



# Technical Assistance Consultant's Report

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Project Number: 36111  
April 2016

## Maldives: Kulhudhuffishi Harbor Expansion Project (Financed by the Technical Assistance Special Fund) Appendices A-F

Prepared by PADECO Co., Ltd., Japan in association with Ryan Private Limited, Maldives

For Ministry of Finance and Treasury  
Ministry of Housing and Infrastructure

This consultant's report does not necessarily reflect the views of ADB or the Government concerned, and ADB and the Government cannot be held liable for its contents. (For project preparatory technical assistance: All the views expressed herein may not be incorporated into the proposed project's design.

**Asian Development Bank**

APPENDIX A – DRAWINGS



| DRAWING LIST |  |
|--------------|--|
| DWG NO.      | TITLE  |
| 0010         | LOCALITY PLAN AND DRAWING LIST                   |
| 0020         | HAA DHAALU ATOLL & KULHUDHUFFUSHI ISLAND         |
| 0030         | GOOGLE EARTH - AERIAL PHOTO & LEVEL CONTOURS     |
| 0040         | LAND USE PLAN EXTRACT                            |
| 0050         | GENERAL ARRANGEMENT                              |
| 0060         | WATERFRONT & SMALL CRAFT ZONE (OPTION 1)         |
| 0070         | WATERFRONT & SMALL CRAFT ZONE (OPTION 2)         |
| 0080         | WATERFRONT & SMALL CRAFT ZONE (OPTION 3)         |
| 0090         | PROPOSED PASSENGER / CARGO HARBOUR & RECLAMATION |
| 0100         | TIMBER JETTY                                     |
| 0110         | WALL SECTIONS                                    |
| 0120         | BREAKWATER SECTIONS                              |
| 0130         | REVTMENT & BEACH SECTIONS                        |
| 0140         | ANCILLARY FACILITIES                             |

|   |  |                  |                |                  |                |                           |
|---|--|------------------|----------------|------------------|----------------|---------------------------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>  |  | DWG. NO:<br>0010 | SCALE<br>-     | SIZE<br>A3       | REV. NO<br>B   | DATE<br>15 FEB 16         |
| TITLE:<br>LOCALITY PLAN & DRAWING LIST  |  |                  | DRAWN BY<br>AM | CHECKED BY<br>JD | APPROVED<br>II | PROJECT. NO<br>RI2015/192 |
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KULHUDHUFFUSHI


|  |          |            |          |            |           |
|--|----------|------------|----------|------------|-----------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b> | DWG. NO: | SCALE      | SIZE     | REV. NO    | DATE      |
|  | 0020     | -          | A3       | B          | 15 FEB 16 |
| TITLE:<br><b>HAA DHAALU ATOLL &amp; KULHUDHUFFUSHI ISLAND</b>          | DRAWN BY | CHECKED BY | APPROVED | PROJECT NO |           |
|  | AM       | JD         | II       | RI2015/192 |           |

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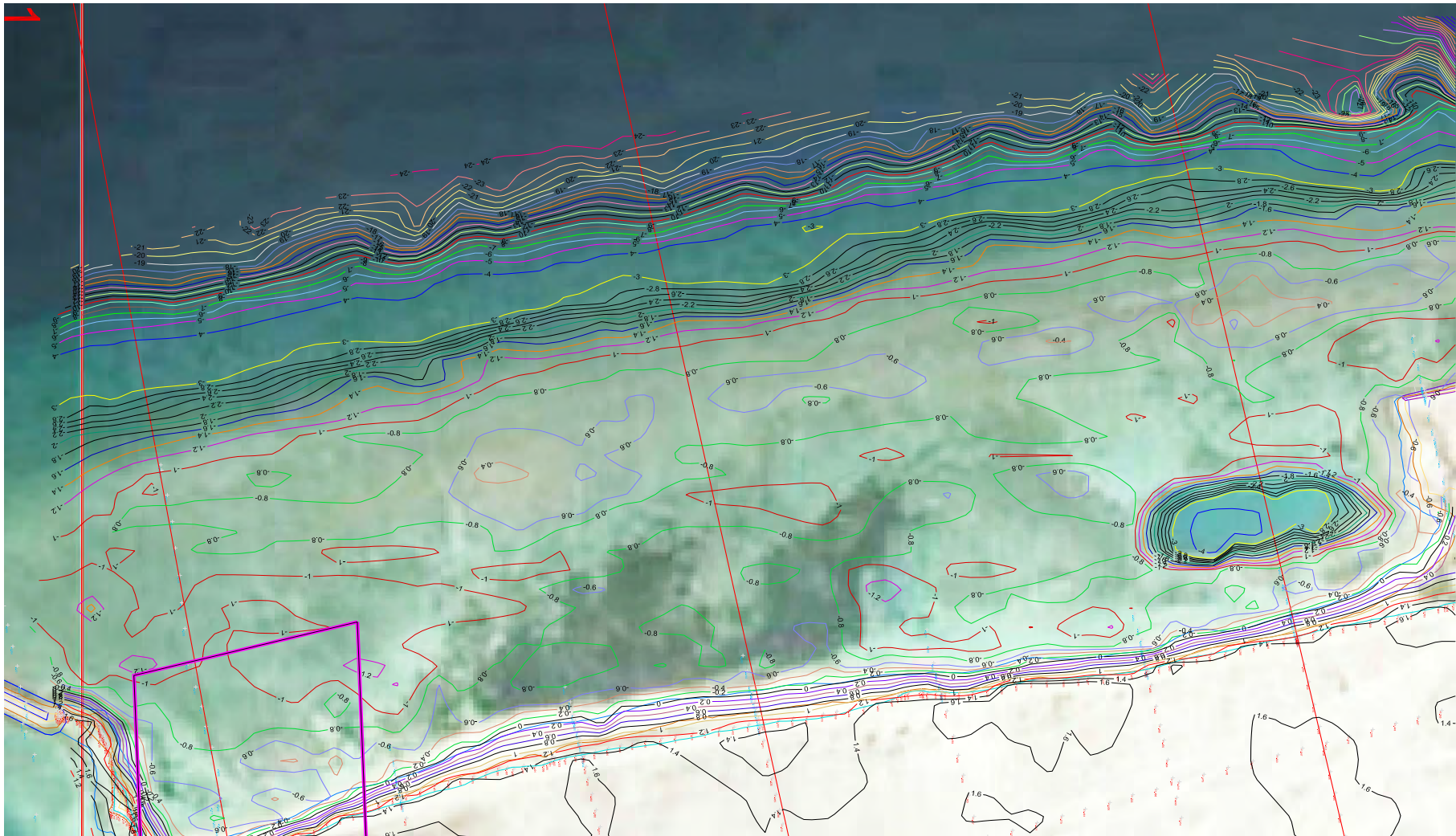


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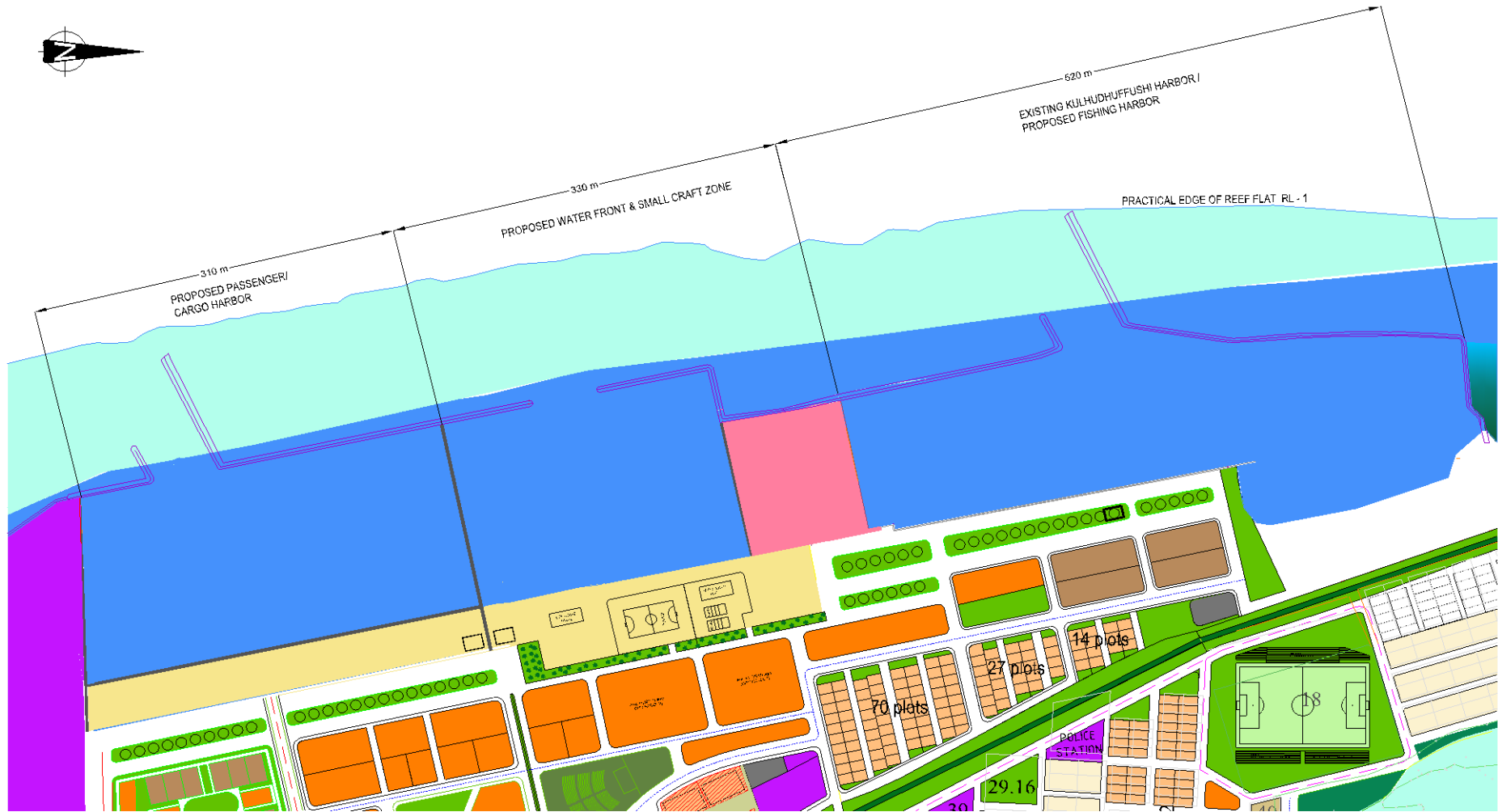


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| TITLE:<br><b>GOOGLE EARTH - AERIAL PHOTO &amp; LEVEL CONTOURS</b>  |  | DRAWN BY<br>AM   | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>R02015192 |                   |
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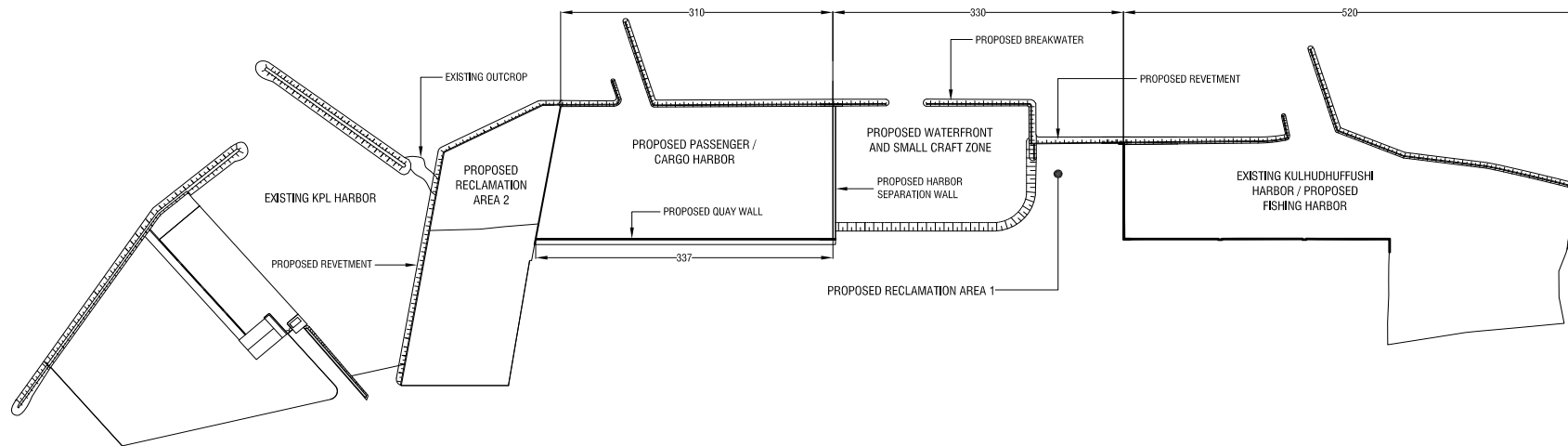



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| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b> |  | DWG. NO:<br>0040                       | SCALE:<br>1:5000 | SIZE:<br>A3  | REV. NO:<br>B             | DATE:<br>15 FEB '16      |
| TITLE:<br>LAND USE PLAN EXTRACT  |  |  | DRAWN BY:<br>AM  | CHECKED BY:<br>JD  | APPROVED:<br>H. Z. HASSAN | PROJECT NO:<br>K20160182 |
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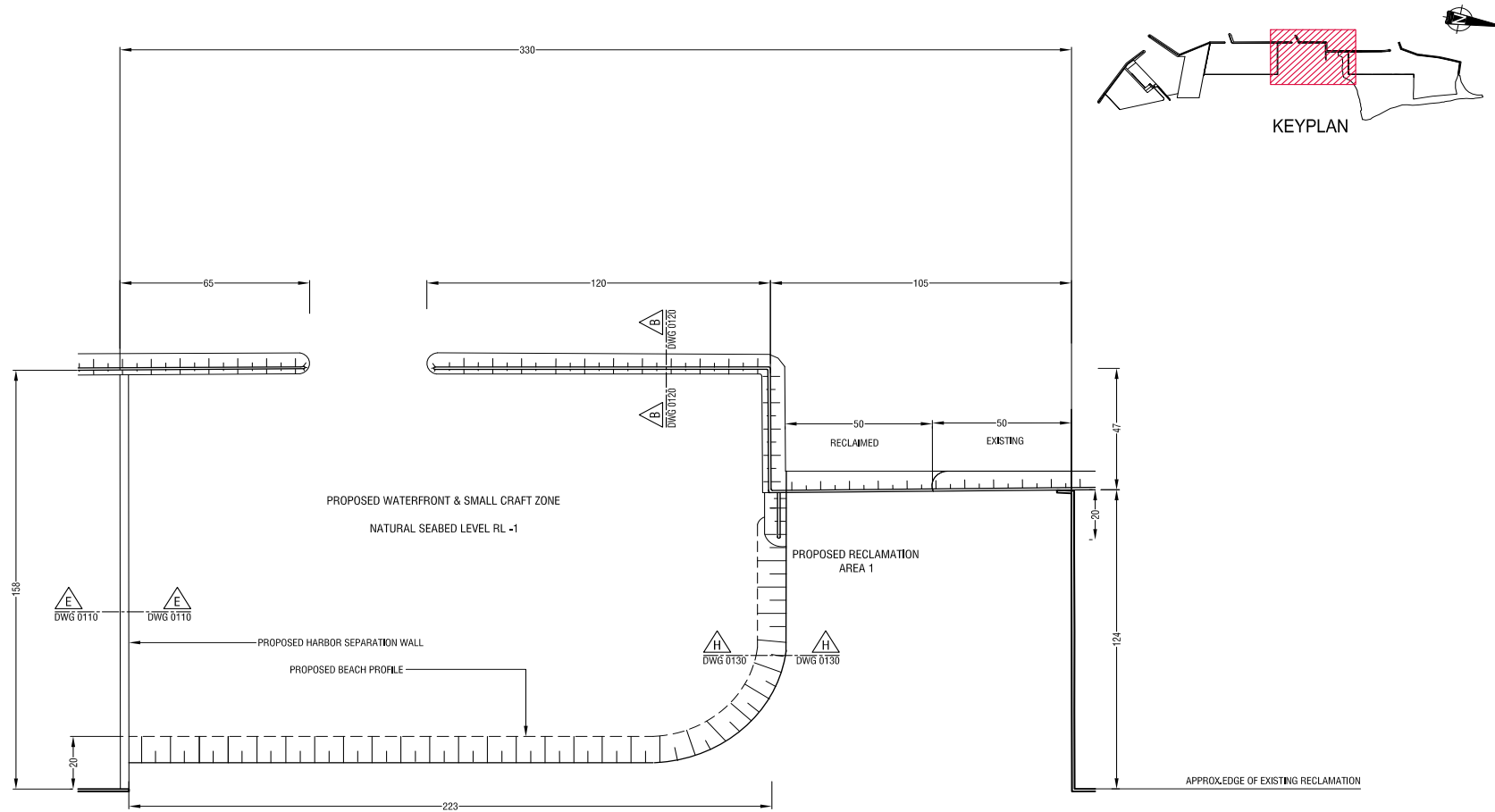


- NOTES:  
 1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.  
 2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

|  |  |                  |                 |                  |                |                          |
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| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b> |  | DWG. NO:<br>0050 | SCALE<br>1:5000 | SIZE<br>A3       | REV. NO<br>B   | DATE<br>15 FEB 16        |
| TITLE:<br><b>GENERAL ARRANGEMENT</b>                                   |  |                  | DRAWN BY<br>AM  | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI2015/192 |
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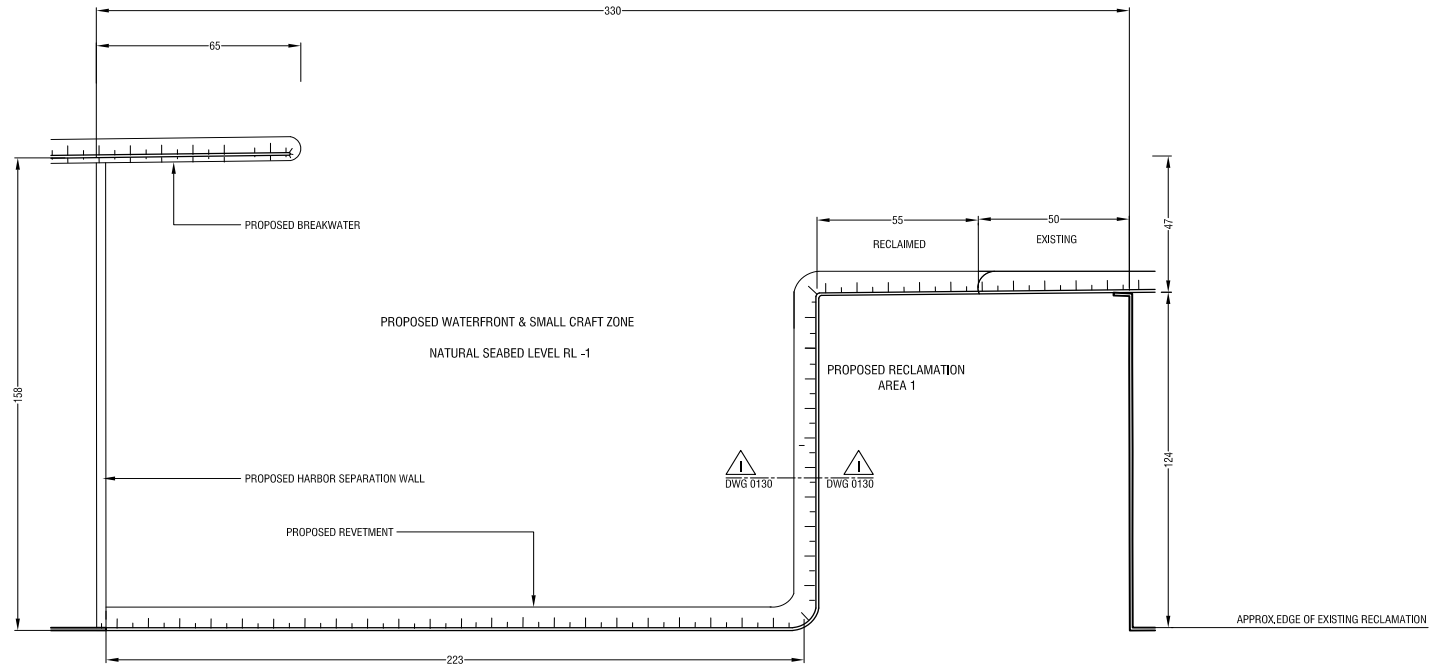
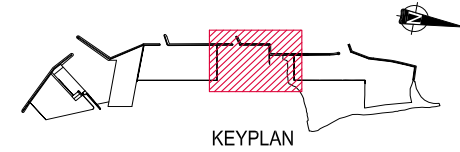


- NOTES:
1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.
  2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

