

SH16 CAUSEWAY UPGRADE PROJECT



Monthly Environmental Report March 2014

Document history and status

Revision	Date issued	Written By	Reviewed by	Approved by	Revision Status
A	29.04.2014	K Stevens	R Purdy/Brigitte Dunbar/ Elizabeth Collins		For REVIEW
В	1.05.2014	K Stevens	M Evans		For APPROVAL
С	1.05.2014	K Stevens		M Evans	FINAL

Distribution of copies

Revision	Purpose	Issued to
А	For review	R Purdy, B Dunbar, E Collins
В	For approval/release	M Evans
С	FINAL	Auckland Council

Printed:	01/05/2014 11:51
Last saved:	01/05/2014 11:51
File name:	K:\EN Environment\EN51 Construction\04 Council Reporting\Monthly Report\2014 Environmental Reports\2014 03 Report\March_2014_Causeway_Upgrade_Project_Monthly_Environmental_Report_Rev_ C.docx
Author:	Kevin Stevens
Environmental Manager:	Steve Jenkins
Name of organisation:	Causeway Alliance
Name of project:	SH16 Causeway Upgrade Project
Document version:	Revision C

Contents

1.0	INTRO	DDUCTION	7
	1.1	PURPOSE OF THE REPORT	7
2.0	OVER	VIEW of ACTIVITIES UNDERTAKEN	7
	2.1	Environmental	7
	2.2	Communications and Stakeholder Management	7
	2.3	Construction	7
3.0	MEET	INGS, INSPECTIONS AND EVENTS	8
4.0	ENVIE	RONMENTAL MONITORING	8
	4.1	EARTHWORKS COMPLIANCE	8
	4.2	CONSTRUCTION NOISE AND VIBRATION	8
	4.3	AIR QUALITY	8
	4.4	CONTAMINATED SOIL	9
	4.5	EROSION AND SEDIMENT CONTROL	9
	4.6	ARCHAEOLOGICAL	9
	4.7	COASTAL MONITORING	9
	4.8	MARINE MONITORING	9
	4.9	ECOLOGICAL	9
5.0	CORR	RESPONDENCE ON CONSENT CONDITIONS AND PLANS	10
6.0	WOR	KS PROPOSED FOR APRIL, MAY AND JUNE 2014	10

Appendix A: Causeway Alliance Construction Zone Plan

Appendix B: SH16 Causeway Imported and Exported Material Summary

Appendix C: Quarterly Avian Report (January - March 2014)

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

To provide Auckland Council with a monthly overview of construction progress and compliance activity on the SH16 Causeway Upgrade project.

This report describes and details activities during the month of March 2014.

2.0 OVERVIEW of ACTIVITIES UNDERTAKEN

2.1 Environmental

Regular contact is continuing with the Auckland Council compliance team.

2.2 Communications and Stakeholder Management

- Produced monthly Causeway News project updates to stakeholders, project neighbours and wider community.
- Letters sent to local residents in Point Chevalier in advance of night works and lane closures occurring at Great North Road Interchange in March/April.
- Communications for the Great North Road westbound on-ramp closure of 28-31 March were rolled out as planned to all print, radio and social media, emergency services, National Road Carriers and Auckland Transport stakeholders. Real-time updates were provided to key stakeholders during the closure and positive feedback on them was received.
- A neighbour in Montrose Street, Point Chevalier provided feedback about noise at night coming from sub-contractor's voices and a drill. The resident was advised that further steps will be taken to manage this noise in the future.
- A neighbour in Alwyn Ave, Te Atatu South provided feedback about noise relating to transporting a crane through the neighbourhood at night. The project team will avoid undertaking similar operations in the future. The resident was contacted with an apology.
- Positive feedback received from stakeholders receiving the Causeway News and cyclists using the temporary cycleway arrangements.

2.3 Construction

- Alwyn Ave (Whau River bridge south-west) temporary staging for widening the southern side of the Whau River Bridge.
- Whau River Bridge (northern side) completion of permanent bridge piling/crossheads for eastbound bridge widening, with beam installation scheduled for April.

7

- Patiki to Whau (westbound, around Rosebank Park Domain) site clearance and earthworks along batter slope continuing in Rosebank Park Domain, reclamation and earthworks continuing in the Coastal Marine Area.
- Whau to Rosebank (eastbound) site clearing complete, reclamation work underway (under Patiki Road off ramp), retaining wall works continuing (including rock revetment)
- Causeway (from North Traherne Island eastbound direction) continue installation of the preload fill layer (surcharge) up to full height, further east continue coffer dam/stability berm, working platform, wick drain and drainage blanket installation. Remedial works required to embankment slumps before further earthworks proceeds in these areas.
- Causeway (South Traherne Island) earthworks, wick drain and drainage layer installation (towards Rosebank Road westbound off-ramp) continuing.
- Great North Road Interchange (GNRI) (northern side, eastbound from Causeway Bridge) stability berm slump area being stabilised with timber piles. Filling further east of Causeway Bridge continuing.
- GNRI (southern side, westbound towards Causeway Bridge) westbound on-ramp final pavement completed and commissioned, with traffic now using new on-ramp. Work is not proceeding where embankment slumped into channel of Oakley Creek until remedial works are agreed with Council.

3.0 MEETINGS, INSPECTIONS AND EVENTS

6 March, 20 March – Auckland Council's earthworks compliance inspections

6 March - Auckland Council's contaminated soils inspection

13 March – Meeting with a Whau Local Board representative and Council Parks officer on items to be considered in the Rosebank Domain Open Space Restoration Plan

14 March – Auckland Council's coastal compliance inspection

4.0 ENVIRONMENTAL MONITORING

4.1 EARTHWORKS COMPLIANCE

Compliance Inspections were completed by Auckland Council officers on the 6 and 20 March and recorded a compliance score of 1 (Full Compliance).

4.2 CONSTRUCTION NOISE AND VIBRATION

Two Site Specific Noise Management Plans submitted and approved in March for the installation of the pier protection walls (in centre median) and on-ramp surfacing works at the GNRI.

4.3 AIR QUALITY

No air quality complaints or issues were received during the period.

4.4 CONTAMINATED SOIL

A summary of exported material disposal locations, along with material classifications, sample methods and quantities at various site locations along the alignment during March is included in Appendix B.

4.5 EROSION AND SEDIMENT CONTROL

There were no Erosion and Sediment Control Plans submitted or approved in March.

4.6 ARCHAEOLOGICAL

There was an inspection of the deconstruction of 20m of the dry stone wall (site R11/2213) at GNRI on 13 March. The works were undertaken in accordance with the Council approved methodology.

4.7 COASTAL MONITORING

Compliance Inspection was completed by Auckland Council officers on the 14 March and recorded a compliance score of 1.

An assessment of effects of the Oakley Creek slump (which occurred on 28 February and transported rock armouring across to the other side of the main channel) concluded that the disturbance in the creek meander is not having any negative ecological or marine life impacts. The depth of water flows across the rocks in the channel can accommodate fish passage and the rocks are providing good habitat for marine life. The slump is currently stable and a remedial works plan will be discussed and agreed with Council in April.

The further slips which occurred on the northern side of the Causeway works on 11 March and 2 April indicate pockets of softer/weaker soils. These are being surveyed and analysed to determine their cause and appropriate remedial work. Increased instrumentation and frequency of monitoring is part of the mitigation plan to provide additional data for early intervention.

4.8 MARINE MONITORING

The summer 2014 marine benthic monitoring was completed during low tide periods at the same 12 sites as the pre-construction baseline monitoring undertaken in February/March 2012.

4.9 ECOLOGICAL

An inspection of Significant and Valued vegetation was undertaken on 31 March at Traherne Island (Zone 1), Patiki Road/Rosebank Domain/Causeway (Zone 2), Whau River Bridge (Zone 3) and at GNRI (Zone 5).

Weed mapping has taken place along the project corridor as part of preparing the landscape planting management plan.

Monthly assessment of avian roosting locations was undertaken at Harbourview-Orangihina (Pony Club) and the temporary roosting rafts at the Causeway Bridge. The monthly avian count at Harbourview – Orangihina for March 2014 was 305 birds compared to the pre-establishment

q

baseline count in March 2011 of 306 birds. No coastal birds were observed to use the two temporary bird roost sites (floating pontoons) installed south of Causeway Bridge, as there was no construction activity affecting roosting sites. The Quarterly Avian Report for January – March is included in Appendix C.

5.0 CORRESPONDENCE ON CONSENT CONDITIONS AND PLANS

Email received from Council (A Gysberts) on 11 March confirming the methodology for clearing vegetation and repair of the dry stone wall at GNRI is in compliance with BoI condition ARCH.7(c).

A review has commenced on the initially approved CEMP and sub-plans in accordance with a prioritised programme, agreed with Council (M Parker-Bevin), and the reviewed documents will be progressively submitted to Council for comment over the next four to five months.

6.0 WORKS PROPOSED FOR APRIL, MAY AND JUNE 2014

Refer Appendix A for Construction Zone Plan.

Zone 1 Causeway

- Eastbound: Continue installing the timber piles and Continuous Flight Auger piles at Causeway Bridge transitions, working platform, preload fill (surcharge), drainage blanket layer, wick drains, coffer dam and reclamation in the coastal area.
- Westbound: Divert cycleway onto closed bus lane westbound from Causeway Bridge to Traherne Island South, complete wick drain and preload in Traherne Island South.

