

# SH16 CAUSEWAY UPGRADE PROJECT



# **Document history and status**

Revision	Date issued	Written By	Reviewed by	Approved by	Revision Status
Α	18.12.2013	K Stevens	R Purdy		For REVIEW
В	19.12.13	K Stevens	M Evans	M Evans	For Approval/Release
С	20.12.13	K Stevens	M Evans	M Evans	FINAL

## **Distribution of copies**

Revision	Purpose	Issued to								
Α	For review	R Purdy								
В	For approval/release	M Evans								
С	FINAL	Auckland Council								

Printed:	14/01/2014 15:38
Last saved:	14/01/2014 15:38
File name:	K:\EN Environment\EN51 Construction\04 Council Reporting\Monthly Report\2013 11 Report\November_2013_Causeway_Upgrade_Project_Monthly_Environmental_Report_Rev_C.docx
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Name of organisation:	Causeway Alliance
Name of project:	SH16 Causeway Upgrade Project
Document version:	Revision C

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#### 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 November 2013.

## 2.0 OVERVIEW of ACTIVITIES UNDERTAKEN

### 2.1 Environmental

Regular contact is continuing with the Auckland Council compliance team.

Submitted the resource consent application for the new Rosebank Domain access improvements (for works outside the designation).

## 2.2 Communications and Stakeholder Management

The quarterly Community Liaison Group (CLG) meeting was held on 13 November to an audience of approximately 50 local residents and stakeholders. This was a joint CLG meeting with the Te Atatu Interchange Upgrade project.

One resident from Waterview complained about a reversing beeper and rock unloading at 6.30am during the week. We have checked to confirm that we are operating within the permitted noise limits and responded to the resident.

## 2.3 Key Stakeholder Milestones

- Produced fortnightly Causeway News project updates to stakeholders, project neighbours and wider community
- Conducting an on-line shared path users' survey with cyclists and pedestrians.
- Iwi blessing for lizard release in Harbourview-Orangihina on the Te Atatu Peninsula.

Positive feedback was received from residents and local stakeholders.

## 2.4 Construction

- Alwyn Ave earthworks completed for access down to Whau River Bridge abutment (south-west side). Mangrove clearance and ground improvements in the marine area underway.
- Whau River Bridge (north-west) ground improvements and revetment rock installation under existing bridge. Installation of temporary staging underway.

- Whau River Bridge (north-east) installation of temporary staging completed and permanent piling will start in early December.
- Rosebank Park Domain barriers established and site clearance continued.
- Causeway (from North Traherne Island in an easterly direction) continue installing drainage layer, wick drains, ground monitoring instrumentation and advancing the coffer dam and working platform in the Coastal Marine Area. Continue installation of the preload fill layer up to full height.
- Causeway (South Traherne Island) earthworks for the working platform, drainage layer continuing (either side of South Traherne Island) and wick drain installation underway.
- Great North Road Interchange (GNRI) (northern side, eastbound from Causeway Bridge) –
  earthworks commenced in preparation for wick drain installation. Continue advancing the
  coffer dam and reclamation.
- GNRI (southern side, westbound towards Causeway Bridge) continue earthworks for raising the area and establishing the shared path (with utilities trench) in the final (permanent) location. Continue ground investigations to establish extent of basalt layer

## 3.0 MEETINGS, INSPECTIONS & EVENTS

- 6 November Met with two Council elected representatives at the Rosebank timber boardwalk site, to discuss a revised fill embankment (reclamation) design and the planning process for approval of the design.
- 14 November Council's earthworks Compliance inspection
- 15 November Council's coastal compliance inspection
- 28 November Council site inspection of coffer dam slump at Causeway Bridge

## 4.0 **ENVIRONMENTAL MONITORING**

#### 4.1 EARTHWORKS COMPLIANCE

Compliance Inspection was completed by Auckland Council officers on the 14 November and recorded a compliance score of 1 (Full Compliance).

## 4.2 CONSTRUCTION NOISE & VIBRATION

There were no Site Specific Noise Management Plans submitted or approved in November.

In accordance with BoI Condition ON.9 the residents at 38 and 40 Alwyn Avenue (who overlook the Whau Bridge) were advised of the proposed acoustic building modification options to their

houses to enable compliance with Board of Inquiry's allowable operational noise limits. The residents have three months to confirm agreement with the proposed modifications.

