

STAFF REPORT

TO: Chair and Members Engineering Services
FROM: Development Engineer, Dugald Ley
REFERENCE: RWK06-04-27
DATE: 10 APRIL 2006
SUBJECT: **DEVELOPMENT/CUSTOMER SERVICE – THREE MONTHLY UPDATE – JANUARY-MARCH 2006**

PURPOSE

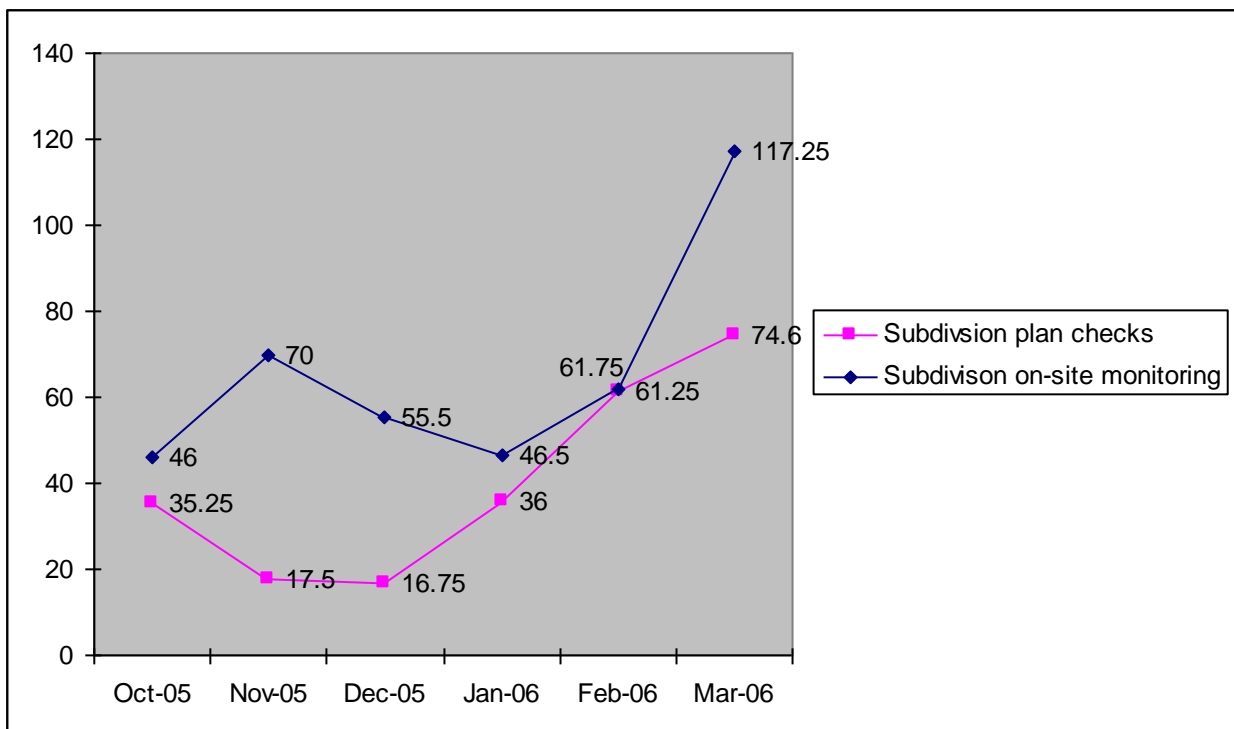
To update the committee on the previous three month's engineering development around the region, customer service enquiry volumes plus a discussion document.

Subdivision/Developments

Major developments occurring around the district are:

- Parker Street, Motueka;
- Brightwater (S Andrew) water tank hill (earthworks only);
- Fearon Gardens, Motueka.

The graph below shows the hours spent on subdivision plan checking and in the field for on-site monitoring



The graph shows increased activity both in Council's representatives' being proactive in the field and time spent by Council's consultant vetting engineering designs. Note: all these hours or costs are passed on to the applicant.

There is a general view that development works have peaked with many developers choosing to sit on consents waiting for the economy to stabilise. Fuel prices also dictate where people wish to live and may stymie some Rural 3 developments.

