
Scottish Natural Heritage

Does Site Condition Monitoring help with management of marine SACs?

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What's in the talk?

- Key points for SCM and management
- Summary of Scotland's SCM approach
- Examples to show whether SCM has helped with management of a site
- Approach to resolving issues
- Outcomes



Key points for SCM...

- Direct contribution to management in certain Scottish SACs
- Cannot, in itself, address all management issues
- Value of SCM can be affected by...
 - Limited information on 'impacting' activity
 - Scale of operation of 'impacting' activity
- Therefore some circumstances require additional work e.g. Firth of Lorn



Summary of Scotland's approach to SCM

- Standardised methods
- Site attributes derived from agreed agency guidance
- Scottish corporate standard = Assessment of 66% of features within a 6-year cycle
- Flexibility e.g. sites flagged up by area staff
- Future marine features monitoring?
 - Possibility of threat / risk-based surveys
 - Need more information on activity-based data



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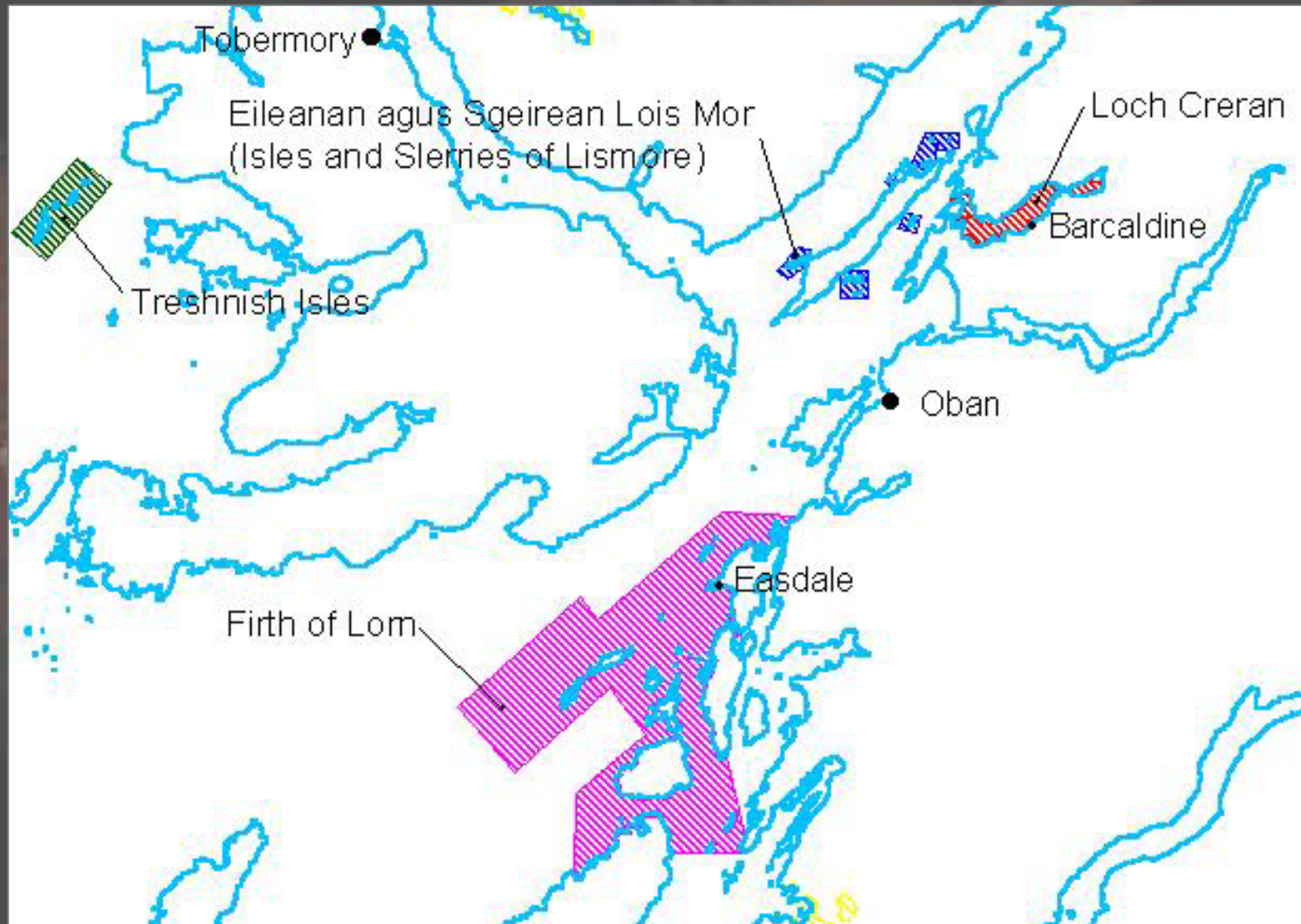
Has SCM helped management?

