



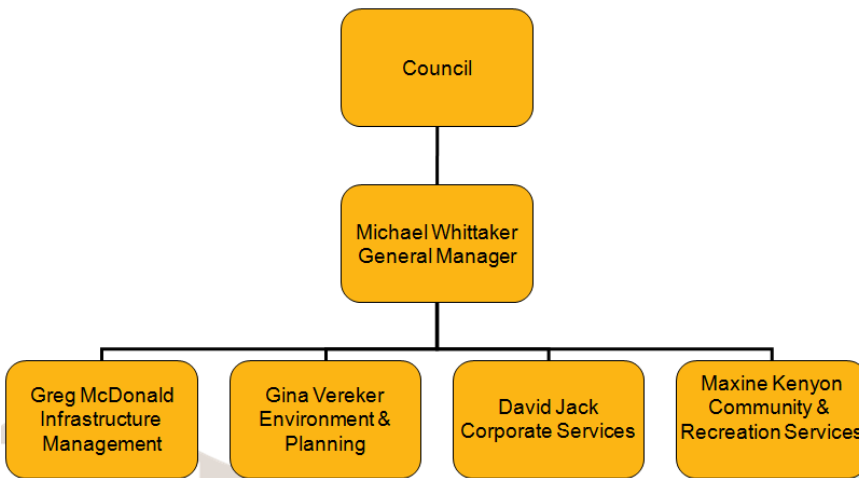
THE ENTRANCE PENINSULA COMMUNITY PRECINCT

ENCOMPASSING: THE ENTRANCE; THE ENTRANCE NORTH; LONG JETTY TOOWOON BAY; BLUE BAY; SHELLY BEACH & MAGENTA

The Wyong Shire Councils' Director of Infrastructure Management, Greg McDonalds' presentation, 19 April, 2011 at 7:00pm on “Responsibilities of WSC’s Infrastructure Management Section”



The Chairperson of TEPCP, Vivienne Scott gave Greg a warm welcome and thanked him for his attendance. Greg began by advising that he would give details of his background as he went along¹. He explained the Shire's new staff structure that has a new General Manager, Michael Whittaker, who was appointed last year. reporting to Council. Greg described how previous to the appointment of Michael Whittaker there was only three directorates. Community/Recreation and Infrastructure Management were in one Directorate that had 900 of Council's 1200 staff. It was doing all the engineering functions and the libraries and the surf clubs and the life savers and it also had the community child care centres as well. It was an enormous group for one person to manage. Greg believed that Michael Whittaker made the right decision to divide the two groups by putting all the engineering functions in one group and the community functions in another.



