

Draft Environment and Social Compliance Audit – Part 2

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GEO: Adjaristsqali Hydropower Project

Prepared by Mott MacDonald for Adjaristsqali Georgia LLC

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Adjaristsqali Hydropower Plant, Georgia

Environmental and Social Compliance - Verification Audit

June 2013
Adjaristsqali Georgia LLC (AGL)

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Executive Summary

This report presents Mott MacDonald's findings of a verification audit which is based on a review of an Environmental and Social Compliance Audit carried out by Adjaristsqali Georgia LLC (AGL) (the AGL Audit) with respect to minor Advanced Works (AW) undertaken as part of the Adjaristsqali Georgia Hydropower Scheme (the Project). The following minor AW was performed from September 2012 to February 2013:

- Tsablana – construction of 700 m of road, partly in a river bed, from the public road to the dam site location;
- Didachara – excavation of a 200 m section to allow for the construction of the access road to the adit. This included construction of a bridge;
- Pachkha – construction of a 7 km long road from the public road in Pachkha to the Pachkha adit location, and stabilisation of slopes; and
- Akhaldaba – excavation of a 4.2 km long and 11 m wide road section from the main road to the tunnel location.

A site visit was undertaken by Mott MacDonald on 18th June 2013 to view the status of the minor AW. In preparing this report Mott MacDonald has also considered the AGL Audit, a review of relevant Project documentation and conversations / meetings with members of the Project team. In addition, there are some environmental and social parameters / aspects covered in this report which weren't explicitly addressed in the AGL Audit.

As part of Mott MacDonald's site visit, the minor AW carried out at Tsablana, Didachara and Akhaldaba were inspected. Additional Ground Investigation (GI) was on-going at the time in the vicinity of the proposed dam site at Tsablana and was being supervised by Mott MacDonald. The information centre in Khulo and the training centre in Shuakhevi were also visited. The minor AW at Pachkha was not specifically visited but has been discussed with AGL's health, safety and environment manager.

During the course of the review, no significant issues were noted in relation to the minor AW and the findings of the AGL Audit are generally confirmed. Specific minor aspects and the findings of this audit have been discussed with AGL's health, safety and environment manager

1. Introduction

1.1 Overview

Adjaristsqali Georgia LLC (AGL) has undertaken an Environmental and Social Compliance Audit (the AGL Audit) with respect to minor Advanced Works (AW) recently completed as part of the Adjaristsqali Georgia Hydropower Scheme (the Project). The objective of the AGL Audit was to determine that the correct environmental and social management processes were adhered to during the completion of the minor AW.

This report presents Mott MacDonald's findings of a verification audit which is based on a review of the AGL Audit, a site visit undertaken by Mott MacDonald on 18th June 2013 to view the status of the minor AW, a review of Project documentation and conversations / meetings with members of the Project team.

1.2 Project Context

The Project comprises a proposed hydropower scheme which is planned to have an installed capacity of between 175 MW and 400 MW and is located within the Autonomous Republic of Adjara, situated in the south west of Georgia.

AGL carried out the following minor AW from September 2012 to February 2013 at four sites within the Project area:

- Tsablana – construction of 700 m of road, partly in a river bed, from the public road to the dam site location;
- Didachara – excavation of a 200 m section to allow for the construction of the access road to the adit. This included construction of a bridge;
- Pachkha – construction of a 7 km long road from the public road in Pachkha to the Pachkha adit location and stabilisation of slopes; and
- Akhaldaba – excavation of a 4.2 km long and 11 m wide road section from the main road to the tunnel location.

The above minor AW was the subject of the AGL Audit.

No road or other minor AW was carried out in Chirugistsqali and therefore this area has not been audited.

In conjunction with these minor AW, AGL has also carried out the following:

- A second stage of ground investigation (GI) works to confirm the geology for the dam, powerhouse and spoil storage areas at all work locations, i.e. Tsablana, Pachkha, Akhaldaba, Didachara and Chirugistsqali;
- Establishment of Project Information Centres which will ultimately be located in Shuakhevi, Khulo and Skhalta (this is estimated to be completed within one month); and
- Establishment of a training centre in Shuakhevi, in conjunction with Kobuleti Professional College, which is being used to teach locals in construction skills such as construction vehicle driving / operation welding and electrics so that they have the opportunity of applying for a vacancy with the EPC Contractor once the main civil works commence, or other similar positions within Georgia.

