

Submission on Contact Energy Limited's Lake Hāwea Draft Erosion Management Plan

28 July 2021

Guardians of Lake Hāwea

Guardian of Lake Hāwea (GLH), a sub-committee of HCA has been appointed by the Hāwea Community Association (HCA) to deal with matters related to the lake and shoreline.

GLH met with Joe Wheeler of Contact Energy on 18 June 2021 for a site visit of the southern foreshore from the Dam to Grandview Creek.

1. Focus of this submission

The focus of this submission is the southern foreshore and in particular the foreshore adjacent to the township of Lake Hāwea. This focus is for the following reasons:

- 1) The township foreshore is a QLDC reserve.
- 2) The HCA has made a significant financial investment in enhancing the indigenous flora and fauna of the reserve
- 3) Since the late 1980's a group of community volunteers (Thursday Group) has every Thursday undertaken weed control and planting on the reserve.
- 4) A significant number of the local community and visitors use the reserve for recreation.
- 5) Contact Energy's resource consent states:

"Sub-condition d) gives priority to the lake margin adjoining Lake Hāwea township and requires actions to avoid, remedy or mitigate actual or potential erosion whereas around the remainder of the lake margin actions are required where erosion affects public roads, private land or which causes a risk to public safety." (p2)

2. Annual and Post Event Inspections (Draft EMP, 6.1 & 6.2)

GLH supports these proposals.

3. Profile Monitoring (6.3)

GLH notes that profile monitoring has been at three year intervals (2004, 2007, 2010, 2013, 2018) up until 2013.

GLH recommends that as a minimum Contact Energy commitment to monitor as follows:

3.1 Every 3 years

All profiles in front of the township (HA 1 to 8) though more frequently if inspection/concerns require it.

Additionally HA 9 & 10 should be surveyed at the same frequency, as they are "upstream" of the most recent gravel deposition site at Gladstone Gap and would potentially show contrast with beaches "downstream".

HA12 is adjacent to John Creek settlement so should also be done 3-yearly to supplement anecdotal statements from residents/visitors.

HA11 is the only profile on the southern shore of the lake not covered above. For completeness, and to give information relevant to the Gladstone Track at the top of the cliff, GLH suggest surveying it 3-yearly.

3.2 Every 10 Years

All remaining sites unless inspection/concerns suggest more frequently.

4. Flora Dora Cliffs

The long-term projections of a further 20+ metres of retreat (Wheeler 2021, p8) is of concern. The last erosion profile

for this area was undertaken in 2018 (Silvester 2018) and it reports “slight average degradation”. We note there was significant cliff collapse in February 2020 which was associated with a high lake level and high winds (see Fig 1). This underscores the need for regular monitoring with additional surveys following significant events. Climate change is likely to result in more extreme weather events.



Fig 1. Eastern end of Flora Dora Cliffs 27 Feb 2020. The Wedding Tree (see below) can be seen in the top left of the frame

The draft 2021 EMP states that one of the conditions of the resource consent as follows:

“Sub-condition d) gives priority to the lake margin adjoining Lake Hāwea Township and requires actions to avoid,

remedy or mitigate actual or potential erosion whereas around the remainder of the lake margin actions are required where erosion affects public roads, private land or which causes a risk to public safety.” (p2)

This suggests that “Do nothing” is not an option for the Flora Dora cliffs in terms of the resource consent. The draft 2021 EMP, however, makes no mention of avoiding or mitigating further erosion at this location.

The 2014 erosion assessment of this area discusses mitigation options and concludes:

“As no infrastructure or private land is at threat there seems little justification for expensive mitigation options. The erosion is more of an amenity issue. If the loss of a portion of the land is tolerable then the Do Nothing option is the preferred approach.” (p20, Silvester 2014)

GLH note that Gladstone track goes through this area and this is a very popular route for walkers and cyclists. The beach below the Flora Dora cliffs is also regularly used by walkers and swimmers, who could be endangered by a collapse of these unstable cliffs.

In addition, the eastern area of the Flora Dora reserve has a large Gum tree which is a very popular area for social gatherings. Evidence of the popularity of this area is evident by Lake Hāwea Community Centre advertising (see: <https://lakeHāwea.communitycentre.co.nz>) (see Fig 2). This area has also been the subject of extensive revegetation (Fig 3) by a group of volunteers (Thursday Group) working in partnership with QLDC. In summary, the Hawea community considers this area to be an important community asset and, as such, it warrants protection to ensure that further erosion is avoided.



