ST HELENA AIRPORT PROJECT

ANNUAL ENVIRONMENTAL REPORT 2014-15

December, 2015

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CEMPC

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FOREWORD

Over the past year, several of the major parts of the construction process have been completed, or are nearing completion, in preparation for the calibration flights in September and Certification in November 2015. The Environmental Team has continued to produce excellent work over this busy period.

In reviewing the Annual Environmental Report for 2014-15 for the St Helena Airport Project, it is pleasing to note that the efforts of Bryony Walmsley, the On Island Team and Off Island support have resulted in improvements in several Key Performance Indicators. However, attention is still required with regard to personnel behaviour and dust and noise emissions.

I am confident that with the experience and professionalism of the Environmental Team, together with other members of the Site Team, they will succeed in the continual improvement of the ratings of Key Performance Indicators as we move towards the end of Phase One of the Project.

Jimmy Johnston
Basil Read Project Director

ACKNOWLEDGEMENTS

A number of people have contributed to this third Annual Environmental Report for the St Helena Airport Project, notably: George Vorster, Annina van Neel and her team, Jeremy Johns. Charles Schwartz, Deon de Jager and all the on-island production managers. Lauren Evans of the Airport Access Office provided constructive comment and criticism.

Graham Temlett reviewed the report and Denain Venter provided much appreciated administrative support.

LIST OF ACRONYMS

ADA	airport development area
ADAB	airport development area boundary
ADT	articulated dump truck
AER	annual environmental report
AIDS	auto-immune deficiency syndrome
AN(OT)O	Air Navigation (Overseas Territories) Order
ASSI	Air Safety Support International
BFI	bulk fuel installation
BR	Basil Read
CECO	Contractor's Environmental Control Officer
CEMP	Contractor's environmental management plan
CEMPC	Contractor's Environmental Management Plan Coordinator
CLO	Community Liaison Officer
dB(A)	decibel (A-weighted)
DfID	Department for International Development
DVOR	doppler VHF omni-directional radar
EC	European Commission
EIA	environmental impact assessment
EMD	Environmental Management Division
EMP	environmental management plan
EMS	environmental management system
ES	environmental statement
EU	European Union
GDP	gross domestic product
HEF	high energy fuel
HIV	human immune-deficiency virus
ISO	International Standards Organisation
kg	kilogram
km^2	square kilometres
KPI	key performance indicator
kWh	kilowatt hour
LEMP	landscape and ecological mitigation plan
m	metre
m^2	square metre
m^3	cubic metre
mg	milligram
ml	millilitre
mm	millimetre
MSDS	material safety data sheet
NGO	non-governmental organisation
OTAR	Overseas Territories Aviation Requirements
PBP	Prosperous Bay Plain
PM10	particulate matter (smaller than 10 micron)
PMU	Project Management Unit
ppm	parts per million
ppt	parts per thousand

RMS	Royal Mail Ship
SEF	stakeholder engagement forum
SHEQ	Safety, Health, Environment, Quality
SHG	St Helena Government
SHNT	St Helena National Trust
TA	technical assistant
TDS	total dissolved solids
TFF	temporary fuel facility
TSP	total suspended particulates
µg	microgram
UK	United Kingdom
WHMP	wildlife hazard management plan
WHO	World Health Organisation
WMP	(Contractor's) waste management plan

EXECUTIVE SUMMARY AND KEY PERFORMANCE INDICATORS

Construction of one of the most challenging projects in the world, the new airport and access road on St Helena Island, commenced in January 2012, with completion of the airport still scheduled for February 2016 when the first commercial flight operated by Comair, a British Airways franchise, will touch down. One of the deliverables during the airport construction period, as specified in Schedule v4.1.19A: Environmental Management Requirements, is an annual environmental report (AER) of the permanent construction works. This document is the third AER and covers the 12-month period from July 2014 to June 2015.

During the reporting period, the Contractor, Basil Read (BR), established and maintained their commitment to responsible environmental stewardship, and to minimising and eliminating potential adverse environmental impacts. This was achieved by putting in place the necessary human and financial resources to implement the environmental requirements specified in the Design, Build and Operate contract.

A set of key performance indicators (KPIs) has been developed for the annual environmental report and these are grouped under the following headings:

- Legal compliance;
- Environmental structures;
- Environmental systems; and
- Environmental performance (social and biophysical).

For each KPI, an assessment rating has been provided. 'Yes' in green means that the target or goal has been achieved. 'Partial' in orange means that there has been progress made towards achieving the goal, or that the KPI has been partially achieved. 'No' in red indicates where the KPI has not been achieved in the current reporting period. The table below provides a brief comment, with reference to the section in the annual report where the matter is discussed more fully.

Of the 30 KPIs, six have not been achieved during the reporting period, six have been partially met and 18 (60%) indicators have been attained. The six indicators which have not been met are:

- Three environmental incidents occurred with a rating of level 3 or more (against a target of no environmental incidents above level 3);
- One level 3 incident concerning damage to Rupert's Lines occurred, and in December 2014, human remains were unearthed during construction activities in Rupert's Valley (a level 4 incident) (against a target of no heritage incidents above level 3);
- Five employees and sub-contractors were banned from driving and three were fined for anti-social behaviour (against a target of nil);
- Respirable dust and noise emissions (two indicators) exceeded the prescribed limits on numerous occasions;
- There was one level 3 biodiversity incident when rocks were removed from an environmentally sensitive slope during construction of the VHF transmitter control hut at Blue Hill in spite of the presence of barricades and presentation of toolbox talks before construction commenced.

Overall however, there has been some improvement since last year, with progress on five indicators and eighteen have remained the same. Performance against three indicators has regressed: stakeholder engagement forum meetings were not held at quarterly intervals as required, although five meetings were eventually held in the year; some construction waste was dumped at Horse Point Landfill in error; and some construction activities deviated from the agreed site walkover notes.

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
LEGAL COMPLIANCE				
Legal compliance with laws and regulations of St Helena	No non-compliance notices, stop orders or penalties have been issued in terms of environmental laws in force	Yes	Yes	
Compliance with the Contractor's Environmental Management Plan (CEMP)	No environmental incidents with ratings of level 3 or more have occurred	No	No	Two level 3 and one level 4 incident occurred. *See section 3.3.*
ENVIRONMENTAL STRUCTURES				
The environmental management team, as specified in the Contract is in place	Appointment and employment of the following positions throughout the reporting period: CEMP Coordinator (CEMPC); Contractor's Environmental Control Officer (CECO); Technical assistants (TAs) Community Liaison Officer (CLO)	Yes	Yes	*See section 3.1.*
Reporting commitments achieved (as per requirements of contract)	100% completion of the following: Weekly CECO reports Monthly CECO reports	Partial	Partial	100% completion of the following: • Monthly CECO reports; • 6-monthly updates of CEMP; • 6-monthly audits; • Annual Environmental Report. 76% completion of CECO weekly

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
	6-monthly update of CEMP (Oct '14, April '15) 6-monthly audit (Sept '14, Mar '15) Annual Environmental Report (Dec '15)			reports. *See section 3.4.*
Meetings held (as per requirements of contract)	The following meetings occur as scheduled: Weekly environmental management meeting; Monthly environmental management meeting; Weekly project meeting	Yes	Yes	*See section 3.4.*
ENVIRONMENTAL SYSTEMS				
Ongoing input to design	Environmental issues are taken into account during project design	Yes	Partial	Attendance by CEMPC at technical design meetings in Johannesburg as required and at weekly project meetings by CECO. Site walkovers are conducted prior to construction in each new area, but there were a few instances where construction deviated from the agreed site walkover notes. *See section 5.1.*
Environmental monitoring systems are in place (as per the requirements of the contract and CEMP)	The following are monitored on a regular (as specified in the CEMP) basis: air quality (inhalable and total dust), water (marine, surface water and groundwater), noise, vibration,	Partial	Partial	Most aspects listed were monitored as per requirements. *See section 6.*

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
	building condition, waste quantities, resources use, wirebirds, pests, invasive species, visual impact, climate, heritage and biosecurity.			
Comments hot line and complaints procedure established (as per contract)	Meaning that there is a 24 hour hot line and all complaints are registered and followed up within 1 day where practically possible.	Yes	Yes	*See section 4.5.*
ENVIRONMENTAL PERFORMANCE: SOCIAL & COMMUNITY SERVICES				
Stakeholder engagement forum (SEF) established by PMU and functioning	SEF set up and PMU holds quarterly meetings	Yes	Partial	SEF meetings were not held on a quarterly basis, but five meetings were held *See section 4.4.*
Number of complaints received	No serious complaints received. Less than 3 minor complaints per month.	No	Partial	Five serious complaints were received during the year, but there were on average just over 2 complaints received per month, which is a significant improvement on the previous year. *See section 4.5.*
Employment of Saints	Direct creation of 112-225 construction jobs for Saints	Yes	Yes	As of end of June 2015, 297 Saints were employed on the airport project as staff or sub-contractors *See section 4.1.*
No additional pressure on island medical facilities	BR to appoint own primary health care practitioner. BR to pay full cost if hospitalisation required	Yes	Yes	Full time medical personnel are present.
No incidents of communicable diseases caused	HIV and AIDS awareness and testing	Yes	Yes	HIV awareness forms part of the Induction programme and ongoing training. Posters are in

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
by BR and its sub-contractors	programmes are in place for all staff			place and condoms available in all male ablution facilities. Staff are counselled about the need to have HIV tests.
Anti-social behaviour and crime	No BR employee or sub-contractor is convicted of any crime while on the island	No	No	There were 5 convictions for drunk driving during the year, and three people were fined for anti-social behaviour.
Incidents of disturbance to heritage resources	No level 3 incidents or higher reported	No	No	One level 3 incident involved ongoing damage to Rupert's Lines. One level 4 incident involved unearthing of human remains at an unknown site in Rupert's Valley. *See section 3.3.*
Impact on housing and accommodation	No impact on local housing markets from immigrant workers. Benefit to local guest houses and rental market.	Yes	Yes	The majority of the expatriate workforce is housed at Bradley's camp. 54 private residences are leased out to BR staff and short-stay project visitors. *See section 4.1.*
Impact on existing waste landfill facilities	The waste generated from construction works must not put pressure on island waste disposal facilities	Yes	Partial	As much waste as possible is re-used, recycled or minimised, but the scope for recycling on the island is limited due to economies of scale. There have been some instances when construction waste was dumped at Horse Point landfill in error. *See section 6.2.5.*
Safe disposal of hazardous waste	BR must store all hazardous waste in a safe and non-polluting manner until the permanent island-based hazardous waste solution has been put in place.	Yes	Yes	All hazardous waste is stored in a bunded area at Bradley's Workshop waiting for the commissioning of the incinerator and hazardous waste cell. A drum compactor is used to reduce the size of drums and oil filters. Some of the plastic jerry cans are washed out with biodegradable degreaser and made available to

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
				the public. Contaminated soil is 'cleaned' on a bioremediation pad at Bradley's Workshop. *See section 6.2.5.*
Minimise impact on Island water supplies	BR to minimise use of island water supplies and develop new sustainable sources of water for construction	Yes	Yes	Island water supplies are only used for potable water use and for concrete mixing at the Rupert's batch plant. All other water (e.g. for dust suppression, vehicle washing, Prosperous batch plant and potable water at Prosperous) is obtained from borehole 5 in Dry Gut. *See section 6.2.6.*
ENVIRONMENTAL PERFORMANCE: BIOPHYSICAL				
Incidents of dust emissions over prescribed limit	No exceedances over permitted limits recorded	No	No	*See section 6.2.1.*
Incidents of noise emissions over prescribed limit	No exceedances over permitted limits recorded	No	No	*See section 6.2.3.*
Incidents of vibration (peak particle velocity) readings over prescribed limit	No exceedances over permitted limits recorded	Yes	Yes	*See section 6.2.4.*
Incidents of water quality over prescribed limit	No exceedances over permitted limits recorded	Yes	Yes	*See section 6.2.2.*
Incidents of significant accidental spills (oil, diesel, concrete)	No level 3 incidents or greater involving accidental spills	No	Yes	No level 3 spillage incidents occurred. *See section 3.3.*
Total land used for project outside of Airport Development Area (ADA) boundary.	Additional land taken by the project must not exceed 10% of the total ADA.	Yes	Yes	The remote obstacle lights (ROLs) and some navigational aids lie outside the ADA. The area taken (60 m^2) represents 0.001% of the ADA.
Incidents of illegal driving, plant collection, animal	No level 3 incidents or greater occurred	Partial	Yes	No level 3 incidents occurred but three level 2 incidents of off-road driving were reported.

Key performance indicator	Description	Assess-ment rating 2014	Assess-ment rating 2015	Comments
trapping				*See section 3.3.*
Rare and endangered species affected (excluding Wirebirds)	No level 3 incidents or greater involving biodiversity issues	No	No	One level 3 incident occurred during construction of the VHF hut at Blue Hill. *See section 3.3.*
Number of Wirebird territories disturbed	No displacement of Wirebirds beyond the ADA	Yes	Yes	*See section 6.2.8.*
Bio-control measures are in place	No contaminated containers allowed onto the island	No	Yes	No incidents occurred. *See section 6.2.11.*
Land rehabilitated as per LEMP	No. hectares planted per year.	-	Yes	2.4 ha were rehabilitated as per specifications. *See section 5.4.*

1 INTRODUCTION

This is the third Annual Environmental Report (AER) for the St Helena airport project. The first report documented the early stages of construction, when new areas were being developed and several supplementary studies to the Environmental Impact Assessment conducted by AECOM in 2007, had to be undertaken. The second report on the 2013-14 year looked back on 12 months of peak construction activity when it was finally possible to see that an airport would emerge from the hollows and hills of Prosperous Bay Plain. With the laying of the foundation stone at the future entrance of the airport building – then only a skeleton, most people finally realised that the airport would be a reality.

This third AER provides an overview of another phase of construction; most of the heavy construction work has been completed or is close to finishing and much of the work is 'invisible' – the communications and navigation systems are being installed and tested, the interiors of the buildings are being finished, the surfacing of the runway is nearly complete and the permanent wharf is emerging from the sea in Rupert's (see Table 1 and Figures 1 and 2). The logistics 'train' from South Africa to St Helena via Walvis Bay in Namibia has been mostly one way to the island until now. This complicated transportation system is now a two-way system with equipment and materials still being imported, and heavy earthmoving equipment and other now redundant materials being sent back.

It is incredible to think that the next and final AER for the construction phase will report on the completion of the project and the landing of the first commercial aeroplane.

During the reporting period of July 2014 to June 2015, Basil Read (BR) established and maintained their commitment to responsible environmental stewardship, and to minimising and eliminating potential adverse environmental impacts. This was achieved by putting in place the necessary human and financial resources to implement the environmental requirements specified in the Design, Build, Operate contract.

Duty of care to the environment and compliance with the Contractor's Environmental Management Plan (CEMP) are the responsibility of the entire construction team. The role of the environmental management team is to ensure that all staff practise good environmental management and stewardship, within the time and budgetary constraints which are inevitably part of such a large capital project.

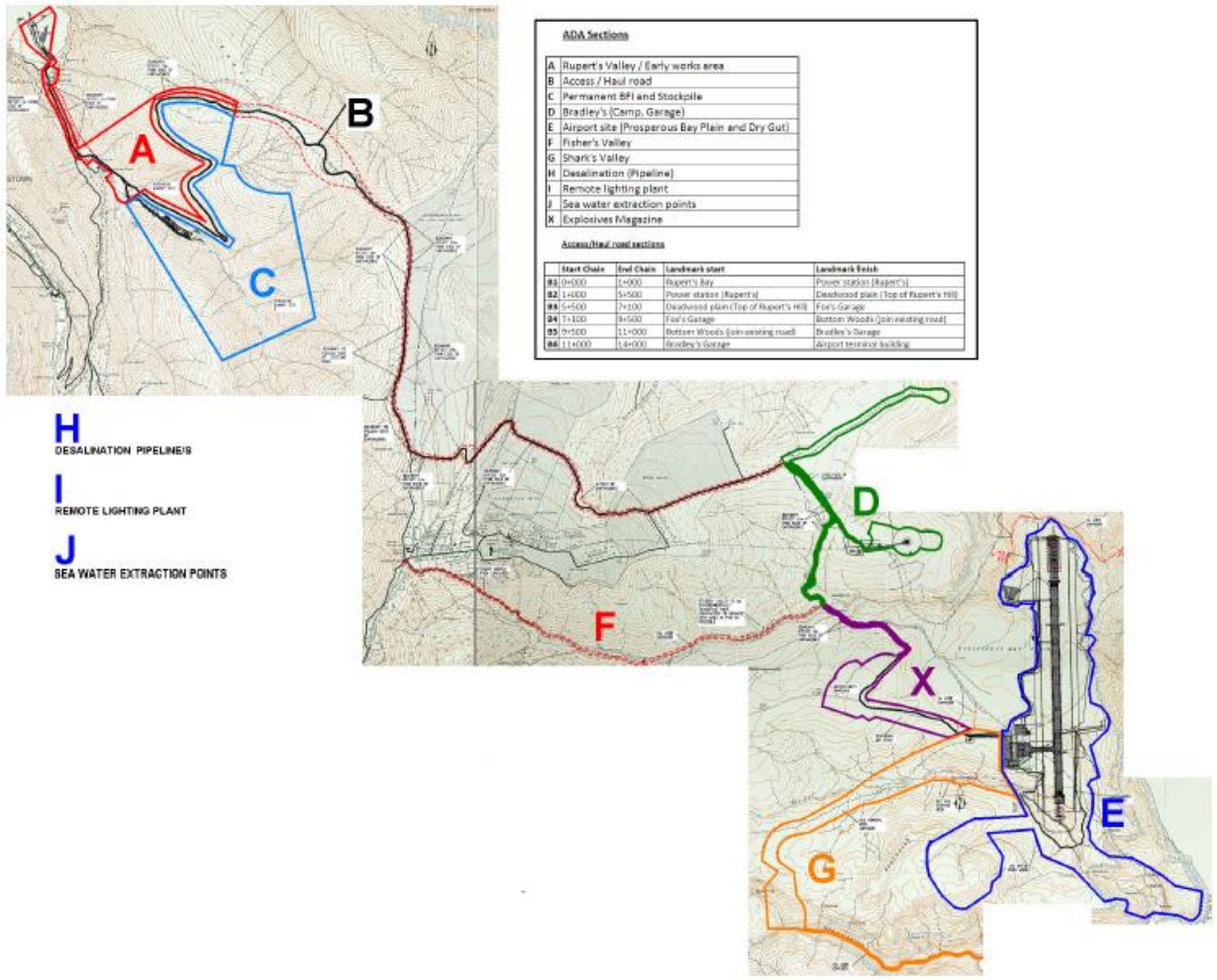


Figure 1: Map of the airport works areas

Figure 2: Map of island showing the location of navigational aids and communications systems

Table 1: Airport construction work areas and status as of end June 2015

Designation	Area name	Construction works	Construction status at end June 2015
A	Rupert's Valley	• Temporary jetty	• Complete, operating
		• Public road upgrade	• Not yet started
		• Workshops	• Operational
		• Laboratory	• Complete, operating
		• Stores	• Complete, operating
		• Laydown areas,	• Complete, operating
		• Temporary fuel facility (TFF)	• Part operational; part decommissioned
		• Permanent wharf access road	• Not yet started
		• Permanent wharf	• 64% complete
		• Lower quarry	• Quarry opened up, but not in use; landscaping
		• Sea Rescue Facility	• 35% complete
B	Access / haul road	• Haul road for construction	• Haul road complete[1]
		• New construction from Rupert's Valley to Deadwood	• 0-76% complete
		• Road upgrade from Deadwood to Foxy's garage	• 76% complete
		• New construction from Foxy's to Bottom Woods	• 76% complete
		• Road upgrade from Bottom Woods to Bradley's	• 76% complete
		• New construction from Bradley's to PBP	• 76% complete
C	Upper Rupert's Valley	• Permanent bulk fuel facility (BFI)	• 68% complete
		• Road spoil area	• Complete, to be rehabilitated
		• Concrete waste disposal area	• Complete, operating
		• Temporary water reservoirs and pump stations	• Complete, operating
		• Concrete batch plant for wharf	• Complete, operating
		• Laydown area for Core-locs and block walls for wharf	• Operating
		• Drainage diversion channel	• 68% complete
		• BFI offices and lab	• Not yet started
D	Bradley's	• Temporary contractor's camp	• Complete, operational
		• Workshop	• Operating
		• Doppler VHF omni-directional radar (DVOR) beacon and VHF mast	• Complete
		• Temporary waste disposal and	• Operational

[1] The haul road is considered complete when it is available for construction traffic to use on a regular basis. The access road is considered complete when the base layers have been laid and the road has a Cape seal surface.