As part of Mott MacDonald's site visit on 18th June 2013, the minor AW carried out at Tsablana, Didachara and Akhaldaba were inspected. The GI was on-going at the time in the vicinity of the proposed dam site at Tsablana and was being supervised by Mott MacDonald. The information centre in Khulo and the training centre in Shuakhevi were also visited. The minor AW at Pachkha was not specifically visited but has been discussed with AGL's health, safety and environment manager.

It is further noted that the Asian Development Bank (ADB), International Finance Corporation (IFC) and European Bank for Reconstruction and Development (EBRD) (the Project Lenders) undertook an audit of AGL's "social and environmental preparedness" between 06 May 2013 and 10 May 2013. Minor concerns were raised regarding the geology of the proposed work areas but it is understood that emphasis was placed on employment in the Project and the AGL training centre in Shuakhevi. In response to this, AGL has stated that it is increasing information awareness over the coming months. This was in evidence during Mott MacDonald's site visit and it is noted that the Public Information Centres are starting to come online. More detail on this aspect is given in Section 2. GI works are on-going with respect to obtaining a better understanding of the underlying geology and to help inform the detailed design process.

For completeness it is noted that no indigenous peoples have been identified in the area of influence. The ethnicity data supports this and nothing arose during previous consultation exercises to contradict this viewpoint. As a result there are no bespoke considerations or mitigations which need to be applied with respect to indigenous peoples.

1.3 Scope and Methodology

In this instance, Mott MacDonald's role is limited to:

- Verification of the AGL Audit for minor AW carried out to date and to comment on its general compliance with the ADB's Safeguard Policy Statement (2009);
- Comment on the appropriateness of the identified measures applied during the minor AW to manage environmental and social aspects; and
- Highlight any potential gaps identified during the review.

2. Verification of the AGL Audit

This section presents Mott MacDonald's findings in relation to the review of the AGL Audit against the ADB's requirements. The results are presented in Table 2.1 and this table is structured according the location of the minor AW and the relevant environmental and/or social parameter which could be impacted at that location. There are some general aspects which relate to the Project and minor AW as a whole and these are contained in the first part of Table 2.1.

In preparing Table 2.1 we have considered the key statements presented in the AGL Audit and how these relate to Mott MacDonald's findings, with the aim of determining if the minor AW were carried out and managed in an appropriate manner.

Photographs taken during the site visit are included in Appendix A.

