# Regulatory Committee 20190612 Attachments

# Minutes of a meeting of the Regulatory Committee held in the Council Chamber at Council Chamber on Wednesday 1 May 2019, commencing at 8:30 am

**Membership**

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

**Welcome**

Cr Scott welcomed Councillors, members of the public and staff to the meeting.

## 1. APOLOGIES

No apologies were noted. Councillor Laws was attending via telephone.

## 2. LEAVE OF ABSENCE

Leaves of absence for Councillor Kempton, Councillor Noone and Councillor Woodhead were noted.

## 3. ATTENDANCE

| | |
|---|---|
| Sarah Gardner | *(Chief Executive)* |
| Nick Donnelly | *(General Manager Corporate Services and CFO)* |
| Gavin Palmer | *(General Manager Operations)* |
| Sally Giddens | *(General Manager People, Culture and Communications)* |
| Andrew Newman | *(Acting General Manager Policy, Science and Strategy)* |
| Liz Spector | *(Committee Secretary)* |

Peter Winder, Acting General Manager Regulatory was unavailable due to technical issues with teleconference.

## 4. CONFIRMATION OF AGENDA

The agenda was confirmed as tabled.

## 5. CONFLICT OF INTEREST

No conflicts of interest were advised.

## 6. PUBLIC FORUM

No public forum was held.

## 7. PRESENTATIONS

No presentations were conducted.

## 8. CONFIRMATION OF MINUTES

**Resolution**

*That the minutes of the meeting held on 21 March 2019 be received and confirmed as a true and accurate record.*

Moved: Cr Scott
Seconded: Cr Neill
CARRIED

## 9. ACTIONS

**Status report on the resolutions of the Regulatory Committee**

| | | | |
|---|---|---|---|
| **11.3** Managing the use of coal for domestic heating in Otago and | 31/1/2018 | *That the matter of the ability to enforce the current Regional Air Plan AirZone 1 provisions be considered by the Regulatory Committee* | IN PROCESS |

| | | | |
|---|---|---|---|
| New Zealand **(Technical Committee)** | | | |
| 11.1 Compliance Activity for 2017/18 | 17/10/18 | *That a case study be undertaken on the Kaikorai Stream with a view to informing future work on urban waterways and other waterways of concern.*<br><br>*That this paper be reframed and represented with analysis of trends and of highlights and issues governance should be address* | IN PROCESS |
| Wallaby Control | 28/11/18 | Cr Scott requested that the action item for a Memorandum of Understanding (MOU) with Environment Canterbury for wallaby control be reinstated to the action list **and** provide an update on the success of the wallaby control programme. | IN PROCESS |
| Lagarosiphon mgmt report | 21/03/19 | Cr Woodhead requested to have **LINZ** make a presentation to Council in the future re lagarosiphon management. | IN PROCESS |

## 10. MATTERS FOR COUNCIL DECISION

Nil

## 11. MATTERS FOR NOTING

**11.1. General Manager's Report on Progress**

Cr Scott reviewed the GM report which highlighted March 2019 compliance in consents, forestry, dairy and contaminated sites. The report also outlined a programme to improve performance and effectiveness of the compliance team. Councillor Brown noted that compliance in the dairy sector was something to acknowledge and reflected a shift in the awareness of issues. Councillor Scott queried whether the scope of dairy farm assessments need to be re-examined. Councillor Lawton noted that many dairy farms may only be a big weather event away from non-compliance. Chief Executive Sarah Gardner said heavy rains do impact effluent storage and ORC staff are openly discussing water quality rules with the industry and farmers. Councillor Deaker asked about the chart showing a large increase in public enquiries related to contaminated sites. CE Gardner suggested this could be due to growth in the region related to development and an increasing public awareness related to contaminants.

Councillor Scott thanked the staff for the report. As there was no further discussion, he asked for a motion.

**Resolution**

*That the Council:*

*1)* ***Receives*** *this report.*

Moved: Cr Robertson
Seconded: Cr Hope
CARRIED

**11.2. Consents and Building Control**

Manager Consents Joanna Gilroy presented the committee with the regulatory activity report for consents, building control and deemed permit replacements for March. She said the team is implementing findings that came out of the consents review including staff training for permit processing and effective communications with consent applicants. She also noted work has begun to have copies of consents available online using a mapping service. Ms Gilroy mentioned that better time tracking for more effective cost recovery is a focus as well. Councillor Deaker said the report provided a good picture of what is happening with the regulatory team. Councillor Lawton asked to see a breakdown of when consents are filed by month over the previous years to see trends. Ms Gilroy said she would provide that information to the Councillors. After a general discussion, Cr Scott asked for a motion.