Zone 2 / Zone 3 Whau to Rosebank

- Eastbound: Installing new Whau Bridge spans. Continue earthworks and construction of retaining wall (midway between Patiki and Rosebank ramps).
- Westbound: Continue temporary and permanent piling for Whau Bridge widening, continue and complete earthworks between Whau River Bridge and Patiki Road (including reclamation and works on Rosebank Park Domain batter slope). Commence works for Patiki Road on-ramp widening, including culvert extension/outfalls.

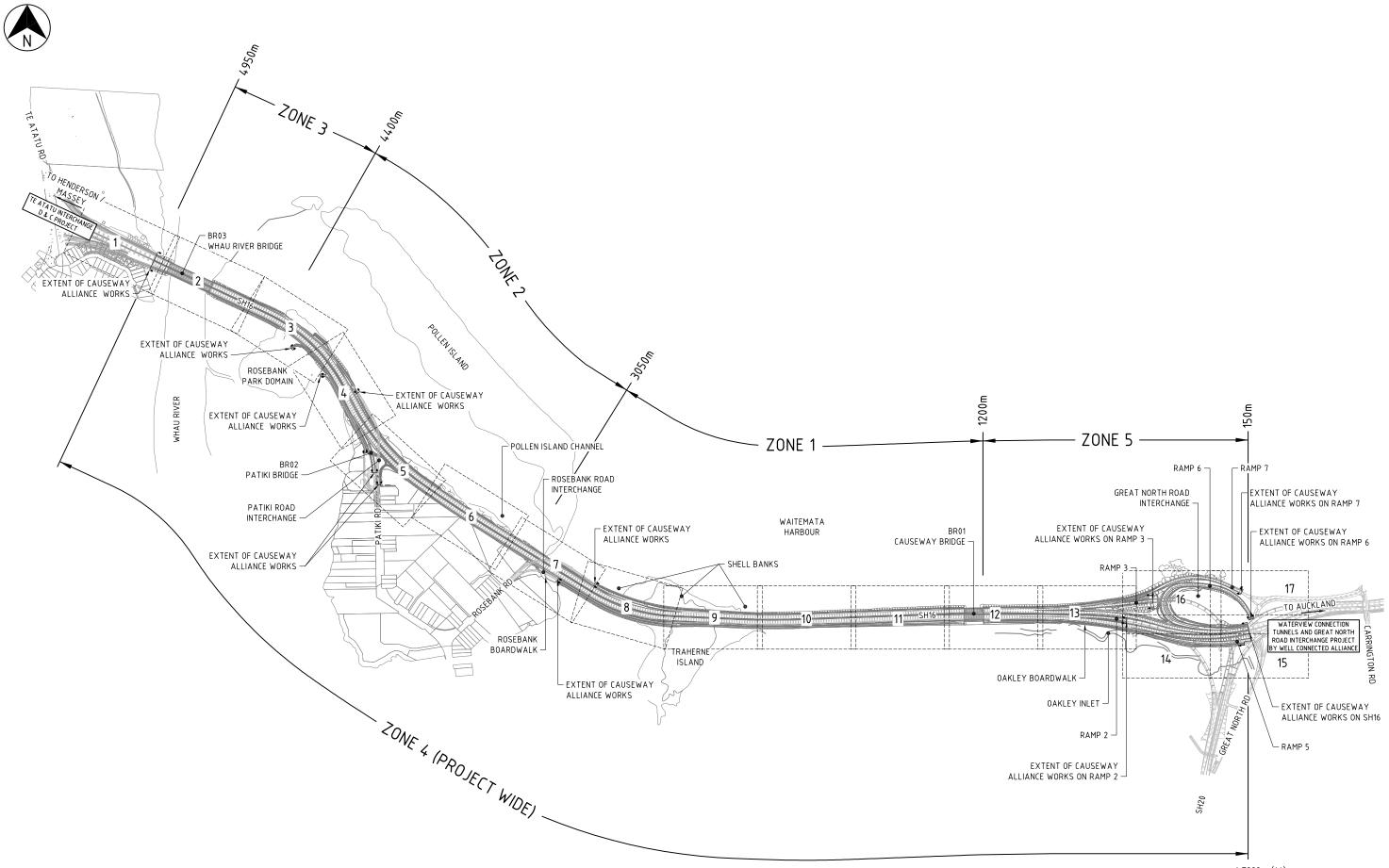
Zone 5 GNRI

- East bound: Continue earthworks to widen the embankment in an easterly direction alongside Great North Road east-bound off-ramp.
- Westbound: Discuss remedial plan for Oakley Creek slump with Council. Remediate slump and continue with embankment filling.

The environmental focus for April will continue to be on inspections prior to and during vegetation removal, monitoring material movements, management of replanted area at Traherne Island and ground clearance to ensure ecological and archaeological stand over requirements are

met. The establishment and monitoring of sediment and erosion controls and monitoring slumps will also continue. Proposed remedial works for slumps will be discussed with Council.

Appendix A: SH16 Causeway Alliance Construction Zone Plan



Appendix B: SH16 Causeway Imported and Exported Material Summary

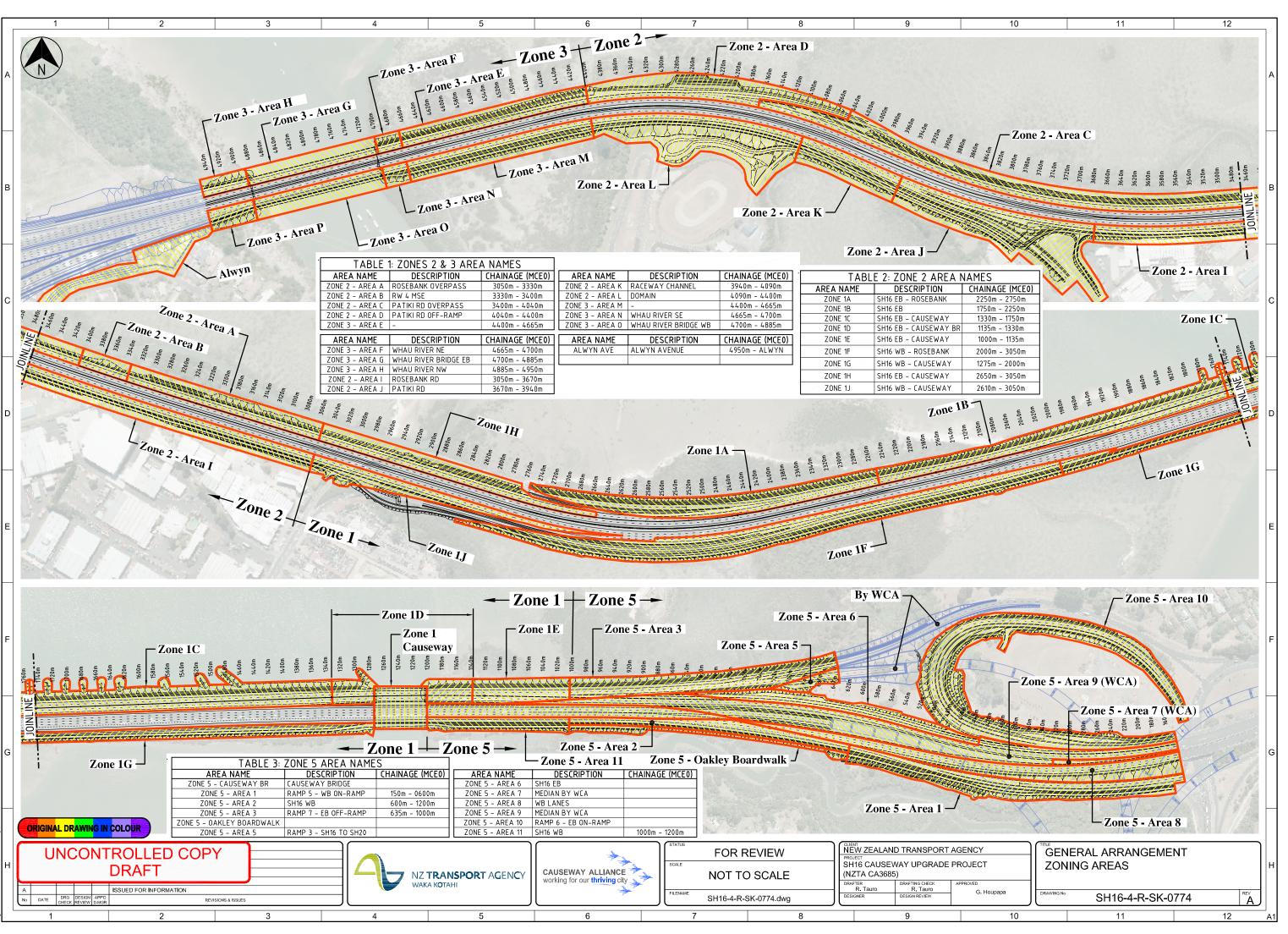
SH16 Causeway Upgrade - March 2014 Materials Tally On Site Materials Movement and Disposal to Landfill