Table 2.1: Compliance Report structure requirements

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
GENERAL	Grievance mechanism and grievances received	<p>Community members and local people were informed that they have a right to file complaints and/or queries on any aspect of project implementation.</p> <p>Comment boxes have been positioned in each Municipality building to allow communities to make their views or complaints known anonymously.</p> <p>Regular meetings of AGL's land, social and environmental team in the affected villages gave people in these villages an opportunity to express their concerns and ask questions.</p> <p>AGL, through its workplace supervisors and management, have frequent communication with local government personnel in Batumi and at mayor level in the affected valleys to ensure that issues with AW activities are addressed appropriately and to answer any questions on the main construction phase activities.</p> <p>Grievances were filed at the main site offices in Batumi and Shuakhevi and the complaints boxes in the municipality buildings in the valley. Complaints and grievances will be dealt with in terms of severity, disruption and likelihood of harm.</p> <p>An open door policy will be maintained to all persons from the following:</p> <ul style="list-style-type: none"> Representatives of affected persons or the affected persons directly; Representatives of the local governments or administrations; Workers; Project students; and <p>Members of the public with CP related questions or concerns.</p>	<p>A grievance mechanism is in place which captures the name of the person providing the comment, the date any comment / grievance was received, the response provided by AGL (including the date), the medium by which any response was given and whether the comment / grievance is considered open or closed.</p>	<p>No significant issues noted.</p> <p>The latest version of the grievance register has been reviewed by Mott MacDonald. Typical comments raised include;</p> <ul style="list-style-type: none"> Queries regarding land acquisition, loss of crops and associated compensation. Potential impacts of the Project, in particular related to local ecology, the river network, landslides and earthquakes The potential to be offered employment <p>In general there appears to be a robust and transparent grievance mechanism in place and good record keeping with respect to comments and grievances received. Response times appear adequate. AGL has a Georgian member of staff who is assigned responsibility for administering the grievance mechanism which provides confidence that comments / grievances are likely to be logged and followed up. Any requests for employment are being passed onto the coordinator of the Shuakhevi Training Centre.</p> <p>Of all the comments and grievances received to date, two appeared to be directly related to the minor AW;</p> <ul style="list-style-type: none"> Residents in Shuakhevi stated that the road constructed in Akhaldaba is steep and required fixing (reference number 42) A resident in Didachara claimed that compensation for the access road had not been paid (reference number 44). <p>Both of these grievances appear to have subsequently been satisfactorily resolved by AGL.</p>
	Stakeholder Engagement	<p>AGL employed a team of respected local people to assist with the communication of targets and aims of the advanced and main construction works. Regular talks were conducted in the affected villages of the minor AW.</p> <p>AGL will construct village / community centres to assist AGL with communication during the construction phase.</p>	<ul style="list-style-type: none"> Meetings with stakeholders specifically regarding the AW. Public Information Centres being established to manage public communications in a face-to-face manner. 	<p>No significant issues noted.</p> <p>The structure for the community facing information giving process was explained and it is understood that a principle Public Information Centre will be established in Shuakhevi and will employ a local community liaison officer. This will provide information about the Project (and Project parties), training and employment opportunities, planned consultation exercises and the ways by which the community can comment on the Project.</p> <p>The Shuakhevi Public Information Centre will be further supported by similar facilities in Khulo and Skhalta.</p> <p>During the site visit the Khulo Public Information Centre was visited and is in the early stages of being established. No significant issues with this were noted.</p> <p>It is noted that during the minor AW, project information signs were installed at the entrance of the work sites. These gave general information about the works being undertaken including the methods by which the Project team could be contacted.</p> <p>Mott MacDonald was shown photographic evidence that meetings were conducted with local people in advance of the minor AW. It was disclosed that these meetings included discussions about the minor AW. Mott MacDonald was also shown minutes of meetings which showed that land acquisition discussions had taken place prior to the minor AW occurring.</p>
	Training of Labour	<p>AGL are formally training people from affected villages and have constructed and registered a training facility in Shuakhevi. All successful students receive a Certificate of Education that meets the requirements set out by Georgian State Law.</p> <p>AGL has organised monetary control workshops to assist small shops and businesses that start to accrue monetary wealth due to the construction phase.</p> <p>In line with CEG's license to construct the Project, AGL is duty bound to train up to 600 people from the affected villages over an 18-month period.</p>	<p>Establishment of a training centre in Shuakhevi.</p>	<p>No significant issues noted.</p> <p>The training centre in Shuakhevi was visited and found to be fit for purpose. The students have well ventilated, air conditioned (which operates as heating on reverse cycle during winter) purpose built class rooms. The classrooms have examples of health and safety signage which they could expect to eventually see on the main construction site. The students are also given a hard hat and hi-vis vest on the first day of training.</p> <p>There is a workshop which is incorporated into the building where practical lessons take place. This is also well ventilated.</p> <p>On the day of the visit some students were undertaking welding training. The students had overalls and were seen using a welding face shield.</p> <p>Mott MacDonald reviewed the "Shuakhevi Training Centre" document which outlines the overall training strategy and this directly references the Projects obligations and the applicable legislation and regulations by which the training strategy is designed to meet.</p> <p>It is noted that the students work towards obtaining a nationally recognised certificate and would be qualified to work on other construction projects within Georgia.</p>