SAC examples...

- Firth of Lorn
- Loch Creran



Has SCM helped management?



Management issues

Risk to the features of interest =
physical disturbance...

- Loch Creran – anchoring, moorings, fishing, aquaculture
- Firth of Lorn – fishing

Fishing...

- Loch Creran – risk from mobile gear (queen scallop), and static gear
- Firth of Lorn – risk from mobile gear (king scallop *Pecten*)



Management issues

Other factors to consider...

- Relative vulnerability / sensitivity of reefs in sites
- Different stakeholder groups
- Meeting recommendations / actions agreed by management group
- Different management tools needed for different activities



Management resolution – Firth of Lorn



Management resolution – Firth of Lorn

- Management Group discussions brought about key issue
- Management response was the closure of SAC to scallop dredging via the Inshore Fishing (Prohibited Methods of Fishing) (Firth of Lorn) Order 2007
- Known = potential for scallop dredging to impact SAC features
- Unknown = Full extent of the interaction between the fishery and the feature of interest
- SCM information on its own was not sufficient to make a long-term decision
- Order is temporary in nature to enable further work to be carried out in order to inform a long-term management solution (and to inform future SCM programme?).



Management resolution – Firth of Lorn

- Programme of work involving...
 - Review of relevant literature
 - Review and analysis of fishing activity
 - Trial of sidescan sonar to assess reef / dredge interaction
 - Assessment of risk from redistribution of sediments raised by dredging operations
 - Related *in situ* studies of dredge performance (indirect effects)



Management resolution – Firth of Lorn

- Independent advisor appointed (Prof Kevin Stokesbury - University of Massachusetts, USA)
- Work is ongoing, reports due to be published shortly
- Broadscale survey data was very useful
- Use of GIS tools likely to remain important in resolving essentially a spatial management problem



