

Research and Information Service Briefing Paper

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The Reservoirs Act (Northern Ireland) 2015 – an overview and progress to date

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This information is provided to Members of the Legislative Assembly (MLAs) in support of their duties, and is not intended to address the specific circumstances of any particular individual. It should not be relied upon as professional legal advice, or as a substitute for it.

Key Points

 The potential flood risk from reservoirs became an area of concern in Northern Ireland during the mid 2000s.

- The primary rationale for the Act was the fact that reservoir safety was only being covered within Northern Ireland by common law considerations (primarily derived from Rylands v Fletcher case in 1868) rather than dedicated and specific legislation.
- The development of the Bill had been informed by extensive consultation and engagement with a range of stakeholders since 2011.
- Rivers Agency, under the auspices of their then parent Department,
 DARD, brought forward a Reservoirs Bill in 2014.
- Issues dealt with in the Bill included a definition of reservoirs based on size (10,000m3 of water), the creation of reservoir manager role with associated responsibilities, the creation of a reservoirs register, the introduction of a risk categorisation designation for reservoirs, requirements for regular inspection by engineers of medium or high-risk designation reservoirs and potential powers for the Department to bring forward a grants scheme.
- The Bill was subject to extensive scrutiny and amendment by the Agriculture and Rural Development Committee.
- Areas of concern identified by the committee included the lack of information on the physical condition of reservoirs and associated costs, how risk designations would be used, the role of engineers, environmental impacts, costs to reservoir managers in the third sector.
- The Act received Royal Assent on 24 July 2015 and notable changes included the Act commencing on a phased basis, a change to reservoir designation from risk to consequence, the removal of a prescribed requirement for supervising engineer visits, and the inclusion of a new requirement for an operational review report three years after Royal Assent.
- As part of the phased approach DARD Rivers Agency undertook a reservoirs review and audit over 2015 and early 2016. This saw a revision in the number of reservoirs from 151 to 131.

 The audit identified 45 reservoirs as being in either 'poor' or 'very poor' condition. Further analysis of these 45 reservoirs reduced the number around which serious concerns existed to 26.

- A Departmental assessment of the costs of repair for safety related works based on the 2016 audit proposed an approximate figure of £10 million.
- Subsequent audit activity in 2019,2020 and 2021 identified 11 reservoirs as requiring urgent action and the majority of these were privately owned, with one being managed within the 3rd/not for profit sector.
- The move from 12 to 9 Government Departments in 2016 saw a need to transfer statutory functions from their old to their new Department. An omission of the functions that DARD had under the Reservoirs Act meant that these functions did not actually transfer to the Department for Infrastructure until June 2021.
- The operation of the Assembly and Executive were significantly disrupted between January 2017 and January 2024 due to a number of suspensions, elections and political negotiations.
- The political institutions were operational between January 2020 and the Assembly election in May 2022.
- Political institution instability impacted the ability to resolve matters such
 as the failure to transfer the Reservoirs Act statutory functions to the
 Department for Infrastructure until 2021 and the delay in bringing forward
 Regulations to fully commence the Reservoirs Act provisions.
- In the absence of full commencement of the provisions within the Reservoirs Act, DFI has made a number of interventions around the practical application of Strategic Planning Policy for Development in Proximity to Reservoirs. In their most recent 2020 iteration these provisions have sought to deliver a short-term pragmatic approach premised upon the concepts of Responsible Reservoir Manager and Condition Assurance.
- 56% of the known controlled reservoirs in Northern Ireland have either Responsible Reservoir Manager Status or Condition Assurance.

 48 reservoirs currently have no assurance status (mainly private and not for profit managed) which means that DFI need to carry out an assessment of flood risk and advise the planning authority accordingly.
 Based on data provided by DFI, in the vast majority of such cases DFI advice to the planning authority would be against development in the inundation area;

- NI Water announced a £6.4 million investment in major reservoir improvements in 2021. 36 reservoirs were scheduled to see improvements up to September 2024.
- DFI publicly consulted on proposals to commence sections of the
 Reservoirs Act and introduce secondary legislation required to enhance
 reservoir safety in 2021. A total of 19 responses were submitted and
 there was general support for the commencement and implementation of
 the Act with the majority of respondents agreeing with the sections to be
 commenced.
- The issue of financial assistance was a key concern. There was also concern that without financial assistance reservoirs may be discontinued or abandoned resulting in adverse impacts on the environment and wider community.
- DFI has recently briefed the Infrastructure Committee on three commencement Orders and two sets of Regulations that it wishes to bring forward to commence and deliver the outstanding elements of the Reservoirs Act 2015, but at the time of writing these have yet to be laid in the Assembly.

Introduction

The briefing paper provides an overview of the development and implementation of the provisions within the Reservoirs Act (Northern Ireland) 2015.

The paper considers key developments within the broad reference period of 2007 to 2025.

The paper utilises a time-based approach, with individual sections focused on the first instance of a broad activity area such as reservoir audit activity for example.

The paper is by no means definitive but rather aims to provide a concise and accessible overview of activity and key milestones over the last 18 years. In this context Figure 1 outlines the matters that will be covered within the paper.