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
	Employment of local people on Project sites	AGL employed 63 local people across 4 works sites; these sites were managed and run by 3 international managers. All employment contracts were written in line the Georgian Labour Code. Wherever possible, AGL adopted the EU style requirements, e.g. all employees were at least 18 years old and suitable for the task being assigned to them.	Incorporation of requirements similar to the EU within the employment contracts.	Mott MacDonald were shown the presentations (these are in Georgian but the contents were explained) which have been given to farmers to educate them on monetary and investment opportunities and how any land compensation money could be used to accrue wealth. No significant issues noted. The use of locals to undertake construction activities within their capability is a requirement of the agreement to construct the Project. Mott MacDonald has reviewed an example of the service agreement which was typically put in place between each person and AGL. It had been prepared in both Georgian and English and the example which was reviewed had been dated and was signed by both parties. The agreement included the amount to be paid by AGL and the terms of payment. AGL made a copy of each person's identification so as to confirm their identity. The person in the example reviewed was over 18 years of age.
TSABLANA	Required land use	The road was constructed on the edge of the river bank flood plain in State Owned Land. The necessary land was acquired from the Georgian Government. No grazing land was taken for the minor AW in this area. No cropland was taken for the minor AW in this area. No physical displacement was necessary for the minor AW in this area.	Implementation of the recommendations in the Land Acquisition and Livelihood Restoration Plan (LALRP) and Land Acquisition and Land Rehabilitation Framework (LALRF).	No significant issues noted. No physical displacement has been necessary as part of the minor AW in this area, plus no grazing land, cropland or any fruit trees were taken as part of the minor AW in this area.
	Applied compensation scheme and legislation for acquired land	The land in this area was Georgian State Land. New cadastral maps have been produced, which have been filled with the Georgian Government and show the new land boundaries.	Implementation of the recommendations in the Land Acquisition and Livelihood Restoration Plan (LALRP) and Land Acquisition and Land Rehabilitation Framework (LALRF).	No significant issues noted. Georgian legal process has been followed for physically acquiring the land necessary for the minor AW. No additional compensation was necessary since no grazing land, cropland or any fruit trees were taken as part of the minor AW in this area.
	Health and Safety at Construction Sites	AGL supervised and trained the employed local contractors and personnel with international management in basic site safety and significant site hazards, such as works at height and moving plants.	<ul style="list-style-type: none"> A health and safety induction was given to all staff prior to commencement of the minor AW. Issuing of personal protective equipment (PPE). Employment of a site supervisor. 	No significant issues noted. Mott MacDonald was supplied with a record sheet demonstrating that the local people employed on the site had attended and understood the health and safety induction. Mott MacDonald reviewed an excerpt from documentation showing that PPE was issued to individual employees and the individual employees signed to show they had received the PPE. A supervisor was employed for the Tsablana site. This person was interviewed by AGL in Batumi. During the minor AW the supervisor was responsible for monitoring the works and reported directly to the principal health, safety and environment manager. During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works, including health and safety aspects. A sample was reviewed by Mott MacDonald and the structure of reporting appeared satisfactory. There was one reported incident as a result of the minor AW at this site which related to an earth moving truck tipping over. The accident was reported as a serious accident which seems appropriate. AGL prepared an Accident Investigation Report and this has been reviewed by Mott MacDonald and found to be satisfactory. In this instance it seems that the truck driver didn't correctly follow supervisor instructions. The format of the Accident Investigation Report clearly describes the injuries sustained, a summary of the root cause, the action which was taken at the time and the proposed response for preventing re-occurrence (corrective action).
	Affected Habitat – Critical Habitat	No critical habitat areas were recorded.	Not applicable	No significant issues noted. No critical habitat areas were impacted in this location.
	Affected Habitat – Tree removal	No comment was made in the AGL Audit.	Not applicable	No significant issues noted. No trees were removed in this location.
	Pollution prevention and control	The road was constructed in a river bed using transported material which was tipped, rolled and compacted in layers up to 1.35 m in height. A membrane layer was installed immediately beneath the road surface.	<ul style="list-style-type: none"> Bespoke design drawings feeding into a risk assessment process. All works were supervised by a member of the AGL team. AGL's principal health, safety and environment manager was on hand as required. During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works. 	No significant issues noted. Toolbox talks included promoting awareness of environmental issues. Construction workers were asked to sign an attendance sheet confirming they understood the toolbox talk. It was observed that part of the road in the river bed had been washed away. However, this has been constructed of locally sourced rock, similar to the natural geology of the river bed, therefore the likelihood of any pollution incident occurring because of this would be very low. There was no evidence of any other pollution incidents occurring during the minor AW. Bespoke design drawings were prepared which it is understood fed into a risk assessment process in order to guide the necessary supervision. It is recommended that future construction works should be managed around a CEMP process and it is understood that AGL will further investigate this prior to the main works taking place.

