

EPA PERMIT

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SCHEDULE TO THE ENVIRONMENTAL PERMIT

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CANTONMENTS-ACCRA
- 3.0 REGISTRATION NO. : CT539/01/20
- 4.0 PERMIT NO. : CT005390120
- 5.0 EIA OF PROPOSED MOVENPICK AMBASSADOR HOTEL, ACCRA

In pursuance of the Environmental Protection Agency Act, 490 of 1994 {Sections 2 (i) and 12 (1)} and the Environmental Assessment Regulations, 1999 (LI 1652) and on the basis of the information provided in the Preliminary Environmental Report (September 2006), this Environmental Permit is issued authorizing **KHI Ghana 01 Limited** to commence the construction of the proposed 5-Star Movenpick Ambassador Hotel in the Accra Metropolis.

6.0 CONDITIONS OF PERMIT

6.1 Project Specifications

- Comply with all relevant project specifications, mitigations, monitoring and other environmental management provisions as indicated in the Environmental Impact Statement (EIS). The project involve the following facilities:
 - A nine-storey building with 337 Rooms, business centre, conference room, retail shop, spa, restaurant and a banquet hall
 - 34 serviced apartments
 - 50 residential apartments
 - 274 capacity car parking lot
 - Swimming Pool

6.2 Location

- The proposed project is located at the Central Business District of Accra and bounded by Mobil House and Cedi House to the north, Novotel Hotel to the south, Independence Avenue to the east, Barnes Road and the offices of the Trades Union Congress to the west.

6.3 Dust Management

- Water bowzers should be used to sprinkle the project area on daily basis to reduce dust generation.

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APPENDIX

1.0 INTRODUCTION

Circa Ghana's post-independence era, the Ambassador Hotel was the flagship of the erstwhile State Hotels Corporation, and was one of the leading hotels in West Africa. It hosted many dignitaries, especially during Organization of African Unity (OAU) summits and other international conferences that were held in Ghana. Unfortunately, the economic stagnation and decay that hit Ghana in the 1970s and 1980s, led to the collapse of the magnificent hotel. It is located within the central business district of Accra, the capital of Ghana.

Under its Economic Recovery Programme (ERP), the government of Ghana set out to divest itself of non-performing state-owned enterprises, including the Ambassador Hotel and other state hotels. It was put on the divestiture list and was purchased by Kingdom Hotels Investment in 2005, after the physical structures had been left to the vagaries of the weather for decades.

Under its Strategic Implementation Plan for the Tourism sector (2003 -2007), the Ministry of Tourism and Diasporan Relations plans to make Ghana the preferred tourism destination in Africa, and make tourism the third largest employer after agriculture and retailing, by 2007. It is against this background that the proponents of this project intend to construct and operate a 337-room five star hotel facility with ultra-modern facilities that match international hotel standards, in addition to 34 serviced apartments, and high end retail and office facilities.

1.1 Brief Background of the Proponent

KHI Ghana 01 Limited is a Ghanaian company owned by Kingdom Hotel Investment (KHI) a Saudi-based investment organization with particular focus on hotels and hospitality facilities. KHI has currently leased the 65 898m2 square metre plot on which stood the ruins of the former Ambassador Hotel. Having demolished the old structure, KHI intends to build a new 337-room, 5-star hotel to be operated as a member of the worldwide chain of Mövenpick hotels, in addition to 34 serviced apartments and high end retail and office facilities. It would feature the latest and most modern elements in modern elements in building technology and hotel comfort. It is worth noting that a Preliminary Environmental Report was prepared and submitted to the Environmental Protection Agency (EPA) concerning the demolition of the old structures, and a permit was duly issued for same prior to the commencement of the demolition exercise.

1.2 The Proposed Project – Mövenpick Ambassador Hotel

Although the tourism and hospitality industry in Ghana has seen tremendous growth over the past decade, there is still a gaping void to be met in order for the sector to meet its objectives of making Ghana a competitive and preferred tourism destination in Africa by 2007. This is in respect of the required number of beds or rooms that meet international star-rated standards.

Enter the new Ambassador Hotel to contribute 262 hotel rooms in the main building and 75 standard room in the extension building that meet international standards, comprising serviced apartments, residential apartments and retail facilities. The main hotel building would be made up of ten (10) executive suites, (12) junior executive suites and an executive lounge on the Executive floor, fourteen (14) twin beds, five (5) junior suites and twenty-eight (28) king-size rooms on each of the five typical floors. The Presidential floor will have four (4) self-contained bedrooms, and two other master bedrooms. There will also be, adjacent to the hotel, three buildings of 4 & 5 floors enclosing 34 serviced apartments with one bedroom, one bathroom, or two bedrooms one bathroom, or two bedrooms two bathrooms apartments. Other facilities to be constructed in the nine-storey structure include a business centre and conference rooms, a reception lobby and a coffee shop, one retail shop, a spa and a health club, an all day restaurant, a theme restaurant and a banquet hall, in addition to services such as a kitchen, a laundry, staff facilities and storage. There will also be two blocks of six floors each serving as residential apartments (50 residential apartments).

For auxiliary power supply, there will be five 2,000 kVA generators and six 1,600 kVA transformers.

While the prime location of the existing structure in the central business district of Accra makes it ideal for the intended purpose, its construction at a time when the entire neighbourhood is already well built-up will require the observation and application of the strictest planning and development practices to take on board the environmental and social concerns raised by neighbours and other stakeholders.

It is expected that the proposed project will be completed in the latter part of the year 2008

The site is bound to the north by Mobil House and Cedi House, to the north-east by a Bank of Ghana office annex, to the south by Novotel Hotel (a 5-storey structure) and to the east by the

Independence Avenue and the National Theatre, and to the west by Liberia Link Road and the offices of the Trades Union Congress (see Figure 2.1, Location map). The entire area, within an approximately 2.5 kilometre radius of the site, is made up of the offices of business entities and commercial concerns as well as government and international agencies and organizations, such as the British Council and the Food and Agricultural Organisation (FAO) of the United Nations.

1.3 Project Justification

The need for hotel accommodation and hospitality facilities in Ghana is most felt now. With the country preparing to host Africa's biggest soccer festival two years from now, and the government aiming at making Ghana a preferred tourist destination especially for Diasporans and people of African origin, the need for more such facilities keep rising. It is anticipated that Ghana's sterling performance at the recent World Cup tournament in Germany will serve to attract soccer pundits and lovers the world over to witness the CAN 2008, which incidentally is being hosted by Ghana.

The recent civil unrests in our neighbouring countries have led to a number of international and multinational organizations that were hitherto headquartered in those strife-torn countries relocating or transferring the greater part of their operations to Ghana.

These, combined with other related reasons have gone to strengthen government's resolve to boost the tourism sector by promoting the divestiture of old non-functional state-owned accommodation facilities in the country, including the former Ambassador Hotel, and recently the City Hotel in Kumasi.

