

12 January 2016

Nicholas Clark
The Mercury
27 Paterson St
Launceston TAS 7250

Dear Mr Clark,

Right to Information Request 10 December 2015

I refer to your request pursuant to the Right to Information Act 2009 (RTI Act) received on 10 December 2015 by Hydro Tasmania. I am authorised to make decisions on behalf of Hydro Tasmania in respect of applications for information under the RTI Act.

1. Your Request

Your request was for:

1. Any report prepared by Hydro Tasmania in relation to a three day trial water release from Trevallyn Dam in conjunction with the Tasmanian Government and Launceston Flood Authority;
2. Any report on outcomes to the trial which was aimed at assessing the effectiveness of a controlled release of water from Trevallyn Dam when coordinated with silt raking operations in the Tamar estuary;
3. Any report may include information on the costs and benefits of providing water from hydro generation infrastructure to support silt raking operations in years with low natural inflows and few flood events;
4. Bathymetric surveys which were to be carried out before and after the trial water release to measure the extent of sediment removed; and
5. Opportunity cost estimate for the water released by Hydro during the three day trial.

(Collectively "the Request")

2. Determination and Reasons for Determination of Request

I have undertaken a search of the information held by Hydro Tasmania and its subsidiaries to locate any records that may be relevant to the Request and have determined as follows:-

2.1 Information relevant to the Request Part 1

The information I have determined which can be released to you that is responsive to Part 1 is numbered 1 and 2 and listed under Part 1 of Annexure A.

I have made the decision to not release certain information.

- The names of officers and contact details have been redacted as that is not information relevant to the request and officer details are also protected by the Privacy Act. Hydro Tasmania has received verbal advice from the Ombudsman's Office that names and details of officers of Hydro Tasmania are not "information" under the RTI Act.
- I have redacted information which I have determined is exempt pursuant to section 35(1)(a) of the RTI Act on the basis that the information is an opinion, advice or recommendation prepared by an officer of Hydro Tasmania. As required under Section 33 of the RTI Act, I considered the Public Interest Test assessment criteria under the Schedule to the RTI Act and determined that it was not in the public interest as a whole to disclose the information.

The reasons for the determination are:

- o that the release of the information would not contribute to the debate on the matter;
- o the information would not inform the request about the decision;
- o the disclosure would not provide the contextual information to aid in the understanding of government decisions
- o the information is related to the business affairs of Hydro Tasmania and if released would cause harm to the competitive position of the corporation.

2.2 Information relevant to the Request Part 2

The information I have determined which can be released to you that is responsive to Part 2 is listed under Part 2 of Annexure A.

2.3 Information relevant to the Request Part 3

The information I have determined which can be released to you that is responsive to Part 3 is listed under Part 3 of Annexure A.

2.4 Information relevant to the Request Part 4

I determined that the subject matter of the information requested in Part 4 of your application is more closely connected with the functions of another public authority; the Launceston Flood Authority (LFA) and sought to transfer this part of your request to LFA pursuant to section 14 of the RTI Act. LFA have however provided us with their permission to release the information to you on their behalf. Please note that this information was prepared by or on behalf of LFA and provided to Hydro Tasmania by LFA. This information is contained within Attachments A and B to the document in Part 1, Item 1.

2.5 Information relevant to the Request Part 5

The information I have determined which can be released to you that is responsive to Part 5 is attached to this determination and is numbered 3 and listed under Part 5 of Annexure A.

The names of officers and contact details have been redacted as that is not information relevant to the request and officer details are also protected by the Privacy Act. Hydro Tasmania has received verbal advice from the Ombudsman's Office that names and details of officers of Hydro Tasmania are not "information" under the RTI Act.

3. Review of Rights

You are entitled under Section 43 of the RTI Act to apply for a review of the decision made under any or all of the Parts of the determination.

Any request for such a review should be made in writing within twenty (20) working days of receiving this letter and addressed to:

Mr S Davy
Chief Executive Officer
Hydro Tasmania
4 Elizabeth Street
HOBART TAS 7000

Should you have any questions on the information provided please contact the undersigned.

This request is now considered closed.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Alan W. Evans', with a large, sweeping flourish extending to the left.