Date	Transport	Ordering	Destat #	Material Source	5 4	0.11	From Description To Area	To Description	Specification Description	Manual of Trans	Coursela ID	Lab Daraut ID	Classification	Final Diseased Facility	Conformance	Touch Tours	Lood Count Truck Volume	
12/03/2014	Subcontractor G&C	Zone Zone 3	Docket # 77429	Site	From Area Alwyn Ave	Gate	Non-Import Only Ridge Road Lan	To Description	Cut to Waste	Cut to Waste	Sample ID	Lab Report ID	Classification	Final Disposal Facility	Conformance	Truck Type Truck & Trailer	Load Count (T)	
12/03/2014 12/03/2014	G&C G&C	Zone 3 Zone 3	77478 77524	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
12/03/2014 12/03/2014		Zone 3 Zone 3	77425 77427	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
12/03/2014 12/03/2014 12/03/2014		Zone 3 Zone 3 Zone 3	77472 77519 77492	Site Site Site	Alwyn Ave Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer Truck & Trailer		
12/03/2014	G&C G&C	Zone 3 Zone 3	77430	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-	No samples available						
12/03/2014	G&C G&C	Zone 3 Zone 3	77428	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-							
12/03/2014 13/03/2014	G&C G&C	Zone 3 Zone 3	77529 77632	Site Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste								
13/03/2014 13/03/2014	G&C	Zone 3 Zone 3	77600	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
13/03/2014 13/03/2014 13/03/2014	G&C	Zone 3 Zone 3 Zone 3	77561 77604 77670	Site Site Site	Alwyn Ave Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer Truck & Trailer		
13/03/2014 13/03/2014		Zone 3 Zone 3	77547	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer Truck & Trailer		
13/03/2014 13/03/2014	G&C G&C	Zone 3 Zone 2	77673	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
13/03/2014 14/03/2014	G&C G&C	Zone 2 Zone 3	77626 77721	Site Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
14/03/2014 14/03/2014		Zone 3 Zone 3	77714 77728	Site	Alwyn Ave Alwyn Ave		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste						Truck & Trailer Truck & Trailer		
21/03/2014 1/03/2014 1/03/2014	G&C	Zone 2 Zone 2	315789 76704 76730	Site Site Site	N/A Zone 2 - Area E Zone 2 - Area E		Cut to waste Zone 2 - Area Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill		From	area not described unable to	determine relevenat samples.		6 Wheeler Truck & Trailer Truck & Trailer	8 8	
1/03/2014 1/03/2014 1/03/2014	G&C	Zone 2 Zone 2 Zone 2	76703	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3 C4	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer		
1/03/2014 1/03/2014	G&C G&C	Zone 2 Zone 2	76706 76734	Site	Zone 2 - Area E Zone 2 - Area E	3 C4 3 C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer		
1/03/2014 1/03/2014	G&C	Zone 2 Zone 2	76722 76743	Site Site	Zone 2 - Area E Zone 2 - Area E	B C4 B C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill						Truck & Trailer Truck & Trailer		
1/03/2014 1/03/2014	G&C G&C	Zone 2 Zone 2	76741 76729	Site	Zone 2 - Area E Zone 2 - Area E	3 C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Cut to Waste	-				Yes (CA50_SP was considered cleanfill as th Ridge Road benzo[a]pyrene cleanfill	Truck & Trailer		
3/03/2014 3/03/2014 3/03/2014	G&C G&C G&C	Zone 2 Zone 2 Zone 2	76751 76813 76854	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3 C4	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-			Ridge Road Landfill as cleanfill	relevant samples were within Ridge Road	Truck & Trailer Truck & Trailer		
3/03/2014 3/03/2014 4/03/2014	G&C G&C G&C	Zone 2 Zone 2 Zone 2	76854 76583 76890	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3 C4	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill			Cleanfill (CA50_SP very minor exceedance (0.04		cleanfill criteria).	Artic Artic Artic		
4/03/2014 4/03/2014	G&C	Zone 2 Zone 2	76930 76965	Site	Zone 2 - Area E Zone 2 - Area E	3 C4 3 C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	CA49_SP; CA50_SP; CA51_SP; CA52_SP; CA52_SP; CA52_SP;	1215417; 1226072	mg/kg) of Ridge Road cleanfill criteria for			Artic		
4/03/2014 4/03/2014	G&C G&C	Zone 2 Zone 2	76916 76960	Site	Zone 2 - Area E Zone 2 - Area E	3 C4 3 C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	CA53_SP; CA69		Benzo[a]pyrene (BAP) (0.027 mg/kg).			Artic Artic		
4/03/2014 4/03/2014	G&C	Zone 2 Zone 2	76941	Site Site	Zone 2 - Area E Zone 2 - Area E	B C4 B C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-					Artic Artic		
5/03/2014 6/03/2014 7/03/2014	G&C G&C	Zone 2 Zone 2 Zone 2		Site Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3	Zone 2 - Area Zone 2 - Area Zone 2 - Area	Stockpile Stockpile Stockpile	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	+					6 Wheeler 6 Wheeler 6 Wheeler		
12/03/2014 12/03/2014 13/03/2014	G&C G&C G&C	Zone 2 Zone 2 Zone 2		Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3	Topsoil / organics Stockpile Zone 5 - Area Topsoil / organics Stockpile Zone 5 - Area	Landscaping	Landscape - Topsoil Landscape - Topsoil	Green Waste Green Waste	-					6 wheeler 6 wheeler	10	
14/03/2014 17/03/2014		Zone 2 Zone 2 Zone 2		Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	3 C4	Topsoil / organics Stockpile Zone 5 - Area Topsoil / organics Stockpile Zone 5 - Area Topsoil / organics Stockpile Zone 5 - Area	Landscaping	Landscape - Topsoli Landscape - Topsoli	Green Waste Green Waste	-			Used onsite at Zone 2 - Area C and Zone 5 - Area 4	Yes - Able to be used onsite	6 wheeler 6 wheeler	13	
18/03/2014 19/03/2014	G&C	Zone 2 Zone 2		Site Site	Zone 2 - Area E Zone 2 - Area E	3 C4 3 C4	Topsoil / organics Stockpile Zone 5 - Area Topsoil / organics Stockpile Zone 5 - Area	Landscaping	Landscape - Topsoil Landscape - Topsoil	Green Waste Green Waste	-					6 wheeler 6 wheeler	22 20	
20/03/2014 24/03/2014	G&C	Zone 2 Zone 2		Site Site	Zone 2 - Area E Zone 2 - Area E	3 C4	Topsoil / organics Stockpile Zone 5 - Area Topsoil / organics Stockpile Zone 5 - Area	Landscaping Landscaping	Landscape - Topsoil Landscape - Topsoil	Green Waste Green Waste						6 wheeler 6 wheeler	14 27	
3/03/2014 3/03/2014		Zone 2 Zone 2	76752	Site	Zone 2 - Area I Zone 2 - Area I	D C4	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer		
3/03/2014 5/03/2014 5/03/2014	G&C G&C	Zone 2 Zone 2 Zone 2	76753 77050 77070	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-					Truck & Trailer Artic Artic		
13/03/2014 14/03/2014	G&C G&C	Zone 2	77665	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
14/03/2014 14/03/2014	G&C	Zone 2 Zone 2	77849 77734	Site	Zone 2 - Area I Zone 2 - Area I		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
14/03/2014 14/03/2014	G&C	Zone 2 Zone 2	77788 77827	Site	Zone 2 - Area I Zone 2 - Area I		Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
14/03/2014 14/03/2014	G&C G&C	Zone 2 Zone 2	78089 77988	Site Site	Zone 2 - Area E Zone 2 - Area E	D C3 C3	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste						Truck & Trailer Truck & Trailer		
14/03/2014 14/03/2014		Zone 2 Zone 2	78099 78002	Site Site	Zone 2 - Area E Zone 2 - Area E	C3	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste				Ridge Road Landfill as cleanfill	Yes - Ridge Road cleanfill able to accept up to 120 mg/kg TPH C ₇ - C ₉ .	I ruck & I railer		
19/03/2014 19/03/2014	G&C	Zone 2 Zone 2	78218 78140	Site	Zone 2 - Area E Zone 2 - Area E	D C3	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-		Cleanfill conditional (CA66		izo niging i i i oʻ, oʻj.	Truck & Trailer Truck & Trailer		
19/03/2014 19/03/2014 19/03/2014		Zone 2 Zone 2	78207 78190 78227	Site Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E	D C3	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	CA66; CA76	1226072	recorded a minor TPH C ₇ - C ₉ detetction (18 mg/kg).			Truck & Trailer Truck & Trailer Truck & Trailer		
20/03/2014 20/03/2014		Zone 2 Zone 2 Zone 2	78250	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer Truck & Trailer		
20/03/2014 20/03/2014 20/03/2014	G&C G&C	Zone 2 Zone 2	78300	Site	Zone 2 - Area E Zone 2 - Area E Zone 2 - Area E		Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
20/03/2014 20/03/2014	G&C G&C	Zone 2 Zone 2	78299 78240	Site	Zone 2 - Area I Zone 2 - Area I	D C3	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
20/03/2014 20/03/2014		Zone 2 Zone 2	78307 78268	Site Site	Zone 2 - Area E Zone 2 - Area E	D C3 D C3	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	-					Truck & Trailer Truck & Trailer		
20/03/2014	G&C	Zone 2	78239	Site	Zone 2 - Area E	D C3	Ridge Road Lan	fill Cut to Waste	Cut to Waste	Cut to Waste					CA76 exceeded Schedule 10 permitted	Truck & Trailer		
17/03/2014	G&C	Zone 2		Site	Zone 2 - Area [C3	Zone 2 - Area	Cut to Waste	Cut to Waste	Clean Fill				Keel and the st Zeel O. Area D.	discharge for nickel (concentration of nickel a CA46 was 115 mg/kg, Auckland S10 permitte		13	
17/03/2014	G&C	Zone 2		Site	Zone 2 - Area I	D C3	Zone 2 - Area	Stockpile	Cut to Waste	Cut to Waste				Kept onsite at Zone 2 - Area D	discharge limit is 105 mg/kg). Material unable to be reused on site, appears to conform as	6 Wheeler	13	
	G&C		318141	Site	Zone 2 - Area I		Ridge Road Lan		Cut to Waste						material was cut to waste.	Truck & Trailer		
22/03/2014 24/03/2014 24/03/2014	G&C G&C	Zone 3 Zone 2 Zone 2	312726	Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer Truck & Trailer		
24/03/2014 24/03/2014 25/03/2014	G&C G&C	Zone 2 Zone 2	308761 312171	Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer		
25/03/2014 25/03/2014	G&C G&C	Zone 2 Zone 2	308762 312727	Site Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	4					Truck & Trailer Truck & Trailer		
25/03/2014 25/03/2014 26/02/2014	G&C	Zone 2	318145 316291	Site	Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	+					Truck & Trailer Truck & Trailer		
26/03/2014 26/03/2014 27/03/2014	G&C	Zone 2	312728 316292 312886	Site Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	+					Truck & Trailer Truck & Trailer Truck & Trailer		
27/03/2014 27/03/2014 27/03/2014	G&C	Zone 2	312886 312176 308765	Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer Truck & Trailer		
27/03/2014	G&C G&C	Zone 2 Zone 2	307607 316347	Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6 L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer Truck & Trailer		
27/03/2014 27/03/2014 27/03/2014	G&C G&C	Zone 2		Site	Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	TP953 1.0-1.1 m & 1.5-1.6 m; TP954 0.1-0.2 m & 0.5-0.6 m;					Truck & Trailer Truck & Trailer		
27/03/2014 27/03/2014	G&C G&C	Zone 2 Zone 2	280817 307654	Site Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	TP954 0.1-0.2 m & 0.5-0.6 m; TP9551.0-1.1 m, 1.5-1.6 m & 1.8-1.9 m: TP956 1.0-1.1 m;					Truck & Trailer Truck & Trailer		
27/03/2014 28/03/2014 28/03/2014		Zone 2 Zone 2	313493 317983 308767	Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	TP957 1.0-1.1 m & 1.5-1.6 m; CA60 0.2-0.35 m; CA61 0.5-		All samples cleanfill or		Yes - Causeway Alliance has shown sample	Truck & Trailer Truck & Trailer Truck & Trailer		
28/03/2014 28/03/2014 28/03/2014	G&C	Zone 2	312080	Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	0.6 m & 1.0-1.1 m; CA62 0.5- 0.6 m; CA630.1-0.2 m; CA64		cleanfill conditional except for the following managed		locations and results to Ridge Road and have advised that the majority of the material can b	Truck & Trailer		
28/03/2014	G&C G&C G&C	Zone 2	308053 307657 308352	Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	0.15-0.3 m; CA65 0.5-0.6 m; CA840.05-0.1 m & 1.5-1.6 m;		fill samples: TP954 0.5- 0.6 m; TP957 1.0-1.1 m &	Ridge Road cleanfill	excepted as cleanfill. Material classified as contaminated will be further delinated using	Truck & Trailer Truck & Trailer Truck & Trailer		
28/03/2014 28/03/2014 28/03/2014	G&C G&C	Zone 2 Zone 2	308332 308002 316296	Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	CA85 0.5-0.6 m; CA86 0.05- 0.1 m; CA870.5-0.6 m, 1.0-1.1	1108341; 1218668; 1242186. (Refer to G9 Based for RECA	1 5 1 6 m CA62 0 5 0 6		XRF testing and if results exceed selected landfill criteria then material to be disposed of	Truck & Trailer		
28/03/2014 28/03/2014	G&C G&C	Zone 2 Zone 2	280819 312891	Site	Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	m, 1.5-1.6 m & 2.0-2.1 m; CA88 0.05-0.1 m, 1.0-1.1 m &	Report for BECA results).	1.1 m & 1.5 - 1.6 m; CA89 1.0-1.1 m; CA94 0.5-0.6		as contaminated fill to Red Vale or Hampton Downs.	Truck & Trailer Truck & Trailer		
28/03/2014 28/03/2014	G&C G&C	Zone 2 Zone 2	308057 308005	Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	1.5-1.6 m; CA89 0.05-0.1, 1.0- 1.1 m & 1.6-1.8 m; CA90 0.5-		m. The following two samples were classified			Truck & Trailer Truck & Trailer		
28/03/2014 28/03/2014 28/02/2014	G&C		316298	Site Site	Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	0.6 m & 1.5-1.6 m; CA91 0.05- 0.1 m, 1.0-1.5 m & 1.9-2.0 m;	1	as contaminated fill: CA87 1.5-1.6 m and 2.0-2.1 m.			Truck & Trailer Truck & Trailer		
28/03/2014 28/03/2014 28/03/2014	G&C	Zone 2	317985 312177 313072	Site Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	CA92 0.5-0.6 m & 1.5-1.6 m; CA93 0.05-0.1 m & 1.0-1.1 m;					Truck & Trailer Truck & Trailer Truck & Trailer		
29/03/2014 29/03/2014	G&C G&C	Zone 2 Zone 2	313075 308058	Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	CA94 0.5-0.6 m. (BECA sampling BH464; DH465;					Truck & Trailer Truck & Trailer		
29/03/2014 31/03/2014	G&C G&C	Zone 2	307612 307661	Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	BH466).					Truck & Trailer Truck & Trailer		
31/03/2014 31/03/2014	G&C	Zone 2 Zone 2	307614 313077	Site Site	Zone 2 - Area L Zone 2 - Area L	C6 C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer		
31/03/2014 31/03/2014	G&C	Zone 2 Zone 2	313498 308060	Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer		
31/03/2014 31/03/2014 31/02/2014	G&C	Zone 2	311930 318776	Site Site	Zone 2 - Area L Zone 2 - Area L	L C6	Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	+					Truck & Trailer Truck & Trailer		
31/03/2014 31/03/2014 31/03/2014	G&C	Zone 2 Zone 2 Zone 2	312084 308358 308006	Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	+					Truck & Trailer Truck & Trailer Truck & Trailer		
31/03/2014 31/03/2014 31/03/2014	G&C	Zone 2	308006 316299 308769	Site Site Site	Zone 2 - Area I Zone 2 - Area I Zone 2 - Area I	L C6	Ridge Road Lan Ridge Road Lan Ridge Road Lan	fill Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer Truck & Trailer		
22/03/2014 12/03/2014	G&C G&C	Zone 2 Zone 2	315790 318495	Site Site	Zone 2 - Area L Zone 2 - Area L	L C6	Zone 2 - Area Dump Material to Waste Zone 3 - Area	Stockpile Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Refuse Waste	1			Stockpiled on site as waste	Yes, material from areas classified as cleanfill Yes, material awaiting appropriate disposal	6 Wheeler 6 wheeler	7 <u>8</u> 7 <u>8</u>	
17/03/2014 20/03/2014	G&C	Zone 2 Zone 2	318500	Site Site	Zone 2 - Area I Zone 2 - Area I	L C6	Zone 3 - Area	Cut to Waste	Temporary Works Cut to Waste	Clay - Clean Clean Fill	-			Used temporarily on site	Yes, material from areas classified as cleanfill Yes, material from areas classified as cleanfill	6 wheeler	29 8	
_			_			_												

