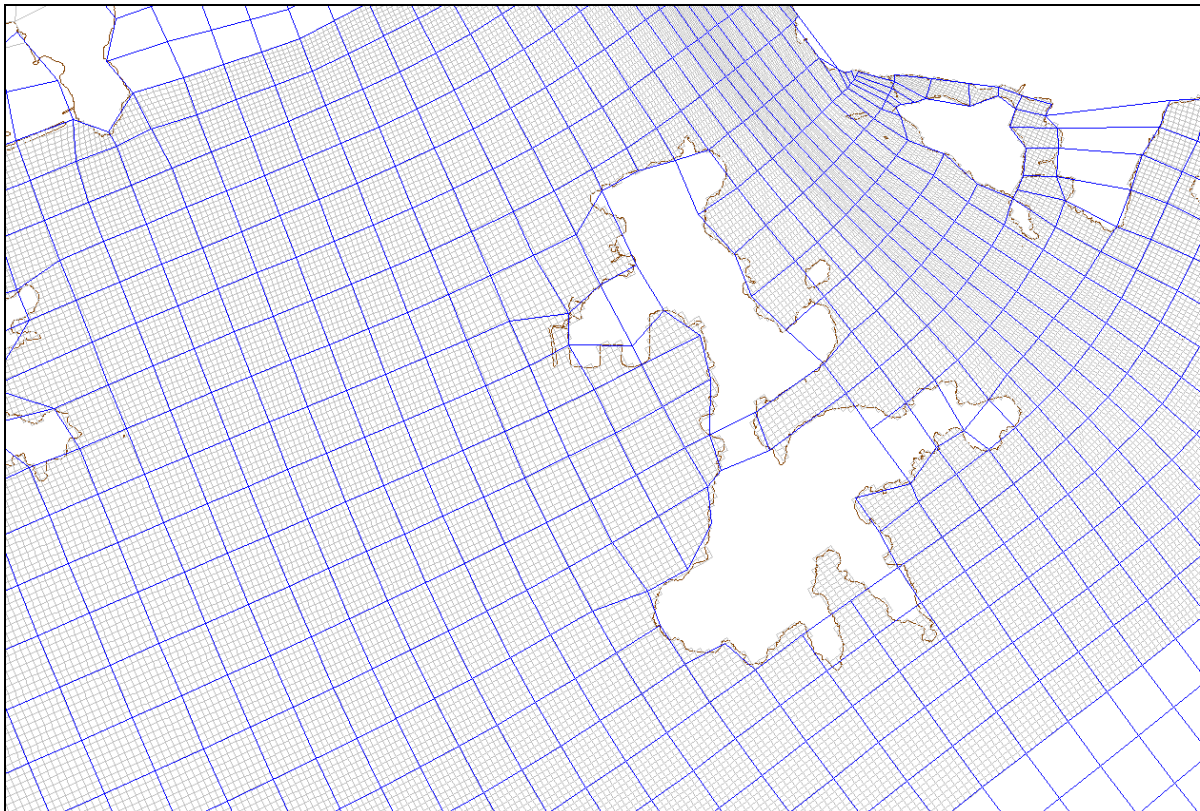
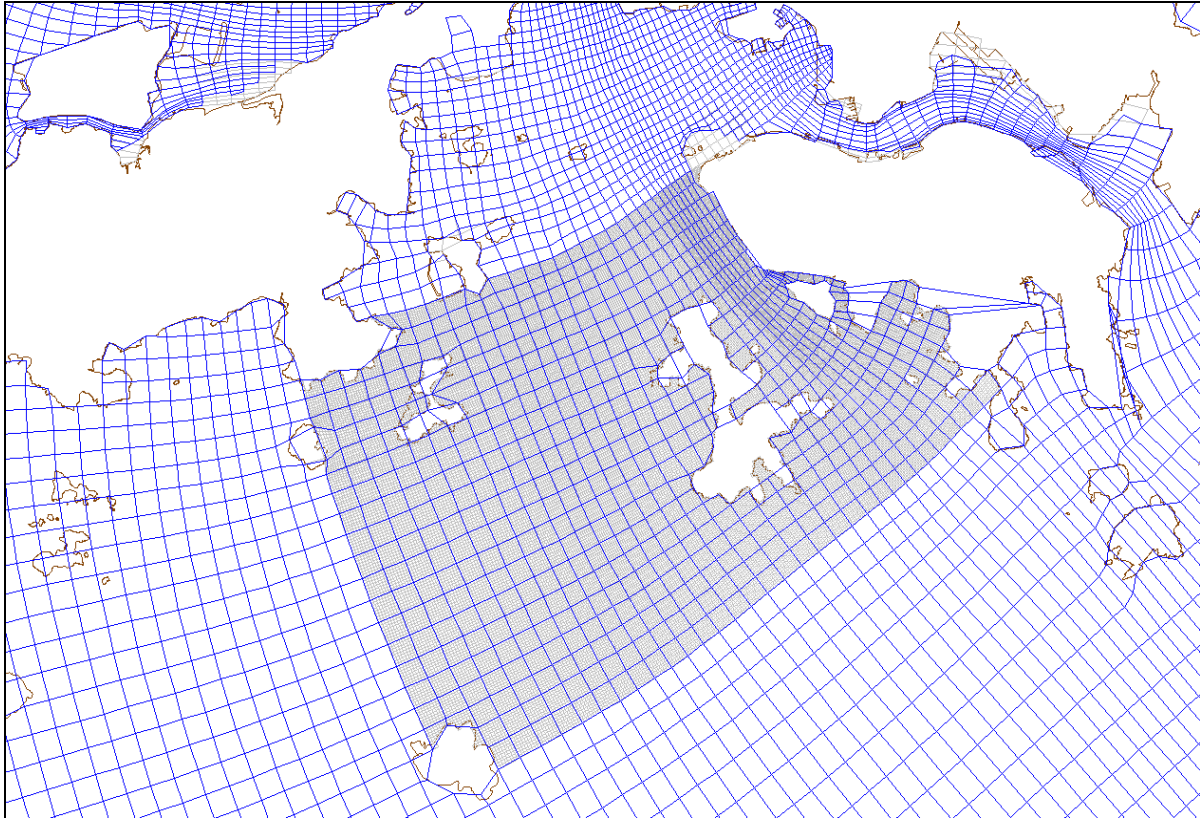


Appendix 3.1 Model Grid Refinement and Validation Results

Annex A Comparison of Original UM Grid with Refined Model Grid

Improvement Dredging for Lamma Power Station Navigation Channel

Environmental Impact Assessment Report

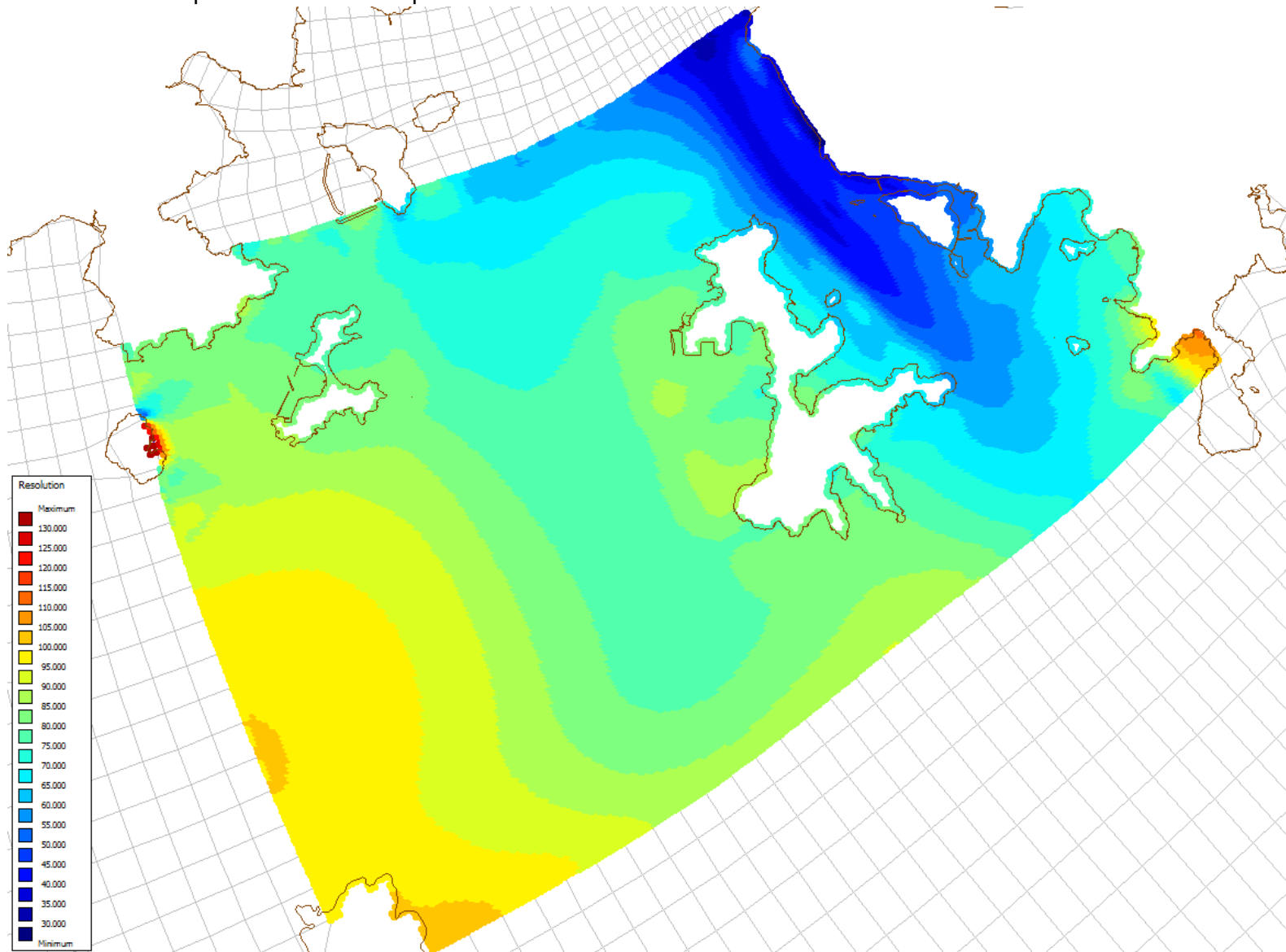


Comparing two grids: Original (blue) and Refined Model Grid (grey)

Annex B Comparison of Grid Parameters

Improvement Dredging for Lamma Power Station Navigation Channel

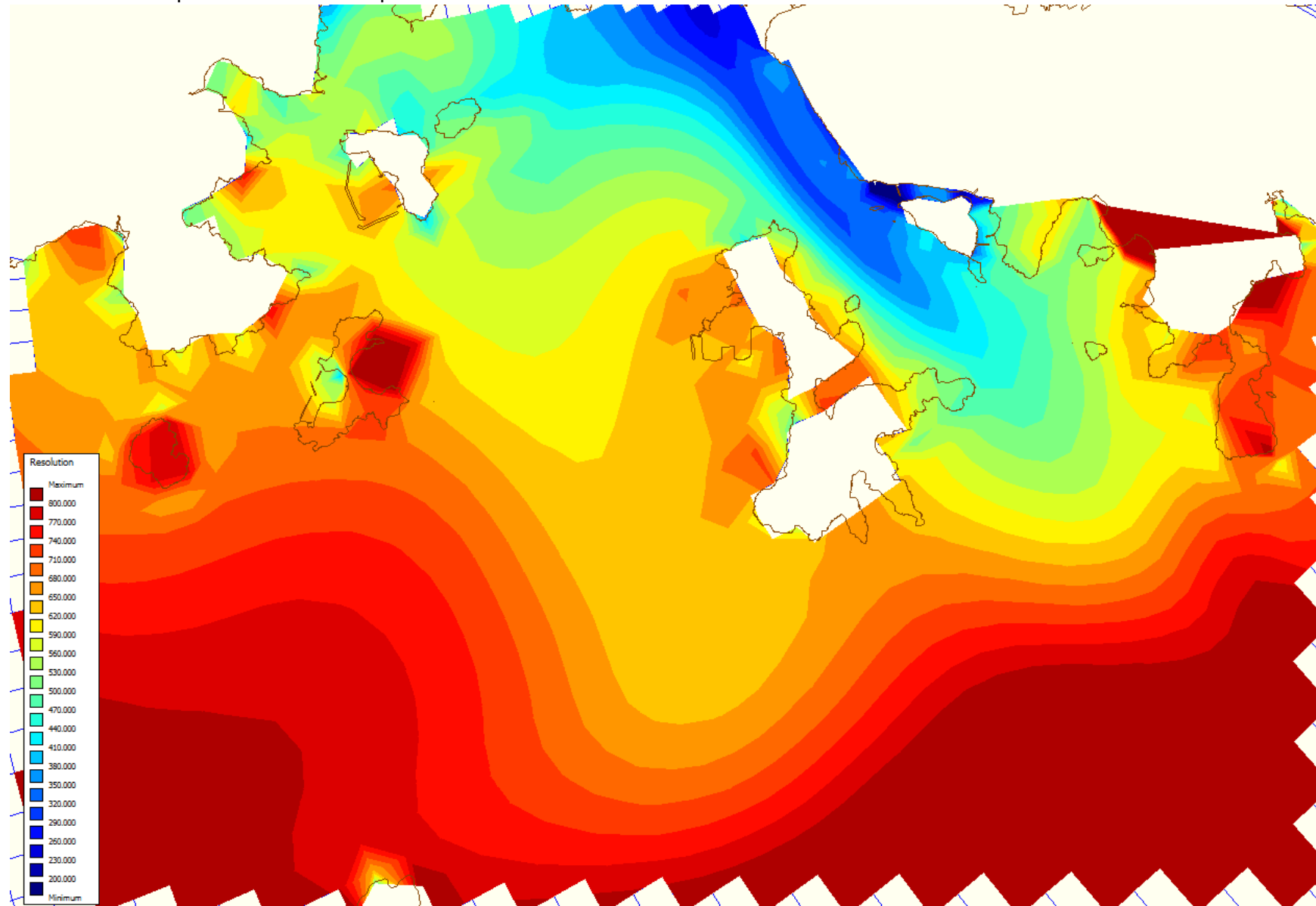
Environmental Impact Assessment Report



Resolution plot for internal domain of the refined grid. Land boundary of 2015 is shown. Note that different colour scales are used in the panels.