The project aims principally at providing ultra-modern hotel accommodation and leisure facilities in Ghana towards making Ghana a preferred tourism destination, while generating employment opportunities for local expertise and raising revenue for the government. Of course, the ultimate objective is to generate suitable financial returns on the capital investments made in the venture. This KHI expects to achieve through the construction of an ultra-modern 337-room five star hotel, and 34 serviced apartments, in addition to high end offices and retail facilities, on the premises of the defunct Ambassador Hotel.

The purpose of this Scoping study is to identify the types, nature and extent of environmental impacts that could arise from the construction of the new Ambassador Hotel (the proposed

project) and design appropriate mitigation or management measures for these impacts to ensure the environmental sustainability of the project.

1.4 Legal, Regulatory and Institutional Considerations

The relevant policies and regulatory requirements that have to be considered for the legitimate and successful implementation of the project have been reviewed, and consultations with the relevant stakeholders and agencies have been conducted.

The laws and regulations considered include:

- Environmental Protection Agency Act, 1994, (Act 490)
- Environmental Assessment Regulations, 1999, (L.I. 1652)
- Fire Precaution (Premises) Regulations, 2003, L.I. 1724
- Accommodation and Catering Enterprise Regulations, 1979, L.I. 1205
- Building Regulations 1999, LI 1630
- Accra Metropolitan Assembly bye-laws on Noise, Public health and Safety and Sanitation.

Apart from the administrative and policy issues, The Strategic Implementation Plan for the Tourism Sector (2004 – 2007), has been considered. The relevant sections of the plan are discussed in further detail below.

Under the Ghana Environmental Assessment Regulations, 1999 (LI 1652), Schedule 1, Regulation 29 identifies the construction of an accommodation, food and beverage facility as an undertaking that requires the registration of the project with the Environmental Protection Agency (EPA) and the issuance of an Environmental Permit by the EPA.

While Section 1 of the Fire Precaution (Premises) Regulations, 2003, L.I. 1724, requires that a fire certificate be acquired for premises such as a public residential accommodation, Section 14 of the same law requires that the owner or occupier of premises who proposes to make major structural alteration to the premises shall give notice of the proposal and obtain approval from the Chief Fire Officer before the proposal is effected.

The Strategic Implementation Plan for the Tourism Sector (2003 – 2007) has the goal of making Ghana a competitive and quality tourism destination within the framework of respect for and recognition of the country's cultural, historical and environmental heritage.

As part of the traffic impact studies conducted, consultations have also been held with other stakeholders of the project, especially the immediate neighbours at the project site, and some road users who frequent the roads within the project area on their concerns, comments and expectations of the proposed project.

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

2.1 Location and Access

The proposed project is a nine-storey 337-room five star hotel facility, 34 serviced apartments and high end offices and retail facilities. It will be located on the Independence Avenue. The site is bound to the north by Mobil House and Cedi House (a 15-storey building), to the north-east by a Bank of Ghana office annex, to the south by Novotel Hotel and to the east by the Independence Avenue and the National Theatre, and to the west by Liberia Link Road and the offices of the Trades Union Congress (see Figure 2.1, Location map). The entire area, within an approximately 2.5 kilometre radius of the site, is made up of the offices of business entities and commercial concerns as well as government and international agencies and organizations, such as the British Council and the Food and Agricultural Organisation (FAO) of the United Nations.

The main entry point to the proposed hotel will be from the Independence Avenue directly opposite the National Theatre, where there will be a lay-by for vehicles entering and exiting the hotel to minimize traffic on the Avenue. This will be connected to a service entrance that provides another access point to the hotel from the Liberia Link Road.

2.2 Facilities and Services

The proposed hotel will be made up of various levels or floors, as indicated on Figure 2.2, Sections. There will be a basement, a podium ground, a podium mezzanine, a technical level, five typical levels, an executive floor and a presidential floor. In all, there will be 262 rooms in the hotel complex and 75 standard rooms in the adjacent expansion, in addition to 34 serviced apartments, 50 residential apartments and high end offices and retail facilities. These would be made up of ten (10) Executive suites, twelve (12) junior Executive suites and an executive lounge on the Executive floor, fourteen (14) twin-bed rooms, five (5) junior suites and twenty eight 28 king-size rooms on each of the five typical floors. The Presidential floor will have four (4) self-contained bedrooms, and two other master bedrooms. There will also be, adjacent to the hotel, three buildings of 4 & 5 floors enclosing 34 serviced apartments with one bedroom, one bathroom, or two bedrooms one bathroom, or two bedrooms two bathrooms apartments. Each guest room will have a sleeping bed, writing desk, chairs, a closet, television and radio sets and dedicated internet service.

Other facilities to be constructed in the nine-storey structure include, a business centre and conference rooms, a reception lobby and a coffee shop, one retail shop, a spa and a health club, an all day restaurant, a theme restaurant and a banquet hall, in addition to services such as a kitchen, a laundry, staff facilities and storages.. There will also be two blocks of six floors each serving as residential apartments (50 residential apartments).

There will also be approximately two hundred and seventy four (274) parking lots. Parking arrangements will be segregated to allow for short and long term parking.

2.3 Water and Power Requirements

It is estimated that at full operational capacity the daily water requirement of the hotel will be about 156,000 gallons (590,000 litres). Water will be used in bathrooms, kitchens, restaurants, swimming pools, and for cleaning and other sanitary purposes.

The electrical power requirements will be met by supply from the Electricity Company of Ghana (ECG). Electrical load will be made up of a motley of lights, general power points, different types of air conditioners and refrigeration equipment, heater systems including boilers, and various types and sizes of pump motors. It would include power requirements for elevator systems and other services.

The total after-diversity maximum-demand for the hotel complex is estimated at 7,000 kVA at a power factor of 80%. It is anticipated that the power factor would be improved by the use of power factor corrective capacitors to about 90% which would reduce the power demand significantly. A power supply system consisting of the following will be installed to supply dedicated power to the hotel:

1. 5 No. 2,000 kVA power generators installed in a Generators room including synchronization panels.
2. MV Switchgear of appropriate capacity
3. 6 No. 1,600 kVA transformers installed in an adjoining Transformers room
4. Main Distribution Boards.

2.4 Market

The hotel is targeting a guest market comprising international business people visiting Ghana, presidents and heads of states, foreign dignitaries and emissaries, and could host international functions and activities such as conferences, workshops and beauty pageants.

The government of Ghana through the Ministry of Tourism and Diasporan Relations is pursuing a Strategic Implementation Plan for the Tourism Sector (2003 – 2007) to make Ghana the preferred tourism destination in Africa, and make tourism the third largest employer after agriculture and retailing by 2007. This drive, especially with the re-branding of the ministry to include diasporan affairs is expected to culminate in an increased tourism interest in Ghana for Africans in the Diaspora. Annual Pan-African events like Emancipation Day and PANAFEST will continue to bring in tourists. Ghana's fifty year anniversary in 2007 lends more weight to this drive. These underpin the need for more hospitality facilities in Ghana.

With Ghana increasingly enjoying international spotlight and attention as an island of peace and political stability in the West African sub-region through the development of democracy and good governance, it is anticipated that the government's policy of making Ghana the gateway to West Africa will attract more business people into the country.

