Cobaki Lakes Development.

A focus on Water Issues.

State Regional Planning Panel presentation

by Joanna Gardner on behalf of the Save Byrrill Creek Group

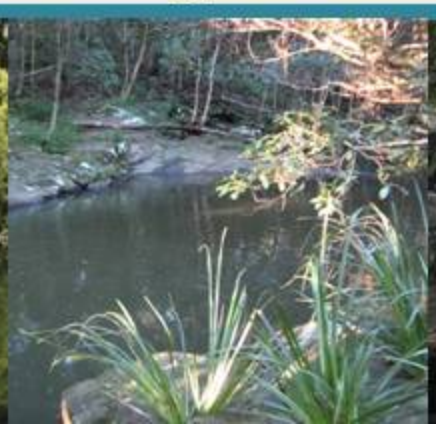
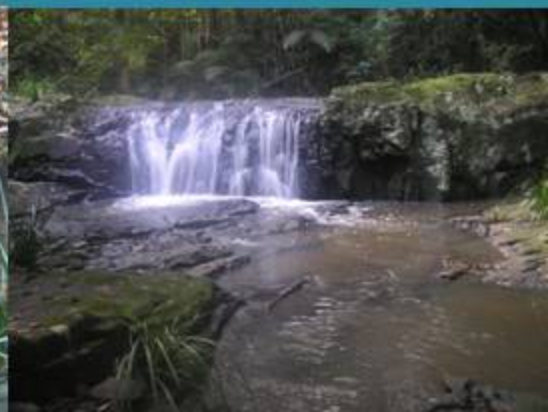
There are a number of Environment issues we feel are lacking in the Cobaki Lakes Development Plan:

A disregard for the Green Cauldron National Iconic Landscape and Border Region values. A lack of adequate consideration for identified critical Gold Coast bioregional corridors, through to the Currumbin area, which has been identified as highly significant for the southern Gold Coast Koala & the dwindling Tweed koala population. A 500m corridor has been recommended by Gold Coast Council.

A missed opportunity for an area set aside within the development as a Koala Refuge & a policy recommending no Dogs.

But my focus tonight is on critical Water Issues relating to the development.



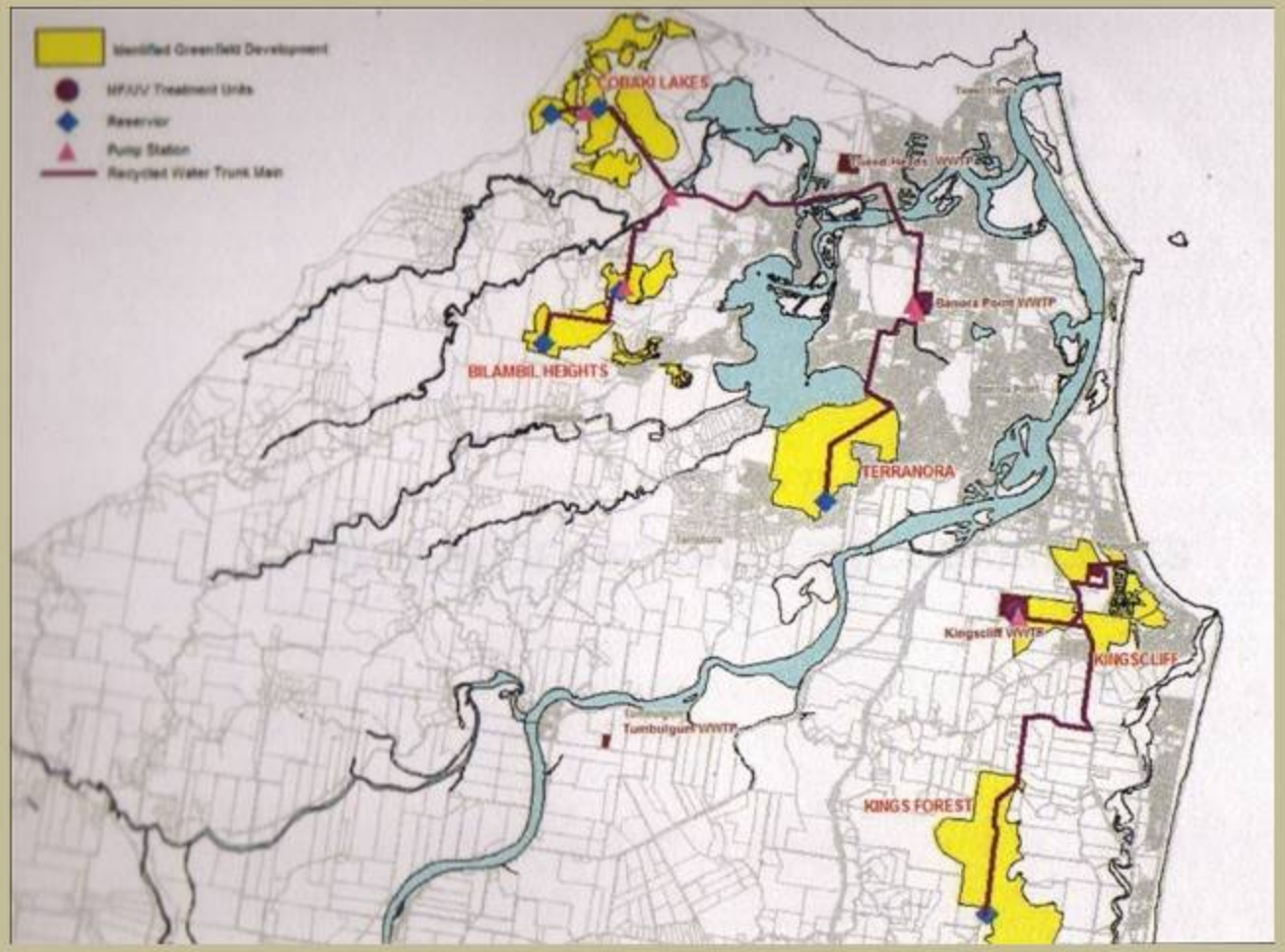
Population projections driving force behind Water Augmentation