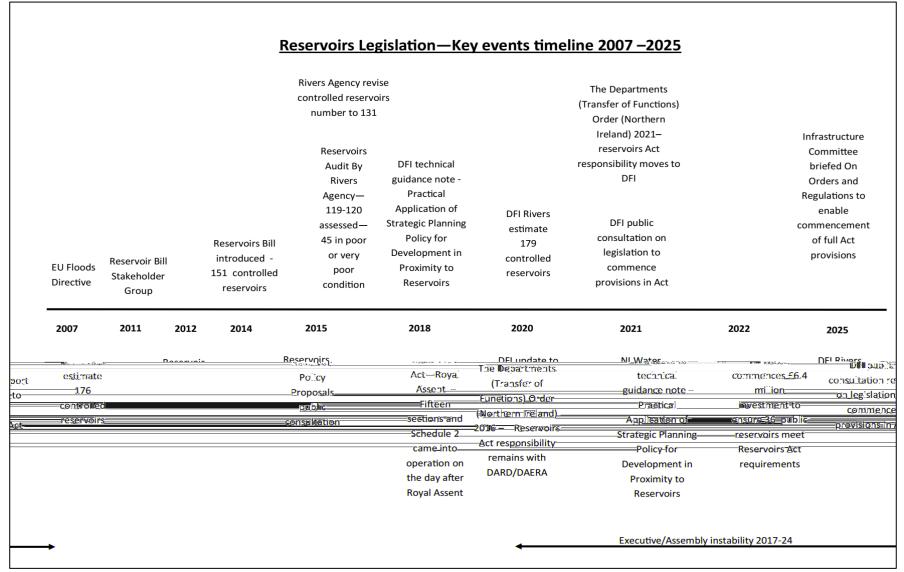


Figure 1: Reservoirs Legislation – key events timeline 2007-2025

1 The rationale for legislation

As a result of implementing the EU Floods Directive¹ in the early 2000s, which required member states to identify, assess, and manage potential significant flood risks, Rivers Agency completed a preliminary flood risk assessment for Northern Ireland.

This exercise identified a potential risk from total dam failure of 156 impounding reservoirs (subsequently amended to 151, having a capacity of greater than 10,000 cubic metres of water above the natural level of any part of the surrounding land) to 66,000 people.

At the request of the Agriculture and Rural Development Committee, Rivers Agency carried out a survey of all 151 reservoirs in Northern Ireland, to assess the impact of the proposed reservoirs legislation on reservoirs that are regarded as community assets.

The results published in April 2013 revealed the following in terms of ownership:

- Public 60;
- Private 59;
- Council 16;
- 3rd Sector 9;
- Not registered/unknown 7.

The actual geographical spread of these 151 reservoirs, on a district council basis, is set out in tables 1 and 2 below.

Table 1: Controlled reservoir ownership – those within 1 district council area

| Council Area | Public | Private | Council | 3 rd Sector | Not registered/unknown | Total |
|--------------|--------|---------|---------|------------------------|------------------------|-------|
| Antrim | 2 | 1 | - | 1 | - | 4 |
| Ards | 2 | 3 | 1 | 2 | - | 8 |
| Armagh | 2 | 2 | - | 3 | - | 7 |
| Ballymena | 2 | 3 | - | - | - | 5 |

¹ <u>DIRECTIVE 2007/60/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (Floods Directive) 2007</u>

| Ballymoney | 1 | 2 | - | - | - | 3 |
|--------------------------|---|---|---|---|---|----|
| Banbridge | - | 1 | 1 | - | - | 2 |
| Belfast | 1 | - | 5 | 1 | 3 | 10 |
| Carrickfergus | 7 | - | 1 | - | - | 8 |
| Castlereagh | 1 | 1 | - | - | - | 2 |
| Coleraine | 6 | 4 | - | - | - | 10 |
| Cookstown | 3 | 3 | - | - | - | 6 |
| Craigavon | - | 1 | 2 | - | - | 3 |
| Derry | 1 | - | - | 2 | - | 3 |
| Down | 4 | 7 | - | - | - | 11 |
| Dungannon & South Tyrone | 2 | 3 | 1 | - | 1 | 7 |
| Fermanagh | 1 | - | 1 | - | - | 2 |
| Larne | 1 | 3 | - | - | - | 4 |
| Limavady | 2 | 1 | - | - | - | 3 |
| Lisburn | 5 | 2 | 1 | - | 2 | 10 |
| Magherafelt | - | 4 | - | - | - | 4 |
| Moyle | - | 1 | - | - | - | 1 |
| Newry & Mourne | 5 | 3 | 2 | - | 1 | 11 |
| Newtownabbey | - | 6 | 1 | - | - | 7 |
| North Down | 6 | 4 | - | - | - | 10 |
| Omagh | 3 | 1 | - | - | - | 4 |
| Strabane | - | 1 | - | - | - | 1 |

Five of the 151 reservoirs actually fell within more than one existing Council boundary and this information is presented in table 2 below.

Table 2: Reservoirs within more than one Council boundary

| Council Areas | Public | Private | Council | 3 rd Sector | Not registered/unknown | Total |
|------------------------|--------|-------------|---------|---------------------------|------------------------|-------|
| Ballymena/Moyle | 1 | - | - | - | - | 1 |
| Banbridge/Armagh | - | 1(multiple) | - | - | - | 1 |
| Banbridge/Lisburn | 1 | - | - | - | - | 1 |
| Newtownabbey/Ballymena | - | 1 | - | - | - | 1 |
| North Down/Ards | 1 | - | - | - | - | 1 |

2 The Reservoirs Bill 2011 - 2015

2.1 Bill development and content

Rivers Agency, under the auspices of their then parent Department, DARD, brought forward a Reservoirs Bill in 2014.

The primary rationale for the Bill was the fact that reservoir safety was only being covered within Northern Ireland by common law considerations (primarily derived from Rylands v Fletcher case in 1868) rather than dedicated and specific legislation.

The development of the Bill had been informed by extensive consultation and engagement with a range of stakeholders since 2011, including the notable creation of a Reservoir Bill Stakeholder Group made up of a range of members including:

- Local councils;
- Executive Departments and Agencies;
- The Institution of Civil Engineers;
- Ulster Angling Federation;
- Ulster Farmer's Union; and
- Waterways Ireland.

An actual public consultation on draft reservoir safety proposals ran from 12 March to 1 June 2012.

The consultation document² that accompanied the consultation process broadly outlined the draft proposals for reservoir safety. One of the most interesting components was the provision of information relating to the potential costs that reservoir operators could potentially be facing as a result some of the draft proposals, and these are set out in tables 3 and 4 below.

