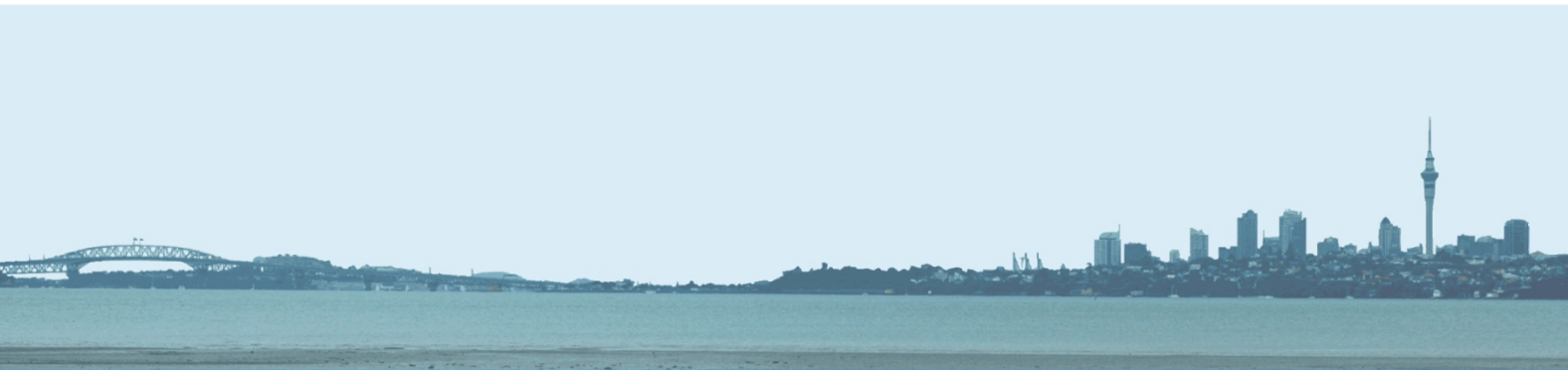


**CAUSEWAY ALLIANCE**  
working for our **thriving** city



## SH16 CAUSEWAY UPGRADE PROJECT



Monthly Environmental Report  
December 2013

## Document history and status

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## **1.0 INTRODUCTION**

### **1.1 PURPOSE OF THE REPORT**

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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 December 2013.

## **2.0 OVERVIEW of ACTIVITIES UNDERTAKEN**

### **2.1 Environmental**

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Regular contact is continuing with the Auckland Council compliance team.

### **2.2 Communications and Stakeholder Management**

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- Produced fortnightly Causeway News project updates to stakeholders, project neighbours and wider community.
- Provided media releases on project progress relating to wick drains, drainage blanket, and orange temporary lane marking tape
- Distributed project update to Te Atatu residents via the 'Te Atatu Views' Community News Magazine, and to the Rosebank business community

Positive feedback has been received from residents and stakeholders.

### **2.3 Construction**

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- Alwyn Ave - mangrove clearance and ground improvements continued in the marine area, preparing access for constructing temporary staging for widening the southern side of the Whau River Bridge.
- Whau River Bridge (north-west) – ground improvements and revetment rock installation under existing bridge. Installation of temporary staging underway.
- Whau River Bridge (north-east) - permanent bridge piling commenced.
- Rosebank Park Domain – barriers established to relocate shared path in January and site clearance continued.
- Causeway (from North Traherne Island in an easterly direction) – works temporarily stopped while hydrographic and geotechnical investigations take place at two localised slumps of the coffer dam (opposite the open channel). Continue installation of the preload fill layer up to full height opposite Traherne Island.

- Causeway (from west of the Causeway Bridge, northern side) - advance the coffer dam and working platform in the Coastal Marine Area in a westerly direction.
- Causeway (South Traherne Island) – earthworks for the working platform, drainage layer (either side of South Traherne Island) and wick drain installation (western towards Rosebank Road off-ramp) continuing.
- Great North Road Interchange (GNRI) (northern side, eastbound from Causeway Bridge) – works temporarily stopped while hydrographic and geotechnical investigations take place at slump of the working platform embankment (opposite Causeway Bridge channel).
- GNRI (southern side, westbound towards Causeway Bridge) – continue earthworks for raising the area and establishing approximately 600m of shared path in the final (permanent) location.