k Volume (T)	Total Volume (T) 28	Total Volume (m3) (conversion factor of 1.6 (1 t = 1/1.6)) 17.50	Total Volume (m ³) for March	Sample Rate
	28	17.50		
	28	17.50		
	28	17.50		
	28 28	17.50 17.50	513	N/A
	28 28	17.50 17.50		
	28 28	17.50		
	28	17.50		
	28 28 28	17.50 17.50 17.50		
	28	17.50		
	28 28	17.50 17.50		
	28 28	17.50 17.50		
8	64 28	40.00 17.50		
	28 28	17.50 17.50		
	28	17.50 17.50		
	28 28	17.50 17.50		
	28 28	17.50 17.50		
	28	17.50		
	28 18	17.50		Total volume of material displaced from Zone 2B: 2453 m ³ (includes 368
	18	11.25		m ³ displaced in January 2014 and
	18 18	11.25 11.25	1262	823 m ³ displaced in February 2014). Six analysed samples relate to Zone
	18 18	11.25 11.25	-	2B. The current sample rate is one sample per 409 m ³ . This meets the
	18 18	11.25 11.25		minimum sampling requirements of
	18 168	11.25 105.00		one sample per 1000 m ³ for cleanfill.
	184 120	115.00 75.00		
8	80 96	50.00 60.00		
	104	65.00 40.00		
	176	110.00		
	112 216	70.00 135.00		
	28 28	17.50		
	28	17.50		
	18 28	11.25		
	28 28 28	17.50 17.50 17.50		
	28 28 28	17.50 17.50 17.50		
	28	17.50		
	28 28	17.50 17.50		
	28 28	17.50 17.50		Total volume of material displaced from Zone 2D: 1387 m ³ (includes
	28 28	17.50 17.50		761 m ³ displaced in November 2013). Two analysed samples relate
	28 28	17.50 17.50	626	to Zone 2D. The current sample rate
	28 28	17.50 17.50		is one sample per 694 m ³ . This meets the minimum sampling
	28 28	17.50 17.50		requirements of one sample per 1000 m ³ for cleanfill.
	28 28	17.50 17.50		
	28 28	17.50 17.50		
	28 28	17.50 17.50		
	104	65.00		
	104	65.00		
	104	65.00		
	29.5	18.44		
	29.5 29.5 29.5	18.44		
	59	18.44 36.88		
	118 118	73.75 73.75		
	88.5 88.5	55.31 55.31		
	88.5 29.5	55.31 18.44		
	116 58	72.50 36.25		
	59 88.5	36.88 55.31		
_	29.5 26.5	18.44 16.56		
	59	36.88		
	29.5 59	18.44 36.88		
	59 59	36.88 36.88		
	88.5 29.5	55.31 18.44		
	59 59	36.88		Total volume of material displaced from Zone 2L: 2193 m ³ . 41 analysed
	88.5 88.5	55.31 55.31		samples relate to Zone 3E. The
	59	36.88	2193	current sample rate is one sample per 54 m ³ . This meets the minimum
	29.5 29	18.44 18.13		sampling requirements of one sample per 500 m ³ for managed fill and one
	29.5 29.5	18.44 18.44		sample per 1000 m ³ for cleanfill.
	28 29	17.50 18.13		
	29 29.5	18.13 18.44		
	59 59	36.88 36.88		
_	29.5 59	18.44 36.88		
-	59 59	36.88 36.88		
	59 59	36.88 36.88		
	59	36.88 18.13		
	59	36.88 18.13		
		10.13		1
	29 59 88.5	36.88		
	59 88.5 88.5	55.31 55.31		
8	59 88.5 88.5 88.5 56	55.31 55.31 55.31 35.00		
8 8 8	59 88.5 88.5 88.5	55.31 55.31 55.31		

