

## **Explanatory Memorandum to ‘The Reservoirs Act 1975 (Capacity, Registration, Prescribed Forms etc.) (Wales) Regulations 2016’**

This Explanatory Memorandum has been prepared by the Department for Economy, Skills and Natural Resources and is laid before the National Assembly for Wales in conjunction with the above subordinate legislation and in accordance with Standing Order 27.1.

### **Minister’s Declaration**

In my view, this Explanatory Memorandum gives a fair and reasonable view of the expected impact of The Reservoirs Act 1975 (Capacity, Registration, Prescribed Forms etc.) (Wales) Regulations 2016.

I am satisfied that the benefits outweigh any costs.

Carl Sargeant AM  
Minister for Natural Resources  
29 January 2016

## **1. Description**

The Reservoir Act 1975 was introduced to enforce adequate safety provisions for reservoirs. However, this Act was conceived in an era where there was little information available on risk from individual reservoirs. Advances in mapping and data now allow the enforcement authority, Natural Resources Wales (NRW), to rank reservoirs by their level of risk to human life. This means that the full suite of the Reservoirs Act 1975 Regulations, which is based on volume of water as opposed to level of risk, is disproportionate for low risk Large Raised Reservoirs (LRRs).

The Reservoir Act 1975 currently applies to all reservoirs with a capacity of more than 25,000 cubic metres (roughly equivalent to 10 Olympic-sized swimming pools) above the level of the natural ground. The Flood and Water Management Act 2010 amends the Reservoirs Act 1975 to introduce new arrangements for reservoir safety, allowing for a risk-based approach to the regulation of reservoirs in place of the prescriptive (volume-based) approach in the Reservoir Act 1975 to ensure appropriate measures are in place to protect the public from a reservoir breach.

The Flood and Water Management Act 2010 allows for the extension of regulation to smaller reservoirs where risks to the public exist; hence, it is proposed that the 'threshold' capacity for regulation should be reduced to 10,000 cubic metres and above. This is based on a general consensus within the dam engineering profession, which suggests that 10,000 cubic metres represents the lowest level that could pose risks to the general public (i.e. anything below this level would not pose risk to human life).

This SI sets out in regulations the following:

- how to calculate capacity for the purposes of the Reservoirs Act 1975;
- the information about a large raised reservoir that is to be registered, notification of changes to, and the keeping and inspection of, the Welsh register;
- the making and content of reports by NRW to the Welsh Ministers;
- the form of record to be kept for a high-risk reservoir and the information to be given in that record;
- the form of certificates and reports of engineers and the form of directions of engineers;
- the information to be provided by undertakers when intending to construct or bring back into use a large raised reservoir; and
- the making of reports by undertakers to NRW in relation to incidents relating to the uncontrolled release of water from a large raised reservoir where emergency measures are taken.

## **2. Matters of special interest to the Constitutional and Legislative Affairs Committee**

There are no matters of special interest to the Constitutional and Legislative Affairs Committee.

### **3. Legislative background**

These Regulations will be made under sections A1(4), 22 and (2C) to (2E), 3(1), 5,11, 20(1) and 21(1) and 21B of the Reservoirs Act 1975.

Powers under the Reservoirs Act 1975 initially vested in the Secretary of State for Wales, so far as exercisable in relation to Wales, and were transferred to the National Assembly for Wales by the National Assembly for Wales (Transfer of Functions) Order 1999 (SI 1999/672). They now vest in the Welsh Ministers by virtue of section 162 of and paragraph 30 of Schedule 11 to the Government of Wales Act 2006.

These Regulations are subject to approval by the National Assembly by the negative resolution procedure under section 5 of the Reservoirs Act 1975.

### **4. Purpose & intended effect of the legislation**

The overall aim of this SI is to ensure the safety of the public from an uncontrolled release of water from a reservoir by imposing statutory obligations upon undertakers. The aim of the amendments to the Reservoirs Act 1975 as set out in Schedule 4 to the Flood and Water Management Act 2010 is to introduce a risk based approach to reservoir safety.

The intent of this legislation is:

- to define a process for calculating the capacity of a large raised reservoir;
- to set out the information that is required by NRW for a large raised reservoir to be registered, this also includes setting out how and when changes to recorded information needs to be notified to NRW and where the Welsh register of large raised reservoirs is kept;
- to set out when NRW should make reports to the Welsh Ministers on undertaker compliance with the Reservoirs Act 1975 and what, as a minimum should be included within these reports;
- to provide forms for undertakers to record information about their reservoir including water levels and depths, leakages and settlement of walls or other works;
- to provide forms for use by engineers for providing certificates, reports and directions;
- to provide the information that is required by undertakers when intending to construct or bring back into use a large raised reservoir; and
- to set out the requirements for making reports by undertakers to NRW in relation to incidents relating to uncontrolled releases of water from a large raised reservoir where emergency measures are taken.

