

CAUSEWAY ALLIANCE
working for our **thriving** city



SH16 CAUSEWAY UPGRADE PROJECT



Monthly Environmental Report

May 2014

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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 that took place during the month of May 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.
- Received feedback from several drivers regarding the duration of the T2 lane closure at the city-bound Great North Road on-ramp. The closure of the T2 lane is required to allow on-ramp upgrade works to progress. As a result, we will ensure that future signage advising of traffic lane closures indicates their duration to fully inform drivers.
- Received feedback from a driver on the benefits of the orange lane marking tape on SH16 city-bound over Great North Road and a request for the tape to be installed along SH16 to allow easy lane identification, particularly during wet weather. The driver was advised that the tape was a trial product and no longer available to the Alliance - solid white lines to define traffic lanes are currently the most appropriate solution.
- Submitted a draft Open Space Restoration Plan for the Rosebank Park Domain to Auckland Council and to wider stakeholders for review by 30 May. Discussions are continuing with Auckland Council regarding the plan.
- Received submissions from Iwi on 'art in design' concepts and features along the new northwestern cycleway at six locations identified in the SH16 Causeway Upgrade Project Urban Design and Landscape Plan.
- Received letter from the Department of Conservation supporting two embankment build outs adjacent to the new northwestern cycleway.

2.3 Construction

- Whau River Bridge (northern side) – installation of two more bridge spans in May (total of four spans installed to date);

- Whau River Bridge (southern side) - piling for the westbound spans at the south west abutment complete;
- Patiki to Whau (westbound, around Rosebank Park Domain) – earthworks along Rosebank Park Domain batter slope remain on hold following the detection of asbestos, earthworks and preloading for the reclamation of the Coastal Marine Area (CMA) around the raceway channel complete;
- Whau to Rosebank (eastbound) – earthworks and rock revetment continuing. Mechanically Stabilised Earth wall construction complete and filling is occurring west of the wall;
- Causeway (from North Traherne Island eastbound direction) – continue installation of the preload fill layer (surcharge) up to full height and coffer dam/stability – this is at various stages along the embankment. Remedial works required to embankment slumps before further earthworks proceeds in these areas. Temporary removal of preload material from the trial embankment area. Piling at Causeway Bridge approach continuing.
- Causeway (South Traherne Island, westbound) – continue installation of the preload fill layer, commenced vegetation clearance to the east of Traherne Island.
- Great North Road Interchange (GNRI) (northern side, eastbound from Causeway Bridge) – installation of preload adjacent to the GNR eastbound on-ramp commenced, construction of new revetment under Causeway Bridge complete – preload now underway, pile installation underway at Causeway Bridge north-western abutment. Filling further east of Causeway Bridge continuing.
- GNRI (southern side, westbound towards Causeway Bridge) – continue earthworks and utility trenching, timber piling at Oakley Creek basalt transition complete with preload on top of the timber piles proceeding. Installation of steel piles in slip area underway.

3.0 MEETINGS, INSPECTIONS AND EVENTS

1 May and 22 May (2 visits) – Auckland Council’s earthworks compliance inspections.

26 May – Auckland Council’s coastal compliance inspection.

4.0 ENVIRONMENTAL MONITORING

4.1 EARTHWORKS COMPLIANCE

Compliance Inspections were completed by Auckland Council officers on 1 May and 22 and recorded a compliance score of 1 (Full Compliance).

4.2 CONSTRUCTION NOISE AND VIBRATION

No Site Specific Noise Management Plans were submitted and approved in May.

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 May is included in Appendix A.

Asbestos was identified in small pieces of old broken, building materials in the soils excavated for the batter slope around the edge of the Rosebank Domain. The processes in the Contaminated Soils Management Plan have been followed. Further testing is being undertaken to ascertain the extent of the material and a specialist disposal method. The air quality testing around the site has not shown any particles of asbestos present. Liaison with Auckland Council's contaminated soil specialist remains on-going.

