<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Illegal hunting of bushmeat by workers during construction | Nakuru Lake Forest, Londiani Forest, Mt. Londiani Forest, Timboroa Forest, and N. Tintere Forest | - Resistant species (eg hardwoods);  
- Establish network of fuel breaks or less flammable materials  
- KPLC & KFS will prohibit project workers from hunting bushmeat, possessing firearms, snare and other hunting equipment, and sufficient wages to reduce need to supplement purchased food with bushmeat & non-timber forest products (NTPs) | KPLC, together with KFS, to randomly inspect vehicles at ingress and egress points of construction areas in the vicinity of forest areas | Construction phase | Additional security costs in forested areas during construction (KShs 1,000,000) |
| Anticipated that large-scale earthworks might cause suspended solids to be mobilised into the water body | Lakes Naivasha, Elementaita and Nakuru | - Use of existing road corridors for construction and operational access wherever possible;  
- Fine tuning of tower locations in consultation with local communities;  
- Footings of towers will be built to address wet season conditions;  
- Use of specialized construction techniques where necessary;  
- Spanning towers across wetland | KPLC to inspect construction activities in the wetland areas regularly | Construction phase | No additional cost. Based on sound engineering practice |
| Potential for microbial contamination of surface water and soil | Active construction sites, Staging Area | - A Waste Management Programme will be developed by the EPC Contractor, to include:  
- Provision of appropriate number of mobile toilets at worksites;  
- Training of construction employees on project sanitation practices | Effluent shall be monitored at the discharge point of the site. Effluent treatment works by the EPC Contractor. Monthly Environmental Inspection report to be completed by KPLC. | Construction phase | Production of monthly environmental inspection report (KShs 1,000,000) |
| Deposition of eroded | Throughout the | - EPC Contractor to ensure | Periodic inspection of | Construction | No additional |
### TABLE 8-1: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Soils into watercourses; Disturbance of flows and habitat from installation of culverts and bridges | Transmission line project | Towers to be located outside the top-of-bank of all watercourses;  
- Existing bridges to be upgraded, rather than new bridges installed;  
- A vegetated buffer will be maintained along both sides of all watercourse crossings | Watercourse crossings by Site Environmental Officer | Phase | Cost. Based on sound engineering practice |

**Soil Erosion Impact from Vegetation Clearance**

| Soils exposed during site preparation, vegetation clearance, and building. | Active construction areas | Contractor should ensure the recovery of exposed soils with grass and other ground cover as soon as possible;  
- Contractor should ensure that erosion and cut slope destabilization are addressed through landscaping and grassing, carting away and proper disposal of construction wastes in the various site works;  
- Compaction of spoil areas and effective drainage of spoil sites;  
- Contractor should ensure that all wastewater is drained into approved drainage facilities. | KPLC Project management; Contractor | Construction phase | Recovery of exposed soils and revegetation costs (KShs 2,000,000) |

**Impacts of Construction Material Sourcing e.g. quarrying**

| Erosion of soils on steep slopes disturbed by excavation for tower footings or clearing for access track | Steep slopes along extent of transmission lines, including Maji Mazuri, Naivasha and Nandi Escarpment | Where practical, steep slopes will be avoided by KPLC and the EPC Contractor during final tower spotting and access tracks will be routed across rather than vertically on steep slopes;  
- Vegetation clearing will be avoided on steep slopes. All | Periodic inspection by the EPC Contractor of steep slopes during construction and rehabilitation measures following construction | Construction phase | Recovery of exposed soils and revegetation costs (KShs 2,000,000) |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Topsoil compaction, rutting and mixing from: grading, excavations and transportation of equipment, concrete and steel to lower sites over access roads and ROW | Areas to be cleared or excavated along transmission lines including tower sites and access tracks | - Use existing access roads or tracks wherever available;  
  - Strip and store topsoil separate from subsoil for major tower site excavations;  
  - In agricultural areas, movement of heavy equipment will be restricted during wet-soil conditions to prevent subsoil compaction;  
  - Rehabilitation of exposed soils as soon as practicable | Following construction, the EPC Contractor to check for compaction on cultivated soils outside the ROW and remediate as necessary | Construction phase | Recovery of exposed soils and revegetation costs (KShs 2,000,000) |

| Impacts on Fauna & Avifauna | Entire length of lines | Risk of electrocution by large climbing animals, such as vervet monkeys, or bats not expected as spacing of conductors and length of insulators exceeds the reach of the climbing species and wingspan of bats present in the project area;  
  - Proposed line will avoid as much as possible any significant bird breeding or staging areas; | KPLC, in collaboration with KWS, to report unusual bird strikes and/or animal electrocutions, in regular compliance reporting. | Planning, construction & operation phases | No additional cost. Based on sound engineering practice |

ESIA KPLC Proposed Kisumu-Lessos-Olkeria  
Transmission Line Volume I  
Issue 1.0 / December 2009
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Injury and fatalities arising from migratory birds colliding with transmission lines | Lakes Naivasha, Elementaita, and Nakuru | • Where transmission line will cross areas that are potentially important as bird flight paths KPLC shall take reasonable measures to make the conductor more conspicuous;  
• Possible use of underground transmission line in sensitive areas;  
• Use of reflectors placed at intervals along the conductor. | KPLC to liaise with KWS & Soysambu conservancy to monitor and record bird fatalities; KPLC to maintain records of abnormal bird strikes and corrective actions taken | Planning, construction & operation phases | No additional cost. Based on sound engineering practice |

**Impacts on Aviation**

<p>| Potential risk to aircraft through collisions and electrocutions | Lakes Naivasha, Elementaita, and Nakuru | • Proposed line should be dressed with more conspicuous conductors and reflectors placed at intervals along the line; | KPLC, in collaboration with KCAA &amp; Soysambu conservancy, to consult on location of airstrips prior to confirmation of final | Planning, construction &amp; operation phases | No additional cost. Based on sound engineering |</p>
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultation with regulatory air traffic authorities prior to installation;</td>
<td>A site(s) may be uncovered anywhere along the transmission line project, especially in the Rift Valley basin</td>
<td>Selective tower placement to span archaeological sites; KPLC will ensure that areas to be disturbed during construction will be examined by an archaeologist; Test pits will be completed for the tower locations where the foundations will be excavated; Contractor will report any relevant finds to the National Museums of Kenya, who will advise on measures to be taken to ensure their preservation.</td>
<td>transmission line RoW.</td>
<td>Planning &amp; construction phases</td>
<td>No additional cost. Based on sound engineering practice.</td>
</tr>
<tr>
<td>Adherence to regional or national air traffic safety regulations; Use of buried lines when installation is required in flight sensitive areas; Line to be located adjacent to prevailing natural obstacles, such as trees or cliffs, to prevent collision of aircraft with conductors and reduce visual impacts; Proposed line should be routed through low risk areas and away from aircraft flight paths within Soysambu Conservancy like Naishi airstrip.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 8-1: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impacts on Public Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Spread of HIV/AIDS & other communicable & sexually transmitted diseases (STDs) | Areas of concentrated workers | • KPLC & EPC Contractor will bus workers to active construction sites each day from the nearest urban centres, such as Naivasha, Nakuru, Eldoret, Lassos, and Kisumu.  
• No camps will be used;  
• The EPC Contractor will provide public education information about HIV/AIDS transmission and preventative measures;  
• Condoms will be made available to project workers at no cost. | KPLC in conjunction with Ministry of Health and relevant NGOs | Construction phase | Production of HIV/AIDS programme reports; Training and sensitization costs (KShs 2,500,000) |
| **Social Impacts: Resettlement & Compensation** | | | | | |
| Physical relocation of persons & acquisition of land or land rights for the project | Wayleaves, Rights-of-Way & Timboroa / Makutano substation | • KPLC will identify all PAPs & develop a Resettlement Action Plan (RAP) framework to address economic losses, physical resettlement & loss of land or land rights. | KPLC management, Ministries of Lands, Housing and Settlement | Prior to construction phase | Based on current land valuation and negotiation results with existing land owners |
| **Occupational Health & Safety** | | | | | |
| Live power lines | Extent of transmission line project | • Only trained & certified workers to install, maintain or repair electrical equipment;  
• Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines;  
• Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards; | KPLC management to liaise with DOHSS | During construction and operation phases | No additional cost, based on sound engineering practice; Regular training of KPLC staff (already established); Community |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Working at height during construction, maintenance, and operation activities.     | Extent of transmission line project | • Testing structures for integrity prior to undertaking work;  
• Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others;  
• Establishment of criteria for use of 100 percent fall protection;  
• Installation of fixtures on tower components to facilitate the use of fall protection systems;  
• Provision of an adequate work-positioning device system for workers;  
• Hoisting equipment should be properly rated and maintained and hoist operators properly trained; | KPLC project management + DOHSS | During construction and operation phases | No additional cost.  
Regular (already established) in-service staff training |

sensitization (KShs 1,000,000)
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Safety belts should be of not less than 16 millimeters (mm) (5.8 inch) two-in-one nylon or material of equivalent strength;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• When operating power tools at height, workers should use a second (backup) safety strap;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Signs and other obstructions should be removed from poles or structures prior to undertaking work;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• An approved tool bag should be used for raising or lowering tools or materials to workers on structures.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community health &amp; safety</td>
<td>Extent of transmission line project</td>
<td>• Use of signs, barriers (e.g. use of steel posts surrounding transmission towers, particularly in urban areas) and education/public outreach to prevent public contact with potentially dangerous equipment;</td>
<td>KPLC project management</td>
<td>Construction and operation phases</td>
<td>Community sensitization programme (KShs 1,000,000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• KPLC to consider welding of towers to prevent vandalism;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Use of single unit towers instead of currently used lattice composite towers;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community policing of towers to be initiated to reduce vandalism;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines to prevent shock;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Locate rights-of-way away from human receptors;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 8-1: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public safety issues regarding: accidental contact with lines, collision with construction equipment, excavations on ROW, material storage, tower construction</td>
<td>Active construction areas</td>
<td>• Use of noise barriers or noise cancelling acoustic devices (corona effect). • The EPC Contractor will secure equipment &amp; demarcate any excavations in such a way as to prevent accidents when construction not in progress; • Keep non-authorised persons away from any construction activities/sites/yard/equipment; post warning signs with appropriate text &amp; graphics; • Begin educational programs in schools &amp; communities to educate people of hazards &amp; safe practices when playing &amp; working near high voltage power lines.</td>
<td>KPLC to maintain records of any incidents, investigations &amp; corrective actions</td>
<td>Construction and operation phases</td>
<td>Community sensitization programme (KShs 1,000,000)</td>
</tr>
<tr>
<td>Climbing and electrocution risk</td>
<td>All transmission towers and substation sites</td>
<td>• All towers will be fitted with warning signs and anti-climbing devices; • Sub-stations to be 'hurricane' fenced.</td>
<td>Periodic inspection and repair as necessary</td>
<td>Construction and operation phases</td>
<td>Community sensitization programme (KShs 1,000,000)</td>
</tr>
</tbody>
</table>

