



Pukepuke Lagoon Vegetation Removal Request for Department of Conservation



Manawatū District Council

4 April 2025

Executive summary

- The current build-up of vegetation within the inlet, outlet and perimeter drain is significantly impacting hydraulic capacity;
- The removal of vegetation will reduce flooding risk and will be beneficial to the wider lagoon;
- Council seek permission to mechanically remove vegetation within the inlet, outlet and perimeter drain to reinstate the hydraulic capacity;
- Mechanical removal of vegetation is limited to the concession area;
- The concession approves vegetation removal between 1 January to 31 March. Therefore Council seek an exemption to allow the proposed work to occur in April 2025;
- The Council requires the Department of Conservation to use their discretion to waive the 28 day notice requirement to allow work to proceed in April. An ecological assessment of the concession area will be completed prior to any vegetation removal;
- Controls have been specified to address concerns expressed during the site walk over and conditions within the concession document;
- An application to fly a drone over Pukepuke Lagoon will be submitted;
- The Council urges the Department of Conservation to lift the current suspension, allowing the work to proceed under the existing concession rather than requiring separate approval.

Introduction

Under the Department of Conservation (DoC) concession (WA219), Manawātū District Council (Council) is authorised to remove vegetation within the easement area using mechanical and chemical (spray) methods subject to specific conditions. This authorisation is limited to the concession area and does not extend across the extent of the lagoon.

Over the last 18 months Council and DoC have been working to lift the current suspension so vegetative control can recommence within the identified easement area to reinstate the hydraulic capacity of the inlet, outlet and perimeter drains.

While further engagement is necessary, the Council urges DoC to lift the suspension, recognizing the demonstrated commitment to collaboration and the critical need to maintain hydraulic capacity for both the drainage scheme and the overall health of Pukepuke Lagoon.

Despite the current suspension of the concession, Council formally requests written approval to mechanically remove vegetation within the concession area to reinstate the hydraulic capacity of the Inlet, outlet and perimeter drains.

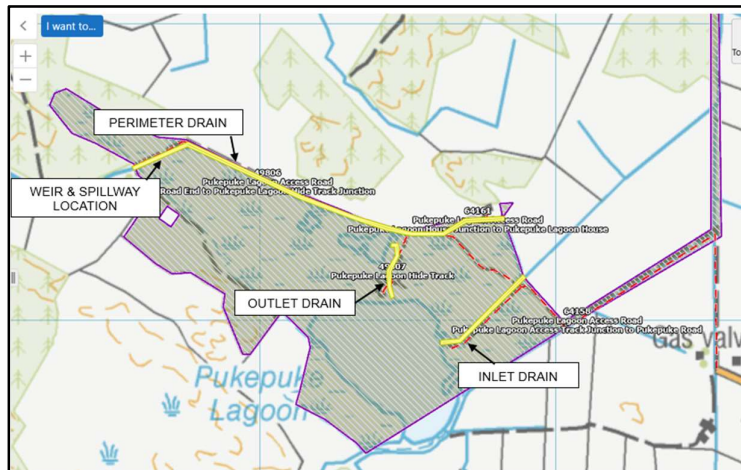


Figure 1: Pukepuke Lagoon and area in which the concession relates (yellow lines).

The concession authorises the use of mechanical and spray controls to occur between 1 January to 31 March within the concession area only. During a workshop on 25 March 2025 the DoC indicated that they were open for the work to occur in April as a one off exception. Council encourage DoC to exercise their discretion to enable the hydraulic connection between Pukepuke Lagoon and Oroua Drainage scheme to be reinstated. Not only will this reduce flooding risk of surrounding land but it will be beneficial to Pukepuke Lagoon as it will increase the volume of water that can get into the lagoon.

Background

Part of the Oroua Downs drainage scheme drains through Pukepuke Lagoon. To retain capacity Council has a concession with DoC that allows a six metre wide inlet and outlet channel to be maintained free of vegetation. The total area covered by the concession is approximately 2.4ha. This represents approximately 3.4% of the total wetland area (70.4ha).