Management resolution – Loch Creran



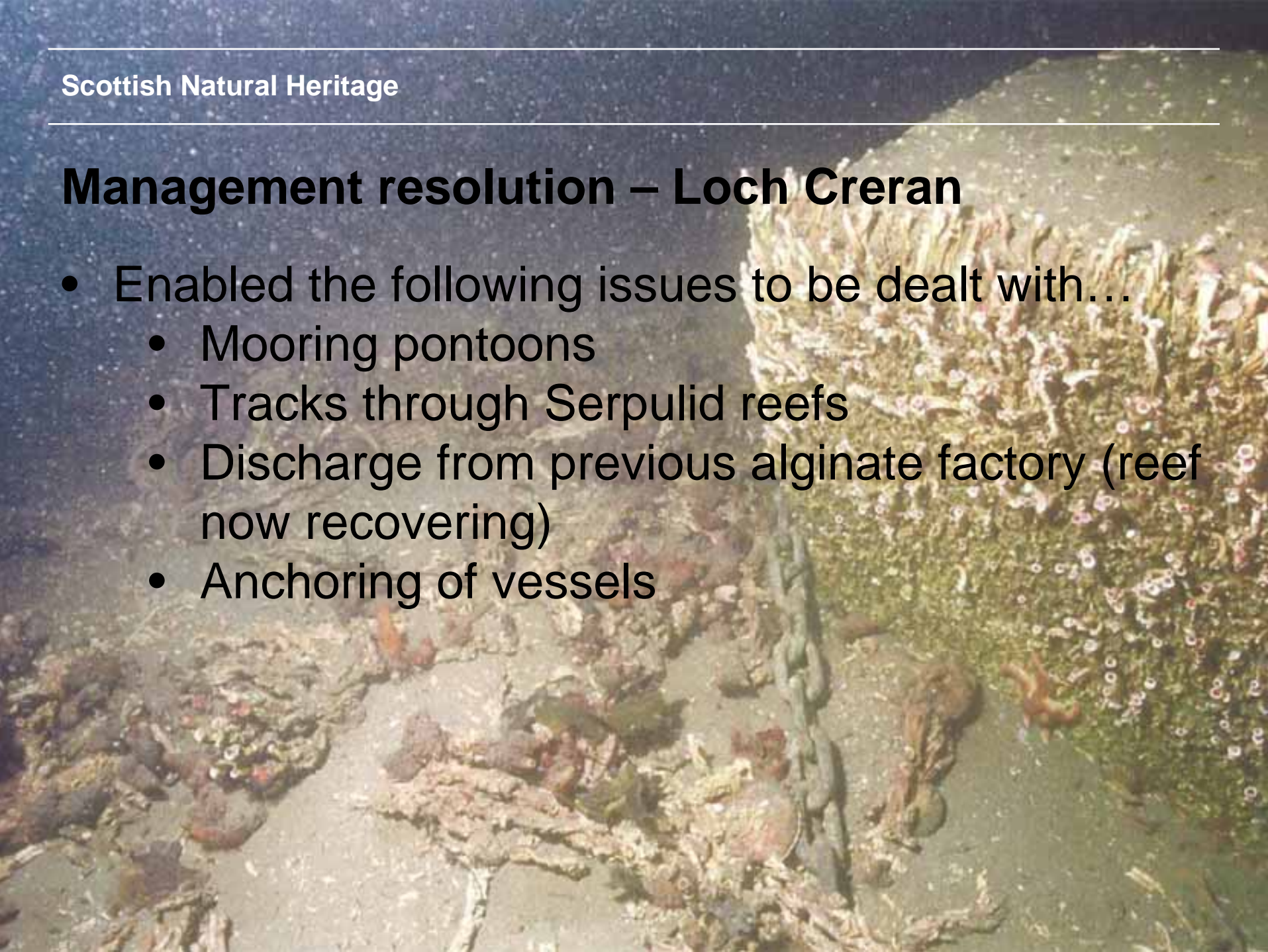
Management resolution – Loch Creran

- Lots of useful information available at appropriate scale to management issues...
 - Broadscale mapping
 - SCM information
 - Legacy of scientific study
- Clear connection between the following...
 - Management issues raised
 - Results of SCM
 - Subsequent management action



Management resolution – Loch Creran

- Enabled the following issues to be dealt with...
 - Mooring pontoons
 - Tracks through Serpulid reefs
 - Discharge from previous alginate factory (reef now recovering)
 - Anchoring of vessels



Outcomes – Loch Creran

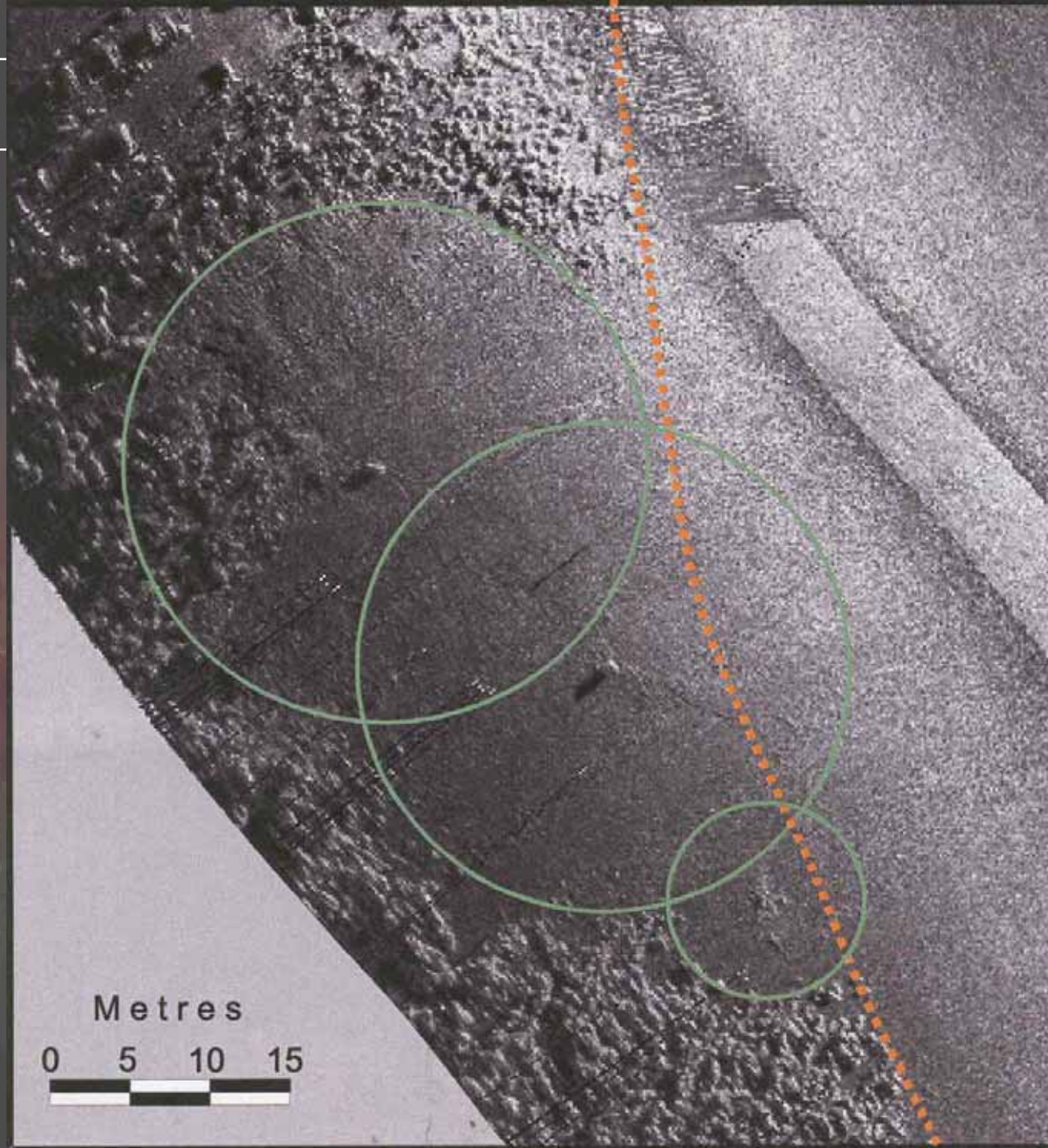
- Action has been taken under the Management Plan
 - Signs
 - Updating sailing information e.g. anchoring
 - Mooring pack



