## **John Sule**

From: Rachel East

**Sent:** Tuesday, 24 March 2015 03:50 p.m.

To: 'Kurt Bowen'

Cc: Louisa Sinclair; John Eteuati; Tom Dyer

Subject: RE: New Proposal - South Road, Caversham

Hi Kurt

Further comment below. The WWS Asset Planning Team would need to see more detailed design/concept plans/discussion prior to a resource consent application being lodged.

## Wastewater - Further details

WWS Asset Planning team have considered this location and the initial proposal of a holding tank. In principle this option is acceptable to WWS however full detailed design is required before WWS can accept the option, also WWS are stipulating a number of caveats.

The critical duration storm event for the Dunedin wastewater network is 24 hours. The storage holding tank option would be required to have a minimum of 24 hours wastewater storage for the total site.

Due to the already significantly surcharged network in South Road WWS recommend that the new wastewater flows are connected to the 225mm diameter wastewater reticulation sewer in South Road at manhole FSM11321. Note this involves crossing a number of watermains and both the 300mm and 450mm diameter wastewater trunk sewers and the 900 x 600mm rectangular stormwater sewer. The levels of these other assets have not been assessed to see if this option is feasible. It is envisaged that Transportation Operations would not accept a private wastewater lateral of this length crossing the road therefore the developer may also be required to design and build to COS&D standards a new manhole and wastewater sewer length to connect into FSM11321 from the site.

## Stormwater - Further details

WWS Asset Planning team have considered this location and the initial proposal of a holding tank. In principle this option is acceptable to WWS however full detailed design is required before WWS can accept the option, also WWS are stipulating a number of caveats.

The critical duration storm event for the Orari Street stormwater network is 20 minutes. A Stormwater Management Plan is required for this site which will investigate the storage required. It is anticipated a storage holding tank option would be required to have a minimum of 12 hours stormwater storage for the total site.

Regards Rachel

From: Kurt Bowen [mailto:Kurt.Bowen@ppgroup.co.nz]

**Sent:** Monday, 23 March 2015 12:06 p.m.

**To:** Rachel East

Subject: RE: New Proposal - South Road, Caversham

Hi Rachel

Thanks for your email.

Obviously there are some existing capacity problems with the infrastructure in this part of the City.

Just a quick follow-up question-

If we were able to develop a suitable engineering solution to the stormwater and foul sewage issues, then I presume that WWS might be able to agree to the development?

Essentially, some form of on-site holding tank for each system could potentially be installed to receive and store material during high-flow periods and release this material when the capacity of each system allows.

This solution has been successfully implemented in other parts of the City in the past, so I expect it would also work here.

Obviously, a detailed design would be needed to be submitted to WWS for approval of these systems.

Can you advise if WWS's position on the acceptability of the proposed development would be more positive if an engineering solution, perhaps as described, could be presented with the resource consent application?

Regards Kurt

### **Kurt Bowen**

Director **M** 021 456 487 **D** 03 470 0553 **E** kurt.bowen@ppgroup.co.nz

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From: Rachel East [mailto:Rachel.East@dcc.govt.nz]

Sent: Wednesday, 18 March 2015 4:36 p.m.

To: Kurt Bowen

Cc: Louisa Sinclair; John Eteuati; Tom Dyer

Subject: RE: New Proposal - South Road, Caversham

Hi Kurt

WWS do not support this over density proposal from a wastewater capacity point of view as there are significant wastewater issues in this catchment.

Water: The model does not indicate any headloss or pressure issues in this area. Predicted fire flows are greater than 25 l/s from a single fire hydrant at noon during a peak day simulation (>40 l/s). Each unit would require an individual water connection.

**Stormwater:** This area is included within the Orari Street catchment ICMP and therefore a stormwater model is available. The model predicts surcharge and flooding both upstream and downstream of this location. Significant flooding is experienced at the Glen Road and South Road intersection.

A stormwater management plan for the development would need to be submitted to WWS and cover the following:

- An assessment of the current and proposed imperviousness area
- How flows from various sections are serviced and how stormwater from the subdivision will be managed
- Secondary flow paths
- An assessment of the current network and its ability to accept any additional stormwater flow from the proposed development
- identify and address any mitigation required.

