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Overland BAILEY BRIDGE **Environmental & Social Management Plan**

Objective

The primary objective of this Environmental & Social Management Plan (ESMP) is to identify the potential impacts, both positive and negative, and to protect the natural and physical environment from unnecessary and irreversible damages due to construction activities. The potential impacts have been identified based on the knowledge of the environmental, social and economic impacts from construction sites keeping in mind as far as possible the specificity of each project location. Also this plan seeks to prevent adverse impacts on the health and safety of the working staff and general during the works.

The secondary objective is to ensure corrective or remedial measures are applied to negative impacts that are unavoidable.

Identification of Environmental Impacts

During construction the elements that are likely to be affected can be listed as follows:

- Atmosphere (Noise & Dust Pollution)
- Geology (Soils Erosion)
- Hydrology (Water Quality)
- Vegetation (Trees)
- Population
- Communication (Traffic)

Prevention & Protection Methods

Delineation of Working Area

The Project Manager may require that the site be enclosed by fencing (hoarding) to assist in the prevention of two main types of hazards:

1. Accident hazards to workers and general public as fencing enclosures can assist in preventing people or animals from wandering onto the site.

2. Environmental damage to surrounding vegetation. Fencing restricts the movement of construction machinery within the construction site as much as possible and avoids destruction of vegetation as much as possible.

Restriction of Noisy Work

During the construction cycle some activities will generate noise. Steps must be taken to minimize the noise pollution that may affect the general public. These are:

1. Heavy equipment or machinery capable of creating noise would be used during the normal working hours of 7:00 am to 5:00 pm.
2. If it is unavoidable the community and staff and public would be informed in advance of any work activities to occur outside of normal working hours.
3. Site would be hoarded with solid barriers if so instructed by the Project Manager.
4. Power and mechanical tools (generators, air compressors and other power mechanical equipment) would have engine covers and the equipment would be placed as far away from residential area.
5. There would be no excessive idling of construction vehicles on site.
6. Vehicles and equipment will be properly serviced.
7. No blasting would be done.
8. Silencers (mufflers) would be fitted to all construction equipment and machinery where possible.

Protection of Water Quality

There are risks of affecting the quality of surface and underground water due to:

1. Accidental spills of machinery oils and fuels. To prevent this risk machinery should avoid crossing over natural watercourses and storm water ways. No washing or maintenance of machinery or equipment would be done near the beach, springs or storm water courses.
2. An increase of siltation of waterways from soils washed away by runoff water. If so instructed by the Project Manager, this may be avoided by installation of sediment barriers such as geotextile to filter runoff that would drag suspended solids and prevent them from reaching natural waterways.

Protection of Air Quality

There are three main sources of particulate emissions and air pollutants, these are:

1. Increase of dust suspension in the atmosphere due to earthworks operations. To mitigate against effects of dust nuisance the following measures would be applied:
 - Regular water spraying of the work area.
 - Keep sand and fines moist with sprays of water.
 - Trucks used in haulage would be covered.
 - Regular cleaning of work site.

- Construction materials such as sand, cement, or other fines would be kept properly covered.
 - Cement would be kept stored within a shed or container.
 - Unpaved, dusty construction roads would be compacted and wetted periodically.
 - Demolition debris, if produced, would be kept in controlled area and sprayed with water mist to reduce debris dust.
 - During pneumatic drilling demolition, if done, dust would be suppressed by ongoing water spraying and/or installing dust screen enclosures at site.
 - The surrounding roads would be kept free of debris to minimize dust.
2. Gaseous emissions from the movement of machinery. Well maintained machinery in good condition will minimize the effect of gaseous emissions.
 3. Smoke from burning waste. There would be no burning of any waste on the construction site.

Location of Dump Site

Before construction works begin, a designated waste aggregation point would be identified on-site.

The excavation and demolition operations would generate surplus of soils and debris. The debris and surplus material would be transported to the designated sanctioned landfill.

Auxiliary Facilities

Auxiliary Facilities for staff and workers

Site offices, workers lunch and change rooms, and sanitary facilities would be placed as close as possible to the work within the construction site hoarding. The bathrooms would be portable chemical type if water closets are not available. All waste material from the chemical washrooms would not be discharged on the site or in natural or artificial waterways.

