here.
- 10) **Rain Gauges**
Rain gauges that may help in estimating flood and draw-down requirements.
- 11) **River Gauging Stations On-site**
River gauging that may help in estimating flood and draw-down requirements.
- 12) **Potential Flooding**
Details of flooding that may be caused downstream during draw-down. If known, properties potentially inundated by drawdown operations are to be notified prior to draw-down initiation. Contact details for the potentially affected properties and locations to be provided here. Additional areas that may become flooded by draw-down operations are to be checked during the draw-down operations.
- 13) **Inflow Controls**
Details of existing inflow controls that may influence draw-down requirements.
- 14) **Diversions**
Details of existing diversion controls that may influence draw-down requirements.

DATA SHEET E – Emergency Plant and Safe Access Routes

This Data Sheet should contain information relating to the site emergency plant and safe access routes.

An example of the general information required is provided below.

Access Routes for Vehicles

Identify the best route for emergency vehicles to take to site. List possible restrictions such as locked gates and availability / location of staff, recovery of keys, road and gate widths, road weight and bridge height restrictions, low lying power line, cattle grids, weather conditions factors, possible flooding, bad road surfaces, nearest location for helicopter landing, etc. Identify alarms or other security / intruder detection systems. Possible landowner access permission details should also be provided.

Provide a map to visually detail access and restrictions if necessary.

Parking

The best locations for parking of vehicles at the site should be provided with details of how many vehicles can safely park at each location.

Marshalling Point / Rendez-vous Points

Identify safe area for emergency services and forward incident controller to muster.

Suitability for Use of Siphons

Take into account the condition of the reservoir e.g. siphons could be problematic due to silt/debris in reservoir.

Suitability for Deployment of pontoons

Not always suitable depending on reservoir position. Where suitable identify launch site, such as slipway.

Configuration of Other Pumping

Pumping sites, distances, equipment and layout required.

Suitability for Use of High Volume Pumps (Fire Service)

Identify whether high volume pumps managed and operated by the Fire & Rescue service be utilised in an emergency. Identify fire service vehicle access to the site and the launch sites and whether pumping distances achievable.

Public Footpaths

Identify footpaths and rights of way in the vicinity of the reservoir that are open to the public and the frequency / popularity of use.

Additional Information

Where applicable list additional relevant emergency plant and safe access information, e.g. past experience or lessons learnt from past incidents or exercises.

DATA SHEET F – Reservoir Construction Drawings

This Data Sheet should contain copies of critical reservoir construction drawings and the location of where all construction drawings are located.

DATA SHEET G – Contractor Contact Details

This Data Sheet should contain addresses and 24hr contact details of local and regional contractors that may be utilised in an emergency situation. It may be useful to highlight previously used contractors that are familiar with the site. Services, equipment or materials that may need to be provided by contractors may include mechanics, electricians, pumps (including high volume), earthworks machinery, generators, valves, gates, bearings, clay fill, sand, aggregate, rock fill, concrete, geofabric, polyethylene, etc.

An example of the general information required is provided below.

Contractor	Telephone Numbers
Name:	Day time:
Address:	Out of Hours:
Type of Service / Equipment:	

Contractor	Telephone Numbers
Name:	Day time:
Address:	Out of Hours:
Type of Service / Equipment:	

Contractor	Telephone Numbers
Name:	Day time:
Address:	Out of Hours:
Type of Service / Equipment:	

DATA SHEET H – List of Key Documents

This Data Sheet should contain a list of key documents that will be of use during an emergency. The documents may be hard copies, CD's, files on servers, websites, etc. The documents may not necessarily be located on-site. If the documents are not located on-site a detailed description of their storage location will be required in case these documents are needed in an emergency.

An example of suggested required documents is provided below.

Document Title	Document Reference	Document Storage Location
Prescribed Form of Record (Statutory Document Under Reservoirs Act)		
Inspecting Engineers Section 10 Report		
Operational Incident Management Procedure		
Assessing the Incident Checklist		
Template for a Post Incident Review Report		
Reservoirs Manual		
Off-site Plan for Reservoir Dam Incidents		
Corporate Emergency Response Plan		
Data Files for individual dams		
Inundation Plans		
Incident Closure & Incident Closure Checklist		
Alternative Supplies		

DATA SHEET I – Plan Distribution Details

As the Plan is a restricted document, this Data Sheet should contain an up to date list of which organisations hold a copy of the Plan, who in the organisations is responsible for the security of the Plan and the reference number and version of the Plan. This list should be updated regularly to ensure control of the Plan and its circulation.

An example distribution list is provided below.

Name	Position	Organisation	Reference No.	Version

DATA SHEET J – Additional Information

Any additional useful information regarding the reservoir should be provided here. In particular, useful information may include:

- historical or local information known by the reservoir operators;
- details of past incidents or known deficiencies;
- site photographs, drawing or sketches highlighting relevant particular site features.

APPENDIX A
On-Site Emergency Plan Template

APPENDIX B

On-site Emergency Plan Example for an Individual Private Owner with a Single Reservoir

APPENDIX C

On-site Emergency Plan Example for an Owner with a Large Number of Reservoirs