

30th April 2020

Ravensdown Limited
C/- Helen Hurring
Private Bag 6012
Napier 4142

Reference: **AUTH-114016-02**

Attention: Helen Hurring, Helen.hurring@ravensdown.co.nz

Dear Helen

COMPLIANCE MONITORING REPORT

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| Consent number: | AUTH-114016-02 (Please note this number replaces your historic number) |
| Historic number: | DP040143Wa |

Hawke's Bay Regional Council has completed the Compliance Monitoring Report for above Resource Consent.

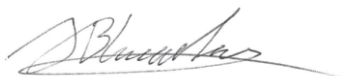
THIS REPORT APPLIES TO THE PERIOD: 1st July 2018 to 30th June 2019

YOUR CURRENT COMPLIANCE GRADE IS: Low Risk Non-Compliance

Under Section 36 of the Resource Management Act 1991 you will be charged for the actual and reasonable costs involved in monitoring the resource consent. The account will be sent to you in due course.

Please contact me should you have any questions.

Yours sincerely



Jack Blunden
Environmental Officer Compliance
Regulation Group
Phone (06) 833 8030
Email: jack.blunden@hbrc.govt.nz

HAWKES BAY REGIONAL COUNCIL: STATEMENT OF COMPLIANCE AND OVERALL GRADE

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| CONSENT HOLDER | Ravensdown Limited | CONSENT NUMBER | AUTH-114016-02 |
| CLIENT ADDRESS | C/- Helen Hurring Private Bag 6012 Napier 4142 | SITE ADDRESS | 90 Waitangi Road, Awatoto, Napier, |
| JOB CODE | 456006 | CONSENT TYPE | Resource Consent |

ACTIVITY DESCRIPTION

to discharge contaminants into water for the purpose of disposing of stormwater, cooling water from air compressors and a hydraulic drive, water from drinking fountains and a truck wash, water from cooling towers and high pressure boilers, and rinse water from a boiler water treatment plant into the Tutaekuri River (Waitangi Estuary)

OVERALL COMMENT

This compliance report covers the period 01/07/2018 to 30/06/2019.

A site visit was made on the 24th of September 2018.

This report identifies some low risk non-compliance with the discharge standards and monitoring requirements of this consent.

Condition 4 is graded low-risk non-compliance for the exceedance of pH total phosphorus and soluble reactive phosphorus on two occasions during the monitoring period.

Condition 6 is graded low-risk non-compliance for the DO, temperature and salinity not being analysed in the February 2019 first flush stormwater samples. Additionally, the sediment sampling required by condition 6b did not include sulphur analysis which is a major by-product from the Ravensdown operations. Please ensure that all required determinants are analysed for during sampling and monitoring.

Full compliance with all other conditions of this consent has been achieved.

Consent Conditions and Compliance Assessment

| NO: | CONSENT CONDITION: | COMPLIANCE GRADE: | COMMENTS: |
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| 1. | All works and structures relating to this resource consent shall be designed and constructed to conform to the best engineering practices and at all times maintained to a safe and serviceable standard. | Full Compliance | During the site visit it was observed that all structures were well maintained and conform to the best engineering practices. Weekly and monthly inspections are undertaken to identify problems and any required repairs are scheduled into a maintenance program. |
| 2. | The consent holder shall undertake all operations in accordance with any drawings, specifications, statements of intent and other information supplied as part of the application for this resource consent. If a conflict arises between any conditions of this consent and the application, the conditions of this consent will prevail. | Full Compliance | There have been no major changes to operations onsite during the compliance period. Compliance based on as-built plans, producer statement and visual observations on site. |
| 3. | For the purposes of this consent, the zone of reasonable mixing of the discharge, to which the Class AE (HB) receiving water quality standards does not apply, shall be the Ravensdown Drain and 90 m down the Awatoto Drain (GPS Co-ordinates N6175341, E2846875). | Not Assessed | This condition refers to the mixing zone and is informative. |
| 4. | The consent holder shall ensure that the discharge complies with the following standards at the outlet of the settling pond, as shown on Figure 3 submitted with the application and attached: a) pH to be within 6.5 – 8.5. b) Fluoride not to exceed 30 mg/litre. | Low Risk Non-Compliance | During the site visit all sample data processes and collection/analysis processes appeared to be operating as required. A full assessment of the data for this period shows some low-risk non-compliance with pH and phosphorus levels |

