

RESERVOIR LEGISLATION IN WALES

BASIC LEGAL FRAMEWORK

The United Kingdom comprises four regional administrations, England, Wales, Scotland and Northern Ireland.

Reservoirs in England and Wales are regulated under the Reservoirs Act 1975, as amended by the Flood and Water Management Act 2010, and this is enforced by Natural Resources Wales, in Wales.

SUMMARY OF RELEVANT SECTIONS OF THE ACT

Reservoirs Act 1975, as amended by the Flood and Water Management Act 2010

Summary Table

Law	Applicable section(s) of Act	Topics							
		A	B	C	D	E	F	G	H
Reservoirs Act 1975	A1 & 5: Define a large raised reservoir subject to regulation	✓							
	1, 21–24: Role and responsibilities of the reservoir undertaker		✓					✓	
	4: Establish engineer panels and appoint suitably competent engineers		✓						
	6–9, 21: Define construction works and provide administrative procedure to certify such works			✓	✓				
	10–12, 19: Inspection & supervision requirements for high-risk reservoirs					✓			
	2-3, 15-18, 25-26: Regulatory powers and duties to require and carry out works to a reservoir		✓				✓	✓	
	12A, 12AA-12B, 20-21: Other requirements, flood plans, maintenance of records, reports and incident reports							✓	
	13-14: Discontinuance or Abandonment								✓

- A. Reservoirs subject to Regulation
- B. Entities concerned
- C. Reservoir projects
- D. Construction and first filling
- E. Reservoir operation
- F. The repair of reservoirs
- G. Rules for the protection of the population
- H. Reservoir decommissioning

These topics are covered in detail below.

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RESERVOIRS SUBJECT TO REGULATION

In Wales, reservoirs that are capable of holding 10,000m³ or more of water are regulated under the Reservoirs Act 1975. The undertakers (the legal terms for the reservoir owners or operators) of these reservoirs are required to register them with Natural Resources Wales (NRW). NRW has a duty to designate reservoirs as high-risk reservoirs where they consider, in the event of an uncontrolled release of water, human life could be endangered. Reservoirs designated high-risk are subject to inspection and supervision by reservoir engineers. Reservoirs not considered to be high-risk remain registered but are not subject to the same degree of inspection and supervision.

ENTITIES CONCERNED

Administrative organisation

The Reservoirs Act 1975 is also the principal legislation in Wales which sets the minimum standards for the construction, supervision, maintenance, inspection and ultimately reservoir decommissioning activities. The same system of panel engineers is used as in England.

Natural Resources Wales (NRW) is the enforcement authority in Wales, which seeks to ensure that undertakers observe and comply with the law. NRW maintains a public register of reservoir information, and monitors the actions required by undertakers. The law provides powers for NRW to act in default of an undertaker or in an emergency. NRW reports to the Welsh Ministers every two years on the steps taken in fulfilling its role.

Owners

A reservoir 'undertaker' is the legal term for the operators of the reservoir, where they have the authority to manage or control the reservoir. Where there is no operator, the owners are the undertakers. Undertakers are responsible for day-to-day monitoring and maintenance of the reservoir and compliance with the law, which entails the appointment of engineers and implementing their recommendations.

Undertakers of high-risk reservoirs must ensure that the reservoir is under the supervision of a Supervising Engineer at all times. They are also required to commission an Inspecting Engineer from the appropriate panel of engineers to inspect the reservoir at intervals not exceeding 10 years. The reservoir undertaker of a 'not high-risk' reservoir is not required to commission a Supervising Engineer or an Inspecting Engineer.

Reservoir Engineers

These are qualified civil engineers who are appointed by Defra with the agreement of Welsh Ministers to reservoir engineer panels, based on recommendations of suitability and competence provided by the Institution of Civil Engineers. The reservoir engineers inspect and supervise reservoirs and where appropriate design and supervise the construction or enlargement of new or existing reservoirs or the decommissioning or abandonment of existing reservoirs. Engineers are commissioned to perform a variety of key reservoir activities, which are detailed below.

