MOOI MGENI TRANSFER SCHEME PHASE 2 (MMTS-2)

Construction of the Spring Grove Dam & Appurtenant Works

[DEA Reference Number: 12/12/20/220]

MONTHLY ECO REPORT : August 2013

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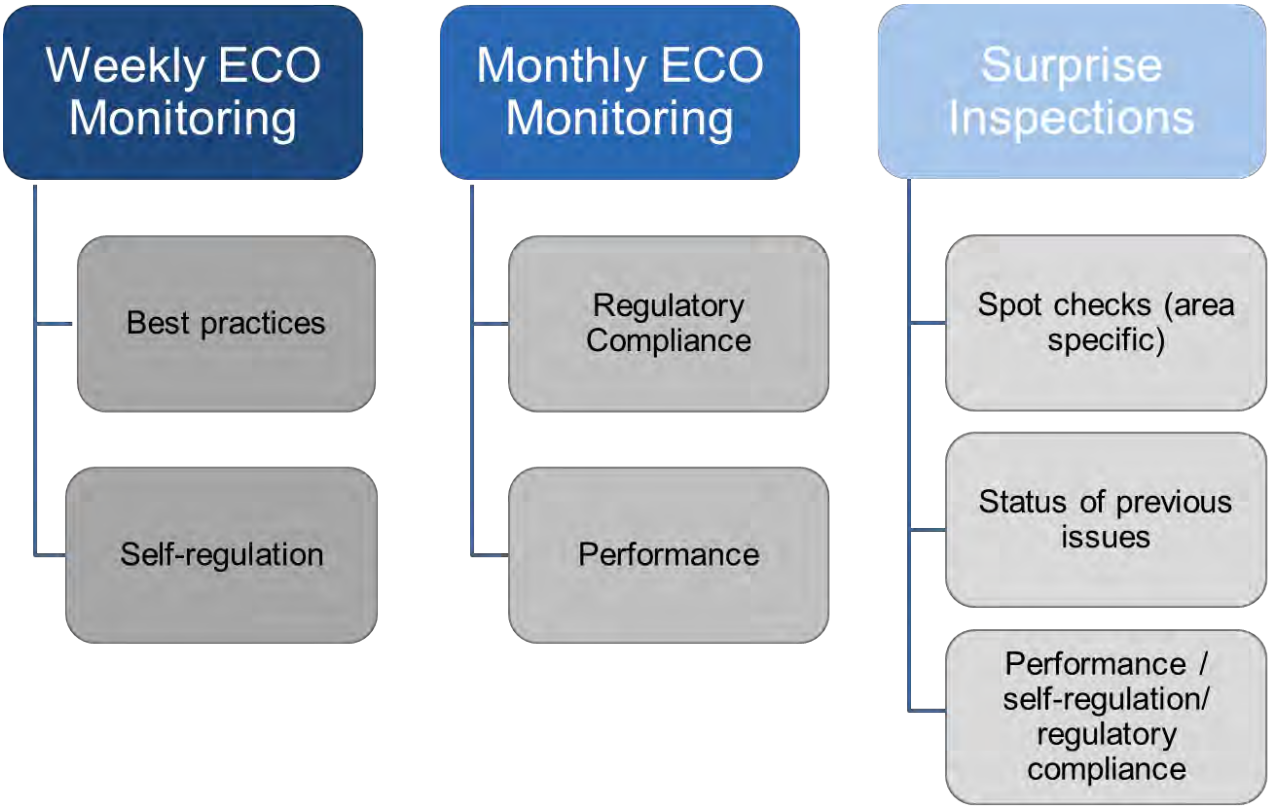
EXECUTIVE SUMMARY

Nemai Consulting was appointed as the independent Environmental Control Officer (ECO) by the Trans-Caledon Tunnel Authority (TCTA) for the Mooi-Mgeni Transfer Scheme Phase 2 (MMTS-2) project. This document serves as the monthly ECO Report for August 2013 for the aforementioned project.

The types of monitoring conducted as part of the ECO functions are captured in the figure to follow.



ECO Monitoring Frequencies & Purposes

The primary areas inspected during the monthly ECO monitoring event include the following:

- Site offices;
- Dam basin;
- Dam wall;
- Workshop;
- Stores area;
- Fish barrier construction site;
- Waste storage area; and
- Ferret Lane.

The latest air, noise and water quality monitoring (May 2013) conducted by Blue Sands, produced the following results:

Dust Fallout

- Dust fallout rates continue to remain well-within the Residential Band.
- Dust fallout had increased at all sites because of very dry conditions, in spite of decreasing activity at the construction site. The highest rate was recorded at DF08 (547 mg/m^2/day), which is situated at the construction site, south fence. The future dust suppression of the large stockpiles of soil in close proximity to this monitoring point and their contribution to dust and PM_{10} levels emanating from the site requires further attention.

Continuous Particulate Monitoring (PM_{10}) with Wind Speed and Direction

- During June 2013, there were four exceedences of the 24-hour PM_{10} limit of 120 µg/m^3, with peak concentrations recorded on 6 June (161 µg/m^3), 11 June (190 µg/m^3), 13 June (192 µg/m^3) and 19 June (181 µg/m^3). PM_{10} concentrations reflect dry climatic conditions.
- According to Blue Sands (2013a), there are still numerous vehicles travelling on the unpaved D146 and access roads, plus the Afrisam stockpile area is largely empty, but remains barren and exposed, not yet being revegetated or rehabilitated.
- The number of daily exceedences so far this calendar year now equals twelve days, which constitutes non-compliance with the National Ambient Air Quality Standards, as only four departures are allowed per annum.
- Examination of the pollution rose reveals that most high dust concentrations originated from the northeast, which includes the car park, stockpile areas approach of the D146 coming towards the site access; all exposed surfaces that would allow for dust entrainment with mechanical disturbance. Gentle northerly winds were again characteristic of the period 11 to 13 June, when the 24-hour standard was exceeded for a further two days.

Environmental Noise

- The noise levels recorded during June 2013 are comparable to prior months.
- The majority of points around the dam site exceeded the rural standard of 45 dB at mid-month. However the month end figures show a reversal of this tendency.
- EN01, EN02 and EN12 are the three monitoring sites closest to the construction site and standards were exceeded during various monitoring events at these sites.

Mooi River Sampling

- Samples were taken on 14 and 28 June 2013.
- Exceedences of standards for some variables (Total ammonia, Fluoride) were recorded at sites upstream of construction activities. This implies that the pollution sources are catchment related.

Separator Sampling

- For the separator, there were 5 (Chemical Oxygen Demand, Faecal coliforms, Manganese, Soap, oil and grease, Suspended solids) exceedences of the 29 determinants. The borehole monitoring results showed 5 exceedences, none of which are similar for the separator.
- According to Blue Sands (2013c), when the overall situation is considered the key determinants about which to be concerned are the faecal coliforms the suspended solids and the COD. Taking into account the small quantity of water released and the levels of the key determinants there should be no cause for concern).

Raw Data

No raw data was received after the last monitoring event.

Overall, a compliance score of 93% was obtained for the monitoring event. In part, the overall good compliance achieved for the monitoring categories reflects the substantial reduction in activities on the site, as the construction period is coming to an end. It should be noted that without the weighting of the scoring items a full appreciation of the significance of the non-compliance is not conveyed.

Significant issues identified during the monthly ECO monitoring include the following:

- Several spills identified;
- Discharge from separator exceeds standards;
- Complaints received regarding dust;
- Issues and Complaints Register maintained – however, delayed attention to certain issues;
- High levels of siltation recorded;
- Storage manager at workshop unaware of requirements for storage of hazardous material;
- Poor management of concrete waste;
- Not all storage areas are provided with spillage procedure.
- No secondary containment for hazardous material stored within a container at workshop;
- Improved housekeeping required; and
- Waste from fencing contractor (complaint received).

The following matters are regarded as significant environmental management priorities that require appropriate attention:

- Clarification is required on the appropriate way forward for the rehabilitation of wetlands and biodiversity offsets. Phase 1 of baseline study underway.
- Pro-active management is required to minimize siltation of watercourses.

- A number of jetties have been built upstream of the fish barrier, in expectation of the impoundment that will be created. The legality of these structures in terms of the National Environmental Management Act (Act No. 107 of 1998) and the National Water Act (Act No. 36 of 1998) is questioned. The landowners need to be made aware of the legal requirements for building structures within the regulated area of a watercourse.
- Reinstatement of area below fish barrier.
- Vegetative cover required for the road embankment along Ferret Lane, prior to heavy rainfall events.
- Confirmation is required whether the spoiling of material within the fish barrier impoundment site requires approval in terms of the National Environmental Management: Waste Act (Act No. 59 of 2008).
- Dust from large soil stockpiles to be managed.

Open issues from the current monitoring period include the following:

- No. 865 - 23-Jul-13 - Large sand stockpile.
- No.872 - 28-Jul-13 - Completion of roads; cattle grids; drainage from roads; waste from fencing contractor;
- No.875 - 31-Jul-13 - Drainage from roads;
- No.878 - 02-Aug-13 - Upgrade of D146;
- No.884 - 07-Aug-13 - Repairs to weir;
- No.889 - 11-Aug-13 - Condition of road; clearing of rocks from grading;
- No.890 - 12-Aug-13 - Completion of culvert;
- No.895 - 14-Aug-13 - Drainage channel;
- No.900 - 15-Aug-13 - Cleaning of cattle grids;
- No.901 - 15-Aug-13 - Water build up at the base of private dam wall;
- No.905 - 19-Aug-13 - Access to dairy following impoundment of fish barrier; and
- No.909 - 20-Aug-13 - Drainage on the Overdale Road.

TITLE AND APPROVAL PAGE

Project name:	***Mooi Mgeni Transfer Scheme Phase 2 - Construction of the Spring Grove Dam & Appurtenant Works***
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Environmental Manager

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LIST OF ACRONYMS & ABBREVIATIONS

DEA	Department of Environmental Affairs
ECO	Environmental Control Officer
EO	Environmental Officer
EMP	Environmental Management Plan
EM	Environmental Monitor
EMC	Environmental Monitoring Committee
MMTS-2	Mooi Mgeni Transfer Scheme Phase 2
TCTA	Trans-Caledon Tunnel Authority
RoD	Record of Decision

DEFINITIONS

Auditing

An 'environmental' audit is a methodical examination (including tests, checks, and confirmation) of environmental procedures and practices with the view of verifying whether they comply with internal policies, accepted practices and legal requirements

Environment

The surroundings in which humans exist and which comprise:

- The land, water and atmosphere of the earth.
- Micro-organisms, plant and animal life.
- Any part or combination of a) and b) and the interrelationships among and between them.
- The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that can influence human health and well-being.

Environmental Aspect

Those components of the company's activities, products and services that are likely to interact with the environment.

Record of Decision

The written statement from the relevant environmental authority in terms of the Environment Conservation Act (Act 73 of 1989), with or without conditions, that records its approval of a planned activity and the implementation thereof and the mitigating measures required to prevent or reduce the effects of environmental impacts during the life of a contract.

Environmental Feature

Elements and attributes of the biophysical, economic and social environment.

Environmental Impact

The change to the environment resulting from an environmental aspect (an activity) on the environment, whether desirable or undesirable. An impact may be the direct or indirect consequence of an activity.

Environmental Management Plan (EMP)

A detailed plan of action prepared to ensure that recommendations for enhancing positive impacts and/or limiting or preventing negative environmental impacts are implemented during the life-cycle of a project.

Environmental Objective

Overall environmental goal pertaining to the management of environmental features.

Environmental Target

Performance requirement that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives.

Hazardous Waste

Any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment

Monitoring

'Compliance' monitoring is a continuous and systematic process to ensure that the conditions in the Record of Decision (RoD) Environmental Management Plan (EMP) are being adhered to.

Pollution

Any change in the environment caused by substances, radioactive or other waves, or noise, odours, dust or heat, emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future.

1 INTRODUCTION

Nemai Consulting was appointed as the independent Environmental Control Officer (ECO) by the Trans-Caledon Tunnel Authority (TCTA) for the Mooi-Mgeni Transfer Scheme Phase 2 (MMTS-2) project.

The ECO's functions in terms of environmental compliance monitoring are to systematically monitor the processes and activities required for the implementation of each Environmental Management Plan (EMP) and the conditions in the Record of Decision (RoD) (refer to environmental governance arrangements in **Figure 1**).

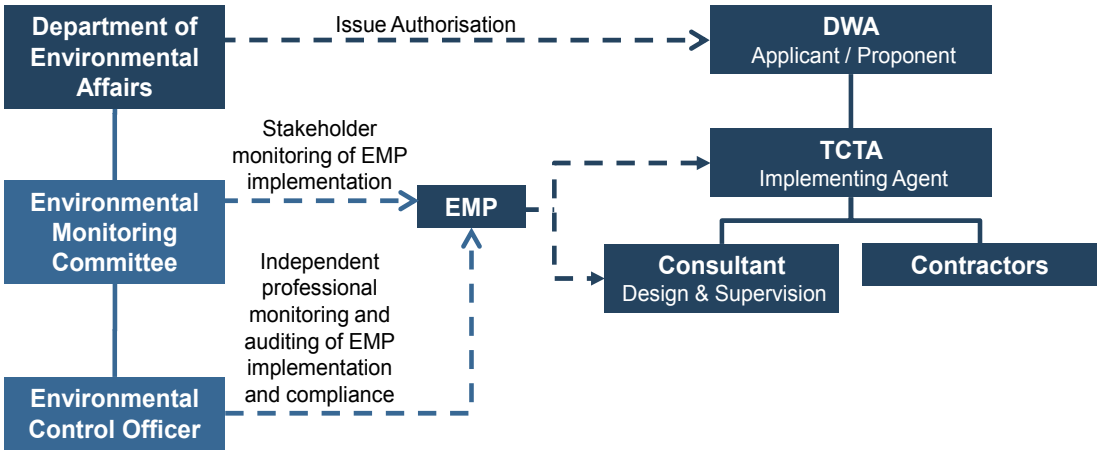


Figure 1: Environmental Governance Arrangements: Lines of Accountability

The RoD requires that a suite of EMPs be prepared for the project. Each EMP comprises two sections, namely a project description and the Environmental Management Philosophy as well as the EMP for a specific activity/phase of construction. To date, the following EMPs have been approved by the Department of Environmental Affairs (DEA):

- Construction of the Spring Grove Dam Wall – approved on 03 May 2011;
- Traffic Management and Mitigation Plan – approved on 16 August 2011 (amendment application approved on 21 February 2012);
- Search, Rescue and Relocation – approved on 07 September 2011;
- Mooi River Gauging Weir – approved on 08 October 2011;
- Mooi River Fish Barrier – approved on 06 February 2012;
- Mpofana River Gauging Weir – approved on 07 March 2012;
- Transplantation of red data species found at Inchbrakie Falls to the Reekie Lynn Falls – approved on 13 April 2012;

- Roads realignment and flood protection of affected sections of the Lower Loteni Road – approved on 07 May 2012;
- Relocation of people living in the dam basin – approved on 09 May 2012;
- Refurbishment;
- Service Relocation & Decommissioning – approved on 24 July 2012;
- Rehabilitation of off-site wetlands – approved on 12 July 2012;
- Establishment of biodiversity offsets – approved on 12 July 2012; and
- Spring Grove Dam Impoundment – approved on 11 December 2012.

This document serves as the monthly ECO Report for August 2013. The monitoring event was undertaken on 21 August 2013, and the monitoring period commenced on 19 July 2013.

2 ECO MONITORING APPROACH

2.1 Weekly Monitoring

Weekly ECO monitoring sessions are conducted where a full day is spent on site to inspect the overall construction domain on a weekly basis. The weekly ECO monitoring reports, which are submitted to TCTA, serve as an overview of the following:

- New or improved areas of good environmental practices and compliance;
- Areas of poor practices or where concerns have been noted;
- Status of previous issues; and
- Conclusions.

The weekly ECO monitoring events are more focused on best environmental practices, rather than regulatory compliance.

2.2 Monthly Monitoring

Monthly ECO monitoring serves to check compliance against the following:

- Conditions of the RoD for the construction of the Spring Grove Dam and Appurtenant Works; and
- EMPs and associated conditions of approval.