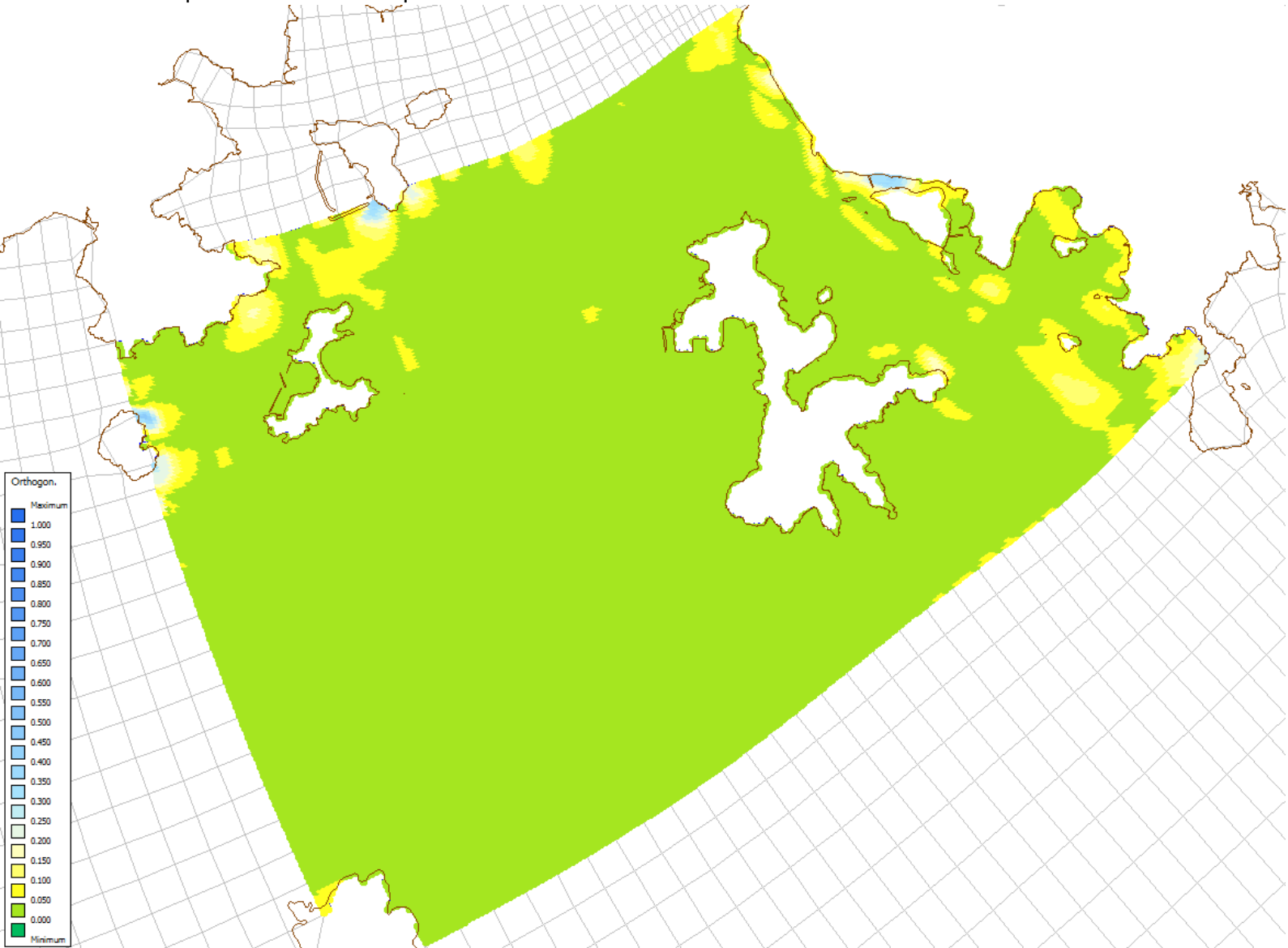
Improvement Dredging for Lamma Power Station Navigation Channel

Environmental Impact Assessment Report



Resolution plot for original grid. Land boundary of 2015 is shown. Note that different colour scales are used in the panels.

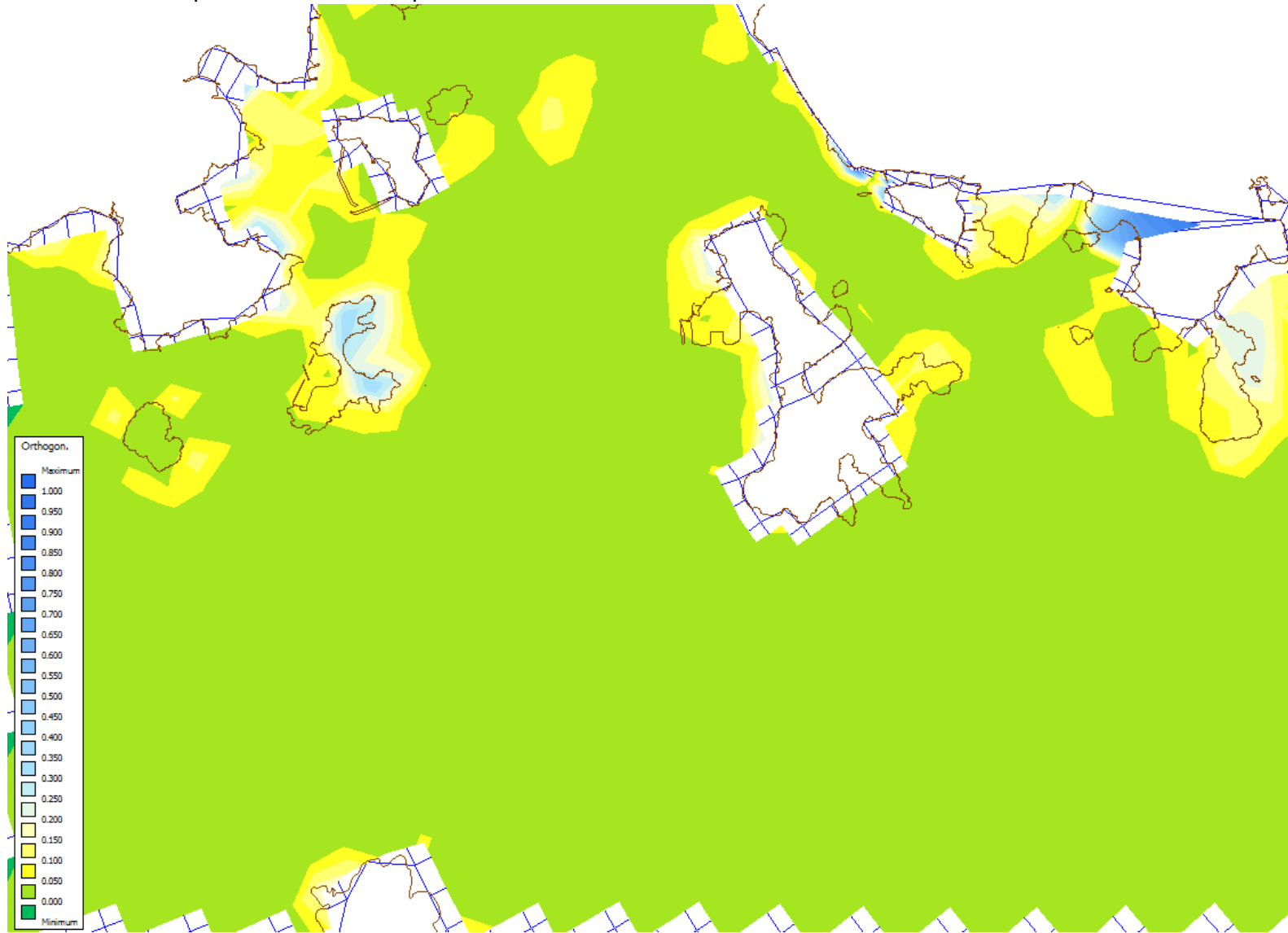
Improvement Dredging for Lamma Power Station Navigation Channel
Environmental Impact Assessment Report



Orthogonality plot for internal domain of the refined grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

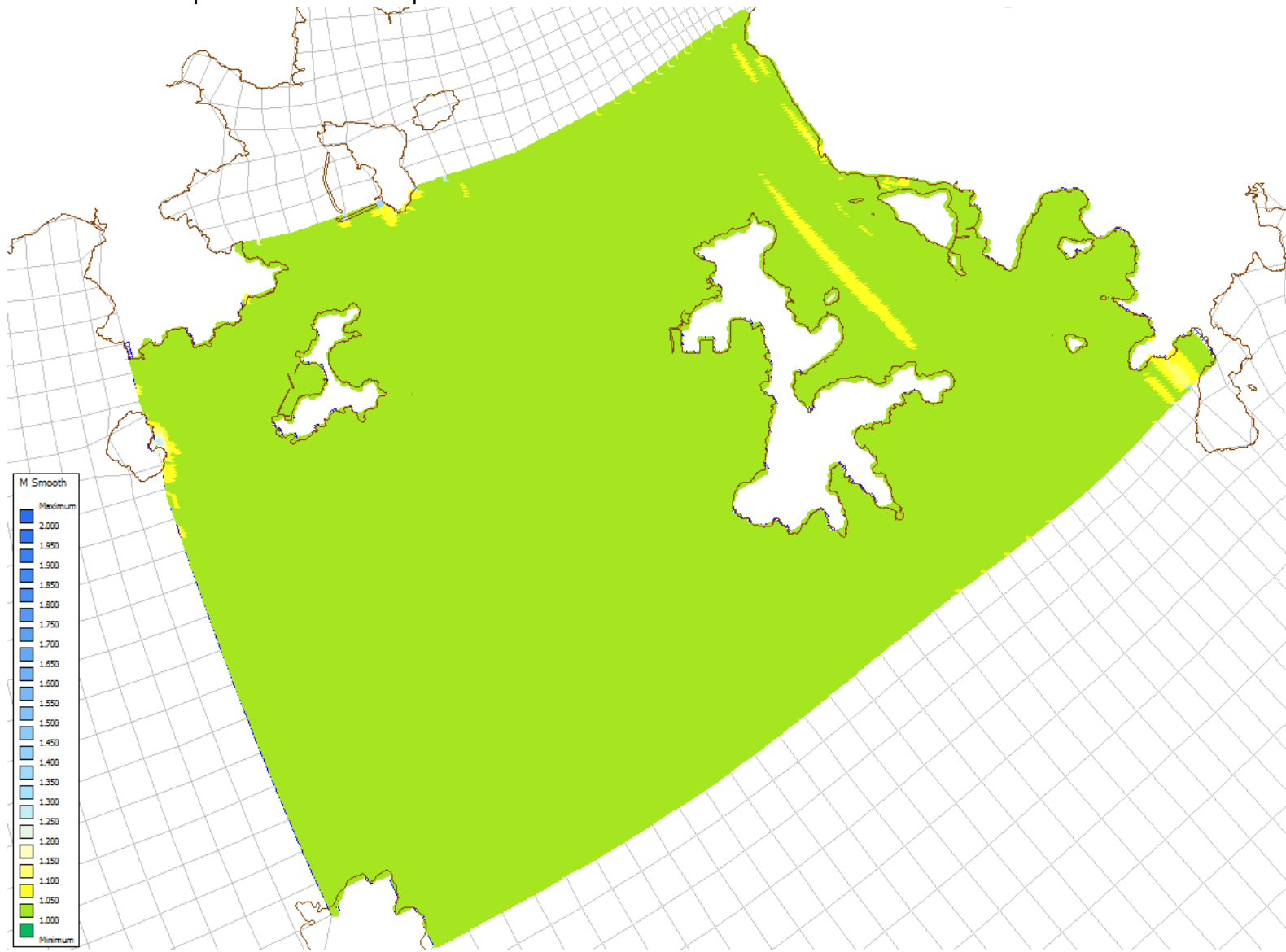
Environmental Impact Assessment Report



Orthogonality plot for original grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

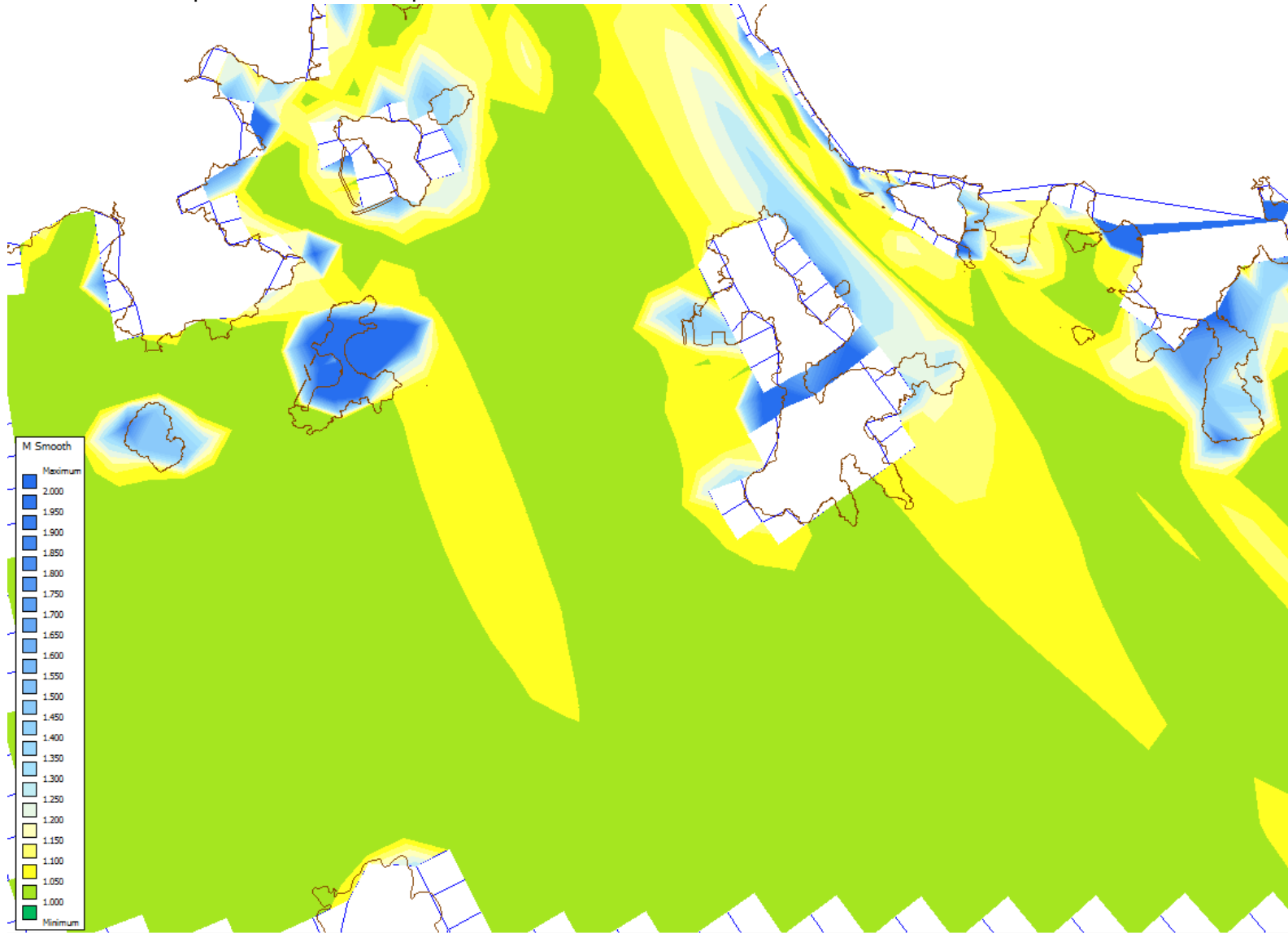
Environmental Impact Assessment Report



M Smoothness plot for internal domain of the refined grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

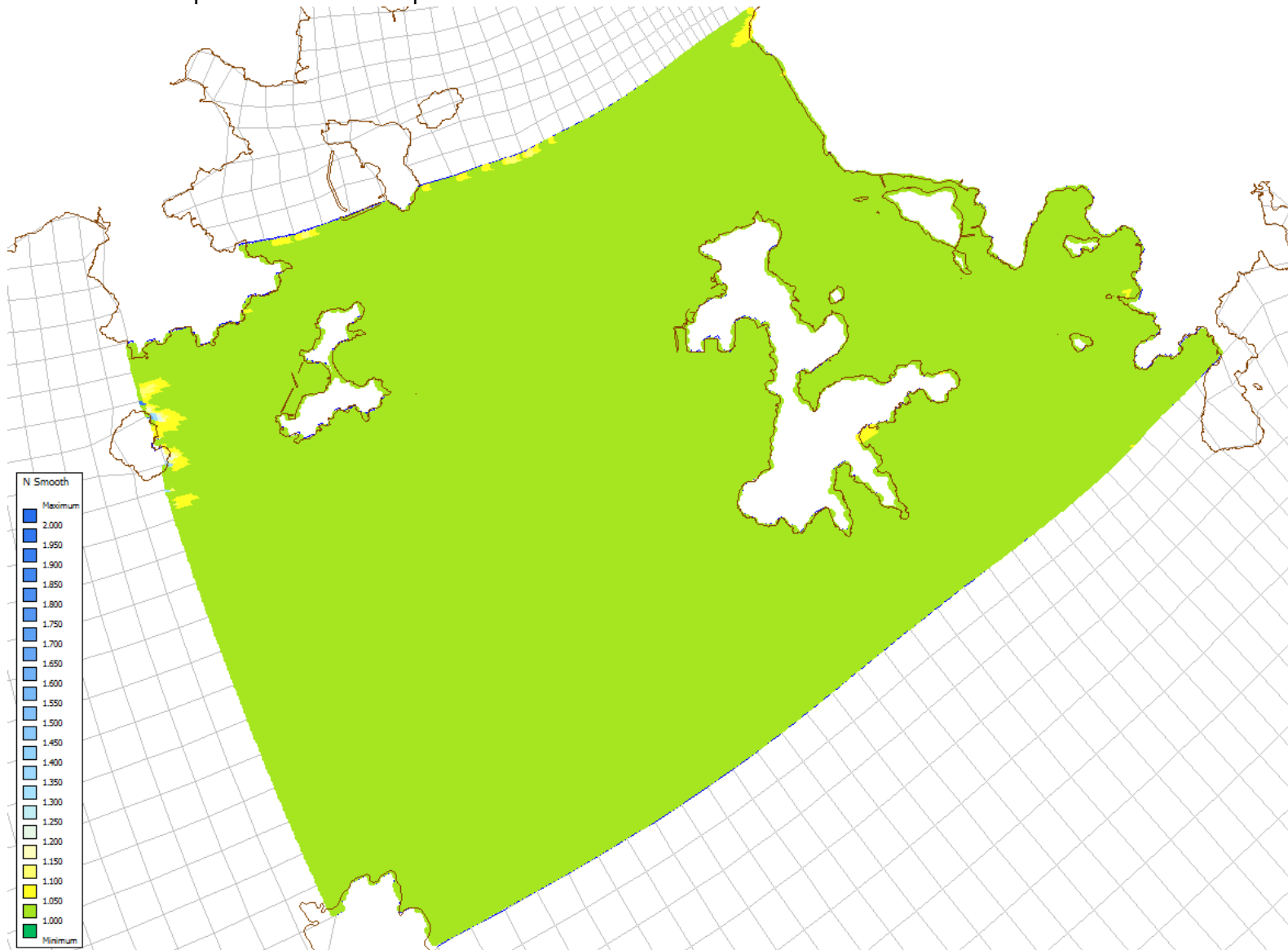
Environmental Impact Assessment Report



M Smoothness plot for original grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

