



Guidance on Abandonment and Discontinuance Reservoirs (Scotland) Act 2011



We are the Scottish Environment Protection Agency (SEPA). As Scotland's environmental regulator we protect and improve the environment by helping business and industry to understand their environmental responsibilities, enabling customers to comply with legislation and good practice and to realise the many economic benefits of good environmental practice.

We are a non-departmental public body, accountable through Scottish Ministers to the Scottish Parliament, and are experienced in providing advice and guidance to business, industry and the public on environmental best practice.

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1. Introduction

1.1 Introduction

1.1 Introduction

Through the phased implementation of the Reservoirs (Scotland) Act 2011 (the 2011 Act), SEPA have become the regulatory authority for reservoir safety in Scotland. Taking over responsibility for reservoir safety contributes to our strategic role in flood risk management, introduced by the Flood Risk Management (Scotland) Act 2009, by enabling a more streamlined and consistent approach to flood risk management.

Ensuring that reservoirs are correctly managed and maintained is essential. They provide Scotland with drinking water, power, resources for business and social amenities. The consequences of poor management and maintenance could be devastating and lead to a serious risk of flooding which impacts our communities, businesses, infrastructure and environment. We can manage this risk more efficiently through effective regulation.

Reservoir safety legislation is relatively new within the UK, with laws coming into effect in 1930. The Reservoirs (Safety Provisions) Act 1930 was passed following two major dam failures in 1925, which led to the deaths of 21 people. This legislation was followed by the Reservoirs Act 1975 (the 1975 Act). The 1975 Act was enforced by Scotland's 32 local authorities, with approximately 660 reservoirs falling within its remit. The new legislation, namely the 2011 Act, is now improving the regulatory landscape and changing our roles and responsibilities.

Prior to the implementation of the 2011 Act, SEPA undertook significant engagement with local authorities, panel engineers and reservoir managers to help inform our planning and development of key processes and systems.

As a modern regulator we proactively engage with the reservoir industry to increase your awareness of responsibilities under the 2011 Act and provide support, where possible, to help reservoir managers and panel engineers comply with the legislation.

We will help to support the reservoir industry through a suite of guidance documents that offer advice and good practice on how to fulfil the requirements of the legislation. This supports reservoir managers by identifying the specific roles and responsibilities brought in by the 2011 Act. All guidance documentation can be found at www.sepa.org.uk/reservoirs. If you require a hard copy to be sent to you please email reservoirs@sepa.org.uk or call 03000 996699 to be put through to the Reservoir Regulatory Unit.

2. Abandonment and Discontinuance (Section 32)

2.1 Key Sections from the Legislation

2.2 Implications of Abandonment and Discontinuance

2.3 Examples of Abandonment and Discontinuance

2.1 Key Sections from the Legislation

Within the Reservoirs (Scotland) Act 2011 the definition and subsequent implications of abandonment and discontinuance differ from those of the Reservoirs Act 1975.

These changes may have led to some confusion and this guidance aims to clarify the situation.

Key Sections from the Legislation

Controlled Reservoir (S1 (2))

A controlled reservoir is any of the following structures or areas which is capable of holding 10,000 [25,000]¹ cubic metres or more of water above the natural level of any part of the surrounding land—

- (a) a structure designed or used for collecting and storing water,*
- (b) an artificial (or partly artificial) loch or other artificial (or partly artificial) area.*

Discontinuance (S32 (5))

Alteration of a controlled reservoir amounts to discontinuance of a controlled reservoir where the alteration is for the purpose of making the reservoir incapable of holding 10,000 [25,000] cubic metres of water above the natural level of any part of the surrounding land (but still capable of holding water above the natural level of any part of that land).

Abandonment (S32 (6))

Alteration of a controlled reservoir amounts to abandonment of a controlled reservoir where the alteration is for the purpose of making the reservoir incapable of filling with water above the natural level of any part of the surrounding land.