**Resolution**

*That the Council:*

*1)* ***Receives*** *this report.*

Moved: Cr Brown
Seconded: Cr Hope
CARRIED

**11.3. Enforcement Activity**

Councillor Scott reviewed the enforcement activity report. The report details infringement and abatement notices actioned during the period 1 March through 12 April. After a general discussion, Cr Scott asked for a motion.

**Resolution**

*That the Council:*
*1)* ***Receives*** *this report.*

Moved: Cr Hope
Seconded: Cr Robertson
CARRIED

## 12. RESOLUTION TO EXCLUDE THE PUBLIC

**Resolution**

*That the public be excluded from the following part of the proceedings of this meeting (pursuant to the provisions of the Local Government Official Information and Meetings Act 1987) namely:*

- *8.1 Approval of minutes of the Public Excluded Regulatory Committee Meeting held 21 March 2019.*
- *3.1EMO1858 Enforcement Activity*

Moved: Cr Scott
Seconded: Cr Hope
CARRIED

## 12.99. PUBLIC EXCLUDED POSTAMBLE

**Resolution**

*That the meeting resume in public session at 9:54 a.m.*

Moved: Cr Scott
Seconded: Cr Neill
CARRIED

## 13. NOTICES OF MOTION

No Notices of Motion were advised.

## 14. CLOSURE

The meeting was declared closed at 9:54 a.m.

_____ _____

Chairperson Date

# Kaikorai Stream Case Study

## INTRODUCTION

At its meeting of 17 October 2018, the Regulatory Committee requested a case study of the Kaikorai Stream to inform future work on urban waterways and other waterways of concern. This paper sets out an overview of the catchment, the nature of the shared management responsibilities for the area, water quality issues, flood hazards, and consent and compliance information in relation to the Kaikorai Stream and its catchment.

## CATCHMENT OVERVIEW

The Kaikorai Stream has a total catchment area of 55.4km$^2$ and flows in a south westerly direction for approximately 14.5km down the Kaikorai Valley. It drains the south eastern and eastern slopes of Flagstaff, Kaikorai Hill and the Balmacewen area, flows through Kaikorai Valley and Green Island and discharges into Kaikorai Estuary and into the Pacific Ocean near Waldronville. The Kaikorai Estuary is moderate in size (94 ha) and the main estuary is shallow and muddy. The catchment is one of the most urbanised in Otago.

The population of the area is around 30,000, and 22% of its area is urbanised, with a mix of residential and industrial uses.

In 1849 settler Samuel Woolley described the Kaikorai stream as of the 'purest water'. It degraded quickly with the ODT describing the stream as “a long continuous sewer” and a “sanitary scandal” as early as 1907 (ref: *Wikipedia page*).

The catchment is heavily modified and is also home to a large number of contaminated sites, along the river. In particular, Dunedin City’s main landfill in Green Island is located close to the estuary.

The Kaikorai estuary is a recognised coastal protection area in the *Regional Plan: Coast.*

Kaikorai Lagoon Swamp is a recognised regionally significant wetland with the following values:

- **Habitat for nationally or internationally rare or threatened species or communities.** Habitat for threatened Australasian Bittern (*Botaurus poiciloptilus*) and the Banded Dotterel (*Charadrius bicinctus bicinctus*)
- **Critical habitat for the life cycles of indigenous fauna which are dependent on wetlands.** The area is important as a refuge, feeding and breeding areas for a wide range of wetland birds. Birds that breed in the area include Mallard (*Anasplatyrhynchos*), shoveller, Black Swan (*Cygnus atratus*), Swamp Hen/Pukeko (*Porphyrio porphyrio melanotus*), Pied Stilt (*Himantopus himantopus*) and Black-backed Gull (*Larus dominicanus*). Shags (*Phalacrocoracidae*), Gulls (*Laridae*), Royal Spoonbill (*Platalea regia*), Terns, White-faced Heron (Ardea *novaehollandiae novaehollandiae*), Oystercatchers (*Haematopodidae*) and Paradise Shelduck (*Tadorna variegata*) also use the area. The Marsh Crake (*Porzana pusilla affinis*) has also been observed here.

