# BMA: Taking the lead to deliver value and growth



**BHP Billiton Mitsubishi Alliance** 

# John Smith CEO BHP Billiton Mitsubishi Alliance

Analyst Visit - October/November 2007



# **Important Notices**



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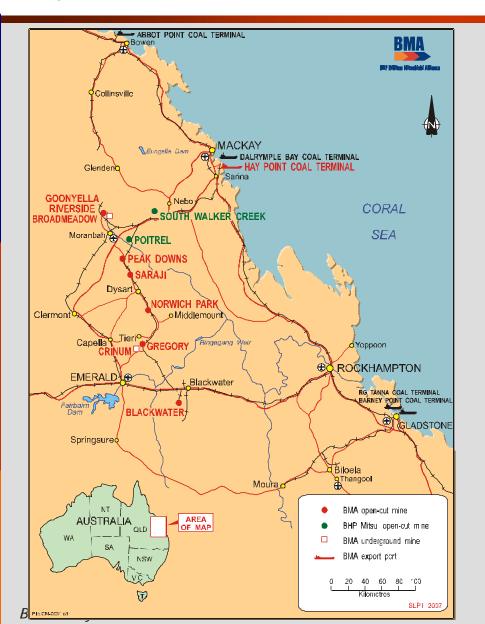
# **Presentation Structure**



- BMA Overview
- Deliver
  - Safety
  - Production
  - Cost management
- Lead
  - Resource position
  - Product range
- Grow
  - Key enablers (people, water, infrastructure)
     Growth options

#### **BMA Overview** Key facts





- 9 Mines (7 OC and 2 UG)
- 44 Mtpa Hay Point plus other port options
- 4,800 employees
- 3,000 contractors
- 750 Mbcm total overburden
- 58 Mt production (100%)
- US\$1.1 B EBIT (BHP Billiton share)

#### **BMA Overview** Key facts



Equipment Snapshot

34 draglines

> 28 shovels and large excavators

107 rear dump trucks

35 haul trucks

108 dozers

> 135 other mobile equipment



#### **BMA Overview** Mission and Strategic Objectives



Our Strategy RDP



**Our LoA Plan** 



**Our 5 Year Plan** 



Our 1 Year Plan



#### **Our Results**



Mission: To create value through the mining, production and marketing of high quality coal resources, and the provision of innovative customer and market-focused solutions. **Deliver Full Potential From** Existing Business

Reinforce Industry Leadership Position

Manage for Future Growth and Volatility

#### **BMA Overview** Mission and Strategic Objectives



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# **Deliver** Full Potential From Existing Business

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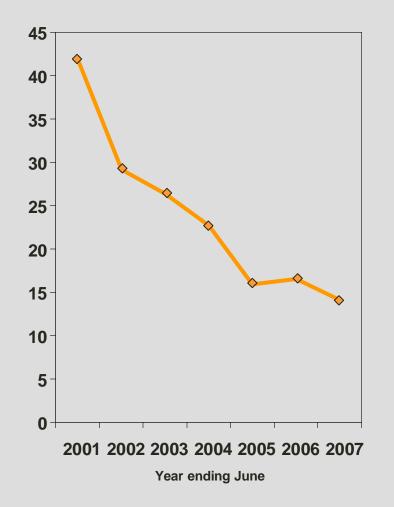
market-focused solutions.

Manage for Future Growth and Volatility

#### **Deliver** Safety



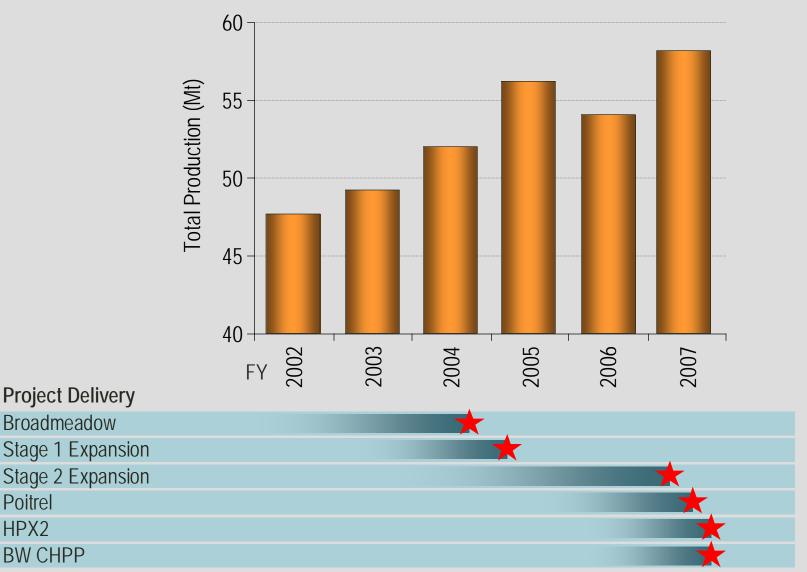
Total Recordable Injury Frequency Rate Number of incidents per million hours worked



- 14 per cent reduction in TRIFR in 2006/07
- Health and Safety Strategic Plan developed
- Fatigue Management a focus
- Contractor Management procedure developed and being rolled out

#### **Deliver** Continual production growth

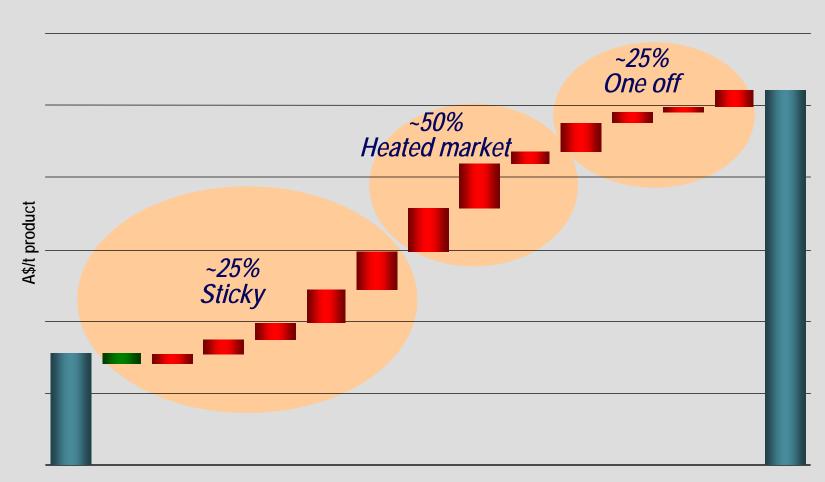




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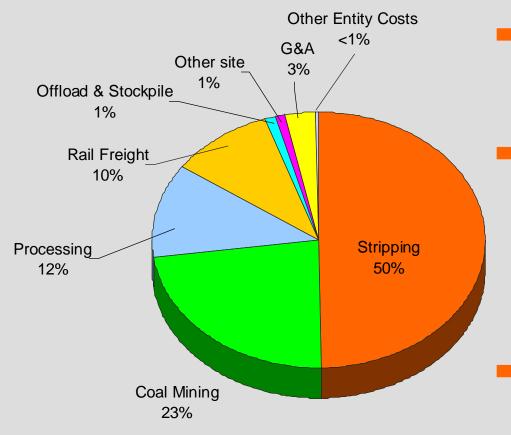