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² Reservoir Safety Policy, Consultation on Draft Proposals, Rivers Agency, DARD, March 2012

Table 3: Operating costs

| Description | Estimated cost £s | Comment | | | |
|----------------------------|-------------------|--|--|--|--|
| Operating costs | Operating costs | | | | |
| Supervision and record | 1,600 - 2,500 | Estimated range of costs per annum | | | |
| keeping by supervising | | | | | |
| engineer | | | | | |
| Monthly monitoring, checks | 2,000 | Estimated cost per annum. These duties | | | |
| and record-keeping | | can be undertaken by the reservoir operator | | | |
| | | or staff following training by the supervising | | | |
| | | or inspecting engineer. | | | |
| General maintenance (staff | 3,000 | , | | | |
| and material to include | | be undertaken by the operator, the | | | |
| required | | operator's staff or can be contracted in. | | | |
| signage/information board) | | | | | |
| Inspection by approved | 2,500 - 4,000 | | | | |
| inspection engineer | | designated as high and medium impact will | | | |
| | | be required to be inspected at least every 10 | | | |
| | | years or more frequently if required by the | | | |
| | | supervising or inspecting engineer. | | | |
| Preliminary survey and | 4,000 | It is likely that a survey and preliminary | | | |
| assessments (1st | | assessments will need to be undertaken for | | | |
| inspection) | | the first inspection by an approved | | | |
| | | inspecting engineer | | | |

Table 4: Potential capital costs for remedial works

| Estimates for Remedial Wo | Estimates for Remedial Works | | | | |
|----------------------------------|------------------------------|---|--|--|--|
| Minor concrete repairs | 15,000 | The reservoir safety regime policy proposals | | | |
| Repair and replacing | 75,000 - 150,000 | only require reservoir operators of high | | | |
| valves | | impact controlled reservoirs to undertake | | | |
| Abandoning a reservoir | 250,000 | works specified by the inspecting and | | | |
| Replacement of pressure | 400,000 | supervising engineer. | | | |
| points and grout holes | | These estimated repair costs provide a rough | | | |
| under spillways | | indication of anticipated costs. The need for | | | |
| Repairs to spillways | 300,000 - 1,000,000 | these works is dependent on a number of | | | |
| | | factors including the condition of the | | | |
| | | reservoir. | | | |
| Cost of decommissioning a | 750,000 | Abandoning a reservoir requires undertaking | | | |
| reservoir | | measures to secure that the reservoir is | | | |
| | | incapable of filling with water above the | | | |
| | | natural level of the surrounding land. | | | |
| Development and re- | 333,000 | This figure is provided from an example of | | | |
| design costs | | where a reservoir had not been maintained | | | |
| | | but its continued use was desired. | | | |

The public consultation exercise yielded a total of 32 written responses to the proposals and some of the key themes identified included:

- Concerns around potential costs associated with the legislation;
- The need for grant support to enable Bill obligations to be met;
- A general endorsement of the High, Medium and Low risk designation system;
- A general endorsement of the Panel Engineer System;
- A mixed message in relation to the charging of fees and cost recovery.

The Bill³ was formally introduced in the Assembly on 20 January 2014 and contained 121 clauses and four schedules.

After successfully passing second stage the Bill moved to Committee Stage and was subject to scrutiny by the Committee for Agriculture and Rural Development.

The Bill as introduced contained a range of proposals but the substantive provisions included:

- A proposed definition of a controlled reservoir in terms of size (10,000m³ of water above the natural level of any part of the surrounding land);
- Proposed creation of the role of reservoir manager including
 establishing that responsibility for managing or operating a reservoir is
 placed on persons or organisations referred to as 'the reservoir
 manager'; and creating the possibility for a controlled reservoir being
 managed by more than one 'reservoir manager';
- Proposed requirements for controlled reservoir registration including the fact that DARD would create and maintain this register and that there would be a duty for controlled reservoir owners/managers to register their reservoirs;
- Proposed introduction of low, medium and high-risk category
 designations based upon the potential consequences of an uncontrolled
 release and the probability of such a release. These clauses also dealt
 with the process of periodic risk designation reassessment and the risk
 designation review and appeals mechanism;

³ Reservoirs Bill (as introduced on 20 January 2014)

 A requirement for reservoirs with a medium or high-risk designation to be subject to regular inspection by supervising engineers (full details in table 5 below);

- A range of offences for non-compliance with the Bill's provisions;
- Powers for the Department to bring forward a grants scheme through subsequent Regulation in order to enable or assist reservoir managers to meet their obligations under the Bill.

Table 5: Reservoir Operating Requirements within the Bill

| Risk designation | Operating requirements | |
|----------------------|---|--|
| Low risk | Registration of the controlled reservoir – which may include a fee if one is introduced through subordinate legislation; | |
| | Provision of an information board displaying emergency response information; | |
| | Maintain a record of relevant documents detailing repairs; | |
| | Periodic risk assessment – proposed every 10 years or more often if circumstances require; | |
| | Potentially include the preparation of a flood plan if required by subordinate legislation; | |
| | Potentially include the commissioning of a construction engineer if remedial or alteration works are required by an inspection engineer (may be encapsulated within capital costs however) as set out in clause 38 of the Bill. Clause 38 would also by default provide that more minor remedial works (ie not defined within the Clause) could be managed by a supervising or inspecting engineer. | |
| Medium and High risk | Same requirements as those for low-risk reservoirs plus the following: | |
| | Record keeping – water levels, repairs etc; | |
| | Commissioning of a supervising engineer – who will visit a high-risk reservoir at least twice in | |

every 12 month and at least once in every 12 months for a medium risk reservoir and produce associated supervisory reports

- Commissioning of an inspecting engineer to conduct an inspection of the reservoir before the end of period of 1 year from the high/medium risk designation (doesn't apply in situations where the controlled reservoir was, immediately before the designation of it as a medium risk reservoir took effect, designated as a high-risk reservoir) – 10 year inspecting period thereafter for high-risk reservoirs
- Potentially include the commissioning of a construction engineer if remedial or alteration works are required by an inspection engineer (may be encapsulated within capital costs however) as set out in clause 38 of the Bill.
 Clause 38 would also by default provide that more minor remedial works (i.e. not defined within the Clause) could be managed by a supervising or inspecting engineer.