RESERVOIR PROJECTS

The Reservoirs Act 1975 does not attempt to set in law such technical standards that may be liable to change as a result of research or recommendations for best practice. The Act does however require the reservoir undertaker to commission reservoir panel engineers for certain works and activities specified by the law.

These engineers are familiar with the latest technical guidance relating to reservoir construction as published by various professional bodies and apply these to the reservoirs to which they are appointed.

CONSTRUCTION AND FIRST FILLING

The Reservoirs Act 1975 requires those who wish to construct a reservoir to commission the services of a reservoir Construction Engineer from the panel of reservoir engineers established by the Defra.

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A Construction Engineer must be appointed for the initial construction or subsequent alteration of a large raised reservoir. This engineer is responsible for safety throughout the construction period and until he is satisfied that the reservoir is performing correctly. He provides certificates at various stages to permit filling of the reservoir and will notify completion of works.

Once construction has advanced to a state where the reservoir can be safely filled, or partially filled; the reservoir Construction Engineer will provide a preliminary certificate which sets out the level to which the reservoir can be filled and any further recommendations in relation to the safety of the reservoir that are appropriate.

This certificate can be revised and re-issued as often as the Construction Engineer considers necessary until the reservoir construction is complete. The commission of the Construction Engineer terminates with the issue of the final certificate, which normally will be issued three years after the preliminary certificate. This final certificate starts a two-year monitoring period, at the end of which the reservoir must be inspected by a reservoir Inspecting Engineer. NRW ensures all certificates are supplied by the engineer to the reservoir undertaker prior to each stage of construction and filling.

RESERVOIR OPERATION

Amendments to the Reservoirs Act 1975 in Wales places a new duty on NRW to designate reservoirs as high-risk reservoir where it considers, in the event of an uncontrolled release of water, human life would be endangered. The designation considers the consequences of a flood from the reservoir but does not consider the likelihood of a dam failure.

High-risk reservoirs must be supervised by a reservoir Supervising Engineer at all times. The Supervising Engineer, guided by recommendations that may be made by an Inspecting Engineer, will advise and direct the undertakers to perform various monitoring and maintenance operations as appropriate to the reservoir. The Supervising Engineer provides the undertakers and NRW with an annual statement detailing the overall behaviour of the reservoir and any actions taken, or not taken, by the undertakers. The Supervising Engineer may also provide directions to the undertakers and may recommend a statutory inspection by an Inspecting Engineer – these are enforceable recommendations.

High-risk reservoirs must be inspected by an Inspecting Engineer, at intervals not exceeding ten years, to provide a condition assessment of the impounding structures, spillways, outlet and inlet facilities. The inspection encompasses the whole reservoir basin, with consideration for the water body catchment. The Inspecting Engineer provides a report to the undertakers and a copy to NRW. The report may include the Inspecting Engineer's recommendations as to measures to be taken in the interests of safety and maintenance, which become statutory duties on the undertakers.

Reservoirs which are not designated as high-risk reservoirs are not formally monitored, but their designation can be reviewed at any time when NRW considers the designation may have ceased to be appropriate.

All reservoir undertakers must report incidents that may affect the safety of their reservoir to NRW

THE REPAIR OF RESERVOIRS

The Reservoirs Act 1975 recognises various types of work that may be undertaken on a reservoir:

- Construction or alteration works that reduce or enlarge the capacity of a reservoir must be undertaken under the supervision of a Construction Engineer commissioned from the approved panel of Inspecting Engineers. Completion of this type of work is certified by the construction engineer.
- Repair works recommended by an Inspecting Engineer as a result of a periodic inspection must be supervised by a Qualified Civil Engineer who will supply a certificate once satisfied that the works have been successfully completed.
- Maintenance works are supervised by the Supervising Engineer who will report on this type of work in the annual statement. This type of work is ongoing and as such does not require a completion certificate.