Designation	Area name	Construction works	Construction status at end June 2015
		recycling area	
		• Bioremediation pad	• Operational
E	Prosperous Bay Plain (PBP) and Dry Gut	• Contractor's laydown area	• Operational
		• Site offices	• Operational
		• Vehicle refuelling	• Operational
		• Batch plant	• Operational
		• Crusher	• Operational
		• Runway and taxiway	• Bulk earthworks complete; runway concrete works 94% complete
		• Combined building	• 90% complete
		• Terminal building	• 65% complete
		• Ancillary airport buildings	• 21% complete
		• Apron	• 94% complete
		• Car park and entrance area	• 62% complete
		• Permanent electricity supply	• Complete
		• Dry Gut fill	• Complete
		• Open channel works area	• Complete
		• Fire training rig	• 46% complete
F	Fisher's Valley	• Cook's Bridge crossing	• Complete
G	Shark's Valley and upper Dry Gut	• Temporary boreholes, water reservoirs and pump stations in Dry Gut	• Borehole 5 operational; remaining boreholes decommissioned; reservoirs removed and area rehabilitated
		• Permanent water supply (boreholes, piping, tanks)	• In progress
I	Around airport	• Remote obstacle lights 1-12	• 87% complete
		• VHF mast at Blue Hill	• 40% complete
X	Tungi Flats	• Explosives magazine	• Operational
		• Borrow pit	• Operational

2 AIMS AND OBJECTIVES OF THE ANNUAL ENVIRONMENTAL REPORT

This AER presents an overview of the environmental performance of the airport contractor (Basil Read) over the reporting period 1st July 2014 to 30th June 2015 relating to the following aspects of the project:

- The environmental governance structures (Chapter 3);
- Our progress in building relationships with our stakeholders (Chapter 4);
- An overview of some of the environmental work undertaken during the year (Chapter 5);
- Our environmental monitoring activities (Chapter 6); and

- The targets and challenges for the 2015-16 year ahead (Chapter 7).

A summary of performance and progress against key performance indicators is presented in the Executive Summary.

3 ENVIRONMENTAL GOVERNANCE STRUCTURES

3.1 Environmental Management Team

Environmental management of the airport construction project is the responsibility of a dedicated team of on-island and off-island staff. The Contractor's Environmental Management Plan Coordinator (CEMPC) is based in South Africa and is responsible for liaison with the BR design team in South Africa, the six-monthly audits, updating the CEMP, preparing the Annual Environmental Report and providing ongoing advice about environmental issues to BR management and the Contractor's Environmental Control Officer (CECO), Annina van Neel. The CECO is based full-time on the island and she has a team of 5 field staff to carry out environmental inspections, monitoring, waste management and revegetation (Table 2). The CECO reports directly to the CEMPC and the on-island SHEQ Manager (Figure 3). Carlene van der Heiden stood in for the CECO for 3 months during the latter's maternity leave from May to July.

Supervising the entire airport project on behalf of the St Helena Government (the Employer), is the Project Management Unit (PMU). The PMU team includes an Environmental Monitor who has been appointed for the duration of the contract and resides on the island to oversee all environmental management activities.

Table 2: Environmental management team (as at 30th June 2015)

Name, position and location	Tasks	
Bryony Walmsley CEMPC	CEMP updates; 6-monthly audits; preparation of the Annual Environmental Report; input to design; attendance at design meetings and monthly environmental management meeting with the Island	

Annina van Neel Contractor's Environmental Control Officer (CECO)	Team manager. Weekly and monthly reports; attendance at environmental and project meetings; site walkovers, implementation of the CEMP; environmental monitoring and day to day auditing; liaison with PMU	
Margie Fowler Conservation TA and LEMP specialist	Responsible for fauna and flora monitoring, plant rescue, seed collection, revegetation works	
John Reid Environmental inspector	Responsible for data entry, biosecurity, waste management and all site inspections	
Sasha Benjamin Field assistant	Responsible for environmental monitoring	

Albert Bennett Pest and predator control officer	Responsible for pest and predator control, seabird and Wirebird monitoring,	
Walter Williams Waste operator	Responsible for receiving, cleaning, compacting and storing hazardous wastes at Bradley's workshop and the distribution of recyclable materials	

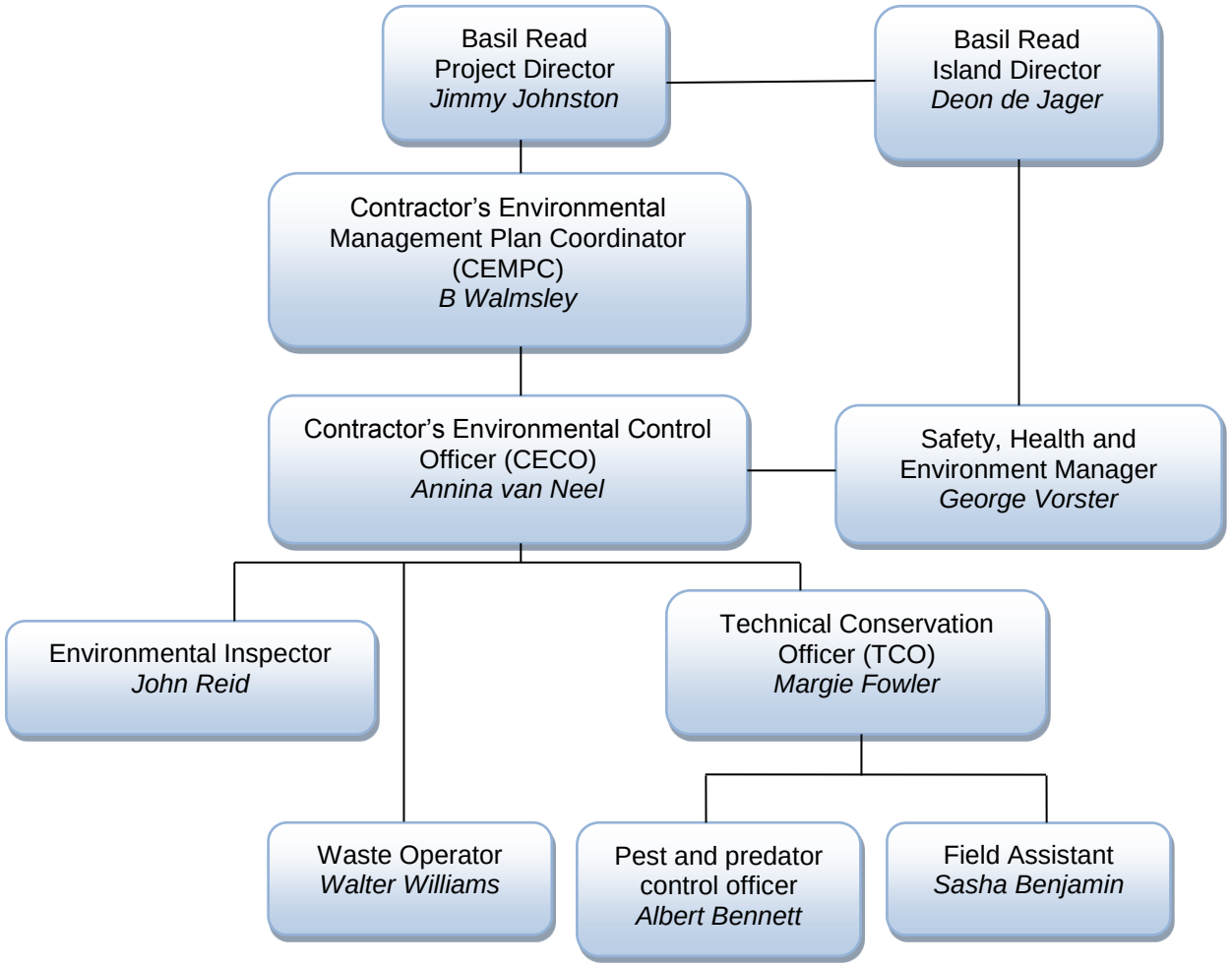


Figure 3: Basil Read environmental reporting structure as at end June 2015

3.2 Environmental Management Plans

As reported in the previous Annual Environmental Report, environmental management on site is controlled by a hierarchy of plans:

- The **Environmental Management Plan** (EMP);
- The **Contractor's Environmental Management Plan** (CEMP) which is updated on an ongoing basis with formal acceptance by PMU every six months to ensure that it is responsive to the evolving nature of the construction site; and
- Various **protocols, procedures and management plans** are added as appendices to the CEMP as and when the need arises.

3.3 Compliance Monitoring and Auditing

There is a comprehensive system of compliance monitoring and auditing in place on site:

Site walkovers
Prior to new sites being developed, site walk-overs are conducted by the CECO, relevant BR manager, PMU, SHG and any relevant local specialists or interested parties to determine the key environmental issues of concern. The aim of the walkovers is to highlight any environmental sensitivities or aspects, as well as areas of ecological constraint that might be affected by the activity.

Site walkovers have taken place for the following:

- Access road batters in Rupert's Valley;
- Blue Hill VHF mast and hut;
- Twelve remote obstacle lights (ROLs) on The Barn (Plate 1), Horse Point, Bradley's, King and Queen Rocks, Ben Coolen and Great Stone Top (Figure 2);
- Access road and fuel pipeline link to the Power Station in Rupert's Valley;
- The line of the permanent water supply pipeline from Bottom Woods to the airport;
- Slipway (Plate 2), Sea Rescue Facility and haul road deviation in Rupert's;
- Old Cannery, fuel pipeline and platforms;
- Trenches for communications and utilities to the DVOR and mast at Bradley's camp;
- The powerline and communications route across Tungi Flats; and
- The Fire Training Rig near the contractor's compound.

Plate 1: Walkover of one of the remote obstacle light locations on the Barn

Plate 2: Walkover for the sea rescue boat slipway in Rupert's

Workplace audits

Work-place audits are conducted by the CECO team every week and the findings are captured in the weekly report. The weekly audits are site-specific and are carried out with the site manager or the foreman in charge.

Site inspections and incident reporting

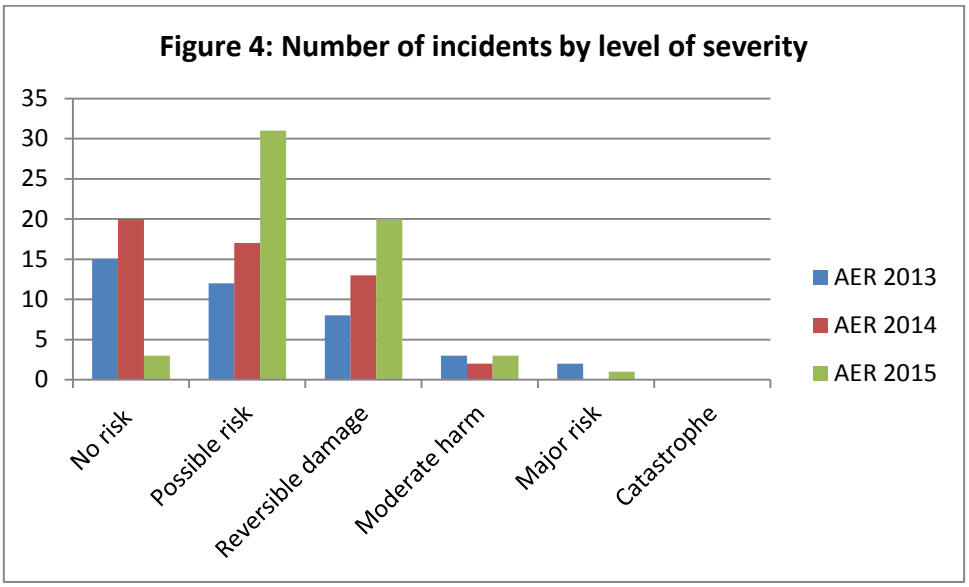
Site inspections are carried out on a daily basis by the CECO team and any environmental incidents are noted in the CEMP log and reported to the PMU within 24 hours of the incident occurring. Any observations noted by the CECO are communicated to the site foreman in charge at the time of the inspection. The PMU's Environmental Monitor also conducts site inspections and issues Site Observation notices to BR for corrective action. The Site Observation notices and the signed close-out reports on actions taken are all saved onto the document control system.

Fifty-eight environmental incidents were recorded during the 12 month reporting period but all have been successfully closed out. This total is six incidents higher than the previous year, which is disappointing given the efforts made by the environmental team to manage the most common incidents – spills and waste management. The incidents are rated on a scale of 1-5 (Table 3).

Table 3: Incident rating scale

Loss type	0 No risk	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
Harm to people (safety & health)	No risk to health and safety	First Aid case;	Medical treatment; Exposure to minor health risk	Lost time injury; Reversible, moderate impact on health	Single fatality or loss of quality of life; Irreversible impact on health	Multiple fatalities; Impact on health ultimately fatal
Environ-mental impact	No environ-mental impact	Possible risk to the environment	Reversible damage to the ecosystem	Moderate environmental harm or degradation of the ecosystem	Major environmental harm; Legal non-compliance	Irreversible, significant environmental harm; Loss of species; Ecological disaster
Impact on reputation	No risk	Slight impact; public awareness but no public concern	Limited impact; Local public concern	Considerable impact; Regional public concern	National impact; National public concern and outrage	International impact; Major public outrage

A summary of these incidents is provided in Figures 4 and 5 below.



Of the 58 recorded incidents, it can be seen that the majority (93%) involved no damage or low to minor, reversible harm to the environment. However, project activities caused three incidents which had a moderate impact and one which had a major impact on the environment, heritage and/or the health and safety of local communities over the past 12 months (Figure 4).

The three incidents that caused moderate harm were:

1) In an effort to provide additional protection to the historical Rupert's Lines after the protective hoarding fell off, a new board was attached to the wall with nails, which caused even more damage. The cumulative damage to the wall from this action and previous knocks from vehicles (Plate 3) has resulted in moderate harm to this heritage structure. However, all the damaged pieces of masonry and stone have been saved and the wall will be repaired once construction of the wharf access road has been completed.

Plate 3: Damage to the historic wall of Rupert's Lines

Plate 4: Increased dust suppression is required in Rupert's Valley to control dust

2) Analysis of respirable dust data in March showed that there had been numerous exceedances of the allowable limit for fine particulates in both lower Rupert's Valley and along

the Bottom Woods to Millennium Forest road. The elevated levels of dust were caused by a combination of speeding and insufficient dust suppression. If not mitigated, these dust concentrations could have a moderate, but reversible impact on health. However, greater efforts were taken to inform both BR and public drivers about the importance of adhering to the posted speed limits and dust suppression activities were increased (Plate 4). It can be seen from the dust monitoring results shown in Figures 14-16 that improved dust control measures had an immediate and beneficial effect on reducing particulate emissions.

3) During preparation of a level platform for the concrete floor for the Blue Hill VHF transmitter control hut, stones were used that had been taken from the nearby cliff face thus adversely affecting a highly sensitive habitat that is host to some very rare endemic ferns. This was in direct contravention of the agreed method statement and planning conditions and a Non-Conformance Notice was issued to BR by PMU.

The only level 4 incident on site during the reporting period occurred on 12th December, 2014, when remains of liberated African slaves were unearthed at two sites while cutting back the batter on the access road just above the power station in Rupert's Valley to create space for the plinths for the fuel pipeline and for the final alignment of the access road (Plates 5 and 6). The site of the human remains was outside previously surveyed mass grave sites. No evidence that the site may contain human remains was observed during pre-construction site walkovers or during trial pitting. Once bones were unearthed, the site foreman stopped work immediately, the area was demarcated with barrier tape and the PMU was notified. SHG commissioned a study by archaeologist Dr Andrew Pearson to make recommendations on how to treat bones found *in situ*, and how to store bones for future research.

Plate 5: The location of the human remains

Plate 6: The site was cordoned off and all construction activities in the area were halted

Mitigation measures to be implemented during the excavation of plinth foundations for the fuel pipeline were identified and work was undertaken between 20 and 27 March 2015. Mitigation measures comprised:

- Excavations to be undertaken using hand tools only;
- No more than three open excavations during any given time;
- Watching brief in operation throughout excavation period.

Only a few bones and bone fragments were found during these excavations. These were recorded and bagged as per Dr Pearson's recommendations. BR investigated if further impacts on the site could be avoided through a re-design of the permanent access road route. This proved not possible and in June 2015 the Contractor confirmed that road construction required cutting into the batter below the site.

Construction work at the two sites resumed in June 2015 under a full watching brief by the environmental team. Firstly the top 300 mm of the previously disturbed area was closely inspected by hand trowel and spade (Plate 7). Once cleared, the material was picked up using a 'soft' (toothless) excavator (Plate 8) and the underlying material was also inspected (Plate 9). The excavated material was then tipped into another TLB bucket and observers watched the material being tipped for any bones (Plate 10). Once cleared, the spoil was replaced in position on the batter slope. All but the smallest bone fragments were placed in labelled, aerated plastic bags and boxed as per Dr Pearson's recommendations, and taken to the Pipe Store in Jamestown for storage. Some of the finds are shown in Plates 11 and 12. At the end of June, work was still proceeding in this area under a watching brief.