Machinery maintenance area (yard or workshop)

All maintenance and servicing of machinery would be done in existing garages or workshops. No maintenance would be done on the construction site to avoid water and soil pollution due to spillage of fuel or oils.

Recycling Point (waste collection skips)

An area would be identified for the collect of different types of waste materials generated on construction site. Where possible proper treatment and recycling would be allowed. Skips for debris, concrete, wood, metal, glass, harmful or hazardous waste, organic and vegetable waste would be located along easy access points.

Concrete Mixers washing areas

An area would be specially prepared for the washing of concrete mixers to avoid uncontrolled mixer cleaning. The water used for washing would not be discarded in natural waterways or storm drains connected to rivers or the sea.

Occupational Health & Safety

The health and safety of workers are critical to the construction operations, therefore the improper handling of equipment, the improper storage and usage of various chemicals and construction materials on site, poor and unsafe working conditions, high levels of continuous noise and fumes, as well as inadequate safety equipment can cause serious injuries and down time to the workers and project and should be avoided. Best management practices should always be implemented as labour laws hold the employer responsible for the workers' safety. Proper facilities would therefore need to be provided for workers.

The following measures would be implemented:

- The contractor would ensure that an Occupation Health and Safety Plan is in place to guide work activities, and provide a safe environment for workers.
- The contractor would ensure that all workers operate within a safe environment.
- All relevant labor and occupation health and safety regulations would be adhered to in order to ensure workers' safety.
- Workers would be provided with necessary equipment as well as protective gear as per their specific tasks such as hard hats, overalls, gloves, goggles boots, etc.
- Sanitary facilities would be provided for all workers on site.
- The contractor would ensure that there are basic medical facilities on site and that there is staff trained in basic first aid.
- Appropriate posting of information within the site would be done to inform workers of key rules and regulations to follow.

Cleaning of the Construction Site

At the completion of the project, it is the responsibility of the contractor to ensure there is a general cleaning up of the entire construction area. This will include:

- Cleaning of all waste on the site, such as debris, packaging materials, rubber, scrap metals, concrete, general rubbish, etc.
- Dismantling of all auxiliary facilities like site offices, bathrooms, storage areas and workers lunch and change rooms.
- Removal of hard and temporary fencing.
- Repairs to any construction access or exit damaged during construction.
- Final cleaning of construction area to ensure that conditions of the area are equal to or better than conditions existing prior to the works.

Code of Conduct:
Environmental, Social, Health & Safety (ESHS)

At **Sea Operations (SVG) Limited** we are dedicated to supplying a professional construction service that will meet and more importantly, exceed the expectations of our clients. We will promote quality construction, take great pride in our work at all times, and develop lasting relationships with all our clients.

To be successful in our mission, we embrace the following values, they define who we are, how we work, and what we stand for. They tell us what we expect of ourselves and all who work with us:

- INTEGRITY – Maintain constant adherence to a moral and ethical code
- PROFESSIONALISM – Conduct ourselves as dedicated professionals
- ACCOUNTABILITY – Hold ourselves responsible for our daily craft
- EXCELLENCE – Strive to do better than ordinary
- COMMITMENT – Pledge to meet the needs of our customers
- TEAMWORK – Cultivate a climate to encourage a co-operative effort
- RESPECT – Appreciate and treat all individuals with courtesy

When you work with us, we expect you to demand these same standards of yourselves and peers.

Why do this matter?

Our reputation is a vital business asset. So is yours.

It gives clients, employees, partners, subcontractors, suppliers and the communities we serve confidence in us. We want to ensure wherever we work we are trusted and operate not only legally but ethically and fairly.

Our reputation depends on you, your decisions, and your actions.

ENVIRONMENTAL MANAGEMENT

All employees must agree to comply with our **Environmental & Social Management Plan**. Employees are expected to work actively to prevent environmental harm and minimize environmental impact. Employees shall make every effort to limit your environmental impact and

follow our environmental management systems. All employees will be inducted and monitored on site to ensure compliance with our Environmental & Social Management Plan (ESMP) with particular emphasis on waste control. All employees will be responsible for cleaning, tidying and responsible disposal of their own waste.