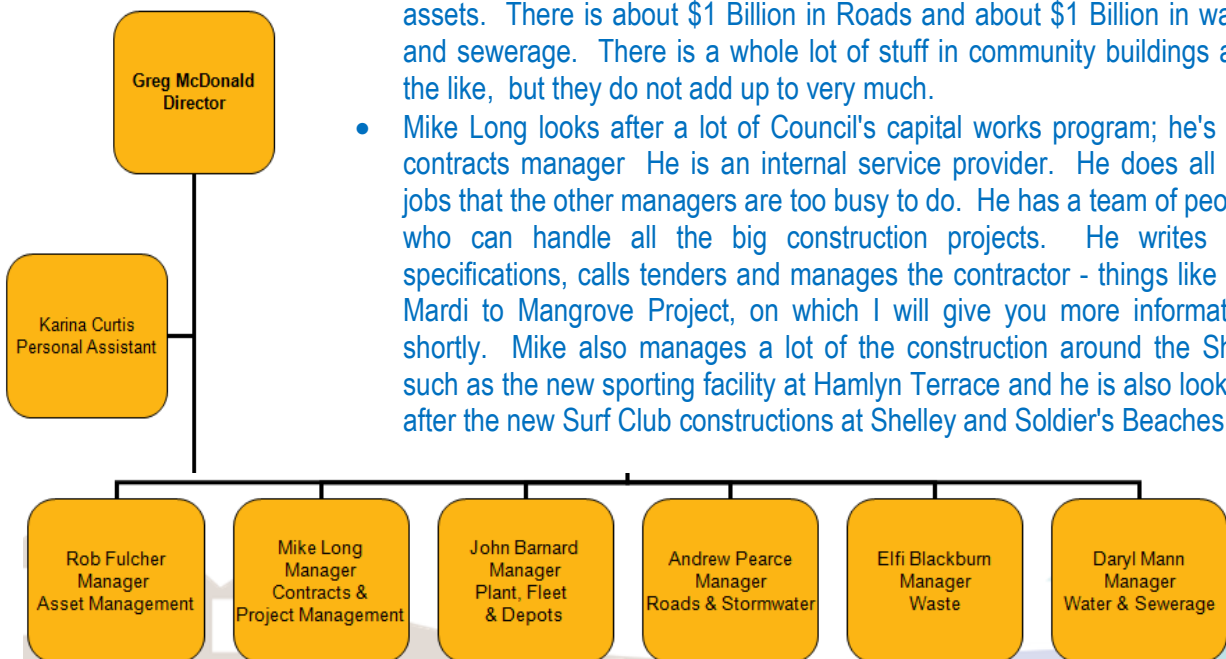
Greg told us that his group, Infrastructure Management ended up with all the roads, plant, fleet, depots while Maxine Kenyon's Community and Recreation Services took on all the things the community are interested in, Parks and gardens, community buildings, sporting facilities, leisure facilities surf clubs, life savers, libraries community centres and child care. Greg, implied that that was OK as he was an Engineer and would be

hopeless at that sort of stuff because he was more interested in engineering matters such as roads and drainage.

¹ Greg has a Bachelors Degree in Engineering, A Masters Degree in Engineering Science and a Master of Business Administration. In 2007 Greg presented the paper “Tillegra Dam – Effects on a small community” to the Institute of Public Works Engineers at the state conference. Greg was subsequently awarded the GA Taylor medal for best conference paper. Greg was previously the Executive Manager – Infrastructure and Assets at Dungog Shire Council where he and his staff were responsible for all engineering aspects within Council, including roads; bridges; stormwater; water and sewer; design, construction and maintenance of all Council's infrastructure; GIS; land development; parks, sportsgrounds and reserves; and Council buildings.

Greg went on to describe the six units he has in his directorate:

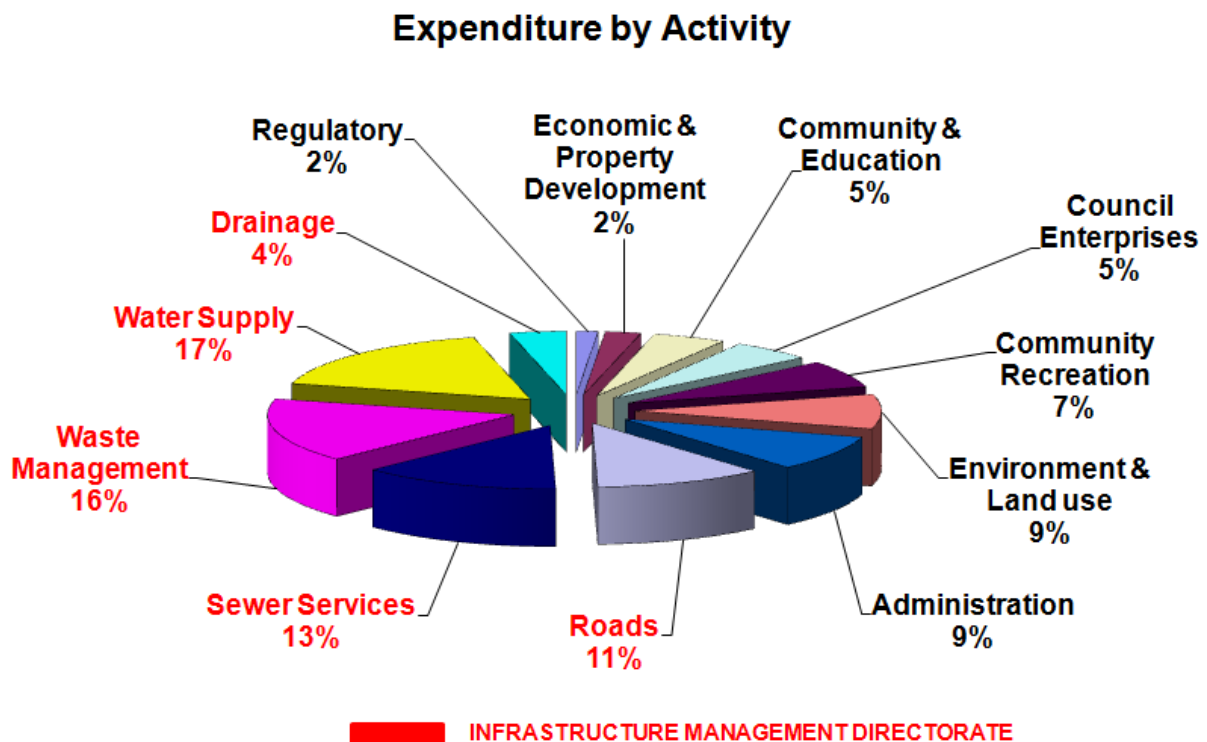
- Rob Fulcher manages the Asset Management group which looks after all the administrative duties associated with managing \$2 Billion worth of assets. There is about \$1 Billion in Roads and about \$1 Billion in water and sewerage. There is a whole lot of stuff in community buildings and the like, but they do not add up to very much.
- Mike Long looks after a lot of Council's capital works program; he's the contracts manager. He is an internal service provider. He does all the jobs that the other managers are too busy to do. He has a team of people who can handle all the big construction projects. He writes the specifications, calls tenders and manages the contractor - things like the Mardi to Mangrove Project, on which I will give you more information shortly. Mike also manages a lot of the construction around the Shire such as the new sporting facility at Hamlyn Terrace and he is also looking after the new Surf Club constructions at Shelley and Soldier's Beaches.



- Greg has a group known as Plant, Fleet and Depots. It is managed by John Barnard. Again it is another service group. It provides Council with all the equipment that it needs to keep Council running. As you can imagine Council has a lot of trucks, excavators, backhoes, graders; we have mowers; you would not believe how many mowers Council has! John has a number against every single item, he knows where every whipper snipper, mower, drill and angle grinder is. There are over 400 large items of plant, truck and graders and over 5 times that amount of small items.
- Andrew Pearce is the man who looks after all Council's road network. He looks after the rehabilitation of the roads; the sealing program; the maintenance program and also looks after the street cleaning; the street trees and their removal if necessary.
- Elfi Blackburn is the Waste Manager looking after the Buttoderry Tip. She manages the day to day running of the site and she looks after the large contract Council has with Theiss to collect the garbage bins.
- Daryl Mann manages the Water and Sewerage group.

Greg then reminded us that he had promised to tell us a little bit about himself. He told us that two years ago he came to Wyong Shire Council as the Water and Sewerage Manager. He was in this role for only two months and at the time the then Director, Paul Wise said to him he have the Mardi to Mangrove project and it is not going too well at the moment. He asked Greg if he was willing to take this project on. So even though Greg was the Water and Sewerage Manager for two months, he kept that role while he was seconded into the Mardi to Mangrove Project Director's role. So, until securing his current position, for the last two years Greg worked mainly on the Mardi to Mangrove project. That is building the 21 kilometre pipeline from Wyong River to Mangrove Creek Dam, making sure we had all the contracts in place for that, building the pump stations, negotiating and liaising with the property owners along the Yarramalong Valley, dealing with all those issues. The other big project Greg's Directorate is doing involves the amalgamation of Gosford and Wyong's Water and Sewerage. There is talk of amalgamating Gosford and Wyong Councils, well in reality that process has already started because both Councils are joining their water and sewerage groups to form the Central Coast Water Corporation to cover the entire Central Coast. At the moment we share our water resources with one big dam at Mangrove. We already work together so we are already started down the path to form The Central Coast Water Corporation.