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
			<ul style="list-style-type: none"> Toolbox talks which included best practice on site environmental management were given to construction workers. 	
	Noise and Vibration Dust Site Traffic	The closest human dwellings are more than 1.2 km away and as a result experienced little or no disturbance in relation to noise / vibration, dust or site traffic.	See Pollution Prevention and Control (above)	<p>No significant issues noted.</p> <p>It was confirmed that there were no immediately apparent sensitive receptors within the vicinity of the minor AW.</p> <p>Although impacts were considered to be unlikely (given the remote location of nearest sensitive receptors), the supervision approach represented an appropriate way of managing any impacts associated with noise / vibration, dust and site traffic.</p>
	Waste and Spoil Disposal	No comment was made in the AGL Audit.	See Pollution Prevention and Control.	<p>No significant issues noted.</p> <p>Construction materials used and associated waste streams will have been limited to the following;</p> <ul style="list-style-type: none"> Crushed rock Excess membrane Timber off-cuts Packing materials (such as plastic) General waste (food waste, plastic, tins, glass) <p>Volumes generated are expected to have been relatively low. Mott MacDonald understands that waste generated was collected at the end of each working day and taken to local waste disposal facilities. There was no evidence of any refuse on the site during the site visit.</p> <p>Mott MacDonald understand that all vehicle maintenance activities were undertaken at local workshops and therefore there was no oil / lubricant / fuel which needed to be disposed of or handled at the work site.</p>
DIDACHARA	Required land use	<p>200m of shallow excavation was required to construct the road section to the proposed adit. A small bridge was built to allow access of small rear loading truck to remove the blasted material from the work face to the external tipping area. The bridge was constructed by forming the foundations, installation of steel reinforcement, erection of subsequent formwork and pouring of concrete.</p> <p>No grazing land was taken for the minor AW in this area.</p> <p>No cropland was taken for the minor AW in this area.</p> <p>No physical displacement was necessary for the minor AW in this area.</p>	<ul style="list-style-type: none"> The pertinent standards from the LALRF and LALRP were applied to the loss of fruit trees and grazing land for road construction. Land lost can be reclaimed after approximately two years when tunnel excavation works are complete. Trees could be ultimately re-planted and grazing land reinstated. Any cattle were moved to other areas. The alignment of the minor AW was selected so as to avoid cutting through the middle of plots. 	<p>No significant issues noted.</p> <p>No physical displacement has been necessary as part of the minor AW in this area, plus no grazing land, cropland or any fruit trees were taken as part of the minor AW in this area.</p> <p>It was noted during the site visit that the edges of a land plot had been taken. There was no discernible evidence of the minor AW traversing through the middle of this plot.</p>
	Applied compensation scheme and legislation for acquired land	<p>The land in this area was mostly Georgian State Land. A small section of private land was acquired.</p> <p>New cadastral maps have been produced, which have been filled with the Georgian Government and show the new land boundaries.</p>	Implementation of the recommendations in the Land Acquisition and Livelihood Restoration Plan (LALRP) and Land Acquisition and Land Rehabilitation Framework (LALRF).	<p>No significant issues noted.</p> <p>Georgian legal process has been followed for physically acquiring the land necessary for the minor AW.</p> <p>No additional compensation was necessary since no grazing land, cropland or any fruit trees were taken as part of the minor AW in this area.</p>
	Health and Safety at Construction Sites	See 'Health and Safety at Construction Sites' for Tsbiana.	See 'Health and Safety at Construction Sites' for Tsbiana.	<p>No significant issues noted.</p> <p>There were no reported health and safety incidents during the minor AW at Didachara.</p> <p>See 'Health and Safety at Construction Sites' for Tsbiana for additional general observations.</p>
	Affected Habitat – Critical Habitat	No critical habitat areas were recorded.	Not applicable	<p>No significant issues noted.</p> <p>No critical habitats were impacted in this location.</p>
	Affected Habitat – Tree removal	No comment was made in the AGL Audit.	Supervision by the Forestry Commission	<p>No significant issues noted.</p> <p>It is noted that a small number of trees were removed, but these had no economic value, nor were they a protected species. Mott MacDonald has been informed that all tree removal was done in accordance with a tree removal permit and was supervised by personnel from the Forestry Commission.</p>
	Pollution prevention and control	A 200 m length of road was constructed. A small bridge (constructed by forming foundations, installation of steel reinforcement, erection of formwork and pouring of concrete) was also established.	<ul style="list-style-type: none"> Bespoke design drawings feeding into a risk assessment process. All works were supervised by a member of the AGL team. AGL's principal health, safety and environment 	<p>No significant issues noted.</p> <p>The site health and safety induction included promoting awareness of environmental issues.</p> <p>There was no evidence of any other pollution incidents occurring during the minor AW.</p> <p>Bespoke design drawings were prepared which it is understood fed into a risk assessment process in order to guide the necessary supervision.</p>

