

Notes of the Water Supply Augmentation – Community Working Group SITE VISIT held Monday 1 February, 2010

Time:

11.45am – 5.30pm

Present:

Facilitators Stuart Waters (Twyfords)
 Tim Mackney (Public Works)

Rachel Eberhard (Tweed Heads); (part)
Tony Thompson (Murwillumbah);
Samuel Dawson (Environment);
Richard Murray (Environment);
Robyn Lemaire (Water User);
Colleen Edwards (Landholder: Clarrie Hall Dam Area)
Joanna Gardner (Landholder: Byrrill Creek Dam Area);
Cr Dot Holdom (Tweed Shire Council);
Don Beck (Business/Commercial)
Anthony Burnham, Tom Alletson & Mark Kingston (Tweed Shire Council);
Margaret Balandin (Water Solutions, Sydney)
Mark Hunting (MWH).
Geraldine O'Flynn (Southern Cross University)

Apologies:

Rob Learmonth (Tweed Coast)
Pryce Allsop (Business/Commercial)
Cr Phil Youngblutt
David Oxenham (TSC)
Michael Wraight (TSC)
Jackie MacDonald (Aboriginal Advisory Committee)

Objectives:

- To visit the sites of Bray Park Weir, Clarrie Hall Dam, Crams Farm, Byrrill Creek and identify and discuss potential environmental and social impacts due to either option. Refer Itinerary (copy attached).

1. 12.07pm Departed Civic Centre

En route to Bray Park Weir, Stuart asked the group to concentrate on the environmental and social impacts of the areas being visited today. Each participant was provided with Activity Sheets to record notes etc.

2. 12.15pm Arrive Bray Park Weir

Anthony Burnham gave a brief overview of the operations of the Bray Park Weir and pointed out fresh water (upstream) and salt (downstream). There are 2 operational fish ladders. The crest is 1m above mean sea level.

Richard asked about low water flows.

Anthony replied that November is traditionally the low flow month. 95 percentile flow equates to flow depth approx 600mm from the top of the crest when both fishladders are open. Anthony commented that there are times when the Tweed River does stop flowing and the only flow is the environmental flow from CHD. Proposed license conditions state that if water in Clarrie Hall Dam drops below 50% then TSC is no longer required to continue to release water for environmental flows, however water will still be released into the river to allow extraction from the weir so releases as such won't stop.

Colleen asked why doesn't Council raise the Weir? Would CHD have a fishladder if the height was increased?

Anthony advised this proposal has been tried but local farmers were concerned about inundation therefore did not reach agreement.

Commenting on Clarrie Hall Dam (as opposed to the weir) a fishladder would not likely be a requirement for a new dam. Margaret added that the Dept of Fisheries determine the design of fish ladders.

Anthony then said when the preferred option is chosen, potentially fisheries would not require with an existing dam but would with a new. More studies are required to determine if a new Byrrill Creek dam would or would not require a fishladder.

Sam stated an ecological study on the Oxley river found anecdotal evidence of fish drops once the weir was built in the 60's – Is it potentially the same here?

Tom responded that there have been no real studies but there is evidence that fish are crossing many barriers, including the weir. There are various fish upstream that require periods in the ocean during their lifecycle, which means that they are able to migrate upstream. At Slippery Crossing, Old Lismore Road, a culvert was causing issues as a fish passage barrier. It was removed and the culvert level lowered – it was seen as a significant barrier and yet the fish were still getting through prior to the upgrade.

Mark Kingston asked if there was an issue with rising sea levels and climate change?

Anthony replied that the existing Weir would need to be looked at and possibly raised to deal with it.

The Group returned to the bus en route to Clarrie Hall Dam.

Anthony pointed out dairy farm where there was a hoof track to get cattle back from the river and also an underpass.

Byangum Bridge is the site of the confluence of Oxley & Tweed Rivers.

Tom advised that Council has, through the River Health Grants, funds of \$180,000 per annum which is used for revegetation of the riverbank and environmental protection.

Richard asked did Council jump the gun considering the Water Sharing Plan is in draft form still?

