
PEEL PORTS
GROUP

Consolidation of Port Environmental Data

Russell Bird
Group Hydrographic and Dredging Manager

Background

- Peel Ports- second largest ports group in the UK
- Contains 6 separate and diverse Port Authorities aswell as other partners and terminals
- Headquarters in Liverpool
- Conservancy obligations throughout Group
- Masses of data management requirements

Group Marine Department

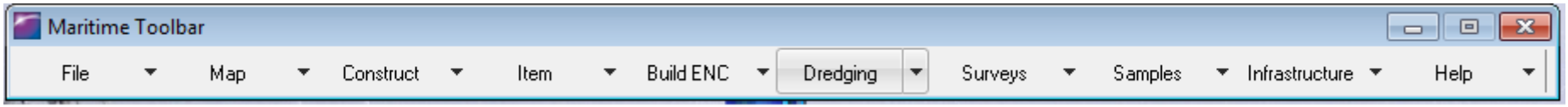
- Appointment of Group Harbour Master October 2013
- Centralised Hydrographic and Dredging function completed August 2014
- Combination of in house data production and 3rd party operations
- Group Marine GIS Co-ordinator
- Group Marine Environmental Officer
- Objectives
  - Efficiency through standardisation and centralisation
  - Fulfil all requirements of the SHA's and business
- Requires huge drive for consolidation of existing data and management policy

The role of GIS as centralised function

- Issue of disparate practises and presentation across group from previous 3 hydrographic departments
  - Requirement to standardise into instantly recognisable Peel Ports survey chart
  - Requirement for improved data management practises for group hydrographic data
  - Opportunity for development as practises and structure matures and develops
- Combination of effort from Oceanwise and permanent GIS Co-ordinator to deliver requirement, training and ongoing development

The Process- Sorted soundings input

- Data processed in house or by 3rd party company and signed of for QA/QC
- Uploaded into data server
- Data sorted according to charting scale and saved in standard data structure
- Separate .swd for each charting area, opened in Cadcorp, containing Soundings bds, contours bds, mapping and installations dbs. Sorted Data input using Oceanwise Maritime Toolbar- added to soundings bds

