

# AN INTERVIEW WITH

# PD PORTS

“GIS helps us track berth depths, optimise maintenance dredging, and redesign channels with environmental sensitivities in mind – **it’s a game-changer for smarter port management.**”

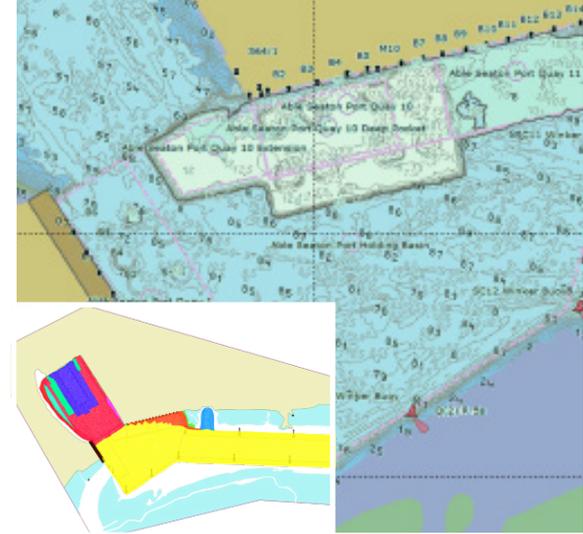
## PD PORTS FACT FILE

**GIS Software:** Cadcorp, GISGRO.

**GIS utilised to support:** Port ENC Production.

Visualisation of aerial photos, ENCs, Bathymetry, Modelling ship approaches to berth, Asset Management. Engineering use GIS for asset management.

**Datasets used:** Bathymetric Data / Hydrographic Surveys, Topography and Imagery, Environmental, Admiralty Charts (Raster and ENCs), Autocad DWG Drawings.



**Q Describe a situation where using GIS made a significant difference in your organisation. How did it impact others?**

**A** One of our main customers has 7 berths within their terminal area. Originally they were all dredged to the same maintained depth, however as one area was only handling smaller ships it was decided there wasn't the need to keep it to that dredge depth. Over time this started to impact the larger ships leaving the adjacent berth. Using GIS to evaluate safe clearance areas we were able to establish the swept path impacted by vessel movements and therefore the area we need to maintain. This is now better defined in both the berth areas and the approaches and are used to inform maintenance dredge programmes.

**Q What is your favourite GIS dataset and why?**

**A** Port ENCs – it's satisfying to produce them and know all the elements which have gone into creating them. They are useful for illustrating navigation problems, positioning ships and planning ship movements.

**Q What is the most innovative or interesting project your organisation has undertaken using GIS?**

**A** For Seaton Channel we produced the ENCs and then used this to look at bathymetry channel profiles and side slopes in order to redesign the channel. Since the original dredge campaign we looked at the slopes that were self maintaining. Having originally set slopes dependent on the sediment type, when the settled

slopes were assessed we found the slope gradient to be much greater than expected which allowed us to reassess the channel width and alter the alignment of the channel. We were able to use GIS to define the buoy locations, look at critical contours and calculate slopes.

**Q In which areas of port management do you apply GIS?**

- A** • Operational planning
- Environmental management
- Asset Management
- Logistics and cargo handling (special projects)
- Emergency response
- Navigational Pilotage
- Maintenance
- New constructions/projects – port developments.

**Q What limitations or frustrations, if any, do you experience with GIS?**

**A** Nothing significant, but if you don't have easy access to the right data/data isn't managed correctly, and there's no structure, then it can be hard to find the right data.

**Q What one thing would you like your GIS to do that it can't do at the moment and how would it make things easier for you?**

**A** Additional automation that would allow us to drop a survey in and produce an ENC straight away.