

MELBOURNE CHANNEL DEEPENING A 'SPECIAL' PROJECT

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EUDA AGM BRUSSELS

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SAFETY STATEMENT

Our people are our most valuable assets, making safety a core value. Our goal is: No Injuries No Accidents. This is embedded in our company's culture and supported through Values and Rules. All employees, including our sub-contractors, are expected to take these values and rules to heart.

VALUES

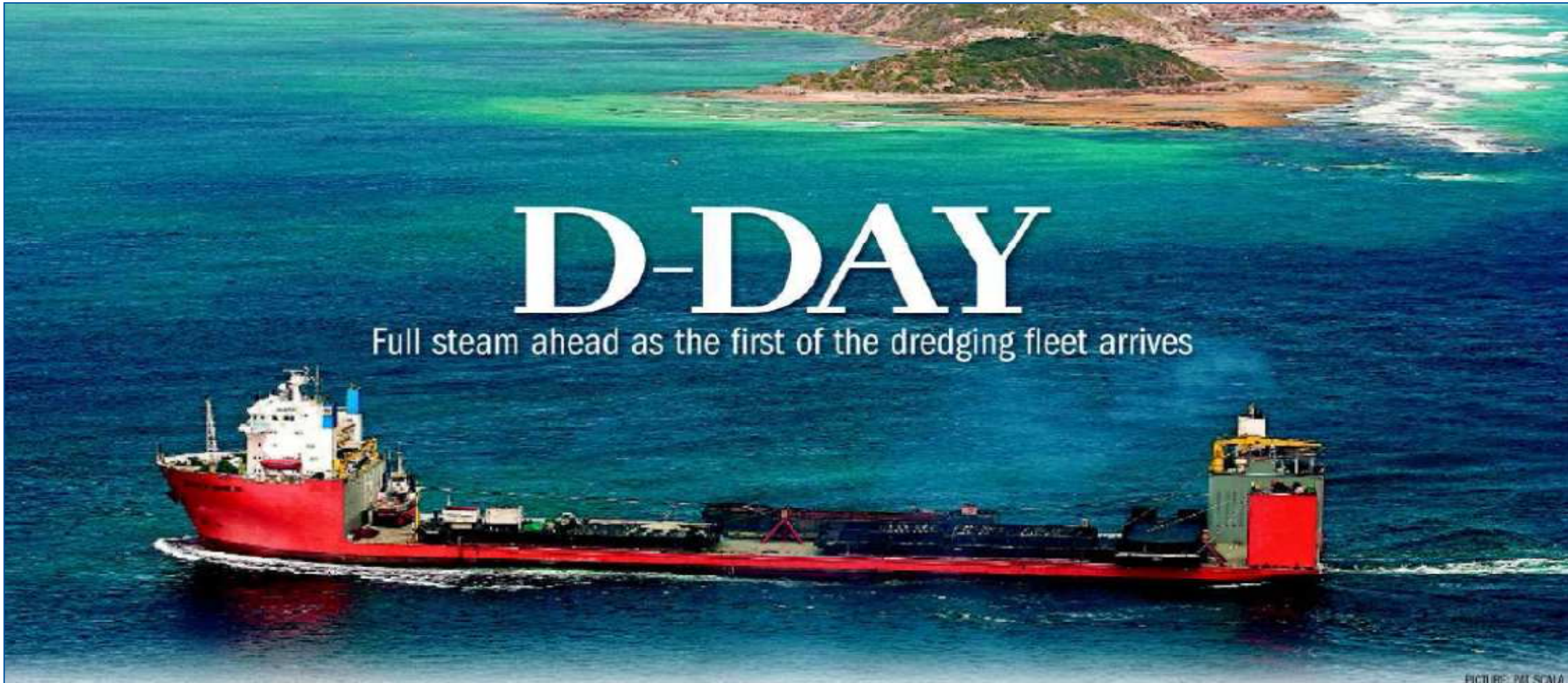
- I AM RESPONSIBLE FOR MY OWN SAFETY**
- I APPROACH OTHERS ABOUT WORKING SAFELY**
- I TAKE ACTION IN CASE OF UNSAFE OPERATIONS**
- IF NECESSARY, I WILL STOP THE WORK**
- I ACCEPT FEEDBACK ABOUT MY SAFETY BEHAVIOUR REGARDLESS OF RANK AND POSITION**
- I REPORT ALL INCIDENTS, INCLUDING NEAR-MISSES, TO INFORM OTHERS AND BUILD ON LESSONS LEARNED**

RULES

- PREPARE A RISK ASSESSMENT FOR EACH PROJECT, VESSEL OR LOCATION**
- OBTAIN A PERMIT TO WORK FOR DEFINED HIGH-RISK ACTIVITIES**
- MAKE A JOB HAZARD ANALYSIS FOR HAZARDOUS NON-ROUTINE ACTIVITIES**
- BE INFORMED ABOUT RISK & CONTROL MEASURES**
- BE FIT FOR DUTY AND WEAR THE PPE REQUIRED**