### Defining capacity

The Regulations will set out a number of points clarifying how to calculate the capacity of a reservoir for the purposes of the Reservoirs Act 1975. The capacity that is important is the volume of water and silt that could escape from a reservoir in the event of an uncontrolled release. It is considered that this is the maximum volume that can be stored within the reservoir and is related to the top water level as defined by the lowest fixed spillway crest.

In defining the calculation of capacity this will include:

- The escapable volume of water within the reservoir.
- The escapable volume of the reservoir is assessed at the time of construction or any subsequent enlargement, whether by raising the reservoir structure(s) or excavating the bed of the reservoir.
- Silt or other material that accumulates on the bed of a reservoir within the raised volume is included in the calculation of capacity.
- This is to apply to all reservoirs whether impounding or non-impounding, online flood storage reservoirs and offline flood storage reservoirs.

The following will be excluded:

- Any volume of the reservoir below the lowest natural ground level.
- Any volume within a reservoir that cannot escape over natural ground within a reservoir.

### Registration requirements:

Regulations 4, 5 and 6 set out the following:

- the information required when registering large raised reservoirs with NRW
- the timing in which information must be provided when registering reservoirs, or after changes are made to reservoirs
- changes to information held on the register
- the location of the register

Schedule 1 of this SI sets out the information undertakers should provide to NRW to be held on the Welsh register of large raised reservoirs.

Those reservoirs over 25,000 cubic metres in capacity and, therefore, currently captured under the Reservoirs Act 1975 will have the full information required in terms of registration documentation. This will already be registered with NRW.

Initially, when registering reservoirs with a capacity between 10,000 and 25,000 cubic metres they will only be asked to provide basic information prior to the reservoir being designated. Any reservoirs designated as not high risk will not be required to have the full inspection regime and, therefore, undertakers will not be required to provide certificates of inspections.

As the enforcement authority for reservoirs, NRW are required to keep and maintain a register of large raised reservoirs which the Regulations set out will be kept at the principle office of NRW.

### NRW reports

Until the creation of NRW in April 2013, biennial reports were made by the Environment Agency and covered England and Wales, providing information on undertaker compliance with the Reservoirs Act 1975.

Following the creation of NRW, they now become responsible for providing these reports, on a two yearly basis.

These reports must include:

- the number of large raised reservoirs that have been registered;
- the steps (if any) that NRW has taken to ensure undertakers of a high risk reservoir have observed and complied with the requirements of the Reservoirs Act 1975; and
- where NRW is an undertaker for any large raised reservoir, a statement as to—
  - the number of large raised reservoirs for which it is the undertaker for; and
  - any steps it has taken to observe and comply with the requirements of the Reservoirs Act 1975.

### Prescribed forms

Schedules 2 to 6 of this SI provide the forms to be used by undertakers to record information and by engineers to provide certificates, reports and direction to undertakers.

Schedule 7 provides a form for undertakers to use when they intend to construct or bring back into use a large raised reservoir.

The intent of these forms is to provide clarity on the information required and consistency of information and format by which it is supplied.

### Undertaker reports to NRW

This SI sets out the requirements for undertakers to report to NRW on any incident which results or could result in an uncontrolled release of water from a large raised reservoir and what emergency measures have been taken to prevent further release of water and minimise danger to human life. The Regulations set out the timings of reports to include a preliminary report as soon as practicable after the event and commencement of emergency measures and a full report six months later. Lessons learnt from such incidents, or near miss incidents are vital learning opportunities for the industry. The Regulations also set out what will be included within the preliminary and final reports.

### Impacts

The Regulations within this SI relate to all large raised reservoirs with a capacity of over 10,000 cubic metres which will be included once Schedule 4 to the Flood and Water Management Act 2010 is fully commenced, even those where undertakers have been informed that they are not high risk. The Regulations setting out how to calculate capacity of a reservoir is required to confirm that a reservoir is over 10,000 cubic metres and, therefore, should be included on the register.

The biggest impact on undertakers will be the requirement to register, particularly for undertakers of reservoirs between 10,000 and 25,000 cubic

metres that have not previously been included within the register. NRW are working on guidance for these undertakers, and once the SI has been made, will begin a campaign to inform potential undertakers.

