

ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY REQUIREMENTS

Bidders should integrate environmental protection, occupational and community health and safety, gender, equality, child protection, vulnerable people (including those with disabilities), sexual harassment, gender-based violence (GBV), sexual exploitation and abuse (SEA), HIV/AIDS awareness and prevention and wide stakeholder engagement in the planning processes, programming, and activities of the parties involved in the execution of the Works. The UNDP and DoDMA may prescribe additional issues to be included to address: green building, climate adaptation and disaster risk reduction. The Environmental, Social, Health and Safety activities will be implemented throughout the construction phase and the Client will closely monitor compliance on ESHS requirements with the aim of continuously improving processes and activities implementation.

For the purpose of the ESHSS policy and/or code of conduct, the term “child” / “children” means any person(s) under the age of 18 years

As a minimum, the policy is set out to the commitments to:

1. apply good international construction industry practice
2. to protect and conserve the natural environment and to minimize unavoidable impacts;
3. provide and maintain a healthy and safe work environment and safe systems of work;
4. protect the health and safety of local communities and users, with particular concern for those who are disabled, elderly, or otherwise vulnerable;
5. ensure that terms of employment and working conditions of all workers engaged in the Works meet the requirements of the ILO labour conventions to which the host country is a signatory;
6. be intolerant of, and enforce disciplinary measures for illegal activities. To be intolerant of, and enforce disciplinary measures for GBV, inhumane treatment, sexual activity with children, and sexual harassment;
7. incorporate a gender perspective and provide an enabling environment where women and men have equal opportunity to participate in, and benefit from, planning and development of the Works;
8. work co-operatively, including with end users of the Works, relevant authorities, contractors and local communities;
9. engage with and listen to affected persons and organisations and be responsive to their concerns, with special regard for vulnerable, disabled, and elderly people;
10. provide an environment that fosters the exchange of information, views, and ideas that is free of any fear of retaliation, and protects whistle-blowers;
11. minimise the risk of HIV transmission and to mitigate the effects of HIV/AIDS associated with the execution of the Works;

The policy shall be signed by the senior manager of the Employer. This is to signal the intent that it will be applied rigorously.

MINIMUM CONTENT OF ESHS REQUIREMENTS

In preparing detailed specifications for ESHS requirements, the specialists should refer to and consider:

- project reports e.g. ESIA/ESMP
- consent/permit conditions
- required standards including Malawi Government Guidelines
- relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (if these represent higher standards than the GoM EHS Guidelines)
- relevant international standards e.g. WHO Guidelines for Safe Use of Pesticides
- relevant sector standards e.g. Concerning Site Waste Management
- grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality e.g. of those reporting allegations of GBV/SEA
- GBV/SEA prevention and management

The detail specification for ESHS shall, to the extent possible, describe the intended outcome rather than the method of working. The ESHS requirements shall be prepared in a manner that does not conflict with the relevant General Conditions of Contract and Particular Conditions of Contract.

MINIMUM REQUIREMENTS FOR THE BIDDER'S CODE OF CONDUCT

[A minimum requirement for the Code of Conduct shall be set out by the Employer, taking into consideration the issues, impacts, and mitigation measures identified, for example, in :

The types of issues identified could include risks associated with: labour influx, spread of communicable diseases, sexual harassment, gender based violence, illicit behaviour and crime, and maintaining a safe environment etc.]

A satisfactory code of conduct will contain obligations on all Contractor's personnel (including sub-contractors and day workers). Additional obligations may be added to respond to particular concerns of the area, the location and the project sector or to specific project requirements. The code of conduct shall contain a statement that the term "child" / "children" means any person(s) under the age of 18 years.

The issues to be addressed include:

1. Compliance with applicable laws, rules, and regulations
2. Compliance with applicable health and safety requirements to protect the local community (including vulnerable and disadvantaged groups), the Employer's and Project Manager's personnel, and the Contractor's personnel, including sub-contractors and day workers, (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)

