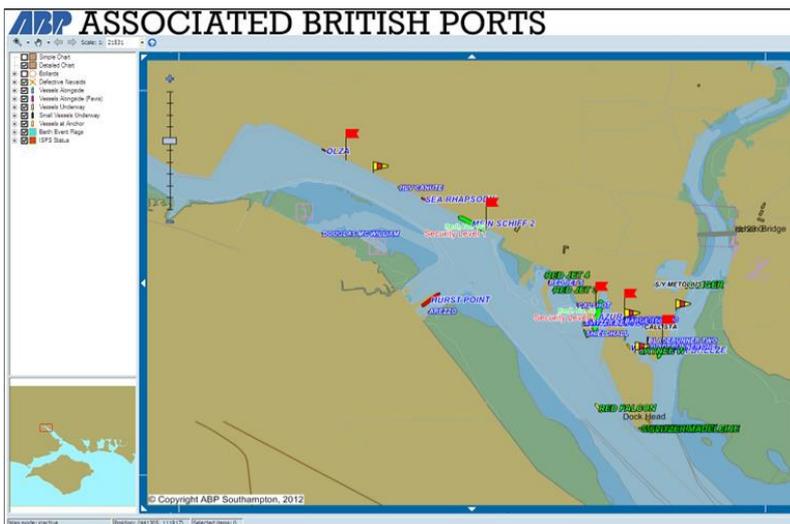


CUSTOMER CASE STUDY

How ABP Port of Southampton is benefiting from GIS

Associated British Ports (ABP) Port of Southampton, like other ports, is a multi-faceted business, encompassing land and maritime operations, asset management, engineering, safety, security and environment protection. To maintain efficiency, port integrity and regulatory compliance, interlocking organisational and management processes are employed. Access to appropriate and fit for purpose data and information is essential to these processes and hence to the smooth running of the port.

Much of the data and information within a port has a spatial context; in other words, it either represents a geographic feature (e.g. building, gate, wreck, navigational aid, sounding) or is attributed to a geographic feature (e.g. occupier, inspection date, sample value). As a consequence, it is often desirable to access and portray this data in a Geographical Information System (GIS) and to use the power of the functionality of GIS to produce outputs in the form of maps, graphs or reports.



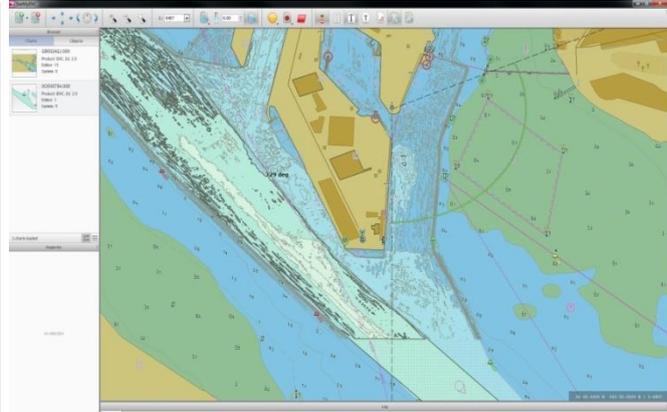
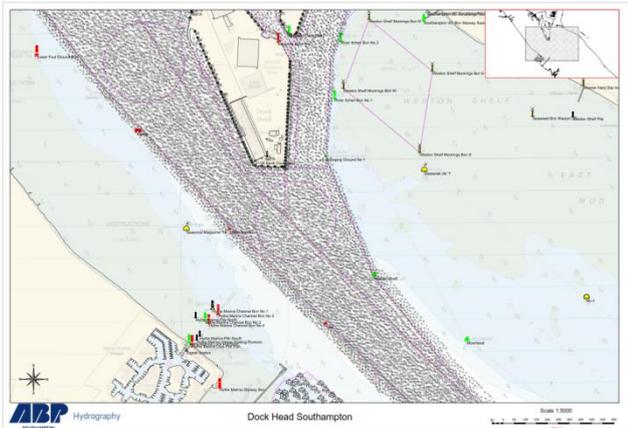
GIS is not just about producing maps and charts. It is also a powerful means of associating and analysing seemingly disparate datasets using location as the common factor. Many different types of data can be discovered, accessed, queried and reported easily and efficiently as part of a wider information infrastructure. It can be used therefore to support improvements in data management, and hence work flow, resulting in increased operational efficiency, streamlined stakeholder engagement and reduced risk.

OceanWise has worked alongside ABP Southampton successfully for over two years and is helping ABP improve workflows that are heavily reliant on data and information. These workflows include hydrographic survey planning and management, chart production, including digital charting used by ABP pilots and VTS, dredging planning and management, asset management and conservancy. This customer case study explains how ABP is benefiting from its relationship with OceanWise and describes how other ports can realise similar benefits in our modern digital world.

Chart Production

The key to efficient modern paper and digital chart production is robust workflows and access to reliable data and information. Much of the data used in chart production is used elsewhere in the port. It is more efficient to manage this data centrally, avoiding data replication and minimising the steps from data acquisition to chart production and dissemination. This approach is also less prone to error as a result of out of date or inappropriate data being used by mistake.