Plate 7: Excavation using hand tools

Plate 8: Excavation using a toothless excavator

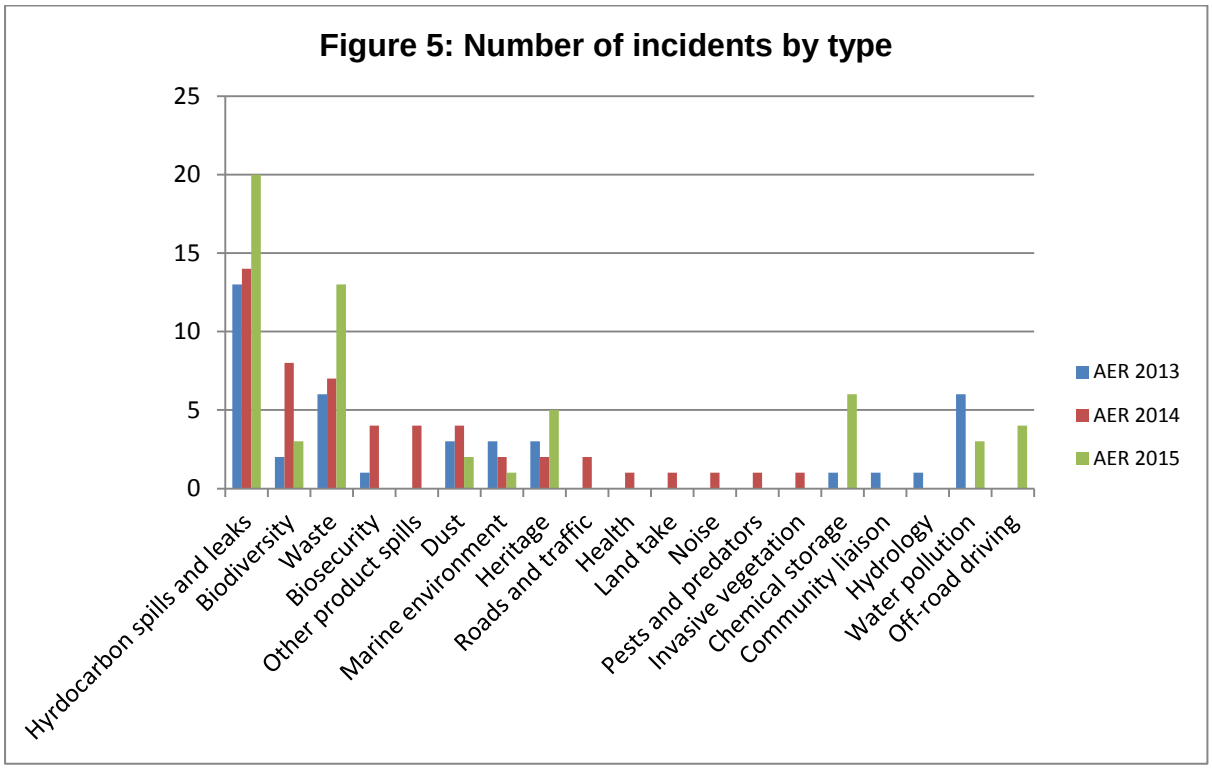
Plate 9: Uncovering a human skull

Plate 10: Sifting through the excavated material

Plate 11: Leg bones

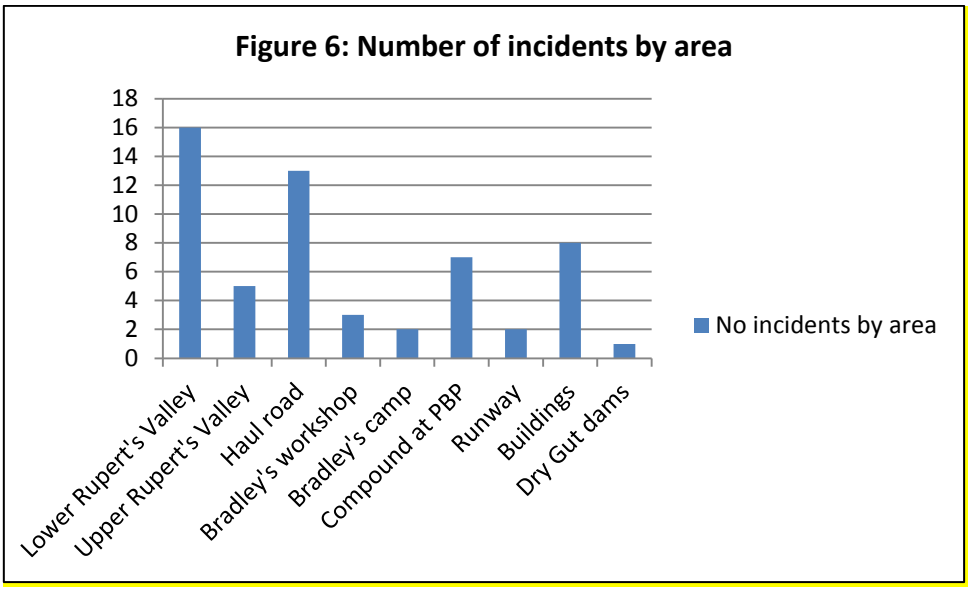
Plate 12: Collection of hand and foot bones, joints and fragments

Figure 5 shows the number of incidents by type. Incidents involving hydrocarbon spills and leaks were again the main contributor to the total (35%) – reflecting an increase in the wear and tear of an ageing vehicle fleet and some procedural non-compliance. All contaminated soil was taken to the bioremediation pad at Bradley's workshop. There was a significant increase in incidents relating to waste management and the storage of hazardous materials. Although few in number, incidents relating to heritage, water pollution and off-road driving were higher than in the previous year, but no incidents relating to noise, biosecurity, health, invasive vegetation, land take or community liaison issues were recorded this year (Figure 5).



Most incidents (16) occurred in lower Rupert's Valley where there was a considerable amount of truck activity associated with wharf construction and off-loading/loading of containers in close proximity to a

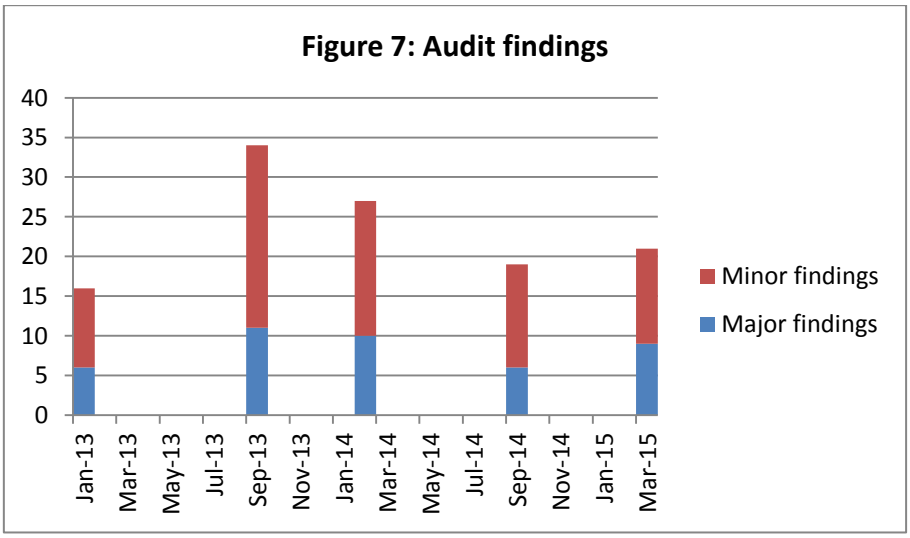
residential area. The second highest number of incidents was associated with the access/haul road, followed by the airport buildings area and the contractor's compound on Prosperous Bay Plain (Figure 6).



External Basil Read audits

The Contract requires a full site audit to be conducted by the CEMPC every six months during the construction of the permanent works phase. Thus, audits took place in September 2014 and again in March 2015. The next audit will take place in September 2015.

There has been a steady improvement in environmental management on the site since the current CEMPC commenced auditing in September 2013, as shown in Figure 7.



Note: the January 2013 audit was conducted by the previous CEMPC according to an early version of the CEMP

After each audit, the CEMPC compiles an audit report, listing the major and minor findings, together with an action plan to rectify the problems. In most cases the issues are rectified promptly and closed out (see Table 4). Increased noise levels were noted after the March audit and although levels were significantly lower in the following two months, noise levels have increased again in all work areas (see Figure 22 in section 6.2.3).

Table 4: Status of close-out of audit findings

Audit date	No of major findings	Status as at next audit			No of minor findings	Status as at next audit		
		Closed out	In progress	Not adequately addressed		Closed out	In progress	Not adequately addressed
Sept 14	6	4	2	0	13	7	1	5
Mar 15	9	7	1	1	12	12	0	0

After the March 2015 audit, the auditor noted that while there had been a marked improvement in waste and litter management in certain parts of the site – especially Bradley's camp, wharf and along the haul road, some areas still struggled to manage wastes successfully in spite of a Good Housekeeping Policy and monthly clean-ups. Although neither of the planned long-term solutions to hazardous waste disposal - the incinerator and the hazardous waste cell, was operational during the reporting period, the auditor was pleased with the improved organisation and management of the temporary hazardous and industrial waste storage area next to Bradley's workshop. For the third audit in a row, no biosecurity incidents were noted, indicating that the control measures in Walvis Bay and at Rupert's are working (see section 6.2.11).

Plate 13: Before corrective actions were taken at the PBP workshop area

Plate 14: After corrective actions were taken at the PBP workshop area

3.4 Meetings and Reporting

As reported in the last AER, members of the environmental team attend a number of meetings to raise issues and to ensure that environmental management actions are implemented where necessary:

- Weekly environmental meetings (on island);
- Monthly environmental management meetings (on island);

- Bi-weekly communications (on-island);
- Monthly Client meetings (on island);
- Weekly production meetings (on island);
- Weekly SHEQ meeting (on island);
- Ad hoc technical meetings (off island).

In addition to the meetings listed above, the environmental management team issues the following reports on a regular basis:

- Weekly environmental report;
- Monthly environmental report;
- Six-monthly audit report;
- Annual environmental report.

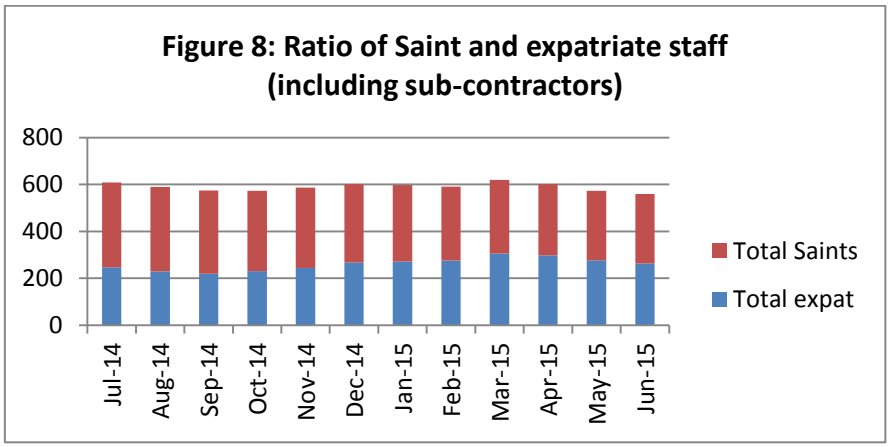
All these reports are submitted to the PMU for acceptance and then distributed to island and off-island BR management personnel, SHG and DfID. All of the monthly reports were submitted and 76% of weekly reports were completed during the 12 month period, which is an improvement on the previous year.

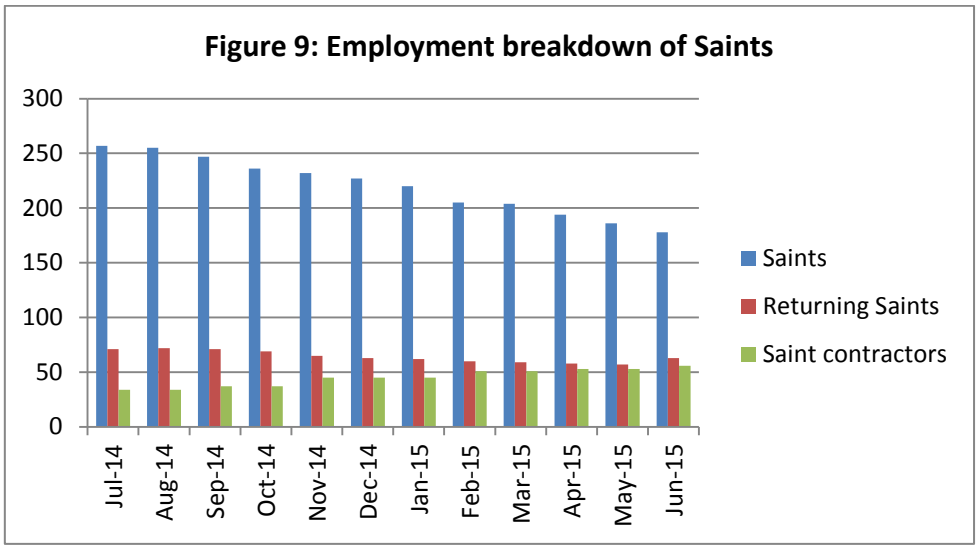
The 2013-14 Annual Environmental Report was presented to the public on the island by the Access Office at one of the Stakeholder Engagement Forum (SEF) meetings and it is available on the Access Office website (www.sainthelenaaccess.com).

4 BUILDING RELATIONSHIPS WITH STAKEHOLDERS

4.1 Employment and Employee Development

Basil Read is the largest private employer on the Island. As at the end of June 2015, a total of 560 people were working on the project of which 297 were Saints and 263 were expatriates employed or sub-contracted by BR (Figure 8). Included in this total were 63 Saints who have returned from abroad to work on the project. From Figure 9 is can be seen that the number of Saints employed as sub-contractors has nearly doubled over the year, while the number directly employed has dropped by about 30%. Overall the total number of Saints employed has dropped by 18% year on year This may be attributed to the shift during the year from labour-intensive earthworks to more specialised sub-contracting work such as navigational aids, installation of computer systems, etc.



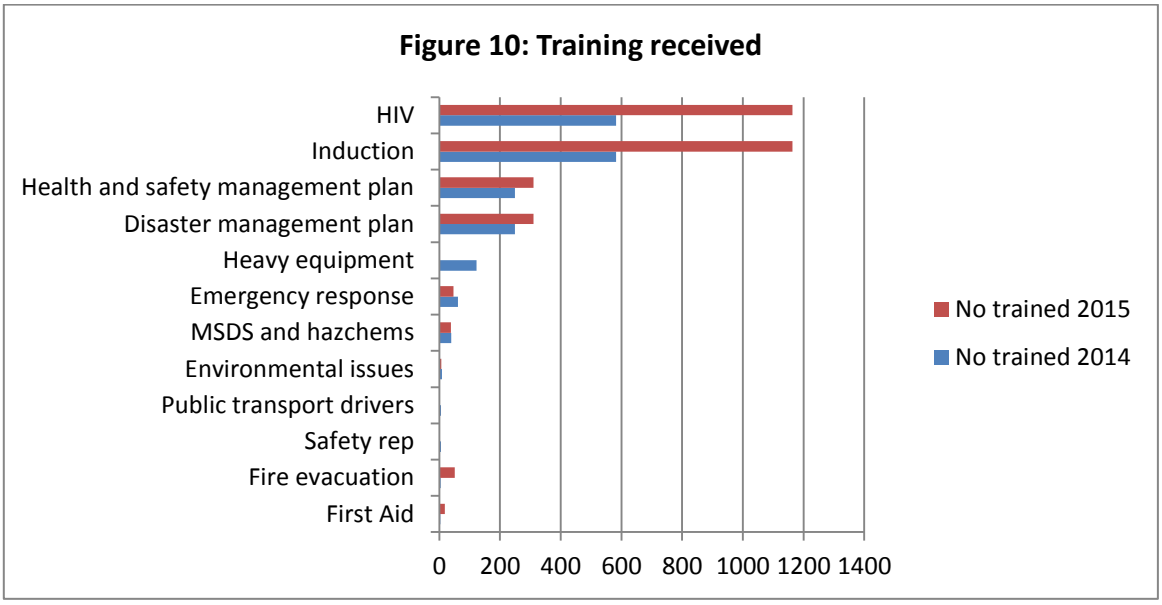


Employment opportunities impacted on all age and gender groups which was made possible by our commitment to provide certified training and imparting of skills to Saints wherever possible, as opposed to sourcing skills elsewhere. Twenty-one Saints under the age of 21, 47 Saints over 60 years of age and 40 female Saints were employed as at the end of June 2015.

Since inception, the project had contributed £1.86 million in taxes and paid £10.38 million in wages and salaries to Saints. Local business has been extensively utilised for the provision of engineering, retail, cleaning, construction and other services to the project, amounting to a cumulative total of £3.64 million. Currently 54 private premises are leased to meet expatriate housing demands and these plus other rentals (e.g. Bradley's Garage) have yielded just over £800,000 in rent. The employment boom together with an influx of over 200-300 expatriates to the Island has resulted in increased spending and economic optimism.

There is a comprehensive programme of skills training in place and in addition to the basic Induction and HIV Awareness training which every employee and sub-contractor has to undertake, all permanent staff have received training on disaster management and health and safety issues (see Figure 10). In addition, where relevant to their work place and skills requirements, employees have been trained in fire-fighting, first aid, emergency response and preparedness, hazardous chemicals,

and various specialised environmental subjects. The amount of training on heavy equipment has decreased since last year due to the shift from major earthworks to building construction.



The CECO and technical assistants give weekly toolbox talks to all construction teams to raise awareness on specific safety, health and environmental issues. Health awareness campaigns have included toolbox talks and the production of leaflets and posters on communicable diseases, health and other social issues, such as:

- Common cold and flu;
- World HIV/AIDS Day;
- TB awareness;
- Domestic abuse;
- Violence against women;
- Drug and alcohol abuse;
- Sexually transmitted diseases and infections;
- Cholera and malaria symptoms; and
- Waterborne diseases.

Plates 15 and 16: Health and social awareness posters

Furthermore, additional toolbox talks are presented on an *ad hoc* or activity-specific basis to address pertinent issues.

4.2 Corporate Social Responsibility

Cumulative direct sponsorships by BR over the entire construction period in the form of cash donations, prizes, material supply, clothing and building improvements have exceeded £42,000 (Plates 17 and 18). The main beneficiaries include: schools, sports clubs, scouts and guides, churches, New Horizons, SHAPE, the SPCA and other island-wide charities. Gravel and tyres have been donated to several school playground projects

Plate 17: One of the yachts taking part in the Governor's Cup after arriving at St Helena. Basil Read provided sponsorships for the arrival functions.

Plate 18: Joseph 'Ace' Hlongwane playing for the Basil Read soccer team the 'Wirebirds'.

One of the most noteworthy events of the year was the first ever mountain bike competition, held on 20th September 2014. Over thirty mountain bike enthusiasts from the young to the not-so-young braved the drizzle and mud, including Basil Read's Buildings Manager, Derrick Alexander (Plate 19). BR provided a first aid response team and marshals with high visibility vests along the approximately 5km route. From the start at Millennium Forest, competitors wound their way along the weather station ridge, down into Bilberry Field/Mulberry Gut, along the valley and then back up a steep ascent before re-joining the trail along the weather station ridge and ending back at the Millennium Forest for welcome drinks and snacks.

Plate 19: Derrick Alexander, BR's Buildings Manager, at the start of St Helena's first mountain bike race

Another social interaction occurred when BR and PMU staff were interviewed by Prince Andrew School students on workplace occupational health and safety issues.

Public announcements were made on a regular basis regarding project aspects such as the Blue Hill VHF mast, wharf access, and the installation of remote obstacle lights on the Barn, Great Stone Top, King and Queen Rocks and Ben Coolen Postbox Walks.

4.3 Open Days and Milestones

The most significant achievement for construction during the reporting period was the completion of the Dry Gut fill (Plates 20-21). The last layer of rock was placed on 1st September 2014 and two public open days were held on the 27th and 28th September to mark this milestone (Plates 22-23). The filling of Dry Gut was required to provide an additional 400 m to the runway length – 200 m of actual runway and 200 m of runway end safety area. The fill, which took 22 months to complete, is 119.8 m in height and contains over 7.6 million cubic metres of compacted rock. The bulk of the fill material was obtained from the runway alignment along Prosperous Bay Plain. With 19 trucks,

working in two shifts, six days a week, it required 450,000 truckloads of rock to be driven down into Dry Gut and back. This equates to 12,500 loads per operator! Each truck travelled about 60,000 km in total, giving a combined distance travelled of about 1.2 million km. This equates to almost 30 trips around the world, with each driver doing the equivalent of one and a half trips around the Equator.

But that's not all - it takes 5 excavator bucketfulls to fill 1 truck, thus the four excavators have turned and scooped rock more than 1.3 million times!

The two public open days were well attended, with 1,606 visitors over the two days. A shuttle bus ran from the terminal buildings to the Dry Gut fill viewpoint and an area was set aside for the sale of food and drinks.

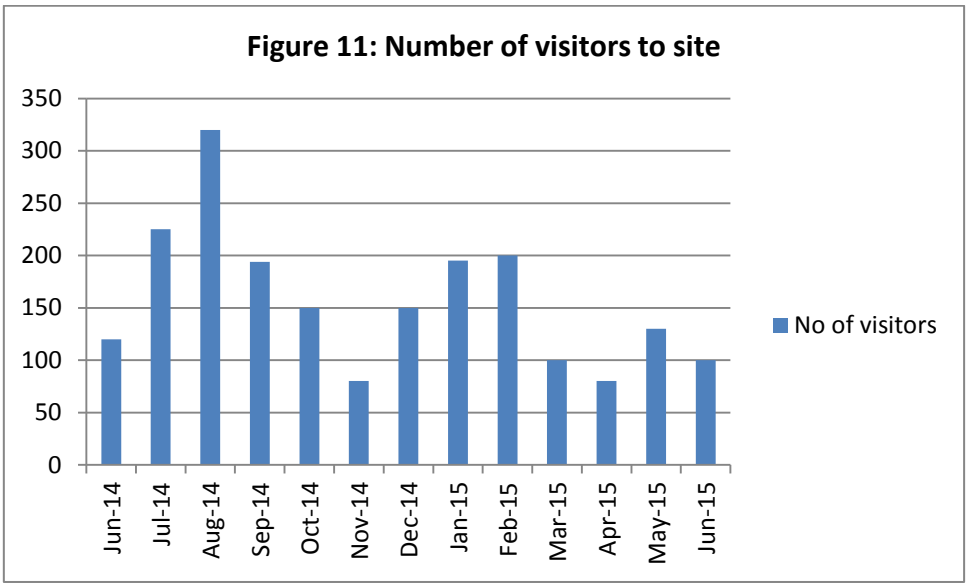
Plate 20: The last load being dumped onto Dry Gut fill

Plate 21: One hundred percent full, 1st September 2014

Plate 22: Saints queuing up to enter the air traffic control tower

Plate 23: Lesley and Loretta, and June and Fred Henry at the Dry Gut Fill Open Day. Lesley and June are sporting commemorative BR hats

In addition to the public open days, the CLO gives guided tours to tourists on the Sundays when the RMS *St Helena* is 'in', which are very popular. Excluding the number of visitors who attended the Dry Gut Open day described above, over 2,000 people visited the site (Figure 11). These figures include school groups and mid-week special interest visits.