Two years hence, Ghana will be hosting Africa's biggest soccer fiesta, CAN 2008. Following Ghana's impressive debut at the World Cup, CAN 2008 in Ghana will continue to draw the attention of the football world to Ghana. It is anticipated that international media houses and sports broadcasting stations will set up shop in Ghana before, during and after the tournament.

In view of the above, it can be projected that the hotel project upon its timely completion could meet an appreciably high market within its initial years of operation. The proposed partnership with the Mövenpick chain of international hospitality facilities would further enhance its marketability, as it would be advertised on the World Wide Web and other advertising channels.

2.5 Construction and Operational Phase Activities

It is necessary for the activities at the construction and operational phases of the project to be mentioned here, since these activities constitute the potential sources of impacts from the project.

2.5.1 Constructional Phase Activities

These would include activities such as excavations for foundations and basement, the podium ground, the podium mezzanine as well as for the technical level of the main building. There will also be the cutting and filling of voids and depressions using earth. It has been estimated

that up to seventy percent of the debris from the demolition phase will be used in filling voids and depressions, and for landscaping. Other construction activities will be the hauling of building material such as sand, stone aggregates, cement, iron rods and other materials. The mixing and pouring of concrete and other building materials will also form part of the construction phase activities. Block-laying, flooring, roofing as well as painting of the building will also be undertaken at this phase.

2.5.2 Operational Phase Activities

At the operational phase, the major activities will be accommodating house guests, hosting of delegates for conferences and other social events and programmes like beauty pageants, musical shows and annual general meetings of large firms and corporations. The swimming pools and restaurants will also play host to the general public as well as hotel guests.

3.0 CONSIDERATION OF ALTERNATIVES

The proposed 337-room 5-star hotel complex, serviced apartments and office and retail facilities is to be located in the central business district of Accra. The choice of the location is justified by the fact that the site has been zoned for such an activity, and has actually been used for a hotel in the past.

At this stage of the proposal, the alternatives considered are:

3.1 “No Project” scenario

Following the collapse of the former Ambassador Hotel, a significant void in the hospitality business was created. Although a number of star-rated hotels have come up since then, the demand for hotel beds of international standard is yet to be matched by their availability.

The location of the proposed hotel is a prime commercial and business area within the city of Accra. The continued fallowing of the site actually accrues to revenue losses to the state, as it has holds huge potential for generating revenue to the state and employment for a significant number of people. Until the recent demolition of the remnants of the former Ambassador Hotel structures, the structures were being inhabited by vagrants and drug pushers, who were defecating rampantly on the site, among other nefarious activities. A “no-project” option will engender the continued unsanitary conditions at the site.

As well as boosting Ghana’s tourism potential the proposed hotel will put Ghana on the international hospitality map as having one of the hotels in the Mövenpick international chain.

A “no-project” option will not let the expected benefits from the proposed project accrue to Ghana.

3.2 Upgrading existing facilities

One alternative was to have rehabilitated and upgraded the existing facilities of the erstwhile Ambassador Hotel to KHI’s standards. However, having been left to the vagaries of the weather for decades, the physical structures of the defunct hotel cannot be trusted to support any structural add-ons. The upgrading of the existing structures would thus be at great cost to the proponent while it may not guarantee structural integrity and the design suitability for the proponent.

3.3 Site Alternatives

There are other locations within the city apart from the current one that could have been used for the proposed hotel project. However, a new location may require the clearing of vegetation and the disruption of social and communal life of groups and individuals that may be residing in or close to the area.

However, not many sites would offer the kind of benefits this current one does – proximity to the central business district and other installations such as the Ministries, the seat of government, the sports stadium, the National Theatre, Accra International Conference Centre, State House, Parliament House, banks, the beach and tourist attraction sites such as the Kwame Nkrumah Mausoleum. In view of the fact that the current site has already been zoned for a hotel, and has actually been used for a hotel in the past there is justification for its continued use as such.

A new site will require that the site be appropriately zoned, and the acquisition of new utility service lines such as water, electricity and telephone at additional cost to the proponent, not to talk about amount of time to be spent in acquiring these facilities. Moreover, the availability of such a large tract of land within the central business district of Accra for the construction of a hotel is simply marginal. This is exemplified by the location of the proposed Sheraton Hotel in Accra, where the current Accra Turf Club has to be relocated to make way for the construction of the hotel.

4.0 ENVIRONMENTAL BASELINE INFORMATION

4.1 Site Description

As already mentioned, the site has been used since the 1960s for a 75-bedroom which collapsed in the early 1980s. It is a 65,898 metre-square piece of land within the central business district of Accra. To the north is the Mobil House and Cedi House (a 15-storey building), to the north-east is a Bank of Ghana office annex, to the south is Novotel Hotel and to the east is the Independence Avenue and the National Theatre, and to the west is Liberia Link Road and the offices of the Trades Union Congress (see Figure 4.1 Site Plan). The remnants of the old Ambassador hotel are currently being demolished, the appropriate permits having been acquired and after a series of consultations with stakeholders. The drains on the site are largely intact.

4.2 Access

The site can be accessed via the main entrance off the Independence Avenue opposite the National Theatre. Another gate opens on to Liberia Link across from the TUC offices. All the roads within the project area are very busy roads with appreciably high volumes of human and vehicular traffic, especially during the peak traffic hours. The site is bounded by a concrete wall that has been recently refurbished, with driveways that still maintain their surface dressings and open parks that are now overgrown with weeds.

4.3 Zoning

Since the site has been zoned for commercial activity, and was already used for a hotel, the Town and Country Planning Department has given its "no objection" approval for the construction of the new hotel. The general area is occupied by high rise buildings comprising office blocks, hotels, recreational facilities and trading centres.

4.4 Services/Utilities

Utility supplies, specifically electricity, telephone and water supply to the existing structure have all been long disconnected. However, by its location, access to the utility services such as water supply, electricity and telephone services will be easily available.

4.5 Air Quality

The site is located in a heavy vehicular traffic zone, with a bus terminus close by (the Kinbu terminus). The ambient air quality within the project area has been determined to be around $100\mu\text{g}/\text{m}^3$, well below EPA's prescribed limit of $150\mu\text{g}/\text{m}^3$. Emissions from the engines of vehicles operation within the area contribute significantly to pollute the area. However, the open nature of the area and the generally windy nature of the area ensure the rapid dispersal of these emissions.

4.6 Noise

The noise level measured in the area indicated levels ranging between 89 dB(A) at night and 95 dB(A) during the day due to vehicular movements and other activities around the project site. These levels are well above the EPA levels 55 dB(A) and 60 dB(A) respectively for areas with commercial or light industry activity.

4.7 Traffic

The project area is serviced by busy streets with appreciably high vehicular and pedestrian traffic; three two-way dual carriage roads and a one-way single carriage link road. The three two-way dual carriage roads are Independence Avenue to the east, Liberia Road to the north and Barnes Road to the west. The western gate of the site opens into Liberia Link, the one-way single carriage road that connects Barnes Road from off the main entrance to Novotel to Liberia Road behind the TUC office block. The Independence Avenue is categorized as a Class C, i.e., a road capacity condition with an average flow range of 750 –1200 passenger vehicles per hour in both directions.