Greg then went to a revenue and expenditure slide, saying you will hear Council say "we have no money"; well that's not entirely true. Council does have money, we just do not have enough to do everything you would want us to do. To give you a feel for that, next year Council is going to spend approximately \$275million doing the day to day things to keep the place running.



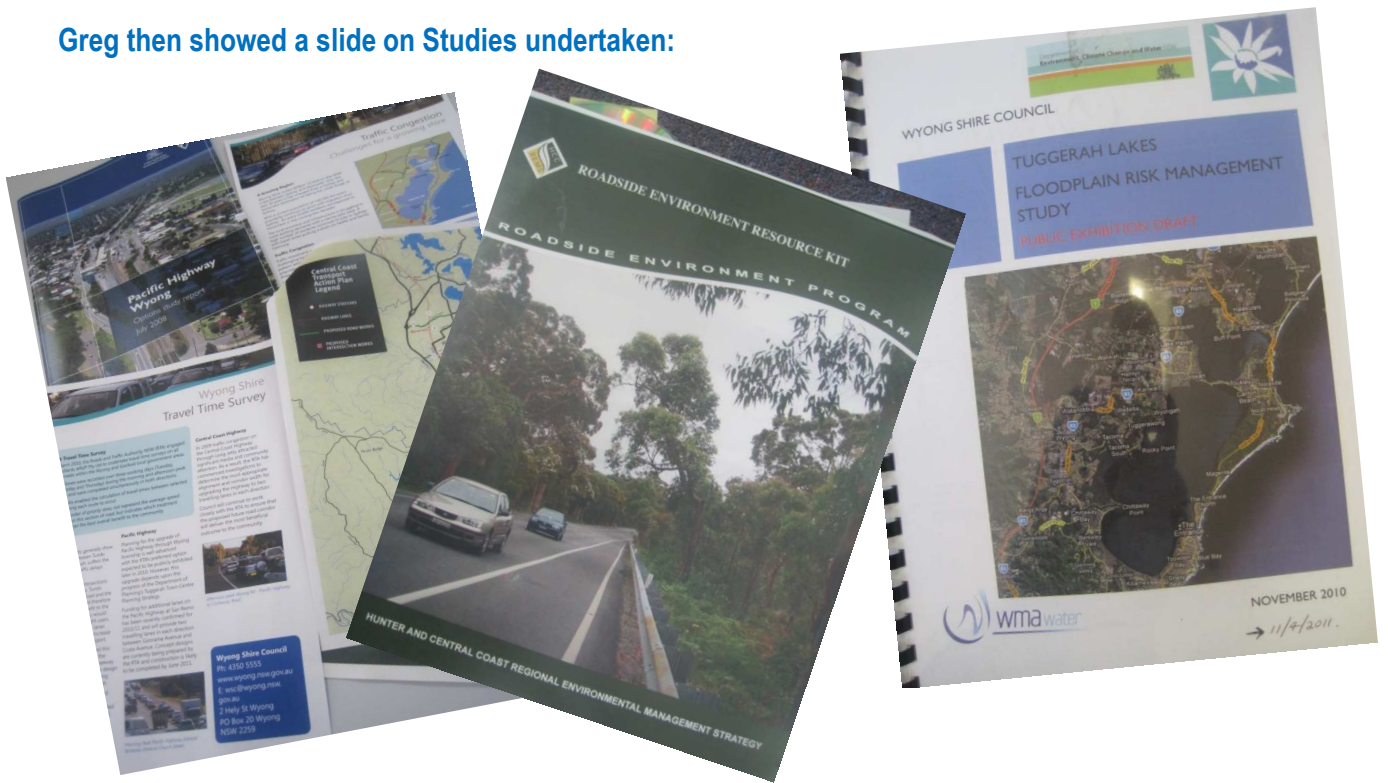
Greg explained that The Infrastructure Management Directorate spends most of the Council's money because it does most of the big things. This in this chart shows expenditure - 4% on drainage, nearly 18% on the water supply, 16% on waste management, 13% on Sewer Services and 11% on roads.