4.5 EROSION AND SEDIMENT CONTROL

Three site specific Erosion and Sediment Control Plans were submitted and approved in May for the earthworks at Rosebank Road off-ramp (CESCP#20), south east Traherne Island (CESCP#21) and Rosebank Road to Patiki Road (westbound) (CESCP#22).

4.6 ARCHAEOLOGICAL

An inspection of Rosebank Park Domain asbestos test trenches along the embankment adjacent to the cycleway and the Rosebank Park Domain access way was undertaken on 9 May. No shell or archaeological deposits were encountered.

4.7 COASTAL MONITORING

A coastal compliance inspection was completed by Auckland Council officers on the 26 May and recorded a compliance score of 1.

A remedial works plan for the Oakley Creek slip was agreed with Council in April. Implementation of the remedial works has commenced with timber piling at Oakley Creek basalt transition complete and preload on top of piles proceeding. The installation of steel piles in the slip area is also underway.

The further slips which occurred on the northern side of the Causeway works on 11 March and 2 April continue to be monitored, surveyed and analysed. Pile installation at the Causeway Bridge north-western abutment has commenced to provide stability to this slip area. Increased instrumentation and frequency of monitoring along the northern side of the Causeway also forms part of the mitigation plan to provide additional data for early intervention.

4.8 MARINE MONITORING

The winter 2014 marine benthic monitoring will be undertaken during June/July/August 2014.

4.9 ECOLOGICAL

An inspection of Significant and Valued vegetation was undertaken on 8 and 22 May at Traherne Island (Zone 1), Patiki Road and Rosebank Park Domain (Zone 2) and Whau River Bridge (Zone 3) and on 22 May at GNRI (Zone 5).

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 May 2014 was 397 birds compared to the pre-establishment baseline count in May 2010 (276 birds). One coastal bird was observed using the temporary bird roost sites (floating pontoons) installed south of Causeway Bridge, which is consistent with the low level of current adjacent construction activity.

5.0 CORRESPONDENCE ON CONSENT CONDITIONS AND PLANS

Minor change application, to change the area of reclamation and permanent occupation in the CMA in the north-western corner of the Waterview Estuary for the Rosebank Fill Embankment, approved by Auckland Council on 15 May.

6.0 WORKS PROPOSED FOR JUNE, JULY AND AUGUST 2014

Refer Appendix B for Construction Zone Plan.

Zone 1 Causeway

- Eastbound: Continue and complete installing the Continuous Flight Auger piles at Causeway Bridge approach/transitions, working platform, preload fill (surcharge).
- Westbound: Continue and complete vegetation clearance to the east of Traherne Island. Divert cycleway onto closed bus lane westbound from Causeway Bridge to Traherne Island South, complete earthworks and preload in Traherne Island South (and towards Rosebank Road off-ramp). Earthworks and culvert works under Rosebank Road westbound off-ramp.

Zone 2 / Zone 3 Whau to Rosebank

- Eastbound: Continue installing new Whau Bridge spans (four left to install). Continue earthworks in this area and complete earthworks on east-bound shoulder east of Whau River Bridge, including treatment swale.
- Westbound: Continue temporary and permanent piling for Whau Bridge widening, commence Whau River Bridge south-west abutment crossheads. Continue and complete earthworks between Whau River Bridge and Patiki Road (including works on Rosebank Park Domain batter slope). Commence works for Patiki Road on-ramp widening/underpass, including temporary diversion of the existing Patiki on-ramp to allow access for piling of the new on-ramp).

Zone 5 GNRI

- East bound: Continue earthworks for preload in an easterly direction alongside Great North Road east-bound off-ramp. Commence works in GNRI Areas 6 and 10.
- Westbound: Commence piling to stabilise Oakley Creek slip area and continue embankment filling. Commencement of the Oakley Creek boardwalk piling.

The environmental focus for June will focus on further assessment of the asbestos found in the Rosebank Park Domain embankment. We will continue to focus on inspections prior to and during vegetation removal, monitoring material movements 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.