The Monthly ECO monitoring reports are submitted to TCTA, the Environmental Monitoring Committee (EMC), and ultimately DEA. The monthly ECO monitoring includes once a month full day site inspections, checking environmental administrative provisions (e.g. documentation, files, registers), analysing monitoring data, checking complaints, interviewing the Environmental Manager, Environmental Monitor (EM) and Environmental Officer (EO) (as required) and completing a detailed ECO Monitoring Checklist. The ECO Monitoring Checklist consists of monitoring items extracted from the EMP and RoD, and are categorised as follows:

- Environmental Authorisation;
- Administration;
- Environmental Education and Awareness;
- Construction;
- Materials;
- Water Quality;
- Air Quality;
- Noise;
- Community Engagement;
- Archaeology and Cultural Sites;
- Vegetation;
- Fauna;
- Traffic;
- Safety and Security;
- Waste;
- Rehabilitation;
- Search, Rescue and Relocation;
- Relocation of people in the dam basin; and
- Services relocation and decommissioning.

The following Conformance Scores, based on the level of compliance for the overall site, is allocated to each monitoring item in the checklist:

CONFORMANCE SCORES	DESCRIPTION
1	Task not achieved
2	Task 20% complete
3	Task 50% complete
4	Task 80 % complete
5	Task 100% completed in accordance with the EMP

Where non-conformance to the RoD conditions and EMP mitigation measures is encountered (i.e. COMFORMANCE SCORE < 5), the significance of the associated Impact is recorded based on the following guidelines):

IMPACT SCORES	IMPACT
1	**Low** – mitigation not needed/ mitigation measures to be maintained
2	**Medium** – mitigation should be considered
3	**High** – mitigation compulsory

The identified non-conformances and related impacts are also rated based on the following **Penalty** Scores:

PENALTY SCORES	DESCRIPTION
0	Not Applicable / Impact or Non-Conformance occurred in area of low Environmental Significance
1	**Moderate** – Impact/Non-Conformance occurred in area of moderate Environmental Significance *(1% Deduction from total conformance score)*
2	**High** – Impact/Non-Conformance occurred in area of high Environmental Significance *(3% Deduction from total conformance score)*
3	**Very High** – Impact/Non-Conformance Occurred in area of very high Environmental Significance *(5% Deduction from total conformance score)*

The overall compliance score is based on:

- No of items scored for the monitoring event;
- The highest conformance score for the monitoring event;
- The actual conformance score for the monitoring event;
- The conformance percentage for the monitoring event (%);
- Total Penalty Deductions (%); and
- Total Conformance Score Including Penalty Deductions (%).

2.3 Surprise Inspections

It was requested by the EMC that surprise inspections of the site be undertaken on a monthly basis. Such an inspection includes revisiting selected issues identified as part of the previous weekly monitoring event, as well as spot-checks of certain areas within the construction domain.

The findings of the surprise inspection for the monitoring period are included in **Appendix A**.

3 CONSTRUCTION ACTIVITIES FOR THE MONITORING PERIOD

Amongst others, the following main construction activities took place during the monthly monitoring period, as identified during the monitoring sessions and from the EO's daily site diary:

- Impoundment of the Spring Grove Dam is ongoing (**Figures 2 - 3**);
- Construction activities at the dam wall (**Figure 4**);
- Construction of the fish barrier (**Figure 5**);
- Construction activities at gauging weir downstream of dam wall (**Figure 6**);
- Improvement of Ferret Lane is on-going (**Figure 7**);
- Construction of concrete drainage channel adjacent to permanent access road into the spillway is ongoing;
- Improvement of the access road on the right bank leading to the fish barrier (river diversion);
- Construction of the Little Mooi gauging weir (close to completion); and
- Further construction work on Route 2 and river diversion below the spillway (**Figure 4**).

Figure 2: Impoundment of Spring Grove Dam

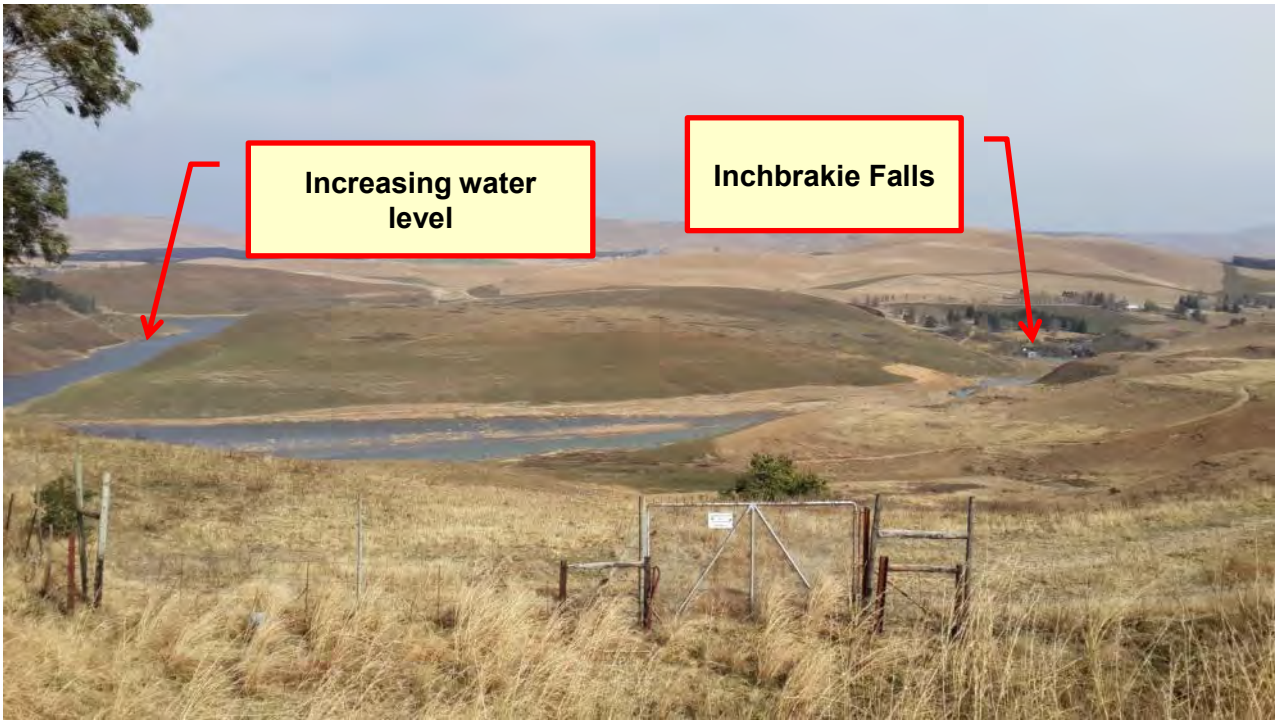


Figure 3: Impoundment approaching Inchbrakie Falls

Figure 4: Construction activities at the dam wall

Figure 5: Construction of the fish barrier

Figure 6: **Construction of the gauging weir downstream of dam wall**

Figure 7: **Improvement of Ferret Lane**

The following key areas were inspected during the monitoring session:

- Site offices;
- Dam basin;
- Dam wall;
- Workshop;
- Stores area;
- Fish barrier construction site;
- Waste storage area; and
- Ferret Lane.

* **COMMENTS:**

TCTA	

4 ENVIRONMENTAL ACTIVITIES FOR THE MONITORING PERIOD

Some of the **key environmental activities** on site, which also include areas of good practices and compliance, were as follows:

- On-going activities –
  - Regular dust suppression;
  - Safe storage and use of hazardous substances;
  - Use of mobile toilets;
  - Vehicle maintenance in dedicated area;
  - Management of siltation;
  - Mixing cement on impermeable surfaces;
  - Appropriate signage displayed and barricading;
  - Waste management;
  - Housekeeping;
  - Trucks abiding by speed limit, displaying chevrons, covered loads and numbered;
  - Use of personal protection equipment;
  - Environmental awareness;
  - Speed management;
  - Fire risk management;
  - Skills training;
  - Releases from dam to cater for Reserve requirements (**Figure 8**);
  - Creating habitat at the fish barrier site (**Figure 9**); and
  - Security check points being used to control access to the fish barrier.

Figure 8: Releases from dam to cater for Reserve requirements

Figure 9: Creating habitat at the fish barrier site

* **COMMENTS:**

TCTA	

5 WATER, AIR AND NOISE MONITORING

Amongst others, the functions of the ECO include the following:

- Conduct third-party monitoring and auditing;
- Regularly monitor and review the progress towards achieving the specific strategies, objectives and performance targets of the EMP; and
- Review monitoring data and evaluate against performance targets.

5.1 Contractor's Monitoring Results

The Contractor appointed Blue Sands to conduct monthly water, air and noise monitoring (refer to monitoring sites, as shown in **Appendix B**). The last set of reports received was for monitoring conducted in June 2013, which is elaborated on in the sub-sections to follow.

5.1.1 Air Quality

Dust Fallout

- For comparison purposes, the monthly dust deposition rates for the 2010 Baseline Air Quality follow.

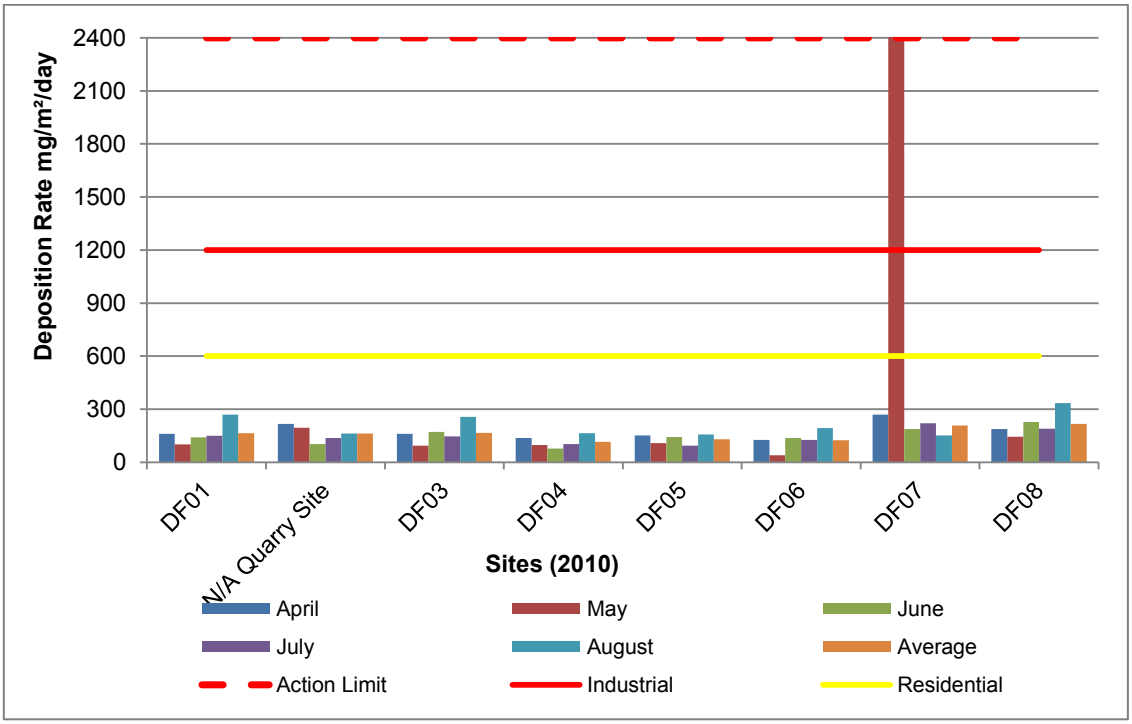


Figure 10: Monthly dust deposition rates for 2010 Baseline Air Quality Survey)

- Dust fallout samples were collected on 28 June 2013 – sampling period = 29 days. Results follow.

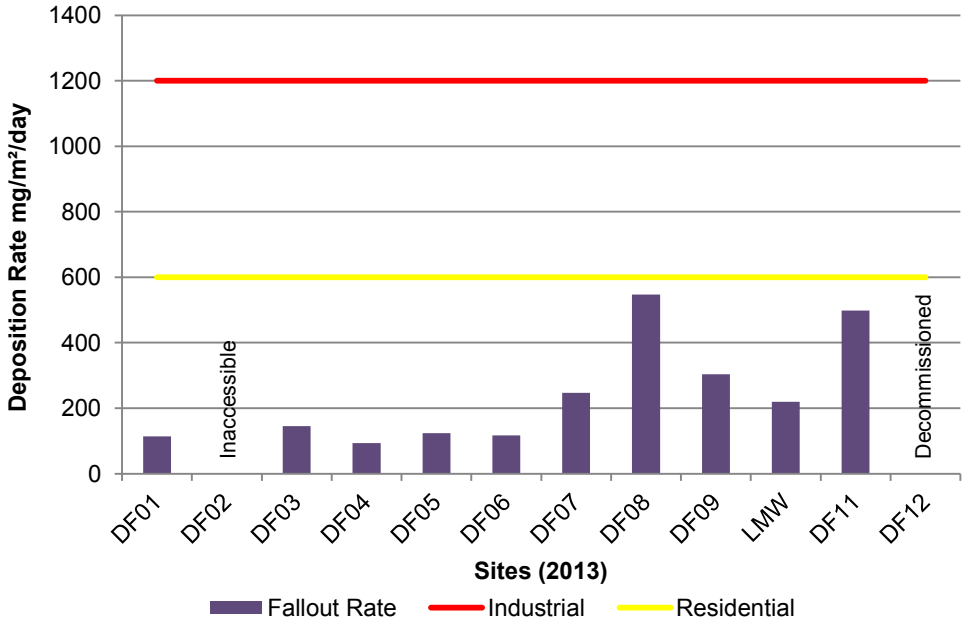


Figure 11: Dust fallout rates for June 2013 (Blue Sands, 2013a)

- Dust fallout rates continue to remain well-within the Residential Band.
- Dust fallout had increased at all sites because of very dry conditions, in spite of decreasing activity at the construction site. The highest rate was recorded at DF08 (547 mg/m^2/day), which is situated at the construction site, south fence. The future dust suppression of the large stockpiles of soil in close proximity to this monitoring point and their contribution to dust and PM_{10} levels emanating from the site requires further attention.

Continuous Particulate Monitoring (PM_{10}) with Wind Speed and Direction

- The sampling period was from 01 to 30 June 2013. Results are shown in **Figure 12**.
- During June 2013, there were four exceedences of the 24-hour PM_{10} limit of 120 µg/m^3, with peak concentrations recorded on 6 June (161 µg/m^3), 11 June (190 µg/m^3), 13 June (192 µg/m^3) and 19 June (181 µg/m^3). PM_{10} concentrations reflect dry climatic conditions.
- According to Blue Sands (2013a), there are still numerous vehicles travelling on the unpaved D146 and access roads, plus the Afrisam stockpile area is largely empty, but remains barren and exposed, not yet being revegetated or rehabilitated.
- The number of daily exceedences so far this calendar year now equals twelve days, which constitutes non-compliance with the National Ambient Air Quality Standards, as only four departures are allowed per annum.

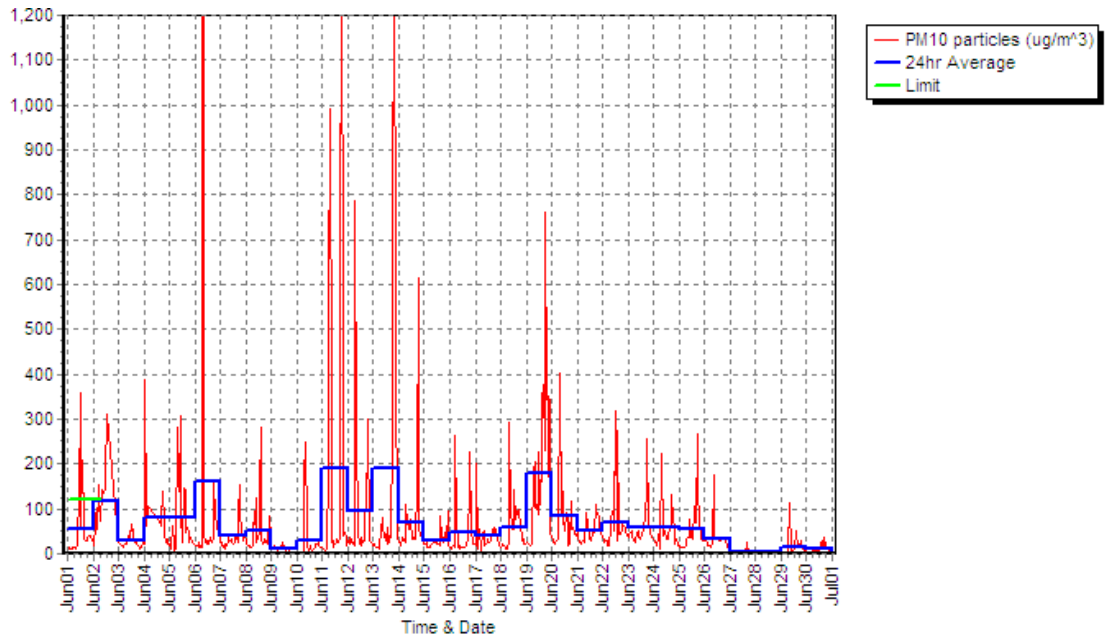


Figure 12: PM_{10} concentrations for 01 – 30 June 2013 (Blue Sands, 2013a)

- Examination of the pollution rose (**Figure 13**) reveals that most high dust concentrations originated from the northeast, which includes the car park, stockpile areas approach of the D146 coming towards the site access; all exposed surfaces that would allow for dust entrainment with mechanical disturbance. Gentle northerly winds were again characteristic of the period 11 to 13 June, when the 24-hour standard was exceeded for a further two days.