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- Where works of any type are not undertaken as required or completed to the satisfaction of the reservoir engineer, NRW has powers to require the undertakers to implement the works or recommendation. In extreme cases, or emergency situations, NRW can undertake the works or take other appropriate action, under the supervision of a Qualified Civil Engineer, to ensure the safety of the reservoir.

RULES FOR THE PROTECTION OF THE POPULATION

NRW uses reservoir flood maps to identify the potential consequences of a reservoir flood. These flood maps are shared with local authority emergency planners to inform their emergency (off-site) plans. The Reservoirs Act 1975 makes reference to the need for reservoir undertakers to prepare emergency (onsite) plans but this is not a legal requirement under the Reservoirs Act 1975.

Such plans set out the actions to be taken by the reservoir undertaker in order to respond to and mitigate the effects of a flood from the reservoir. These plans will be specific to each reservoir. Inspecting engineers may also recommend undertakers prepare an onsite flood plan and in these circumstances it becomes a statutory requirement. Reservoir flood maps also provide detail to inform reservoir risk designation.

RESERVOIR DECOMMISSIONING

The Reservoirs Act 1975, within its definition of construction or alteration of a reservoir, includes the term 'discontinuance' which is where the reservoir is altered so that it is incapable of holding 10,000m³ of water. It also includes the term 'abandonment' which is where the reservoir is altered so that it is incapable of filling accidentally or naturally of any water to such an extent that it poses a risk.

Such works are to be conducted under the supervision of a Qualified Civil Engineer who will certify completion. Other approvals may be required from environmental and planning authorities and the engineer is expected to be competent with these to provide advice to their client.

COMPARISON OF RESERVOIR LEGISLATION IN ENGLAND, WALES, SCOTLAND AND NORTHERN IRELAND.

	Reservoirs Act 1975	Reservoirs Act 1975 as amended for England	Reservoirs Act 1975 as amended for Wales	Reservoirs (Scotland) Act 2011	Reservoirs Act (Northern Ireland) 2015
Regulatory Authority	Originally Local Authorities	Environment Agency (EA)	Natural Resources Wales (NRW)	Scottish Environment Protection Agency (SEPA)	Department of Agriculture and Rural Development (DARD). Department for Infrastructure from May 2016.
Registration Threshold	25,000 m ³	25,000 m ³ (Further evidence gathering, in 2016/17, to take place before Ministers decide on any changes to this threshold and inclusion of cascades)	10,000 m ³ New threshold came into force 1 April 2016	10,000 m ³ Includes connected storages (cascades etc) but to be phased in. <u>Initially 25000m³ from 1 April 2016</u> . Reservoirs over 10,000m ³ will be brought under regime at a later date.	10,000m ³ Includes connected storages (cascades etc)
Fees	No	Still to be determined	To be determined	Yes	Yes. While the Act makes provision for the charging of fees there is no intention to do so at present.
Risk Designation	No accounting for risk within legislation	High Risk only, assessed on probability of failure = 1 & consequence.	High risk only, assessed on probability of failure = 1 & consequence.	High, Medium & Low – assessed on probability of failure = 1 & consequence.	High, Medium & Low Consequence – assessed primarily on the impact of an uncontrolled release of water due to dam failure.
Responsible party	Undertaker	Undertaker(s)	Undertaker(s)	Reservoir Manager(s)	Reservoir Manager(s)
Inspection Reports	Section 10 Report	Section 10 Report	Section 10 Report	Section 47 Report	*Section 35 Report