### **3.0 MEETINGS, INSPECTIONS & EVENTS**

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2 December – meeting to scope and programme preparation of the Rosebank Domain Open Space Restoration Plan.

12 December – Council’s earthworks compliance inspection

13 December – Council meeting to discuss slumping of the working platform at the eastern side of the Causeway Bridge and localised slumping at two locations along the Causeway (west of Causeway Bridge).

13 December – meeting with Council’s Archaeologist at the historic stone wall at GNRI

16 December – Council’s coastal compliance inspection

### **4.0 ENVIRONMENTAL MONITORING**

#### **4.1 EARTHWORKS COMPLIANCE**

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Compliance Inspection was completed by Auckland Council officers on the 12 December and recorded a compliance score of 1 (Full Compliance).

#### **4.2 CONSTRUCTION NOISE & VIBRATION**

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

#### **4.3 AIR QUALITY**

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

#### **4.4 CONTAMINATED SOIL**

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

#### **4.5 EROSION AND SEDIMENT CONTROL**

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Erosion and Sediment Control Plan #10 was approved on 19 December, as part of the Rosebank Park Domain Access Improvements consents.

#### **4.6 ARCHAEOLOGICAL**

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An inspection of the historic stone wall at GNRI was undertaken on 13 December by Council's Archaeologist to confirm the extent of vegetation removal, repairs to the dry stone wall and reuse of the surplus stones from the demolished wall, to comply with BoI Condition ARCH.7.

#### **4.7 COASTAL MONITORING**

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Compliance Inspection was completed by Auckland Council officers on the 16 December and recorded a compliance score of 1.

Intertidal coastal profile surveys along the northern side of the Causeway were provided on 19 December, in compliance with BOI Condition C.16. The transects show minimal change in level beyond the construction works.

The two coffer dam slumps on the northern side of the Causeway embankment have been stabilised and no further movement has been observed.

A review of the coastal processes in the Causeway channel opposite the embankment slump on the eastern side of the Causeway Bridge indicates there are no effects on coastal processes caused by the slump.

#### **4.8 MARINE MONITORING**

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No marine benthic monitoring was undertaken during the period.

#### **4.9 ECOLOGICAL**

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Inspections of Significant and Valued vegetation were undertaken on 6 and 17 December at North and South Traherne Island, Whau River Bridge (Zone 3) and at GNRI (Zone 5).

Monthly assessment of avian roosting locations was undertaken in Zone 3 (Harbourview-Orangihina). The monthly avian count for December 2013 was 11 birds compared to the pre-establishment baseline count in December 2010 of 10 birds. Coastal birds were observed to use the temporary bird roost sites (floating pontoons) installed south of Causeway Bridge.

The Quarterly Avian report # 3 (October – December 2013) is attached as Appendix C.

## **5.0 CORRESPONDENCE ON CONSENT CONDITIONS AND PLANS**

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Resource consent for the new Rosebank Park Domain Access Improvements was granted on 19 December.

Letter received from Council's Archaeologist dated 19 December confirming that from a heritage preservation perspective, it is best to leave the historic Stone Wall as is and to continue with proposed vegetation removal from the wall (required by BoI Condition ARCH.7(c) and the Stone Wall 'Repair Specification' document (v.1.1)).

## **6.0 WORKS PROPOSED FOR JANUARY 2014**

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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.

### **Zone 2 / Zone 3 Whau to Rosebank**

- Whau River eastbound: commence permanent 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 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. Complete vegetation removal between Patiki Road and Whau Bridge. Establish Construction Yard 2 in Rosebank Park Domain.