Residents at 42 and 44 Alwyn Avenue were advised that the predicted noise levels in their houses would remain below the allowable limit and therefore no building modification is required.

## 4.3 AIR QUALITY

No air quality complaints or issues were received during the period, or were recorded on Causeway Alliance Daily Site Reports. A water truck is regularly watering metal construction roads and work sites to minimise dust nuisance.

### 4.4 CONTAMINATED SOIL

A summary of imported material sources and exported material disposal locations, classifications sample methods and quantities at various site locations during November is included in Appendix B.

### 4.5 EROSION AND SEDIMENT CONTROL

There were no site specific Erosion and Sediment Control Plans submitted or approved in November.

#### 4.6 ARCHAEOLOGICAL

An inspection of a recorded midden site in the Rosebank – Patiki section was undertaken on 18 November.

Two site visits with stonemasons to scope the extent of repairs possible to the dry stone wall at GNRI to comply with BoI Condition ARCH.7(c).

#### 4.7 COASTAL MONITORING

Compliance Inspection was completed by Auckland Council officers on the 15 November and recorded a compliance score of 2B (minor non-compliance with consent conditions). This related to works on the eastbound off-ramp site at GNRI where coastal rock salvaged from the existing embankment was being used to line the temporary stability berm. During these operations, fines attached to the rock and transferred during the works were at risk of generating sedimentation to the coastal environment. This was the first score below 1 since coastal works commenced in May 2014.

### 4.8 MARINE MONITORING

No marine monitoring was undertaken during the period.

On 28 and 29 November the leading coffer dam face at the eastern GNRI (north) site slumped toward the main drainage channel near the Causeway Bridge. The slumped area is approximately 30m long and is being regularly monitored by the Alliance. No further movement has been detected through daily survey monitoring. A hydrographical survey will be undertaken to map the slump and an assessment undertaken to determine the cause of the instability and whether there has been any effect on the channel. A further review will be held with Council staff in December.

### 4.9 ECOLOGICAL

Three inspections of Significant and Valued vegetation were undertaken on 20 November at both North and South Traherne Island, Whau River Bridge and at GNRI.

The area of vegetation over-clearance on south-west Traherne Island was replanted with approximately 175 plants in early November, following finalisation of the replanting plan. The plants were sourced from seedlings obtained from Traherrne Island. The new plants are growing well and have been monitored by the Project Botanist.

Monthly assessment of avian roosting locations was undertaken in Zone 3 (Harbourview-Orangihina). The monthly avian count for November was 11 birds compared to the preestablishment baseline count in November 2010 of 14 birds.

Two temporary bird roost sites (floating pontoons) were installed south of Causeway Bridge.

## 5.0 CORRESPONDENCE ON CONSENT CONDITIONS AND PLANS

There were no items in November.

## 6.0 WORKS PROPOSED FOR DECEMBER 2013

Refer Appendix A for Construction Zone Plan.

## **Zone 1 Causeway**

- Continue installing the working platform, preload fill (surcharge), drainage blanket layer, wick drains, coffer dam and reclamation in the coastal area on both sides of the Causeway and Traherne Island.
- Survey coastal transects on the northern side of Causeway.

## Zone 2 / Zone 3 Whau to Rosebank

 Whau River eastbound: complete installation of temporary staging units on the northeast side of Whau River Bridge and commence piling for widening Whau Bridge.
 Continue installing staging and rock protection under Whau River Bridge (north-west abutment).