APPENDIX A – SH16 CAUSEWAY UPGRADE PROJECT IMPORTED AND EXPORTED MATERIALS SUMMARY

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

Date	Transport Subcontractor	Ordering Zone	Docket #	Material Source	From Area	From Description Non-Import Only	Activity By Cost.Code	To Area	To Description	Specification Description	Material Type	Sample ID	Lab Report ID	Classification	Final Disposal Facility	Conformance	Truck Type	Load Count	Truck Volume (T)	Total Volume (T)	Total Volume (m ³) (conversion factor of 1.6 (1 t = 1/1.6))	Total Volume (m ³) for May	Sample Rate
29/05/2014	G&C	Zone 1	1981	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil	BECA samples WS653 (1.2 m; 4.8 m); WS654 (0.6-0.8 m; 4-5 m)	Refer to G9 Report	Cleanfill	Ridge Road Landfill	Yes	Artic			16.02	10	125	
29/05/2014	G&C	Zone 1	2019	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	2059	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	1965	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	1999	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	2045	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	1969	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	2004	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
29/05/2014	G&C	Zone 1	2050	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
30/05/2014	G&C	Zone 1	2096	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
30/05/2014	G&C	Zone 1	2095	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
30/05/2014	G&C	Zone 1	2097	Site	Zone 1 - Area D	CFA Piling Spoil - Marine Mud	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Pile Spoil												
15/05/2014	G&C	Zone 1	GC 335278	Site	Zone 1 - Area D	strippings	Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste	CA71	1226072	Cleanfill conditional (CA71 recorded minor PAH detections including minor exceedence (0.04 mg/kg) of Ridge Road cleanfill criteria for benzo[a]pyrene (BAP) (0.027 mg/kg))	Stockpiled onsite at the Taupuni Yard	Yes	6 Wheeler	6	10	60	37.5	213	Total volume of material displaced from Zone 1D (shallow material): 213 m ³ . One analysed sample relates to Zone 1D (shallow material). The current sample rate is one sample per 213 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill.
15/05/2014	G&C	Zone 1	GC 308743	Site	Zone 1 - Area D		Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste												
16/05/2014	G&C	Zone 1	GC 308486	Site	Zone 1 - Area D		Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste												
16/05/2014	G&C	Zone 1	GC 335279	Site	Zone 1 - Area D		Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste												
26/05/2014	G&C	Zone 1	GC 335289	Site	Zone 1 - Area E	strippings	Cut To Waste (Single Handle)	Taupuni Yard	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable	BECA sample - BH407	Refer to G9 Report	Cleanfill (BECA had classed BH407 as managed fill but on review determined to be cleanfill)	Stockpiled onsite at the Taupuni Yard	Yes	6 Wheeler	8	10	80	50	100	Total volume of material displaced from Zone 1F: 100 m ³ . One analysed sample relates to Zone 1E. The current sample rate is one sample per 100 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill.
26/05/2014	G&C	Zone 1	GC 334645	Site	Zone 1 - Area E	strippings	Cut To Waste (Single Handle)	Taupuni Yard	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
28/05/2014	G&C	Zone 1	1935	Site	Zone 1 - Area F	Topsoli	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable	CA21; CA22; CA23; CA43, CA44, (BECA samples: WS430, WS666; W669A)	1176303; 1215417, (Refer to G9 Report for BECA results)	CA21, CA23, CA44, WS430 and WS669A all cleanfill (BECA had classed WS430, WS666 and WS669A as managed fill but on review determined to be acceptable for Ridge Road cleanfill). CA22 cleanfill conditional. CA43 managed fill.	Ridge Road Landfill	Two minor exceedences for PAHs (CA22 and CA43 exceeded Schedule 10 permitted discharge for lead (concentration of lead at CA22 was 270 mg/kg and at CA43 was 400 mg/kg, Auckland S10 permitted discharge limit is 250 mg/kg) - material unable to be reused onsite. Material at CA22 below Ridge Road cleanfill criteria for lead, however CA43 was above and required managed fill disposal. CA22, WS430, WS666 and WS669A had minor PAH detections - Ridge Road cleanfill has accepted minor	Artic			19.84	12.4	325	Total volume of material displaced from Zone 1F: 1365 m ³ (includes 1040 m ³ already displaced in October 2013). Eight analysed samples relate to Zone 1F. The current sample rate is one sample per 171 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill and 500 m ³ for managed fill.
14/05/2014	G&C	Zone 1	GC 334629	Site	Zone 1 - Area F	Insitu Clay / Unsuitable - Topsoli - Chg 1900	Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable												
16/05/2014	G&C	Zone 1	GC 334633	Site	Zone 1 - Area F		Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste												
21/05/2014	G&C	Zone 1	GC 310862	Site	Zone 1 - Area F		Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Cut to Waste												
22/05/2014	G&C	Zone 1	GC 333859	Site	Zone 1 - Area F		Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
22/05/2014	G&C	Zone 1	GC 335286	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
23/05/2014	G&C	Zone 1	GC 335287	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
23/05/2014	G&C	Zone 1	GC 334642	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
26/05/2014	G&C	Zone 1	GC 308485	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