#### **Deliver** Cost Management



FY07 Cost Breakdown

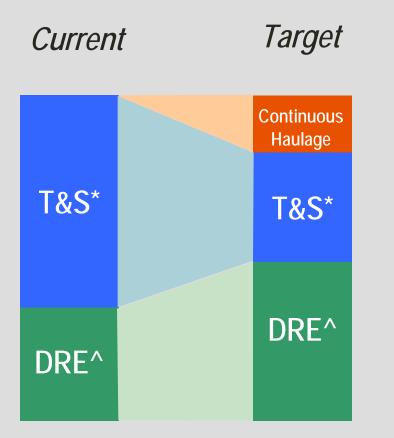


Note: Total costs for BMA managed operations and excludes royalties, port charges and the coal research levy

- Bulk of operating costs are in earth moving and increasing strip ratios
- Focus on lowest cost stripping options and maximising coal recovery
  - Last Drop
  - Stripping Study
- Business excellence delivering measurable benefits

#### **Deliver** BMA Stripping Study





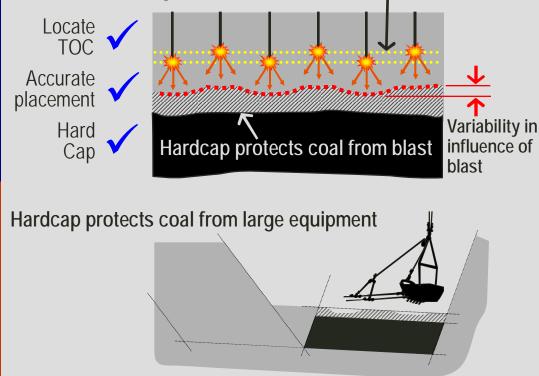
- Study completed to identify lowest cost stripping solutions
- Opportunities identified are being carried forward:
  - BMA Dragline Strategy
  - Site specific continuous haulage studies

- \* T&S = Truck and Shovel
- ^ DRE = Dragline

#### Deliver Last Drop



Placement of charge within ±0.5m



Hardcap is removed with smaller equipment



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- Reduces coal loss
- Extensive trials at Peak Downs proving findings
- Prioritised program of rollouts has been developed
- Significant cost reduction benefits are expected

#### **BMA Overview** Mission and Strategic Objectives



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# Reinforce Industry Leadership Position

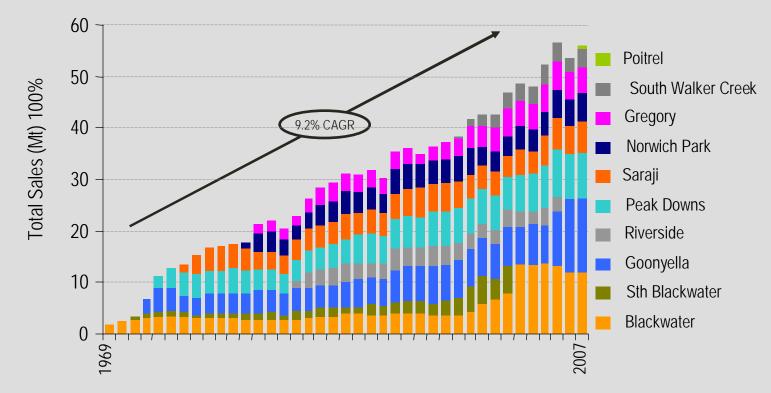
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market-focused solutions.

Manage for Future Growth and Volatility

#### **Lead** Resource base to support on going sales growth





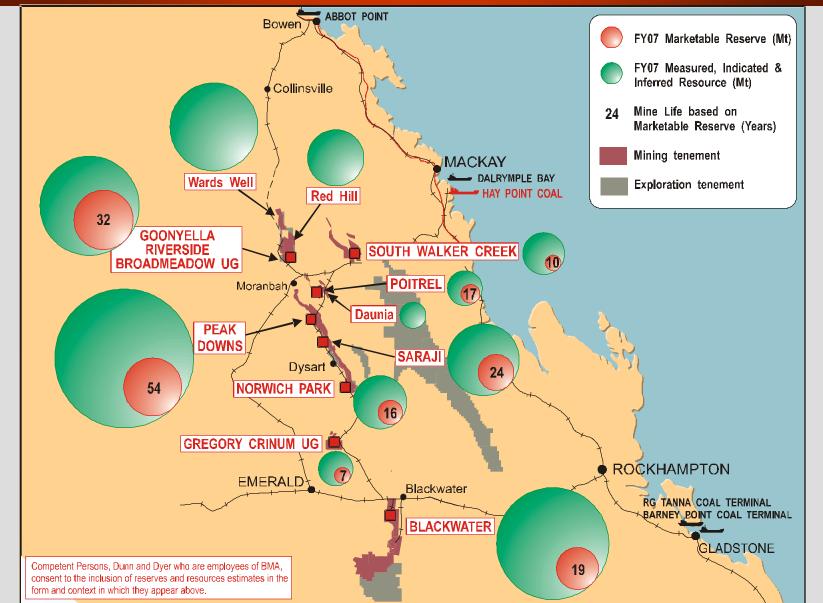
- 1.7 Bt Marketable Reserves (850 M attributable to BHP Billiton)
- 9.8 Bt Measured, Indicated and Inferred Resources (5.4 Bt attributable to BHP Billiton)

The competent persons, Dunn and Dyer who are employees of BMA, consent to the inclusion of the Reserve and resource estimates in the form and context in which they appear above.