3. The use of illegal substances
4. Non-Discrimination in dealing with the local community (including vulnerable and disadvantaged groups), the Employer's and Project Manager's personnel, and the Contractor's personnel, including sub-contractors and day workers (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, age, disability (physical and mental), sexual orientation, gender identity, political conviction or social, civic, or health status)
5. Interactions with the local community(ies), members of the local community (ies), and any affected person(s) (for example to convey an attitude of respect, including to their culture and traditions)
6. Sexual harassment (for example to prohibit use of language or behavior, in particular towards women and/or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
7. Violence including sexual and/or gender based violence (for example acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion, and deprivation of liberty)
8. Exploitation including sexual exploitation and abuse (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading behavior, exploitative behavior or abuse of power)
9. Protection of children (including prohibitions against sexual activity or abuse, or otherwise unacceptable behavior towards children, limiting interactions with children, and ensuring their safety in project areas)
10. Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)
11. Avoidance of conflicts of interest (such that benefits, contracts, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
12. Respecting reasonable work instructions (including regarding environmental and social norms)
13. Protection and proper use of property (i.e. to prohibit theft, carelessness or waste)
14. Duty to report violations of this Code
15. Non retaliation against workers who report violations of the Code, if that report is made in good faith.

The Code of Conduct should be written in plain language and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment;
- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

A copy of the code shall be displayed in a location easily accessible to the community and project affected people. It shall be provided in languages comprehensible to the local community, Contractor's personnel (including sub-contractors and day workers), Employer's and Project Manager's personnel, and affected persons.

PAYMENT FOR ESHS REQUIREMENTS

The general practice is that the payment for the delivery of ESHS requirements shall be a subsidiary obligation of the Contractor covered under the prices quoted for other Bill of Quantity items or activities. For example, normally the cost of implementing work place safe systems of work, including the measures necessary for ensuring traffic safety, shall be covered by the Bidder's rates for the relevant works. Alternatively, provisional sums could be set aside for discrete activities for example for HIV counselling service, and, GBV/SEA awareness and sensitization or to encourage the contractor to deliver additional ESHS outcomes beyond the requirement of the Contract.

SUPPLEMENTARY INFORMATION

A. Environmental and Social Impact Management

A 1 ENVIRONMENTAL MANAGEMENT TEAM (EMT)

The Contracting Authority will be represented on site by a Project Engineer and his inspection team will include an Environmental Officer who shall determine members of the site supervision team as the Environmental Management Team (EMT) that will report on the activities to the Contracting Authority through Project Engineer.

The EMT will be responsible for monitoring the performance of the Contractor during the construction phase with regard to Environmental issues and to assess the effectiveness of the impact mitigation measures in protecting the environment on behalf of the District Council and the local communities. The role of the EMT will be “pro-active” with regard to impacts seeking to predict and prevent negative impact and pollution.

The Contractor will provide one full time Contractor's Health Safety and Environmental Liaison Officer (HSE Officer) to be responsible for the implementation of all environmental mitigation measures. The HSE Officer will also undertake liaison with local community leaders and ensure that the Contractor's compliance with the requirements of the Malawi Environmental Affairs Department (EAD), the District Environmental Office, and other relevant authorities in connection with environmental and social considerations.

The Contractor shall prepare a Project Environmental Management Plan based on the risks and responsibilities given in the ESMP Table. This Plan shall be particular to the works required under this Contract. The draft ESMP will be discussed, reviewed, where necessary amended and finally agreed in the EMT. The ESMP will form the principal document upon which all Environmental Monitoring will be based throughout the project.

A 2 IMPACT MITIGATION MEASURES

A2.1 LANDSCAPE PRESERVATION

(A) General

The Contractor shall exercise care to conserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the works. Except where clearing is required for permanent works, diversions or excavation operations, all trees, native shrubbery and vegetation shall be preserved and shall be protected from damage by the contractor's construction operation and equipment. The edges of clearing and cuts through trees, shrubbery, and vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Movement of labour and equipment within the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to grazing land, crops or property.

Except as otherwise provided special reseeding or replanting will not be required under these specifications; however on completion of the work all work areas not seeded shall be scarified and left in a condition which will facilitate natural re-vegetation, provide for proper drainage and prevent erosion. All unnecessary destruction, scarring, damage or defacing reseeded or the landscape resulting from the Contractor's operations shall be repaired, replanted reseeded or otherwise corrected as directed by the Project Engineer and at the Contractor's expense.

(B) Construction (Access) Roads

The location, alignment, and grade of construction roads shall be subject to approval of the Project Engineer. When no longer required by the Contractor, construction roads shall, if required by the Project Engineer, be restored to the original contour and made impassable to vehicular traffic. The surfaces of such diversions shall be scarified as needed to provide a condition that will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(C) Construction Facilities

The Contractor's workshops office and yard area shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On completion of the project all temporary buildings including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be regarded, as required, so that all surfaces drain naturally, blend with natural terrain, and are left in a condition that will facilitate natural re-vegetation, provide for proper drainage and prevent erosion.