In addition to this' Council spend \$100million on its Capital Works Program. That is building new projects; new bridges will have to be built to replace a lot of old timber bridges up the valley in the next financial year. Council will also be spending quite a bit more on roads and road maintenance, as well as quite a lot in the waste area. In addition to running Buttonderry the Council has seven old sites to rehabilitate.

Greg's next slide in his PowerPoint presentation was on **Asset Management** group. Their tasks include:

- To plan and implement Council's Asset Management Strategy.
- Plan and manage any traffic matters with major development and critical new planning infrastructure.
- Manage the risks associated with the flood prone areas of the Shire in relation to current and future development. At TEPCP's February meeting we heard from Lara Critchley, Council's Flood Engineer, about the Tuggerah Lakes Flood Risk Management Plan. She is part of this group.
- Maintain sound relationships with the State and Federal Governments and other key infrastructure providers to advocate improved transport initiatives within the Shire.
- Undertake a rationalised process to determine whether assets held provide appropriate investment both economically and in service delivery to the community
- Adopt the project evaluation criteria

Greg then showed a slide on Studies undertaken:



The next slide was on the **Contract & Project Management group**. They manage all the big projects and at the moment have about fifty two individual project happening totalling \$138million. There are some big money and some big projects happening such as the Hamlyn Terrace Sporting Field.



- The completed project will provide playing fields capable of holding soccer, rugby and cricket and a BMX track.
- Facilities will also include netball and basketball courts, playground and BBQ equipment.
- A community centre and amenities will also be housed on the site along with car parking facilities.
- Completion of the facility is programmed for July 2011 and is estimated to cost \$7M



Greg next showed the Mardi Suite of Works:



- The Mardi Suite of Works involved the construction of a new 22 metre high intake tower, two pumping stations, associated pipework and significant upgrade to the high voltage supply to the site.
- Work was budgeted to cost \$59M but completed for \$3M under budget.



Construction of Soldiers Beach SLSC

- The new surf club will be located behind the existing club which will be demolished following completion of new building.
- The ground floor will house life saving equipment, public amenities, first aid facilities, kiosk and lifeguard amenities.
- The first floor will contain a function room capable of holding 100 people.
- It is programmed for completion for June 2011 and estimated to cost \$2.8M



Construction of Shelley Beach SLSC

- The existing single storey will be demolished and replaced with a new two storey building.
- The structure is precast wall panelling, ultrafloor slabs with structural steel bracing and roof framing.
- The project is programmed to be completed by June 2011 and is estimated to cost \$2.8M



Light Tower



Liberty Playground Long Jetty



Greg's next slide was on the **Plant, Fleet and Depots** group.

- To provide the support services of plant and fleet management and provision, depot operation and emergency service response
- Source, maintain and repair mobile assets.
- Provide skilled equipment contracts and machinery through internal and external supply options
- Support the Rural Fire Service and Emergency Services through Council's contribution to budgets and asset management
- Current products include:
- Depots and Sites
- Plant – Mobile Equipment and Vehicles
- Stores
- NSW Fire Brigade, Rural Fire Service and Other Emergency Services
- Currently 217 major plant items, and 351 light weight vehicles are managed.
- Management of 1 depot and 5 sub-depots
- Support to 15 RFS Brigades

Examples of Fleet



Roads & Stormwater

Greg told the meeting that roads were one of the main interests of the community. The condition of our roads are the thing Council is most criticised for. There is about 1020km of roads and Council recognises that in the last few years it may not have been spending enough money on roads. At a workshop in May 2011 Greg was able to convince the Councillors that we needed an extra \$5million in the budget next year for bridge replacement and about \$1 to \$2million for road maintenance. So in the new financial year Council will be spending a lot more on roads and bridges. Greg explained that the old timber bridges are very costly to maintain and that replacing them with Concrete bridges reduces maintenance significantly. In answer to a question Greg explained that Councils aim was to spend this money on local roads not State roads.