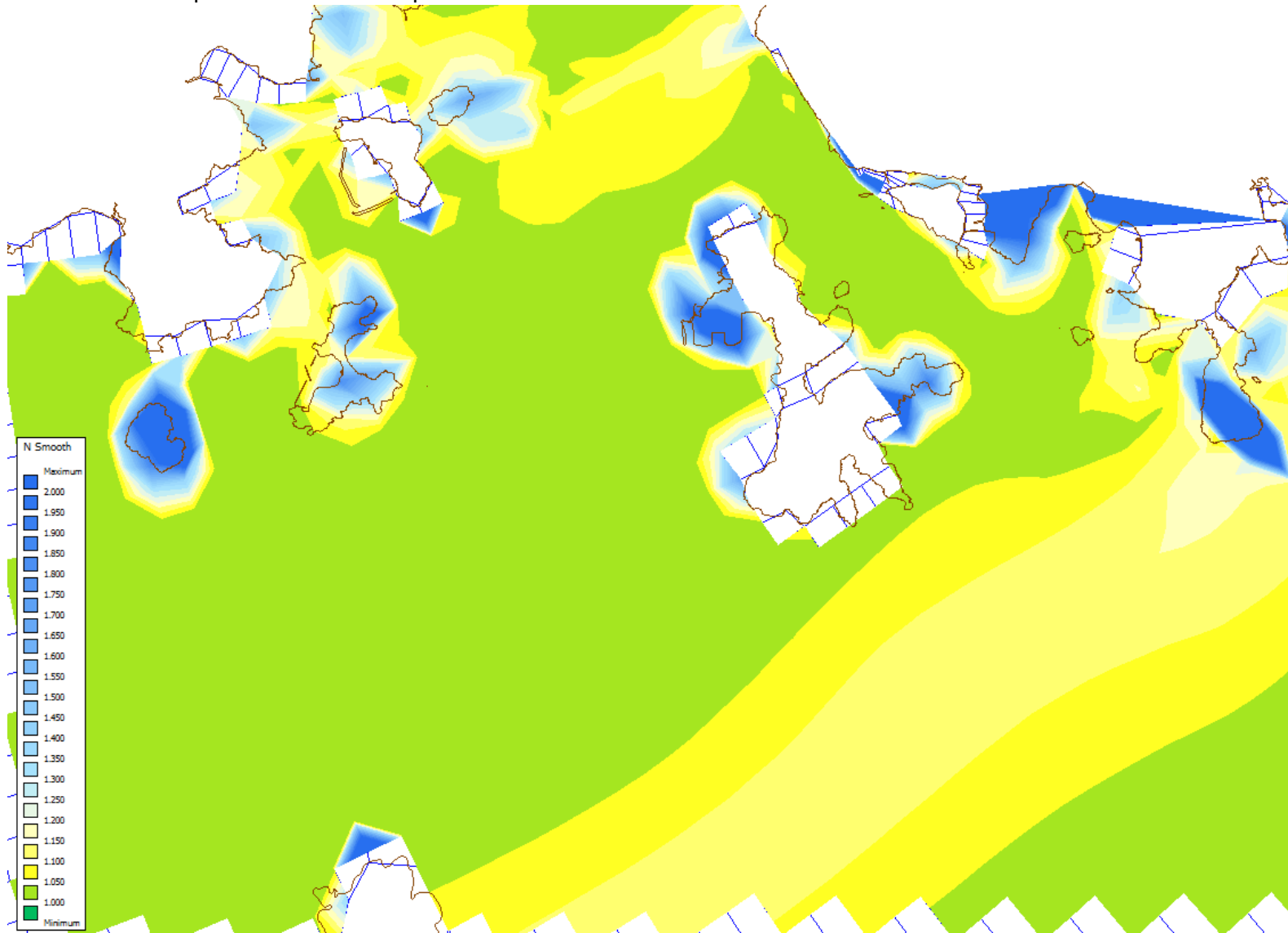
Environmental Impact Assessment Report



N Smoothness plot for internal domain of the refined grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

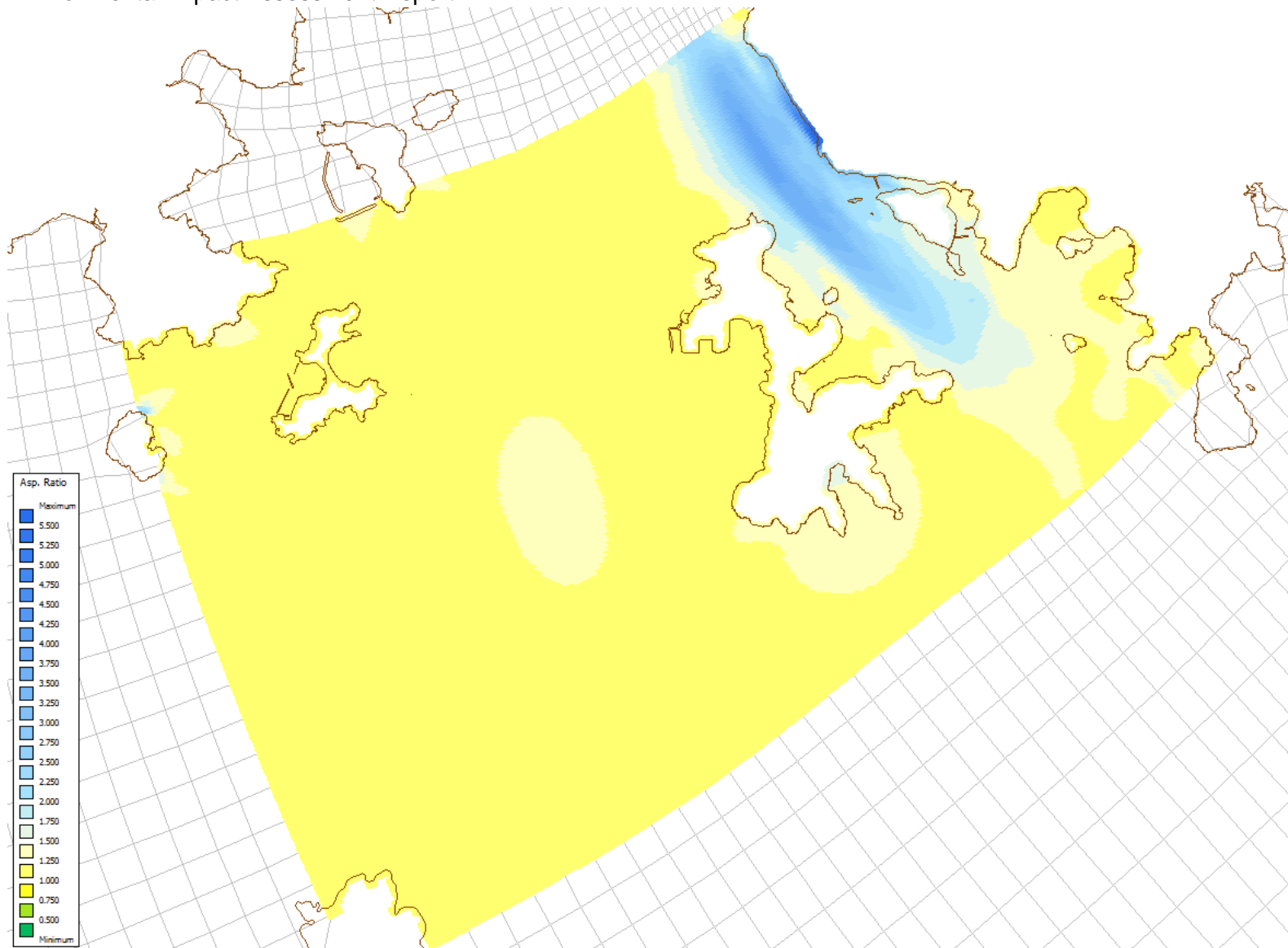
Environmental Impact Assessment Report



N Smoothness plot for original grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

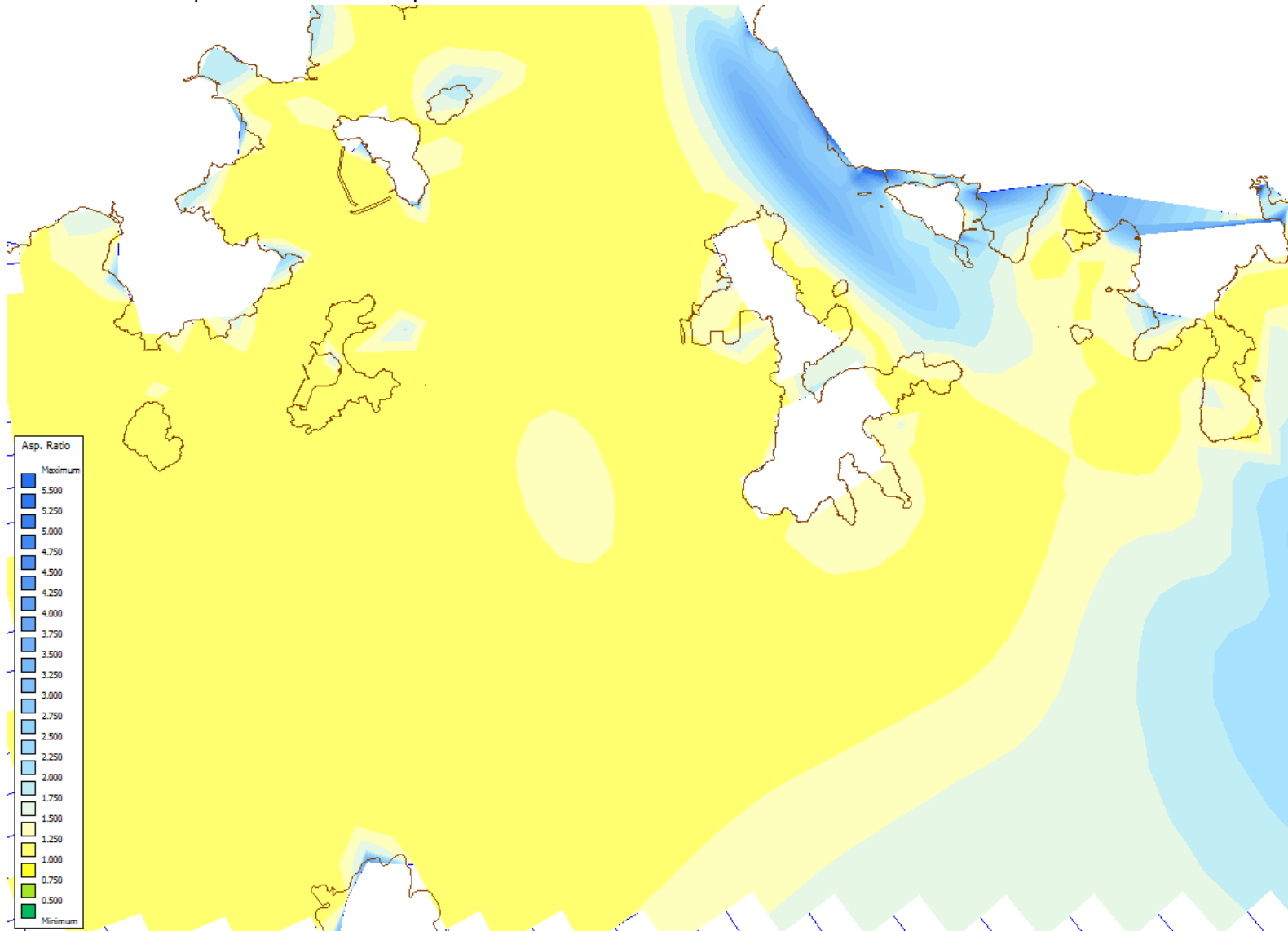
Environmental Impact Assessment Report



Aspect Ratio plot for refined grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

Improvement Dredging for Lamma Power Station Navigation Channel

Environmental Impact Assessment Report



Aspect Ratio plot for original grid. Land boundary of 2015 is shown. Note that the same colour scale is used in both panels.

