## TABLE OF CONTENTS

**Title page**  
Page i  
**Table of contents**  
Page ii  
**List of tables**  
Page vii  
**List of figures**  
Page viii  
**Non-technical summary**  
Page ix  

### CHAPTER 1: INTRODUCTION  
1. Project Background  
2. Aims and Objectives  
3. Brief on Project Proponent  
4. Site Extent and Land Ownership  
5. Project Justification  
5.1 Environment Impact Assessment  

### CHAPTER 2: POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK  
2.1 Zoning  
2.2 Proposed Real Estate Scheme Development on “Plot R”  
2.2.1 Investment Promotion (Property Development Scheme) Regulations 2015.  
2.3 National Development Plan  
2.4 Outline Planning Scheme for Grand Port Savanne District Council Area  
2.5 Extracts from the Rivers and Canals Act 1863  

### CHAPTER 3: SITE DESCRIPTION  
3.1 Project Site Location  
3.2 Site Characteristics  
3.2.1 Existing Features and surrounding environment  
3.2.2 Access to site  
3.3 Geological and Topographical Characteristics  
3.3.1 Topography  
3.3.2 Geology  
3.3.3 Soil type  
3.4 Climate  
3.4.1 Temperature  
3.4.2 Rainfall  
3.4.3 Wind regime  
3.5 Hydrology  
3.5.1 Water bodies  
3.5.2 Water canal  
3.6 Fauna and Flora  
3.7 Existing Infrastructure  
3.7.1 Power supply  
3.7.2 Water supply
# CHAPTER 4: PROJECT DESCRIPTION

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Introduction</td>
<td>41</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Plot coverage and Footprint of Villas</td>
<td>42</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Height of buildings</td>
<td>42</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Setbacks</td>
<td>42</td>
</tr>
<tr>
<td>4.1.4</td>
<td>Parking facilities within individual villa</td>
<td>43</td>
</tr>
<tr>
<td>4.1.5</td>
<td>Reserves</td>
<td>44</td>
</tr>
<tr>
<td>4.2</td>
<td>Description of Villas</td>
<td>44</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Villa A</td>
<td>44</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Villa B</td>
<td>45</td>
</tr>
<tr>
<td>4.2.3</td>
<td>Number and size of bedrooms</td>
<td>45</td>
</tr>
<tr>
<td>4.3</td>
<td>Leisure activities and Amenities</td>
<td>46</td>
</tr>
<tr>
<td>4.4</td>
<td>Infrastructures</td>
<td>47</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Water distribution and consumption</td>
<td>47</td>
</tr>
<tr>
<td>4.4.2</td>
<td>Power distribution and consumption</td>
<td>48</td>
</tr>
<tr>
<td>4.4.3</td>
<td>Telecommunication</td>
<td>49</td>
</tr>
<tr>
<td>4.4.4</td>
<td>Lighting</td>
<td>49</td>
</tr>
<tr>
<td>4.4.5</td>
<td>Ventilation</td>
<td>49</td>
</tr>
<tr>
<td>4.4.6</td>
<td>Roads</td>
<td>49</td>
</tr>
<tr>
<td>4.5</td>
<td>Security and Administrative office</td>
<td>50</td>
</tr>
<tr>
<td>4.6</td>
<td>Wastewater disposal</td>
<td>51</td>
</tr>
<tr>
<td>4.7</td>
<td>Solid waste disposal</td>
<td>52</td>
</tr>
<tr>
<td>4.8</td>
<td>Landscaping</td>
<td>53</td>
</tr>
<tr>
<td>4.9</td>
<td>Project Implementation Plan</td>
<td>54</td>
</tr>
</tbody>
</table>

# CHAPTER 5: METHOD OF ASSESSMENT OF BASELINE ENVIRONMENT

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Introduction</td>
<td>56</td>
</tr>
<tr>
<td>5.2</td>
<td>Methodology for collection of Baseline information</td>
<td>56</td>
</tr>
<tr>
<td>5.2.1</td>
<td>Noise assessment survey</td>
<td>56</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Geotechnical investigation</td>
<td>58</td>
</tr>
<tr>
<td>5.2.2.1</td>
<td>Soil investigation</td>
<td>58</td>
</tr>
<tr>
<td>5.2.2.2</td>
<td>Soil profile</td>
<td>58</td>
</tr>
<tr>
<td>5.2.2.3</td>
<td>Percolation</td>
<td>58</td>
</tr>
<tr>
<td>5.2.2.4</td>
<td>Water table</td>
<td>58</td>
</tr>
<tr>
<td>5.2.3</td>
<td>River water quality monitoring at Avalon Golf Estate</td>
<td>59</td>
</tr>
<tr>
<td>5.3</td>
<td>Consultations</td>
<td>59</td>
</tr>
<tr>
<td>5.4</td>
<td>Identification of further studies</td>
<td>60</td>
</tr>
</tbody>
</table>