The results of a Manual Traffic Data Count (MTDC) conducted within the project vicinity to establish a traffic baseline data is as presented in the appendix. There is general traffic congestion on the southern side of the proposed site (mainly in Makola–Okaishie–Kinbu areas) due to pedestrian–vehicular conflict and the intense commercial activities that go on there. The peak period for this sustained saturation starts from 10:30 hours to 17:30 hours.

By virtue of the commercial activities within the project area and the central business district in general for most times of the day, there is appreciably heavy traffic on the Independence Avenue–Barnes Road intersection (National Theatre–Novotel Hotel

direction). Hawkers and beggars take advantage of the traffic situation to ply their trade. This situation normally occurs during week days and on Saturdays, and creates a pedestrian-vehicular conflict which in turn contributes to the traffic congestion.

4.8 Drainage

Like most of the physical structures on the site, the drainage construction on the site is still in appreciably good shape, though they have been exposed to the weather elements for a long time. They were originally designed to open out into the metropolitan drain system and can still be used, unless in situations where the new construction would not permit so.

5.0 IDENTIFICATION OF ISSUES OF ENVIRONMENTAL CONCERN

Various components of the project implementation would present issues of environmental concern. These concerns have been identified from various sources, including site visits and inspections, consultations with various stakeholders, ENVI-LOGICA's sources as well as desk surveys. These issues have been presented in the Rapid Impact Matrix (Table 5.1) below and described briefly below.

The potential impacts of the proposed hotel project that have been identified have been categorized below under construction and operational phases.

5.1 Construction Phase

Construction phase impacts would include:

5.1.1 Air quality

The construction works will generate dust that would compromise air quality in the area. Equipment and vehicles to be used in the project such as excavators, pay loaders and haulage or dump trucks will also emit exhaust fumes and smoke. This could present issues of air pollution, against the background that the general wind direction in the area is north-eastern, toward the office blocks and properties to the north and the north-east of the site.

5.1.2 Noise and Vibration

The construction activity will generate noise that could add to the background noise levels in the area. As already mentioned, the measured background noise levels in the vicinity for both day and night times exceed the permissible EPA values. To this end, it will be ensured that equipment to be used by the selected Contractor will have very low noise emission levels. Noise, as well as dust generation, has been major concerns raised during consultations with stakeholders during both the demolition stage and also the construction phase. Appropriate mitigation measures have been proposed and discussed in *Chapter 6.0 Consultations*.

5.1.3 Traffic Impacts

The project site is serviced by three two-way dual carriage roads and a two-way single carriage link road. The three two-way dual carriage roads are Independence Avenue to the east, Liberia Road to the north and Barnes Road to the west. The western gate of the site opens into Liberia Link, the one-way single carriage road that connects Barnes

Table 5.1 Rapid Impact Matrix (Scale +ve impact=+5; -ve impact =-5)

ENVIRONMENTAL IMPACT	IMPACT SCALE	IMPACT DESCRIPTION
Construction Phase		
Air quality	-1	Dust, smoke and soot generation from the construction and the movement of haulage and other machinery
Noise	-1	Noise generation from the construction, engines of pay loaders and haulage trucks
Traffic Impacts	-2	Increased vehicular traffic on the roads serving the project area
Occupational Health and Safety	-2	Work-related accidents
Public Health and Safety	-2	Air pollution, dust sprays, vehicular-pedestrian accidents
Employment	+3	Income generation
Operations and Maintenance Phase		
Waste generation and management –liquid and solid	-2	Waste water, sewage, food waste, packaging materials
Storm water drainage	-2	Reduced percolation and high run-off volumes.
Traffic	-1	Increased vehicular traffic on the roads serving the project area
Energy and Waste minimisation	+2	Power factor correction devices will be installed
Security	+2	Security measures at the hotel will secure the neighbourhood.
Emergency fire	-1	Risk of fire outbreak from electrical failure, kitchen fires.
Accidents and hazards – drowning, burns, slips and falls	-2	Potential drowning in the swimming pools, burns and scalds in the kitchen, accidental slips and falls.

Road from off the main entrance to Novotel to Liberia Road behind the TUC office block. The Independence Avenue is categorized as a Class C, i.e., a road capacity condition with an average flow range of 750 –1200 passenger vehicles per hour in both directions.

At the construction phase, haulage trucks will be required to bring in building materials, sand and other logistics. Heavy earth-moving equipment such as excavators will be brought to the site. An estimated eighty per cent (80%) of the rubble from the on-going demolition of the old structure will be reused on site, in filling voids and hollows, and also in creating landscaping elements. The remainder will be carted off after construction. These could significantly impact the traffic conditions on these roads, especially as they enter and exit the plant.

5.1.4 Occupational Health and Safety

The risks of accidents, slips and falls exist in the course of construction exist. Accidental collisions and knock-downs of personnel by trucks and other moving equipment are potential risks. Falling objects and debris could hit workers on the ground. Some workers may cut themselves or others accidentally with tools, or may slip carrying materials. The inhalation of dust and other particulate air-borne matter could also affect the health of workers.

5.1.5 Public Health and Safety

By virtue of its location in the central business district, generated dust and exhaust fumes from the construction works could impact negatively on the air quality within the populated vicinity, thus impacting negatively on public health.

In view of the heavy traffic conditions within the area the project could lead to more vehicle-pedestrian conflicts and/or accidents.

During haulage of sand to the site, dust sprays from the dump trucks as they move along streets could compromise air quality and enter the eyes of the pedestrian public.

5.1.6 Employment

It is anticipated that the proposed construction will offer employment opportunities. It will require the hiring of some skilled and unskilled personnel, up to between four hundred and five hundred. Food vendors and providers of other services would also come to the project site to sell their wares. This will be a positive and beneficial impact.

5.1.7 Construction Waste Generation

Construction activities will include the generation of construction wastes such as empty cement sacks, wood wastes, empty paint buckets and plastic wastes such as electrical cable clippings, etc. the reusable wastes such as cement sacks, wood wastes and paint buckets will be gathered and given out to scavengers, while other wastes will be disposed of through the public waste disposal system.

5.1.8 Disruption of Utility Services

This is a genuine concern raised by a number of stakeholders consulted. The project area, as already mentioned, is in a prime business and commercial district. Disruption of electric power, telephone services, water or any other utility service could cause serious problems for the numerous businesses and commercial houses in the vicinity. This was another issue of concern raised by a number of the respondents in the stakeholder consultations.

