
2. PROJECT SITE LOCATION & DESCRIPTION

2.1 PROJECT LOCATION/SURROUNDING

The subject site consists of a plot of land of 163,560m² (38^A 75^P) at Beau Vallon in the district of Grand Port and is surrounded by built up areas as well as land, belonging to the promoter, under cane cultivation.

The Northern boundary of the site adjoins partly the existing Le Beau Vallon 1 morcellement (MHL/M/13916) as depicted in **Plate 2.1**; while the Southern part adjoins land belonging to the promoter, which is presently under cane cultivation. The subject site is also under cane cultivation (**Plate 2.2**). The Old Railway track adjoins the Western part of the subject site. The Eastern boundary of the site adjoins land under sugarcane cultivation belonging to the promoter.



Plate 2.1: “Le Beau Vallon 1 - MHL/M/13916” (left) adjoining “Le Mahe 2” (right)

Plate 2.2 depicts that the subject site is presently under sugar cane cultivation.



Plate 2.2: Subject site presently under cane cultivation

A context plan showing the subject site is enclosed in **Annex B1** which also illustrates a location plan.

The context Plan (**Annex B1**) illustrates the following features, worth mentioning in the context of this EIA report, that exist in the surroundings of the subject site.

- The villages of Beau Vallon, Mahebourg, Pointe d'Esny and Blue Bay
- The Beau Vallon morcellement (MHL/M/13916)
- The Concasseuse du Sud Stone crusher plant
- The SSR International Airport.
- The Plaine Magnien - Mahebourg A12 Road
- The Beau Vallon – Blue Bay B67 Road
- Wetlands denoted 83 & 117
- Declared Ramsar site
- Old Railway Track

Beau Vallon and Mahebourg are fairly well developed villages with most amenities and facilities that inhabitants may need. This will attract, particularly, the eventual owners of the residential lots.

The villages are inter-connected with a good road network, namely the Plaine Magnien– Mahebourg A12 Road and the Beau Vallon – Blue Bay B67 Road. All necessary shopping facilities exist in the vicinity of the subject site. One such shopping facility is the ‘King Savers’ supermarket, which can be depicted in **Plate 2.3**. Other supermarkets such as ‘London’ supermarket are also found in the region.



Plate 2.3: The ‘King Savers’ supermarket located within walking distance from the subject site

The project area is well served with good public transport system, comprising of CNT, UBS and many other private buses, which connects the region with all parts of the island. Plate 2.4 shows buses serving the region. The project area is served from the Mahebourg Bus Terminal to Port Louis, Flacq and the Southern part of the Island, including the SSR International Airport.



Plate 2.4: Public transport serving the region.

Leisure and sport facilities are available in the village, particularly a football ground within walking distance. Blue Bay public beach is within easy reach from the subject site. Another leisure facility in the project region is the Mahebourg Water Front. Hotels such as Preskil, Shandrani and Blue Lagoon Hotel are located in the project area.

Educational facilities, comprising of pre-primary, primary and secondary schools, exist in the village as well as nearby Mahebourg and Point D'Esny villages. Secondary schools existing in the project area include Loreto College of Mahebourg & Hamilton Private Secondary School. The National Naval museum is located in Mahebourg.

Other commercial facilities are also available in the project region such as restaurants, tea and coffee shops. The nearest market is located in the Mahebourg village, near to the Mahebourg Water Front.

The minimum distances from some selected surrounding features (**Annex B1**) and the subject site were measured and given in **Table 2.1**.

Table 2.1: Minimum distance between the plot of land and selected features

Features	Distance (m)	Direction from site
Old Railway Track & Reserve	Adjoins its western boundary	West
SSR International Boundary line	513	West
Nearest Bus-Laybys	577	North
Existing Football Playground	581	North
Nearest settlement boundary	232	North
“King Savers” Supermarket	384	North
Loreto College of Mahebourg	752	North East
Primary School	1368	North
Temple	798	North
London Supermarket	566	North East
Church	1300	North
Plaine Magnien-Mahebourg A12 road	577	North
“Sud Concasseuse” Stone crusher plant	662	North
Riviere La Chaux	804	North
Mahebourg Hospital	1490	North
Naval Museum	824	North
Mahebourg Waterfront	1611	North East
Airport runway	1163	South West
Wetland 83 (ESA)	737	South East
1 st Wetland 117 (ESA)	659	South East
2 nd Wetland 117 (ESA)	1353	South East
Wetland 116 (ESA)	1312	South East
Wetland 118 (ESA)	1581	South East
Wetland 119 (ESA)	1734	South East
Declared Ramsar site (including wetland 114, 115 & 120)	561	East
Nearest coastline	455	East
Blue Bay Public Beach	1934	South East
Preskil Beach Resort(Hotel)	1157	East
Astroea Beach (Hotel)	1893	South East
Beau Vallon – Blue Bay B67 Road	480	West
Geological pit (ESA)	1607	South East
Mahebourg Waterfront	1,611	North

