

## On-site Wastewater Workshop – Achieving Excellence with On-site Wastewater?

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On 15 March 2016, forty people attended the New Zealand Land Treatment Collective (LTC) one day on-site workshop prior to the LTC conference in Gisborne. The workshop was to discuss progress that has been made in advancing on-site wastewater management issues in New Zealand. A summary of what was happening within key regions was presented, along with various industry perspectives on the management of progress and changes within the industry. An opportunity was provided to update priorities that were identified at a similar workshop in 2012. Participant breakdown was 35 % regulators, 30 % technical advisors and 35 % suppliers and installers.

### Regional Status

Judith Robinson – Gisborne District Council: GDC being a Unitary Authority has the benefit of a coordinated relationship within building and regulatory arms of council. This approach also provides for a sound working relationship with suppliers, designers and installers. Within the district there a number of small sites and with owners that have limited budgets. This drives a pragmatic response and in many cases simple designs. They are developing a good data base of what is happening throughout the district. They have made their Plan enabling, i.e. easy for on-site systems to be permitted activities providing they are maintained and reporting is mandatory. They also promote low-tech high capacity systems where appropriate.

Terry Long – Bay of Plenty Regional Council: BOPRC have developed good monitoring data to support issues facing on-site systems. This has allowed the development of a targeted approach around critical areas. They have a new on-site rule in their regional plan that requires a lot of detail to be demonstrated by competent practitioners. They have supported the development of a national training program which, at least locally, allows a greater level of technical discussion of those within industry.

Keith Peacock – Hawke’s Bay Regional Council: HBRC started their on-site program more than 15 years ago. A key part of this has been their Sewage On Site (SOS) group which has greatly assisted communication between RC, TAs, suppliers and designers. They currently run a system and designer accreditation approach with approved suppliers and designers being given a preferential approval process and charged a lesser consent fee.

Leif Pigott – Tasman District Council: TDC is a unitary authority which assists with coordination between building and regulatory functions. A key observation made was the lack of skills locally within the industry and difficulty attracting and maintaining good quality staff within councils. A recent highlight that appeared to benefit all was the running out of town of a cowboy which has helped council and suppliers lift the game.

Terry Long – on-site Rules Nationally: A summary was presented of where Regional Councils were at regarding on-site rule development. Key points to note were:

- Of 16 Regional Councils / Unitary Authorities, all have on-site rules;
- Some date back to 1997, with many being reviewed more than 10 years ago;
- With many councils there was no evidence of pending reviews;
- Guidance documents used in plans were:
  - 35 % AS/NZS 1447

- 24 % TP58
- 18 % their own guide
- 24 % no reference guide
- Regarding specifications in rules:
  - 1 required septic tank maintenance
  - 4 required AWTS maintenance
  - 3 required qualified designers
  - 2 required the use of approved systems
  - Most has a maximum flow for permitted activity of 2 m<sup>3</sup>, but 5 plans did not specify a limit.

## **Industry Status**

Rob Potts – Lowe Environmental Limited - On-site Effluent Testing (OSET) Where to from Here: We can't sit Stool: A summary of the OSET National Testing Programme (OSET NTP) in Rotorua was presented. In summary:

- 25 of 30 plants tested have met the AS/NZS standard;
- Trials have highlighted poor reliability of advanced systems, with many systems requiring 'tinkering' during the testing phase; and
- 18 of 89 Councils assist as funding partners. If further partners are not obtained, fees for suppliers will go up or the OSET system will have to be decommissioned.

Industry representatives (Innoflow, Biorock and Oasis) highlighted key issues facing the industry. These were: communication, common standards and a level playing field.

Gretel Silyn Roberts – Auckland Council – TP58 Revision: TP58 review is underway. AC is going to be consulting on technical components soon. It will be AC centric, but there may be scope for it to be utilised nationally (hopefully).

Nick Walmsley – Water New Zealand: WNZ want to see coordination over all water programs and would like to see and help facilitate a national guidance document.

Hamish Lowe – Lowe Environmental Limited – On-site Wastewater Training – Where are we at?: BoPRC and AC, along with Opus and LEI have set up a training programme to deliver to NZQA Unit Standards (US). Five courses have been run with the majority of attendees coming from the Auckland and BoP regions. In many cases attendance has been driven by the need to have SQEPs. To provide for effective ongoing training to a NZQA level, changes are needed to the USs. Greater emphasis should be placed on regulatory requirements and identifying/understanding the receiving environment. To date there has been a high costs incurred to trainers which is well beyond the initial budget. To keep the course viable support is needed from RC's, especially where regions require SQEPs.

## **Direction and Overview**

Andrew Dakers – EcoEng – OWMS, A Systems Approach: An overview was provided that drew together many aspects of on-site wastewater management, which highlighted:

- An on-site wastewater management service (OWMS) is more than the treatment unit. It comprises source technologies, treatment, dosing and a land application system;
- There are many disciplines and stakeholders involved in any one OWMS. The amenity needs and risks to the end-user and the immediate community, along with the real and relative risks to the local environment must be the primary focus of the industry and regulators;

- All key stakeholders require a high level of competence;
- By necessity an OWMS are site specific. We need to develop systems that are site specific and not generic; and
- Should we be targeting HOT SPOTS for more control and relaxing requirements in COOL SPACES.