Table 2-1: Serviced (Water) Residential Population Projection for TSC

ESTIMATED POPULATION	2006	2011	2021	2031	2036	2041
Existing Serviced Population	73,185	71,966	69,018	66,044	64,854	64,854
Projected Infill Population	0	6,951	16,402	22,435	25,896	28,461
Major Development Areas						
Bilambil Heights	*0*	*0*	*2,934*	*5,609*	*6,881*	*6,881*
Cobaki Lakes	*0*	*0*	*4,454*	*8,525*	*10,464*	*10,464*
Kings Forest	*0*	*0*	*4,640*	*8,880*	*10,900*	*10,900*
Terranora Area A	*0*	*0*	*1,300*	*2,498*	*3,071*	*3,071*
West Kingscliff	*0*	*0*	*1,158*	*2,197*	*2,687*	*2,687*
Total of Major Development Areas	0	0	14,486	27,709	34,003	34,003
Greenfield outside Major Areas	0	6,182	19,540	27,301	32,295	36,395
Tweed Shire Total	**73,185**	**85,099**	**119,446**	**143,488**	**157,048**	**163,714**

Tweed Council New Development Areas

Cobaki Lakes, in its early stage of Planning, will set a precedent for further developments.
From Councils Demand Management Strategy 2009: Note original Planned Maroon line for Recycled Water Trunk line that has now been discarded.



Tweed Water Augmentation Strategy

Provide more water

- Council Report gave 9 options originally: 2008-09
- This was reduced to 3 options: 2009

1. Clarrie Hall Dam enlarged 2. A pipeline to SE QLD 3. New dam at Byrrill creek

- Consultation & Recommendations of CWG: April 2010
- Council Water Staff Report & Recommendations: Sept.
- Council decision: Nov 1st 2010

Council Votes Byrrill Creek No 1 Option

Despite Staffs Recommendations:

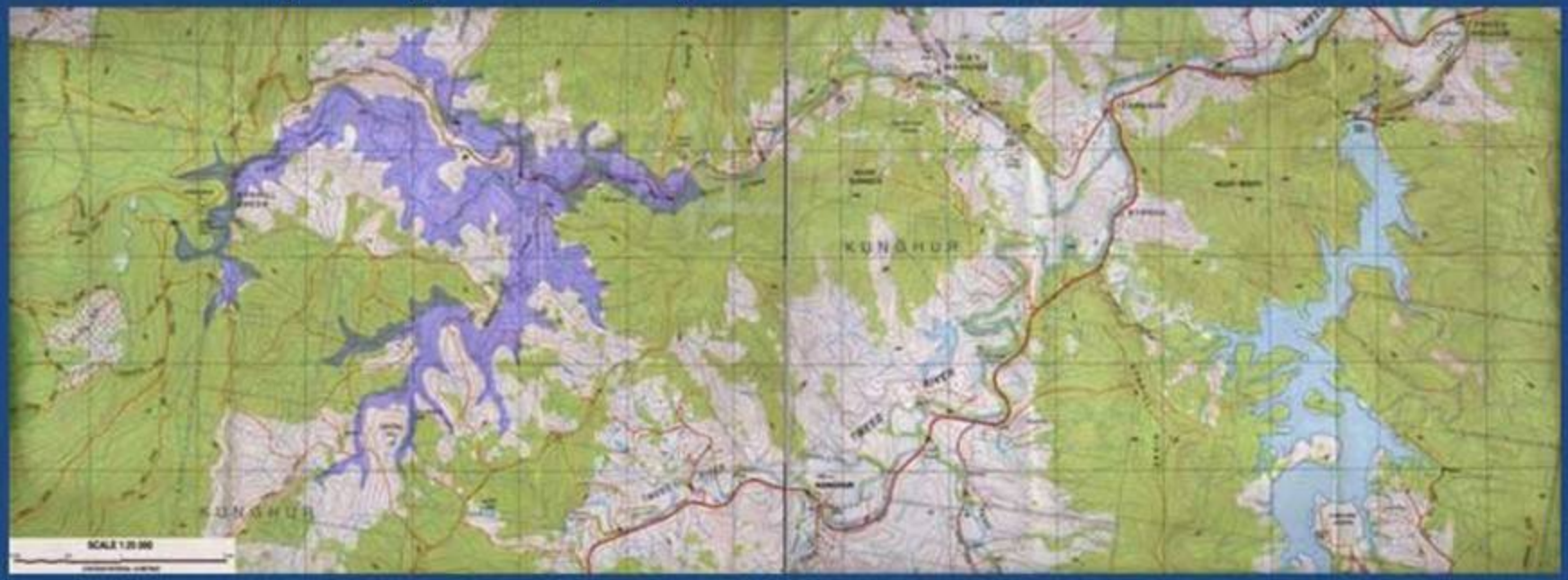
1. Clarrie Hall Dam
2. Pipeline to SE QLD
3. Byrrill Creek Dam