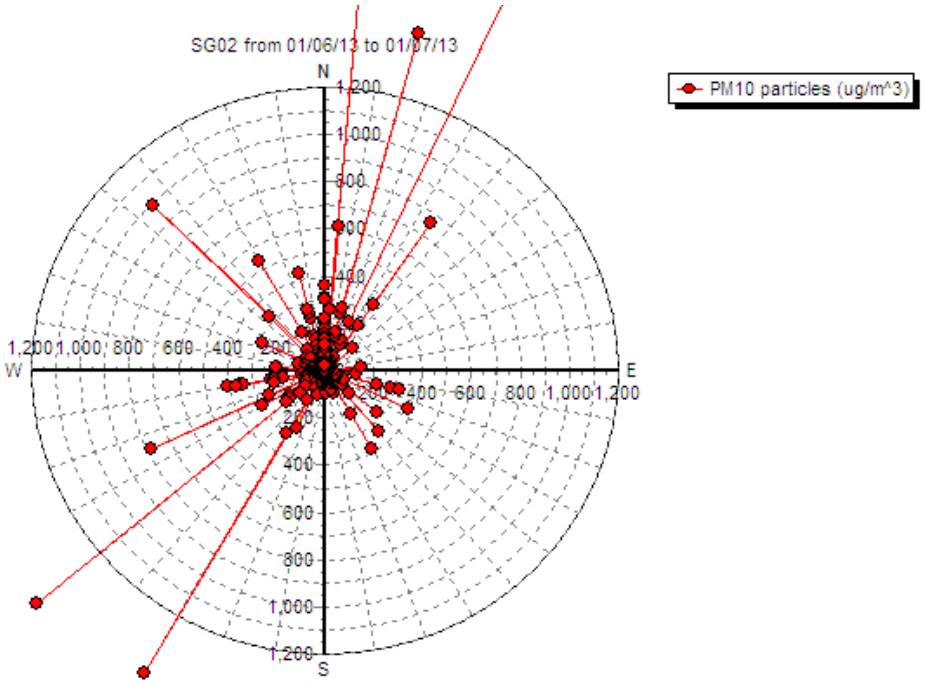


Figure 13: 1-hour PM_{10} pollution rose for June 2013 (Blue Sands, 2013a)

5.1.2 Environmental Noise

- Two surveys were undertaken for June 2013. Two daytime surveys were conducted. These surveys ran from 10h30 to 14h00 on 20/06/2013 and 09h30 to 13h30 on 12/07/2013. Night time surveys are no longer being conducted as construction and cartage is no longer taking place during the evenings.
- The noise levels recorded during June 2013 are comparable to prior months.
- The majority of points around the dam site exceeded the rural standard of 45 dB at mid-month. However the month end figures show a reversal of this tendency.
- EN01, EN02 and EN12 are the three monitoring sites closest to the construction site and standards were exceeded during various monitoring events at these sites.

5.1.3 Water Quality

Mooi River Sampling

- Samples were taken on 14 and 28 June 2013.
- Exceedences of standards for some variables (Total ammonia, Fluoride) were recorded at sites upstream of construction activities. This implies that the pollution sources are catchment related.

Separator Sampling

- For the separator, there were 5 (Chemical Oxygen Demand, Faecal coliforms, Manganese, Soap, oil and grease, Suspended solids) exceedences of the 29 determinants. The borehole monitoring results showed 5 exceedences, none of which are similar for the separator.
- According to Blue Sands (2013c), when the overall situation is considered the key determinants about which to be concerned are the faecal coliforms the suspended solids and the COD. Taking into account the small quantity of water released and the levels of the key determinants there should be no cause for concern).
- It should be noted that DWA was notified by the ECO in May 2013 of the non-compliance of the discharge from the separator with the effluent standards. No feedback has been received from this Department to date.

5.1.4 Raw Data

No raw data was received after the last monitoring event.

5.1.5 *Daily Water Quality Monitoring*

No daily water quality data was received after the last monitoring event. The high levels of siltation and the lack of proportional mitigation measures remain a concern.

The general target for water quality is that there should be less than a 10% variation in the instantaneous values at the downstream monitoring point. This may be unattainable when considering the nature of the construction activities. Nonetheless, every effort should be made to minimise the levels of siltation in the watercourses that are affected by the construction activities. Downstream water users should also be notified of major events that could cause substantial increases in turbidity levels.

* **COMMENTS:**

TCTA	

6 ENVIRONMENTAL PERFORMANCE

An overview of the environmental performance during the monthly monitoring period is provided in the sub-sections to follow.

6.1 Weekly ECO Monitoring – Status of Issues

The weekly ECO monitoring will be concluded in August 2013.

Note that only significant environmental aspects and impacts are listed in this section, based on the following qualitative criteria that were used to screen the weekly ECO monitoring Reports:

1. **Hazardous** nature of the environmental aspect or impact;
2. **Extent** of impact (within / beyond the boundaries of the construction domain);
3. **Sensitivity** of receiving environment;
4. **Probability** of aspect resulting in significant impact;
5. **Regulatory** context;
6. **Liability** / **cost** related to corrective actions;
7. Potential to lead to legitimate **concerns** by interested and affected parties; and
8. **Cumulative** impacts.

6.1.1 25 July 2013

Issue Ref.	Category	Summary of poor practice / area of concern	Status
279	**Water pollution**	1. Water levels in the two sediment ponds at the batch plant are very high. 2. A bare patch of soil is present below the first sediment pond at the batch plant which is being eroded.	Open
290	**Pollution prevention**	The corner of the right-hand side bund wall of the vehicle servicing area has been damaged at the workshop.	Open
307	**Pollution Prevention**	1. Numerous empty cement bags lying on ground around shutter board used for small batch cement mixing on the left bank at the level of the dam wall.	Open
		2. Diesel powered equipment lacks bunding in shed at the Little Mooi gauging weir site camp.	Closed
308	**Water pollution**	Sediment being released into Mooi River as a result of dewatering operations at spillway.	Open
312	**Pollution Prevention**	1. Diesel powered equipment in storage container at the Lower Loteni site camp without bunding. 2. Diesel spill on ground under Rodio equipment at the workshop.	Closed
314	**Water pollution**	1. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the Spring Grove Weir construction site. 2. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the fish barrier.	Open
315	**Pollution Prevention**	1. Lack of bunding under diesel-powered equipment/tank at the river diversion (fish barrier). 2. Diesel spills around piece of equipment at the workshop area. Open bag of cement directly on bare soil in workshop area. 3. Diesel powered equipment in storage container at the Lower Loteni site camp without bunding and stacked.	Closed

6.1.2 01 August 2013

Issue Ref.	Category	Summary of poor practice / area of concern	Status
279	**Water pollution**	1. Water levels in the two sediment ponds at the batch plant are very high. 2. A bare patch of soil is present below the first sediment pond at the batch plant which is being eroded.	Open
290	**Pollution prevention**	The corner of the right-hand side bund wall of the vehicle servicing area has been damaged at the workshop.	Open
314	**Water pollution**	1. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the Spring Grove Weir construction site. 2. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the fish barrier.	Open
318	**Pollution Prevention**	1. Diesel powered equipment in storage container above the Spring Grove gauging weir without bunding.	Open
		2. Diesel powered equipment below the spillway adjacent to Route 2 without bunding.	Closed

6.1.3 08 August 2013

Issue Ref.	Category	Summary of poor practice / area of concern	Status
279	**Water pollution**	1. Water levels in the two sediment ponds at the batch plant are very high. 2. A bare patch of soil is present below the first sediment pond at the batch plant	Open

Issue Ref.	Category	Summary of poor practice / area of concern	Status
		which is being eroded.	
290	**Pollution prevention**	The corner of the right-hand side bund wall of the vehicle servicing area has been damaged at the workshop.	Open
314	**Water pollution**	1. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the Spring Grove Weir construction site. 2. Large amount of sediment being released into the Mooi River as a result of the breaking of the river diversion (earthen wall) at the fish barrier.	Closed
318	**Pollution Prevention**	Diesel powered equipment in storage container above the Spring Grove gauging weir without bunding.	Open
319	**Pollution Prevention**	1. Diesel powered equipment in container at the Spring Grove weir without bunding. 2. Empty bags of cement (hazardous waste) on ground in work area on left bank at height of dam wall.	Open
		3. Diesel powered equipment and jerry cans containing fuel in red container at the Spring Grove weir without bunding.	Closed
320	**Pollution Prevention**	Pile of mixed hazardous and non-hazardous waste present in the river diversion (fish barrier) site camp.	Closed

6.1.4 21 August 2013

Issue Ref.	Category	Summary of poor practice / area of concern	Status
279	**Water pollution**	3. Water levels in the two sediment ponds at the batch plant are very high. 4. A bare patch of soil is present below the first sediment pond at the batch plant which is being eroded.	Open
290	**Pollution prevention**	The corner of the right-hand side bund wall of the vehicle servicing area has been damaged at the workshop.	Open
319	**Pollution Prevention**	Diesel powered equipment in container at the Spring Grove weir without bunding.	Open
322	**Pollution Prevention**	1. Diesel powered equipment in container at the newly located site camp at the fish barrier without bunding. 2. Diesel spill on bare ground adjacent to Rodio equipment at the workshop.	Open
323	**Pollution Prevention**	1. Hand mixing of cement directly on ground at site of culvert installation and adjacent to pump house on Ferret Lane. 2. Concrete slurry present at entrance into gallery on right bank. 3. Diesel spill on ground at refuelling area adjacent to diesel tanks at the workshop. 4. Hazardous materials containers stored outside at the workshop.	Closed
		5. Empty bags of cement at the pump house on Ferret Lane. 6. Close-to-full drip trays under Rodio equipment on right bank above spillway. 7. Operation of Rodio causing contaminated run-off onto road on right bank above spillway. 8. Area of cement slurry present along river's edge on the right bank of the spillway.	Open
324	**Water pollution**	Dewatering operations at the spillway (adjacent to the outflow piping) being conducted directly into the Mooi River causing sediment to be released.	Closed

6.1.5 Conclusions

A snag list was prepared to follow up on the open items. Feedback on the status of these issues will be sought from the Contractor.

6.2 Monthly ECO Monitoring Checklist

From September 2013, monthly ECO monitoring will focus more on rehabilitation progress and the related conditions in the RoD, as well as the mitigation measures contained in the EMPs and Rehabilitation Programme.

The results of the monthly ECO Monitoring Checklist for August 2013 are summarised in the sub-sections to follow.

6.2.1 Monitoring Categories

The results of the monitoring categories are summarised in **Table 2**.

Table 1: Summary of Monthly ECO Monitoring Checklist categories: August 2013

Monitoring Category	Conformance Score (%)
Environmental Authorisation	95
Administration	100
Environmental Education and Awareness	85
Construction	100
Materials	89
Water Quality	87
Air Quality	96
Noise	100
Community Engagement	100
Social	94
Archaeology and Cultural Sites	100
Vegetation	100
Fauna	100
Safety & Security	100
Waste	84
Traffic	100
Search, Rescue and Relocation	97
Construction Camp	95
Rehabilitation	100

In part, the overall good compliance achieved for the monitoring categories reflects the substantial reduction in activities on the site, as the construction period is coming to an end.

6.2.2 Areas of Non-Compliance

Selected areas of significant non-compliance for August 2013, which (amongst others) influenced the conformance and penalty scores contained in Table 2, are captured in the table to follow.

Table 2: Selected areas of non-compliance: August 2013

Monitoring Category	Condition / Mitigation Measure	Comments
Environmental Authorisation	Hazardous and flammable substances must be stored and used in compliance with the applicable regulations and safety instructions	• Comply with conditions stipulated in MSDSs, as recommended by the supplier for safe storage and handling required, such as incompatible materials, provision of local and general ventilation, conditions of storage (e.g. temperature and humidity, avoidance of sunlight), etc. • Containers to be adequately labelled. • Adequate secondary containment required. • Several spills identified (**Figure 14**).
	Provisions of the Hazardous Substances Act (Act 15 of 1973) to be adhered to	
	Liquid effluent generated through the construction process must be disposed of in a manner approved by the relevant local municipality and compliant to the relevant legislation	Discharge from separator exceeds standards (refer to **Section 5.1.3**).
	Undertake dust abatement measures such as the wetting of construction areas and the application of chemical palliatives on heavily used unpaved roads and the re-vegetation of permanent stockpiles	Complaints received regarding dust.
	All public complaints during construction must be adhered to as soon as possible	Issues and Complaints Register maintained. Delayed attention to certain issues.
	Provisions of the National Water Act, 1998 (Act 36 of 1998). Silting, demarcation and management of material storage and vehicle servicing areas used by the contractor to be outside of the 1:50 year flood line or at least 100 meters from any watercourses	High levels of siltation recorded. (**Figure 15**).
Environmental Education & Awareness	All personnel (including Sub-Contractors and suppliers) to be familiar with and understand the specifications contained in CEMP	Storage manager at workshop unaware of requirements for storage of hazardous material.
Materials	In the case of a spill, immediate action must be taken to stop and contain the spill. Any observed spills / leakages must be removed and the cause remedied.	• Several spills identified (**Figure 14**). • Poor management of concrete waste (**Figure 16**).
	The spill prevention management plan to be adhered to	
	Uncontrolled releases of hazardous materials to be prevented	
	Spill reporting procedures to be available at all storage facilities	Not all storage areas are provided with spillage procedure.
	All staff to be trained regarding handling and storage practices for hazardous materials and emergency response procedures required in case of an accidental release	Storage manager at workshop unaware of requirements for storage of hazardous material.

Monitoring Category	Condition / Mitigation Measure	Comments
Materials (cont.)	Chemicals stored in drums to be located in areas with a secondary containment capacity of at least 25% of the maximum stored quantity of chemicals	No secondary containment for hazardous material stored within a container at workshop (**Figure 17**).
	Bund volumes of drum storing chemicals to have sufficient capacity for spill containment	
Water Quality	Provide treatment and/or disposal method for the wastewater	Discharge from separator exceeds standards.
	Silt laden water shall not be directly discharged over land or directly into watercourses and shall be contained in settlement ponds and managed before release. Silt, sand and silt-laden water shall not enter any surface watercourse.	High levels of siltation recorded (**Figure 16**).
	Any release shall comply with the project's water quality standard	Discharge from separator exceeds standards (refer to **Section 5.1.3**).
Social	Environmental Awareness Training for all different levels of construction workers	Storage manager at workshop unaware of requirements for storage of hazardous material.
Waste	Site to be kept clean and free of litter	• Improved housekeeping required. • Poor management of concrete waste (**Figure 16**). • Waste from fencing contractor (complaint received).

Figure 14: Spillages identified

Figure 15: High levels of siltation

Figure 16: Poor management of concrete waste

Figure 17: No secondary containment for hazardous material

6.2.3 Overall Monitoring Results

A summary of the results of the ECO monitoring checklist follows.

Table 3: Summary of results of Monthly ECO Monitoring Checklist: August 2013

Description	Total	Percentage
Number of Items Scored for this Audit	265	
Actual Conformance Score	1227	93

6.2.4 Sequential ECO Monitoring Results

A graph indicating the sequential ECO Monitoring Results from May 2011 until present follows. It should be noted that without the weighting of the scoring items a full appreciation of the significance of the non-compliance is not conveyed.

