NAVIGATIONAL RISK ASSESSMENT WORKING GROUP

NRAWG Date:	21/05/2013	Owner:	C McQueen HML	NRAWG Ref:	46	NRAWG Title:	Cap San Class ULCS to Northfleet Hope Container Terminal (LCT)

Panel Members:

Name	Organisation	Name	Organisation	Name	Organisation
C McQueen	PLA HML	C Phillips	PLA POM	G Frost	PLA Risk manager
J Parkes	PLA HM (SMS)	G Holland	POT HM (member of the group but unable to attend meeting)		
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R Flynn	PLA PRM	P Hanson	PLA DHML		

Detail / Terms of Reference	Observation/Recommendation
London Container Terminal has approached the Port of London Authority to investigate the feasibility of Hamburg Suds new Cap San class of Ultra Large Container Ship trading to the terminals Northfleet Hope riverside berths. The new Cap San class ULCS dimensions are 333.2 m LOA, beam 48.2 m, expected operating draught 12.5 m, (summer draught 14.0) deadweight 124458t and container capacity to carry 10,500 teus. This new class of vessel for LCT are larger in terms of its general dimensions, deadweight and carrying capacity to existing containerships that currently go to LCT.	Historically only one ship with greater dimensions of the Cap San Class has berthed on LCT's riverside berths (Northfleet Hope Container Terminal - NHCT) the "Sovereign Maersk" which had 347m LOA, beam 42m, in 2007. Following risk assessment work carried out by the Container Ship Working Group (CSWG) in May looking specifically at risks for the new larger containership for London Gateway Port the following criteria were accepted as being applicable for LCT ships. 1. Definition of ULTRA LARGE CONTAINER SHIP (ULCS) was adopted as being 320m LOA and or draft 13.5 or more. 2. The Cap San class vessel falls under the definition of ULCS but its expected operating draught is to be 11 to 12.0m (Due to constraints at other ports). 3. The current overall draught constraints that apply for ships to NHCT is in the order of 12.5m to 13.0m subject to whether tides are spring or neap and requirement to maintain minimum

It is felt that the vessel because of its size is close to the safe operational limits for the terminal to berth and un-berth such a vessel on regular basis in the expected range of tidal and weather conditions it would be expected to operate. The objective of the risk assessment is to review existing hazards, determine feasibility of the ship regularly being able to call at London Container Terminal, identify simulation work required to validate assessment and to identify whether additional risk controls are required.	underkeel clearances of 0.9m on flood and 1.4m on the ebb and an under keel clearance of 0.5 m whilst alongside. The CSWG original risk assessment work had identified a need for 2 pilots for all ULCSs. As part of a sore thumb review of original findings the group was asked to review 2 pilot ULCS requirement proposed Cap San ULCS for NHCT. The group was asked to consider reports from pilots assigned to the Maersk Sovereign and involved in risk assessment and simulation work undertaken at the time for that vessel. The evidence presented identified no particular need for a second pilot other than for familiarisation and training needs on the estuary passage to the berth. As the Cap San ships normal operating draught is12m, it was accepted it would not be so tidally constrained to the deep water route in the estuary, and it was agreed for the first voyage 2 suitably authorised pilots to be used to assess the passage, the need for a portable pilot unit; and provided no concerns arose subsequently, for future arrivals and departures, the 2nd pilot would board and land at Gravesend. *(This would be subject to review).* Following ship simulation work undertaken on the 20th June the following parameters were determined and recommended as part of this NRAWG report. 1. A maximum 25 knots wind limit should apply for ULCSs manoeuvring at NHCT. 2. For this class of ship at a draught of 12 metres and above, the berthing parameters are as follows: Berthing starboard side alongside - high water Tilbury + 30 minutes. Berthing port side alongside - 1 hour before high water Tilbury. Latest departure time (letting go the lines) is 15 minutes before high water Tilbury. 3. Allocated tugs to have minimum combined bollard pull of 140 tons. Minimum 2 tugs to be utilised recommend 2 x 70 TBP. <u>Other Recommendations</u> 1. 2 pilots requirement for berthing and un- berthing at NHCT with 2nd pilot boarding and landing at Gravesend. First voyage 2 pilots will board at Sunk.*(as agreed at Container Working Group meeting 10th June 2013, 2 pilot requirement to be reviewed after 3 months.).*

	2. Create an enhanced berthing box for Cap San ship. *(Will entail some minor dredging of the lower berth to achieve to uniform depth, currently upper berth declared depth is 13.2m and lower berth declared depth as 12.6m, there are depths less than 12.6m between berths).*Port of Tilbury has advised they would be looking to create 13.0 dredged box for 330m ship. 3. Because of increased displacement and high windage area of the Cap San ship, a standard mooring plan to be developed in cooperation with Hamburg Sud and London Container Terminal and loading on shore bollards checked to ensure there safe working loads are not exceeded. 4. Cap San ship is not to overhang the upper berth. 5. Minimum 25 metres separation gap between Cap San ship and another ship on the lower berth. (*Limits maximum length ship to about 240m LOA on the lower berth).* 6. Tugs are to be dedicated to the vessel. 7. Abort decision is to be made for a vessel on inward passage by Sea Reach 7, with the vessel swinging off London Gateway with tug assistance, if the vessel does not have a clear berth or because of restricted visibility existing or expected to exist in Gravesend Reach or at the berth. (Less than 0.5 mile). 8. NHCT ULCSs and large container ships to be included in traffic management preplanning for all large vessel movements and pro active management measures in place to ensure area off the NHCT berths is clear and ULCS does not meet other traffic at Tilburyness. 9. Planning a 1.5 hours gap between vessel leaving the berth and inbound vessel berthing should ensure inward ULCS can be aborted safely if the outward ship is delayed. 10. Sailing times to be rigidly adhered to with crane booms topped and drivers clear of the cranes in good time. 11. Moorings minimum 4 +2 with lines and headlines & stern lines split on different mooring bollards.

Panel Chairman:	C W B McQueen	Signature:		Date:	21/06/2013