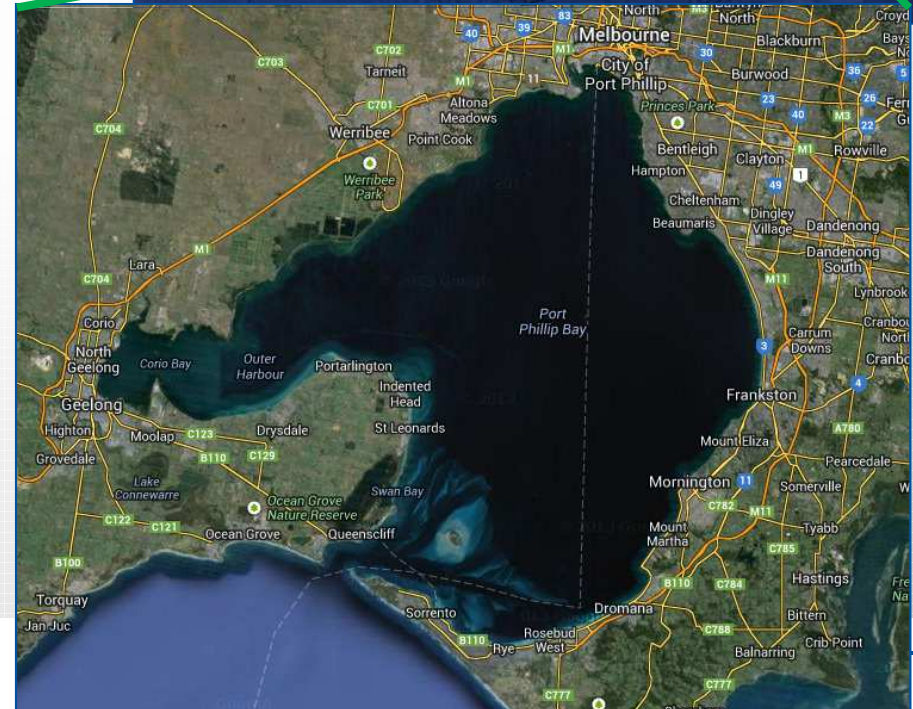
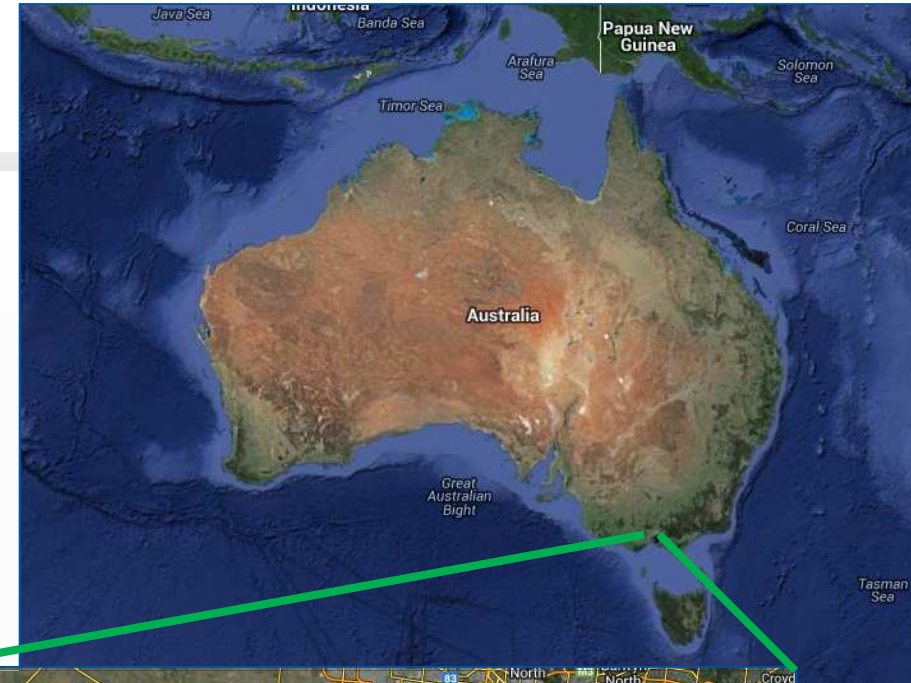


PERCEPTION



INDEX

- 01 PROJECT
- 02 TECHNICAL CHALLENGES
- 03 ENVIRONMENTAL CHALLENGES
- 04 ALLIANCE CHALLENGES
- 05 SOCIETAL CHALLENGES
- 06 BOSKALIS APPROACH / OBSERVATIONS
- 07
- 08
- 09



