The following are two opinions on the Wastewater Scheme - from Tony Pink, a Glenorchy land owner and an engineer with extensive overseas experience at very senior levels, and Vince Jones, the first chairman of the Wastewater Committee and a long time Glenorchy resident.

I am strongly against any form of powered or monitored equipment on individual properties due to the ongoing maintenance and thus cost effects.

This is especially important for absentee owners, where the system will have low utilisation and thus increased likelihood of maintenance problems – this is akin to a car left idle for most of the year - components will deteriorate due to lack of use and the few times you come to use it, there is a high likelihood that problems and thus costs and loss of service will arise to get the car back in service. Leaving pumps idle in the most hostile environment imaginable is asking for reliability problems and this is not acceptable for one of the primary facilities in a home.

Regarding the emotive "sustainable" requirement - this means the elimination or minimisation of ongoing demands on resources that are not renewable. Therefore power use, monitoring services, and maintenance of mechanical equipment are all unsustainable from an operational point of view - a point overlooked by proponents of the STEP options. From a CAPEX point of view the most "sustainable" solution is the one which requires the least complexity of components and again utilising pumps and control equipment over many hundreds of properties is not the most "sustainable" proposition.

The standout free energy solution is one that utilises gravity for as much of the transport of sewage as possible and thus the most likely long term efficient system is the reticulated gravity system with minimum council owned and maintained pump stations and treatment facilities.

To suggest that 500+ individual pump systems can ALL be maintained to the required standard by regular homeowners is absurd. Observation of say Glenorchy's private car maintenance standards (or any other average rural community) will demonstrate the complete range of maintenance levels – from the full care and attention level to the total disregard "run it into the ground" mentality. This is due to many factors some of which include interest and capability to carry out maintenance but probably mainly due to ability or inclination to afford to carry out the necessary work. There is no evidence to suggest Glenorchy property owners will approach the maintenance of their sewerage system in a different way and thus it is highly likely that system performance won't be as great as one where the primary treatment processes are regularly maintained by a central accountable organisation such as the council or it's appointed agent.

Finally, with regard to procurement, it is critical that the operational term is sufficiently long to match the life of the full system - it is entirely inappropriate for tenders to be sought with an operational period of say 5 years as the system needs to function for considerably longer than that before total replacement is required. Thus a MINIMUM operational period must be 30years and preferably 50years as I would not expect the community to be faced with upgrading the system at an interval less than those periods.

This 30year or 50year operational period will have a significant impact on costs that the community will have to bear - either individually of by the council. Consider for the STEP type systems, how many pump replacements, unplanned call out events, maintenance visits etc will be required for 500+ properties over 30- 50years and what this will cost everybody. If the operational period is short in the tender request, it will inappropriately skew the min cost result, but will still leave the community paying for these costs well after short term operational contract periods have expired.

It is vital that 30-50 year operational requirements are included in the tender request - I raise this point as I haven't seen any detail on assumptions from the vocal few STEP supporters, nor has it been clear from the council summary document what the tender operational period is to be. This must be addressed.

## TONY PINK

The community accepts that there has to be an upgrade of the town's sewerage system which up until now consists of single chambered tanks, three stage tanks and some long drop toilets. There is not much enthusiasm for discussing which system we should have apart from a small vociferous group determined to impose the system of their choice on the community. Despite an extensive PR exercise they have gained little, if any, support. There is no doubt in my mind that the overall feeling is that the property owner wants as little to do with the disposal of human waste as possible. The standard of the maintenance of the existing single stage tanks is probably indicative of their position. The pressing of the button on the cistern is where the vast majority want to cease their involvement.

With the STEP we are looking at 350 tanks and 350 pumps along with piping to treatment tanks and a dispersal field - 700 things to be maintained - 700 things to go wrong. I had some friends stay at a rental property in town and the light came on in the 3 stage tank. It cost \$650 to get the technician up and the owner would have been paying an inspection/maintenance fee on contract of around \$500 per annum. QLDC said at the last meeting that the reticulated system would have one main pump and two subsidiary pumps.

At the main meeting held with the ORC and QLDC reps, the Regional Council CEO made it quite clear that their preference was for there to be a reticulated system where they, the ORC, could deal with one authority, the QLDC, rather than individual owners. If we were to opt for 3 stage tanks then the ORC would require regular Resource Consent renewals and regular inspections at the expense of the individual land owner. Now, 3 stage units are not on the table but my concern is that in the future the STEP tanks would have these conditions imposed on them. We are immediately adjacent to Lake Wakatipu in one of New Zealand's premier tourist areas. I believe that over time the requirements by the ORC are going to get tougher and tougher. The STEP system is much vulnerable to stricter criteria than the gravity/hybrid proposal. This being the case then the operational costs of the STEP system could escalate very rapidly. The disposal of waste to the Queenstown sewage treatment station is another cost which is likely to escalate.

Our criteria has never changed over the last three sewage scheme proposals. The best possible scheme, for the least possible cost, with the lowest possible operating costs - and of these the last is the most important. It is the STEP system which probably has the higher operating costs and certainly has the greatest potential for those operating costs to balloon.

The word "Sustainable" is bandied around with gay abandon and seems to mean whatever you want it mean. Google the meaning of sustainable and there truly are thousands of meanings and you take your pick. For me I think it is most important that the treatment of our waste takes place in Glenorchy ie we are self-contained and that no part of that treatment is imposed on another community. Therefore, because of the higher capital cost with the higher operational costs and the potential for these to balloon I would not support the STEP system. The gravity/ hybrid system is more environmentally sound and, dare I say it, sustainable.

**VINCE JONES**