(D) Blasting Precautions

In addition to any requirements of local regulations, the contractor shall adopt precautions when using explosives that will prevent scattering rocks, stumps, or other debris outside the work area, and prevent damage to surrounding property, trees, shrubbery and vegetation.

A 2.2 PRESERVATION OF TREES AND SHRUBBERY

(A) Preservation

All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be protected from any damage that may be caused by the construction operations and equipment. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting excavating, dumping, chemical damage or other operations; and the Contractor shall adequately protect such trees by use of protective barriers or other methods approved by the Project Engineer. The removal of trees or shrubs will only be permitted after prior approval by the Project Engineer.

The layout of the Contractor's construction facilities such as workshops, warehouse storage areas and parking areas; location of access and haul routes; and operation in borrow and spoil areas shall be planned and conducted in such a manner that all trees and shrubbery not approved for removal by the Project Engineer shall be preserved and adequately protected from either direct or indirect damage by the Contractor's operations.

Except in emergency cases or when otherwise approved by Project Engineer, trees shall not be used as anchorages. Where such use is approved, the trunk shall be wrapped in with a sufficient thickness of approved protective material before any rope, cable, or wire is placed.

(B) Repair or Treatment of Damage

The Contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term "injury" shall include without limitation, bruising, scarring, tearing and breaking of roots, trunk or branches. All injured trees and shrubs shall be repaired or treated without delay, at the Contractor's expense. If damage occurs, the Project Engineer will determine method of repair or treatment to be used for injured trees and shrubs as recommended by an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the Contractor.

(C) Replacement

Trees or Shrubs that in the opinion of the Project Engineer are beyond savings shall be removed and replaced early in the next planning season. The replacement shall be the same species or other approved species and of the maximum size that is practicable to plant and sustain growth in the particular environment. Replacement trees and shrubs shall be stayed, watered and maintained for a period of 1 year from the date of replacement.

A 2.3 PREVENTION OF WATER POLLUTION

(A) General

The Contractor's construction activities shall be performed by methods that will prevent entrance or accidental spillage, of solid matter, contaminants, debris, and other pollutants and

wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Other pollutants may include: concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts and thermal pollution.

Dewatering work for structure foundations or earthworks operations adjacent to or encroaching on streams or watercourses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines or other watercourse perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon watercourse itself.

Turbidity increases in a stream or other water bodies that are caused by construction activities shall be strictly controlled. When necessary to perform required construction work in a stream channel, the turbidity may be increased, as approved by the Project Engineer, for the shortest practicable period required to complete such work. This required construction work may include such work as diversion of a stream, construction or removal of cofferdams, specified earthworks in or adjacent to a stream channel, pile driving, and construction of turbidity control structures. Mechanised equipment shall not be operating in flowing water except as necessary to construct crossing or to perform the required construction.

Wastewater from aggregate processing, concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, re-circulation systems for washing of aggregates or other approved methods. Any such wastewaters, discharged into surface of these specifications, settling material is defined as that material possible. For the purpose of these specifications settling material is defined as material which will settle from the water by gravity during a 1- hour quiescent detention period.

(B) Compliance with law and regulations

The Contractor shall comply with applicable laws and regulations and water quality standards concerning the control and abatement of water pollution.

A 2.4 ABATEMENT OF AIR POLLUTION

The Contractor shall comply with applicable laws and regulations concerning the prevention and control of air pollution. Notwithstanding the above in conduct of construction activities and operation of equipment, the Contractor shall utilize such practicable methods and devices as are reasonably available to control prevent and otherwise minimize atmospheric emissions or discharges of air contaminants.

The emission of dust into the atmosphere shall be strictly controlled during the manufacture, handling and storage of concrete and aggregates, and the Contractor shall use such methods and equipment as are necessary for the collection and disposal or prevention of dust during

these operations. The Contractor's methods of storing and handling cement and lime shall also include means of eliminating atmospheric discharges of dust. Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments or other inefficient operating conditions. Shall not be operated until corrective repairs or adjustments are made.

Burning of materials resulting from clearing of trees and bush, combustible construction materials, and rubbish will be permitted only when atmospheric conditions for burning are considered favourable and when authorized by the Project Engineer. In lieu of burning, such combustible materials may be disposed of by other methods as provided in Clause B 2.10 hereof. Where open burning is permitted, the burn piles shall be properly constructed to minimize smoke, and in no case shall unapproved materials such as tires, plastic rubber products, asphalt products, or other materials, that create heavy black smoke or nuisance odours, be burned.