#### Risks of not implementing

Should these new Regulations not be implemented smaller, high risk reservoirs would not be brought under legislation and there would be no deregulation of those reservoirs that are deemed not to have a high risk to human life.

Not commencing Schedule 4 to the Flood and Water Management Act 2010 could result in large raised reservoirs in locations where they pose no harm to human life if a breach occurred remaining fully regulated, whilst smaller reservoirs in key locations, therefore, posing a huge risk if an uncontrolled release were to occur would be left without formal monitoring and inspection.

Without this SI there will be no set process for registering large raised reservoirs with NRW, calculating capacity, NRW reporting to Welsh Government or undertakers reporting incidents to NRW.

There will also be no requirement to use consistent forms prescribing the information to be used by undertakers and engineers, therefore, no consistency in the information provided.

## **5. Consultation**

A Regulatory Impact Assessment (RIA) has been completed alongside this Explanatory Memorandum.

Details of the consultation are included within the RIA.

## **PART 2 – REGULATORY IMPACT ASSESSMENT**

### **Options**

There are only 2 options in terms of implementing these amendments to the Reservoirs Act 1975 as set out in Schedule 4 to the Flood and Water Management Act 2010; do nothing or bring into force the provisions.

Do nothing: this would see none of the provisions with Schedule 4 to the Flood and Water Management Act 2010 enacted. This would not bring the smaller reservoirs under legislation and not deregulate those reservoirs that are deemed not to have a high risk to human life. It would also not allow for regulations to be made to set out the process for calculating capacity, requirements for registration or provide consistent forms for use by undertakers and engineers.

Option 1: Bring into force the provisions of Schedule 4 to the Flood and Water Management Act 2010 to reduce the capacity of a large raised reservoir to those larger than 10,000 cubic metres, bring in a designation process and allow for regulations to be made including those around calculating capacity, registration, reporting and the use of specific forms.

## **Costs & benefits**

### Costs:

Do nothing: The 'do nothing' option would see no new regulations regarding reservoir safety as proposed by Schedule 4 to the Flood and Water Management Act 2010 made meaning no additional costs to undertakers. However this would also see no deregulation of large raised reservoirs deemed not to be at high risk and therefore no benefit to those undertakers of reservoirs unlikely to cause harm to life.

Option 1: Bringing into force the provisions of Schedule 4 to the Flood and Water Management Act 2010 - this would allow for the regulations to be made around registration requirements, calculation of capacity, reporting and forms for reports/certificates.

NRW have confirmed that initially they will not be making any charges to undertakers for registration of a reservoir as they consider this could be a barrier to registration and therefore compliance with the Act. Therefore no costs associated with registration of reservoirs with a capacity of 10-25,000 cubic metres which will come under the Reservoirs Act 1975 once Schedule 4 to the Flood and Water Management Act 2010 is fully commenced

These regulations should not bring in any additional costs to undertakers. Costs will only be incurred where the employment of a qualified civil engineers is required for a high risk reservoir as set out in The Reservoirs Act 1975 (Exemptions, Appeals and Inspections) (Wales) Regulations 2016.

There are currently 228 large raised reservoirs registered with NRW in Wales (with a capacity of over 25,000 cubic metres) with an additional 160 expected to be added with a capacity of over 10,000 cubic metres.

## Benefits

These regulations ensure that there is a consistent way of registering large raised reservoirs, calculating capacity and recording information.

The regulations around reports from NRW to the Welsh Minister ensure that the compliance of undertakers with the Reservoirs Act 1975 is recorded.

The regulations around reports from undertakers to NRW on incidents ensure that NRW are made aware of incidents which result in, or could result in an uncontrolled release of water. The regulations set out that a requirement for a preliminary and final report. This will provide initial information about the information and then a fuller report where lessons learnt can be identified.

## **Consultation**

Welsh Government jointly consulted with Defra on amendments to the Reservoirs Act 1975 through a 12 week public consultation between 23 February and 17 May 2012. This consultation sought views on the various different amendments brought about by Schedule 4 to the Flood and Water Management Act 2010. 72 responses were received to this consultation which included responses from local authorities, environmental bodies, agricultural bodies, professional bodies (such as Institution of Civil Engineers), consultants, utility companies, representative bodies (such as RSPB) and individuals (predominantly panel engineers).

