



TECHNICAL COMMITTEE AGENDA

Wednesday, 11 September, 2:30 p.m.,
Council Chamber
Level 2 Philip Laing House, 144 Rattray Street, Dunedin

Membership

Cr Andrew Noone

(Chairperson)

Cr Ella Lawton

(Deputy Chairperson)

Cr Graeme Bell

Cr Doug Brown

Cr Michael Deaker

Cr Carmen Hope

Cr Trevor Kempton

Cr Michael Laws

Cr Sam Neill

Cr Gretchen Robertson

Cr Bryan Scott

Cr Stephen Woodhead

Disclaimer

Please note that there is an embargo on agenda items until 48 hours prior to the meeting. Reports and recommendations contained in this agenda are not to be considered as Council policy until adopted.

For our future

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1. APOLOGIES

No apologies were received prior to publication of the agenda.

2. LEAVE OF ABSENCE

No leave of absences were received prior to publication of the agenda.

3. ATTENDANCE

4. CONFIRMATION OF AGENDA

Note: Any additions must be approved by resolution with an explanation as to why they cannot be delayed until a future meeting.

5. CONFLICT OF INTEREST

Members are reminded of the need to stand aside from decision-making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

6. PUBLIC FORUM

No requests to speak during public forum were received prior to publication of the agenda.

7. CONFIRMATION OF MINUTES

Recommendation

That the minutes of the meeting held on 1 August 2019 be received and confirmed as a true and accurate record.

Attachments

1. Technical Committee minutes 20190801 [7.1.1 - 3 pages]



Minutes of a meeting of the
Technical Committee held in the Council Chamber
on Thursday, 1 August 2019 at 2 p.m.

Membership

Cr Andrew Noone	<i>(Chairperson)</i>
Cr Ella Lawton	<i>(Deputy Chairperson)</i>
Cr Graeme Bell	
Cr Doug Brown	
Cr Michael Deaker	
Cr Carmen Hope	
Cr Trevor Kempton	
Cr Michael Laws	
Cr Sam Neill	
Cr Gretchen Robertson	
Cr Bryan Scott	
Cr Stephen Woodhead	

Welcome

Cr Noone welcomed Councillors, members of the public and staff to the meeting at 02:09 pm.

For our future

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1. APOLOGIES

Resolution

That the apologies for Cr Lawton be accepted.

Moved: Cr Brown

Seconded: Cr Laws

CARRIED

2. LEAVE OF ABSENCE

No leave of absence was requested.

3. ATTENDANCE

Sarah Gardner	<i>(Chief Executive)</i>
Nick Donnelly	<i>(General Manager Corporate Services and CFO)</i>
Gavin Palmer	<i>(General Manager Operations)</i>
Sally Giddens	<i>(General Manager People, Culture and Communications)</i>
Peter Winder	<i>(Acting General Manager Regulatory)</i>
Amanda Vercoe	<i>(Executive Advisor)</i>
Liz Spector	<i>(Committee Secretary)</i>
Ben Mackey	<i>(Natural Hazards Analyst)</i>

4. CONFIRMATION OF AGENDA

The agenda was confirmed as published.

5. CONFLICT OF INTEREST

No conflicts of interest were advised.

6. PUBLIC FORUM

No public forum was held.

7. PRESENTATIONS

No presentations were held.

8. CONFIRMATION OF MINUTES

Resolution

That the minutes of the meeting held on 12 June 2019 be received and confirmed as a true and accurate record.

Moved: Cr Noone

Seconded: Cr Robertson

CARRIED

9. ACTIONS

Status report on the resolutions of the Technical Committee

Report	Meeting Date	Resolution	Status
Lake Snow technical workshop recommendations	18/10/18	<i>The CE engage on the with CEs at the regional CEOs meeting on 8 November 2018 on the primary objectives from the workshop.</i> <i>Invite Regional Councils and MPI to formally endorse and support the proposed research programme and to discuss funding arrangements.</i>	IN PROCESS
GM Report	12/06/2019	<i>Staff to write to the ministers of Biosecurity, Environment and Local Government with the aim of seeking direct government response and input towards combatting the threat of lake snow to the region's waterways</i>	COMPLETE
Glendhu Forestry	12/06/2019	<i>Council requested the report be provided to CE City Forests Ltd and Southern Wood Council</i>	ASSIGNED

10. MATTERS FOR NOTING

10.1. General Manager Operations Report to Technical Committee

The report was provided to the committee members to update them on the Dundas St bridge stage of the Leith Flood Protection works, a recently completed study commissioned by the ORC on regional liquefaction risk areas, and the installation of a weather radar in Otago. The General Manager Operations, Dr Gavin Palmer, was present to speak to the report and answer questions. Also present was Natural Hazards Analyst Ben Mackey. After a general discussion, Councillor Noone asked for a motion.