### Management of Hazardous and Contaminating Material

<p>| Environmental contamination from spillage or disposal of fuels, lubricants, oils and solvents on construction sites | All construction sites | • KPLC and the EPC Contractor shall dispose of materials defined as hazardous waste (eg. Hydraulic oil) in a responsible way, and where reasonable, Monthly Environmental Inspection form to be completed | Construction phase | No additional cost. Performance is based on sound engineering &amp; |</p>
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| the construction site       |          | shall return such materials to the manufacturer for recycling;  
<pre><code>                            |              | • Implementation and enforcement of the Pollutant Spill Contingency Procedures of the EPC Contractor’s Environmental Action Plan, including:                                                                                               |                |            | supervision practices |
</code></pre>
<p>|                             |          | • Prohibition of dumping of any contaminating material product into the environment/onto the ground, including waste oils, in accordance with NEMA regulations;                                                                                                                                  |                |            |                |
|                             |          | • Storage &amp; routine handling of fuels, lubricants, and other potentially contaminating substances in a weather-protected area equipped with a secondary containment system for spills;                                                                                                                |                |            |                |
|                             |          | • Storage &amp; routine handling of fuels, lubricants, and other potentially contaminating substances in a weather-protected area equipped with a secondary containment system for spills;                                                                                                                |                |            |                |
|                             |          | • Storage areas shall be designed such that they will contain 110% of the largest container/vessel stored in the storage area;                                                                                                                                                                                                                      |                |            |                |
|                             |          | • Have available on-site all equipment and materials required to execute a clean-up;                                                                                                                                                                                                                                                                         |                |            |                |</p>
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Management of Waste</th>
<th>All construction areas</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Management &amp; Mitigation Measures</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• All wastes recovered during cleanup operations to be collected and stored for subsequent disposal;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Supply agreement will include responsibility for supplier to take waste oil;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• KPLC will verify each supply/disposal subcontractor(s) has adequate arrangements or facilities for proper disposal, treatment or recycling of these wastes;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Personnel will be educated on proper use and disposal of hazardous materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual impact and environmental contamination from improper disposal of solid and liquid wastes. Air pollution from on-site burning of solid waste</td>
<td>The EPC Contractor will manage waste according to Waste Management Plan. In addition, the following management measures may be implemented:</td>
<td>Monthly Environmental Inspection form completed by KPLC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Waste management training for all workers;</td>
<td>Planning, construction &amp; operation phases</td>
<td></td>
<td>Production of monthly reports (KShs 1,000,000)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The EPC Contractor shall identify a suitable site for the disposal of solid waste from construction activities in general in agreement with the local administration and shall ensure that such a site is used properly;</td>
<td></td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Wood, etc, cable reels, etc. may be sold for a nominal fee to local persons;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Management &amp; Mitigation Measures</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>----------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fugitive dust in the immediate vicinity of construction activities, and along loose surface roadways</td>
<td>Right-of-Way and access roads, Timbora substation</td>
<td>• Contractor to protect stockpiles of friable material subject to windthrow by wetting, or with a barrier, vegetation, or windscreen, water stockpiles;  • Cover loads of friable material during transportation;  • Watering of roadways to reduce dust when necessary, or use biodegradable (e.g. Lignin-based) road sealing compounds;  • Restrict speed on loose surface roads to 25Km/hr during dry or dusty conditions;  • In sensitive areas, including the sub-stations, suppress dust during dry periods by use of water sprays</td>
<td>Daily inspection by the EPC Contractor of construction areas for excessive nuisance dust KPLC/ the EPC Contractor to maintain records of complaints on air quality, and follow-up corrective or measures</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000); Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td>Impaired air quality from exhaust of heavy equipment, motor vehicles and</td>
<td>Transportation routes, construction sites</td>
<td>• Maintain equipment in good running condition – no vehicles to be used that generate excessive black smoke;</td>
<td>EPC Contractor to make spot visual inspections of exhaust and vehicle loads and complete Monthly Environmental Inspection</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Management &amp; Mitigation Measures</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>other equipment with internal combustion engines</td>
<td></td>
<td>- Enforce vehicle load restrictions to avoid excess emissions from engine overloading;</td>
<td>report, EPC Contractor to maintain record of corrective action taken.</td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Where practical, switch off engines when not in use.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoke from uncontrolled combustion of cleared vegetation and combustible waste</td>
<td>Forested sections of wayleaves, Timboroa substation</td>
<td>- Uncontrolled burning of woody debris and constructing waste to be prohibited within the wayleave;</td>
<td>Monthly Environmental Inspection report to be completed by KPLC</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Slash from vegetation clearing to be chipped and left as mulch;</td>
<td></td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Combustible construction waste to be landfilled or left for removal by residents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuisance noise at adjacent sensitive receptors</td>
<td>Schools and residences along the transmission lines</td>
<td>- Baseline noise readings will be taken by KPLC and the EPC Contractor prior to commencement of construction. Noise management measures and procedures to be adhered to will include: - All internal combustion equipment will have properly functioning silencers or mufflers; - Landowners along the routes to be notified about the construction schedule and activities, including blasting, should it be required; - Noise generating activities that take place near residential or sensitive institutional receptors will be restricted to the period between 0600 and 2000hrs.</td>
<td>Liaison by the EPC Contractor with adjacent residents and landowners to identify nuisance noise issues and resolve complaints.</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Management &amp; Mitigation Measures</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>----------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>----------------</td>
</tr>
</tbody>
</table>
| Traffic Congestion/ Road Wear and Tear | Structural Integrity of Roads | Transportation routes and access roads | • Contractor should provide temporary road signs or notices to indicate on-going works;  
• The Contractor together with the Project Manager should plan itineraries for site traffic on a daily basis and avoid peak traffic periods;  
• The Project Manager and Contractor should choose traffic routes to reduce the impact in the neighbourhood avoiding, as far as practical any sensitive areas. | KPLC to inspect road conditions weekly | Construction phase | No additional cost. Performance is based on sound engineering practice. |
| Disruption of traffic at access points to access roads | Transportation routes and access roads | • No new access roads will be constructed;  
• Plans for connection of any upgraded access roads to the public highway network will be submitted for approval by the District Engineer or other appropriate Relevant Authority before construction commences. | KPLC to implement a traffic complaints and corrective action procedure | Construction phase | No additional cost. Performance is based on sound engineering practice and supervision. |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Traffic congestion as a result of incremental traffic associated with the project | Main transportation routes | • Procedures will be included to ensure transport of abnormal loads is timed and executed to minimise traffic disruption;  
• Selection of local access roads will be made in consultation with local officials to optimise use of roads with adequate capacity. | KPLC to implement a traffic complaints and corrective action procedure | Construction phase | No additional cost.  
Performance is based on sound engineering practice and supervision. |
| Risk of accidents due to project related traffic | Transportation routes & access roads | • KPLC & the EPC Contractor will effect traffic controls to avoid congestion and truck accidents on the project access roads;  
• Choice of traffic routes depending on delivery and dispatch to reduce the congestion impact in the neighbourhood;  
• Due regard of drivers to traffic regulations which should be insisted upon at all times, with courtesy shown to other road users;  
• Employment of a road safety co-ordinator to oversee implementation of the traffic controls;  
• Regular maintenance of delivery and dispatch trucks. | KPLC & EPC Contractor to maintain records of all accidents involving project vehicles. KPLC to implement a traffic complaints & corrective action procedure. | Construction phase | No additional cost.  
Performance is based on sound engineering practice and supervision. |

**Labour & Working Conditions**

| Adherence to labour standards & well-being of construction workers | Entire transmission line project | • EPC Contractor will be required to adopt policies & procedures that comply with national legislation & address all aspects | Contractor to keep accurate employment records.  
On-going monitoring by KPLC of EPC contractor’s performance; | Construction phase | No additional cost.  
Performance is |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| Work related injury or health effects   | All project areas | • KPLC & the EPC contractor will comply with relevant JBIC & WB/IFC health & safety requirements, including specific provisions for:  
  • Introduction & use of poisonous or other chemicals injurious to health;  
  • Handling dangerous goods & specialised waste;  
  • Training;  
  • Provision of potable water;  
  • Working environment committee;  
  • Use of helmets;  
  • Personal injuries & accidents;  
  • Damage to material, equipment & buildings;  
  • Poison treatment, chemical & fire injuries;  
  • Safety audit;  
  • Work done by hired personnel or firms;  
  • Operating cranes;  
  • Working with heat in confined places;  
  • Corrective action;  
  • Protective action; & | Investigation & corrective action for reported incidence of labour abuses |