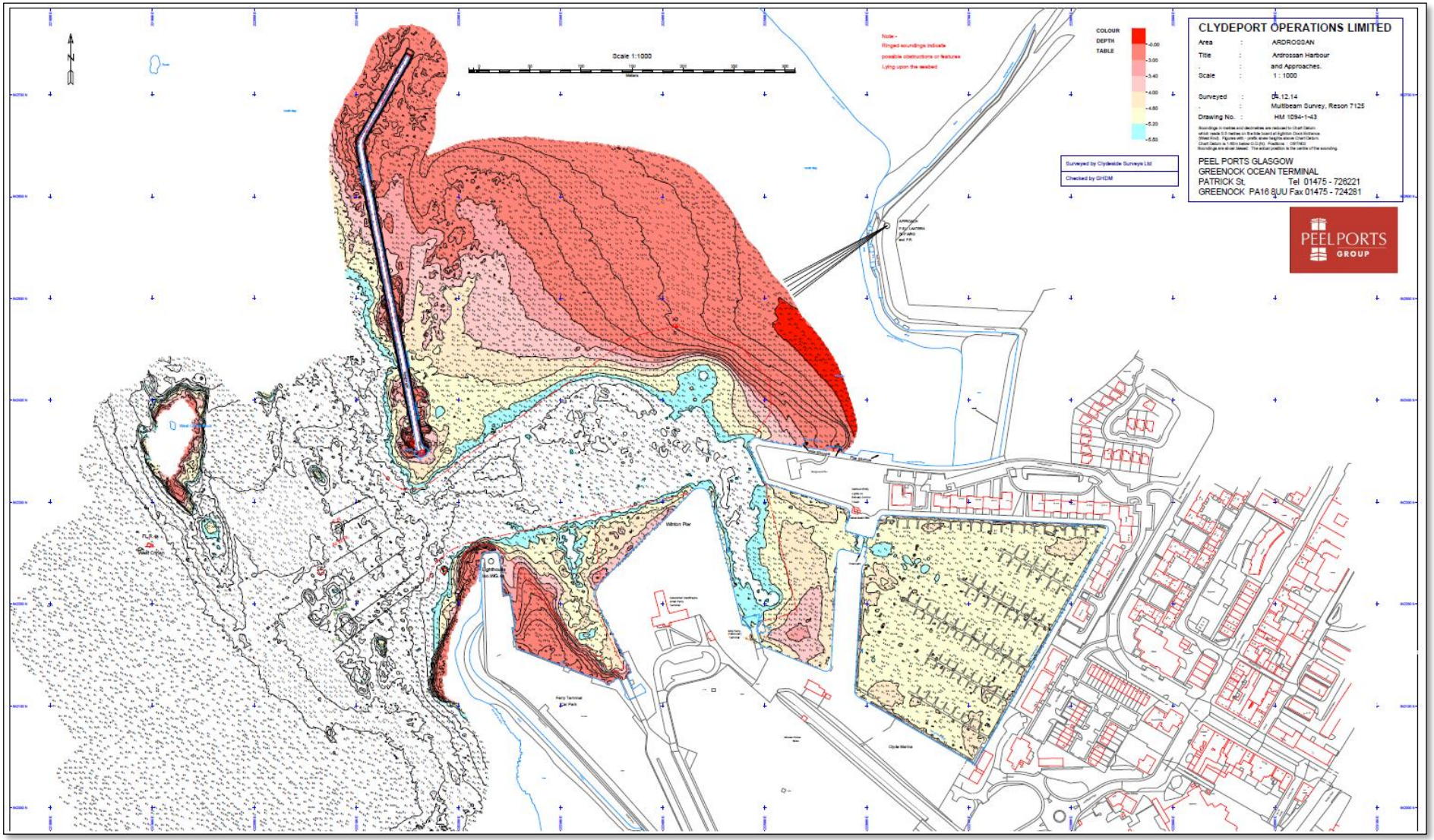


- Contours uploaded from dxf source file and replicated into bds

Output

- Separate Print swd for each survey area- uploaded into Map Modeller after all final check made in data swd
- Information is simply changed such as date of survey, surveyor and survey number
- Published!