A panel discussion including Terry Long, Andrew Dakers, Gretel Silyn Roberts, Judith Robertson, Keith Peacock and Rob Potts highlighted progress that has been made over the last 5 years, but this was with a limited number of councils who have invested in developing better management systems within their regions. Key aspects needing further attention were better communication between industry participants (council – council – supplier – designer) and the need for everyone to contribute financially if national programmes for guidance, testing and training were to be maintained and established.

### Key Issues

The participants were divided into groups and Virginia Baker (ESR Social Scientist) facilitated a series of discussions to identify key issues of interest to the industry. A ranking process was used to identify critical issues, which are summarised below.

Issue	Priority rating	Priority count
Accreditation - installers/maintainers/systems/designers/inspectors/regulators	1	24%
NES	2	19%
System design - appropriate and complete (high tech vs low input)	3	18%
Robust testing – facility/field	4	12%
Regulatory Collaboration	5	8%
Education - homeowner/customer education/obligations	6	5%
Regular servicing	7	3%
Training – upskilling	7	3%
Database	9	2%
Need for proof of effects	9	2%
Need for an end user voice	11	1%
Roadshow – education	11	1%
WIPES – understanding what goes down the drain	11	1%
Self-Governance	14	0%

The participants were also asked to identify the issues that they saw as being the easiest to address, being those that could be done easily, quickly and will minimal financial input.

Ease	Priority rating	Priority count
Database	1	23%
Regular servicing	2	18%
Education - homeowner/customer education/obligations	3	16%
Roadshow – education	4	11%
Accreditation - installers/maintainers/systems/designers/inspectors/regulators	5	7%
System design - appropriate and complete (high tech vs low input)	5	7%
Robust testing – facility/field	5	7%

Regulatory Collaboration	8	4%
Training – upskilling	8	4%
NES	10	1%
WIPES – understanding what goes down the drain	10	1%
Self-Governance	10	1%
Need for proof of effects	13	0%
Need for an end user voice	13	0%

The top 5 priority issues were examined in further detail with groups asked to identify solutions to a number of questions, including:

1. What progress has been made with this priority
2. Why?
3. What is needed
4. How is it resourced
5. Who to action
6. How do we know it has been achieved?

A summary of the responses to questions for the top 5 issues is being prepared and will be presented in an upcoming LTC newsletter.

The 2012 workshop highlighted a clear difference of views and priorities between regulators and installers. Regulators wanted minimum designs and a clear demonstration of competence. Industry personnel wanted a level playing field which was nationally consistent. This workshop however highlighted a more common attitude, with the collective opinion that good communication between all stakeholders was essential, with a regionally consistent design and approval process being essential; and where possible, a nationally consistent approach developed.

It was clear that some council and industry professionals are making significant progress at local levels to increase the understanding of on-site systems and their management; however, this was not consistent across the country. It was also evident that consistency was needed and an outcome from the workshop should be to develop this consistency between the proactive councils and organisations, and use this momentum to help the other councils and organisations, professionals and suppliers.

The advancement of on-site systems, design and regulation was clearly noted to be limited by funding availability. In particular, funding and support was needed to allow the continuation of the OSET NTP in Rotorua, training programmes and potentially the development of national guidance documents. Failure to fund such programmes would see the current facilities and efforts to date being discontinued.

There was discussion about the complexity of on-site systems, and whether a one solution fits all sites approach works. Opinion was strong and in support of ensuring design was fit for purpose, with the need to keep systems simple and appropriate for the site conditions and likely management. It was generally acknowledged that the more bells and whistles the greater the chance of failure and the greater the need for more stringent management controls.

There was consensus that better communication was needed between all industry on-site participants and there was the need to continue the momentum created by workshops convened by the LTC. It was noted that Hawke’s Bay and Canterbury areas have regular industry discussions and these could serve as a model to be used elsewhere. It was clear that the on-site industry would benefit from national coordination, but it was unclear who could make this happen. The LTC and

Water New Zealand could, but to date little has happened apart from the coordination of sporadic industry discussions. Potentially this is all that may be needed if it is coordinated?

A forward process was left in the hands of the LTC, with an opportunity to develop a national focus for OWMS that could see greater industry coordination than that occurring at the moment. The details of such a plan would be the focus of the LTC technical committee with contribution from other industry contributors.

Hamish Lowe (Low Environmental Impact) coordinated and chaired the day with assistance from SCION. Virginia Baker (ESR) facilitated the workshop sessions and other ESR staff assisted with note taking. Copies of the presentation given can be found at:

<https://nzltc.wordpress.com/publications-resources/>

<http://www.lei.co.nz/reference-material>