2.2 Bill scrutiny by ARD Committee

The Assembly's then Agriculture and Rural Development Committee scrutinised the Reservoirs Bill over the course of 16 meetings during 2014.

The Reservoirs Bill (NIA 187/11-15) was referred to the Committee in accordance with Standing Order 33 on completion of the Second Stage of the Bill on 4 February 2014.

A RalSe Bill Paper (NIAR 248-13)⁴ looking at potential issues within the Bill was presented to the ARD Committee in February 2014.

⁴ The Reservoirs Bill, RalSe Bill Paper, NIAR 248-13, 4 February 2014

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17 organisations responded to the Committee's request for written evidence on the Bill and the Committee also organised an event specifically for private reservoirs owners to share their views.

The Committee took evidence from a range of stakeholders and published their report on the Bill on 24 June 2014⁵.

Issues identified by the committee during their scrutiny included:

- No concerns with the major principle of the Bill in that it is designed
 to protect people, the environment, economic and cultural assets from
 the consequences of a dam failure and the reservoir flooding;
- DARD was unable to inform the Committee of the physical condition of the reservoirs and it could not quantify how much it might cost to bring them to an acceptable safety standard to protect people, the environment, economic and cultural assets. The Committee was very strongly of the opinion that this work should have been done before the Bill was introduced to the Assembly. The lack of concrete information made decision making on aspects of the Bill very difficult;
- The risk designation process as provided for at clauses 17 to 23 was an area of major concern for the Committee. As proposed the risk designation process in the Bill will use consequence as the main designation tool. However, the Bill does mention and refer to probability in a manner that suggested that it will be used, thus creating, what the Committee perceived as an inoperable clause at clause 22. The Committee concern however, centred not only on terminology but on the inability of the reservoir manager to affect the risk designation by their compliance with the Bill. The Committee therefore voted 'not content' with the relevant clauses.
- The Committee indicated that it wished to see a more balanced approach to the role of the engineers. It was felt that there was a real risk that, in the interest of being risk adverse and on the

⁵ Report on the Reservoirs Bill, Agriculture and Rural Development Committee, 24 June 2014

precautionary principle, engineers may, in the words of many witnesses "over engineer".

- As with the issue of information on the condition of the 151 controlled reservoirs in Northern Ireland, in the opinion of the Committee there was an information gap around the costs that reservoir managers can expect to have to meet in order to comply with the Bill. Despite the fact that legislation of a similar nature to this has been operational in England, Scotland and Wales for decades, the Committee could find no public information on the financial cost of compliance. What little information was available appeared to suggest that capital costs could often be extremely high.
- The Bill would allow the Department to step in and take specified actions, including works, when the reservoir manager did not comply with the requirements of the Bill. In such cases the Department would be obliged to seek to recover the full costs of such actions / works. While the Committee were of the opinion that those who could afford to pay should do so, it also recognised that some reservoir managers, particularly the third sector, may be in this position because they were financially unable to comply with the Bill in the first instance.
- All reservoirs including those on private land with no public access, are important assets in terms of the environment. They are also important from the viewpoint of social and recreation use and often have an important flood attenuation role. The Committee therefore expressed concerns that some reservoir owners are either considering or are already decommissioning their reservoirs in an attempt to avoid having to comply with the legislation when it is enacted. The Committee was concerned that these aspects and consequential potential negative impacts had not been clearly thought through or assessed by the Department.
- The lack of information on the condition of the reservoirs in Northern Ireland and the estimated cost to bring them up to an acceptable standard meant that the Committee could not fully comment on the Grant Aid provisions within the Bill except to note

that it was content that the Bill contained such provisions, and that for some, mainly the third sector owners, all grant aid, particularly capital grants may need to be at 100%.

• The Committee did give detailed consideration to changing the part of the definition of a controlled reservoir dealing with capacity. It considered whether capacity should change from 10,000m3 to either 15,000m3 or 25,000m3. However, based on the information provided to it by the Department it would appear that this would ultimately have little or no benefit and it therefore did not seek an amendment on this issue.

Through the process of its scrutiny 200 amendments were tabled and adopted with regards to the content of the Bill.

2.3 Further Assembly scrutiny of Bill – consideration, further consideration and final stages

The consideration stages of the Bill in the Assembly saw further changes and amendments being made between 28 April 2015 and 24 June 2015 when the Bill completed final stage.

2.4 Differences between the Bill and final Act

The Reservoirs Act⁶ received Royal Assent on 24 July 2015.

Table 6 below provides an overview of some of the key changes between the provisions with the Bill as introduced and the Act which received Royal Assent.

| | Bill as introduced - proposals | Act |
|--------------|---|--|
| Commencement | Following Bill provisions to come into operation on Royal Assent: | Act came into force on a phased basis. |