Alan W. Evans
Right to Information Officer & Corporation Secretary
Hydro Tasmania
t 03 6230 5300
e alan.evans@hydro.com.au
f03 6231 4217 4

Annexure A

PART 1

1. Internal Memo to Hydro Tasmania Leadership Group regarding Upper Tamar Silt Raking and Flow Trial dated 18 September 2015 of 5 pages. **Released - YES partially.**
2. Minute to the Minister for Energy and Treasurer – Subject: Upper Tamar Silt Raking and Flow Trial dated 21 October 2015 of 3 pages. **Released – YES partially.**

PART 2

See Part 1, Items 1 and 2.

PART 3

See Part 1, Items 1 and 2.

PART 4

Attachment A and Attachment B to Internal Memo to Hydro Tasmania Leadership Group regarding Upper Tamar Silt Raking and Flow Trial dated 18 September 2015 of 3 pages. **Released - YES with permission from Launceston Flood Authority.**

PART 5

3. Internal email exchange between Hydro Tasmania personnel dated 25 August 2015 of 2 pages. **Released – YES partially.**

Internal memo

Private and confidential

| | | |
|-----------------|--|-----------------|
| To: | Leadership Group | |
| From: | [REDACTED] | Ext no: |
| Date: | 18 September 2015 | Pages: 5 |
| Subject: | Upper Tamar Silt Raking and Flow Trial | |
| Status: | For information | |

Purpose

This memo is to update the Leadership Group on the outcomes of the recent Upper Tamar silt raking and flow release trial between 27 and 30 August.

Preliminary Results

A map showing the raking area and plots showing, silt volumes in the Kings Wharf and Yacht Basin areas of the Upper Tamar Estuary and river flows over time are found in attachments A and B.

Preliminary analysis of the monitoring data showed that approximately 14,000 cubic metres of sediment was removed from the Yacht Basin during the flow trial. A further 5000 cubic metres of sediment was removed from the Kings Wharf area for an overall total of 19,000 cubic metres of material.

Objectives

The objective of the trial was to assess the effectiveness of a controlled release of water from Trevallyn Dam, in conjunction with silt raking operations, on the removal of silt from the Upper Tamar estuary for flood management purposes (flood protection for a 1:200 year event).

The LFA have additional silt management objectives including:

1. Aesthetics and amenity and
2. Maintaining a channel for the tourist boat to get from Seaport to the Cataract Gorge.

In terms of meeting the flood protection objective it became apparent that the LFA were unclear about what their preferred river bed profile or target silt volume was, i.e. how much silt is acceptable and/or at what volume was the effectiveness of the levees compromised? This is problematic as without this knowledge it is not possible to have an understanding of how much silt has to be removed to maintain the effectiveness of the levees. The LFA has said it will identify these target levels. For aesthetic and amenity purposes the LFA would like to

have no visible silt shoals at low tide and they thought this may be the target level for the flood works as well.

Potential Water Releases

The LFA has raised the option of Hydro Tasmania releasing water from Trevallyn Dam in years when there is not a natural flood. If this option was adopted a range of matters would need to be considered:

- Water would be requested in dry years when Hydro Tasmania's water storages probably would be low.
- What would the commercial arrangements be?
- How would the need for a release be determined, ie. how far above or close to the sediment target volume was the most recent measurement?
- How quickly does the silt return to the upper estuary leading to additional release requests?

[REDACTED]

Hydro Tasmania is developing a Trevallyn Stakeholder Plan that describes how issues associated the Tamar silt issue (and others) will be managed and by whom in the business.

In our communications with the Treasurer and the LFA we need to reiterate that the trial was not designed to assess the potential benefit of flows to maintain or improve amenity and aesthetics. If we were assessing these we would have had a different trial design and monitoring program.

To drive commercial behaviour Hydro Tasmania's preferred outcome is to be fully compensated for any water it may release to improve the effectiveness of silt raking.

Recommendations

[REDACTED]

