



Guidance for engineers on the completion of Schedule 15 – Supervising Engineer Written Statements.

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

On the 1st April 2016 SEPA became the regulator for reservoir safety in Scotland under the Reservoirs (Scotland) Act 2011. 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 result of this work and the reservoir registration process for the 2011 Act we now have a comprehensive database which contains details of the reservoirs to which the 2011 Act applies.

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 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 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 get put through to the Reservoir Regulatory Unit.

2. Completion of Schedule 15 – Supervising Engineer Written Statements

2.1 General Information

2.2 Schedule 15 – Supervising Engineer Written Statements
Guidance

2.1 General Information

SUPERVISING ENGINEER'S WRITTEN STATEMENT.

FORM OF STATEMENT UNDER SECTION 50(8) OF THE RESERVOIRS (SCOTLAND) ACT 2011.

The following provides some informal guidance and examples of what issues should be covered in a Supervising Engineer's Written Statement (SEWS).

A copy of the Section 50(8) SEWS must be in the form given in Schedule 15 of the Reservoirs (Scotland) Regulations 2016, failure to do will result in the SEWS being returned to be re-produced using Schedule 15. Word versions of these can be found on the Scottish Government's reservoirs web pages. . <https://www.gov.scot/publications/reservoirs-legislation/>

All statutory information should be contained in the completed Schedule and not within additional supporting documents.

Section 50(8) SEWS should be produced and submitted to the Reservoir Manager and SEPA within the statutory time scales as noted in Section 50(8) and Section 50(10) of the Act.

Additional site visit findings, photographs, instrumentation graphs etc. could be appended to the document for each site visit completed prior to the date of the written statement and submitted to the Reservoir Manager. These may follow the structure given in the ICE publication "A Guide to the Reservoirs Act 1975 2nd Edition", modified to omit those parts given in the Schedule. These documents do not need to be submitted to SEPA.

All reports and documents should be submitted in a pdf format but if submitted in MS Word File Format it should be protected in a way that inhibits and prevents any amendments being made by anyone but the author.

2.2 Schedule 15 – Supervising Engineer Written Statements

STATEMENT BY SUPERVISING ENGINEER
UNDER SECTION 50(8) OF THE RESERVOIRS (SCOTLAND) ACT 2011
Reservoir registration number: <i>[insert reservoir registration number as specified in the controlled reservoirs register]</i>
I <i>[insert name of engineer]</i> of <i>[insert address of engineer]</i> being a member of <i>[insert name of panel to which engineer is appointed]</i> , appointed to supervise the controlled reservoir <i>[known as [insert name of reservoir]]</i> (<i>delete if the reservoir has no name</i>)
Guidance – Please ensure the name of reservoir matches that on SEPA’s ‘Controlled Reservoirs Register’.
located at <i>[insert location of reservoir, with sufficient detail to identify it (including the national grid reference for the approximate centre of the reservoir). It would also be helpful to include the nearest post-code]</i> , state in relation to the reservoir that during the period beginning with <i>[insert period start date]</i> and ending with <i>[insert period end date]</i> —
Guidance – Please ensure the period entered here matches that for which you were appointed.
I took the following steps in relation to the matters referred to in section 50(2)(a) to (h) of the Reservoirs (Scotland) Act 2011:
<p style="text-align: center;">Guidance.</p> <p><i>The Statement should give details of the steps/actions taken by the engineer setting out how the various requirements were met. As well as 50(2) (a) to (h) you should also provide detail on how (i) and (j) were met and also 50(4) and 51(3). The requirements covered by the Statement are noted below.</i></p> <p><i>(a) give notice to the reservoir manager of anything that the engineer considers might affect the safety of the reservoir.</i></p> <p><i>(b) monitor any matters specified in a safety report as matters to be monitored by the supervising engineer until a final certificate is issued in respect of the relevant works. This only applies to reservoirs under or following construction or alteration. The Statement should note the matters that were specified and what action has been taken to put them into effect during the period of the statement.</i></p> <p><i>(c) monitor compliance by the reservoir manager with the requirements of any preliminary certificate for the time being applicable to the reservoir. This only applies to reservoirs under or following construction or alteration. The Statement should note the matters that were specified and what action has been taken to put them into effect during the period of the statement.</i></p> <p><i>(d) monitor compliance by the reservoir manager with the requirements of any final certificate for the time being applicable to the reservoir,</i></p> <p><i>This only applies to reservoirs under or following construction or alteration and prior to the first inspection following the issuing of the final certificate. The Statement should note the matters that were specified and what action has been taken to put them into effect during the period of the statement.</i></p>

(e) monitor any matters specified in any such final certificate as matters that should be monitored by the supervising engineer until the first inspection of the reservoir required under section 46. This only applies to reservoirs under or following construction or alteration

f) monitor compliance by the reservoir manager with the requirements of any direction given in the latest inspection report by virtue of section 47(3)(d)(i). S47(3)(d)(i) refers to a direction by the inspecting engineer to the reservoir manager to ensure that any measures specified in the inspection report for the maintenance of the reservoir are monitored by the supervising engineer.

(g) give notice to the reservoir manager and SEPA of any failure to comply with any requirement of—

- (i) a safety report referred to in paragraph (b),*
- (ii) a preliminary certificate referred to in paragraph (c),*
- (iii) a final certificate referred to in paragraph (d), or*
- (iv) a direction referred to in paragraph (f),*

(h) monitor any matters specified in the latest inspection report as matters that should be monitored by the supervising engineer until the next inspection of the reservoir required under section 46. S47(3)(f) of the Act requires that the Inspection Report must specify any matters that should be monitored by the supervising engineer until the next inspection of the reservoir required under section 46. The statement should include a note of the matters and their status. This includes any inspection undertaken under the 1975 Act.