DAMS IN ADJACENT CATCHMENTS:
6.4 kms. distance apart between dam walls

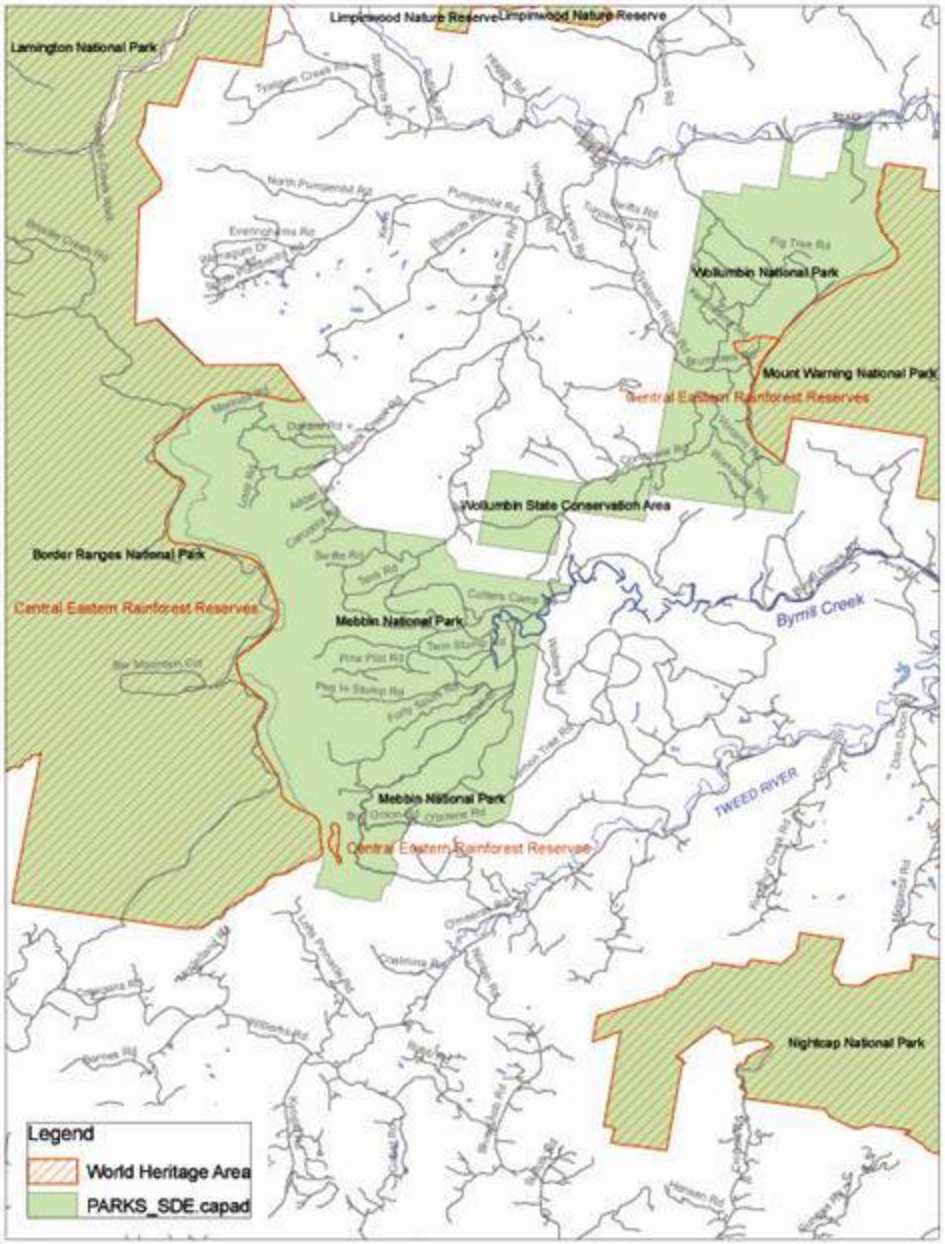
BYRRILL CREEK DAM 36,000ML

CLARRIE HALL DAM present16,000ML
Proposed expansion to 42,300ML

Dams have a life span of approximately 80 years.



NSW Government Weirs Policy: An increase in town water supply for the purposes of meeting projected population demand cannot be used as a justification to approve a proposal to build a new, or expand an existing weir, if environmentally friendlier alternatives to meeting that demand exist, which are also economically feasible.