A2.5 DUST ABATEMENT

During the performance of the work required by this specifications or any other appurtenant thereto, whether on right-of-way provided by the Employer or elsewhere, the Contractor shall furnish all the labour, equipment, materials, and means required, and shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance and to prevent dust which has originated from his operations from damaging crops, orchards, cultivated fields and dwellings or causing nuisance to obtain adequate control.

A2.6 NOISE ABATEMENT

The Contractor shall comply with applicable National laws, orders and regulations concerning the prevention, control and abatement of excessive noise. Blasting, the use of jackhammers, pile driving, rock crushing or other operations producing high-intensity impact noise may be not be performed during the night.

A 2.7 LIGHT ABATEMENT

The Contractor shall exercise special care to direct all stationary flood-light to shine downwards at an angle less than horizontal. These floodlights shall also be shielded so as not to be a nuisance to surrounding areas. No lighting shall include a residence in its direct beam. The Contractor shall be responsible for correcting light problems when they occur as directed by the Project Engineer.

A 2.8 PRESERVATION OF HISTORICAL & ARCHAEOLOGICAL DATA

Should the Contractor or any of his employees in the performance of his contract discover evidence of possible scientific, prehistoric, or archaeological data he will notify the Project Engineer immediately, giving the location and nature of the findings. Written confirmation shall be forwarded within 2 days. The Contractor shall exercise care so as not to damage artefacts or fossils uncovered during excavation operation and shall provide such co-operation and assistance as may be necessary to preserve the findings for removal or other disposition

by the employer. The Contractor will also report his findings for the Ministry of Forestry, Fisheries and Environmental Affairs and the authority responsible for antiquities.

Where appropriate by reasons of a discovery the Project Engineer may order delays in the time of performance, or changes in the work, or both. If such delays, or changes or both are ordered, the time of performance and contract price shall be adjusted in accordance with the applicable clause in the conditions of contract. The Contractor shall insert this Clause in all subcontracts that involve the performance of work on the project site.

A 3 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The Contractor will be deemed to have prepared their tender upon sound environmental practice and the guidelines contained in this section together with the entire contents of the Guidelines to Environmental Impact Assessment issued by the Departments of Forestry, Fisheries and Environmental Affairs in December 1997 and the heading applicable to this contract in the Environmental Management Plan that follows this Section.

The ESMP will be read in conjunction with and shall be deemed to include all descriptions of environmental protection and mitigation described elsewhere in the Specification, Design Standards and Conditions of Contract. The ESMP will supplement but not supersede normal Regulatory Controls from Health and Safety Inspectorates and shall be made available to all parties.

The following is a summary of the guidelines to be incorporated into the ESMP

Soil erosion

- Controlling and management of excavation activities
- Installation of erosion control measures such as check dams, scour checks and impact dissipaters
- Landscaping and re-vegetating construction site and gravel sites

Pollution (air, noise, water)

- Supervision of construction traffic, including control of speed
- Sensitization of workforce
- Maintenance of plant and equipment
- Proper disposal of construction debris, proper handling, storage and disposal of oil and oil wastes, and disposal of wastewater/sewage at Contractor's/workmen's camps

Materials sources

- Planned, controlled and restricted access to all materials sites
- Proper management of excavation activities
- Terraced landscape where necessary, and grassing and re-vegetation of materials sites
- Compensation of individuals/ communities as required for use of material

- Controlled blasting of hard stone material

Water Sources

- Consultation with communities during identification of sources
- Management of water usage

Deviations/Access Roads

- Planning of deviations/Access Roads
- Reinstating deviations (and old tracks) to original condition

Vegetation

- Prohibition of use of herbicides
- Landscape & planting all disturbed areas (pits, deviations, embankments, camps sites)
- Planting of trees at around construction site for aesthetic, as wind breaker and pollution screens.

Demobilisation/ Decommissioning

- Proper removal and disposal of construction buildings and structures required for the contractors'/workmen's camp, and construction wastes including oil, solid wastes, and debris after construction works are complete, and restoration to original condition where applicable.