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
			<p>manager was on hand as required.</p> <ul style="list-style-type: none"> During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works. Toolbox talks which included best practice on site environmental management were given to construction workers. 	<p>It is recommended that future construction works should be managed around a CEMP process and it is understood that AGL will further investigate this prior to the main works taking place.</p>
	Noise and Vibration Dust Site Traffic	<p>The closest human dwellings are more than 1.2 km away and as a result experienced little or no disturbance in relation to noise / vibration, dust or site traffic.</p>	<ul style="list-style-type: none"> All works were supervised by a member of the AGL team. AGL's principal health, safety and environment manager was on hand as required. During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works. Toolbox talks which included best practice on site environmental management were given to construction workers. 	<p>No significant issues noted.</p> <p>It was confirmed that there were no immediately apparent sensitive receptors within the vicinity of the minor AW.</p> <p>Although impacts were considered to be unlikely (given the remote location of nearest sensitive receptors), the supervision approach represented an appropriate way of managing any impacts associated with noise / vibration, dust and site traffic.</p>
	Waste and Spoil Disposal	<p>No comment was made in the AGL Audit.</p>	<p>See Pollution Prevention and Control</p>	<p>No significant issues noted.</p> <p>Construction materials used and associated waste streams will have been limited to the following;</p> <ul style="list-style-type: none"> Crushed rock Excess membrane Waste concrete Excess / off cuts from steel rods Timber off-cuts Packing materials (such as plastic) General waste (food waste, plastic, tins, glass) <p>Volumes generated are expected to have been relatively low. Mott MacDonald understands that waste generated was collected at the end of each working day and taken to local waste disposal facilities. There was no evidence of any refuse on the site during the site visit.</p> <p>Mott MacDonald understand that all vehicle maintenance activities were undertaken at local workshops and therefore there was no oil / lubricant / fuel which needed to be disposed of or handled at the work site.</p>
AKHALDABA	Required land use	<p>A 900 m section of the constructed road passed along and through grazing land of 12 land users, which also contained approximately 45 apple trees. The road ultimately required the removal of 9 apple trees that were compensated for as per the agreements in the LALRF and LALRP.</p> <p>Some grazing land was impacted for the minor AW in this area.</p> <p>No cropland was taken for the minor AW in this area.</p> <p>No physical displacement was necessary for the minor AW in this area.</p>	<ul style="list-style-type: none"> The pertinent standards from the LALRF and LALRP were applied to the loss of fruit trees and grazing land for road construction. Land lost can be reclaimed after approximately two years when tunnel excavation works are complete. Trees could be ultimately re-planted and grazing land reinstated. Any cattle were moved to other areas. The alignment of the minor AW was selected so as to avoid cutting through the middle of plots. 	<p>No significant issues noted.</p> <p>No physical displacement has been necessary as part of the minor AW in this area and the recommendations of the LALRF and LALRP were implemented.</p> <p>Any cattle were moved prior to works commencing.</p> <p>It was noted during the site visit that the edges of land plots had been taken. There was no discernible evidence of the minor AW traversing through the middle of any plots.</p>
	Applied compensation scheme and legislation for acquired land	<p>Based on Georgia's law for land acquisition, AGL measured the affected land in line with the current market value of the land and added 10% to the obtained price. The measured areas included those for road construction for the AW and the affected land for the construction phase, often in presence of the land owner and land user.</p> <p>New cadastral maps have been produced, which have been filled with the Georgian Government and show the new land boundaries.</p>	<p>Implementation of the recommendations in the LALRF and LALRP.</p>	<p>No significant issues noted.</p> <p>AGL has a compensation register for the minor AW undertaken at Akhaldaba which shows the area of land affected, the fruit trees affected and the subsequent amount of compensation which is due to be paid to the land user.</p>
	Health and Safety at	<p>See 'Health and Safety at Construction Sites' for Tslana.</p>	<p>See 'Health and Safety at Construction</p>	<p>No significant issues noted.</p>

