



London Gateway CEDA Seminar

9th December, Institute of Civil Engineers

Wreck Removal Investigative Techniques to Assess Archaeological Potential

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Port of London Authority



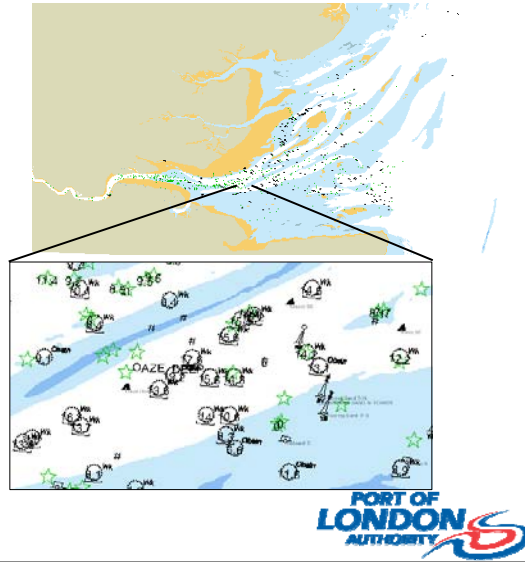
Objectives

- Background to Thames Estuary
- Channel Design
- Desk Based Assessment
- Hydrographic Survey/Dive Inspections
- Archaeological Assessment
- Salvage/Recovery
- Heritage Protection
- Summary



Thames Estuary

- ~900 Recorded wrecks and obstructions
- ~600 Wrecks
- Sites vary in spatial extent from 1-100m
- Sites date from 17th century to present.



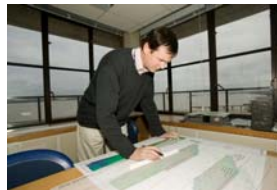
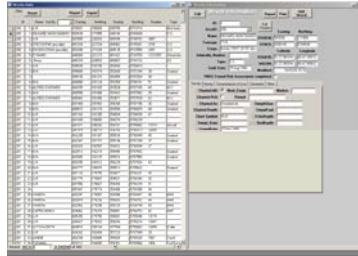
Channel Design

- Design considerations:
 - Current deep water route
 - Navigational constraints
 - Wrecks & Obstructions
 - Bed materials



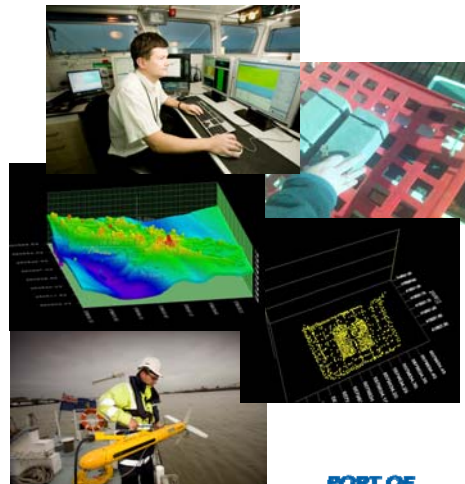
Desk Based Assessment

- Known wrecks & obstructions
 - PLA Wreck database
 - UKHO records
- Unknown wrecks & obstructions
 - Sidescan sonar and magnetometer surveys
- 573 sites identified as part of LG Environmental Statement
- Archaeological input



Hydrographic Survey

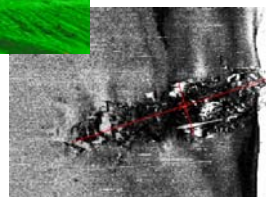
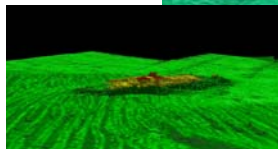
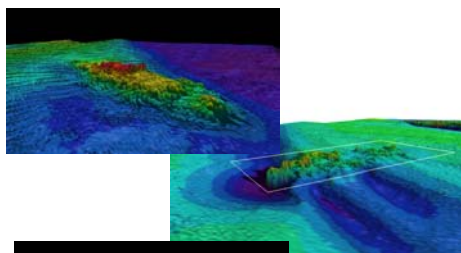
- Survey Resources
 - Four field surveyors
 - Three survey vessels
 - Two high resolution multibeam systems
 - Dual frequency sidescan sonar
 - Real time tide gauge system
 - 3D Processing



Hydrographic Survey Vessels



Hydrographic Survey

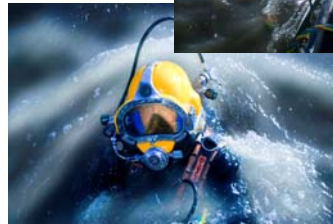


- 3D Visualisation
- Charting
- PLA Wrecks Geographic Information System (GIS).



Diver Inspection

- Dedicated dive team specialising in salvage operations
- Description and Interpretation of sea bed features
- Sampling to improve future classification for both obstructions and bed features.

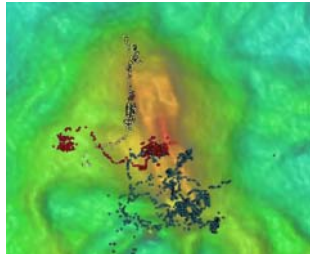


Archaeological Assessment

- Review of Survey Data
- Anomaly Classification
- Documentary Research
- Archaeological Dive Surveys
- In-water Archaeological Recording
- Assessment of Archaeological Importance
- Appropriate Mitigation Developed



Archaeological Dive Surveys



Images: Wessex Archaeology

- Diver tracking
- Finds/Artefact analysis
- Assessment of character, nature & age of site

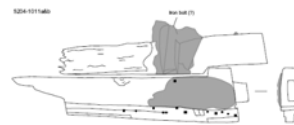
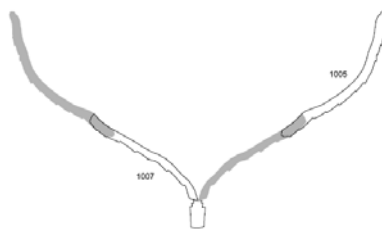


In-Water Archaeological Recording

- Small Finds Analysis



- Structural Recording



Images: Wessex Archaeology



PLA Salvage

- Obstruction Clearance
 - WWII boom defences
 - Anchors, chains & cables
 - Misc
- Smaller/wooden wrecks
 - Supporting Intrusive Archaeological Investigation



Protecting Our Maritime Heritage

- Two sites recently designated under Protection of Wrecks Act 1973.
- Thought to be remains of the “London” which sank in 1655.
- Will be subject to Archaeological Exclusion Zone and monitoring during dredging.
- Dredging Protocol to deal with obstructions which may be encountered.



Summary

- Channel Design
- Desk-based Assessments
- Hi-Res Hydrographic Surveys
- Diver Inspection
- Archaeological Investigation
- Salvage/Recovery
- Heritage Protection



Any Questions?