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#### Lead Resource Position









Coal Type	Coals
НОНСС	Peak Downs
~ 53%	Goonyella
	Saraji
НСС	Norwich Park
~ 15%	Gregory Crinum
SHCC	Blackwater
~ 8%	Poitrel
PCI	South Walker Creek
~ 5%	Poitrel
SSCC	Blackwater
~ 9%	

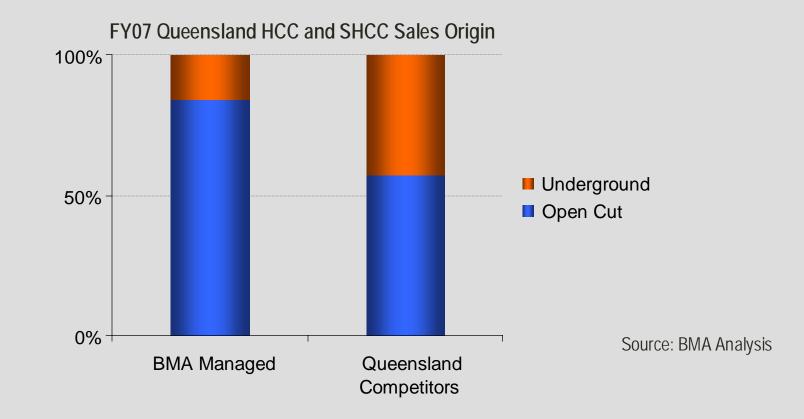
*Note: thermal coal accounts for remaining 10% of production* 

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**Price** 

#### **Lead** Risk profile advantage





- BMA's higher proportion of open cut sales delivers a lower risk and less volatile EBIT stream
- BMA Resource is expected to sustain >80% open cut sourced sales for +30 years

#### **BMA Overview** Mission and Strategic Objectives



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# Manage for Future Growth and Volatility

market-focused solutions.

Manage for Future Growth and Volatility





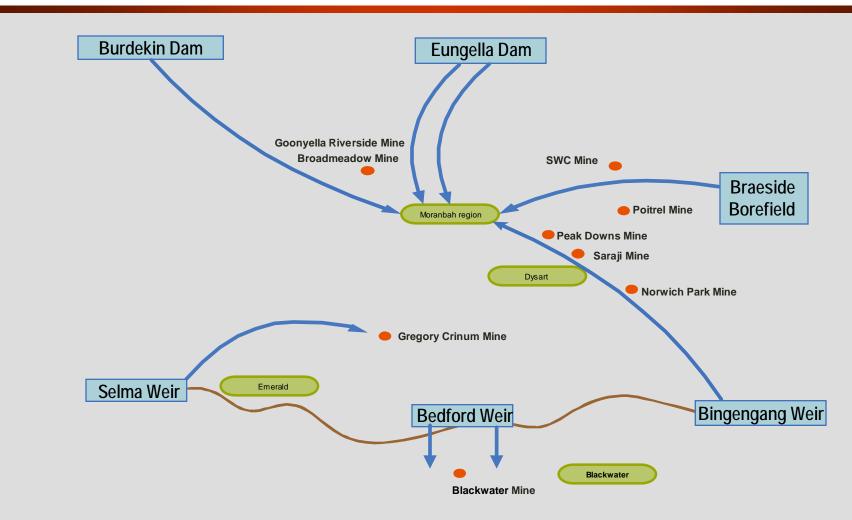




- We need to attract and retain good people to deliver
- Ongoing training and development of the workforce a priority
- The focus of our community programs is to improve the quality of life in our towns

#### **Grow** Water supply – a key enabler





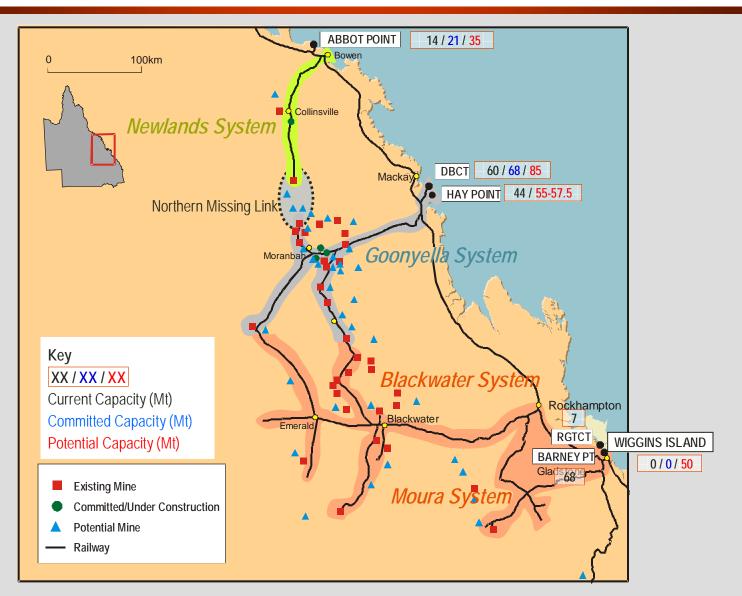
We have a strong position on water

Water will not be a constraint to future development

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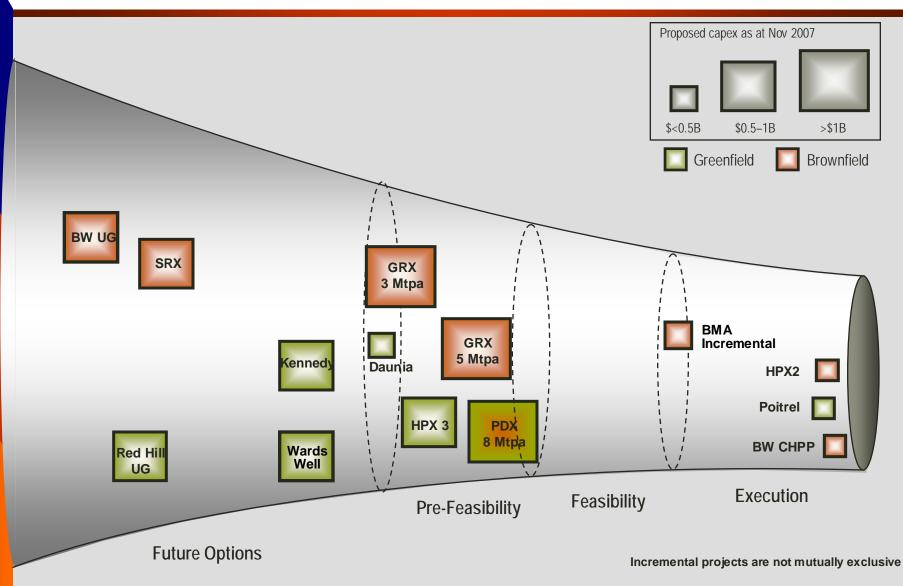
#### **Grow** Logistics – a key enabler