**Stormwater pipe within the site:** Development over Council stormwater assets would not be acceptable. Just to note that if the site is subdivided at any point, an easement in gross would be required over the existing stormwater pipe within the site. As the main is probably more than 5m deep the easement would have to be sufficiently wide for safe access to the pipe - 6m or more depending on the actual depth of the main. (This should also be used as a guide for the landuse development as well). The location of the private piped watercourses (rather than small stormwater pipes) on site should be checked as mapping is only indicative.

**Wastewater:** This area is included in the wastewater model but not in full detail. Wastewater flows would be added to the 300mm diameter sewer at the corner of the site. This sewer and the parallel 450mm diameter sewer are known to be fully surcharged during a rainfall event and also cause flooding. Wastewater flows are taken along South Road, then through Surrey Street and MacAndrew Road then the Main Interceptor Sewer.

The wastewater model predicts both flooding and surcharge in the wastewater sewers at the upstream end of the catchment (Kaikorai Valley) and also at the downstream flat area of South Dunedin. This catchment contributes to a downstream network that experiences surcharge or flooding issues in a 1 in 10 year rainfall event. There are currently significant wastewater surcharge and flooding (internal and external property) in Surrey Street. This wastewater network has 3 associated constructed wastewater overflows that are active in rainfall events. The additional development that breaches the permitted density in the DP is not acceptable to WWS and has the potential to exacerbate known wastewater surcharge and flooding issues in the catchment upstream or downstream.

Regards Rachel

From: Kurt Bowen [mailto:Kurt.Bowen@ppgroup.co.nz]

Sent: Monday, 16 March 2015 11:46 a.m.

To: Rachel East

Subject: New Proposal - South Road, Caversham

Hi Rachel

This is a new job enquiry.

I'm not certain if this is something that you will wish to look at yourself or if there is someone better placed with the W&W department to consider this proposal. Please feel free to forward this email on to someone else if that is more suitable.

We have been asked by a client to assist with the planning/consenting processes around a new development of 5 residential units on a vacant block on land in Caversham.

The development in non-complying in term so of zone density, however we believe that there is a good planning justification for the proposed DP breach.

Our views have been confirmed in a general sense by DCC's planning dept.

The next step for us is to confirm acceptability of the proposed activity with the infrastructure departments, including TP, W&W and urban design.

To this end I have attached some information relevant to W&W for you to look through.

I would be grateful if you could review the attached information and give me your thoughts on the acceptability of the proposal in terms of W&W considerations, including the availability of capacity within the local infrastructure to service the proposed development.

## Specifically, please note-

- The site is located at 380 South Road, opposite the intersection with Morrison Street.
- Site area is 1.314m<sup>2</sup>.
- The site is zoned R1 presently, and is pencilled for Medium Density Zone under the 2GP.
- The site borders on existing LA Zone to its east, R1 Zone to its north (but owned by KiwiRail as the Main South Line), with South Road and Barnes Drive to the south and west respectively.
- The site is vacant land at present (and has been for some time) mainly used for informal parking during workdays.
- The proposal is to establish 5 small (~100m² floor area) units on the site, to be compact (2-storey), energy-efficient, well-insulated and hopefully low cost units.
- A site of this size in the R1 Zone allows for 2 units maximum, so we will be proposing a breach to the permitted density.
- There is a large SW pipe running through the site (green arrows on layout plan).
- There are several smaller SW pipes running through the site (blue dashed lines).
- The idea is that SW drainage from the site will be made directly to one or several of the existing pipes within the site.
- The idea is that FS drainage from the site will be made to the existing sewer within the adjoining road corridor.
- The idea is that water supply to the site will be made from the existing main within the adjoining road corridor.
- All drainage and water connections may be individual (if we decide to subdivide the 5 sites later on), or shared (if we decide to develop this as a common-ownership property).

I trust that this is enough of a description to enable you to provide some useful feedback in terms of W&W matters. If there is any further information that you need, or if you would like to discuss the project, please feel free to contact me.

I look forward to hearing from you soon.

Regards Kurt

## **Kurt Bowen**

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