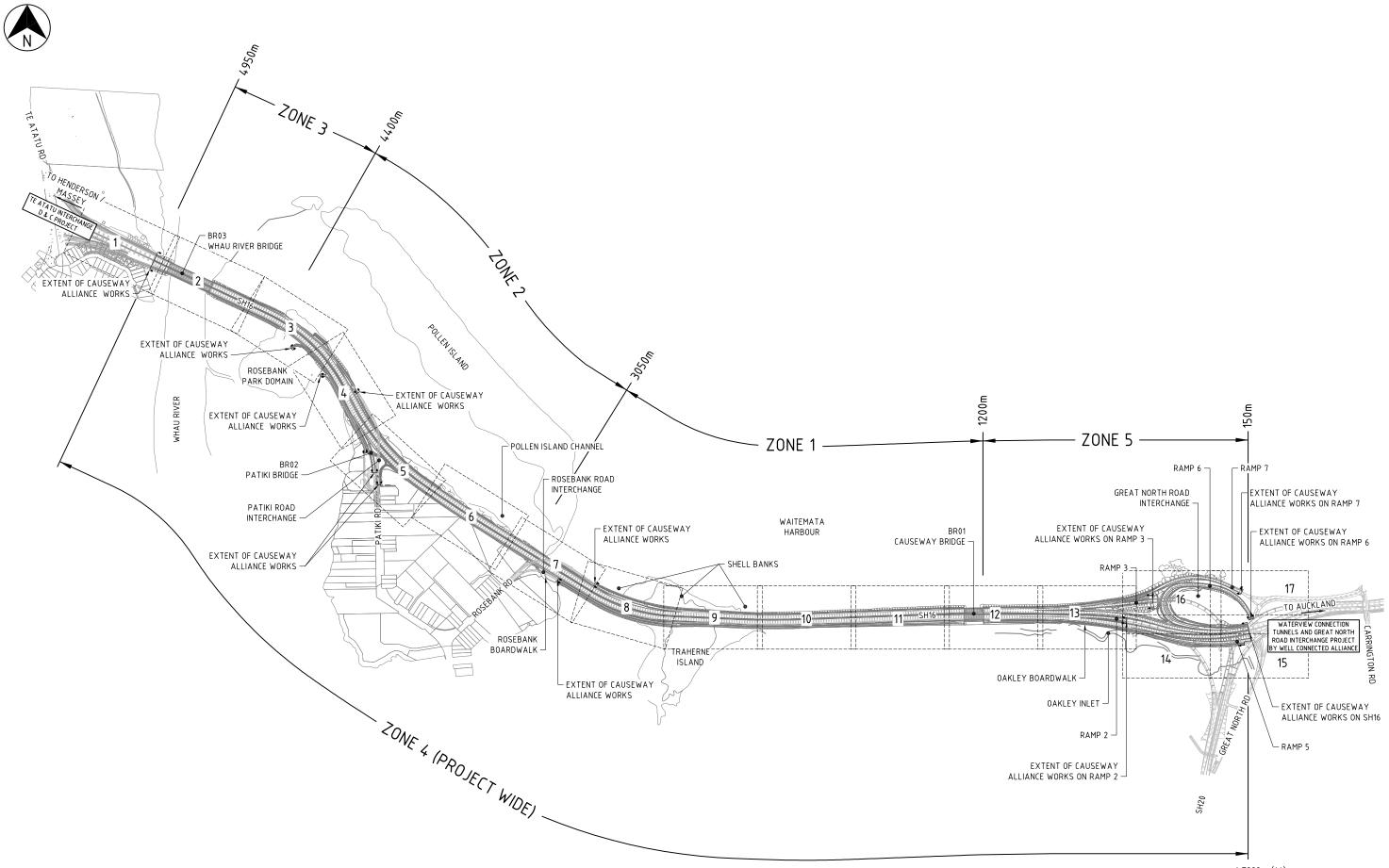
- Patiki/Rosebank eastbound: continue earthworks, establish access and commence piling for retaining wall.
- Whau River westbound: continue ground improvements in marine area (excavate soft material and replace with compacted metal), for south-west abutment below Alwyn Avenue.
- Rosebank/Patiki westbound: establish shared path diversion from Patiki overbridge to Whau Bridge (around Rosebank Park Domain) to relocate cycleway into bus shoulder.

### **Zone 5 GNRI**

- East bound: continue earthworks to widen the embankment in an easterly direction alongside Great North Road east-bound off-ramp. Investigate impact of coffer dam slump and review design by Causeway Bridge. Vegetation clearance adjacent to stone wall within consented footprint.
- Westbound: complete utilities trench and paving for 400m length of permanent cycleway.
   Continue filling embankment area (where cyclists have been moved to old bus shoulder lane).

The environmental focus for December will continue to be on inspections prior to and during vegetation removal and ground clearance to ensure ecological and archaeological stand over requirements are met. The establishment and monitoring of sediment and erosion controls will also continue.