26/05/2014	G&C	Zone 1	GC 333862	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
27/05/2014	G&C	Zone 1	GC 333863	Site	Zone 1 - Area F	strippings	Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli - Clean but Unsuitable												
29/05/2014	G&C	Zone 1	GC 335292	Site	Zone 1 - Area F	Topsoli	Cut To Waste (Single Handle)	Taupuni Yard	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable						CA66; CA76	1226072	Cleanfill conditional (CA66 recorded a minor TPH C7 - C9 detection (18 mg/kg)).	Ridge Road Landfill	Yes - Ridge Road cleanfill able to accept up to 120 mg/kg TPH C7 - C9.		
8/05/2014	G&C	Zone 2	12488	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83028	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83046	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83049	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83096	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83107	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
8/05/2014	G&C	Zone 2	83114	Site	Zone 2 - Area D	Topsoli strip	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but unsuitable												
6/05/2014	G&C	Zone 2	308477	Site	Zone 2 - Area D	Cut to waste	Cut To Stockpile	Zone 2 - Area D	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
21/05/2014	G&C	Zone 2	333858	Site	Zone 2 - Area D	Cut to waste	Cut To Stockpile	Zone 2 - Area D	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
22/05/2014	G&C	Zone 2	308491	Site	Zone 2 - Area D	Cut to waste	Cut To Stockpile	Zone 2 - Area D	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
23/05/2014	G&C	Zone 2	333860	Site	Zone 2 - Area D	Cut to waste	Cut To Stockpile	Zone 2 - Area D	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
29/05/2014	G&C	Zone 2	335293	Site	Zone 2 - Area J	Patiki onramp temp diversion pavement cut	Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli & Clay - Clean but Unsuitable	CA18; CA19; CA20; CA75, (BECA samples: BH459 (0.9 m); DH460)	1176303; 1226072, (Refer to G9 Report for BECA results).	Cleanfill	Stockpiled onsite at the Taupuni Yard	Yes	6 Wheeler	4	10	40	25	37.5	Total volume of material displaced from Zone 2J: 83 m ³ (includes 45 m ³ displaced in April 2014). Six analysed samples relate to Zone 2J. The current sample rate is one sample per 14 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill.
30/05/2014	G&C	Zone 2	334648	Site	Zone 2 - Area J	Patiki onramp temp diversion pavement cut	Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
30/05/2014	G&C	Zone 2	335296	Site	Zone 2 - Area J	Patiki onramp temp diversion pavement cut	Cut To Stockpile	Taupuni Yard	General Unsuitable	Cut to Waste	Topsoli & Clay - Clean but Unsuitable	CA15, (BECA samples BH470 (0.3 m; 2.6 m))	1175713, (Refer to G9 Report for BECA results)	Cleanfill	Ridge Road Landfill	Yes	6 Wheeler	1	10	10	6.3	403.4	Total volume of material displaced from Zone 3E: 2623 m ³ (includes 215 m ³ displaced in December 2014, 660m ³ displaced in January 2014, 298 m ³ displaced in February 2014, 825 m ³ displaced in March 2014 and 222 m ³ displaced in April 2014). Three analysed samples relate to Zone 3E. The current sample rate is one sample per 874 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill.
1/05/2014	G&C	Zone 3	82388	Site	Zone 3 - Area E		Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill												
1/05/2014	G&C	Zone 3	82410	Site	Zone 3 - Area E		Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill												
1/05/2014	G&C	Zone 3	82424	Site	Zone 3 - Area E		Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Clean Fill												
1/05/2014	G&C	Zone 3	82372	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
1/05/2014	G&C	Zone 3	82396	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
1/05/2014	G&C	Zone 3	82420	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
1/05/2014	G&C	Zone 3	82379	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
1/05/2014	G&C	Zone 3	82422	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
2/05/2014	G&C	Zone 3	82439	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
2/05/2014	G&C	Zone 3	82479	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
2/05/2014	G&C	Zone 3	82486	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
2/05/2014	G&C	Zone 3	82490	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
2/05/2014	G&C	Zone 3	82493	Site	Zone 3 - Area E	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli - Clean but Unsuitable												
5/05/2014	G&C	Zone 3	82678	Site	Zone 3 - Area E		Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste												
5/05/2014	G&C	Zone 3	82669	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
5/05/2014	G&C	Zone 3	82675	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
6/05/2014	G&C	Zone 3	82768	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
6/05/2014	G&C	Zone 3	82804	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
7/05/2014	G&C	Zone 3	82909	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
7/05/2014	G&C	Zone 3	82916	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
7/05/2014	G&C	Zone 3	82928	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
7/05/2014	G&C	Zone 3	82942	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												
7/05/2014	G&C	Zone 3	82975	Site	Zone 3 - Area E	Topsoli stripping from patiki off ramp (stu's work)	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Topsoli & Clay - Clean but Unsuitable												

