AQUAMARINE POWER

Wave resource assessment for Oyster farms using MIKE21

Ian Harris
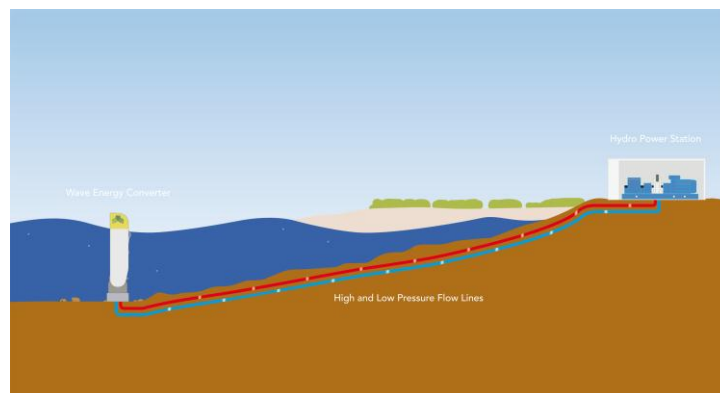

AQUAMARINE POWER

Aquamarine Power

- Oyster is a bottom hinged flap.
- Oyster is installed in 10 – 15m water depth.

Aquamarine Power
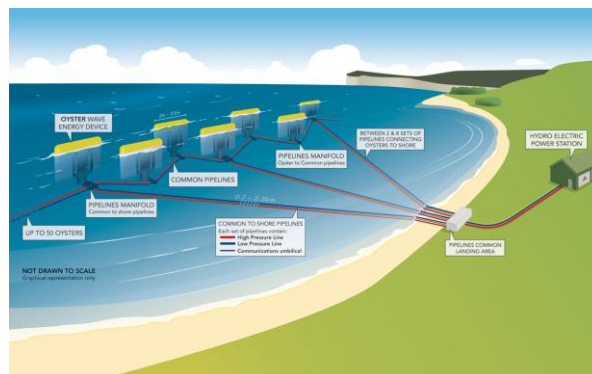
- Oyster 800 currently installed at EMEC.

3

Resource Assessment

- Inform site development.
- Inform site layout.
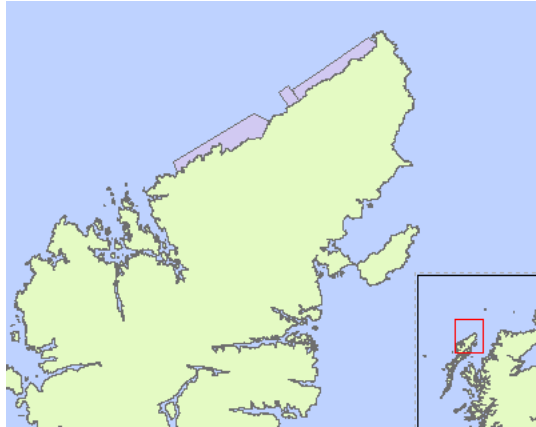- Produce energy production estimates (EPEs).

4

AQUAMARINE
POWER

Resource Assessment

- Lewis 40MW lease option area.

5

AQUAMARINE
POWER

## Resource Assessment

- Aquamarine Power's modelling levels.

	A	B	C	D
Summary	High Resolution Calibrated	Medium Resolution	Low Resolution	Very Low Resolution
Model Type	In house	In house	In house	External
Boundary Data	Fully Spectral	Fully Spectral	Parameter	
Surveyed Bathymetry	Yes	Yes	No	
Calibrated	Yes	No	No	

6

AQUAMARINE POWER
Lewis Model

- Level C assessment already carried out.
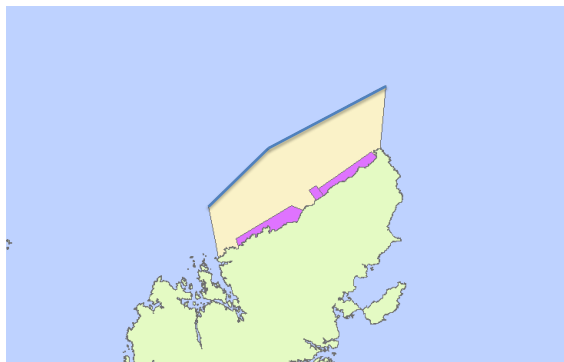