# Appendix A: SH16 Causeway Alliance Construction Zone Plan



**Appendix B: SH16 Causeway Imported and Exported Material Summary** 

Date	Transport Subcontractor	Ordering Zone	Docket#	Material.Source Import Only	From.Area Non-Import Only	Gate	From.Description Non-Import Only	From Chainage	To.Area	Sample ID	Lab Report ID	Classification	Acceptable Disposal Facility	Conformance	To.Description	To Chainage	Specification.Descripti on Fill Only	Material Type	Type of work	Truck Type	Load Count	Truck Volume (T	Total Volume (T	Total Volume (m³) (conversion factor of 1.6 ( = 1/1.6))	t Sample Rate
11/11/2013 11/11/2013	G&C G&C	Area West Area West	68400 68399	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1 1	20 20	20 20	56.25	No sampling undertaken
11/11/2013 11/11/2013 12/11/2013	G&C G&C	Area West Zone 2 Area West	68405 68445 68489	Site Site	West - Gate C3 West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill						Landfill Landfill Landfill		Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill Clean Fill		Artic Truck & Trailer Artic	1 1	20 20 30	20 20 30		, 🕶
12/11/2013 12/11/2013	G&C G&C	Area West Area West	68444	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1 1	20 20	20 20		
12/11/2013 12/11/2013	G&C G&C	Area West Area West	68445 68499 68500	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20 20	20 20		
12/11/2013 12/11/2013	G&C G&C	Area West Area West	68498 68442	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20 20	20 20	150	No sampling undertaken
12/11/2013	G&C G&C	Area West Area West Area West	68540 68444 68489	Site	West - Gate C3 West - Gate C3		Topsoil strip Topsoil strip Topsoil strip		Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Topsoil / Unsuitables Topsoil / Unsuitables Topsoil / Unsuitables		Artic Artic Artic	1 1	20 20 20	20	-	
12/11/2013 12/11/2013 12/11/2013	G&C G&C	Area West Area West	68599 68639	Site Site	West - Gate C3 West - Gate C3 West - Gate C3		Topsoil strip Topsoil strip Topsoil strip		Ridge Road Landfill Ridge Road Landfill Ridge Road Landfill						Landfill Landfill Landfill		Cut to Waste Cut to Waste Cut to Waste	Topsoil / Unsuitables Topsoil / Unsuitables Topsoil / Unsuitables		Artic Artic	1	20	20		
13/11/2013	G&C	Area West	68562	Site Site	West - Gate C3		Topsoil / organics Stockpile		Ridge Road Landfill						Landfill Landfill		Cut to Waste	Clean Fill		Artic	1 1	20	20		
13/11/2013 13/11/2013	G&C G&C	Area West Area West	68605 68556	Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20	20	-	
13/11/2013 13/11/2013	G&C G&C	Area West Area West	68591 68557	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20 20	20 20	112.5	No sampling undertaken
13/11/2013 13/11/2013	G&C G&C	Area West Area West	68594 68536	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20 20	20 20		
13/11/2013 13/11/2013	G&C G&C	Area West Area West	68487 68595	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1	20 20	20 20	-	
14/11/2013 14/11/2013	G&C G&C	Area West Area West	68642 68633	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Artic	1 1	20 20	20	25	No sampling undertaken
15/11/2013 15/11/2013	G&C G&C	Zone 2 Zone 2	68928 68901	Site Site	West - Gate C3 West - Gate C3				Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Truck & Trailer Truck & Trailer	1	30	30 30		
15/11/2013	G&C	Zone 2	12409	Site Site	West - Gate C3	C3	Topsoil / organics Stockpile		Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste	Clean Fill		Truck & Trailer	1	30	30	75	No sampling undertaken
15/11/2013	G&C	Zone 2	68928	Site	West - Gate C3	Li3	Topsoil / organics Stockpile		Ridge Road Landfill						Lationi		Cut to Waste	Clean Fill		Truck & Trailer	1	30	30		