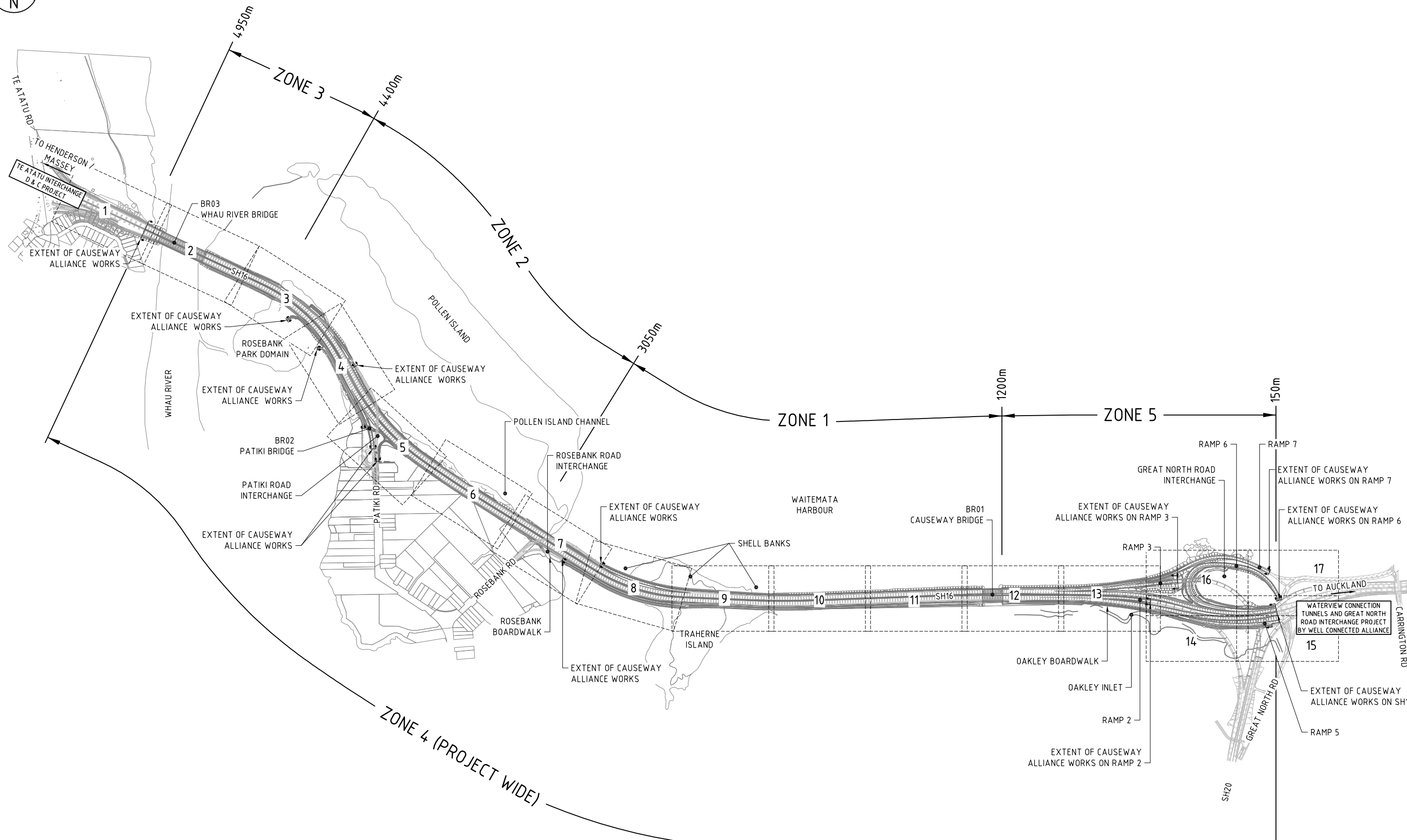
### **Zone 5 GNRI**

- East bound: continue earthworks to widen the embankment in an easterly direction alongside Great North Road east-bound off-ramp (towards Stone wall). Review remedial process for embankment slump at eastern side of Causeway Bridge.
- Westbound: divert temporary cycleway location onto new 600m length of permanent cycleway. Continue filling new widened embankment area and at on-ramp.

The environmental focus for January 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**