7
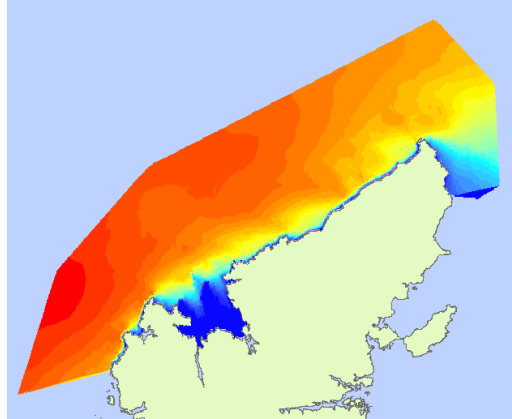
AQUAMARINE POWER
Lewis Model

- Currently carrying out level B assessment.
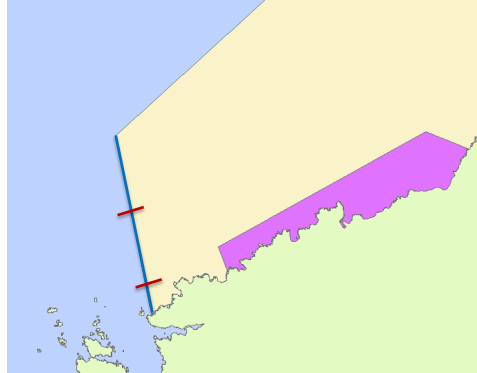- Deep water spectral data applied to offshore boundaries.

8

Lewis Model

- What about the nearshore boundaries?
  - How do we quantify this loss?
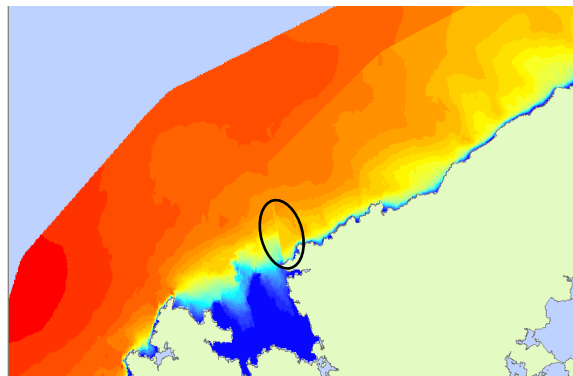 - Scale with energy vs. depth.

9

Lewis Model Results
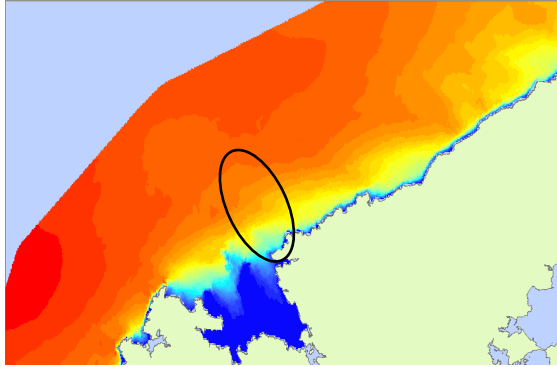
- Model results good.
- Some issues.

10

AQUAMARINE
POWER

Lewis Model Improvements

- How can we improve the level B model?
  - Apply different scaling.
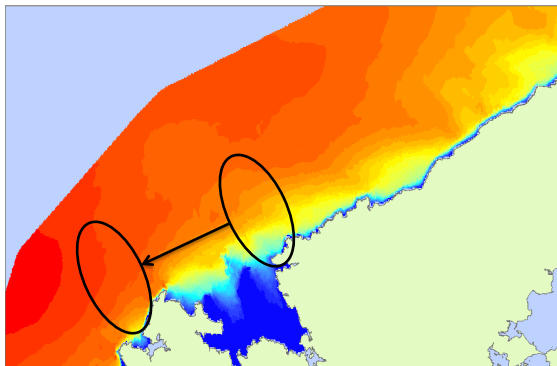 - Scale based on power loss in level C model.

11

AQUAMARINE
POWER

Lewis Model Improvements

- How can we improve the level B model?
  - Move the South boundary.

12

Aquamarine Power
Elder House
24 Elder Street
Edinburgh
EH1 3DX

Tel: +44 (0) 131 524 1440
Fax: +44 (0) 131 524 1444
www.aquamarinepower.com