15/11/2013	G&C	Zone 1	68791	Site	Zone 1C	C5			Ridge Road Landfill	CA31; CA32	1182532	Cleanfill/Managed Fill	Greenmount Cleanfill, Ridge Road Managed, Greenmount Managed, Hampton Downs	Yes - Taken to Ridge Road Managed Landfill (C31 had nickel concentrations sightly above Auckland background ranges. 22 had copper, lead and nickel concentrations sightly above Auckland background ranges. Metal concentrations were under the acceptance criteria for all three desenfil sites. CA32 had Benzolglaymen RAP? concentrations that exceeded the Ridge Road cleanfil acceptance criteria, though these were under the Greenmount BigiP Equivalent acceptance criteria.	Landfill		Cut to Waste	Topsoil / Organics		Truck & Trailer			29.5	18.4	Total volume of material disposed 53 m <sup>3</sup> (includes 35 m <sup>3</sup> already disposed of in Orbber). Two samples relate to Zone 10. The current sample rate is one sample per 27 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 500 m <sup>3</sup> for managed fill.
15/11/2013	G&C	Zone 1	68790	Site	Zone 1C	C5			Ridge Road Landfill					Yes - Taken to Ridge Road Managed Landfill. CA31 had nickel	Landfill		Cut to Waste	Topsoil / Organics		Artic			29.5		
													Greenmount Cleanfill, Ridge Road	concentrations slightly above Auckland background ranges. CA 32 had copper, lead and nickel concentrations slightly above									-	-	Total volume of material disposed 90 m <sup>3</sup> (includes 53 m <sup>3</sup> already disposed of in October/November). Two samples
15/11/2013	G&C	Zone 1	68789	Site	Zone 1C	C5			Ridge Road Landfill	CA31; CA32	1182532	Cleanfil/Managed Fill	Managed, Greenmount Managed, Hampton Downs	Auckiand background ranges. Metal concentrations were under the acceptance criteria for all three cleanfill sites. CA32 had Benzo[a]pyrene (BAP) concentrations that exceeded the Ridge Road cleanfill acceptance criteria, though these were under the Greenmount B(a)P Equivalent acceptance criteria.	Landfill		Cut to Waste	Topsoil / Organics		Truck & Trailer			29.5	36.9	relate to Zone 1C. The current sample rate is one sample per 45 m². This meets the minimum sampling requirements of 1 sample per 500 m² for managed fill.
16/11/2013	G&C	Area West	68925	Site	West - Gate C3		Topsoil / organics Stockpile		Ridge Road Landfill	No compline un de del					Landfill Landfill		Cut to Waste	Clean Fill		Artic	1	20		44	
16/11/2013 16/11/2013	G&C G&C	Area West Zone 2	68916 68901	Site Site	West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Artic Truck & Trailer	1	20 30		44	No sampling undertaken
18/11/2013 18/11/2013	G&C G&C	Area West Area West	68981 69034	Site Site	West - Gate C3 West - Gate C3		Topsoil strip Topsoil strip		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	_				Landfill Landfill		Cut to Waste Cut to Waste	Topsoil / Unsuitables Topsoil / Unsuitables		Truck & Trailer Truck & Trailer	1	30 30		75	
18/11/2013 18/11/2013	G&C G&C	Area West Area West	68987 68944	Site Site	West - Gate C3 West - Gate C3		Topsoil strip Topsoil strip		Ridge Road Landfill Ridge Road Landfill	ivo sampling uncertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Topsoil / Unsuitables Topsoil / Unsuitables		Truck & Trailer Truck & Trailer	1	30 30		15	No sampling undertaken
18/11/2013 18/11/2013	G&C G&C	Area West Zone 2	68949 68948	Site Site	West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Truck & Trailer Truck & Trailer	1	30			reo camping andonation
18/11/2013 18/11/2013	G&C	Zone 2	69039 68987	Site	West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste Cut to Waste	Clean Fill Clean Fill		Truck & Trailer Truck & Trailer Truck & Trailer	1	30		112	
18/11/2013 18/11/2013	G&C G&C	Zone 2 Zone 2 Zone 3	68948 69003	Site Site	West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill						Landfill		Cut to Waste Cut to Waste Cut to Waste	Clean Fill Cut to Waste		Truck & Trailer Truck & Trailer Truck & Trailer	1 1	30 30	29	-	No sampling undertaken