Based on **Table 2.1**, it can be confirmed that the subject site complies with all buffer zones, except the 1km buffer that is needed with the existing “**Sud Concasseuse**” stone crusher. **Plate 2.5** depicts the stone crushing plant.



Plate 2.5: The UBP/Sud Concasseuse stone crushing plant

However, it is important at this point to stress that an EIA licence had been granted to CBVL for Le Beau Vallon 1 morcellement (MHL/M/13916), which is located at a minimum distance of only 250 m. This constraint had been relieved for Le Beau Vallon 1 (MHL/M/13916) project further to investigation carried out on ambient TSP and wind analysis, which proved that the site was NOT affected by the stone crusher plant in terms of dust emanation. **Annex A6** details this investigation and its findings, which were reported in the EIA report referenced ENV/12/1364 and submitted on the 22 February 2008.

Based on above investigation and its findings associated with wind analysis, it has been demonstrated that Le Beau Vallon 1 (MHL/M13916) was not affected by the stone crusher. Consequently, since Le Beau Vallon 1 (MHL/M13916) adjoins the proposed Le Mahe 2 morcellement project which located at a distance of 662m from the stone crusher, the subject site will also NOT be affected.

It is to be noted that the SSR International Airport, the boundary of which is far from the proposed site at 513 m. The noise bands created by the airport are indicated in the Restriction Insert Plan at **Annex B10**. The plan clearly shows that the noise bands do not cross the project site. Hence, Airports Mauritius Ltd (AML) should not object to this proposed project.

2.2 ZONING

In line with the requirements of the development of a morcellement project and, based on its own experience on same, the promoter filed an application for land conversion permit for at the Ministry of Agro-Industry & Food Security on the 27 March 2014. A copy of this application together with the signed layout plan and acknowledgement letters from the said Ministry are attached at **Annex B2**. The application for the Land Conversion Permit was made for a total extent of 286,154m² (67A80P), which includes the proposed residential morcellement Le Mahe 2 of extent 163,560m² (38^A 75^P).

The Ministry of Agro-Industry & Food Security issued the promoter the Land Conversion Permit on 9th September 2015, for the extent of 286,154m² (67A80P), which include the proposed residential morcellement Le Mahe 2 of extent 163,560m² (38^A 75^P), as evidenced by a copy of same permit enclosed at **Annex B3**.

2.3 NAMES, ADDRESSES AND QUALIFICATIONS OF EIA CONSULTANT

The present EIA study is being carried out by **Kaselor Ltd**, a firm that has a wide experience in the formulation and implementation of morcellement projects and in the carrying out of Environment Impact Assessment studies.

The principal of **Kaselor Ltd** is Mr Selven PERIENEN, B.Tech (Hons), Registered Civil Engineer.

Annex B4 shows the authorisation letter from the promoter to prepare this EIA report.

2.4 EXISTING LAND USE

The project site is currently under cane cultivation (**Plate 2.2**). It does not accommodate any flora and fauna that are of ecological interest. The site does not fall in any environmentally sensitive zone and does not include environmentally sensitive areas such as wetlands, river courses or springs.

2.5 OWNERSHIP OF LAND

The said plot of land, of the extent of 163,560 m², forms part of the surplus of “**DOMAINE BEAU VALLON**” of an original extent of 1100^A and belongs to “**COMPAGNIE DE BEAU LTEE**” as per deed of ownership transcribed and registered in **Volume 346 No. 405**. A copy of said deed of ownership is enclosed in this report as **Annex B5**.

Over and above, a copy of “certificat de propriete” signed by Public Notary Me Joesph Paul Hughes Didier Maigrot on the 30th April 2014 is also enclosed at **Annex B6**.