Fig 2. Screen shot taken from Hāwea Community Centre Website of the Wedding Tree site on Flora Dora Cliffs, cliff edge information added.



Fig 3. Revegetation on the east facing slope below the Wedding tree.

Given the significant amenity value associated with Flora Dora terrace and recent cliff collapses it is now appropriate to review the mitigation options. While we do not have specific expertise in terms of options for mitigation, we note that a mix of strategies may be required. We offer the following comments on some of the options presented by Silvester (2014).

Reduce lake level: The GHL continue to recommend that a reduced MCL be maintained over the summer months, when the lake is normally at high levels and there is a high risk of very strong northerly winds creating extreme wave action along the southern lake foreshore. GLH note that QLDC and HCA have previously argued that there should be a high water level buffer zone between 344-346 masl over the summer to minimise erosion. (para 80, Environment Court 2005).

Groin: we agree that a groin would detract from the natural appearance of the beach, but this has to be offset against the considerable loss of land that will eventually occur to the Flora Dora Terrace. The 2014 report notes:

“...it is one of the open spaces along the Lake Hāwea foreshore that has a pleasant appearance and “wilderness” feel (p19, Silvester 2014)

Finally, Contact Energy documents do not mention a significant contributor to the erosion of part of the cliff face, namely run-off from a QLDC stormwater drain. Figs 4 and 5 show this. GLH, and more latterly HCA’s three waters sub-committee, have been urging QLDC to address this issue. It

has been two years since GLH brought this to the attention of QLDC, when QLDC agreed it needed addressing. A number of mitigation options have been discussed with QLDC but this issue would appear to be a low priority for QLDC as there is no resolution in sight. Between June 2019 and May 2020 the cliff edge has retreated 1 metre at a point directly north of the stormwater outlet. The HCA Three Waters subcommittee is continuing to actively pursue a resolution of this problem.



Figure 4. flooding on Flora Dora terrace arising from open storm water drain. The boardwalk is on the Gladstone track



Fig 5. Flora Dora Cliffs directly north from stormwater drain

5. Muir Road Cliffs

GLH are in agreement that no significant erosion appears to have occurred during the 2020 event when the lake level, at its height, allowed run-up to the base of the cliff. Natural ravelling (downslope movement of material) is occurring along the cliff due to gravity as the weak material attempts to reach its angle of repose, assisted by rabbit burrowing.

Figure 6 shows wood debris associated with the high lake level of early 2020.



Fig 6. Muir Road cliffs looking west June 2021

The 2014 report on this area suggests that post flood remediation could involve:

“...battering the eroded face and encouraging the establishment of new vegetation.” (p16)

GLH note that:

- 1) Members of the public regularly walk below these cliffs.
- 2) There are pest plant species occurring along this slope (e.g. Gorse, Broom, Briar, Lupin) and these require active management by Contact Energy. In addition, a limited number of native plants had self-seeded there, most notably *Coprosma propinqua* (as shown in Fig 6). A further suite of low-growing native turf plants have established at the top of the slope, between the fence and the cliff. These stabilise the soil and should not be damaged.
- 3) There would be merit in considering planting deep rooting native plants that are indigenous to the area (Cabbage tree,

ribbonwood, and pittosporum species) in the lower gravel parts of the slope. This would considerably enhance the indigenous biodiversity of the area and provide a plant linkage corridor between the township foreshore vegetation and that at Gladstone Gap. Battering would not be necessary to undertake this task. Watering in the establishment phase could easily be undertaken by a pipeline from Contacts existing tank in the paddock above the cliffs.

GLH accept that there would be a risk of some plant loss in major storm event but considers the benefits outweigh the minimal risk.

6. Grandview Creek Cliffs

GLH note there has been significant erosion in this area and that this has involved private land. GLH support land purchase to ensure the ongoing security of the Gladstone Track. There is a risk of the public falling as result of cliff edge collapse if they venture too close to the fence, which in places is already hanging in space. The fall height is significant and is likely to result in significant injury. Consideration needs to be given to reducing this risk through a combination of signage and re-fencing.

7. References

Environment Court 2005. Decision C102/2005

Wheeler J. 2021. Lake Hāwea Erosion Management Plan. Draft 3 -For Consultation. . Contact Energy Limited. Clyde.

Silvester P. 2018. Lake Hāwea Erosion Monitoring Profile Surveys. Contact Energy Limited. Clyde.

Silvester P. 2014 Lake Hāwea Foreshore Flora Dora Cliffs
Erosion Assessment 2014. Contact Energy Limited. Clyde