Final Certificate for Discontinuance (S39 (3))

Where the reservoir is being discontinued, the construction engineer must give the reservoir manager a final certificate, not later than 28 days after being satisfied—

- (a) that the discontinuance has been safely completed,*
- (b) that the resulting structure or area is incapable of holding 10,000 [25,000] cubic metres of water above the natural level of any part of the surrounding land,*
- (c) that the resulting structure or area is sound and satisfactory and may safely be used for the collection and storage of water.*

Final Certificate for Abandonment (S39 (5))

Where the reservoir is being abandoned, the construction engineer must give the reservoir manager a final certificate, not later than 28 days after being satisfied—

- (a) that the abandonment has been safely completed,*
- (b) that the resulting structure or area is incapable of filling with water above the natural level of any part of the surrounding land.*

¹Only reservoirs in Scotland with a capacity of 25,000 or more cubic metres are currently regulated by SEPA. At some point, the regime will be extended so that it also applies to reservoirs with a capacity of between 10,000 and 25,000 cubic metres.

2.2 Implications of Abandonment and Discontinuance

A reservoir manager who wishes to abandon or discontinue their reservoir must notify SEPA no later than 28 days before the proposed works begin.

Additionally the reservoir manager is required to appoint a construction engineer from the relevant panel of engineers and give notice of this appointment to SEPA no later than 28 days before the works are to begin.

In all circumstances if an existing 'Controlled Reservoir' is **Discontinued** then;

- It is no longer regulated under the Reservoirs (Scotland) Act 2011
- It is not required to be supervised or inspected
- It is removed from the 'Controlled Reservoirs Register'
- It no longer falls under SEPA's Reservoir Charging Scheme

For 'Controlled Reservoirs' that are **Abandoned** the situation is different in that they may or may not remain regulated under the Reservoirs (Scotland) Act 2011 and this is dependent on the nature of the 'Abandonment'.

The following examples in Section 2.3 provide detail on the types of 'abandonment' and 'discontinuance' and the implications.

2.3 Examples of Abandonment and Discontinuance

- 1) A controlled reservoir is altered in that the dam level is lowered so that it still fills with water but is only capable of holding 24,000 cubic metres of water above the natural level of any part of the surrounding land.

This site is therefore '**Discontinued**' and the appointed panel engineer would issue a Final Certificate under Section 39(3). As the reservoir no longer meets the definition of a 'controlled reservoir' it is no longer regulated under the Reservoirs (Scotland) Act 2011.

It should be noted that if the regulatory regime is extended so that it also applies to reservoirs with a capacity of between 10,000 and 25,000 cubic metres then a discontinued reservoir with a capacity of over 10,000 cubic metres would in due course come back under regulatory control.

- 2) A controlled reservoir is altered in that the dam level is lowered so that it still fills with water but is only capable of holding 9,000 cubic metres of water above the natural level of any part of the surrounding land.

This site is therefore '**Discontinued**' and the appointed panel engineer would issue a Final Certificate under Section 39(3). As the reservoir no longer meets the definition of a 'controlled reservoir' it is no longer regulated under the Reservoirs (Scotland) Act 2011.

- 3) A controlled reservoir is altered so the dam structure is totally removed so it is incapable of holding any water.

This site is therefore '**Abandoned**' and the appointed panel engineer would issue a Final Certificate under Section 39 (5). As the reservoir no longer meets the definition of a 'controlled reservoir' it is no longer regulated under the Reservoirs (Scotland) Act 2011.

- 4) A controlled reservoir is altered in that a section of the dam is removed down to the lowest natural level of any part of the surrounding land. Therefore the structure cannot hold any water above that level.

This site is therefore '**Abandoned**' and the appointed panel engineer would issue a Final Certificate under Section 39 (5). As the reservoir no longer meets the definition of a 'controlled reservoir' it is no longer regulated under the Reservoirs (Scotland) Act 2011.

- 5) An 'off-line (Service)' controlled reservoir is altered by way of removal of its inlet pipework meaning water cannot enter the reservoir. The rest of the dam structure remains intact. The valves on the outlet pipe(s) are held open or removed, so that any other water entering the reservoir will not accumulate to fill it at the present time.

