APPLICATION NUMBER: **APP.045654.01.01**

Application Type: **Non Notified New**

Applicant Name: **Mangawhai Hills Limited**

Note: *In this decision document, "application", "activity" and "consent" refer to all activities that are part of the consent application.*

REASONS FOR THE DECISION

This consent is granted pursuant to section 104B of the Resource Management Act 1991 (the Act). In reaching this decision, the council has considered the matters outlined in Part 2 and section 104 of the Act. It has been determined that:

(1) The adverse effects of the proposed activity on the environment will be no more than minor.

(2) The proposed activity is consistent with the relevant statutory planning documents and regulations.

(3) The granting of this resource consent achieves the purposes of the Act.

Summary of Activity

The application is for a new consent for a discharge to land and air from a communal wastewater treatment and disposal system servicing 600 new lots and retail commercial activities (2x cafes) on properties Lot 1 and 2 DP 578282, Lot 2 DP 172698, Allot 241 and 254 PSH of Mangawhai (160 and 196 Tara Road, and 106 Moir Road, Mangawhai) at or about location co-ordinates 2650098E 6564275N. The new wastewater treatment plant and disposal field will be located on Lot 1 DP 578282.

The proposed site is approximately 169.2 hectares (ha) in area, which is being developed into a large 600 lot subdivision. The applicant anticipates a mixed use of permanent residents and holiday homes. The land use change is being sought via a private Plan Change (Kaipara District Council Plan Change 84) whereby the applicant is seeking to rezone the land from rural to rural-residential. The current Kaipara District Council Wastewater Treatment Plant (WWTP) for Mangawhai does not have capacity to connect new users, hence, the applicant is proposing a communal WWTP and disposal field to service the new lots. Each new lot (dwelling) will install a 4,700L septic tank that has an effluent pump installed (STEP system) with a boundary kit connecting to the proposed communal effluent sewer reticulation system and WWTP.

Treated wastewater will be discharged to land via pressure compensating drip irrigation lines, firmly affixed to the ground, with approximately 1-meter spacings, over a total area no less than 9ha. The disposal field will be planted in native species.
The proposed flow rates, and dosing rate to land have been detailed in the table below. These dosing rates are based on site soil investigations, have been adjusted for slope, and account for three scenarios, being: normal flow rate; peak (holiday period) flow rate; and WWTP design flow rate.

Table 1 Proposed flow rates for MHL and application rates to land.

Description	Flow Rate (m^3/day)	Disposal Field Management Units (MU) Dose Rates	
		MU 1 & 2 (mm/day)	MU 3 (mm/day)
Normal Flow	217.5	3.2	2.0
Peak Flow (factor of 2)	435	6.4	4.0
Design Flow of proposed WWTP	324	4.8	3.1

Table 1 Note: 435m^3/day and peak 90 percentile flow of 522m3/day over a 7-day rolling period is provided for.

For the purposes of consenting limits, the applicant has agreed that the volume of wastewater discharged to land shall not exceed an average of 218 cubic metres per day, as calculated for each 30-day period, or a maximum of 435 cubic metres per day.

Regional Plan Rule(s) Affected

The discharges to land and to air are deemed to be discretionary activities in accordance with Rule C.6.1.5 of the Proposed Regional Plan for Northland (PRP).

Actual and Potential Effects (Section 104(1)(a) of the Act)

The adverse effects on the environment of this activity have been determined to be no more than minor for the following reasons:

- Site investigations encountered Category 3 soils (clay loam, moderate to slow draining). Based on soil investigations at the site the soils had an average K_{sat} of 53mm/hr with a range of 23 – 77 mm/hr, and a K_{-40} average of 3.1mm/hr with a range of 1.4 – 4.1mm/hr. The applicant has applied the proposed dosing rates discussed in the paragraphs below using 30% of the K_{-40} rate and taking the lowest (range) rate of 1.4mm/hr to accommodate for a safe design maximum application depth of 10.1mm/day.
- Dosing reductions to account for slope of the land, and site soil investigations has been applied across different management units (MU) within the proposed disposal field. This is outlined in Plan 5535/2 and in the agreed condition 8. No treated wastewater will be discharged to land with a slope greater than 20% (1:5).
- For normal flow rate scenario, the applicant has a design occupancy of 2.5 persons per dwelling with a flow rate of 362.50L/day/dwelling (based on 145L/person/day). The applicant proposes that the normal flow rate from the proposed 600 dwellings will be **217.5m^3/day** discharged via 9ha of PCDI lines at a dosing rate of 3.2mm/day (MU1 & 2) and 2.0mm/day (MU3). This is considered acceptable and will ensure that the loading rate during peak flows and wet weather flow events do not result in the maximum application depth (10.1mm/day) being exceeded over the disposal field.
- A peaking factor of 2x the average occupied population per dwelling has been applied to accommodate high flows during the Christmas, New Year, and the Easter tourism periods (for up to 25 days per year). The applicant has applied for a maximum flow rate of **435 m^3/day** of treated wastewater disposed to land during this peak period. This has been enabled through conditions of consent. The peak flow rate was informed by a report commissioned by the Thames Coromandel District Council for annual trends in wastewater flow rates. Holiday destinations in the Thames Coromandel District observed a peak factor of up to 2.6 x the population per dwelling for daily wastewater flow during the New Year period. This study was used to better understand and inform the likely anticipated peaking factors during holiday periods at the subject site, being within a coastal township typically subject to a higher populus during summer / holiday period. The peaking factor of

2 is considered acceptable and will ensure that the loading rate over the disposal field during peak events will not exceed a maximum dosing rate of 6.4mm/day (MU1 & 2) and 4.0mm/day (MU3). This falls within the maximum application depth of 10.1mm/day for the soil at the site and is considered acceptable.

- The wastewater from each proposed dwelling will receive primary treatment prior to receiving secondary and tertiary treatment within the communal WWTP to further reduce pollutants such as TN, N-N, TP and *E.coli* before being discharged to land.
- There are a number of wetlands and watercourses that run through the property. The applicant has identified a primary and reserve disposal area which is located at least 15 meters from any surface water. The location of the disposal area has been conditioned via a plan provided by the applicant. The main watercourse runs northwest to southeast through the property before discharging to the coast approximately 1.5km from the subject site.
- The sub-surface discharge, and the reduced dosing rates across the disposal area will minimise any risk of surface run-off of contaminants from the disposal area. The disposal area will also be planted with native species which will further minimise the risk of overloading or runoff from the disposal area via evapotranspiration. In addition, surface water cut off drains are proposed as a condition of consent and will be installed directly above the disposal area to divert storm water away from the disposal area.
- Groundwater was not encountered during site investigations and the winter groundwater level was estimated to be 1.7m below ground level. No known groundwater bores are within 50m of the disposal field.
- The coastal marine area is more than 1.5km from the disposal area. All the surrounding dwellings in this coastal community are either connected to the public wastewater reticulation or have existing on-site sewage systems of vary ages and effectiveness.
- The applicant has calculated that an average of 226 kg N/ha/yr loading rate (1,985 kg N/yr) will be received by the disposal field. This is based on the normal expected flow rate of 217.5m3/day of domestic type wastewater. The applicant expects a further 50% of denitrification through the soil medium via soil microbial activity based on previous study (Beggs et al. (2011)). Nitrogen loading is expected to be further reduced through the uptake of proposed planting on the disposal field (up to an additional 13 kg N/ha/year). The planting of the disposal field has been included as a condition of consent.
- Given the above, the nitrogen leaching rate from the disposal field based on the proposed 600 lot development of the site is 5.9kg N/ha/yr (water reduction fixtures applied) and 7.3kg N/ha/yr (standard fixtures applied). This sits within the permitted baseline for rural production land use (beef cattle) under the National Environmental Standards for Freshwater (2020) of <8 kg N/ha/yr. This is considered acceptable, and the actual and potential adverse effects from nitrogen leaching from the disposal field will be less than minor.
- A flowmeter and data logger will be installed on the outlet pipe from the treatment system to record volume of effluent discharged to the disposal area. This is proposed as a condition of consent, and the flow and MU (or zone) records will be forwarded to the council monitoring officer in a quarterly report.
- Given the high level of treatment provided by the proposed treatment system and the renovation of the wastewater within the underlying unsaturated soil layers, there is unlikely to be any measurable adverse effect on surface, or ground water quality as a result of this discharge.
- The risk of odour from the high volume of wastewater discharge should be minimal if the wastewater system is well maintained.
- Regular maintenance of the system is necessary for the ongoing effective treatment and discharge of wastewater. This consent requires that the system is maintained by a suitably qualified and experienced person, and that the record of maintenance undertaken is kept and supplied to the council on request.

