

### INVESTOR SITE TOUR AND PRESENTATIONS

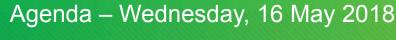
Boral Australia and USG Boral

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Brisbane, Queensland 16 May 2018





### **PRESENTATIONS and Q&A:**

- Introduction: 8.45-9.00am
- Mike Kane, CEO & Managing Director

#### Boral Australia: 9.00-11.15am

- · Joe Goss, Divisional Chief Executive, Boral Australia
- Ross Harper, Executive GM, Cement
- · Wayne Manners, Executive GM, Major Projects
- Brian Tasker, National GM, Property
- Simon Jeffery, Executive GM, Queensland

#### USG Boral: 11.30-12.45pm

- Frederic de Rougemont, CEO, USG Boral
- Tony Charnock, Senior VP Asia Pacific, USG Boral

#### LUNCH: 12.45-1.15pm

**SITE VISIT – Ormeau Quarry** Depart 1.15pm, return 4.45pm



Ormeau Quarry, Queensland

### Boral today: Performance, transformation & growth

#### 1. Delivering strong results in Australia and maintaining leading positions

- · Key supplier to Australia's booming infrastructure and strong residential and non-residential construction markets
- · Reinvesting in valuable upstream quarry positions, low cost cement positions and downstream concrete & asphalt networks
- · Solid margins with further improvements to come through excellence programs, innovation and price
- TODAY'S FOCUS: Excellence programs, challenges & opportunities, major projects, property, Queensland

#### 2. Strong long-term growth platform with innovation-based competitive advantage in USG Boral

- · Leading plasterboard business in Asia, Australia and the Middle East
- · Positioned well to respond to changes in demand cycles and competitive pressures
- TODAY'S FOCUS: Delivery against strategy, innovation, brand leadership, challenges & priorities

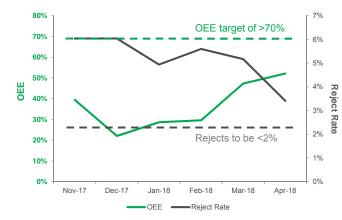
#### 3. Delivering transformational growth in North America

- · Successful integration of Headwaters acquisition with substantial synergies
- Further growth through market recovery and innovation
- · Addressing short-term operational issues
  - Photo updates from the diary of the CEO

### Boral North America – Oceanside, California

Plant Optimisation is delivering substantial improvements in efficiencies

Overall Equipment Effectiveness (OEE) and Reject Rates, Oceanside Metal Roofing Plant, California



- Monthly OEE reporting implemented at end of 2017
- In 4 months:
  - OEE lifted from 22% to 52%
  - reject rates reduced from 6.0% to 3.4%
- Plant optimisation expected to improve costs

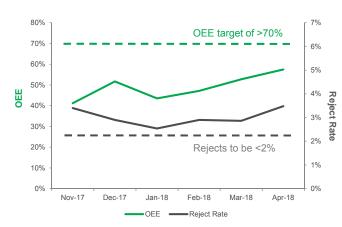
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### Boral North America – Okeechobee, Florida

Plant Optimisation is delivering substantial improvements in efficiencies



- Overall Equipment Effectiveness (OEE) and Reject Rates, Okeechobee Roof Tile Plant, Florida
  - Monthly OEE reporting implemented at end of 2017
  - In 5 months:
    - production doubled from December to March/April
    - OEE lifted from 41% to 57%
    - reject rates fluctuating between 2.5% and 3.5%
  - Plant optimisation expected to improve costs

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# Boral North America – Okeechobee, Florida Improved logistics and inventory management



## Boral North America - Okeechobee, Florida

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7

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We are aligning Okeechobee's safety and production with our standards





## BORAL AUSTRALIA

Joe Goss, Divisional Chief Executive, Boral Australia



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### Agenda

Boral Australia is making strong progress on building a sustainable performance model

- Boral Australia Overview
   Joe Goss
- Major Projects
   Wayne Manners
- Cement
   Ross Harper
- Property
   Brian Tasker
- QLD Region
   Simon Jeffery



Boral Concrete App launch

### **Boral Australia**

A vertically integrated portfolio of construction material assets with an east coast focus

