



PROJECT BRIEF

SUBREGIONAL INFRASTRUCTURE RESEARCH PROJECT

(WATER)

1. Background:

Substantial population and urban growth has occurred in the Western Bay of Plenty (WBOP) Sub-region for many decades. Strong growth is expected continue in the foreseeable future.

To manage this growth the SmartGrowth Strategy for the WBOP sub-region was developed in 2004. This Strategy provides a 50 year vision for the development of the sub-region. An integral part of the Strategy is the Settlement Pattern. The Settlement Pattern identifies the geographic areas where urban development (residential, industrial and commercial) is expected to occur in the future within the sub-region as well as the general timeframes for this development based primarily on the adopted SmartGrowth population projections. The Strategy and the Settlement Pattern are currently in the process of being updated.

The SmartGrowth partners are now finding for a number of reasons that there is likely to be insufficient land identified within the SmartGrowth Settlement Pattern to accommodate expected growth in the coming 40 to 50 years. The reasons for this are:

- Lower densities being achieved in growth areas like Wairakei and Te Tumu and less residential intensification taking place (more land than previously anticipated is required to house approximately 11,750 people)
- Likelihood of further reductions to minimum residential yields below 15 lots per hectare resulting from the settlement of an appeal to the Tauranga City Plan (effect of this is unknown at this stage)
- Working to a higher total population in the sub region (approximately 300,000 people) because the SmartGrowth Strategy is likely to look out to 2061 instead of 2051 to retain a 50 year vision.
- The identified long-term shortage of industrial land (this is currently estimated to be 300 hectares but may change as the result of further research being undertaken on this issue)

In addition to this, additional land may need to be found because of:

- The possibility that the infrastructure costs associated with servicing growth in some of the areas already identified in the settlement pattern may be prohibitive which, if true, would necessitate growth being relocated.

- The possibility that research underway by SmartGrowth into residential infill and intensification development may result in less growth being allocated to this form of development.

On the other hand, there is currently significant uncertainty about likely long-term population growth rates which have in recent years reduced substantially. This issue will become clearer once the 2013 census data is available and has been used as a basis for determining new long-term growth forecasts for the sub-region.

The SmartGrowth *Residential Land Capacity and Suitability Study 2011* identifies and assesses a number of additional areas where urban development could occur in the sub region and some issues around the servicing of such areas with suitable network infrastructure. Each of these areas identified in that report has specific infrastructural challenges associated with providing appropriate water, wastewater, transportation and other infrastructure to service urban development.

The Settlement Pattern options set out in the *Residential Land Capacity and Suitability Study* need to be examined in terms of effectiveness, efficiency, financial viability and affordability of providing this infrastructure. A sub regional perspective on aligning infrastructure with new urban land options is necessary.

It is noted that there has already been significant recent public investment in key network infrastructure to support existing and planned sub-regional growth. For example, the southern and Omokoroa wastewater pipelines, Route K, Harbour Link and the Tauranga Eastern Link. In general all the public agencies involved in SmartGrowth are seeking to maximise the efficient use of existing investment before committing significant capital investment into new infrastructure projects. Examining options in this regard is a key part of this research project.

2. Project Goal:

The goal of this project is to identify any potential challenges to providing an urban water supply to any of the 16 areas considered in the *SmartGrowth Residential Land Capacity and Suitability Study* for post 2041 and to provide a high-level costing to these supplies.

3. Project Manager:

The project manager is to be Lee Jordan – Utilities Planner, Tauranga City Council.
Phone – (07)577 7064, Email – lee.jordan@tauranga.govt.nz

4. Project Scope:

The scope of this project is to consider the potential water supply to the 16 areas identified in the SmartGrowth *Residential Land Capacity and Suitability Study* between Paengaroa and Katikati and identify any significant issues and costs that may arise in providing a water supply to those areas. Some of these issues may include topics such as allocation, source, quality, treatment, reticulation etc. There may be other supply options that could be considered.

Water sources to be assumed are the Paengaroa supply, Waiari Treatment Plant (yet to be constructed), Oropi Treatment Plant and Joyce Road Treatment Plant, Tahawhai supply and the Wharawhara supply. If other sources are identified they should also be taken into consideration.

5. Project Inputs:

SmartGrowth will supply the following;

- A copy of the *SmartGrowth Residential Land Capacity and Suitability Study 2011* report
- Plans giving the location and scale and projected populations for each area. .
- Information on existing and planned water supply for WBOP District and Tauranga City.

6. Project Outputs:

The outputs required from this project are:

- a) A high level costing of a bulk water supply to each of the areas identified in the SmartGrowth Land Capacity and Suitability Study.
- b) Identification of any particularly challenging issues or any "Fatal Flaws" that may be encountered.
- c) Consider any other options.
- d) Address any allocation issues that may arise from the Environment BOP report on water allocation policy.
- e) Identify any risks that could be encountered.
- f) Present the report to SmartGrowth Implementation Management Group (draft and final) and also to the SmartGrowth Implementation Committee (draft and final).

7. Methodology:

This is seen as being largely a desktop exercise, identifying pipe sizes and potential routes along with any broad brush engineering opportunities and constraints that may arise along those routes.

Key tasks include:

- a) Identify trunk main pipeline routes. (Desktop exercise)
- b) Identify the water source to be used.
- c) Consider any other options.
- d) Identify quantities required for each growth area.
- e) Identify pipe sizes.
- f) Provide high-level costing of these trunk mains.
- g) Address any issues that may arise from the water allocation planning work being completed by Bay of Plenty Regional Council

8. Project Resources:

Project team:

- Graeme Jelley, Infrastructure Planning Manager, TCC
- Kelvin Hill, Infrastructure Engineer, WBOPDC
- Lee Jordan, Utilities Planner, TCC

9. Consultation Requirements:

Discussion is likely to be required with the Bay of Plenty Regional Council officers who are working on sub regional water allocation matters. Allowance should be made for fortnightly meetings with the SmartGrowth Project Team.

10. Timeframes:

Project inception meeting	29 th June
Identify water quantities required for each area.	13 th July
Identify pipe sizes	27 th July
Options costed	10 th August
First cut report completed.	17 th August
Draft report completed.	24 th August
Presentation of draft report to IMG	4 th September
Presentation of draft report to SGIC	19 th September
Peer reviews completed	
Presentation of findings to IMG	2 nd October
Presentation of findings to SGIC	End of October