Table 6 - Key changes between Bill and Act

⁶ Reservoirs Act (Northern Ireland) 2015

| Bill as introduced proposals | - Act |
|--|---|
| Section 1 – contraction reservoir definition | follows + Schedule 2 as |
| Section 2 – structure or area which is treated as a controlled reserve | to be 1,2,5,6,42,93 to 97, 126 to 128, 130 and 132. |
| Section 5 - contr reservoirs supplementary | olled of the Act required to set the legislative foundation in place, for example, what is a controlled reservoir, who |
| Section 6 – rese managers | powers of entry. Phase 1 |
| Section 39 – Me of relevant works purposes of Act | the day after Royal Assent or on such day or days as |
| Sections 88-92 - powers of entry, warrants for entr | огиег арропп. |
| offences for preventing/obstruentry and compensation | Phase 2 will include all other parts of the Act, such as the requirement to commission a supervising |
| Section 116 – Supplementary, incidental, consequential et provision | engineer, the requirement to undertake works directed in inspection reports, further inspections, and associated sections or part |
| Section 118 - definitions. | sections. Phase 2 sections can only be commenced |
| • Section 120 – Commencement | after a draft order has been laid before, and approved by a resolution |
| Section 121 – St title. | of, the Assembly. |
| Schedule 2 – Inc defined expressi | DAPD Minister gave a |

| | Bill as introduced - proposals | Act |
|---|---|--|
| | | commencement of phase two would not be brought forward until after a report had been presented to the Assembly by the Department setting out the condition of reservoirs and the capital costs of making them safe. ⁷ |
| Reservoir designations (Section 17) | Reservoir designations: Low risk; Medium risk; High risk. | Reservoir designations: Low consequence reservoir; Medium consequence reservoir; High consequence reservoir. |
| Supervising engineer visits | Specified that high risk reservoirs needed to be visited at least twice in every 12 month period by a supervising engineer; Specified that medium risk reservoirs needed to be visited at least once in every 12 month period by a supervising engineer. | Section 27 (1) The Department may by regulations make provision: • (a)for there to be a standard frequency of visits that must be made by a supervising engineer to a high-consequence or medium-consequence reservoir, |

⁷Reservoirs Bill: Consideration Stage, NI Assembly, Official Report: Tuesday 28 April 2015,

| | Bill as introduced - proposals | Act |
|---------------------------|--------------------------------|--|
| | | (b)for the standard frequency to be different according to whether or not the Department considers that a high-consequence or medium-consequence reservoir is of an acceptable standard as regards how it is being maintained. |
| Operational review report | No provisions | The Department must, not later than three years after this Act receives Royal Assent, publish a report on the operation of this Act. (2) The Department must lay the report before the Assembly. |

3 Audit activity

3.1 2015/16 initial review and audit

In line with the conditions around the phased introduction of the Reservoirs Act (Northern Ireland) 2015, DARD Rivers Agency completed both a reservoirs review and a reservoirs audit over the course of 2015 and early 2016.

The Assembly's Agriculture and Rural Development Committee received an update on this activity in March 2016⁸.

The reservoirs review saw a revision in the number of controlled reservoirs in Northern Ireland from 151 to 131.

The intention of the reservoirs audit was to gather information on the condition of controlled reservoirs that were likely to receive High or Medium Consequence designation, together with an estimate of the capital cost of works in the interests of safety. DAERA committed to reimburse the costs of providing the required information by private sector and not-for-profit reservoir managers, up to a maximum £2,500.

A total of 120 qualifying reservoirs were identified for audit i.e. either medium or high consequence and the owners/managers of 112 of these agreed to participate in the audit ((34 Private, 68 public, and 10 not-for-profit). The owners/managers of 4 reservoirs (all publicly owned) were undecided and a further 4 (all privately owned) had declined to participate.

At the time of the Rivers Agency update in March 2016, 55 of the 112 reservoirs confirmed as participating in the audit had provided the requested information. The actual ownership status of the 55 respondents was as follows:

- 37 public sector reservoirs;
- 11 private sector reservoirs; and
- 7 not-for-profit reservoirs.

Rivers Agency stated their intention to present the full reservoirs audit to the Assembly in 2016, but the researcher has however been unable to access a copy of this finalised audit report.

Evidence provided to the Assembly's Infrastructure Committee on Wednesday 20 November 2024, by officials from the Department for Infrastructure,

Reservoirs Act and Audit, Update briefing for the Agriculture and Rural Development Committee, Rivers Agency, March 2016

highlighted the fact that 2015/16 audit identified **45 reservoirs as being in** "poor" or "very poor" condition⁹.

Information provided in a note¹⁰ from DFI reveals data was obtained for 105 reservoirs overall (including 46 managed by NI Water). The 45 in poor¹¹ or very poor condition did not include NI water reservoirs. In order to help support reservoir managers, the Department carried out further analysis of these 45 reservoirs and serious concerns remained in relation to at least 26 reservoirs.

DFI has provided an overview of the condition of the 105 reservoirs identified during the 2016 audit and this data is set out in table 7 below. It should be noted that this data excludes the 46 NI Water reservoirs as they were either all in good condition or there were ongoing plans to return them to good condition

| Sector | Good condition | Fair condition | Poor Condition | Very Poor condition |
|--|-------------------|-------------------|-------------------|---------------------|
| Public sector (excluding NI Water) | 2 | 3 | 4 | 8 |
| Not for profit sector | 1 | 1 | 6 | 4 |
| Private sector | 3 | 4 | 13 | 10 |
| Total | 6 (10%) | 8 (14%) | 23 (39%) | 22 (37%) |

Table 7: Reservoir audit 2016 – condition by sector

A Departmental assessment of the costs of repair for safety related works based on the 2016 Audit proposed an approximate figure of £10 million.

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Reservoirs Act (Northern Ireland) 2015: Department for Infrastructure, Official Report: Minutes of Evidence, Committee for Infrastructure, meeting on Wednesday, 20 November 2024

¹⁰ Note in email from DFI to researcher received on 29 April 2025

¹¹ Definitions for how 'poor' and 'very poor' were defined are included in Annex 1 of this paper.

3.2 Subsequent audit activity in 2019, 2020 and 2021

The information in this section was derived from DFI data sent to the researcher¹².

In 2019-20 DFI carried out additional surveys with specialist reservoir engineers which identified 9 reservoirs that required urgent interventions.

This activity included surveying those 26 reservoirs of particular concern from the original audit.

15 reservoirs were never surveyed in 2016 and to get a fuller picture further surveys were completed in 2020-21 which identified another two reservoirs requiring urgent interventions, bringing the total number to 11.