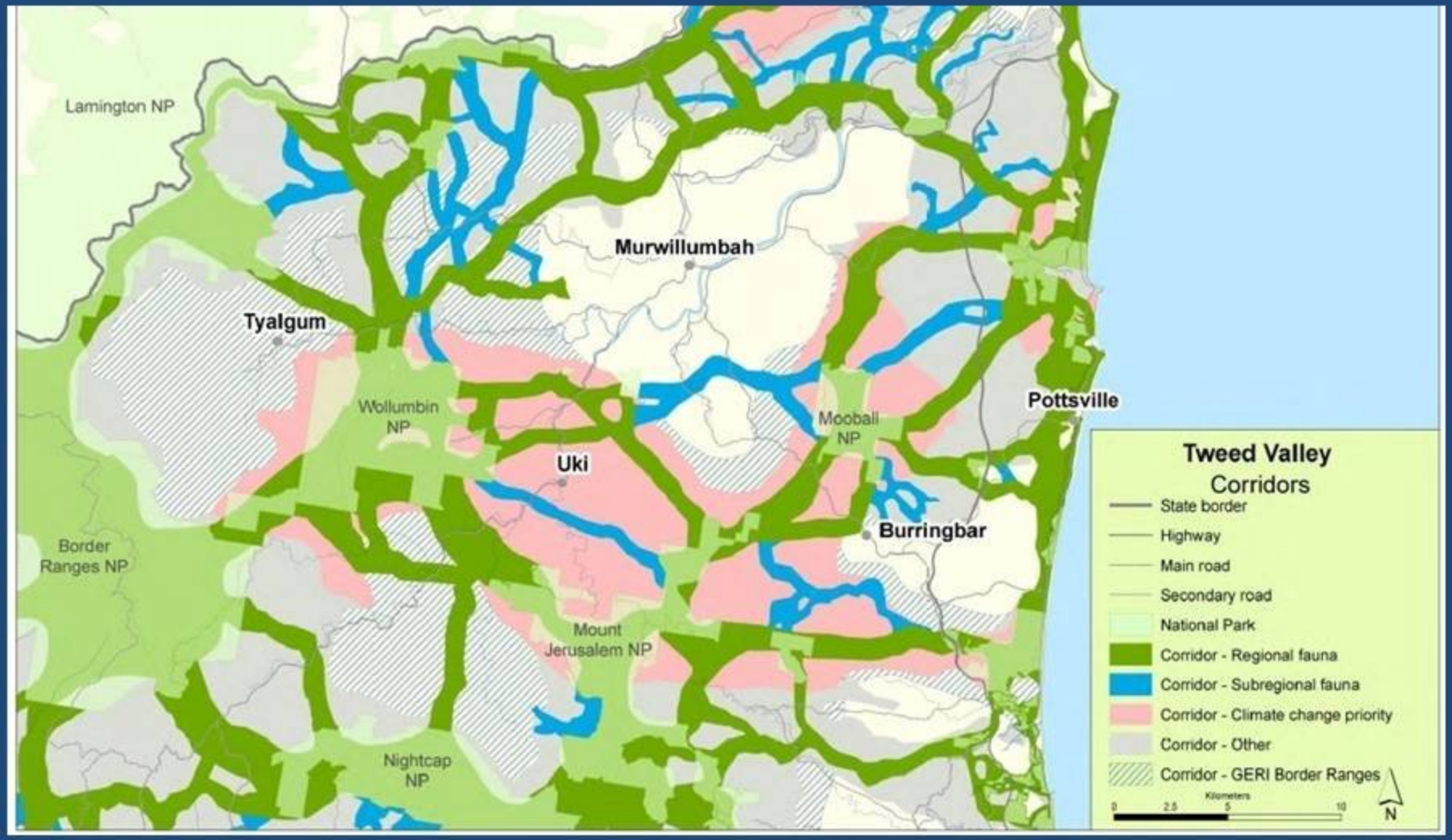
WORLD HERITAGE AREAS

The area of the proposed dam is in close proximity to the World Heritage areas of the Central Eastern Rainforest Reserves of Mt. Warning, Border Ranges & 11 ha of Mebbin National Park.

Mebbin NP is at present under consideration for inclusion of WH status as it has been assessed as exhibiting similar natural heritage values.

Byrrill Creek is geologically part of the volcanic complex of Mt Warning. There are many significant Aboriginal Cultural Heritage Sites that would be flooded

BORDER RANGES RAINFOREST BIODIVERSITY MANAGEMENT PLAN 2010
REGIONAL FAUNA & CLIMATE CHANGE CORRIDORS



Provided by Shane Ruming DECCW Coffs Harbour ,with thanks.

BIODIVERSE AREA - ENDANGERED SPECIES

Within the Byrrill Creek Area and surrounding National Parks there is high % of recorded Endangered or Vulnerable Fauna & Flora species

Biolink Ecological Consultants identified 43 Threatened Fauna species 26 Flora Species and 3 Endangered Ecological Communities in a 5km radius of Byrrill Creek

Areas of lowland rainforest, near the creek at Mebbin National Park that would be flooded. Lance Tarvey of NPWS, Murwillumbah, considers these areas the most valuable in diversity of species and irreplacable.