SH16 Causeway Upgrade - March 2014 Materials Tally On Site Materials Movement and Disposal to Landfill

т	ransport	Ordering					From Description												Truck Volum	Total Volum	Total Volume (m3)	Total Volume (m ³)	
	bcontractor	Zone	Docket #	Material Source	From Area	Gate	Non-Import Only	To Area	To Description	Specification Description	Material Type	Sample ID	Lab Report ID	Classification	Final Disposal Facility	Conformance	Truck Type	Load Count	(T)	(T)	(conversion factor of 1.6 (1 t = 1/1.6))	for March	Sample Rate
4/03/2014	G&C	Zone 3	76932	Site	Zone 3 - Area		3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill						Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer			28	17.50		
4/03/2014 4/03/2014	G&C G&C	Zone 3	76928	Site	Zone 3 - Area Zone 3 - Area		3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill	-					Truck & Trailer			28	17.50	-	
4/03/2014	G&C	Zone 3	76936	Site	Zone 3 - Area	E C3	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	1					Truck & Trailer			28	17.50		
5/03/2014 5/03/2014	G&C	Zone 3 Zone 3		Site	Zone 3 - Area Zone 3 - Area		3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill	+					Artic			18	11.25 11.25	-	
5/03/2014	G&C G&C	Zone 3	77056	Site	Zone 3 - Area	E C3	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill Clean Fill	1					Artic			18	11.25		
6/03/2014 6/03/2014	G&C	Zone 3	77088 77104	Site	Zone 3 - Area Zone 3 - Area	E C3	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	1					Artic			18	11.25	-	
6/03/2014	G&C G&C	Zone 3		Site	Zone 3 - Area	E C3	3	Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill	+					Artic			18	11.25	1	Total volume of material displaced
6/03/2014	G&C	Zone 3	77069	Site	Zone 3 - Area	1E C3	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	1					Artic			18	11.25	1	from Zone 3E: 1998 m3 (includes 215
6/03/2014 6/03/2014	G&C G&C	Zone 3 Zone 3	77089	Site	Zone 3 - Area Zone 3 - Area	IE C3	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	-			Ridge Road Landfill as cleanfill	Yes	Artic Artic			18	11.25	-	m ³ displaced in December 2014,
6/03/2014	G&C	Zone 3	77121	Site	Zone 3 - Area	E C3	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	1					Artic			18	11.25	1	660m ³ displaced in January 2014
6/03/2014	G&C	Zone 3 Zone 3	77144	Site	Zone 3 - Area	E C3	3	Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Cut to Waste	CA15. (BECA sampling	1175713. (Refer to G9 Report for BECA	Cleanfill			Truck & Trailer Truck & Trailer Truck & Trailer			28	17.50	825	and 298 m ³ displaced in February 2014). Three analysed samples relate
7/03/2014	G&C	Zone 3		Site	Zone 3 - Area Zone 3 - Area	IE C3	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste Cut to Waste	BH470 0.3 m; 2.6 m)	results)	Ciddilli			Truck & Trailer			28	17.50	020	to Zone 3E. The current sample rate
7/03/2014 14/03/2014	G&C	Zone 3	77169 77720	Site	Zone 3 - Area Zone 3 - Area	E C3	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste	-					Truck & Trailer			28	17.50	-	is one sample per 666 m ³ . This
14/03/2014	G&C G&C	Zone 3	77779	Site	Zone 3 - Area	E		Didge Deed Londfill	Cut to Waste Cut to Waste	Cut to Waste	Cut to Waste Cut to Waste	+					Truck & Trailer			28	17.50	-	meets the minimum sampling
14/03/2014	G&C	Zone 3	77844	Site	Zone 3 - Area	IE		Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste	Cut to Waste	1					Truck & Trailer			28	17.50	1	requirements of one sample per 1000 m ³ for cleanfill.
14/03/2014 14/03/2014	G&C	Zone 3 Zone 3	77839	Site	Zone 3 - Area Zone 3 - Area	IE IF		Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste Cut to Waste Cut to Waste	+					Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer		-	28	17.50	-	III TOI Cleanini.
31/03/2014	G&C	Zone 2	79321	Site	Zone 3 - Area	1E C6	3	Ridge Road Landfill Ridge Road Landfill Zone 2 - Area D Zone 2 - Area D Zone 2 - Area D	Cut to Waste Cut to Waste	Cut to Waste	Clean Fill Clean Fill Clean Fill Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer			28	17.50	1	
31/03/2014	G&C	Zone 2	79281	Site	Zone 3 - Area Zone 3 - Area	E C6	5	Ridge Road Landfill	Cut to Waste	Cut to Waste Cut to Waste	Clean Fill	+					Truck & Trailer			28	17.50	-	
3/03/2014	G&C	Zone 3 Zone 3 Zone 3		Site	Zone 3 - Area Zone 3 - Area Zone 3 - Area	E C3	3	Zone 2 - Area D	Stockpile Stockpile Stockpile Stockpile	Cut to Waste	Clean Fill	+					6 Wheeler 6 Wheeler 6 Wheeler			96	60.00		
5/03/2014 6/03/2014	G&C	Zone 3		Site	Zone 3 - Area Zone 3 - Area	E		Zone 2 - Area D	Stockpile	Cut to Waste Cut to Waste	Clean Fill Clean Fill	1			Used onsite at Zone 2 - Area D	Yes - Able to be used onsite	6 Wheeler 6 Wheeler			80	50.00 125.00	-	
7/03/2014	G&C G&C	Zone 3 Zone 3		Site	Zone 3 - Area	IE E		Zone 2 - Area D Zone 2 - Area D	Stockpile	Cut to Waste	Clean Fill	+					6 Wheeler			80	50.00	1	
8/03/2014	G&C	Zone 3	A	Site	Zone 3 - Area	E		Zone 2 - Area D Zone 2 - Area D Ridge Road Landfill	Stockpile	Cut to Waste	Clean Fill Clean Fill						6 Wheeler	L .		144	90.00	1	
3/03/2014 3/03/2014	G&C	Zone 3 Zone 3	317503	Site	Zone 3 - Area Zone 3 - Area	IMI C6	5	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste Cut to Waste	Clean Fill	+				1	6 Wheeler Truck & Trailer Truck & Trailer	2	-	29	18.13	1	
3/03/2014	G&C	Zone 3	317502	Site	Zone 3 - Area	IM C6	3	Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill Clean Fill	1					Truck & Trailer Truck & Trailer	1		28.5	17.81	1	
4/03/2014 4/03/2014	G&C	Zone 3 Zone 3	322862 317240	Site	Zone 3 - Area Zone 3 - Area	M C6	5	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill	+				1	Truck & Trailer	2	-	29.5	35.63 18.44	1	
4/03/2014	G&C	Zone 3	295696	Site	Zone 3 - Area	M C6	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	+					Truck & Trailer Truck & Trailer	1		29.5	18.44	1	
4/03/2014 6/03/2014	G&C	Zone 3	317505	Site	Zone 3 - Area	M C6	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	1					Truck & Trailer	2		57	35.63 35.63	-	
6/03/2014	G&C G&C	Zone 3	317243 322868	Site	Zone 3 - Area Zone 3 - Area	M C6	3	Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clay - Clean	+					Truck & Trailer Truck & Trailer Truck & Trailer	1		28.5	17.81	1	
18/03/2014	G&C	Zone 3	301832	Site	Zone 3 - Area	M C6	Cut to waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clay - Clean	an an an an an				No - Material around locations CA55 and BH469 are classified as managed fill (refer to Waste Classification Table for details). If material was removed from areas outside the	Truck & Trailer	2	29	58	36.25	1	
18/03/2014 18/03/2014	G&C	Zone 3 Zone 3	312875 303693	Site	Zone 3 - Area Zone 3 - Area		6 Cut to waste - Double Handle 6 Cut to waste - Double Handle	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clay - Clean Clay - Clean						Truck & Trailer Truck & Trailer	2		29	18.13	-	
18/03/2014	G&C	Zone 3	312716	Site	Zone 3 - Area	M C6	6 Cut to waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clay - Clean			CA54, WS675 and BH469 (2.3 m) all cleanfil CA56 is clearfill (Ridge Report for BECA results Read only), CA55 and BH469 (0.75 m) are			Truck & Trailer	2		57	35.63	1	Total volume of material displaced
18/03/2014 18/03/2014	G&C G&C	Zone 3	316711 322890	Site	Zone 3 - Area Zone 3 - Area	M C6	6 Cut to waste - Double Handle 6 Cut to waste - Double Handle	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clay - Clean Clay - Clean				Ridge Road cleanfill WS675 and					29	18.13 54.38	-	from Zone 3M: 1025 m ³ . Six analysed
19/03/2014	G&C		312877	Site	Zone 3 - Area		Cut to waste - Double Handle		Cut to Waste	Cut to Waste	Clay - Clean					above sample locations then compliance would be met.	Truck & Trailer	J		58	36.25		samples relate to Zone 3M. The
19/03/2014 19/03/2014	G&C	Zone 3	312718	Site	Zone 3 - Area Zone 3 - Area		6 Cut to waste - Double Handle 6 Cut to waste - Double Handle	Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clay - Clean	sampling BH469 0.75 m & 2.				be met.	Truck & Trailer			57	35.63 18.44	932	current sample rate is one sample per 171 m ³ . This meets the minimum