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Inspecting Engineer	<p>All sites</p> <p>No time limit on production of report</p> <p>Report only copied to Enforcement Authority when MIoS contained in report</p> <p>No time limits on MIoS</p>	<p>High risk sites</p> <p>Inspection report to be sent within 6 months of inspection date to Undertaker</p> <p>All reports copied to EA</p> <p>Time limits on MIoS</p>	<p>High risk reservoirs</p> <p>Inspection report to be sent within 6 months of inspection date to Undertaker</p> <p>All reports copied to NRW</p> <p>Time limits on MIoS</p>	<p>High risk sites</p> <p>Medium risk sites, only when requested by supervising engineer</p> <p>Inspection report to be sent within 9 months of inspection date to Reservoir Manager All reports copied to SEPA within 28 days of sending to Reservoir Manager</p> <p>Time limits on MIoS</p>	<p>High and Medium Consequence reservoirs.</p> <p>Inspection report to be sent within 6 months of inspection date to Reservoir Manager.</p> <p>All reports copied to the Department within 28 days.</p> <p>Time limits on MIoS</p>
Supervising Statements	Section 12 Statement	Section 12 Statement	Section 12 Statement	Section 50 Statement	*Section 26 Statement
Supervising Engineer	<p>All sites</p> <p>Not required to send statement to Enforcement Authority</p>	<p>High risk sites</p> <p>12-monthly written statements produced for undertaker and all copied and sent to EA</p>	<p>High risk reservoirs</p> <p>12-monthly written statements produced for undertaker and all copied and sent to NRW</p>	<p>High & Medium risk sites</p> <p>12-monthly written statements produced for reservoir manager and all copied and sent to SEPA within 28 day of sending to reservoir manager.</p>	<p>High & Medium Consequence reservoirs</p> <p>12-monthly written statements produced for Reservoir Manager and copied to Department</p>

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	Reservoirs Act 1975	Reservoirs Act 1975 as amended for England	Reservoirs Act 1975 as amended for Wales	Reservoirs (Scotland) Act 2011	Reservoirs Act (Northern Ireland) 2015
On-site Plans	No	Termed 'flood plan' in Act - Minister has powers to make this a statutory requirement by issuing further regulations	Termed 'flood plan' in Act - Minister has powers to make this a statutory requirement by issuing further regulations - No intention to make further regulations at this time	-Termed 'flood plan' in Act , Scottish Ministers have powers to make this a statutory requirement by issuing further regulations	Yes – termed 'flood plan' in the Act.
Maintenance items	Not statutory	Statutory – included in Inspecting engineer reports	Statutory – included in Inspecting engineer reports	Statutory – will be included in Inspecting engineer reports	Yes statutory. Works will be included in Inspecting engineer reports.
Incident Reporting	Voluntary	Statutory	Statutory	Scottish Ministers have powers to make this a statutory requirement by issuing further regulations.	Statutory, details will be set out in regulations.
Enforcement Powers	Only criminal	Criminal	Criminal	Civil Sanctions & Criminal	Civil and Criminal Sanctions
Public Register	Yes - limited	Yes – expanded requirements. All engineer reports, certificates & written statements to be included, as well as outline inundation map for each reservoir	Yes – expanded requirements. All engineer reports, certificates & written statements to be included.	Yes – expanded requirements. All engineer reports, certificates & written statements to be included, as well as outline inundation map for each reservoir	Yes – extent to be specified by regulations.

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Reservoir Flood (Inundation) Maps	No	Yes. EA currently updating maps (produced in 2009) to reflect new legislation requirements	Yes. EA produced them for all sites covered by 1975 Act as registered in 2009. 'New' reservoirs between 10,000 and 25,000m ³ to be mapped by NRW to inform risk designation and emergency planning	Yes. SEPA has produced them for all sites covered by 1975 Act and will do so in due course for existing sites over 10,000 m ³ when the Act applies to such reservoirs. Reservoir Managers of new sites will be required to produce them & supply them as part of registration requirement.	Yes. The publication of reservoir flood maps will be consistent with the terms of the National Protocol.

***Northern Ireland: It should be noted that Sections 26 and 35 of the Reservoirs Act (Northern Ireland) 2015 have not yet been commenced**