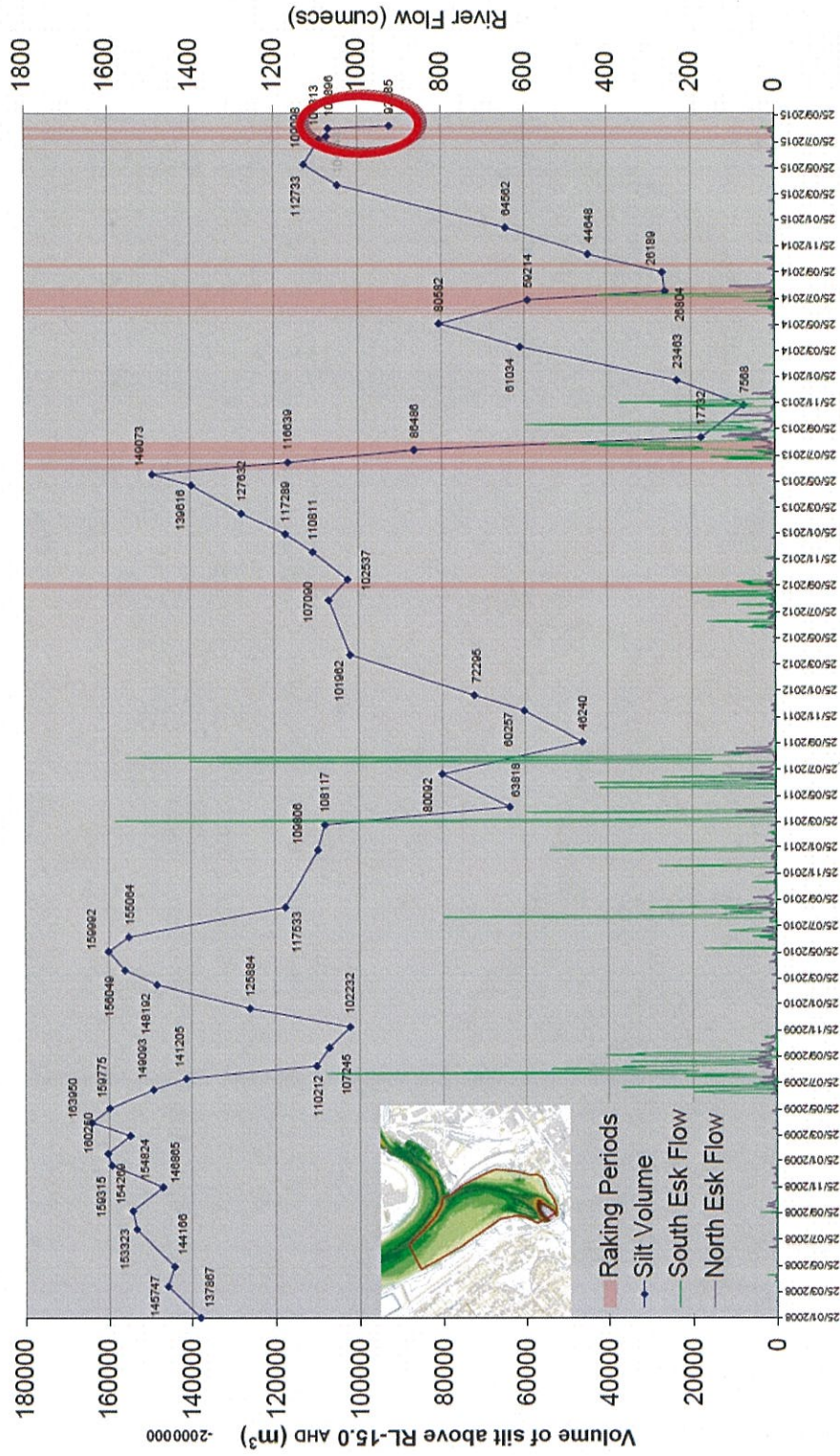
Attachment A



Red circles indicate approximate survey areas

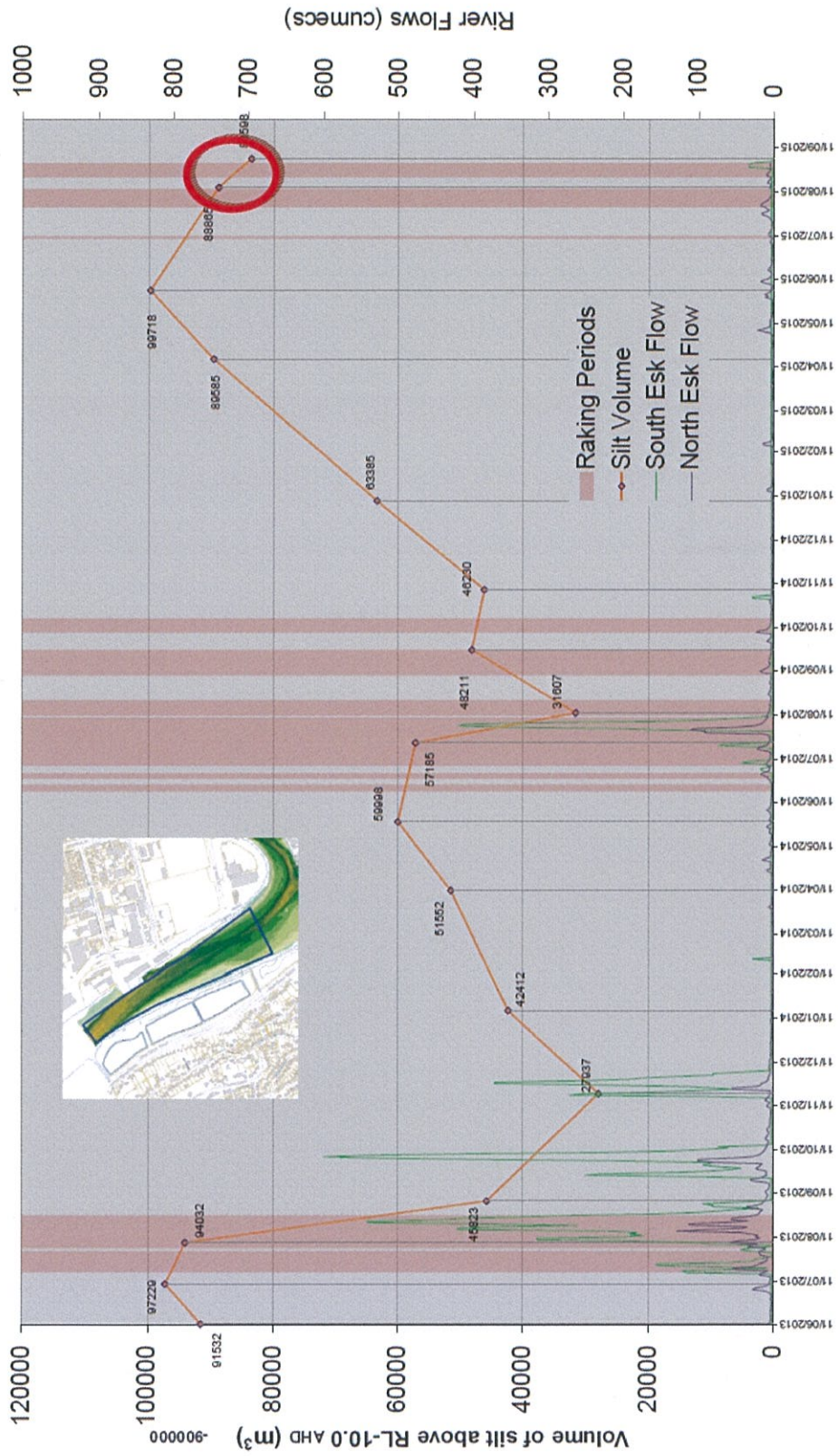
Attachment B

Yacht Basin Sedimentation



Red circles indicate trial period

Kings Wharf Sedimentation



Red circles indicate trial period

Dept. Ref _____
Critical Date _____

| |
|------------------------------------|
| APPROVED/NOT APPROVED/NOTED |
| |
| SIGNED: _____ |
| DATE: _____ |

Minute to the Minister for Energy

SUBJECT: UPPER TAMAR SILT RAKING AND FLOW TRIAL

Minister's notation:

Purpose:

To inform the Minister and Treasurer on the status of the Upper Tamar Silt Raking and Flow Trial

Recommendation:

That you:


- **Note the information contained in this briefing note**

Background:

- Hydro Tasmania and the Launceston Flood Authority (LFA) conducted a silt raking and flow trial in late August 2015.
- The agreed purpose of the trial was to assess the effectiveness of a controlled release of water from Trevallyn Dam, in conjunction with silt raking operations and strong tide events, on the removal of sediment from the Upper Tamar estuary. If the trial proved effective then the information gathered was to be used as an input into a cost/benefit analysis of further releases for the purpose of maintaining the effectiveness of the flood protection levees.