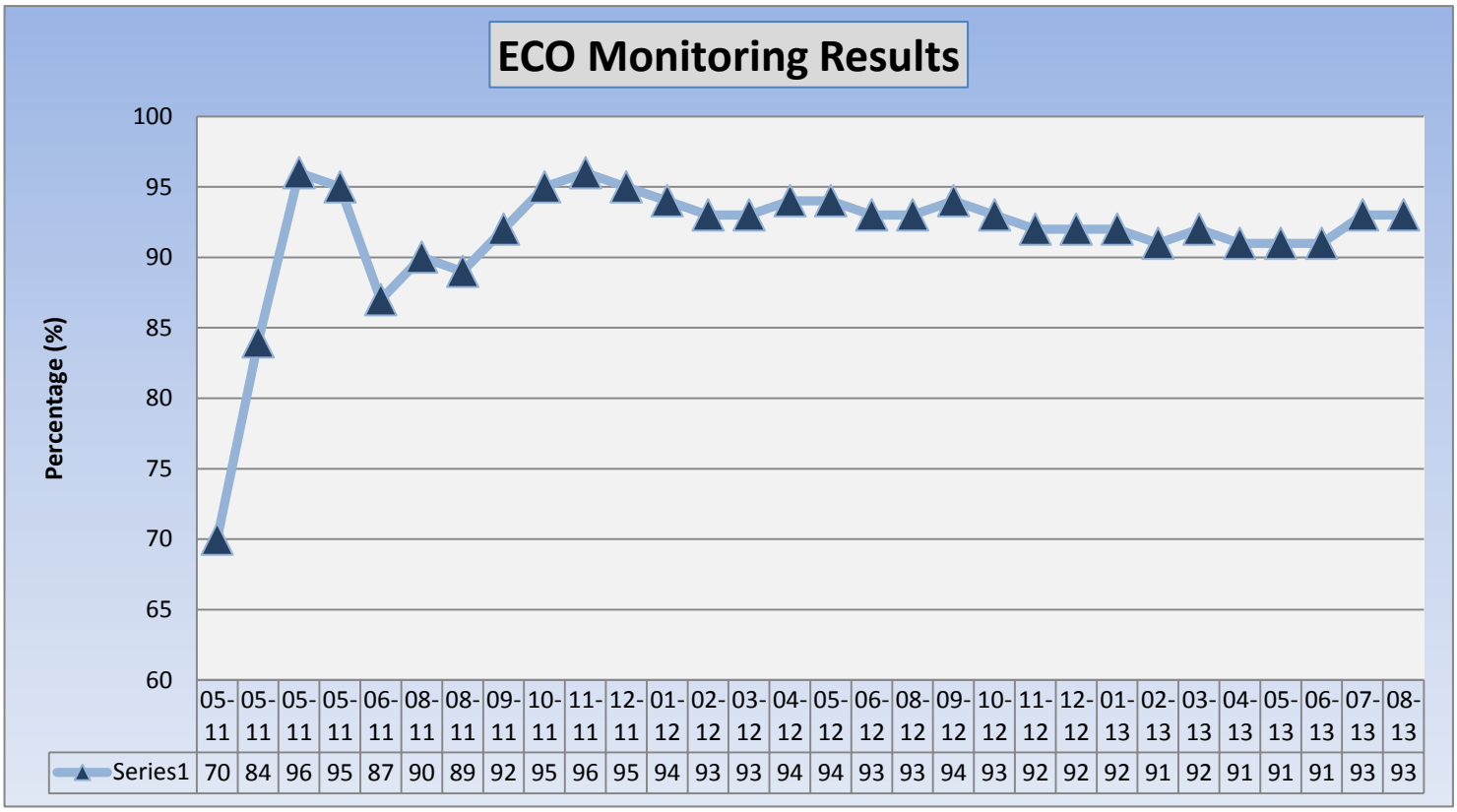


Figure 18: Graph – summary of results of Monthly ECO Monitoring Checklists

The graphs to follow indicate the compliance scores achieved for selected categories over the entire ECO monitoring period.

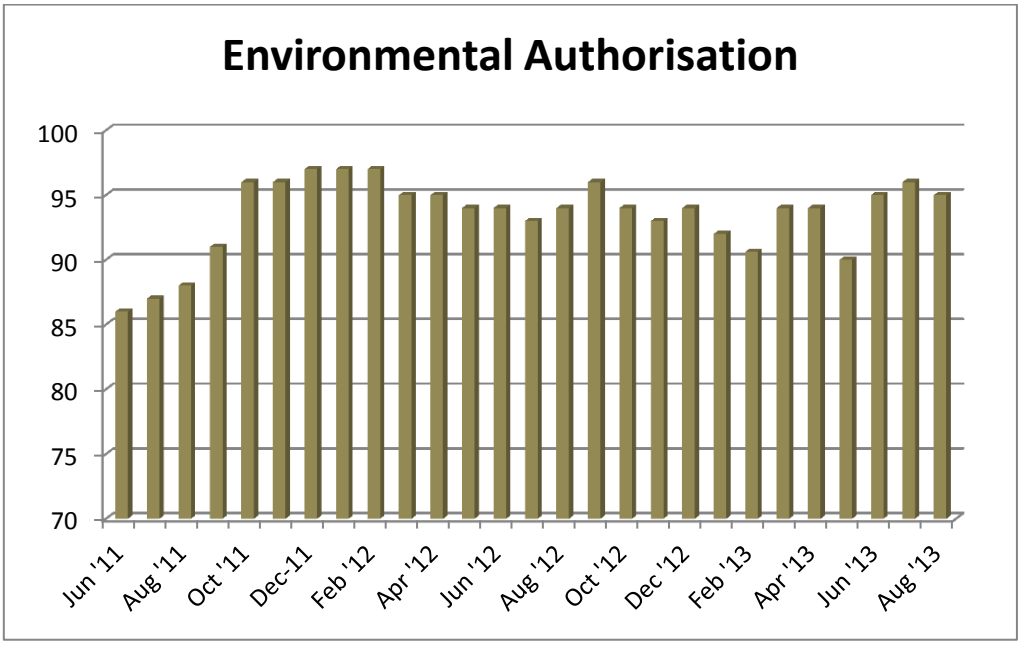


Figure 19: Graph – summary of compliance for category: Environmental Authorisation

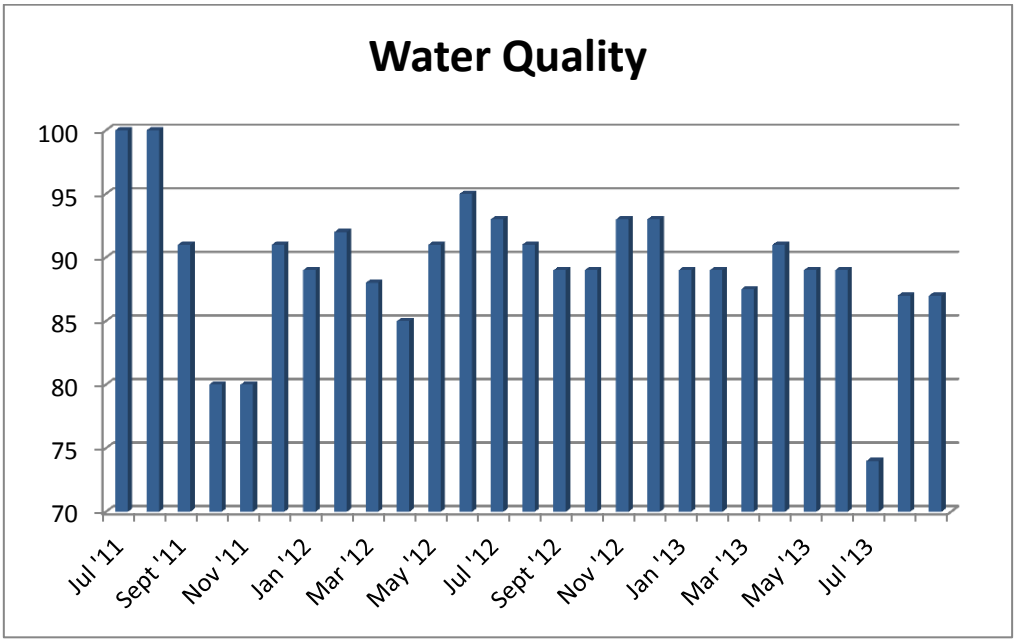


Figure 20: Graph – summary of compliance for category: Water Quality

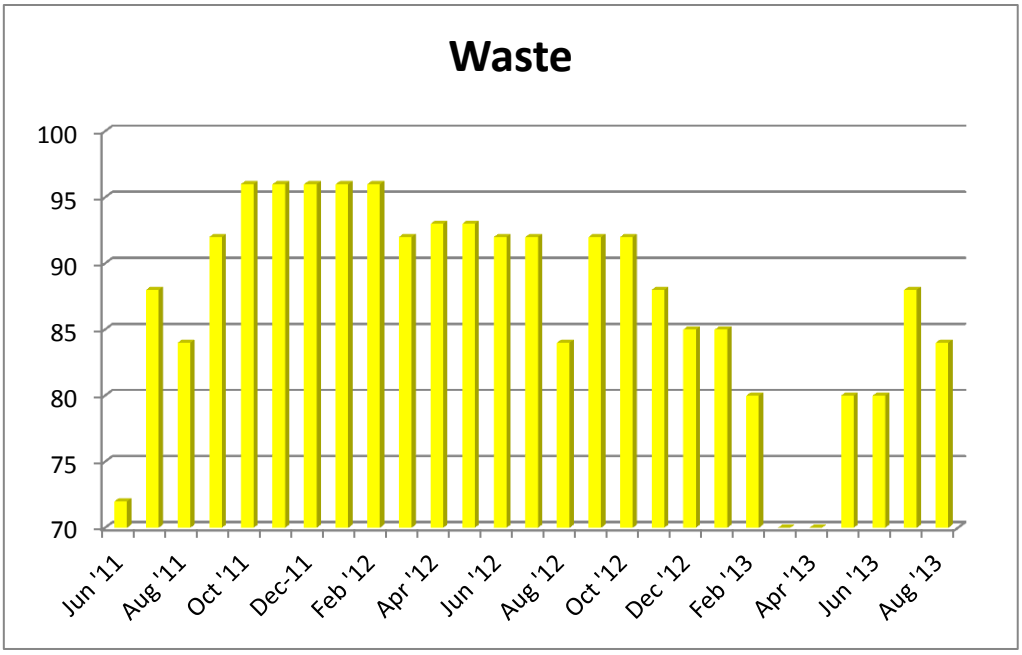


Figure 21: Graph – summary of compliance for category: Waste

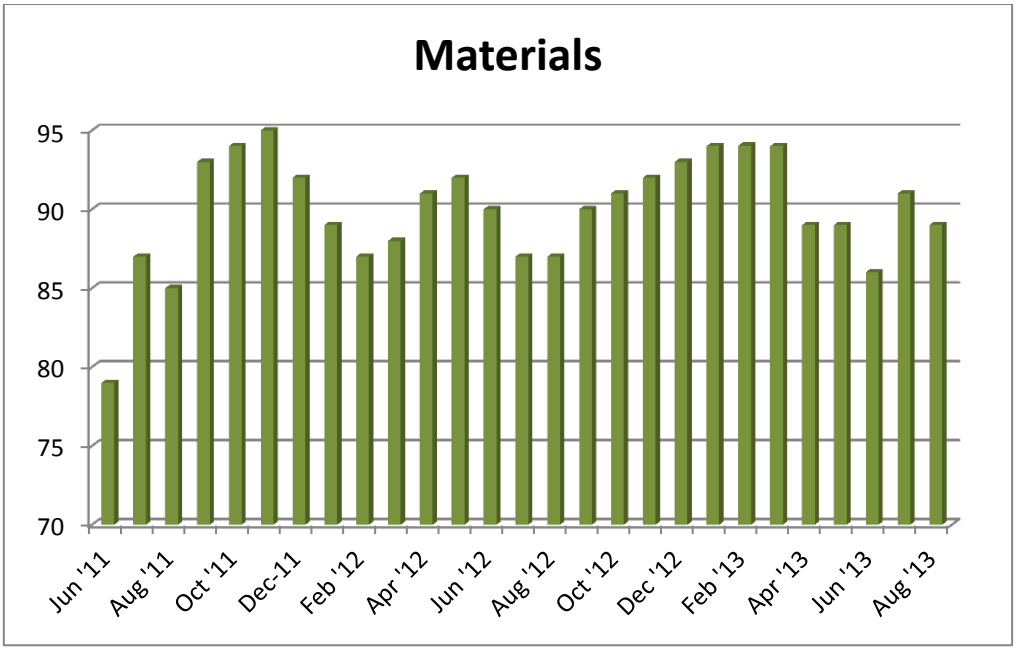


Figure 22: Graph – summary of compliance for category: Materials

* **COMMENTS:**

TCTA	

6.3 Pending Environmental Management Considerations

The following matters are regarded as significant environmental management priorities that require appropriate attention:

- Clarification is required on the appropriate way forward for the rehabilitation of wetlands and biodiversity offsets. Phase 1 of baseline study underway.
- Pro-active management is required to minimize siltation of watercourses.
- A number of jetties have been built upstream of the fish barrier (**Figure 23**), in expectation of the impoundment that will be created. The legality of these structures in terms of the National Environmental Management Act (Act No. 107 of 1998) and the National Water Act (Act No. 36 of 1998) is questioned. The landowners need to be made aware of the legal requirements for building structures within the regulated area of a watercourse.
- Reinstatement of area below fish barrier (**Figure 24**).
- Vegetative cover required for the road embankment along Ferret Lane, prior to heavy rainfall events (**Figure 25**).

- Confirmation is required whether the spoiling of material within the fish barrier impoundment site requires approval in terms of the National Environmental Management: Waste Act (Act No. 59 of 2008) (**Figure 26**).
- Dust from large soil stockpiles to be managed (**Figure 27**).

Figure 23: Jetties built upstream of the fish barrier

Figure 24: **Reinstatement of area below fish barrier**

Figure 25: **Road embankment along Ferret Lane**

Figure 26: Spoiling of material within the fish barrier impoundment site

Figure 27: Dust from large soil stockpiles to be managed

* **COMMENTS:**

TCTA	

7 NON-CONFORMANCE / INCIDENT REPORTING

New environmental non-conformances / incidents recorded by the EM during the monthly ECO monitoring period are contained in the table to follow.

Table 4: Environmental Non-Conformance/Incident Register entries: Jul - Aug 2013

Date of NCR / Incident	NCR/Incident No.	Description	Actual Corrective Action	EM Suggested Deadline	Actual Date Corrected
25/07/2013	J00846-NCR061	Dewatering was undertaken with no filtration measures in place at the Little Mooi Weir this was noted during an ECO inspection on the 25/07/2013. The contractors Engineer communicated that he was informed filtration measures were not necessary. Contaminated Water was being pumped from the work area directly overland onto neighbouring property. Ground water contamination and the impact of the surrounding biological environment were not considered.	Filtration measures must be implemented before directly discharging over land or into the river. Contractor to implement prevention measures and provide adequate proof for close-out. Tool box talk, must be conducted to re-emphasise awareness of site procedures and impacts of such activities to prevent re-occurrence.	06/08/2013	No
25/07/2013	J00846-NCR062	Decommissioning of the settlement pond was undertaken incorrectly. This resulted in the discharge of silt laden water directly into river which is considered pollution in reference to the National Water Act No.36 of 1998 1. A method statement for works was not submitted for approval of the Engineer. 2. The Engineer was not informed of the activity. 3. There was no supervision of the sub-contractor 4. Water monitoring results were requested for the duration of the pollution incident as per P67.4.3.3/P67 4.4; this was not undertaken. 5. The Contractor failed to notify the Engineer immediately of the pollution incident as Per 67.4.3.6	1. Method statement to be submitted for approval of the Engineer with regards to any works being conducted in or near rivers or natural water courses. 2. For duration of construction work or when the river course is disturbed in any way the effect on the river water shall be monitored and tested in terms of P67.4.4. Contractor to provide analysis together with quantitative data. 3. Contractor is to investigate the pollution incident and provide report and feedback on what action was	06/08/2013	No

Note: Wording directly extracted from Environmental Non-Conformance / Incident Register

* **COMMENTS:**

TCTA	

8 ISSUES AND COMPLAINTS

Appendix C contains the issues and complaints (48 entries) that were recorded by the Social Monitor during the monthly ECO monitoring period. The following issues (apart from matters pertaining to expropriation and compensation) remain open, based on the Issues and Complaints Register, which require feedback / action from the project team:

Open issues from current monitoring period –

- No. 865 - 23-Jul-13 - Large sand stockpile.
- No.872 - 28-Jul-13 - Completion of roads; cattle grids; drainage from roads; waste from fencing contractor;
- No.875 - 31-Jul-13 - Drainage from roads;
- No.878 - 02-Aug-13 - Upgrade of D146;
- No.884 - 07-Aug-13 - Repairs to weir;
- No.889 - 11-Aug-13 - Condition of road; clearing of rocks from grading;
- No.890 - 12-Aug-13 - Completion of culvert;
- No.895 - 14-Aug-13 - Drainage channel;
- No.900 - 15-Aug-13 - Cleaning of cattle grids;
- No.901 - 15-Aug-13 - Water build up at the base of private dam wall;
- No.905 - 19-Aug-13 - Access to dairy following impoundment of fish barrier; and
- No.909 - 20-Aug-13 - Drainage on the Overdale Road.