This site is therefore '**Abandoned**' and the appointed panel engineer would issue a Final Certificate under Section 39 (5). As the reservoir could still hold 25,000 cubic metres of water above the natural level of any part of the surrounding land (following a blockage or collapse of the outlet pipes) it therefore still meets the definition of a 'controlled reservoir' and is still required to be regulated under the Reservoirs (Scotland) Act 2011.

- 6) A controlled reservoir is altered by way of removal of its outlet draw-off and scour valves, or fixing them in an open position, but there are no other changes made to the structure.

As water is still able to enter the reservoir the case as to whether or not the reservoir could be classed as “**Abandoned**” would need careful consideration by the panel engineer. Unless the engineer can be convinced that there is minimal inflow to the reservoir basin and there is no likelihood of the outlets blocking in some way it is unlikely to be appropriate to issue a certificate of abandonment.

However if, for example, there is a by-wash channel with a design capacity capable of diverting major flows around the reservoir such that inflow to the reservoir from the direct catchment is minimal the construction engineer may consider the reservoir to be “**Abandoned**”. In such circumstances it should only be considered as abandonment if the construction engineer is satisfied that in any foreseeable circumstances the reservoir is incapable of filling and holding any water above the natural level of any part of the surrounding land. As the reservoir no longer meets the definition of a ‘controlled reservoir’ it is no longer regulated under the Reservoirs (Scotland) Act 2011.

As a matter of guidance, it is suggested that in cases of Abandonment, the Construction Engineer includes, where appropriate, in the Annex to the Construction Certificate;

- details on how the reservoir has been rendered incapable of filling
- a statement of the volume of water, if any, that the reservoir is capable of holding,
- a statement that in the opinion of the construction engineer the volume is such that it remains, or as the case may be, ceases to remain, within the current definition of a Controlled Reservoir.

3. Further information

3.1 Frequently asked questions

3.2 Sources of information

3.3 Glossary

3.1 Frequently asked questions

Here are some frequently asked questions relating to the new regulations for reservoirs in Scotland. After reading this section, if you have some unanswered queries please look at the sources of information section (p26). A glossary is also included (p27) to help you understand some of the new terms and concepts associated with the 2011 Act.

Q. Does the 2011 Act apply to all reservoirs?

A. When fully implemented only those reservoirs capable of holding at least 10,000 cubic metres of water above the lowest natural ground level.

Q. How many reservoirs will be regulated by the 2011 Act?

A. There are currently around 690 reservoirs regulated in Scotland under the Reservoirs (Scotland) Act 2011. In addition to these sites it has been estimated that a further 800 to 850 reservoirs could fall under the 2011 Act when the registration for reservoirs that hold, or are capable of holding, 25,000 cubic metres of water above natural ground level is reduced to 10,000 cubic metres of water above natural ground level.

Q. Who is responsible for enforcing reservoir safety?

A. SEPA are the regulatory authority for reservoirs in Scotland and we took over responsibility for the enforcement of reservoir safety from local authorities in April 2016.

Q. What is the role of SEPA as the regulatory authority?

A. SEPA, as the regulatory authority, is responsible for comprehensive regulation and enforcement of the 2011 Act. We are also required to maintain a Statutory Public Register of Reservoirs and to produce biennial reports to the Scottish Government.

For further information, please visit www.sepa.org.uk/reservoirs

Q. Who is the reservoir manager?

A. The operator(s), user(s) and/or owner(s) of the reservoir. This can be more than one person or company.

Q. Who has ultimate responsibility for the safety of reservoirs?

A. Under the 2011 Act, reservoir managers (operators, users and owners) have ultimate responsibility for the safety of their reservoirs. They must operate within the law, and must consider the need for planning permission or environmental consents when introducing measures to be taken in the interests of safety.

Q. Who are panel engineers?

A. Panel engineers are a group of specialist civil engineers (“qualified civil engineers”) who are experienced and qualified in reservoir safety. They are appointed by Scottish Ministers to one of the panels for a specific period, typically five years. Towards the end of this period, the civil engineer has to re-apply for appointment to the panel.