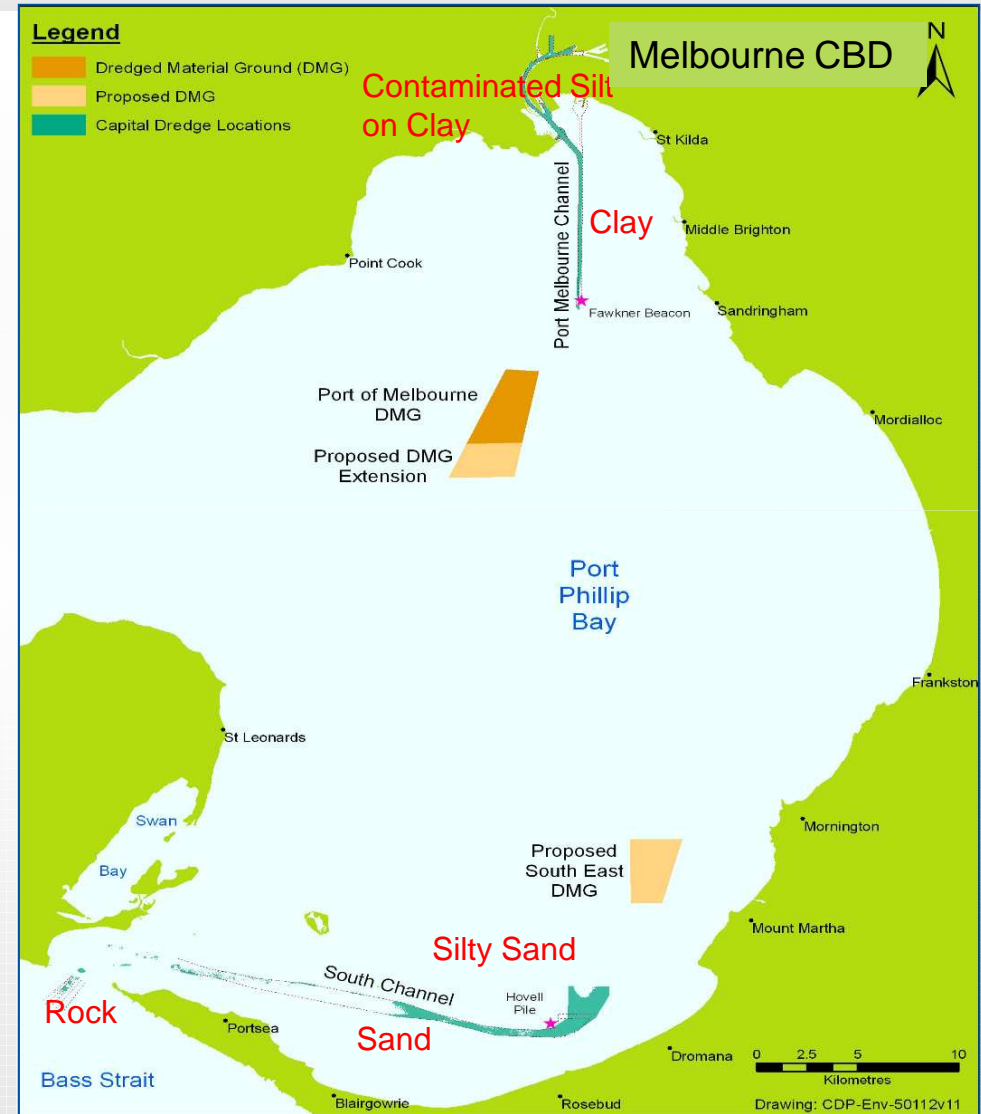
PROJECT CONTEXT

- ✓ Technical challenges in a sensitive environment
 - ✓ Immediate commencement after approval
 - ✓ Traditional procurement inadequate
 - ✓ Alliance model for development and execution
-
- Innovative involvement sought



SCOPE OF DREDGING WORKS

- ✓ Total 22 Mm³
- ✓ North
 - Stiff clay 7.1 Mm³
 - Contaminated silt 1.4 Mm³
- ✓ South 13 Mm³
 - Silty sand
 - + Rock outcrops
- ✓ Entrance 0.5 Mm³
 - Layered, weakly cemented limestone



TENDER PROCESS

- ✓ Tender submission October 2003
- ✓ POMC sought partner early in development phase:
 - Entrance Technology
 - Environmental Compliance
- ✓ Six international dredging contractors bidding
- ✓ Two shortlisted
 - Technical and environmental criteria
 - Alliance readiness
- ✓ Tender procedure, thoroughly managed
- ✓ Boskalis selected
- ✓ Alliance contract May 2004