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| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>  |  | DWG. NO:<br>0060 | SCALE<br>1:1500  | SIZE<br>A3     | REV. NO<br>B              | DATE<br>15 FEB 16 |
| TITLE:<br><b>PROPOSED WATERFRONT &amp; SMALL CRAFT ZONE (OPTION - 1)</b>  |  | DRAWN BY<br>AM   | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI/2015/192 |                   |
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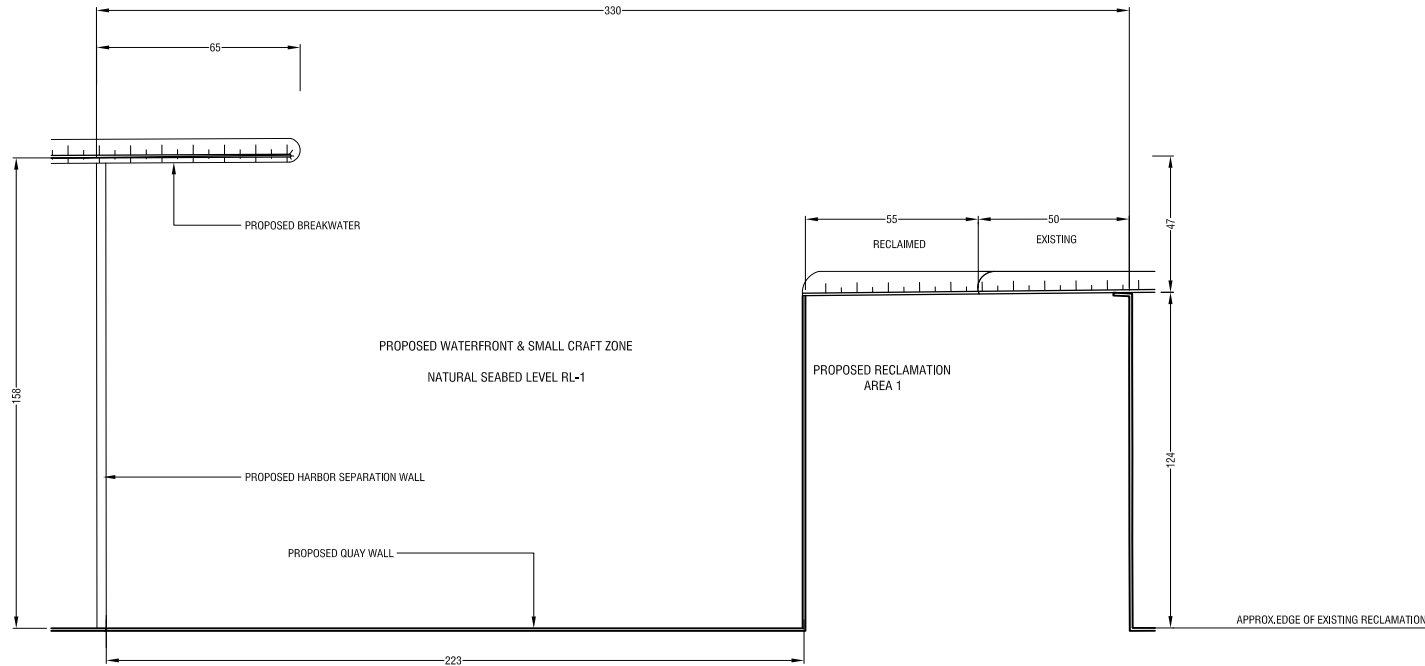
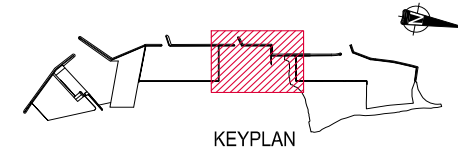
NOTES:

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| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>   |  | DWG. NO:<br>0070 | SCALE<br>1:1500  | SIZE<br>A3     | REV. NO<br>B            | DATE<br>15 FEB 16 |
| TITLE:<br><b>PROPOSED WATERFRONT &amp; SMALL CRAFT ZONE (OPTION - 2)</b>   |  | DRAWN BY<br>AM   | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI2015192 |                   |
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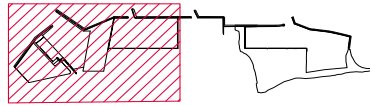


- NOTES:  
 1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.  
 2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

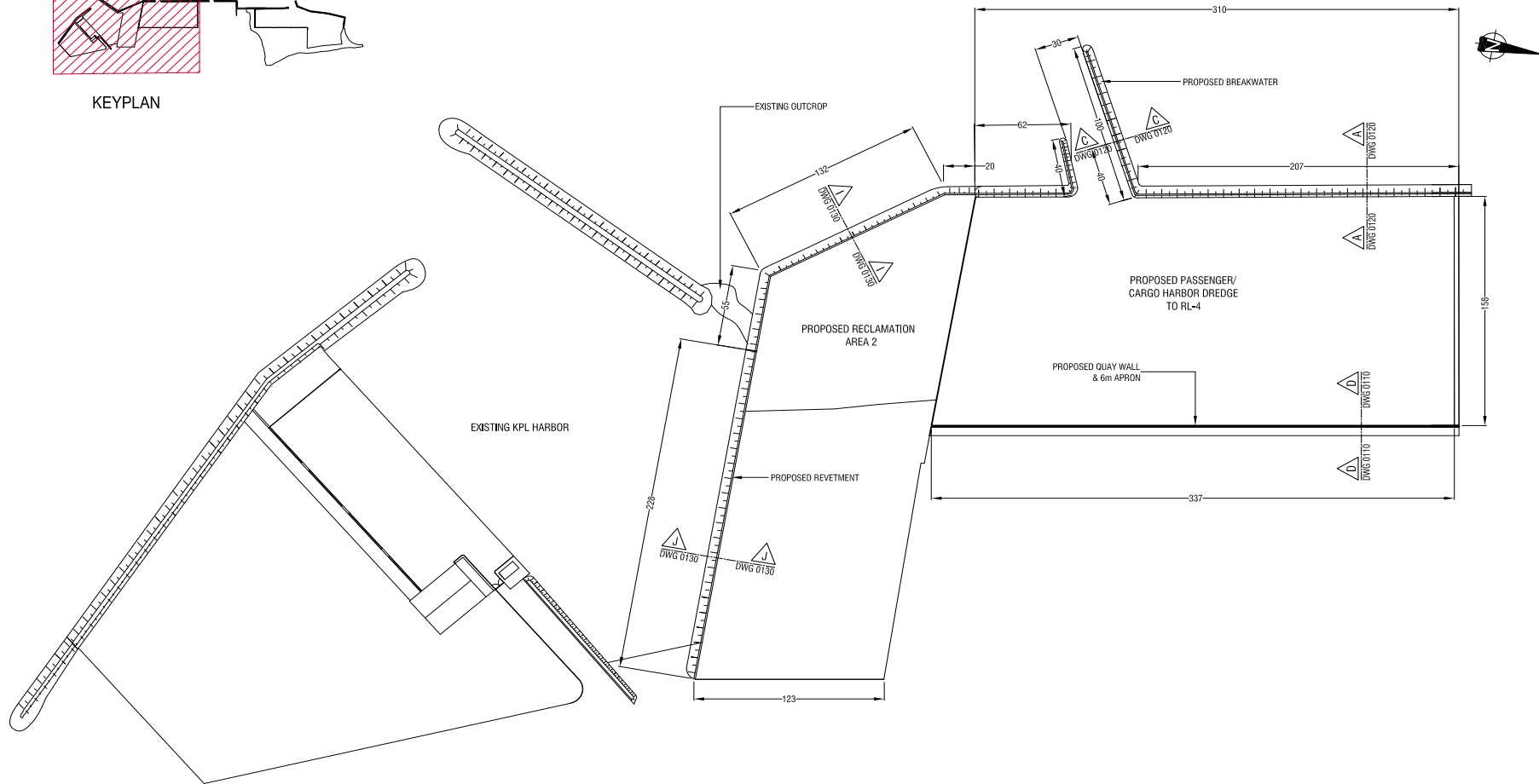
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| TITLE:<br><b>PROPOSED WATERFRONT &amp; SMALL CRAFT ZONE (OPTION - 3)</b> |  |                  | DRAWN BY<br>AM  | CHECKED BY<br>JD | APPROVED<br>II | PROJECT. NO<br>RI20151192 |
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KEYPLAN

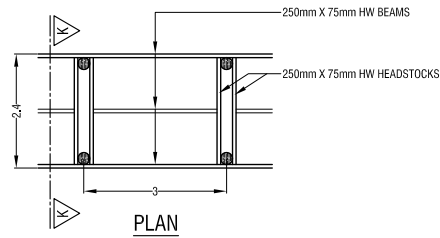


NOTES:

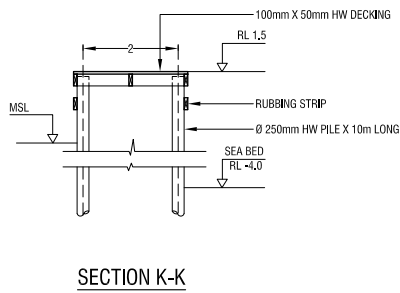
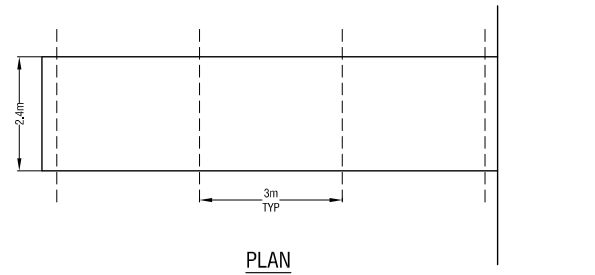
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|   |  |                  |                  |                |                          |                   |
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| TITLE:<br><b>PROPOSED PASSENGER / CARGO HARBOR &amp; RECLAMATION</b>  |  | DRAWN BY<br>AM   | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>R02015/192 |                   |
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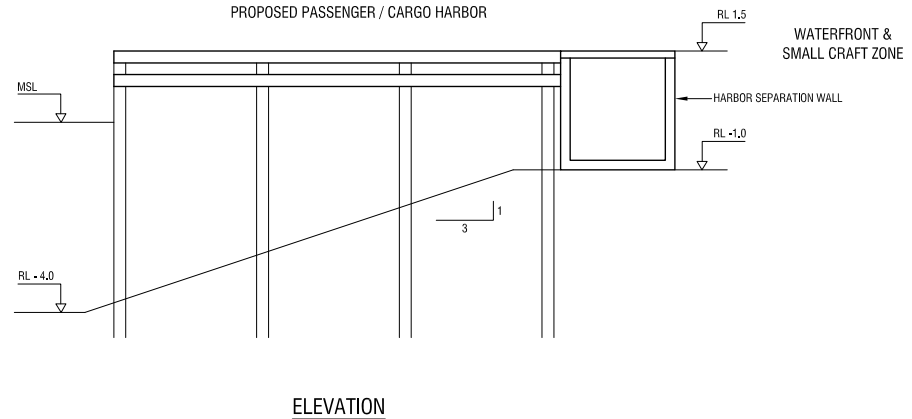
**TIMBER JETTY**



**TIMBER FINGER JETTY**



**PROPOSED PASSENGER / CARGO HARBOR**

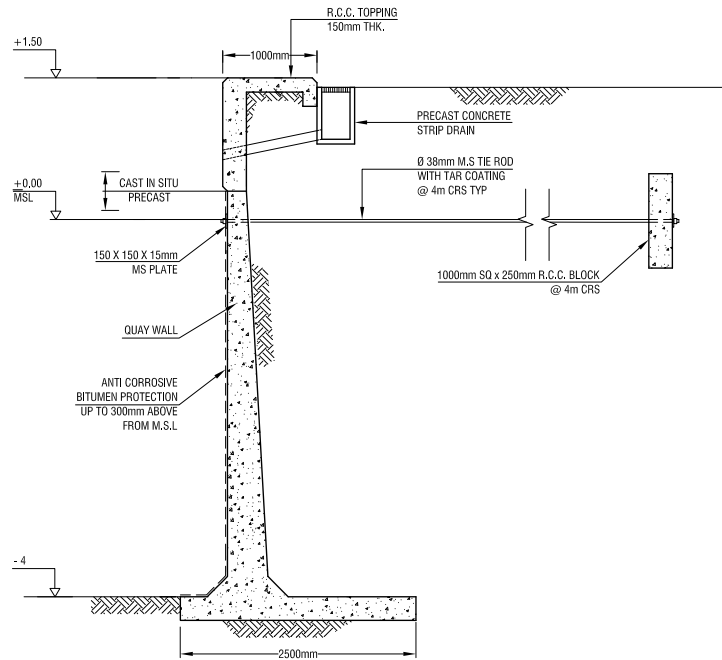


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2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

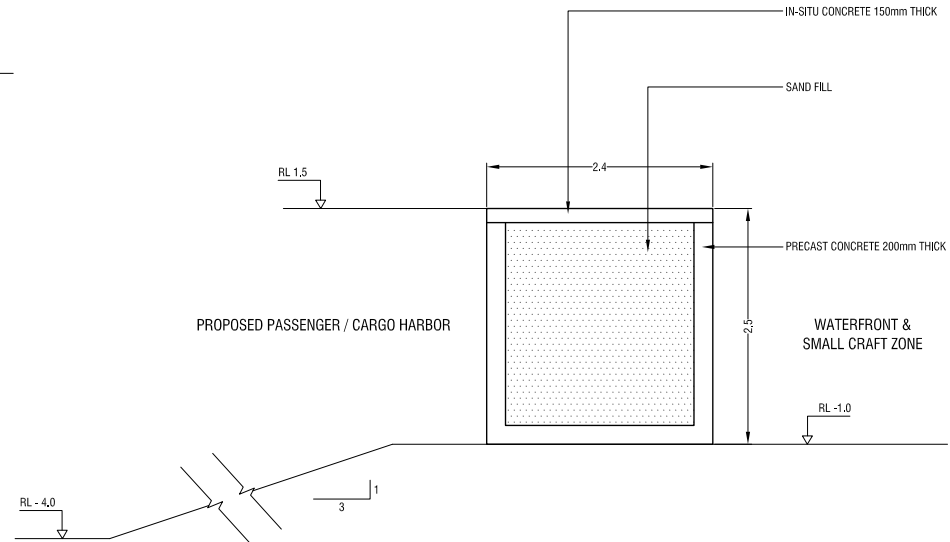
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| TITLE:<br><b>TIMBER JETTY</b>   |                  | DRAWN BY<br>AM | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI2015/192 |
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QUAY WALL SECTION D-D  
REF. DWG 0090



SECTION E-E  
REF. DWG 0060

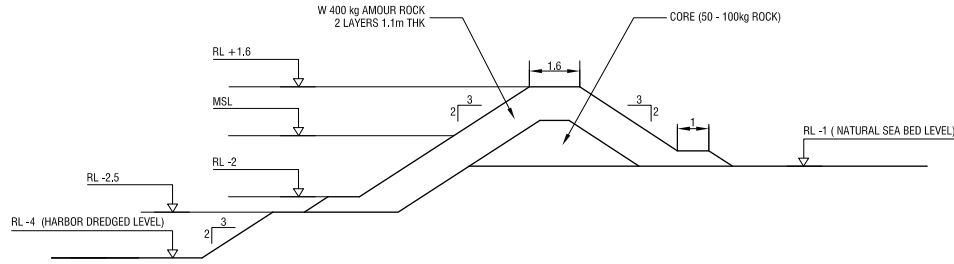
NOTES:

1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.
2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

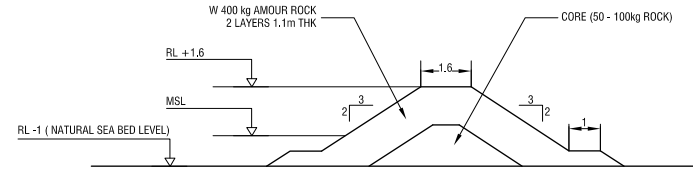
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|---|--|------------------|----------------|------------------|----------------|--------------------------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>  |  | DWG. NO:<br>0110 | SCALE<br>1:50  | SIZE<br>A3       | REV. NO<br>B   | DATE<br>15 FEB 16        |
| TITLE:<br><b>WALL SECTIONS</b>  |  |                  | DRAWN BY<br>AM | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI2015/192 |
| DO NOT SCALE. ONLY USE FIGURED DIMENSIONS GIVEN   |  |                  |                |                  |                |                          |
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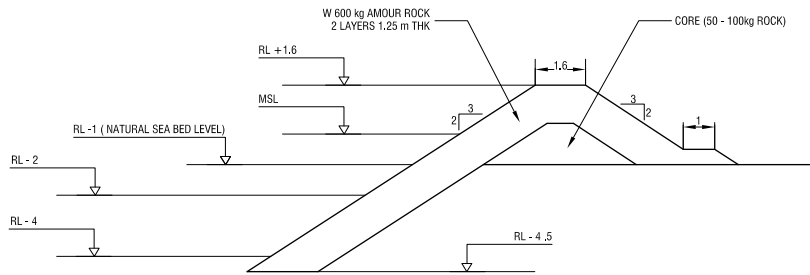
**RIVAN PRIVATE LIMITED**  
Rivian Private Limited  
11, 12th Floor, 11th Street, Singapore  
Tel: +65 6339 8888  
Fax: +65 6339 8889  
Email: riv@rivant.com.sg  
Website: www.rivant.com.sg



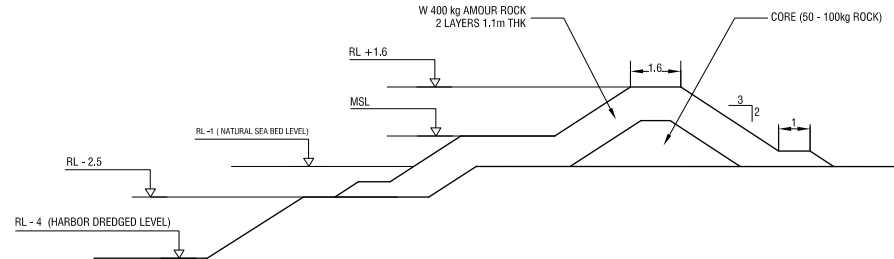
SECTION A-A  
REF. DWG 0090



SECTION B-B  
REF. DWG 0060



SECTION C-C  
REF. DWG 0060



SECTION B-B (MODIFIED)  
REF. DWG 0060

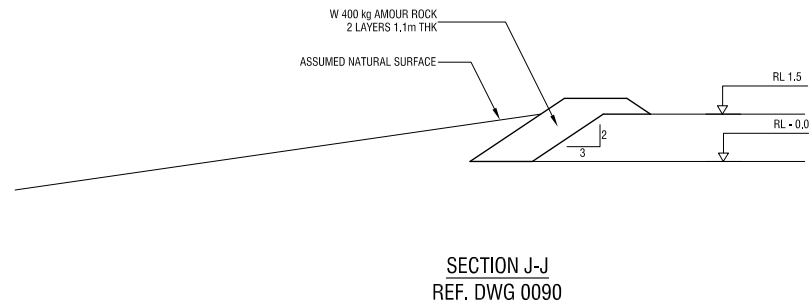
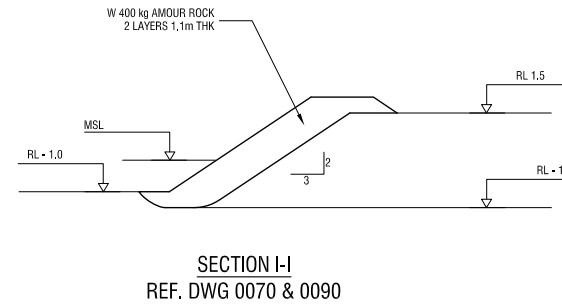
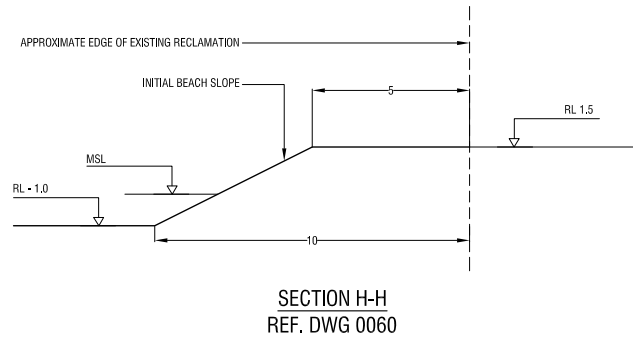
NOTES:

1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.
2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

|   |  |                  |                |                  |                |                           |
|---|--|------------------|----------------|------------------|----------------|---------------------------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>  |  | DWG. NO:<br>0120 | SCALE<br>1:150 | SIZE<br>A3       | REV. NO<br>B   | DATE<br>15 FEB 16         |
| TITLE:<br><b>BREAKWATER SECTIONS</b>  |  |                  | DRAWN BY<br>AM | CHECKED BY<br>JD | APPROVED<br>II | PROJECT. NO<br>RI2015/192 |
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11, 99/005 Street 11, Meikong 20176  
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300 Block N, Asean Avenue, Meikong, Myanmar



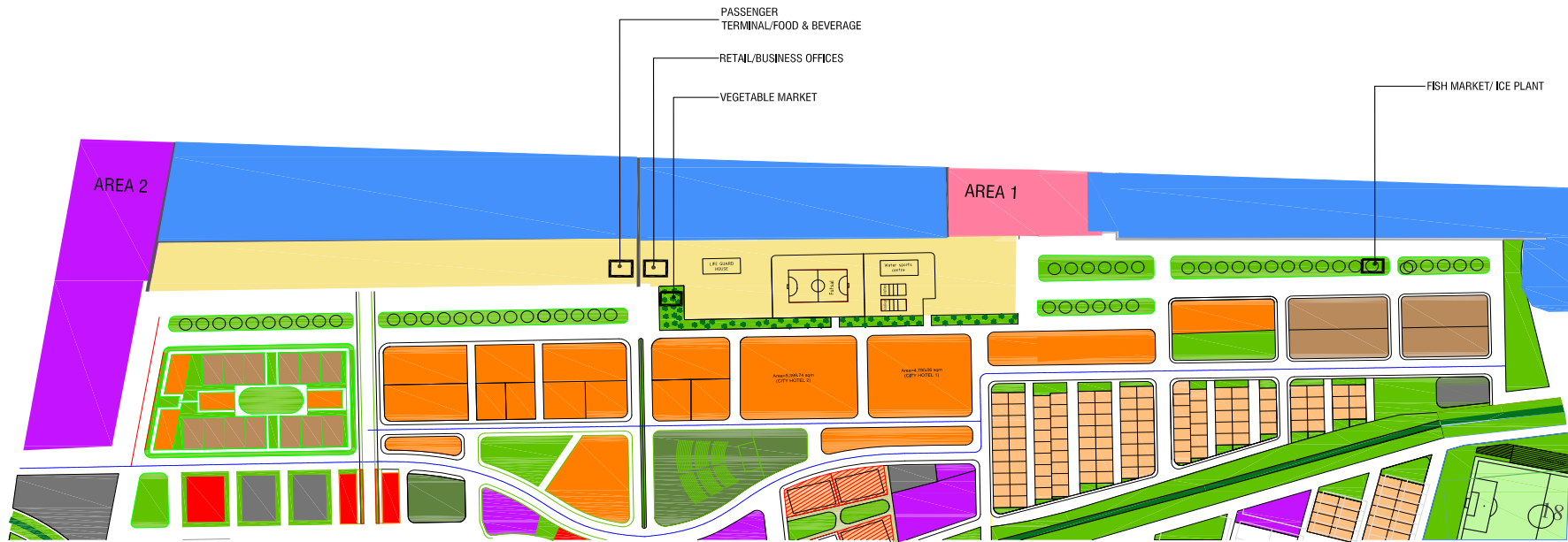
- NOTES:  
 1. ALL DIMENSIONS ARE NOMINAL AND SHOWN IN METERS (m) U.N.O.  
 2. ALL LEVELS IN METERS (m) TO MEAN SEA LEVEL (MSL) DATUM U.N.O

|  |  |                  |                  |                |                           |                   |
|--|--|------------------|------------------|----------------|---------------------------|-------------------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT "MLD8829"</b> |  | DWG. NO:<br>0130 | SCALE<br>1:150   | SIZE<br>A3     | REV. NO<br>B              | DATE<br>15 FEB 16 |
| TITLE:<br><b>REVTMENT &amp; BEACH SECTIONS</b>                       |  | DRAWN BY<br>AM   | CHECKED BY<br>JD | APPROVED<br>II | PROJECT. NO<br>RI2015/192 |                   |
| DO NOT SCALE. ONLY USE FIGURED DIMENSIONS GIVEN                      |  |                  |                  |                |                           |                   |



