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**Matawhero Logyard Annual Report**

For Eastland Port Limited

May 2022

## REPORT INFORMATION AND QUALITY CONTROL

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## 1 INTRODUCTION

Eastland Port Limited (EPL) hold resource consents issued by Gisborne District Council for the discharge of stormwater from the Matawhero Logyard to the Awapuni Drain (DW-2019-106195-01 and WI-2019-106213-01). The consents require an annual report to be submitted covering the matters identified in Condition 8 of the resource consent.

**Condition 8** of the resource consent states:

*'The Consent Holder shall keep a record of all monitoring analyses and inspections results undertaken in accordance with the conditions of this consent and shall submit these records to the Council annually and also immediately upon written request. The Consent Holder shall immediately notify the consent authority in writing of any non-compliance with any condition of this Consent and shall keep a record of this and the action(s) taken to address the matter of non-compliance. These records shall be submitted to the Council annually and also immediately upon written request.*

*The consent holder shall produce a report annually by the 30 of June each year for the previous calendar year to the satisfaction of the Environmental Services Manager. The report shall include:*

- Annual volume of cargo entering and leaving the facility
- A description of any modifications to the operation of the site.
- Non compliances with consent conditions and action taken
- Complaints and action
- Monitoring inspections and outcome
- Water quality monitoring results and an interpretive summary of results and any recommendations.'

This report presents the 2022 Annual Report, for the period 1 April 2021 to 31 March 2022. It has been prepared by 4Sight Consulting Ltd (4Sight) to be submitted on behalf of Eastland Port.

## 2 ANNUAL VOLUME OF CARGO ENTERING AND LEAVING THE FACILITY

Over the 2021/22 year (01 April 2021 – 31 March 2022) the volume of cargo that entered the facility was 224,899 tonnes and the volume that left the facility was 245,877 tonnes.

## 3 DESCRIPTION OF MODIFICATIONS TO THE OPERATION OF THE SITE

There have been no modifications to the operation of the site over the 2021/22 year.

## 4 NON-COMPLIANCES WITH CONSENT CONDITIONS AND ACTION TAKEN

A summary of non-compliance with consent conditions and actions taken over the 2021/22 year are presented in Table 1 below.

Table 1: Non-compliance and actions taken over the 2021/22 year

Date	Non-compliance	Action taken
23/06/2021	Total Nitrogen, Dissolved Oxygen and Conductivity exceedance of consent trigger limits.	Consent trigger limits were also exceeded at the background site indicating exceedances were caused by wider environment influences. No further actions necessary.
04/11/2021	Total Nitrogen and Conductivity exceedance of consent trigger limits.	Consent trigger limits were also exceeded at the background site indicating exceedances were caused by wider environment influences. No further actions necessary.

19/03/2022	Surface Water Total Nitrogen and Dissolved Oxygen exceedances of consent trigger limits.	Consent trigger limits were also exceeded at the background site indicating exceedances were caused by wider environment influences. No further actions necessary.
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## 5 COMPLAINTS AND ACTION

There have been no complaints during the 2021/22 year.

## 6 MONITORING INSPECTIONS AND OUTCOME

A summary of the monitoring inspections and outcomes over the 2021/22 year are presented in Table 2 below.

Table 2: Monitoring inspections and outcomes over the 2021/22 year

Date	Inspection notes	Outcome
23/06/2021	2021 Quarter 2 water quality monitoring	Water quality sampling completed
04/11/2021	2021 Quarter 4 water quality monitoring	Water quality sampling completed
19/03/2022	2022 Quarter 1 water quality monitoring	Water quality sampling completed
24/03/2022	Stormwater pond inspection	No outcome
Monthly	Swale drains inspections	Cleared once a month and additionally after heavy rain events.

## 7 WATER QUALITY MONITORING RESULTS

A summary of the surface water monitoring results (Table 3) and groundwater results (Table 4) for the 2021/22 year are presented below. Sampling was not undertaken in Quarter 3 2021 due to the Covid-19 alert level settings during the quarter. It is also noted that the stormwater pond at Matawhero Logyard requires large amounts of rain before discharge at the pond outlet is flowing and available to be sampled.

It is noted that since the approved changes to Condition 17 of the Resource Consent in 2019 Temperature, Volatile Suspended Solids, Soluble Inorganic Nitrogen, Dissolved Reactive Phosphorus, Total Phenols, Light Absorbance, Visual Clarity and Dissolved Copper, Lead and Zinc are no longer required to be analysed for compliance.

Table 3: Summary of surface water monitoring results for the 2021/22 year. Consent trigger limit exceedances at Site 2 and 3 are highlighted red.