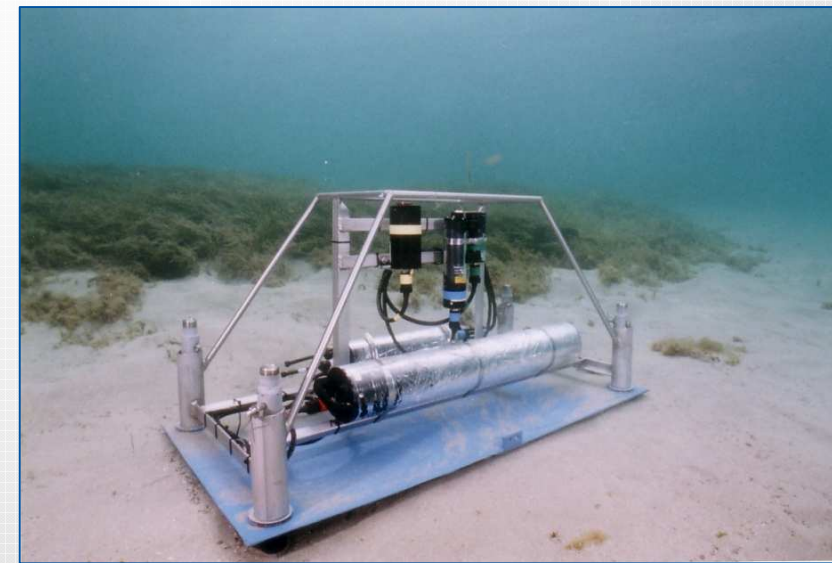
ENVIRONMENT APPROVAL PROCESS

- ✓ June 2004 submission EES
- ✓ July 2004 Panel hearings
- ✓ Feb 2005 disapproval EES
- ✓ April 2005 – April 2007 SEES
- ✓ July 2005 – Aug 2005 trial dredging
- ✓ July 2007 Panel hearings
- ✓ Dec 2008 state & federal approval
- ✓ Feb 2008 start project



ALLIANCE PRE-DREDGING

- ✓ Basic offer without environment
- ✓ 3yr environmental approval process
- ✓ Input in risk assessments
- ✓ Input in environmental studies and investigations
- ✓ Communication with the public
- ✓ Realistic Environmental Management Plan

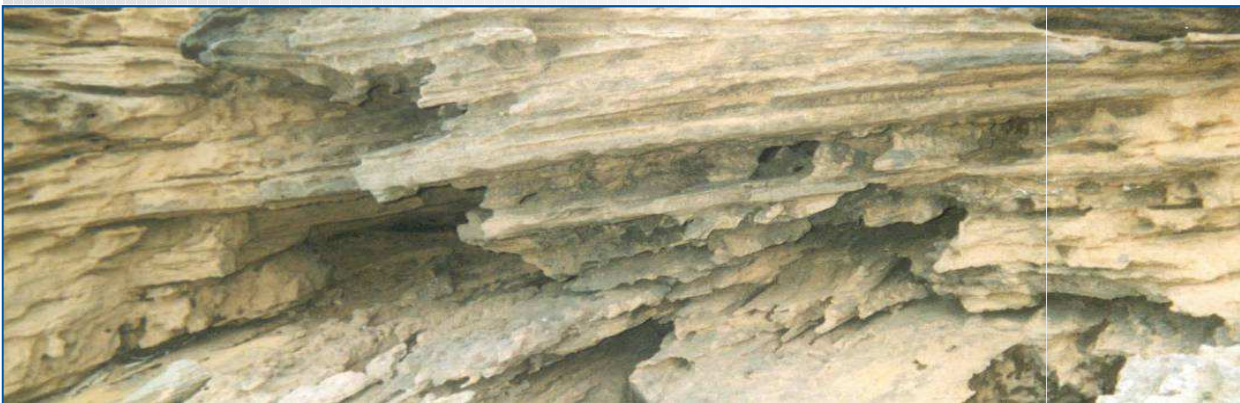


INDEX

- | | |
|-----------|-------------------------------------|
| 01 | PROJECT |
| 02 | TECHNICAL CHALLENGES |
| 03 | ENVIRONMENTAL CHALLENGES |
| 04 | ALLIANCE CHALLENGES |
| 05 | SOCIETAL CHALLENGES |
| 06 | BOSKALIS APPROACH /
OBSERVATIONS |



ENTRANCE – HARD ROCK + HIGH DYNAMICS



ENTRANCE – TSHD DRAGHEAD DESIGN

Ripper Draghead

Quarry tests



Lab tests



general information
The Dragging Thrust-Compressor is a large
vertical thrust-Compressor and a self-
propelled dragging module consisting
of a multipurpose dragging installation
equipped with data-acquisition and
data processing systems.
The dragging module is mounted on
top of the Thrust-Compressor.