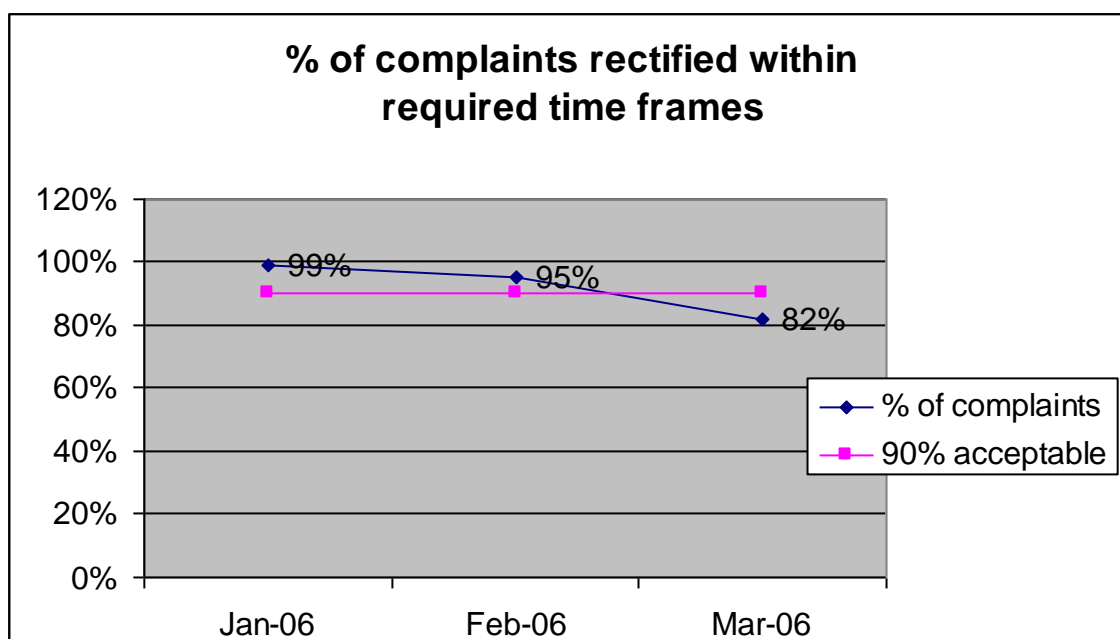
Customer Services

The table below gives a summary of the last three month's service requests entered in to the database:

Category	Number of complaints		
	January 2006	February 2006	March 2006
Water	237	177	231
Wastewater	34	22	28
Stormwater	6	5	8
Roading maintenance	97	60	74
Refuse/rubbish collection	14	4	1
Street lighting	2	10	18
Footpaths/Carparks	5	7	8
Rivers		1	
Total	395	286	368
Outstanding	-	-	-

In general, a similar pattern to the previous three months with the weather being fairly stable over the summer period and this reflects in the figures above.

As this report is compiled before the March figures are completely closed off, this is reflected in the lower March figures. However, the graph shows consistently high achievement rates.



Global Warming

Recently there have been more subdivisions and developments being promoted in the coastal area within 200 metres of the foreshore that have ramifications for Council in the future. This is in regard to coastal protection works and an example where Council has had to arrange this type of works is in the Ruby Bay/Mapua locality. Clearly Council's are being put on notice that when they approve coastal residential properties, a risk in 50-100 years may well cause our future leaders to debate how these developments were permitted back in 2006.

With over 90% of the world's inhabitants living close to the coastal environment, long term prospects of this continuing are limited due to climate change.

Various organisations, principally led by NIWA, have concluded that climate change is here to stay and increasing effects are being felt around the world and in this country. Examples include flood events in Europe, New Orleans, and, closer to home, the Manawatu flooding in February 2004 and the Tauranga floods of May 2005. Coastal developments will increasingly come under more pressure as they will be affected by weather patterns from the sea and flood events from the land. Increasingly these events are becoming more regular with disastrous effects.

The following table produced by NIWA in 2004 is even more relevant today and their website <www.climatechange.govt.nz> gives valuable information on their predictions. It also provides links to other Council's and how they are dealing with climate change on their coastal margins.