19/03/2014	G&C G&C	Zone 3 Zone 3	301835	Site	Zone 3 - Area	M C6	6 Cut to waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clay - Clean Clay - Clean	m; WS675 0.7 m)			are		Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer			58	36.25	1	sampling requirements of one sample
19/03/2014	G&C	Zone 3	316420	Site	Zone 3 - Area	M C6	6 Cut to waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clay - Clean Clean Fill Clean Fill	1		managed fill.			Truck & Trailer			28	17.50	1	per 500 m ³ for mangaed fill and 1000
20/03/2014	G&C G&C	Zone 3 Zone 3	301836	Site	Zone 3 - Area Zone 3 - Area		6 Cut to waste - Double Handle 6 Cut to waste - Double Handle	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	+					Truck & Trailer			85.5	53.44 35.63	-	m ³ for cleanfill.
21/03/2014	G&C	Zone 3	313061	Site	Zone 3 - Area	M C6	6 Cut to Waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	1					Truck & Trailer			88.5	55.31	1	
21/03/2014 21/03/2014	G&C G&C	Zone 3	323298 308758 312723 301838	Site	Zone 3 - Area	M C6		Ridge Road Landfill	Cut to Waste Cut to Waste Cut to Waste Cut to Waste Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill Clean Fill Clean Fill	-					Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer			59	36.88 36.88	-	
21/03/2014	G&C	Zone 3	312723	Site	Zone 3 - Area Zone 3 - Area	M C6	Cut to Waste - Double Handle Cut to Waste - Double Handle Cut to Waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste Cut to Waste	Clean Fill	1					Truck & Trailer			57	35.63 35.63		
21/03/2014	G&C	Zone 3	301838	Site	Zone 3 - Area	M C6	6 Cut to Waste - Double Handle	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	+				CA55 and BH469 exceeded Schedule 10	Truck & Trailer			57	35.63	-	
25/03/2014	G&C	Zone 3	315794	Site	Zone 3 - Area			Zone 2 - Area L Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill				Used onsite at Zone 2 - Area L	Concortanto En volta cabelada to incitedada permitted discharge for nickel (concentration o nickel at CA55 was 119 mg/kg and at BH469 was 150 mg/kg, Auckland S10 permitted discharge limit is 105 mg/kg). Material unable to be reused on site, appears to conform as material was cut to waste		13	8	104	65.00		
5/03/2014	G&C G&C	Zone 3	317242	Site	Zone 3 - Area	N C6	3	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	+					Truck & Trailer	2		57	35.63	1	
5/03/2014	G&C	Zone 3	317242 295697 322864	Site	Zone 3 - Area	N C6	5	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	4					Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer	2	1	57	35.63 35.63 35.63	-	Total volume of material displaced
5/03/2014 5/03/2014	G&C G&C	Zone 3	322864 301810	Site	Zone 3 - Area Zone 3 - Area	N C6	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill	+		Cleanfill conditional (CA3			Truck & Trailer	2		57	35.63	1	from Zone 3N: 649 m ³ . One analysed
6/03/2014	G&C	Zone 3	295699	Site	Zone 3 - Area	N C6	3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste	Clean Fill	7		minor exceedance (0.09		Veg. Bidge Bood has associated and	Truck & Trailer	2		57	35.63]	sample relates to Zone 3N. The
6/03/2014 26/03/2014	G&C G&C	Zone 3 Zone 3	301812 308764	Site	Zone 3 - Area Zone 3 - Area		3	Ridge Road Landfill Ridge Road Landfill	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill Clean Fill	CA35	1182532	mg/kg) of Ridge Road cleanfill criteria for	Ridge Road cleanfill	Yes - Ridge Road has accepted minor exceedences for PAHs.	Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer Truck & Trailer	2		57	35.63 36.88	649	current sample rate is one sample
26/03/2014	G&C	Zone 3	308764 316292	Site	Zone 3 - Area	N C6	5	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	1		Benzo[a]pyrene (BAP)			Truck & Trailer			88.5	55.31		per 649 m ³ . This meets the minimum sampling requirements of one sample
26/03/2014	G&C	Zone 3 Zone 3	318767	Site	Zone 3 - Area Zone 3 - Area	IN C6	5	Ridge Road Landfill Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill	+		(0.027))			Truck & Trailer			88.5	55.31	-	1000 m ³ for cleanfill.
24/03/2014	G&C	Zone 3	287033	Site	Zone 3 - Area	IN C6	3	Zone 2 - Area L	Cut to Waste Cut to Waste	Cut to Waste Cut to Waste	Clean Fill Clean Fill	+					6 wheeler	25	8	200	125.00	1	
28/03/2014	G&C	Zone 3	315540	Site	Zone 3 - Area Zone 3 - Area	N C6	Cut to Waste	Zone 3 - Area N Zone 3 - Area N	Cut to Waste	Cut to Waste	Clean Fill Clean Fill	-					6 wheeler	10	8	80	50.00 40.00	-	
29/03/2014 4/03/2014	G&C G&C	Zone 3 Zone 5	315800	Site	Zone 3 - Area Zone 5 - Area		2 Cut to Waste	Zone 3 - Area N Zone 5 - Area 1	Cut to Waste	Cut to Waste	Clean Fill Cut to Waste					CA29 exceeded Schedule 10 permitted	6 wheeler 6 Wheeler	1	8	8	40.00		Total volume of material displaced
26/03/2014	G&C	Zone 5	307702	Site	Zone 5 - Area	a 3 C12	2	Zone 5 - Area 1	Soil	Earthworks - Type G - Non Structural Fi	ill Topsoil - Clean	CA24; CA25; CA26; CA27; CA28; CA29; CA30 (relevan	t 1178678. Refer to G9	Cleanfill (CA26 very mine exceedance (0.03 mg/kg of Ridge Road cleanfill	0	discharge for nickel (concentration of nickel at CA29 was 133 mg/kg, Auckland S10 permitted discharge limit is 105 mg/kg). All other	6 wheeler	1	10	10	6.25	24	from Zone 5 - Area 5: 24 m ³ . Eight analysed samples relate to Zone 5 - Area 5. The current sample rate is
28/03/2014	G&C	Zone 5	308704	Site	Zone 5 - Area	a 3 C12	2	Zone 5 - Area 1	Soil	Earthworks - Type G - Non Structural Fi	ill Topsoil - Clean	BECA sampling: BH407 0.2 m)	Report for BECA results	 of Ridge Road cleanfill criteria for Benzo[a]pyren (BAP) (0.027 mg/kg). 	Used onsite Zone 5 - Area 1	discharge limit is 105 mg/kg). All other samples were below S10 limits for nickel, based on this it is deemed acceptable for reuse	6 wheeler	1	10	10	6.25	24	Area 5. The current sample rate is one sample per 4 m ³ . This meets the minimum sampling requirements of
29/03/2014	G&C	Zone 5	308705	Site	Zone 5 - Area			Zone 5 - Area 1	Soil	Earthworks - Type G - Non Structural Fi				(JAI) (0.027 HIgNg).		onsite.	6 wheeler	1	10	10	6.25		one sample 1000 m ³ for cleanfill.
1/03/2014	G&C G&C	Zone 5 Zone 5	315514	Site	Zone 5 - Area	17 C11		Gate A Gate A	Spoil	Piling/Excavation spoil Piling/Excavation spoil	Cut to Waste Cut to Waste	+					6 wheeler 6 wheeler	4	8	32	20.00	4	
3/03/2014 5/03/2014	G&C	Zone 5	315772	Site	Zone 5 - Area Zone 5 - Area	17 C11	1	Gate A	Spoil	Piling/Excavation spoil	Cut to Waste	1					6 wheeler	4	8	32	20.00	1	
6/03/2014	G&C	Zone 5 Zone 5	315773	Site	Zone 5 - Area Zone 5 - Area	1/ 011	1	Gate A	Spoil	Piling/Excavation spoil	Cut to Waste Cut to Waste	-					6 wheeler 6 wheeler	3	8	24	15.00	-	
11/03/2014	G&C G&C	Zone 5	315774	Site	Zone 5 - Area Zone 5 - Area	a7 C11	1	Gate A Gate A Gate A	Spoil	Piling/Excavation spoil Piling/Excavation spoil	Cut to Waste Cut to Waste	+		No sample	e available		6 wheeler	2	8	16	10.00	155	N/A
12/03/2014	G&C	Zone 5	315778	Site	Zone 5 - Area	a7 C11	1	Gate A	Spoil	Piling/Excavation spoil	Cut to Waste	1		NO Sample	is availaulit		6 wheeler	4	8	32	20.00	100	IN/A
13/03/2014 14/03/2014	G&C	Zone 5 Zone 5	315779 315780	Site	Zone 5 - Area Zone 5 - Area Zone 5 - Area	17 C11	1	Gate A Gate A	Spoil	Piling/Excavation spoil Piling/Excavation spoil	Cut to Waste Cut to Waste	+					6 wheeler 6 wheeler	2	8	16	10.00	1	
17/03/2014	G&C	Zone 5		Site	Zone 5 - Area	a7 C11	1	Gate A	Spoil	Piling/Excavation spoil	Cut to Waste	1					6 wheeler	3	8	24	15.00	1	
19/03/2014 24/03/2014	G&C G&C	Zone 5	315531 315792	Site	Zone 5 - Area Zone 5 - Area	17 C11	1	Gate A Gate A Gate A	Spoil	Piling/Excavation spoil Piling/Excavation spoil	Cut to Waste Cut to Waste	+					6 wheeler 6 wheeler	2	8	16	10.00	+	
24/03/2014	σαυ	∠une o	315/92	one	LUINE D - Afea	1 U U U U	· · ·	A 9160	opoli	Filling/Excavation spoil	Gui iO VV astê	1					o wheeler	1	8	0	3.00		-