#### **Grow** Deep inventory of projects and future options



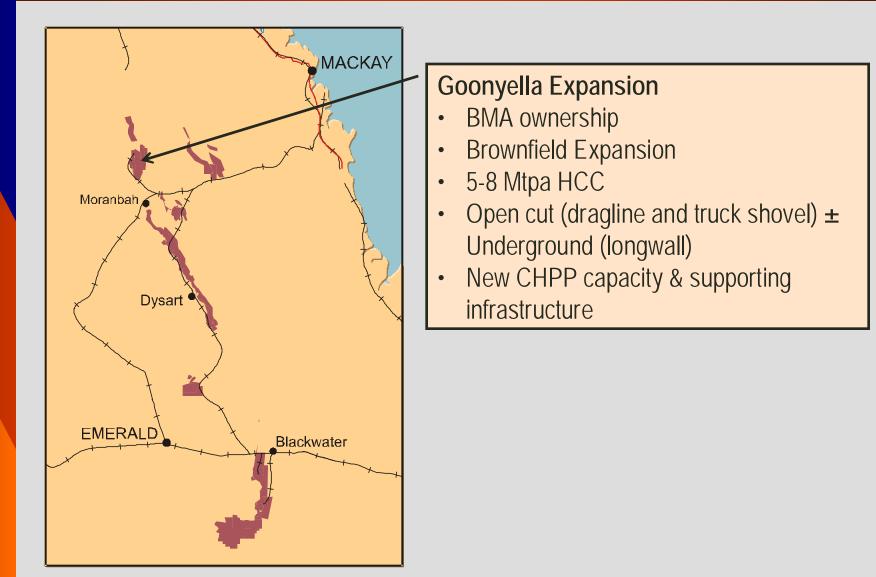


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Source: BHP Billiton

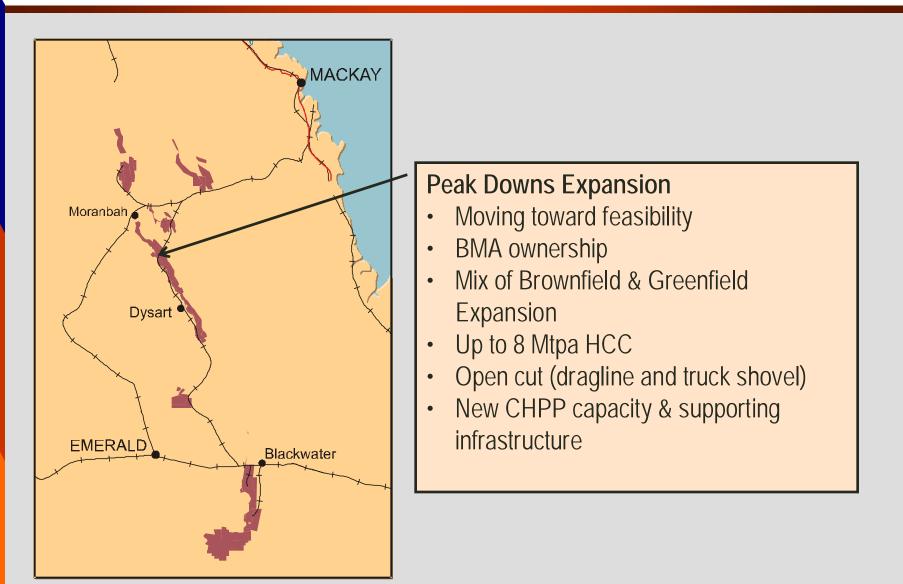
#### **Grow** Goonyella Expansion





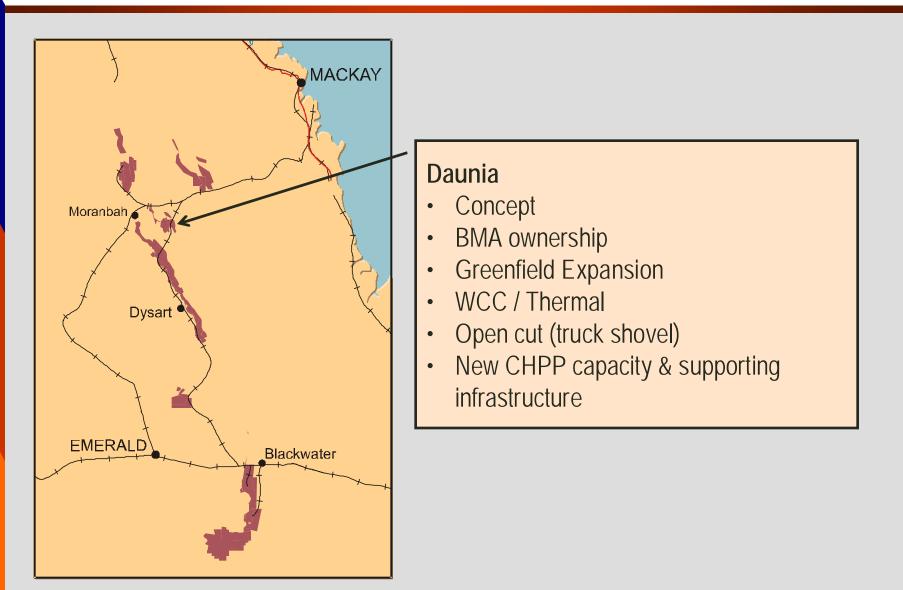
#### **Grow** Peak Downs Expansion





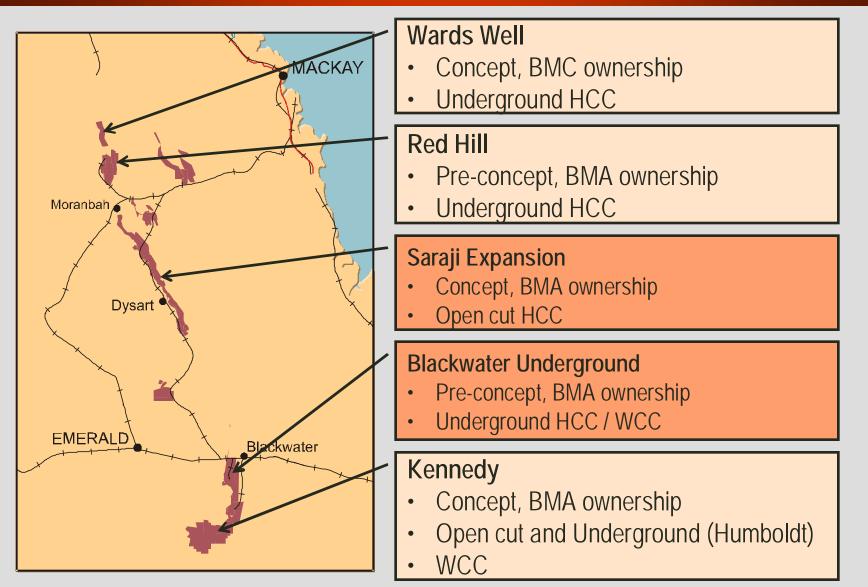






#### **Grow** Some other options





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- Current assets performing strongly priority is safety, production and cost performance
- *Large, high quality resource base with growth options*
- Strong infrastructure positioning
- Diverse portfolio to deliver reliability & quality to our customers



# Mark Chambers General Manager, Blackwater Mine





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#### **Presentation Topics**



- Overview
- Safety (Zero Harm)
- Geology
- Coal quality
- Mining equipment and production
- Mine site cost break-up
- Innovation / improvements