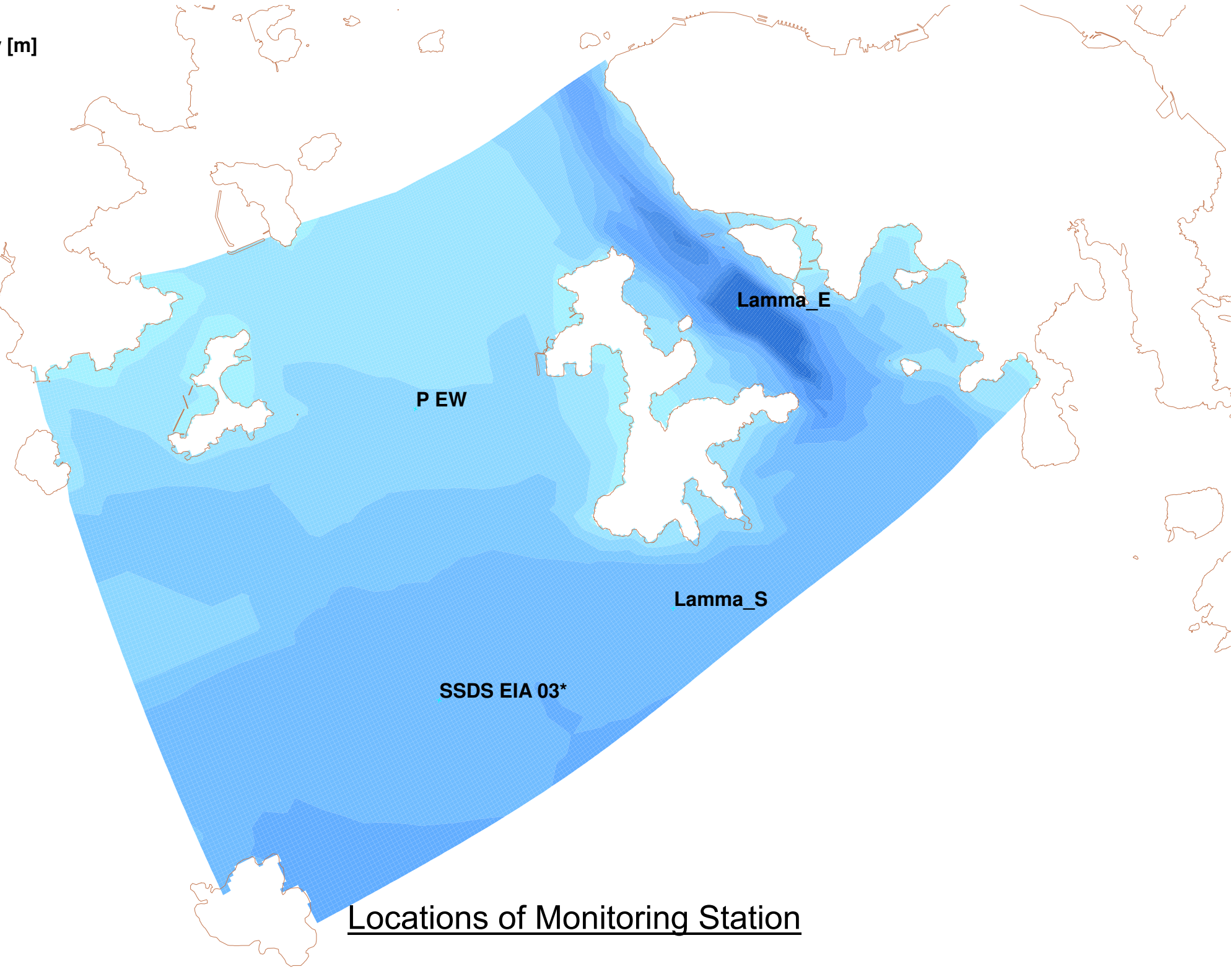
Improvement Dredging for Lamma Power Station Navigation Channel

Environmental Impact Assessment Report

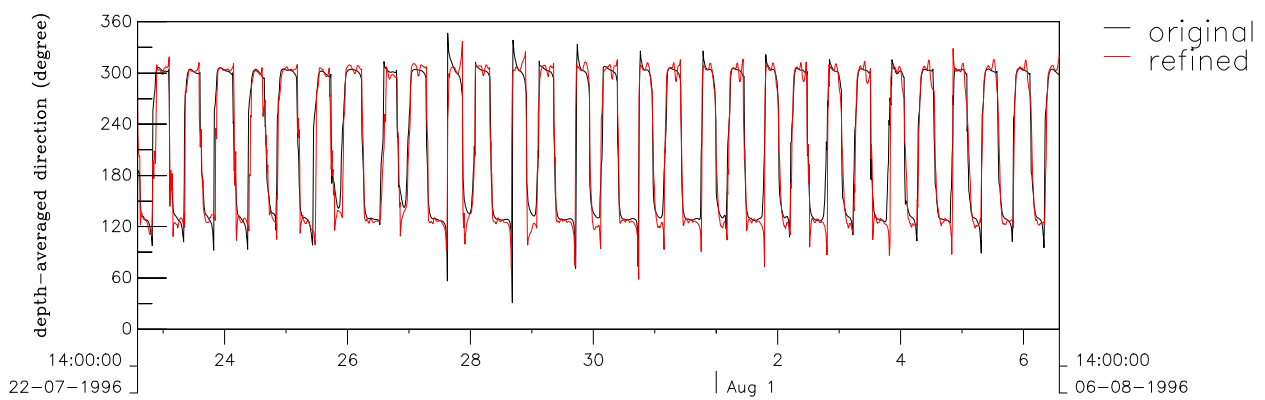
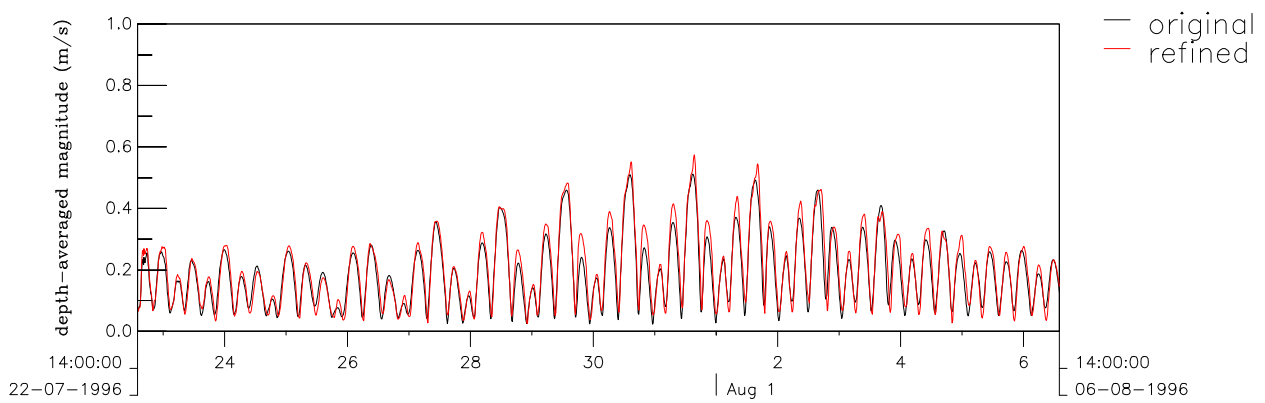
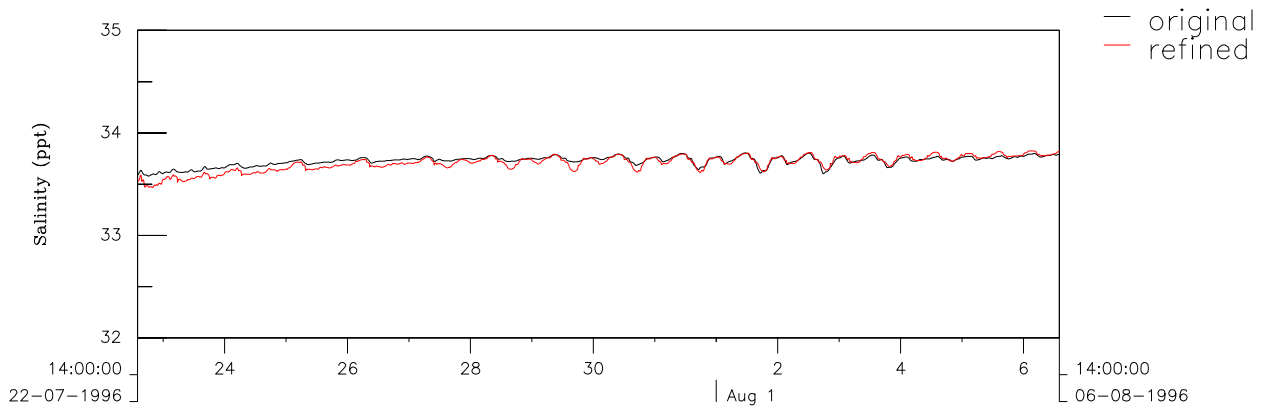
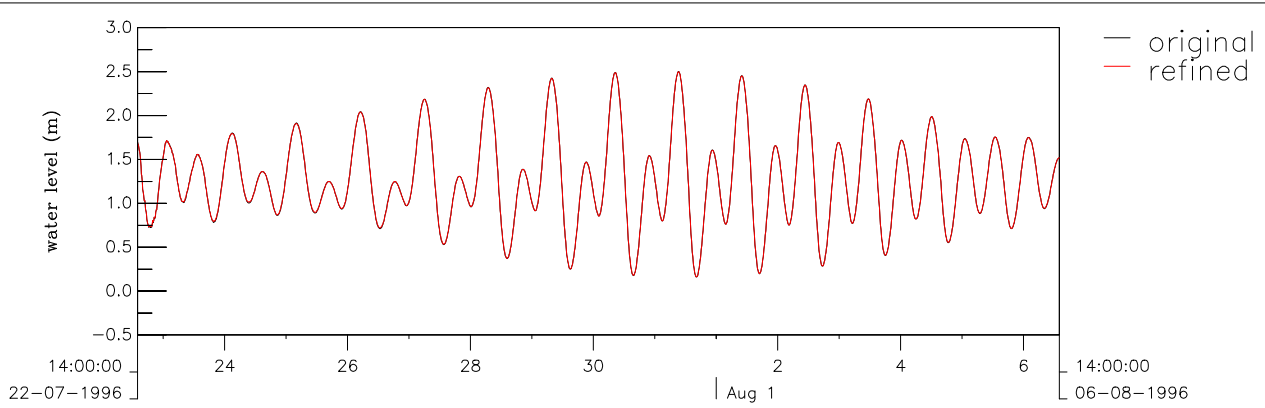
Annex C Model Validation Results

Bathymetry [m]

- < 1.0
- < 5.5
- < 10.0
- < 14.5
- < 19.0
- < 23.5
- < 28.0
- < 32.5
- < 37.0
- < 46.0
- < 50.5

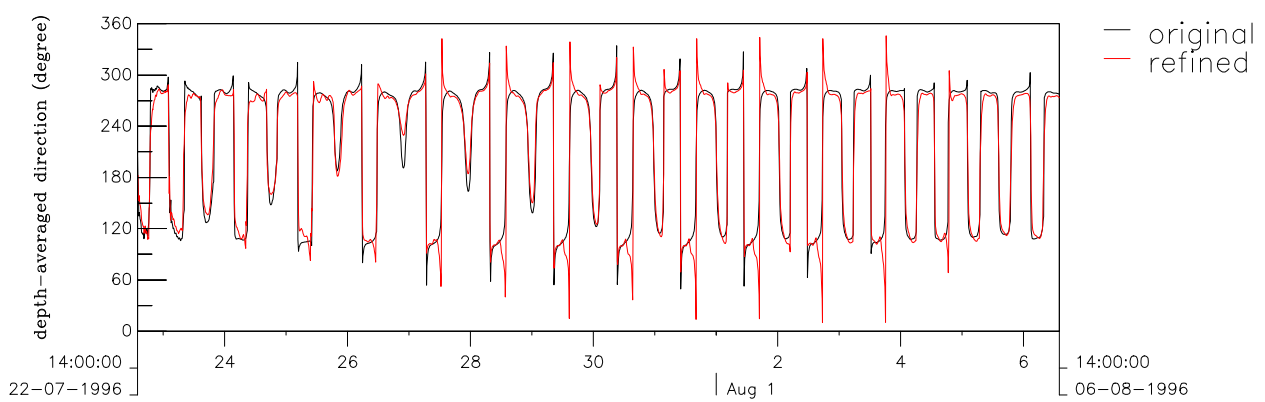
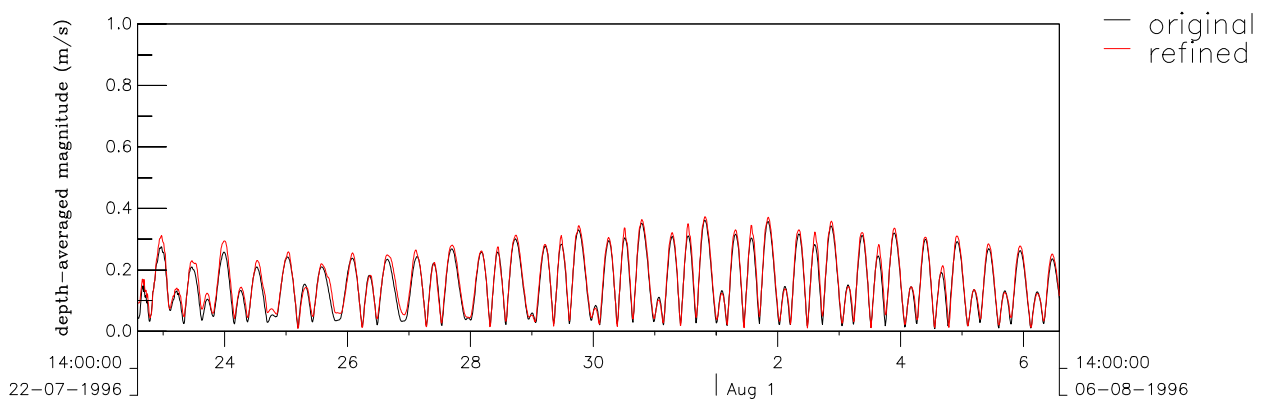
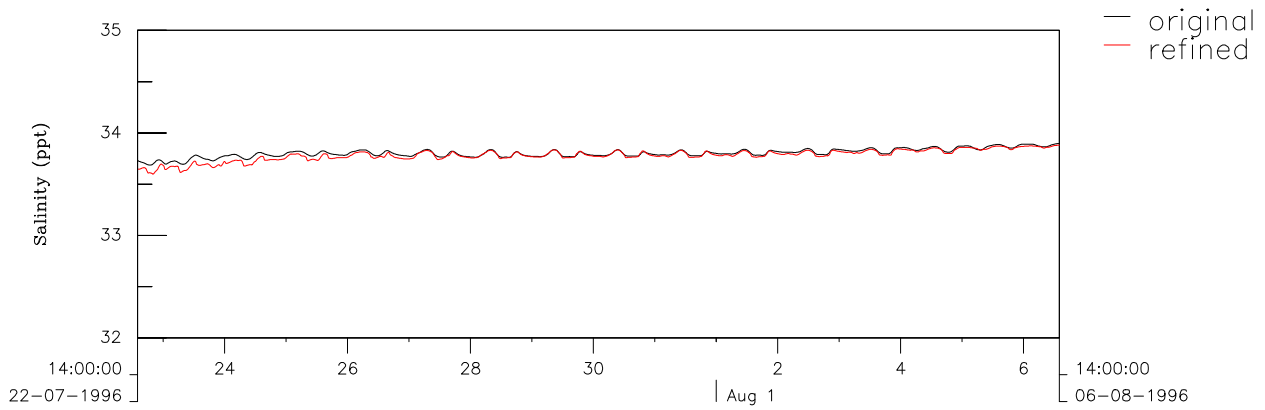
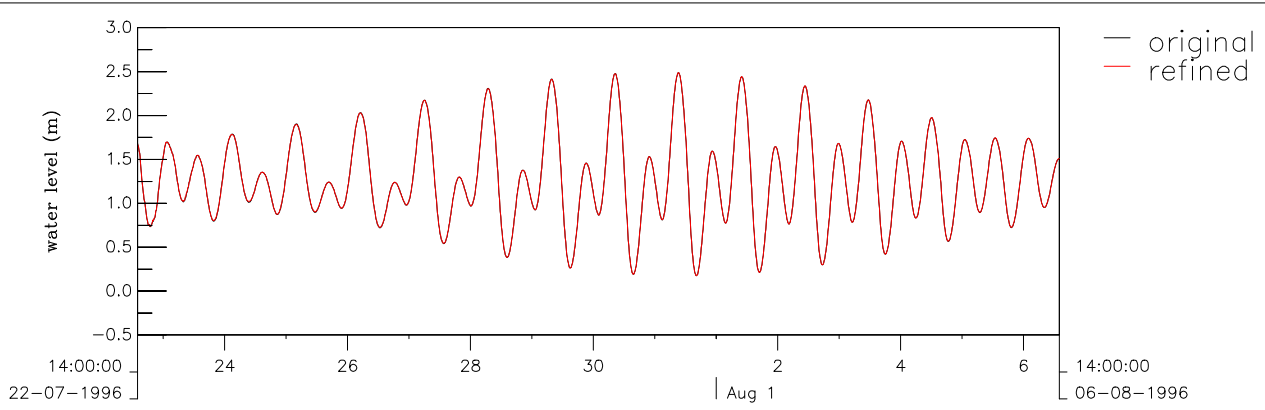