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11, 802015/192, 11, 802015/192  
 P.O. Box 1000, Male  
 www.riyan.com.mv  
 3rd floor, Al-Azhar, Meeremhanga, Male'

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|   |  |                  |                 |                  |                |                          |
|---|--|------------------|-----------------|------------------|----------------|--------------------------|
| PROJECT:<br><b>KULHUDHUFFUSHI HARBOR EXPANSION PROJECT " MLD8829 "</b>  |  | DWG. NO:<br>0140 | SCALE<br>1:3000 | SIZE<br>A3       | REV. NO<br>B   | DATE<br>15 FEB 18        |
| TITLE:<br><b>ANCILLARY FACILITIES</b>   |  |                  | DRAWN BY<br>AM  | CHECKED BY<br>JD | APPROVED<br>II | PROJECT NO<br>RI2015/192 |
| DO NOT SCALE. ONLY USE FIGURED DIMENSIONS GIVEN   |  |                  |                 |                  |                |                          |
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## APPENDIX B 1– COST ESTIMATE

## TA-8829 MLD: Kulhudhuffushi harbour Expansion Project

15.4 MVR = 1 USD

| ITEM                   | DESCRIPTION                      | UNIT           | QTY    | HYBRID RATE<br>USD | AMOUNT<br>USD | RATE<br>RF | AMOUNT<br>RF |
|------------------------|----------------------------------|----------------|--------|--------------------|---------------|------------|--------------|
| <b>WF - Waterfront</b> |                                  |                |        |                    |               |            |              |
|                        | 1 Preliminaries (% of total)     | %              | 15     |                    |               |            |              |
|                        | Rate Spread calibration factor   |                | 1.0654 |                    |               |            |              |
| 2.1                    | Site Clearance                   | Item           | 1      | 2,131              | 2,131         | 30,800     | 32,815       |
| 2.2                    | Dredging                         | m <sup>3</sup> | 0      | 6.56               | 0             | 0          | 0            |
| 2.3                    | Breakwater                       | m              | 232    |                    |               |            |              |
| 2.3.1                  | Core                             | m <sup>3</sup> | 1,096  | 172.60             | 189,204       | 2,495      | 2,913,747    |
| 2.3.2                  | Geotextile                       | m <sup>2</sup> | 2,854  | 9.59               | 27,363        | 139        | 421,388      |
| 2.3.3                  | Armour layer                     | m <sup>3</sup> | 2,453  | 172.60             | 423,457       | 2,495      | 6,521,243    |
| 2.4                    | Revetment                        |                |        |                    |               |            |              |
|                        | Seaward Revetment (I)            | m              | 70     |                    |               |            |              |
| 2.4.1                  | Geotextile                       | m <sup>2</sup> | 630    | 9.59               | 6,041         | 139        | 93,032       |
| 2.4.2                  | Armour layer                     | m <sup>3</sup> | 481    | 172.60             | 83,064        | 2,495      | 1,279,183    |
|                        | Small Revetment (J)              | m              | 0      |                    |               |            |              |
| 2.4.3                  | Geotextile                       | m <sup>2</sup> | 0      | 9.59               | 0             | 139        | 0            |
| 2.4.4                  | Armour layer                     | m <sup>3</sup> | 0      | 172.60             | 0             | 2,495      | 0            |
| 2.5                    | Quaywall                         | m              | 0      |                    |               |            |              |
|                        | -4m wall                         |                |        |                    |               |            |              |
| 2.5.1                  | Precast                          | m              |        | 1,864.51           | 0             | 26,950     | 0            |
| 2.5.2                  | Insitu                           | m              |        | 414.45             | 0             | 5,991      | 0            |
| 2.5.3                  | Tie rods and anchors @ 4m crs    | No             |        | 575.33             | 0             | 8,316      | 0            |
| 2.5.4                  | Mooring points @ 5m crs          | No             |        | 131.05             | 0             | 1,894      | 0            |
| 2.5.5                  | Backfilling                      | m <sup>3</sup> |        | 1.60               | 0             | 23         | 0            |
| 2.5.6                  | Harbour Separation Wall          | m              | 0      | 1,917.78           | 0             | 27,720     | 0            |
| 2.6                    | Reclamation                      |                |        |                    |               |            |              |
| 2.6.1                  | Area 1                           | m <sup>3</sup> | 14,375 | 1.60               | 22,973        | 23         | 353,790      |
| 2.6.2                  | Beach                            | m <sup>3</sup> | 6,806  | 1.60               | 10,877        | 23         | 167,512      |
| 2.7                    | Others                           |                |        |                    |               |            |              |
| 2.7.1                  | Solar powered navigation beacons | No             | 0      | 2,130.87           | 0             | 30,800     | 0            |
| 2.8                    | Ancillaries                      |                |        |                    |               |            |              |
|                        | Subtotal                         |                |        |                    | 765,111       |            | 11,782,710   |
|                        | Preliminaries                    |                |        |                    | 114,767       |            | 1,767,407    |
|                        | Total (excl. contingency)        |                |        |                    | 879,878       |            | 13,550,117   |
|                        | Contingency (%)                  | 10             |        |                    | 87,988        |            | 1,355,012    |
|                        | TOTAL                            |                |        |                    | 967,865       |            | 14,905,129   |



## Passenger/Cargo - PC

|       |   |                |         |           |           |         |             |
|-------|---|----------------|---------|-----------|-----------|---------|-------------|
| 1     | Preliminaries (% of total)  | %              | 15      |           |           |         |             |
| 2.1   | Site Clearance  | Item           | 1       | 2,130.87  | 2,131     | 30,800  | 32,815      |
| 2.2   | Dredging  | m <sup>3</sup> | 153,339 | 6.56      | 1,006,374 | 95      | 15,498,166  |
| 2.3   | Breakwater  | m              | 409     |           |           |         |             |
| 2.3.1 | Core  | m <sup>3</sup> | 1,883   | 172.60    | 325,010   | 2,495   | 5,005,161   |
| 2.3.2 | Geotextile  | m <sup>2</sup> | 6,285   | 9.59      | 60,266    | 139     | 928,100     |
| 2.3.3 | Armour layer  | m <sup>3</sup> | 5,872   | 172.60    | 1,013,452 | 2,495   | 15,607,164  |
| 2.4   | Revetment   |                |         |           |           |         |             |
|       | Seaward Revetment (I)   | m              | 207     |           |           |         |             |
| 2.4.1 | Geotextile  | m <sup>2</sup> | 1,863   | 9.59      | 17,864    | 139     | 275,107     |
| 2.4.2 | Armour layer  | m <sup>3</sup> | 1,423   | 172.60    | 245,632   | 2,495   | 3,782,727   |
|       | Small Revetment (J)   | m              | 228     |           |           |         |             |
| 2.4.3 | Geotextile  | m <sup>2</sup> | 1,414   | 9.59      | 13,555    | 139     | 208,745     |
| 2.4.4 | Armour layer  | m <sup>3</sup> | 998     | 172.60    | 172,169   | 2,495   | 2,651,398   |
| 2.5   | Quaywall<br>-4m wall  | m              | 498     |           |           |         |             |
| 2.5.1 | Precast   | m              | 498     | 2,288.26  | 1,139,554 | 33,075  | 17,549,125  |
| 2.5.2 | Insitu  | m              | 498     | 508.65    | 253,306   | 7,352   | 3,900,920   |
| 2.5.3 | Tie rods and anchors @ 4m crs                                     | No             | 124     | 706.09    | 87,555    | 10,206  | 1,348,353   |
| 2.5.4 | Mooring points @ 5m crs   | No             | 99      | 131.05    | 12,974    | 1,894   | 199,796     |
| 2.5.5 | Backfilling   | m <sup>3</sup> | 26,892  | 1.60      | 42,977    | 23      | 661,853     |
| 2.5.6 | Harbour Separation Wall   | m              | 158     | 1,917.78  | 303,009   | 27,720  | 4,666,342   |
| 2.5.7 | Finger Piers  | m              | 63      | 2,130.87  | 134,245   | 30,800  | 2,067,367   |
| 2.6   | Reclamation   |                |         |           |           |         |             |
| 2.6.1 | Area 2  | m <sup>3</sup> | 25,000  | 1.60      | 39,954    | 23      | 615,288     |
| 2.7   | Others  |                |         |           |           |         |             |
| 2.7.1 | Solar powered navigation beacons                                  | No             | 2       | 2,130.87  | 4,262     | 30,800  | 65,631      |
| 2.7.2 | Survey and compaction   | m <sup>2</sup> | 2,702   | 1.60      | 4,318     | 23      | 66,500      |
| 2.8   | Ancillaries   |                |         |           |           |         |             |
| 2.8.1 | Pavement  | m <sup>2</sup> | 2,052   | 54.66     | 112,153   | 790     | 1,727,153   |
| 2.8.2 | Buildings Retail and Admin + Passenger<br>Terminal and Recreation | m <sup>2</sup> | 350     | 852.35    | 298,321   | 12,320  | 4,594,148   |
| 2.8.3 | Market (Fish and Veg)   | m <sup>2</sup> | 300     | 532.72    | 159,815   | 7,700   | 2,461,151   |
| 2.8.4 | Ice Plant   | Item           | 1       | 26,635.83 | 26,636    | 385,000 | 410,192     |
| 2.8.5 | Quay lighting   | No             | 24      | 1,556.64  | 37,359    | 23,972  | 575,334     |
|       | Subtotal  |                |         |           | 5,512,892 |         | 84,898,537  |
|       | Preliminaries   |                |         |           | 826,934   |         | 12,734,780  |
|       | Total (excl. contingency)   |                |         |           | 6,339,826 |         | 97,633,317  |
|       | Contingency (%)   | 10             |         |           | 633,983   |         | 9,763,332   |
|       | TOTAL   |                |         |           | 6,973,808 |         | 107,396,649 |
|       | GRAND TOTAL without contingency                                   |                |         |           | 7,219,703 |         | 111,183,434 |
|       | GRAND TOTAL with contingency                                      |                |         |           | 7,941,674 |         | 122,301,777 |

## APPENDIX B 2– DETAILED COST ESTIMATE BY EXPERNDITURE CATEGORY, YEAR, AND FINANCIER

| Detailed Cost Estimates by Expenditure Category |                  |                |              |                  |                |            |                      |
|---|------------------|----------------|--------------|------------------|----------------|------------|----------------------|
| Item  | MVR (millions)   |                |              | US \$ (millions) |                |            | % of Total Base Cost |
|   | Foreign Exchange | Local Currency | Total        | Foreign Exchange | Local Currency | Total      |                      |
| <b>A. Investment Costs</b>                      |                  |                |              |                  |                |            |                      |
| 1. Civil Works <sup>a</sup>                     | 78.0             | 27.0           | 105.0        | 5.1              | 1.8            | 6.8        | 95%                  |
| 2. Equipment <sup>b</sup>                       | 0.5              | 0.1            | 0.6          | 0.0              | 0.0            | 0.037      | 1%                   |
| 3. Land Acquisition                             | 0.0              | 0.0            | 0.0          | 0.0              | 0.0            | 0.0        | 0%                   |
| 4. Consulting, Training & Capacity Building     | 0.0              | 0.0            | 0.0          | 0.0              | 0.0            | 0.0        | 0%                   |
| 5. Project Management                           | 0.0              | 0.0            | 0.0          | 0.0              | 0.0            | 0.0        | 0%                   |
| 6. Taxes and Duties                             | 0.0              | 5.1            | 5.1          | 0.0              | 0.3            | 0.3        | 5%                   |
| <b>Subtotal (A)</b>                             | <b>78.5</b>      | <b>32.2</b>    | <b>110.6</b> | <b>5.1</b>       | <b>2.1</b>     | <b>7.2</b> | <b>100%</b>          |
| <b>Total Base Costs (A+B)</b>                   | <b>78.5</b>      | <b>32.2</b>    | <b>110.6</b> | <b>5.1</b>       | <b>2.1</b>     | <b>7.2</b> | <b>100%</b>          |
| <b>C. Contingencies</b>                         |                  |                |              |                  |                |            |                      |
| 1. Physical <sup>c</sup>                        | 7.8              | 3.2            | 11.1         | 0.5              | 0.2            | 0.7        | 10%                  |
| 2. Price <sup>d</sup>                           | 3.0              | 1.2            | 4.2          | 0.2              | 0.1            | 0.3        | 4%                   |
| <b>Subtotal (C)</b>                             | <b>10.8</b>      | <b>4.4</b>     | <b>15.3</b>  | <b>0.7</b>       | <b>0.3</b>     | <b>1.0</b> | <b>14%</b>           |
| <b>D. Interest During Implementation</b>        |                  |                |              |                  |                |            |                      |
| 1. Interest during Construction                 | 0.0              | 0.0            | 0.0          | 0.0              | 0.0            | 0.0        | 0%                   |
| 2. Commitment Charges                           | 0.0              | 0.0            | 0.0          | 0.0              | 0.0            | 0.0        | 0%                   |
| <b>Subtotal (D)</b>                             | <b>0.0</b>       | <b>0.0</b>     | <b>0.0</b>   | <b>0.0</b>       | <b>0.0</b>     | <b>0.0</b> | <b>0%</b>            |
| <b>Total Project Cost (A+B+C+D)</b>             | <b>89.3</b>      | <b>36.6</b>    | <b>125.9</b> | <b>5.8</b>       | <b>2.4</b>     | <b>8.2</b> | <b>114%</b>          |

<sup>a</sup> Civil works include installation costs

<sup>b</sup> Equipment procurement on the basis of CIP cost (carriage and insurance paid)

<sup>c</sup> Physical contingencies are computed at 10% of base cost

<sup>d</sup> Price Contingencies are computed by expenditure based on annual domestic and foreign inflation

| Detailed Cost Estimates by Year             |            | US \$ millions |            |            |            |            |            |            |
|---|------------|----------------|------------|------------|------------|------------|------------|------------|
| Item  | Total Cost | 2016           | 2017       | 2018       | 2019       | 2020       | 2021       | 2022       |
| <b>A. Investment Costs <sup>a</sup></b>     |            |                |            |            |            |            |            |            |
| 1. Civil Works                              | 6.8        | 0.0            | 1.7        | 3.4        | 1.7        | 0.0        | 0.0        | 0.0        |
| 2. Equipment                                | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| 3. Land Acquisition                         | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| 4. Consulting, Training & Capacity Building | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| 5. Project Management                       | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| 6. Taxes and Duties                         | 0.3        | 0.0            | 0.1        | 0.2        | 0.1        | 0.0        | 0.0        | 0.0        |
| <b>Subtotal (A)</b>                         | <b>7.2</b> | <b>0.0</b>     | <b>1.8</b> | <b>3.6</b> | <b>1.8</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |
| <b>B. Recurrent Costs</b>                   |            |                |            |            |            |            |            |            |
| 1. Operations & Maintenance                 | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| <b>Total Base Costs (A+B)</b>               | <b>7.2</b> | <b>0.0</b>     | <b>1.8</b> | <b>3.6</b> | <b>1.8</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |
| <b>C. Contingencies</b>                     |            |                |            |            |            |            |            |            |
| 1. Physical <sup>b</sup>                    | 0.7        | 0.0            | 0.2        | 0.4        | 0.2        | 0.0        | 0.0        | 0.0        |
| 2. Price <sup>c</sup>                       | 0.3        | 0.0            | 0.0        | 0.1        | 0.1        | 0.0        | 0.0        | 0.0        |
| <b>Subtotal (B)</b>                         | <b>1.0</b> | <b>0.0</b>     | <b>0.2</b> | <b>0.5</b> | <b>0.3</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |
| <b>D. Interest During Implementation</b>    |            |                |            |            |            |            |            |            |
| 1. Interest during Construction             | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| 2. Commitment Charges                       | 0.0        | 0.0            | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        | 0.0        |
| <b>Subtotal (D)</b>                         | <b>0.0</b> | <b>0.0</b>     | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |
| <b>Total Project Cost (A+B+C+D)</b>         | <b>8.2</b> | <b>0.0</b>     | <b>2.0</b> | <b>4.1</b> | <b>2.1</b> | <b>0.0</b> | <b>0.0</b> | <b>0.0</b> |
|   |            | 0.00%          | 24.56%     | 50.00%     | 25.43%     | 0.00%      | 0.00%      | 0.00%      |

<sup>a</sup> In Mid 2015 prices

<sup>b</sup> Physical contingencies are computed at 10% of base cost

<sup>c</sup> Price Contingencies are computed by expenditure based on annual domestic and foreign inflation

| Detailed Cost Estimates by Financier<br>Item | US \$ millions   |                       |            |            |                       |            |
|--|------------------|-----------------------|------------|------------|-----------------------|------------|
|  | ADB<br>ADF Grant | % of Cost<br>Category | GoM        |            | % of Cost<br>Category | Total Cost |
|  |                  |                       | Tax & Duty | Total      |                       |            |
| <b>A. Investment Costs</b>                   |                  |                       |            |            |                       |            |
| 1. Civil Works <sup>a</sup>                  | 6.8              | 100%                  |            | 0.0        | 0%                    | 6.8        |
| 2. Equipment <sup>b</sup>                    | 0.0              | 100%                  |            | 0.0        | 0%                    | 0.0        |
| 3. Land Acquisition                          | 0.0              |                       |            | 0.0        |                       | 0.0        |
| 4. Consulting, Training & Capacity Building  | 0.0              |                       |            | 0.0        |                       | 0.0        |
| 5. Project Management                        | 0.0              |                       |            | 0.0        |                       | 0.0        |
| 6. Taxes and Duties                          | 0.0              | 0%                    | 0.3        | 0.3        | 100%                  | 0.3        |
| <b>Subtotal (A)</b>                          | 6.9              | 95%                   | 0.3        | 0.3        | 9%                    | 7.2        |
| <b>Total Base Costs (A)</b>                  | 6.9              | 95%                   | 0.3        | 0.3        | 9%                    | 7.2        |
| <b>Total Base Costs (A+B)</b>                | 6.9              | 95%                   | 0.3        | 0.3        | 9%                    | 7.2        |
| <b>C. Contingencies</b>                      |                  |                       |            |            |                       |            |
| 1. Physical <sup>a</sup>                     | 0.7              | 95%                   | 0.0        | 0.0        | 5%                    | 0.7        |
| 2. Price <sup>b</sup>                        | 0.3              | 95%                   | 0.0        | 0.0        | 5%                    | 0.3        |
| <b>Subtotal (C)</b>                          | 0.9              | 95%                   | 0.0        | 0.0        | 5%                    | 1.0        |
| <b>D. Interest During Implementation</b>     |                  |                       |            |            |                       |            |
| 1. Interest during Construction              |                  |                       |            |            |                       |            |
| 2. Commitment Charges                        |                  |                       |            |            |                       |            |
| <b>Subtotal (D)</b>                          | 0.0              |                       | 0.0        | 0.0        | 0%                    | 0.0        |
| <b>Total Project Cost (A+B+C+D)</b>          | <b>7.8</b>       | <b>95%</b>            | <b>0.3</b> | <b>0.4</b> | <b>5%</b>             | <b>8.2</b> |

<sup>a</sup> Physical contingencies are computed at 10% of base cost

<sup>b</sup> Price Contingencies are computed by expenditure based on annual domestic and foreign inflation

