

3 SITE ENVIRONMENTAL CHARACTERISTICS

3.1 INTRODUCTION

It is essential that the environmental aspects of the actual site and its immediate surroundings be carefully studied and assessed so that they can be preserved wherever possible.

If ever they have to be interfered within the interest of the project, ways and means of mitigating these effects as much as possible should be investigated.

The following sub-sections identify these various aspects.

3.2 SITE CHARACTERISTICS

The site, of area 66, 446.90m², possesses a sea frontage with about 467metres of shoreline along the coastal region of Bel Ombre. It is located between the public beach of Bel Ombre and the C Beach Club Hotel as shown in the Site Plan enclosed at Annex 1B at the end of Section 1.

3.3 SITE DESCRIPTION

The site, located at Bel Ombre, in the district of Savanne, is bordered as follows:

- Towards the North by the Black River Savanne Coast Road (B9)
- Towards the South by the beach and the lagoon of Bel Ombre
- Towards the East by a surplus of state land and PG Bel Ombre and further by the C Beach Club hotel.
- Towards the West by the Bel Ombre Public Beach

The Site Plan is enclosed at Annex 1B at the end of Section 1.

3.4 AERIAL VIEW PLAN

To enable the reader to have an overall view of the proposed hotel overall site, an aerial plan of the locus site has been included in the report, and reproduced at Annex 3A at the end of Section 3.

The aerial photograph clearly shows:

- (i) The demarcation of the site with respect to the adjoining hotel
- (ii) The public beach of Bel Ombre
- (iii) The Black River Savanne B9 Road running along the northern boundary of the project site
- (iv) The primary school of Bel Ombre
- (v) Village of Bel Ombre
- (vi) Restaurant and Meat Shop

- (vii) De-proclaimed Savanne coastal road
- (viii) The existing abandoned & disused building on site – however, covered with the thick vegetation and cannot be seen clearly. The approximate location of same is indicated.

3.5 LAND COMPLEX

The Land Complex in which the site of an extent of 66, 446.90m² lies is generally classified as the Eastern and Southern Intermediate Lava Plains and Slopes. The soil can be described as low humic latosols and humic latosols with deep to moderately deep dark brown brown silty clay loam on silty clay, friable.

3.6 LAND UNIT MAPPING SYMBOL

According to a plan and report prepared by the Food and Agriculture Organisation of the United Nations and the then Mauritius Industry Research Institute in May 1973, the landmapping unit of the area encompassing the site is classified as 3.1. It forms part of eastern and southern lower humid plains of mature dissection.

3.7 LANDFORM AND ALTITUDE RANGE

The landform can be described as almost flat to gently undulating, with slopes being mostly below 8%, with a general seaward slope and altitudes between 0 to 290 metres.

However, the actual site, of area 66, 446.90m², and bordering the seafront of 476 metres is fairly flat and varies in altitude between 0 to 2 metres at the project site.

A Topographical plan showing level of the site is enclosed at Annex 3B at the end of Section 3.

3.8 ADJACENT CENTRES OF POPULATION

The main centres of population with respect to the site are essentially the existing 5-Star rated hotels which are located along the southern coast but to the east of the locus site – namely, Heritage Le Telfair Golf and Spa, Villas Valriche Experience, Moevenpick Resort and Spa Mauritius, Sofitel SO Mauritius and C Beach Club Hotel and Tamassa Hotel – 4* rated.

The hotel site is situated within the Bel Ombre touristic area, opposite the public beach of Bel Ombre.

There are no immediate centres of population contiguous to the proposed site.

Opposite the public beach, on the inland side of the Savanne Coast Road B9, is situated the Savanne Government Primary School, as shown in Photograph 3.1 below:



Photograph 3.1: Bel Ombre Government Pre-Primary and Primary School

3.9 SITES OF INTEREST

3.9.1 Inside the Proposed Project Site

There is no site of interest within the proposed project site. However, part of the old coastal road which has now been de-proclaimed (and is therefore disused) crosses the proposed site as shown in the photograph below.



Photograph 3.2: Disused Coastal Road

3.9.2 Disused Building

Disused and abandoned concrete buildings were observed along the north-eastern boundary of the proposed project site as witnessed by the photographs 3.3 below.



Photograph 3.3: Disused & Abandoned Buildings

3.9.3 Outside Site

3.9.3.1 Bel Ombre Public Beach

The coastal frontage located adjacent to the proposed project site is occupied by Bel Ombre Public Beach as shown in Photograph 3.4 below:



Photograph 3-4: Bel Ombre Public Beach

Consequently, the proposed hotel will in no way whatsoever deprive the Mauritian public from enjoying the public beach given that the proposed project site does not have any encroachment with the Bel Ombre Public Beach.

It is worth mentioning that the Bel Ombre Public Beach will remain completely untouched by the project.

3.10 ENVIRONMENTAL SENSITIVITY

3.10.1 Flora

The indigenous flora is of negligible endemic significance; however, the site is covered with thick vegetation consisting of bushes, shrubs which do not carry any floral value such as Acacia, Vieille fi, etc.

