



National Environment Management Authority

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ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) STUDY REPORT FOR THE PROPOSED CONSTRUCTION OF BUNGOMA COUNTY LEVEL 6 TEACHING AND REFERRAL HOSIPTAL IN BUNGOMA COUNTY.

Pursuant to Section 59 of the Environmental Management and Coordination Act CAP 387, the National Environment Management Authority (NEMA) has received an Environmental Impact Assessment Study Report for the above proposed project.

The proponent **Ministry of Health**, proposes to construct level 6 Referral hospital with 1800No. bed capacity comprising of the Accident and Emergency unit/ Intensive care Unit(ICU) & High Dependency Unit(HDU), Maternity and Neonatal Care Unit, Surgical theatres(General & Specialized), Diagnostic Centre Outpatient and Inpatient departments, Pharmacy & Support Services, Administrative & Staff facilities, associated amenities and facilities in Kabuchai sub-county, Mukuyuni ward, Sichei village within Kabuchai constituency, Bungoma County County.

The following are the anticipated impacts and proposed mitigation measures

Impact	Proposed Mitigation Measures
Loss of vegetation	- Identify endangered species of trees to be planted in other places where they will not be affected, - Plant more trees in site reserve areas to increase vegetation, - Encourage the locals to plant trees in their plot to increase tree cover, - Support local conservation groups to plant more trees,
High Demand of Raw material	- Source building materials from local suppliers who use environmentally friendly processes in their operations. - Ensure accurate budgeting and estimation of actual construction material requirements to ensure that the least amount of material necessary is ordered - Ensure that damage or loss of materials at the construction site is kept minimal through proper storage. - Use at least 5%-10% recycled, refurbished or salvaged materials to reduce the use of raw materials and divert material from landfills
Occupational Health and Safety Risks	- Provide all workers with the necessary protective gears - Ensure all workers are in protective gears all the time when on site - Place fire extinguishers in strategic areas within the station - Designate and mark smoking areas - Workers to be trained as fire marshals - Fire escape routes to be shown clearly - Provide enough first aid kits within the project site - Train workers in administering first aid - Label all potential hazards such as movable machine parts - Raise awareness and educating workers on risks from equipment and training them on the use of the equipment. - Placing visible and readable signs around where there are risks. - Ensuring security in and around the site to control the movement of people. - Providing safe and secure storage for equipment and materials in the site. - Placing visible and readable signs to control the movement of vehicles and notify motorists and pedestrians around the, and workers in the site.
Increased Solid Waste Generation	- Use of an integrated solid waste management system like: Source reduction; Recycling; Reuse; and Land filling/Backfilling. - Using waste minimization techniques like buying required quantities in bulk. Identifying all sources of wastes, and ensuring wastes are handled by licensed waste handlers - Making available suitable facilities for the collection, segregation and safe disposal of the wastes. - All construction materials left over at the end of construction should be used in other projects or sold - Ensure proper handling and storage of construction materials to reduce damage.
Air Pollution	- Avoid excavation works in extremely dry weathers. - Personal protective equipment to be worn. - Post signs that limit vehicles speed onto unpaved roads and over disturbed soils. - Cover stockpiles of sand, soil and similar materials or surround them with wind breaks. - Ensure strict enforcement of on-site speed limit regulations. - Sprinkle water on access routes when necessary to reduce dust generation by construction vehicles. - Ensure strict enforcement of on-site speed limit regulations - Sprinkle water on graded access routes whenever necessary to reduce dust generation by construction vehicles - Enclosing the structures under construction with dust proof nets. - Using efficient machines with low emission technologies for the ones that burn fossil fuels. - Regular maintenance and services of machines and engines. - Use of clean fuels e.g. unleaded and de-sulphurized fuels. - Educate and raise awareness of construction workers on emission reduction techniques - Install continuous emission monitoring systems (CEMS).

Noise and Vibrations	- Prescribe noise reduction measures if appropriate e.g. restricted working hours, transport hours and noise buffering - Consult with the surrounding community on the permissible noise levels and best working hours. - Sensitize construction vehicle drivers and machinery operators to switch off engines of vehicles or machinery not being used. - Ensure that construction machinery is serviced and kept in good condition to reduce noise generation. - Observe normal working hours during noisy construction works (00800 to 1700) hours - Ensure that all generators and heavy-duty equipment are insulated or placed in enclosures - Construction workers to wear ear muffs if working in noisy section.
Increased Traffic	- Placing signs around the site notifying other vehicles about the heavy traffic and to set the speed limit around the site. - Ensuring all drivers for the project comply to speed regulations. - Making sure the construction doesn't occupy the road reserves and complying with traffic and land demarcation obligations. - Ensuring all vehicles used for the project are in good working condition both legally and commensurate to their intended use.
Increased Water Demand	- Ensure that water is sourced from a sustainable source and from licensed water vendors. - Recycling waste water and using it for other purposes - Provide information signs on means and needs to conserve water - Promote re-cycling and re-use of water as much as possible - Sensitize the occupants to conserve water by avoiding unnecessary wastage. - Detect and repair broken pipes promptly - Install roof gutters and installing water storage tanks to collect and harvest rain water - Avoid unnecessary toilet flushing
Increased Incidences and Accidents	- Registration of all workplaces by the Director, Directorate of Occupational Health and Safety (DOHSS) - Provision of appropriate Personal Protective Equipment (PPE) for staff - Erect warning signs - Allocate a fire assembly point - Comply with all standards and legally required health and safety regulations as set out by the Occupational Safety and Health Act (Part XI: Section 96) as pertains to construction activities. - Provide fully functional standard First Aid Kit on site. Recommendations for Employees exceeding fifty (50) - Demarcate all works which may pose a employees and other site workers - Place portable fire extinguishers at suitable locations - Training all staff on fire safety policy and procedures - Clearly mark all fire exits within the site
Insecurity	- Maintaining a perimeter wall and have a manned barrier - Maintaining security alarms - Partnership with the neighbors and police in community policing - Control of secondary businesses. - Round the clock security for the facility. - Adequate lighting and an alarm system installed at strategic points.
Community Impacts	- Initiate good public relation between the proponent, contractor and the community - Erect and maintain information boards in the position, quantity, design and dimensions of the proposed glass factory - Keep a "Complaints Register" on Site

A full report of the proposed project is available for inspection during working hours at:

**1. Director General
National Environment and
Management Authority (NEMA),
Popo Road, off Mombasa Road
P. O. Box 67839-00200,
NAIROBI.**

**2. County Director of Environment,
BUNGOMA COUNTY.**

A copy of the EIA report can be downloaded at www.nema.go.ke

NEMA invites members of the public to submit oral or written comments within **thirty (30) days** from the date of publication of this notice to the Director General, NEMA to assist the Authority in the decision making process for this project. **Kindly quote ref. No. NEMA/ENVIS/SR/00570**

Comments can also be e-mailed to info@nema.go.ke

**MAMO B. MAMO, PhD, EBS
DIRECTOR GENERAL**

This advertisement is sponsored by the proponent.