5.2 Operations and Maintenance Phase

Identified impacts at the Operations and Maintenance phase are as outlined below:

5.2.1 Waste generation and management

Wastes generated can be categorized into liquid and solid. Liquid waste from the hotel will be constituted of sanitary water, sewage and wastewater from the kitchens. A significant proportion of the liquid waste will be from sanitary activities like washing of floors, guest rooms, toilets and bathrooms. It is estimated that the daily water demand shall be 1,500 litres per room for the hotel and 230 litres per person for the residential apartments. That works out to about 590,000 litres for the hotel at full occupancy, the 34 serviced apartments and the offices and retail facilities. An estimated sixty percent 85% of this would be discharged as wastewater, which would principally be from domestic sources and there not dangerous or hazardous. This will be disposed of through an existing 500 mm sewer line along Independence Avenue. The swimming pool will be drained periodically, and the Ghana National Fire Service would be invited to pump such water away which could be used in flushing drains, watering dusty roads or quenching fires. Human wastes will be collected in cesspits that will be collected periodically. The prospect of installing waste treatment facilities is under consideration and will be firmed up by the EIA stage.

Solid wastes will include food wastes, paper and polythene packaging materials, broken glassware, tins and cans from the kitchens, restaurants, bars and coffee shops. These will

be collected in large bins and disposed off through the metropolitan waste disposal system. Private waste collection companies will be engaged to collect and appropriately dispose of these wastes.

5.2.2 Storm water drainage

The paving and concretizing of such vast area as is proposed will result in reduced percolation during rainfall periods. This will give rise to increased run-off which if not properly handled could result in flooding in adjacent, low-lying areas.

5.2.3 Noise

Outdoor activities at the hotel such as poolside parties, garden parties and barbecues could generate significant levels of noise, depending on the number of people attending and what time of the day.

5.2.4 Traffic

The entrance and exit points of the hotel both open out into very busy streets. This situation could aggravate the traffic situation on these streets, especially during peak traffic hours during the operations and maintenance phase of the hotel.

5.2.5 Energy management and Waste minimization

For a hotel of this size and stature, electric power consumption can obviously very high, taking into account the number of equipment that must ordinarily be left running, such as corridor lights, air conditioners, fridges and freezers, elevators, security equipment and a host of other gadgets. For the efficient application of electrical energy, power supply to all these equipment will need to be supplied with optimum power. Output power factor corrective devices will be installed to ensure energy efficiency. Energy-saving lamps will be used as much as possible to conserve electrical power.

It is anticipated that up to about 45,000 square metres of the grounds will be landscaped with grass and other vegetation. These areas will need to be watered or irrigated regularly to keep the vegetation fresh. A storm water drainage system will be put in place that will collect run-off from the buildings roofs, parking and paved areas by gravity via gutter kerb inlets onto the green, landscaped areas during the rainy season. This will go a long way to reduce the amount of potable water that will be required to irrigate these green patches and minimize waste.

Mechanisms will also be put in place to separate or segregate waste plastics and polythenes from solid wastes to be disposed of, to ensure the rapid biodegradability of garbage moved from the hotel to municipal dumpsites. These will be handed over to plastic waste recycling companies, and will reduce the environmental menace plastics are posing to Ghana as a nation.

5.2.6 Security

Hotels, like all public places are open to the general public. The potential gathering of people at the hotel for functions such as conferences and meetings, as well as for their day-to-day business will present a target-rich zone for all kinds of crooks and people with deviant, socially unacceptable behaviour. Thieves and other kinds of criminals may seek to rob from parked vehicles, guest rooms and other sections of the hotel. The presence of security personnel will deter such deviants from their operations and help sanitize the general neighbourhood by way of security and public safety.

5.2.7 Emergency fire

Fire outbreaks could start as a result of malfunctioning electrical equipment, incorrect installation of such equipment or from cooking fires in the kitchens. If liquefied petroleum gas (LPG) will be used as fuel in the kitchens, the risks only get higher.

5.2.8 Accidents and hazards

Accidents could occur at the kitchens, such as knife cuts, burns, scalds, slips and falls. At the poolside, drowning of swimmer(s) could occur.

6.0 CONSULTATIONS

6.1 Stakeholder Consultations

Consultations have been made with a number of statutory agencies and organizations to facilitate the identification of key environmental concerns associated with proposed projects.

The proposed project has been registered with the Environmental Protection Agency, which has requested that a Scoping Report should be prepared and submitted. The Scoping Report will focus on the issues to be assessed in the subsequent Environmental Impact Assessment be conducted. This will ensure compliance with environmental regulations.

The utility agencies, particularly Ghana Water Company Limited, Electricity Company of Ghana and Ghana Telecommunications have been consulted to assist in locating any underground cables and pipelines that may have been buried on the project site long ago, that could interfere with the provision of utility services to the public, or pose safety threats to the Contractor and its employees.

In consultations with the head of General Services Department of Cedis House, Mr.Kwesi Bentil, he expressed concern about dust and noise generation that could emanate from the construction exercise. He indicated that the upper levels of the building made use of natural ventilation, and therefore would suffer dust pollution and potential equipment damage should the dust from the construction exercise be carried into their offices by the wind.

The General Manager of Novotel Hotel, Mr. Jean Drohuet indicated that the hotel's swimming pool and terrace bar are adjacent to the southern wall of the site. He therefore expressed concern about dust and noise from the construction exercise making the swimming pool and the terrace bar area unusable during the period

In consultations with the Facilities Engineer and the Project Engineers of Mobil House, they expressed concerns about the possibility of the inadvertent cutting of service lines such as power, water and telephone lines due to the construction exercise.

The Chairman of the Interim Management Committee of the National Theatre, Mr. Michael .H. Attipoe, indicated that in consultation with their engineering consultants, the Architectural and Engineering Services Limited (AESL), they had identified the risk of disruption of utility lines due to the construction, as well as noise as the major impacts that could affect their activities.

Currently, detailed drawings for the buildings are being prepared for submission to relevant authorities for building permit, after which a Contractor will be selected to handle the construction, through a tender process. When selected, the Contractor maintained equipment that will generate minimal noise.

Name of Consultees	Concerns/Comments	Mitigation/Action to be Taken
Mr. Kwesi Bentil, Head of General Services Department, Cedi House	Dust and Noise generation	Site will be sprinkled with water frequently to minimize dust generation. Construction will be restricted to daylight hours to minimize noise nuisance.
Mr. Jean Drohuet, General Manager, Novotel Hotel	Dust generation and noise	Site will be sprinkled with water frequently to minimize dust generation. Construction will be restricted to daylight hours to minimize noise nuisance.
Felix Majekodunmi, Managing Director, TOTAL/MOBIL Ghana Limited	Possibility of disruption of public utility service lines in the course of the construction exercise	Service providers have been consulted to assist in identifying location of service lines to prevent accidental cutting or breaking of lines
Mr. Michael .H. Attipoe, Chairman, Interim Management Committee	Noise and possibility of disruption of public utility service lines in the course of the construction exercise	Construction will be restricted to daylight hours to minimize noise nuisance. Service providers have been consulted to assist in identifying location of service lines to prevent accidental cutting or breaking of lines.