<table>
<thead>
<tr>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
</table>
| Construction and operation phases | No additional cost.  
Performance is based on sound engineering practice and supervision. |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental &amp; Community Benefits</td>
<td></td>
<td>• Utilisation of fall arrestors &amp; anti-climbing devices to prevent public injury</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Purchase of local goods and services will boost local economy | Project region | • The EPC Contractor will investigate Kenyan capacity to supply construction materials, goods and services;  
• Whenever goods or services are available on a competitive basis, the policy will be to purchase locally | KPLC will encourage local business leaders to form a liaison group to assist KPLC in monitoring local procurement practices | Construction phase | No additional cost. 
Performance is based on sound engineering practice and supervision. |
| Opportunities for employment | Extent of facilities | • The EPC Contractor will develop and implement a plan to ensure that local residents are given first priority for job opportunities for which they are qualified, before workers from outside the region are hired;  
• Details of specific job opportunities will be released and information provided on application procedures. | KPLC to monitor implementation of plan | Construction phase | No additional cost. 
Performance is based on sound engineering practice and supervision. |
| Cumulative Effects | Study area | • KPLC has avoided potentially significant social effects by routing the proposed line adjacent to the existing line in most places;  
• In forest areas, wayleave width will be restricted to 35m;  
• Effects on ecological functions in forests will be offset by enrichment planting of forest within the reserve; | KPLC report on status of mitigation measures taken for forested areas in yearly progress report | Entire project phases | No additional cost. 
Performance is based on sound engineering practice and supervision. |
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Management &amp; Mitigation Measures</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Enhanced capacity of the system by building a 220kV capacity line now avoids need for construction of additional line as transmission demand grows.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>-------------------------</td>
<td>-----------------------------------------------------</td>
<td>------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Visual and Aesthetic Impacts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of the transmission line reduces aesthetic values for ecotourism and recreation</td>
<td>Scenic Rift Valley Basin</td>
<td>None required</td>
<td>During construction, KPLC to report on status of tourist facilities in regular compliance reporting</td>
<td>Project planning phase &amp; construction period</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td>Tower design too busy, with many lattice members, gigantic and overbearing</td>
<td>Scenic Rift Valley Basin</td>
<td>None required</td>
<td>KPLC project management</td>
<td>Project planning phase</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td>Visibility of towers &amp; conductors</td>
<td>Entire transmission line project</td>
<td>None required</td>
<td>KPLC project management</td>
<td>Construction phase</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td><strong>Land Take</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land affected by the construction and operation of the proposed transmission line</td>
<td>Entire transmission line project; existing substations</td>
<td>None required</td>
<td>KPLC project management</td>
<td>Project planning phase &amp; construction period</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td>Wayleave Acquisition &amp; maintenance</td>
<td>Entire transmission line project</td>
<td>None required</td>
<td>KPLC project management</td>
<td>Project planning phase &amp; construction period</td>
<td>Based on current land valuation and negotiation results with existing land owners</td>
</tr>
<tr>
<td><strong>Impacts on National Parks and Conservancies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced aesthetic values for ecotourism and recreation</td>
<td>Hell's Gate National Park, Lake Nakuru National Park, Soysambu Conservancy</td>
<td>None required</td>
<td>KPLC to implement design and location procedures prescribed in the framework</td>
<td>Project planning phase &amp; construction period</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td><strong>Impacts on Forests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incompatible land use in a designated reserve</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt.</td>
<td>Daily auditing and spot checks;</td>
<td>KPLC to inspect clearing in forest areas to confirm work confined to 35m</td>
<td>Project planning</td>
<td>To be determined in conjunction with</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Permanent loss of forest land will reduce the available habitat for vegetation and wildlife, and reduce the forests' function as carbon sinks</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt. Londiani Forest, Timboroa Forest, and N. Tinteret Forest</td>
<td>Daily auditing and spot checks; Report monthly; Inventory and collection of selected plants and ecologically valuable trees.</td>
<td>KPLC to update status of regeneration plan in regular compliance reporting.</td>
<td>Project planning, construction and operation phases</td>
<td>To be determined in conjunction with KFS during wayleave acquisition</td>
</tr>
<tr>
<td>The resulting cleared corridor may pose a barrier to movement of 'forest interior' wildlife species between the forested areas on either side of the transmission line</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt. Londiani Forest, Timboroa Forest, and N. Tinteret Forest</td>
<td>Daily auditing and spot checks; Report monthly; Inventory and collection of selected plants and ecologically valuable trees.</td>
<td>Current status of 'cross line corridors' will be determined by KPLC and KFS.</td>
<td>Project planning, construction and operation phases</td>
<td>To be determined in conjunction with KFS &amp; KWS</td>
</tr>
<tr>
<td>Improvements to access required for construction may increase grazing, bushmeat hunting &amp; illegal felling of timber</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt. Londiani Forest, Timboroa Forest, and N. Tinteret Forest</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>KPLC, in collaboration with KFS, to report on status of access and any issues arising, in regular compliance reporting</td>
<td>Project construction &amp; operation phases</td>
<td>No additional costs</td>
</tr>
<tr>
<td>Forest fires, if underlying growth is left unchecked, or slash from routine maintenance accumulates in RoW</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt. Londiani Forest, Timboroa Forest, and N. Tinteret Forest</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>KPLC, in collaboration with KFS, to report on status of access and any issues arising, in regular compliance reporting</td>
<td>Project construction &amp; operation phases</td>
<td>To be determined in conjunction with KFS</td>
</tr>
<tr>
<td>Illegal hunting of bushmeat by workers</td>
<td>Nakuru Lake Forest, Londiani Forest, Mt.</td>
<td>Daily auditing and spot checks;</td>
<td>KPLC, together with KFS, to randomly inspect vehicles at ingress and egress</td>
<td>Construction phase</td>
<td>Additional security costs in forested</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Time Frame</td>
<td>Responsibility</td>
<td>Monitoring Requirements</td>
<td>Estimation Costs</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------</td>
<td>------------</td>
<td>----------------</td>
<td>-------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Impacts on Wetland Ecosystems</td>
<td>Londiani Forest, Timbora Forest, and N. Tindare Forest</td>
<td>Construction phase</td>
<td>KPLC to inspect construction activities in the wetland areas regularly</td>
<td>Daily auditing and spot checks; Routine sampling at the wetland areas; Water Quality Sampling Analysis reports (Ref. Schedule of Water Quality Regulation, 2009).</td>
<td>Production of environmental report (KShs 2,000,000)</td>
</tr>
<tr>
<td>Soil Erosion Impact from Vegetation Clearance</td>
<td>Nakuru, Elementaita and Nakuru</td>
<td>Construction phase</td>
<td>KPLC Project management; Contractor</td>
<td>Daily auditing and spot checks; Routine sampling at the site; Water Quality Sampling Analysis reports (Ref. Schedule of Water Quality Regulation, 2009).</td>
<td>Recovery of exposed soils and revegetation costs (KShs 2,000,000).</td>
</tr>
<tr>
<td>Impacts due to construction</td>
<td></td>
<td>Report monthly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated that large-scale earthworks might cause suspended solids to be mobilised into the water body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential for microbial contamination of surface water and soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposition of eroded soils into watercourses; disturbance of flows and habitat from installation of culverts and bridges</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil exposed during site preparation, vegetation clearance, and building</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The estimated costs are for the implementation of environmental protection measures.
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Monitoring Requirements</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion of soils on steep slopes disturbed by excavation for tower footings or clearing for access track</td>
<td>Steep slopes along extent of transmission lines, including Maji Mazuri, Naivasha and Nandi Escarpment</td>
<td>Daily auditing and spot checks; Report monthly; Compaction records; Regular inspection on implementation of good soil conservation practices; Regular inspection of storm water drainages (Ref Fourth Schedule of Water Quality Regulation, 2006).</td>
<td>Periodic inspection by the EPC Contractor of steep slopes during construction and rehabilitation measures following construction</td>
<td>Construction phase</td>
<td>Recovery of exposed soils and revegetation costs (KShs 2,000,000)</td>
</tr>
<tr>
<td>Topsoil compaction, rutting and mixing from: grading, excavations and transportation of equipment, concrete and steel to tower sites over access roads and ROW</td>
<td>Areas to be cleared or excavated along transmission lines including tower sites and access tracks</td>
<td>Daily auditing and spot checks; Report monthly; Compaction records; Regular inspection on implementation of good soil conservation practices; Regular inspection of storm water drainages (Ref Fourth Schedule of Water Quality Regulation, 2006).</td>
<td>Following construction, the EPC Contractor to check for compaction on cultivated soils outside the ROW and remediate as necessary</td>
<td>Construction phase</td>
<td>Recovery of exposed soils and revegetation costs (KShs 2,000,000)</td>
</tr>
</tbody>
</table>