**APPENDIX C1: FMAQ-MoFT**

| Topic  | Response   | Remarks   |
|--|--|---|
| <b>1. Implementing Agency</b>  |  |   |
| 1.1 What is the entity's legal status / registration?  | Government Ministry  |   |
| 1.2 Has the entity implemented an externally-financed project in the past (if so, please provide details)?   | Yes. Currently EA for ADB funded SME project under the Ministry of Economic Development and ADB funded Outer Islands Energy Project under the Ministry of Environment and Energy     | Many more projects funded by different donors. The debt management unit has expertise on ADB requirements.  |
| 1.3 What are the statutory reporting requirements for the entity?  | Monthly and annual reporting in the form of budget and actual comparison on a monthly basis. In addition annual income and expenditure statement and statement of financial position | Last available audited annual financials for FY2012.  |
| 1.4 Is the governing body for the project independent?   | A government ministry  |   |
| 1.5 Is the organizational structure appropriate for the needs of the project?  | Yes.   |   |
| <b>2. Funds Flow Arrangements</b>  |  |   |
| 2.1 Describe (proposed) project funds flow arrangements, including a chart and explanation of the flow of funds from ADB, government and other financiers. | MoFT will open an imprest account and the PMU/MHI will manage including all documentation  | There is a Debt Management Division (DMD) at MoFT which has experience with ADB procedures with ongoing projects for small and medium industry sector and energy sector |
| 2.2 Are the (proposed) arrangements to transfer the proceeds of the loan (from the government / Finance Ministry) to the entity satisfactory?              | Yes. There is a precedent  |   |
| 2.3 What have been the major problems in the past in receipt of funds by the entity?   | No   | Anecdotal evidence that delays have been experienced by contractors in claiming government share of expenditure   |
| 2.4 In which bank will the Imprest Account be opened?  | N/A  |   |

| Topic  | Response   | Remarks   |
|--|--|---|
| 2.5 Does the (proposed) project implementing unit (PIU) have experience in the management of disbursements from ADB?   | Yes  |   |
| 2.7 Does the entity have/need a capacity to manage foreign exchange risks?   | Not relevant   |   |
| 2.8 How are the counterpart funds accessed?  | Through government budget  |   |
| 2.9 How are payments made from the counterpart funds?  | Through government budget procedures   |   |
| 2.10 If part of the project is implemented by communities or NGOs, does the PIU have the necessary reporting and monitoring features built into its systems to track the use of project proceeds by such agencies?             | No   |   |
| 2.11 Are the beneficiaries required to contribute to project costs? If beneficiaries have an option to contribute in kind (in the form of labor), are proper guidelines formulated to record and value the labor contribution? | No   |   |
| <b>3. Staffing</b>   |  |   |
| 3.1 What is the (proposed) organizational structure of the accounting department? Attach an organization chart.  | MoFT own accounts is done by the finance and accounts section under the Corporate Affairs Division. TPAD is responsible for the consolidated public sector accounting. is has 43 staff headed by a Financial Controller. |   |
| 3.2 Identify the (proposed) accounts staff, including job title, responsibilities, educational background and professional experience. Attach job descriptions and CVs of key accounting staff.                                | Yes  |   |
| 3.3 Is the project finance and accounting function staffed adequately?   | Yes  |   |
| 3.4 Is the finance and accounts staff adequately qualified and experienced?  | Most staff have a few years experience and are not professionally qualified accountants  | There is a severe shortage of professional accountants in the country and the public sector is not attractive for the few available |
| 3.5 Is the project accounts and finance staff trained in ADB procedures?   | Yes  |   |
| 3.6 What is the duration of the contract with the finance and accounts staff?  | Full time staff  |   |

| Topic  | Response   | Remarks  |
|--|--|--|
| 3.7 Indicate key positions not contracted yet, and the estimated date of appointment.  | Yes  |  |
| 3.10 Does the project have written position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff?   | Not relevant for EA  |  |
| 3.11 At what frequency are personnel transferred?  | N/A  |  |
| 3.12 What is training policy for the finance and accounting staff?   | Mainly on the job training   |  |
| <b>4. Accounting Policies and Procedures</b>   |  |  |
| 4.1 Does the entity have an accounting system that allows for the proper recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds? Will the project use the entity accounting system? | Yes, see section under Accounting System below   |  |
| 4.2 Are controls in place concerning the preparation and approval of transactions, ensuring that all transactions are correctly made and adequately explained?   | Yes. SAP ensures segregation between those processing transactions and those approving them. Separate sections for major expenditure items such as payroll and procurement | Since funds not managed less controls needed. All payments authorized by Finance Director and for PSIP the Director of the Infrastructure division. Payments for materials management made against a Payment Voucher based on a Purchase Order |
| 4.3 Is the chart of accounts adequate to properly account for and report on project activities and disbursement categories?  | CoA in current accounting system cannot be used. Another one will have to be used  | Project accounting is on a commercial full accrual basis. Public accounting is on partial accrual basis  |
| 4.4 Are cost allocations to the various funding sources made accurately and in accordance with established agreements?   | Yes  |  |
| 4.5 Are the General Ledger and subsidiary ledgers reconciled and in balance?   | Yes.   |  |
| 4.6 Are all accounting and supporting documents retained on a permanent basis in a defined system that allows authorized users easy access?  | Yes - documents maintained for 5 years   |  |

| Topic  | Response  | Remarks |
|--|---|---------|
| <i>Segregation of Duties</i>   |   |         |
| 4.7 Are the following functional responsibilities performed by different units or persons: (i) authorization to execute a transaction; (ii) recording of the transaction; and (iii) custody of assets involved in the transaction? | Authorization and preparation of vouchers by separate staff. Entering into accounting system and approving entries by separate staff. Fixed Asset Register maintained, assets coded and physically verified.                                  |         |
| 4.8 Are the functions of ordering, receiving, accounting for, and paying for goods and services appropriately segregated?  | Separate Procurement division in charge of ordering. Receiving department confirms receipt. These documents uploaded on to accounting system and cross checked before approved for payment  |         |
| 4.9 Are bank reconciliations prepared by someone other than those who make or approve payments?  | Yes   |         |
| <b>Budgeting System</b>  |   |         |
| 4.10 Do budgets include physical and financial targets?  | National budget   |         |
| 4.11 Are budgets prepared for all significant activities in sufficient detail to provide a meaningful tool with which to monitor subsequent performance?   | Recurrent budget and the PSIP   |         |
| 4.12 Are actual expenditures compared to the budget with reasonable frequency, and explanations required for significant variations from the budget?   | Yes at monthly and annual intervals   |         |
| 4.13 Are approvals for variations from the budget required in advance or after the fact?   | Generally in advance  |         |
| 4.14 Who is responsible for preparation and approval of budgets?   | Budget Circular issued by MoFT in July each year. Budgets of individual units consolidated by MoFT during August-November. Cleared by Budget Committee and President's Office before submitting to People's Majilis for approval in December. |         |

| Topic   | Response  | Remarks   |
|---|---|---|
| 4.15 Are procedures in place to plan project activities, collect information from the units in charge of the different components, and prepare the budgets?   | Yes   |   |
| 4.16 Are the project plans and budgets of project activities realistic, based on valid assumptions, and developed by knowledgeable individuals?   | Yes   |   |
| <b>Payments</b>   |   |   |
| 4.17 Do invoice-processing procedures provide for: (i) Copies of purchase orders and receiving reports to be obtained directly from issuing departments? (ii) Comparison of invoice quantities, prices and terms, with those indicated on the purchase order and with records of goods actually received? (iii) Comparison of invoice quantities with those indicated on the receiving reports? (iv) Checking the accuracy of calculations? | All supporting documents for payments included with voucher for approval and subsequent entry into system       |   |
| 4.18 Are all invoices stamped PAID, dated, reviewed and approved, and clearly marked for account code assignment?   | Yes   |   |
| 4.19 Do controls exist for the preparation of the payroll and are changes to the payroll properly authorized?   | Separate HR division. Individual master files maintained at Payroll for base salary, allowances and deductions. | Base salaries and increments approved by MoFT   |
| <b>Policies And Procedures</b>  |   |   |
| 4.20 What is the basis of accounting (e.g., cash, accrual)?   | Modified cash accounting  | Part accrual no depreciation  |
| 4.21 What accounting standards are followed?  | Similar to IPSAS cash accounting standards  |   |
| 4.22 Does the project have an adequate policies and procedures manual to guide activities and ensure staff accountability?  | N/A. To be prepared   |   |
| 4.23 Is the accounting policy and procedure manual updated for the project activities?  | There is an accounting and procedures manual.   | There is quite a lot of centralization as well since creation of asset codes, employee codes all with MoFT. |
| 4.24 Do procedures exist to ensure that only authorized persons can alter or establish a new accounting principle, policy or procedure to be used by the entity?  | Yes, in accordance with the above manual  |   |



| Topic  | Response  | Remarks  |
|--|---|--|
| 4.25 Are there written policies and procedures covering all routine financial management and related administrative activities?  | Yes   |  |
| 4.26 Do policies and procedures clearly define conflict of interest and related party transactions (real and apparent) and provide safeguards to protect the organization from them? | Yes   |  |
| 4.27 Are manuals distributed to appropriate personnel?   | Yes   |  |
| <b><i>Cash and Bank</i></b>  |   |  |
| 4.28 Indicate names and positions of authorized signatories in the bank accounts.  | All bank accounts centralized with MoFT                                     |  |
| 4.29 Does the organization maintain an adequate, up-to-date cashbook, recording receipts and payments?   | N/A   |  |
| 4.30 Do controls exist for the collection, timely deposit and recording of receipts at each collection location?   | All collections deposited with the Public Account of MoFT on a daily basis. |  |
| 4.31 Are bank and cash reconciled on a monthly basis?  | Under TSA only the public bank account at MMA is maintained and reconciled  |  |
| 4.32 Are all unusual items on the bank reconciliation reviewed and approved by a responsible official?   | Yes   | . This is part of the internal audit program as well |
| 4.33 Are all receipts deposited on a timely basis?   | Yes, cash collections deposited daily                                       |  |
| <b><i>Safeguard over Assets</i></b>  |   |  |
| 4.34 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?   | Yes   |  |
| 4.35 Are subsidiary records of fixed assets and stocks kept up to date and reconciled with control accounts?   | Yes   | FAR maintained off – system and reconciled with SAP  |
| 4.36 Are there periodic physical inventories of fixed assets and stocks?   | Yes   |  |
| 4.37 Are assets sufficiently covered by insurance policies?  | No  |  |
| <b><i>Other Offices and Implementing Entities</i></b>  |   |  |
| 4.38 Are there any other regional offices or executing entities participating in implementation?   | No  |  |

| Topic   | Response  | Remarks                   |
|---|---|---------------------------|
| 4.39 Has the project established controls and procedures for flow of funds, financial information, accountability, and audits in relation to the other offices or entities? | Not applicable  |                           |
| 4.40 Does information among the different offices/implementing agencies flow in an accurate and timely fashion?   | Not applicable  |                           |
| 4.41 Are periodic reconciliations performed among the different offices/implementing agencies?  | Not applicable  |                           |
| <i>Other</i>  |   |                           |
| 4.42 Has the project advised employees, beneficiaries and other recipients to whom to report if they suspect fraud, waste or misuse of project resources or property?       | No  |                           |
| <b>5. Internal Audit</b>  |   |                           |
| 5.1 Is there an internal audit department in the entity?  | MoFT hosts the internal audit function for the entire public sector   |                           |
| 5.2 What are the qualifications and experience of audit department staff?   | The Director Internal audit is qualified and experienced. Several of its staff have training in India and have the Certified Internal Auditor certificate |                           |
| 5.3 To whom does the internal auditor report?   | Minister through the Permanent Secretary  |                           |
| 5.4 Will the internal audit department include the project in its work program?   | Yes   |                           |
| 5.5 Are actions taken on the internal audit findings?   | Yes   |                           |
| <b>6. External Audit</b>  |   |                           |
| 6.1 Is the entity financial statement audited regularly by an independent auditor? Who is the auditor?  | Yes, by the Auditor General. Last Audit report issued for FY2012  | This is not satisfactory, |
| 6.2 Are there any delays in audit of the entity? When are the audit reports issued?   | Yes.  |                           |
| 6.3 Is the audit of the entity conducted according to the International Standards on Auditing?  | Yes   |                           |
| 6.4 Were there any major accountability issues brought out in the audit report of the past three years?   | No  |                           |

| Topic   | Response  | Remarks  |
|---|---|--|
| 6.5 Will the entity auditor audit the project accounts or will another auditor be appointed to audit the project financial statements?  | Generally project accounts will be audited by private auditors acceptable to AGO and ADB                                  | Current ADB projects for energy and SME sectors have required that private auditors acceptable to GoM perform the audit. These are usually representatives of international accounting firms in the Maldives |
| 6.6 Are there any recommendations made by the auditors in prior audit reports or management letters that have not yet been implemented?   | No major issues reported in FY 2012 accounts.   |  |
| 6.7 Is the project subject to any kind of audit from an independent governmental entity (e.g., the supreme audit institution) in addition to the external audit?  | The Auditor General   |  |
| 6.8 Has the project prepared acceptable terms of reference for an annual project audit?   | Will be   |  |
| <b>7. Reporting and Monitoring</b>  |   |  |
| 7.1 Are financial statements prepared for the entity? In accordance with which accounting standards?  | Modified cash accounting. Similar to IPSAS cash accounting standards  |  |
| 7.2 Are financial statements prepared for the implementing unit?  | Yes   |  |
| 7.3 What is the frequency of preparation of financial statements? Are the reports prepared in a timely fashion so as to be useful to management for decision making?  | Monthly comparison between budget and actual, annual income and expenditure statement and statement of financial position |  |
| 7.4 Does the reporting system need to be adapted to report on the project components?   | Yes   |  |
| 7.5 Does the reporting system have the capacity to link the financial information with the project's physical progress? If separate systems are used to gather and compile physical data, what controls are in place to reduce the risk that the physical data may not synchronize with the financial data? | No  |  |
| 7.6 Does the project have established financial management reporting responsibilities that specify what reports are to be prepared, what they are to contain, and how they are to be used?  | To be prepared  |  |
| 7.7 Are financial management reports used by management?  | Yes, by government and by development partners  |  |

| Topic  | Response  | Remarks  |
|--|---|--|
| 7.8 Do the financial reports compare actual expenditures with budgeted and programmed allocations?                                       | Yes   |  |
| 7.9 Are financial reports prepared directly by the automated accounting system or are they prepared by spreadsheets or some other means? | Yes   |  |
| <b>8. Information Systems</b>  |   |  |
| 8.1 Is the financial management system computerized?   | SAP integrated system rolled out to all government departments. | .  |
| 8.2 Can the system produce the necessary project financial reports?  | Yes   | It may be difficult to integrate and a separate system may be needed |
| 8.3 Is the staff adequately trained to maintain the system?  | Yes   |  |
| 8.4 Does the management organization and processing system safeguard the confidentiality, integrity and availability of the data?        | Password protected, authority limits in place                   | .  |

**APPENDIX C2: FMAQ-MHI**

| Topic  | Response   | Remarks   |
|--|--|---|
| <b>1. Implementing Agency</b>  |  |   |
| 1.1 What is the entity's legal status / registration?  | Government Ministry total staff of 800, the largest of the 14 ministries in the Maldives   |   |
| 1.2 Has the entity implemented an externally-financed project in the past (if so, please provide details)?   | Currently financing IDB project for 10 Harbors, project cost USD20 million. This is Phase II. Phase I for 7 harbors was completed. Also experienced with Kuwait Fund, Danida, JBIC and UNDP. | Most of the other donor projects are dated, over 10 years, and institutional memory may not be available. Also many ADB projects over 20 years ago. The most recent ADB project loan, Domestic Maritime Transport, was handled by Ministry of Transport which was the IA. |
| 1.3 What are the statutory reporting requirements for the entity?  | Monthly and annual reporting to MoFT in the form of budget and actual comparison on a monthly basis. In addition annual income and expenditure statement and statement of financial position | Last available annual financials for FY2012. Certain adjustments to FY2013 and FY2014 have not yet been approved by MoFT.   |
| 1.4 Is the governing body for the project independent?   | A government department  |   |
| 1.5 Is the organizational structure appropriate for the needs of the project?  | Already has structure with PMUs which can be replicated  |   |
| <b>2. Funds Flow Arrangements</b>  |  |   |
| 2.1 Describe (proposed) project funds flow arrangements, including a chart and explanation of the flow of funds from ADB, government and other financiers. | MHI does not handle funds. MoFT will open an imprest account and the PMU/MHI will manage including all documentation   | There is a Debt Management Division (DMD) at MoFT which has experience with ADB procedures with ongoing projects for small and medium industry sector and energy sector   |
| 2.2 Are the (proposed) arrangements to transfer the proceeds of the loan (from the government / Finance Ministry) to the entity satisfactory?              | Yes. There is a precedent  |   |

| Topic  | Response  | Remarks   |
|--|---|---|
| 2.3 What have been the major problems in the past in receipt of funds by the entity?   | No  | Anecdotal evidence that delays have been experienced by contractors in claiming government share of expenditure   |
| 2.4 In which bank will the Imprest Account be opened?  | N/A   |   |
| 2.5 Does the (proposed) project implementing unit (PIU) have experience in the management of disbursements from ADB?   | Not recent ADB experience but IDB current experience  |   |
| 2.7 Does the entity have/need a capacity to manage foreign exchange risks?   | Not relevant  |   |
| 2.8 How are the counterpart funds accessed?  | Through government budget   |   |
| 2.9 How are payments made from the counterpart funds?  | Through government budget procedures  |   |
| 2.10 If part of the project is implemented by communities or NGOs, does the PIU have the necessary reporting and monitoring features built into its systems to track the use of project proceeds by such agencies?             | No  |   |
| 2.11 Are the beneficiaries required to contribute to project costs? If beneficiaries have an option to contribute in kind (in the form of labor), are proper guidelines formulated to record and value the labor contribution? | No  |   |
| <b>3. Staffing</b>   |   |   |
| 3.1 What is the (proposed) organizational structure of the accounting department? Attach an organization chart.  | MHI accounting department has nine staff headed by Director Finance. Two main divisions for revenue and payments. Payments further divided into accounts payable (for contractors etc.) and material management for non project expenditure | There is an accounting officer in charge of the Imprest Account and reporting requirements of the IDB project. This can be replicated for the proposed project. |
| 3.2 Identify the (proposed) accounts staff, including job title, responsibilities, educational background and professional experience. Attach job descriptions and CVs of key accounting staff.                                | IDB project has one project accountant on a part time basis a similar arrangement can be made   |   |
| 3.3 Is the project finance and accounting function staffed adequately?   | Will be   |   |
| 3.4 Is the finance and accounts staff adequately qualified and experienced?  | The senior staff have degree/diploma in accountancy   | No professionally qualified accountants such as CA, CPA   |

| Topic  | Response   | Remarks  |
|--|--|--|
| 3.5 Is the project accounts and finance staff trained in ADB procedures?   | Not specifically ADB but have experience in other donor's procedures, i.e., IDB  | There is experience within the country.  |
| 3.6 What is the duration of the contract with the finance and accounts staff?  | Contract staff for the duration of the project   |  |
| 3.7 Indicate key positions not contracted yet, and the estimated date of appointment.  | PMU not recruited yet  |  |
| 3.10 Does the project have written position descriptions that clearly define duties, responsibilities, lines of supervision, and limits of authority for all of the officers, managers, and staff?   | Will have prior to implementation  |  |
| 3.11 At what frequency are personnel transferred?  | N/A  |  |
| 3.12 What is training policy for the finance and accounting staff?   | Mainly on the job training   |  |
| <b>4. Accounting Policies and Procedures</b>   |  |  |
| 4.1 Does the entity have an accounting system that allows for the proper recording of project financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories, and sources of funds? Will the project use the entity accounting system? | Yes, see section under Accounting System below   |  |
| 4.2 Are controls in place concerning the preparation and approval of transactions, ensuring that all transactions are correctly made and adequately explained?   | Yes. Purchase Orders are prepared by the Procurement Section and paid by the Finance Section. Project payments are approved by the infrastructure division and paid by the finance division. | Since funds not managed less controls needed. All payments authorized by Finance Director and for PSIP the Director of the Infrastructure division. Payments for materials management made against a Payment Voucher based on a Purchase Order |
| 4.3 Is the chart of accounts adequate to properly account for and report on project activities and disbursement categories?  | Yes, in accordance with ADB disbursement categories  |  |
| 4.4 Are cost allocations to the various funding sources made accurately and in accordance with established agreements?   | Yes  |  |
| 4.5 Are the General Ledger and subsidiary ledgers reconciled and in balance?   | Yes.   |  |
| 4.6 Are all accounting and supporting documents retained on a permanent basis in a defined system that allows authorized users easy access?  | Yes - documents maintained for 5 years   |  |

| Topic  | Response  | Remarks   |
|--|---|---|
| <i>Segregation of Duties</i>   |   |   |
| 4.7 Are the following functional responsibilities performed by different units or persons: (i) authorization to execute a transaction; (ii) recording of the transaction; and (iii) custody of assets involved in the transaction? | Authorization and preparation of vouchers by separate staff. Entering into accounting system and approving entries by separate staff. Fixed Asset Register maintained, assets coded and physically verified.                                  |   |
| 4.8 Are the functions of ordering, receiving, accounting for, and paying for goods and services appropriately segregated?  | Separate Procurement division in charge of ordering. Receiving department confirms receipt. These documents uploaded on to accounting system and cross checked before approved for payment  |   |
| 4.9 Are bank reconciliations prepared by someone other than those who make or approve payments?  | Bank reconciliations done by MoFT who maintains bank accounts   | Treasury single accounts (TSA) system in operation where all payments centralized at MoFT level |
| <i>Budgeting System</i>  |   |   |
| 4.10 Do budgets include physical and financial targets?  | National budget   |   |
| 4.11 Are budgets prepared for all significant activities in sufficient detail to provide a meaningful tool with which to monitor subsequent performance?   | Recurrent budget and the PSIP   |   |
| 4.12 Are actual expenditures compared to the budget with reasonable frequency, and explanations required for significant variations from the budget?   | Yes at monthly and annual intervals   |   |
| 4.13 Are approvals for variations from the budget required in advance or after the fact?   | Generally in advance  |   |
| 4.14 Who is responsible for preparation and approval of budgets?   | Budget Circular issued by MoFT in July each year. Budgets of individual units consolidated by MoFT during August-November. Cleared by Budget Committee and President's Office before submitting to People's Majilis for approval in December. |   |