**SH16 Causeway Upgrade - December 2013 Materials Tally**  
**On Site Materials Movement and Disposal to Landfill**

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 Description	Material Type	Type of work	Truck Type	Load Count	Truck Volume (T)	Total Volume (T)	Total Volume (m <sup>3</sup> ) (conversion factor of 1.6 (1 t = 11.6))	Sample Rate
2/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	5		40	25	Total volume of material disposed 95 m <sup>3</sup> . Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 46 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
2/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	9		72	45		
2/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	5		40	25		
3/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	6		48	30	Total volume of material disposed 145 m <sup>3</sup> (includes 95 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 73 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
3/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	4		32	20		
9/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	3		24	15	Total volume of material disposed 175 m <sup>3</sup> (includes 145 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 88 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
9/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	3		24	15		
9/12/2013	G&C	Zone 2		Site	Zone 2 - Area B		Topsol / organics Stockpile		Zone 5 - Area 4	CA69 - awaiting results					Landscaping		Landscape - Topsoil	Green Waste		6 wheeler	2		16	10	
9/12/2013	G&C	Zone 2		Site	Zone 2 - Area B		Topsol strip		Zone 2 - Area C						Stockpile		Landscape - Topsoil	Topsoil - Clean		6 wheeler	20		160	100	
10/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	8		64	40	Total volume of material disposed 255 m <sup>3</sup> (includes 175 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 128 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
10/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	8		64	40		
11/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	5		40	25	Total volume of material disposed 280 m <sup>3</sup> (includes 255 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 140 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
11/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	3		24	15	Total volume of material disposed 15 m <sup>3</sup> . Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 5 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
11/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	2		16	10	Total volume of material disposed 290 m <sup>3</sup> (includes 280 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 145 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
11/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	3		24	15	Total volume of material disposed 55 m <sup>3</sup> (includes 15 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 19 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
11/12/2013	G&C	Zone 3	Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	General fill							Cut to Fill	Clay - Clean		6 wheeler	5		40	25		
12/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15 & BECA Sampling: BH470 0.3 m, 2.6 m	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	5		40	25	Total volume of material disposed 80 m <sup>3</sup> (includes 55 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 27 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
12/12/2013	G&C	Zone 3		Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	CA33-CA34	1182532	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes - Stockpiled onsite	Stockpile		Cut to Waste	Marine Sediment		6 wheeler	6		48	30	Total volume of material disposed 345 m <sup>3</sup> (includes 290 m <sup>3</sup> already disposed in December). Two samples relate to Zone 3 - Area P. The current sample rate is one sample per 173 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
12/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	4		32	20		
12/12/2013	G&C	Zone 3	Site	Zone 3 - Area P		Shear Key / Undercut		Alwyn Ave	Stockpile							Cut to Waste	Marine Sediment		6 wheeler	1		8	5		
12/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	4		32	20	Total volume of material disposed 140 m <sup>3</sup> (includes 80 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 47 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
12/12/2013	G&C	Zone 3	Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	General fill							Cut to Fill	Clay - Clean		6 wheeler	8		64	40		
13/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	1		8	5	Total volume of material disposed 145 m <sup>3</sup> (includes 140 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 49 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
14/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	7		56	35	Total volume of material disposed 185 m <sup>3</sup> (includes 145 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 62 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
14/12/2013	G&C	Zone 3	Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	General fill							Cut to Fill	Clay - Clean		6 wheeler	1		8	5		
16/12/2013	G&C	Zone 3		Site	Zone 3 - Area E		Cut to Fill		Zone 1 - Area B	CA15. (BECA Sampling: BH470 0.3 m, 2.6 m)	1175713. Refer to G9 Report for BECA results.	Cleanfill	Greenmount & Ridge Road Cleanfill, Greenmount and Ridge Road Managed, Hampton Downs	Yes (used onsite) - BECA samples were classed as managed fill. Upon review by AECOM, samples were reclassified as cleanfill. BH470 (at 0.3 m depth) had nickel concentrations slightly above Auckland background ranges, though under the acceptance criteria for all three cleanfill disposal sites and under Schedule 10 limits. CA15 had detectable PAH compounds, though values were below Schedule 10 and cleanfill criteria.	General fill		Cut to Fill	Clay - Clean		6 wheeler	6		48	30	Total volume of material disposed 215 m <sup>3</sup> (includes 185 m <sup>3</sup> already disposed in December). Three samples relate to Zone 3 - Area E. The current sample rate is one sample per 72 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 1000 m <sup>3</sup> for cleanfill.
16/12/2013	G&C	Zone 1	71173		Zone 1 - Area C	C5	Topsol strip		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. CA31 had nickel concentrations slightly above Auckland background ranges. CA32 had copper, lead and nickel concentrations slightly above Auckland background ranges. Metal concentrations were under the acceptance criteria for all three cleanfill sites. CA32 had Benz[a]pyrene (BAP) TEF concentrations that exceeded the Ridge Road cleanfill acceptance criteria, though these were under the Ridge Road B(a)P TEF acceptance criteria.	Cut to Waste		Topsoil - Clean but unsuitable	Artic		18	Total volume of material disposed 279 m <sup>3</sup> (includes 234 m <sup>3</sup> already disposed of in October/November). Two samples relate to Zone 1C. The current sample rate is one sample per 140 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 500 m <sup>3</sup> for managed fill.				
16/12/2013	G&C	Zone 1	71208		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18		45			
16/12/2013	G&C	Zone 1	71176		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
16/12/2013	G&C	Zone 1	71209		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71285		Zone 1 - Area C	C5	Topsol strip		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. CA31 had nickel concentrations slightly above Auckland background ranges. CA32 had copper, lead and nickel concentrations slightly above Auckland background ranges. Metal concentrations were under the acceptance criteria for all three cleanfill sites. CA32 had BAP TEF concentrations that exceeded the Ridge Road cleanfill acceptance criteria, though these were under the Ridge Road B(a)P TEF acceptance criteria.	Cut to Waste		Topsoil - Clean but unsuitable	Artic		18	Total volume of material disposed 358 m <sup>3</sup> (includes 302 m <sup>3</sup> already disposed of in October/November/December). Two samples relate to Zone 1C. The current sample rate is one sample per 179 m <sup>3</sup> . This meets the minimum sampling requirements of 1 sample per 500 m <sup>3</sup> for managed fill.				
17/12/2013	G&C	Zone 1	71234		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71244		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71304		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71181		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71246		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					
17/12/2013	G&C	Zone 1	71294		Zone 1 - Area C	C5	Topsol strip		Ridge Road Landfill						Cut to Waste		Topsoil - Clean but unsuitable	Artic		18					