- To manage and develop roads, bridges and drainage networks and associated infrastructure within the shire
- to ensure ease of travel
- Provide geotechnical services
- Council owns and maintains:
 - 225 public car parks
 - 1020 km of roads
 - 450 km drainage pipes
 - 71 Bridges
- Current Products include:
 - Road and Stormwater design and maintenance.
 - Car Parks
 - Traffic Facilities
 - RTA and Local Roads
 - Quantities and Cost Control
 - Road and Foot Bridges
 - Investigations, inspections, condition monitoring assessments and reporting.
 - Engineering survey
 - Footpaths
 - Street furnishings
 - Shared pathways
 - Kerb and Guttering

Mataram Road Culvert



The project replaced and widened the stormwater culvert (\$950,000) and roadworks (\$625,000)

Marks Road



This project was to provide an open drain for Marks Road Gorokan which cost \$150,000 and completed in January 2011

Shared Pathways



Concrete board walk over drainage system adjacent to Wilfred Barrett Drive, The Entrance North. Project cost was \$450,000



Concrete board walk over natural and man made wet land area at Blue Haven. Project cost was \$600,000

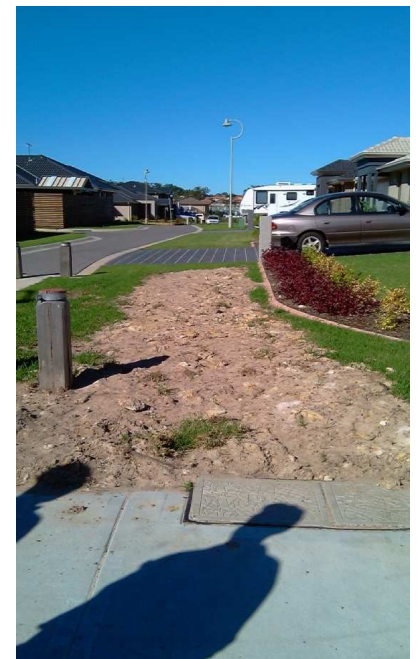
Various Works



Encounters Faced



This is the state of a footpath in a new suburb after a Utility provider completed their works. The areas has now been repaired and turfed.



Gross pollutant trap on lake foreshore damaged by recent storm. This particular area has been made safe and will be repaired next financial year

This is a carriageway and shoulder failure as a result of excess vehicles due to M2M project. The carriage way has been made safe and it will be repaired once M2M has been completed.

Waste - Buttonderry Waste Management Facility

Greg told us that "Waste" was an interesting group. Buttonderry landfill had about forty to fifty years of life before it closes. It is quite a large site. It is quite a modern site. Council has spent a lot of money in the last few years bringing it to a high level of expertise. About 250,000 tonne goes across the weigh bridge but not all that goes into land fill. About 110,000 tonne gets recycled including crushed concrete, steel, paper, batteries and just launched this week e waste taking televisions, microwaves and computers.

In response to a question on the State tax on waste, Greg advised that waste disposal is very expensive. The State Government has a charge for every tonne of waste that goes into Buttonderry. Council collects that tax on the State Governments behalf. Fifty to sixty percent of your disposal fees is actually a tax that goes to the State Government. Council gets a little bit of that back, about 10% for waste initiatives, things like the new e waste initiative.



Greg described Buttonderry as a "high tech" facility with weigh bridges as you go in and out. We have a concreted area for dropping off domestic waste. The days of backing up to the tip face are gone along with the risk of being run over by the trash compactor. This is a safe, clean facility. There are receptacle bins for gas bottles, batteries, paper, timber, steel so you can segregate all your waste and put it in the recycling bins.

