

- 6 -

KYNETON SHIRE WATERWORKS TRUSTEngineer's Report Contd...

1st April, 1981.

Reticulation Extensions Contd...

We have included all four jobs under one Contract but separate schedules have been prepared for each.

Our detailed estimate for each of the jobs may be summarised as follows: -

	Construction \$	Supply of Materials \$	Engineering and Overhead \$	Total \$
Johnsons Court	2,143	3,115	526	5,784
Abattoirs Road	2,121	3,132	525	5,778
Lauriston Road	2,987	4,053	704	7,744
Rebecca Drive Glenn Court	3,875	5,697	957	10,529

A copy of the plan and specification has been forwarded to the Trust and all documents including detailed estimates and the proposed method of finance have been submitted to the S.R.W.S.C. for approval.

5. Water Supply to Woodleigh Heights Estate

In regard to the feasibility of extending water to the development proposed for the Woodleigh Heights Estate we have prepared a separate report which has already been forwarded to the Trust for its consideration.

WOODLEIGH HEIGHTS ESTATE

The Trust has received a request for the supply of water to a Holiday Flat development on the Woodleigh Heights Estate. The estate is located approximately 500 metres north of Dettmans Lane off Edgecombe Road.

The development will proceed in stages with stage 1 consisting of 24 units and stage 2 extending to 120 units. When fully occupied each unit will house 4 people and therefore the maximum population will be 96 and 480 persons for stages 1 and 2 respectively.

The site is outside the present boundary of the Waterworks District and there are no mains available to serve it and consequently extensions of both the District and reticulation system will be required if the Trust agrees to provide water.

The volume of water to be consumed annually by the development is difficult to predict because of the fluctuations in occupancy of these units. However we suggest that the total consumption will be of little consequence to the Trust but the maximum daily consumption will be a major factor in

.../8

L7

Engineer's Report Contd...

Woodleigh Heights Estate Report Contd...

deciding whether or not water will or indeed can be provided. The Developer has indicated that the natural environment surrounding units will be maintained and there will be little use of water for other than domestic purposes. Under these conditions we suggest the maximum daily consumption for stage 1 will be in the order of 1.1 kilolitres. If watering of the surroundings were practised then the maximum consumption would rise to 4.5 kilolitres per day and we believe this figure should be adopted for the purpose of assessing the affect of the increased load on the reticulation system.

The Trust will be aware that the nearest watermain is located on the corner of Dettmans Lane and Edgecombe Road. The main serves Dettmans Lane and the Huttons Abattoir as well as a few additional properties. In times when water consumption is high the main does not have sufficient head to serve Dettmans Lane and consequently would not provide any water to the proposed flats under these conditions. The Mollison Street booster pump and associated works will undoubtedly improve the situation to some extent but the connection of another 24 equivalent tenements is likely to increase the maximum demand for water from the Edgecombe Road main by around 144 litres per minute and the additional head loss in the pipeline will tend to counteract any such improvement. Therefore, a tank with a capacity equivalent to at least one days maximum consumption should be provided by the developer.

The storage would ensure that water is available to the units during periods of peak consumption and would be designed to fill at night so other consumers are not disadvantaged by the scheme.

The volume of storage required for stages 1 of the development is 108 kl (24,000 gallons). The developer has installed two 227 kilolitre storage tanks at the north eastern corner of the Estate and he has indicated that one could be made available to the Trust for this purpose. The tank will provide a reasonable pressure (approximately 22 psi) to around half the estate. If water were required to the balance of the land booster pumping would be required but it is anticipated that development will commence in the lower areas initially.

The length of watermain extension needed to serve the estate is approximately 1870 lineal metres which we estimate will cost \$22,440.00. Alterations to the tank and installation of valves etc we estimate will cost a further \$1,500.00 and therefore the total cost of the proposed works is \$23,940.00.

It would seem reasonable for the Trust to also impose a Headworks Levy on each unit as there will be additional load on the Trust Headworks if water is made available.

The Trust is giving consideration to the installation of a tank in Dettmans Lane and if the scheme proposed above proceeds then the tank on the Woodleigh Heights Estate could be used instead of the one to be constructed in Dettmans Lane.

The existing tanks are not as high in elevation as that which was proposed but they will still give a reasonable service to the new Shire Tip and most of the existing properties in Dettmans Lane. Some further site investigation is required to confirm the extent of benefit of the system using the existing tank and this will be carried out following the outcome of the Trusts decision on the proposal.

.../9

LF

KYNETON SHIRE WATERWORKS TRUSTEngineer's Report Contd...Woodleigh Heights Estate Report Contd...

deciding whether or not water will or indeed can be provided. The Developer has indicated that the natural environment surrounding units will be maintained and there will be little use of water for other than domestic purposes. Under these conditions we suggest the maximum daily consumption for stage 1 will be in the order of 1.1 kilolitres. If watering of the surroundings were practised then the maximum consumption would rise to 4.5 kilolitres per day and we believe this figure should be adopted for the purpose of assessing the affect of the increased load on the reticulation system.

The Trust will be aware that the nearest watermain is located on the corner of Dettmans Lane and Edgecombe Road. The main serves Dettmans Lane and the Huttons Abattoir as well as a few additional properties. In times when water consumption is high the main does not have sufficient head to serve Dettmans Lane and consequently would not provide any water to the proposed flats under these conditions. The Mollison Street booster pump and associated works will undoubtedly improve the situation to some extent but the connection of another 24 equivalent tenements is likely to increase the maximum demand for water from the Edgecombe Road main by around 144 litres per minute and the additional head loss in the pipeline will tend to counteract any such improvement. Therefore, a tank with a capacity equivalent to at least one days maximum consumption should be provided by the developer.

The storage would ensure that water is available to the units during periods of peak consumption and would be designed to fill at night so other consumers are not disadvantaged by the scheme.

The volume of storage required for stages 1 of the development is 108 kl (24,000 gallons). The developer has installed two 227 kilolitre storage tanks at the north eastern corner of the Estate and he has indicated that one could be made available to the Trust for this purpose. The tank will provide a reasonable pressure (approximately 22 psi) to around half the estate. If water were required to the balance of the land booster pumping would be required but it is anticipated that development will commence in the lower areas initially.

The length of watermain extension needed to serve the estate is approximately 1870 lineal metres which we estimate will cost \$22,440.00. Alterations to the tank and installation of valves etc we estimate will cost a further \$1,500.00 and therefore the total cost of the proposed works is \$23,940.00.

It would seem reasonable for the Trust to also impose a Headworks Levy on each unit as there will be additional load on the Trust Headworks if water is made available.

The Trust is giving consideration to the installation of a tank in Dettmans Lane and if the scheme proposed above proceeds then the tank on the Woodleigh Heights Estate could be used instead of the one to be constructed in Dettmans Lane.

The existing tanks are not as high in elevation as that which was proposed but they will still give a reasonable service to the new Shire Tip and most of the existing properties in Dettmans Lane. Some further site investigation is required to confirm the extent of benefit of the system using the existing tank and this will be carried out following the outcome of the Trusts decision on the proposal.