## **Appendix C: Quarterly Avian Report**

**CAUSEWAY ALLIANCE**

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

**QUARTERLY REPORT NO. 3  
OCTOBER TO DECEMBER 2013**



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# **Causeway Alliance**

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

**Quarterly Report No. 3  
October to December 2013**

**JANUARY 2014**

**FOR: CAUSEWAY ALLIANCE**  
**BY: BIORESEARCHES GROUP LIMITED**  
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## **1 INTRODUCTION**

This is the third 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 METHODS**

### **2.1 Te Atatu Pony Club and Construction Yard No. 1**

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 Causeway Bridge**

Observations of coastal birds, but especially shags, using both the constructed roosting rafts and natural features for roosting are made at half tide rising 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 that are aimed at compensating for the disruption to rock rubble high tide roosting sites beside the Bridge during construction.



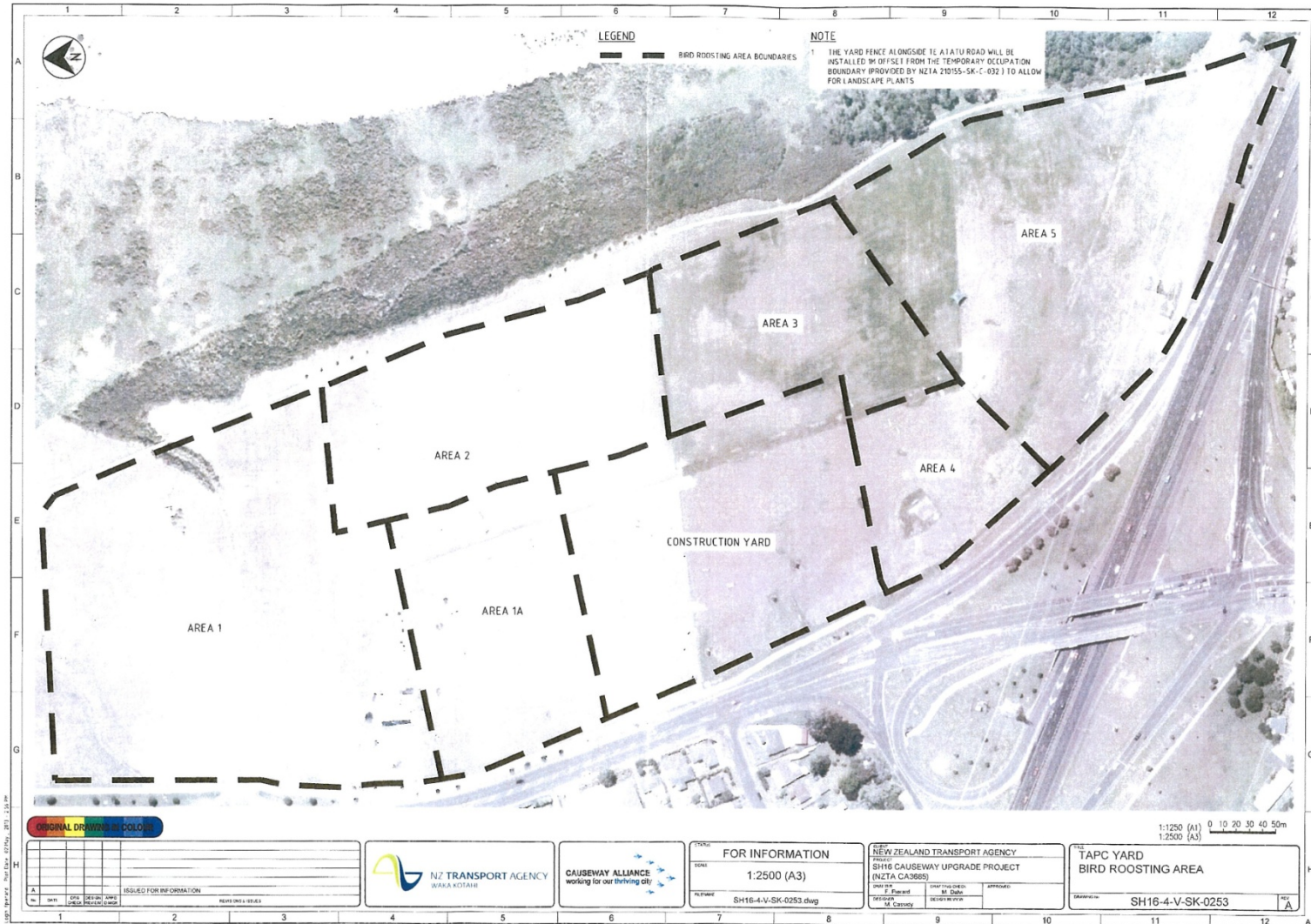


FIGURE 1 AREAS REFERRED TO ON THE DATA SHEETS

### **3     RESULTS**

The results for October, November and December 2013 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     Te Atatu Pony Club and Construction Yard No. 1**

Comments on the October, November and December 2013 results are as follows –

- 3.1.1. There has been no displacement of coastal birds as a result of the Construction Yard.
- 3.1.2. The total number of birds remained low as most birds had moved away to breed. One pair of NZ dotterel attempted to breed on a spoil pile within the Yard but was unsuccessful.