This photo to the right is a gas manifold. When putrecible waste decays it produces gas. If you can collect enough of it then you can use it you can power a generator to produce electricity. Council has a contractor who comes on site that put in the infrastructure and manages this. It will generate about \$20million worth of electricity over the next twenty to thirty years, that's about \$1million a year's worth that is put back into the grid. The contractor pays a percentage to council for the use of their gas.



We no longer have a huge hole in the ground that we just cover up with dirt. Now days, we have a huge pit with liners so that all the leach liquid, all the nasties, that twenty or thirty years ago would end up in the creeks or ground water, no longer get in there. It is completely encapsulated. Council pumps the water out, treat the water and make sure the water is clean and free of chemicals.

Buttonderry tip:

- Provides domestic and commercial waste service
- Provides a safe, convenient, competitively priced and environmentally sound disposal recycling facility at Buttonderry and other locations.
- Current collections per week equate to 3,500 for waste and 1,900 for recyclables.
- Rehabilitate old landfills
- Current Products include:
 - Waste Management
 - Tip Operations
 - Closed Landfill Remediation
 - Domestic Waste
 - Commercial Waste
 - Litter Collection
 - 250,000 tonne annually
 - 140,000 landfill
 - 110,000 recycled



Water & Sewerage

Greg said that water and sewerage is pretty well self explanatory. It is a series of water and sewerage pipes around the Shire, pump stations. Wyong Shire does share facilities with the City of Gosford. We share the Mangrove Dam and the Hunter pipeline. The Pipeline allows us to get water from Hunter Water and has the ability for us to provide them with water - it works both ways. At the moment our water levels are fairly low, about 30% full and as a consequence we have level 3 water restrictions. Hopefully when the Mardi to Mangrove pipeline is completed in the next couple of months we will see a change when water starts being pumped from the Wyong River into the Dam.

Water and sewerage is a huge responsibility for Council; we do a lot of testing to:

- To provide safe and reliable drinking water services and sewerage collection, treatment and disposal facilities to the community in a cost-effective and sustainable manner.
- Full compliance of DECCW licence
- Water quality meets ADG or other standards as directed by DoH.



In addition the Water and Sewerage group is:

- Developing a Water Corporation transition strategy
- Current Products include:
- Dams and Weirs / Catchments
 - Water Supply Administration
 - Sewer Pump Stations
 - Sewer Mains
 - Sewer Treatment Plants
 - Water Mains
 - Water Treatment Plants
 - Water Pump Stations
 - Joint Water Supply Administration
 - Drought Management
 - Water Reservoirs



Mardi – Mangrove Project



The pipe are 1 metre in diameter.

This Slide concluded Greg's presentation.

Vivienne Scott then asked Greg why The Tuggerah Lakes Floodplain Risk Management Study and the Coastline Management Study was split between two Directorates and where did the Tuggerah Lakes Estuary, Coastal and Floodplain Management Committee fit in? Greg explained that previously the Floodplain group were in with Gina Vereker and the Planning Group. The Environment and Planning Directorate now looks after only the Coastline Management Study and the Tuggerah Lakes Estuary, Coastal and Floodplain Management Committee because these were considered to be mainly planning related functions. It was considered that The Tuggerah Lakes Floodplain Risk Management Study was considered more of an asset management, engineering function rather than an environmental or planning function. The Floodplain Risk Management people are engineers, not planners and they have been moved into Greg's Asset Management group looking at how the floodplain risks interacts with all the built assets of Council. This group is doing all the policy documents of how long should we keep an asset for; when does the economic life of an asset make it feasible to dispose of that asset or replace that asset or how much should we spend on that asset annually to ensure that it does not deteriorate any further?

Tony Scott asked about the liner used at the Buttonderry tip? Greg explained that this was a geo-fabric liner that did not deteriorate and that there also was a clay liner over it. The intent is that we do not have any water leaving the hole. After three years we cap the hole with geo-fabric and a clay to stop water getting in. We will continue to drain the leachate liquid from the hole and test it for the next twenty odd years until it stops being contaminated.