If the vegetation is not removed from the easement area, a large proportion of the water within the drainage network will bypass around the lagoon via the emergency bypass channel. This will limit the lagoons hydraulic connection to the wider area and is likely to result in flooding of surrounding land.

During a workshop and subsequent site visit with representatives from DoC, Rangatāne o Manawatū, Ngāti Apa and Council on 25 March 2025, there was general agreement that the inlet, outlet drains and to a lesser extent the perimeter drain needed to be cleared. While there was agreement that intervention was required, the methods of removal needed to control the following matters:

- Removed vegetation re-entering the drainage channels
- Damaging pest control stations
- Controlling pest plants within the easement area
- Fish passage condition
- Monitoring for invasive aquatic species ie carp, Hornwort

- Eel assessment, due to treaty settlements, Ngāti Apa and Rangitāne o Manawātū are only authorised to provide comment under MPI.
- Bird assessments – specifically nesting birds – While Fish and Game conduct an annual survey this survey only looks at black swan numbers and shovel ducks. It does not include dabchicks or other bird species of potential nationally or regional importance.

Site Visit 25 March 2025

Pukepuke Lagoon and the upgradient Oroua drainage scheme is reliant on water being able to enter Pukepuke Lagoon via the inlet drain. As there has been no mechanical clearance within any of the drains going in and out of Pukepuke Lagoon for a prolonged period of time, the capacity, is currently significantly limited. These restrictions currently mean that there is a high risk of flooding and blockages effectively starves the lagoon of water. Therefore in order to reinstate the hydraulic connection and drainage capacity, vegetation removal is deemed urgent as the drain is currently completely blocked in places.



Figure 2:Vegetation restricting drain hydraulic capacity – 25 March 2025

Currently the Lagoon and associated drains are predominantly dry due to the prolonged dry period. As a result there are only pockets of water along the inlet, outlet and perimeter drain. The proportion of the Lagoon that contains water has significantly reduced.

The current fish passage is dry and therefore is acting as a fish barrier rather than a fish passage. Regardless of this barrier, the extent of aquatic movement is expected to be largely limited by the current dry nature of the drains.

It appears that the fish passage was put in to create a weir in an attempt to retain water in the lagoon. The pros and cons should be reviewed to determine the fish passages net value.

Several rocks at the top of the passage have been washed part way down. Therefore it is recommended when there is a digger on site some of these rocks should be replaced at the top of the passage.



Figure 3: Current dry conditions have limited fish passage and extent of Pukepuke Lagoon

Baseline Assessment

Council has initiated work to get a baseline ecological assessment completed to help identify what vegetation is present within the concession area and determine if there is any evidence of invasive weeds, aquatic pests or nesting birds. This assessment is limited to the concession area only.

In the event that this baseline assessment identifies invasive weeds, Council will notify DoC to seek approval to utilise an approved spray prior to mechanical removal to minimise the risk of spreading undesirable vegetation. Council acknowledge the preference to limit the vegetation removal to mechanical means and therefore spray will only be utilised if invasive weeds are identified that can't be controlled through mechanical means alone.

The baseline ecological assessment is expected to commence on 7 April 2025 subject to weather conditions.

Spraying

The use of sprays will only be used if the baseline assessment confirms that mechanical vegetation removal without spraying will increase the risk of invasive pest plants being spread. In the event that invasive pest plants are identified, selective spraying may be required to minimise the risk of spreading any undesirable seeds.

Any associated spraying will be limited to the easement area and areas identified by the baseline ecological assessment requiring additional controls to minimise further distribution of identified invasive weeds.

In the event that spraying is required only sprays approved to be used around waterways will be utilised.

In the event that spraying is required a subsequent request will be submitted as the following information will need to be clarified:

- Weed that requires additional control
- Spray that will be used
- Methods of application
- Any further mitigation

Mechanical vegetation Removal

Mechanically removing vegetation is limited to the easement area and is controlled by Schedule 3 (e-k). The specified time to remove vegetation through mechanical means is 1 January to 31 March. However, as discussed above, DoC has indicated that they are open to extending this period to include April to provide sufficient time to remove the required vegetation this season. Confirmation of this one off extension will be required in writing prior to any vegetation control commencing.