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| <p>c) Suspended Solids not to exceed 100 mg/litre.</p> <p>d) Rate of discharge not to exceed 265 litres /second.</p> <p>e) Total phosphorus:</p> <p>From the date of the commencement of this consent until 30 June 2012:</p> <p>☑ Over any 12 month period the concentration of total phosphorus shall not exceed 35 mg/litre for more than 95% of the time</p> <p>☑ Over any 12 month period the concentration of total phosphorus shall not exceed 40 mg/litre for more than 99% of the time.</p> <p>From the 1st of July 2012:</p> <p>☑ Over any 12 month period the concentration of total phosphorus shall not exceed 17 mg/litre for more than 95% of the time</p> <p>☑ Over any 12 month period the concentration of total phosphorus shall not exceed 22 mg/litre for more than 99% of the time.</p> <p>f) Soluble Reactive Phosphorus:</p> <p>From the date of the commencement of this consent until 30 June 2012:</p> <p>☑ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 30 mg/litre for more than 95% of the time</p> <p>☑ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 35 mg/litre for more than 99% of the time.</p> <p>From the 1st of July 2012:</p> <p>☑ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 15 mg/litre for more than 95% of the time</p> <p>☑ Over any 12 month period the concentration of soluble reactive phosphorus shall not exceed 20 mg/litre for more than 99% of the time.</p> | | <p>a) There was one minor exceedance of pH on the 07/05/2019 where discharge pH was recorded as 5.99, outside of the limit of between 6.5-8.5 pH units. This was thought to be as a result of a contaminated bottle.</p> <p>b) There were no exceedances of fluoride during the period</p> <p>c) There were no exceedances of total suspended solids during the period</p> <p>d) There were no exceedances of the total rate of discharge during the period</p> <p>e) There was one exceedance of the total phosphorus limit on the 07/08/2018 of 23.3 mg/L as a result of the dilution system not operating as required. As this is in excess of the consent limit for the 99% of the time this has been graded low-risk non-compliance.</p> <p>f) There was one exceedance of the SRP limit on the 7/08/2018 of 19.2 mg/L as a result of the dilution system not operating as required. As this is in excess of the consent limit for the 99% of the time this has been graded low-risk non-compliance.</p> <p>Additionally the auto sampler is being replaced with an inbuilt pH probe to measure the pH of the actual discharge and to reduce error caused by contamination.</p> |
| <p>5. The consent holder shall carry out the following monitoring programme at the consent holders expense:</p> <p>a) A sampling station shall be maintained at the outlet of the settlement pond and be accessible to the Council officers, or its agents at all times.</p> <p>b) A representative, flow-proportional, composite sample (sampled continuously over a period of 24 hours) shall be collected from the sampling station, referred to in Condition 5a, at least once per week and tested for the following parameters:</p> <p>i) pH</p> <p>ii) total phosphorus</p> <p>iii) soluble reactive phosphorus</p> | <p>Full Compliance</p> | <p>a) A sampling station is maintained at the outfall from the stormwater detention pond</p> <p>b) Weekly 24 hour flow proportional sampling is undertaken by the consent holder. All samples are analysed for pH, TP, SRP, F and TSS. The results are recorded and reported monthly to Council along with monthly discharge volumes.</p> <p>c) Bi-annual heavy metal sampling was undertaken on the 4/12/2018 and 4/6/2019 by the consent holder. The samples were analysed for Cu, Zn, Cd, Cr, Al and S. The values are reported</p> |