Vivien Scott asked about the Central Coast Highway planning? Greg advised that where he had said the Asset Management group " maintains sound relationships with the State and Federal Governments and other key infrastructure providers to advocate improved transport initiatives within the Shire " you could read RTA as one of those. The RTA is the State Authority responsible for the Central Coast Highway and the Asset Management group liaises with them on the planning and maintenance of the asset trying to get them to understand Council's point of view. We are not always successful.

Rod Slater stated that forty years ago fifty percent of Council rate revenue was spent on Roads and Drainage and asked Greg to comment. Greg agreed that this was probably right but pointed out that then we were not charging developers to do a lot of the road construction work or have them pay for it. He also pointed out that the quality of construction today is higher and that Council does not have to spend as much on the maintenance of new roads.

Rod Slater then asked if Council would ever get to the recommended ten year interval for road resealing? Greg responded by saying no, he did not think Council could achieve this,

Anne Darlington then asked what criteria an engineer used to decide what section of road was going to be resealed because she had observed that some sections of road were in a far worse condition, but were not being resealed while other roads in a less severe condition were being resealed? Greg explained that a reseal is simply a thin layer of bitumen and stone. It provides a weather proof membrane but it does not provide any structural strength. When you have a failure in the pavement under the seal you have a structural failure and placing a seal over it is not going to fix the problem. If you can maintain a road by resealing it when cracks appear, cracks that let water into the pavement causing it to deteriorate, then by resealing all those cracks you have saved the road. If the pavement has deteriorated too far it is not worth while resealing as it will fail again straight away. This road will need reconstruction not resealing. It is much more expensive and explains why it may have not been resealed and is awaiting funds to become available to reconstruct it. If it is a State Road Council contributes 50% to its maintenance.

Doug Darlington commented that a lot of people ask him why can't Council kerb and gutter their street. Almost half of the streets in Long Jetty and The Entrance are without Kerb and Gutter. Greg stated the Council requires new developments to provide kerb and gutter but does not have the money to go back and retrofit old streets.

Tom Lyons described a sewerage failure on his neighbouring property and asked what powers does council have to step in and fix problems when the owner fails to do so? Greg advised that Council has powers under the Water Management Act and also under the Local Government Act to go onto private property to address water and sewerage matters but it would depend on the nature of the problem. If it was a health issue Council would fix the problem and seek restitution from the property owner.

Tom Lyons then made a statement about the generation of material that is dumped on residents through their letter boxes and from packaging and that more should be done to reduce the amount of this material.

Vivienne Scott asked what was meant by the term "Adopt Project Evaluation Criteria" in the Asset Management group? Greg replied that Council has set up a Project Evaluation team. When we have a problem it usually ends up as a project. Greg told us that he might have a solution to a particular problem, and it may be the right one, but to make sure it is run by the Project Evaluation Team to see if there is a better way in solving the problem. The team is not only made up of engineers, but accountants, ecologists and planners and by bouncing the problem off everyone it is hoped that the best solution is arrived at before starting the project. The Asset Management group drives this process.

Greg was asked if anything was going to be done about Tuggerah Parade? He said it was too early in the planning process to be able to identify particular projects.

Anne Rowland asked if Council had a protocol for determining which projects were adopted? Greg answered that this was what the Project Evaluation team was doing, setting a criteria for selecting projects: such as how many people benefit, cost, environmental impacts, is there a community benefit, all these things. It is subjective. But the criteria we are aiming at will be a pretty good rule of thumb for investigating projects.

Vivienne Scott asked how much input do individual councillors have on that criteria? Greg advised that Councillors put in a "wish list". Individuals bring their items but collectively it is Council as a whole that votes on what gets in and what is left out.

Hervé Nayna then thanked Greg on behalf of The Entrance peninsula Community Precinct for his presentation stating that it was not only useful but informative.

Note taker Doug Darlington