2.6 ACCESS TO SITE

The site can be easily accessed from the Plaine Magnien-Mahebourg A12 Road, through the Beau Vallon - Blue Bay B67 road (A to B) and along the proposed common roads 7.00-metre wide (B to C), as depicted in **Plates 2.6**, respectively as well as illustrated at **Annex B13**.

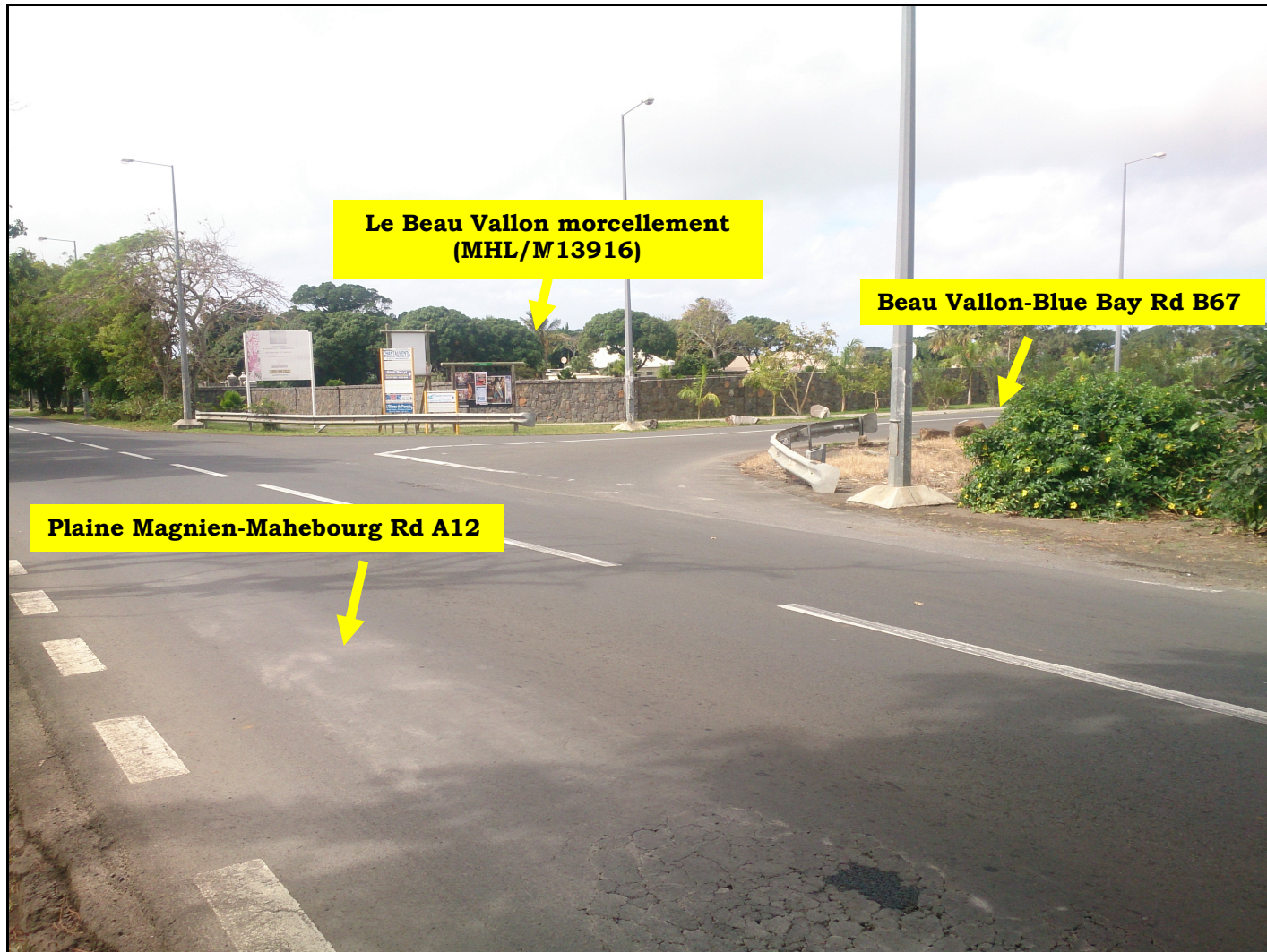


Plate 2.6: Intersection between the Plaine Magnien – Mahebourg A12 road and Beau Vallon - Blue Bay B67 road

2.7 INFRASTRUCTURE & PUBLIC UTILITIES

Once the EIA licence is obtained, it is expected to receive the Letter of Intent for the proposed morcellement from the Ministry of Housing & Land within a period of 6 months, whereby the promoter and his consultants will liaise with the Ministry of Public Infrastructure (MoPI), Road Development Authority (RDA), Central Electricity Board (CEB), Central Water Authority (CWA), Mauritius Telecom Services (MTS), District Council of Grand Port and the Traffic Management Road & Safety Unit (TMRSU) to submit the detailed design drawings for the implementation of all infrastructure works to bring all the amenities to the proposed morcellement project.