tauro PlotDate: 21February, ź

Appendix C: Quarterly Avian Report

CAUSEWAY ALLIANCE

COASTAL BIRD MONITORING AT THE TE ATATU PONY CLUB AND CAUSEWAY BRIDGE

QUARTERLY REPORT NO. 4 JANUARY TO MARCH 2014



Consulting Biologists - Established 1972 P.O. Box 2828, Auckland 1140, New Zealand www.bioresearches.co.nz **Causeway Alliance**

Coastal Bird Monitoring at the Te Atatu Pony Club and Causeway Bridge

Quarterly Report No. 4 January to March 2014

MARCH 2014

FOR: CAUSEWAY ALLIANCE BY: BIORESEARCHES GROUP LIMITED G L Don, M.Sc (Hons)



<u>CONTENTS</u>

1	INTI	RODUCTION	1
2	MET	THODS	1
	2.1	Te Atatu Pony Club and Construction Yard No. 1	1
	2.2	Causeway Bridge	1
3	RES	SULTS	
	3.1	Te Atatu Pony Club and Construction Yard No. 1	
	3.2	Causeway Bridge Roosting	4
		3.2.1 January 2014	4
		3.2.2 February 2014	4
		3.2.3 March 2014	5
4	CON	NCLUSION	7
5	APP	PENDICES	
	Appe	endix 5.1 Field Sheets	9
	Appe	endix 5.2. Te Atatu Pony Club Coastal Bird Count Summary	
	Appe	endix 5.3. Baseline Coastal Bird Data	15



1 INTRODUCTION

This is the 4th quarterly report on the coastal bird monitoring within the Te Atatu Pony Club adjacent to Construction Yard No. 1 as required by BOI Avian Condition A3 (a).

The associated Condition A3 (b) involves monitoring of roosting behaviour on the southern side of the Causeway Bridge; that has commenced with notes included herein.

2 <u>METHODS</u>

2.1 <u>Te Atatu Pony Club and Construction Yard No. 1</u>

All areas adjacent to the Construction Yard are inspected on foot at high tide. All coastal birds present in the areas shown on Figure 1 are identified and counted.

Counts are undertaken with Nikon Monarch 10 x 42 binoculars and a Vixen Geoma 80-A tripod-mounted spotting scope (60 times zoom). Before each count the air temperature is measured using a quartz digi-thermo (-10 to +110°C) thermometer; wind speed and barometric pressure are measured with a Silva Alba Windwatch or obtained from Metservice and general weather conditions are also recorded. All data are entered on pre-prepared, waterproof record sheets.

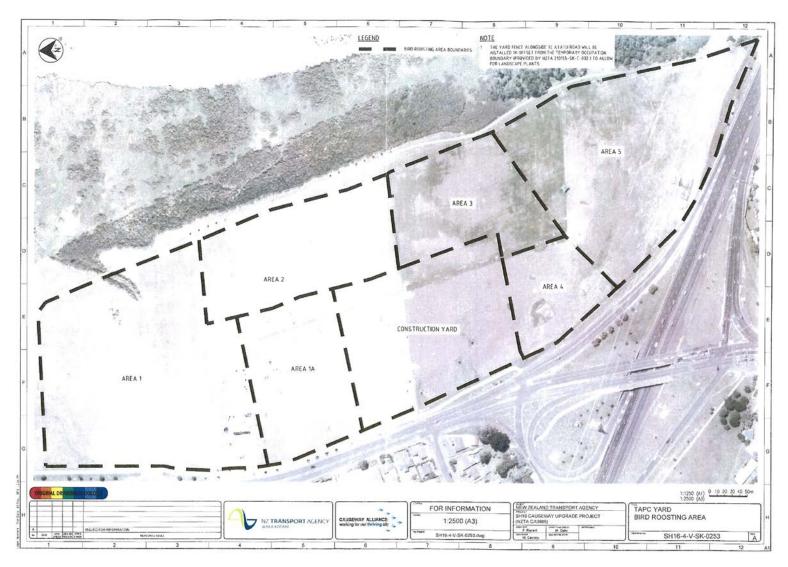
2.2 <u>Causeway Bridge</u>

Observations of coastal birds, but especially shags, using both the constructed roosting rafts and natural features for roosting are made at about half tide and high tide. The former provides information on the pattern of non–high tide resting and roosting. The latter monitors use of the high tide roosting structures (rafts) that are aimed at compensating for the disruption to rock rubble high tide roosting sites beside the Bridge during construction.





FIGURE 1 AREAS REFERRED TO ON THE DATA SHEETS



3 <u>RESULTS</u>

The results for January, February and March 2014 are shown in Appendix 5.1 as the individual field sheets and an overall summary, that will be extended as the surveys progress, is shown in Appendix 5.2. The baseline results for the period 25 March 2010 to 23 March 2011 are reproduced in Appendix 5.3 for convenience.

3.1 <u>Te Atatu Pony Club and Construction Yard No. 1</u>

Comments on the January, February and March 2014 avifauna are as follows -

- 3.1.1. There has been no general displacement of coastal birds as a result of the Construction Yard and general bird behaviour is similar to that observed in the baseline survey.
- 3.1.2. The total number of birds increased steadily through the quarter as birds returned from breeding locations (especially S.I. pied oystercatcher, banded dotterel and wrybill from the South Island and lower North Island).
- 3.1.3. The comparative total numbers are summarised below.

	2011 (max.)	2014
January	47	38
February	296	147
March	306	305
average	216.3	163.3

January and March counts were similar between 2011 and 2014 but the count in February 2014 was lower than in February 2011 mainly due to a later influx of S.I. pied oystercatchers. The quarterly average for 2014 was also significantly lower as a result (chi-squared = 7.39; p<0.01).

3.1.4. In March 2014, 101 banded dotterel were recorded; a maximum of 99 was recorded in March 2011.



- 3.1.5 Wrybill were recorded in February (2) and March (3); they were also recorded in February 2011 and in March 2010 and 2011.
- 3.1.6. NZ dotterel were relatively sparse with a maximum of 7 compared with a maximum of 15 in February 2011 and 20 in March 2010.
- 3.1.7. Seven species of coastal birds were recorded in 2014; additional species recorded in the baseline survey were black-backed gull, red-billed gull and caspian tern.

3.2 Causeway Bridge Roosting

3.2.1 January 2014

Date :	8.1.14
Time :	1415 hours
Tide time :	HW 1356; 3.3 m

- no roosting on rafts.
- no construction activity.

Date :	10.1.14
Time :	1035 hours
Tide time :	LW 0924; 0.9 m

• c.12 shags roosting "beach".

3.2.2 February 2014

 Date :
 13.2.14

 Time :
 1545 hours

 Tide time :
 LW 1323; 1.0 m

• 2 shags roosting "beach"; 12 shags roosting at Whau Creek mouth – eastern side.

Date :	18.2.14
Time :	0820 – 0930 hours
Tide time :	HW 1038; 3.2 m

- 0820 machines operating on SE side of Bridge.
- 0830 roosting on "beach" remnant : 55 pied stilt; 1 variable oystercatcher; 1 caspian tern.
 - no shags feeding under Bridge.





- 0846 48 pied stilt vacated the "beach" and flew towards the north destination unsighted.
- 0855 6 pied stilt vacated "beach" and flew towards north.
 - no shags roosting abutment rocks.
 - no shags (or other birds) roosting on the rafts.
 - 2 pied shags feeding under bridge.
- 0930 no birds on rafts.
 - no shags present.