- 3.1.3. The total numbers of coastal birds relative to the baseline are shown below. The average number for the 2013 quarter is essentially the same as that recorded in the baseline.

	<b>2010 (max.)</b>	<b>2013</b>
<b>October</b>	11	12
<b>November</b>	14	11
<b>December</b>	10	11
<b>average</b>	11.7	11.3

- 3.1.4. Differences in species composition were that in 2010 the total numbers were enhanced by a family (adults plus juveniles) of paradise shelducks. In this 2013 survey NZ dotterel were more consistently present and there were approximately twice as many spur-winged plover as in the baseline survey.

### 3.2 Causeway Bridge Roosting

**Date :** 6.12.13

**Time :** 0850 – 0930 hours

**Tide time :** HW 1044; 3.6 m

- early “set up” works on SE side of Causeway Bridge only
- intertidal roosting “beach” well covered; high spring tide
- pied shags (2) feeding under Bridge as recorded baseline survey
- eastern raft roosting
  - 0914 1x white-fronted tern
  - 0918 2x white-fronted tern
  - 0921 1x white-faced heron
  - 0931 1x white-faced heron and 1x white-fronted tern (at risk species)
  - 0935 1x white-faced heron and 2x white-fronted tern
- roosting on SW rock rubble adjacent Causeway Bridge
  - 0936 1x pied shag (threatened species)
- western raft roosting
  - nil

**Date :** 10.12.13

- 10 shags roosting on “beach” adjacent to eastern raft at c.½ tide rising (also roosting Whau River “beach” on eastern side of channel).

#### Comments

Construction works were minimal and restricted to the SE corner of the Bridge. Shag roosting behaviour was similar to that recorded in the baseline i.e. SW rubble at high tide and the “beach” at half tide rising. There are no concerns regarding roosting or feeding adjacent to the Causeway Bridge.