The 2011 Act requires them to oversee the safe construction, operation and maintenance of reservoirs and inspect their safety every ten years or more frequently if necessary. A panel engineer must be appointed by the reservoir manager when a new reservoir is built or repairs and changes are made to existing ones where these might affect the safety of the reservoir. Panel engineers (qualified civil engineers) may be construction engineers, inspecting engineers or supervising engineers.

The list of current panel engineers can be found at:

www.gov.scot/Topics/Environment/Water/16922/panengineerlist

Q. What is the role of a construction engineer?

A. A construction engineer is appointed by the reservoir manager to supervise the design and construction of a new reservoir, the modification of a reservoir, for example if it changes its capacity or for other work which might affect its safety and for which Scottish Ministers have issued regulations.

Q. What is the role of the inspecting engineer?

A. The inspecting engineer's role is to inspect the reservoir when appointed to do so by the reservoir manager, to advise the reservoir manager of the condition of the reservoir and to make recommendations regarding works required to ensure its continued satisfactory operation, to give directions regarding monitoring required in the period up to the next inspection, and to provide advice on matters to be watched by the supervising engineer.

Q. What is the reservoir manager's role in the inspection process?

A. The reservoir manager should normally attend the inspection and provide the inspecting engineer with the necessary documents to help them carry out the inspection. It is recommended that the reservoir manager check the report to make sure it is accurate before it is finalised and issued. They also have an opportunity to check any queries with the inspecting engineer, such as what measures to be taken in the interests of safety he/she may need to introduce.

Q. What is the role of the supervising engineer?

A. A supervising engineer is appointed by the reservoir manager and is required to notify the reservoir manager about any safety issues related to the reservoir. They are also required to monitor any matters specified in safety reports, preliminary and final certificates as well as inspection reports. They are also required to report to the reservoir manager and SEPA any failures to comply with the previously mentioned reports and certificates. The supervising engineer must produce a written statement at least every 12 months which must be supplied to the reservoir manager and SEPA.

Q. What other organisations are responsible for the enforcement of safety issues that are not covered by the Reservoirs (Scotland) Act 2011?

A. We recognise the role of other organisations and will not take on responsibilities that rightly sit with others or duplicate effort unnecessarily. In particular the Health and Safety Executive has a key role under the Health and Safety at Work etc. Act 1974 and Local Authorities have key roles in addressing site safety under the Building Act 1984 (section 76 to 79). We will provide information to these bodies on risks that we find that are their responsibility.

3.2 Sources of information

3.2.1 SEPA

www.sepa.org.uk

As the enforcement authority for reservoir safety in Scotland the SEPA website hosts comprehensive information on reservoir safety. We also have a national, strategic role for flood risk management and are the flood warning authority for Scotland.

3.2.2 Scottish Government

www.scotland.gov.uk/Topics/Environment/Water

The Scottish Government drafted the Reservoirs (Scotland) Act 2011 in consultation with the reservoir industry. A list of panel engineers is available from the Scottish Government website, along with information on development of the new legislation.

3.2.3 Institution of Civil Engineers

www.ice.org.uk

The Institution of Civil Engineers (ICE) seeks to advance the knowledge, practice and business of civil engineering, to promote the breadth and value of the civil engineer's global contribution to sustainable, economic growth, and ethical standards, and to include in membership all those involved in the profession. The ICE, through its Reservoirs Committee, advises government ministers on the appointment of Panel Engineers.

3.2.4 British Dam Society

www.britishdams.org

The British Dam Society (BDS) is an Associated Society of the Institution of Civil Engineers. It exists to advance the education of the public and the profession in technical subjects relating to the planning, design, construction, maintenance, operation, safety, environmental and social issues of dams and reservoirs. The BDS is also a member of the International Commission on Large Dams (ICOLD).

3.2.5 International Commission on Large Dams

www.icold-cigb.org

International Commission on Large Dams (ICOLD) comprises 82 countries and seeks to develop dams in a technically safe, ecologically and socio-economically sustainable manner.