While the concession specifies that mechanical clearance should only occur once every five years the concession allows for the granter to provide discretion to increase this frequency based on Raupo growth, build-up of sediment within the drain and lagoon, extent of channel restriction and effectiveness of annual chemical controls. The use of chemicals as a blanket control method has been discouraged and therefore is not currently a control method utilised. Consequently it is likely that the frequency of mechanical vegetation removal will need to be increased. Discretion is not required in this instance, as mechanical vegetation clearance has not occurred in the last five years. It is likely that Council will need the granter to exercise their discretion in the future to enable the mechanical clearance to occur on a more frequent basis. This need for vegetation clearance will be established as part of the annual reporting going forward.

Subject to obtaining written permission to undertake mechanical vegetation removal in April, Council will provide at least five days notification of when vegetation removal is scheduled. Excluding the April 2025 mechanical vegetation removal Council will provide at least 28 days' notice to meet the requirements of schedule 3 (f).

The mechanical vegetation removal will be subject to the following controls which are based on conditions within the concession and concerns expressed during the combined site inspection:

- A weed bucket will be used to remove the vegetation;
- Pre walk over must be completed to identify pest control sites. These sites shall be clearly marked if required to avoid any unintentional damage or loss;
- The vegetation removal will be subject to the areas covered by the easement;
- No vegetation will be deposited on the tracks;
- Subject to the Department of Conservation approval, hollows and ruts in the access track can be filled with sediment to improve access;
- The width of the channel shall not be increased beyond six metres as measured at 6.32m (ASL);
- The channel shall not be deepened by removing natural bed material. This allows accumulated material to be removed to reinstate the channel capacity;
- All Machinery and hydraulic equipment will be checked prior to commencing work;
- Any refuelling of machinery will not occur on the Department of Conservation land;
- Any vegetation removed will be placed so it can't re-enter the waterway (Specify setback);

- Rocks on the fish passage shall be redistributed to place some of the dislodged rocks at the top of the fish passage.

Reinspection

Council will invite the DoC to join them in a post vegetation inspection that shall occur within three weeks of the work being completed.

Drone footage

In conjunction with the ecological assessment Council will apply for a permit and fly a drone over Pukepuke Lagoon. While the drone will be flown over the full extent of the lagoon there will be a focus on the easement areas as this is the area that relates to the concession document. The drone will be flown prior to any vegetation clearance and again after the vegetation clearance has been completed.

Conclusion

Currently the build-up of vegetation, specifically within the inlet and outlet drains significantly reduces the drains capacity to effectively convey water. This restriction not only has an adverse impact on flood risk but limits how much water can enter the Lagoon itself. As an aquatic environment it is considered critical that the hydraulic connection is maintained.

To address the capacity issues, Council seek approval to remove vegetation from the inlet, outlet in perimeter drains by mechanical means. This work is to occur in April 2025 and therefore will need specific allowance to undertake the work outside the specified 1 January to 31 March concession window.

Ongoing assessments under the concession will need to occur to help determine how frequently the mechanical clearance needs to be. It is considered that the annual reporting will be sufficient to help determine this frequency and justify if the clearance regime needs to be more than once every five years.

Council urge DoC to consider lifting the suspension on the basis that Council are committed to working in a collaborative partnership and providing the information within the concession and the fact that the ongoing vegetation control is important to retain the drainage capacity as well as the health of the lagoon.

The mechanical vegetation control and spraying if required is limited to the concession area. As this is a comparatively small area in comparison the entire lagoon (approximately 3.4%) an overarching management plan is recommended.

In the event that spraying is required a subsequent request will be submitted as the following information will need to be clarified:

- Weed that requires additional control
- Spray that will be used
- Methods of application

- Any further mitigation measures

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Manawatu District Council

4 April 2025