4.4 Stakeholder Engagement Forum.

Five Stakeholder Engagement Forum meetings have been held during the year as follows:

Date	Location	Topics
July 2014	Rupert's Valley Community Centre	Permanent wharf, BFI, pre-cast yard LEMP planting in valley
October 2014	Harford Community Centre (Plate 24)	Access road Rehabilitation
March 2015	Museum, Jamestown	General project overview
April 2015	Canister, Jamestown	Launch of the 2014 Annual Environmental Report
June 2015	Rupert's Valley Community Centre	Update on sea rescue facility Introduction to Fuel Management Contractor (PensPen) LEMP

The aim of the meetings is to provide information to affected communities and to listen to issues and concerns raised by the public. The meetings are chaired by the PMU's Environmental Monitor.

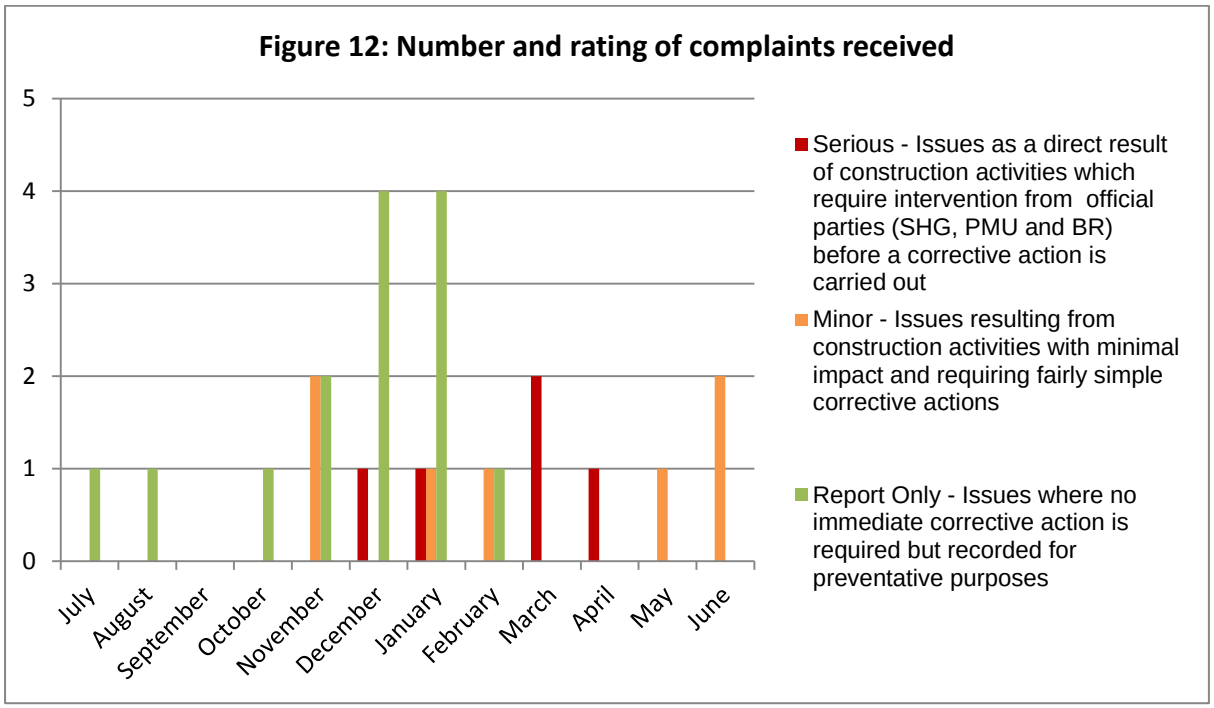
Plate 24: Stakeholder engagement forum meeting at the Harford Community Centre

4.5 Community Liaison

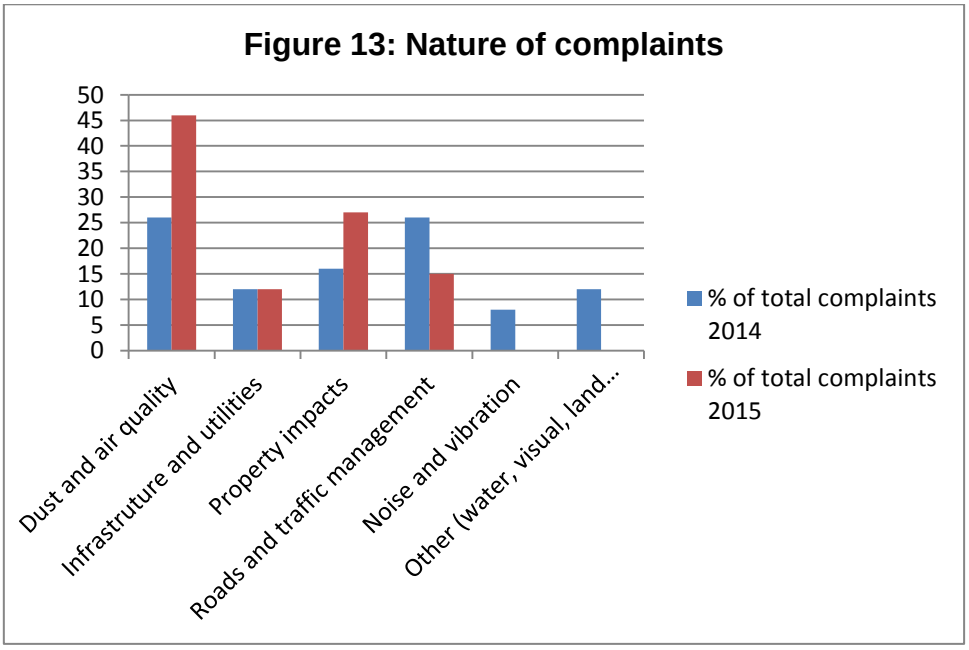
In addition to the Stakeholder Engagement Forum and Open Days described above, there are various other forms of community liaison. The Access Office provides an update on the airport project every month, which is circulated via the two island newspapers and is available on the Access Office website (www.sainthelenaaccess.com).

BR has a full-time Community Liaison Officer (CLO) who provides a constant communication link between the contractor, the affected communities, as well as the broader island community. There is a 24 hour hotline and a complaints reporting and recording system in place.

In the twelve month period up to 30th June 2015, a total of 26 complaints were received, 50% fewer than last year. Fifty-four percent of the complaints were classed as report only and 27% were rated as minor and were quickly rectified (Figure 12). However, there were 5 serious complaints which needed immediate intervention (same number as last year). These all related to roads and traffic management – mostly damage to private vehicles and property from flying stones, and speeding offences.



However, the bulk (46%) of the less serious complaints related to dust, primarily in the Deadwood area (10) and two from Rupert's – this is up from 26% last year (Figure 13). Property impacts accounted for seven complaints, which is also considerable higher than in the 2013-2014 reporting period, and there were three complaints about infrastructure and utility disruptions.



5 ENVIRONMENTAL MANAGEMENT ACTIVITIES

This chapter summarises some of the environmental work undertaken during the reporting period.

5.1 Input to Design

Although the bulk of the design phase is complete, there were still many project elements being finalised during the reporting period. Environmental issues are considered in the design process through an ongoing process of design iterations, review, site inspection and comment by various parties such as the CEMPC, CECO, PMU and SHG. Some of the key environmental inputs made during the year are summarised in Table 5 below.

Table 5: Summary of selected environmental inputs to the design phase

Area of development	Areas where environmental inputs were considered during design
A – Lower Rupert's Valley	• Wharf access road • Sea rescue building • Pipeline route to power station
B – Access/haul road	• Appropriate road surfacing materials • Weather station junction (Great Wall) • Drainage/ culverts e.g. Deadwood and Mulberry Gut
C – Upper Rupert's Valley	• BFI offices and fire water storage
D – Contractors camp at Bradley's	• DVOR and VHF mast locations
E – Prosperous Bay Plain and Dry Gut	• Airport fencing, gates and access roads • Sewage treatment plant • Temporary refuse storage areas
X – Site compound and explosives magazine	• Permanent water line
I – Remote navigational and communication aids	• Access road alignment and positioning of VHF mast and hut at Blue Hill • Fine positioning of remote obstacle lights to avoid sensitive flora

5.2 Studies Commissioned

Since most of the large-scale works are well underway within the ADA, and with no additional studies being identified during the site walkovers, no investigations or environmental surveys were undertaken by BR during the reporting period.

5.3 Feedback on Earlier Studies

Planning permission for the open channel was received in July 2013. One of the approved mitigation measures for the open channel was to replace saved lichen-covered rocks onto the benches of the open channel cut slopes. Due to the nature of the rock, benching was not possible and it was agreed that the lichen-covered rocks would be replaced on the 'green route' – the access track initially used to excavate the open channel. Subsequent site inspections have shown that flora on the green route is recovering well and lichen are prolific on either side of the track, therefore it is expected that lichen will slowly recolonise the disturbed area without further interventions. The saved lichen-covered rocks

will be placed on the final surface of Middle Fill and on an area adjacent to the Dry Gut fill during the second half of 2015.

5.4 Landscape and Ecological Mitigation Plan

The Landscape and Ecology Mitigation Programme (LEMP), an important component of the airport project, includes a four year plant propagation and planting programme focussing on habitat restoration and landscaping of areas damaged during *temporary* construction works for the airport project. Another aim of the LEMP is to provide alternative habitats and landscape treatments to reduce and offset the permanent direct loss of habitat resulting from *permanent* construction works. The detailed landscape designs are being undertaken by AECOM in the UK. Although the LEMP was supposed to run in parallel with the construction phase, the AECOM contract was only signed in July 2014 and the landscape architect visited the island in November/December of the same year. The draft, preliminary, detailed landscape designs were submitted in February for comment and the final designs are expected from July 2015 onwards.

In the meantime and in anticipation of the detailed designs, the SHG LEMP Project Manager set up a plant nursery in Half Tree Hollow, which became operational at the beginning of the reporting year.

Contractually, BR is required to implement the LEMP within its construction footprint, while SHG is responsible for creating compensatory habitat elsewhere on the Island; thus the LEMP project will continue beyond the start of airport operations.

5.4.1 Site preparation work

Following receipt of five site specifications last year, an additional eight were prepared by the SHG LEMP Manager and issued to BR by the PMU during this reporting period. These site specifications variously provided detailed site shaping, ground preparation, topsoiling, revegetation and species rescue requirements for various completed areas within the construction footprint. These areas included:

- North Hill (at the northern end of the runway) - harvesting of lichen and removal of lichen-covered rocks for translocation on Dry Gut terraces;
- Dry Gut eastern terraces levels 260 and 270 – placement of lichen-covered boulders from North Hill and scattering of Ramalina spp lichen;
- Shaping and trimming sections of the haul road that will not be used for the permanent access road;
- Topsoil removal and species recovery and translocation from the site of the localiser near the north-west end of the runway;
- Shaping, topsoiling and replanting of nursery-grown plant species on the site of the Dry Gut reservoirs;
- Additional planting at the Dry Gut reservoirs;
- Spreading a thin layer of topsoil on the line of sight batter (western side of the runway) to promote natural re-colonisation.

All but one of these specifications (additional planting in Dry Gut) have been completed and signed off by all parties by the end of the reporting period.

5.4.2 Species rescue, translocation and revegetation

The most notable LEMP works carried out during the year are described below:

Revegetation at Dry Gut reservoirs

This was the first revegetation exercise using nursery-grown plants. Over a period of two months from April to June 2015, almost 4,000 samphire plants (*Suaeda fruticosa*) and 50 annual beard grass plants (*Polypogon monspeliensis*) were planted in and along the reinstated Dry Gut channel (Plates 25 and 26). Many lessons were learned from this exercise relating to the condition of plants as received from the nursery, the need for rabbit proofing for all plants, and, as warned by the CEMPC, planting in a water course will result in plants being washed away. Significant losses of samphire were incurred due to all these factors, and many plants had to be replaced and provided with rabbit-proofing.

Plate 25: BR team with assistance from ANRD planting out samphire and annual beard grass on the rehabilitated site of the Dry Gut dams

Plate 26: Annual beard grass with rabbit protection

Lichen rescue and translocation

Prior to earthworks commencing on North Hill at the northern end of the runway, BR harvested 32 flour sacks of Ramalina species lichens and 20 pick-up truck loads of lichen-covered rocks. The rocks were replaced on two eastern-facing terraces of the Dry Gut fill, orientated with the lichen facing towards the sea in order to intercept moisture. The loose Ramalina lichens were scattered across the rock slopes of the fill with the hope that they will recolonise the bare rocks.

Translocation of endemic plants from the localiser site

The localiser forms part of the navigational system for the airport and has to be situated in a specific position to achieve the desired geometry. This meant that a previously undisturbed area adjacent to the north-west part of the runway had to be built up with overburden to achieve a platform for the localiser and an access track had to be created. During September 2014, the environmental team rescued all babies toes and lichens within the footprint, as well as other native plants which would be suitable for translocation (Plate 27). The babies toes and samphire plants were translocated to the topsoiled terraces of the north-west fill (Plate 28) and the lichen-covered rocks were lifted and replaced in adjacent unaffected areas.

Plate 27: Collection of babies toes from the localiser site

Plate 28: Planting out the rescued babies toes onto a terrace of north-west fill

Rehabilitation of the temporary Deadwood haul road

- The material imported to establish the road at the north-west end of the Deadwood pasture was removed and used for repairs of the main section of road running through the centre of the pastureland. Once the material had been removed; the area was rehabilitated to allow for natural regrowth of Kikuyu grass (Plates 29 and 30);
- The gate at the north-western end of the pasture was removed and placed at the other end to allow for future access to the north-west paddock;
- The main road was graded to enable water drainage into the paddocks, whilst care was taken to alleviate water from standing or running near the wind turbine control buildings;
- Extraneous material (e.g. crushed stone) that had accumulated around fencing posts and within the paddocks was removed;
- All temporary construction signage was removed;
- All damaged fencing posts were replaced; and
- The Boer Prisoner of War camp explanation board was re-instated.

Plate 29: Temporary haul road over Deadwood Plain

Plate 30: Rehabilitated haul road track

In addition to the revegetation work, some sites continue to show signs of natural colonisation by a variety of species, notably the open channel, the Dry Gut terraces and mole spider hill.

Open channel

A considerable amount of natural revegetation has occurred in the open channel; endemic and native plants include samphire, salt plant (Plate 31) and ice plant, while invasive/alien vegetation such as wild tomato, bilberry and sow thistle, are constantly being removed from the area.

Dry Gut terraces

Only endemic and native plants have been observed on the Dry Gut terraces, including samphire (Plate 32), salt plant, ice plant and babies toes.

Mole spider hill and line-of sight batter

Natural colonisation by endemic and native vegetation includes samphire, ice plant, salt plant and common goosefoot (Plates 33 and 34).

Plate 31: Natural revegetation by salt plant in the open channel

Plate 32: Young self-sown samphire seedling on Dry Gut terraces

Plate 33: Natural revegetation on Mole Spider Hill (samphire, common goosefoot, ice plant and salt plant)

Plate 34: Recolonisation of the line of sight batter (right) from undisturbed vegetation (left)

5.5 Operations Environmental Management System and Wildlife Hazard Management Plan

During the reporting period, work continued on the development of an Environmental Management System (EMS) for the operation of St Helena Airport, as well as the Wildlife Hazard Management Plan. Both documents are supported by Standard Operating Procedures that detail the day-to-day management of various environmental management activities during airport operations, such as:

- Risk assessment procedures and register;
- The airport fuel facility;
- Hazardous chemical management – storage, handling and disposal;
- Pest and predator control;
- Waste management;
- Water and effluent management;
- Management, maintenance and monitoring of revegetated areas;
- Environmental monitoring and reporting;
- Airport precinct traffic management and Postbox Walk access; and
- Monitoring, recording and reporting of bird strikes.

Both documents form part of a suite of Manuals that has to be approved by the airport certifying body, Air Safety Support International (ASSI) before the airport can obtain its licence to operate. Both of the environmental documents have been approved in principle by ASSI pending last minute updates immediately prior to airport hand-over. Training of the airport Environmental Officer and designated Assistant Environmental Officers will take place during August 2015.

6 ENVIRONMENTAL MONITORING

6.1 Monitoring Programme

The following environmental aspects were monitored on a regular basis during the reporting period:

- Air quality;
- Water quality;
- Groundwater levels;
- Noise;
- Vibration;
- Building condition;
- Waste types and quantities;
- Resource use;
- Mole spiders;
- Wirebirds;
- Seabirds;
- Invasive vegetation;
- Pests and predators;
- Biosecurity;
- Marine environment;
- Visual impact;
- Climate; and
- Heritage.

The responsibility for all monitoring lies with the Contractor's Environmental Control Officer (CECO) and the appointed technical assistants (TAs).

The monitoring programme is shown in Table 6.

Table 6: Monitoring frequency

Environmental aspect	Monitoring frequency					
	Daily	Weekly	Monthly	Quarterly	Ad hoc	Comment
Air quality -TSP			X			
Air quality – PM10	X					
Surface water quality		X				When water is flowing; full analysis every 6 months
Groundwater quality			X			Full analysis every 6 months
Groundwater levels		X				
Noise		X			X	When construction work occurs near residential areas and following complaints
Vibration					X	On blast days and following complaints
Building condition					X	Before and after major construction work in a residential area
Waste		X				
Resource use			X			
Mole spiders				X		
Wirebirds		X				
Seabirds – Gill Point			X			
Seabirds – bird strike risk				X		Done daily for a week every quarter
Invasive vegetation			X			
Pests and predators		X	X			
Biosecurity			X		X	Regular monthly monitoring and when NP Glory arrives
Marine water quality (turbidity)	X					
Marine species	X		X			Daily observations of cetaceans; monthly snorkel survey; biannual dive
Visual			X			
Climate	X					
Heritage			X			

6.2 Monitoring Results

6.2.1 Air quality

The main air quality issue on this construction site is dust. The two aspects that we monitor are:

- **PM10:** particulate matter finer than 10 micron (PM10) can enter human lungs and be harmful to health; and
- **Total suspended particulates (TSP):** nuisance dust can affect domestic, industrial and agricultural activities, it smothers plant stomata, and can close micro-pores in soil affecting soil micro-fauna.