In terms of what is known about these 11 reservoirs, DFI has confirmed the following information:

- The majority are private reservoirs;
- One is managed within the 3rd/not for profit sector;
- All 11 are classed as high consequence with properties within their inundation areas – just over 1000 properties at risk.

Additionally, the geographical spread of the 11 reservoirs is as follows:

- One in the Antrim and Newtownabbey Borough Council area;
- One in the Ards and North Down Borough Council area;
- Two in the Armagh City, Banbridge and Craigavon Borough Council area;
- Two in the Belfast City Council area;
- Two in the Causeway Coast and Glens Borough Council area;
- One in the Mid and East Antrim Borough Council area; and
- Two in the Newry, Mourne and Down District Council area.

¹² Note in email from DFI to researcher received on 29 April 2025

4 Transfer of functions Orders - 2016 and 2021

The Departments (Transfer of Functions) Order (Northern Ireland) 2016¹³ was the effective outworking of the Northern Ireland Executive's decision to change the number of Government departments within Northern Ireland.

The move from 12 to 9 Departments enabled by the Departments Act (Northern Ireland) 2016, meant that there was a need to transfer certain statutory functions from their original department to their new department.

Schedule 2 of the Order outlined the functions that would be transferred from the Department for Agriculture and Rural Development (DARD) to the Department for Infrastructure (DFI). Schedule 2 however omitted the functions that DARD had under the Reservoirs Act 2015.

This effectively left the statutory functions around the development and implementation of the Reservoirs Act 2015 in a form of operational limbo.

This omission was not corrected until Article 4 of the Departments (Transfer of Functions) Order (Northern Ireland) 2021¹⁴ came into force on 1 June 2021. DFI assumed statutory responsibility for the Reservoirs Act 2015 and its provisions on 1 June 2021¹⁵.

5 Political instability

The operation of the Assembly and Executive were significantly disrupted between January 2017 and January 2024 due to a number of suspensions, elections and political negotiations.

The political institutions were operational between January 2020 and the Assembly election in May 2022.

This instability impacted the ability to resolve matters such as the failure to transfer the Reservoirs Act statutory functions to the Department for

¹³ The Departments (Transfer of Functions) Order (Northern Ireland) 2016

¹⁴ The Departments (Transfer of Functions) Order (Northern Ireland) 2021

¹⁵ AQW 30364/17-22

Infrastructure until 2021 and the delay in bringing forward Regulations to fully commence the Reservoirs Act provisions.

6 Planning guidance for development in proximity to reservoirs

The Department for Infrastructure (DFI) has made a number of significant interventions in relation to planning guidance for development in proximity to reservoirs since 2015 and these are summarised below.

6.1 2018 Technical Advice Note

In August 2018 the Department for Infrastructure issued a Technical Advice Note (TAN)¹⁶ outlining the Practical Application of Strategic Planning Policy for 'Development in Proximity to Reservoirs'.

More specifically the note set out how Department for Infrastructure (DfI) Rivers would apply its responsibilities with regard to the provisions of planning policy contained within the Strategic Planning Policy Statement (SPPS), together with the provisions of Policy FLD 5 of Planning Policy Statement (PPS) 15 (Revised)1 "Development in Proximity to Reservoirs".

The TAN was issued in the context of the regulatory framework for reservoirs, namely the Reservoirs Act, not being in place in 2018.

Section 2.3 of the TAN highlighted the following:

Paragraph 6.120 of the SPPS advises that "New development within the flood inundation area of a controlled reservoir can only be justified where the condition, management and maintenance regime of the reservoir are appropriate to provide assurance regarding reservoir safety". Accordingly, planning permission for new development should only be granted subject to such assurance being provided by a suitably qualified engineer and supported by Dfl

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¹⁶ The Practical Application of Strategic Planning Policy for 'Development in Proximity to Reservoirs', Technical Advice Note, Department for Infrastructure, August 2018

Rivers, as the responsible body for the management of flood risk". A "suitably qualified engineer" is an All Reservoirs Panel Engineer.

Paragraphs 2.4 and 2.5 expanded further on this issue:

- 2.4 Paragraph 6.121 of the SPPS advises that "Applications for built development in these areas must also be accompanied by a Flood Risk Assessment (FRA) which demonstrates an assessment of the downstream flood risk in various scenarios (for example, controlled release of water, uncontrolled release due to dam failure, change in flow paths as a result of proposed development). The FRA will also need to set out suitable measures to manage and mitigate the identified flood risks, including details of emergency evacuation procedures."
- 2.5 This means that before planning permission can be granted, the Planning Authority needs to be satisfied that, in the opinion of an All Reservoirs Panel Engineer, the condition, maintenance and management regime of the controlled reservoir is sufficient regarding reservoir safety, and that the flood risk in various scenarios will be managed and mitigated.

Section 3 of the 2018 TAN also identified what DFI Rivers would accept as meeting reservoir safety assurance requirements as follows:

I. A *Reservoir Inspection Report completed by an All Reservoirs

Panel Engineer not more than 8 years before the date of the

Planning Application which indicates that no works in the interests of
safety are required to the reservoir;

0R

II. A *Reservoir Inspection Report completed by an All Reservoirs
Panel Engineer not more than 8 years before the date of the
Planning Application which indicates that works in the interests of
safety are required and the report is accompanied by confirmation in
writing from an All Reservoirs Panel Engineer that the works have
been completed to his/her satisfaction;

OR

III. A **Reservoir Survey Report completed by an All Reservoirs

Panel Engineer not more than 8 years before the date of the

Planning Application which indicates that the overall condition of the

reservoir is "Good":

OR

IV. A **Reservoir Survey Report completed by an All Reservoirs

Panel Engineer not more than 8 years before the date of the

Planning Application which indicates that the overall condition of the
reservoir is "Fair", "Poor", or "Very Poor" and the Survey Report is
accompanied by confirmation in writing from an All Reservoirs Panel
Engineer that the safety works identified in the survey report have
been completed to his/her satisfaction;

0R

V. Where works to the reservoir are required to be undertaken for the purposes of ensuring reservoir safety and a schedule of works has been agreed by an All Reservoirs Panel Engineer, planning permission may be granted subject to a negative condition or a planning agreement as considered appropriate, to ensure the works are carried out satisfactorily prior to the commencement of the development being sought by the planning application.