It is noted that the Social Monitor has prepared a summary of all the open issues, which still require attention.

* **COMMENTS:**

TCTA	

9 PROPOSED AMENDMENTS TO THE ROD AND EMP

9.1 Proposed Amendments to RoD

An application for an amendment to the RoD was submitted by DWA to DEA on 15 August 2011.

Proposed amendments or matters for clarification related to the RoD are contained in **Table 6**.

Table 5: Proposed amendments / matters for clarification related to the RoD

Condition No.	Description	Comments / Amendment
Amendments Previously Recorded		
3.2.1.22	Indigenous vegetation removed from the dam basin must be kept in a temporary nursery to be used for rehabilitation	Addressed in EMP for Search, Rescue and Relocation, which was approved on 07 September 2011.
3.2.1.23	The wood from exotic and/or invasive species removed from the dam basin must be made available to the local community free of charge	Decision pending from Contractor regarding the way forward for the disposal of the cleared vegetation. RoD condition may prove to be costly.
3.2.3.1	Daily monitoring by ECO	ECO was not appointed as a daily monitor. Daily monitoring is undertaken by the EO on behalf of the Contractor and by the EM on behalf of the Engineer. Weekly ECO monitoring conducted.
3.2.3.3	ECO's quarterly environmental performance audits	Environmental performance audits undertaken by the ECO every six months.
3.2.3.4	Submission of environmental compliance report every two months by the ECO.	Environmental compliance report submitted monthly.
3.2.3.5	ECO to maintain – a) Daily site diary b) Non-conformance register c) Public complaints register d) Register of audits e) Copies of method statements f) Material Safety Data Sheets (MSDS) g) Monitoring reports of the contractor/s h) Compliance and audit reports i) Training registers j) Copies of the RoD and EMPs k) Waste disposal certificates l) Copies of all permits required during construction	ECO to ensure that these documents, registers, reports and permits are maintained. Documentation to be maintained by Environmental Monitor. MSDSs to be kept between the OHS file and Environmental Monitor's file, due to a split function.
3.2.3.6	ECO to remain employed until the end of rehabilitation	ECO to remain employed until the end of defects liability period
3.2.6.1(d)	Provisions of the National Water Act, 1998 (Act 36 of 1998). Silting, demarcation and management of material storage and vehicle servicing areas used by the contractor to be outside of the 1:50 year flood line or at least 100 meters from any watercourses.	Mobile toilets to be situated at least 50m away from a watercourse.
3.2.1.11	All access roads must be clearly demarcated and 'no entry' sings must clearly indicate those roads not to be used by contractors or delivery vehicles. No heavy construction vehicles may access road P164 from Rosetta to Kamberg, the section of the	Proposed amendment: All access roads must be clearly marked and 'no entry' sings must clearly indicate those roads not to be used by contractors or delivery vehicles. No construction vehicles

Condition No.	Description	Comments / Amendment
Amendments Previously Recorded		
	Overdale Road between the D146 and the P164 in Rosetta or road D682 in Rosetta	may access road P164 from Rosetta to Kamberg, the section of the Overdale Road between the D146 and the P164 in Rosetta or road D682 in Rosetta, however, should impoundment of the dam take place prior to the completion of the fish barrier, access will then be allowed on the road P164 to the Ballina Road for completion of the works.
3.2.1.13	No temporary construction camps or similar facilities (i.e. guard hut) is allowed outside the development footprint as the establishment of such structures might trigger a listed activity as defined in the NEMA Regulations	Guard hut established on private road.
New Recommended Amendments		
	N/A	N/A

* **COMMENTS:**

TCTA	

9.2 Proposed Amendments to EMP

In accordance with the RoD condition no. 3.2.4.4, EMPs will be regarded as dynamic documents and any changes to the EMPs must be submitted to DEA for acceptance, which is to be accompanied by recommendations of the EMC.

An EMP Amendments Register was submitted by TCTA to DEA on 21 September 2011, which records the proposed amendments to the EMP for management measures that are deemed to be ineffective or redundant. These amendments were discussed with the EMC on 03 August 2011.

Proposed amendments or matters for clarification related to the EMP are contained in **Table 7**.

Table 6: Proposed amendments / matters for clarification related to the EMP

No.	Description	Comments
Mitigation Measures identified during previous ECO monitoring events		
Existing Mitigation Measures contained in EMPs		
1.	EMPs to provide rehabilitation measures for areas to be disturbed during the construction phase [RoD condition no. 3.2.4.3(b)].	EMP for the Construction of the Spring Grove Dam Wall to make provision for rehabilitation of areas affected by construction work outside of dam basin (e.g. access roads).
2.	EMPs to include implementation measures	Addressed in EMP Register.

No.	Description	Comments
	aimed at controlling invasive plant species and weeds [RoD condition no. 3.2.4.3(f)].	
3.	Cover vehicles transporting spoil, topsoil or other dust generating materials.	Addressed in EMP Register.
4.	Dust suppression measures must be implemented on dry weather days.	The spoil area opposite Erika Millican's property is considered a working area and will not be watered down for dust suppression. Instead, visual inspections will be undertaken and if dust is a nuisance the area will be watered down.
5.	For each waste type create a MSDS that is always available to accompany the waste.	Addressed in EMP Register.
6.	All waste containers designated for off site transport to be secured and labelled with the contents and associated hazards, be properly loaded and be accompanied by a shipping paper (i.e. manifest) describing the load and its associated hazards	Impractical for all waste containers. Suitable for hazardous waste.
7.	Transporters of hazardous materials to ensure that: vehicles transporting hazardous materials are registered for this purpose; clearly display in English the nature of materials being transported; what to do in the event of an emergency and an emergency telephone number (24 hour) of a responsible person who can provide advice in an emergency	Bulk fuel transporters comply with this measure. However, requirements are too onerous for sub-contractors (e.g. mechanics). EMP deviation to be discussed.
8.	The quantity of hazardous material used each month is to be documented	Requirement is more feasible in terms of fuel usage. Necessity of measure to be explored further in terms of other hazardous material used on site, such as material used for the maintenance of vehicles, material used at the laboratory, etc.
9.	Monitor the number of project related vehicles travelling off site per day	Trucks are being monitored through GPS tracking system. Monitoring of other construction-related vehicles is an onerous task, and the practicality thereof needs to be investigated further.
10.	Phase 2 of social monitoring is monthly local area monitoring where in-depth research will be done in all the local 'communities' identified in the MEP as constituting local social environment. These areas will be covered over 12 months and comprehensive narrative reports will be compiled. The first round of longitudinal survey will be conducted. A sample of households will be interviewed every four months until the project completion to determine how they experience social impacts related to MMTS2	Need to consider how current social monitoring conforms to original intentions of the associated mitigation measure.
11.	Phase 3 of social monitoring is in-depth investigation and participation appraisal where the focus shifts from area monitoring to specialist investigation of themes and participatory appraisal and planning with project communities to determine whether social changes claimed by respondents	Need to consider how current social monitoring conforms to original intentions of the associated mitigation measure.

No.	Description	Comments
	have significance in the project social environment, the level of significance, what they involve and what responses are required	
12.	Specify targets for minimum numbers of each species to be relocated; the selected destination and the party responsible for post-relocation care	Specialist feedback: Impossible to set target numbers because we don't know population sizes or even if the species occur or not. Preference is to relocate within the basin and post-relocation care of animals is impossible - we can only manage their habitat.EMP amendment.
13.	Working hours to be limited from Monday to Saturday from 06h00 to 18h00. No traffic will be permitted on the road between 07h00 and 08h00.	Requested change in working hours at the fish barrier.
14.	Methods must include details on who will be responsible for monitoring the species post-relocation and quantifiable measures to assess the success of such relocation	*Specialist feedback: When we do capture and translocate fauna, it will be impossible to measure the success of translocation. It is expensive and impractical to mark or tag the animals after relocation.*
15.	Once all plant material required has been collected for translocation or propagation, local herbalists should be invited to collect the remaining material.	SANBI has been invited to undertake the rescue of medicinal plants from the basin and make these available to herbalists. This was assessed as the best option due safety and security risks, both for the project and neighbouring properties, associated with the number of different herbalists having access to site. It is believed that SANBI will conduct a more controlled and systematic process in the rescue of medicinal plants from the basin.
Additional Mitigation Measures to supplement EMPs		
16.	Working within watercourses and safeguarding the characteristics of the watercourse, including flow, water quality, habitat (morphology) and aquatic biota	
17.	Borrow pits (e.g. stormwater management). It is noted that certain of the existing categories of the EMP for the Construction of the Spring Grove Dam Wall make provision for managing the environmental aspects and impacts associated with the borrow pits	
18.	Mobile toilets to be situated at least 50m away from a watercourse.	
19.	Silt laden water shall not be directly discharged over land or directly into watercourses and shall be contained in settlement ponds and managed before release. Silt, sand and silt-laden water shall not enter any surface watercourse.	Proposed new wording: *Silt laden water shall not be directly discharged into watercourses and shall be contained in settlement ponds and managed before release. Silt, sand and silt-laden water shall not enter any surface watercourse.*
20.	A Resettlement Working Group (RWG) will be established to attend to grievances so as to ensure that the occupants are catered for within the agreed parameters.	*Feedback from project team:* A RWG is appropriate in projects where the resettlement affects a cohesive community, village, or town that falls under a common decision-making authority and where entitlements would be standardised for all relocatees. In the case of the occupants and labour tenants in the Spring Grove Dam (SGD) basin it was not appropriate for one body (a RWG) to make decisions and set entitlement frameworks on behalf of families with disparate needs and expectations. Instead, consultations began with farm-specific meetings in order to tie-in the legislated retrenchment process with the relocation process. After that phase of

No.	Description	Comments
		consultation the meetings progressed to family-specific consultations during which individual entitlement frameworks were drawn-up with heads of household, within the context of TCTA's greater guiding principles for the resettlement process. Any changes to the guiding principles were informed by the outcomes of the family-specific consultations. Another function of the RWG is management of the grievance procedure commonly developed in a resettlement project. In the case of the SGD basin community the grievances were channelled into the existing grievance mechanism, the social monitoring issue register. This enables the ECO to audit the issues, and for long-standing issues to be brought before the EMC. An application is therefore made for an amendment to be made to section 7.1 of the EMP for the Relocation of Occupants; the resettlement working group functions fall away and are replaced with the family-specific consultations.
Mitigation Measures identified during last ECO monitoring event		
21	Only indigenous vegetation to be used in rehabilitation.	Kikuyu used for road embankments.

* **COMMENTS:**

TCTA	

REFERENCES

Blue Sands, 2013a. Air Quality Monitoring. June 2013. Spring Grove Dam Construction. Prepared for Group Five (Pty) Ltd.

Blue Sands, 2013b. Environmental Noise Surveys. June 2013. Spring Grove Dam Construction. Prepared for Group Five (Pty) Ltd.

Blue Sands, 2013c. Water Quality Monitoring. June 2013. Spring Grove Dam Construction. Prepared for Group Five (Pty) Ltd.

APPENDIX A

SURPRISE ECO INSPECTION REPORT

MOOI MGENI TRANSFER SCHEME PHASE 2 (MMTS-2)

ENVIRONMENTAL CONTROL OFFICER (ECO)

MONTHLY UNSCHEDULED INSPECTION REPORT

DATE:	19 August 2013
REPORT NUMBER:	13
TARGET LOCATIONS:	Spring Grove gauging weir; spillway; right and left banks above spillway, and workshop
DURATION:	Two hour inspection
PURPOSE:	Unscheduled ECO Inspection
ATTENDANCE:	ECO (Nemai Consulting – A. Burke); Environmental Monitors (BKS – T. Mokoena)

PHOTOGRAPHIC RECORD – PREVIOUS ISSUES FROM 14 AUGUST 2013

Fig 1: On 14 August 2013, close-to-full drip trays present under Rodio equipment on right bank above spillway.

Fig. 1a: During this inspection, this drip tray under the Rodio equipment on the right bank above the spillway remained in need of servicing.

Fig. 2: On 14 August 2013, area of cement slurry present along river's edge on the right bank of the spillway.

Fig. 2a: During this inspection, area of cement slurry remained along the river's edge on the right bank of the spillway.

Fig. 3: On 14 August 2013, cement slurry present at entrance into gallery on left bank.

Fig. 3a. During this inspection, area of cement slurry had been removed from the entrance into the gallery on the left bank.

Fig. 4: On 14 August 2013, dewatering operations at the spillway being conducted directly into the Mooi River causing sediment to be released.

Fig. 4a: During this inspection, dewatering at the right bank of the spillway was not in operation.

Fig. 5: On 14 August 2013, diesel powered equipment in container at the Spring Grove weir without bunding.

Fig. 5a: During this inspection, diesel powered equipment in container at the Spring Grove weir remained without bunding.

Fig. 5: On 14 August 2013, diesel spill directly adjacent to the refuelling station at the workshop.

Fig. 5a: During this inspection, diesel spill remained next to the refuelling station at the workshop.

PHOTOGRAPHIC RECORD – GOOD PRACTICES

Fig 1: Bunding placed under diesel-powered equipment at the spillway.

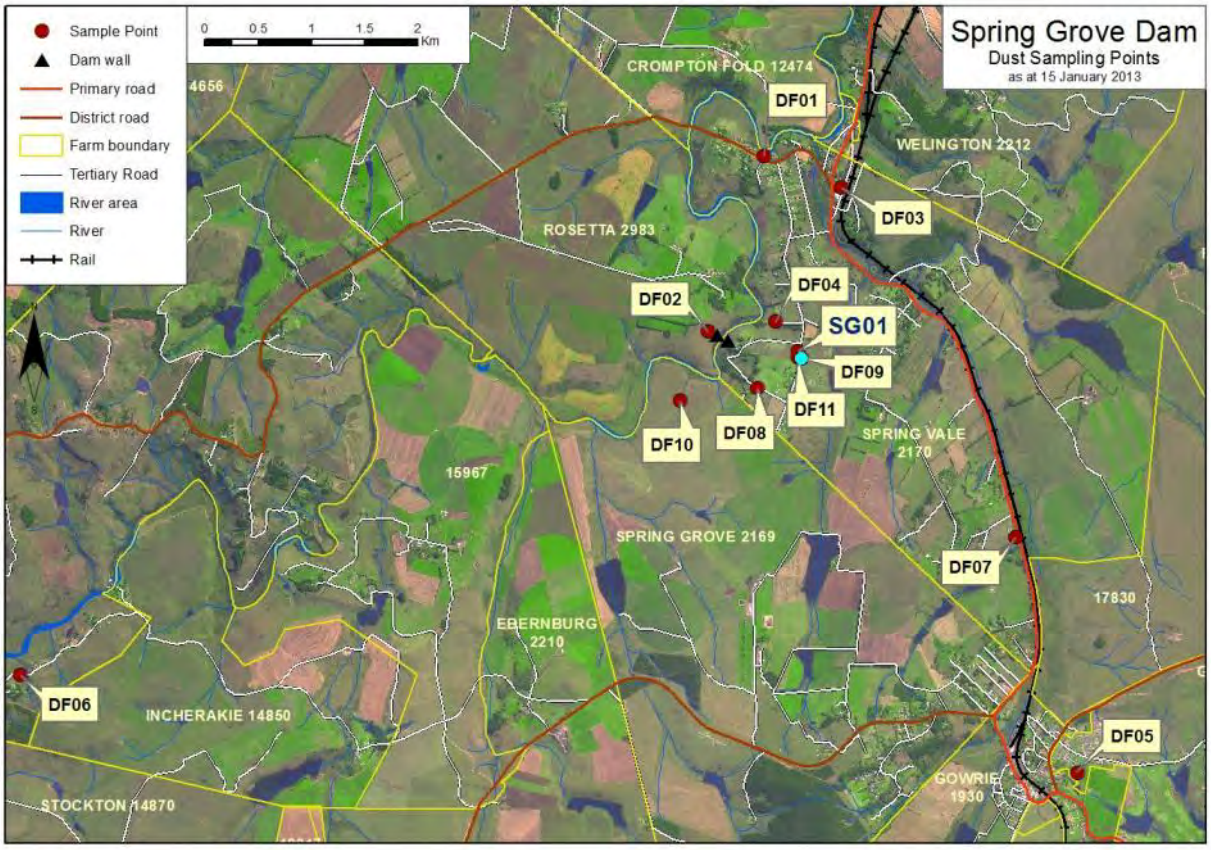
Fig. 2: Drip tray placed at diesel refuelling station at the workshop.