The consultation set out a proposed approach to clarifying how to calculate the capacity of a large raised reservoir for the purposes of the Act. The responses stated that in calculating the capacity, it should only include material that could escape from the reservoir in the event of an uncontrolled release, which could include silt if mobilised. Only water, silt or other material that could not escape would be excluded from the capacity calculation.

The consultation set out timings and the information to be required for the registration of a large raised reservoir and asked respondents three questions around the proposals. Whilst generally supportive, there were questions raised around the timings to register or inform NRW of changes. It was decided that the 28 days proposed was appropriate and consistent with other sections of the amended Reservoirs Act. 1975.

Whilst legislation allows NRW to charge for registration of large raised reservoirs, at this time NRW have agreed not to make any charges as this could be seen as a barrier to registration for undertakers of reservoirs over 10,000 cubic metres to be included within the Reservoirs Act 1975 for the first time.

There was no public consultation question around when reports by NRW will be required by Welsh Ministers and what these reports should contain. These reports contain information around undertaker compliance with the Act. These reports have always been provided on a biennial basis by the Environment Agency covering Wales and England. The 2013-15 reporting period is the first occasion that NRW will provide this report for reservoirs only in Wales.



There was no public consultation question around the inclusion of prescribed forms that are included within the schedules to these regulations.

The consultation asked respondents whether they agreed with the proposal to require a specific person to report incidents which affected or could affect the safety of the reservoir. There was general agreement for this proposal. By bringing in a six month time limit for completion of the final report, this will allow for lessons to be learnt from incidents or near misses quickly.

A copy of the summary of responses to this consultation can be found on the [Welsh Government website](#)

A second consultation was carried out in Wales only from 18 June to 13 August 2013 to discuss options for commencing Schedule 4 to the Flood and Water Management Act 2010. The original joint consultation had put forward a 2 phased approach to commencement to firstly introduce the amendments to the Reservoirs Act 1975 to all reservoirs currently registered (with a capacity of over 25,000 cubic metres) and then to bring in the reduction to 10,000 cubic metres. This approach was proposed prior to the creation of NRW in April 2013 and was suggested in order to allow NRW as the enforcement authority time to establish and be better equipped to deal with the changes in the legislation. As time progressed in developing this legislation it was deemed that a phased approach was contradictory to Parliament's intent which was to take a risk based approach to reservoir safety. In addition NRW has now been established for over two years and have been working closely with officials to plan and prepare for these changes to come into effect. Responses to the second consultation were in agreement that all of Schedule 4 to the Flood and Water Management Act 2010 in relation to reservoir safety should be commenced in one go.

A copy of the summary of responses to this consultation can be found on the [Welsh Government website](#)

### **Competition Assessment**

There are no expected detrimental effects on competition as the water sector is currently classed as a monopoly utility, therefore no market exists. In addition, the impacts of this legislation will be on all reservoir undertakers who will be required to comply with the safety regime set out in the Reservoirs Act 1975 (as amended).

The competition filter test	
Question	Answer yes or no
Q1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?	No
Q2: In the market(s) affected by the new regulation,	No

The competition filter test	
Question	Answer yes or no
does any firm have more than 20% market share?	
<b>Q3:</b> In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?	No
<b>Q4:</b> Would the costs of the regulation affect some firms substantially more than others?	No
<b>Q5:</b> Is the regulation likely to affect the market structure, changing the number or size of businesses/organisation?	No
<b>Q6:</b> Would the regulation lead to higher set-up costs for new or potential suppliers that existing suppliers do not have to meet?	No
<b>Q7:</b> Would the regulation lead to higher ongoing costs for new or potential suppliers that existing suppliers do not have to meet?	No
<b>Q8:</b> Is the sector characterised by rapid technological change?	No
<b>Q9:</b> Would the regulation restrict the ability of suppliers to choose the price, quality, range or location of their products?	No

### Post implementation review

The regulations provide clarity to the Reservoirs Act 1975 in relation to registration of large raised reservoirs, calculating the capacity of a reservoir for the purposes of the Act, reporting requirements and the provision of forms to be used by undertakers and engineers.

Section 3 of the Reservoirs Act 1975 requires NRW to provide a report on a regular basis to the Welsh Ministers outlining steps that they have taken to enforce compliance with the Act. This will allow for the requirements of the new regulations to be monitored and reviewed. These will be biennial reports.

In addition, Welsh Government will review and report on the impacts of these regulations within 5 years of them coming in to force. This will allow Government to ensure that the policy objectives are being met and having the intended effect and consider whether any further legislation is required. A review and report of the regulations will then be carried every 5 years.