OR

- VI. Assurance in writing from an All Reservoirs Panel Engineer that the condition, maintenance and management regime is sufficient regarding reservoir safety.
- 3.2 When obtaining assurance regarding reservoir safety, the developer should engage with the reservoir manager (if it is a different party). This will also provide an opportunity for the manager and developer to jointly consider any structural improvement works required to make the reservoir safe or other implications the

development may have for the reservoir manager. The funding of such works is a private matter between the developer and the reservoir manager.

3.3 Reservoir safety assurance will not be required where the application relates to a replacement building and the FRA demonstrates there is no material increase in the flood risk to the development or elsewhere.

3.4 The specific factors to be taken into account when providing consultant advice may vary depending on the development proposed.

6.2 Technical Guidance Note (TGN 25) 2020

In June 2020 DFI produced a new revised Technical Guidance Note¹⁷ (TGN 25) that superseded the 2018 Technical Advice Note dealt with in section 6.1. TGN 25 deals with the practical application of Strategic Planning Policy for development in proximity to reservoirs.

The revised TGN 25 had elements that matched the previous TAN from 2018 but there were also some notable additions including the following:

- The outlining of a desired long-term approach to the planning process built upon the principle of condition assurance in relation to flood risk from controlled reservoirs – like the approach in the rest of the UK. The TGN acknowledged that a move to this approach within Northern Ireland could only apply where the key provisions of the reservoir safety framework provided for in the Reservoirs Act are commenced.
- The outlining of a short-term/pragmatic approach in the absence of full commencement of the Reservoirs Act provisions. Primary mechanism is reservoir managers voluntarily entering into a written agreement with DFI to comply with key provisions of the Act. When satisfied – DFI will confer

¹⁷ The Practical Application of Strategic Planning Policy for 'Development in Proximity to Reservoirs', Technical Guidance Note 25 (revised), Department for Infrastructure, June 2020

'Responsible Reservoir Manager Status' on the named reservoir – management and maintenance of controlled reservoirs will be assessed against the requirements of the Reservoir Act 1975 (as amended) which applies to England and Wales.

- Condition assurance alone DFI will consider assurance provided by a
 planning applicant or others but will also insist on all the matters in the
 interests of safety identified in a current inspection report (Section 10 of
 Reservoirs Act 1975) being completed up front and signed off by an All
 Reservoirs Panel Engineer.
- No/Insufficient Assurance on Condition, Management and
 Maintenance Where no, or insufficient, evidence is provided by the
 applicant regarding the condition, management, and maintenance regime
 of the reservoir, the Department will carry out an assessment of flood risk
 to people and advise the planning authority accordingly.

It appears that the guidance in TGN 25 continues to apply at present in the absence of full commencement of the Reservoirs (Northern Ireland) Act 2015 provisions.

Information provided to the researcher by DFI in the form of a note¹⁸ suggests that at present 97 (56%) of the 173 known controlled reservoirs in Northern Ireland have either Responsible Reservoir Manager status or Condition Assurance.

48 reservoirs currently have no assurance status and 28 have either no info/low consequence status. Based on data provided by DFI, in the vast majority of such cases DFI advice to the planning authority would be against development in the inundation area.

DFI data¹⁹ as highlighted in table 8 below highlights how these figures are broken down by sector.

¹⁸ Emailed briefing note received on 29 April 2025

¹⁹ ibid

Sector Responsible Condition No No info/low Reservoir assurance assurance consequence Manager Status NI Water 65 4 0 24 5 0 1 Govt Dept 1 Council 3 2 0 13 Not for profit 0 1 10 0 1 4 36 3 Private Total 84 13 48 28

Table 8 – Reservoir status with regards to planning process

7 Capital investment in NI Water reservoirs

In December 2021 NI water announced a £6.4 million investment²⁰ in a major programme of reservoir improvements across Northern Ireland to refurbish and enhance the safety of the impounding reservoir portfolio.

36 reservoirs were scheduled to see a range of improvements up to September 2024 with work undertaken including the following:

- refurbishment of control valves;
- installation of drainage;
- repairs to spillway structures and improvement to monitoring equipment to ensure the safe and appropriate management of the reservoirs.

The actual status and cost of this work has proven challenging to determine with publicly available information. Key questions include:

²⁰ £6.4 Million Water Improvement Scheme gets underway to future-proof local Reservoirs, Press Release, NI Water 7 December 2021

- Were all scheduled works completed by September 2024?
- Is any work currently outstanding?

 Was the £6.4 million budget allocation sufficient to complete the intended works across the 36 identified reservoirs?

8 DFI consultation on proposals to commence sections of the Reservoirs Act (Northern Ireland) 2015

In November 2021 the Department for Infrastructure (DFI) launched a public consultation²¹ on proposals to commence sections of the Reservoirs Act (Northern Ireland) 2015, and introduce the secondary legislation required to implement the fundamental elements of the reservoir safety policy in Northern Ireland and the criteria which will be used to give controlled reservoirs a reservoir designation.

As well as providing an overview of how DFI proposed to commence outstanding sections of the Reservoirs Act 2015 using Regulations and Orders the consultation document posed eight questions under three distinct areas to inform the response of stakeholders as follows:

Part 1 - Commencement

 Q1 Do you agree that the sections of the Act that the Department proposes to commence, include the key elements of the reservoir safety regime envisaged by the Act?