No, the draft plan has been under development by the Office of Water for a number of years and is yet to be finalised. Council's operation of the dam and weir is working within the existing water sharing conditions which include water restrictions on town supplies and environmental flows.

3. 12.45pm Arrive Clarrie Hall Dam – visit base of dam wall

Anthony pointed out the spillway working on the far side and also the outlet structures. 600mm & 1200mm pipes go into the tunnel under middle of dam. 2 flows meet 50m from where the bus was located. Water was discharging over the spillway because of the good rain over the weekend and so water was not being released from the release valves.

Tim asked the Group to understand the scale of the proposed new structure, how much higher it will be than existing and where the valves and releases are.

Joanna asked what was the terrible smell at the base of the dam?

Anthony explained the odour when releasing from the dam comes from less oxygen in the water – it produces hydrogen sulphide. To combat this, it flows into a mixer to aerate with coned dispersion valves to oxygenate water. Anthony pointed to the brown stains on rock which is soluble iron oxide and manganese. Low flow releases: To meet Council's riparian license agreement, it is required to open a 500mm scour valve to meet the 1.1mega Litre/day requirement.

The Group viewed the existing dam from the base of the structure and was advised by Anthony that there would be an 8.5m rise from the wall of the existing spillway. The spillway moves over to the abutment on the right. Either 40m or 50m wide. The bulk of the dam and the existing face would remain unchanged.

Richard asked for the calculations on the storage capacity, as he could not comprehend the 42,300 Mega Litre storage capacity. He requested this information be substantiated.

Anthony replied that through Public Works, this is the recommended maximum height to raise the wall. It is currently 61.5m height to be raised to 70m height. Anthony expressed his confidence in volume and figures.

Stuart asked the Group to consider what are the impacts of this option.

Joanna asked what would the size of the spillway be?
Anthony replied that it will be double the existing size.

Robyn asked that since the dam was built in the 60's has it silted up substantially?
Anthony replied that of the total capacity of 16,000 Mega Litres, 15,000 is considered usable.

4. 1.25pm After lunch break the Group moved to the water intake tower

Tom asked if the trees would be cleared and taken out through a barge?

Anthony responded that it has not been detailed as yet, but it would be proposed to clear vegetation and looked at in more detail through the process.

Mark Kingston added if it was to be cleared by bulldozers then there is a significant impact with roads.

Margaret advised that this would be addressed through the undertakings of the Environmental Impact Study.

Joanna agreed that there would be a significant environmental impact because of the roads required for construction, bulldozers and barges.

ClIr Holdom raised the consideration of the impact on Aboriginal Cultural Heritage matters.

Mark Kingston says the community needs to think about the unknown impact on vegetation and threatened species.

Sam commented he had found 2 rare species of vegetation close to the dam within 20m of disembarking from the bus.

Richard asked why Council hasn't considered piped water system? To pipe from CHD to Bray Park Water Treatment Plant?

Anthony responded with maintenance and operation, the cost would be very expensive. There are positive and negative effects on the river - affects water quality – reduces contamination but it is required to be oxygenated and is dependent on river flows.

Richard stated Gold Coast water is piped from Hinze Dam but it is saving water being the issue. Save Water – Save Energy.

Anthony responded that Council's yield is from Clarrie Hall Dam and the river. The river is the biggest component. Council's releases from the dam also act as the only flows in the creek during dry times. By adding a pipeline these flows would not benefit the creek and would increase the construction and operation costs significantly.

5. 1.40pm to Crams Farm

Stuart asked the Group how we are going? Dialogue v Debate: Responses:

Richard Thinks questions are being answered slowly

Cllr Holdom Always room for improvement
Don Getting valuable information
Sam Heard these arguments before

Stuart advised differences of opinion are to be expected – What about the environmental issues of what you have seen so far? Asked the group to make notes on the templates provided. Responses:

Colleen The effect of released water
Robyn The flora and fauna of the area

6. 2.05pm at McCabe's Bridge (point of reference for inundation)

Tim advised the maximum height of the CHD dam is 70m. The centre line on the road is 66.5m and to the top of the rail of the bridge is 67.6m. Therefore the inundation level would be 3.5m above centre of the road. This is a permanent level when the dam is full.

