6 October 2023

Tinex Group Limited C/- Stratum Consultants Level 1, 29 Grey Street Tauranga

Attention: Shae Crossan

Revision: 02

Dear Shae,

RE: Stormwater Sampling: 245 Te Puna Station Road, Te Puna

1 INTRODUCTION

BCD Group Limited (BCD) has been engaged by Tinex Group Limited (The Client) to assist with the collection and analysis of stormwater samples collected from 245 Te Puna Station Road, Te Pina. The water quality sampling is required as part of a resource consent application for the existing activities on site.

2 SCOPE

The purpose is to identify the contaminant loading in the stormwater discharging from a culvert at the sites accessway, and the water in the drain flowing past the site. The site location is presented in figure 1.



Figure 1. The site (red) (source: LINZ CC BY 4.0 © - Bay of Plenty 0.1m Urban Aerial Photos (2023) & others 2020-2022)









3 ENVIRONMENTAL SOIL SAMPLING

Stormwater samples were collected on 24 September 2023 at 7am during a rainfall event in which stormwater discharged from the site through the culvert. The culvert location is presented in figure 2, with the drain sample collected from upstream of the accessway.

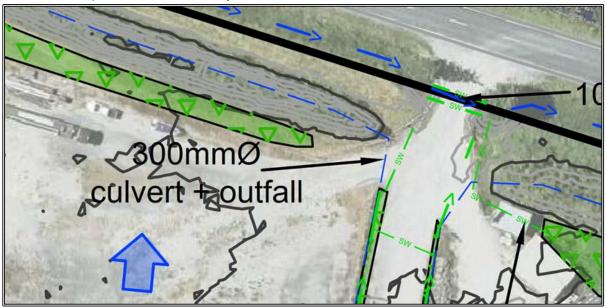


Figure 2 - Sample location

Water samples were collected directly from the culvert discharge (Sample 2) and drain (Sample 1) into laboratory supplied containers and placed in a chilled cooler box for transportation to Hill Laboratories. The following analysis was undertaken on the stormwater samples collected based on commonly encountered contaminants within stormwater:

- Total Suspended Solids (TSS)
- Total Copper
- Dissolved Copper.
- Total Zinc
- Dissolved Zinc
- Total Petroleum Hydrocarbons (TPH).

3.1 Assessment Criteria

The discharge quality standards were measured against the Western Bay of Plenty District Council Comprehensive Stormwater Discharge Consent for Katikati (RM22-0643) which is considered to provide a comparable threshold for acceptable water quality. These are presented in Appendix 4, Table 1 of the consent.

3.2 Laboratory Results Summary

3.2.1 Total Suspended Solids

Both samples were analysed for TSS, both samples contained low concentrations of TSS (less than 20g/m³) significantly below the consented limits (150g/m³).

3.2.2 Copper

Both samples were analysed for dissolved and total copper. Copper in the sample collected from the drain (Sample 1) contained elevated concentrations of dissolved and total copper above the consented limits. The sample collected from the site culvert outflow contained concentrations of copper below the consented limits.

3.2.3 Zinc

Concentrations of zinc in both samples were below the consented limits.

3.2.4 Total Petroleum Hydrocarbons

Both samples contained concentrations of TPH below laboratory limits of reporting.

4 CONCLUSIONS

Based on analysis for commonly encountered contaminants within stormwater concentrations within the sample collected from the culvert met consented limits for stormwater discharges within the Western Bay of Plenty District Councils network. The sample collected from the drain contained concentrations of copper above the consented limits.

5 LIMITATIONS

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Laboratory test results provide an approximation of the concentration of the tested analytes and are subject to the inherent limitations of the laboratory techniques used for the tests. Interpretations of subsurface conditions including contaminant concentrations are not guaranteed at distance away from the specific points of sampling.