19/11/2013 19/11/2013	G&C G&C	Zone 2 Zone 2	69110 69073	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No compline undertaken	_		_		Cut to waste Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Truck & Trailer Truck & Trailer	1	30 30		75	
19/11/2013 19/11/2013	G&C G&C	Zone 2 Zone 2	69100 69082	Site Site	West - Gate C3 West - Gate C3		Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill	No sampling undertaken	-	-	-	-	Landfill Landfill		Cut to Waste Cut to Waste	Clean Fill Clean Fill		Truck & Trailer Truck & Trailer	1	30 30		/5	No sampling undertaken
20/11/2013 20/11/2013	G&C G&C	Zone 3 Zone 3	69166 69141	Site Site	West - Gate C3 West - Gate C3	C3	Topsoil / organics Stockpile Topsoil / organics Stockpile		Ridge Road Landfill Ridge Road Landfill	No sampling undertaken	-	-	-	-	Cut to waste Cut to waste		Cut to Waste Cut to Waste	Cut to Waste Cut to Waste		Truck & Trailer Truck & Trailer	1	30 30	29 29	- 36	No sampling undertaken
22/11/2013	G&C	Zone 3		Site	Alwyn Ave		Cut to waste		Alwyn Ave	No sampling undertaken	-	-	-	-	Cut to waste		Cut to Waste	Clean Fill		6 Wheeler	5	8	40	25	No sampling undertaken
23/11/2013	G&C	Zone 1	69400	Site	Zone 1C	C5			Ridge Road Landfill	CA31; CA32	1182532	Cleanfil/Managed Fill	Greenmount Cleanfill, Ridge Road Managed, Greenmount Managed, Hampton Downs	Yes - Taken to Ridge Road Managed Landfill. CA31 had nickel concentrations slightly above Auckland background ranges. CA 32 had copper, lead and nickel concentrations slightly above Auckland background ranges. Metal concentrations were under the acceptance orteries for all three deemfill sites. CA32 had Benzo(glyrnen (BAP) concentrations that exceeded the Ridge Road clearfill acceptance criteria, though these were under the Greenmount B(a)P Equivalent acceptance criteria.	Landfill		Cut to Waste	Topsoil / Organics		Truck & Trailer			28.8	18	Total volume of material disposed 100 m² (includes 90 m² aiready disposed of in October/November). Two samples relate to Zone 1C. The current sample rate is one sample per 54 m². This meets the minimum sampling requirements of 1 sample per 500 m² for managed fill.
25/11/2013 25/11/2013	G&C G&C	Zone 1 Zone 1	69397 69401	Site Site	Zone 1C Zone 1C	C5 C5			Ridge Road Landfill Ridge Road Landfill					Yes - Taken to Ridge Road Managed Landfill. CA31 had nickel			Cut to Waste Cut to Waste	Topsoil / Organics Topsoil / Organics		Truck & Trailer Truck & Trailer			28.8 28.8	18 18	Total volume of material disposed 234 m <sup>3</sup> (includes 108
25/11/2013 25/11/2013	G&C G&C	Zone 1 Zone 1	69444 69479	Site Site	Zone 1C Zone 1C	C5 C5			Ridge Road Landfill Ridge Road Landfill				Greenmount Cleanfill, Ridge Road	concentrations slightly above Auckland background ranges. CA 32 had copper, lead and nickel concentrations slightly above Auckland background ranges. Metal concentrations were under	Landfill Landfill		Cut to Waste Cut to Waste	Topsoil / Organics Topsoil / Organics		Truck & Trailer Truck & Trailer			28.8 28.8	18 18	m <sup>3</sup> already disposed of in October/November). Two samples relate to Zone 1C. The current sample rate is
25/11/2013 25/11/2013	G&C G&C	Zone 1 Zone 1	69486 69450	Site Site	Zone 1C Zone 1C	C5 C5			Ridge Road Landfill Ridge Road Landfill	CA31; CA32	1182532	Cleanfill/Managed Fill	Managed, Greenmount Managed, Hampton Downs	the acceptance criteria for all three cleanfill sites. CA32 had Benzo[a]pyrene (BAP) concentrations that exceeded the Ridge	Landfill Landfill		Cut to Waste Cut to Waste	Topsoil / Organics Topsoil / Organics		Truck & Trailer Truck & Trailer		-	28.8 28.8	18 18	one sample per 117 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 500 m <sup>3</sup> for