## **Overview – key statistics**

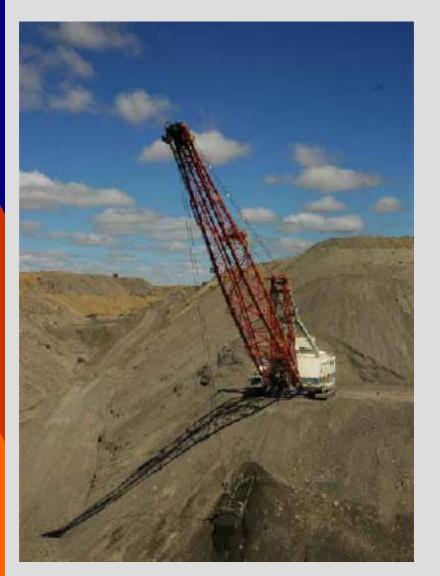




- **Operations commenced 1967**
- BWM and SBC merged 2001
- Annual production and sales approx. 13 Mt (Met + Thermal)
- 90% of sales in the seaborne export market
- Export coal is railed 300 km to ports at Gladstone for shipping
  - Approx 800 employees
  - 600 FTE contractors
  - 170 Mbcm of overburden removal (total)
- BHP Billiton owns 50%

#### **Overview**





- Coal extracted by open cut methods
- Multi Seam operation with operating strike length of almost 60 km
- Coal processing will be centralised at new Coal Handling & Processing Plant
- Site product & dedicated port stockpile capacities of approx 450 Kt and 1 Mt tonnes respectively

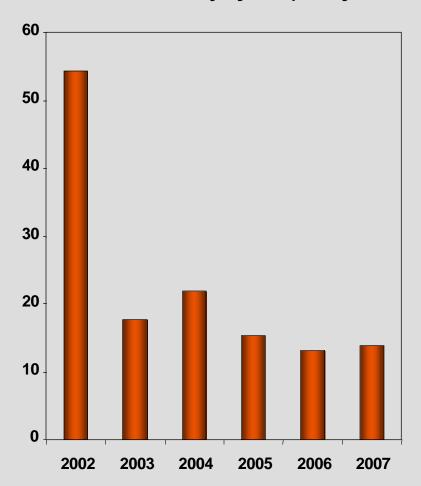
## **Overview – strategic planning process**





## Safety (Zero Harm)





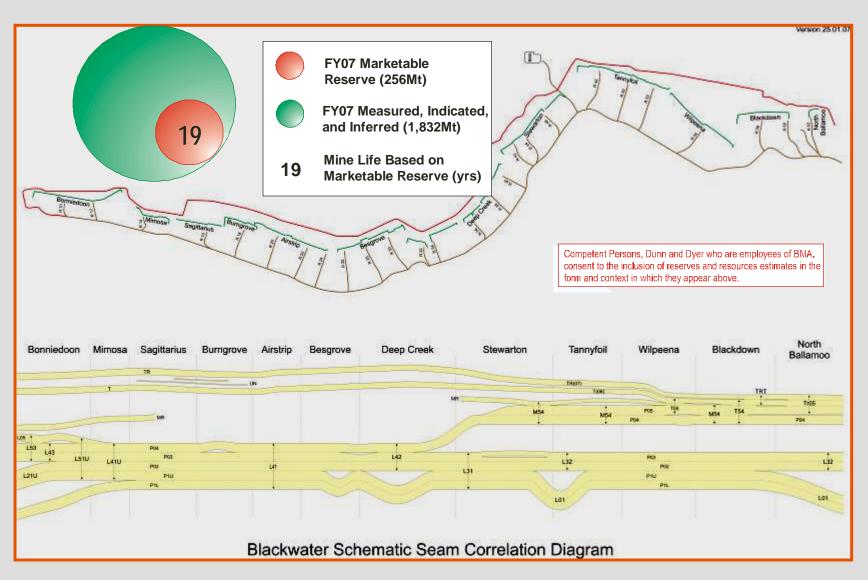
Total Recordable Injury Frequency Rate

FRCP

- Hazard awareness/identification
- Near miss reporting/analysis
- Accident/incident investigation
  - Fatigue management
- Contractor Management (CMS)
- Safe Leadership program

#### Geology – resources & reserves

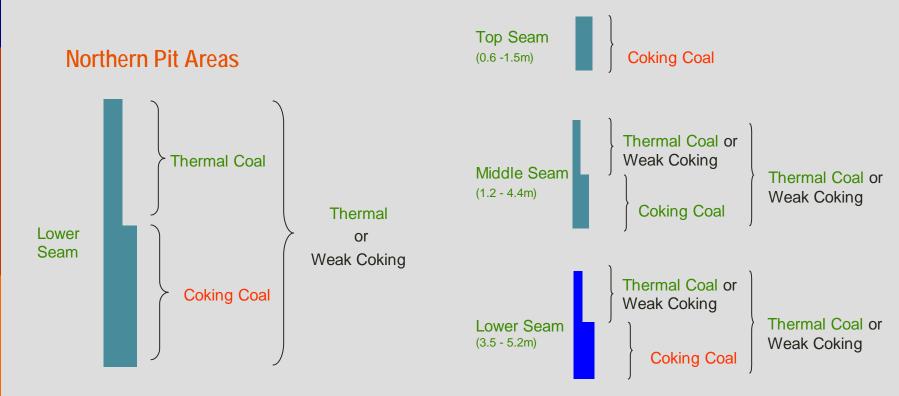




# **Geology - selective mining**

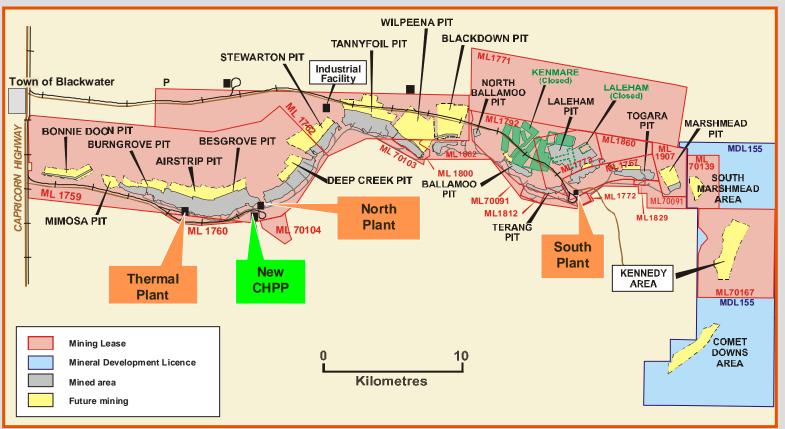


- Due to relatively flat dipping nature of deposit and good seam thicknesses coal seams maybe selectively mined or split
- This provides processing flexibility plus ability to react to product type requirements
  Central and Southern Pit Areas