- **Critical habitat for the life cycles of indigenous fauna which are dependent on wetlands.** The area is important as a refuge, feeding and breeding areas for a wide range of wetland birds. Birds that breed in the area include Mallard (*Anasplatyrhynchos*), shoveller, Black Swan (*Cygnus atratus*), Swamp Hen/Pukeko (*Porphyrio porphyrio melanotus*), Pied Stilt (*Himantopus himantopus*) and Black-backed Gull (*Larus dominicanus*). Shags (*Phalacrocoracidae*), Gulls (*Laridae*), Royal Spoonbill (*Platalea regia*), Terns, White-faced Heron (Ardea *novaehollandiae novaehollandiae*), Oystercatchers (*Haematopodidae*) and Paradise Shelduck (*Tadorna variegata*) also use the area. The Marsh Crake (*Porzana pusilla affinis*) has also been observed here.
- **High degree of wetland naturalness**
- **Scarce in Otago in terms of its ecological or physical character.** A Scarce wetland type: saltmarsh and Leptocarpus sp. marsh. Less than 15% of swamps remain in Otago.
- Highly valued by Kai Tahu for cultural and spiritual beliefs, values and uses, including mahika kai and waahi taoka.

## SHARED MANAGEMENT RESPONSIBILITIES

The Kaikorai catchment is traversed by three waters infrastructure owned by Dunedin City Council (DCC). DCC plays a significant role in the catchment, not only as an infrastructure provider, but also as a regulator as shown in the Table 1 below.

**Table 1: Local Authority Management Responsibilities**

| Activity | Management document | Responsibility of |
|---|---|---|
| New land use, subdivision or development | District Plan | DCC |
| Discharge to water or to land in circumstances where it may enter water | Water Plan<br>Waste Plan | ORC |
| Discharge to land | Waste Plan | ORC |
| Discharge to stormwater or wastewater drains | Trade Waste bylaw | DCC |
| Taking and use of water, damming, or diversion | Water Plan | ORC |
| Bed disturbance, or structure on the bed of a river | Water Plan | ORC |

## KAIKORAI WATER QUALITY

The Kaikorai Stream has a complicated water quality pattern. Dunedin City Council take water from the Taieri catchment for the Mt Grand Water Treatment Plant. Up to 560 litres per second is then discharged to MacLeod's Creek (a tributary of Fraser's Stream). Fraser's Stream is a major tributary of the Kaikorai Stream.

The upper Kaikorai Stream has extremely poor water quality with elevated nutrient and bacteria concentrations. There is a slight improvement in water quality downstream of the Fraser's Creek confluence, but relevant water quality guideline values are generally exceeded particularly for bacteria concentrations. The macroinvertebrate health in the Kaikorai Stream is extremely poor and this reflects the poor water quality.

The main point source discharges that influence water quality in the Kaikorai Stream are the multitude of stormwater outfalls that discharge along the length of the stream in wet weather. Urban stormwater contains a wide array of contaminants that, in sufficient concentration and quantity, can cause significant pollution of receiving waters by degrading water quality and altering stream habitat and ecology. Urban stormwater enters the watercourse as a point source, but the material carried in it can be derived from non-point sources, such as runoff from open land, or from spills.

In addition to stormwater outfalls DCC operates two constructed overflows in the catchment to avoid uncontrolled discharges from the wastewater network into homes, private properties or onto roads. These are shown in Figure 1.


**Figure 1: Locations of Dunedin City Council wastewater overflows**

Dunedin City Council has a programme of wastewater and stormwater pipe renewals in the catchment. Over time these improvements should lessen the pressures on the stream's health. DCC's programme includes:

- wastewater and stormwater pipe renewals, focused in the catchment area north of Bradford, is anticipated to reduce wastewater overflows and ultimately prevent their occurrence by 2032 (when the current consent expires).
- the likely closure of the Green Island landfill, between 2023-2028

- the proposed to construction of a new temporary wastewater overflow into the Kaikorai Stream until the Kaikorai Valley wastewater network is able to be connected to an upgraded Green Island wastewater treatment plant. An application for resource consent for the discharge is anticipated to be made to the ORC by November 2019.

## FLOOD HAZARDS IN THE KAIKORAI STREAM CATCHMENT

The Kaikorai Stream catchment is one of the three main Dunedin urban catchments alongside with the Water of Leith and its main tributary, Lindsay Creek (Figure 2).