| Topic   | Response   | Remarks   |
|---|--|---|
| 4.15 Are procedures in place to plan project activities, collect information from the units in charge of the different components, and prepare the budgets?   | Yes  |   |
| 4.16 Are the project plans and budgets of project activities realistic, based on valid assumptions, and developed by knowledgeable individuals?   | Yes  |   |
| <b>Payments</b>   |  |   |
| 4.17 Do invoice-processing procedures provide for: (i) Copies of purchase orders and receiving reports to be obtained directly from issuing departments? (ii) Comparison of invoice quantities, prices and terms, with those indicated on the purchase order and with records of goods actually received? (iii) Comparison of invoice quantities with those indicated on the receiving reports? (iv) Checking the accuracy of calculations? | All supporting documents for payments included with voucher for approval and subsequent entry into system            |   |
| 4.18 Are all invoices stamped PAID, dated, reviewed and approved, and clearly marked for account code assignment?   | Yes  |   |
| 4.19 Do controls exist for the preparation of the payroll and are changes to the payroll properly authorized?   | Separate payroll division. Individual master files maintained at Payroll for base salary, allowances and deductions. | Base salaries and increments approved by MoFT   |
| <b>Policies And Procedures</b>  |  |   |
| 4.20 What is the basis of accounting (e.g., cash, accrual)?   | Accrual.   | Part accrual no depreciation  |
| 4.21 What accounting standards are followed?  | Modified cash accounting similar to ISAS cash standard   |   |
| 4.22 Does the project have an adequate policies and procedures manual to guide activities and ensure staff accountability?  | N/A. To be prepared  |   |
| 4.23 Is the accounting policy and procedure manual updated for the project activities?  | There is an accounting and procedures manual.  | There is quite a lot of centralization as well since creation of asset codes, employee codes all with MoFT. |
| 4.24 Do procedures exist to ensure that only authorized persons can alter or establish a new accounting principle, policy or procedure to be used by the entity?  | Yes, in accordance with the above manual   |   |
| 4.25 Are there written policies and procedures covering all routine financial management and related administrative activities?   | Yes  |   |

| Topic  | Response  | Remarks |
|--|---|---------|
| 4.26 Do policies and procedures clearly define conflict of interest and related party transactions (real and apparent) and provide safeguards to protect the organization from them? | Yes   |         |
| 4.27 Are manuals distributed to appropriate personnel?   | Yes   |         |
| <b><i>Cash and Bank</i></b>  |   |         |
| 4.28 Indicate names and positions of authorized signatories in the bank accounts.  | All bank accounts centralized with MoFT                                     |         |
| 4.29 Does the organization maintain an adequate, up-to-date cashbook, recording receipts and payments?   | N/A   |         |
| 4.30 Do controls exist for the collection, timely deposit and recording of receipts at each collection location?   | All collections deposited with the Public Account of MoFT on a daily basis. |         |
| 4.31 Are bank and cash reconciled on a monthly basis?  | Public account with MMA reconciled  |         |
| 4.32 Are all unusual items on the bank reconciliation reviewed and approved by a responsible official?   | Yes   |         |
| 4.33 Are all receipts deposited on a timely basis?   | Yes, cash collections deposited daily                                       |         |
| <b><i>Safeguard over Assets</i></b>  |   |         |
| 4.34 Is there a system of adequate safeguards to protect assets from fraud, waste and abuse?   | Yes   |         |
| 4.35 Are subsidiary records of fixed assets and stocks kept up to date and reconciled with control accounts?   | Yes   |         |
| 4.36 Are there periodic physical inventories of fixed assets and stocks?   | Yes   |         |
| 4.37 Are assets sufficiently covered by insurance policies?  | No  |         |
| <b><i>Other Offices and Implementing Entities</i></b>  |   |         |
| 4.38 Are there any other regional offices or executing entities participating in implementation?   | No  |         |
| 4.39 Has the project established controls and procedures for flow of funds, financial information, accountability, and audits in relation to the other offices or entities?          | Not applicable  |         |
| 4.40 Does information among the different offices/implementing agencies flow in an accurate and timely fashion?  | Not applicable  |         |

| Topic   | Response   | Remarks  |
|---|--|--|
| 4.41 Are periodic reconciliations performed among the different offices/implementing agencies?  | Not applicable   |  |
| <i>Other</i>  |  |  |
| 4.42 Has the project advised employees, beneficiaries and other recipients to whom to report if they suspect fraud, waste or misuse of project resources or property? | No   |  |
| <b>5. Internal Audit</b>  |  |  |
| 5.1 Is there an internal audit department in the entity?  | Yes  |  |
| 5.2 What are the qualifications and experience of audit department staff?   |  |  |
| 5.3 To whom does the internal auditor report?   |  |  |
| 5.4 Will the internal audit department include the project in its work program?   |  |  |
| 5.5 Are actions taken on the internal audit findings?   |  |  |
| <b>6. External Audit</b>  |  |  |
| 6.1 Is the entity financial statement audited regularly by an independent auditor? Who is the auditor?  | Yes, by the Auditor General. Last Audit report issued for FY2011 | Although audit has been conducted for subsequent years no audit report has been issued as yet  |
| 6.2 Are there any delays in audit of the entity? When are the audit reports issued?   | 2013 audit completed, but last report issued for 2011            |  |
| 6.3 Is the audit of the entity conducted according to the International Standards on Auditing?  | Yes, international standards for public sector auditing          |  |
| 6.4 Were there any major accountability issues brought out in the audit report of the past three years?   | No   | Audit for FY 2011 has highlighted issues of incomplete FAR, non collection of revenues, switching funds between budget heads   |
| 6.5 Will the entity auditor audit the project accounts or will another auditor be appointed to audit the project financial statements?                                | Generally a private sector auditor                               | Current ADB projects for energy and SME sectors have required that private auditors acceptable to GoM perform the audit. These are usually representatives of international accounting firms in the Maldives |
| 6.6 Are there any recommendations made by the auditors in prior audit reports or management letters that have not yet been implemented?                               | No   |  |

| Topic   | Response  | Remarks |
|---|---|---------|
| 6.7 Is the project subject to any kind of audit from an independent governmental entity (e.g., the supreme audit institution) in addition to the external audit?  | The Auditor General   |         |
| 6.8 Has the project prepared acceptable terms of reference for an annual project audit?   | Will be   |         |
| <b>7. Reporting and Monitoring</b>  |   |         |
| 7.1 Are financial statements prepared for the entity? In accordance with which accounting standards?  | Modified cash accounting similar to IPSAS cash accounting standard  |         |
| 7.2 Are financial statements prepared for the implementing unit?  | Yes   |         |
| 7.3 What is the frequency of preparation of financial statements? Are the reports prepared in a timely fashion so as to useful to management for decision making?   | Monthly comparison between budget and actual, annual income and expenditure statement and statement of financial position |         |
| 7.4 Does the reporting system need to be adapted to report on the project components?   | IDB project has separate chart of accounts??  |         |
| 7.5 Does the reporting system have the capacity to link the financial information with the project's physical progress? If separate systems are used to gather and compile physical data, what controls are in place to reduce the risk that the physical data may not synchronize with the financial data? | No  |         |
| 7.6 Does the project have established financial management reporting responsibilities that specify what reports are to be prepared, what they are to contain, and how they are to be used?  | To be prepared  |         |
| 7.7 Are financial management reports used by management?  | Yes, by government and by development partners  |         |
| 7.8 Do the financial reports compare actual expenditures with budgeted and programmed allocations?  | Yes   |         |
| 7.9 Are financial reports prepared directly by the automated accounting system or are they prepared by spreadsheets or some other means?  | Yes   |         |
| <b>8. Information Systems</b>   |   |         |
| 8.1 Is the financial management system computerized?  | SAP integrated system rolled out to all government departments.   |         |

| <b>Topic</b>  | <b>Response</b>                               | <b>Remarks</b>   |
|---|---|--|
| 8.2 Can the system produce the necessary project financial reports?   | Yes   | It may be difficult to integrate and a separate system may be needed |
| 8.3 Is the staff adequately trained to maintain the system?   | Yes   |  |
| 8.4 Does the management organization and processing system safeguard the confidentiality, integrity and availability of the data? | Password protected, authority limits in place |  |

## APPENDIX D – PUBLIC CONSULTATIONS

| Stakeholder                                    | Level of Interest | Key Stakeholder Interests  |
|--|-------------------|--|
| <b>General Public</b>                          |                   |  |
| Community (general)                            | Primary           | Improving the island's connectivity to regional and national markets and promoting local and visiting populations' accessibility to key services such as health, education, businesses, income generation, etc.  |
| Women/<br>Women Development Committees         | Primary           | Improving access and as there a lot of female headed households in islands, improving access means better quality of life with an easy transportation system (specially for women needing specialist treatment during pregnancy and childbirth)  |
| Agriculturalists                               | Primary           | There is a Sunday Market in Kulhudhuffushi to sell locally grown vegetables and fruits by local farmers from nearby islands and having a passenger harbor would increase the reliability and would also limit the increase in costs so that products would still be affordable when costs passed on to customers   |
| Local Transport Providers                      | Primary           | At present also Kulhudhuffushi acts as a major passenger and cargo hub in the Northern region of the country. There are regular scheduled boats/ferries both carrying cargo and passengers. An improved accessibility through the passenger harbor project would widen the already existing local sea transport system.  |
| Visitors seeking health services               | Primary           | There is a regional hospital in Kulhudhuffushi, which provides all the specialist facilities of health care including laboratory services and brings in visitors seeking health care services from nearby islands on a daily basis. Need for regular and reliable transport services that would ensure the visitors to return to their island on the same day. |
| Fish Processors                                | Primary           | As above and require sufficient cargo capacity to be able to ship processed goods to Malé and thence overseas. Need regularity so that they are therefore able to accept supplies of fish for processing as and when available from fishermen.   |
| Fishermen                                      | Primary           | As above. Fishermen require adequate harbors for protection of vessels, and depend on the fish processors having access to sufficient cargo capacity to be able to ship processed fish and therefore purchase from fishermen.  |
| Retailers/<br>Small Businesses                 | Primary           | To ensure reliable, adequate and timely supply of retail goods at a rate that enables adequate margin for profitability.   |
| Construction Groups                            | Primary           | To ensure reliable and timely supply of construction materials and ability to travel to meet contract requirements of time and location.   |
| Students from nearby islands seeking education | Primary           | Kulhudhuffushi has campuses of both Maldives National University and Villa College, which brings in students from the Northern region to the island. Need for regular and reliable services to enable home family visits during holidays, or visits  |

|   |           |  |
|---|-----------|--|
|   |           | by family during term time, at an affordable rate and ensuring the ability to return to school/university on time.   |
| Local and Central Government                        |           |  |
| Atoll and Island Councils                           | Primary   | Elected atoll and local councils are responsible for working and lobbying with central government towards the needs of community such as accessing development resources, managing island affairs to maximize social and economic benefit, which is directly affected by transport capacity and reliability. An effective transport system positively impacts on the achievement of this role. |
| Ministry of Housing and Infrastructure              | Primary   | MHI is mandated with physical development planning policy and regulations, land-use planning in islands and improving accessibility infrastructure of inhabited islands.   |
| Ministry of Environment and Energy                  | Primary   | MEE is mandated with overall environmental policy and regulatory framework. All the developmental projects, including harbor development projects are initiated after conducting an Environmental Impact Assessment.   |
| Ministry of Home Affairs/Local Government Authority | Primary   | Local Government Authority is mandated with developing island management plans and overseeing the works of the elected atoll and island councils. Improved accessibility would improve the implementation of island development plans  |
| Ministry of Economic Development                    | Secondary | Responsible for company registration, setting of freight rates for domestic staple items, regulating fair competition freights, regulating shop opening hours  |
| Ministry of Tourism                                 | Secondary | Now responsible for civil aviation which is sometimes integrated with and at times in competition with maritime transport.   |
| Ministry of Defense/Maldives National Defense Force | Secondary | Responsible for policing and patrolling the waters of the economic zone of the nation. They are also responsible for passenger and freight movements and safety within the Port Areas.   |
| Kulhudhuffushi Ports Authority                      | Secondary | Mandated with managing the Regional Ports Facility   |
| Ministry of Education                               | Secondary | Responsible for the overall education policy and increasing educational opportunities for the people of Maldives. Reliable and affordable transportation is a necessary prerequisite for the ministry's commitments to make primary and secondary education accessible to all children.  |
| Ministry of Health                                  | Secondary | Responsible for the management of health services in the country – equitable access to health services is significantly affected by transportation services.   |
| Ministry of Fisheries and Agriculture               | Secondary | Responsible for development of the necessary infrastructure for the growth of the fisheries and agriculture sector   |

APPENDIX E– EIA TOR



**Terms of Reference for Environmental Impact Assessment for Harbour Expansion Works at Kulhudhuffushi, HaaDhaal atoll**

The following is the Terms of Reference (ToR) following the scoping meeting held on 27 December 2015 for undertaking the EIA of the proposed harbour extension works at *Kulhudhuffushi, HaaDhaal*. While every attempt has been made to ensure that this ToR addresses all of the major issues associated with development proposal, they are not necessarily exhaustive. They should not be interpreted as excluding from consideration matters deemed to be significant but not incorporated in them, or matters currently unforeseen, that emerge as important or significant from environmental studies, or otherwise, during the course of preparation of the EIA report.

1. **Introduction and rationale** – Describe the purpose of the project and, if applicable, the background information of the project/activity and the tasks already completed. Objectives of the development activities should be specific and if possible quantified. Define the arrangements required for the environmental assessment including how work carried out under this contract is linked with other activities that are carried out or that are on going within the project boundary. Identify the project financing and institutional arrangements relevant to execution of the project.
2. **Study area** – Submit a minimum A3 size scaled plan with indications of all the proposed infrastructures and components of the project. Specify the boundaries of the study area for the environmental impact assessment highlighting the proposed development location and size. The study area should include adjacent or remote areas, such as relevant developments and nearby environmentally sensitive sites (e.g. coral reef, sea grass, mangroves, marine protected areas, special birds nesting or roosting sites, ecologically and economically sensitive species (nursery and feeding grounds). Relevant developments in the within the project boundary and adjacent areas shall be addressed including residential commercial areas in addition to significant indigenous and cultural areas.
3. **Scope of work**– Identify and quantify tasks of the project including project preparation, construction, operation and decommissioning (if applicable) phases.

**Task 1. Description of the Project** – Provide full description and justification of the relevant parts of the project including dredging, reclamation works, using maps at appropriate scales where necessary. Information on the following activities should be provided where appropriate:

- Location of the harbour basin extension and related structures on an A3 scaled map

Environmental Protection Agency  
 Green Building, 3<sup>rd</sup> Floor, Handhuvaree Hingun  
 Male', Rep. of Maldives, 20392  
 Tel: [+960] 333 5949 [+960] 333 5951  
 Fax: [+960] 333 5953

20392  
 Email: secretariat@epa.gov.mv  
 Website: www.epa.gov.mv







- Island geomorphology (shoreline and vegetation line) including presence of beach rocks and any special characteristics (use maps);
- Bathymetry of the project impact sites including area proposed for dredging, reclamation and other relevant areas where appropriate (use maps);
- Identification of erosion and accretion pattern at the project direct impact and residual impact area.
- Characteristics of seabed and reef sediments

Hydrography/hydrodynamics (use maps)

- General description of tides and currents using site specific data where available,
- Seawater quality at the project site specific to physical parameters: temperature, pH, salinity, turbidity, Total Dissolved Solids, Total Suspended Solids and Dissolved Oxygen, BOD<sub>5</sub>, COD, Faecal and total coliforms

Air quality and Noise levels

- Brief description of ambient air quality and noise level in the project area. A qualitative description maybe provided (instead of quantitative data collection) since the currently are no issues of air pollution or noise. The existing conditions of low population, existence of small scale commercial activities occasionally etc. maybe provided to justify lack of air and noise issues

Ecology

- Description of the marine environment to include characteristics of the seabed including benthic and fish community at the project impact area and vicinity
- Provide a general list of floral and faunal species in the project area and clearly identify species that are classified as “critically endangered” (CR) or “endangered” (EN) under IUCN or under special protection status under the Government of Maldives may be presented separately in a tabular format
- If there are any CR or EN or species under national protection, further background information on the habitat range, seasonal behavior/activities such as migration, breeding etc. needs to be provided and determined whether the project area is “critical habitat” according to the IFC Performance standard 6 guidelines<sup>1</sup> for such species

Socio-economic environment

- Demography: total population, sex ratio, density, growth
- Pressure on land use and marine resources dependency,
- Land use planning, natural resource use and zoning of activities at sea;
- Accessibility such as land and marine transport system at the island,
- Infrastructure facilities such as health, education, water supply, sewerage, electricity statu<sup>s</sup>

<sup>1</sup>[http://www.ifc.org/wps/wcm/connect/bff0a28049a790d6b835faa8c5a8312a/PS6\\_English\\_2012.pdf?MOD=AJPERES](http://www.ifc.org/wps/wcm/connect/bff0a28049a790d6b835faa8c5a8312a/PS6_English_2012.pdf?MOD=AJPERES)

Environmental Protection Agency  
 Green Building, 3<sup>rd</sup> Floor, HandhuvareeHingun  
 Male', Rep. of Maldives, 20392  
 Tel: [+960] 333 5949 [+960] 333 5951  
 Fax: [+960] 333 5953

20392  
 Email: secretariat@epa.gov.mv  
 Website: www.epa.gov.mv



- Boats and other seagoing vessels at the island and pattern of vessels that use existing harbour
- Structure or sites that are of historical, and cultural significance

**Task 3. Legislative and regulatory considerations** – Identify the pertinent legislation, regulations and standards, and environmental policies that are relevant and applicable to the proposed project, and identify the appropriate authority jurisdictions that will specifically apply to the project. The report should clearly identify the different articles and clauses that apply to the said project and should state how the project meets these requirements. Include permits and approvals in the EIA document.

Project approval from the following institutions shall be included:

- Approval from the Housing and Infrastructure;

**Task 4. Potential impacts (environmental and socio-cultural) of proposed project:** The EIA report should identify all the impacts, direct and indirect, during construction and operation stages, and evaluate the magnitude and significance of each. Recommendations for further updates and revisions of impacts analysis during the detailed design stage maybe provided if necessary. Particular attention shall be given to impacts associated with the following:

Impacts on the natural environment

- Impacts of project location on people and natural resources
- Changes in current flow velocities/directions, that may result in changes in erosion/sedimentation patterns, which may impact shore zone configuration/coastal morphology due to construction of the harbor;
- Loss of marine habitat, and related ecosystem impacts and impacts on any IUCN CR or EN or national protected species
- Sedimentation impacts to direct impact area and nearby marine habitats,
- Impacts of noise, vibration and disturbance during the construction and long term impacts during operation of the harbor;

Impacts on the socio-economic environment

- Benefits and impacts of the project on marine based and other relevant economic activities;
- Impacts on employment and income, potential for local people to have (temporary) job opportunities (and what kind) in the execution of the proposed project works;
- Level of coastal protection from the project design and implementation against hazards such as sea level rise, storm surges, etc.
- Social destabilization of the island community

Environmental Protection Agency  
 Green Building, 3<sup>rd</sup> Floor, HandhuvanāzHingun  
 Male', Rep. of Maldives, 20392  
 Tel: (+960) 333 5949 (+960) 333 5951  
 Fax: (+960) 333 5953

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 ފޯން: 333 5949 333 5951  
 ފެކްސް: 333 5953  
 Email: secretariat@epa.gov.mv  
 Website: www.epa.gov.mv



**Construction related hazards and risks**

- Pollution of the natural environment (e.g. spills, pollution from construction related waste) during construction and operation;
- Risk of accidents and pollution on workers and local community during construction and operation,
- General occupation health and safety related risks within construction camps and
- Impacts on social and economic values, norms and belief due project outputs and health related issues such as STD, HIV, AIDS etc. during construction.

**Cumulative and induced impacts** – Cumulative impacts of the project in addition to recent, ongoing and planned development projects in the project area must be identified and measures recommended to mitigate and minimize the impacts. Induced environmental impacts that may occur in future as a result of the project must be identified and recommendations provided to mitigate and minimize the impacts.

The methods used to identify the significance of the impacts shall be outlined. One or more of the following methods must be utilized in determining impacts; checklists, matrices, overlays, networks, expert systems and professional judgment. Justification must be provided to the selected methodologies. The report should outline the uncertainties in impact prediction and also outline all positive and negative/short and long-term impacts. Identify impacts that are cumulative and unavoidable.

**Task 5. Alternatives to proposed project** – Describe alternatives including the “no action option” should be presented. Determine the best practical environmental options. Alternatives examined for the proposed project that would achieve the same objective including the “no action alternative”. This should include alternative location, technologies, materials, designs, timing, etc. environmental, social and economic factors should be taken into consideration. The report should highlight how the location was determined. All alternatives must be compared with locally accepted standards of similar nature. The comparison should yield the preferred alternative for implementation. Mitigation options should be specified for each component of the proposed project.

**Task 6. Climate Change Assessment** – Climate change related risks for the sustainability of the project must be identified in reference to past climate related events as well as future projected climate scenarios in the country. In relation to the extent of risks identified appropriate mitigation measures must be incorporated in project design. If no risks were identified during the project design life, clear justification needs to be provided. If any risks were identified, the measures taken in project design including cost estimates for the additional measures, if any, need to be clearly presented. Overall, the project must clearly demonstrate that proper due diligence done on climate risks have been carried out.

Environmental Protection Agency  
 Green Building, 3<sup>rd</sup> Floor, HandhuvareeHingun  
 Male', Rep. of Maldives, 20392  
 Tel: [+960] 333 5949 [+960] 333 5951  
 Fax: [+960] 333 5953

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 ފޯމުގެ ނަންބަރު : 20392  
 Email: secretariat@epa.gov.mv  
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and addressed. Recommendations for steps to be taken during detailed design maybe recommended if necessary.

Quantitative estimates on greenhouse gas emissions must be made in relation to future boat/ferry traffic during project operation. This maybe based on the traffic projections carried out as part of the project economic analysis. A comparison must be made between baseline GHG emissions based on existing boat/ferry traffic and future projected traffic over the project life to understand the additional quantity of GHG that will be generated as a result of the project.