APPENDIX B

MONITORING SITES

Dust Sampling Points

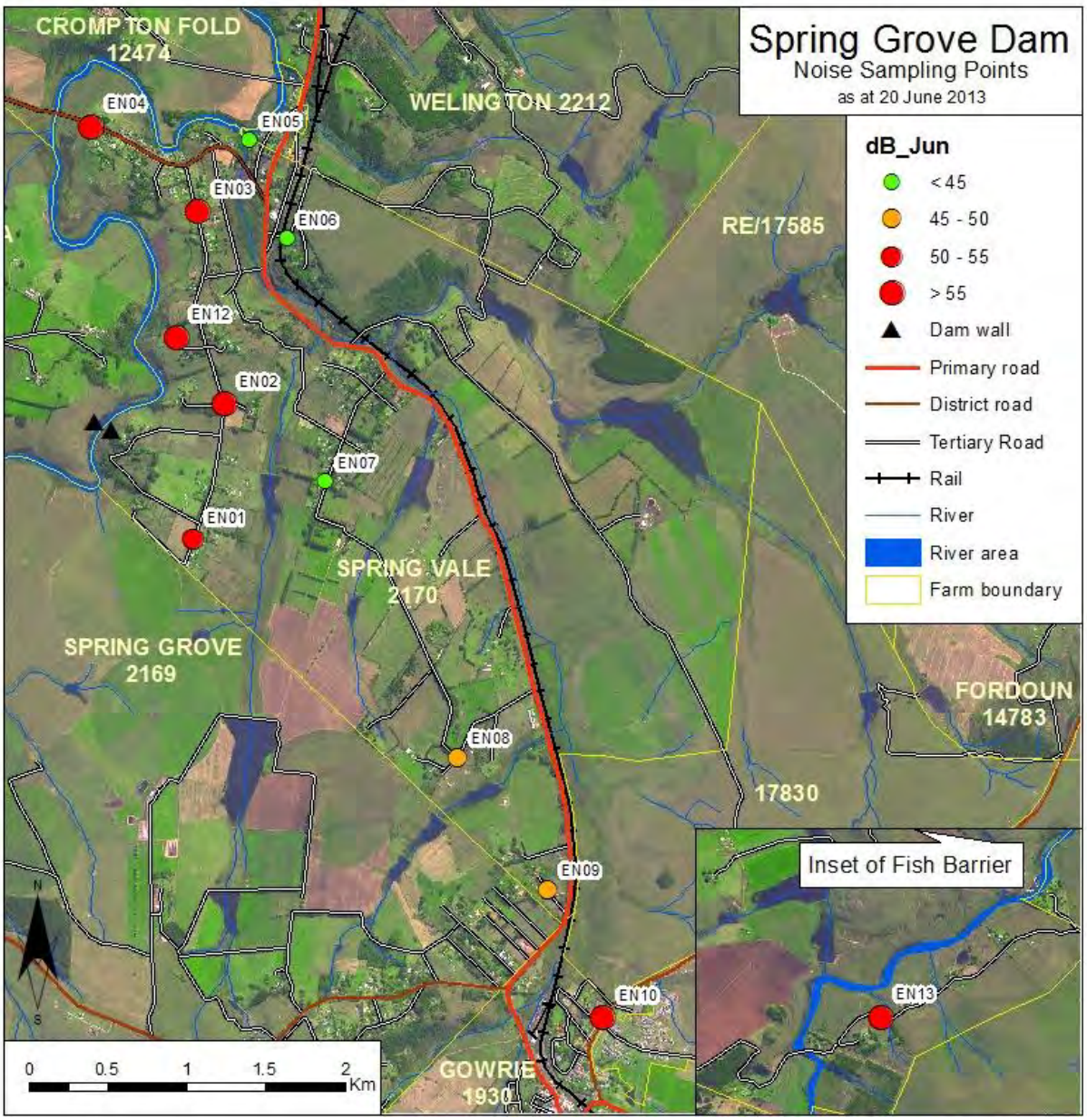
Blue Sands (2013a)



Sampling Site and Description		Coordinates
DF01	Paul Van Oerle's Property	29°18'13.60"S 29°58'12.00"E
DF02	Construction Site, North of Dam Wall	29°19'06.49"S 29°57'51.32"E
DF03	Rosetta Post Office	29°18'22.70"S 29°58'38.00"E
DF04	Construction Site, North Fence	29°19'04.90"S 29°58'13.60"E
DF05	Gowrie Village	29°21'23.60"S 29°59'55.10"E
DF06	Fish Barrier	29°20'45.30"S 29°53'48.20"E
DF07	Pangbourne School	29°20'13.10"S 29°59'36.00"E
DF08	Construction Site, South Fence	29°19'24.70"S 29°58'08.90"E
DF09	Between Offices and D146	29°19'16.40"S 29°58'21.63"E
DF10	Little Mooi Gauging Weir	29°19'26.88"S 29°57'40.89"E
DF11	Peter Warren's Property	29°19'15.86"S 29°58'23.51"E

Noise Sampling Points

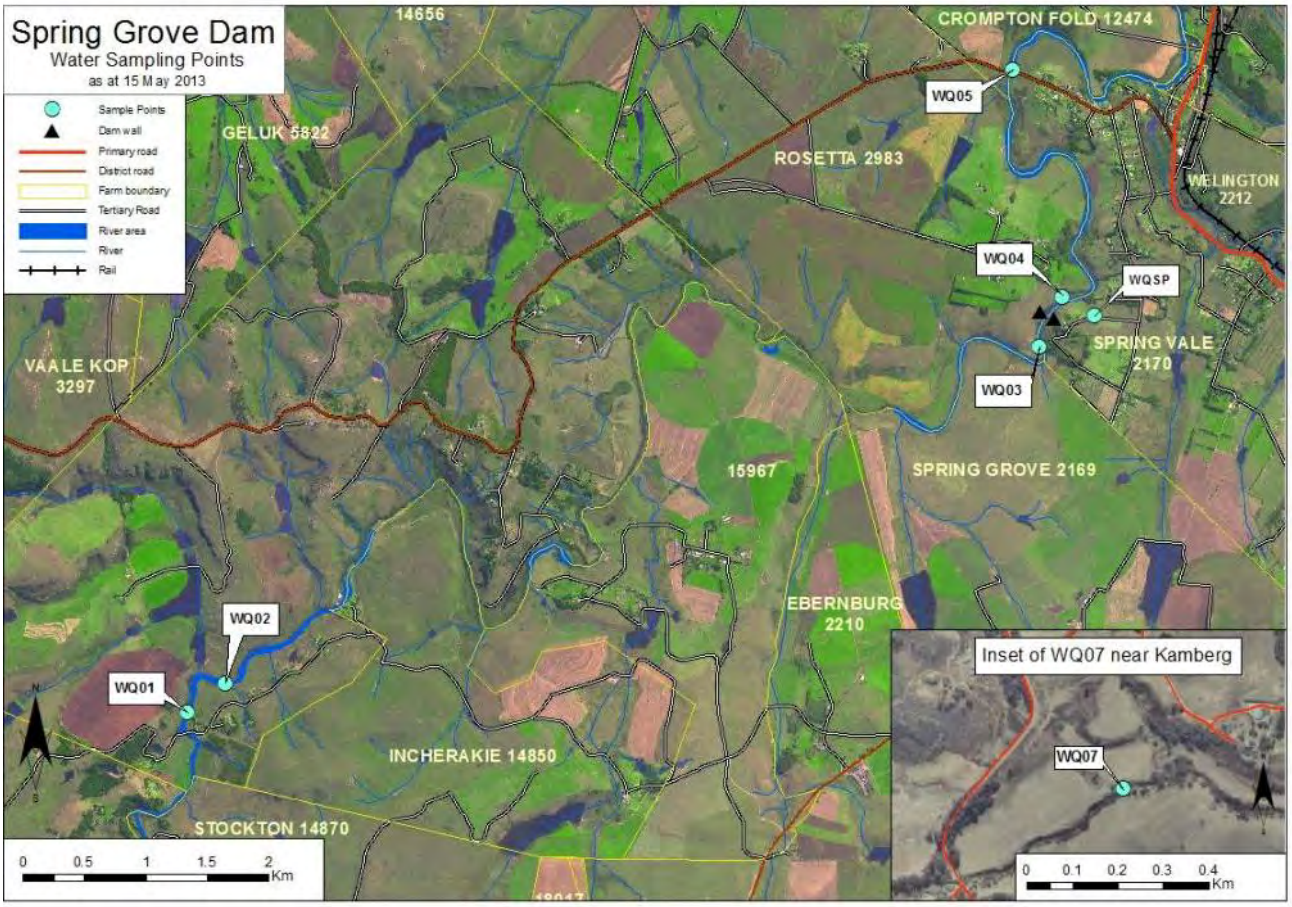
Blue Sands (2013b)



Position	Rationale / site description
EN01	At the end of the road to Rosetta Farm
EN02	The entrance to Shonalanga Cottages
EN03	The entrance to Overdale Guesthouse
EN04	The entrance to Tamakwa Country Lodge on Kamberg Road
EN05	Willowvale Road in Rosetta Village
EN06	On the road to Drakesleigh farm next to railway tracks
EN07	On Patrick Guilbridge Road on the D682
EN08	At the entrance to “The Stables” Wine estate
EN09	At the entrance to Boddington 200 m from the R103
EN10	At the entrance to the Midlands Community College opposite Gowrie
EN12	Between the Mooi and Spring Grove access road, north of Shonalanga Cottages
EN13	At the entrance to the fish barrier construction site

Water Quality Sampling Points

Blue Sands (2013c)



Location	Rationale / site description
WQ01	Upstream of the Fish Barrier
WQ02	Downstream of the Inchbrakie Falls
WQ03	Upstream of the temporary on-site bridge
WQ04	± 50 m downstream of the proposed Dam Wall
WQ05	Downstream of the Dam Wall at Rosetta Bridge
WQ07	Gauging weir on the Little Mooi
WQSP	Separator

APPENDIX C

EXTRACT FROM ISSUES AND COMPLAINTS REGISTER

ISSUES AND COMPLAINTS REGISTER: JULY – AUGUST 2013

Note that the Issues and Complaints Register contains additional information to what is provided below. The Social Monitor has also summarised the open issues.

Issues Attended to:

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
863	20-Jul-13	Charles Jonsson	11h55 sms: Road flat out busy today and all dust blwoing straight into our house and no water truck. I will block road unless watered in half an hour.	message forwarded to Ryan Phelan with instruction to sort out immediately. Response from contractor was that there has been a truck running but it is a windy and dry day.	Y
864	22-Jul-13	Clyde Bartlett	Pump not working so have no water.	Clyde, all landowners have been told not to use the new pumps until the systems have been fully commissioned! Please don't use your pump. This is why we're delivering water every day. We will send a technician out to fix your pump, but only when we are ready to commission.	Y
866	24-Jul-13	Iny McSeveny	Unpleasant altercation (on phone) with G5's environmental officer. Rude. Iny called to find out when fire breaks will be burnt, and got a lecture.	Response from Don Robertson is that a break should be burnt, and so the contractor went ahead and did the break on the 25th. Iny sent thanks.	Y
867	25-Jul-13	Piet Pelser	Has bought cattle, but no stock watering solution yet so what is TCTA going to do about it?	Plea to contractor to send water tanker while fence is temporarily erected, but no water tanker available. Fence finally put up on Tuesday 30th, so that cattle have temporary access to water.	Y
868	26-Jul-13	John Wetton	Hi Katie, Could we please have watering on the D146 as the dust is terrible at the moment. Many thanks. John	Tanker sent out.	Y
869	27-Jul-13	Peter Jerman	We're running low on water, so called Thulani and he says that he has talken leave! Not acceptable! 29 July 2013: Thank you for the two water loads deliverd today - PJ	Sat 27: Hi Andrew, who is in charge of the water tanker this weekend. The Jermans (and therefore the Cartwrights on Hilltop), the Winckworths, the Houghams) are all just about to run out of water and Thulani (Deepauls) seems to be on leave until Tuesday mroning. Urgently need a couple of deliveries, please. Will try to call you again. Mon 29: Hi Andrew and Douglas, any chance of a water tanker this morning please, for domestic water supply. It is deseperate! They've run out of water!	Y
870	27-Jul-13	Stuart Winckworth	Hi Katie, I learned from Pete Jerman that we shall have no water delivery from last Friday - 26th - until Tuesday next week - 30th. If this is correct, and I have no reason to suppose it is not, I find it amazing that: No plan was made to alleviate the situation, This was not brought to our attention the moment TCTA became aware of the problem. Water is a necessity, not a luxury, and while I can accept that there may be problems I find the cavalier attitude of TCTA unacceptable. Regards, Stuart Winckworth!	Sat 27: Hi Andrew, who is in charge of the water tanker this weekend. The Jermans (and therefore the Cartwrights on Hilltop), the Winckworths, the Houghams) are all just about to run out of water and Thulani (Deepauls) seems to be on leave until Tuesday mroning. Urgently need a couple of deliveries, please. Will try to call you again. Mon 29: Hi Andrew and Douglas, any chance of a water tanker this morning please, for domestic water supply. It is deseperate! They've run out of water!	Y
871	27-Jul-13	Norma Hougham	I've been told that there will be no water delivered until Tuesday! Not right!	Sat 27: Hi Andrew, who is in charge of the water tanker this weekend. The Jermans (and therefore the Cartwrights on Hilltop), the Winckworths, the Houghams) are all just about to run out of water and Thulani (Deepauls) seems to be on leave until Tuesday mroning. Urgently need a couple of deliveries, please. Will try to call you again. Mon 29: Hi Andrew and Douglas, any chance of a water tanker this morning please, for domestic water supply. It is deseperate! They've run out of water!	Y