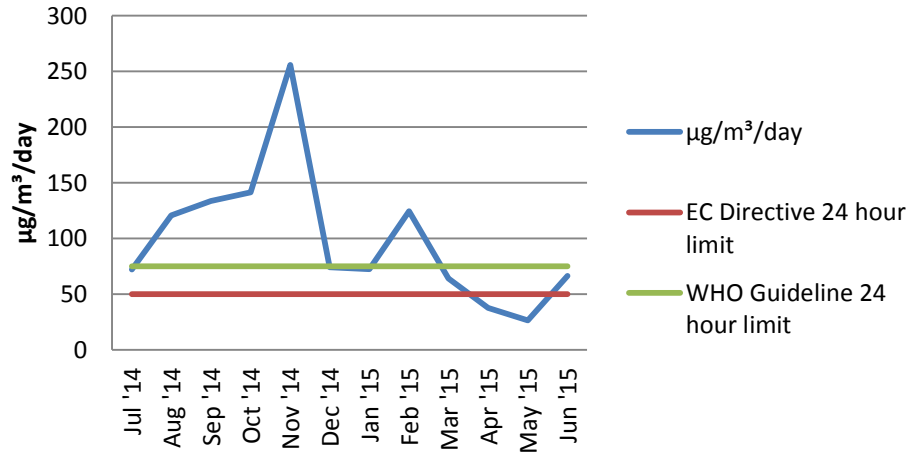
We have two PM10 monitors which are moved around the site to respond to particular requests or work activities. Monitoring took place in the following locations during the year:

Table 7: Respirable dust monitoring locations

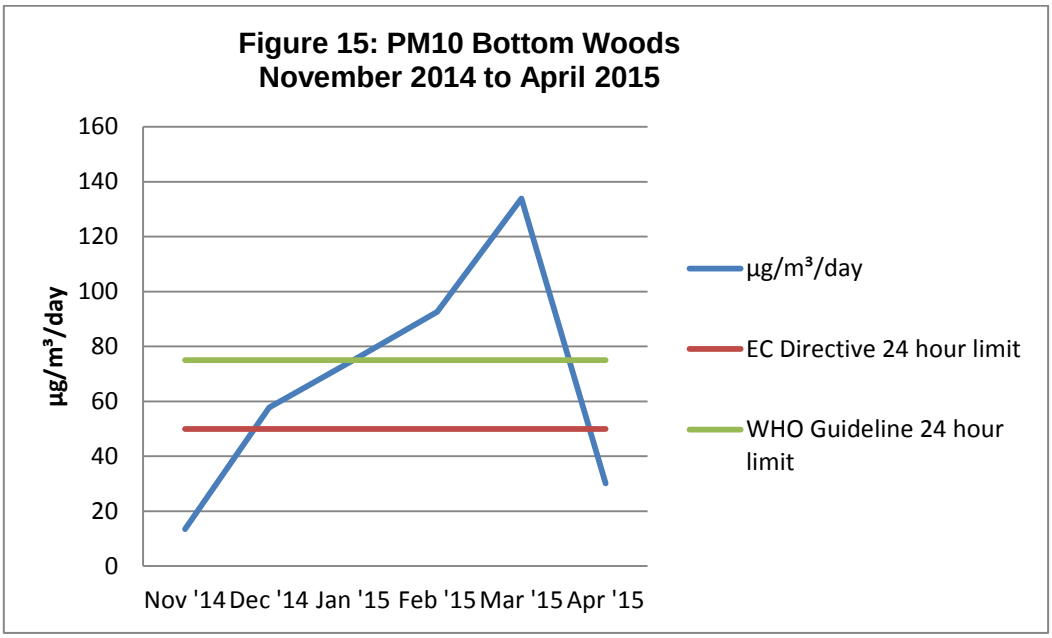
Location of PM10 monitor	Period	Reason
Rupert's Valley	July 2014 – June 2015	Wharf construction and unloading/loading NP Glory 4 through residential area
Bottom Woods	Nov 2014 – April 2015	Road dust
Deadwood	Aug – Oct 2014	Construction works near residential areas
Bottom Woods Meteorological Station	June 2015	Background readings in advance of installation of incinerator
Horse Point landfill site	June 2015	Background readings in advance of installation of incinerator
Central Basin	June – July 2015	Grooving of runway surface

The PM10 results from these locations are shown in Figures 14-18 together with the European Commission (EC) Directive and World Health Organisation (WHO) guideline limits for PM10.

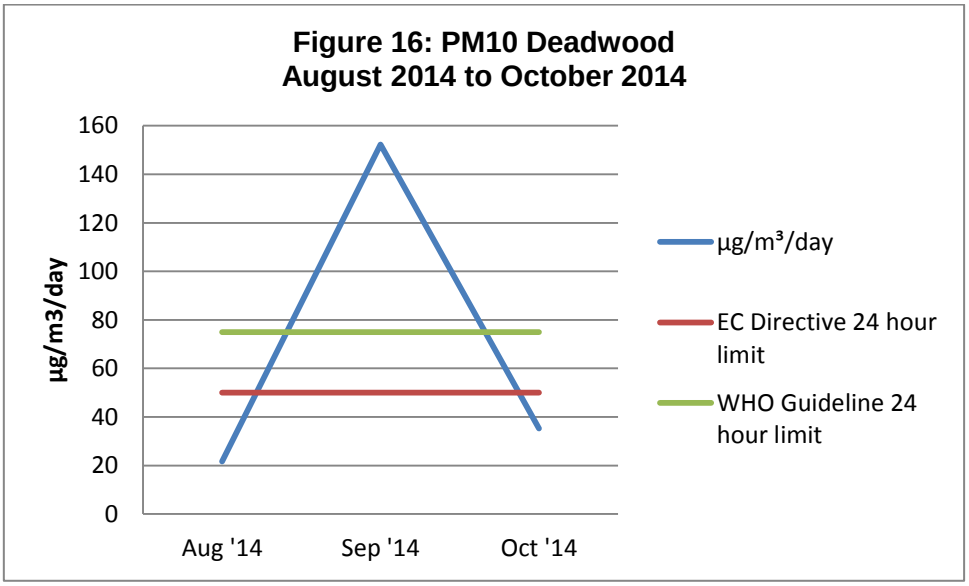
Figure 14: PM10 Rupert's Valley July 2014 to June 2015



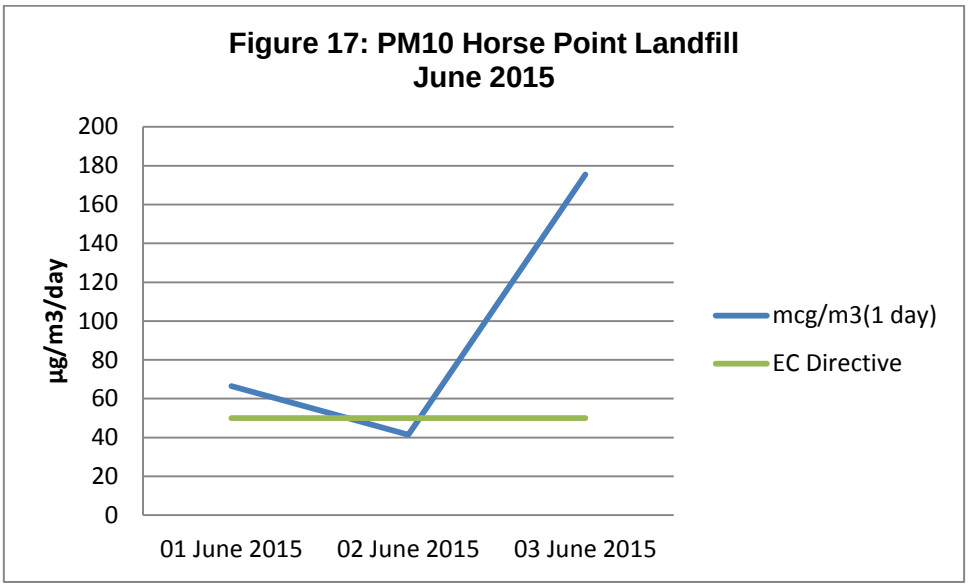
The average daily PM10 emissions in Rupert's Valley exceeded both the EC and WHO limits for most of the year until the March audit highlighted this as needing immediate corrective action. It can be seen that dust levels dropped from March due to increased dust suppression. The cause of the dust was a combination of heavy traffic hauling rock to the wharf, loading and offloading the NP Glory 4, speeding and hot, dry conditions.



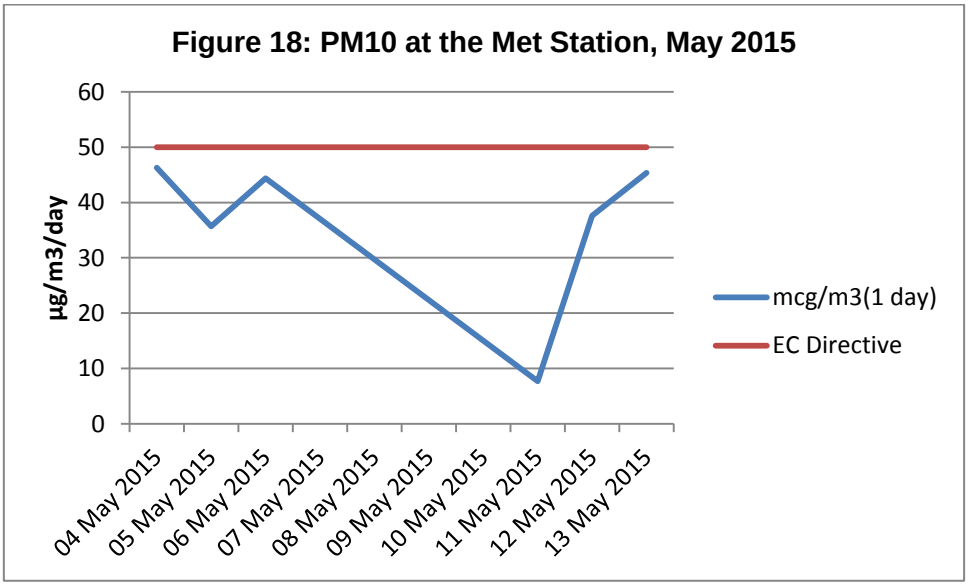
The average daily PM10 emissions at Bottom Woods exceeded the WHO Guideline limit in two months and exceeded the EC Directive during four of the six months that monitoring was conducted in this location. As with Rupert's Valley, the average dust levels dropped from March after corrective actions were taken to increase dust suppression and to reduce BR and public speeding along the stretch of road between Reggies Takeaway and the Millennium Forest.



Problems were experienced with the PM10 monitor at Deadwood during September, with moisture getting into the instrument and wetting the filters. As a result the instrument was sent to South Africa for re-calibration and servicing The results from this period are therefore anomalous.



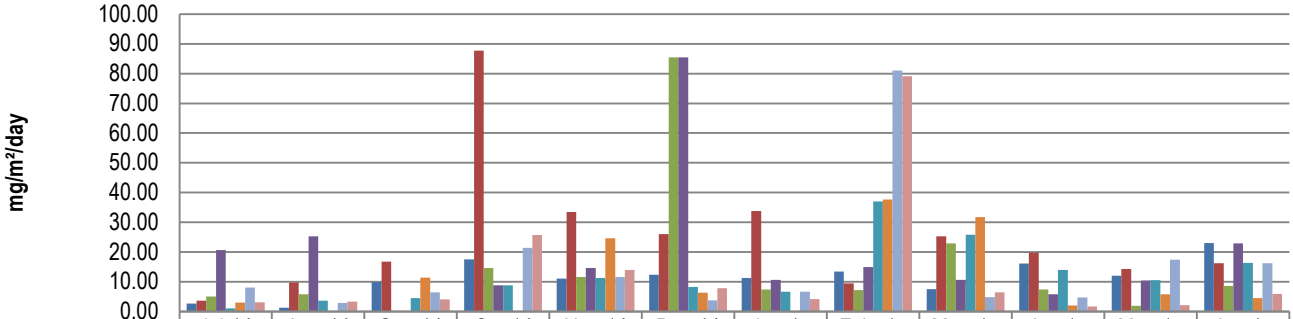
In anticipation of the installation of the incinerator at Horse Point Landfill, background monitoring commenced in June. It can be seen from Figure 17 above that the ambient conditions at the landfill are dusty and exceeded the EC Directive on two out of three days. However the conditions at the nearby Meteorological Station – another of the fixed monitoring points for the incinerator once it is in operation, were much less dusty, with readings well below the EC Directive (Figure 18).



Total suspended particulate (TSP) dust levels were however, well within the UK limit of 200 mg/m^2/day at all locations as shown in Figure 19 below. The various locations experienced dust peaks at different times reflecting areas where construction activities were occurring. Many of the complaints about dust were received from Deadwood residents during December and this is clearly demonstrated in the results. The peak PM10 reading for Rupert's Valley in October is also reflected in the peak TSP recorded for that month. The spike in dust deposition in Central Basin in February

was due to the movement of fine gypsum overburden from the west side of the runway to the Middle Fill spoil area.

Figure 19: Total Suspended Particulates, July 2014 to June 2015

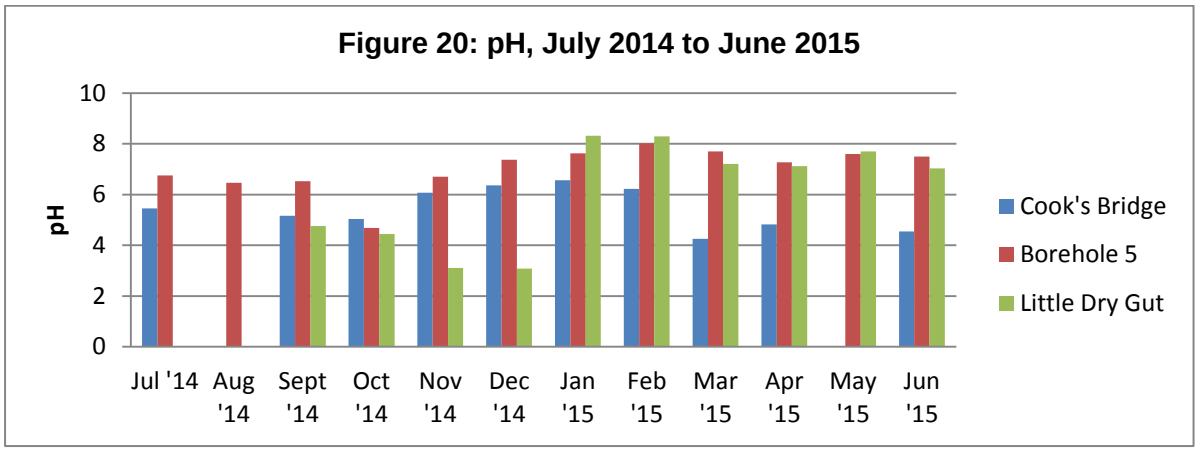


	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb -15	Mar -15	Apr-15	May-15	Jun-15
Argos	2.68	1.21	9.89	17.49	11.08	12.39	11.23	13.43	7.44	16.15	11.99	22.98
Rupert's	3.58	9.71	16.77	87.68	33.42	26.03	33.82	9.48	25.30	19.74	14.24	16.24
Deadwood	5.01	5.72	0.21	14.57	11.62	85.49	7.35	7.17	22.85	7.33	1.91	8.61
Mulberry Gut	20.64	25.28	0.00	8.76	14.63	85.49	10.67	14.90	10.59	5.79	10.37	22.84
Bottomwoods	0.99	3.64	4.50	8.77	11.22	8.29	6.64	37.03	25.75	13.96	10.50	16.28
Bradleys	2.97	0.00	11.32	0.00	24.66	6.33	0.00	37.60	31.72	1.99	5.81	4.53
Central Basin 1	8.04	2.87	6.45	21.41	11.57	3.74	6.67	81.00	4.84	4.64	17.45	16.24
Central Basin 2	3.04	3.25	4.03	25.71	14.00	7.78	4.16	79.10	6.46	1.71	2.10	5.85

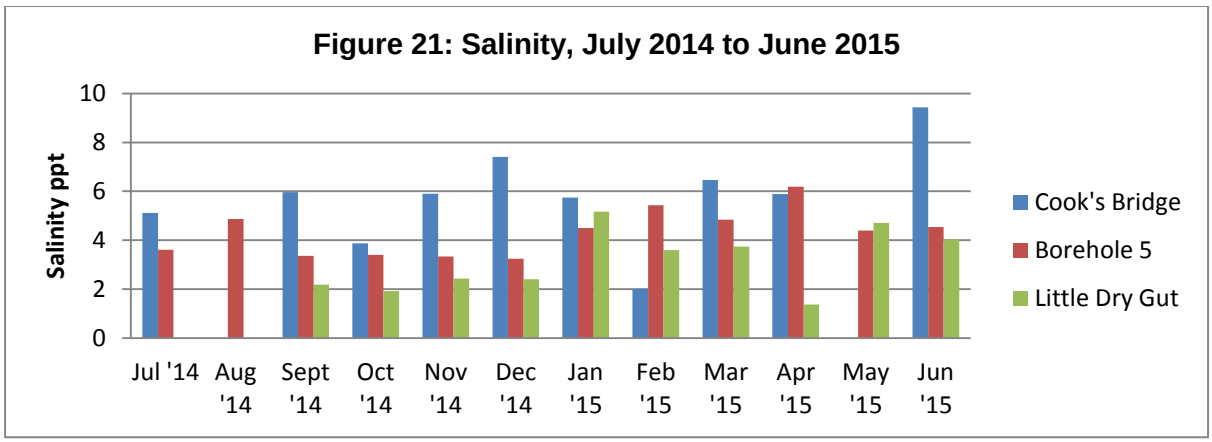
6.2.2 Water quality

Surface water is monitored weekly at Cook's Bridge and when water is present, at the confluence of the open channel with Little Dry Gut, Champagne Pools (below the Dry Gut fill) and in Rupert's Run. All but two of the boreholes drilled in Dry Gut and on Tungi Flats were decommissioned once the Dry Gut fill was completed and only Borehole 5 is monitored on a regular basis now.

The weekly monitoring is undertaken using a hand held meter to measure pH and three different indicators of salinity: salinity, electrical conductivity and total dissolved solids. There is a direct relationship between these and only the results for salinity are shown below. Optimum pH for most water users lies between a pH of 5 and 9. The acidity of water at Cook's Bridge in Fisher's Valley and occasionally in Little Dry Gut is unusual and can only be explained by natural geochemical reactions, as there are no acid-forming substances being used in the construction works which could be affecting these water resources (Figure 20).



Salinity is measured in parts per thousand and it can be seen from Figure 21 that salinity varies considerably depending on the season and the amount of runoff. After long dry periods, the first flows can be very saline as the water dissolves salt crystals from the surface soils. If flows persist for days or even weeks the salinity decreases as the surface salts are flushed out. Once flow in the stream stops, the pools left behind slowly dry out and become increasingly saline until they become hypersaline, leaving behind a rime of salt crystals. It is thus difficult to establish a baseline. Salinity levels below 1 ppt are considered to be quite low, while those over 4 are high.



Every six months, a set of samples is collected for full analysis at an accredited laboratory in South Africa. The results are analysed in the context of the suitability of the water for various uses. The findings from the samples collected in September 2014 and March 2015 are summarised in Table 8 below.

Table 8: Suitability of water for various uses

Water use	Borehole 5	Rupert's borehole	Champagne Pools	Fisher's Valley at Cook's Bridge	Little Dry Gut
Concrete	Yes	No	No	No	No
Dust suppression,	Yes	Marginal	No	No	No

Water use	Borehole 5	Rupert's borehole	Champagne Pools	Fisher's Valley at Cook's Bridge	Little Dry Gut
vehicle washing					
Fire fighting	Yes	No	No	No	No
Potable use	Yes	No	No	No	No
Irrigation	Maybe	No	No	No	No
Aquatic ecosystems	n/a	n/a	Yes	Yes	Yes

If Borehole 5 is to be used for irrigation purposes, it needs to be pumped at, or at a higher rate of abstraction than at present to ensure that the sodium chloride levels stay within acceptable limits for highly salt tolerant vegetation. The water pumped from Rupert's borehole is highly saline and is not suitable for washing vehicles and can cause severe corrosion – as seen on the water bowsers.