Land/property and crops

- Notification to people about non – compensation for annual crops within road reserve
- Evaluate land/property loss due to deviations, materials sites and Contractor's camp
- Compensation to be paid for land, crops and all property on land temporarily acquired for road construction works (camps and deviations) and for all crops outside road reserve that are removed/destroyed for clearing of carriageway, gravel pits and deviations

Public Health and Occupational Safety

- Provision of water supply for the workforce, and proper facilities for the disposal of solid and sanitary waste
- Provision of protective gear to workforce
- Provision of a first aid kit on site

Traffic Management/Public Safety

- Supervision of construction traffic and management of construction activities
- Provision of safe access/egress to work sites
- Erection of warning signs

Site of cultural, historical and traditional value

- All findings to be reported to the Project Engineer, UNDP and Ministry responsible for antiquities and Department of Environmental Affairs.
- All graves are to be avoided.

Planning and prevention

- Frequency of Environmental site meetings to be chaired by the Environmental Control Officer and attended by relevant parties
- Adoption of time scale and planning for all relevant measures
- Procedure for correction of bad practice
- Reinstatement of borrow pits

Borrow areas

- Borrow areas shall be reinstated in compliance with the following minimum specifications in the table below:

PIT AND QUARRY REINSTATEMENT SPECIFICATION	
1.	At the completion of operations the Contractor shall rehabilitate used, exhausted and obsolete pits and quarries.
2.	The sides and floors of pits shall be formed to a flowing finish with side slopes not steeper than 1 vertical to 6 horizontal.
3.	During pit reshaping any material carried to the pit shall be spread uniformly over the entire shaped surface. The Contractor shall ensure that non – biodegradable and inert waste is removed and disposed of in licenced sites. The same will apply to toxic waste.
4.	Topsoil shall be spread over the shaped batters, filled areas and bare areas of the pits to a reasonable depth.
5.	Following the spreading of topsoil, the entire pit shall be ripped along the contours to a depth of 500mm and at not more than 500mm spacing.

REVEGETATION SPECIFICATION	
1.	Planting and direct seeding shall be carried out after the topsoil has been placed, shaped and prepared for planting and seeding operations
2.	The Contractor shall prepare a plant and seed species list that is representative of the native vegetation (trees, and understorey species) in adjacent areas and the list is to be included in the Environmental Management Plan.
3.	The plant and seed list shall describe the plant size and spacing of all plants, the quantities by seed species in a seed mix and the seeding rate (kg per hectare) to be used in any revegetation of the area to be rehabilitated.

4.	The Contractor shall supply and hand-plant tube stock in good condition using the species and spacing chosen in the plant list.
5.	The Contractor shall supply and direct seed the areas to be seeded using the seed species mix and seeding rate (kg per hectare) as described in the plant list.
6.	All planting, seeding and or weed control operations shall be undertaken in accordance with basic principles of REVEGETATION AND LANDSCAPING.
7.	The completion criteria for revegetation shall be in accordance with the Environmental Management Plan.

A 4 ENVIRONMENTAL TRAINING

The Environmental Control Officer (ECO) will be responsible for organising the environmental training of all the Engineer's and Contractor's staff. It is suggested that this training is coupled with the safety training that the Contractor should include in his own site management plan. The Contractor shall ensure that the Project Engineer is informed of all staff that will work on the site and their general responsibilities and shall make sure that they are available to attend suitable briefing sessions arranged by the ECO on the environmental mitigation measures that are to be in place on the site. The Contractor shall provide the ECO with a suitable room for the briefing and such administrative support and facilities as shall be ordered by the ECO.

A 5 MEDICAL AND HIV/AIDS PREVENTATION PROGRAMMES

To assist in the general health and well-being of both all the site staff and the residents in the community local to the works, the Client will organize and coordinate appropriate awareness training as well as health screening (other than accident prevention and medical aid facilities provided by the Contractor).

The Contractor shall ensure that the Project Engineer is informed when any new staff commences work on the site such that health and HIV awareness and counselling can be provided either in group sessions or on an individual basis. The Contractor shall ensure that staff are available for briefing by the District Council staff and shall make available suitable rooms, administrative support and provide any facilities or supplies against an order from the District Council. The Contractor shall ensure that condoms provided as part of the HIV/STD control program are readily available to all staff.

The Client will also arrange for the health screening of site workers in local medical facilities and the Contractor shall cooperate fully in these programmes by making staff available. The Contractor shall ensure that the Project Engineer and local medical officials are informed promptly of any workers suffering from the symptoms of infectious disease so appropriate help and treatment can be arranged promptly.

A6 ROAD SAFETY TRAINING

The District Council will be arranging road safety training and awareness sessions in local schools and community centres. The Contractor will assist the District Council when requested with administrative support and where ordered the provision of supplies for these courses and program.