Further development- Presentation



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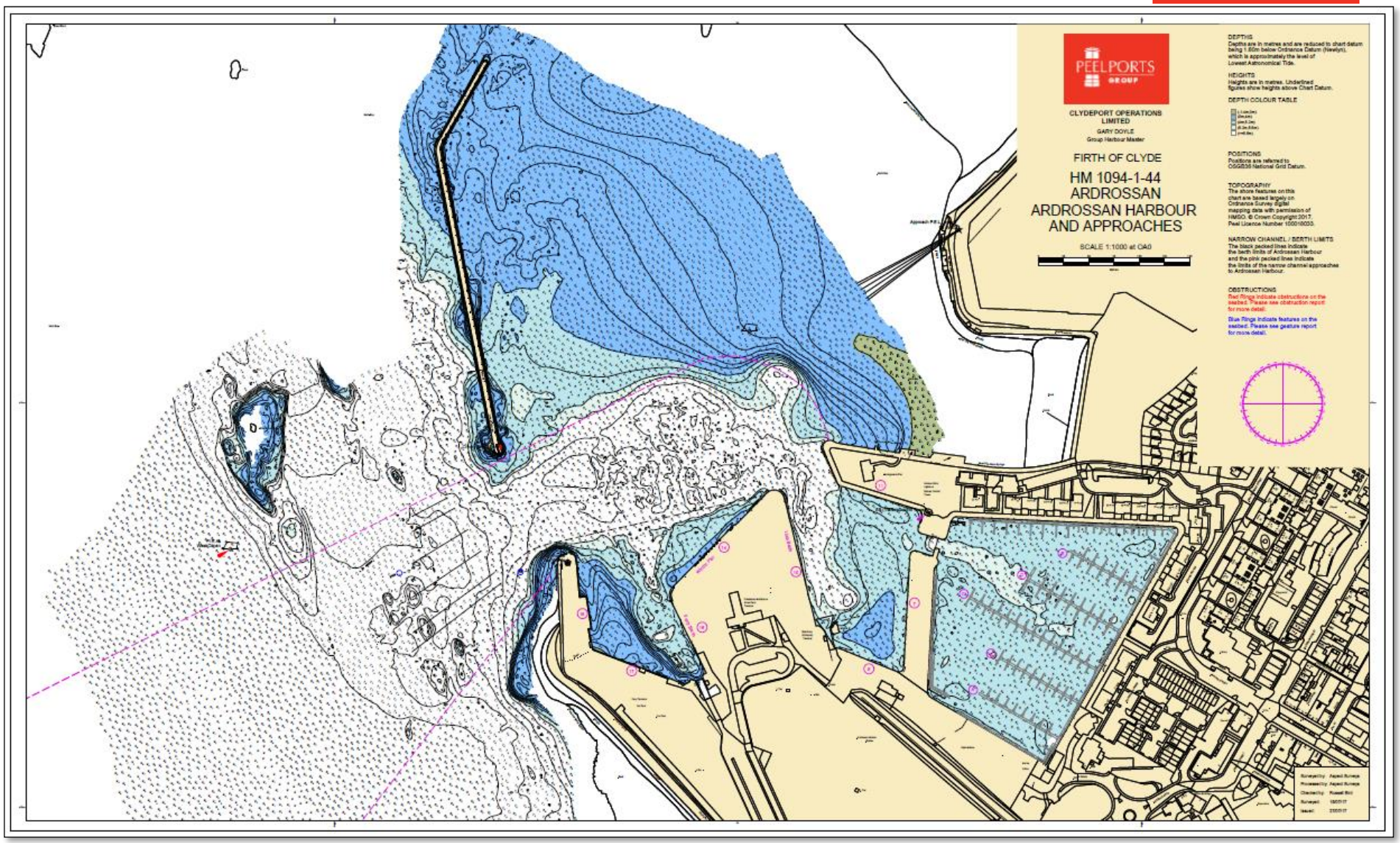
Further development- Presentation