Resolution

That the Council:

- 1) *Receives this report.*

Moved: Cr Noone

Seconded: Cr Hope

CARRIED

11. NOTICES OF MOTION

No Notices of Motion were advised.

12. CLOSURE

The meeting was declared closed at 02:35 pm.

Chairperson

Date

8. ACTIONS

Status report on the resolutions of the Technical Committee

Report	Meeting Date	Resolution	Status
Lake Snow technical workshop recommendations	18/10/18	<i>The CE engage on the with CEs at the regional CEOs meeting on 8 November 2018 on the primary objectives from the workshop.</i> <i>Invite Regional Councils and MPI to formally endorse and support the proposed research programme and to discuss funding arrangements.</i>	IN PROCESS

9. MATTERS FOR NOTING

9.1. General Manager's Report to Technical Committee

Prepared for:	Technical Committee
Report No.	EHS1860
Activity:	Flood Protection & Control Works
Authors:	Fiona Mangoes, Communications and Engagement Advisor Ben Mackey, Natural Hazards Analyst
Endorsed by:	Gavin Palmer, General Manager Operations
Date:	11 September 2019

PURPOSE

- [1] To update Council on the following matters:
- Lake Hayes consultation
 - Stock Truck Effluent Disposal (STED) Facilities
 - Executive Leadership Team rural community outreach
 - Roxburgh debris flow update
 - Leith Flood Protection Scheme

RECOMMENDATION

That the Council:

- 1) **Receives this report.**

LAKE HAYES CONSULTATION

- [2] In accordance with the resolutions made at the 21 March 2019 meeting of Technical Committee, ORC is undertaking community consultation on the technical intervention options as outlined in the GHC report to improve the health of Lake Hayes. The consultation period is active over a four-week period, 6 August to 3 September inclusive.
- [3] On 13 August ORC held two community drop-in sessions at the Lake Hayes Pavilion with ORC technical staff, alongside GHC consultants who prepared the interventions overview report¹, as well as two independent scientists, Dr Marc Schallenberg from the University of Otago and Dr Max Gibbs from NIWA². These sessions were well attended, with approximately 20 groups at the first session, and 15 groups at the second. A second set of community drop in sessions will be held on 3 September.
- [4] Community outreach includes paid advertising in the Otago Daily Times, Queenstown's Mountain Scene, posters in popular community spaces and cafes, publicity through local

¹ *Lakes Hayes Remediation Options Overview Report*, prepared for Otago Regional Council, GHC Consulting Ltd Consultancy Report, March 2019, 45p.

² Dr Gibbs authored the report: *Lake Hayes Water Quality, Expansion on Remediation Options*, prepared for Otago Regional Council, October 2018, 30p.

community associations and Facebook. Direct mail was also sent to approximately 200 households surrounding the lake. Feedback on the intervention options being considered can be provided using the Lake Hayes YourSay website or by requesting a hard copy to be sent to addresses.

- [5] At the time of print, a key concern among those attending the sessions and those who have provided feedback is to address the nutrients entering the lake, rather than the historic accumulation.
- [6] Other initiatives being undertaken by ORC are the continuous monitoring of lake water quality with a permanent monitoring buoy, and co-funding (with Queenstown-Lakes District Council) of a feasibility study of wetlands on tributaries of Lake Hayes, led by Friends of Lake Hayes.



Figure 1: Members of the community attend the first drop-in session (13 August 2019) to discuss with experts the considered intervention options to address the historical accumulation of nutrients in Lake Hayes.

STOCK TRUCK EFFLUENT DISPOSAL (STED) FACILITIES

- [7] ORC has constructed a network of eight STED facilities in Otago. Implementation of a ninth STED, on SH8 near Tarras, is progressing. The application for New Zealand

Transport Agency (NZTA) funding is being finalised and consultation with the occupier of NZTA's land is continuing.

- [8] One of the alternative sites previously considered by Council is located on Ripponvale Straight, SH6, near Cromwell¹. NZTA has recently felled the poplar trees at and near the site (Figure 2). The trees were on land owned by NZTA.



Figure 2: Ripponvale Straight, SH6 near Sandflat Road, Cromwell, looking west (3 September 2019)

EXECUTIVE LEADERSHIP TEAM RURAL OUTREACH SESSIONS

- [9] The Executive Leadership Team, facilitated by our rural liaison team, will be visiting the regions for outreach sessions with rural communities in late September to early October 2019. The sessions are being hosted by local catchment groups and will be a great opportunity to introduce the new ORC Executive team, the priorities of the ORC, and to update stakeholders on key pieces of work such as Plan Change 6A. Meetings will be held in Central Otago (Roxburgh and Wanaka), Taieri, North Otago and West and South Otago.