**Impacts on Fauna & Avifauna**

<p>| The power lines introduce a physical hazard to birds and climbing animals | Entire length of lines | Daily auditing and spot checks; Report monthly. | KPLC, in collaboration with KWS, to report unusual bird strikes and/or animal electrocutions, in regular compliance reporting. | Planning, construction &amp; operation phases                                                                                                                                                                                                                                                                                                                                 | No additional cost. Based on sound engineering practice |
| Injury and fatalities arising from migratory birds colliding with transmission lines | Lakes Naivasha, Elementaita, and Nakuru | Daily auditing and spot checks; Report monthly. | KPLC to liaise with KWS &amp; Soysambu conservancy to monitor and record bird fatalities; KPLC to maintain records of abnormal bird fatalities | Planning, construction &amp; operation phases                                                                                                                                                                                                                                                                                                                                 | No additional cost. Based on sound engineering practice |</p>
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Monitoring Requirements</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Impacts on Aviation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential risk to aircraft through collisions and</td>
<td>Lakes Naivasha, Elementaita,</td>
<td>Regular spot checks; Report monthly.</td>
<td>KPLC, in collaboration with ICAO &amp; Soysambu conservancy, to consult on</td>
<td>Planning, construction &amp; operation phases</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td>electrocutions</td>
<td>and Nakuru</td>
<td></td>
<td>location of airstrips prior to confirmation of final transmission line RoW.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Impacts on Archaeological, Cultural and Historic Sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No archaeological sites identified to date within</td>
<td>A site(s) may be uncovered</td>
<td>Regular spot checks; Report monthly.</td>
<td>KPLC to ensure workers receive training on importance of archaeological sites</td>
<td>Planning &amp; construction phases</td>
<td>No additional cost. Based on sound engineering practice</td>
</tr>
<tr>
<td>transmission line project vicinity</td>
<td>anywhere along the</td>
<td></td>
<td>and artefacts and how to identify them</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>transmission line project,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>especially in the Rift Valley basin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Impacts on Public Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spread of HIV/AIDS &amp; other communicable &amp; sexually</td>
<td>Areas of concentrated</td>
<td>Daily auditing and spot checks; Report monthly; HIV/AIDS</td>
<td>KPLC in conjunction with Ministry of Health and relevant NGOs</td>
<td>Construction phase</td>
<td>Production of HIV/AIDS programme reports; Training and sensitization costs (KShs 2,500,000)</td>
</tr>
<tr>
<td>transmitted diseases (STDs)</td>
<td>workers</td>
<td>programme reports (Monthly, Interim Survey Study and Final Survey Study).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>KPLC to maintain a record of each worker's orientation &amp; ongoing education. Maintain records of condom distribution program.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Impacts: Resettlement &amp; Compensation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical relocation of persons &amp; acquisition of land or</td>
<td>Wayleaves, Rights-of-Way &amp;</td>
<td>KPLC to implement grievance, monitoring &amp; evaluation</td>
<td>KPLC management, Ministries of Lands, Housing and Settlement</td>
<td>Prior to construction phase</td>
<td>Based on current land valuation and negotiation results with existing land owners</td>
</tr>
<tr>
<td>land rights for the project</td>
<td>Timboroa / Makutano substation</td>
<td>procedures as prescribed in the resettlement policy</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ESIA KPLC Proposed Kisumu-Lesos-Olkaria
Transmission Line Volume I

8-29

Issue 1.0 / December 2009
<table>
<thead>
<tr>
<th>Environmental Issue</th>
<th>Location</th>
<th>Monitoring Requirements</th>
<th>Responsibility</th>
<th>Time Frame</th>
<th>Estimated Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Health &amp; Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live power lines</td>
<td>Extent of transmission line project</td>
<td>Health &amp; Safety Plan established and followed; SHE Training program; Monthly reporting KPLC project management</td>
<td>KPLC management to liaise with DOHSS</td>
<td>During construction and operation phases</td>
<td>No additional cost, based on sound engineering practice; Regular training of KPLC staff; Community sensitization (KShs 2,000,000)</td>
</tr>
<tr>
<td>Working at height during construction, maintenance, and operation activities.</td>
<td>Extent of transmission line project</td>
<td>Fall Protection Program; SHE Training program; Monthly reporting</td>
<td>KPLC project management + DOHSS</td>
<td>During construction and operation phases</td>
<td>No additional cost. Regular (already established) in-service staff training</td>
</tr>
<tr>
<td>Community health &amp; safety</td>
<td></td>
<td>Community Health &amp; Safety Plan established and followed; SHE Training &amp; sensitization program; Monthly reporting</td>
<td>KPLC project management</td>
<td>Construction and operation phases</td>
<td>Community sensitization programme (KShs 1,000,000)</td>
</tr>
<tr>
<td>Public safety issues regarding: accidental contact with lines, collision with construction equipment, excavations on ROW, material storage, tower construction</td>
<td>Active construction areas</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>KPLC to maintain records of any incidents, investigations &amp; corrective actions</td>
<td>Construction and operation phases</td>
<td>Community sensitization programme (KShs 1,000,000)</td>
</tr>
<tr>
<td>Climbing and electrocution risk</td>
<td>All transmission towers and sub-</td>
<td>Daily auditing and spot checks;</td>
<td>Periodic inspection and repair as necessary</td>
<td>Construction and operation</td>
<td>Community sensitization</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Management of Hazardous and Contaminating Material</td>
<td>All sites</td>
<td>Daily auditing and spot checks; Report monthly; Emergency telephone contact numbers for staff; Material Safety Data Sheets; Maintenance schedule for Equipment, transportation trucks and oil interceptors (Ref Fourth Schedule of Waste Management Regulations, 2006).</td>
<td>Monthly Environmental Inspection form to be completed</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering &amp; supervision practices</td>
</tr>
<tr>
<td>Management of Waste</td>
<td>All sites</td>
<td>Daily auditing and spot checks; Report monthly (Ref Third &amp; Fourth Schedule of Waste Management Regulations, 2006); Project Manager Inspection and approval reports; Water quality monitoring</td>
<td>Monthly Environmental Inspection form completed by KPLC</td>
<td>Planning, construction &amp; operation phases</td>
<td>Production of monthly reports (KShs 1,000,000); Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Air Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fugitive dust in the immediate vicinity of construction activities, and loose</td>
<td>Right-of-Way and access roads, Timboroa substation</td>
<td>Daily auditing and spot checks; Report monthly; Air Quality Sampling Analysis reports</td>
<td>Daily inspection by the EPC Contractor of construction areas for excessive</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td>surface roadways</td>
<td></td>
<td>(Ref Eleventh Schedule of Air Quality Draft Regulations).</td>
<td>nuisance dust KPLC/ the EPC Contractor to maintain records of complaints on air</td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>quality, and follow-up corrective or measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impaired air quality from exhaust of heavy equipment, motor vehicles and other</td>
<td>Transportation routes, construction sites</td>
<td>Daily auditing and spot checks; Report monthly; Air Quality Sampling Analysis reports</td>
<td>EPC Contractor to make spot visual inspections of exhaust and vehicle loads and</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td>equipment with internal combustion engines</td>
<td></td>
<td>(Ref Eleventh Schedule of Air Quality Draft Regulations).</td>
<td>complete Monthly Environmental Inspection report. EPC Contractor to maintain</td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>record of corrective action taken.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smoke from uncontrolled combustion of cleared vegetation and combustible construction waste</td>
<td>Forested sections of wayleaves, Timboroa substation</td>
<td>Daily auditing and spot checks; Report monthly; Air Quality Sampling Analysis reports</td>
<td>Monthly Environmental Inspection report to be completed by KPLC</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Ref Second Schedule of Air Quality Draft Regulations).</td>
<td></td>
<td></td>
<td>Approval costs from relevant authorities (NEMA rates)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuisance noise at adjacent sensitive receptors</td>
<td>Schools and residences along the transmission lines</td>
<td>Daily auditing and spot checks; Report monthly; Noise Quality Sampling Analysis</td>
<td>Liaison by the EPC Contractor with adjacent residents and landowners to identify</td>
<td>Construction phase</td>
<td>Production of monthly reports (KShs 1,000,000);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reports (Ref Eleventh Schedule of Air Quality Draft Regulations).</td>
<td>nuisance noise issues and resolve complaints.</td>
<td></td>
<td>Approval costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>Traffic Congestion/Road Wear and Tear</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structural Integrity of Roads</td>
<td>Transportation routes and access roads</td>
<td>Regular spot checks; Report monthly.</td>
<td>KPLC to inspect road conditions weekly</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering practice.</td>
</tr>
<tr>
<td>Disruption of traffic at access points to access roads</td>
<td>Transportation routes and access roads</td>
<td>Regular spot checks; Report monthly.</td>
<td>KPLC to implement a traffic complaints and corrective action procedure</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering practice and supervision.</td>
</tr>
<tr>
<td>Traffic congestion as a result of incremental traffic associated with the project</td>
<td>Main transportation routes</td>
<td>Regular spot checks; Report monthly.</td>
<td>KPLC to implement a traffic complaints and corrective action procedure</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering practice and supervision.</td>
</tr>
<tr>
<td>Risk of accidents due to project related traffic</td>
<td>Transportation routes &amp; access roads</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>KPLC &amp; EPC Contractor to maintain records of all accidents involving project vehicles. KPLC to implement a traffic complaints &amp; corrective action procedure.</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering practice and supervision.</td>
</tr>
<tr>
<td>Labour &amp; Working Conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adherence to labour standards &amp; well-being of</td>
<td>Entire transmission line project</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>Contractor to keep accurate employment records.</td>
<td>Construction phase</td>
<td>No additional cost. Performance is based on sound engineering practice and supervision.</td>
</tr>
<tr>
<td>Environmental Issue</td>
<td>Location</td>
<td>Monitoring Requirements</td>
<td>Responsibility</td>
<td>Time Frame</td>
<td>Estimated Costs</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------------</td>
<td>-------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>construction workers</td>
<td></td>
<td>Report monthly.</td>
<td>On-going monitoring by KPLC of EPC contractor's performance; Investigation &amp; corrective action for reported incidence of labour abuses</td>
<td></td>
<td>Performance is based on sound engineering practice and supervision.</td>
</tr>
<tr>
<td>Work related injury or health effects</td>
<td>All project areas</td>
<td>Daily auditing and spot checks; Report monthly.</td>
<td>KPLC to complete Monthly Environmental Inspection report. KPLC to maintain records of inspections, incidents, investigations &amp; corrective actions</td>
<td>Construction and operation phases</td>
<td>No additional cost. Performance is based on sound engineering practice and supervision.</td>
</tr>
</tbody>
</table>

**Developmental & Community Benefits**

| Purchase of local goods and services will boost local economy | Project region | No monitoring required | KPLC will encourage local business leaders to form a liaison group to assist KPLC in monitoring local procurement practices | Construction phase | No additional cost. Performance is based on sound engineering practice and supervision. |
| Opportunities for employment | Extent of facilities | No monitoring required | KPLC to monitor implementation of plan | Construction phase | No additional cost. Performance is based on sound engineering practice and supervision. |

**Cumulative Effects**

| Cumulative effects of the project on ecological and social conditions, aesthetics, and land development patterns | Study area | Regular spot checks; Report annually. | KPLC report on status of mitigation measures taken for forested areas in yearly progress report | Entire project phases | No additional cost. Performance is based on sound engineering practice and supervision. |
CONCLUSION

This ESIA Study has been prepared to provide sufficient and relevant information on the proposed KPLC 220kV transmission line running from Olkaria-Lessos-Kisumu, to enable NEMA establish whether activities of the project are likely to have significant adverse environmental impacts. Mitigation and monitoring measures have been proposed for identified impacts in this report and Environmental and Social Management (ESMP) and Monitoring (ESMoP) Plans presented. The ESMP and ESMoP presented in this report are tools to be used by the Project Team and Project Proponent during the construction and operation periods. This report presents issues that should be addressed in order to ensure environmental sustainability and compliance with the existing legal requirements.