#### Vertically integrated operating model Large national footprint (total number of operations<sup>1</sup>) Quarries Bitumen Cement<sup>4</sup> 78 Quarries 1 Bricks WA BIA JV with Aggregates Concrete Roof tiles and sand Downer Timber<sup>3</sup> Asphalt 40-50% Quarry -5-15% 2 NT volumes sold Masonry 1 5 sold internally Cement<sup>2</sup> internally to to Asphalt Concrete QLD 62 ~50-60% 35% of bitumen supplied by sold ~35-55% Quarry internally JV plants volumes sold SA WA externally<sup>6</sup> Concrete<sup>5</sup> Asphalt NSW/ 21 ACT 11 93 As at 30 June 2017 Includes cement manufacturing plant, bagging plant, lime plant, limestone quarry and depots Includes 8 Boral Hardwood mills and 1 JV Softwood operation Includes Boral's share of 1.5m tonnes of grinding capacity in 50% owned **VIC/TAS** 2. 16 3. 4. 46 Sunstate Cement JV Includes Boral Concrete, Roofing, Masonry plus 2nd brands Concrite 5. **End Customer**

(NSW), Alsafe (Vic) & Q-Crete (Qld) Long-term historical averages 6

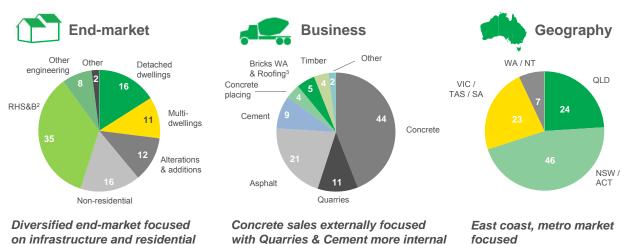
11

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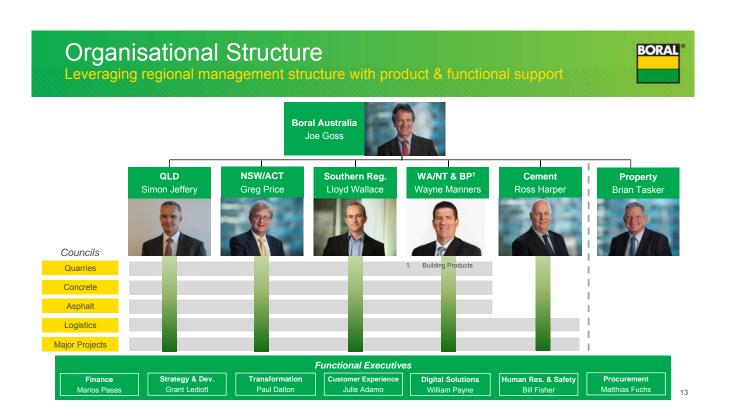
### **Revenue Profile**

A diverse revenue<sup>1</sup> profile (%) by end-market, business and geography



Based on 1H FY2018 split of Boral Australia external revenue Roads, Highways, Subdivisions & Bridges Bricks WA & Roofing includes Masonry revenues 1. 2.

3.



# Delivering strong returns and capturing growth We are targeting to deliver continued revenue growth and margin improvements

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Growth focus	Initiatives and Actions	Targets
Capturing <b>volumes</b> from higher demand	<ul> <li>Upgrading quarry and downstream plant</li> <li>Supplementing fixed network with mobile plants</li> <li>Expanding asphalt crew and equipment national mobility</li> <li>Optimising national cement sourcing and adding cement capacity</li> <li>Maintaining or improving our market position</li> <li>Expanding Project Management Office</li> <li>Introducing new value added concrete products</li> <li>Implementing national network sales and operations planning</li> </ul>	Maintain or improve market position Secure our share of infrastructure projects
Delivering better <b>pricing</b> outcomes	<ul> <li>Building organisational customer orientation</li> <li>Implementing Commercial Excellence</li> <li>Implemented two price increases p.a. since FY2016</li> <li>Targeting more technical projects aligned with capabilities</li> <li>Differentiating our customer experience, driving value for both customers and Boral</li> </ul>	ASP to offset cost increases and achieve a return on investment that exceeds cost of capital through cycle
Continuing focus on <b>costs</b> & operational improvements	<ul> <li>Continuing Operational Excellence initiatives (incl. procurement, OEE, productivity)</li> <li>Implementing Supply Chain Optimisation program</li> <li>Delivering quarry upgrade benefits: Deer Park, Orange Grove, Ormeau (late 2018)</li> <li>Completing alternative fuels investment at Berrima</li> <li>Building Vic portside clinker import and grinding facility</li> <li>Leveraging digital innovation opportunities for cost and safety</li> </ul>	~1-2% savings on cost base per year ~5-10% Supply Chain cost optimisation (over 3 years)