Cultural Effects

The application has been circulated to tāngata whenua who have registered with council as having an interest in resource consent applications within the area of the activity. No response has been received by council from tāngata whenua.

The applicant however was already engaged with representatives of Te Uri o Hau during the pre-consenting and consenting process. Te Uri o Hau has undertaken site visits and application meetings with the council processing planner and applicant during this time. Their cultural report and addendum has been attached to and forms part of the consent application. These documents outline their support for the proposed location of the second disposal field to the south of the site, for which their nursery facility will provide a majority of the native species for planting. Te Uri o Hau did not support the discharge of treated wastewater to existing native bush and identified the pasture block as a preferable option for discharge. The applicant amended their site plans to accommodate Te Uri o Hau's request. It is considered that the cultural effects have been considered during the processing of this resource consent application and are acceptable.

Relevant Statutory Provisions (Section 104(1)(b) of the Act)

The council has determined that the granting of this resource consent is consistent with the objectives and policies contained in Sections D.1, D.2, D.3, D.4 and F of the PRP.

The objectives and policies of the PRP now have considerable weight. Council therefore considers that it does not need to undertake an additional assessment of the respective objectives and policies in the Regional Water and Soil Plan for Northland.

The proposed activity contravenes section 15 of the Act, and therefore the council has also had regard to the matters outlined in section 105 of the Act. The council is satisfied that the activity will not give rise to the effects outlined in section 107 of the Act after reasonable mixing.

Te Uri o Hau has an iwi/hapū environmental management plan relevant to the location of this activity. A wastewater discharge to land and air (odour) which does not adversely affect ground water or surface water quality is not contrary to the objectives and policies contained within this plan and there are no identified customary activities which would be put at risk by the implementation of the proposal (objectives and policies set out under section 29 and 30 of the IMP). The objectives and policies contained within the iwi/hapū environmental management plans have been considered along with the objectives and policies of the relevant planning documents.

The activity is not within, or adjacent to, any statutory acknowledgement area and the granting of this consent will have no adverse effect on a statutory acknowledgement area.

Duration of the Consent

The applicant has requested a duration of consent of 25 years. A period of 25 years has been determined to be appropriate in the circumstances of the proposal.

In determining duration, regard has also been had to Policy D.2.14 of the PRP.

Name and Signature of Authorised Person:

Stuart Savill
Consents Manager

Date: **16 May 2024**

ADMINISTRATION MATTERS APP045654.01/02.01

Consents Processing Officer (preparation of conditions and decision report):

Signed:  Date: 14.05.2024

Eloise Keefer
Planning Consultant

AUTHORISATION IRIS ID NUMBER	ACTIVITY TYPE	ACTIVITY SUB-TYPE	ACTIVITY CLASS	MONITORING OFFICER
AUT.045654.01.01	Land Discharge	Sewage	Discretionary	EMO General
AUT.045654.02.01	Air Discharge	Sewage	Discretionary	EMO General

REMINDER ACTIONS REQUIRED TO BE COMPLETED PRIOR TO REPORT GOING TO ADMINISTRATOR:

- **PLANS FOR DECISION CLEARLY IDENTIFIED AND/OR ELECTRONIC COPIES ON IRIS**
- **IRIS LOCATION RECORD CREATED FOR EACH ACTIVITY IF REQUIRED**
- **MONITORING PROGRAMME COMPLETED (not required for FDE)**
- **SECTION 37 EXTENSIONS ON IRIS THAT PROVIDES AT LEAST THREE WORKING DAYS TO DECISION DUE DATE**

DECISION ENCLOSURE CHECKLIST – ***(please check the box that is relevant to this consent)***

☑ **Decision to be Sent to Iwi Group(s)** – ***Te Uri o Hau (Shereen Worthington) shereenw@xtra.co.nz and (Rebecca Fletcher) rfletcher@uriohau.co.nz***

☐ **Decision to be sent to MPI – UAE for Marine Farms only**

☐ **Transfer of Functions Decision – copy of consent and report to TLA**

☐ **Coastal Sign**
- **Number Required ..... – *Officer to seek approval for this disbursement from the applicant***