

# Randheli Island Resort Development

## Noonu Atoll, Maldives

### Services Rendered

- Fatal Flaw Analysis
- Master Plan Validation
- Coastal Erosion Assessment
- Coastal Engineering Review of Proposed Structures
- Master Plan Recommendations
- Coastal Engineering Recommendations
- Artificial Beach Creation Feasibility

### Project Summary

ATM provided services associated with the planning and feasibility of constructing a luxury resort development on Randheli Island on the Noonu Atoll in the northern Maldives. The developer is a successful international luxury hotel operator that was reviewing options regarding the feasibility of developing luxury over-water and upland resort villas and amenities for a 70-villa destination resort. The proposed development included over 40 over-water villas, upland resort villas, supporting amenities, and infrastructure. The Maldives have a concentration of luxury island resorts that typically feature over-water and oceanfront villas.

In order to establish and maintain recommended coastal setbacks for planning and design purposes, ATM reviewed available surveys and oceanographic data and then conducted site inspections to document local sediment transport dynamics, wind-wave conditions, and the potential for erosion. ATM conducted a visual ground survey of the island and compared historic and recent satellite images to analyze previous estimates of coastal erosion and deposition trends. Marine transects were completed to confirm location of sensitive benthic habitat areas and environmentally feasible locations for coastal protection structures.

ATM completed a fatal flaw analysis for the proposed master plan and presented recommended changes and modifications of resort features to ensure adequate protection of structures and resort amenities. The development team incorporated ATM's conclusions and recommendations into subsequent planning efforts that address concerns identified by ATM.

