Bruce Richardson, Chief Harbour Master.

With the Port of London (PLA) Authority's mission statement containing key words such as safe, sustainable and competitive, Report interviews Bruce Richardson, the Chief Harbour Master and the Pilotage Manager, Richard Carr and asks them how the PLA goes about achieving these goals in today's tough operating environment. Report also looks at the reasons why the PLA decided to chose a MARIN simulator and what role this will play in its future strategy.

Safety and efficiency go

Bruce Richardson begins by pointing out that the PLA is not a typical port authority, in that it does not operate terminals or berths. In this respect, it is almost unique within the UK. Not only that, the Authority's territory is extensive, covering 400 square miles, and includes 75 active berths along the banks of the Thames. This can often mean that the PLA is involved in handling up to 100 vessel movements a day. As such, this means the PLA takes safety 'extremely seriously', says Richardson.

Over the decades safety issues have always been high on the agenda but there has been even more awareness recently throughout the UK as port authorities implement the Port Marine Safety Code. This Code, introduced in December 2000, was prompted by the very serious Sea Empress accident at Milford Haven.

Implementing the code requires port authorities to put in place a navigation Safety Management System, based on full-risk assessment. Whilst ports have of course reviewed hazards over many decades, this new formalised approach now provides a system which allows ports to demonstrate how they are approaching safety. By way of illustration, the PLA's main risk assessment identified 244 different hazards, all of which are now kept under active review on a pre-planned basis.

Another example of the importance attached by the PLA Board to safety matters can be found in the reliability targets it sets for its VTS systems. The port operates two VTS centres which integrate the output from 14 radars and 12 electronic tide gauges. The overall reliability target for this highly complex system is 99.9%. VTS was introduced at the PLA in 1964. Since then equipment has been regularly updated with the PLA now using its third generation system.

Currently, the PLA is busy conducting AIS trials and this equipment is due to be integrated into the VTS system next year, even though the fitting programme for ships, mandated by IMO Resolutions, is unlikely to require vessels to be fitted before 2004. Again here, the PLA has taken the initiative and is accelerating the introduction of AIS into its VTS system because it sees the enormous benefit it has to the safety of navigation, inherent in its very accurate vessel tracking, and the much-reduced risk of misidentification.

Another major initiative the PLA has taken in enhancing the margin of safety is by investing in a

hand-in-hand at the Port of London Authority

MARIN ship manoeuvring simulator which is due to be up-and-running in the Spring of next year. "We wish to develop our pilotage training, especially in the field of emergency response", says Richardson.

Simulator training is a routine activity in other transport-related fields - aviation, rail transport and even the underground. Without them you cannot really train people to respond correctly to emergency scenarios. Richardson admits that pilots were fairly sceptical at first, some were doubtful that a 'computer toy' could help improve the skills of highly-experienced seamen. Such doubts, however, were quickly put to rest as soon as the PLA pilots started to gain experience at the MARIN facility in the Netherlands.

A project, sponsored by BP Oil, which was studying berthing techniques at the BP refinery was enough to demonstrate the degree of realism that could be generated in the MARIN simulator. "It will give our pilots greater confidence and allow them to rehearse situations not possible in a real ship. It will also allow pilots to more easily maintain the knowledge of the 75 different berths up and down the Thames. They will be able to practice berthing different types of vessels in a variety of different tidal and weather conditions. This is especially important in a port which handles a wide range of vessels from VLCCs to small coastal vessels", he adds. For the PLA, the top priority it looked for in the simulator was the quality of its manoeuvring realism and it was primarily for this reason that it decided to work with MARIN. "We place enormous priority on achieving accurate and representative vessel response to helm and engine orders, and to the effects of wind and tide. We did not want a video game, but a system in which the pilots could place their trust."

Richard Carr, Pilotage Manager.

For the PLA, MARIN's 70 years of experience are now reaping rewards, in that the Institute's origins in ship modelling and tank testing have resulted in it being able to provide extremely realistic models for use in its simulators, stresses Richardson. "It is not possible to buy a simulator off the shelf. Any system has to be tailored to a port's needs, which is why it is so important to chose a provider that really listens to you."

Once introduced, the PLA expects that all of its 92 pilots will undertake several days training on the simulator each year. MARIN