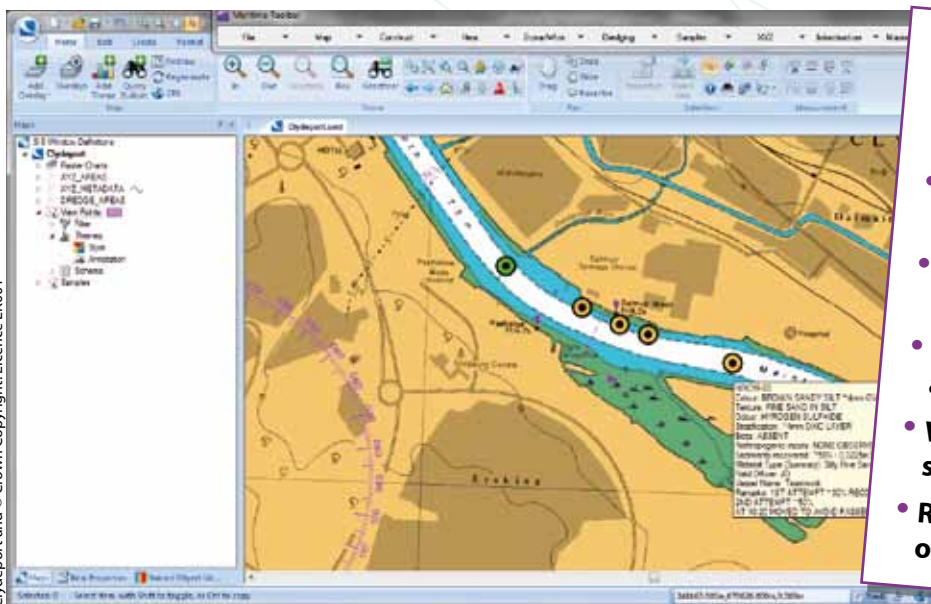


Maritime Toolbar

Environmental Samples Management Extension

Tools to meet the workflow demands of the maritime user



Key Benefits:

- Implements the philosophy of 'lean' management
- Links previously disparate datasets with GIS
- Improves productivity and efficiency
- Helps standardise data inputs and outputs
- Wide range of sample types supported
- Runs independently or with GIS

Geographic Information Systems (GIS) offer multiple benefits to maritime users wishing to acquire, analyse and disseminate environmental, asset and business data using 'location' as a common factor. Maritime Toolbar Extensions build on the data management and manipulation tools inherent in GIS and OceanWise Maritime Toolbar to address particular workflow demands within an overall maritime information infrastructure.

Organisations carry out specific tasks to address business and operational needs. Efficiency is improved by breaking these tasks down into well-defined steps or processes. Each process often relies on data that is developed as a result of a previous task, output from a different system or is acquired externally. The interface between processes can be a source of major inefficiencies and frustration, either because information is not easily accessible or requires considerable preparation

before it can be used. **Maritime Toolbar** and its **Workflow Extensions** uses the philosophy of lean process management by providing the tools required to manage common data as a central resource and streamlining the exchange of data between processes, systems and external stakeholders.

Maritime Toolbar Workflow Extensions have been developed in collaboration with port operators to meet their exact requirements. However, they will be of benefit to other maritime users involved in planning, constructing and operating all types of coastal or offshore infrastructure. Other Extensions are currently available for the following maritime processes:

- Hydrographic Survey Management
- Dredging and Licensing Management
- Infrastructure and Asset Management

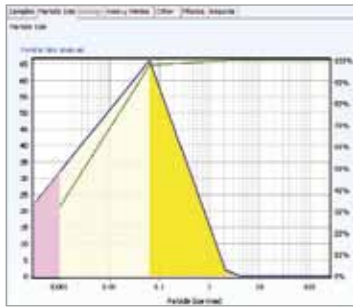
Each extension can be installed alone or in combination depending on individual requirements. Extensions for other maritime processes are in development, please contact **OceanWise** for further details.

Environmental Samples Management

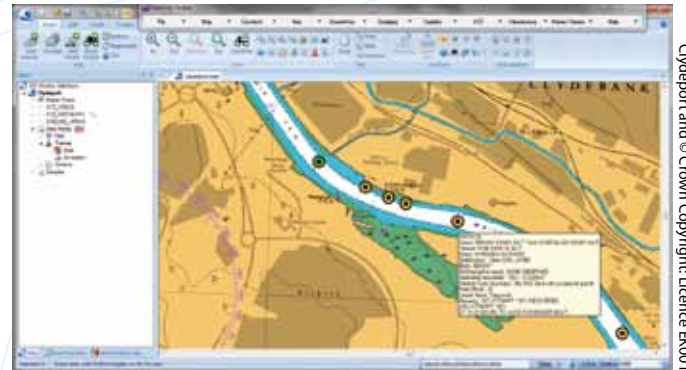
Sampling of the water column or seabed is a common activity in maritime operations. The planning and monitoring of data collection programmes and the reporting of results to meet regulatory conditions is a legal requirement. The data acquired is complex and requires specialist knowledge and tools to process and interpret. Often this data is linked to a dredging campaign or work programme. Being able to undertake these tasks, exchange data with surveyors and regulators, and share data internally between related tasks easily and efficiently has real advantages.

Description	Parameter	HDV	Qualifier	Value	Units	Analysis
Arsenic	As	15		mg/kg		Rep No: 4395
Cadmium	Cd	0.2		mg/kg		Rep No: 4395
Chromium	Cr	51		mg/kg		Rep No: 4395
Copper	Cu	26		mg/kg		Rep No: 4395
Mercury	Hg	0.19		mg/kg		Rep No: 4395
Nickel	Ni	19		mg/kg		Rep No: 4395
Lead	Pb	55		mg/kg		Rep No: 4395
Zinc	Zn	200		mg/kg		Rep No: 4395

Records regulatory trigger action levels and highlights non compliance



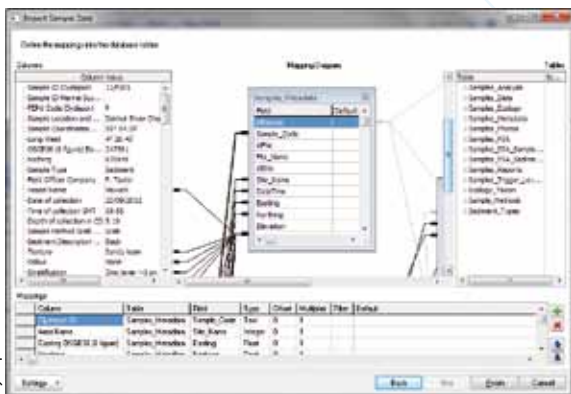
Incorporates standard data types and methods of collection and analysis



Display sample locations, data values and statistics themed in GIS

Maritime Toolbar and its **Workflow Extensions** run as a standalone application or as an 'Add-In' to Cadcorp SIS, which provides the spatial or mapping functionality. At their core is **Ocean Database**, comprising a bespoke data model developed from many years' hands-on experience. **Ocean Database** can be realised in a range of Relational Database Management Systems (RDBMS), such as Oracle, Microsoft SQL and PostgreSQL, and is at the heart of the **OceanWise**'s maritime information infrastructure product and service range. Data templates, exchange standards and reports provide the link with stakeholders. They can be customised to contain user details, logos and to match with specific regulatory regimes or practices.

Standardising the way data is recorded and exchanging it digitally with contractors and the regulator is becoming more common in many walks of life. However, these improvements do not happen by accident but are brought about by working with stakeholders, applying good data management practices and having the software and systems in place to support them.



Load data from contractors using standardised templates