HEALTH & SAFETY

Sea Operations (SVG) Limited is committed to creating and maintaining a positive Health & Safety culture embraced by all employees and subcontractors.

Employees and subcontractors are required to work actively to prevent workplace accidents and create a healthy and safe work environment. The aim is zero accidents. The health and safety performance of subcontractors will represent a key criterion used in the selection process.

We will ensure we maintain a trained and competent workforce appropriate to the duties they are undertaking.

EQUALITY, DIVERSITY & INCLUSION

Sea Operations (SVG) Limited is committed to promoting equal opportunities to all its employees. We treat all people equally with respect and dignity. We do not discriminate on the grounds of age, colour, disability, ethnicity, gender, marital status, sexual orientation, religion, faith or on any other unjustifiable or illegal grounds. We expect subcontractors to demonstrate the same commitment to promoting equal opportunities in how they operate.

GENERAL RULES & BEHAVIOUR ON SITE

1. All employees will receive a compulsory site induction on the first morning they arrive on a site, prior to commencing any works.
2. All persons must report to work in a fit state. It is not only your safety risk, but it is a risk to those around you who could be affected by what you do.
3. Any person reporting for duty under the influence (or suspected of being under the influence), or in the possession, of drugs and /or alcohol will be immediately asked to leave the site – no exceptions.
4. Any person on medication for a specific medical condition which may impair their performance is to make it known to the Site Manager as soon as possible so that appropriate measures, if necessary, will be put in place.
5. All employees will be provided with the appropriate PPE (Personal Protective Equipment). All tools and PPE must be in good condition, fit for purpose, and receive all the mandatory and statutory inspections, checks and calibrations, as and when required.
6. No food or drink, with the exception of water, is to be taken and consumed anywhere throughout the site. All food and drink must be stored and consumed in the allocated canteen facilities provided, if brought inside the boundaries of the site.
7. Sites are strictly **NO SMOKING**, unless there is a designated smoking area assigned by the Site Manager.
8. All workers must practice basic hygiene, that is,

- a. Hand washing before eating, drinking, smoking and before, as well as after, using the toilet
 - b. Proper food storage in the canteen
 - c. Careful disposal of food leftovers in the canteen bin so as not to attract vermin which may carry disease.
9. Mobile Phones – the use of mobile phones should be restricted to during break times and after shifts to minimize worker’s distraction and maximize concentration. This ensures quality of work, productivity and promotes team work. Most importantly it will reduce the amount of accidents on sites, particularly falls, and minimizes damage to phones, which may be needed in an emergency situation.
 10. Personal Stereos are not permitted to be used on site. Radios may be used subject to permission being sought from the Site Manager.
 11. Vehicles are not allowed to be parked on site, unless permission is granted by the Site Manager.
 12. Horseplay on site will not be tolerated and could lead to termination and the incident being reported to the Police.
 13. Cleanliness and Waste – All employees are responsible for maintaining a clean, tidy and safe working environment, free from unnecessary waste materials and packaging.
 14. We expect all employees to treat and regard one another respectfully, courteously and professionally at all times in order to achieve and maintain a positive working environment.

TRAINING

We intend to provide training prior to the commencement of works. Qualified personnel in the respective fields of the environment, health, and safety would be brought in to host educational seminars for all employees. We encourage all employees to be interactive and ask as many questions.

Periodic training will be provided to refresh and continually sensitize and educate employees.

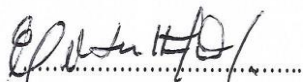
DISCIPLINARY ACTION

We may have to take disciplinary action against employees who repeatedly or intentionally fail to follow our code of conduct. Disciplinary actions will vary depending on the violation.

Possible consequences include:

- Demotion
- Reprimand
- Suspension or termination for more serious offenses
- Detraction of benefits for a definite or indefinite time

We may take legal action in cases of corruption, theft, embezzle or other unlawful behavior.



Errol Sutherland

Managing Director