**Task 7. Mitigation and management of negative impacts** – Identify possible measures to prevent or reduce significant negative impacts to acceptable levels. These will include both environmental and socio-economic mitigation measures. Mitigation measures to avoid or compensate habitat destruction, e.g. sediment control structures, coastal protection structures to reduce erosion, coral reconstruction, and temporary jetty and replacement of marine protected or environmentally sensitive areas. If any IUCN CR or EN or national protected species are going to be impacted, mitigation measures must be provided to avoid, mitigate or compensate for the impacts to ensure there will be no “net loss” of biodiversity. Measures for both construction and operation phase shall be identified including cost the mitigation measures, equipment and resources required to implement those measures. The confirmation of commitment of the Developer to implement the proposed mitigation measures shall also be included. An Environmental Management Plan (EMP) in matrix format will be prepared summarizing the impacts, mitigation measures, location, monitoring method and indicators, costs and responsible parties for implementing and monitoring the mitigation measures. This EMP will be updated during the detailed design and attached to the bidding documents during recruitment of the civil works contractor.

**Task 8. Environmental Monitoring Plan**– Identify issues requiring monitoring to ensure compliance to mitigation measures and present impact management and monitoring plan for all relevant components of the project. Details of the monitoring program during construction and operation stages including the physical and biological parameters for monitoring, cost commitment from the developer to carryout monitoring in the form of a commitment letter, detailed reporting scheduling, costs and methods of undertaking the monitoring program including monitoring indicators and targets, must be provided.

**Task 9. Stakeholder consultation**– Identify appropriate mechanisms for providing information on the agricultural project to relevant stakeholders, government authorities. In this respect consultation shall be undertaken with the following stakeholders and any other relevant stakeholders identified during the preparation of the EIA report:

- Council kulhudhufushi
- Relevant stakeholders of Kulhudhufushi
- Ministry of Housing and Infrastructure

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| Tel: [+960] 333 5949 [+960] 333 5951 ފޯން: 333 5949 333 5951 | އިމެއިލް: secretariat@epa.gov.mv ފޯން: 333 5949 333 5951            |
| Fax: [+960] 333 5953 ފެކްސް: 333 5953                        | ވެބްސައިޓް: www.epa.gov.mv ވެބްސައިޓް: www.epa.gov.mv               |



Consultations must be carried out during project preparation with local people in the project area and local or international environmental NGOs existing in the country. Consultations must be targeted at informing the stakeholders on the project, listening to their views and addressing any concerns they may have if relevant for the project. The EIA report should include a list of people/groups consulted, clearly showing the numbers of men and women consulted, their contact details and summary of the major outcomes. Photos of the consultations may be provided as appendixes.

**Task 10. Institutional arrangements and Grievance Redress Mechanism**—Describe the project organizational set up for implementing the project clearly showing positions/people that will be responsible for environment safeguards. Provide a flow chart with description of key responsibilities with respect to environment safeguards for each agency. This must include the Executing Agency, Project Management Consultants, Contractor, Local Council, EPA etc.

Propose a mechanism for the project to address grievances or complaints that maybe raised during project implementation by the local community or any other party. Provide a flow chart to clearly demonstrate how the mechanism will work.

**Presentation-** The environmental impact assessment report, to be presented in digital format, will be concise and focus on significant environmental issues. It shall contain the findings, conclusions and recommended actions including specifying measures to be taken during preparation of the detailed design supported by summaries of the data collected and citations of any references used in interpreting those data. The environmental assessment report will be organized according to, but not necessarily limited by, the outline given in the Environmental Impact Assessment Regulations, 2012 and related amendments

**Timeframe for submitting the EIA report** – The developer must submit the completed EIA report within 6 months from the date of this Term of Reference.



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 27 December 2015

Environmental Protection Agency  
 Green Building, 3<sup>rd</sup> Floor, HandhuvareeHingun  
 Male', Rep. of Maldives, 20392

Tel: [+960] 333 5949 [+960] 333 5951  
 Fax: [+960] 333 5953

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 20392  
 Email: [secretariat@epa.gov.mv](mailto:secretariat@epa.gov.mv)  
 Website: [www.epa.gov.mv](http://www.epa.gov.mv)

## APPENDIX F– DRAFT TOR FOR PMC

### DRAFT TERMS OF REFERENCES FOR THE PROJECT MANAGEMENT CONSULTANT

ADB Grant P36111-MLD - Kulhudhuffushi Harbor Expansion Project

#### 1. Background and Objectives

1.1 The Government of Maldives has applied for a grant from the Asian Development Bank (ADB) for the Kulhudhuffushi Harbor Expansion Project (the project) and intends to apply a portion of proceeds to engage a consulting firm (the consultant) to carry out project management, detailed design and construction supervision activities for the project. The main requirement of the consultant is to assist the Ministry of Housing and Infrastructure (MHI) (Employer) by:

- a) providing project management assistance,
- b) carrying out the detailed engineering design;
- c) providing support during procurement phase;
- d) supervising and administering of contracts for works, and
- e) providing project compliance and monitoring support.

1.2 The indicative components of the harbor's works and the related facilities are as follows:

- a) Dredging and reclamation works
- b) Breakwaters, revetments and quay-wall structures including harbor separation walls and finger piers
- c) Pavement
- d) Harbour navigational beacons and quay lighting
- e) Ice Plant
- f) Buildings – Administration/Retail/ Terminal
- g) Market – Fish/ Fruits and Vegetable

1.3 Upon engagement, the selected Consultant will be given access to the PPTA reports and outputs.

#### 2. Scope of Service

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**Component 1: Overall Project Management**


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- Task 01 Provide project management services throughout detailed design, procurement, construction, and commissioning stages and post-defect liability period.
- Task 02 Prepare project schedule and corresponding projected cash flow in conjunction with the Employer and provide ADB a realistic schedule for design, approvals, tendering, construction and commissioning. The consultant is to maintain and update the project schedule throughout the project.
- Task 03 Formulate and maintain a project performance management system in the format acceptable by the Employer and ADB, which consists of (1) preparing in the initial stage a project performance management system, in accordance with the ADB's project design and monitoring framework to monitor (i) the progress of the overall project implementation, and (ii) the development impact of the project; and (2) collecting/updating the project performance indicator benchmarks.
- Task 4 Develop a project management plan in sufficient detail to enable the project to be monitored as per Client's requirements

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**Component 2: Detail Design Engineering and Cost Estimate**


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- Task 04 Review the preliminary design, prepared during the project preparatory stage, validate/improve in accordance with best international standards and recommended practices. This includes carrying out value engineering - evaluating and proposing cost effective alternatives as deemed necessary.
- Task 05 Review the existing surveys, identify and carryout additional detail surveys and undertake full detail design namely:
- Carry out detail design for all improvement works – including preparation of detailed design drawings in sufficient details for accurate determination of quantities and cost and to facilitate construction.
  - Compile existing data and carry out limited hydrographic/ oceanographic surveys as required to enable numerical modeling of the harbor and coastal structures to ensure sufficient safeguards against overtopping, harbor stilling and safe entry. Data collection may be required within the time available in the overall program.
  - Geotechnical site investigation to verify soil conditions for dredging and coastal structures
- Task 06 Prepare estimated quantities and cost of all proposed works and equipment with best possible accuracy.

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**Component 3: Procurement Support**


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- Task 07 Review the indicative contract packages, prepared during the project preparatory stage, and, if warranted, recommend better alternatives to in order to optimize contract administration, construction coordination, and competitive pricing.
- Task 08 Based on the type of bidding procedures and contracts, as advised by the Employer, prepare bidding documents for all works and equipment packages. The bidding documents shall be prepared in accordance with ADB's latest applicable Standard Bidding Documents (SBD) available in the ADB website.
- Task 09 Provide all necessary assistance for the procurement of contracts, including but not limited to, advertising the invitation to bid, bid clarifications, addenda, pre-bid meetings, bid openings, bid evaluation and reports, contract negotiations, and draft contract documents.

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**Component 4: Construction Supervision and Contract Administration**

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- Task 10 Approving contractor's work program, method statements, material sources, safety plan and environmental management plan.
- Task 11 Reviewing and checking working drawings, the setting out of the works, and providing instructions to the contractor.
- Task 12 Reviewing the quality control programs of the contractors.
- Task 13 Inspecting materials and works to ensure compliance with the contract specifications and giving notice to the contractor in the event that such materials and works fail to comply with the specifications.
- Task 14 Accepting or rejecting any part or parts of the completed works.
- Task 15 Making measurements and keeping measurement records.
- Task 16 Maintaining records, correspondence, and diaries.
- Task 17 Certifying work volume and interim certificates for progress payments.
- Task 18 Assisting the Employer's representative with the maintenance of consolidated project accounts, and with preparation of financial statements and withdrawal applications for submission to ADB.
- Task 19 Certifying completion of part or all of the works.
- Task 20 Periodically checking the remaining quantities for completion, and undertaking regular monitoring of each contract through an earned value management framework
- Task 21 Providing assessments to the Employer in relation to Contractor's variation claims, extensions of time claims, and other technical and contractual matters

that may arise.

- Task 22 Negotiating with each contractor and recommending to the Employer the rates for any unscheduled items of work that may arise.
- Task 23 Advising the Employer's representative on all matters relating to the execution of the works; and assisting the representative with processing the contractor's possible claims.
- Task 24 Preparing, at the completion of the contracts, a consolidated project completion report in a format provided by ADB.
- Task 25 Checking and certifying as-built drawings for the works prepared by the contractors.
- Task 26 Inspecting the works at appropriate intervals during the defects liability period and certifying the defects liability certificate for issuance by the Employer's representative.
- Task 27 Providing the Employer with complete records, and inception, monthly, and completion reports.
- Task 28 Assisting the Employer to provide on-site training where required for the Employer's field staff on quality assurance and contract administration.

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**Component 5: Environmental Assessment and Monitoring**

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- Task 28 Review the Environmental Impact Assessment(EIA) report and carry out additional studies and public consultations if recommended or required by the EIA. If there are substantial changes in the project design or discovery of new environmental impacts update the EIA report and disclose it on the ADB website. Review the general engineering design and in discussion with the engineering team identify needs if any for design modification to enhance environment safeguard and/or mitigate climate risks. Update the Environmental Management Plan (EMP) and provide more specific details based on site visits, the revised design and new information acquired, if any. Review the bidding documents and ensure the inclusion of the EMP, related mitigation costs and all necessary provisions for compliance to environment safeguard requirements. The environment management plan will be updated as part of the updated EIA.
- Task 29 Monitor the project's compliance to environment safeguards as given in the EIA report and implementation of the EMP by the contractor and ensure compliance with the environmental safeguard requirements of civil works contracts. Provide necessary training and technical advices including on-site advisory to the contractors as found necessary. Review and confirm that the EMP implementation records are maintained by the contractor. Prepare semi-annual environmental monitoring reports based on these records and on-site spot checks carried out and submit to the Employer.

### 3. Implementation Arrangement

3.1 The consulting services will be implemented by a firm of international consultants. An association or direct engagement of suitable national consultants is highly recommended to compliment consultant's local knowledge and experience. It is anticipated that the following international and local staff will be required:

#### International Staff

| No. | Position                        | Qty | Number of person-month | Total person-month |
|-----|---------------------------------|-----|------------------------|--------------------|
| 1   | Team Leader / Resident Engineer |     | 21                     | 21                 |
| 2   | Harbour/Coastal Engineer        |     | 4                      | 4                  |
| 3   | Procurement Specialist          |     | 1.5                    | 1.5                |

#### National Staff

| No. | Position   | Qty | Number of person-month | Total person-month |
|-----|--|-----|------------------------|--------------------|
| 1   | Deputy Resident Engineer   | 1   | 24                     | 24                 |
| 2   | Environmental Specialist (1.5 month during detailed design and 3 days/month x 18 months during construction if the option to have this on the PMC team*) | 1   | 1.5 or 3.5*            | 1.5 or 3.5*        |
| 3   | Social Development Specialist (if PSA report requires this)  | 1   | 1                      | 1                  |
| 4   | Architect  | 1   | 2.0                    | 2.0                |
| 5   | Civil/ Structural Engineer   | 1   | 2.0                    | 1.5                |
| 6   | MEP Engineer   | 1   | 2.0                    | 2.0                |
| 7   | Quantity Surveyor  | 1   | 1.5                    | 1.5                |

Note:

- (i) The estimated person-months are indicative of actual requirements and will be paid on actual time-basis. To provide a common basis for financial proposals, the Consultants shall propose the staff person-months indicated above.

- (ii) Other support staff (such as CAD operators, administrative support, etc.) necessary to complete the assignment shall be included in the consultant's financial proposal under Out-Of-Pocket expense items.
- (iii) Other expense items (such as communication, report production, local support staff, stationary, in-country transport, including vehicle rental and fuel, and etc.) necessary to complete the assignment shall also be included in the consultant's financial proposal under Out-Of-Pocket expense items. The Consultant will bear at its own expense any of essential out-of-pocket expense items that are not priced in the financial proposal.

3.2 Preferred qualifications of key experts are given below:

(i) Resident Engineer/Team Leader (international). The candidate shall possess a degree in civil engineering or related field, and possess at least 15 years of experience in design, project management, and implementation of maritime projects. Familiarity with contract administration using the FIDIC forms of contract required. Experienced in developing countries, particularly small island countries. Experience in donor-funded projects. Team leader of harbor projects for at least 3 projects is desired. This is a full-time position based on the island of Kulhudhuffushi during the construction phase.

(ii) Harbour/ Coastal Engineer (international). The candidate shall possess a degree in civil engineering or related field, and possess at least 10 years of experience in design (including numerical modelling for harbor projects), project management, and implementation of harbor and coastal works projects. Familiar with climate change impacts on maritime infrastructure. Experience in developing small island countries.

(iii) Procurement Specialist (international). The candidate shall possess a degree in civil engineering or related field. He/she should have at least 10 years of experience in procurement of goods, works and services and contract management. Experience in developing member countries will be desirable. Familiar with ADB's Procurement Guidelines or FIDIC on procurement of works, goods and services.

(iv) Deputy Resident Engineer/Deputy Team Leader (National). The candidate shall possess a degree in civil engineering or equivalent, and possess at least 10 years of experience in design, project management, and implementation of coastal infrastructure development projects. Familiar with contract administration using the FIDIC forms of contract preferred. Experience in working with development agencies will be preferred.

(v) Environment Specialist (national). The candidate shall possess a degree in environmental science or related field, and possess at least 10 years of experience in environmental impact studies. Familiarity with coral island environments is required. Must be registered as an EIA Consultant with Maldives EPA. Familiar with ADB and Maldives EPA policy on environmental safeguard and project compliance monitoring and reporting.

(vi) Social Specialist (national). The candidate shall possess a degree in

Social Sciences or related field, and at least 5 years of experience in designing, implementing or monitoring social components of developmental projects, preferably with experience in transport sector. Familiar with ADB's policy on social safeguard and project compliance monitoring and reporting.

(vii) Architect (national). The candidate shall possess a degree in Architecture and be licensed for practice in the Maldives. A minimum of 5 years of experience in design of buildings in the Maldives is preferred.

(viii) MEP Engineer (national). The candidate shall possess a degree in MEP/ Building Services Engineering together with a minimum of 5 years of experience in the design of MEP engineering for buildings.

#### 4. Reports, Deliverables and Time Schedule

4.1 The consulting services will be implemented over about 24 calendar months from the commencement date with an anticipated design and tender period of 6 months and an implementation period of 18 months.

4.2 The Consultant shall prepare and submit the following reports in the English language (5 copies for the Employer and 2 copies for ADB). The final report shall be prepared in hardcopy and in CD-ROM.

| Report                       | Description/Technical Accomplishment   | Timeline  |
|------------------------------|--|---|
| Inception Report             | Recommendations for preliminary design and procurement packages, and staff mobilization schedule.  | Within 1 month of commencement of services                  |
| Standard Bidding Documents   | Standard bidding documents for preliminary review (excluding BOQ, specification, and design drawings).   | Within 2 months of commencement of services                 |
| Final Bidding Documents      | For all works and equipment packages – incorporating Employer/ADB's comments on SBD and including BOQ, specification, and design.  | Within 4 months of commencement of services                 |
| Design Completion Report     | Design criteria and approach, survey reports, and progress of design for all contract package including results of the models tests validating design  | Within 4 months of commencement of services                 |
| Monthly Progress Report      | Brief details of the work carried out during the previous month (all components), the problems encountered or anticipated, together with the steps taken or recommendations for their correction, and financial and physical progress to date. | Every month by the 10 <sup>th</sup> of the subsequent month |
| Safeguards Monitoring Report | Progress on compliance to the loan agreement, national policies and EMP.   | Semi-annually   |

|                           |  |  |
|---------------------------|--|--|
|                           | Description of monitoring activities carried out along with pictures and environmental quality test results. |  |
| Project Completion Report | In accordance with ADB's format.   |  |

## 5. Data, Local Services, Personnel, and Facilities to be provided by the Government

5.1 MHI will provide the consultant with the following:

- During the design phase, the Consultant will allocate his own offices in .
- Post the design phase, MHI will provide office Space equipped with Internet Connectivity during the tender phase

5.2 Civil works contractor will provide the consultant with the following; Office Space and utility services / Furniture/ Internet connectivity/ Reasonable office supplies at the Contractor's Office in Kulhudhuffushi during the implementation phase.

**APPENDIX G – LIST OF STAKEHOLDERS’ MEETINGS**

(20 August 2015 till 02 March 2016; excluding ADB, IA, and EA meetings)

**1. Ministry of Economic Development - Transport Portfolio**

Date: 03 Sept 2015

| Present   | Organization   |
|---|--|
| Capt. Abdul Latheef Mohamed – Minister of State | Ministry of Economic Development - Transport Portfolio |
| Ismail Ibrahim, Steve Moynihan                  | PADECO & Riyan -Consultant                             |
| Mariyam Azleema                                 | Ministry of Housing and Infrastructure-Client          |

| TOPIC                             | DISCUSSIONS   |
|-----------------------------------|---|
| Introduction                      | Consultant gave a brief description of the project  |
| Tariff/ fees                      | Capt. Latheef stated that so far GOM have not imposed on any user fees on local harbors. But asked to confirm from the local council.   |
| Vessels                           | Approximately 5 larger size vessels (similar to the vessel ‘Bahadur’ (passenger +light cargo ship)  |
| Boat Building Code                | He also stated that a general Boat building code is being developed by this department and hopefully will be implemented during this year.  |
| Development of I-Heaven           | When asked whether the development of I-Haven project would impact, he stated that the discussions of project components were underway at senior GOM levels and impacts will be clearer after the project specifics are decided   |
| KPL Port                          | He also stated that Kulhudhuffushi port is Managed by MPL   |
| Governing Body                    | Regarding the Governing Body of maritime transport, he stated there is no separate Maritime Transport Authority but is covered by the Transport Authority and advised to contact them to get vessel registers for Kulhudhuffushi. |
| Planned Airport at Kulhudhuffushi | On the impact of the planned airport at Kulhudhuffushi, he felt that passenger trips by sea from Malé to Kulhudhuffushi will like go down   |

## 2. Maldives Ports Limited

Date: 16 Sept 2015

Venue: Maldives Ports Limited

| Present  | Organization   |
|--|--|
| Mahdy Imad – CEO                                 | Maldives Ports Limited and Kulhudhuffushi Ports Ltd, |
| Mohamed Wajeih Ibrahim –<br>Asst General Manager | Malé North Harbor In-charge                          |
| Khalid Bichou<br>Ismail Ibrahim<br>John Dimock   | PADECO & Riyan -Consultant                           |

| TOPIC   | DISCUSSIONS  |
|---|--|
| <b>Introduction</b>                               | Consultant gave a brief description about the project  |
| <b>KPL –<br/>Kulhudhuffushi<br/>Ports Limited</b> | <p>CEO- stated that KPL is managed by MPL under the direct supervision of him. He also stated that previously KPL was run by a subsidiary company through MPL and it has now been changed under the management of MPL.</p> <p>He expressed his concern that availability of fresh food in Malé is less than two days' supply, meaning that any delay caused to vessels from India could see prices of onions for example, go beyond the means of locals.</p> <p>His preference is for storage capacity to be increased at least for 3 months and located at Kulhudhuffushi Regional Harbor, with the added benefit that local ships and labor would distribute to other islands and Malé. International ships would be prevented by Customs from travelling further south.</p> <p>He also stated it was planned as a transshipment port for the vessels from India and still very few international ships get the service from KPL.</p> <p>There has been a delay of a couple of years of bringing about the institutional changes to the management of the harbor; but could provide no insight why it has taken so long.</p> |
| <b>Harbor Depth</b>                               | He also stated that the sea bed of the harbor was dredge to -5m from MSL and current depth of the harbor is -3 from MSL after the reclamation due the siltation. He also stated they have not done any maintenance dredging since it was built and such dredging needs to be done in every 1 to 1.5 years to avoid the siltation .Furthermore, he stated that it can be done by a private company or by a Government owned dredging operation.   |



|   |   |
|---|---|
| <b>Draft of the vessels between Malé and Kulhudhuffushi</b> | The average draft of the vessels travelling between Malé and Kulhudhuffushi are about 3m to 4m. |
| <b>Construction cost of KPL</b>                             | He stated that the construction cost was in the order of MVR 40-50 million.                     |

### 3. Department of Debt Management / MoFT

Date: 21<sup>st</sup> October 2015

Venue: MoFT

#### Attendance

| Present                            | Organization                                  |
|------------------------------------|---|
| Aminath Ali                        | MoFT – DMD                                    |
| Ismail Ibrahim, Jayath Atukorala   | PADECO & Riyan-Consultant                     |
| Nazleem Azleema, coordinator - MHI | Ministry of Housing and Infrastructure-Client |