3.2.3 March 2014

Date :	19.3.14
Time :	0800 – 0930 hours
Tide time :	HW 1010; 3.2 m

- 0820 at "beach" roosting : 3 pied shag; 4 spur-winged plover; 1 white-faced heron; 22 pied stilt.
 - adjacent Bridge feeding : 3 white-fronted tern.
- 0818 "beach" inundated and vacated.
- 0819 1 white-fronted tern feeding near eastern raft.
- 0819 to 0830 1 pied shag feeding adjacent SW abutment.
- 0845 to 0930 no birds roosting on either raft
 no birds roosting on southern abutments.
- 1045 shags roosting on new rubble at the water's edge on the NE side of Bridge.

Comments

Pied shag and white-fronted tern in particular continue to feed beneath the Bridge and immediately adjacent to the SE works area. Most works are still on the northern side. The "beach" is utilised for midtide roosting until it is inundated as previously and shags and pied stilt in particular roosted on the new rubble and fill areas on the northern side.

Use of the rafts was very low but that may change as birds acclimate to their presence. The western raft is probably too far west and too close to the public walkway/cycleway to be attractive for roosting.



Overall there were fewer pied shags present on the southern side at high water than in the 2007 baseline survey i.e. 17 pied shag 12.3.07; 10 pied shag 27.3.07 (high water counts). That may reflect disruption by the works but no works were occurring on the SW abutment and it is likely that the provision of new, attractive roosting areas on the northern side is also a factor.



4 <u>CONCLUSION</u>

High tide roosting in the Pony Club is similar to the baseline in terms of numbers, diversity and behaviour. Oystercatchers, dotterels and wrybill roost immediately adjacent to the Construction Yard fence on occasions so that structure has not had an adverse effect.

Use of the habitat on the southern side of the Causeway Bridge and beneath the Bridge itself for feeding and mid/low tide resting was unchanged from the baseline. The only change appears to be a decrease in the number of pied shags utilising the area, especially at high tide. That may relate to construction activities, the availability of new roosting areas on the northern side or a combination. To date, the use of the rafts for roosting has been very low, however, additional roosting areas, provided by the works on the northern side, are being utilised by a variety of birds including pied shags. For that reason the relatively low use of the rafts is not considered to be a significant issue at this time.

GD\1338 REPORT NO 4 JANUARY TO MARCH 2014 27 MARCH 2014



5 <u>APPENDICES</u>



Appendix 5.1 Field Sheets



CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS CONSTRUCTION YARD NO. 1

DATE: 8.1.14

TIME (hrs): 1330 – 1400

TIDAL STATE : c. HW

AIR TEMP (°C) : 23.1

WIND (knots) : SW to 16 kts

TIDE TIME; HEIGHT : HW 1356; 3.3m

BARO. PRESSURE (hPa): 1007

WEATHER : dry, cloudy.

AREA 1 1A 2 3 4 5 banded dotterel 28 bar-tailed godwit black-backed gull mallard NZ dotterel 7 paradise shelduck pied stilt red-billed gull S.I. pied oystercatcher spur-winged plover 3 variable oystercatcher white-faced heron wrybill

TOTAL NUMBER = 38



CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS CONSTRUCTION YARD NO. 1

DATE: 18.2.14

TIME (hrs) : 1000 - 1030

TIDAL STATE : c. HW AIR TEMP (°C) : 24.9

WIND (knots) : NE to 5 kts

TIDE TIME; HEIGHT : HW 1038; 3.2 m

BARO. PRESSURE (hPa): 1019

WEATHER : dry, sunny with cloud.

	AREA									
	1	1A	2	3	4	5				
banded dotterel		69	1							
bar-tailed godwit										
black-backed gull										
mallard										
NZ dotterel		1								
paradise shelduck										
pied stilt										
red-billed gull										
S.I. pied oystercatcher		48								
spur-winged plover		2			4	1				
variable oystercatcher		3								
white-faced heron	1					15				
wrybill		2								

TOTAL NUMBER = 147



CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS CONSTRUCTION YARD NO. 1

DATE: 19.3.14

TIME (hrs) : 1000 – 1030

TIDAL STATE : c. HW

TIDE TIME; HEIGHT : HW1010; 3.2 m

AIR TEMP (°C) : 22.7

BARO. PRESSURE (hPa): 1024

WIND (knots) : SW to 2 kts

WEATHER : dry, sunny with cloud.

	AREA									
	1	1A	2	3	4	5				
banded dotterel				101						
bar-tailed godwit										
black-backed gull										
mallard										
NZ dotterel										
paradise shelduck										
pied stilt										
red-billed gull										
S.I. pied oystercatcher		185								
spur-winged plover	3			4	1	1				
variable oystercatcher		2								
white-faced heron						5				
wrybill				3						

TOTAL NUMBER = 305



Appendix 5.2. Te Atatu Pony Club Coastal Bird Count Summary



	29.4.13	29.5.13	10.6.13	26.7.13	23.8.13	23.9.13	7.10.13	5.11.13	6.12.13	8.1.14	18.2.14	19.3.14
banded dotterel *	3	42	44	83	2	主	主	主	主	28	70	101
bar-tailed godwit •	_	-	1	兰	兰	兰	坐	兰	兰	兰	兰	兰
black-backed gull	_	_	_	兰	兰	兰	兰	兰	兰	主	兰	兰
mallard	_	_	-	主	兰	主	主	兰	兰	兰	主	兰
NZ dotterel *	5	4	-	4	7	2	4	3	3	7	1	兰
paradise shelduck	_	_	_	主	兰	1	主	兰	2	兰	兰	兰
pied stilt •	_	_	_	主	兰	兰	主	兰	兰	兰	兰	兰
red-billed gull *	_	6	_	兰	兰	兰	兰	兰	兰	兰	兰	兰
S.I. pied oystercatcher •	330	351	323	204	9	1	兰	兰	兰	兰	48	185
spur-winged plover	6	2	3	2	3	4	7	6	5	3	7	9
variable oystercatcher •	6	2	6	9	兰	兰	1	1	1	兰	3	2
white-faced heron	2	-	3	兰	2	主	兰	1	兰	兰	16	5
wrybill *	35	207	210	40	34	兰	兰	兰	兰	主	2	3
TOTAL	387	614	590	342	57	8	12	11	11	38	147	305

threatened species at risk species



Appendix 5.3. Baseline Coastal Bird Data



Common Name	25.3.10	30.3.10	15.4.10	19.4.10	20.4.10	30.4.10	14.5.10	20.5.10	15.6.10	29.6.10	15.7.10	29.7.10	26.8.10	27.8.10
banded dotterel,														
tuturiwhatu *	54	77	2	-	-	89	81	81	75	102	117	110	12	8
black-backed gull, karoro	_	_	_	_	_	_	_	_	_	2	2	_	_	_
caspian tern *	_	_	_	_	_	_	_	_	_	_	_	_	_	—
N.Z. dotterel, tuturiwhatu *	20	14	16	9	7	11	10	6	5	11	3	11	_	3
paradise shelduck, putangitangi	_	_	_	_	_	-	-	_	_	_	-	_	_	_
red-billed gull, tarapunga★	_	_	_	_	_	_	_	_	8	10	-	_	_	_
South Island pied oystercatcher, torea †	_	_	_	121	69	48	_	186	270	329	351	164	46	71
spur-winged plover	_	_	2	2	_	2	5	2	2	6	1	1	2	2
variable oystercatcher, toreapango †	_	_	_	_	_	_	_	_	4	10	7	_	_	2
white-faced heron	_	_	1	_	1	1	_	1	6	_	_	_	1	_
wrybill, ngutuparore *	_	9	_	_	_	I	I	_	_	_	l	_	_	_
Total	74	100	20	132	77	151	96	276	458	474	481	300	61	86

ANNEXURE B – Waterview - Final Te Atatu Pony Club bird data (25.3.10 – 23.3.11)



Common Name	9.9.10	14.9.10	26.10.10	27.10.10	8.11.10	24.11.10	9.12.10	23.12.10	6.1.11	20.1.11	4.2.11	21.2.11	8.3.11	23.3.11
banded dotterel,														
tuturiwhatu *	_	-	_	_	_	_	_	_	31	38	65	68	99	72
black-backed gull,														
karoro	1	1	_	_	—	_	-	_	—	1	—	-	1	-
caspian tern *	_	_	_	_	_	_	_	_	_	_	_	_	_	1
N.Z. dotterel,		_	_	_	_	_	_	_	_	_	_	_		
tuturiwhatu *	_	_	_	_	3	2	_	3	1	4	15	10	10	9
paradise shelduck,														
putangitangi	_	-	2 + 7 J	2 + 7 J	2 + 8 J	_	2 + 4 J	2 + 4 J	6 (a)	_	-	-	-	-
red-billed gull,														
tarapunga *	_	_	_	_	_	_	_	_	_	_	-	-	1	-
South Island pied		_												
oystercatcher, torea	36	5	_	_	-	_	-	_	-	-	-	197	54	221
spur-winged plover	5	3	_	2	1	3	2	_	4	2	7	4	8	-
variable oystercatcher,														
toreapango †	_	-	_	_	—	_	-	_	—	—	—	3	-	2
hite for a house								1		2	F	7	2	1
white-faced heron		-	—	—	-	—	-	1	-	2	5	/	3	
wrybill, ngutuparore *	_	_	_	_	_	_	_	_	_	_	_	7	4	-
										47				
Total	42	9	9	11	14	5	8	10	42		92	296	180	306

★ threatened species ↑ at risk species J juvenile All results at high tide (3.0 – 3.4 m) (a) four offspring - all males