ENTRANCE – COMPARE QUARRY / TRIAL



Quarry



Trial

INDEX

- | | |
|-----------|-------------------------------------|
| 01 | PROJECT |
| 02 | TECHNICAL CHALLENGES |
| 03 | ENVIRONMENTAL CHALLENGES |
| 04 | ALLIANCE CHALLENGES |
| 05 | SOCIETAL CHALLENGES |
| 06 | BOSKALIS APPROACH /
OBSERVATIONS |



ENVIRONMENTAL ASSETS

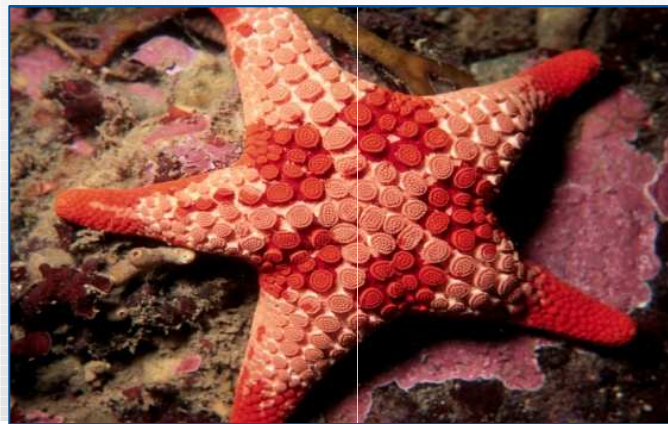
- ✓ Fish, Birds & Mammals
- ✓ Flora & sessile fauna
- ✓ Conservation Areas
- ✓ Economic & Social Uses



ENVIRONMENTAL CHALLENGES

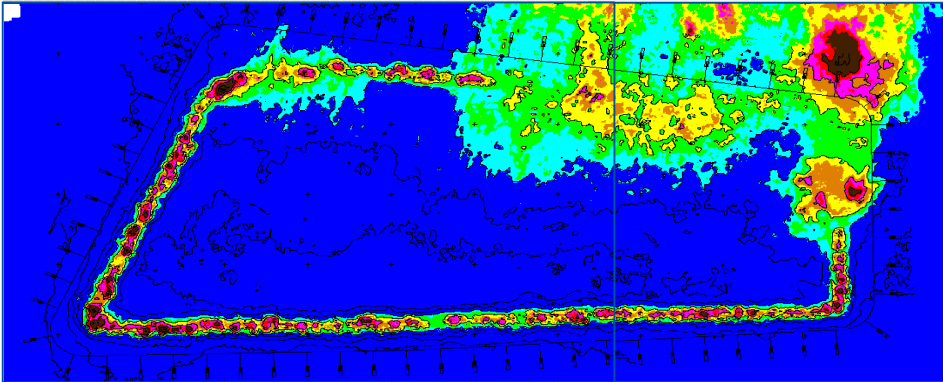
- ✓ Special issues: hard rock near canyon
- ✓ Soft contaminated clay in under water bunded area
- ✓ 'Calibration' of turbidity models