¹ *Stock Truck Effluent Disposal Central Otago*, Report to 21 March 2019 meeting of Otago Regional Council Technical Committee, 20 March 2019, and *Stock Effluent Disposal Sites Options Report – Central Otago*, Prepared for Otago Regional Council, WSP-Opus, February 2019, 21p.

ROXBURGH DEBRIS FLOW UPDATE

- [10] Creeks in the Roxburgh area have a long history of flooding during intense rainfall, with significant sediment movement causing rapid aggradation and a loss of channel capacity (Figure 3).



Figure 3: Debris deposited across SH8 at Reservoir Creek in the October 1978 event.

- [11] The most recent major event was November 2017, where an intense localised thunderstorm caused at least four Creeks near Roxburgh to flood. Updates to Council about this issue were presented to the Technical Committee in June 2018 and October 2018.
- [12] Reservoir Creek, which runs through northern Roxburgh, has a 180m-long concrete flume (built in the early 1980's) to efficiently convey floodwater and sediment across the residential area to the Clutha River (Figure 4). In the 2017 event, this flume filled with debris, causing sediment laden floodwaters to escape the channel causing significant damage to properties across northern Roxburgh. Other creeks were constricted at highway culverts and deposited sediment across SH8 in multiple places, blocking the state highway for several days.



Figure 4: View down Reservoir Creek towards the Clutha River (February 2019). The channel transitions to the concrete flume towards top of image, with the SH8 Bridge visible crossing the flume. View to the east. (Golder, 2019).

- [13] Erosion and scour in the hills behind Roxburgh caused by the 2017 and subsequent smaller rainfall events highlight the unstable nature of the catchments, which contain a significant amount of readily mobilised sediment. Records from historic events and modern observations indicate further episodes of sediment movement are likely to recur over the short to medium term due to the disturbed state of the catchments.
- [14] ORC engaged engineering firm Golder Associates to 1) assess the catchment and channel conditions of five creeks near Roxburgh, and 2) identify measures to mitigate the risk to people and property from future floods. The recently completed reports will be made available for review. A range of measures have been proposed for each channel, and include enhanced channel clearance, protective bunding, armoured guide walls, debris retention structures, and culvert enlargement (Figure 5). For each catchment, options have been presented in order of cost effectiveness. Some of the identified options, such as armouring channel walls or installing debris detention structures, would require significant capital expenditure and engineering work as well as regulatory and land access approvals.
- [15] Staff are currently assessing the report and plan to bring a paper to Council in late 2019 outlining options, their effectiveness, costs and risks. This will include consideration of land-use planning and opinion on the acceptability of the residual risk, with and without further mitigation. The goal is to identify the most appropriate long-term measure to mitigate the hazards associated with potential future flood events. Capital works and large-scale maintenance works would be subject to Council's Annual Plan decision-making process.



Figure 5: Potential mitigation measures along the lower part of Reservoir Creek (modified from Golder, 2019).

- [16] The creeks cross SH8, and some culverts have repeatedly blocked during flood events, depositing sediment across the highway in multiple places. NZTA report they are undertaking investigations focusing on issues raised from the ORC Golder Report that affect the State Highway, such as culvert capacity. This work by NZTA is expected to be complete by April 2020. Any recommendations stemming from these investigations will be put forward for physical works funding from NZTA’s future Resilience Programme. NZTA have already completed the work to remove the additional culvert above the highway near the golf course, which should now improve the flow under the highway; this culvert was a significant obstruction in previous flood events.
- [17] In ongoing work by ORC, one of the priority options recommended by Golder involved removing a sediment lobe at the base of Reservoir Creek. This work is planned for October 2019. Acquisition of LiDaR¹ data across the catchments is planned over the next month to serve as a monitoring baseline, document channel aggradation and erosion, and to establish design channel profiles. Large landslides up Pumpstation Creek and Golf Course Creek are being monitored. A telemetered rain gauge installed in the Reservoir Creek catchment in October 2018 continues to provide valuable data.

¹ Light Detection and Ranging topographic data.

LEITH FLOOD PROTECTION SCHEME

- [18] Works continue on the Dundas Street bridge stage of the Leith Flood Protection Scheme (Figures 6 and 7).