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| | <p>iv) fluoride</p> <p>v) suspended solids</p> <p>Results shall be recorded on a mass per unit volume of discharge basis and the volume of discharge shall also be recorded. The records shall be forwarded to the Council at monthly intervals, along with an assessment of compliance against condition 4.</p> <p>c) A representative, flow-proportional, composite sample (sampled continuously over a period of one week) shall be collected from the sampling station, referred to in Condition 5a, at six monthly intervals and tested for the following parameters:</p> <p>i) total copper</p> <p>ii) total zinc</p> <p>iii) total cadmium</p> <p>iv) total chrome</p> <p>v) total aluminium</p> <p>vi) total sulphur</p> <p>Results shall be taken on a mass per unit volume of discharge basis and the volume of discharge taken shall also be recorded. The records shall be forwarded to the Council at six monthly intervals.</p> <p>d) All sampling and surveys shall be carried out by a person suitably qualified and experienced in this field and authorised by the Council (Manager: Regulation).</p> <p>e) All analyses in accordance with conditions of this consent shall be carried out by an independently IANZ accredited laboratory and authorised by the Council (Manager: Regulation).</p> <p>f) The consent holder shall calibrate and operate any meters required for monitoring in accordance with the manufacturer's specifications, or to the reasonable satisfaction of the Chief Executive of the Hawke's Bay Regional Council.</p> | | <p>with discharge volumes so total mass can be calculated. The results are provided monthly to Council.</p> <p>d) All sampling is undertaken by suitably qualified and experienced staff or contractors.</p> <p>e) All analyses is undertaken by IANZ accredited laboratories.</p> <p>f) An independent review of monitoring processes on site found that monitoring and sampling procedures were being carried out in accordance with best practice and equipment was well maintained and calibrated.</p> |
| <p>6.</p> | <p>Every fourth year starting from the commencement of this consent, the consent holder shall monitor the following components in the receiving environment at their expense:</p> <p>a) the structure of macrofaunal communities to determine both temporal and spatial changes in the community composition. Species diversity, richness, abundance and evenness shall be determined for the benthic macrofauna, and data should be subjected to appropriate multi-variate analyses in relations to chemical and physical measurements.</p> <p>b) sediment quality to determine sediment health, and potential accumulation of contaminants within the sediments.</p> <p>Sediments should be analysed for:</p> <ul style="list-style-type: none"> - total copper - total cadmium - total chromium - total zinc | <p>Low Risk Non-Compliance</p> | <p>The consent holder undertook the required 4 yearly monitoring of the receiving environment in accordance with the submitted and approved sampling plan required by condition 7. The monitoring and sampling was undertaken in March 2019</p> <p>a) Macrofaunal communities are being impacted by decreasing quality within the receiving environment. It is unclear whether this is due to the discharge or because of degradations in the wider environment.</p> <p>b) No sulphur analysis was undertaken on the retrieved sediment samples due to a mistake on the sample submission form. General declines in metal concentrations within sediments over time and away from the mixing zone. A similar declining pattern has been seen for phosphorus and fluoride with</p> |