#### Discussions

| TOPIC                                    | DISCUSSIONS  |
|--|--|
| <b>Introduction</b>                      | Consultant gave a brief description about Kulhudhuffushi Expansion Project   |
| <b>Imprest Account or Direct Payment</b> | DMD said that in their experience direct payments should be used as far as possible (where there are milestone payments etc.) since experience has been that there are delays in replenishing the imprest account.   |
| <b>Training of ADB procedures</b>        | The Consultant pointed out that MHI as IA would need training on ADB procedures such as maintenance and replenishment of imprest accounts and associated documentation such as preparing withdrawal applications and statements of expenditure. DMD said that ADB will be conducting a week long training course in January and that MHI should request to participate |
| <b>Current ADB projects in Maldives</b>  | ADB is financing two loan projects (1i for small and medium scale industries (2) energy sector which has recently commenced. Both projects have PMU which is staffed by locals. The SME project staff has experience in ADB procedures   |
| <b>Counterpart funding</b>               | Counterpart funding must be included in MHI budget for funds to be available. The PMU should manage this and liaise with MoFT to ensure funds are available, if not there will be delays in payments   |

|                           |   |
|---------------------------|---|
| <b>Tax</b>                | Import taxes and GST is levied on ADB projects but is funded by GoM. This is another aspect that PMU has to manage since it is part of the counterpart funds. |
| <b>Meetings with MoFT</b> | DMD requests MHI to submit official request to ADB Desk officer to meet Treasury and Public Accounts Dept. (TPAD)   |

#### 4. Kulhudhuffushi Council

**Date:** 24 October 2015

**Venue:** Kulhudhuffushi island council

| <b>Present</b>                     | <b>Organization</b>                           |
|------------------------------------|---|
|                                    | Island Council                                |
| Jayath Atukorala                   | PADECO & Riyan-Consultant                     |
| Nazleem Azleema, coordinator - MHI | Ministry of Housing and Infrastructure-Client |

| <b>TOPIC</b>                   | <b>DISCUSSIONS</b>   |
|--------------------------------|--|
| <b>Introduction</b>            | Consultant gave a brief description about Kulhudhuffushi Expansion Project   |
| <b>Constitution</b>            | 7 elected members for period of 3 years among which a President is elected. 10-member Atoll Council also in Kulhudhuffushi among whom President and Vice President elected. 15 islands in atoll.<br>Island Council has staff of 23, divided into Municipal, economic, finance and admin. One council member in charge of ports |
| <b>Population</b>              | Resident 9000 outside 2000 (university students, traders etc.) About 600 civil servants  |
| <b>Harbor related expenses</b> | 15 LED double arm lights installed in Feb 2015 monthly electricity bill MVR 15,000. Harbor and fish market area cleaning contracted out cost MVR 20,000/month.<br>There is night time traffic  |
| <b>Fishing activities</b>      | 7 vessels from Kulhudhuffushi, others from atoll. (Hdh) Night time fishing. No ice factory, but fuel, water and food available. Shark fishing prohibited, only reef fishing – fish sold locally at market. Two businesses involved in dry fish sale to Malé  |
| <b>Slipway and ship yard</b>   | Active business in ship repairs and ship building, by 4 businesses employing 200 people. Rent payable to council for use of slipway, 1 sqft = 2 MVR/month  |

|                                  |  |
|----------------------------------|--|
| <b>Passenger / cargo ferries</b> | 4 weekly services Malé-Kulhudhuffushi – 4 vessels. Capacity of 175 each, full during festivals and school holidays. 3 weekly service Malé-Hanamadhloo capacity of 60 each on 3 vessels   |
| <b>Duty reduction</b>            | GoM implemented 30% duty reduction of import cargo through Kulhudhuffushi in 2010. Lot of activity (labor & small ships) in loading and unloading. However, from 2012, customs officer boards vessel and transports to destination no loading/unloading at Kyushu as was intended. But duty reduction given since entered Kulhudhuffushi as first port. Another port also given duty concession. Riyan to find out |
| <b>KPL</b>                       | Pays rent to council of MVR 3000/pa. Little activity there   |
| <b>Hospital/ University</b>      | 70 bed hospital, major hospital in the region. Large campus of University of the Maldives. Many from other islands as cost of living cheaper than Malé 165 flats being constructed after worked stopped for 2 years. 100 to Kulhudhuffushi islanders and 65 to other islanders   |

## 5. Kulhudhuffushi Council

**Date:** 24 October 2015

**Venue:** Kulhudhuffushi island council

| <b>Present</b>  | <b>Organization</b>                           |
|---|---|
| Abdul Raheem Ali (Pilot – in charge) 7988679<br>Mustofa Ali (Finance head) 9997545<br>Mohammed Hassan (operations) 7788286<br>Aminath Ahmed (admin) 7681592 | KPL   |
| Jayath Atukorala  | PADECO & Riyan-Consultant                     |
| Nazleem Azleema, coordinator - MHI  | Ministry of Housing and Infrastructure-Client |

| <b>TOPIC</b>        | <b>DISCUSSIONS</b>   |
|---------------------|--|
| <b>Introduction</b> | Consultant gave a brief description about Kulhudhuffushi Expansion Project   |
| <b>Organization</b> | 46 staff. Wholly owned by MPL. Established 2005. Organization similar to port company, with separate departments for operations, finance, admin etc. Well equipped with largest 150t crane in the Maldives and three forklifts. However only 89 ships handed so far this year, container throughput 293 TEU cargo throughput 3900 t. |

|                       |  |
|-----------------------|--|
| Operations            | <p>Only vessels less than 1000 GRT can be handled with existing depth limitation to handle larger vessels. No imports direct to Kulhudhuffushi from overseas all from Malé. Local businessmen may not have the capacity or scale to deal with foreign suppliers. Only export scrap metal to India</p> <p>Since international port customs clearances all available with separate large customs building.</p> <p>Vessels importing construction materials etc. to resorts or other islands cannot access port due to depth issue. Use anchorage instead and customs goes out to anchorage and issues an “inter-atoll permit” by levying required customs dues. Since these ships do not dock at KPL no port levies can be charged.</p> <p>Ship calls have reduced due to the lack of infrastructure projects that need imported material, e.g. housing project.</p> <p>30% duty concession has resulted in increased port calls for containers carrying motorcycles and vehicles, but this has not increased labor requirement for unloading and re-loading as a hub port as envisioned. The container is taken off the ship, cleared and reloaded on to the same vessel for onward to Malé where the main demand is. Any demand for Kulhudhuffushi is re-shipped from Malé. Although contracted out stevedore available services not required most of the time which has not benefitted local economy. However KPL gets port dues.</p> |
| Tariff                | Same as MPL tariff.  |
| Financial performance | Monthly salary and other costs about MVR 400k. Monthly average revenue also about MVR 400k. When there are revenue shortfalls, MPL pays the salary shortfall.  |

## 6. Kulhudhuffushi Council

**Date:** 20 November 2015

**Venue:** Kulhudhuffushi island council

### Attendance

| Present                        | Organization               |
|--------------------------------|----------------------------|
|                                | Kulhudhuffushi Council     |
| Steve Moynihan<br>Sonora Kasur | PADECO & Riyan- Consultant |

### Discussions

| TOPIC        | DISCUSSIONS  |
|--------------|--|
| Introduction | Consultant gave a brief description about Kulhudhuffushi Expansion Project |

|                  |  |
|------------------|--|
| PPTA             | Members stated concerns about the fishing harbor and explained that boats moored there to use the fish market (where fish are processed on shore). They did not have a quay and transferred their catch to the shore on small boats. The council also noted that the reclamation was eroding quickly without protection. It was said that 800 ft. had eroded, with insistence that this was depth of recession and not the length of the eroding face. This is unlikely. They also said that the reclamation originally came out to the end of the dividing extension. In this case, from Google Earth, the erosion will have been an average of 95m. It may also be possible that 800ft and 80m were mixed up in the translation. |
| Further meetings | The first meeting was with the Kulhudhuffushi Council on 20th who noted that subsequent meetings were arranged for the next day, Saturday 21st, as all had a busy agenda on the Friday.  |

## 7. Kuldhuffushi stakeholders

**Date:** 21 November 2015

**Venue:** Kulhudhuffushi island council

### Attendance

| Present                        | Organization               |
|--------------------------------|----------------------------|
| Mohamed Zuhair                 | Mithuru Transport Ltd      |
| Steve Moynihan<br>Sonora Kasur | PADECO & Riyan- Consultant |

### Discussions

| TOPIC        | DISCUSSIONS  |
|--------------|--|
| Introduction | Consultant gave a brief description about Kulhudhuffushi Expansion Project |

|                  |  |
|------------------|--|
| PPTA             | <p>Mohamed Zuhair of Mithuru Transport Ltd owns one 30m passenger boat and three cargo boats (30m, 28m, and 20m) plus one cargo boat under construction of 34m. He says that these have a 4m draft and can leave only on high tide. He requests that the harbor depth be 5m. This depth was also backed up by people at the later focus group meeting.</p> <p>He charters one boat from India to the commercial harbor.</p> <p>He noted that there are 4 cargo boats and 3 passenger boats from Kulhudhuffushi using the harbor plus smaller boats from other islands – in total 12 passenger boats and 6 cargo boats. I queried the small number of boats and he explained that the boats have become much larger. In 1990 he had one dhoni of 15t for passengers, and in 2004 one dhoni of 150t. He operates a ferry system to Malé 3 times a week. This is regular and works well.</p> <p>There is congestion in the harbor, and mainly because there are no rules applied. A tariff would be good because it would prevent long-term mooring against the quay. He could not afford a tariff of Rf5 per minute alongside, but a tariff of less than Rf500 for overnight mooring would be acceptable.</p> <p>With 200 to 300 people per a voyage it would be good to have a ticket building. Other requests were for a tower crane for unloading, which he believed would easily pay for itself, and for electricity and water services along the quay.</p> <p>Crew costs vary from Rf6000 per month up to Rf12,000 to Rf18,000 for the captain, including all allowances. If a passenger vessel is more than 80% full a bonus is given.</p> <p>The fare, one-way, to Malé is RF320 per person but this will change to Rf425 to cover the installation of more powerful engines cutting the sailing time from 12hrs to 10hrs.</p> <p>The ferry has sailed 400 nights in 1000 nights. Cargo ships average 4 trips per month. He considers development of the hospital and education will increase activity in Kulhudhuffushi.</p> |
| Further meetings | N/A  |

## 8. Kulhudhuffushi stakeholders

**Date:** 21 November 2015

**Venue:** Kulhudhuffushi island council

### Attendance

| Present        | Organization               |
|----------------|----------------------------|
| Mohamed Iqbal  | Fishing Boat Captain       |
| Steve Moynihan | PADECO & Riyan- Consultant |

### Discussions

| TOPIC            | DISCUSSIONS   |
|------------------|---|
| Introduction     | Consultant gave a brief description about Kulhudhuffushi Expansion Project  |
| PPTA             | <p>Fish are carried in small boats to the beach and then the market. They get damaged in the small boats and there is a loss in quality.</p> <p>The process takes 3-4 hours to unload 300kg. If moored alongside a quay it would take 15 minutes.</p> <p>The boats leave at 10pm and catch bait. Around 4am they travel some 75km to a Fish Aggregation Device. They fish for about 2 hours and return to Kulhudhuffushi at 3.30-4pm.</p> <p>They need ice and now keep the fish cool by pumping water over them.</p> <p>6 to 8 Kulhudhuffushi boats travel out each day. There are others from other islands, particularly those that don't have a harbor.</p> <p>A 14m boat has a crew of 10. A 21m boat has a crew of 15 to 18.</p> <p>Fish are sold for Rf60,000 to Rf100,000 per month. Half of this goes to the boat owner, who pays fuel, food, maintenance etc. The other half is distributed amongst the crew.</p> <p>The small boats for shore transfer at Kulhudhuffushi are moored to lines and floats attached to concrete blocks set on the seabed.</p> <p>The market is too small, big enough for only 2 boats at a time. A market which is three to four times bigger than the existing facility is required.</p> <p>(I visited the existing facility and it consisted of slabs on which fish were being cut up. However, I was later told that this was not a proper market and was only a temporary structure).</p> |
| Further meetings | N/A   |

## 9. Kuldhuffushi stakeholders' focus group

**Date:** 21 November 2015

**Venue:** Council

### Attendance

| Present | Organisation             |
|---------|--------------------------|
|         | Stakeholders focus group |

|              |                            |
|--------------|----------------------------|
| Sonora Kasur | PADECO & Riyan- Consultant |
|--------------|----------------------------|

**Discussions**

| TOPIC            | DISCUSSIONS  |
|------------------|--|
| Introduction     | Consultant gave a brief description about Kulhudhuffushi Expansion Project   |
| PPTA             | <p>Twenty people attended the meeting. This was conducted all in Dhivehi (local language) by Sofoora Kawsar Usman –and to be reported separately. However, they did say that they were not willing to pay for the harbor. After some discussion of the benefits they conceded that a tariff should be about one quarter of that at Malé North Harbor.</p> <p>Also that more people in Kulhudhuffushi should be consulted.</p> <p>The breakwater of the new harbor should be further out than the existing.</p> |
| Further meetings | Further surveys will be undertaken   |

**10. MoFT, TPAD****Date:** 22 November 2015**Venue:** MoFT**Attendance**

| Present                           | Organisation                                 |
|-----------------------------------|--|
| Maryam Abdul Nasir<br>Zumra Ahmed | Director, DMD, MOFT<br>Funds Executive, TPAD |
| Jayath Atukorala                  | PADECO & Riyan-Consultant                    |

**Discussions**

| TOPIC        | DISCUSSIONS  |
|--------------|--|
| Introduction | Consultant gave a brief description about Kulhudhuffushi Expansion Project |



|                          |   |
|--------------------------|---|
| CoA                      | The Consultant requested for a complete Chart of Accounts (CoA) applicable across the public sector. TPAD agreed to email the CoA   |
| SAP                      | Separate staff within TPAD allocated for SAP helpdesk and SAP training across all public organizations. Plans to migrate into a higher module of SAP called BI = business intelligence where all reports can be generated off system instead of through MS Excel spreadsheets |
| Accounting               | Partial accrual method. Accounts payable and accounts receivable prepared but depreciation not accounted for. Donated assets not captured.  |
| Finalization of accounts | FY 2012 completed but FY 2013 and FY2014 still not finalized.   |
| External audit           | AG has not audited MoFT. No audit reports available. Delays in audit of MHI may be due to lack of staff at AG office.   |
| WB PFM project           | World bank PFM project commenced in 2014.   |
| Further meetings         | MoFT – internal auditor<br>MoFT – admin for org chart<br>MoFT – property services / facilities division<br>AG office  |

## 11. PMU, ADB SME Project, Ministry of Economic Affairs

**Date:** 24 November 2015

**Venue:** MoFT

### Attendance

| Present          | Organisation               |
|------------------|----------------------------|
| Ibrahim Firushan | SME Consultant             |
| Jayath Atukorala | PADECO & Riyan- Consultant |

### Discussions

| TOPIC        | DISCUSSIONS  |
|--------------|--|
| Introduction | Consultant gave a brief description about Kulhudhuffushi Expansion Project |

|                 |   |
|-----------------|---|
| PMU composition | Project Director, from Ministry of Economic Affairs core office of 3 including project manager and accountant. 6 regional offices. \$12million project including SME on-lending. Towards the end of the project now looking at establishing a credit rating agency, movable asset registry that will promote further lending to the sector. IDB also financing Islamic finance component. |
| Fund Manager    | Bank of Maldives has been appointed the fund manager who will also hold the project's Imprest Account   |
| Direct Payments | Other than the line of credit, most payments are direct payments by the ADB.  |
| Auditors        | Project accounts are prepared in accordance with IFRS and are audited by a private firm of Chartered Accountants  |

## 12. Auditor General's Office (AGO)

**Date:** 30 November 2015

**Venue:** MoFT

### Attendance

| Present   | Organisation                      |
|---|-----------------------------------|
| Ahmed Salih – Director Technical<br>Ibrahim Fazeel – Director SOE audit<br>Fathimath Nishath Zadi – Director Performance Audit<br>Ahmed Ibrahim – Senior Auditor<br>Ahmed Mafawiz - Auditor | AGO                               |
| Jayath Atukorala<br>Mariyam Nazleema  | PADECO & Riyan -Consultant<br>MHI |

### Discussions

| TOPIC        | DISCUSSIONS   |
|--------------|---|
| Introduction | MHI gave a brief description about Kulhudhuffushi Expansion Project |

|                                   |  |
|-----------------------------------|--|
| Audit brief                       | Finance law 3/2006, requires all government entities to undergo a financial statement audit. Financial statements must be submitted to the AGO within 3 months of the end of the financial year and the AGO must submit their report to the entity within 2 months. Entities not submitting reports on time must be reported to Parliament. However, last MHI audit report FY2011 MoFT FY2012. AGO accepts that part of the delay may lie in their hands but also financial statements being submitted late. AGO accepts that this is a contravention of the law but even if reported no action is taken |
| Internal auditor sections         | Generally internal audit sections only in SOE and large private companies. Very difficult to recruit and retain expertise.<br>AGO volunteered to assist MHI internal auditor provided there is a request to do so.   |
| Types of audit                    | Compliance audit also done for government departments. Performance or value for money audit (VFM) quite new and only a few have been done for SOEs. No audit of IT systems done, including the SAP government accounting system  |
| Internal control issues under SAP | Business Intelligence module under SAP will be implemented in 2016 when all financial reporting will be done through the system instead of MS Excel reporting. AGO agrees that current reporting off-system is not satisfactory.<br>AGO expressed concern that skill levels of staff at many government departments may impede the process   |
| Unrecorded PSIP assets            | The Consultant raised the issue of unrecorded PSIP assets within the PAS. AGO commented that the government chart of accounts does have a works in progress code that can be utilized to record and report of such expenses. Again the skill levels of staff may impede the process  |
| Public accounting service         | AGO has brought forward the idea of a separate public accounting service to be paid on a higher scale to attract better qualified candidates. This has not been received well by government.   |
| AG appointment                    | AG's appointment is made by the Parliament on recommendation of the President. 2/3 majority is required for appointment but only a simple majority of members present is required for his removal  |

### 13. MoFT Internal Audit

**Date:** 3 December 2015

**Venue:** MoFT

#### Attendance

| Present  | Organisation              |
|--|---------------------------|
| Ismail Zariyandh – Director<br>Aminath Suwaida – Audit accountant<br>Aminath Samhai – Audit accountant | MoFT Internal audit       |
| Jayath Atukorala   | PADECO & Riyan-Consultant |

#### Discussions

| TOPIC        | DISCUSSIONS   |
|--------------|---|
| Introduction | JA gave a brief description about Kulhudhufushi Expansion Project |

|                                |   |
|--------------------------------|---|
| Scope                          | The internal audit of MoFT functions as a internal audit advisor to the entire government sector not only MoFT. Total of 17 staff. Assistance from ongoing World Bank project. Previously audit committee consisting of 11 people who met bi-monthly, no longer functional.<br><br>Internal audit manual prepared and Baseline Assessment of internal controls of government departments and island administrations being carried out |
| Staff training                 | Staff who have been with the division for more than 2 years receive training India for the Certified Internal Auditor certificate.<br><br>Staff turnover quite high   |
| Legal basis for internal audit | Attorney-General has approved changes to finance law to legally recognize internal auditor of MoFT as the internal auditor of the entire public sector.   |
| Financial statement audit      | No financial statement audit has been done for GoM's consolidated financial statements prepared by TPAD, as is done in many countries.  |
| Bank reconciliation            | Bank reconciliation has been done for the Public Bank Account at MMA and for the various bank accounts in the islands   |

#### 14. ADB's Climate change consultant

**Date:** 10 December 2015

**Venue:** MHI

##### Attendance

| Present                       | Organisation                  |
|-------------------------------|-------------------------------|
| Karma Yangzom                 | ADB environmental specialist  |
| Pema Norbu                    | ADB climate change specialist |
| Ismail Ibrahim<br>John Dimock | PADECO & Riyan-Consultant     |