A7 Responsible Authorities

The Contractor is advised that the following authorities have an interest in the environmental and social protective measures associated with this construction project.

District Assembly

- Environmental Affairs Department
- Public Health Department
- Health and Safety Office
- District Property Valuer

A8 Site Clearance

No trees are to be cut or removed unless required to be cleared or removed for construction works. Where there are branches overhanging roads or traffic diversion routes the Contractor shall agree with the Project Engineer the cutting back necessary to provide for clear vehicle access. The Branch cutting shall then be carried carefully using saws to leave a clean cut face with no damages or snags.

A 9 Finishing of verges and other works area

Verges, routes of diversion roads, site camps and all other areas where the Contractor's work resulted in heavily compact soils; they shall be loosened, spread with a thin layer of grass plant rich soil and firmed by foot or a light roller so as to encourage the re-growth of natural vegetation.

B. ADDITIONAL INFORMATION

B1. Staff Conditions

The wages paid to staff employed by the contractor shall be fair and reasonable having regard to those commonly paid in the trade or industry in which such staff are employed and undertake to comply with such requirements relating to hours of work and conditions of labour as are or may from time to time be laid down in the legislation of Malawi.

In the event of any difference or dispute arising as to what wages ought to be paid, or what hours of working conditions ought to be observed it shall be reported to the Secretary of

Labour as prescribed under the Trade Disputes (Arbitration and Settlement) Act (Cap. 54:02 for settlement.

Without prejudice to their obligations under Section 43 of the Employment Act (Cap 55:02)., the Contractor shall keep proper wages books and time sheets showing the wages paid and the time worked by the staff under their employment in and about the carrying out of this Contract and such wages books and time sheets shall be produced whenever required for inspection by any officer authorized by the Contracting authority.

The Contractor shall recognize the freedom of his employees to be members of Trade Unions.

The Contractor shall at all times during the continuance of the Contract display a copy of this Article in full on his Site Office notice boards for the information of his employees.

Due precautions shall be taken by the contractor, and at his own cost, to ensure the safety of his staff and labour and in collaboration with and to the requirements of the local health authorities, to ensure that medical staff, first aid equipment and stores, sick bay and suitable ambulance service are available at camps, housing and on the site at all times throughout the period of the Contract and that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements. The Contractor shall ensure that all his staff is given awareness programmes on HIV/AIDS.

The Contractor shall maintain records of health and safety and make reports concerning the health and safety of his employees as the Project Engineer may from time to time prescribe. The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the site from insect nuisance occasioned by the same. The contractor shall so far as is reasonably practicable, having regard to local conditions, provide on the site an adequate supply of drinking and other water for the use of his staff and labour.

The Contractor shall report to the Project Engineer details of any accident as soon as possible after its occurrence. In the case of a fatality or serious accident, the Contractor shall, in addition, notify the Project Engineer immediately by the quickest means available.

The Contractor shall make all necessary arrangements for the transport to any place as required for burial of any of their expatriate employee or member of their families who may die in Malawi. The Contractor shall also be responsible for the transport to the place of origin and burial of any of his local employees who may die while engaged upon the Works.

The Contractor shall at all times take all reasonable precautions for the protection of persons and property in the neighbourhood of the Works

B2. WORKING OUTSIDE NORMAL WORKING HOURS

If any steps taken by the Contractor for working outside normal working hours are deemed by the Resident Engineer to involve the Contracting Authority in additional supervision costs, such costs shall be notified in advance by the Project Engineer and shall be recoverable from the Contractor either by direct payment by the Contractor, or to become due to the Contractor

and the Project Engineer shall notify the Contractor accordingly, with a copy to the contracting authority.

If any steps taken by the Contractor involve the Engineer's junior staff working outside normal working hours, the Contractor shall pay overtime to the Engineer's junior staff. The procedure for overtime shall be as follows:

- i. Contractor presents to Engineer a request to work overtime
- ii. Engineer makes arrangements with their personnel and may or may not accept the request for overtime
- iii. When overtime has been worked the concerned Engineer's personnel shall fill and sign time sheet
- iv. The filled time sheet shall then be presented to the contractor for countersigning and certification of the hours worked.
- v. At the end of the month the Engineer aggregates all overtime hours worked in the month and lodges with the contractor a claim for payment of overtime.

When the contractor makes payment the Engineer disburses the money to concerned personnel accordingly.