- ✓ Drafting Environmental Management Plan
- ✓ EES + Trial + SEES till permit

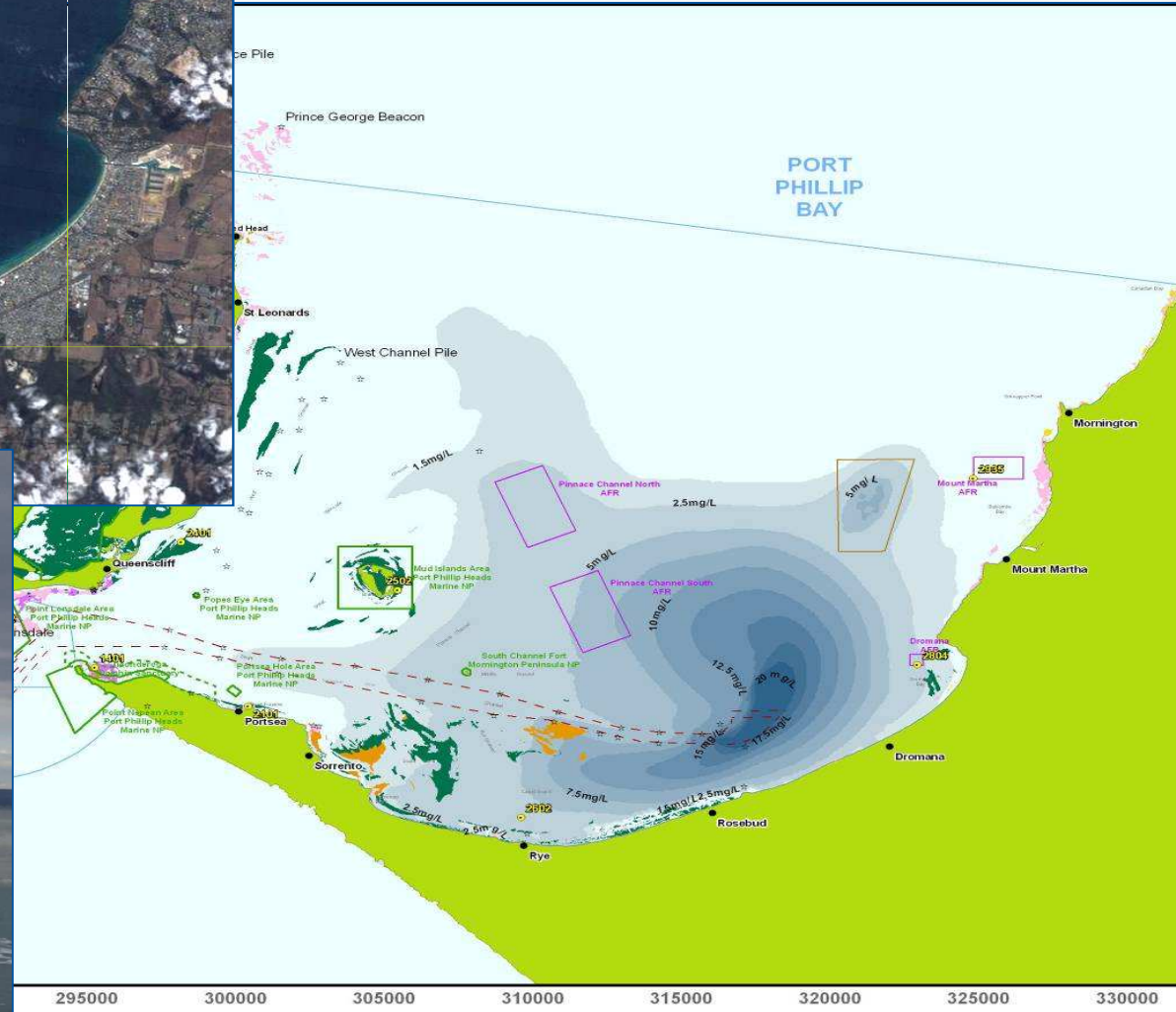


MITIGATION - CONTAMINATED MATERIAL

- ✓ Bunded disposal area
 - ✓ Area 2000 x 800 meter
 - ✓ Bund ~ 50 x 4 meter (w x h)
- ✓ Controlled silt placement
 - ✓ Fluid mud discharge through near bed diffuser
- ✓ Full confinement
 - ✓ Sand cap of 0.5 meter



TURBIDITY - PLUME MODEL VALIDATION



INDEX

- | | |
|-----------|-------------------------------------|
| 01 | PROJECT |
| 02 | TECHNICAL CHALLENGES |
| 03 | ENVIRONMENTAL CHALLENGES |
| 04 | ALLIANCE CHALLENGES |
| 05 | SOCIETAL CHALLENGES |
| 06 | BOSKALIS APPROACH /
OBSERVATIONS |



ALLIANCE ACHIEVEMENTS

- ✓ Teams with open communication
 - ✓ building
 - ✓ continuity
- ✓ Target on highest possible performance
- ✓ All risk mitigations designed & included
 - ✓ equipment & tools
 - ✓ work methods
 - ✓ control procedures
- ✓ Joint effort
 - ✓ environmental monitoring
 - ✓ 'immediate' external reporting



ALLIANCE ACHIEVEMENTS

- ✓ Budget update for environment and procedures
 - ✓ Risk & Benefits sharing
 - ✓ Open Book cooperation
 - ✓ Lump Sum with pain – gain mechanism
 - ✓ Bonus pool to enhance performance & ‘reputation’
- Successful project integration of Owner & Contractor



INDEX

01	PROJECT
02	TECHNICAL CHALLENGES
03	ENVIRONMENTAL CHALLENGES
04	ALLIANCE CHALLENGES
05	SOCIETAL CHALLENGES
06	BOSKALIS APPROACH / OBSERVATIONS



SOCIETAL CHALLENGES

- ✓ Stakeholder communication essential
 - ✓ First: information sessions by POMC (stage + audience)
 - ✓ Later: interactive sessions by Alliance (mingling)
 - ✓ Continued: progress information sessions around the bay
- ✓ Regular management reviews with Ministry of Environment
- ✓ Adherence to EMP
- ✓ Numerous audits