#### **4 CONCLUSION**

There is no indication that the presence of or activities within the Construction Yard have adversely affected the use of the Pony Club for roosting by coastal birds. Shags continue to feed under the Causeway Bridge and rest on the intertidal “beach” near the Bridge. Bird use of the two rafts was minimal as was the level of adjacent construction activity.

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5 **APPENDICES**

**Appendix 5.1 Field Sheets**

**CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS  
CONSTRUCTION YARD NO. 1**

DATE: 7.10.13

TIME (hrs) : 0945

TIDAL STATE : c. HW

TIDE TIME; HEIGHT : HW 0946; 3.3m

AIR TEMP (°C) : 18.7

BARO. PRESSURE (kPa) : 100.7

WIND (knots) : SW to 3 kts

WEATHER : dry, cloudy, sunny intervals.

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

Note: + 1x NZ dotterel within CY.

TOTAL NUMBER = 12

**CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS  
CONSTRUCTION YARD NO. 1**

DATE: 5.11.13

TIME (hrs) : 0910

TIDAL STATE : c. HW

TIDE TIME; HEIGHT : HW 0924; 3.4 m

AIR TEMP (°C) : 18.4

BARO. PRESSURE (kPa) : 101.6

WIND (knots) : N to 5 kts

WEATHER : cloudy, squally showers.

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

**TOTAL NUMBER = 11**



**CAUSEWAY ALLIANCE - COASTAL BIRD COUNTS  
CONSTRUCTION YARD NO. 1**

DATE:6.12.13

TIME (hrs) : 1030

TIDAL STATE : c. HW

TIDE TIME; HEIGHT : HW1044; 3.6 m

AIR TEMP (°C) : 23.2

BARO. PRESSURE (kPa) : 101.1

WIND (knots) : NW to 3 kts

WEATHER : cloudy; occ. light shower, sunny intervals.

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

**TOTAL NUMBER = 11**

**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
<b>banded dotterel *</b>	3	42	44	83	2	羊	羊	羊	羊
<b>bar-tailed godwit ●</b>	–	–	1	羊	羊	羊	羊	羊	羊
<b>black-backed gull</b>	–	–	–	羊	羊	羊	羊	羊	羊
<b>mallard</b>	–	–	–	羊	羊	羊	羊	羊	羊
<b>NZ dotterel *</b>	5	4	–	4	7	2	4	3	3
<b>paradise shelduck</b>	–	–	–	羊	羊	1	羊	羊	2
<b>pieb stilt ●</b>	–	–	–	羊	羊	羊	羊	羊	羊
<b>red-billed gull *</b>	–	6	–	羊	羊	羊	羊	羊	羊
<b>S.I. pied oystercatcher ●</b>	330	351	323	204	9	1	羊	羊	羊
<b>spur-winged plover</b>	6	2	3	2	3	4	7	6	5
<b>variable oystercatcher ●</b>	6	2	6	9	羊	羊	1	1	1
<b>white-faced heron</b>	2	–	3	羊	2	羊	羊	1	羊
<b>wrybill *</b>	35	207	210	40	34	羊	羊	羊	羊
<b>TOTAL</b>	<b>387</b>	<b>614</b>	<b>590</b>	<b>342</b>	<b>57</b>	<b>8</b>	<b>12</b>	<b>11</b>	<b>11</b>

\* threatened species

● at risk species

**Appendix 5.3. Baseline Coastal Bird Data**

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

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	–	–	–	–	–	–	–	–	–	–	–	–
<b>Total</b>	<b>74</b>	<b>100</b>	<b>20</b>	<b>132</b>	<b>77</b>	<b>151</b>	<b>96</b>	<b>276</b>	<b>458</b>	<b>474</b>	<b>481</b>	<b>300</b>	<b>61</b>	<b>86</b>

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
white-faced heron	-	-	-	-	-	-	-	1	-	2	5	7	3	1
wrybill, ngutuparore*	-	-	-	-	-	-	-	-	-	-	-	7	4	-
<b>Total</b>	<b>42</b>	<b>9</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>5</b>	<b>8</b>	<b>10</b>	<b>42</b>	<b>47</b>	<b>92</b>	<b>296</b>	<b>180</b>	<b>306</b>

\* threatened species † at risk species J juvenile (a) four offspring - all males

All results at high tide (3.0 – 3.4 m)