# CHAPTER 6: ASSESSMENT OF PREDICTED IMPACTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>Introduction</td>
<td>61</td>
</tr>
<tr>
<td>6.2</td>
<td>Impacts during pre-construction and construction phases</td>
<td>61</td>
</tr>
<tr>
<td>6.2.1</td>
<td>Dust emissions</td>
<td>61</td>
</tr>
<tr>
<td>6.2.2</td>
<td>Noise emissions</td>
<td>63</td>
</tr>
<tr>
<td>6.2.3</td>
<td>Land degradation</td>
<td>65</td>
</tr>
<tr>
<td>6.2.3.1</td>
<td>Flora</td>
<td>65</td>
</tr>
<tr>
<td>6.2.3.2</td>
<td>Generation of Solid Waste</td>
<td>65</td>
</tr>
<tr>
<td>6.2.3.3</td>
<td>Domestic wastewater</td>
<td>66</td>
</tr>
</tbody>
</table>
6.2.3.4 Hydrocarbon leakages
6.2.4 Degradation of feeder water quality
6.2.5 Change in landform
6.2.6 Traffic impacts

6.3 Impacts during operation phase
6.3.1 Noise emissions
6.3.2 Land degradation
   6.3.2.1 Solid waste generation
   6.3.2.2 Wastewater generation
6.3.3 Surface water drainage system
6.3.4 Degradation of feeder water quality
6.3.5 Traffic impacts

CHAPTER 7: MITIGATION OF PREDICTED IMPACTS

7.1 Introduction
7.2 Impacts during pre-construction and construction phases
   7.2.1 Mitigation measures for dust emissions
   7.2.2 Mitigation measures for noise emissions
   7.2.3 Prevention of Land degradation
      7.2.3.1 Flora
      7.2.3.2 Generation of solid waste
      7.2.3.3 Domestic wastewater
      7.2.3.4 Hydrocarbon leakages
   7.2.4 Conservation of surface water quality
   7.2.5 Landscaping
   7.2.6 Mitigation of traffic impacts

7.3 Impacts during operation phase
   7.3.1 Control of noise emissions
   7.3.2 Prevention of land degradation
      7.3.2.1 Solid waste management
      7.3.2.2 Wastewater generation
   7.3.3 Surface water drainage system
   7.3.4 Conservation of surface water quality
   7.3.5 Traffic impacts

CHAPTER 8: SOCIO ECONOMIC AND SOCIO CULTURAL IMPACTS

8.1 Introduction
8.2 Socio-economic impacts
   8.2.1 Direct Investment
   8.2.2 Operating Investment cost
   8.2.3 Direct and indirect employment
   8.2.4 Amenity, Commercial and Recreational Value
   8.2.5 Standard of living
   8.2.6 Livelihood

8.3 Socio-cultural impacts
   8.3.1 Quality of Life
   8.3.2 Social benefit to Grand Bassin pilgrims
   8.3.3 Cultural and community lifestyle
8.4 Social development programme 85

CHAPTER 9: ENVIRONMENTAL MANAGEMENT PLAN 86
9.1 Introduction 86
9.2 Roles and Responsibilities 86
9.3 Potential impacts, their Mitigation and Monitoring plan 88
9.4 Fire abatement measures 95
9.5 Use of LPG 95
9.6 Use of refrigerant 95

CHAPTER 10: ENHANCEMENT OPPORTUNITIES 96

CHAPTER 11: ALTERNATIVES 98
11.1 Introduction 98
11.2 Alternative site 98
11.3 Alternative undertaking 98
11.4 Alternative methods 99
   11.4.1 On site wastewater disposal 99
   11.4.2 Central Wastewater Treatment Plant 101
   11.4.3 Individual Wastewater Treatment Plant 102
   11.4.4 Pumping of sewage to the nearest sewer system 103

CHAPTER 12: CONCLUSION 107

References
LIST OF ANNEXES

1. Location, Site and Contour plan, and Surveyor’s report
2. (a) Certificate of incorporation of Lignecaliste Co Ltd
   (b) Certificate of incorporation of Arthur & Morgane Ltd
   (c) Proof of ownership
   (d) Certificate of Incorporation of Casearia Ltd
   (e) Acte de vente between Arthur and Morgane and Casearia Ltd
   (f) Business registration card of Casearia Ltd
3. Letter of approval issued by BOI
4. Letter from MoE
5. Site on Development Management Map
6. Site layout plan
7. (a) Borehole licences
    (b) Correspondences from CWA
    (c) Renewed borehole licence
8. Master plan
9. Land use map
10. Clearance from CEB
11. Ground floor plan, elevations, sections and schedule of area for:
    (a) Villa A
    (b) Villa B
12. Road section, roadside drain and drain outlet details
13. (a) Design sheets for septic tank and leaching field
    (b) Sewer details
14. (a) Environmental Noise survey results
    (b) Location plan of noise monitoring points
15. Extract of geotechnical investigation report
16. River water quality test reports