Locations of Monitoring Station



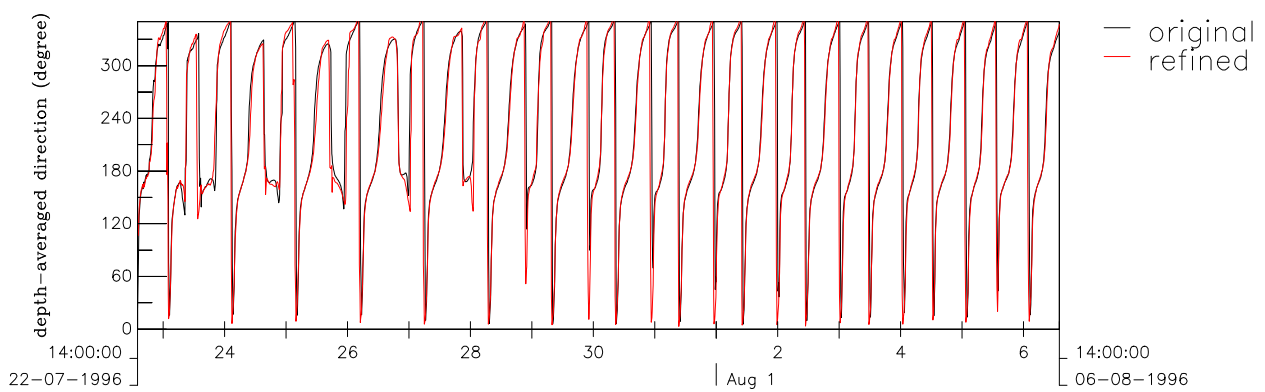
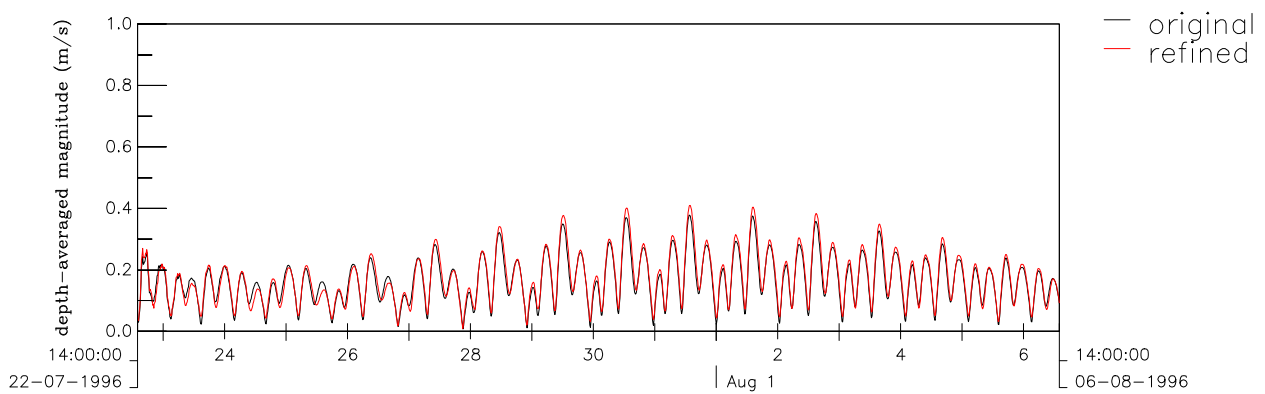
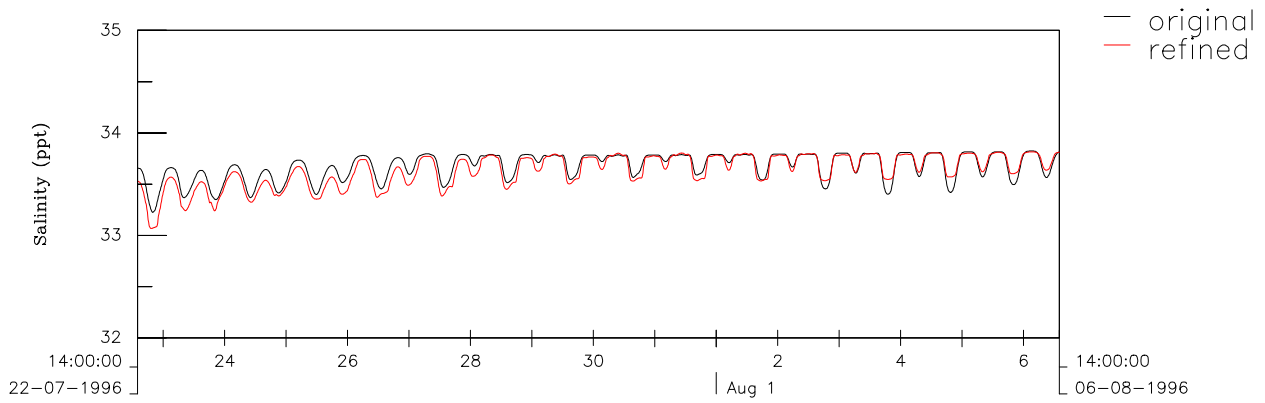
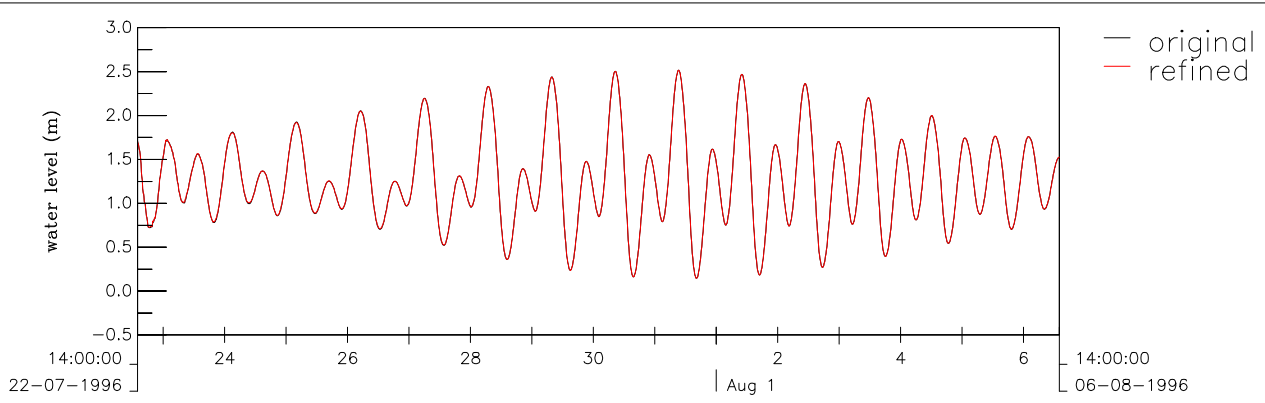
Comparison of Hong Kong model results at "Lamma-E"
original v.s. refined (8x8 DD), Run00w v.s. Run01w
Dry Season

Mott MacDonald Hong Kong Limited



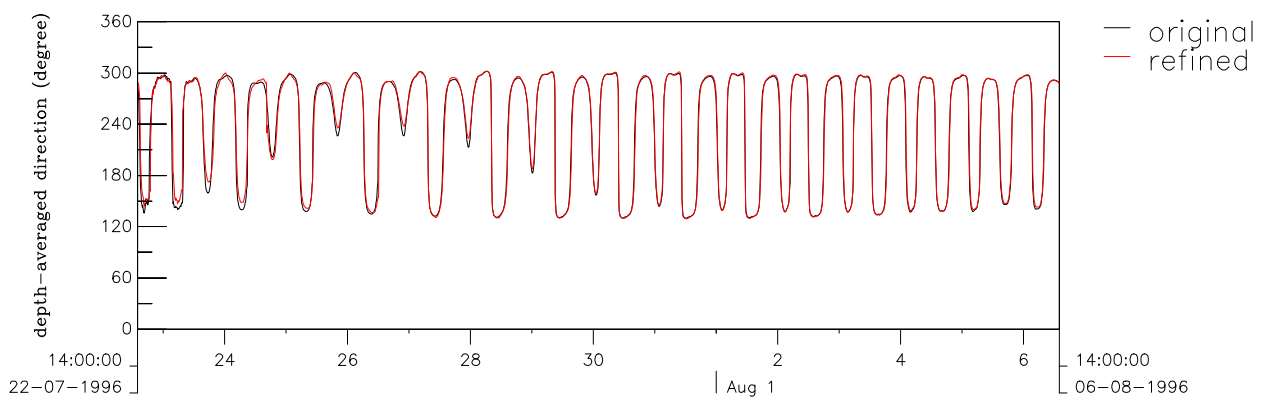
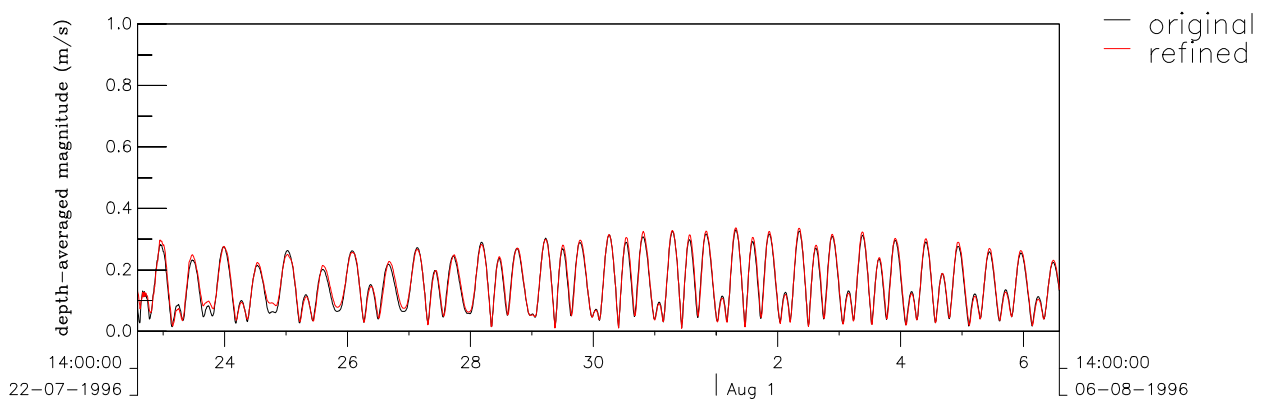
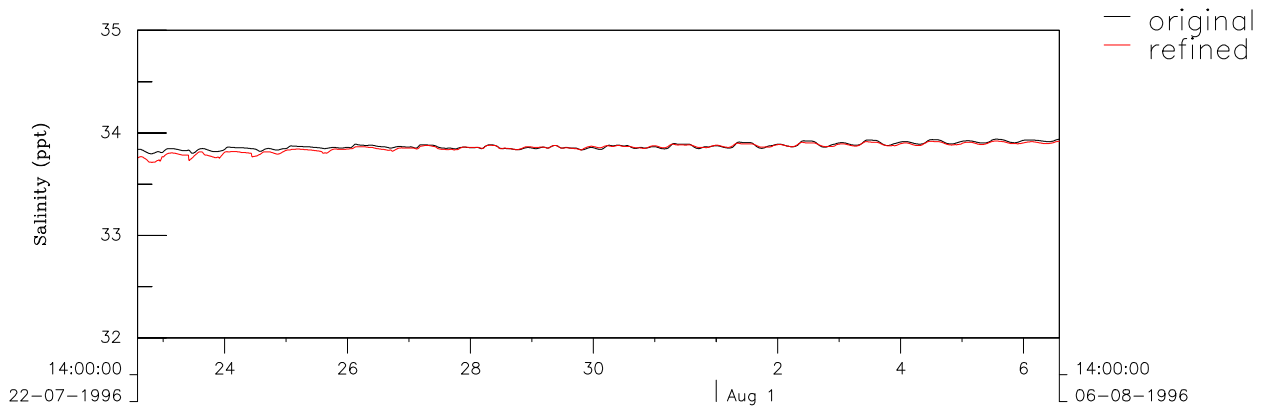
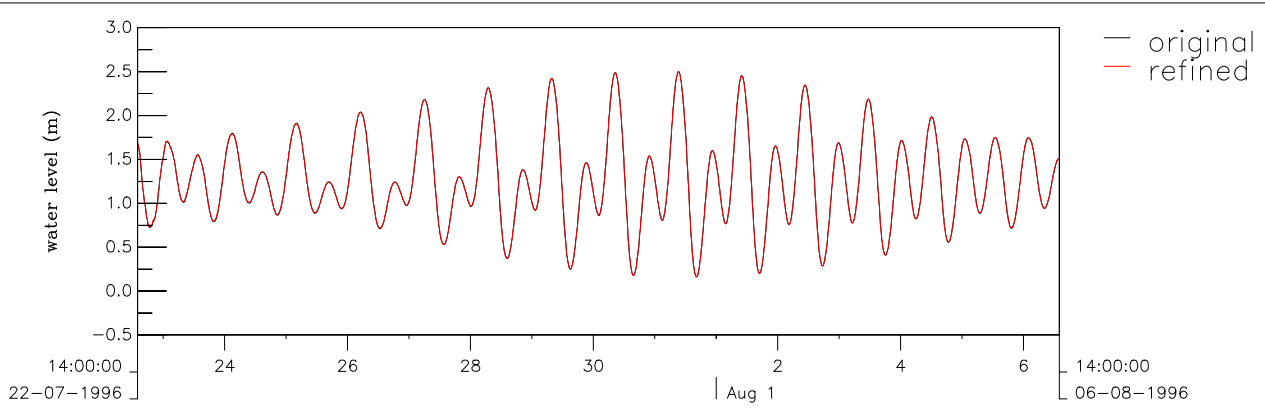
Comparison of Hong Kong model results at "Lamma-S"
original v.s. refined (8x8 DD), Run00w v.s. Run01w
Dry Season