Tweed Water Sharing Plan Bans Dam

- **The high biodiversity value of the area has been recognised by :** 6 Assessments Reports which all assessed Byrrill Creek as a High Conservation riparian status and over $546,000 in riparian grants
- **The Tweed Water Sharing Plan was gazetted by the NSW Office of Water, on Dec. 17th 2010 which placed a prohibition on the Byrrill Creek Dam for the next 10 years.** Minister Costa's letter stated: *'I can advise you that the WSP as made does not permit the construction of a new in-river dam on Byrrill Creek. This decision has been made based on the high environmental and world heritage values of the Byrrill Creek area, and* ***the availability of other water supply options for Tweed Shire.'***
- **The Mayor & Councillors still pursue the dam at Byrrill Creek**

NSW Far North Coast Regional Strategy Plan

The NSW Far North Coast Regional Strategy Plan states quite clearly:

"All future development is to apply water sensitive urban design principles, including the use of dual use reticulation systems, in releases of adequate scale, and meet storm water management targets that support the environmental values of the catchment."

Cobaki Lakes is large scale, and as such should implement this State Strategy, and should seek water security through whole-of-water cycle management using both State and National Integrated Water Cycle Management principles. It should certainly not be 100% reliant on a new dam in the highest riparian conservation area in Tweed Shire.

Dual Reticulation & Storm water Harvesting originally proposed by developer

Dual reticulation (recycled water for garden & toilet use) knocked back

- The developer, Leda originally proposed to Tweed Council that an on site grey water recycling system for Cobaki & Kings Forest be implemented in both these developments. This proposal was not followed through in an appropriate way by Tweed Council and an agreement was never reached, and now has been discarded completely.

Lack of planning for bulk Stormwater harvesting at Cobaki Lakes

- Tweed Shire Council also rejected plans by the developer to harvest bulk stormwater on the 605.4 ha 'greenfield' property. If Tweed Shire Council had allowed the harvesting of bulk stormwater then 10,000 Cobaki Lake residents could have irrigated open space parkland and supplemented their household garden irrigation from this source.
- Consequently, without bulk stormwater harvesting and greywater reuse, 10,000 Cobaki Lake residents will use inappropriately 1.444 million litres of drinking water each day for out door use.

Independent Review of Councils Choices

Why a Dam for the small amount of water needed?

An Independent Review Of the Councils Demand Management Strategy & Water Supply Options by Geolink Engineering Consultancy Firm, in Feb, 2011 found many anomalies within the reports:

The Review's main points indicated:

1. At present the Tweed has ample water supply & there is no need to rush into a decision. In fact with stringent demand management principles it is quite likely a new water supply would not be needed within the projected time frame of 2036.

2.A relatively small amount of extra water supply 1,000- 3,000 Mega litres is needed by the 2036, which is out of proportion to expected yields of either dam: upgrade of Clarrie Hall or a new Byrrill Creek Dam.

3.Geolink suggested other alternatives, especially in New Greenfield Areas which could be instigated with less social and environmental impact than dams

Reuse of Water

Geolink states in their Review:

A recycled water scheme is likely to be most practical in the five greenfield major development areas.

Cobaki could have an on site recycled water system as was suggested in the Council's DMS.

It would be prudent to require the design of the subdivision to include dual reticulation: key portions of the dual reticulation infrastructure (e.g. pipelines that run underneath roads) should be installed at the development stage because it will be much cheaper than retrofitting at a later date.

Given the successful implementation of recycled water schemes in other regions of Australia in recent years, it is suggested that there are unlikely to be community acceptance issues as suggested in the Council's DMS.

This is considered to be an environmental and social benefit, particularly given the poor health of the estuaries. Council is required at present to reduce pollution into Terranora. Storm water harvesting would alleviate this too.