2.8 CLIMATIC CONDITIONS

The island of Mauritius as a whole may be characterised as having a moderately tropical climate. The warmer summer season is also the rainier and lasts from November to April, with February as the wettest month. The summer season is also characterised by tropical cyclones. The winter season, which is cooler and drier, occurs between May and October, with October being the driest month.

On account of its relief, the island is also characterised by a number of distinct micro-climates with varying levels of rainfall, temperature or humidity. The area where the subject site lies is located at an altitude of about 17m above mean sea level and has annual rainfall levels of the order of 1,800 mm, as compared with the maximum of 5,000mm for the island as a whole.

With regards to wind, it is important to mention that a detailed wind analysis was carried out and reported in the EIA report referenced ENV/12/1384 and submitted on the 22 February 2008. The said wind analysis report was crucial during the implementation of Le Beau Vallon1 (MHL/M/13916) due to the existence of the stone crusher locate to the North of the subject site. The wind analysis report is enclosed as **Annex B7**.

The main findings of the report are reproduced below.

- ***The North and North-West winds blew over the region for only 1.6% and 5.2% of time. The most prevailing wind in the region is the South-East wind, which prevailed 36.2% of the time. The next prevailing winds are the East and North East at 26.2% and 19.7% of time, respectively.***
- ***Wind of more than 30 km/h did not blow in both directions (North & North West) over the project site. Also wind of speed of 12 – 30 km/h did not prevail over the region in the North and North West direction during 8 months and 10 months a year, respectively.***
- ***It is hence anticipated that the impact of the stone crusher will not be significant in terms of dust being carried over the site.***

Moreover, a recent site visit was made by Kaselor representatives on Tuesday 22 July 2015 and it was observed that most of the time winds did not blow over the proposed morcellement region.

2.9 GEOLOGY, LANDFORM AND SOIL CHARACTERISTICS

The geology of Mauritius is mainly composed of basaltic lavas which originate from volcanic origin. The Food and Agriculture Organisation (FAO) and Mauritius Sugar Industry Research Institute (MSIRI) Land Resources and Agricultural Suitability Map of Mauritius identifies the site for proposed development as forming part of the late lavas of the younger volcanic series which erupted from a chain of some 20 vents.

The FAO/MSIRI map classifies the different regions into land units. The proposed site consists of **Land Unit namely 1.4**. The geotechnical investigation details of the proposed site are more fully described at **Annex B8**.

2.10 TOPOGRAPHY

The topography of the subject site with contour lines is illustrated in the proposed morcellement layout plan, enclosed at **Annex C1**. The height of the project site, above mean sea level, varies between 17m to 10m. It was observed that there is a depression in the middle of the subject site with a minimum point at an altitude of 9m above mean sea level.

2.11 Water Resources

No streams, canals or rivers exist within the project site. However, as depicted in the context plan (**Annex B1**) the nearest existing wetland, denoted 83, is located to the South East of the project site at minimum distance of 737m. Hence, the project complies with the buffer zone of 30m from such an Environmental Sensitive Area.

2.12 Flora & Fauna

In the project area, no known migration route of any animal has ever been reported or observed. No endangered or rare animal species exist in the area. As mentioned earlier in this report, the subject site is currently covered with sugar cane.

2.13 Value of Project Site as Designated site

The project site does not fall under a World heritage site, Biosphere reserve, National park.

2.14 Cultural heritage

No temple or other places of worship such as “*Kalimaye*”, exists within the vicinity of the project site.

2.15 Similar Projects

There is one morcellement Le Beau Vallon 1 which adjoins the proposed project site. CBVL received the Morcellement Permit reference MHL/M/13916 for Le Beau Vallon 1, as per **Annex A4** and as depicted in **Plate 2.7 & 2.8**



Plate 2.7: Le Beau Vallon 1 morcellement (MHL/M/13916)



Plate 2.8: The entrance of the Le Beau Vallon 1 morcellement (MHL/M/13916)

2.16 Site Constraints

The Grand Port District Outline Scheme is enclosed in this report as **Annex B9**. Both the Outline Scheme and the Context Plan (**Annex B1**) clearly show the following site constraints, namely.