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
	Construction Sites		Sites' for Tsbiana.	There were no reported health and safety incidents during the minor AW at Akhaldaba. See 'Health and Safety at Construction Sites' for Tsbiana for additional general observations.
	Affected Habitat – Critical Habitat	No critical habitat areas were recorded.	Not applicable	No significant issues noted. No critical habitat was impacted in this location.
	Affected Habitat – Tree removal	Fruit trees avoided wherever possible. 9 apple trees ultimately removed (45 were originally at risk).	Implementation of the recommendations in the Land Acquisition and Livelihood Restoration Plan (LALRP) and Land Acquisition and Land Rehabilitation Framework (LALRF).	No significant issues noted. AGL has a compensation register for the minor AW undertaken at Akhaldaba which shows the areas of land affected, the fruit trees affected and the subsequent amount of compensation which is due to be paid to the land user. Both the LALRP and LALRF describe the compensation methods and techniques to be applied in the case of fruit trees being removed. These documents have been prepared in accordance with international best practice.
	Pollution prevention and control	4.2 km of road was constructed. <i>It is noted during the site visit that gabion wall and concrete slope stabilisation walls were constructed in this area but this hasn't been stated in the AGL Audit.</i>	<ul style="list-style-type: none"> Bespoke design drawings feeding into a risk assessment process. All works were supervised by a member of the AGL team. AGL's principal health, safety and environment manager was on hand as required. During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works. Toolbox talks which included best practice on site environmental management were given to construction workers. 	No significant issues noted. The site health and safety induction included promoting awareness of environmental issues. There was no evidence of any other pollution incidents occurring during the minor AW. Bespoke design drawings were prepared which it is understood fed into a risk assessment process in order to guide the necessary supervision. It is recommended that future construction works should be managed around a CEMP process and it is understood that AGL will further investigate this prior to the main works taking place.
	Noise and Vibration	The main impacts were in Lower Akhaldaba and related to dust and noise. After consultation with the locals it was concluded that operations using loud machinery would only be used after 9am. Mobile plant was also isolated immediately after its use	<ul style="list-style-type: none"> Loud machinery only used after 9am. Isolation of mobile plant. 	No significant issues noted. In general the approach to mitigating potential noise and dust impacts appears satisfactory.
	Dust	The main impacts were in Lower Akhaldaba and related to dust and noise. Dust was controlled using a mobile water bowser.	<ul style="list-style-type: none"> Mobile water bowser Employing affected residents to do the work. 	
	Site Traffic	No comment was made in the AGL Audit.	None identified.	No significant issues noted. The main traffic impact would have expected to have been in relation to dust (which is discussed above) and accidents. It is understood that a presentation was given at a school located close to the road which covered the dangers of the construction sites, in particular heavy plant and associated traffic. There is no evidence of any specific issues and/or incidents occurring with respect to traffic management, however further to earlier comments, a CEMP would have assisted in this instance in clearly documenting specific traffic control measures to be implemented.
	Waste and Spoil Disposal	No comment was made in the AGL Audit.	See Pollution Prevention and Control.	No significant issues noted. Construction materials used and associated waste streams will have been limited to the following; <ul style="list-style-type: none"> Crushed rock Excess membrane Waste concrete Excess / off cuts from steel rods Timber off-cuts Packing materials (such as plastic) General waste (food waste, plastic, tins, glass) Volumes generated are expected to have been relatively low. Mott MacDonald understands that waste generated was collected at the end of each working day and taken to local waste disposal facilities. There was no evidence of any refuse on the site during the site visit. Mott MacDonald understand that all vehicle maintenance activities were undertaken at local workshops and therefore there was no oil / lubricant / fuel which needed to be disposed of or handled at the work site.