The risks during the proposed transmission line project to be monitored include, but are not limited to the following issues:

- Visual and Aesthetic Impacts;
- Land take;
- Impacts on National Parks and Conservancies;
- Impacts on Forests;
- Impacts on Wetland Ecosystems;
- Impacts on Avifauna;
- Impacts on Aviation;
- Impacts on Archaeological, cultural and historical sites;
- Impacts on Public Health;
- Social Impacts;
- Occupational Health & Safety Impacts;
- Soil Erosion Impact from Vegetation Clearance;
- Impacts of Earth and other Construction Material Sourcing (eg. Quarrying);
- Hazardous Materials;
- Waste Management;
- Air and Dust Emissions;
- Noise;
- Impacts of Fuel and Chemical Storage on Site;
- Traffic Congestion/ Road Wear and Tear;
- Labour Force Management;
- Contractor Code of Conduct; and
- Environmental and Social Monitoring.

Key environmental management and mitigation measures proposed include the following:

- Design of resettlement and compensation activities to ensure compliance with the laws and regulations of Kenya, international requirements like JBIC and World Bank, and existing KPLC policy resettlement framework;
- Minimize the effects on aesthetics and ecology of sensitive ecosystems;
- Reduce temporary disturbance of the wetlands and avoid permanent intrusion into the wetland area;
- Include diversions of the transmission line's Right-of-Way (RoW) to minimize the impacts on archaeological, cultural and historical sites;
- No construction camps will be set up for the proposed project;
- Contractor to calculate the EMF levels generated by the various components of the project

GIBB recommends that KPLC adhere to all the proposed mitigation measures outlined in this Study, the various relevant guidelines and legislation governing resettlement and compensation, sensitive ecosystems, labour force management, public and worker health and safety, management of hazardous and contaminating material, management of waste. The project will cost a total of USD 99.5 million.
REFERENCES


Ching, F.D.K. Architecture: Form, Space and Order. New York, Norstrand Reinhold. 1976

Clough Smith Ltd. Construction Operations, Chapter Six. Manual used for the construction of foundations, erection and stringing of towers on the Kiambere Hydro-electric Project.


IFC. Environmental, Health & Safety Guidelines for Electric Power Transmission and Distribution.


APPENDICES

List of Appendices

Appendix 1: GIBB Registration Certificate & EIA Licence
Appendix 2: Letter of Award
Appendix 3: Copy of Approval of ToRs by NEMA
Appendix 4: Notice of meetings to Local Administration (2nd round)
Appendix 5: Notice of meetings to Local Administration (3rd round)
Appendix 6: Project Information Document (PID)
Appendix 7: Sample Initial Questionnaire
Appendix 8: Sample Questionnaire: Socio-economic survey
Appendix 9: Maps representing environmental features traversed by the proposed transmission line
  Appendix 9.1: Transmission lines & lakes
  Appendix 9.2: Settlement along the transmission line
  Appendix 9.3: Transmission lines & river crossings
  Appendix 9.4: Transmission lines and forest cover
  Appendix 9.5: Location of archaeological sites
  Appendix 9.6: Location of National Parks near the proposed transmission line
Appendix 10: Raw data for Ecological Survey
Appendix 11: Summary on public consultation dates, venues and issues
Appendix 12: Relevant environmental quality standards/ regulations
Appendix 13: JBIC Environmental Checklist No. 14
Appendix 14: Comments on Draft ESIA Report
Appendix 15: Photo plate
APPENDIX 1

GIBB Registration Certificate & EIA Licence
THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT
CERTIFICATE OF REGISTRATION AS AN ENVIRONMENTAL IMPACT
ASSESSMENT/AUDIT EXPERT

This is to certify Ms. GIBB (Eastern Africa)
of P.O. BOX 300020 NAIROBI.......
(Address)
has been registered as an Environmental Impact Assessment Expert in accordance with the provisions
of the Environment Management and Coordination Act and is authorized to practice in the capacity of
a Lead Expert/Associate Expert/Firm of Experts (Type)....FIRM EXPERT.

Dated this 10TH day FEBRUARY of 2004........

Signature.....

(Seal)

Director General
The National Environmental Management Authority
THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT
ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT PRACTICING LICENCE

M/S .......... GIBB AFRICA LIMITED ............... (individual or firm) of
Address ...... P.O BOX 30020-00100
NAIROBI

is licenced to practice in the capacity of a (Lead Expert/Associate Expert/Firm of Experts) .......

FIRM OF EXPERTS

in accordance with the provisions of the Environmental Management and Coordination Act.

Dated this ....... 08th .... Day .... April .... of 20.....99

Signature 

(Seal)

Director General
The National Environment Management Authority

Conditions of Licence
1. This licence expires on 31st December, 20.....99
Our Ref: KPLC1/8/3/1/2009

3rd August, 2009

Your Ref:

GIBB Africa Limited,
P.O BOX 30020-00100,
NAIROBI,
TEL: +254-20-3245000
FAX: +254-20-2244493

RE: CONSULTANCY SERVICES FOR CARRYING OUT ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROPOSED KISUMU-LESSOS-OLKARIA TRANSMISSION LINE UPGRADING PROJECT

We refer to your tender dated 9th July 2009, and are pleased to inform you that following evaluation, your tender for Carrying out Environmental & Social Impact Assessment of the Proposed Kisumu-Lessos-Okarua Transmission Line Upgrading Project has been successful. The consultancy services will be at a cost of Kenya Shillings Two Million Eight Hundred and Nine Thousand Five Hundred and Twenty Only (Kshs 2,809,520.00).

This notification does not constitute a contract and the formal Contract Agreement, which is enclosed herewith for your perusal should be executed within Fourteen (14) days from the date hereof pursuant to the provisions of the Public Procurement and Disposal Act 2005. Please initial all the enclosed documents which form part of this contract and return the same together with the contract duly executed.

Yours faithfully,

for: THE KENYA POWER AND LIGHTING COMPANY LIMITED

A. N. GATUKUI
PROCUREMENT MANAGER
APPENDIX 3  Copy of Approval of ToRs by NEMA
The Kenya Power & Lighting Co., Ltd.

SCOPING REPORT & TERMS OF REFERENCE

FOR

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT STUDY

FOR

THE PROPOSED KISUMU-LESSOS-OLKARIA UPGRADE TRANSMISSION LINE PROJECT, KENYA

JULY 2009

[Stamp: APPROVED 5 JUL 2009]
APPENDIX 4  Notice of meetings to Local Administration (2nd round)
Kwa D.C.

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBABA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)


KPLC imeipa kazi kampuni ya GIEB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakatokaana na mradi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakaoathiriwa na mradi huu, wadu wabari mtahi na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kikutana na wananchi kwa ajili ya ushauri kama isuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATUMUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Timboroa</td>
<td>Timboroa Market</td>
<td>1. October, 2009</td>
<td>Saa nane Jioni (2pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yakio tunayoheshimu itusaide kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBABAJI UMEME
Mkuu Wa Wilaya,  
Wilaya ya Kisumu,

Kwa D.C,

Yah: KUPATA MAWAIIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)


KPLC imeipsi kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakayotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations—June 2003) wote wenyewe nia na wale watakaoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukuwata na wananchi kwa ajili ya ushauri kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Kibos</td>
<td>Kibos Centre</td>
<td>3. October, 2009</td>
<td>Saa sita Jioni (12pm)</td>
</tr>
<tr>
<td>Eneo la Mamboleo</td>
<td>Mamboleo Centre</td>
<td>3. October, 2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoithimu itusaidie kuwajulisha wanachi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn 23 Septemba, 2009

Mkuu Wa Wilaya,
Wilaya ya Naivasha.

Ionwe na: Bw. Mohamed Birik

Bwana D.C.,

Yah: KUPATA MWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya ushauri kama ilustavvyo.

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Lake road, Mashamba ya maua Naivasha</td>
<td>DCK Centre, Naivasha</td>
<td>28, Septemba, 2009</td>
<td>Saa nne asubuhili (10am)</td>
</tr>
<tr>
<td>Kayole, KWSTI, Prisons na Maua ya Panda</td>
<td>Kayole 'B' Centre</td>
<td>28, Septemba, 2009</td>
<td>Saa nne joni (2pm)</td>
</tr>
<tr>
<td>Mti Mingi na Elmentaita</td>
<td>Mtingi Centre</td>
<td>29th Septemba, 2009</td>
<td>Saa nne asubuhili (10am)</td>
</tr>
<tr>
<td>Jogoo road</td>
<td>Jogoo road centre</td>
<td>29th Septemba, 2009</td>
<td>Saa tisa joni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoreshimu ilusaidie kuwajulisha wanachi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Nakuru-Molo,

Kwa D.C,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)


KPLC imeiipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakayotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya ushauri kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI MKUTANO</th>
<th>PA</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Mau Summit</td>
<td>Total Centre</td>
<td>1</td>
<td>October, 2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wanachi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Mkuu Wa Wilaya,
Wilaya ya Nakuru,

Bwana D.C.,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEE WA OMKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatekayotokana na mradi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadu mbali mbali na wananchi wote wanaoshinda ndani na karibu na eneo la mradi, wanaapawa kushauriwa ili kupata maoi yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya ushauri kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATIMUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Karabati</td>
<td>Karabati Centre</td>
<td>30, Septemba, 2009</td>
<td>Saa mmo asubuhi (10am)</td>
</tr>
<tr>
<td>Eneo la Ngata na Salgaa</td>
<td>Telkom Centre</td>
<td>30, Septemba, 2009</td>
<td>Saa mmo Jioni (2pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayotheshimu ilusaidia kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn  