Other Water Options

That Cobaki Development could use

- **Water Recycling: Dual reticulation**
  For outdoor use & toilets
- **Rainwater tanks: 10,000lt**
- **Stormwater harvesting**
- **Water sensitive urban design**

Some Councils & Authorities that already use recycled H2o

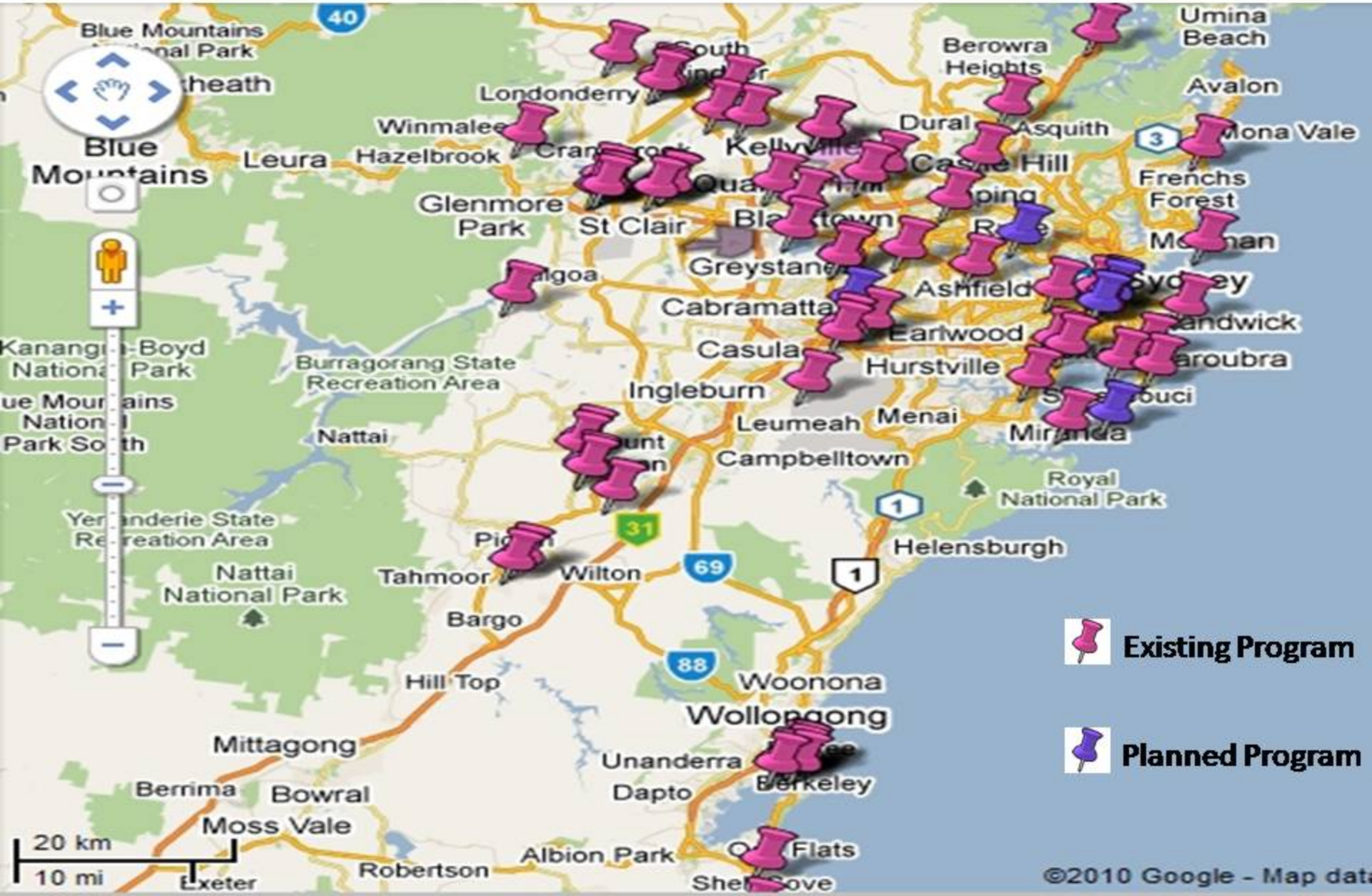
- **Ballina**
- **Rous Water**
- **Orange**
- **Gold Coast**
- **Sydney Water**
- **Brisbane**
- **Newington Village**
- **Olympic Park**
- **Lismore**
- **Salisbury, SA**

50% of water in an average household is used for outdoor use & toilets.

Good quality water is conserved for drinking & indoor use.