Robyn asked how many dip sites would be inundated?

Tim responded that he did not know to what extent but that this would be looked into once the preferred option was chosen.

Colleen pointed out her property and buffer zone of 7m and surrounding properties which would be inundated. Colleen commented that the bridge would need to be replaced. She asked are bridges allowed over catchment waters? Colleen handed out a flyer indicating same (see attached).

Anthony responded it would be a risk management option to be looked into as part of the risk management plan for any water catchment – just as the road runs through the existing catchment.

Don said there needs to be fair compensation from Council. Council needs to look not only at land value but at loss of income, livelihood, access. Dip sites – none are currently being used and in the process of being removed now.

7. 2.15pm Arrive Crams Farm

Anthony pointed out a set of guideposts which would be representative of inundation level.

Joanna asked what is the difference in square metres affected?

Post Meeting Note: The new dam would inundate approximately 450 hectares while the existing dam covers an area of approximately 150 hectares.

Tim pointed out 70m and 77m water levels on aerial map of the proposed dam. There are approx 8 properties affected.

Robyn asked if these people are willing to sell up?

Notes

Colleen responded: No, only one that I am aware of is willing to sell up, but for others a partial sale is OK and some don't want to sell at all.

Tim advised he has had inspections with most of these property owners and one discussion for next meeting is to the social aspects and issues to be identified for severed properties etc.

Margaret from Water Solutions, Sydney, talked about the environmental issues attached. She said NSW Public Works produced a study on Dam Raising Options in 2007 which looked at the archaeological issues, including Aboriginal community issues, for any sites, inundation and dam wall raising. A second study was undertaken giving an ecologists snapshot of potential issues, an incomplete flora and fauna study, inundation of vegetation issues, wetland areas and short term changes to habitat. There is different legislation for consideration ie Commonwealth Threatened Species, State, Fisheries Management Act, etc. All these address the issues, once there is a preferred option, then the specifics are targeted.

Tony made comment that farmers bury dead cows – is there any toxic escape to water?

Margaret responded this would be identified in a specific Environmental Impact Study.

Colleen asked could the wetlands area ultimately increase as the water level moves? This dam filled quickly.

Stuart asked the Group if there were any more environmental issues?

Mark – there is significant impact on certain areas which could easily be quantified. There is issues with new roads.

Don again asked that Council must take the whole of the land for fair compensation not just sectioned land. Has any discussion taken place on purchasing the total parcel such as land used for Chinderah By-pass?

Tim responded that Council would follow the requirements of the Act. It states that Council must not just consider land value but how productive land is affected plus lost income and other factors.

Sam asked Margaret which option is more environmentally preferred than the other. Margaret responded that you need to spend dollars to work out which to get to that level. Ecologists would undertake specialist studies once the preferred option was identified.

Joanna requested a full EIS on Byrrill Creek Dam. How can we make a decision without this information?

Margaret responded by saying a full EIS is very expensive and needs to be undertaken through the various seasons. Staged assessments may be possible.

Richard asked about the Aboriginal consultation guidelines. Cllr Holdom explained that a representative from the Aboriginal Advisory Committee takes this information to their respective groups for consultation and will return their requirements to Council.

8. 3pm to Byrrill Creek

Tom explained that Byrrill Creek has had the most work done in the last 3 or 4 yrs with Council, based on the Stressed Rivers Report. It is seen as the best of what's left and found to be greatest environmentally sound, least extensively cleared, good habitat, geomorphically sound. It is found to have good diversity in the stream bed and recognised with an immediate riparian environment. It is under threat from weeds (cat claw, privet and camphor laurel). Through the NSW Environmental Trust \$200,000 went into works to preserve Byrrill Creek. This was matched by Council.

Joanna requested the bus pause at "The Hamlet" to show riparian rainforest with high biological diversity.

The bus then continued and stopped adjacent to the bridge upstream from Pretty Gully. The Group disembarked for a short walk along the creek bed.

Sam identified threatened species "Thorny Pea" along the riverbed.

