



CONTENT FOR CONCEPT DESIGN OF SEWERAGE SYSTEM

1. Introduction

- 1.1. Project background
- 1.2. Maldives design standards and requirements
- 1.3. Project lifecycle
- 1.4. Scope of work
- 1.5. Island description

2. Wastewater discharge

- 2.1. Island demographics and population projections
- 2.2. Design parameters
- 2.3. Present wastewater discharge
- 2.4. Future wastewater discharge
- 2.5. Design horizons

3. Protected areas, zones and reserves

4. Surveys

- 4.1. Socio-economical
- 4.2. Physical survey
- 4.3. Groundwater assessments

5. Stakeholder consultation with attached meeting minutes

6. Wastewater collection and disposal system

- 6.1. Overview
- 6.2. Design approach and system flow diagrams
- 6.3. Preliminary hydraulic design of sewer network
- 6.4. Sewerage system Pump stations and Components
- 6.5. Sewer connection arrangement
- 6.6. Sewage treatment facilities
 - I. Sewage treatment options (minimum 3 options)
 - II. Recommended option
 - III. Concept layout of sewage treatment plant

- IV. General arrangements on process control and instrumentation
- V. Power requirement and electrical works
- VI. Emergency arrangement
- VII. Pump selection
- VIII. Fecal sludge treatment
- 6.7. Sewer Outfall
 - I. Outfall arrangement
 - II. Outfall pipe laying options
 - III. Outfall end diffuser details
- 6.8. System Power requirements
- 7. Material standards**
- 8. Power supply**
 - 8.1. Existing infrastructure
 - 8.2. Power supply upgrade requirements
 - 8.3. Power supply requirement for the sewerage system (with STP)
 - 8.4. Renewable energy integration (minimum 30% of total energy)
- 9. Land approvals for Sewerage Pump stations, sewage treatment plant and administrative building**
- 10. Environmental friendly design considerations**
- 11. Estimated operation and maintenance cost**
- 12. Expected design deviations**
- 13. Conclusions**