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

Date	Transport Subcontractor	Ordering Zone	Docket #	Material Source	From Area	From Description Non-Import Only	Activity By Cost.Code	To Area	To Description	Specification Description	Material Type	Sample ID	Lab Report ID	Classification	Final Disposal Facility	Conformance	Truck Type	Load Count	Truck Volume (T)	Total Volume (T)	Total Volume (m ³) (conversion factor of 1.6 (1 t = 1/1.6))	Total Volume (m ³) for May	Sample Rate
14/05/2014	G&C	Zone 2	308484	Site	Zone 3 - Area N	Cut Rocks from VCC platform	Cut To Stockpile	Zone 3 - Area M	Stockpile	Cut to Waste	Topsoil & Clay - Clean but Unsuitable	CA35	1182532	Cleanfill conditional (Minor exceedence (0.09 mg/kg) of Ridge Road cleanfill criteria for Benzo[a]pyrene (BAP) (0.027 mg/kg))	Stockpiled onsite at Zone 3 - Area M	Yes	6 Wheeler	4	8	32	20	20	Total volume of material displaced from Zone 3N: 669 m ³ . (Includes 649 m ³ already displaced in March 2014). One analysed sample relates to Zone 3N. The current sample rate is one sample per 669 m ³ . This meets the minimum sampling requirements of one sample 1000 m ³ for cleanfill
8/05/2014	G&C	Zone 3	334074	Site	Zone 3 - Area O		Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	What Specification?	Topsoil & Clay - Clean but Unsuitable	CA34; CA35 (Zone 3 - Area O covers Whau River Bridge therefore Zone 3 - Areas N and P are included for material relating to or near the surface)	1182532	Cleanfill conditional (CA35 minor exceedence (0.09 mg/kg) of Ridge Road cleanfill criteria for Benzo[a]pyrene (BAP) (0.027 mg/kg)). CA34 is classed as cleanfill.	Ridge Road	Yes	Truck & Trailer	2		49	30.6	119.1	
8/05/2014	G&C	Zone 3	335444	Site	Zone 3 - Area O		Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	What Specification?	Topsoil & Clay - Clean but Unsuitable				Ridge Road	Yes	Truck & Trailer	1		29.5	18.4		
7/05/2014	G&C	Zone 3	307739	Site	Zone 3 - Area O		Cut To Stockpile	Taupuni Yard	General Unsuitable	What Specification?	Topsoil & Clay - Clean but Unsuitable				Stockpiled onsite at the Taupuni Yard	Yes	6 wheeler	2	8	16	10		
7/05/2014	G&C	Zone 3	307740	Site	Zone 3 - Area O		Cut To Stockpile	Taupuni Yard	General Unsuitable	What Specification?	Topsoil & Clay - Clean but Unsuitable				Stockpiled onsite at the Taupuni Yard	Yes	6 wheeler	11	8	88	55		
8/05/2014	G&C	Zone 3	310707	Site	Zone 3 - Area O		Cut To Stockpile	Taupuni Yard	General Unsuitable	What Specification?	Topsoil & Clay - Clean but Unsuitable						6 wheeler	1	8	8	5		
