

## Tuesday 4<sup>th</sup> May

08:00 Registration desk open

08:30 Mihi whakatau

08:50 **Welcome** – Sue Bennett (NZLTC Chair)

### Session 1: IMPROVING OUTCOMES FOR LAND TREATMENT

*Chair: Grant Northcott*

*Session Premier Sponsor: Horizons Regional Council*

09:00 **International Keynote Speaker via ZOOM : Dr Mark Borchardt** Cows, septic tanks and people

### 10:00 MORNING TEA

### Session 2: ONSITE WASTEWATER TREATMENT

*Chair: Leif Pigott*

*Session Premier Sponsor: NIWA*

10:30 **Rob Potts** (LEI) and **Lee Burberry** (ESR) The Darfield Wastewater Management Story

10:50 **Peter Carter** (Department of Conservation) DoC Wastewater Management

11:10 **Rupert Craggs** (NIWA) Ecocultural technologies for rural and Maori community on-site treatment

11:30 **Murray Close** (ESR) A microbial risk assessment tool to manage the discharge of faecal pathogens to land near drinking water wells.

11:50 **Craig Brown** (CBC Wastewater) Lessons from two community engagement projects to improve land treatment outcomes for on-site wastewater systems

### 12:10 PACKED LUNCH

### Session 3: Fieldtrip - ONSITE WASTEWATER TREATMENT

12:30 **Delegates depart from Coachman Hotel Palmerston North and travel to local on-site wastewater fieldtrip sites.**

13:00 **Field Site #1:**

13:00 **Field Site #2:**

16:30 **Arrive back at the Coachman Hotel Palmerston North**

**16:45 – 17:45 NZLTC AGM**

**18:00 Social evening event** Brew Union Brewery  
Spot prizes

## Wednesday 5<sup>th</sup> May

### Session 4: AGRICULTURE & LAND TREATMENT

*Chair: Jack Feltham*

*Session Premier Sponsor:*

08:30 **Local Keynote Speaker:** TBA - Land Treatment in the Manawatu-Wanganui region

09:00 **Greg Barkle** (Land and Water Research) Woodchip bioreactors – design considerations

09:20 **Gimhani Perera** (Waikato University) Phosphate adsorption on activated bio-media

09:40 **Reza Moghaddam** (Waikato University) Methanol dosing of a pilot-scale denitrifying bioreactor to enhance nitrate removal from tile drainage water

10:00 **Dorisel Torres-Roja** (Waikato University) Nitrate attenuation by thermochemical modification of wood substrates

### 10:20 MORNING TEA

### Session 5: GENERAL LAND TREATMENT

*Chair: Sue Bennett*

*Session Premier Sponsor:*

10:50 **Lee Burberry** (ESR) Woodchip denitrification wall trial in a gravel aquifer: Results year 1

11:10 **Selva Selvarajah** (Enviroknowledge) Using plant uptake to determine cut and carry wastewater-nitrogen loading rate

11:30 **Meg Devane** (ESR) Flood and rainfall mobilisation of *E. coli* and faecal source tracking markers from decomposing cowpats - the implications for water quality monitoring

11:50 **Rebecca Stott** (NIWA) Confound it *E. coli*! Improving understanding of microbial water quality and performance monitoring outcomes for land treatment of wastewater using natural treatment systems

12:10 **Luke Wilkinson** (PDP) Geospatial methods for the efficient identification of potential land treatment sites

### 12:30 LUNCH

### Session 6: BIOSOLIDS

*Chair: Rebecca Stott*

13:30 **Matt Brenin** (Massey University) Assessing the effectiveness of a compost toilet system and compost activators for pathogen die-off rates in an emergency context

13:50 **Jack Feltham** (PDP) Biosolids land treatment – consented but not implemented

14:10 **Alexandra Meister** (Canterbury University) Native vegetation to manage nutrients in wastewater land application schemes

14:30 **Maria Gutierrez-Gines** (ESR) Biosolids as a valuable source of plant nutrients with high potential as soil conditioner and soil fertilizer

14:50 **Katie Beecroft** (LEI) Biosolids end use for the Lower North Island

### 15:10 AFTERNOON TEA

### Session 7: BIOSOLIDS

*Chair:*

15:40 **Jianming Xue** (Scion) Microplastics in soil-plant system: source, fate and ecological impact

16:00 **Helena Ruffell** (University of Canterbury) Do microplastics affect productive soil systems?

16:20 **Michael Quintern** (MyNoke) New Zealand-wide vermicomposting of municipal biosolids and organic waste

16:40 **Charlotte Robertson** (MyNoke) Reducing N leaching from effluent disposal land by applying vermicast from biosolids

### 18:00 CONFERENCE DINNER AND GUEST SPEAKER:

Wharerata Function Centre

Dinner Speaker: Dr Lee Burberry - *Rock, goats, dates and incinerating toilet paper – a Christmas holiday in Oman.*

## Thursday 6<sup>th</sup> May

### Session 8: GENERAL LAND TREATMENT

*Chair:*

08:30 **Belinda Meares and Azam Khan** (PDP) Land treatment – heading to the end of the road?

08:50 **Alana Bowmar** (PDP) Nitrogen leaching constraints for land treatment systems

09:10 **Melaina Voss** (Palmerston North City Council) Wastewater best practical options work: Life for the PNCC WWTP beyond 2022

09:30 **Phil Lake** (LEI) Foxton wastewater land treatment consenting and construction challenges and lessons

### 09:50 MORNING TEA

### Session 9: GENERAL LAND TREATMENT

*Chair:*

10:20 **Jen Prosser** (LEI) Regional biosolids strategy – sustainable biosolids use through collective management

10:40 NZLTC into the future

**11:00 CLOSING COMMENTS**

### FIELDTRIP

11:30 **Delegates depart from Coachman Hotel Palmerston North and travel to local land treatment fieldtrip sites (Packed lunch)**

12:00 **Field Site #1: Foxton**

14:00 **Field Site #2: (Toilet Stop) Shannon and Fielding**

15:30 **Arrive at the Palmerston North Airport**

16:00 **Arrive at the Coachman Hotel Palmerston North**

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# New Zealand Land Treatment Collective

## Annual Conference

4 – 6 May 2021

Coachman Hotel, Palmerston North

Improving outcomes for land treatment