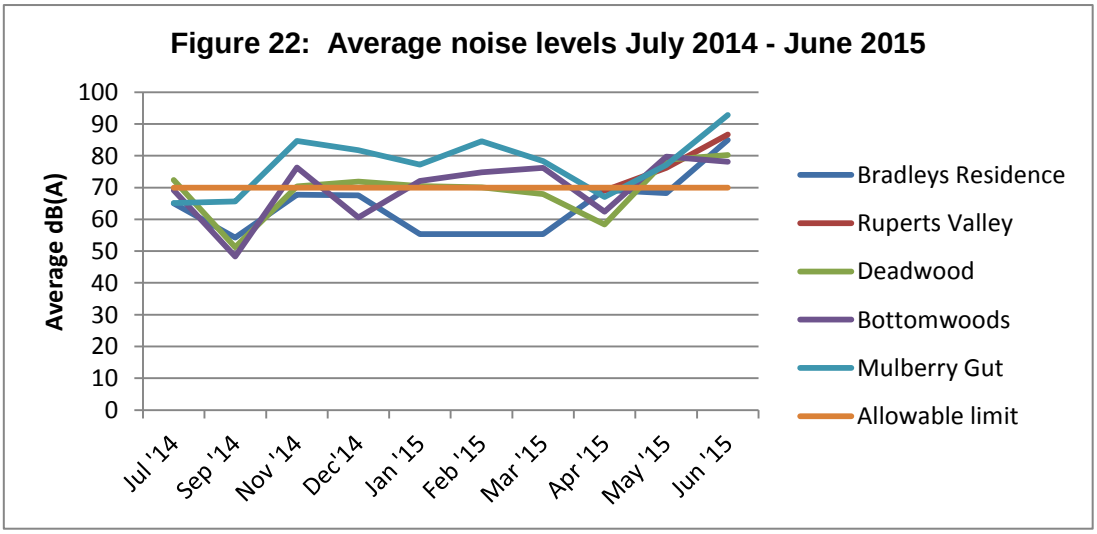
6.2.3 Noise

Noise can affect sleep, concentration and peace of mind and therefore noise on site is monitored on a weekly basis when construction is occurring in residential areas, during blasting, or on an *ad hoc* basis following complaints.

Weekly measurements are taken in the following residential areas: Bradley's, Bottom Woods, Deadwood, Mulberry Gut/Colt Sheds and Rupert's Valley.

The acceptable average noise limit established for this project is 70 decibels. The average monthly decibel readings at various residential areas affected by construction are shown in Figure 22. Throughout most of the reporting period, noise levels at Colt Sheds consistently exceeded the limit while noise levels at Bottom Woods and Deadwood were occasionally high. These high noise levels may be attributed to trucks hauling rock from the Horse Point quarry to the permanent wharf. However, since May, noise levels at all receptors exceeded the limit due to strong winds.

Figure 22: Average noise levels July 2014 - June 2015

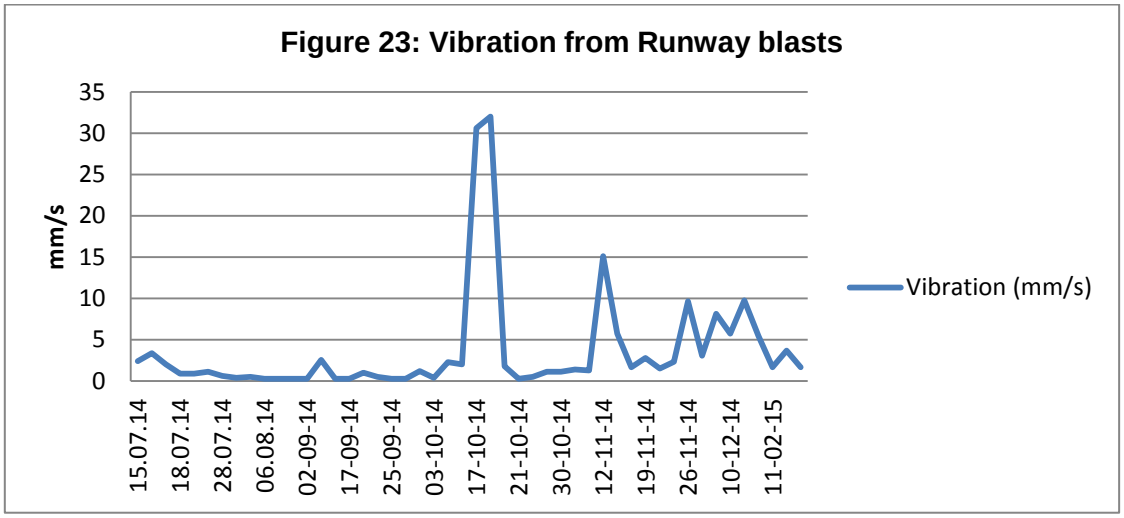


Note: decibel levels increase exponentially and therefore the average is skewed towards the maximum

6.2.4 Vibration and building condition monitoring

During the reporting period, vibration readings were taken at the airport site to monitor blasts on the runway; this activity ceased in March 2015 and as a result, routine vibration monitoring is no longer carried out. Vibration monitoring results for the runway blasts taken at the airport terminal building, on the runway slab nearest the blasts (high readings) and at Bradley's camp are shown in Figure 23. The average vibration at Bradley's camp was 0.52 mm/s, which is well within the target daytime peak particle velocity value of 1.5 mm/s specified in the EMP. The highest reading at Bradley's was 1.11 mm/s.

Figure 23: Vibration from Runway blasts



Ad hoc readings were also taken during heavy rolling activities on the access road near residential areas, but all of this work was completed by the end of July 2014 and as no complaints about vibration have been received during the year, no further measurements were taken.

Pre-construction building condition surveys were carried out in the residential areas in close proximity to construction work, mostly in 2013 and early 2014. The reason why not all houses were surveyed in Rupert's is due to some owners not being willing to participate. This year, follow-up surveys were conducted in September/October 2014 in Rupert's Valley and in February 2015 in Deadwood and no structural damage to buildings due to airport construction activities has been found to date. However, most of the follow-up surveys will take place once construction activity has ceased in these areas.

Table 9: Summary of condition surveys completed (as of 30 June 2015)

Area	No of properties	No of initial surveys	% of total properties surveyed	No of follow-up surveys	% of initial surveyed
Deadwood	26	26	100	14	54
Rupert's Valley	21	15	71	10	67
Bottom Woods	23	23	100	0	0
Mulberry Gut/Colt Sheds	6	6	100	0	0

6.2.5 Waste management

The amount of hazardous and non-hazardous waste generated is recorded on a weekly basis and waste disposal practices are monitored on a continuous basis by PMU and BR environmental staff during site inspections and audits. Incidents are reported by PMU as Site Observations and BR is required to take immediate action.

Most of the waste management efforts in the 2014-15 year focussed on finding ways to reduce the amount of waste being generated, especially hazardous waste, and in controlling the temporary storage of such waste until a permanent solution was in place.

After much debate and discussion between SHG and BR, SHG procured an incinerator (Plate 35), which is to be used by BR for construction waste until the airport opens. Thereafter, it will be used for the disposal of the Island's hazardous wastes, including that arising from airport operations. It was installed in early February 2015 but unfortunately, due to technical reasons, the incinerator burnt out during testing and the replacement will only be operational in the second half of 2015. This has placed increasing pressure on the temporary storage facilities at Bradley's workshop.

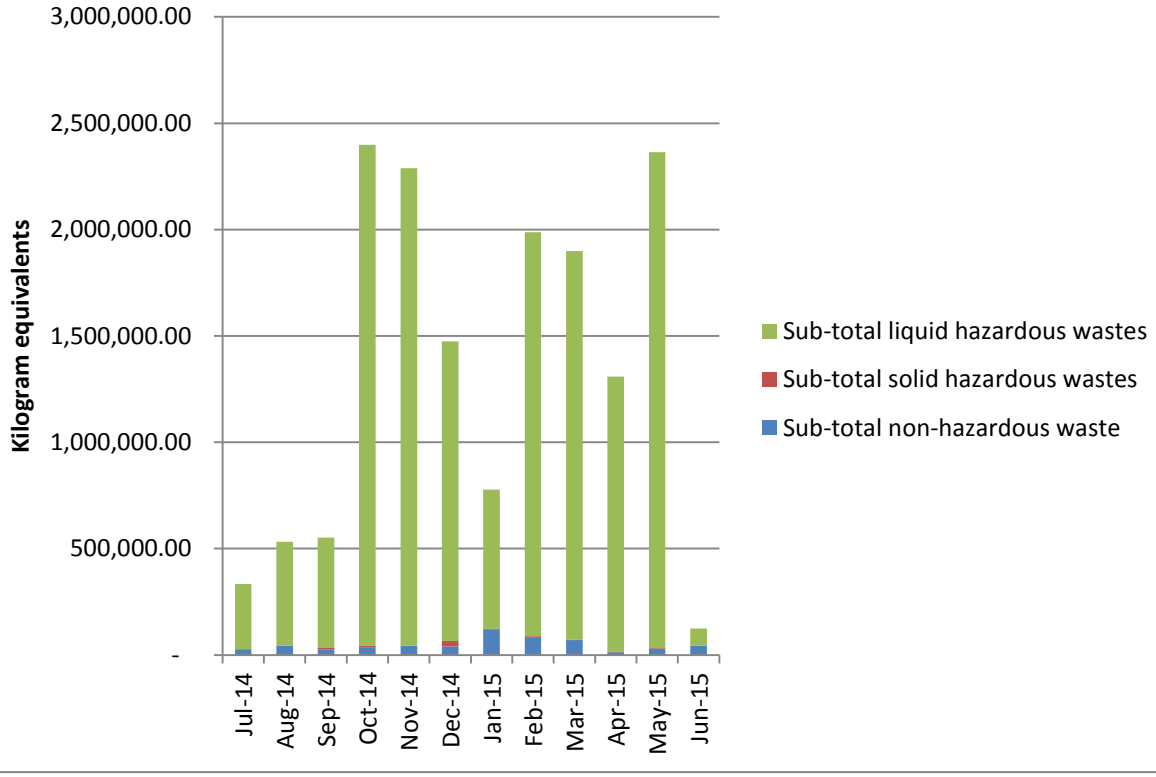
However, not all BR or island wastes can be incinerated and therefore SHG commissioned BR to construct two hazardous waste cells at Horse Point Landfill Site – one for island use and one for construction waste. These engineered cells are expected to be in operation in the second half of 2015 (Plate 36).

Plate 35: Incinerator

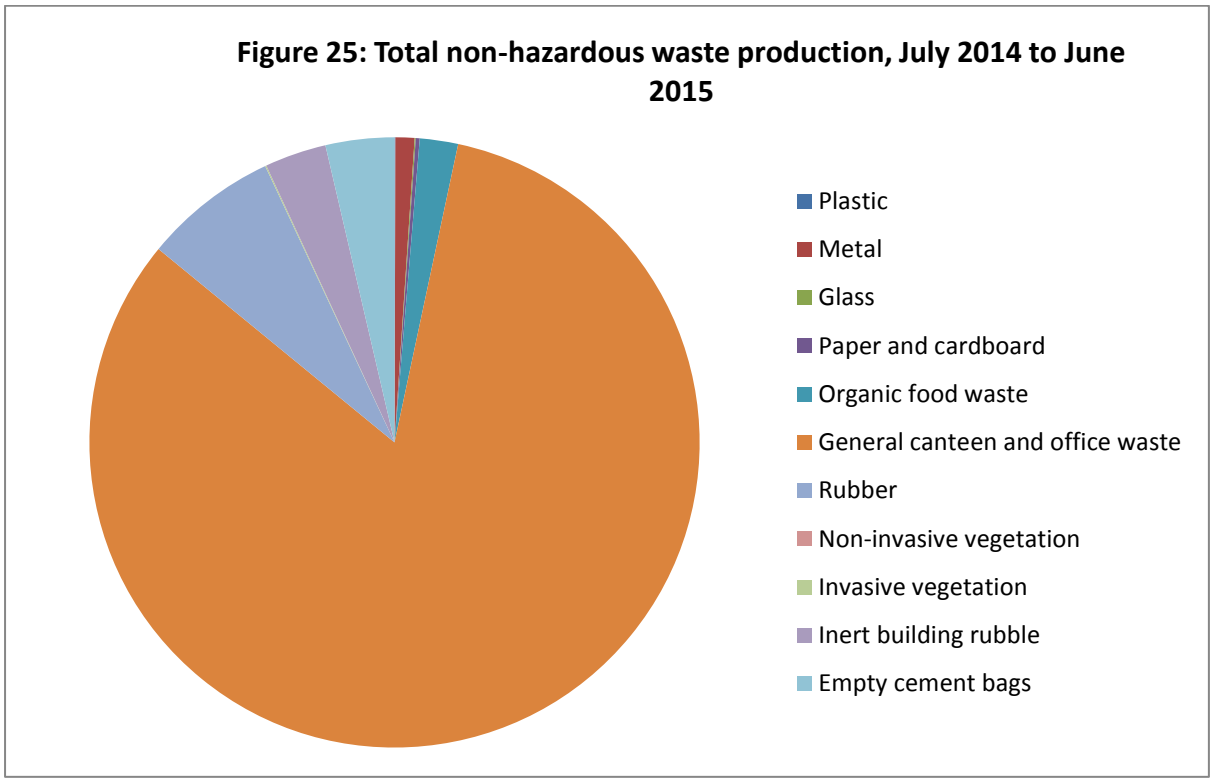
Plate 36: Completed hazardous waste cell with gas release chimney

The total amount of waste generated in the 2014-2015 year was 16,000 tonnes, of which 96% comprised liquid hazardous waste (sewage and waste oil), 3.5% or 567 tonnes was non-hazardous waste and 0.5% comprised solid hazardous waste (Figure 24).

Figure 24: Monthly liquid and solid waste production, July 2014 to June 2015



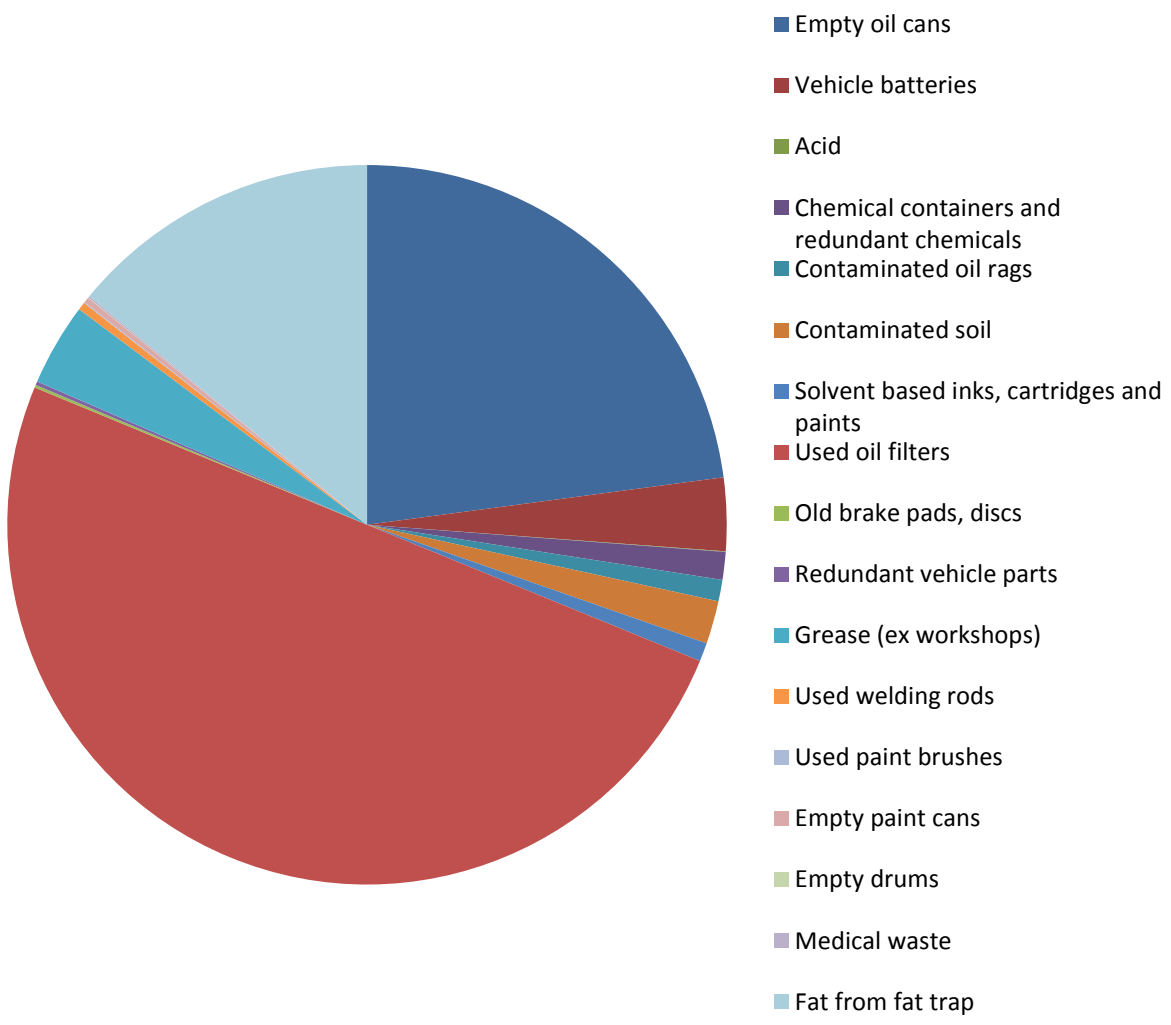
A total of almost 567 tonnes of non-hazardous waste was generated over the year, the bulk of which emanated from the canteen and offices (Figure 25). The second largest amount of non-hazardous waste was tyres, followed by empty cement bags and inert building rubble. The canteen and general waste is disposed of at Horse Point Landfill, the inert rubble is dumped at the designated spoil areas and the tyres are used for a variety of purposes on the construction site and given away to the motocross club and schools for playground use. The cement bags were originally designated as hazardous waste, but in fact empty bags are not deemed hazardous (according to the UK Department for Environment, Food and Rural Affairs) and they are currently being shipped off Island. All the organic waste is given to the local pig farmer and scrap metal is available to anyone who would like it. Paper and cardboard used to be given to SHAPE, but they have adequate stocks for now and so this waste stream is no longer recycled. Unfortunately, the economies of scale on the island are too small at present to justify recycling of plastic and glass.



Hazardous waste amounts to almost 15.5 tonnes, the bulk of which (99.5%) is liquid waste emanating from the septic tanks and chemical toilets and a smaller amount being waste oil.

Half of the solid hazardous waste stream comprises used oil filters, while a further quarter is made up of oil cans and kitchen fat from the fat trap (Figure 26). Other large contributors to the waste stream include workshop grease, vehicle batteries and contaminated soil. Some of the plastic oil cans are washed out using a biodegradable degreaser and then recycled on-island. The contaminated soil is 'cleaned' on a bioremediation pad at Bradley's and once 'clean', it is spoiled on the designated disposal areas. The rest of the hazardous wastes are being stored on a concrete bunded area near Bradley's workshop for final disposal in the incinerator or hazardous waste cell.

Figure 26: Total solid hazardous waste produced, July 2014 to June 2015



6.2.6 Resource Use

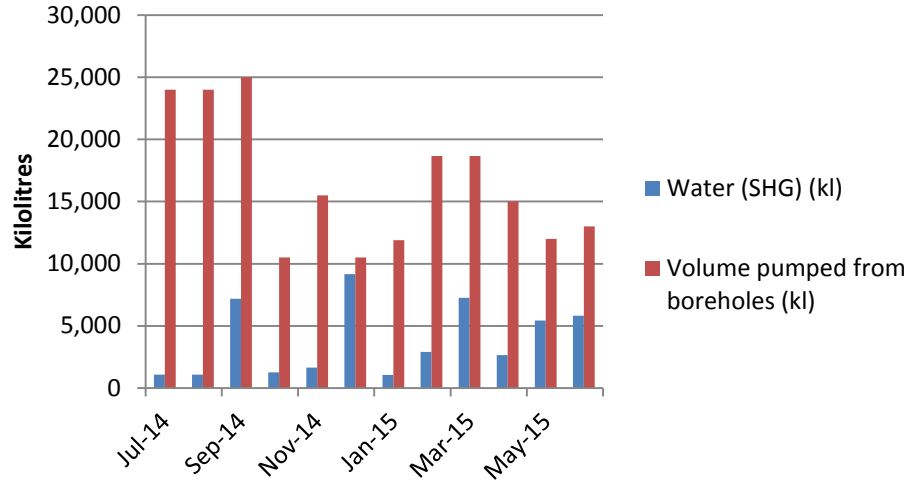
Records of usage are kept of the following and reported on a monthly basis:

- Groundwater pumped from each borehole;
- Municipal water;
- Electricity;
- Diesel.