OPPOSITION IN ADVANCE

Bay fears rising

The Queen of all monsters readies for its mammoth task



Hulking dredger mutes protesters

New dredge snag

Toxic shocker

Kiss the fish goodbye fear

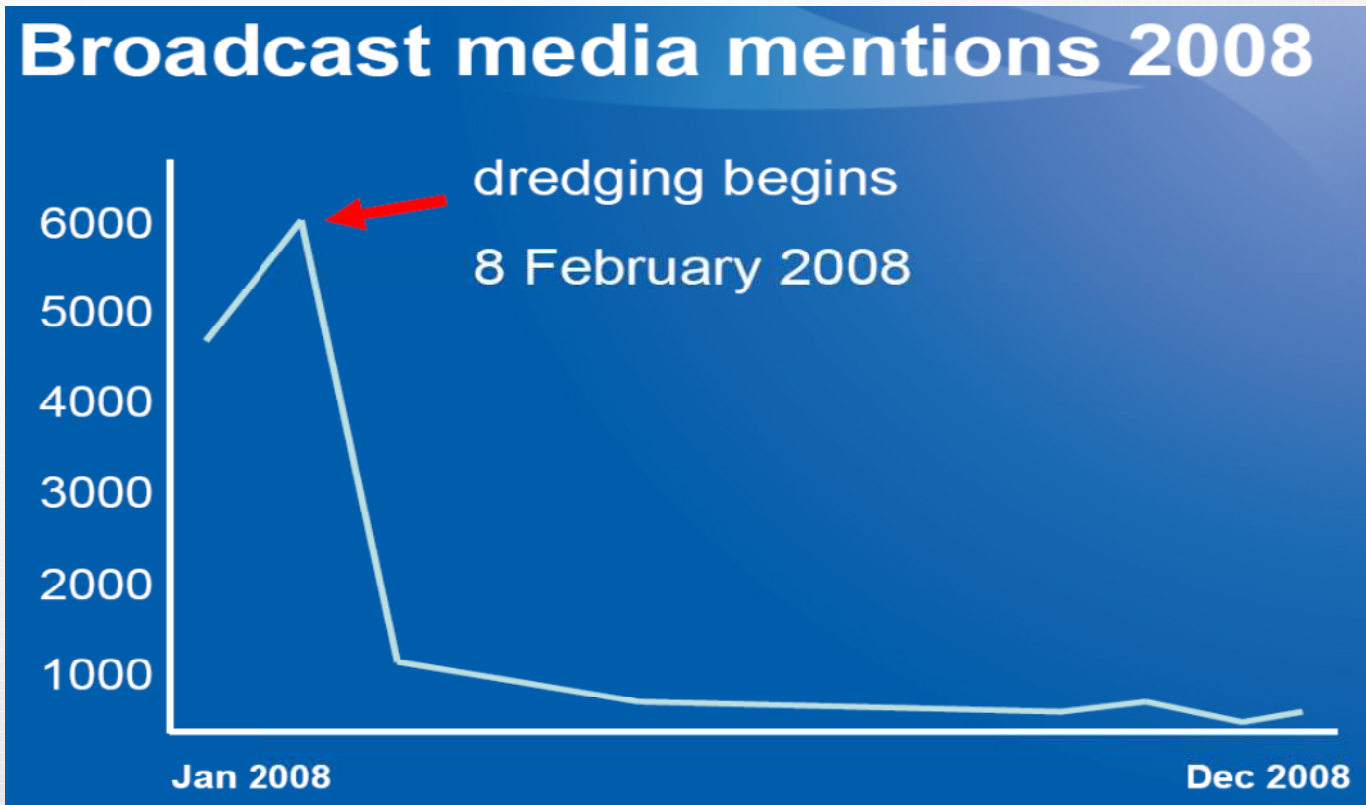


Bay of plenty: a plume follows the trial dredging of Port Phillip Bay

Pristine waters are under threat

IMPORTANCE OF INFORMATION SHARING

- ✓ Weekly press conferences / releases (successes & failures)
- ✓ Emergency reporting procedures
- ✓ On-line progress data sharing



PUBLIC ACCEPTANCE AT THE END

Encouraging headlines

'No obvious impact on marine life'

Greens bow to reality

Bay progress clear sailing

Nick Higginbottom

CRITICS of the Brandy Government's bay dredging project have been dealt a major blow with a report revealing the channel deepening is ahead of schedule and within its strict environmental regulations.

The Port of Melbourne Corporation yesterday delivered its quarterly report on the project, which found no significant impacts on the environment and that the dredging was ahead of schedule.

Water quality was found to be lower than forecast, but the report stated that there were only small and short-term water quality fluctuations, which were not of significance to the long-term health of the bay.

Ports Minister Tim Pallas said the current progress meant the channel-deepening should now be finished by late 2010 rather than the original prediction of an early 2010 completion.

"These results indicate the comprehensive planning undertaken before the project began has worked to minimise and monitor environmental impacts," he said.

"In the first three months 2.9 million cubic metres, out of a total 22.9 cubic metres, has been dredged. This means we are on track to complete the project in the summer of 2010."



Forging ahead: the Queen of the Antipodes.

The anti-dredging group Blue Wedges said the report was misleading as the project's environmental management plan was flawed from the beginning.

The community group's president, Jessy Wade, said there was a lot of important information missing from the report that was vital to determine the environmental impacts of the dredging.