Part 2 - Regulations

- Q2 Do you agree with the level of information that it is proposed is held on the controlled reservoirs register?
- Q3 Do you agree with the level of information that it is proposed should be provided by reservoir managers at registration?
- Q4 Do you agree with the standard frequency of visits proposed for a high or medium consequence reservoir?

²¹ Consultation on proposals to commence sections of the Reservoirs Act, Department for Infrastructure, November 2021

 Q5 Do you agree that the proposed level of emergency response information displayed at or near a reservoir is sufficient?

- Q6 Do you agree with the proposed approach to stop notices set out in the draft Regulations at Annex D?
- Q7 Do you agree that consideration is given to an appropriate and affordable grant scheme to assist with the cost of reservoir safety works?

Part 3 - Designation Criteria

 Q8 Do you agree with the proposed criteria which will be used to give a reservoir a high, medium or low consequence designation?

A total of 19 responses were submitted to the public consultation exercise from a range of stakeholders that broadly included councils, political parties, Government Departments/Agencies, Angling interests, businesses, third sector groups and individual citizens. The full consultation report can be accessed here.

The report includes the following summary of the overall responses:

In general, there was support for the commencement and implementation of the Act with the majority of respondents agreeing with the sections to be commenced. It was evident from responses that provision of financial assistance was a key concern. There was also concern that without financial assistance reservoirs may be discontinued or abandoned resulting in adverse impacts on the environment and wider community.

9 Subordinate legislation to enable Reservoirs Act provisions commencement

DFI has developed a number of pieces of draft subordinate legislation to enable commencement of the outstanding elements of the Reservoirs Act 2015.

More specifically it appears that DFI is planning to bring forward three Orders and two sets of Regulations as follows:

 The Reservoirs (2015 Act) (Commencement No.1) Order (Northern Ireland);

- The Reservoirs (2015 Act) (Commencement No.2) Order (Northern Ireland);
- The Reservoirs (Commissioning of Panel Engineers) Order (Northern Ireland);
- The Reservoirs (Northern Ireland) Regulations; and
- The Reservoirs (Visits by Supervising Engineers, Stop Notices and Grants) Regulations (Northern Ireland).

The Infrastructure Committee was briefed on the Orders and Regulations at their meeting on 26 March 2025.

At the time of writing the Orders and Regulations have yet to be laid in the Assembly.

10 Observations/issues

- Despite the full provisions/obligations of the Reservoirs Act 2015 not being in place at present, reservoir managers continue to have a common law responsibility for reservoir safety. More specifically reservoir managers have the duty to manage, monitor, survey and maintain a reservoir. This raises an obvious question in terms of whether the current protections and responsibilities for reservoir safety for reservoir owners/managers are as robust as those afforded by provisions within a fully commenced Reservoirs Act (Northern Ireland) 2015?
- The scrutiny of the Reservoirs Act 2015 was both lengthy and extensive and resulted in significant changes to both the content of the final Act and how it was to be commenced, most notably utilising a phased approach.

DFI currently recognises 176²² reservoirs as falling under the provisions
of the Reservoirs Act 2015. As highlighted in figure 1 and section 3 of
this paper, the number of controlled reservoirs has changed over the last
18 years and may well change again when the duty to register eventually
comes into force. This makes an overall current assessment of controlled
reservoir capital and ongoing operational costs hard to determine.

- The original approximate figure of £10 million pounds was identified in 2016 as the overall cost of repair for safety related works. DFI have estimated this figure as potentially being in excess of £13.7 million pounds in 2025²³. It remains unclear if this figure includes or excludes the £6.4 million that NI Water have committed to meeting Reservoirs Act requirements at 36 of their reservoirs.
- Based on the most recent audit activity in the 2020-21 period, there
 appeared to be 11 reservoirs that had required urgent interventions. DFI
 data²⁴ suggests that there was remedial activity at these reservoirs, but
 the Department has not been provided with confirmation from a suitably
 competent reservoir engineer to verify that any works undertaken would
 meet engineering standards relevant to reservoir safety.
- In the absence of fully commenced Reservoirs Act provisions, DFI has
 faced challenges in relation to managing development in proximity to
 reservoirs. Whilst interim solutions have been developed, these solutions
 appear potentially complicated and onerous. It has not however been
 possible to assess the actual overall operational impact of the interim
 solutions on levels of development in proximity to reservoirs within this
 paper.
- The number of reservoirs, condition, cost of potential remedial action and responsibility for these matters, and the potential level and nature of public grant support were issues in 2014 and remain live today.

Reservoirs Act (Northern Ireland) 2015: Department for Infrastructure, Official Report: Minutes of Evidence, Committee for Infrastructure, meeting on Wednesday, 20 November 2024

²³ DFI note emailed to Assembly researcher on 29 April 2025.

²⁴ ibid

Annex 1 – Definition of 'Poor' and 'Very Poor' reservoirs definition in 2016 reservoirs audit

Information provided to researcher by DFI in form of a note on 29 April 2025.

Poor

- The Embankment is showing a sign of leakage and / or extensive structural deterioration and early action is needed to stabilise the dam.
 (or)
- The Spillway is structurally unsound, or obstructed or capable of discharging less than 50% of the appropriate design flood. (or)
- The Outlet arrangements are dilapidated or provide control only on the downstream side or are insufficient for providing an adequate emergency drawdown rate, or if the outlet pipes beneath the embankment are liable to fail.

Very Poor

- The Embankment has significant leakage or has already experienced structural damage. (or)
- The Spillway overflow arrangements are unclear or missing. (or)
- The Outlet has no viable draw-off arrangements.

Having clearly defined criteria allowed the Department to allocate a condition category where a reservoir manager supplied an existing reservoir inspection report.

This situation arose in respect of NI Water's 46 reservoirs, 10 Public Sector reservoirs, 1 Not for Profit Sector reservoir, and 1 Private Sector Reservoirs. The condition score on the remaining 47 reservoirs was given by an All Reservoir Panel Engineer.