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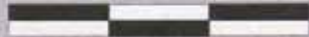
Outcomes – Loch Creran

- Visual aid



Metres

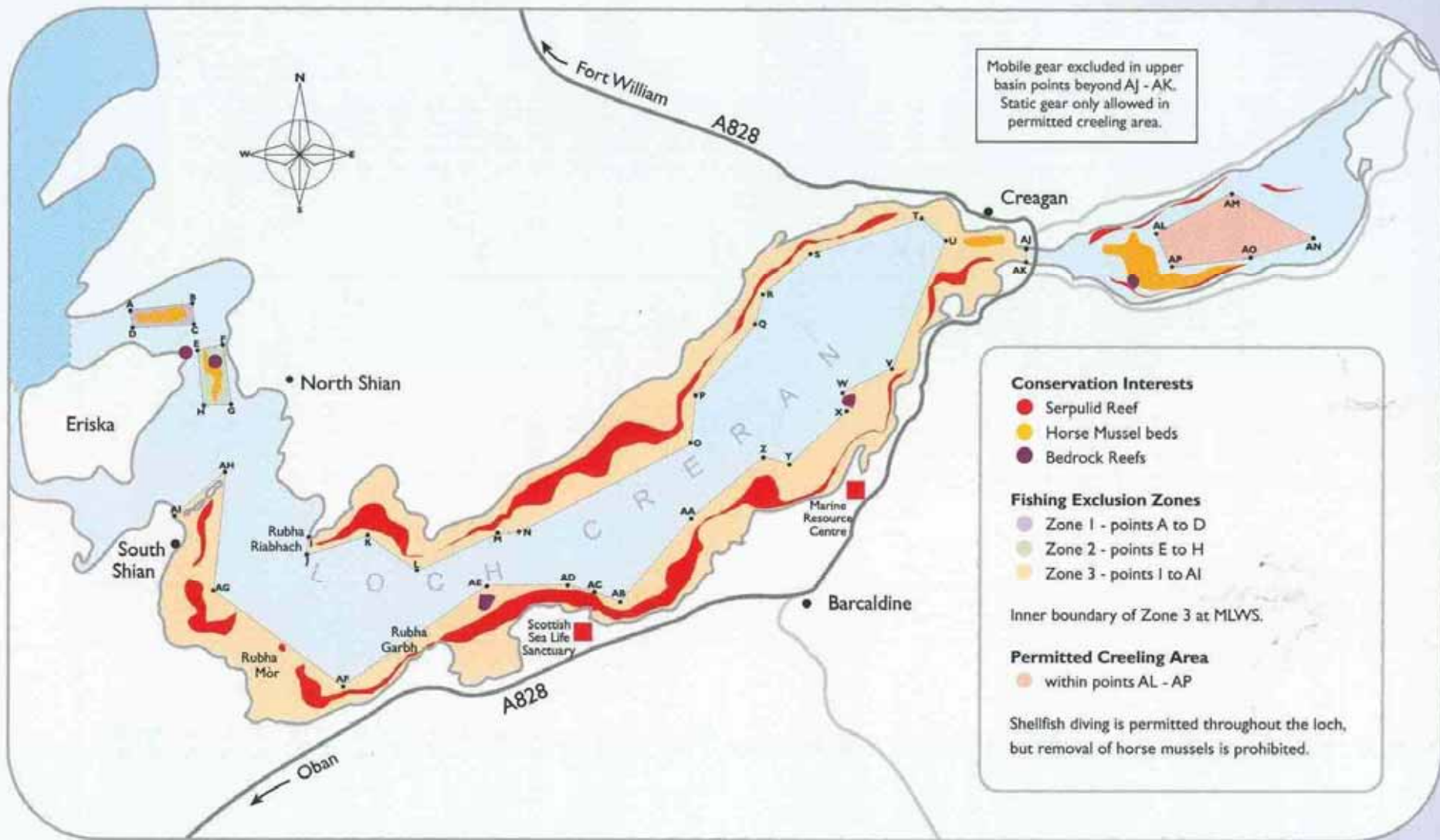
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Outcome – Loch Creran