Mott MacDonald Hong Kong Limited



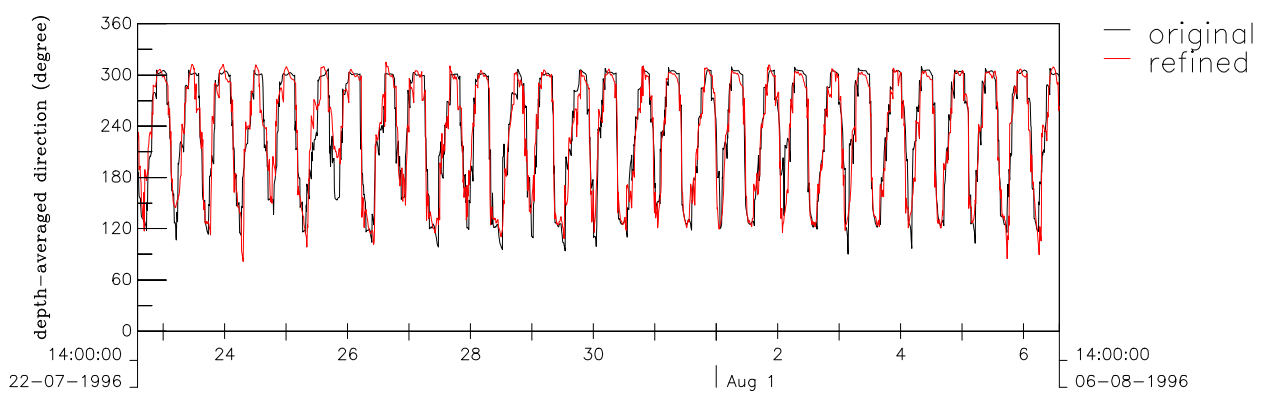
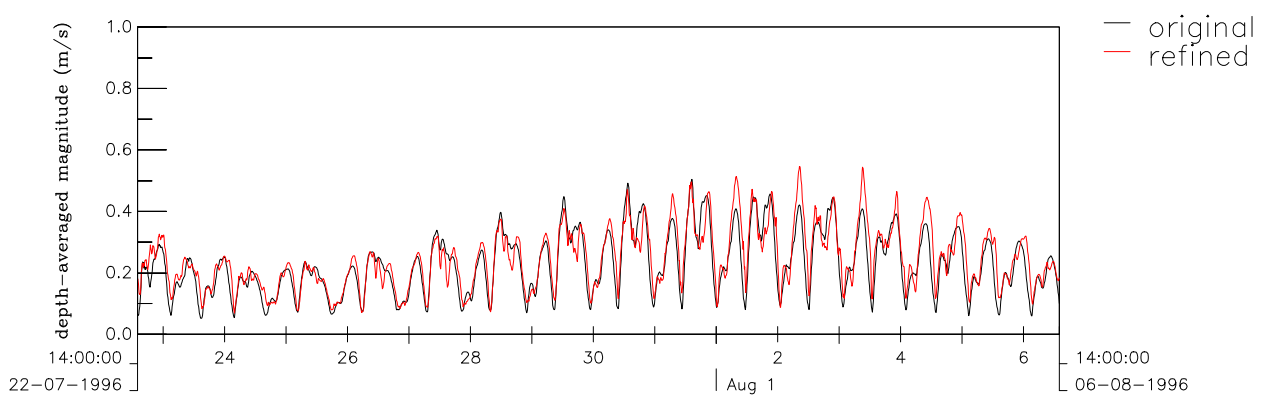
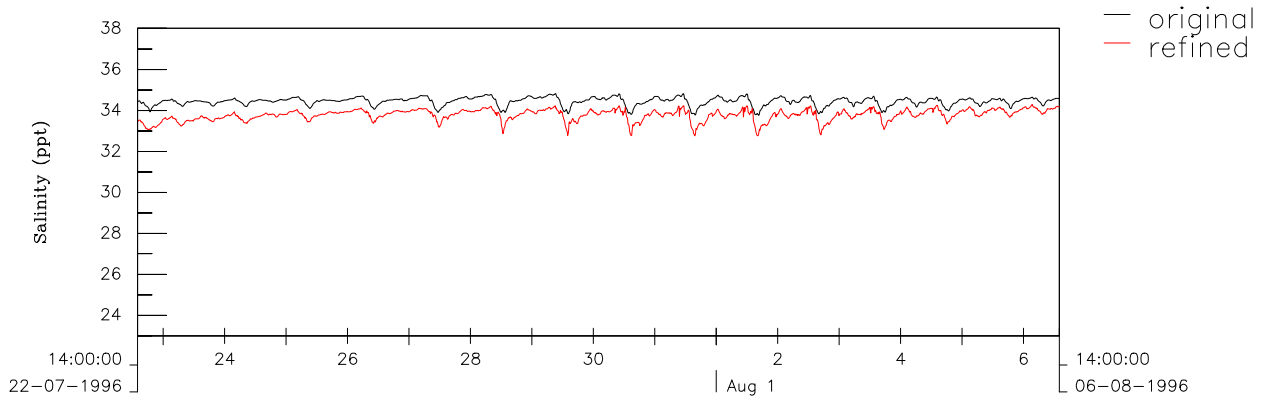
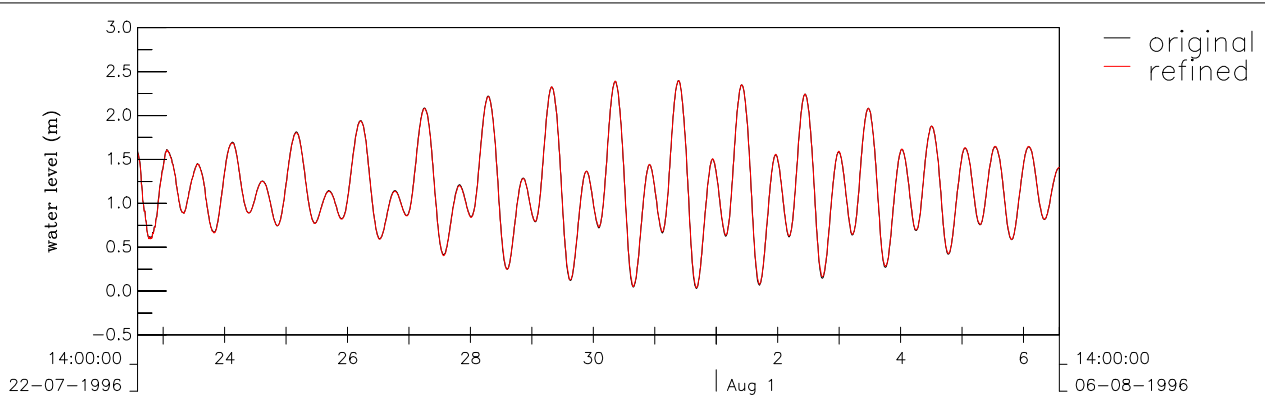
Comparison of Hong Kong model results at "P EW"
original v.s. refined (8x8 DD), Run00w v.s. Run01w
Dry Season

Mott MacDonald Hong Kong Limited



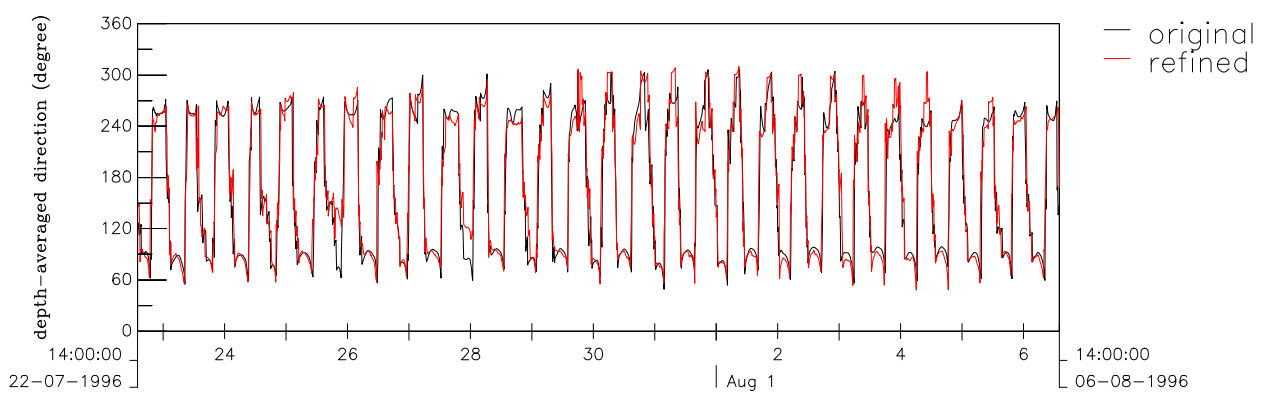
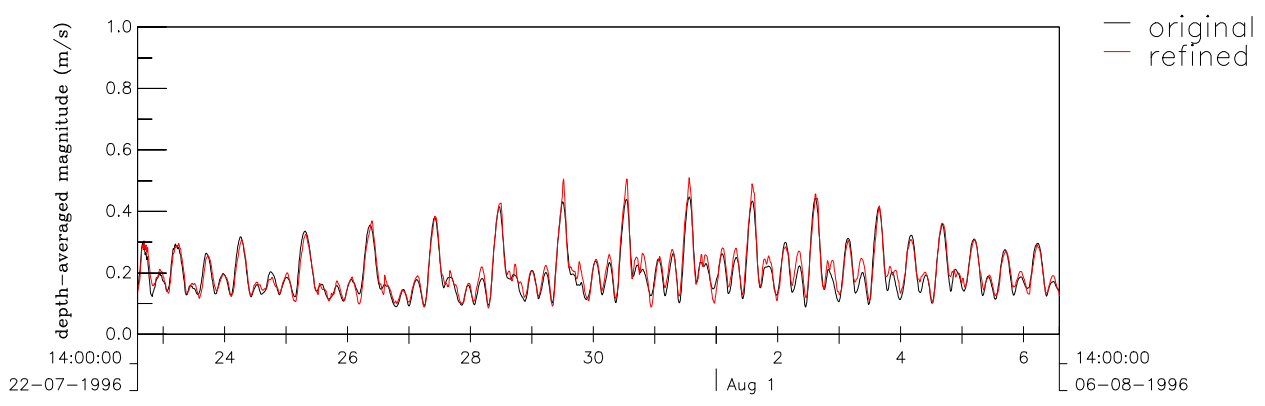
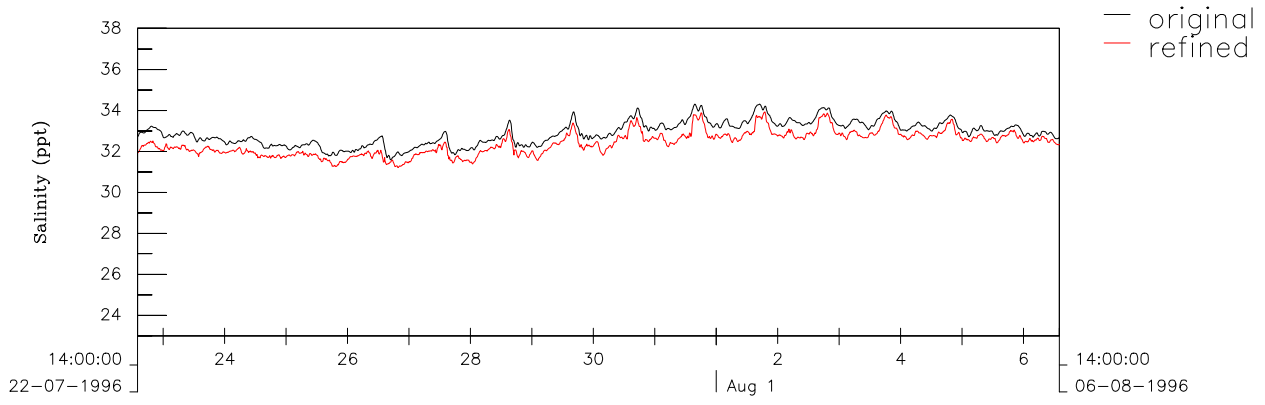
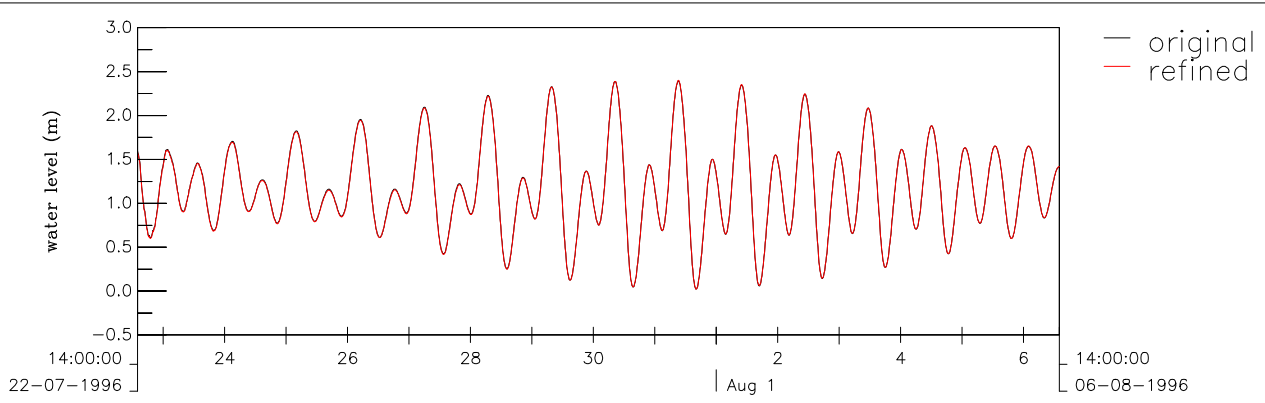
Comparison of Hong Kong model results at "SSDS EIA 03*" original v.s. refined (8x8 DD), Run00w v.s. Run01w
Dry Season

Mott MacDonald Hong Kong Limited



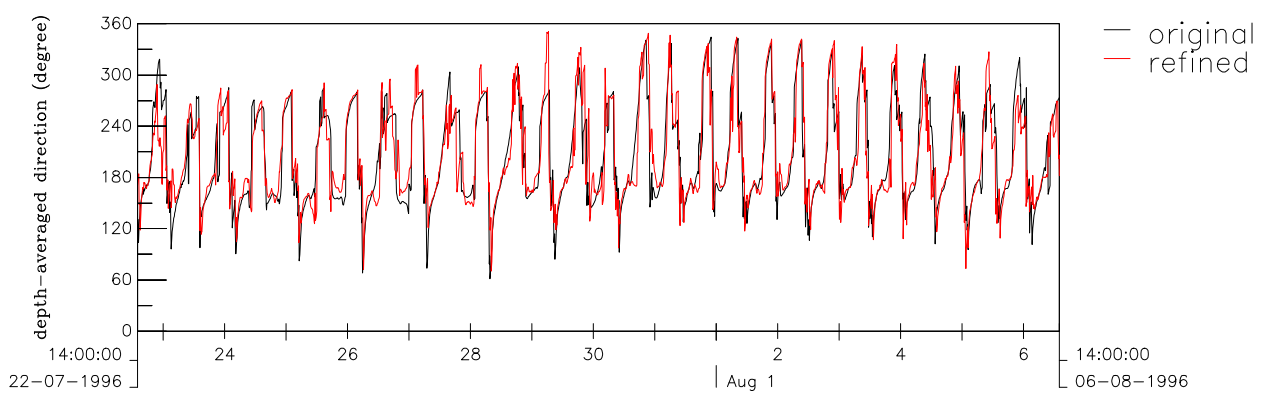
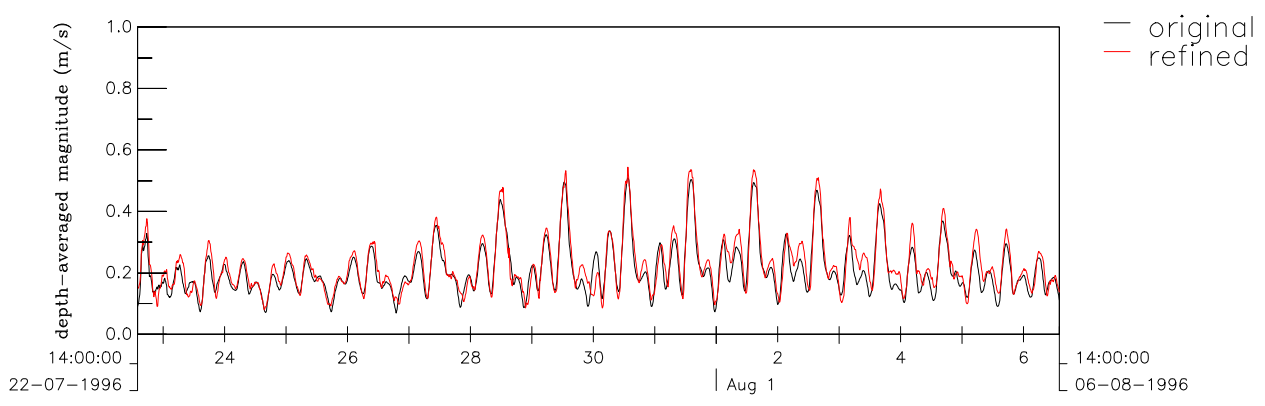
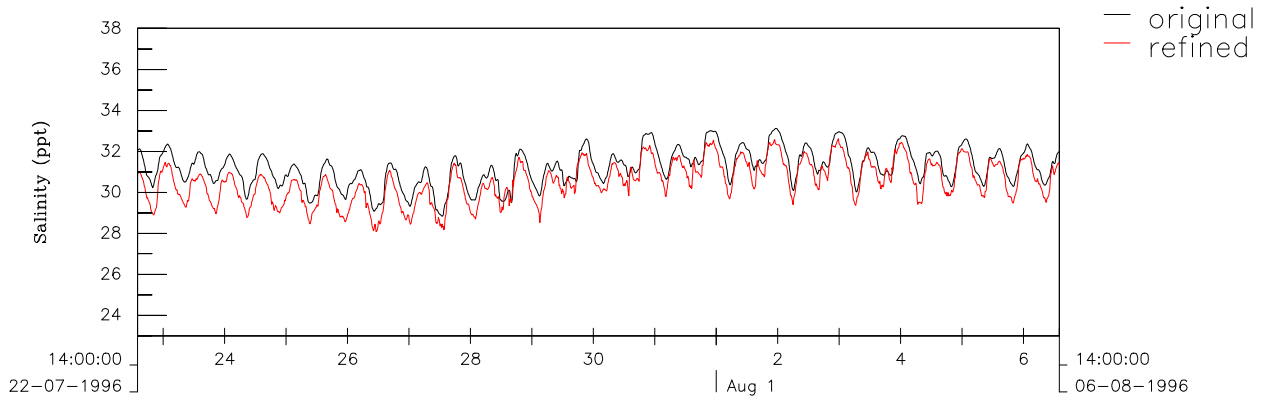
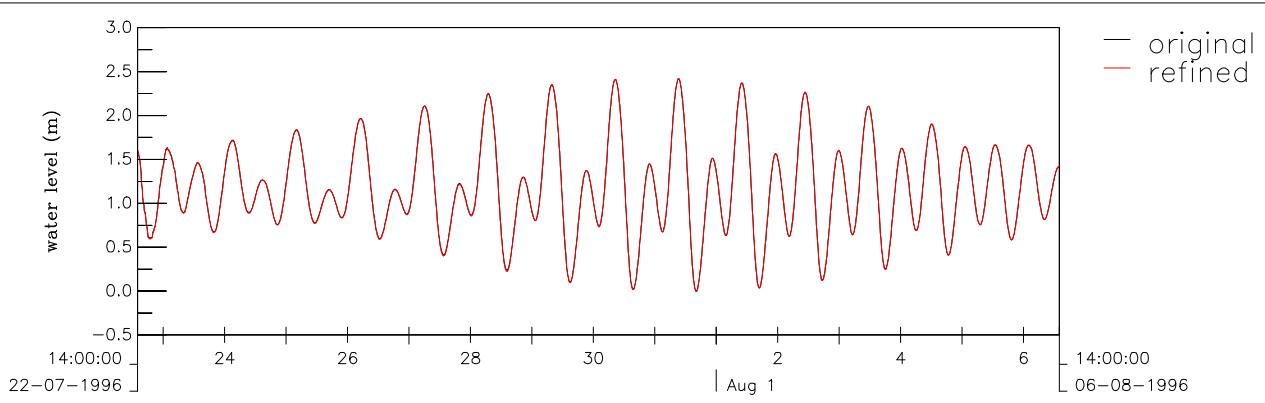
Comparison of Hong Kong model results at "Lamma-E"
 original v.s. refined (8x8 DD), Run00w v.s. Run01w
 Wet Season