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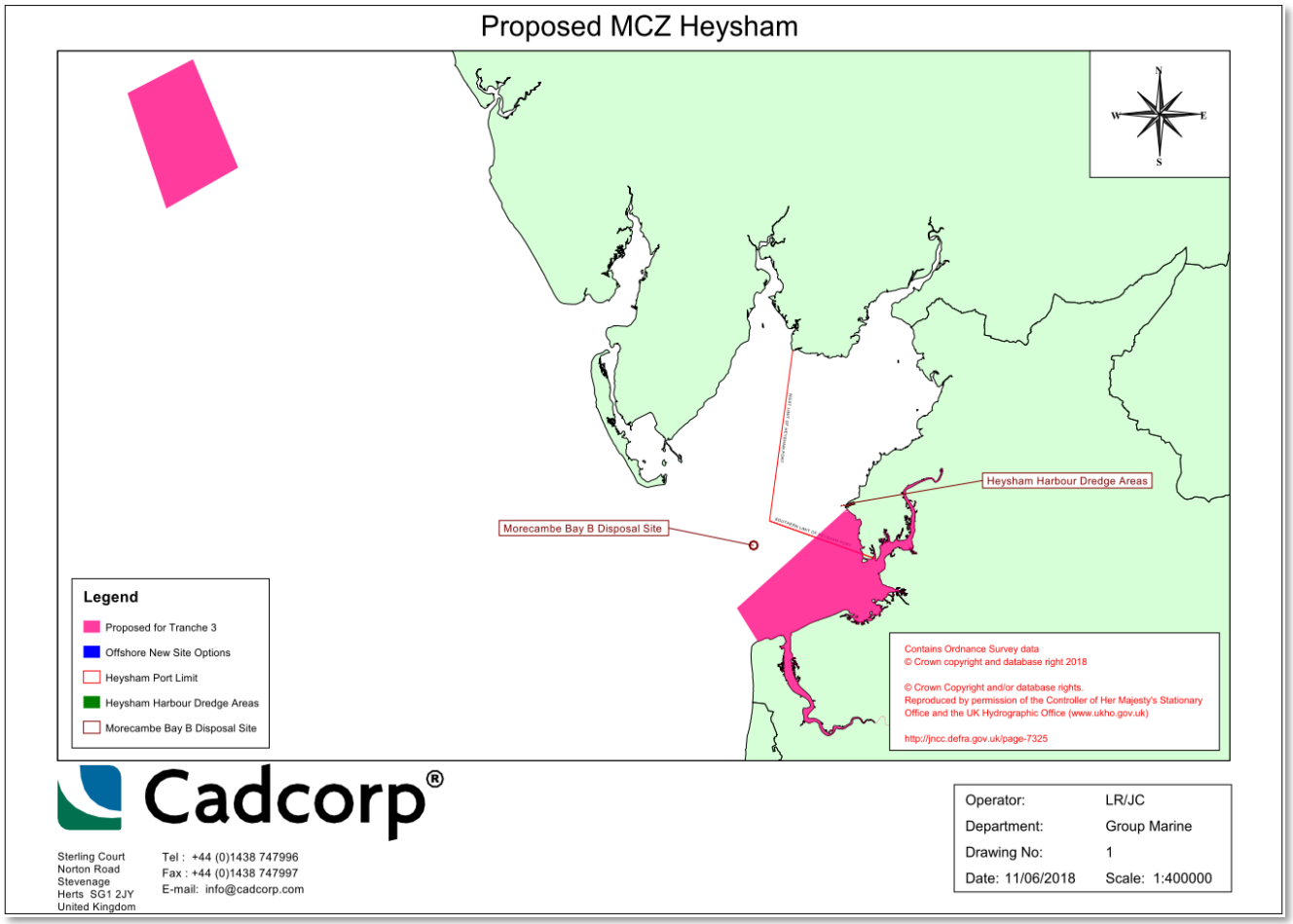
Environmental Data Management

- Challenges of very disparate data sources/formats
- Variety of requirements for visualisation and outputs:
  - Marine License Applications
  - WFD and HRA Assessments
    - Water Quality, monitoring data
  - In combination effects
  - Beneficial use studies
  - MLA consultations

Group Marine Environmental GIS

- Environmental representation on GIS to compile layers of protected areas, dredge locations – all layers from various sources in single output