- Fishing
 - Management Group requested zonation
 - Achieved through Order under the Inshore Fishing (Scotland) Act 1984 i.e. The Inshore Fishing (Prohibited Methods of Fishing) (Loch Creran) Order 2007
 - Complex zonation
 - Order protects key interests – excludes mobile and static gear
 - Order enables activities not risking the reefs
- Communication essential between stakeholders
 - Based on effective knowledge (fishing and reefs)

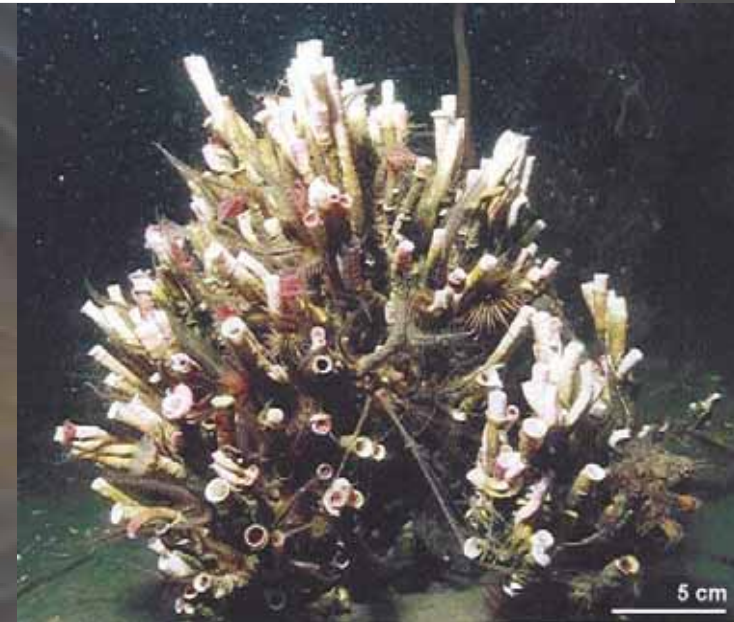




Outcome – LC - Fishing exclusion zones

Outcome – Loch Creran

- **SUCCESS!**
 - Management process used to achieve sensible outcomes
 - High resolution information available
 - Information directly informed management



Lessons learned for management

- SCM may be more effective for...
 - managing smaller sites
 - sites with discrete features
- Majority of Scotland's sites are quite extensive (and remote)
- Management groups important role
 - Discussion forum
 - Keeping people informed
 - Hearing all opinions to aid solution (within legal parameters)
- Important to be aware of activities within site
- Important to communicate between compliance monitoring and SCM



Lessons learned for management contd.

- **Flexibility** essential
 - specific surveys to respond to certain activities
- Need to be aware of **limitations of SCM**
 - Larger sites
 - Non-discrete features
- Need to be aware of **uses of SCM**
 - Smaller sites
 - Discrete features
- Need to be aware of **constraints and requirements of available management tools**
 - Differing data / scale / spatial requirements



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