Tall mature trees such as coqueluche trees, badamiers, and filaos have also been observed and mapped on site. These tall mature trees will be preserved as much as possible during the construction works.

Moreover the rows of coqueluche trees located on the beach along the proposed hotel's frontage will be preserved and integrated in the overall landscape and charm of the proposed project. They will remain completely untouched as they are earmarked to fit into the unique scenery of the site.

In any case, no cutting of any tree on the land will be effected except with the permission of the Conservator of Forests, and the Forestry Department to which all associated applications will be made in due course.

A tree survey has been carried out by the Ministry of Agro Industry and Food Security and the existing trees which are located on the project site. A correspondence from the Ministry of Agro-Industry and Food Security – Forestry Service is enclosed at Annex 3C at the end of this Section.

Pictures of the vegetation cover over the proposed site are reproduced below.



Photographs 3-5: Tall Mature Trees

3.10.2 Fauna

The indigenous fauna is also practically non-existent. During the site visit, only a few birds were observed. However, no endangered species were observed on the site. Being given that the mature trees will be preserved as much as possible, the birds' habitat will thus not be destroyed.

3.11 HYDROLOGICAL CHARACTERISTICS

There is no river, feeder, or any hydrological feature present on the site or in the vicinity of the site.

3.12 AMENITY AND RECREATIONAL VALUE

The proposed site in its present state does not offer much amenity value given that it is partly covered with wild vegetation. However, part of it is used by the public to relax even if the proposed site has been earmarked for the construction of a hotel since 2001 by Ministry of Housing and Lands.

3.13 CLIMATOLOGICAL CHARACTERISTICS

(a) Rainfall

The Bel Ombre region, situated along the southern coastal belt, possesses a humid megathermal micro-climate, and benefits from an average annual precipitation of 1600-3000 millimetres, the lower range being experienced within the coastal areas and the higher range being experienced in the higher elevation mountainous areas. In the Mauritian context, this level of annual rainfall is considered as medium when compared with values of annual precipitation of the order of 4000 mm for the Central Plateau. This is because although the southern coast lies on the windward side of the dominating South East Trade Winds, yet when the latter reaches the coastal belt which is flat in topography, only part of the carried moisture is deposited at this location.

Thus, it can be considered that the project site lies in a region of fairly balanced water regime as far as rainfall is concerned, (especially the coastal belt) with an annual average rainfall of the order of 1600 mm, and a mean annual evapotranspiration of the order of 1600-1800mm.

(b) Temperature

An analysis of the typical temperature pattern for the southern coastal belt of Mauritius produces the following temperature configuration:

- (i) The monthly mean maximum temperature varies from 25.5°C in the winter months to 30.4°C in the summer months.
- (ii) The monthly mean minimum temperature varies from 16.6°C in the winter months to 22.4°C in the summer months.
- (iii) The monthly extreme lowest temperatures occurring in the winter months are of the order of 12.0°C, and 17.0°C in the summer months.
- (iv) The monthly mean temperature varies from 21.1°C in the winter months to about 26.3°C in the summer months.

(c) Wind Regime

The Southern area is governed basically by one major wind regime; the South East Trade Winds blowing normally over Mauritius for about ten months of the year, constitute the main component of the wind regime. These winds blow from the South East, rise over the higher lands of the island, known as the Central Plateau, and reach the western and north-western parts of the island.

The Southern area, especially the coastal zones, being situated within proximity of the sea is also effected to a minor extent by the sea-breeze and land-breeze wind regime.

3.14 GEOLOGICAL AND GEOTECHNICAL CHARACTERISTICS

As indicated at sub-section 3.3, the Land Complex within which the site lies is classified as the southern coastal plains which are generally well drained.

It is reasonable to expect consistent sand layers and possibly clay and/or matrix along a vertical excavation profile, with possibility of encountering a basalt layer at bigger depths.

Since the proposed buildings will be of a mixture of GF, GF+1 and GF + 2 configuration, a conventional foundation system comprising of separate column bases, strip and pad footings for blockwalls will be amply sufficient, with an allowable bearing pressure beneath the foundations of the order of 75 kN/m² will be adopted.

A copy of the detailed geotechnical report carried out by Messrs Labolink Ltd is enclosed at Annex 3D at the end of this Section.

3.15 FISHERMEN'S ACTIVITIES

During the various site visits to the locus site by the officers of the EIA Consultant for the purpose of preparing this EIA report, no fishermen's activities was noticeable within the lagoon fronting the proposed hotel site, such as fishermen's boats mooring, fishermen fishing in the lagoon with fishing lines, fishermen's equipment and tools lying on the beach etc.

Moreover, the development being inland from the beach, the project will not bear any impact on the fishermen's activities in the lagoon even if they existed.

The photographs 3.6 show the sea frontage along the proposed project site.



Photograph 3-6: Sea Frontage along Proposed Site.