Mott MacDonald Hong Kong Limited



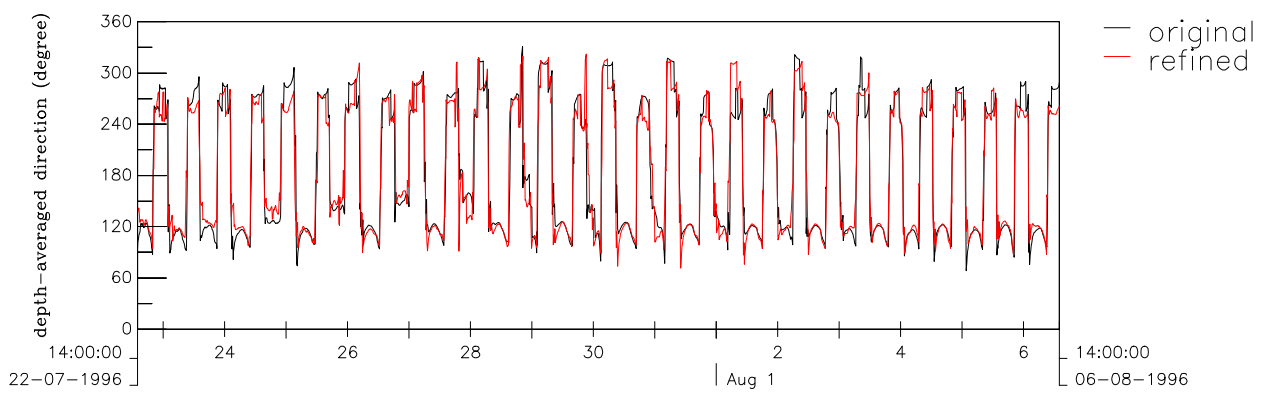
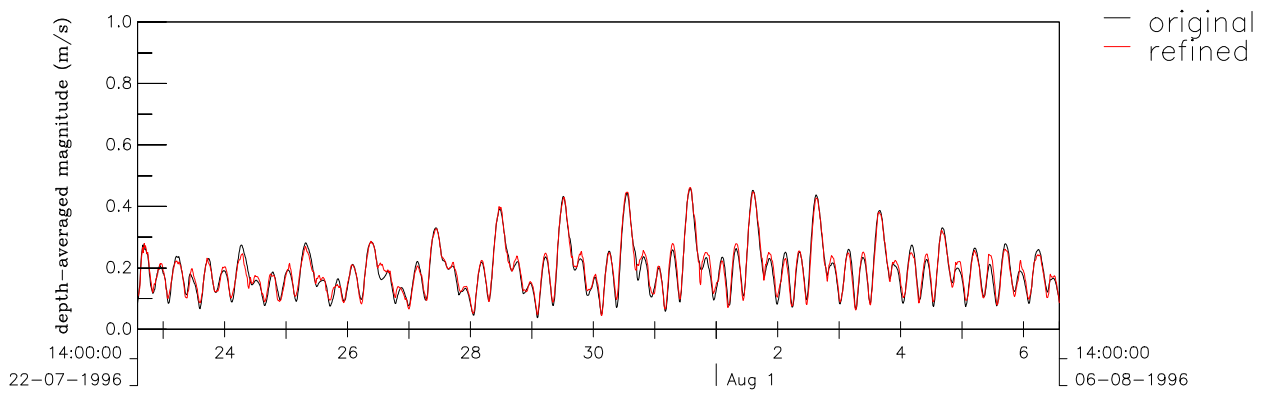
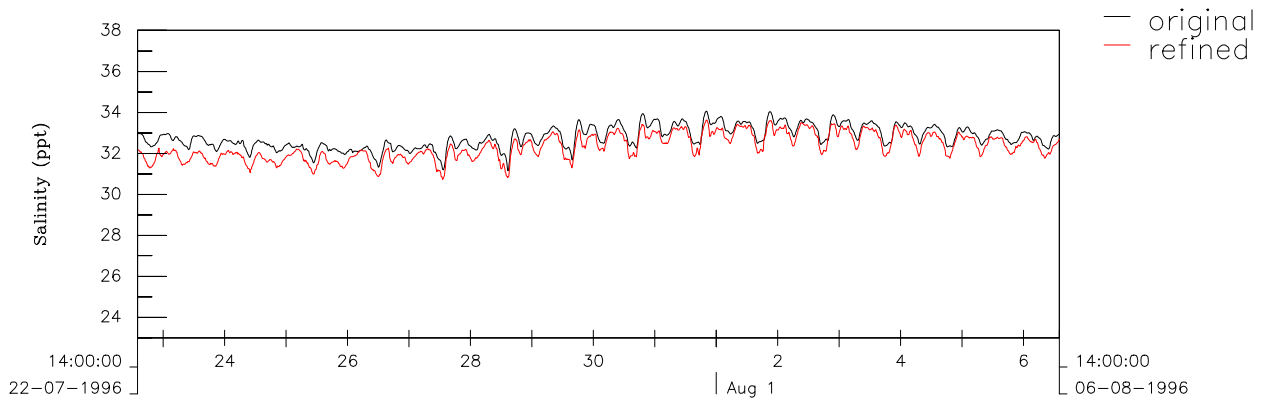
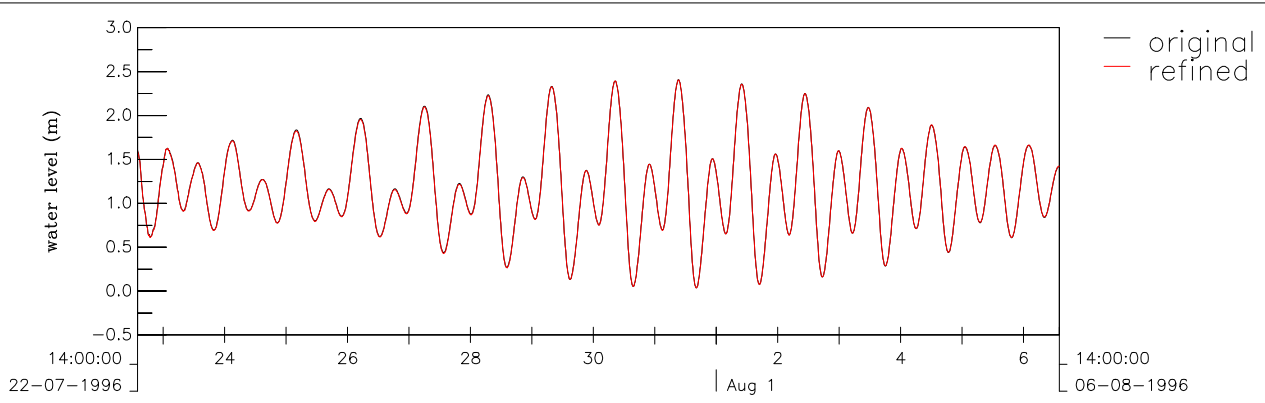
Comparison of Hong Kong model results at "Lamma-S"
 original v.s. refined (8x8 DD), Run00w v.s. Run01w
 Wet Season

Mott MacDonald Hong Kong Limited



Comparison of Hong Kong model results at "P EW"
 original v.s. refined (8x8 DD), Run00w v.s. Run01w
 Wet Season

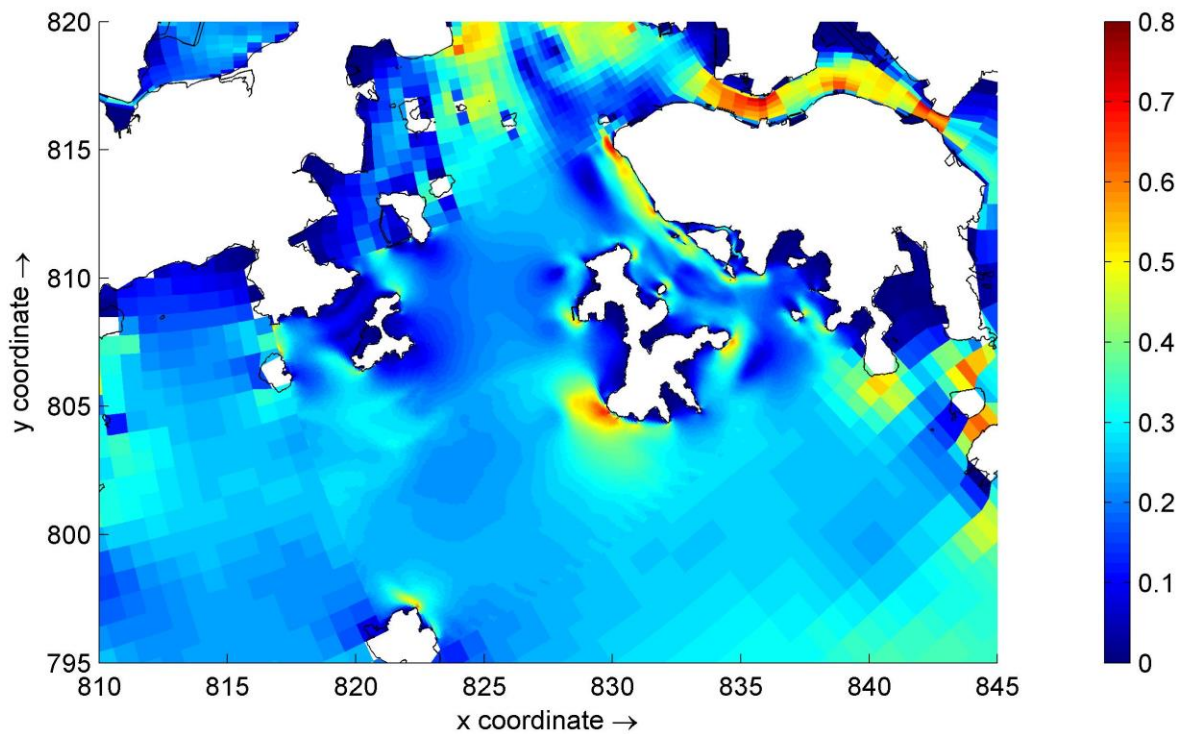
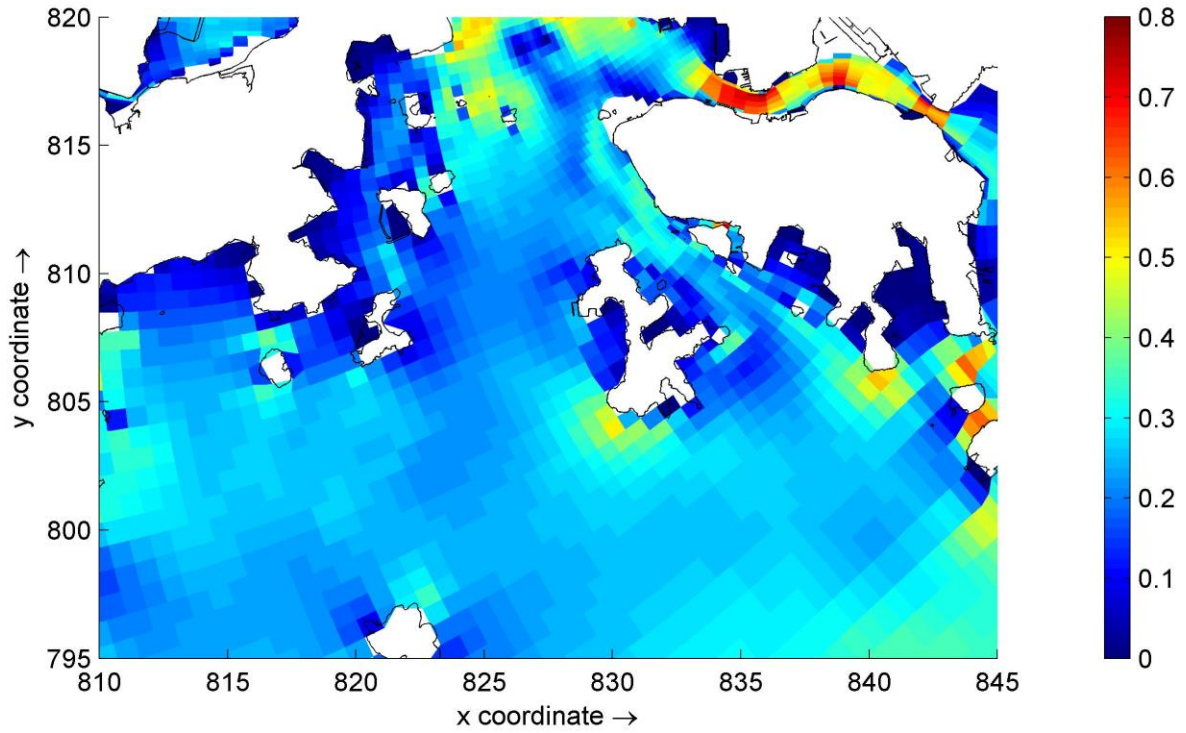
Mott MacDonald Hong Kong Limited



Comparison of Hong Kong model results at "SSDS EIA 03*" original v.s. refined (8x8 DD), Run00w v.s. Run01w
Wet Season

Mott MacDonald Hong Kong Limited

Annex D Model Validation (Comparison Plots)