MOVENPICK-AMBASSADOR HOTEL

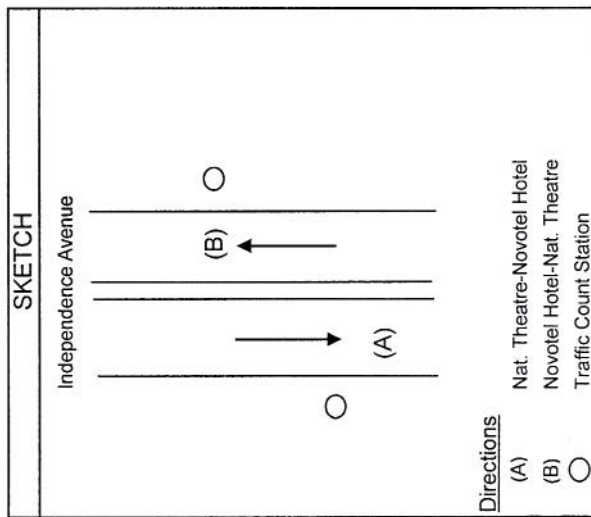
4-DAY 12 HOUR CONTINUOUS MANUAL TRAFFIC COUNT

ROAD NAME:
DIRECTION:
DATE:

Independence Avenue
National Theatre-Novotel Hotel (A)
22nd January, 2006

DAY: Sunday
SHEET NO. 13
COMMENT:

PEDESTRIAN/VEHICLE TYPE	HOURLY INTERVALS													TOTAL
	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18		
Pedestrians	200	195	217	105	92	98	122	135	99	97	53	29	1442	
Bicycle		1	1			1						1	4	
Motor Bicycle	1	5		2	3	6	2		3	1	2	1	26	
Cars	121	201	192	194	198	148	102	100	95	85	98	76	1610	
Pick up and vehicle	15	35	35	48	20	22	25	12	9	4	2	3	230	
Small bus	102	121	102	121	100	90	92	87	85	46	42	37	1025	
Medium bus	8	12	18	10	3	11	7	5	4	1	4	1	84	
Large Bus	2	2	1	4		5	4	2		1	3	2	26	
Light truck	1	2	2	3	1	2	1		1		1	2	16	
Medium truck		1	1	2		2	1	1			2	1	11	
Heavy truck		1						1	1				3	
Semi trailer(light)				1									1	
Semi trailer(heavy)					1								1	
Truck trailer													0	
Extra large truck and others													0	
TOTAL (VEH.)	250	381	352	385	326	287	234	208	198	138	155	123	3037	



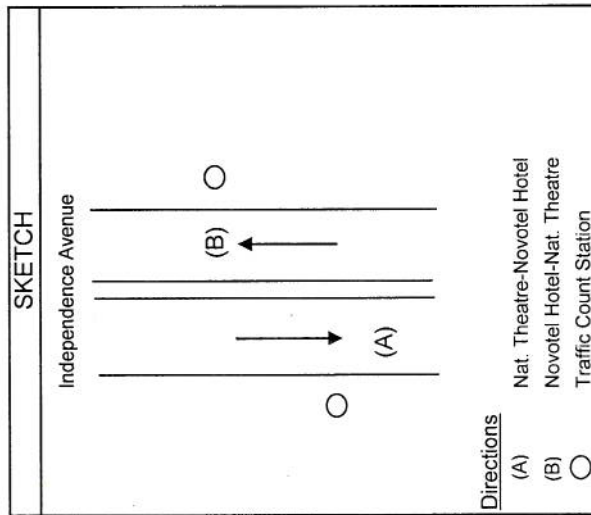
MOVENPICK-AMBASSADOR HOTEL 4-DAY 12 HOUR CONTINUOUS MANUAL TRAFFIC COUNT

ROAD NAME:
DIRECTION:
DATE:

Independence Avenue
Novotel Hotel-National Theatre (B)
22nd January, 2006

DAY: Sunday
SHEET NO. 14
COMMENT:

PEDESTRIAN/VEHICLE TYPE	HOURLY INTERVALS												TOTAL
	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	
Pedestrians	73	72	64	51	21	25	18	22	20	14	25	26	431
Bicycle	6	3	2	3	1	4	1		2	1	2	4	29
Motor Bicycle	3	3	5	3	1	2	3	5	2	1	3	2	33
Cars	34	43	58	55	59	63	81	70	89	61	64	40	717
Pick up and vehicle	6	14	18	15	14	12	35	40	43	62	60	58	377
Small bus	20	30	45	43	40	35	38	29	22	29	33	30	394
Medium bus	1	6	11	8	2	2	7	4	3	1	2	4	51
Large Bus		3	5	4	2	2	4	1		2	4	2	29
Light truck	1	3		1	2		1	2	2	4	4	1	21
Medium truck		2	1		1		1		1		1		7
Heavy truck						1							1
Semi trailer(light)							1	1	1				3
Semi trailer(heavy)													0
Truck trailer											1		1
Extra large truck and others													0
TOTAL (VEH.)	71	107	145	132	122	121	172	152	165	161	174	141	1663



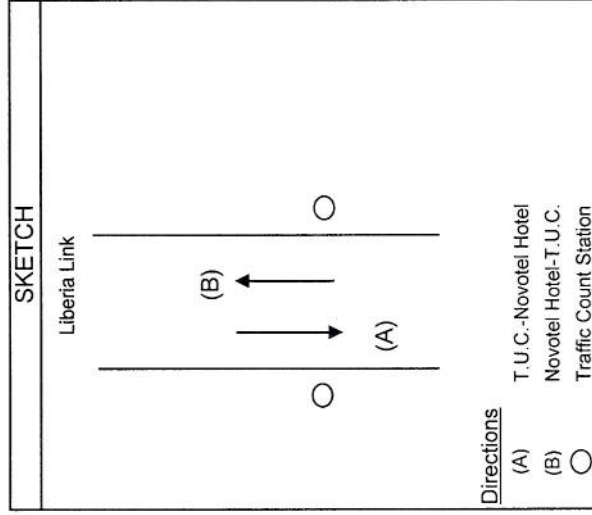
MOVENPICK-AMBASSADOR HOTEL 4-DAY 12 HOUR CONTINUOUS MANUAL TRAFFIC COUNT

ROAD NAME:
DIRECTION:
DATE:

Liberia Link
T.U.C.-Novotel Hotel (A)
22nd January, 2006

DAY: Sunday
SHEET NO. 15
COMMENT:

PEDESTRIAN/VEHICLE TYPE	HOURLY INTERVALS													TOTAL
	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18		
Pedestrians	20	21	33	38	28	32	22	20	18	34	41	39	346	
Bicycle		1	3	2	1						2		9	
Motor Bicycle			1	1									2	
Cars	1		1			1	2				2		7	
Pick up and vehicle			1										1	
Small bus													0	
Medium bus													0	
Large Bus													0	
Light truck													0	
Medium truck													0	
Heavy truck													0	
Semi trailer(light)													0	
Semi trailer(heavy)													0	
Truck trailer													0	
Extra large truck and others													0	
TOTAL (VEH.)	1	1	6	3	1	1	2	0	0	0	4	0	19	