# **Coal Processing**





- The two existing wash plants and the New CHPP have "bypass" production systems.
- Bypass coal (unwashed) is used where as mined quality permits Thermal (100%), Weak coking (35%) Coking (4%)

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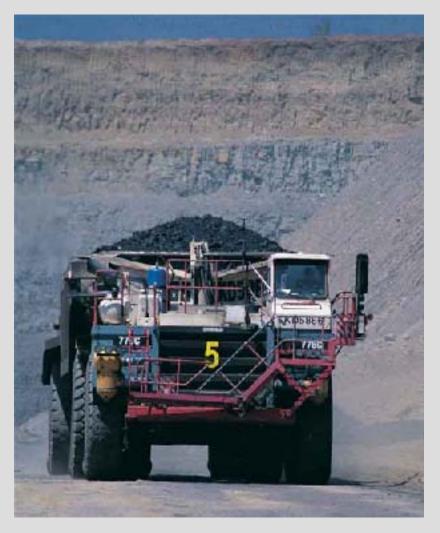
## Mining Equipment



#### Equipment Snapshot

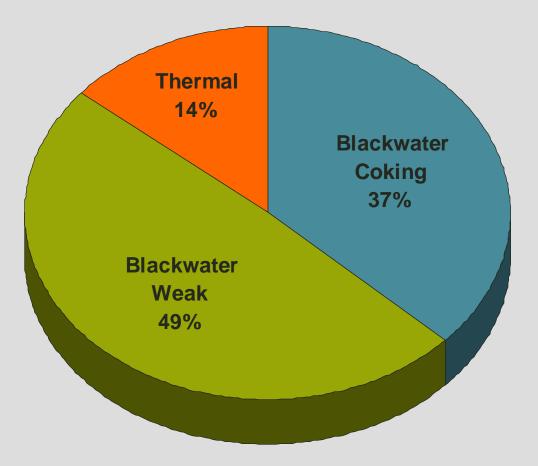
8 draglines

- 1 shovel and 2 large excavators
- 15 rear dump trucks
- 11 haul trucks
- 22 dozers
- 31 other mobile equipment





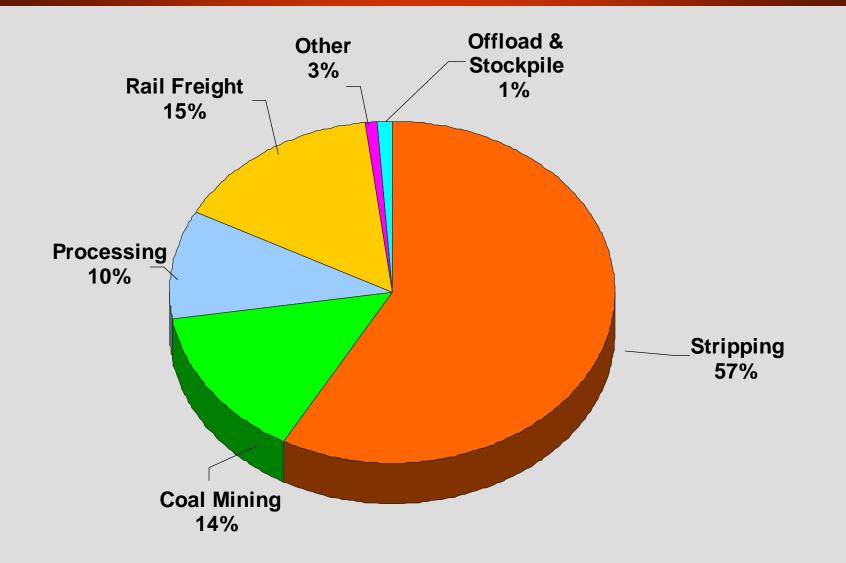




2007 Production - 12.276 Mt

#### Mine site cost breakdown – FY07





## Improvements - CHPP project







- Feasibility completed October 2003
- Project Approval January 2004
- Commissioning from April 2007
- Full production from late 2007
- Commissioning underway early indications suggest improved yield, increased efficiency and cost management
- New technology
- Health and Safety improvements

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## Improvements - Dragline 41 project







- Purchased by BMA in 2005
- 74,000 hrs of operation
- Significant upgrade and overhaul of machine during reassembly
- Additional dragline to offset more truck and shovel stripping costs
- Dragline operating at 120% RSL but upgrade will permit 125% RSL
- First production at Blackwater January 2007

## Improvements - Low density explosives



- Trials nearing completion
- 2 Products

Loadex (Dry hole product)
 XLoad (Wet hole product)
 Results so far favourable
 Potential for RMA wide replication

Potential for BMA wide replication





- BMA100 Emulsion
- Rice Hulls
- ANFO

<u>XLOAD</u>



- BMA100 Emulsion
- EPS Polystyrene
- ANFO

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## Improvements - Last Drop





- Technical Studies and geological investigation start of 3<sup>rd</sup> Qtr FY08
- Introduction of blasting methodologies to create "hard caps" 3<sup>rd</sup> Qtr FY08
- Implementation (Removal of hard caps) FY09
- Implementation reduces pit advance rate and maximises resource, improves combustible recovery and assists in feed predictability and hence processing efficiency

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#### Summary

- Large mine and resource base with long life
- Important asset for BMA in the long term
- Range of coal products
- Flexibility to respond to demand due to infrastructure platform
- Business improvement initiatives delivering improved cost management





# Sam Bonanno VP, Operations, Ports & Business Improvement

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#### **Presentation Topics**



## Safety

- Environment & Community
- Overview
- Capabilities
- Competitive Advantages
- Expansion Capability

# Safety (Zero Harm)



Total Recordable Injury Frequency Rate

FRCP

- Hazard awareness/identification
- Near miss reporting/analysis
- Accident/incident investigation
  - Fatigue management
- Contractor Management (CMS)
- Safe Leadership program

#### **Environmental and Community Strengths**





 Noise
 Spillage
 Water management

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## **Overview of Operations**





- 17 primary products and 22 blends
- 64 customers in 21 countries
- Hay Point 24 hr x 365 days
- Inloading ~ 4,000 trains
- Outloading ~ 900 parcels on 400 ships
- "Quality Terminal" not just a "Throughput Terminal"
- Responsibility for the quality of all cargoes loaded, as well as logistics for the BMA, including BMC, product

# Our advantages





- Strategic asset enabling control of the whole logistics chain
- Linked and responsive to mine production and delivery
- Capability to co-ordinate trains
- Control the scheduling and berthing order of vessels

## Stockyard allows flexibility





- Designated stockpiles to minimise cross-contamination
- Over 1,000 combinations available for efficient coal delivery
- Stockyard Capacity with 14-16 Coal Types
  - Dry Season 1.45 Mt
    - Wet Season 1.0 Mt

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# **Stacking and Reclaiming**