Prepared by:

Alan Woodger

Senior Environmental Scientist

BCD Group Ltd

Attachments

Laboratory Summary Table Laboratory Certificates



245 Te Puna Station Road: Stormwater Sample Results Summary 23-1432

Name Location Date Time	TSR - 01 Drain 24/09/2023 7am	TSR - 02 Culvert 24/09/2023 7am	WBOPDC Consent ¹
Total Suspended Solids Dissolved Copper Total Copper Dissolved Zinc Total Zinc	8 0.0031 0.0039 0.0034 0.0086	12 0.0007 0.00097 0.0096 0.0122	150 0.0018 0.0018 0.015 0.015
Total Petroleum Hydrocarbons in Water			
C7 - C9	< 0.10	< 0.10	-
C10 - C14	< 0.2	< 0.2	-
C15 - C36	< 0.4	< 0.4	-
Total hydrocarbons (C7 - C36)	< 0.7	< 0.7	15

All concentrations are in g/m³

1) Resource Consented Limits presented in RM22-0643 Appendix A Table 1.



R J Hill Laboratories Limited 28 Duke Street Frankton 3204 Private Bag 3205 Hamilton 3240 New Zealand **6. 0508 HILL LAB** (44 555 22)
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 ★ www.hill-labs.co.nz

Certificate of Analysis

Page 1 of 2

SPv1

Client: BCD Group Limited
Contact: Alan Woodger

C/- BCD Group Limited

PO Box 13276 Tauranga Central Tauranga 3141

 Lab No:
 3371848

 Date Received:
 26-Sep-2023

 Date Reported:
 05-Oct-2023

 Quote No:
 113268

 Order No:
 23-1432

 Client Reference:
 23-1432

Submitted By: Alan Woodger

Sample Type: Aqueous						
Sam	ple Name:	TSR - 01 24-Sep-2023 7:00 am	TSR - 02 24-Sep-2023 7:00 am			
Lab Number:		3371848.1	3371848.2			
Individual Tests						
Total Suspended Solids	g/m³	8	12			
Dissolved Copper	g/m³	0.0031	0.0007			
Total Copper	g/m³	0.0039	0.00097			
Dissolved Zinc	g/m³	0.0034	0.0096			
Total Zinc	g/m³	0.0086	0.0122			
Total Petroleum Hydrocarbons in V	Vater					
C7 - C9	g/m³	< 0.10	< 0.10			
C10 - C14	g/m³	< 0.2	< 0.2			
C15 - C36	g/m³	< 0.4	< 0.4			
Total hydrocarbons (C7 - C36)	g/m³	< 0.7	< 0.7			

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Aqueous						
Test	Method Description	Default Detection Limit	Sample No			
Individual Tests		1	1			
Total Digestion	Nitric acid digestion. APHA 3030 E (modified) : Online Edition.	-	1-2			
Total Suspended Solids	Filtration using Whatman 934 AH, Advantec GC-50 or equivalent filters (nominal pore size 1.2 - 1.5µm), gravimetric determination. APHA 2540 D (modified) : Online Edition.	3 g/m ³	1-2			
Filtration for dissolved metals analysis	Sample filtration through 0.45µm membrane filter and preservation with nitric acid. APHA 3030 B: Online Edition.	-	1-2			
Dissolved Copper	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0005 g/m ³	1-2			
Total Copper	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B : Online Edition / US EPA 200.8.	0.00053 g/m ³	1-2			
Dissolved Zinc	Filtered sample, ICP-MS, trace level. APHA 3125 B : Online Edition.	0.0010 g/m ³	1-2			
Total Zinc	Nitric acid digestion, ICP-MS, trace level. APHA 3125 B: Online Edition / US EPA 200.8.	0.0011 g/m ³	1-2			
Total Petroleum Hydrocarbons in Water		1	<u>'</u>			
C7 - C9	Solvent extraction, GC-FID analysis. In-house based on US EPA 8015.	0.10 g/m ³	1-2			
C10 - C14	Solvent extraction, GC-FID analysis. In-house based on US EPA 8015.	0.2 g/m ³	1-2			
C15 - C36	Solvent extraction, GC-FID analysis. In-house based on US EPA 8015.	0.4 g/m ³	1-2			
Total hydrocarbons (C7 - C36)	Calculation: Sum of carbon bands from C7 to C36. In-house based on US EPA 8015.	0.7 g/m ³	1-2			





This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked * or any comments and interpretations, which are not accredited.

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 27-Sep-2023 and 05-Oct-2023. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

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Kim Harrison MSc

Client Services Manager - Environmental