Over the year, 198,720 kilolitres of water were abstracted from the boreholes in Dry Gut Valley and on Tungi Flats; this amount is slightly less than the 232,000 kilolitres used in the previous year. Most of this water was used for wetting the Dry Gut rockfill to aid compaction up until August/September and thereafter, water from borehole 5 was used for mixing concrete at the PBP batch plant for the runway and buildings construction works (Figure 27). The good quality water from Borehole 5 was also used for dust suppression, vehicle washing and drinking water on the building site. A total of 46,538

kilolitres of water was purchased from SHG, which is over half the amount purchased the year before. Most of this was used for concrete mixing at the Rupert's concrete batch plant, with a small amount being used for potable water in the offices, stores and workshops (Figure 26).

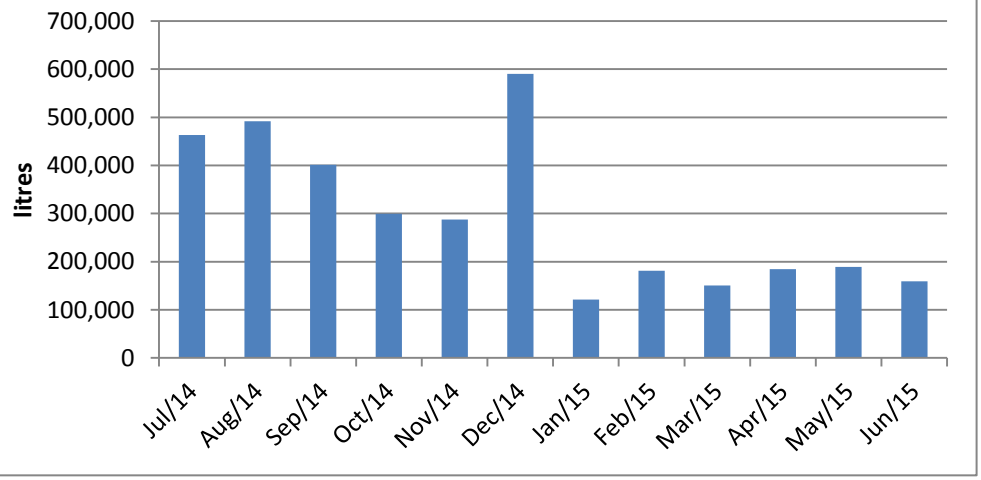
Figure 27: Water consumption



Almost 647,000 kilowatt hours (kWh) of electricity were consumed over the 12 month period at an average of almost 54,000 kWh per month.

Over 3.5 million litres of diesel was consumed which compares favourably with the 5.4 million litres used in the 2013-14 period and reflects the reduction in heavy equipment use on completion of the Dry Gut fill in August 2014 (Figure 28). However, hauling rock from Clingham's quarry at Horse Point to Rupert's for wharf construction contributed to the overall consumption tally. Petrol consumption in comparison was a relatively low amount of just under 16,000 litres over the same period.

Figure 28: Diesel consumption



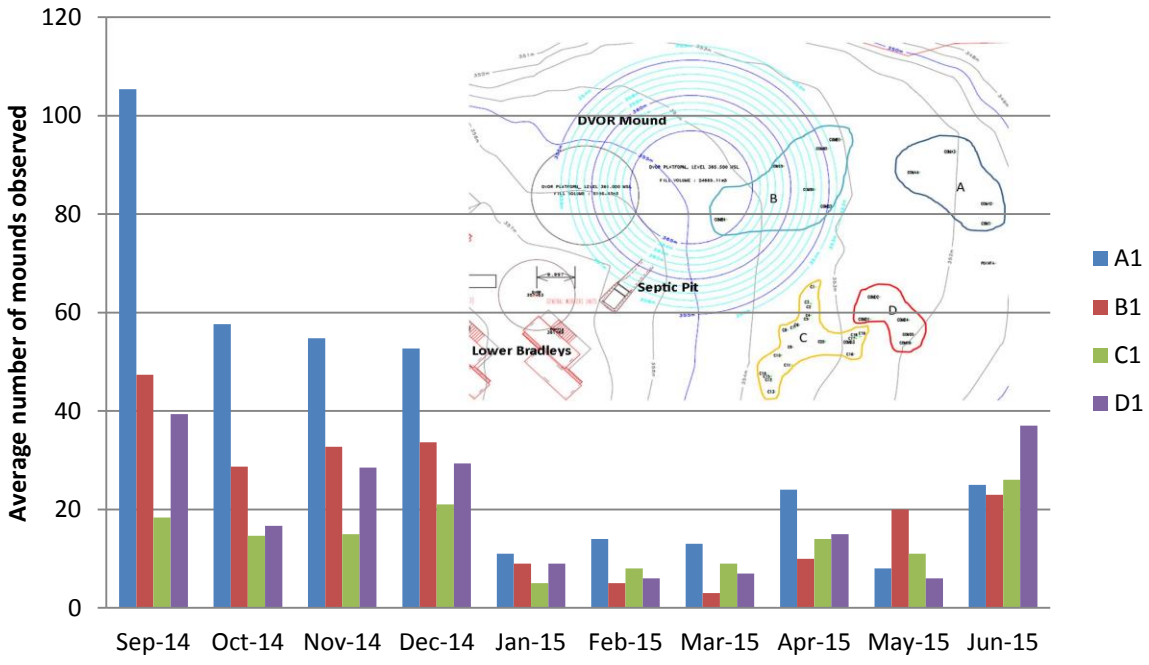
6.2.7 Mole spiders

As mentioned in the last Annual Environmental Report, the mole spider is thought to be endemic to the island and very little is known about it, except that it is largely subterranean. The only evidence of this spider is the presence of small mounds on the surface, occurring in small groups or colonies. One of the main known colonies occurs just below Bradley's camp which is the site for the DVOR beacon. The position of the DVOR is dictated by the geometry of the airport and there are few other options for its location given the nature of the terrain. Thus a baseline census was undertaken in March 2014, with another in September 2014 to map out the number of mounds present in four identified colonies and to position the DVOR so that there would be minimal disturbance to this enigmatic species (Plate 37).

Plate 37: Mole spider monitoring plots near Bradley's camp

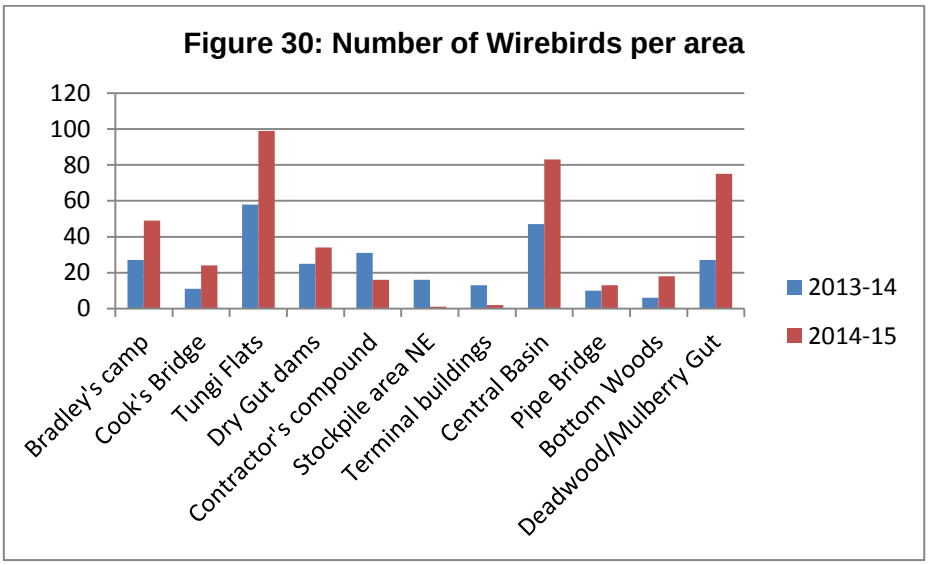
The site has been monitored on a monthly basis since September 2014 and the results are shown in Figure 29. It is clear that there are some seasonal trends, with a low level of new activity from January to May, however it is not known whether this reflects the breeding season for this species or the presence of prey items, or indeed, disturbance from construction activities which commenced in October 2014. Earthworks were completed by November 2014, but construction of the DVOR itself continued until mid-May 2015. What is evident is that the level of peak activity shifted from colony A to other colonies in May 2015 – again for reasons unknown. As mentioned above, little is known about this spider and this is the first ever attempt at monitoring its behaviour; there is still a lot to be learnt.

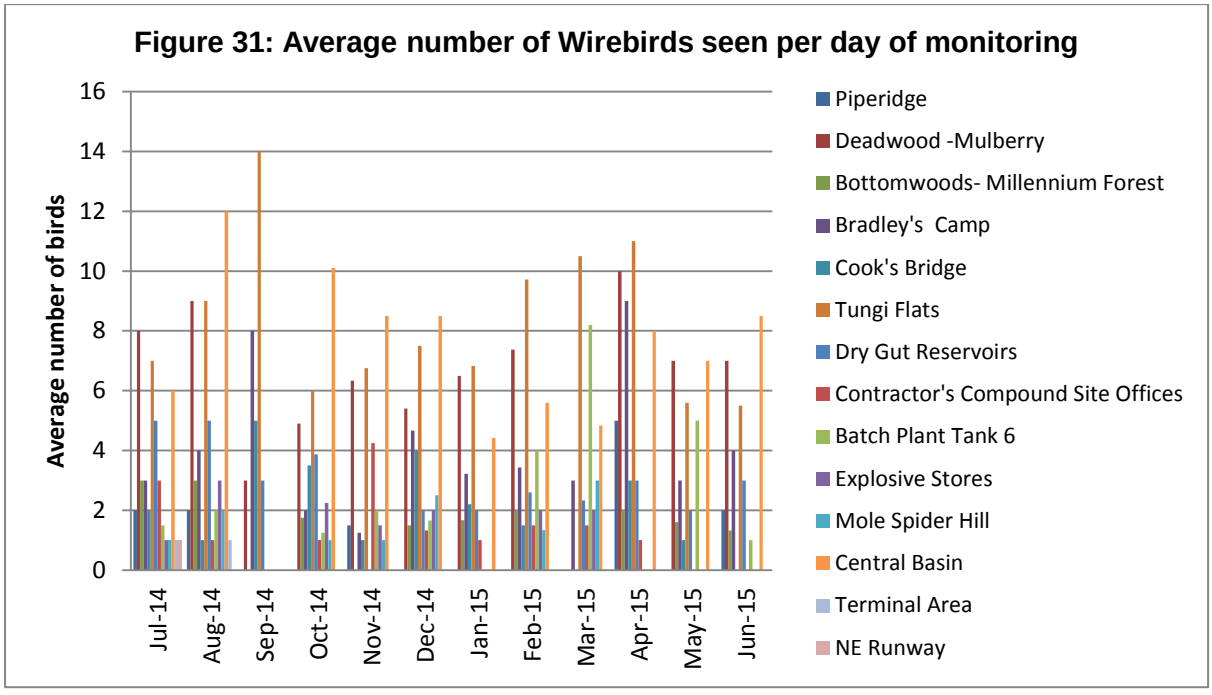
Figure 29: Mole spider monitoring at Bradleys Camp



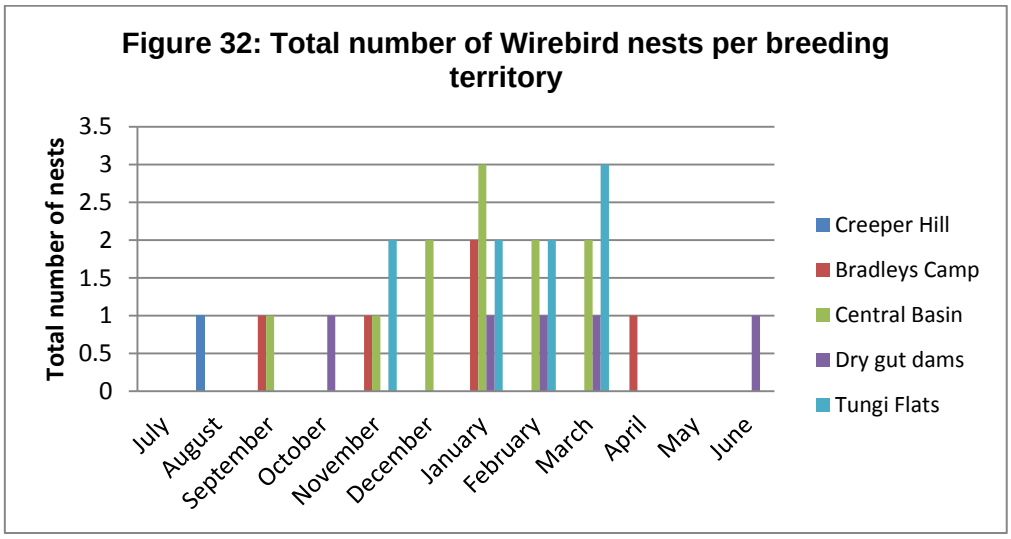
6.2.8 Wirebirds

Wirebirds are monitored by trained BR staff once per week using the 'sweep walk' technique used by SHNT during their regular counts on the island. Eleven sites have been monitored for the last two years and it can be seen from Figure 30 that numbers in most areas have increased, in some areas significantly so. However, it is also clear that in areas where there is a high level of construction activity i.e. at the terminal buildings, contractor's compound and at the NE stockpile area, there has been a reduction in numbers. The highest concentrations of Wirebirds are found on Tungi Flats, Central Basin, the Deadwood/Mulberry Gut area and at Bradley's camp (Figures 30 and 31). It is possible that the increase in the Wirebird populations across these sites may be due to continuing efforts at predator control, especially rodents and cats (see section 6.2.10 below).





The breeding records show that breeding during the 2014-15 season started as early as August on Creeper Hill, but only peaked during the 3 month period from January to March 2015, when a total of 19 nests were observed (Figure 32). It is interesting to note that nests were found in every month of the year except July 2014 and May 2015.



6.2.9 Birdstrike risk monitoring

The environmental team commenced monitoring of the airspace at the north and south ends of the runway in order to provide data for the assessment of birdstrike risk for the Wildlife Hazard Management Plan (WHMP). Monitoring commenced in March 2014 and was initially conducted every day for one week every quarter. However, from October 2014, the routine changed to monitoring for one day every month. The northern end of the runway is monitored for 2 hours in the late morning (to coincide with the likely arrival times of planes) and the southern end is monitored for 2 hours in the early afternoon, when planes are most likely to leave.

The birdlife in the northern approach airspace is dominated almost entirely by fairy terns (Plate 38), occurring mostly in pairs or singly. Mynah birds (Plate 39) are rarely seen and then only as individuals (Figure 33).

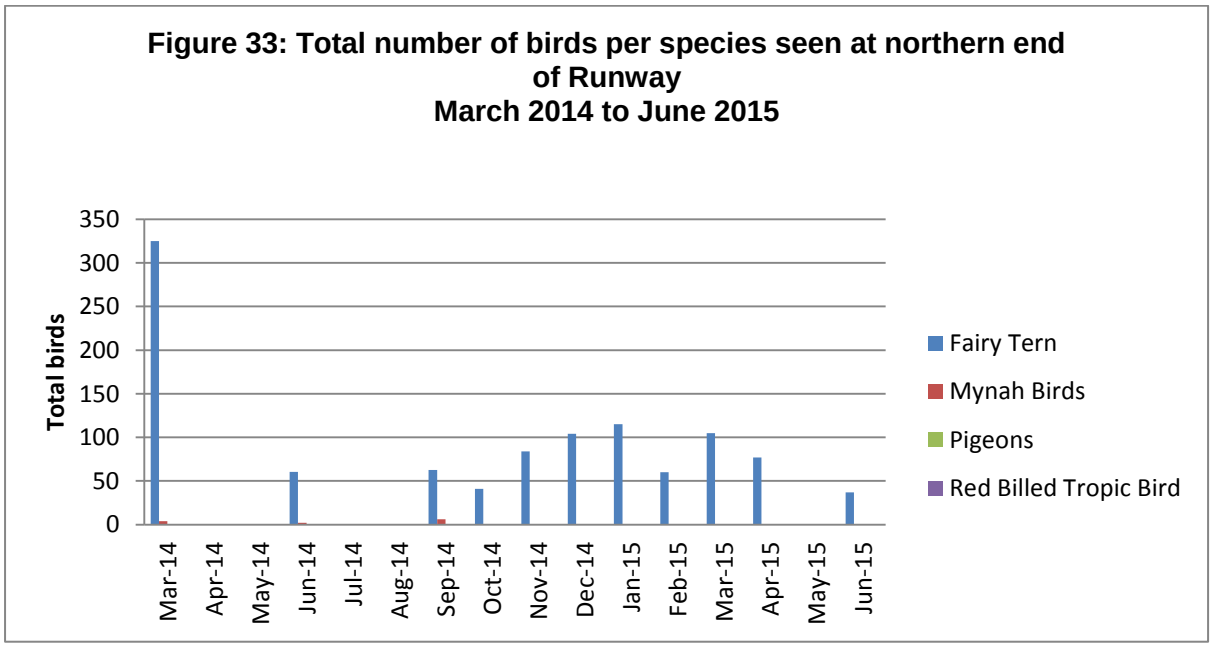


Plate 38: Fairy terns

Plate 39: Mynah bird

The southern end of the runway paints a very different picture, with masked boobies (Plate 40), fairy terns and red-billed tropic birds (Plate 41) being frequently seen in the airspace (Figure 34). As would be expected, land birds are rare, with only occasional individual pigeons and mynahs being observed.

Plate 40: Masked boobies

Plate 41: Red-billed tropic bird

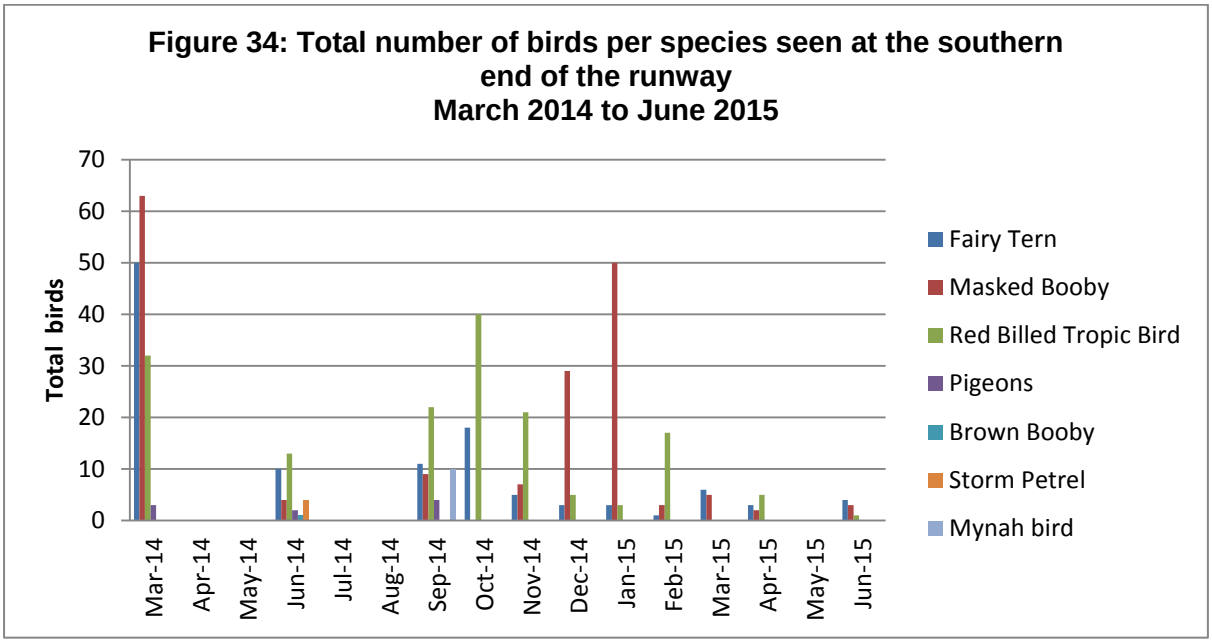


Figure 34: Total number of birds per species seen at the southern end of the runway March 2014 to June 2015

A full report on this monitoring will be produced prior to the airport opening and the WHMP will be updated accordingly

6.2.10 Pests and predators

As mentioned in previous reports, there are a number of pests and predators that need to be controlled on and around the construction sites. Mynah birds, rodents and cats all prey on Wirebirds and their eggs, while rabbits pose a serious threat to plants, especially new plantings.

