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Our Ref:  
Your Ref:  
Date: 1 April 2014

Dear Stella

## **RESERVOIRS BILL COMMITTEE MEETING 18 FEBRUARY 2014**

Your letter of 21 February refers.

### **Financial Information**

#### **Reservoir Costs**

Attached is the financial information on the reservoirs at Kiltonga [ Annex A ], Hillsborough [ Annex B ], and Begny [ Annex C ]. The Inspection Regime for each of these reservoirs was adopted by Rivers Agency in 2001. The average annual cost from 2008 to 2013 is as follows:-

#### **Reservoir Monitoring**

The average annual cost of monitoring for each of the reservoirs at Kiltonga, Hillsborough, and Begny is £288.72 (based on costs from 2008 to 2013).

This monitoring is undertaken by an Engineering Technician or a Foreman and entails a walkover to check for changes to the dam, such as the presence of rabbit burrows, erosion of the surface or unusual damp patches. They also check the operation of any sluices or valves and any blockages in the channels.



## **Reservoir Supervision**

The average annual cost of supervision for each of the reservoirs at Kiltonga, Hillsborough, and Begny is £163.72 per year (based on costs from 2008 to 2013).

This is currently undertaken by a Rivers Agency Senior Engineer, but it is important to note that this is not a Panel Supervising Engineer, whose role requires a more detailed examination of embankment surfaces or joints in masonry, settlement of dam, operation and condition of any valves or mechanisms, measurement of leakage at monitoring points (if installed) and prioritising any ongoing maintenance such as painting, pointing concrete joints or repairs to any vermin damage reported by the officers monitoring the reservoir.

## **Inspecting Engineer**

A Reservoir Panel Inspecting Engineer, under the terms of the GB Reservoir Legislation, was commissioned to carry out a 10 year inspection at Kiltonga, Hillsborough, and Begny reservoirs in 2013. The average cost of this inspection was £2,255 per reservoir.

## **Construction Engineer**

None of the reservoirs has required any construction work since 2008.

## **Maintenance Works**

The average annual cost of this maintenance work for each of the reservoirs at Kiltonga, Hillsborough, and Begny over the last 6 years is set out in the Annexes to this letter.

Routine maintenance of reservoirs is undertaken, at various times throughout the year, by Rivers Agency squads, typically, comprising 3 industrial staff. This work entails grass cutting, valve lubrication and clearance of spillway outlets.

## **Capital Works**

Following the Reservoir Panel Engineer inspections in 2013, capital works were identified for Kiltonga, Hillsborough, and Begny reservoirs. Most of these works have been completed and, again, the costs are detailed in the attached Annexes.

## **Definition of Reservoir Manager**

Any person who manages or operates a reservoir or any part of it, but is not the owner (or part owner) of the reservoir, will be regarded as the reservoir manager for the entire reservoir or for that particular part for which he is responsible, (Clause 6(5) of the Reservoir Bill refers).

The default position, if a reservoir manager cannot be identified, will be that the owner is the reservoir manager. The relevant Bill Clause is 6(6) which states that: The owner of any part of the reservoir for which no person is reservoir manager by virtue of Clause 6(5) is the reservoir manager of the part.

Should a loan or lease agreement between a reservoir owner and another party (be it a club or community group) confer responsibility for managing or operating all or any part of a reservoir on the other party, the other party will be regarded as a reservoir manager.

The terms “manage” & “operate” are not defined in the legislation and therefore the normal dictionary definition will apply:-

“Manage” - Be in charge of, control, supervise.

“Operate” - Control the functioning of.

Any organisation that is part of any such agreement or arrangement with a reservoir owner would therefore be encouraged to carefully examine its position in this regard.

During its evidence to the Committee on 18 February 2014, NI Water advised that it enters into leases with clubs or organisations that allow members to, for example, fish or sail on the reservoir. NI Water, at all times, retains full ownership of, and full responsibility for, managing and operating all of its reservoirs. Therefore, NI Water readily acknowledges that it will be the reservoir manager for each of its reservoirs, and not the leaseholders.

### **Grant Aid (Clause 105)**

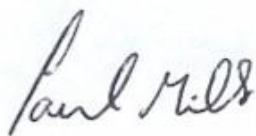
The Reservoirs Bill provides the Department with the power to enable the payment of a grant to reservoir managers to assist them to comply with their obligations under the Reservoirs Bill. The need for grant assistance was the single biggest issue raised during the public consultation and it is clearly an issue for the Committee and for many individuals and organisations that have given evidence to the Committee.