23 Septemba, 2009

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Nandi East,

Kwa D.C.,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBASA UMEME WA OLKARIA-LESOS-KISUMU-
UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)

Kampuni ya Kenya Power and Lighting (KPLC) inataraaji kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakayotokana na mradi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenywe nia na waile watakaoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanoisho ndani na kariibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya ushauri kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Nandi Hills</td>
<td>Nandi Hills Town Centre</td>
<td>2, October, 2009</td>
<td>Saa Tisha Jioni (3pm)</td>
</tr>
<tr>
<td>Eneo la Mberere na OCPP</td>
<td>Mberere Centre</td>
<td>3, October, 2009</td>
<td>Saa nne asubuh (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wanachi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

23 Septemba, 2009

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Wareng,

Kwa D.C,

Yah: KUPATA MAWAIIDA KUHUSU MRADI WA KUSAMBBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakayotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na wale watakaoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kikutana na wananchi kwa ajili ya ushauri kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Lessos</td>
<td>Lessos Centre</td>
<td>2, October, 2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoihesimu itusaidie kuwajulisha wanachi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAJMA MENEJA MKUU, USAMBAAJI UMEME
APPENDIX 5

Notice of meetings to Local Administration (3rd round)
The Kenya Power & Lighting Co. Ltd.
The Kenya Power & Lighting Co. Ltd.
Central Office - P.O. Box 30099, Nairobi, Kenya
Telephone - 254-02-3201000-Telegrams 'ELECTRIC'
Fax No. 254-02-310336
Stima Plaza, Kolosal Road

Our Ref: KPLC1/1F/8/3/1/09/JG/wbn 21 October, 2009

Your Ref:

Chief,
Timboroa Location,
Wilaya ya Kipkelion

Kwa Chief,

Yah: KUPATA MAWIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-
UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-
AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na wala watakaoathiriwa na mradi huu, wadapi mali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Timboroa na Mumberes</td>
<td>Ofisi ya Chief</td>
<td>29.10.2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

[Signature]
MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Chief,
Mumberes Location,
Wilaya ya Kipketi

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUSSU MRADI WA KUSAMBASA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadani mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapasa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahili kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Timboora na Mumberes</td>
<td>Ofisi ya Chief</td>
<td>29.10.2009</td>
<td>Saa mne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajuliwa wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Mkuu Wa Darafa,
Darafa ya Timboroa,

Kwa D.O,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBABA UMEME WA OLKARIA-LESSOS-KISUMU-
UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-
AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenywe nia na wale watakaoathiriwa na mradi huu, wadu mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapasa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kamaifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Timboroa na Mumberes</td>
<td>Ofisi ya Chief</td>
<td>29.10.2009</td>
<td>Saa nne asubuh (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

21st October, 2009

D.O.,
Mau Summit Division,

Bwana D.O,

Yah: KUPATA MAWIAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-
UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT) -
AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo za kufunga nyaya za kuzambaza
umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya
wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeupa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na
mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote
wenye nia na wale watatakaathiwa na mradi huu, wadai mbali mbali na wananchi wote wanaoishi ndani na
karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mau Summit na Kamere</td>
<td>Chief’s Office</td>
<td>28.10.2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

21 October, 2009

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Nakuru,

Kwa D.C,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-
UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-
AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguso za kufungaa nyaya za kuzambaza
umeme (stimu) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezea Wakenya
wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipia kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na
mrandi huu,

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote
wenye nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi vote wanaoishi ndani na
karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Ngata na Salgaa</td>
<td>Telcom Centre</td>
<td>28.10.2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
<tr>
<td>Mau Summit na Kamare</td>
<td>Chief’s Office</td>
<td>28.10.2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref: 

21 October, 2009

Kwa D.O,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stimu) kutoka Olkaria hadi Kisu mu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imelpa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi za mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Ngata na Salgaa</td>
<td>Telcom Centre</td>
<td>28.10.2009</td>
<td>Saas nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn  21 October, 2009

Your Ref: 

Chief,  
Mau Summit Location,  

Kwa Chief,  

Yahe: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU  


KPLC imeipa kazi kampuni ya Gibb Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mradi huu.  

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations–June 2003) wote wenye nia na wale watakaoathiriwa na mradi huu, wadui mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.  

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:  

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mau Summit na Kamare</td>
<td>Chief’s office</td>
<td>28.10.2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.  

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED  

MHANDISI SAMMY MUTA  
KAINU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Chief,
Mau Summit Location,

Kwa Chief,

**Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-A WAMU YA TATU**

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuiria uchumi wa Kenya.

KPLC imeipa kazi kampuni ya Gibb Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrundi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na wale watakaoathiria na mrudi huu, wadu mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mrardi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mau Summit na Kamare</td>
<td>Chief's office</td>
<td>28.10.2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

[Signature]

MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Mkuu Wa Wilaya,
Wilaya ya Tineret,

Bwana D.C,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadada mbali mbali na wananchi wote wanaoishi ndani na kanbu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahli kama iluatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessos na Mberere</td>
<td>Lessos Centre,</td>
<td>29.10.2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoihesimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

[Signature]

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn

Your Ref:

Mkuu wa Wilaya,
Wilaya ya Tinderet,

Bwana D.C,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUIZA WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe aina na wale watakatayoathiriwa na mradi huu, wadawa mbalii mbalii na wananchi wote wanaolihi ndani na kanbu na eneo la mradi, wanaapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kikutana na wananchi kwa ajili ya usahili kama iluatavo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/ MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessos na Mberere</td>
<td>Lessos Centre</td>
<td>29.10. 2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofis yako tunayo heshimu itusaidie kwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEKA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref: 

Mkuu Wa Wilaya,
Wilaya ya Kisumu,

Kwa D.C,

**Yah: KUPATA MAWAIIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU**


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe ni na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaotshidi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO la Kibos</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enbole Centre</td>
<td>Village Centre</td>
<td>30.10.2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
<tr>
<td>Mamboleo Centre</td>
<td>Mamboleo Centre</td>
<td>31.10.2009</td>
<td>Saa tano asubuh (11am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: **KENYA POWER & LIGTHING COMPANY LIMITED**

*MHANDISI SAMMY MUITA*  
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Chief,
Mamboleo Location,
Wilaya ya Kisumu,

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUUSI MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe ni na wale watakatooathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mamboleo Centre</td>
<td>Mamboleo Shopping</td>
<td>31.10.2009</td>
<td>Saa tano asubahi (11am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

[Signature]

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn                                           21 October, 2009

Your Ref: 

Chief,
Miwani Location,
Wilaya ya Nyando

Kwa Chief,

Yah: KUPATA MAWIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU


KPLC imeanza kazi campuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulinganana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations—June 2003) wote wenye nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Kibos</td>
<td>Village Centre</td>
<td>30, October, 2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoheshimu itusahaan kwawajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

[Nanderi: SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAAJI UMEME]
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn  

21 October, 2009

Your Ref:

Mkuu wa Wilaya,  
Wilaya ya Nyando

Kwa D.C.,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) initaraji kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe ni na wale watakaoathiriwa na mradi huu, wadadu mbali mbali na wananchi wote wanaishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraji kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eneo la Kibos</td>
<td>Village Centre</td>
<td>30, October, 2009</td>
<td>Saa tisa Jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu ituasaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA  
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
The Kenya Power & Lighting Co. Ltd.
The Kenya Power & Lighting Co. Ltd.
Central Office – P.O. Box 30009, Nairobi, Kenya
Telephone – 254-02-3201000-Telegrams ‘ELECTRIC’
Fax No. 254-02-310336
Stima Plaza, Klobot Road

Our Ref: KPLC:1/1F/8/3/1/09/JG/wbn 21 October, 2009

Your Ref:

Chief,
Lessos Location,
Tinderet District

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU


KPLC imeipa kazi kampuni ya Gibb Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakotokana na mradi huu.

Kulingana na kanuni za uchunguzi za mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenywe nia na wale watokaอาทิริwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapawapa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kubutana na wananchi kwa ajili ya usahului kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessos na Mberere</td>
<td>Lessos Centre,</td>
<td>29.10.2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu itusaide kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

ниandisi Sammy Muita
KaImu meneja mkuu, usambazaji umeme
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn 21 October, 2009

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Nandi Hills,

Bwana D.C.,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wa kuzambaza umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mradi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakaoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahili kama ifutavío:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nandi Hills na Taito Location</td>
<td>Taito Centre,</td>
<td>30.10.2009</td>
<td>Saa nne asubhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoreshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
AIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref. KPLC1/1F/8/3/1/09/JG/wbn

21. October, 2009

Chief,
Taito Location,
Wilaya ya Nand Hills,

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo wa kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessor. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimalisha uchumu wa Kenya.

KPLC imewapa kazi kampuni ya Gibb Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakonyotokana na mrundi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakaoathirwa na mrundi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kusalimu ili kupata mawaidha yao kuhusu mrudi huu.

Tunatarajia kikutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nandi Hills na Taito Location</td>
<td>Taito Centre,</td>
<td>30.10.2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

**MHANDISI SAMMY MUITA**
KAIMU MENEJA MKUJU, USAMBAZAJI UMEME
The Kenyan Power & Lighting Co. Ltd.

Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Tinderet,

Kwa D.C,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBABA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT): AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakonyokana na mradi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakachathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maeoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama iluatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lessos na Mberere</td>
<td>Lessos Centre,</td>
<td>29.10.2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu iluussidi kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

*MHANDISHI SAMMY MUITA*
*KAINAMA MENEJA MKUU, USAMBAZAJI UMEME*
Our Ref: KPLC1/1/F/8/3/1/09/JG/wbn

Your Ref:  

Chief,

Nandi Hills Location,

Kwa Chief,

Yah: KUPATA MAWAI'DHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMI YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguza za kufunga nyaya za kuzambaza umeme (slima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakaoathiriwa na mradi huu, wadai mbali mbali na wananchi wote wanaoishi ndani na kanbu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kukutana na wananchi kwa ajili ya usahili kama itutavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nandi Hills na Taito Location</td>
<td>Taito Centre,</td>
<td>30.10.2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoifishimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

[Signature]

MHANDISI SAMMY MUTA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
The Kenya Power & Lighting Co. Ltd.

Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Mkuu Wa Wilaya,
Wilaya ya Naivasha,

Ionwe na: Bw. Mohamed Birik

Kwa D.C.

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kuptia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadaw mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kukutana na wananchi kwa ajili ya usahii kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Lake road, eneo la DCK market na Sanctuary, Naivasha</td>
<td>DCK Centre, Naivasha</td>
<td>26, October, 2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
<tr>
<td>Eneo la Kayole,</td>
<td>Kayole 'B' Centre</td>
<td>26, October, 2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoihishimu itusaide kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

[Signature]

MHANDBISI SAMMY MUITA
KAMU MENEJA MKUU, USAMBAZAJI UMEME
Kwa Chief,

Yah: KUPATA MAWAIIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLIKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengine wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakotokana na mrandi huu.

Kulingana na kanuni za uchunguzi za mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na waie watakaoathirwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kuktana na wananchi kwa ajili ya usahulizi kama ifutatavo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Lake road,</td>
<td>DCK Centre, Naivasha</td>
<td>26, October, 2009</td>
<td>Saa nne asubui (10am)</td>
</tr>
<tr>
<td>eneo la</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DCK market na</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sanctuary,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naivasha</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eneo la Kayole,</td>
<td>Kayole 'B' Centre</td>
<td>26, October, 2009</td>
<td>Saa tisa joni (3pm)</td>
</tr>
<tr>
<td>Naivasha</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayolishimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHAINDSI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Kwa Chief,

Ya: KUPATA MAWADHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenywa wengi wapate umeme ili kulimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakotokana na mrandi huu.

Kulingana na karuni za uchunguzi za mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na waile watatokaoathiriwa na mradi huu, wadu mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni ya kutoke mradi huu.

Tunataraja kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Lake road, eneo la DCK market na Sanctuary, Naivasha</td>
<td>DCK Centre, Naivasha</td>
<td>26, October, 2009</td>
<td>Saa nne asubuhi (10am)</td>
</tr>
<tr>
<td>Eneo la Kayole</td>
<td>Kayole 'B' Centre</td>
<td>26, October, 2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoihesimu itusaidie kuwajulisha wananchi kuhuso mkutano huu.

Kwa niaba ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEmE
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn 21 October, 2009

Your Ref:

Mkuu Wa Darafa,
Darafa ya Elmentaita

Kwa D.O.

Yah: KUPATA MAWIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inatarajia kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Keny.

KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenye nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kikutana na wananchi kwa ajili ya usahihi kama ifuatavyo:

<table>
<thead>
<tr>
<th>Eneo</th>
<th>Mahali Pa Mkuatano</th>
<th>Tarehe</th>
<th>Wakati/Muda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miti Mingi, Jogoo Centre na Elmentaita</td>
<td>Miti Mingi Centre</td>
<td>27.10.2009</td>
<td>Saa nne asubuhu (10am)</td>
</tr>
<tr>
<td>Bagaria Location</td>
<td>Bagaria Shopping Centre</td>
<td>27.10.2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoishimu itusaidie kuwajulisha wananchi kuhusu mkuatano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

21 October, 2009

Your Ref:

Mkuu Wa Naivasha,
Darafa ya Naivasha,

Ionwe na: D.O 1,

Yah: KUPATA MAWAIIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)- AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imeipa kazi kampuni ya Gibb Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe nia na wale watakaoathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanaoishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Lake road, eneo la DCK market na Sanctuary, Naivasha</td>
<td>DCK Centre, Naivasha</td>
<td>26. October, 2009</td>
<td>Saa mne asubuhi (10am)</td>
</tr>
<tr>
<td>Eneo la Kayole,</td>
<td>Kayole 'B' Centre</td>
<td>26. October, 2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
The Kenya Power & Lighting Co. Ltd.

Our Ref: KPLC1/1F/8/3/1/09/JGI/wbn 21 October, 2009

Your Ref:

Chief,
Mitimingi Location,
Darasa ya Elmentaita

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBABA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU


KPLC imeipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na wale watakayaathiriwa na mradi huu, wadau mbali mbali na wananchi wote wanacishi ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunatarajia kukutana na wananchi kwa ajili ya usahuli kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miti Mingi, Jogoo Centre na Elmentaita</td>
<td>Mitimingi Centre</td>
<td>27.10.2009</td>
<td>Saa nne asubuhu (10am)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoloshimu itusaidie kuwajulisha wananchi kuhusu mkutano huu.

Kwa nila ya: KENYA POWER & LIGHTING COMPANY LIMITED

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Our Ref: KPLC1/1F/8/3/1/09/JG/wbn

Your Ref:

Chief,
Bagaria Location,
Darafa ya Elmentaita

Kwa Chief,

Yah: KUPATA MAWAIDHA KUHUSU MRADI WA KUSAMBAZA UMEME WA OLKARIA-LESSOS-KISUMU-UCHUNGUZI WA MADHARA YATAKAYOATHIRI MAZINGIRA (ENVIRONMENTAL IMPACT ASSESSMENT)-AWAMU YA TATU

Kampuni ya Kenya Power and Lighting (KPLC) inataraja kujenga nguzo za kufunga nyaya za kuzambaza umeme (stima) kutoka Olkaria hadi Kisumu kupitia Lessos. Lengo la mradi huu ni kuwawezesha Wakenya wengi wapate umeme ili kuimarisha uchumi wa Kenya.

KPLC imejipa kazi kampuni ya GIBB Africa Ltd kufanya uchunguzi wa athari ya mazingira yatakoyotokana na mrandi huu.  

Kulingana na kanuni za uchunguzi wa mazingira (Impact Assessment and Audit Regulations-June 2003) wote wenyewe na wala watakaoathiriwa na mradi huu, wadui mbali mbali na wananchi wote wanaoshia ndani na karibu na eneo la mradi, wanapaswa kushauriwa ili kupata maoni yao kuhusu mradi huu.

Tunataraja kikutana na wananchi kwa ajili ya usahili kama ifuatavyo:

<table>
<thead>
<tr>
<th>ENEO</th>
<th>MAHALI PA MKUTANO</th>
<th>TAREHE</th>
<th>WAKATI/MUDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bagaria Location</td>
<td>Bagaria Shopping Centre</td>
<td>27.10.2009</td>
<td>Saa tisa jioni (3pm)</td>
</tr>
</tbody>
</table>

Tunaomba ofisi yako tunayoiheshimu itusaidie kwajulisha wananchi kuhusu mkutano huu.

Kwa niaba ya: KENYA POWER & LIGTHING COMPANY LIMITED

[Signature]

MHANDISI SAMMY MUITA
KAIMU MENEJA MKUU, USAMBAZAJI UMEME
Environmental & Social Impact Assessment (ESIA)
Proposed Kisumu-Lessos-Olkaria Transmission Line Project

August 2009

The Kenya Power & Lighting Co. Ltd is expecting to receive financial assistance for the Kisumu-Lessos-Olkaria Transmission line project from JICA. This project traverses 8 districts of Naivasha, Nakuru, Kericho, Uasin Gishu, Baringo, Nandi, Nyando and Kisumu. The length of the targeted transmission lines is approximately 255Km as a total, with approx 170Km between Olkaria and Lessos, and 85Km between Lessos and Kisumu.

Kisumu-Lessos is expected to provide an alternate path from Lessos-Muhoroni-Kisumu through Kakamega area to supply Kisumu area and improve reliability. Olkaria-Lessos 220kV line provides an alternative path from the Lessos 132kV. This is further detailed in the table below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Route</th>
<th>Type</th>
<th>Length</th>
<th>Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Olkaria – Lessos</td>
<td>Alternative 1</td>
<td>Double circuit</td>
<td>Approximately 213 km Naivasha District, Nakuru District, Koibatek District, Uasin Gishu District and Nandi District</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Alternative 2</td>
<td>Double circuit</td>
<td>Approximately 178 km Naivasha District, Nakuru District, Kericho District and Nandi District</td>
</tr>
<tr>
<td>3</td>
<td>Lessos – Kisumu</td>
<td>Alternative 1</td>
<td>Single/Double circuit</td>
<td>Approximately 103 km Kisumu District, Nyando District and Nandi District</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Alternative 2</td>
<td>Single/Double circuit</td>
<td>Approximately 77 km Kisumu District, Nyando District, and Nandi District</td>
</tr>
</tbody>
</table>

Additionally, a map illustrating the proposed line project is provided overleaf.

To ensure that the above project is implemented in an environmentally and socially sustainable manner, KPLC has engaged the services of GIBB Africa Ltd to conduct an Environmental & Social Impact Assessment (ESIA) for the proposed project.

As an identified stakeholder, you are required to document your views, opinions and concerns regarding the above project.

GIBB Contact person:  Angela Mwenda
Shell & BP House, Harambee Avenue
PO Box 30020, Nairobi 00100, Kenya
Tel: +(254) 20 251880/250577
Cell: 0722 206876/0733 333024
Fax: +(254) 20 210694/244493.
E-mail: amwenda@gibbafrica.com
APPENDIX 7  Sample Initial Questionnaire
The Kenya Power & Lighting Co. Ltd is expecting to receive financial assistance for the Kisumu-Lessos-Olkaria Transmission line project from JICA. This project traverses 8 districts of Naivasha, Nakuru, Kericho, Uasin Gishu, Baringo, Nandi, Nyando and Kisumu. The Kisumu- Lessos line is approximately 90Km while the Olkaria-Lessos line is approximately 196Km.

To ensure that the above project is implemented in an environmentally and socially sustainable manner, KPLC has engaged the services of GIBB Africa Ltd to conduct an Environmental & Social Impact Assessment (ESIA) for the proposed project.

As an identified stakeholder, you are required to document your views, opinions and concerns regarding the above project.