- 5 Stacker Reclaimers, all capable of 6,000 tph automatic or manual stacking
- Reclaim capacities of 2 x 6,000 tph, 1 x 5,000 tph and 2 x 3,500 tph
- Flow splitters on each transfer point and yard machine to facilitate blending and maximise flow rate and direct loading opportunity





## **Functional Unit Capacities**







- Rail contracts are sufficient to meet current needs
- Ongoing negotiation to meet growth profile
- Nominal inloading capacity >50 Mtpa
- Stockyard throughput capacity >50 Mtpa
- Shiploading capacity of 43 45 Mtpa dependent on ship size and blending requirements

# **Shiploading Capability**

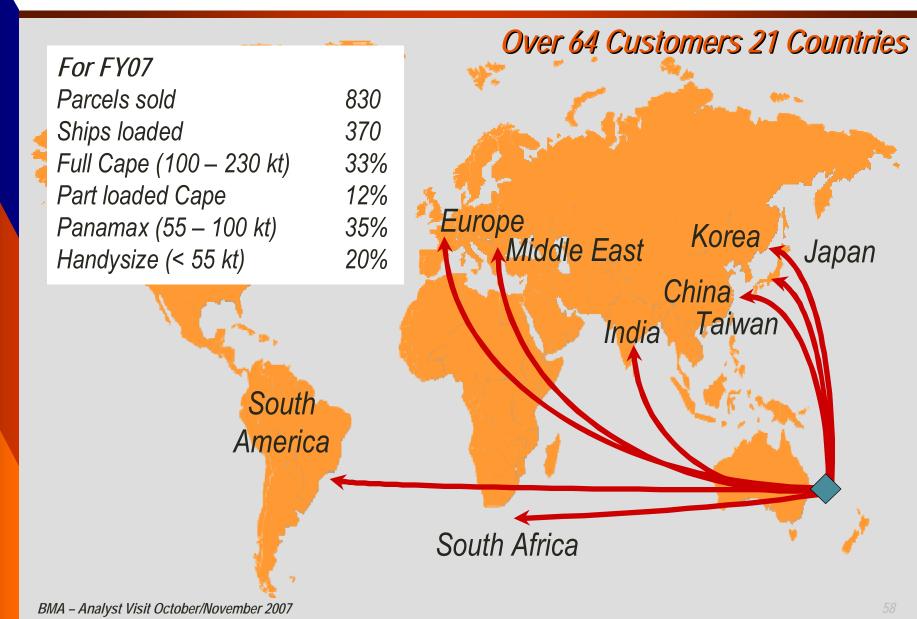


- Maximum Ship Size: Berth1: 175 k DWT, Berth2: +200 k DWT
- Largest ship loaded: "Iron Pacific" (230,000 DWT)
- Largest cargo : 207,769 t on "Iron Pacific"
- Average Cargo Size : Approx 95,000 t



## **Cargo Destinations**

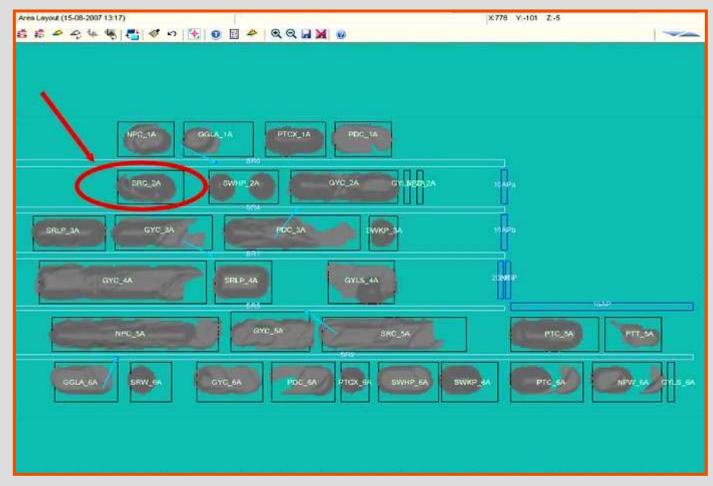








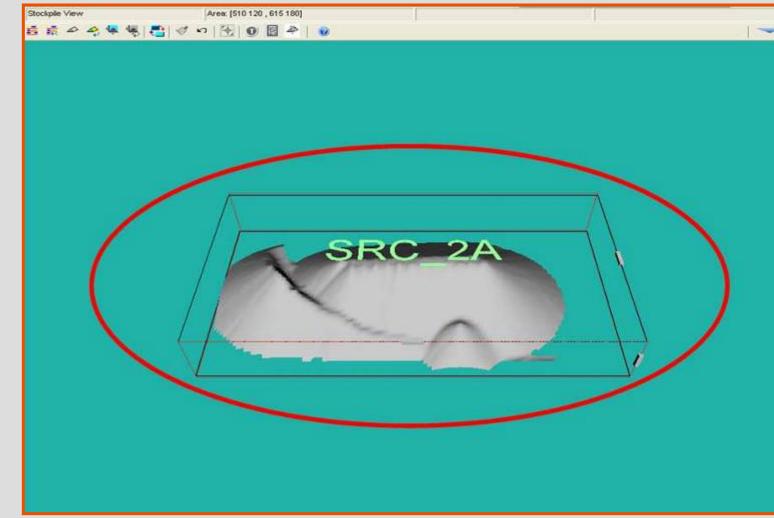
Unique quality smoothing capability through the coal tracking system







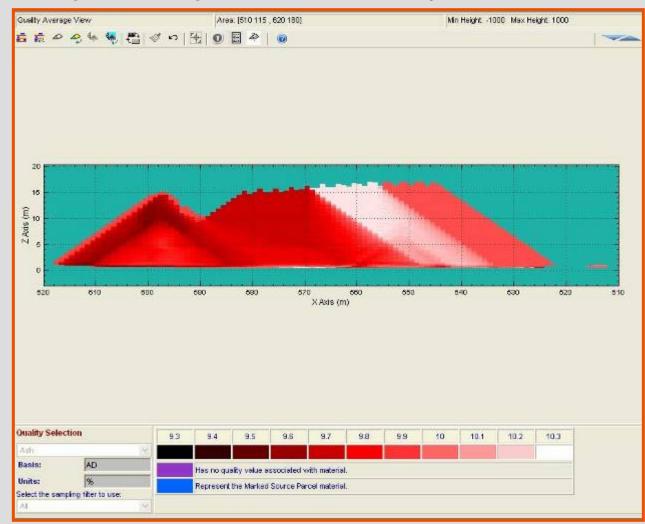
#### Visual representation of the individual stockpile