- The Sud Concasseuse stone crusher located at 662m to the North of the boundary of the subject site.
- The old Railway Track adjoining the Western boundary of the subject site.
- The proposed Mahebourg by-pass road crossing the subject site from the Beau Vallon - Blue Bay B67 Road.

However, the following sections will demonstrate that the project will NOT be affected by these constraints.

2.16.1 The Sud Concasseuse Stone Crusher

The existing stone crushing plant, belonging to UBP, located to the North of the subject site at a minimum distance of 662m, is a constraint to the project. The stone crusher is clearly indicated in the Context Plan (**Annex B1**). This is not within the provision of a buffer zone of at least 1 km from the site boundary of a stone crusher, specified in the **EIA Guideline for Proposed Residential Morcellement Projects** prepared by the Department of Environment in September 2004.

However, due to the following reasons, it is strongly recommended to relieve this proposed project from this particular site constraint.

1. EIA licences had been granted to the promoter for 3 similar projects in the vicinity of the project site, i.e Morcellement Beau Vallon (in 2002), Lorette (in 2003), Morcellement Le Beau Vallon 1 referenced MHL/M/13916 (2010) development adjoins the proposed site as indicated in the Context Plan (**Annex B1**).

2. Past investigation of ambient Total Suspended Solids (TSP) carried out over period of 4 consecutive days as from Monday 14th – Friday 18th January 2008 in the Morcellement Le Beau Vallon (MHL/M/13916), and detailed in **Annex A6**, proved that the ambient TSP complied with the standards of ambient air specified in the *Environment Protection (Standards for Air) Regulations 1998*.
3. The stone crusher is located downhill the site at an altitude 9 m lower than the project site. Moreover, as depicted in the wind analysis report prepared in 2008 at **Annex B7**, the project site is located upwind 93.2 % of time. During that % of time, the project site is safe, in terms of dust emission from the stone crusher.
4. Only 6.8% of time the north and north-west winds blow over the project area. However, there is an undertaking letter from the Management of the stone crusher (**Annex B11**) indicating clearly that the activities of the plant will immediately be ceased if ever there is a change in the wind direction. **Therefore, at all times no dust emanating from the stone crushing plant will be blown over the project site.**
5. Moreover, no official complaints in terms of dust nuisance as a result of the activities of the stone crusher were received from any other party yet (**Annex B11**).
6. Further mitigating measures to be undertaken by the Management of the *Sud Concassage Ltée* to limit dust emissions, as given in **Annex B11**, have been committed. These measures will include the covering of the vibrating screens and conveyors with tarpaulin.
7. A recent site visit was made by Kaselor representatives on Tuesday 22 July 2015 to make a visual assessment of the wind directions. **The observations made confirmed the conclusions of the wind analysis report. Most of the time winds did not blow over the proposed project site.**

2.16.2 OLD RAILWAY TRACK

As depicted in the Context Plan (**Annex B1**), the old railway track adjoins the Western boundary of the project site. The promoter is committed to maintain a buffer zone of 15 m all along the Western Boundary of the plot of land.

The promoter undertakes that no development will be carried out in this 15 m buffer zone on both sides of the old railway track.

Moreover, a letter from the Ministry of Public Infrastructure, Land Transport and Shipping Division dated 6th January 2009 (**Annex B12**), was sent to the representative of the promoter for the Le Beau Vallon 1 morcellement – MHL/M/13916 project. The Old Railway Track crosses the latter project. Nevertheless, a no objection certificate was issued for the Le Beau Vallon 1 - MHL/M/13916 project, and it is obviously anticipated that same no objection certificate be issued for the proposed morcellement.

2.16.3 PROPOSED MAHEBOURG BY-PASS PROJECT

After several consultative meetings held with relevant authorities (Ministry of Housing and Lands, Road Development Authority & Traffic Management and Road Safety Unit) pertaining to the proposed Mahebourg By-Pass, it was jointly agreed that the existing alignment of the Mahebourg By-Pass as depicted in the Outline Scheme was not feasible.

A new alignment was proposed for the Mahebourg By-Pass as per the attached layout at **Annex B13** and it has been approved by the Ministry of Housing and Lands.