If we do not receive your response within 10 days from the date of receipt, we will assume you have no comments. Should you need more forms or have any queries before filling out the form, please contact us through the information provided at the end of this questionnaire, and we will respond accordingly.

Kindly comment on the following areas, with respect to the above project:

**Public Awareness**
- Contents of project and potential impacts adequately explained?
- Is understanding obtained from the public?

**Water Quality**
- Possibility of soil runoff & water quality degradation
Resettlement
- Involuntary resettlement? Efforts to minimize impacts?
- Adequate explanation on relocation & compensation to PAPs prior to resettlement?
- RAP based on socio-economic studies?
- Particular attention to vulnerable groups, including women, children, elderly, people below the poverty line, ethnic minorities, indigenous peoples?
- Agreements with affected persons obtained prior to resettlement?

Living & Livelihood
- Possibility that living conditions of inhabitants adversely affected?
- Adequate measures to reduce the impacts?
- Communicable diseases, including HIV/AIDS introduced due to immigration workers?
- Radio interference by public lines & mitigation measures?

Heritage
- Damage to the local archaeological, historical, cultural and religious heritage sites?
- Mitigation measures in accordance with Kenya’s laws?
Global issues

- Impacts to transboundary or global issues eg. Waste treatment, acid rain, destruction of the ozone layer, global warming?

Additional comments
Annex 1: Sample Socio-economic Survey Format

<table>
<thead>
<tr>
<th>101</th>
<th>SURVEY QUESTIONNAIRE IDENTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Survey Control Number</td>
</tr>
<tr>
<td>B.</td>
<td>Date of Interview</td>
</tr>
<tr>
<td>C.</td>
<td>Place of Interview</td>
</tr>
<tr>
<td>D.</td>
<td>Name of Interviewer</td>
</tr>
<tr>
<td>E.</td>
<td>Checked by Supervisor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>102</th>
<th>BASIC PROFILE OF PAPs (Landowners and Residents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Name of Interviewee (only adult members above 18-year-old):</td>
</tr>
<tr>
<td>B.</td>
<td>Address of the Interviewee</td>
</tr>
<tr>
<td>i</td>
<td>Ward:</td>
</tr>
<tr>
<td>ii</td>
<td>Others:</td>
</tr>
<tr>
<td>iii</td>
<td>Street &amp; Road Name:</td>
</tr>
<tr>
<td>iv</td>
<td>Plot No.:</td>
</tr>
<tr>
<td>C.</td>
<td>Relation to Head of Family (Choose one)</td>
</tr>
<tr>
<td>1</td>
<td>Myself, 2: Wife, 3: Child, 4: Parent, 5: Other (Specify)</td>
</tr>
<tr>
<td>D.</td>
<td>How many years have you been living here?</td>
</tr>
<tr>
<td>E.</td>
<td>Is there any tenant in this house? If Yes, number of tenants?</td>
</tr>
<tr>
<td>F.</td>
<td>How many years has/have the tenant(s) resided? (For Illegal Occupant Only)</td>
</tr>
<tr>
<td>G.</td>
<td>How long are you planning to live here (in years)?</td>
</tr>
<tr>
<td>H.</td>
<td>Profile of Head of Family:</td>
</tr>
<tr>
<td>I.</td>
<td>Head of Family (Name)</td>
</tr>
<tr>
<td>J.</td>
<td>Sex: 1: Male, 2: Female</td>
</tr>
<tr>
<td>K.</td>
<td>Age</td>
</tr>
<tr>
<td>L.</td>
<td>Marital Status: 1: Married, 2: Unmarried, 3: Others (e.g. Divorced, Separated, Specify)</td>
</tr>
</tbody>
</table>

| M.  | Attainment Level of Education (Choose one):   |
| N.  | 1: Illiterate (either English or a local official language); |
| O.  | 2: Can Read only (either English or a local official language); |
| P.  | 3: Can Read and Write both (either English or a local official language); |
4. Basic School (grade attended): 
5. High School (grade attended): 
6. University: 
7. Post Graduate & Above: 
8. Others (Specify): 

M. Religion (Choose one)

N. Total number of family members (including infants and children)

O. Total number of households in one (your) structure
(e.g. if there are 2 households in one house, record 2)

P. Occupation (Choose all that apply)
1. Government/Public Sector: 
2. Private Sector (employed): 
3. Self-Employed (Specify): 
4. Farmer: 
5. Casual Labour: 
6. Unemployed: 
7. Others (Specify)

(For those who check 3. Self-Employed in above P)

Q. Do you have license of the business?

R. How many workers are there?

<table>
<thead>
<tr>
<th>LAND LIKELY TO BE LOST/AFFECTED</th>
</tr>
</thead>
</table>
A. Please give information on the land owned/occupied by your household and to be lost/affect by the Project. |

<table>
<thead>
<tr>
<th>Type of Land</th>
<th>Area (Sqm.: m²) of the land owned/occupied by your family</th>
<th>Area (Sqm.: m²) of the land to be lost/affect by the Project</th>
<th>Status of Land Holding (please choose number applicable from the list below)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Residential land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Agricultural land (i.e. paddy fields, farms and orchard)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Commercial land (e.g. shop)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Land for workshop</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v. Others (Specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Land</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
* Status of Land Holding
1. With Certificate of Title
2. Tenant
3. Illegal occupation
4. Uncertain
5. Others (specify)

<table>
<thead>
<tr>
<th>Type of Structures owned/occupied by your household</th>
<th>Status of ownership of the Structures (please choose number applicable from the list below)*1</th>
<th>Please check if the structure will be lost/affected by the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Residential building/house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Commercial “2”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Residential + Commercial”2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Farm House</td>
<td></td>
<td></td>
</tr>
<tr>
<td>v. Animal Shed/Pool house</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vi. Boundary Wall/Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>vii. Well/Hand pump</td>
<td></td>
<td></td>
</tr>
<tr>
<td>viii. Graveyard/Crematorium Ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ix. Others (specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 Status of ownership of the Structure
1. Self-owned;
2. Public-owned structure for rental;
3. Private owned structure for rental;
4. Group- or Community-owned;
5. Illegal owned/occupation;
6. Uncertain ownership;
7. Others (specify)

*2 Commercial structure
Please answer question below

(For those who check i. Residential building/house or iii. Residential + Commercial in above A.)
Residential Building/House

B. What is the type of residential building/house owned/occupied by your
household and likely to be affected? (Choose one)
1. Single detached one-storey;
2. Single detached two-storey;
3. Single detached three-storey or more;
4. Apartment/Row house duplex;
5. Mudly house;
6. Tents or tentative simple hut;
7. Others (specify)

C. Take photos of the house appearance.

D. Roof (Choose one)
1. Iron sheets;
2. Tiles;
3. Natural materials;
4. Concrete;
5. Asbestos;
6. Others (Specify)

E. Walls (Choose one)
1. All concrete;
2. Concrete and wood;
3. All wood;
4. Soil;
5. Natural materials;
6. Others (Specify)

F. Living Area/Floor Area (m²) for residential part owned/occupied by your family

G. Living Area/Floor Area (m²) for residential part to be lost/affected by the Project

H. Number of rooms

I. Age of house (year)

(For those who check ii. Residential building/house or iii. Residential + Commercial in above A.)
Commercial Structure

J. Usage of Structure? (Choose all that apply)
1. Shop;
2. Storage/Warehouse;
3. Workshop;
4. Factory;
5. Office;
6. Others (Specify)

K. Floor Area (m²) for commercial part owned/occupied by your family

L. Floor Area (m²) for commercial part to be lost/affected by the Project

M. Age of structure (year)

<table>
<thead>
<tr>
<th>105</th>
<th>HOUSEHOLD BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Income</td>
</tr>
<tr>
<td></td>
<td>A. Sources of household income</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Salary as employee</td>
</tr>
<tr>
<td>b.</td>
<td>Self-employed business</td>
</tr>
<tr>
<td>c.</td>
<td>Farming</td>
</tr>
<tr>
<td>d.</td>
<td>Casual labour</td>
</tr>
<tr>
<td>e.</td>
<td>Others (Specify)</td>
</tr>
<tr>
<td></td>
<td>Total income</td>
</tr>
</tbody>
</table>

12
### Assets

B. Vehicles: What vehicles do your family own? (Choose all applicable)

- 1. Bicycle
- 2. Motorcycle
- 3. Jeep/Car
- 4. Truck
- 5. Bus
- 6. Others (Specify)

C. Agricultural Implements: What agricultural implements do your family own? (Choose all applicable)

- 1. Tractor
- 2. Thresher
- 3. Harvester
- 4. Sprayer
- 5. Pump set
- 6. Electric pump
- 7. Others (Specify)

D. Assets for economic activities (business and trading):

If your family owns other assets being used for economic activities, please specify.

E. Household Items: What household items do your family own? (Choose all applicable)

- 1. TV
- 2. Fridge
- 3. Electric Cooker
- 4. Electric Fan
- 5. Microwave
- 6. Radio
- 7. Others (Specify)

F. Total Annual Saving (KShs)

G. Have you taken any loan?

- 1. Yes
- 2. No
- 3. Don't know

H. If Yes, then please tell us the following:

<table>
<thead>
<tr>
<th>Name of the loan provider</th>
<th>Amount (in KShs)</th>
<th>Repaid (in KShs)</th>
<th>Balance (in KShs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Bank</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Microfinance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Relative/Friend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Other (specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Accessibilities

A. Accessibilities of family members in normal conditions at present

<table>
<thead>
<tr>
<th>District Development</th>
<th>Status in Normal Conditions</th>
<th>Average Time per Trip (one-way) (minutes)</th>
<th>Frequency</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Once to</td>
<td>1:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1: 1 Day</td>
<td>2:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2: 2-4 days</td>
<td>3:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3: 1 Week</td>
<td>4:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4: 2 Weeks</td>
<td>5:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5: 1 Month</td>
<td>6:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6: 2 Months</td>
<td>7:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7: 6 Months</td>
<td>8:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8: 1 Year</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distance (one-way) (km)</th>
<th></th>
</tr>
</thead>
</table>