(i) supervise (or ensure that a nominated representative of the engineer supervises) any proposed draw-down in respect of the reservoir.

(j) monitor compliance by the reservoir manager with the requirements of section 51. (keeping of records)

consider the need for any direction by the supervising engineer under section 50(4) for the reservoir manager to carry out visual inspection of the reservoir at intervals specified by the supervising engineer.

consider the need for any direction by the supervising engineer under section 51(3) as to the manner and intervals for keeping records.

[[*insert name of reservoir manager*] took the following measures in the interests of the safety of the reservoir or otherwise to maintain the reservoir: [*insert measures taken*].] (delete as appropriate)

Guidance.

This should include in detail the status, including any certification, of putting into effect all measures in the interests of safety (including measures for the maintenance of the reservoirs) specified in the last Inspection, including a note of measures put into effect during the period of this statement and measures put into effect since the last Inspection Report.

- **Measures in the Interests of Safety**

These would include the measures set out in the inspection report (including those issued under the 1975 Act). It would be helpful to include the name of the qualified engineer appointed to oversee the safety measures.

- **Other matters**

These would include the measures in the inspection report for the maintenance of the reservoir that the reservoir manager is directed under section 47(3)(i) to ensure are monitored by the supervising engineer.

[There was a failure to comply with: [specify as appropriate].] (delete as appropriate)

Guidance.

In accordance with section 50(8)(c) of the Act, the Statement must include a statement of any failure to comply with:

- a requirement in a safety report referred to in section 50(2)(b) of the Act. This only applies while a construction engineer is appointed (for increasing or decreasing capacity, or otherwise altering reservoir)*
- a requirement in a preliminary certificate referred to in section 50(2)(c) of the Act. This only applies while a construction engineer is appointed (for increasing or decreasing capacity, or otherwise altering reservoir)*
- a requirement in a final certificate referred to in section 50(2)(d) of the Act. This only applies while a construction engineer is appointed (for increasing or decreasing capacity, or otherwise altering reservoir)*
- a direction referred to in section 50(2)(f) of the Act. This is a direction given in the latest Inspection report under the 2011 Act regarding maintenance.*
- a recommendation by the supervising engineer under section 50(3) of the Act. This is a recommendation by the SE for an inspection of the reservoir under section 47 by a specified date.*
- a direction by the supervising engineer under section 50(4) of the Act. This a direction by the SE for the reservoir manager to carry out visual inspections of the reservoir at intervals specified by the SE.*

Every such failure (during the period specified in the form) should be stated. If there were no failures this should be stated.

Signature of engineer	<i>Please ensure this is completed as failure to do so could mean it is rejected and returned to the engineer for correcting</i>
Date signed	<i>Please ensure this is completed as failure to do so could mean it is rejected and returned to the engineer for correcting</i>

Additional Guidance

It would be helpful to include a note of the date of the last Inspection Report (under section 47) or Safety Report (under section 35) and the relevant Engineer who prepared the Report.

There are other supervising engineer requirements under section 50 of the Act and whilst the Act does not require them to be included in the annual statement it may be helpful to include a note of them with the Statement submitted to SEPA and the reservoir manager.

Section 50(2)(i) Supervise (or ensure that a nominated representative of the engineer supervises) any proposed draw-down in respect of the reservoir.

The supervising engineer may wish to set out what steps were taken to supervise any draw-down in respect of the reservoir.

Section 50(2)(j) monitor compliance with the requirements of section 51

Under the Act the supervising engineer must also monitor compliance by the reservoir manager with the requirements of section 51 of the Act. Whilst the Act does not require this to be covered by the statement it would be useful if information could be included which recorded what had been done by the reservoir manager to ensure compliance with the section and in particular any direction issued by an engineer under section 51(3).

Section 50(3) supervising engineer considers that the reservoir should be inspected

Where the supervising engineer considers that the reservoir should be inspected they should give the reservoir manager a written recommendation and then provide SEPA with a copy. It would also help if it was noted on the written statement if a recommendation had been made.

Section 50(4) carry out visual inspection

Under the Act the supervising engineer is required to include in the statement any failure of the reservoir manager to comply with a direction given by a supervising engineer under section 50(4). In addition it would be useful if a statement was included which noted whether a direction had been issued by the supervising engineer during the period of the statement and whether notice had been given by the reservoir manager to the supervising engineer under section 50(6)(c).

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. A glossary is also included 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. Currently the requirements of the 2011 Act only apply to reservoirs capable of holding at least 25,000 cubic metres of water above the lowest ground level. When fully implemented it will apply to 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 2011 Act?

A. There are currently 686 reservoirs in Scotland that are regulated under the 2011 Act. In addition to these sites it has been estimated that there could be a further 800 to 850 reservoirs that would 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. 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, are 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:

<https://www.gov.scot/publications/reservoir-engineers-panels-member-lists/>

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

<https://www.gov.scot/policies/water/reservoir-safety/>

The Scottish Government oversees the implementation of the Reservoirs (Scotland) Act 2011. 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-ciqb.org

International Commission on Large Dams (ICOLD) comprises 82 countries and seeks to develop dams in a technically safe, ecologically 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 manmade 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 should 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.