3.3 Glossary

Term	Definition
Civil sanctions	An enforcement intervention that can be applied directly by the regulator.
Controlled reservoir	After the Reservoirs (Scotland Act) 2011 is fully implemented, a controlled reservoir will be a structure designed or used for collecting water which is capable of holding 10,000 cubic meters of water or more above the natural level of any part of the surrounding land.
Dam	A dam is a man made barrier usually built across a river to hold back water forming a loch or reservoir behind it. It can be constructed from concrete or natural materials like earth and rock.
First risk designation	The risk designation ('high', 'medium' or 'low') is assigned to a reservoir once the period for representations has ended
Impoundment	Any dam, weir, or other works by which water may be impounded (i.e. collected and stored); or any works diverting waters in connection with the construction or alteration of any dam, weir or other works. Raising the level of an existing natural loch is also considered an impoundment. A pond or loch created by excavation below the pre-existing ground level (e.g. a dug pond or flooded quarry) is not included.
Incident reporting	Reservoir managers are required to report to SEPA incidents that have occurred at their reservoir.
Inspecting engineer	Appointed by the reservoir manager of a high risk or medium risk reservoir to carry out an inspection.
Inundation map	A map showing areas that would be affected by flooding from releases from a dam's reservoir. The flooding may be from either controlled or uncontrolled releases or as a result of a dam failure. A series of maps for a dam could show the incremental areas flooded by larger flood releases.
Nominating reservoir manager	A reservoir manager who has nominated another manager to act on their behalf for decisions relating to the safety of the reservoir.
Nominee	Nominated to act on behalf of multiple reservoir managers and may act as a central point of contact in correspondence with SEPA. All individual reservoir managers are still legally responsible for complying with regulation.
Panel engineer	A specialist civil engineer appointed by Scottish Ministers. All reservoirs must be designed, constructed, inspected and supervised by a panel engineer.
Provisional risk designation	SEPA is required to give a provisional risk designation to all registered controlled reservoirs as soon as practicable once registered. Reservoir managers are able to make a representation to SEPA within two

	months, if they are dissatisfied with the risk assigned to their reservoir.
Register	The reservoir manager of each controlled reservoir must register the reservoir with SEPA. SEPA must establish and maintain a controlled reservoirs register which contains specific information on each reservoir. SEPA must make the controlled reservoirs register available to the public at all reasonable times.
Representation	If a reservoir manager is dissatisfied with the risk designation assigned to their reservoir following SEPA's provisional risk designation, they can make a representation to SEPA explaining why they feel that the risk designation is wrong.
Reservoir	Reservoirs are artificial storage places for water, such as ponds, impoundments and raised lochs, from which the water may be withdrawn (abstracted) for purposes such as electricity generation, irrigation, water supply or flood storage. They can also be recreational or amenity sites from which no water is normally abstracted.
Reservoir manager	This is the new term under the Reservoirs (Scotland) Act 2011 for the manager or operator of a reservoir. Reservoir Managers have ultimate responsibility for the safety of their reservoirs and will have control over the operation of the dam. The definition has been updated so as to ensure organisations who merely lease or use the water, such as angling clubs, may not be responsible for supervisory and maintenance requirements. However if under the terms of the lease they are required, for example, to operate valves then they may be classed as reservoir managers.
Review	A reservoir manager may seek to have their reservoir's risk designation reviewed if following a representation they are still dissatisfied with the risk designation given to their reservoir. SEPA is also required to undertake a review of a reservoir's risk designation when it considers it to be no longer appropriate or by the end of the period of six years.
Risk designation	The Reservoirs (Scotland) Act 2011 requires SEPA to assign a risk designation of either 'high', 'medium', or 'low' to all controlled reservoirs. The risk designation will be based on the potential impacts on a variety of receptors from an uncontrolled release of water. 'High' risk sites will receive a greater level of regulation than either 'medium' or 'low'.
Supervising engineer	Appointed by the reservoir manager of high and medium risk reservoirs to monitor matters as required in various engineers certificates and reports.
Undertaker	In terms of the Reservoirs Act 1975, the "undertaker" is the person or organisation with responsibility for a reservoir. The "Reservoir Manager" will replace the "undertaker" and be responsible for registering each controlled reservoir under the Reservoirs (Scotland) Act 2011.