ABP Southampton uses the above approach, GIS, and workflows and templates set up by OceanWise. Data is brought into GIS natively from ABP’s survey control and data acquisition software where it is combined with infrastructure and other required datasets (see below). Paper chart production is carried out using GIS directly whereas the production of digital charts in S-57 format (bathymetry and port ENC’s and Maritime Information Overlays (MIO)) for use on Portable Pilot Units and Vessel Traffic Services requires OceanWise’s Maritime Toolbar and ENC Writer Extension.



Hydrographic Surveying and Dredging

While ABP Port of Southampton had systems in place to register and record Hydrographic Surveys and associated dredging, these systems were no longer being updated to reflect changes required in the day-to-day running of the business. OceanWise has been able to provide Maritime Toolbar Extensions which give the same level of functionality – to record all published surveys and record details of dredging undertaken, while the software is externally maintained, saving on bespoke maintenance costs.



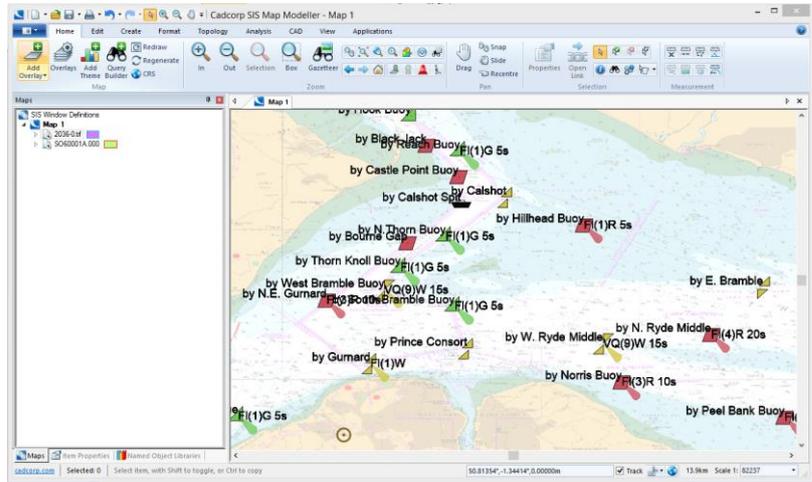
This has led to the removal of approximately 10 legacy databases and spreadsheets and transformed ABP’s work processes by moving to a centralised system. Ocean Database (ODB) acts as the central data store, built in SQL Server 2008 to use the benefits of SQL Server’s adoption of spatial functionality, ODB is able to store many simple and complex port related data types, including navigational aids, berthing information, water and seabed quality samples and real time and predicted tides.

ABP Southampton is also now able to display the status of the Port Surveys

in map form, by linking the GIS with ODB, they can see at a glance which areas are due for survey or have been recently surveyed. This, in turn, streamlines survey planning to enable it to be carried out more effectively. OceanWise are also able to respond to additional software requirements as needed and provide other functionality which has proved useful to the business.

Infrastructure and Asset Management

As with many ports the same data is often required to support different business processes and systems. Historically, this data has been stored multiple times within each application, or in different formats and/or locations. Now, by using OceanWise's ODB as a central data store, ABP Southampton has been able to link their existing PAVIS (Port and Vessel Information System) system to ODB, so data is managed centrally and any updates take place only once and all systems reflect these changes. This same dataset is also now being used as the input to the creation of a Marine Information Overlay (MIO) used in the VTS RADAR system – leading to greater efficiency and ensuring consistency across the Port.



Conservancy Management

All ports have a requirement to report what they do to regulators and OceanWise Maritime Toolbar Extensions have enabled ABP Southampton to continue to do this but in a much faster and more robust fashion. Through the Toolbar they are able to process the logs provided by the dredger using automatic tools which then act as input to reporting required by the regulator. Using 3 mouse clicks to create the bi-annual Disposal Licence Return to the Marine Management Organisation (MMO) has resulted in significant amounts of time and effort savings in what was once a lengthy process.

In addition, by linking the Annual Licence Return to OceanWise's Environmental Samples Management Extension recent sampling results in relation to a specific dredge or survey area can easily be assessed, including the ability to highlight results which may have surpassed defined MMO Action Levels. As with other port information, this data is stored centrally and can also be read from the database into the GIS and so display the results in a graphical form providing new analysis opportunities. As a new benefit the Hydrography Team is now enabled to provide customisable and automated reports to assist Senior Management within the Port and ABP Group in decision making and compliance matters.

All these areas of the business have benefitted from incorporating the systems into Business as Usual processes using the ideas of Lean Data Management to improve the workflows and ensuring the least amount of transformation of datasets is required.

Maik Weidt, ABP Southampton Port Hydrographer explains, *"GIS and in particular the specialist maritime tools and expertise provided by OceanWise are now integral to our operations. We have replaced our old paper and spreadsheet based systems with centralised data and information management and access. This system is now reaping wide benefits across the port. Hopefully one day all ports will be using these types of GI systems and tools. Ensuring the safety for all users in the port is paramount and I am pleased that ABP Southampton with the help of OceanWise has been one of the first ports in the UK, to benefit from this modern approach."*

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