These species are monitored at 45 locations across the entire construction site. Rodents are monitored using tracking tunnels and camera traps, cats are caught using cat traps and the presence of mynahs is monitored during the monthly Wirebird monitoring 'sweeps'. Rabbits are monitored by visual observation.

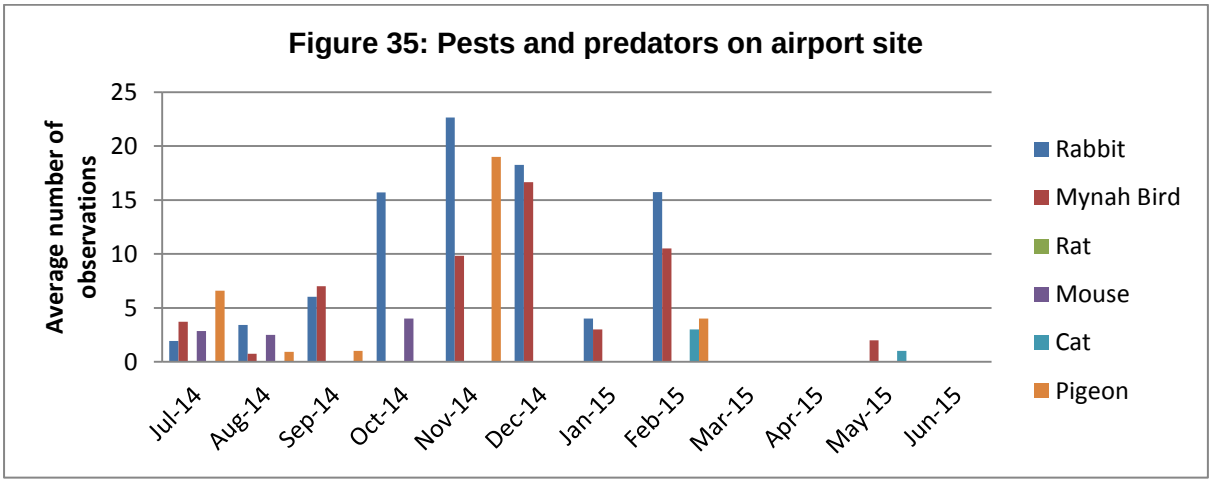
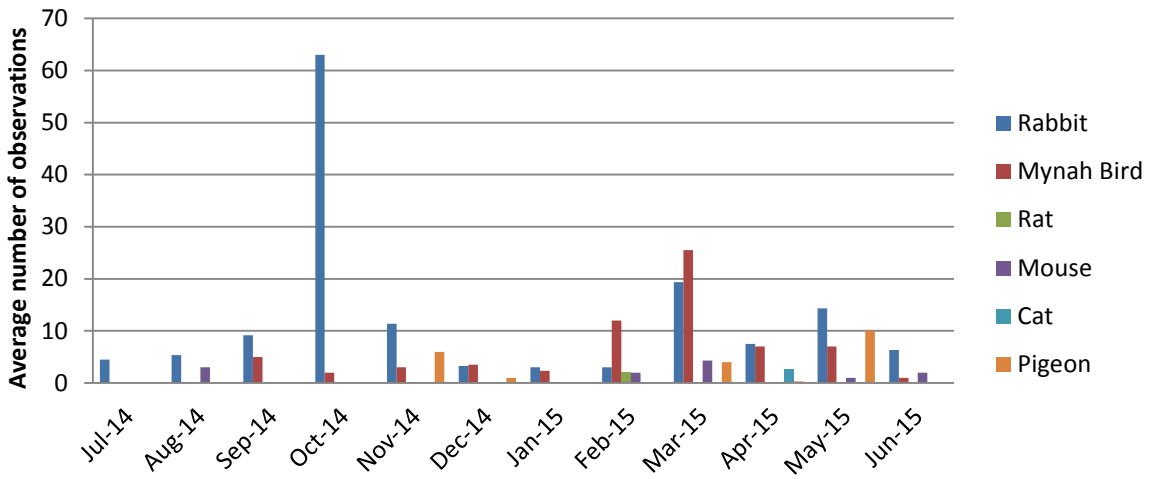


Figure 35: Pests and predators on airport site

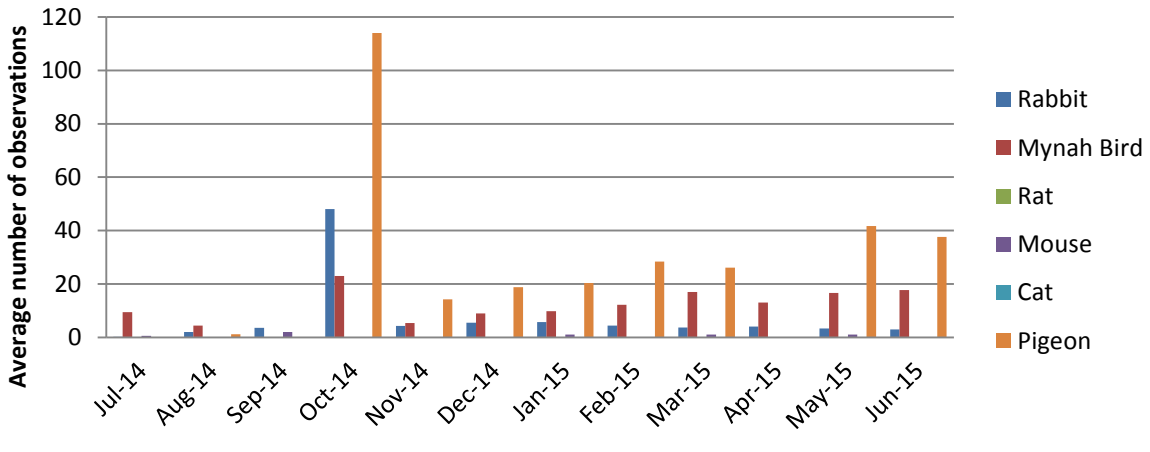
Up until February 2015, rabbits, mynahs and to a lesser extent pigeons were present in quite large numbers on the airport site, but numbers have decreased since then. Cats are only an occasional problem in this area (Figure 35). On the other hand, pest and predator numbers seem to have increased at the contractor's compound, Tungi Flats and on the site of the old reservoirs in Dry Gut (Figure 36). As with the airport site, rabbits are prolific, but there are also populations of rodents (mostly mice) in this area – probably due to the presence of buildings and food scraps. It is pleasing to note that the number of cats has reduced since last year and this may be reflected in the higher numbers of Wirebirds in this area (see section 6.2.8).

Figure 36: Pests and predators at contractor's compound, Tungi Flats and upper Dry Gut



Pigeons and mynahs are attracted to Bradley's camp which provides roosting and resting locations as well as a source of food, in spite of major efforts to control food waste by covering all receptacles and containers and regular disposal (Figure 37).

Figure 37: Pests and predators at Bradleys Camp



6.2.11 Biosecurity

The construction of the new airport on St Helena has resulted in a change in procedures in the importation of goods and materials to the island with the direct transfer of containers and machinery from ship to shore for the first time. Once the airport is operational, freight will be also be arriving by air, and the very much reduced transit time increases the risk of new species reaching the island.

For all airport construction imports via NP Glory 4, there are pre-border and post-border biosecurity controls in place. All containers, vehicles and equipment are sanitised or fumigated and inspected before they are loaded onto the NP Glory 4 at Walvis Bay and they are inspected again as they are off-loaded in Rupert's Bay. Imported building sand also poses a risk and so it is fumigated at source and a random 10% sample of the batch is inspected for plants as well as live and dead animals or pupae.

As part of the post-border biosecurity procedures, a monitoring protocol has been developed for the early detection of new species, initially around the entire construction site but the number of sites will decrease and change once the airport and Rupert's wharf operations commence. Thus, nine monitoring sites were set up in August 2014 at every location where shipping containers are opened. Each site comprises an invertebrate refuge consisting of a standard hollow breeze block covered by a concrete slab; one of the compartments in the block holds a sticky board, the other compartment is loosely stuffed with newspaper. The monitoring sites are located at the Customs bonded yard in Rupert's Valley (2), the batch plant at the pre-cast yard (1), Bradley's camp kitchen (1), Bradley's workshop (1), explosives magazine (1), Prosperous batch plant (1), BME containers (1) and the combined building site (1). A tenth monitoring site was established at the Jamestown wharf container offloading area in February 2015.

The monitoring sites are checked on a monthly basis by the Contractor's environmental team when all sticky traps and newspaper are carefully collected and transported to the SHNT for analysis. A total of 22 different species of invertebrates (insects), 12 species of spider, one gecko and one mouse species have been found in the traps. All species recorded are common on St Helena Island and have not been imported.

In addition to regular inspections, monthly monitoring for weeds is carried out where the containers are unloaded in Rupert's Valley and where imported sand is used on site to make sure that no alien species have escaped, especially the Namibian ice plant. If specimens of this species are found, they are pulled up and have been stockpiled for incineration.

6.2.12 Visual Impact

Photographs are taken from numerous fixed positions across the construction site every week. The following plates show selected before and after situations in Prosperous Bay Plain, Deadwood, Dry Gut, Rupert's Bay and upper Rupert's Valley.

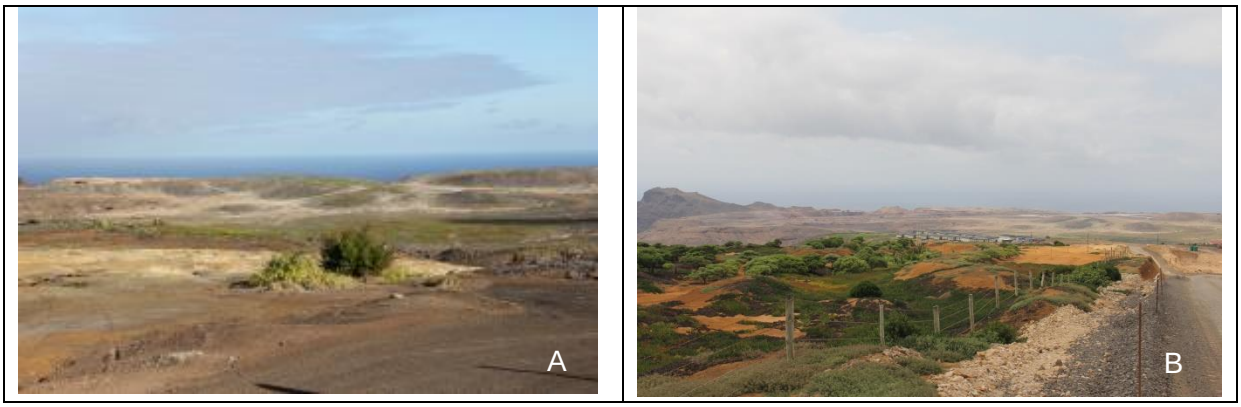


Plate 42: Airport site from Bradley's in January 2012 (A) and in September 2014 (B). Note presence of Bradley's camp and runway elevation

Plate 43: View of the old Deadwood road in January 2012 (A) and the new road in 2014 (B)

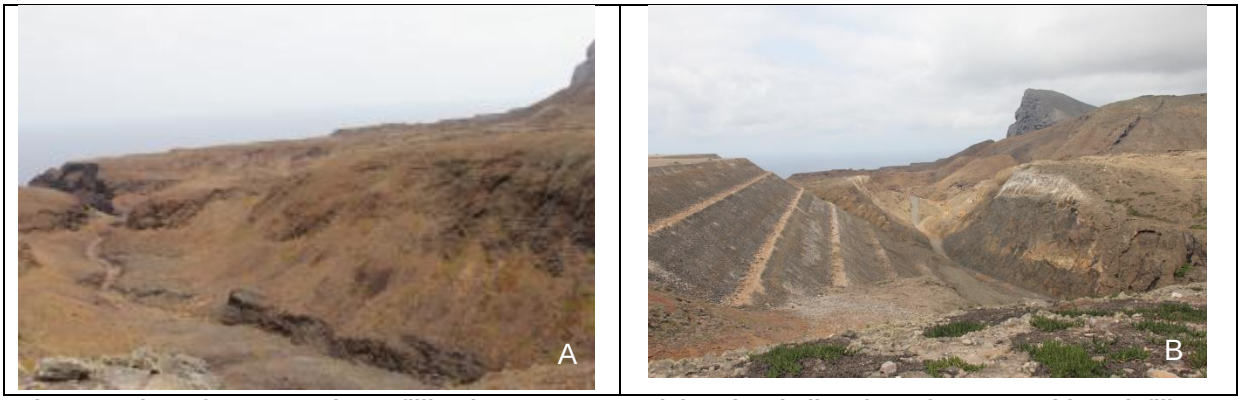


Plate 44: View of Dry Gut prior to filling in January 2012 (A) and a similar view of Dry Gut with rock fill and construction of the open channel completed in September 2014 (B)

Plate 45: View of the Rupert's Bay permanent wharf before construction commenced (A) and in September 2015 (B)

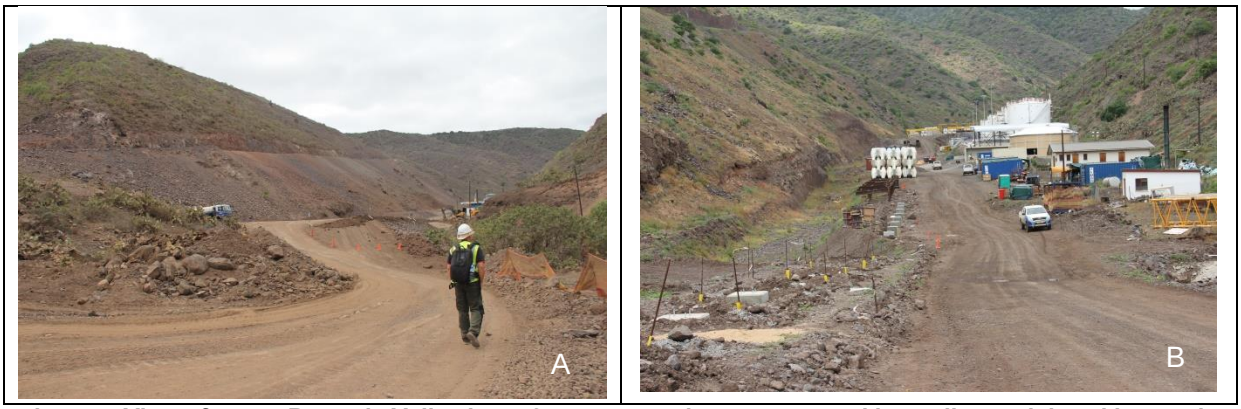


Plate 46: View of upper Rupert's Valley just after construction commenced in April 2013 (A) and in March 2015 (B)

6.2.13 Climate

In order to provide the airport operator and airport users with historic weather conditions, a weather station was moved from Prosperous Bay Plain, where it was originally set up, and re-installed and commissioned at Bradley's Camp in June 2012. The weather data are collected and processed once a month by the Basil Read construction team. The following parameters are monitored: wind, temperature, relative humidity, air pressure, precipitation, cloud cover and visibility.

6.2.14 Heritage

Regular observations are made in active construction areas for impacts on, or damage to, heritage sites. Furthermore, building condition surveys are carried out prior to blasting or other activities which may cause an impact to the integrity of historic buildings and structures. Watching briefs are established whenever work is being undertaken in areas of known heritage sensitivity. This involves members of the CECO team being present for the duration of all excavation works to check for the presence of artefacts or human remains.

7 CONCLUSIONS

Although there has been far less disturbance of new land this past year, the environmental work has not diminished. On the contrary, focus has turned from conducting specialist studies for new sites to preparing completed areas for rehabilitation and to date, some limited planting activities. Most of the routine monitoring activities have continued as well. As the date for airport certification approaches, we have been busy with the finalisation of the Environmental Management System for airport operation and the Wildlife Hazard Management Plan.

While the delay in commissioning the incinerator was disappointing, the environmental team managed to cope with the ever-increasing volume of hazardous waste at Bradley's and efforts to sell, donate and give away non-hazardous wastes such as scrap metal, plastic jerry cans, tyres and wood were re-doubled. We look forward to the commissioning of both the incinerator and hazardous waste cell during the next few months.

A few notable milestones were achieved during the year, such as the completion of Dry Gut fill, but the next few months will be momentous with many project components and milestones being achieved such as turning on the runway lights (July), the first calibration flights in September, certification of the airport by ASSI (November), the completion of the wharf in February 2016 (weather permitting), and ultimately, the first commercial flight in February 2016. It will be a memorable period in St Helena's history!

Targets for 2015 – 16

- Completion of 2015-2016 AER three months after completion of construction;
- 6-monthly audit in September 2015, the airport close-out/handover audit in February 2016 and the final audit in approximately July 2016;
- CEMP update 7 in October 2015 and CEMP update 8 in April 2016;
- Improved compliance with the CEMP and with the key performance indicators listed in the Executive Summary of this AER;
- Wharf construction impacts - as or less than predicted;
- Safe disposal of all hazardous and bulky wastes by incineration or into the engineered hazardous waste cell;
- Scrap metal sold by local dealer off-island;
- Ongoing site completion works of disturbed areas as part of the LEMP programme.

APPENDIX A

BASIL READ'S SAFETY, HEALTH, ENVIRONMENT AND QUALITY POLICY

SHEQ POLICY STATEMENT

(Safety, Health, Environment and Quality)

Basil Read is building the future offering clients in the construction industry a comprehensive range of services spanning buildings, roads and civil engineering.

OUR DEFINITION:

The Oxford English Dictionary defines quality as a "degree of excellence".
At Basil Read, our degree of excellence is defined in our ISO 9001 Quality, OHSAS 18001 Occupational Health and Safety and ISO 14001 Environmental implementation.

OUR AIM:

Our SHEQ system serves as an on-going measurement tool to ensure effective management of the priority items identified through our assessments.

OUR OBJECTIVES:

Safety and Health (SH)

- To proactively reduce the frequency and severity of injuries.
- Awareness of risk-.
- To promote an environment where all employees accept responsibility for their own Health and Safety and the Health and Safety of everyone engaged in our core business.
- Ensure we comply with the OHS Act, relevant legal anc other requirements.

Environment: (E)

- Prevent Pollution
- Legal compliance with the relevant Environmental Legislation and other requirements.
- Continual Improvement of monitoring to ensure an effective management system.

Quality: (Q)

- In our company, quality standards are achieved when our joint effort in delivering a service or product meets or exceeds ours client's specified requirements.
- We value and nurture our client relationships.
- We carefully evaluate and select our suppliers, sub-contractors and partners, striving for mutually beneficia relationships.
- We promote learning, increasing knowledge and transferring skills according to an identified programme

OUR APPROACH:

At all levels in the company, managers implement a clear system of Safety and Health, Environmental and Quality checks by:

- Identifying aspects, impacts, hazards and risks.
- Determining priorities.
- Setting SHEQ objectives.
- Formulating action plans.
- Measuring progress regularly and analysing the results by specialists.

By being focused on SHEQ, we control risks and enhance efficiency.

OUR COMMITMENT:

At EXCO level we are personally committed to achieving excellence and we commit all employees to achieve their SHEQ objectives.

IMPROVEMENT:

At Basil Read, we implement an Annual Plan for Improvement. The Improvement Plan is consistent with our business strategy, and ensures continuous improvement of the SHEQ System.

YOUR ASSURANCE:

Our implementation of OHSAS 18001 Occupational Health and Safety, ISO 14001 Environment and ISO 9001 Quality assures successful identification of priorities for effective management.

FROM THE CEO'S OFFICE

20 May 2011

nqa OHSAS 18001 Registered UKAS 015 | nqa ISO 14001 Registered UKAS 015 | nqa ISO 9001 Registered UKAS 015