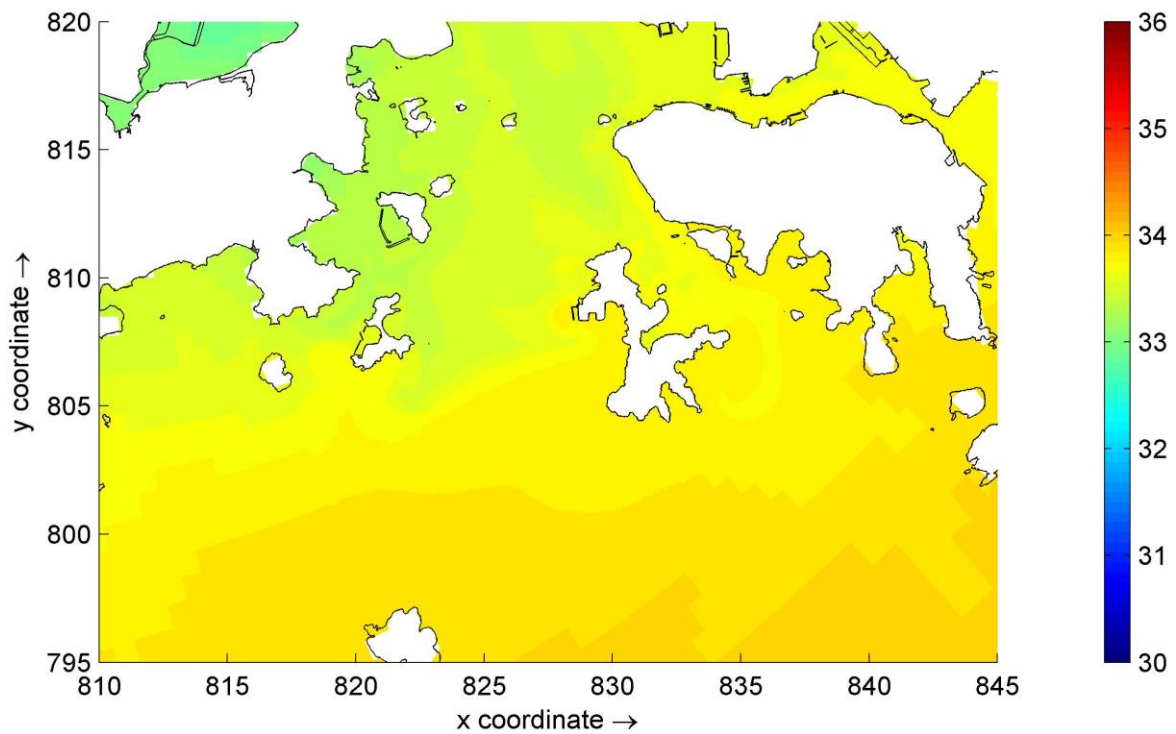
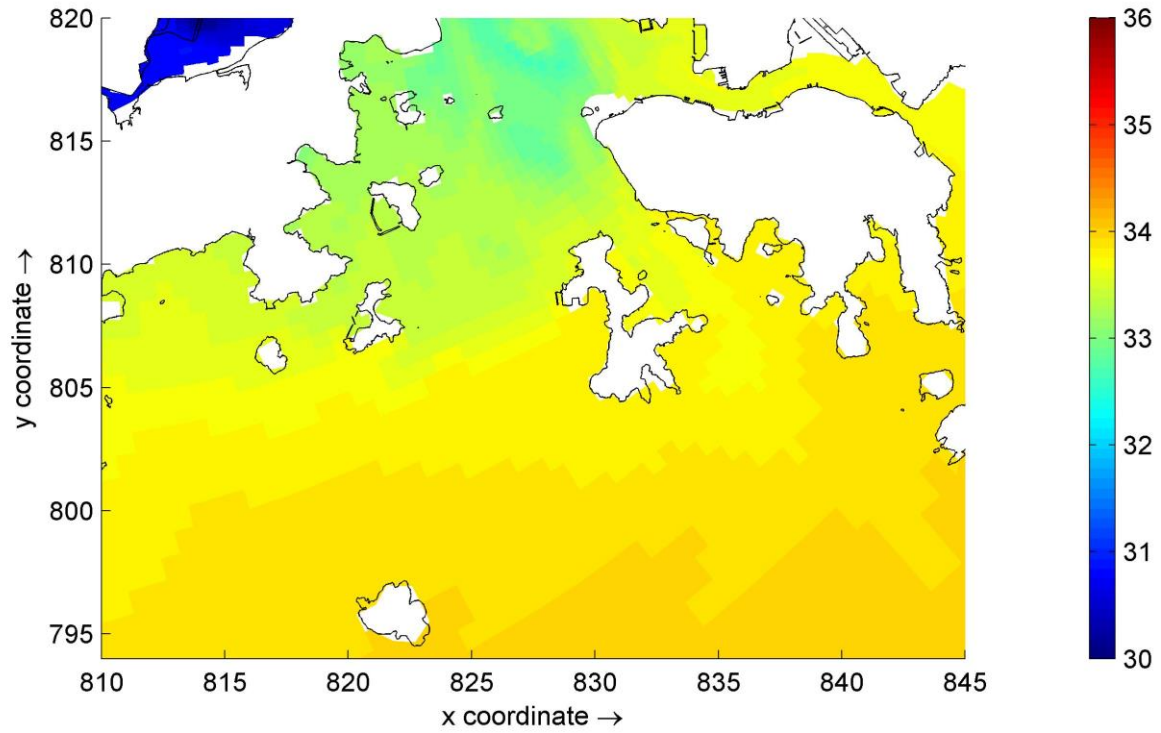


Comparison of Hong Kong model results
 Depth-averaged current magnitude (m/s)
 original (upper) v.s. refined (8x8 DD) (lower), Run00d v.s. Run01d

August 02 20:00

Dry Season

Mott MacDonald Hong Kong Limited

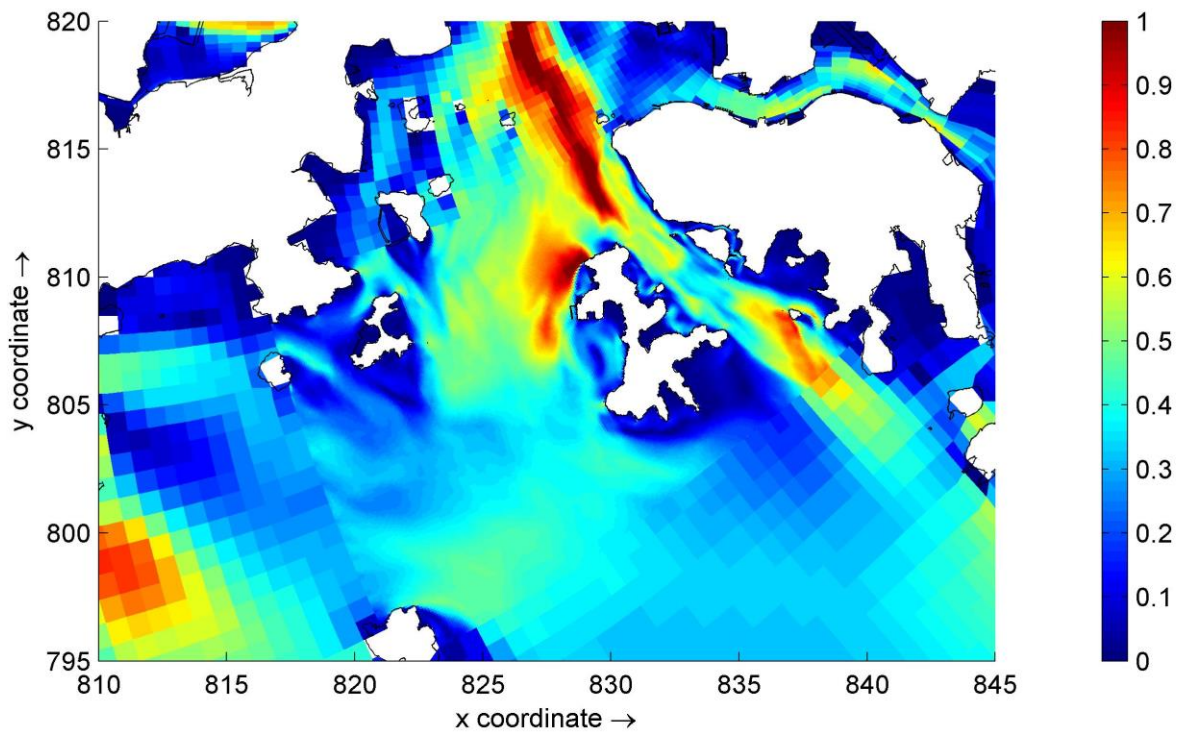
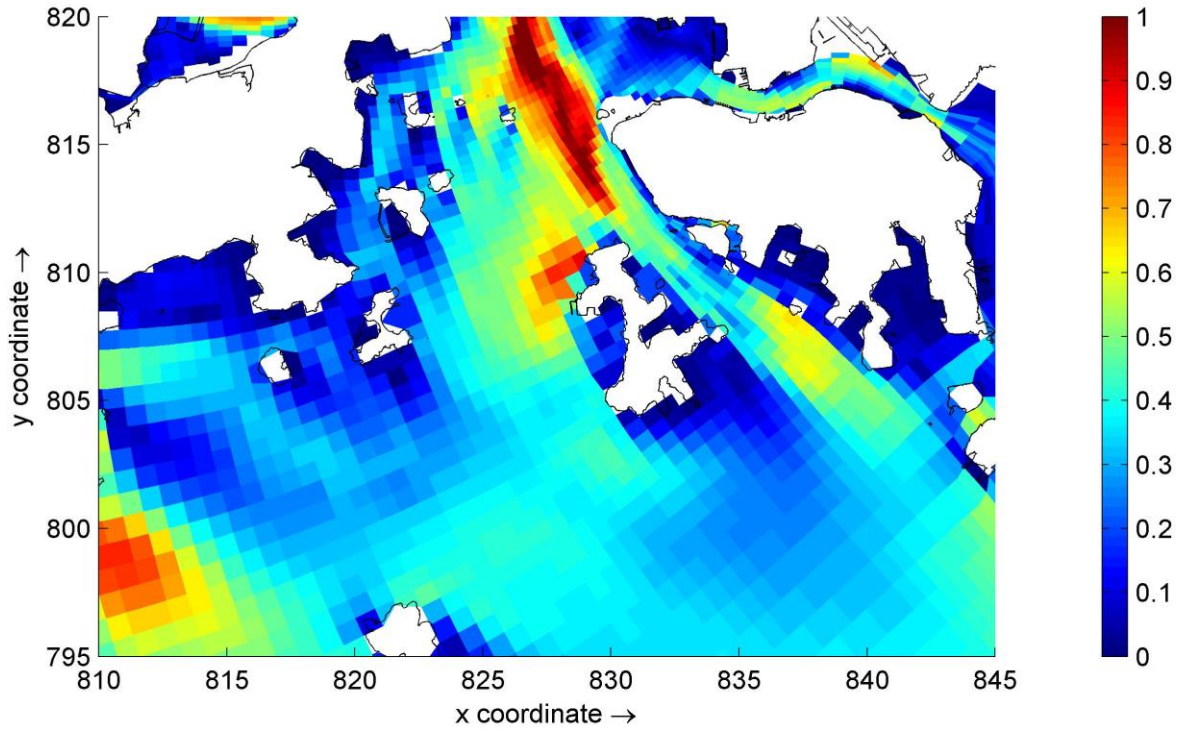


Comparison of Hong Kong model results
 Salinity (ppt)
 original (upper) v.s. refined (8x8 DD) (lower), Run00d v.s. Run01d

August 02 20:00

Dry Season

Mott MacDonald Hong Kong Limited

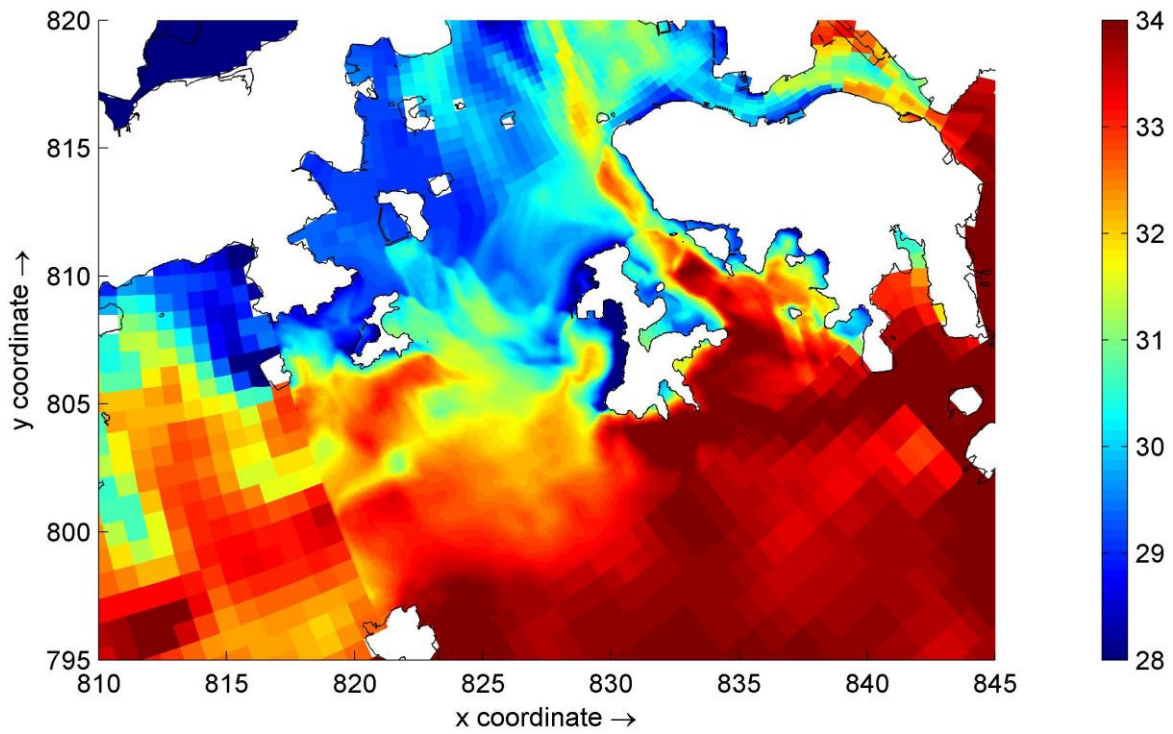
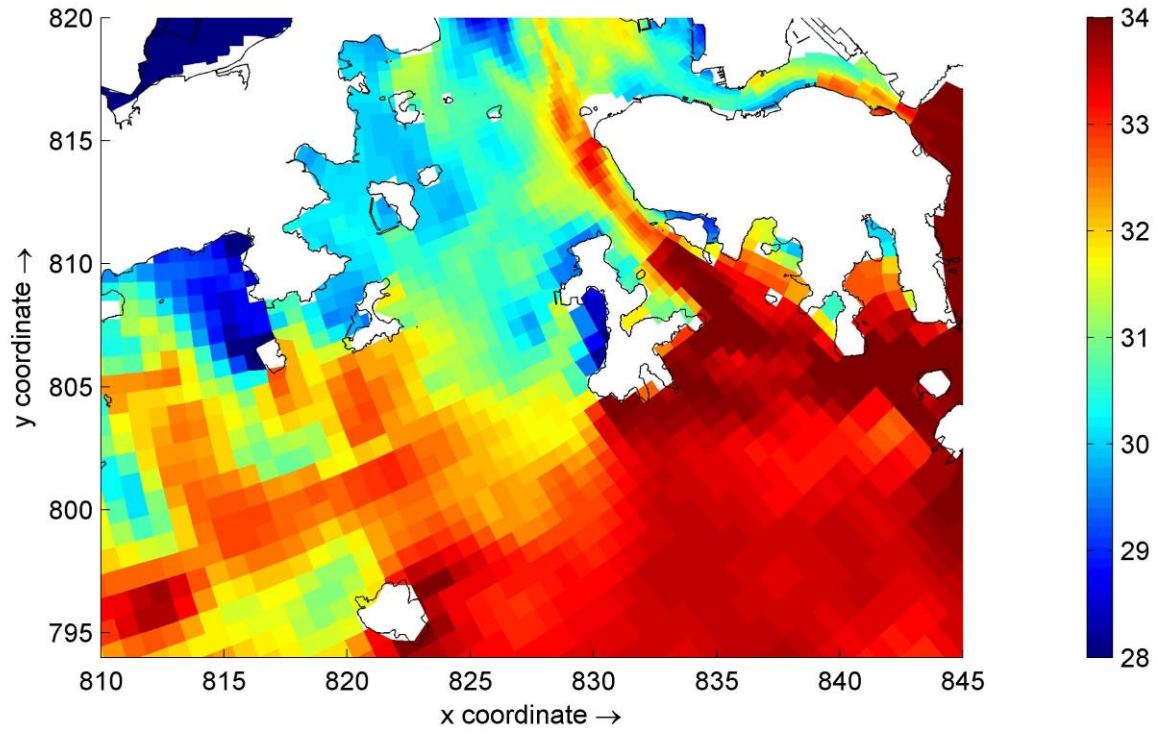


Comparison of Hong Kong model results
 Depth-averaged current magnitude (m/s)
 original (upper) v.s. refined (8x8 DD) (lower), Run00w v.s. Run01w

July 30 14:00

Wet Season

Mott MacDonald Hong Kong Limited



Comparison of Hong Kong model results
 Salinity (ppt)
 original (upper) v.s. refined (8x8 DD) (lower), Run00w v.s. Run01w

July 30 14:00

Wet Season

Mott MacDonald Hong Kong Limited