3/05/2014	G&C	Zone 3	334618	Site	Zone 3 - Area P	cut for working platform	Cut To Stockpile	Alwyn Ave	Stockpile	Cut to Waste	Clay - Clean but Unsuitable	CA34	1182532	Cleanfill	Stockpiled onsite at Alwyn Ave	Yes	6 Wheeler	8	8	64	40	125	Total volume of material displaced from Zone 3P: 405 m ³ (Includes 280 m ³ already displaced in December 2013). One analysed sample relates to Zone 3P. The current sample rate is one sample per 125 m ³ . This meets the minimum sampling requirements of one sample per 1000 m ³ for cleanfill.
7/05/2014	G&C	Zone 3	333960	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	1	8	8	5		
8/05/2014	G&C	Zone 3	309303	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	1	8	8	5		
9/05/2014	G&C	Zone 3	334328	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	1	8	8	5		
15/05/2014	G&C	Zone 3	333535	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	2	8	16	10		
15/05/2014	G&C	Zone 3	317324	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	1	8	8	5		
15/05/2014	G&C	Zone 3	309607	Site	Zone 3 - Area P	Insitu Clay / Unsuitables -	Cut To Waste (Single Handle)	Ridge Road Landfill	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Ridge Road Landfill	Yes	6 Wheeler	1	8	8	5		
19/05/2014	G&C	Zone 3	335280	Site	Zone 3 - Area P		Cut To Waste (Single Handle)	Taupuni Yard	General Unsuitable	Cut to Waste	Clay - Clean but Unsuitable				Stockpiled onsite at the Taupuni Yard	Yes	6 Wheeler	6	8	48	30		
8/05/2014	G&C	Zone 3	334623	Site	Zone 3 - Area P		Cut To Stockpile	Zone 3 - Area P	Cut to Waste	Cut to Waste	Clay - Managed				Stockpiled onsite at Zone 3 - Area P	Yes	6 Wheeler	4	8	32	20		
1/05/2014	G&C	Zone 5	317129	Site	Zone 5 - Area 2	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste				CA05 (BECA samples BH403 (0.5 m, 3.0 m); BH406; WS651; WS652)	1162411. (Refer to G9 Report for BECA results).	Cleanfill	Ridge Road Landfill	Yes	Artic	1		
1/05/2014	G&C	Zone 5	335344	Site	Zone 5 - Area 2	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste	Artic	1	20						20	12.5		
1/05/2014	G&C	Zone 5	334069	Site	Zone 5 - Area 2	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste	Truck & Trailer	2	30						60	37.5		
2/05/2014	G&C	Zone 5	311989	Site	Zone 5 - Area 2	Cut to waste	Cut To Waste (Single Handle)	Ridge Road Landfill	Cut to Waste	Cut to Waste	Cut to Waste	Truck & Trailer	1	30						30	18.75		

**APPENDIX B – SH16 CAUSEWAY UPGRADE PROJECT CONSTRUCTION
ZONES PLAN**