Our environment benefits with less water taken from rivers & dams & less polluting discharges into rivers & estuaries

Programs in Sydney



Rainwater Tanks

NEW SIZE WATER TANKS NOT AGREED UPON IN COBAKI DEVELOPMENT

Tweed Council's one & only recommendation for water saving in Cobaki (& other areas)was a proposed small 5000lt tank, however this is not in the Developers Plan of Commitment, so in essence there is no water self sufficiency for an expected extra 10,000 people

At present there are State Guidelines within BASIX that include a 3000litre tank for new houses. This requirement is state wide & does not take into account differing topography, climates and rainfall in the many shires. Larger volume rain tanks were recommended by GEOLINK (10,000lt) in developments. This needs stronger legislation & to be implemented at Cobaki.(minimum 10,000lt)

Rainwater tanks represent a key element in water saving. Tanks are an integral part of water sensitive urban design. They reduce the amount of potable water used, can be used for washing machines, hot water systems, toilet or outdoor use. By capturing rainwater in tanks, less stormwater flows directly into our water ways, carrying sediments & pollution

Stormwater pollution into Cobaki Broadwater

An aerial photo dated 6 May 2010 of just one heavy rain event showing polluting stormwater drainage earthworks from Cobaki Lakes since subdivisional earthworks commenced in 2004. There have been many heavy rain events since 2004. Since 2004 earthworks totalling 3 million cubic metres have been moved around the 605.4 hectare Cobaki Lakes subdivision, causing serious sedimentary pollution to adjacent SEPP 14 Wetlands, the Cobaki Broadwater and the Terranora Inlet system with unknown damage from Actual Acid Sulphate Soils.

Water Sensitive Urban Design

Water Sensitive Urban Design

WSUD is integrated at the early planning stages of urban development & may include:

Rainwater tanks, streets with swales instead of concrete guttering, drainage ponds or lakes, constructed wetlands, recycling water and specific plant selection.

Federal Initiatives in Urban Water Planning Principles include

National Water Initiative (NWI), National Water Security Plan for Cities and Towns, Stormwater Harvesting & Reuse, Green Precincts Program , Water Smart Australia, COAG

"The COAG National Water Principle 4 requires that water in the urban context be managed on a whole-of-water cycle basis."

A diversity of water supply systems, both on site & off to suit the context. Potable water is not utilised for purposes that dont warrent it (eg recycled water for toilets)

At present there are many State & Federal Water Policies & Iniatives which promote Recycled Water but there is no strong legislation that mandates it for new large urban developments. May this planning panel look towards the future.

Dept. Of Environment & Resource Management. QLD Govt.

› Diverse sources of supply

A shift away from

The traditional reliance on rainfall and surface storages as the sole source of water supply.

To

A diverse portfolio of supply sources such as dams and reservoirs, groundwater, urban stormwater, rainwater tanks, recycled wastewater, greywater reuse and desalinated water.

A mixture of centralised and decentralised systems.

The benefits

- Improves water security by reducing reliance on catchment rainfall as the sole source.
- A mix of centralised and decentralised systems builds greater resilience to short-term climate variability, long-term climate change and population growth.
- Reuse of previously wasted water can avoid the need for new, expensive water supply options.
- Greater energy efficiency leads to a reduced energy footprint and greenhouse emissions.
- The scale of infrastructure can be matched to the scale of need.
- Systems supply water to the quality needed for the use, e.g. no need to supply potable water for outdoor irrigation or toilet flushing if other sources are available.

The Choice: A dam or a sustainable way forward

Tweed Shire is facing a future doubling of population, the majority of which is developments. Cobaki, in its early developmental planning stages will set a precedent for other greenfield areas .

There are no water saving initiatives in place at Cobaki yet.

This is an incomprehensible lack of foresight by Council Staff & the Dept of Planning. Council's mooted solution of small 5,000lt tanks, funded by the property owner, is not even in the Developers Plan of Committment.

If this panel does not reccommend & mandate sustainable water self sufficiency solutions for Cobaki, in line with Federal & State Guidelines, a golden opportunity has been lost to create a blue print for the future.... and the highest conservation area in the Tweed will be inundated by a new dam.

The ramifications of decisions made now will go far into the future.