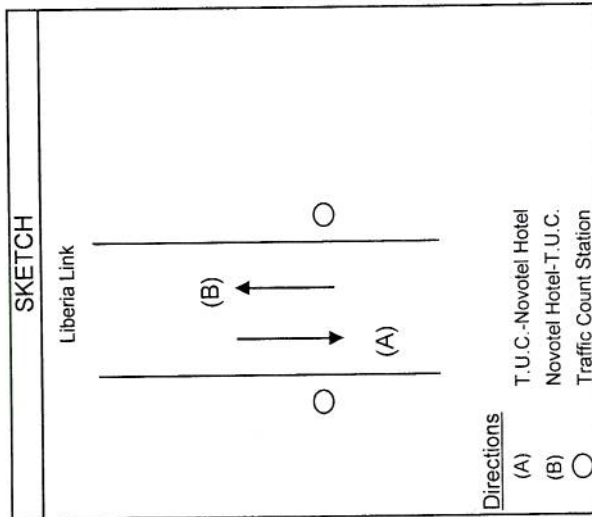
MOVENPICK-AMBASSADOR HOTEL 4-DAY 12 HOUR CONTINUOUS MANUAL TRAFFIC COUNT

ROAD NAME:
DIRECTION:
DATE:

Liberia Link
Novotel Hotel-T.U.C. (B)
22nd January, 2006

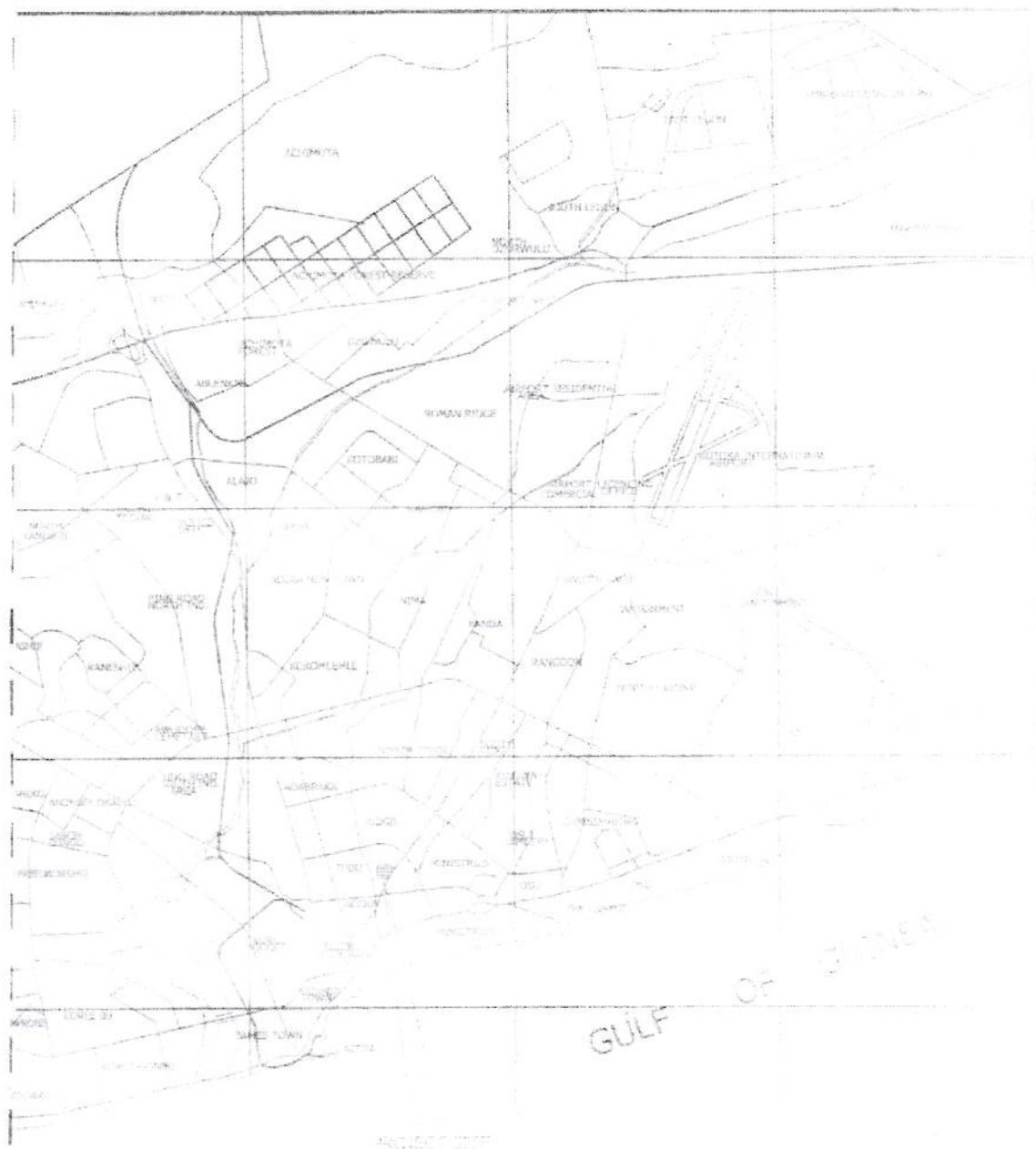
DAY: Sunday
SHEET NO. 16
COMMENT:

PEDESTRIAN/VEHICLE TYPE	HOURLY INTERVALS													TOTAL
	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18		
Pedestrians	12	16	32	37									273	
Bicycle	1	1	3	4	1	2	2	1		1	2		18	
Motor Bicycle		1		1				1	2		1	1	7	
Cars	4	7	12	16	13	15	16	10	8	5	9	7	122	
Pick up and vehicle			1	1		1			1		1		5	
Small bus	1		1							1			3	
Medium bus													0	
Large Bus													0	
Light truck													0	
Medium truck													0	
Heavy truck													0	
Semi trailer(light)													0	
Semi trailer(heavy)													0	
Truck trailer													0	
Extra large truck and others													0	
TOTAL (VEH.)	6	9	17	22	14	18	18	12	11	7	13	8	155	



APPENDIX

- Proposed Terms of Reference
- Manual Traffic Count
- Summary of profile of Consultant