Parameter	Units	Consent trigger limits (10m below confluence)	Quarter 2 2021			Quarter 4 2021			Quarter 1 2022		
			23 June 2021			4 November 2021			29 March 2022		
			Stormwater retention ponds outlet (MLY Site 1)	Awapuni Drain 10m downstream (MLY Site 2)	Awapuni Drain 10m upstream (MLY Site 3)	Stormwater retention ponds outlet (MLY Site 1)	Awapuni Drain 10m downstream (MLY Site 2)	Awapuni Drain 10m upstream (MLY Site 3)	Stormwater retention ponds outlet (MLY Site 1)	Awapuni Drain 10m downstream (MLY Site 2)	Awapuni Drain 10m upstream (MLY Site 3)
pH	- LOG(H <sup>+</sup> )	6.5 - 8.5	7.3	7.6	6.9	7.8	7.9	7.7	7.3	7.3	7.4
Dissolved Oxygen	%	No less than 80%	17.1	48.3	51.9	54	88.8	75.6	38	39.2	47.7
Conductivity	mS/cm	0.3	0.06	0.85	0.08	0.03	0.35	0.18	0.03	0.07	0.12
Total Suspended Solids	g/m <sup>3</sup>	100 g/m <sup>3</sup> above background	102	31	23	183	43	57	42	33	12
Total Nitrogen	g/m <sup>3</sup>	0.4	0.39	2.7	2.5	0.46	2.8	1.8	0.7	1	1.34
BOD	g/m <sup>3</sup>	20	12	3	3	22	7	12	7	5	5
Total Tannins	g/m <sup>3</sup>	Indicator test only	3.3	1.7	1.4	8.8	2.1	4.5	1.5	1.7	1.9
Total Resin Acids	g/m <sup>3</sup>	0.06	0.0108	<0.0001	<0.0001	1.1316	Bottle broken in transit	0.0085	n.d.	n.d.	n.d.
Total Petroleum Hydrocarbons	g/m <sup>3</sup>	15	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7

Table 4: Summary of groundwater monitoring results for the 2021/2022 year. Consent trigger limit exceedances are highlighted red.

Parameter	Units	Consent trigger limits (at sump tile drainage outlet)	Quarter 2 2021			Quarter 4 2021			Quarter 1 2022		
			23 June 2021			4 November 2021			29 March 2022		
			MLY GW 01	MLY GW 02	Sump Tile Drainage	MLY GW 01	MLY GW 02	Sump Tile Drainage	MLY GW 01	MLY GW 02	Sump Tile Drainage
Groundwater level	m	No limit	4.1	1.17	-	1.01	1	-	1.07	0.73	-
pH	-LOG(H <sup>+</sup> )	6.5 – 8.5	7.2	7.2	6.9	957	830	143	923	710	206
Conductivity	mS/cm	0.3 above background	0.09	0.09	0.09	0.10	0.08	0.01	0.09	0.07	0.02
Total Petroleum Hydrocarbons	g/m <sup>3</sup>	15	<0.7	<0.7	<0.7	<0.7	<0.9	<0.7	<0.7	<0.7	<0.7
Total Resin Acids	g/m <sup>3</sup>	0.06 above background	<0.0001	<0.0001	<0.0001	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
Total Nitrogen	g/m <sup>3</sup>	0.6 above background	0.27	0.22	0.49	0.28	0.25	0.81	0.3	0.24	1.09

## 7.1 Summary of water quality results and recommendations

### 7.1.1 Surface Water

All surface water sampling events for the reporting year 2021/2022 exceeded the consent compliance trigger limit (0.4 g/m<sup>3</sup>) for Total Nitrogen at the compliance site (Site 2) and also the background site (Site 3). Total Nitrogen levels were lowest at the stormwater retention pond outlet (Site 1) during all sampling, indicating that exceedances are driven by wider environment influences associated with adjacent land uses.

Dissolved Oxygen levels across all sampling sites have been overall low and non-compliant with the consent limit of 'no less than 80%'. This suggests the Awapuni Drain generally experiences suppressed dissolved oxygen concentrations.

Conductivity readings exceeded the compliance trigger limit of 0.3 mS/m during the quarter 2 and quarter 4 2021 sampling. Samples were collected during an outgoing tide as required in accordance with Condition 15 stating that:

*"Sampling shall be undertaken and completed during the period beginning two hours after high tide and ending one hour after low tide."*

Conductivity at the stormwater pond outlet was well below the consent trigger limit during all sampling events. Tidal influence affecting salinity is a variable and dominant influence in the Awapuni drain.

No exceedances are likely due to be due to activities on, or the quality of discharges from the logyard.

### 7.1.2 Groundwater

The groundwater monitoring results completed during the reporting year 2021/2022 showed that there were no exceedances of the consent trigger limits at the sump tile drainage outlet (compliant point) apart from Total Nitrogen during the 29 March 2022 sampling. Surface water may have intruded into the sampling site due to extensive flooding during the sampling event.

## 8 CONCLUSION

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The site is being managed to an appropriate standard. The surface water sediment interception system is performing to design expectations. The Awapuni Drain is a highly modified receiving environment of low ecological value and sensitivity. The water quality in the Drain is complex in terms of tidal influences and is likely governed by a range of other influences not related to, or exacerbated by, the operations on or stormwater discharges from the site.