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
873	29-Jul-13	Adrian Short	Hi Katie, I hope you are well. I was at the farm this weekend and noticed some light admin which hopefully can be easily resolved. The tree branches from the trees that were cut down next to old pumphouse have not been removed – are they going to burn it or remove them.(See picture attached). Also in the flood plain there are some sizeable "ouhoud" trees still there which I hope are still to be removed (See picture). Maybe these could all be burnt in the floodplain – I think it would be a good idea to burn the floodplain also of all the grass too and have no objection to this happening. Please let me know. Many thanks, Adrian. Resposne: Funny that -= my land when there is a fire break to burn – not my land when I build a jetty !!!!!	Hi Adrian, Thanks very much for your e-mail. I'll discuss disposal of this debris with Ryan, and also discuss where the responsibility of firebreaks lies, since this remains your land. Kind regards, Katie. Hi Ryan, Please see message below. Perhaps we could look at these trees this afternoon during the inspection? I know that the FB basin is not yet fully cleared, so maybe this is work that is outstanding? Kind regards	Y
874	30-Jul-13	Sheryl Pote	Dear Katy, When will we be able to use the mountain camp its been almost a year now and we have been totally restricted to the middle section of the farm and desperately need to try and save bales where there is foggage and grass. The concrete was not thrown the Friday before and staff members sat an entire afternoon watching us dip horses last week until they were eventually collected after we had locked our gates as we were going out. Its a security hazard having people we do not know on the farm watching us from a stragic point what we do etc. We still can't put horses in as there is no fencing to protect tanks, the borehole area and generator housing. Please could you help here so we can get back to being able to rest the hammered camps. We can then put horses in the mountain camp and where you kindly said we can below the dam fence line (will have to put electric fencing so we can move the horses and restrict them from going off as they are inquisitive. There is still a lot of places that need to be checked below the dam fence stuff left behind, wire and rubbish I don't know if you will be sending someone to check as we see when the kids or I go riding) Gavin will be coming back hopefully soon. Thanks, Sheryl	Hi Sheryl, You should be able to use the mountain camp now, since all the water pipes have been buried so that horses don't nibble them, and we are still tanking water to the JoJos while we wait for the borehole to be up and running. What other problems need to be solved before you can use the mountain camp? Are there not fences in that camp that will keep the horses away from the JoJos? We do realise that we need to fence the borehole and generator area, but can only do that once the generator housing has been built. We will also fence the JoJos once they have been placed in their final position. This all takes time, but we will attend to it as soon as possible. I'm so VERY sorry about the concrete not being thrown when you had thought it would be. I have no excuse for that, or for the fact that the team sat on your property for longer than needed. We know the team, and the contractor (Alex) and will discuss this matter with him. The concrete has been thrown now though and we will get MooiMec in to move the JoJos to their new position. Please remember that the contractor, G5, has only given you temporary permission to use the land below the purchase line, since it is their construction domain. They hand over to TCTA within the next few weeks, and after that it is up to you to arrange permanent access to that land through the resource management process. Please contact Donavan Henning at DonavanH@nemai.co.za to make the proposal to use this land. We, on site, have no mandate to give you permission to use the land long-term. The clearing of the dam basin has been completed, except for a few minor issues. Thanks for bringing the debris to our attention. Kind regards, Katie	Y
876	01-Aug-13	Chris King	I am really concerned about my garden and Anniversary Dam; it has never been so low. I cannot irrigate my garden because the pipes are way out of the water. My borehole works if one switches on the electricity and it is only going to go into Windmill Dam, it isn't as though anyone would be drinking the water.	Informally told mrs King that she may turn borehole pump on, at her risk. System formall commissioned in the week of the 19th of August.	Y
877	02-Aug-13	Peter Wentzel	I have noticed that my gate between Craig Breetzke and myself has been damaged. I take it that the gate will be replaced and the fence restored to the new road. Please ensure that the gate is painted with Duram Heritage Green. I seem to remember that John mentioned the gate between John and myself and that is to be restored with a new gate as it was also damaged. Please ensure that it is restored in its old location and also painted as before.	Hi Peter, Thanks for putting this in writing. We will ensure that the gates are replaced as per the previous spec. Kind regards, Katie. Gates replaced, and painted green.	Y
879	03-Aug-13	Chris Daly on behalf of Josiel	On Saturday the 3rd of August 2013 our Foreman Josiel Sefatsa was attacked at the T junction turning off to our site office whilst he was busy attending to his vehicle. The story is that a group of locals 5no including 2no Group Five	Hi Douglas, Please let me know how this is being resolved. I suggest holding a meeting to iron out all issues/expectations. Kind regards, Katie. Mr Sefatsa elected to continue working, even with the threat.	Y

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
		Sefatsa	employees (1 still in employ of Group Five) the other retrenched was under the influence and started an argument which led to physical assault of our Foreman Josiel. The argument stemmed from the fact that Josiel is from Lesotho and is not welcome here according to the locals. He was struck with a brick to the side of his head and left shoulder. A charge was laid and Josiel had to spend the day in Howick at the court case and will have to go again on Monday 12th August. I am concerned that Josiel's safety is at risk should he get cornered again by these locals. This is the first incident in 10 months.		
880	06-Aug-13	Chris Daly	Hi Katie, As discussed a few minutes ago my guys (Pipe Tech and Siyakhula Coatings have withdrawn from this area and will only go back in when the trouble makers have been sorted. Apparently it again is a group of retrenched labour that are totally pissed and now saying they want work and was promised work for the new pipeline. My guys have been threatened with there vehicles being burnt. This is now happening at a critical point where we cannot afford to lose even one day and it will definitely impact on our completion date. I await your prompt response. Thanks.	Hi Chris, My view is that you should refer this incident to the police to sort out. There's nothing Katie or any of us can do in this instance. Regards, Gavin. Good Afternoon Gavin/ Katie, Andrew is sorting this out at the moment with Chris and Njabulo. He or I will feedback to you soon. Regards, Douglas. Hi Douglas, I suggest holding a community meeting to sort out expectations. Kind regards, Katie. Attached is Brandon Mitchell the AIA representing the client report on this matter. We understand this rebellious matter has been dealt with and G5PJV's Community Liaison Officer – Nhlanhca Ziqubu, cell: 082 717-2892 has matters in control. Any future problems contact Nhlanhca Ziqubu, cell: 082 717-2892 direct. Mike Hilton	Y
881	07-Aug-13	Ben Zulu	Queries regarding payment of wake fee, as well as about housing (resettlement).	Meeting held on site with family, and teleconference held with Lonwabo Mapolisa. Issues resolved, and exhuamtion applications signed.	Y
882	07-Aug-13	Adrian Short	In response to e-mail from social monito alerting downstream users to environmental release: Hi Katie, I find it very hard to believe that this meets the environmental flow requirements of the river (and this may very well not be covered adequately in the RoD for construction of the dam). What does the Environmental Reserve Determination say in reality? Has the comprehensive determination been done? In terms of river health, it seems to me that this is the equivalent of "rape and pillage"! The sustainability of the river system should not be sacrificed for the consumers in Durban. This is what happens on the Umgeni but should not be allowed on the Mooi. Adrian	Dear all, After much debate, and a flurry of e-mails between DWA, TCTA and AECOM, we have advised the client that we have increased the release to 0.6 cumecs. This was done last night. Norman Ward, Chief Engineer at DWA KZN, has been very supportive and has provided invaluable guidance about the environmental demand between SGD and Mearns. He noted that he'd had a few e-mail complaints about the 0.3 cumec release, from people who feel that they'll have trouble getting their pumps into the water. He advised that we should increase to 0.6 cumecs to avoid problems. Please note that the inflow to SGD has dropped to just below 0.6 cumecs, so we can't release any more than that. Kind regards, Katie	Y
883	07-Aug-13	Peter Scott	In response to e-mail from social monito alerting downstream users to environmental release: Hi Katie, For how long?? This is the problem we had the last time when the river was so low and our pump burnt out. At this rate our foot valve is above the water and is on bed rock. This flow rate is not sustainable for anything in practice. Plse ensure tankers are made available for shonalanga with immediate effect and for the duration of this exercise. We cannot have livestock running out of water like the last time. Rgds, Peter Scott	Dear all, After much debate, and a flurry of e-mails between DWA, TCTA and AECOM, we have advised the client that we have increased the release to 0.6 cumecs. This was done last night. Norman Ward, Chief Engineer at DWA KZN, has been very supportive and has provided invaluable guidance about the environmental demand between SGD and Mearns. He noted that he'd had a few e-mail complaints about the 0.3 cumec release, from people who feel that they'll have trouble getting their pumps into the water. He advised that we should increase to 0.6 cumecs to avoid problems. Please note that the inflow to SGD has dropped to just below 0.6 cumecs, so we can't release any more than that. Kind regards, Katie	Y
885	07-Aug-13	John Wetton	Hi Katie I think we need full explanation of the current flow. ,3of a cube per second is almost nothing. In all my years (more than 20) of owning our property the water level has never been this low. This is not acceptable. Thanks John	Dear all, After much debate, and a flurry of e-mails between DWA, TCTA and AECOM, we have advised the client that we have increased the release to 0.6 cumecs. This was done last night. Norman Ward, Chief Engineer at DWA KZN, has been very supportive and has provided invaluable guidance about the environmental demand between SGD and Mearns. He noted that he'd had a few e-mail complaints about the 0.3 cumec release, from people who feel that they'll have trouble getting their pumps into the water. He advised that we should increase to 0.6 cumecs to avoid problems. Please	Y

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
				note that the inflow to SGD has dropped to just below 0.6 cumecs, so we can't release any more than that. Kind regards, Katie	
886	07-Aug-13	Brandon Karg	Expropriation fences are not tied down properly and dogs are getting out!	The purchase line fence is just a 6 strand cattle fence, and is not meant to be dog-proof. If you need it to be more secure then please go ahead and modify it.	Y
887	08-Aug-13	Sheryl Pote	When will water be sorted out?	Commissioning will take place as soon as possible.	Y
888	08-Aug-13	Andrew Smith	Short cuts are being taken by the contractor! Was told by Bellwood that the heaps of soil will just be left above the Fish Barrier.	The spoil material will be left in-situ, but landscaped according to spec.	Y
891	12-Aug-13	Andrew Smith	Hi Katie, See attached photos. Please remind G5 that the imported material in the river will need to be removed. Also in the first photo the road in the foreground need to be reshaped to its original shape and grassed. Regards, Andrew Smith	Hi Gavin and Ryan, Please see below and attached from Andrew Smith for your action and feedback. Please respond to me about: 1. The upstream crossing and decommissioning thereof. 2. Road above FSL to boundary with Laurence Stuart-Hill that needs to be reshaped to original shape and grassed, as landowners had indicated during last meeting. Kind regards, Katie. Hi Andrew, The pipes will be removed and most of the bulk of the causeway material will be used for further stabilisation of Ballina Dam. The leftover material will be flattened/shaped. Ryan and Andrew are aware of the way in which rehabilitation needs to take place. Thanks for confirming your rehab requirements in writing. Katie	Y
892	12-Aug-13	Sheryl Pote	HI Katie, We have no water in the far camps and the tanks are empty as I told you last Friday. We trying to do our last weaning tomorrow now before the foaling starts again. Please don't forget to get someone to check below the dam fence line still tons of debri and wire and stuff even fence wire that was left in the long grass under the dam water that was pulled down by Donald when he felled trees and we baled round very worried this is going to surface at some stage. Just to keep you aware. Sheryl	Hi Sheryl, I've just confirmed with Thulani Memela (water tanker driver) that he has been delivering water to you since the JoJos were moved into their final position last week. In fact, the last load that he is doing today is to you. Please check your tanks. The Contractor is aware of the debris below the purchase line, but won't be attending to it because you have asked to use that land and therefore take responsibility for it.	Y
893	13-Aug-13	Konrad Peter	Katie, We are ERF 123 of Portion 1085 of the farm Wilde Als Spruit. On Sunday we walked on our property and noticed you had started digging up alongside the existing pipeline going through our farm. On further inspection, and to our great surprise, we noticed your staff had pulled out every other steel fence pole (34 in total) from our existing perimeter fence, cut them in half and used them as a security barrier to screen off the hole they had just dug. Plse arrange to have our fence poles replaced and our sagging fence repaired immediately. Until such time as our fence is fixed to our satisfaction I have instructed my staff to prevent your team from accessing the pipeline on our farm. Should I not hear from you I shall lay a charge of malicious damage to property. Feel free to contact me on the numbers below. rgds, Konrad	Hi Katie, Upon visiting Mr Konrads farm where the fence poles were taken (chambers 79-81) I have observed the following ! • The two chamber sites are indeed still fully fenced with the original fencing and poles from WKsa sub contractor (Fenceco) • All poles steel "Y" standards are of new black standards. • Nowhere anywhere is there any sign of poles used by WKsa to fence our own chambers • There are fence poles slightly rusted taken from Mr Konrads fence correct but my observation is that it is right next door to the settlement where the school is. • Our own fencing have also been partially stolen further back from chambers 77 to 79 and this was reported at one of our monthly progress meetings some three months ago.. WKSA is therefore not responsible or liable for the above fence thefts. Kind Regards, CHRIS DALY	Y
894	14-Aug-13	John Wetton	Via sms: We have fragile fish pop and I'm sure all this mud is not doing them too much good. When will it stop? (prompted by a sms informing downstream users that work would be done in the river and that the water may be muddy)	Response via sms: Hi John, it'll stop once G5 is finished with what they need to do. Probably towards the end of next week. Perhaps ask Donavan re the fish population and impact?	Y

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
896	14-Aug-13	Duncan Price	Afternoon Katie, I wonder if you could help me on the below. A homeowner a Mr Hampson noticed a white peg and concrete block with no. BM 27 indicated on it.He is concerned that this is the alignment for the new pipeline which has been re routed around the bottom dam.His concern is that it is in very close proximity to his property and he was under the impression that the pipeline was at least 30 m south of this. Thanks Katie, Duncan Price	Hi Duncan, The peg and concrete block are reference beacons. They fall outside of both the original servitude and proposed new servitude alignment, and have been placed at various points just alongside the route between here (the Spring Grove Dam) and the Mpofana outfall works. Their purpose is to act as survey reference points for all further survey work that will take place along the route. I apologise that you weren't communicated with about the placing of these beacons, but at this early stage of work (and before we have environmental authorisation to construct) we will often be left out of the loop on site. I've consulted with our head office colleagues and they have assured me that all further pre-con work will be communicated with you via me. If you notice any other funnies, or have any questions, please be in touch. Kind regards, Katie	Y
897	14-Aug-13	John Wetton	Dear all, At one of our EMC meetings Blake offered to pay half the cost of tarring the D146 up to the dam site. This seems like a fair offer and could I ask whether this has been progressed by TCTA /DWA and if not what do you intend to do to take the matter further. The cost of dust suppression which will be needed over the next few years surely warrants taking this matter seriously. Dust is really a serious problem for the community and now that most of the really heavy lorries (which might damage a black top) have finished we should take this offer seriously. When the project is complete and the road is not tarred dam traffic will cause dust so to avoid community complaints parties should seriously consider this. Many thanks, John	Hi All, There seems to be some sort of confusion as to the Departments contribution towards the upgrading and surfacing of DR 146, we will not have funds available to do this, secondly we have projects and budgets committed for the next 5 years where road upgrades are being done. The upgrading of DR 146 has never been on the Departments plans for any form of upgrading. If I recall correctly I suggested negotiations should be entered between the Department, TCTA and other stakeholders to see what options can be done for possible upgrading of the road. The department would only assist with plant and any available resources that we have readily available at the time of the upgrade if it were to proceed. Once all the work is completed on the dam a traffic count should be obtained to see the volumes and type of traffic that is utilising DR 146 – this will be able to tell us what design and surface criteria will be required for the proposed upgrade. It should also be noted we have a backlog of requests for some 170km of road to be upgraded which would require a budget of R 980 000 000.00 to implement at current costs. There are also numerous gravel roads passing through communities that are bus routes / taxi routes and the ADT count is in excess of 400 vehicles a day, which I believe would be far higher than DR 146. The approximated budget required to upgrade DR 146 (2.28km) to Departmental standards would be in the region of R10 000 000 – depending on the design criteria. I therefore suggest TCTA, UMNGENI WATER and The Department meet to find a possible solution for the proposed upgrading of DR 146 in line with what will be end use for the dam. If it is going to become a recreational dam in the future, it would make sense to have the road upgraded and surfaced. If there are any further queries in regard to the above please contact me. Regards,	Y
898	15-Aug-13	Adrian Short	Trees that were cut because of the Fish Barrier haven't been cleared away yet. When will this be done?	As soo n as resources are available we will attend to this matter.	Y
899	15-Aug-13	Piet Pelser	Gates have gone! Without permission!	Piet, those were temporary gates, and our gates at that, and so we are able to move them as and when we need to. This does not affect your access or security, since we have wired-up the gap. If you wish to re-create that track then you need to liaise with Chris King, since that would be a new access off her land in terms of the servitude agreement.	Y
902	16-Aug-13	Piet Pelser	Gavin Elliott seen on private property without permission! Message sent: Caught Gavin driving around my farm! You haven't answered the gate lock and	Response via sms: Hi Piet, I had NO IDEA that Gavin was on your property. He is, however, doing an inspection of work that you have asked for. We are still following up	Y