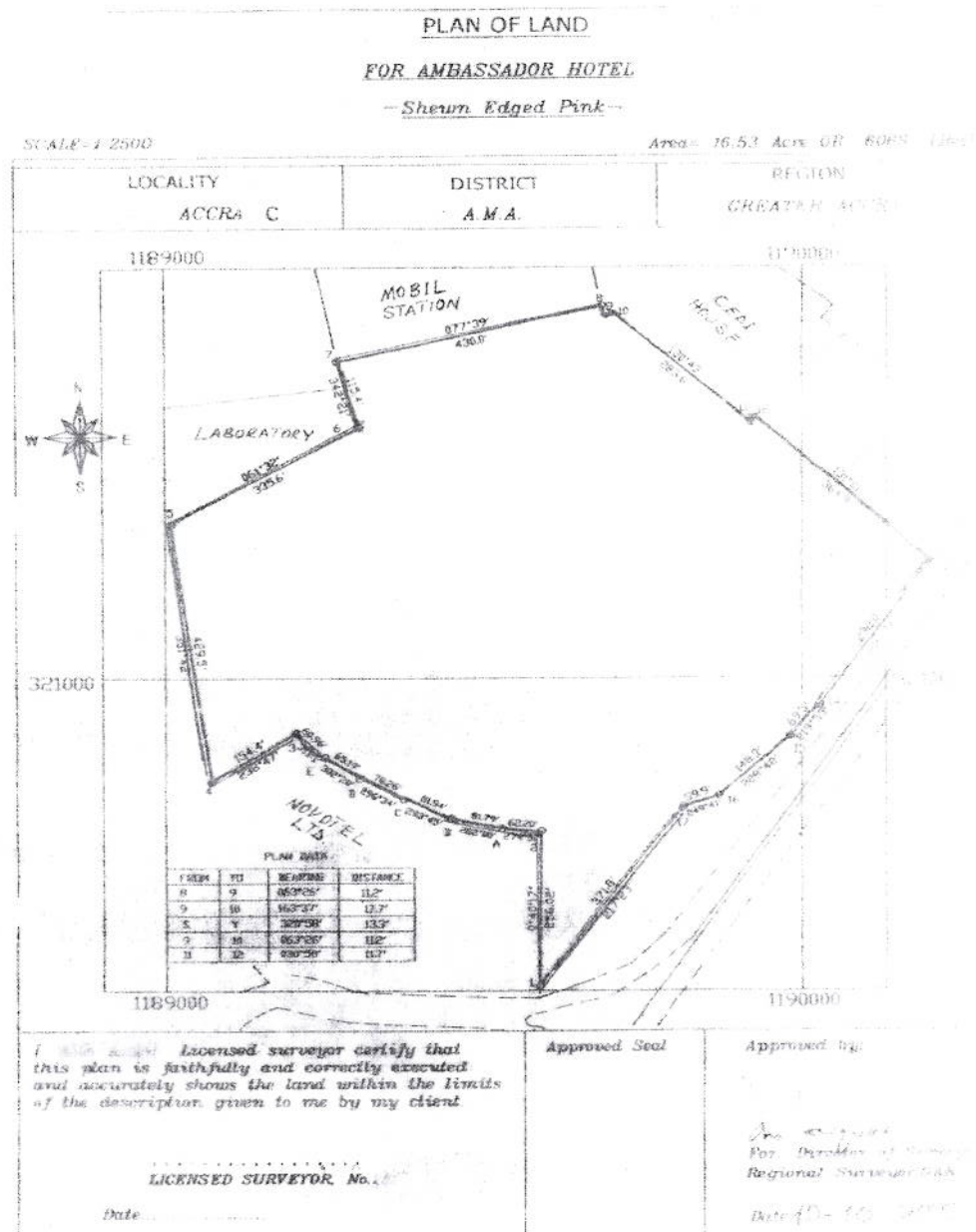


FIG 4.1 Site Plan

PROPOSED TERMS OF REFERENCE FOR ENVIRONMENTAL IMPACT ASSESSMENT

PROPOSED MÖVENPICK AMBASSADOR HOTEL **ENVIRONMENTAL IMPACT ASSESSMENT STUDY**

PROPOSED TERMS OF REFERENCE

Non-Technical Executive Summary

- Concise description of proposed project
- Brief account of affected environment
- Outline of significant impacts and findings
- Monitoring programme
- Conclusions

1.0 Introduction

- Project background and objectives
Regulatory and Administrative requirements - all applicable local and international regulations and standards relating to the project will be identified and outlined.
- Scope of study - TOR as approved by EPA

2.0 Description of the proposed project

A reasonably detailed description of the project will be given using maps, figures and tables as necessary and will highlight the following:

- General project area
- Construction and Operational activities

3.0 Description of the Baseline Environment

The proposed project will be located off the Independence Avenue, opposite the National Theatre, in Accra in the Accra Metropolitan Area in the Greater Accra Region of Ghana. Some data relating to the existing socio-economic and the natural environmental factors have been identified during the Scoping and these will be studied further. The areas of emphasis will be:

3.1 Socio-economic Environment

- i. Employment
- ii. Traffic flow patterns
- iii. Hospitality market trends

3.2 Natural Environment

- iii. Noise Levels
- iv. Drainage
- v. Soils
- vi. Air Quality

Baseline data for the above will be obtained from existing sources including Ministry of Tourism and Diasporan Relations, Ghana Tourist Board, Accra Metropolitan Assembly, Department of Urban Roads, published materials etc.

4.0 Significant Environmental Impacts and Proposed Mitigation

Some environmental effects will occur during the construction and operational phases of the project. In Chapter 5 of the Scoping report the potential impact identification has been done using a **Rapid Impact Matrix**.

As far as possible, all the identified impacts will be quantified and assessed for significance based on magnitude, extent, duration, reversibility etc.

From the assessment of impacts, the necessary mitigation actions will be prescribed and wherever possible design or implementation will be altered accordingly.

5.0 Monitoring

An appropriate monitoring programme to determine impacts on the physical, biological and socio-economic environments will also be developed. This programme will be used to verify whether predictions of environmental impacts, developed in the design phase, are accurate and that unforeseen impacts are detected at an early stage. Some of the monitoring parameters may include dust, noise, traffic flow patterns, waste generation and management, energy utilization, etc.

6.0 Analysis of Alternatives

This section will present a discussion on all alternatives and options that have been considered for the project. Some of the alternatives to be considered include:

- "No-project" Scenario
- Upgrading existing facilities
- Site alternatives

7.0 Provisional Environmental Management Plan

Environmental Management System guidelines will be developed as part of the provisional Environmental Management Plan. Environmental management and training will include the following:

- a. Waste generation and management procedures,
- b. Energy management and Waste minimization,
- c. Occupational health and safety procedures,
- d. Fire prevention mechanisms and procedures

- d. Monitoring procedures
- e. Effective record-keeping and reporting system.

The EMP will incorporate the following:

- a. composition and job description of an environmental management team,
- b. structure of reporting for environmental management team and this should be linked with operational and administrative activities,
- c. roles and responsibilities
- d. financial and human resource requirements

8.0 Consultations, Interagency & Public/Non-Governmental Involvement

This section will present the findings of all the consultations held in connection with the proposed project with agencies and all stakeholders. The discussions will cover the various issues of concern raised and how they have been addressed in the EIA.

9.0 Conclusion

This section will present the main conclusions and recommendations resulting from the EIA.

10.0 EIS Format

- Non-Technical Executive Summary
- Introduction
- Project Description
- Baseline Environmental Conditions
- Impact Identification and Analysis
- Mitigation Measures
- Monitoring Plan
- Provisional Environmental Management Plan
- Conclusion
- Annexes

Annexes: Illustrative Materials

The Environmental Impact Statement (EIS) will be illustrated with relevant photographs, maps, plans, diagrams and any other illustrative material that would make it easy to appreciate the content of the EIS.