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BS 6349 – Essential Update for the Ports and Maritime Community

Close and back to the future

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***8th February
2016***



TODAY'S PROGRAMME

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■ Morning

- Progress and the future - Chris Boysons
- BS 6349 Pt 1.2 – Steve Osborn
- ISO 21650 and CEN/TC250/SC1/WG6 – Simon Burchett
- BS 6349, Part 1-4 and BS 8500 – Peter Keel
- BS 6349, Part 5, - Mark Lee, Steve Challinor, Peter Neville-Jones
- BS 6349, Part 6 - Gareth Evans
- BS 6349, Part 7 - Simon Burchett

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TODAY'S PROGRAMME

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■ Afternoon

- Feedback workshop – CB 502 Committee
- Workshop on Seismic Design –
Helge Frandsen and Dimitrios Pachakis
- Workshop on Probability and Factors of
Safety – Chris Boysons

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FUTURE WORK OF CB 502

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■ New standards ?

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What new standards do you need?

- Port surfacing ?
- Seismic design of port structures ?
- Coastal structures ?
- Coastal flooding ?
- Maritime asset management ?
- Marinas and other recreational facilities ?
- Testing for fenders and mooring equipment ?
- Port lighting ?

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PORT SURFACING

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- **Spain**
 - ROM 4.1-94. – Guidelines for the design and Construction of Port Pavements
- **UK**
 - Heavy Duty Pavement Interpave 4th Edition 2008
- **PIANC**
 - MarCom WG 165 – Design and maintenance of container terminal pavements

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SEISMIC DESIGN

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Seismic design guidelines for port structures



■ EN

- BS EN 1998:2004 Eurocode 8 – Design of structures for earthquake resistance

■ US

- ASCE/COPRI 61/14 - Seismic design of piers and wharves
- UFC 4-152-01: 2005 – Design: Piers and wharves

■ PIANC

- MarCom WG 34: 2001 – Seismic design guidelines for port structures

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COASTAL STRUCTURES

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- **Spain**
 - ROM 1.1.-Recommendations for the design of seawalls and breakwaters (under progress. Approved Chapters 1 and 2.)
- **US**
 - EM-1110-2-1100 Coastal Engineering Manual
 - EM-1110-2-1204 Environmental engineering for coastal shore protection
 - EM-1110-2-2502 Retaining and flood walls
 - NA VFAC DM-26.2 Coastal protection
- **Hong Kong Govt, Port Works Manual**
 - Part 4 Guide to design of seawalls and breakwaters
 - Part 5 Guide to design of beaches
- **CIRIA**
 - B12 Seawall design
 - R119 Guide to the use of groynes in coastal engineering
 - R154 Beach recharge materials - demand and resources
 - C594 Coastal and marine working on site
 - C638 The rock manual use of rock in hydraulic engineering
 - C658 Beach management manual



COASTAL FLOODING

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- **UK**
 - BS 8533 Assessing and managing flood risk in development - Code of practice
- **US**
 - USAC EM-1110-2-1100 Coastal Engineering Manual
- **CIRIA**
 - C628 Coastal and estuarine managed realignment - design issues
 - Development and flood risk - guidance for the construction industry (C624)
 - Beach management manual (second edition) (C685B)

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MARITIME ASSET MANAGEMENT 1

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- **PAS 55 Asset management to 2015**
 - Part 1 - Specification for the optimised management of physical infrastructure assets
 - Part 2 - Guidelines for the application of PAS 55-1
- **ISO 55000 From Jan 2014**
 - ISO 55000 - Overview, principles and terminology
provides an overview of the subject of asset management and the standard terms and definitions to be used.
 - ISO 55001 – Requirements
the requirements specification for an integrated, effective management system for assets
 - ISO 55002 - Guidelines on the application of ISO 55001
provides guidance for the implementation of such a system

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MARITIME ASSET MANAGEMENT 2

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- **US**
 - UFC4-150-07 Maintenance of waterfront facilities
- **China**
 - JTS 150-2007 Code of energy-saving design for port and waterway engineering ?
- **PIANC**
 - 103 Life cycle management of port structures, recommended practice for implementation
- **CIRIA**
 - C667 Whole life infrastructure asset management

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MARINAS

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- **The Yacht Harbour Association**
 - A code of practice for the design, construction and operation of coastal and inland marinas and yacht harbours
- **US Army Corp of Engineers**
 - EM-1110-1-400 Recreational facility and customer services Standard
 - EM-1110-2-1206 Environmental engineering for small boat basins
- **California**
 - Guidelines for Marina Berthing Facilities
 - Small Craft Boat Launching Facilities
- **Australia**
 - AS 3962 -2001 Guidelines for design of marinas
- **Dubai**
 - Marinas and small craft harbour regulations and design guidelines
- **Abu Dhabi**
 - Design code for maritime infrastructure
- **PIANC**
 - RecCom WG reports

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TESTING OF FENDERS AND MOORING EQUIPMENT

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- **PIANC**
 - **WG 33 Guidelines for the Design of Fenders Systems: 2002**

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- **HSE**
 - Health and Safety in Ports SIP009 – Guidance on Lighting
 - HSG38 - Lighting at Work
- **BSI**
 - BS EN 12464 Part 1:2011, Lighting of Workplaces - Indoor work places
 - BS EN 12464 Part 2:2014 Lighting of Workplaces - Outdoor work places
- **ILO**
 - C152: 1979 - Occupational Safety and Health in Dock Work



ANYTHING ELSE

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VOTE NOW

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- Port surfacing
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THE FUTURE OF MARITIME STANDARDS

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Thank you
Have a safe journey home

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