#### Coal tracking - New High Resolution Quality View



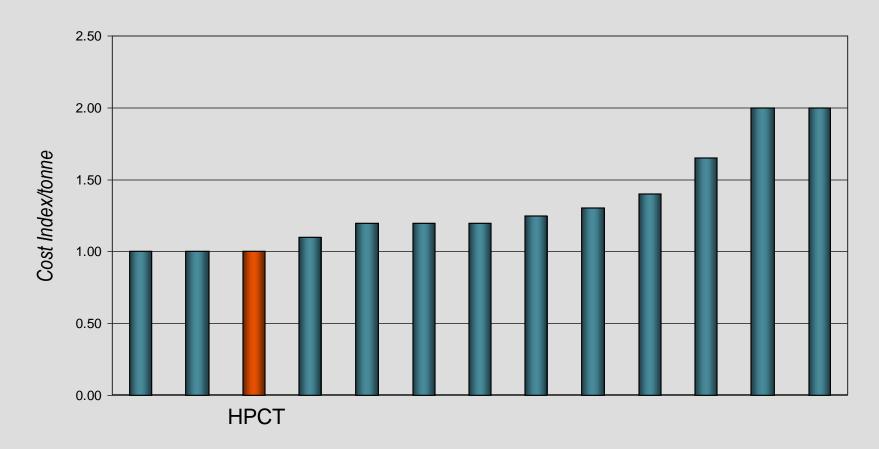
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## Our advantages



• Low cost position versus all other coal exporting terminals

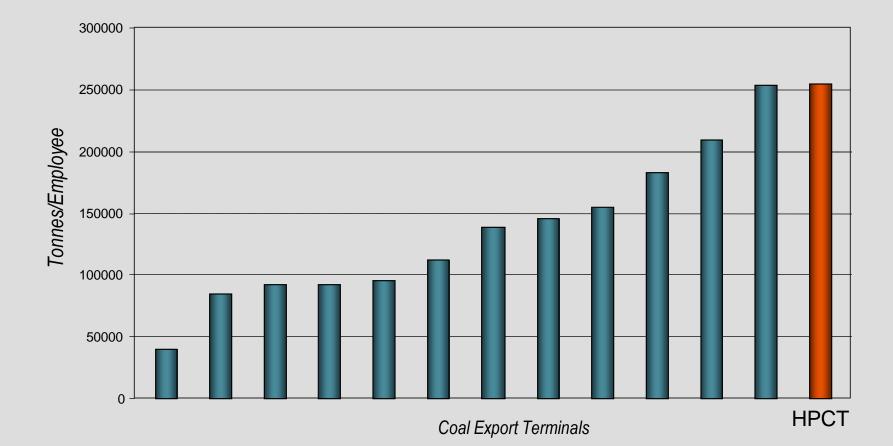
Total Terminal Cost Index







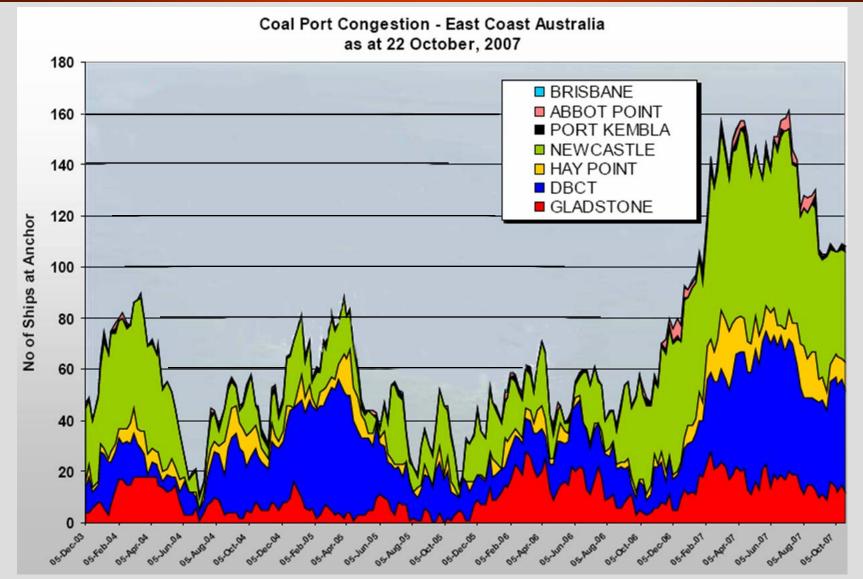
Hay Point productivity versus all other coal export terminals



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#### Demurrage – Ships at anchor



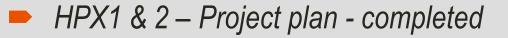


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Source: Coalsync Operations

## **Expansion Execution Capability**







## **Expansion Execution Capability**



#### Completed HPX1 & 2 - on budget and in acceptable time frame

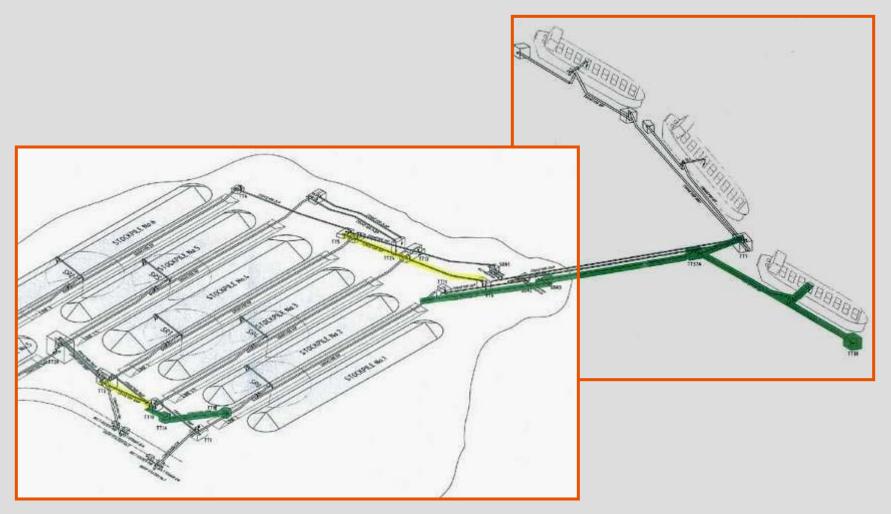








#### HPX3 could deliver 55-57.5 Mtpa total nominal capacity







- Hay Point Coal Terminal is a strategic asset for BMA:
  - allows us to manage the whole logistic chain from pit to customer
  - competitive advantages low cost, high productivity, increased quality control
  - capacity to expand and a history of delivering on expansion activities
  - credibility, reliability, consistency and performance of the asset



Dave Murray President Coal

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- Strong market driven by demand from India, China and Brazil
- Product quality key portfolio biased to premium end of the market
- Premier assets in the world's best metallurgical coal basin
- *Large, long life, high margin, expandable resource base*
- Strong portfolio of growth options
- Strategic infrastructure position
- Ongoing focus on cost management