##### Discussions

| TOPIC | DISCUSSIONS |
|-------|-------------|
|-------|-------------|

|                |  |
|----------------|--|
| Sea level rise | <p>AS4997 Design of maritime structures relies upon IPCC projections of sea level rise due to climate change. Recommended allowance of 0.1 m for 25 y design life and 0.2 m for 50 y design life, means that 0.12 m design life would be appropriate for 30 y design life.</p> <p>ADB preferred 19.9 cm or 0.199 m sea level rise by year 2050, determined by HadCM2 modelling stated in RMSI 2006, Developing a disaster risk profile for Maldives Volume 1: Main Report, UNDP</p> <p>It was agreed to adopt this increase in still water level for this project.</p> |
|----------------|--|

|             |  |
|-------------|--|
| Storm Surge | <p>Discussed storm surge and presented the range of statements available on the record in relation to the Maldives and the basis upon which the design water level and wave height were chosen for the preliminary design report:</p> <ul style="list-style-type: none"> <li>• RMSI 2006, Developing a disaster risk profile for Maldives Volume 1: Main Report, UNDP states in Table 11 on page 47 that the calculated storm surge for the northern islands is 0.84m for a 100 year return period and 1.32m for a 500 year return period. Adding 0.98m for “average astronomical tide”, gives storm tides of 1.3 m and 2.3 m respectively. The 0.98m tide added to produce a storm tide water level, isn’t explained or referenced.</li> <li>• An unfortunate consequence of this ambiguity is that further alarmist conclusions have been drawn in (Ministry of Environment, Energy and Water, 2007), where it is stated that: ‘A storm surge at high prediction could cause a 3.18m wave that could inundate even the largest of islands. These surges do not take into account regular monsoonal wind generated flooding which is considered the most common in Maldives (Shaig, 2006; UNDP, 2006).’</li> </ul> <p>The 3.18m “wave” is the sum of:</p> <ul style="list-style-type: none"> <li>○ 1 in 500 y storm surge of 1.32 m</li> <li>○ “average tide height” of 0.98 m</li> <li>○ maximum projected sea level rise by 2100 of 0.88 m.</li> </ul> <p>The calculation mixes return periods and wrongly labels the result as a wave. Further, the statement that the storm surges do not take account of monsoonal conditions is misleading or perhaps poorly worded, because the extreme low pressure system or cyclonic event that would cause the stated 30 hPa pressure drop to create the 1 in 500 y storm surge, and a monsoonal wind generated event, are mutually exclusive.</p> <ul style="list-style-type: none"> <li>• James G Titus, 1989, Policy Implications of Sea Level Rise: The Case of The Maldives stated: ‘Because storm surges are rarely over 30 cm, it has been safe to develop land that is only 40 cm above high tide.’</li> <li>• The 1992 JICA Report for Malé in Figure 3.3.1 Design Waves, states a design water level for the East and South coasts of +1.64 m and +1.63 m respectively. Both coasts are exposed to swell waves of <math>H_o = 3.0</math> m. The North and West coasts which are sheltered from swell waves, have design water levels of +1.34 m which corresponds to MHHW relative to LAT datum.</li> </ul> <p>The wave and water level modelling was performed by Goda in association with Lanka Hydraulics Institute (LHI) for a 1 in 50 y return period event. It follows that the 0.3 m additional maximum still water level for the East and South coasts represent the upper bound for storm surge and some if not all of this increase will be attributed to wave set up. The reason for the higher still water level isn’t stated in the reports.</p> <p>The UNDP 2006 Disaster Risk Report states in Section 5.3 - Results and Discussion - Storm Climatology:</p> <p>‘The islands of Maldives are less prone to tropical cyclones. The northern islands of the country were affected by weak cyclones that formed in the southern part of the Bay of Bengal and the Arabian Sea. Figure 14 shows the tracks of cyclones affecting Maldives during the period 1877 - 2004. The number of cyclones directly crossing Maldives is small. Only 11 cyclones crossed the islands over the entire span of 128 years. Most of the cyclones crossed Maldives north of 6.0° N and none of them crossed south of 2.7° N during the period.’</p> <p>As the Maldives is not a renowned cyclonic region, the 1 in 50 y design event is non-cyclonic with no allowance for still water level increase due to storm surge.</p> |
|-------------|--|

|             |  |
|-------------|--|
| Wave set up | Discussed allowing 200 mm water level increase due to wave set up in accordance with work done by Oriental Consultants.  |
| Wave Height | Discussed the protection afforded by the reef not only due to waves being depth limited, but also due to shoaling as the waves pass over the edge of the reef. |

## 15. Kulhudhuffushi Training Center

**Date:** 24 December 2015

**Venue:** KTC

### Attendance

| Present                          | Organisation                    |
|----------------------------------|---------------------------------|
| Ali Ahmed – Training Coordinator | Business Center, Kulhudhuffushi |
| Sofoora Kawsar                   | PADECO & Riyan-Consultant       |

### Discussions

| TOPIC                                | DISCUSSIONS   |
|--------------------------------------|---|
| General work of Business Center (BC) | General work of BS: Assist in SMEs in start-up which is a basic training and business training which includes development of Business Plan for the future. In addition, help in the registration, assisting with loans, and helps with the legal framework of SMEs. Currently, there are 3 staff, a manager, administrative staff and training coordinator. During the past one year they have carried out trainings in the northern region of Maldives (Shaviyani, Haa Dhaal and Haa Alif). This includes a total of 38 islands where 74% of 967 participants were fe. |

|                              |   |
|------------------------------|---|
| Challenges of Current Harbor | Only few passenger/cargo boats can be moored in the harbor, as currently it is not regulated. Limited stairs in the harbor that makes it difficult for passengers to get down from boats during high tide, Two sides of the harbor cannot be used to mooring, The space in the harbor is not fully utilised or is not available for utilisation by businesses   |
| Gender and Poverty           | In terms of gender gap in the island, it is noticeable that the salaries of fes are normally lower by MVR 500-1000 compared to a , mainly for sales position. However, foreseen increase employment of fes for various jobs in the harbor facilities, as businessmen prefer to employ fes due to salary scale and low turnover.<br>Currently, there are people engaged in thatching, rope weaving and doing many different small businesses in the island. Trainings in the following areas are important; <ul style="list-style-type: none"> <li>○ Photography</li> <li>○ Event management</li> <li>○ Cake decorations</li> <li>○ Electricians</li> <li>○ Engineering</li> </ul> |
| New Facilities               | The following facilities should be the minimum ancillary facilities available; <ul style="list-style-type: none"> <li>○ Fuel</li> <li>○ Water</li> <li>○ Electricity</li> <li>○ Shelter (kind of bus stops)</li> <li>○ Terminals</li> </ul>   |
| Additional Comments          | Businessmen will be willing to rent a 6000 sq. ft. of land for 15K and if a building is leased it will be higher.<br>Additionally, people will be willing to pay for the facilities they get rather than a mooring fee. For usage of harbor fees need to create awareness among people on finance required to sustain such infrastructure development. BS is willing to contribute in to any kind of activity within the capacity.  |

## 16. Kulhudhuffushi secondary school

**Date:** 24 December 2015

**Venue:** SC

### Attendance

| Present   | Organisation                     |
|---|----------------------------------|
| Aminath Mohamed –Leading teacher/Session In-charge<br>Hussain Ali – Leading Teacher<br>Mohamed Shahid - Principal | Secondary School, Kulhudhuffushi |
| Sofoor Kawsar   | PADECO & Rivan-Consultant        |

### Discussions

| TOPIC | DISCUSSIONS |
|-------|-------------|
|-------|-------------|



|                              |  |
|------------------------------|--|
| General work                 | Currently there are a total of 19 teachers in the schools, where 4 are from other islands. And 585 students out of which more than 30% are students from other islands for 2016. With harbor extension and ease of other facilities it is foreseeable that this number will increase   |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Only few passenger/cargo boats can be moored in the harbor. The huge businessmen even now moored and small vessels cannot get a place in hours' time. Limited stairs in the harbor that makes it difficult for passengers to get down from boats when the tides are high. Specifically, for sick and emergency cases.<br>No terminal or harbor for passengers.<br>No shelter or renting facilities for parents who want to stay for overnight. |
| Gender and Poverty           | In terms of gender fes secure jobs easily than their counterparts<br>Should there be trainings focussed under the project, the following areas are important;<br>Soft skills development<br>Electricians<br>Engineering  |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Restaurants/cafes<br>Shops<br>ATMs<br>Shelter (kind of bus stops)<br>Terminals   |
| Additional Comments          | Businessmen will be willing to rent land or built buildings in the harbor and be willing to pay a higher rent than the amount they pay to rend a place inside the island   |

## 17. Kulhudhuffushi Local Council

**Date:** 24 December 2015

**Venue:** K. council

### Attendance

| Present  | Organisation                 |
|--|------------------------------|
| Abdulla Mohamed – Council member<br>Hussain Shaqeef – President<br>Ahmed Athif – Vice President<br>Abdul Latheef Hassan – Council member | Kulhudhuffushi local council |
| Sofoor Kawsar  | PADECO & Riyan-Consultant    |

### Discussions

| TOPIC                        | DISCUSSION   |
|------------------------------|--|
| General work                 | Atoll council is the body which looks in the works of 3 main northern atolls of the Maldives. And have representative from each atoll.   |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Circulation of water in the harbor is less leading to algae formation in the boats and smelly water in some seasons,<br>Two entrance to the harbor is not enough in busy times,<br>Accretion of sand in the harbor leading to less depth,<br>No road development with harbor leading to huge puddles and in difficulty in loading/unloading and for passengers in rainy seasons.<br>No drainage in the roads,<br>No facilities for sick or disabled persons. |
| Gender and Poverty           | In terms of gender, it is foreseeable that men and women will have equal opportunity in the facilities of harbor.<br>Should there be trainings focussed under the project, the following areas are important;<br>SME development,<br>Outboard engines,<br>Electrical wiring,<br>Financially accounting<br>Safety and maintenance work<br>Hotel development   |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Facilities for sick/disabled<br>Warehousing<br>Cranes/forklift<br>Fuel<br>Water<br>Electricity   |
| Additional Comments          | People are even now migrating to island. With new development such as airport, tertiary hospital and better education there will be an influx of population. The harbor needs to be developed in a way that it can be expanded at a later stage.   |

## 18. Kulhudhuffushi hospital

**Date:** 25 December 2015

**Venue:** Kulhudhuffushi hospital

### Attendance

| Present  | Organisation            |
|--|-------------------------|
| Mohamed Hassan – Zimmaadhaaru veriya<br>(In charge of Hospital)<br>Khadheeja Ali – Laboratory Technologist<br>Abdul Ghafoor Mohamed – Maintenance Officer<br>Sobeeha Adam – Nursing In charge<br>Hassan Ahmed – Medical Record Officer | Kulhudhuffushi hospital |

|                |                           |
|----------------|---------------------------|
| Sofoora Kawsar | PADECO & Riyan-Consultant |
|----------------|---------------------------|

### Discussions

| TOPIC                        | DISCUSSIONS   |
|------------------------------|---|
| General work                 | The regional hospital currently serves to all the islands of north. People from as far as Raa or Noonu also travel to get hospital facilities. It is planned that the hospital will be developed as a tertiary hospital in near future. Currently the capacity is 55 beds with a 38% occupancy on most days. On Saturdays, more than 90% of the hospital capacity is reached, on average around 350 people are served on Saturday. This is due the influx of people from other islands for Saturday market. |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>No facilities for disabled, sick or women to get off the boats.<br>No system in taxi queues<br>No public toilet or petrol facilities  |
| Gender and Poverty           | In terms of gender, it is foreseeable that men and women will have equal opportunity in the facilities of harbor.<br>Should there be trainings focussed under the project, the following areas are important;<br>Nursing<br>Health professionals<br>Engineers and other skill developments where people seek education from Malé.   |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Public toilets,<br>Petrol,<br>Electricity<br>A designated area for sick or emergency cases  |
| Additional Comments          | Development of a harbor will not bring people to the islands but development of health/education and other facilities will bring more people, thus with development of harbor other areas should also be focussed.  |

## 19. Maldives University Kulhudhuffushi campus

**Date:** 25 December 2015

**Venue:** Kulhudhuffushi, university campus

| Present  | Organisation                               |
|--|--|
| Ibrahim Mohamed – Manager<br>Mohamed Umar – Lecturer<br>Fathimath Mohamed – Associate lecturer<br>Rasheedha Ali – Associate Lecturer<br>Abdul Rahman – Senior Administrative Officer | Maldives University Campus, Kulhudhuffushi |
| Sofoora Kawsar   | PADECO & Riyan-Consultant                  |

**Discussions**

| TOPIC                        | DISCUSSIONS  |
|------------------------------|--|
| General work                 | The university campus currently have 50 % of Kulhudhuffushi and 50% student from outer atolls. There are different programs delivered – one is the block mode programs where a lot of students are interested in as it is run during weekend   |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Circulation of water in the harbor is less leading to algae formation in the boats and smelly water in some seasons,<br>Two entrance to the harbor is not enough in busy times,<br>Accretion of sand in the harbor leading to less depth,<br>No road development with harbor leading to huge puddles and in difficulty in loading/unloading and for passengers in rainy seasons.<br>No drainage in the roads,<br>No facilities for sick or disabled persons. |
| Gender and Poverty           | Equal participation by both gender is important for both and currently the campus provides equal opportunities.  |
| Additional Comments          | Should there be a need for training and capacity development. The university can be a part of it and play an important role to identify the training needs and provide training based on the capacity.   |

**20. Women Development Committee- Kulhudhuffushi****Date:** 25 December 2015**Venue:** Kulhudhuffushi**Attendance**

| Present                      | Organisation                       |
|------------------------------|------------------------------------|
| Sobeeha Mohamed – WDC member | Former Women Development Committee |
| Sofoora Kawsar               | PADECO & Riyan-Consultant          |

**Discussions**

| TOPIC | DISCUSSIONS |
|-------|-------------|
|-------|-------------|

|                              |  |
|------------------------------|--|
| General work                 | The term for the WDC was from November 2012 to November 2015. A new committee is still not elected and will be elected soon. The work of WDC includes working for the development of island. However, with a lot of challenges WDC was not able to perform to the optimal level. Some of the challenges included no financial and administrative support, no office space to do work and inactive leadership.  |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Delays in ferries due to no space for mooring,<br>No system in mooring, no space allocated for ferries or passenger/cargo boats.   |
| Gender and Poverty           | In terms of gender, females after studies look for jobs in the island, while males look for jobs outside the islands. Thus, the pay is different/lower for the females as they normally work as cashiers while males will be asked to do additional work such as deliveries and add on work.<br>Should there be trainings focussed under the project, the following areas are important;<br>Packaging and food processing<br>Hygiene in handling food<br>SME marketing<br>Technological skill development<br>Computer trainings<br>Administrative and management trainings |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Shelter,<br>Terminal,<br>ATMs<br>Markets   |
| Additional Comments          | Implementation of the new harbor project should act to tackle the current challenges in the harbor.  |

## 21. Airport ferry association- Kulhudhuffushi

**Date:** 26 December 2015

**Venue:** Kulhudhuffushi

### Attendance

| Present                | Organisation              |
|------------------------|---------------------------|
| Mohamed Adhuham- agent | Airport Ferry Association |
| Sofoor Kawsar          | PADECO & Riyan-Consultant |

### Discussions

| TOPIC | DISCUSSIONS |
|-------|-------------|
|       |             |

|                              |  |
|------------------------------|--|
| General work                 | Currently there are 11 ferries operating in the three northern atolls of the Maldives under the association. The size of these ferries are 60 – 70 ft. and charge MVR 20 for a trip. They are scheduled and the Kulhudhufushi is the central hub for ferried, this means all the trips will include kulhudhushi as central hub. On an average day 400- 500 people are transported from one place to another on these ferries. A total of MVR 140,000 was received as tickets sale during December 2015.  |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>No system that enforces the bigger business to behave, not regulated well.   |
| Gender and Poverty           | In terms of gender, no females work in ferries. One foreigner works in each ferry but Maldivians are always given priority. However, it is foreseeable females will work in the terminals as cashiers if those facilities are established. The passengers travelling in the ferries are mainly females, accounts to 75%.<br>Should there be trainings focussed under the project, the following areas are important;<br>Packaging and food processing<br>Hygiene in handling food<br>SME marketing<br>Technological skill development<br>Computer trainings<br>Administrative and management trainings |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Slipway<br>Water,<br>Fuel,<br>Electricity<br>Terminals for ferries<br>A designated area for ferries.   |
| Additional Comments          | Currently people above 65, children and disabled people can travel free of charge. Thus, harbor should take these into consideration.<br>If capital and loans for maintenance is available it would be useful.   |

## 22. ACSC- Kulhudhuffushi

**Date:** 26 December 2015

**Venue:** Kulhudhuffushi

### Attendance

| Present  | Organisation |
|--|--------------|
| Shaheedha Ahmed – President ACSC<br>Aminath Afreena – Member of ACSC<br>Ibrahim Naeem – Member ACSC<br>Mohamed Umar – Information Secretary ACSC<br>Saudha Ahmed – Secretary ACSC<br>Ahmed Abdulla – Member Zigzag<br>Azeez - Zigzag | NGOs         |

|                |                           |
|----------------|---------------------------|
| Sofoora Kawsar | PADECO & Riyan-Consultant |
|----------------|---------------------------|

**Discussions**

| TOPIC                        | DISCUSSIONS  |
|------------------------------|--|
| General work                 | Both NGOs work with youth and are active in the developmental activities of island. They get opportunity to participate in activities and try to give input in projects.   |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Limited entrance to the harbor,<br>Less water circulation in the harbor, making water stinky<br>Accretion of sand in the harbor<br>In rainy and windy seasons – the tides and current become so high the boats continuously hit the harbor bringing a lot of damages,<br>Harbor is too small for the current number of vessels<br>Not able to fully utilise the harbor – mooring on two sides not possible |
| Gender and Poverty           | The new harbor will allow women to develop small business like food processing at home. And supply it to the shops and gaadiyas (food carts) in the harbor. This will increase indirect employment for women.<br>Should there be trainings focussed under the project, the following areas are important;<br>Boat engine servicing<br>Outboard engine maintenance<br>Business development<br>Craft and handiwork   |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Slipway, Water, Fuel, Sheltered stops (like bus stops), Prayer room, Toilets, Slipway, Tourism development, Terminals for ferries. A designated area for ferries.  |
| Additional Comments          | People will be willing to rent land and buildings from the harbor. In this sense, a 6000 ft. building will be rented for more than MVR 25,000. With airport development, there will again be more employment opportunities that will bring more population. Plus, the island also needs sea plane to Malé and resorts.   |

**23. Residents of other islands- Kulhudhuffushi****Date:** 26 December 2015**Venue:** Kulhudhuffushi**Attendance**

| Present  | Organisation              |
|--|---------------------------|
| Hussain Ali<br>Hassan Habeeb – HA. Hoarafushi<br>Noorul Hudha Mohamed – H.Dh.<br>Nellaidhoo<br>Mohamed Mausoom – H.Dh Makunudhoo | People from other islands |

Sofoora Kawsar

PADECO &amp; Riyan-Consultant

**Discussions**

| TOPIC                        | DISCUSSIONS   |
|------------------------------|---|
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>Limited entrance – need more entrance to harbor<br>Design is not good for different weathers<br>Cannot utilise the breakwater   |
| Gender and Poverty           | The new harbor will allow women to develop small business like food processing at home. And supply it to the shops and gaadiyas (food carts) in the harbor. This will increase indirect employment for women.<br>Should there be trainings focussed under the project, the following areas are important;<br>Skills development<br>Technicians<br>Engineering<br>Vehicle repair<br>Carpentry<br>Mason works |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Shelter (bus stops)<br>Fuel<br>Terminal<br>Phone booths<br>Toilets<br>Restaurants<br>Cafes<br>Benches<br>Rent apartments<br>Water   |
| Additional Comments          | People will be willing to rent land and buildings from the harbor. In this sense, a 6000 ft. land will be rented for more than MVR 2000. Even now people from the smallest island like Kumundhoo, Kurinbi and Nellaidhoo are willing to migrate if they are given housing plots/flats (even for flat purchase amount MVR 800,000).  |

**24. Residents of Kulhudhuffushi****Date:** 26 December 2015**Venue:** Kulhudhuffushi**Attendance****Present****Organisation**



|  |                            |
|--|----------------------------|
| Habeeba Ali – Bank of Maldives<br>Shaheedha Ali – Jalaaludheen School<br>Niyaz Moosa – Taxi driver<br>Ahmed Adam – Construction<br>Ali Abdul Raheem – Security services<br>Hussain Ali – Businessman<br>Hussain Yamin –Businessman<br>Mohamd Ali – Businessman | People from Kulhudhuffushi |
| Sofoora Kawsar   | PADECO & Riyan-Consultant  |

### Discussions

| TOPIC                        | DISCUSSIONS  |
|------------------------------|--|
| General Discussion           | Kulhudhuffushi is the biggest population in the northern part of Maldives and the busiest island too, in terms of travel. There is not day in a week people do not come to Kulhudhuffushi. Mostly, people travel for health and education purposes. In this sense, in grade 11-12 (for A' level studies) more than 75% are from other islands.   |
| Challenges of Current Harbor | Current harbor has a lot of challenges, in this sense;<br>No section for ferries and bigger vessels<br>Cannot moor on two sides<br>Harbor is too small for the number of vessels entering the island   |
| Gender and Poverty           | Currently there are no opportunities for all the students who finish high school. Thus, there is a competition for jobs and employers hire fees for a low salary mainly because fees are more committed and reliable. Should there be trainings focussed under the project, the following areas are important;<br>Vocational Education (previously when VTC was working, Kulhudhuffushi was a strong campus, however with polytechnic all the equipment and machinery are displaced)<br>Health sector – specific for girls<br>Business development areas<br>Innovation<br>Accounting |
| New Facilities               | The following facilities should be the minimum ancillary facilities available;<br>Water, Fuel, Toilet, Electricity, Cranes, Slipway, Warehouse (wood and cement)<br>Taxi queuing , Need separate area for taxis  |
| Additional Comments          | It is important that the KPL be operational to get the full benefits of the extended harbor. Hence, the new harbor needs to till the end of reef edge. Businesses and people from islands will be interested to rest out land and building in the harbor for a 6000 – 8000 sq. ft. place for MVR 20,000 – 30,000. This will rise with the new airport and other development projects.  |

## 25. MPL

**Date:** 28 January 2016

**Venue:** MPL

**Attendance**

| Present   | Organisation              |
|---|---------------------------|
| Ibrahim Shareef Mohamed- CEO<br>Ibrahim Rasheed- Genral Manager | MPL                       |
| Khalid Bichou   | PADECO & Riyan-Consultant |

### Discussions

| TOPIC                                | DISCUSSIONS  |
|--------------------------------------|--|
| Introduction                         | KB gave a brief description about Kulhudhufushi Expansion Project  |
| MPL / KPL scope of work              | CEO explained history, current structure, and future plans of MPL, including their scheduled move to Thilafushi, He also explained current situation with KPL and plans for making the port as a transit point for perishable goods. He also outlines current difficulties of KPL.   |
| KPL training centre                  | Mr Rasheed explained role and work of MPL training centre and provided a guided tour to the centre facilities. It was explained that the centre offers short courses in port operations and management to MPL staff sometimes in cooperation with international experts, other international ports, as well as international agencies such as UNCTAD. The MPL training centre can also cooperate to offer courses to other port staff outside MPL. |
| Cooperation with MPL as part of CDTA | Khalid Bichou mentioned that s part of this PPTA, several CDTA components will be offered one of which on capacity building and training of Kffushi port staff. As such, there may be ground to cooperate with MPL and use their training facilities.  |
| Schedules ADB mission                | Khalid bichou also mentioned that the ADB fact finding mission is scheduled in late Feb- early March 2016, and a meeting between MPL and ADB would be beneficial to explore cooperation as part of the above CDTA.   |