The Minister has indicated that, she would be willing to consider the need for a grant scheme when measures, including safety works, required for reservoirs are known. Any such scheme will be subject to budget cover and Executive approval. The Minister is particularly concerned about the ability of 3rd sector or not-for-profit organisations to meet the cost of measures in the interests of reservoir safety.

Rivers Agency is currently establishing the potential costs of financing a grant scheme for reservoir safety to protect the public. These potential costs will be shared with the Committee at the earliest opportunity.

I would be grateful if you would bring this to the attention of the Committee.

Yours sincerely



**Paul Mills**  
**Departmental Assembly Liaison Officer**

<b>Reservoir Name:</b>	<b>Kiltonga Nature Reserve</b>
<b>Capacity:</b>	<b>90,987 cubic meters</b>
<b>Structure type):</b>	<b>Earth fill embankment</b>
<b>Age:</b>	<b>Dates from 1878</b>
<b>Provisional Risk Designation:</b>	<b>High</b>

Financial year	Reservoir Monitoring	Reservoir Supervision (£)	Inspecting Engineer (£)	Construction Engineer (£)	Maintenance Works (£)	Capital Works (£)
2008	£373.44	£152.76	Nil	Nil	£58.20	Nil
2009	£205.00	£157.48	Nil	Nil	£60.00	Nil
2010	£255.90	£161.26	Nil	Nil	£61.44	Nil
2011	£163.30	165.94	Nil	Nil	£63.22	Nil
2012	£140.51	£170.25	Nil	Nil	£64.87	Nil
2013	£338.35	£174.68	£2255.00	Nil	£1331.04	£6861.33
Average Costs	£246.08	£163.72	£225.00 (over the next 10 years)	Nil	£273.12	£686.13 (over the next 10 years)

### Reservoir Monitoring

This column shows an average annual cost of £246.08 for monitoring the condition of Kiltonga reservoir. As mentioned in the covering letter, the monitoring will typically be undertaken by a Rivers Agency Professional Technical Officer (analogous to EO1) and Foreman (analogous to Administrative Officer) adopting a role similar to that which the Reservoir Manager will fulfil. This entails a walkover to check for damage to the dam such as rabbit burrows, erosion of surface, unusual damp patches, operation of any sluices or valves and any blockages in the channels.

### Reservoir Supervision

This column shows an average annual cost of £163.72 for examining Kiltonga reservoir by a Rivers Agency Senior Professional Technical Officer (analogous to Deputy Principal).

### Inspecting Engineer

An inspection of Kiltonga by an external Reservoir Panel Engineer was conducted during 2013. The cost of £2,255 to conduct this 10 year inspection is averaged over the next 10 years which is when the next inspection is due.

### Construction Engineer

There have been no construction works on this reservoir in recent years.

### Maintenance Works

This column shows an average annual cost of £273.12 for general maintenance works at Kiltonga. The significant increase in costs in 2013 represents additional works undertaken in preparation for the Panel Engineer Inspection.

### Capital Works

The Panel Engineer Inspection Report, prepared following the January 2013 inspection, identified 7 measures to be taken to maintain reservoir safety. This is capital works which is estimated to cost £6861.33. This cost is averaged over the next 10 years from 2013 to 2023, when the next Panel Engineer inspection is due.

<b>Reservoir Name:</b>	<b>Hillsborough Lake</b>
<b>Capacity:</b>	<b>457,500 cubic meters</b>
<b>Structure type:</b>	<b>Earth fill embankment</b>
<b>Age:</b>	<b>Dates from 1650</b>
<b>Provisional Risk Designation:</b>	<b>High</b>

Financial year	Reservoir Monitoring	Reservoir Supervision (£)	Inspecting Engineer (£)	Construction Engineer (£)	Maintenance Works (£)	Capital Works (£)
2008	£349.18	£152.76	Nil	Nil	£465.60	Nil
2009	£305.04	£157.48	Nil	Nil	£480.00	Nil
2010	£317.29	£161.26	Nil	Nil	£491.52	Nil
2011	£379.31	£165.94	Nil	Nil	£505.77	Nil
2012	£243.34	£170.25	Nil	Nil	£518.92	Nil
2013	£338.35	£174.68	£2255	Nil	£532.42	£7213.61
Average costs	£322.08	£163.72	£2255.00 (over the next 10 years)		£499.03	£721.36 (over the next 10 years)