20,11/2010	5.00		23100	Site	2010 10				g- /www.conum					Road cleanfill acceptance criteria, though these were under the Greenmount B(a)P Equivalent acceptance criteria.	Landfill		-31 10 118310			a ridiloi			20.0		sampling requirements of 1 sample per 500 m <sup>-</sup> for managed fill.
25/11/2013 25/11/2013 26/11/2013	G&C G&C	Zone 1 Zone 3	69547	Site	Zone 1C Alwyn Ave	C5	Topsoil / organics Stockpile		Ridge Road Landfill Alwyn Ave	No sampling undertaken	-		-	Kept Onsite	Cut to waste		Cut to Waste Cut to Waste	Topsoil / Organics Cut to Waste		Truck & Trailer 6 wheeler	10		28.8 80	18 50	
26/11/2013 26/11/2013	G&C G&C	Zone 3 Zone 3		Site Site	Alwyn Ave Alwyn Ave		Topsoil / organics Stockpile Topsoil / organics Stockpile		Alwyn Ave	No sampling undertaken No sampling undertaken	-	-	-	Kept Onsite Kept Onsite	Cut to waste Cut to waste		Cut to Waste Cut to Waste	Cut to Waste Cut to Waste		6 wheeler 6 wheeler	6 8		48 64	30 40	No sampling undertaken
27/11/2013	G&C	Zone 3		Site	sar Key / Undercut SW W	/hau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Craite	Stockpile		Cut to Waste	Cut to Waste		6 wheeler	5		40	25	Total volume of material disposed 25 m <sup>3</sup> (prior to 27 October no material had been disposed of). Two samples relate to SIW Whau. The current sample rate is one sample per 13 m <sup>2</sup> . This meets the minimum sampling requirements of 1 sample per 1,000 m <sup>2</sup> for cleanfill.
28/11/2013	G&C	Zone 3		Site	sar Key / Undercut SW V	Vhau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Onsite	Stockpille		Cut to Waste	Cut to Waste		6 wheeler	8		64	40	Total volume of material disposed 65 m² (includes 25 m² already disposed of in November). Two samples relate to SW Whau. The current sample rate is one sample per 83 m². This meets the minimum sampling requirements of 1 sample per 1,000 m² for clearfill.
29/11/2013	G&C	Zone 3		Site	ear Key / Undercut SW Vi	Vhau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Onsite	Stockpile		Cut to Waste	Cut to Waste		6 wheeler	6		48	30	Total volume of material disposed 95 m² (includes 65 m² already disposed of in November). Two samples relate to SNV What. The coment sample rate to one sample per 46 m². This meets the minimum sampling requirements of 1 sample per 1,000 m² for cleanfill.
29/11/2013	G&C	Zone 3		Site	ear Key / Undercut SW W	/hau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Onsite	Stockpile		Cut to Waste	Cut to Waste		6 wheeler	7		56	35	Total volume of material disposed 130 m³ (includes 95 m³ aiready disposed of in November). Two samples relate to SW Whau. The current sample rate is one sample per 65 m³. This meets the minimum sampling requirements of 1 sample per 1,000 m³ for cleanfill.
30/11/2013	G&C	Zone 3		Site	ear Key / Undercut SW W	/hau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Onsite	Stockpile		Cut to Waste	Cut to Waste		6 wheeler	5		40	25	Total volume of material disposed 155 m <sup>3</sup> (includes 130 m <sup>3</sup> aiready disposed of in November). Two samples relate to 50° What. The current sample rate is one sample per 78 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1,000 m <sup>3</sup> for cleanfill.

30/11/2013	G&C	Zone 3		Site	aar Key / Undercut SW Whau	Shear Key / Undercut		Alwyn Ave	CA33; CA34	1182532	Cleanfill	Greenmount Cleanfill, Ridge Road Cleanfill, (Puketutu Island Cleanfill)	Kept Onsite	Stockpile	Cut to Waste	Cut to Waste		6 wheeler	6	48	30	Total volume of material disposed 185 m³ (includes 155 m³ already disposed of in November). Two samples relate to 5 WW Meau. The current sample rate is one sample per 93 m². This meets the minimum sampling requirements of 1 sample per 1,000 m² for clearfilli.
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