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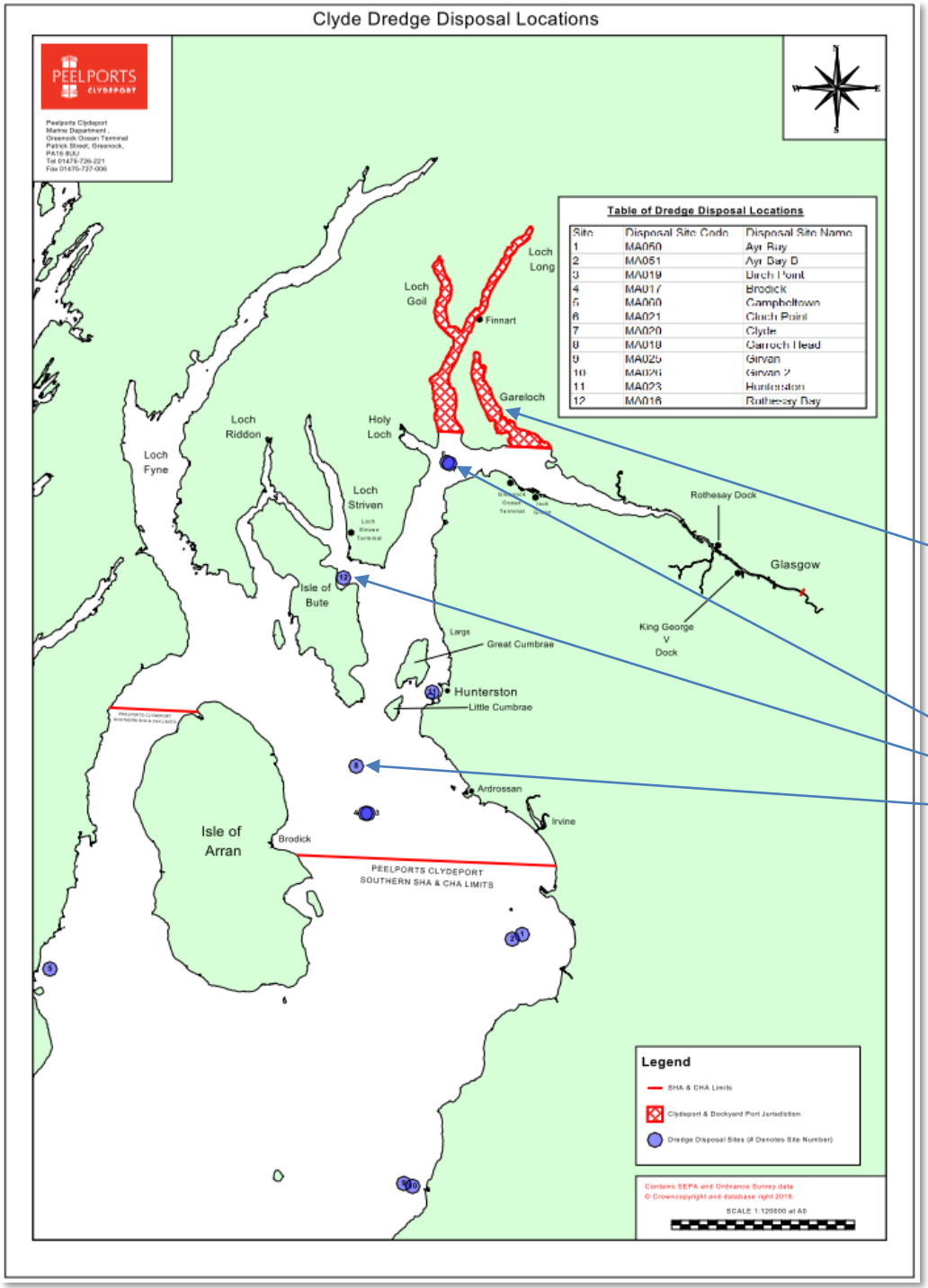
Group Marine GIS Function to date

- Environmental representation on GIS to compile layers of protected areas, dredge locations – all layers from various sources in single output
- Check locations of MLA and overlaying with port area of jurisdiction to see if the application has the potential to affect Peels interests before considering a response.
- Working with the EA to map water body boundaries and sonde monitoring locations to investigate any potential impacts of dredging on environmental parameters effecting water quality such as DO, temperature, pH, Nitrogen.
- Use of excel to collate sediment quality reports and view any sediment samples that are above a specific action level for use in WFD reports –long term this data will be added to the Oceanwise environmental samples manager database and this will allow a link between the database and the internal GIS system to map the points



Clyde Disposal Locations- strategic projects

Jurisdictional Areas (COL Own data)

Disposal sites (SEPA)