"In the report it only says until April 10 so the most contentious parts of the project are not included in this report, and the removal of corals from the Yarra and dropping them in unpopulated bays," she said.

"This is underestimating what the current situation is in the bay. There's a whole lot of things that are missing from this report, which are all consequences of the ecology of the bay, that attacks, eggs and larva, embryo, organisms in that sort of way."

Ms Wade said she was not worried the Commonwealth and Brandy governments were being aggressive for the court battles over the dredging project, and thought the Premier's recent statements were laudable.

"I notice John Braxator recently said Plug the Pipe protects bays - well he's never said it here so we must be losing the track," she said.

Ms Wade has also lodged papers seeking the court's legal advice, a matter expected to be determined in coming weeks.

Channel dredging gets tick

Dredge or lose billions

Dredging passes test

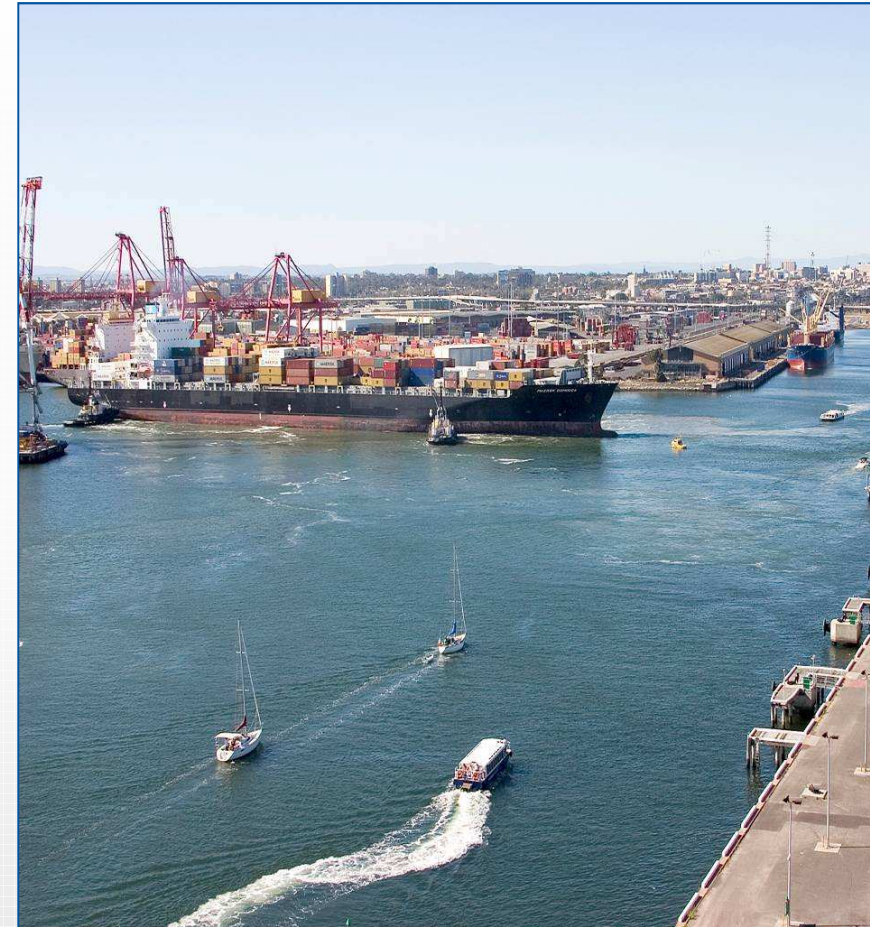
Port of Melbourne Corporation



SUSTAINABLE PORT

(from draft PIANC report 150)

- ✓ From re-active landlord to pro-active partner
- ✓ Co-operation with stakeholders
- ✓ In harmony with its environment
- ✓ Green growth as an economic driver
- ✓ Technological and societal developments
- ✓ Long term proactive vision irrespective of actual regulations



INDEX

- 01 PROJECT
- 02 TECHNICAL CHALLENGES
- 03 ENVIRONMENTAL CHALLENGES
- 04 ALLIANCE CHALLENGES
- 05 SOCIETAL CHALLENGES
- 06 BOSKALIS APPROACH / OBSERVATIONS**



ALLIANCE CONTRACTOR OUTCOME

- ✓ Outstanding performance
- ✓ Full compliance
- ✓ Within budget and time
- ✓ Full acceptance
- ✓ High level of confidence within government



➤ Thanks to contractor integrated approach

BOSKALIS APPROACH OBSERVATIONS

- ✓ Key success components
 - ✓ Competent team – all disciplines integrated
 - ✓ Innovative, knowledge based approach
 - ✓ Understanding the client
 - ✓ Best for project oriented
 - ✓ Mutual trust
- ✓ True alliance behaviour
- ✓ Award winning project



POMC & BOSKALIS: FULL STEAM AHEAD