The Kaikorai Stream contains the Dunedin suburbs of Halfway Bush, Brockville, Kaikorai, Kenmure, Concord, Green Island, Abbotsford, Waldronville, Fairfield, and parts of Balmacewen, Maori Hill, Roslyn and Mornington.

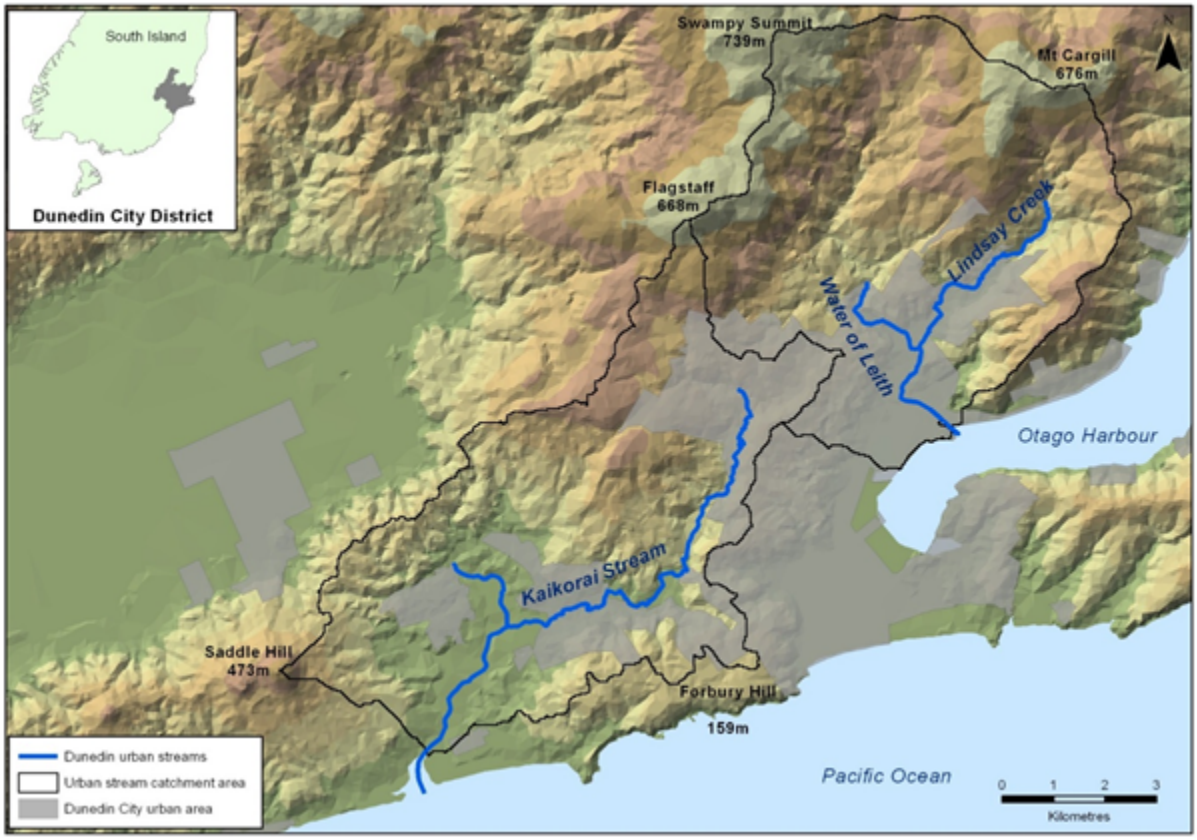


**Figure 2: Topography of the Kaikorai Stream, Water of Leith and Lindsay Creek catchments**

Most of the Kaikorai Stream catchment is drained by a defined channel network, and urban areas are serviced by a stormwater piped network with numerous small systems discharge at various points to Frasers Creek, Kaikorai Stream, Concord Creek, and Abbotts Creek.

The catchment is characterised by relatively steep slopes resulting in high flood flow velocities and rapid increase in water levels during heavy rainfall events. The mapped floodplain of the catchment is shown in Figure 3.


**Figure 3: Mapped floodplain area for Kaikorai Stream**

Flood related issues in the Kaikorai catchment can be caused by main-channel overflow (capacity limitation), local surface runoff, stormwater network overflow, channel blockages (landslips, debris) and blockage of the stream mouth. Figure 4 shows examples of channel blockages.