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| <ul style="list-style-type: none"> - fluoride - total phosphorus - sulphur - sediment composition - nickel <p>As per table in consent document:</p> <p>c) Cancelled.</p> <p>d) chlorophyll a concentrations as an indicator of potential nutrient enrichment.</p> <p>e) presence/absence of fish species.</p> <p>f) periphyton biomass and taxonomy as an indicator of potential nutrient enrichment.</p> <p>g) undertake Whole Effluent Toxicity Testing to determine the effects of the combined discharge on organisms in the receiving environment on three test species at 100: 1 dilution.</p> <p>h) Every month¹, starting from the commencement date of this consent, the consent holder shall monitor, at their expense, at the locations indicated by a green star in Appendix 2, receiving water quality to determine whether contaminants of concern are present and in what concentrations.</p> <p>Receiving water should be analysed for:</p> <ul style="list-style-type: none"> - Temperature - Salinity - Dissolved oxygen - pH - Suspended Solids - Chlorophyll a - Ammoniacal Nitrogen - Nitrate Nitrogen - Nitrite Nitrogen - Nitrate + Nitrite Nitrogen - Total Nitrogen - SRP - TP - Sulphur - Fluoride | <p>distance from the discharge. Ammonium nitrate concentrations at AS3 and AS6 exceeded the 95% ANZECC trigger value indicating that most sites are highly degraded.</p> <p>c) Cancelled.</p> <p>d) Chlorophyll a concentrations were noted to be declining away from the mixing zone and unlikely to be impacted by the discharge.</p> <p>e) The only fish species observed during the monitoring were eel within the Ravensdown drain and immediately downstream of the discharge. More fish species were noted during previous years.</p> <p>f) Periphyton sampling was undertaken on the 26th of March 2019 which showed a slight decrease in biomass on previous years, this was not able to be attributed to the effects of the discharge.</p> <p>g) Whole effluent toxicity testing was undertaken using samples of the discharge as required. No toxicity was observed across three trophic level species. However the sediment sampling indicates that the metals concentrations in the receiving environment are likely to cause toxicity and the discharge may be adding to a compounding effect.</p> <p>h) Monthly monitoring of the surface water locations has been undertaken for the required period. All receiving water samples have been analysed for the required determinants. The sampling indicates elevated levels of Al, Cd, Cr, Cu, Zn, Ni, nitrate species, SRP and TP at most sites in excess of the ANZECC (2001) trigger levels. Further investigation into the source of these elevated levels should be undertaken and any action to reduce impacts from the Ravensdown operation on the receiving environment should be identified.</p> <p>i) First flush stormwater samples were collected on the 08/09/2018, 26/02/2019 and 13/06/2019 from the required locations. The samples collected in February and June 2019 were not analysed for dissolved oxygen, temperature or salinity and is considered a low-risk non-compliance. The sampling results indicate ongoing exceedance of the ANZECC (2001) trigger level values at most sites for Al, Cd, Cr, Cu, Zn, Ni, nitrate species, SRP and TP.</p> |
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| | <p>- Metals (Al, Cd, Cr, Cu, Zn and Ni)</p> <p>As per table in consent document:</p> <p>1For the avoidance of doubt it is acknowledged that monitoring can only occur when there is flow present in the Waitangi Drain. If there is no or very low flows in Waitangi Drain the consent holder must inform the Council (Manager Resource Use) that they have been unable to undertake the required sampling as soon as practicable, and within 7 days of trying to undertake the sampling. Evidence (eg. photos of flows in the drain at the time) should be provided to confirm this.</p> <p>i) Each year, on two occasions (one during either January or February, and one during June, July or August) the consent holder shall monitor stormwater discharged in the “first flush” of a rainfall event. Samples shall be taken at the locations indicated by a red star in Appendix 2 and analysed for the same contaminants and at the same detection limits as specified in condition 6 (h) except for chlorophyll a which samples do not need to be analysed for.</p> | | |
| 7. | The consent holder shall submit a monitoring program, designed to meet the requirements of Condition 6, to the satisfaction of the Council (Manager: Environmental Regulation), prior to the receiving environment monitoring occurring in accordance with Condition 7. | Full Compliance | The monitoring program was received and approved by Council ahead of the monitoring being undertaken by the consent holder. |
| 8. | Within three months of the receiving environment monitoring taking place in accordance with Condition 7, the consent holder shall submit a report to the Hawke’s Bay Regional Council detailing results and analysis of the monitoring, and a summary of conclusions. | Full Compliance | <p>The consent holder encountered significant delays in reporting due to the data and observations of the estuary and macroinvertebrate sampling not being made available. A preliminary report excluding these results was submitted within an agreed extended timeframe. The missing information was submitted to Council on the 5th December 2019 in full and was reviewed by HBRC staff in January 2020. An external peer review was requested in February 2020 to be undertaken by Shane Kelly of Coast and Catchments Ltd.</p> <p>The delay was not foreseeable and the consent holder made every effort to complete the report and engaged frequently with Council regarding the situation. For these reasons the condition has been graded compliant</p> |
| 9. | The consent holder shall prepare an annual report for the period of July to June each year, and before 31 October submit it to the Hawke’s Bay Regional Council. The report shall summarise monitoring and compliance to the consent conditions and discuss any non-compliance and recommended necessary actions to achieve compliance. | Full Compliance | <p>The annual report was submitted to Council on the 31/10/2019. The annual report covers the period 1/7/18 to 30/6/19 for both the discharge to air and discharge to water consents.</p> <p>The annual report section for the discharge to water provided a summary of all exceedances for the period and summarises all monitoring data collected as required. A summary of the exceedances for the period is supplied below</p> |

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| | | | <p>pH - There was one exceedance of the pH limit on the 07/05/2019, possibly as a result of contamination in the sampling bottle. No further pH exceedance have been recorded during this period.</p> <p>Fluoride - there have not been any exceedances of fluoride for the period.</p> <p>Total phosphorus - There was one exceedance of the total phosphorus limit on the 07/08/2018 of 23.3 mg/L. This was as a result of the dilution system being turned off, additionally weekly sweeping of the site and sumps is being undertaken.</p> <p>Soluble reactive phosphorus - There was one exceedance of the SRP limit on the 7/08/2018 of 19.2 mg/L. This was as a result of the dilution system being turned off and is the same event that resulted in a spike of total phosphorus. An additional monitoring program for SRP before discharge to the settling pond is now being taken.</p> |
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To assist you with the interpretation of the report, the compliance grades are:

FULL COMPLIANCE

Your operation is fully compliant with all relevant consent conditions, plan rules, regulations, and national environmental standards.

LOW RISK NON-COMPLIANCE

Your operation is compliant with most of the relevant consent conditions, plan rules, regulations, and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature [e.g. failure to submit a monitoring report].

MODERATE NON-COMPLIANCE

Your operation is non-compliant with some of the relevant consent conditions, plan rules, regulations, and national environmental standards where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.

SIGNIFICANT NON-COMPLIANCE

Your operation has non-compliance with many of the relevant consent conditions, plan rules, regulations, and national environmental standards where there significant environmental consequences and/or there is a high risk of adverse environmental effects.