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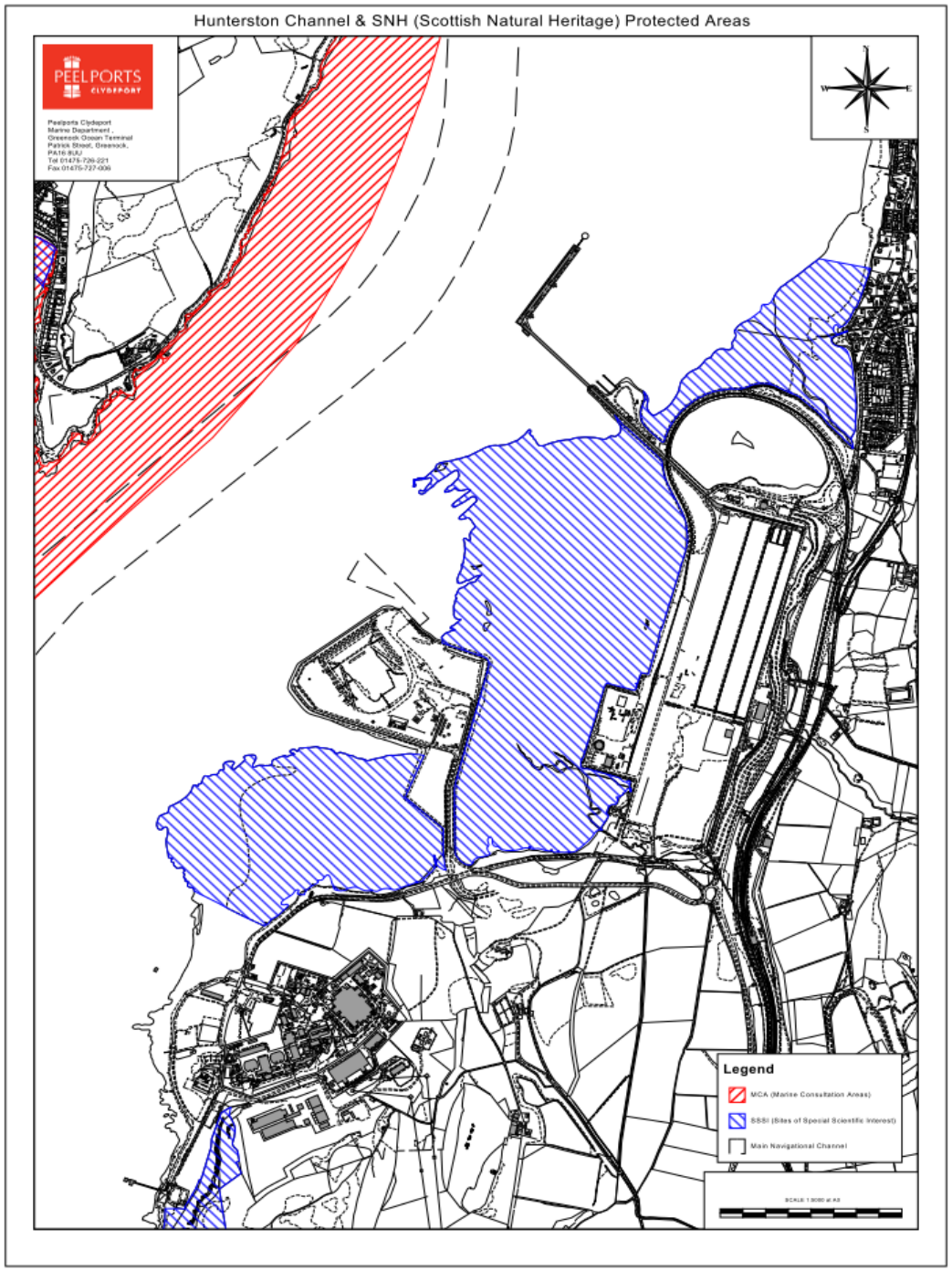
Legend

- SHA & CHA Limits
- Clydeport & Dockyard Port Jurisdiction
- Dredge Disposal Sites (# Denotes Site Number)



SSSI Hunterston-specific requests

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Legend

- MCA (Marine Consultation Areas)
- SSSI (Sites of Special Scientific Interest)
- Main Navigational Channel

Work Required and Challenges

- All data and data sources need to be consolidated into a repeatable standard format
- Locating and storing known data into sensible locations
- Unit of measurement comparison/determination
  - Disposal tonnage/m3
  - PPM/percentage dissolution
  - Good status/bad quality
- Underpinning requirement for standardised Group Metadata standard
- Open data/charges/no overall governance of marine data- finding it in the first place!!

Summary and Longer term GIS

- GIS has enabled and ensured good practise in terms of approach to data management and group marine strategy
- Streamlined process- effort in getting right first time
- Largest challenge is to convert existing data into first a data management structure and then format
- Long term aspirations:
  - Keep building database and data layers to assist in Environmental Management
  - Enable end user internally and maybe externally to access data and perform primary assessments

Any Questions?

Thanks