Climate variable	Direction and magnitude of change
Mean temperature	Increase 0.5-0.7°C by 2030s 1.4-2.0°C by 2080s
Daily temperature extremes (frosts, hot days)	Fewer cold temperatures and frosts, more high temperature episodes
Mean rainfall	Varies around country. By 2080s Taranaki, Manawatu - Wanganui, West Coast, Otago and Southland show increases; Hawke's Bay, Gisborne, eastern Canterbury, eastern Marlborough show decreases. Substantial variation around the country.
Extreme rainfall	Heaver and/or more frequent extreme rainfalls, especially where mean rainfall increase predicted. No change through to halving of heavy rainfall return period by 2020s; no change through to fourfold reduction in return period by 2080s.
Snow	Snow cover decrease, snowline rise, shortened duration of seasonal snow.
Wind (average)	Increase in the mean westerly windflow across New Zealand. By 2080s, could be from slight increase up to doubling of mean annual westerly flow.
Strong winds	Increase in severe wind risk possible.

Storms	More storminess possible.
Sea level	Increase – 30-50 cm rise (New Zealand average) between 1990 and 2100, accelerating the historical trend.
Waves	Increased frequency of heavy swells in regions exposed to prevailing westerlies.
Diseases/Pests	Increased prevalence and migration

This Council considered some of these effects in its review of Engineering Standards in 2004 and imposed minimum ground levels around the TDC coastline. The resultant levels (above mean sea level) were made up of maximum spring tide levels, global warming, storm surge, river flow/wave run up and a safety margin.

Consequently, Council imposed various levels from 3.5 to 4.0 m above mean sea level (MSL equals 0.0 m which is TDC datum) for new subdivision ground levels or 1.8 metres above mean high water sea level around the coastal area where development occurs.

Under the RMA, Council has to address and have regard to many issues. Of particular importance is Part 2, Section 7 of the RMA “Other Matters” where all persons administering the Act “shall have regard to the effects of climate change”

Also, Council does not have to approve subdivisions/developments/ where it considers that:

- Section 106(1)(a) any land or structure will be subject to erosion, inundation from any source;
- Section 406(a)(i) the land is not suitable for subdivision;
- Section 406(a)(ii) not in the public interest;
- Section 406 (b)(ii) adequate provision has not been made for the disposal of sewage.

The following are the likely scenarios for Tasman District due to climate change.

- The biggest threat to lifelines and services is likely to come from heavy rainfall and flooding. Those lifelines and services that are currently near river banks are at greater risk from floods and landslides.
- Areas near the coast may become increasingly prone to coastal erosion, coastal flooding and storm surges due to rising sea levels.
- There is potential for damage to the region’s low lying coastal settlements and infrastructure where population, tourism and capital investment are large and predicted to expand.
- Infrastructure such as roads, bridges, water mains, stormwater flood protection works and sewage systems need to be assessed to determine their suitability to cope with climate change.
- Structures such as bridges may need to accommodate higher flood peaks in their design.

- Expected sea level rises could make groundwater aquifers near the coastline vulnerable to saltwater intrusion. Possible lower rainfall in some areas may also affect water supplies.
- An increase in drought conditions may result in increased competition for water uses between agricultural irrigation, domestic and industrial use, and may change farming patterns.
- Changes in temperature and rainfall may affect the suitability of districts for particular crops and stock. Problems with weeds, pests and diseases impact upon agriculture and horticulture.

This report is not about how to reduce CO² emissions or what you can do in your own home. (Those issues will be canvassed in a report presently being compiled by the Environmental and Planning Department which will be presented to Council in the future). However, the attached coloured chart will give an indication of what the world is in for. It is however alerting Councillor's that global warming **is** happening and we are feeling the effects already. It is only a matter of time until we have our own disaster in our district and typical question will be "why did Council allow this development to take place?"

Presently there are a number of coastal developments before Council for approval. Many of these assets and infrastructure built as part of these developments may well not reach their life-cycle before the effect of global warming have caused major reconstruction or alteration to them, or abandonment in the extreme. As well as future amendments to the TDC Engineering Standards in 2007, the TRMP will undoubtedly need amendments to mitigate future risk to Council of developments in hazard prone areas due to climate change.

RECOMMENDATION

THAT the Development/Customer Services – Three Monthly Update January to March 2006 be received.

Dugald Ley
Development Engineer