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			chain issue!	re your chain and lock.	
903	18-Aug-13	Rob McKenzie	Hi Katie, Prior to the expropriation fencing being erected, there was a fence, with gate, that ran along the bottom of the George's property (Portion 36). Once the expropriation fence was up, sections of the George's fence joined up with it on both the Portion 35 side (that's us) and the Portion 37 side (Uwe Wischnewski) which meant that the fence was still intact. Our cattle have always mangaged to squeeze their way through the fence between us and the Georges, but in the past were stopped going any further by the fencing along the road. (The George's horses reciprocate by crossing onto our land.) Now that the expropriation fence has been re-positioned, there are only two short portions of fence left on the George's property with a large gap in between. In addition, the gate to the Edmunds' property is broken (bottom hinge has snapped off) and it is unsecured. The larger cattle can push it open and, because of the design of the gate, the smaller ones can just climb through it. On the Edmunds' land there is a gap in the expropriation fencing, presumably to take a gate which has never been fitted. The two gates that were removed from the concrete strip section of road are still lying there. Could one not be used on the Edmunds' land to block the entrance to the dam? Once our cattle reach the Edmunds' gap, it is a straight run through to Pote's land. This morning we retrieved them from way beyond the Pote's old saw mill site - and there is the threat that they will be impounded and sent to Estcourt. As a temporary measure we have roped up the Edmund's gate and tied an "expropriation gate" onto it. Obviously we need a more satisfactory solution. Also, the cattle grid at Snothi's house has been rendered ineffective since Group 5's repairs to it. Is there a solution in the pipeline that I don't know about? Kind regards, Rob	Hi Rob, There weren't any plans to repair/replace private internal fences. That should be the responsibility of the landowners. Our fences and gates are not necessarily designed to aid farmers in their grazing routines! However, I understand your concerns and will engage with Gavin about the possibility of fixing the privately owned fencing gaps, and especially about sorting out the gap in our purchase line fence on the Edmund's property. You have mentioned that the grid hasn't been effective since it was repaired, and I was under the impression that it had been sorted out. So, thanks for the reminder. K	Y
904	18-Aug-13	Andrew Smith	Hi Katie, See attached photos taken yesterday. G5 have no intention of removing all the imported material from the river which I am sure is not in line with the EMP. If this is not the case maybe you can send me a copy. I believe that this need to be addressed urgently and before impoundment starts. I have given Bellwood options on where to spoil this imported material but they need an instruction from G5. If you need me to assist in directing Bellwood please let me know. Regards, Andrew Smith	From Gavin: Hi Andrew, There is no requirement in the EMP, nor was there ever any intention to have the contractor remove the spoil nor his temporary coffer embankments from the Fish barrier basin. The Fish barrier weir is merely to replace the Inchbrakie falls as a barrier against the bass moving up into the trout waters, and does not serve as a reservoir. Regards, Gavin. Hi Andrew, We've just been out for an inspection of the Fish Barrier, and must note that the contractor is well within his spec to place spoil material in the Fish Barrier basin, as long as it will be below the Full Supply Level. K. Hi Andrew, Thank you for having raised this issue. We are aware of this matter and have started engaging with the project team on the way forward. Will keep you posted. Regards, Donavan Henning	Y
906	19-Aug-13	Terry Bouwer	Fence down into forest below Gowrie Farm has not been closed/fixed, and is standing open.	The WKSA team has been closing the fence and they go back and forth, but another TLB has been clearing alien invasives and may have left the fence open. WKSA team will check-up.	Y
907	19-Aug-13	Sindi Ngubane (via Lonwabo Mapolisa)	No electricity at temporary houses!	Hi Gavin, SI needed for the problem below: G5 is instructed to resolve the electricity supply issue at the Greytown Road Development, through their subcontractor. The subcontractor (Alex) has already investigated the problem, and the repair should take place as discussed. Kind regards, Katie	Y

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908	20-Aug-13	James Zondi (Councillor)	Whole of Zenzani Village has mobilised and work on the pipeline refurbishment cannot continue until jobs are available for people from Zenzani.	Meetings held between SM, EM and the councillors, as well as between the councillors and their constituents. Situation seems to have calmed down, and been understood.	Y
910	21-Aug-13	Peter Scott	Katie, claim still not paid. Plse revert. Peter.	Peter, G5 is actually meant to be processing it today. Som it should reflect tomorrow/in the next couple of days. Please let me know when it does. K	Y

Open Issues:

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
865	23-Jul-13	Merewyn de Heer	I am REALLY CONCERNED by this sand pile. I have heard that Group 5 have not been awarded the pipeline contract and it is going to someone else. what if they run out of funds / go bankrupt and this sand is never removed. I have also heard via Emmanuel that the pile in front of me wont be cleared first and it will only be moved in 2 years time!!!!!. It really is a huge problem for me as it blocks off more than half of the front of my property as well as the dust issue this really is not fair! I really need some concrete answers please. in writing. Otherwise I am forced to hand this over to my lawyer. I am sure you can understand my concerns. please advise asap. Response: Thanks Katie, I just need some indication in writing of the date it will be cleared by, that we all commit to, otherwise this could be an indefinite problem that i am left with ... . You need to understand that over half of the front of my property has at least a 6 metre high wall of sand in front of it. Its a complete obstruction and not ethical in my opinion. It is also directly on the boundary, there is no clearance / space. Please can you revert urgently.	Hi Gavin, Please see below. Please could we discuss what measures have been put in place by the contractor to mitigate dust nuisance from the bedding stockpiles? Kind regards, Katie. Hi Merewyn, We understand your concern, and have been looking for the most sustainable and practical way in which to mitigate. The contractor has been instructed to spray the material down with binding agents that will prevent the pile from emitting the dust that you have reported it currently emits. G5 didn't re-qualify for the pipeline contract, but another large, multi-national, experienced contracting company has qualified and is in the final stages of being appointed. Gavin has specifically instructed that the bedding material in front of your house is moved first. Gavin is the resident engineer, and so has the authority to get this done. It is easy to do, and makes sense. Gavin and Emmanuel will chat so that Emmanuel is also in the picture. You are more than welcome and within your rights to hand this matter over to your lawyer. If you do so then please be aware that we will be forced hand the matter over to our lawyer too, and at that stage we will not be able to make any further decisions or enter into correspondence outside of the legal channels. We don't want to go this route. Kind regards, Katie. Response: Hi Merewyn, I can't yet give you a date by which it will be cleared. We haven't formally appointed the contractor for MMTS2/Water Transfer Scheme and therefore haven't set a programme for the construction work. However, we (AECOM – the consulting engineer) remain in control of the contractor and have already committed to you in writing the fact that we will ensure that the stockpile in front of your property is removed and used first. Kind regards, Katie	N

No	Date	Submitted by	Description of Issue	Response to Issue	Resolved
872	28-Jul-13	Chris King	Dear Katie, First of all a big thank you for my smart, green gates. Are the workmen coming back to finish the roads? Could you please give me an update on their progress and what else is planned. I see they are in the process of installing new cattle grids at each end of the causeway. Are the existing cattle grids going to be cleaned out and repaired where necessary? Also the roads leading to them need more attention. I am concerned about the drainage in places. The gulley alongside of the road is blocked with gravel and so are the run off ditches. What is happening at the end of Clive Garlick's new drive? When it rains, the water runs down his drive and scours out great grooves in the main drive. Some time ago I mentioned to you that the fencing chaps had left a mess. I photographed it yesterday and I will endeavour to send you the pictures. I realise it is largely in the Dam land but they should still clear up after themselves. I drove up Tunga's Hill yesterday to photograph the Dam. At the new gate in the new fencing that your people have erected I pulled out a considerable number of cut off coils of barbed wire, now visible because of the burn. If my horse had become entangled in that and I had fallen and suffered a serious injury, the claim for damages would not have been small! Of course I brought the pieces home to dispose of them safely, a picture is also sent! Kind regards, Chris	Dear Chris, Apologies for not responding to your e-mail sent on Sunday; I'm calculating crop and tree values, and compensation and other losses faced by the occupants and haven't had a chance to concentrate on anything else. However, I have discussed some of your points below this week so can give you a quick bit of feedback now. We're so pleased that you like the green gates; Don Robertson is a gem. All existing cattle grates will be cleaned and cleared, and the roads leading to them will be given a final repair. The road still requires work, and this will be done within the next few weeks. Andrew Olden and Gavin Elliott are aware of the touch-ups that are needed, and that is why Grant Novall from Bellwood is still around and working on the road. All drainage will be attended to; this will take place right at the end so that no graded material is left in the drainage channels. Clive Garlick must attend to his own drainage, and this has been communicated to him. There is a simple solution, which involves him placing a little hump halfway up his driveway in order to guide the water off your road. Ryan is aware of the fencing mess, and the environmental team will be sent around to clear this up. Thanks so much for sending photos. I need to properly discuss the culvert after your entrance with Gavin when he is back next week. We do understand what you mean about the need for headwalls, but must see what works from an engineering perspective, and what is required. Thank you very much for your response about the RAP at the Loteni Rd entrance; this is the best solution and we appreciate your support. Your borehole and Anniversary Dam I can't give you an indication of when this will be up and running. The Nimbus Water people (who you met with me 3 weeks ago) will return within the next two weeks to install the systems and after that we should be able to commission, provided that we have a handover agreement in place. I understand that Anniversary Dam is very low and that this is affecting your garden, so will discuss the options with Alain urgently. Katie	N
875	31-Jul-13	Chris King	Dear Peet, I am personally delighted with the work on the road. I have just pointed out to Katie that some of the ditches are still blocked and I worry about the drainage ditch just past my entrance as there is a steep drop on both sides of the pipe and really should have a head wall there. I am also concerned about the point where Clive Garlick's new drive meets our road which gets heavily scarred and eroded during heavy rains. Kind regards,Chris	1. We're so pleased that you like the green gates; Don Robertson is a gem. 2. All existing cattle grates will be cleaned and cleared, and the roads leading to them will be given a final repair. The road still requires work, and this will be done within the next few weeks. Andrew Olden and Gavin Elliott are aware of the touch-ups that are needed, and that is why Grant Novall from Bellwood is still around and working on the road. 3. All drainage will be attended to; this will take place right at the end so that no graded material is left in the drainage channels. 4. Clive Garlick must attend to his own drainage, and this has been communicated to him. There is a simple solution, which involves him placing a little hump halfway up his driveway in order to guide the water off your road. 5. Ryan is aware of the fencing mess, and the environmental team will be sent around to clear this up. Thanks so much for sending photos. 6. I need to properly discuss the culvert after your entrance with Gavin when he is back next week. We do understand what you mean about the need for headwalls, but must see what works from an engineering perspective, and what is required. 7. Thank you very much for your response about the RAP at the Loteni Rd entrance; this is the best solution and we appreciate your support.	N

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878	02-Aug-13	Ed Waller	Progress needs to be made on the D146, for entrances to be signed-off and approved by an engineer and by the DoT so that subdivision can be registered. What is the progress?	D146 rehab is still underway, and we should be able to do a sign-off by the end of September 2013.	N
884	07-Aug-13	Angelique Scott	Dear Katie. After repeated requests to repair our weir, we understand Group Five are leaving next week. Please revert urgently as to when our weir will be repaired, as previously requested with no response! After all the original agreement was to have the weir repaired by the end of November last year and since then our emails have either had delayed responses or no response at all. We need answers urgently! Kind regards, Angelique Scott	From Peet to Andrew: Andrew, We have originally promised that the Shonalanga weir will be repaired by November 2012. In a spirit of cooperation we have agreed some months ago to do additional work to their weir. The Scotts are now becoming concerned that time is running out and this work is still outstanding. Please give us an accurate indication when you plan this work as we are busy scheduling a meeting with the Scotts for today on water related matters. Regards. Peter, There is no intention to demobilise before the Works is complete. The Contractor is extremely busy at present but confirmed this morning that work on the Shonalanga weir will start at the end of August 2013. Regards, Peet Viljoen	N
889	11-Aug-13	John Charlton	Hi Kate, I was up at our house this weekend and felt it necessary to bring a few points to your attention re the road. I am not sure if Alfie Messenger is complete with his work as yet but there are some issues that need looking at. 1)the stretch of road that is within the Armco barrier and from halfway down this stretch towards my house ending at where my bore hole is, needs looking at. We had some light rain over the weekend and this stretch is already becoming very muddy and has a middle "mannejie" due to the surface being too soft. You can feel it under the car tyres as it gives way as you drive.It was for the same reason that I had a lot of aggregate placed on this stretch some 8 years back. The road compacted nicely and held out well. Right now the balance of the road has a lot more stone on the surface than this stretch for some reason. I suggest therefore that it would really need a decent layer of stone as the sun never seems to dry the road out here. In summer it will become a mess unless this is done. 2) could you please ask Alfie (as I have done some time back) to tidy up the land on the river side of the road that Gavin and yourself and I discussed. He has graded the old road level, below the new road, and there are a lot of large rocks lying around there. He has done some work there but it looks unfinished when compared to the road sides on the river side of the road. Simply put I would like him to level off the area and make it possible to cut the grass with a slasher when the grass has grown back. Please come back to me on these points.	Hi John, The road work has not been completed yet, but thanks so much for putting your concerns in writing. We hope to impound the Fish Barrier later this week (although there is still quite a bit of work to be done) and all resources have been deployed to work on contractual completion date matter. Your road continues to be a priority, but does not affect the contractual completion date, and so may be worked on for longer. We may need to access Ferret Lane through your security gate off the Loteni Road, but will be in contact with you with plans. 1. We agree that this section of road is still to be properly engineered, with sub-surface drainage. This involved taking off the current top layers, re-laying suitable aggregate, and then re-surfacing the road. 2. Your old road needs to be properly rehabilitated. It will be landscaped (rocks removed) and hydroseeded so that it compares well to the rest of your veld. Kind regards, Katie	N
890	12-Aug-13	Julia Kidd	Culvert can't be complete; it looks as though it will just erode into the stream.	Headwalls are still to be built.	N
895	14-Aug-13	John Wetton	Hi Katie, As mentioned to I had heard that the re hab of the above was going to be deferred until the pipeline pumping station etc had been completed. You have indicated that this is not so and I am pleased to hear this. The above is easy to comprehend but from my perspective in addition to the above the drainage channel outside my fence line needs some re engineering to take the water further down my property to avoid flooding my cottages. The triangle of land opposite me needs clean up and the Eskom pole needs to be straightened up. Do you have a snag list which includes issues raised by the community. If not I suggest you get one as there will be issues raised when the contractor	Hi John, Thanks so much for following your call up with an e-mail. The rehabilitation of the D146 and road verges will not be delayed until the end of the next contract. It will be done under G5, as soon as they can mobilise resources away from contractual completion deadlines. In fact, they need to attend to the road surface as well as the drainage and verge rehab. Gavin is aware of the drainage outside your fence line, and it is on his snag list. I do have a snag list of issues raised by the community. The snag list has been developed from my issue register, and in particular from the open issues in the register. If you are aware of mutterings in the community then please let me know, because only the issues raised formally through me could be attended to. I can't	N

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			has left site and we will be left with a problem. Thanks, John	gauge what hopes and expectations there are unless people are in touch. Kind regards, Katie	
900	15-Aug-13	Christine King	Concerned that the cattle grates have not been cleaned out properly, which is contrary to the agreement.	The grates will be cleaned-out; the road rehab is not yet finished.	N
901	15-Aug-13	Clive Garlick	via sms: Hi Katie, I am concerned about the water build up at the base of my dam wall at Chris King's entrance. I have been told that it can only spell bad news in the future. Suggestion is drop the level of the outlet pipe. Regards Clive. Further sms: That's fine, I would like a written report from someone your side so if there is a problem at least I have some recourse. I have been told "damp footing" at the base of a earth wall is bad news. If someone can prove otherwise that's fine. Thanks Katie I await the report.	Response via sms: Hi Clive, noted, but our engineers have not considered it a problem. I'll chat again with Gavin. K. Suggestion is that a pipe be placed through the old, lower pipe, if that pipe can be found.	N
905	19-Aug-13	Christine King	Dear Katie, Some time ago you told me people were coming to look at this problem. As far as I am aware this has not yet happened. This matter is now assuming some urgency as the Fish Barrier is about to be inundated. Access to my dairy will be totally cut off from all sides so that operating Inchbrakie as a dairy farm will become impossible. Please will you present this scenario to those whom it may concern and request that they give it immediate attention? Kind regards, Chris	Hi Chris, You're right, there had been a plan to take a walk with you and Sven and to decide what solution may be possible. Our engineers have been extremely tied-up with contractually important impoundment work, and so we haven't had a chance to whisk them away to look at your cattle walkway matter. I suspect that there needs to be a more formal response that this, and I will liaise with James and Ugo again about the proposed way in which to handle this. It must feel as though this isn't getting the attention that it deserves, but this matter is always at the top of our list during discussions with TCTA, we just haven't had the resources to focus on the technical aspects. I'm sure you're tired of hearing these words, but I will get back to you as soon as I have had relevant feedback. Kind regards, Katie	N
909	20-Aug-13	Chris Beith	Drainage has still not been attended to on the Overdale Road		N