**Figure 4: Example of channel blockage in June 2015 flood event – Left: Tree and debris trapped under the bridge at Burnside. Right: Car and tree lodged in culvert beneath SH1 at Burnside.**

Under high flows, the stream can erode and scour its bed and banks and carry debris and detritus, exacerbating the flood damage. Buildings and infrastructures located close to the stream banks are particularly vulnerable to bank erosion and instability. Bridges and culverts are also vulnerable to debris and detritus carried during high flows resulting in structural damage and blockage of the channel.

Landslides located on steep banks along the Kaikorai Stream and its tributaries could be triggered during heavy rainfall events, partially or fully blocking the channel and causing substantial overflow.

A combination of low flows in the Kaikorai Stream and onshore wind and wave action periodically lead to the formation of a large sand bar across the mouth of the estuary. Although the sand bar often dissipates naturally, its presence during storm events may exacerbate flood hazard for low-lying land surrounding the Kaikorai Estuary.

The lower reaches of the Kaikorai floodplain (below Green Island) could be affected by coastal hazards such as storm surge and tsunami, particularly if the sea level was higher than at present. An increase in mean sea level may also have an impact on the depth and extent of inundation from the Kaikorai Stream in the lower reaches during flood events. The interaction of different processes (e.g. coastal storm surge coinciding with high river flows and surface runoff) can also increase the level of hazard for the Kaikorai Estuary (ORC 2014a, ORC 2014b).

Records of inundation and damage from main-channel overflow have been limited to isolated locations in 1923, 1968, 1991, 1994 and 2015 (Figure 5 and Figure 6).

**Figure 5: Kaikorai Stream flooding, Green Island, looking downstream towards the Main South Road Bridge, March 1994. Photo source: Otago Daily Times**

**Figure 6: Example of surface flooding in the Kaikorai catchment (Kaikorai Valley Road) in June 2015 flood event**

Localised channel works (such as concrete retaining walls, gabion baskets, weirs, etc.) have mitigated the flood and erosions hazards locally but, unlike the Water of Leith, the Kaikorai Stream has no comprehensive flood protection scheme. The flood and erosion protection structures along the stream are of mixed ownership (with the majority being privately owned) and of variable conditions.

The lower reaches of the Kaikorai floodplain (below Green Island) could be affected by coastal hazards such as storm surge and tsunami. This impact will be exacerbated by sea level rise.

An increase in mean sea level may also have an impact on the depth and extent of inundation from the Kaikorai Stream in the lower reaches during flood events. The interaction of different processes (e.g. coastal storm surge coinciding with high river flows and surface runoff) can also increase the level of hazard for the Kaikorai Estuary.

## COMPLIANCE AND INCIDENTS

Consent Compliance

Within the catchment there are 77 current resource consents for a variety of activities, 16 of which are discharges to air consents, 15 are discharges to water consents and 5 discharges to land consents. There are 7 water takes and 18 diversions of water consents. The remainder are a mixture of structures, dams and land use type consents. Current ORC consents within the Kaikorai catchment are shown in Figure 7.

In terms of compliance with consent conditions, there is a general trend of very good compliance with the exception of air quality discharges. Odour remains the main source of incidents and observed non-compliance with consent conditions. The odour sources are from rendering, pet food manufacture and waste management.

Enforcement of odour conditions on resource consents has occurred with 2 infringements and an Abatement Notice being issued against a company over the last 5 years.