Location	Parameter	The AGL Audit Discussion / Findings	AGL Mitigation Measures	Mott MacDonald's Findings and Comments
PACHKHA <i>Note: The site was not visited as part of the site visit undertaken on 18th June 2013, so this is a summary based on discussions with the AGL team</i>	General	<p>The AGL Audit states that;</p> <ul style="list-style-type: none"> 7km of road was constructed by shallow excavation and backfilling techniques from the public road section in Pachkha up to the Pachkha Adit location. One 230m section of road passed by 5 rural cottages. The road required the purchasing of a strip of land 3m wide from 2 land users. A total of 5 land users were compensated in accordance with the LALRP and employed to construct the necessary gabion walls for slope protection. A total of 17 local people were trained and employed by AGL to complete the works in Pachkha. No crop land was taken as a result of the road construction. The 230m x 3m section of land lost due to road construction can be reclaimed and put back to grazing land after the Project works are complete. 	<ul style="list-style-type: none"> Implementation of the recommendations in the Land Acquisition and Livelihood Restoration Plan (LALRP) and Land Acquisition and Land Rehabilitation Framework (LALRF). Bespoke design drawings feeding into a risk assessment process. All works were supervised by a member of the AGL team. AGL's principal health, safety and environment manager was on hand as required. During the minor AW, fortnightly progress reports were produced by AGL's principal health, safety and environment manager which noted the current status of the works. Toolbox talks which included best practice on site environmental management were given to construction workers. 	<p>No significant issues noted.</p> <p>The following summary is based on discussions with the AGL health, safety and environment manager.</p> <p>It was stated that the measures with respect to environment, health and safety adopted for Tsablana, Didachara and Akhaldaba were implemented to manage the works at Packha. The key aspects being the use of bespoke environmental, health and safety risk assessments, negotiation and payment of compensation for land acquisition in accordance with the LALRP, site safety awareness training for construction workers, removal of trees under supervision by the Forestry Commission and in accordance with the tree clearing permit.</p> <p>There was no physical resettlement as part of the minor AW in this area, plus no crop land was impacted. Some fruit trees were impacted by the minor AW in this area and AGL has a compensation register for the minor AW undertaken at Packha which shows the areas of land affected, the fruit trees affected and the subsequent amount of compensation which is due to be paid to the land user.</p> <p>Both the LALRP and LALRF describe the compensation methods and techniques to be applied in the case of fruit trees being removed. These documents have been prepared in accordance with international best practice.</p> <p>AGL has stated that there were no reported incidents during the implementation of the minor AW in this area.</p> <p>It has not been possible to visually confirm whether any obvious issues of concern exist at the site, but based on discussions and a review of AGLs general approach it would be considered to be of a low likelihood.</p> <p>The same general comment as stated above for Tsablana, Didachara and Akhaldaba apply in that it is recommended that future construction works should be managed around a CEMP process and it is understood that AGL will further investigate this prior to the main works taking place.</p>

3. Conclusions

This report presents Mott MacDonald's findings of a verification audit which is based on a review of the AGL Audit, a site visit undertaken by Mott MacDonald on 18th June 2013 to view the status of the minor AW and conversations / meetings with the Project team. However, it should be noted that the minor AW at Pachkha was not visited as part of this process, but has been discussed with AGL's health, safety and environment manager.

There are some additional environmental and social parameters / aspects covered by this report which weren't explicitly addressed in the AGL Audit. These have been included to ensure full coverage of potential impacts which could have arisen from the minor AW.

During the course of our review, no significant issues were noted in the way the minor AW was carried out and it appears that appropriate environmental and social mitigation was adopted during the minor AW. Therefore the findings of the AGL Audit are generally confirmed.

The one minor aspect noted was that future construction works should be managed around a CEMP process as going forward the works are going to become more complex and be significantly greater in scale. Any CEMPs should be supported by a project document control system. However, in this instance and for the purposes of the minor AW, it is felt that the use of bespoke design drawings, consultations with local stakeholders feeding into risk assessments was appropriate.

The findings of this audit have been discussed with AGL's health, safety and environment manager.

Appendices

Appendix A. Site Visit Photos	12
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Appendix A. Site Visit Photos

Photo A.1: View across the washed out road at Tsblana Photo A.2: New bridge and access road at Didachara



Source: Mott MacDonald



Source: Mott MacDonald

Photo A.3: Outside of the training centre in Shuakhevi Photo A.4: Desks, signage and PPE at the training centre in Shuakhevi



Source: Mott MacDonald



Source: Mott MacDonald

Photo A.5: Site signage on the road at Akhaldaba



Source: Mott MacDonald

Photo A.6: Access road up to the tunnel site at Akhaldaba



Source: Mott MacDonald