- This advice should be read in conjunction with:
 - Letter from LFA to Hydro Tasmania dated 13 October 2015 (attached)
 - Letter from Andrew Nikolic to Treasurer dated 7 October 2015

Hydro Tasmania position

- The LFA has clearly indicated additional sediment management objectives beyond flood management, including:
 - aesthetics and amenity; and
 - maintaining a channel for the tourist boat from Seaport to the Cataract Gorge.
- 
- Hydro Tasmania does not support any future water releases in the absence of:
 - Evidence connecting the volume of silt removal to the effectiveness of flood levees to protect low-lying areas of Launceston in a 1:200 year flood event; and
 - Full compensation for the commercial impact on Hydro Tasmania

Justification

The August 2015 trial showed that sediment could successfully be removed making use of the combination of water releases, raking and strong tide events. The cost impact of the trial on Hydro Tasmania was in the order of \$75,000. This cost increases significantly during periods of low inflow and high electricity market prices. Given Hydro Tasmania's pending obligation to be accountable for electricity supply in Tasmania, the foregone energy has to be purchased (imported across Basslink) from the National Electricity Market. In a severe drought this may be during peak periods (high price periods).

Since the trial, in order to progress a cost benefit analysis, Hydro Tasmania has sought further information regarding the volume of silt that would render the flood levees ineffective in a 1:200 year flood event. The LFA has recently written to Hydro Tasmania suggesting that further releases are required (14 days/annum) and that the target level should be equivalent to the lowest measured volume since surveys commenced in 2008. The suggested target is not supported by any scientific, engineering or commercial evidence. It appears that the target level is driven by the desire to not have mud flats (silt) exposed at low tide, which has no relationship to flood management.

The LFA states that sediment management should be achievable in most years by making use of dam spills that occur due to high inflows. However, it noted that in drought years it would require water releases from Trevallyn Dam. For this year the LFA has estimated a further 14 days (at an average of 25 cumecs each) would achieve the sediment removal targets referred to in its letter of 13 October 2015. However, there has been no explanation of the basis for this estimate.

Since the trial in late August, inflows have dropped off due to lower than expected rainfall for this time of year. This means the value of foregone revenues for an additional 14 days of water releases, equivalent to 8400MW/hrs of hydro-generation at Trevallyn Power Station, would be much greater than the foregone revenue cost of the August 2015 trial. In the present circumstances the additional requested 14 days would cost more than \$500,000 without any defined flood management benefit.

Silt raking is a relatively new process, with environmental approval for a trial in the Upper Tamar granted only in the past few years. Based on the available information, silt raking appears to be most effective when carried out in conjunction with dam spill events during a flood in excess of 200 cumecs. In the last three years over 350,000m³ of silt has been removed by aligning raking with natural flood events, while the silt deposit over the same period is estimated to be between 90,000 – 300,000m³, a net decrease (excluding the result from the trial) in total sediment in the target area. (These are the numbers as quoted in Senator Nikolic's letter to the Treasurer.)

It follows that it is conceivable that much more silt than is needed for the purpose of flood management could be removed by optimising natural (zero cost) flood flows for the majority of periods. Prolonged droughts may be the exception.

Without exposure to the cost of the releases the LFA and other interested parties are unlikely to show economic constraint in their requests for releases as they will receive all of the benefit (above and beyond managing flood risk) at no cost.

21/10/2015

| | | | |
|--------------|------------|-------------|------------|
| Prepared by: | [REDACTED] | Cleared by: | [REDACTED] |
| Position: | [REDACTED] | Position: | [REDACTED] |
| Email: | [REDACTED] | Email: | [REDACTED] |
| Phone: | [REDACTED] | Phone: | [REDACTED] |

From: [REDACTED]
Sent: Tuesday, 25 August 2015 11:47 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Trevallyn Spill - silt raking trial

Sorry -- update to \$ cost [\$50,705]

From: [REDACTED]
Sent: Tuesday, 25 August 2015 11:30 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: Trevallyn Spill - silt raking trial

Hi [REDACTED],

Re: Trevallyn Spill (to assist silt raking trial)

Details as follows (from [REDACTED]):

- Start time: 5am Thursday 27 August 2015
- Duration: 3 days (ie 72 hours)
- Target flow: 25 cumecs over the dam (but it will probably vary between 15-35 cumecs)
- MegaLitres: 6,480 ML (ie 6,480,000,000 Litres)
- Lost Generation: 1,913 MWh (ie 26.6MW which is approx 2% of the states demand)
- Cost: \$50,705 (assuming VIC spot price ave of \$26.50/MWh and ignoring REC as only 8% prob of LGC)

There is reasonable pick up from inflows (per below chart) so Poatina has not been materially affected (by using reg pond store & release) and the lost generation is only calculated at Trevallyn power station.

Let [REDACTED] or I know if any queries on the above.

[REDACTED] -- by Cc: Note -- just talked with [REDACTED] and we worked out his MWh he gave you a moment ago was wrong -- (ie the above is correct)