### Reservoir Monitoring

This column shows an average annual cost of £322.08 for monitoring the condition of Hillsborough Lake. As mentioned in the covering letter, the monitoring will typically be undertaken by a Rivers Agency Professional Technical Officer (analogous to EO1) and Foreman (analogous to Administrative Officer) adopting a role similar to that which the Reservoir Manager will fulfil. This entails a walkover to check for damage to the dam such as rabbit burrows, erosion of surface, unusual damp patches, operation of any sluices or valves and any blockages in the channels.

### Reservoir Supervision

This column shows an average annual cost of £163.70 for examining Hillsborough Lake by a Rivers Agency Senior Professional Technical Officer (analogous to Deputy Principal).

### Inspecting Engineer

An inspection of Hillsborough by an external Reservoir Panel Engineer was conducted during 2013. The cost of £2,255 to conduct this 10 year inspection is averaged over the next 10 years which is when the next inspection is due.

### Construction Engineer

There have been no construction works on this reservoir in recent years.

### Maintenance Works

This column shows an average annual cost of £499.03 for general maintenance works at Hillsborough Lake.

## **Capital Works**

The Panel Engineer Inspection Report, prepared following the January 2013 inspection, identified 5 measures to be taken to maintain reservoir safety. These are capital works which are estimated to cost £7213.61. This cost is averaged over the next 10 years from 2013 to 2023, when the next Panel Engineer inspection is due. Additional works have also been recommended for this reservoir. The option report for these has been delivered at a cost of £11290.00. An invitation to tender for this work has not yet been published so River Agency is unable to provide a cost estimate for this work at this time.

<b>Reservoir Name:</b>	<b>Begny Lake</b>
<b>Capacity:</b>	<b>537,310 cubic meters (Estimated)</b>
<b>Structure type:</b>	<b>Earth fill embankment</b>
<b>Age:</b>	<b>Not known</b>
<b>Provisional Risk Designation:</b>	<b>High</b>

Financial year	Reservoir Monitoring	Reservoir Supervision (£)	Inspecting Engineer (£)	Construction Engineer (£)	Maintenance Works (£)	Capital Works (£)
2008	£266.86	£152.76	Nil	Nil	£232.80	Nil
2009	£300.12	£157.48	Nil	Nil	£240.00	Nil
2010	£102.40	£161.26	Nil	Nil	£245.76	Nil
2011	£400.48	£165.94	Nil	Nil	£252.89	Nil
2012	£324.46	£170.25	Nil	Nil	£259.46	Nil
2013	£393.83	£174.68	£2255.00	Nil	£266.21	£1490.72
Average Costs	£298.02	£163.72	£2255.00 (over the next 10 years)		£249.52	£149.07 (over the next 10 years)

### Reservoir Monitoring

This column shows an average annual cost of £298.02 for monitoring the condition of Begny Lake. As mentioned in the covering letter, the monitoring will typically be undertaken by a Rivers Agency Professional Technical Officer (analogous to EO1) and foreman (analogous to Administrative Officer) adopting a role similar to that which the Reservoir Manager will fulfil. This entails a walkover to check for damage to the dam such as rabbit burrows, erosion of surface, unusual damp patches, operation of any sluices or valves and any blockages in the channels.

### Reservoir Supervision

This column shows an average annual cost of £163.72 for examining Begny Lake by a Rivers Agency Senior Professional Technical Officer (analogous to Deputy Principal).

### Inspecting Engineer

An inspection of Begny Lake by an external Reservoir Panel Engineer was conducted during 2013. The cost of £2,255 to conduct this 10 year inspection is averaged over the next 10 years when the next inspection is due.

### Construction Engineer

There have been no construction works on this reservoir in recent years.

### Maintenance Works

This column shows an average annual cost of £249.52 for general maintenance works at Begny Lake.

### Capital Works

The Panel Engineer Inspection Report, prepared following the January 2013 inspection, identified 3 measures to be taken to maintain reservoir safety. This is capital work which is estimated to cost £1490.72. This cost is averaged over the next 10 years from 2013 to 2023, when the next Panel Engineer inspection is due.

