Terms of Reference to Undertake Marine Biodiversity Assessment as a monitoring component of Undine Bay Proposed Development and Which currently Impacts on the Efate Ring Road Upgrade

DRAFT 27th March 09

1. Back Ground

The proponents for the proposed Undine Bay development have been working with the department of Public Works to self-fund a road realignment prior to Downer EDI Works Ltd undertaking the final bitumen sealing. The road realignment has already been built and promises potential savings for the road works. Since MCA approved procedures for road realignments on the Efate Ring Road, the proponents have cooperated with the procedures.

However, concerns were raised, such as, on the following:

- whether the realigned road meets the GoV's and MCC's environmental, social, and consultation requirements
- whether the works were monitored for compliance
- whether the aggregate material on the road was appropriately sourced

These concerns prompted MCC to request MCA-Vanuatu to oversee an independent audit to address these concerns. This particular audit was undertaken in December 2008 by Dr. Dick Watling, International Environmental Specialist, under a contract with MCA to provide advice as Engineer and on Environmental monitoring and compliance.

Despite the efforts made and the public support received on the realigned road, MCC was still unable to accept the Audit report as the development, including the realigned road, would continue without complying with specific MCC conditions. These conditions include, amongst other things, the undertaking of a marine study to determine the level of damage or impact on the foreshore by the works, including from realigned road. This work will be conducted by the Department of Fisheries as officially requested by the Vanuatu Environment Unit.

2. Objective:

a) To investigate and determine the level of impact or damage on the foreshore, including benthic habitat and organisms from the proposed Undine Bay development
b) To investigate and determine the location and size for proposed coral regeneration program for the developer to implement
c) To investigate and determine a site suitable for the establishment of a marine protected area to be managed using local rules and traditional knowledge

Proposed Scope of Work

1. Description of the area and boundary of study, including illustration of detailed locality maps

2. Methodology deployed to undertake the marine study[1].

3. Assess changes that have occurred overtime. This include the following:
    - Fish Assessment – Dominant species and assess its level of abundance
    - Invertebrate Assessment – Target species, including of commercial and conservation value
    - Substrate Assessment – Assess surface substrate coverage
    - Mangrove Assessment – Assess the current level of species and coverage

4. Assess the quality of water[2]. Determine whether the current inland works from the proposed Undine Bay development is impacting on the quality of the water. Determine the level of sedimentation in the lagoon system.

5. Conclusions
    - Summary of findings
    - Recommendations
    - Consultations – List of people consulted for the assignment

References:

a) Jimmy, R. 2005: Environment Impact Assessment, Undine Bay Proposed Development, North Efate, Shefa Province (Appendix 4- Coastal Resource Assessment)
b) Letter from VEU to Department of Fisheries 6 February 2009
c) MCC Correspondence, December 19 2008
d) Letter from MCA responding to MCC Letter of December 19 2009
e) Watling, Dr. Dick 2008: Independent Audit of the Undine Bay Proposed Development As It Impacts on the MCA Efate Ring Road Up-grade

[1] Three survey techniques deployed, as per original EIA report, were Line Intercept transect survey, Free Dive Survey and Quadrant Survey. The department of fisheries can recommend other survey techniques to undertake the assessment.

[2] The use of biological indicators was the only method of approach mentioned in the EIA report for water quality test. This particular assignment should not prevent other methods to be suggested for deployment.