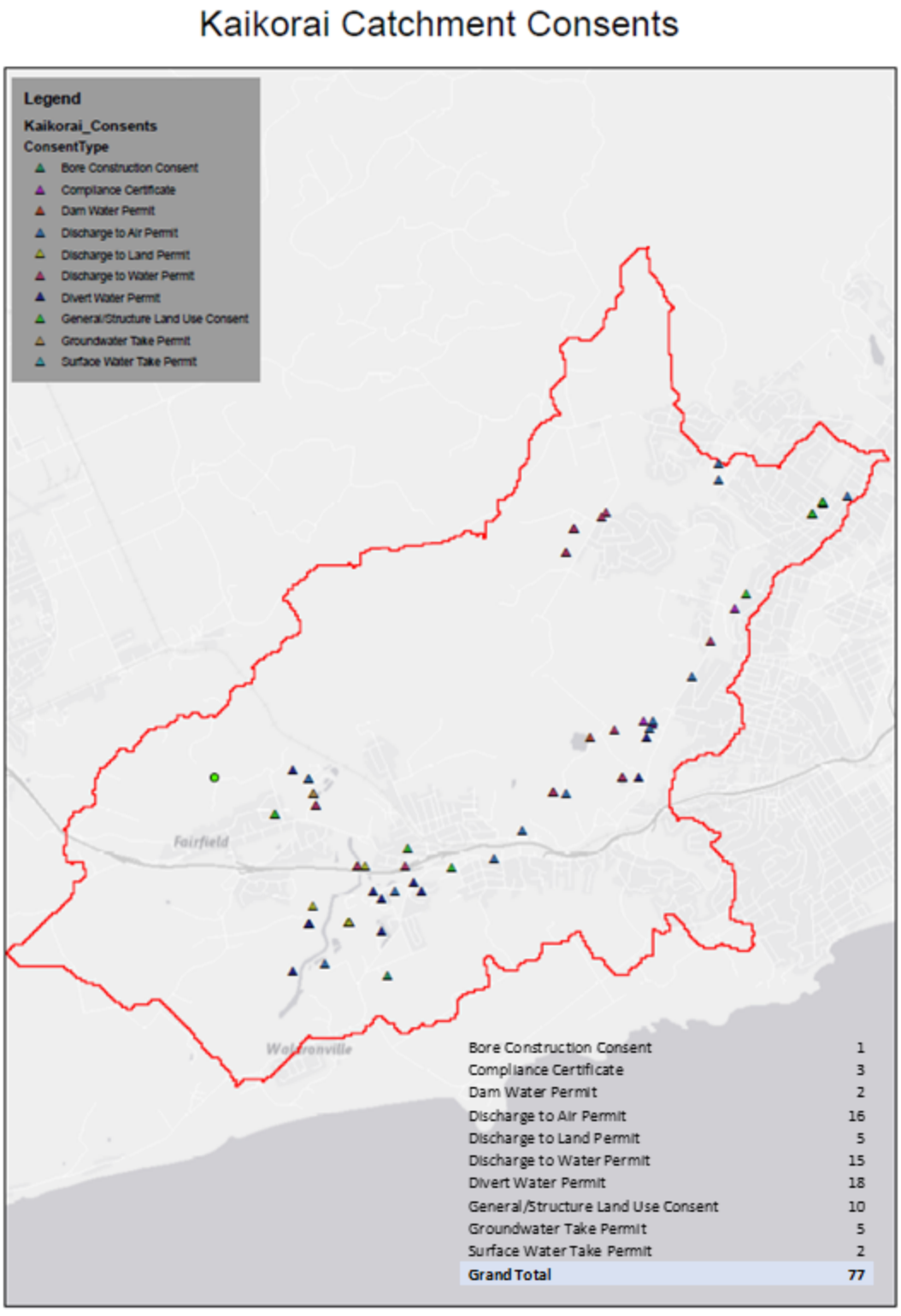


**Figure 7: Kaikorai Catchment ORC Consents**

Incident Investigations

Since July 2016 there have been 147 complaints about various alleged activities in the Kaikorai catchment. There have been 84 incidents about air discharges (mainly odour) and 45 incidents about water pollution. The remainder relate to earthworks, flooding and dye testing. The location and type of incidents that ORC has responded to in the Kaikorai catchment since 2016 are mapped in Figure 8.

Water pollution incidents are generally trending upwards in the catchment and the majority of these have been for paint entering the Kaikorai Stream. Investigating paint discharges from the stormwater system entering the Kaikorai Stream is highly problematic: often the complaint is reported well after the event. Staff can observe discoloration and may find the stormwater source, but because the DCC stormwater network is extensive, finding the actual location of the discharge is difficult. ORC staff have been working with DCC staff to get a better understanding of the network and developing a working relationship when it comes to investigating these types of complaints.

Enforcement Actions

Since 1 July 2014, Council has taken enforcement action on six occasions against companies and individuals. Table 2 is a breakdown of the enforcement actions taken by Council.