Environmental & Social Management Plan Table

Environmental Social Impact	Proposed Mitigation and Aspect for Monitoring	Responsibility for intervention and monitoring during design, construction and defects liability period	Responsibility for mitigation monitoring and/or maintenance after defects liability period	Monitoring means: (c) = Construction (o) = operation	Recommended frequency of monitoring
ENVIRONMENTAL MANAGEMENT					
Changes in hydrology impeded drainage	Install drainage structure properly Efficiency of drainage structures	Design consultant Supervising Engineer	Contractor District Works Offices	Inspection: (o) routine maintenance and drainage condition survey	(c) during construction and on completion of each structure
Soil erosion	<ul style="list-style-type: none"> -Control earthworks -Install drainage structures properly -Install erosion control measures -Landscape and re-vegetate gravel sites -Management of excavation activities -Impact on erosion (on road, off road, embankments, riverbanks etc) -Efficiency of erosion control measures -Landscape 	Supervising Engineer and Contractor /District Council District Works Offices District Council	Supervising Engineer and Contractor	(c) inspection (o) routine maintenance and soil condition survey (c) inspection (o) routine maintenance and road condition survey	(c) daily erosion control measures during construction and on completion of measures (o) once in 6 months (c) once a month
Air pollution	<ul style="list-style-type: none"> • Control speed of construction vehicles • Prohibit idling of vehicles • Sensitize workforce • Maintenance of plant and 	Supervising Engineer and Contractor	Traditional leader \Health and Environment	(c) inspection/ observation (o) observation	(c) Daily /random (o) random

Environmental Social Impact	Proposed Mitigation and Aspect for Monitoring	Responsibility for intervention and monitoring during design, construction and defects liability period	Responsibility for mitigation monitoring and/or maintenance after defects liability period	Monitoring means: (c) = Construction (o) = operation	Recommended frequency of monitoring
	equipment <ul style="list-style-type: none"> Plant trees as pollution screens Impose speed limits for all vehicles, especially at towns and villages sensitize motorists/road users 	District Council	committees. Traffic police		
Noise pollution	<ul style="list-style-type: none"> Sensitize workforce Supervise construction traffic Sensitize drivers of construction vehicles Maintain plant and equipment Impose speed limits for all vehicles, especially at towns and villages Sensitize motorists/road users 	Supervising Engineer and Contractor	Traditional Leader/ Health and environment Committees Traffic police	(c) inspection/ observation (o) observation	(a) Daily /random (o) random
Water pollution	<ul style="list-style-type: none"> Incorporate erosion control measures 	District Council Supervising Engineer and Contractor	Contractor	(c) inspection	(c) daily
Gravel sites	<ul style="list-style-type: none"> Inform people living at/near the sites that the pits have been selected 	Supervising engineer and Contractor	District Works	(c) meeting	(c) Once immediately after

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	<p>for exploitation.</p> <ul style="list-style-type: none"> • Plan access to gravel sites • Control and restrict access to gravel sites (e.g. by fencing) • Control earthworks • Proper management of excavation activities • Landscape terrace if necessary, and grass sites. Replace trees that were removed during excavation • Discourage pits being made into water pans after construction Rehabilitate old unused gravel pits • Compensate individuals/ communities as required for use of material • Progress of rehabilitated gravel sites (use of site, established 	<p>Supervising Engineer and Contractor</p> <p>Contractor</p> <p>Supervising Engineer</p>	offices	<p>(c) Inspection</p> <p>(c) Payment records</p> <p>(o) Inspection</p>	<p>selection of sites</p> <p>(c) daily</p> <p>(o) once before excavation begins and at specified periods as agreed thereafter</p> <p>(c) once in 2 months</p> <p>(o) once in a months</p>

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	vegetation)				
Hard stone sources	<ul style="list-style-type: none"> • Inform communities living at/near the sites that the sites have been selected for exploitation. • Plan access to hard stone sites • Control and restrict access to hard stone sites (e.g. by fencing) • Control blasting • Proper management of exploitation activities • Landscape site after exploitation and grass sites. Replace trees or vegetation that were removed during excavation • Compensate individuals / communities as required for use of material 	<p>Supervising Engineer and Contractor</p> <p>Supervising Engineer and Contractor</p> <p>Contractor</p>		<p>(c) meeting</p> <p>(c) inspection</p> <p>(c) payments records</p>	<p>(c) Once immediately after selection of sites</p> <p>(c) daily</p> <p>(o) once before excavation begins and at specified periods as agreed thereafter</p>
Sand sources	<ul style="list-style-type: none"> • Take sand from beds of large rivers only • Extraction to 	Supervising Engineer and Contractor	n/a	(c) inspection	(c) during mining