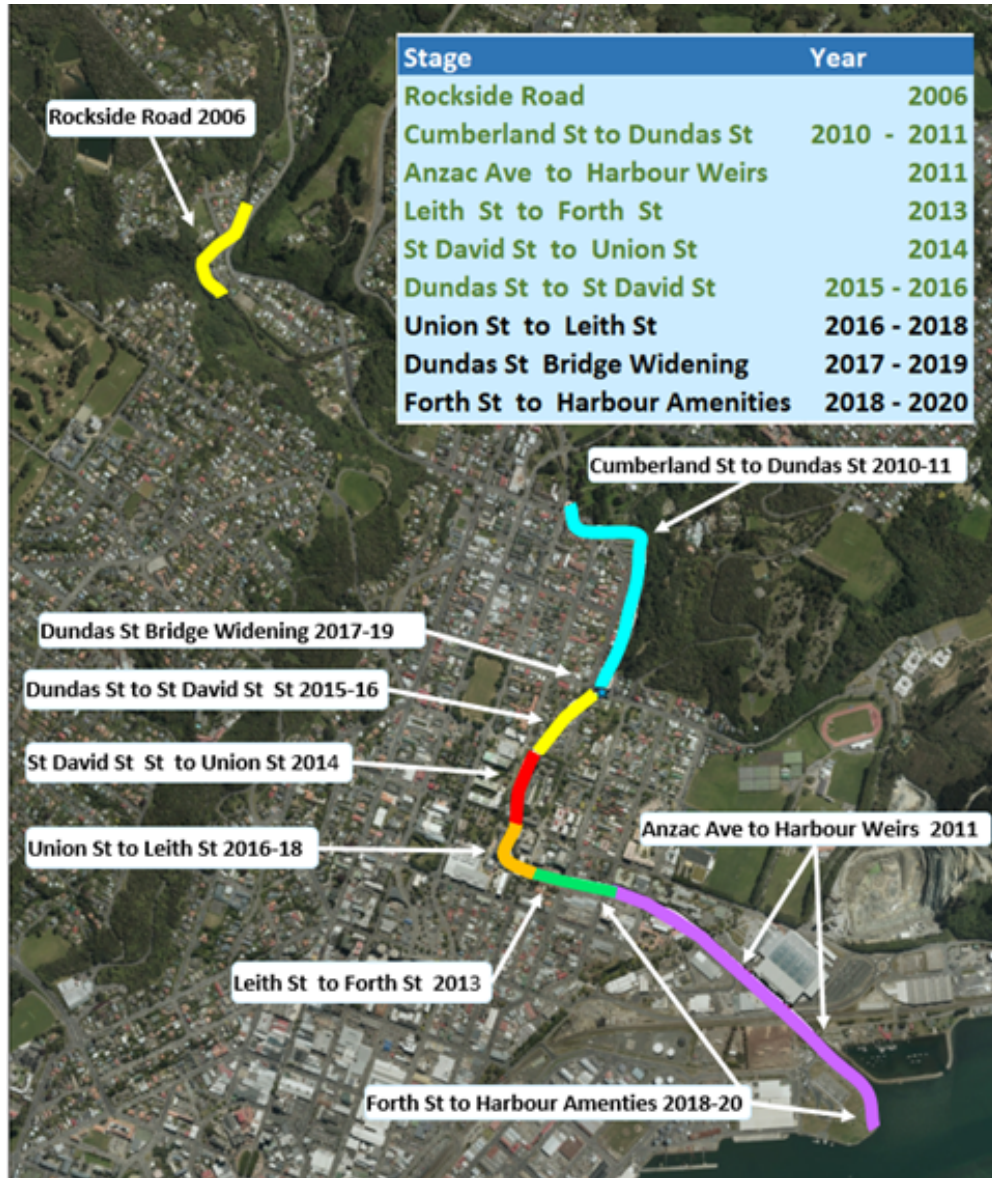


Figure 6: Staging of construction of Leith Flood Protection Scheme.

- [19] Progress has been good and the precast concrete culvert units to the right (western) bank are now in place (Figures 8 and 9). The sections are being fixed together and then backfilling behind both sides of the bridge and culvert can begin. This is a significant milestone as the vulnerability of the works to flood damage will start to reduce.



Figure 7: Dundas Street Bridge stage of the Leith Flood Protection Scheme, looking upstream, 6 August 2019 (courtesy Downer NZ Ltd)



Figure 8: Precast concrete culvert units, Dundas Street bridge (3 September 2019). Dundas Street bridge at top left.



Figure 9: Precast concrete culvert units being craned into position at Dundas Street bridge (3 September 2019).

ATTACHMENTS

Nil

10. CLOSURE