The Group rejoined the bus.

Paused on Cabbage Tree Creek causeway where Joanna advised there was identification of 13 sightings of the Giant Barred Frog (threatened species). Joanna also made mention this area is the best platypus habitat in the Shire.

Tim produced aerial map showing 117.5m and 125m inundation areas.

Joanna advised this is not just Byrrill Creek catchment it is also Kungaloo & Mebbin Springs.

Mark (MWH) suggested a saddle dam to limit the inundation of the second catchment.

Joanna said the biggest impact of this dam is the loss of the through-road and the impact on the National Park.

Mark (MWH) asked is the relocation of Byrrill Creek Road costed into the 36,000 Mega Litre dam?

Mark (MWH) agreed that some costings have been allowed for in the initial estimate.

Sam – from looking at the maps, the environmental and social impacts on Byrrill Creek are huge. It is obvious the affect will be more than CHD.

Joanna advised there would be approximately 25 landowners affected.

Don asked 25 affected from the dam wall?

Joanna – Yes from an access point of view.

Mark (MWH) What about the commercial viability? Such as Dairy farms, forestry?

Anthony advised the commercial viability has not been investigated in detail. Council has 2 Forestry interests. One is a Joint venture with the State Forest – a combination of pulpwood -12-18mths and one the council owns – short life pulpwood which can be harvested from anytime now.

Colleen asked how clearing would be carried out?

Anthony - A similar approach to remove vegetation. There would be a large portion of forestry area which would be inundated.

Stuart asked what they learned from visiting Byrrill Creek?

Anthony provided a description of proposed structure being 150m long, base of wall, large pyramid-like structure commencing at approximately driveway of Pretty Gully.

- 9. 5.30pm : The site visit finished at the Civic Centre which was then followed by the 3rd Meeting of the Community Working Group at 6.00pm.**

Points of interest presented to Council and CWG members during the field trip to Bray Park Weir, Clarrie Hall Dam and Byrrill Creek Dam sites

After the meeting of Affected Landholders of the Clarrie Hall Dam region held at Crams farm on 10th January 2010 and talking personally to most of those who could not attend, certain issues should be considered. The actual impact to landholders in the affected area has not been clearly defined.

In the Assessment of Options – “Social Acceptability”, it is stated that “Raising the dam to RL 70m and associated flood surcharge will not inundate private properties”. Actually, approximately ten properties will be significantly reduced and/or segmented or inaccessible. To continue operating these holdings as farms would become impossible, as the flatter more productive portions of land will become flooded or retained as buffer zones, leaving only the wooded or weathered slopes which are of no productive value. (We are still wondering why such a large buffer zone of 7m is required. As the storage area would be larger, the buffer zone could be made even less than the existing 5m).

Some landholders welcome the raising of the dam, but others do not. There are landholders who experienced this reclamation several decades ago when the dam was originally constructed and they have expressed their fears of being short changed, having their zoning rural 1a altered or additional caveats put on their land.

-“**Services/Roads**”, states “Minimal Impacts. Road bridge raising may be required”. The question of what size bridge would be required to span this section of water. Answer was “approximately 150m”, which is a large bridge to service this area. The height of which would have to be at least 6m above the existing McCabes Bridge. Or alternatively, a new road across the valley, linking Commissioners Ck Road to Doon Doon Road. This raised the issue of location and the affect on landholders.

- “**Capital, operations, NPV & Cost/KL**”, states Capital cost is \$30 million to increase storage by 26,300ML. This figure does not include land acquisitions, roads and services relocations, clearing and fencing.

Other aspects considered by the community were:

- Increasing the spillway to 50m not just 40m. Or if not 50m then why not?
- Would the new spillway incorporate a ‘fish ladder’? If not, then why not?
- How often would the dam level be lowered (manually) and to what level?
- Is there a possibility that Council could come back and increase the height again?
- Are there any plans to raise the height of Bray Park Weir?
- Does the Council have any plans to sell water to SEQ?
- Landholders in the rural areas manage their own water, then why can’t urban areas be encouraged to store rainwater and recycle their greywater? **If not, then why not?**