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	unnecessarily removed <ul style="list-style-type: none"> Landscaping and planting all disturbed areas (pits, access roads embankments, camp sites) 	Traditional Leader/ Health and Environment Committees			
	<ul style="list-style-type: none"> Planting and grassing should be done just before the rains Discourage use of firewood/charcoal by providing alternatives Care for tree/plants 		TA Health and Environment Committees	(c) observation (o) observation	(c) weekly (o) Random
Workmanship	<ul style="list-style-type: none"> provide water supply Have central canteen facilities Discourage use of firewood/charcoal by providing alternatives Manage water use in camps 	Supervising Engineer and Contractor	Contractor	(c) inspection	(c) daily
Visual Enlargement	<ul style="list-style-type: none"> Landscaping and planting of access roads, gravel sites and camp Care for plants and trees 	District Council TA health and Environment committees	Contractor TA Health and Environment Committees	(c) inspection (c) observation (o) observation	(c) daily / random (c) Weekly (o) random

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SOCIAL MITIGATION					
Settlement	<ul style="list-style-type: none"> Plan for increased population around construction area due to labour influx Conduct STD/AIDS awareness campaign Plan for local security 	District Physical Planning Department Supervising Engineer Traditional Leaders	District Physical Planning Department	(c) meetings, barazas (o) reports (c) inspection records (c) meetings, deployment of local police	(c) once during construction (o) annually (c) continuous (c) continuous (o) continuous
Loss of Land /property	<ul style="list-style-type: none"> Identify project affected people Notify people about non-compensation for annual crops within road reserve Evaluate land/property loss due to access roads, materials sites and contractor's camp Compensation to be paid for land and all property on land to be temporarily acquired for construction works outside the designated construction site 	District Council Contractor	n/a	(c) inspection (c) notices, meetings (c) inspection (c) payments records	(c) Once before construction commences (c) compensation paid once after assessment of loss before construction
Loss of crops	<ul style="list-style-type: none"> Limit clearing of crops as much as possible Pay compensation for all crops outside construction site that are removed/ 	District Council Supervising Engineer and Contractor	Supervising Engineer and Contractor	(c) inspector (c) payment	(c) Daily (c) Once after assessment

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	malaria, respiratory diseases, STDs HIV/AIDS)				
Disturbance to public	<ul style="list-style-type: none"> Minimise pollution as above Erect information and warning signs Control construction activities Construct special parking bay at terminal towns for trucks/heavy vehicles 	Supervising Engineer Supervising Engineer Supervising Engineer and Contractor Design Consultant	Contractor District Works Offices	(c) Inspection (c) Inspection (c) Inspection (c) Inspection (o) routines maintenance	(c) daily (c) when affected (c) daily (c) during construction and on completion (o) once in a month
Road Safety	<ul style="list-style-type: none"> Install speed bumps near school and trading centres Supervise construction traffic Ensure safe access/egress to work sites Erect warning signs Construct special parking bay at large trading centres for trucks/heavy vehicles Impact on road safety (number of accidents) 	Design Engineer Supervising Engineer and Contractor Design Consultant	Supervising Engineer and Contractor District Works Offices District Works offices District Council	(o) (c) Inspection (c) Inspection (o) routines maintenance (c) Inspection (o) routine maintenance (o) Police report	c) daily (c) when designed (o) once in a month
Cultural and historical sites with	<ul style="list-style-type: none"> Report all findings to Supervising Engineer, Ministry responsible for antiquities and DEA Avoid all graves 	Supervising Engineer and Contractor	n/a	(c) Inspection and report	(c) As need arises

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traditional value					
Socio-economic status	<ul style="list-style-type: none"> • Changes in income level • Change in health status • Changes in education levels 	n/a	District Council	(o) Independent Study	(o) once in 5 years
Land use	Change in land use area covered by settlement, arable land, pasture, degraded land shrub/bushland, social land	n/a	District Agriculture Offices District Physical Planning Dept	(o) Independent Study	(o) once in 5 years
Economic activity in project area	<ul style="list-style-type: none"> • Changes in agricultural production and marketing • Changes in livestock production and marketing 	n/a	District Agricultural Officers/District Council	(o) Independent study	(o) once in 5 years