**Table 2: Enforcement action taken in the Kaikorai Catchment since 1 July 2014**

| Date | Action | Offence |
|---|---|---|
| March 2017 | Prosecution | Discharge of industrial waste into the Kaikorai Stream. |
| February 2016 | Infringement | Dumping and discharge of solid animal waste into the Kaikorai Stream. |
| August 2018 | Infringement | Discharge of sediment into the Kaikorai Stream from a construction business |
| February 2019 | Infringement (2) | Discharge of odour from rendering plant. Two infringements for separate offences. |
| February 2019 | Abatement Notice | Cease the discharge of offensive and objectionable odour beyond the property boundary from a rendering plant. |

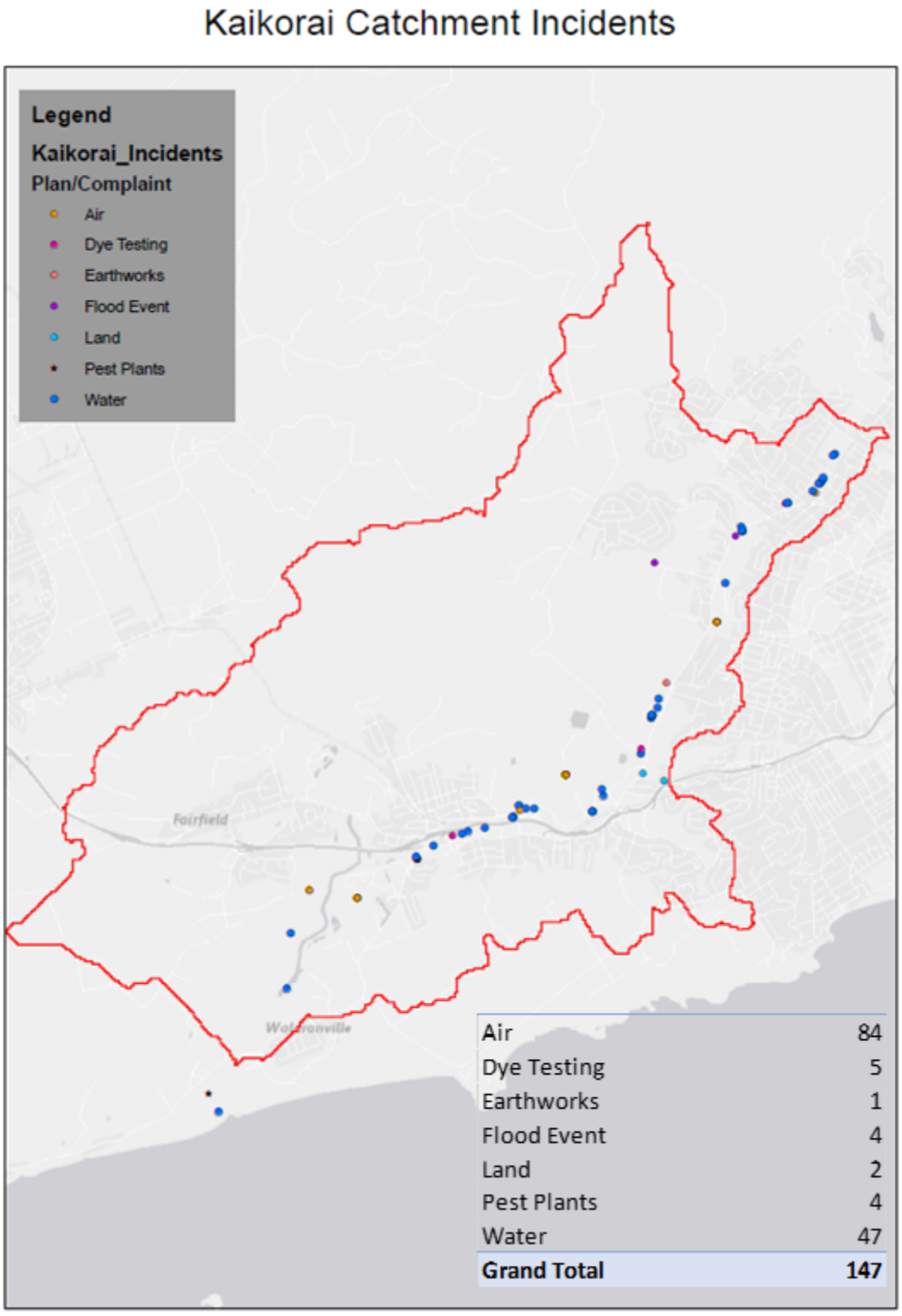


**Figure 8: Kaikorai Catchment Incidents**