Investments in excellence programs, improvement initiatives & innovation will be recouped as benefits continue

## Culture and Capability

Sustaining performance by investing in culture and our people

### Sustainable Performance Model



- Transforming our business through our people strong leadership, people engagement and cultural alignment
- Culture, people and leadership underpins our investment in excellence programs and our zerojonejten strategy
  - 'Zero Harm Today' to our people and environment
  - Number one for customers and employees
  - 10% improvement
- Organisational health is critical in achieving sustainable high performance

15

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### Organisational Health

Improving organisational health to drive sustained business performance



- Organisational health and culture of the business are critical to achieve sustainable performance
- McKinsey Consulting has compiled years of studies from over 1,000 companies into an Organisational Health Index (OHI), which indicates that companies in the top quartile 'outperform' peers
- Our most recent 2017 survey<sup>1</sup> score has moved Boral Australia into the top OHI quartile with zero practices in the bottom quartile
- Survey results by business provide valuable insights into individual business culture and leadership perspectives within each business
- Outputs provide key areas of focus to continue to grow our people and improve performance
  - 1. 2017 survey included 1,300 employees in Boral Australia surveyed and included front line team leaders and supervisors through to the senior leaders in our business

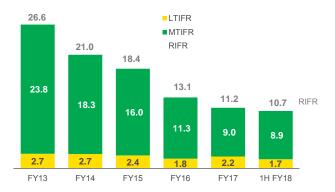
# Safety Excellence Safety remains our first priority

### Safety Excellence



- Management commitment and leadership
- Employee engagement in health, safety and environment responsibility:
  - ✓ Engaging front line supervisors
  - ✓ Strengthening behavioural programs
  - Continuing contractor safety program
  - ✓ Implementing site based environmental plans

#### **Division Recordable Injury Frequency Rate**



Injuries per million hours worked for employees and contractors. Recordable Injury Frequency Rate (RIFR) comprises Medical Treatment Injury Frequency Rate (MTIFR) and Lost Time Injury Frequency Rate (LTIFR).

17

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### Customer Excellence

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Improving customer orientation and pricing practices

### **Customer Excellence**

### **Customer orientation:**

Helping customers to Build something great

- · Identifying customer journeys by key segments to better understand customer needs and moments of truth across our customer lifecycle
- Designing improved customer experience built • around core customer and business value drivers
- · Developing improved service models by segment, with success metrics

### **Commercial Excellence:**

Setting prices to achieve a sustainable return

While maintaining or improving our market positions, obtaining a fair price to achieve a return on investment that exceeds the cost of capital through the cycle

- Building a commercial culture and training our sales team to leverage the value of our products and services
- Differentiating pricing by segment and product, built around the value we deliver / what customers value
- Improving access to sales data to allow faster and better decision making and oversight of our price and margins

	ner Excellence mer orientation and pricing practices	BORAL®
	Objectives	Progress
Growing revenue and margins	<ul> <li>Expanding margins through greater understanding of Boral's 'cost to serve' and customer behaviour</li> <li>Capturing pocket margin</li> </ul>	<ul> <li>Experience roadmap validated with customers, works program commenced</li> <li>Launched SMS order confirmation and Concrete deliveries arrival time 'app'</li> </ul>
Building commercial culture	<ul> <li>Institutionalising 'One Boral' behaviour / culture with clear behavioural guides</li> <li>Building sales staff competency through training programs and targeted recruitment</li> </ul>	<ul> <li>Achieving product margin growth targets for most businesses</li> <li>280 sales professionals accredited to Bronze status by June 2018</li> </ul>
Building sales tools & systems	<ul> <li>Improve decision making via reporting and 'configure, price, quote' tools with customer relationship management</li> <li>More frequent pricing reviews</li> </ul>	<ul> <li>Configure Price Quote tool rolled out in Southern Region with the rest of the East Coast to be completed by July 2018</li> <li>Implemented two price increases in FY18</li> </ul>

19

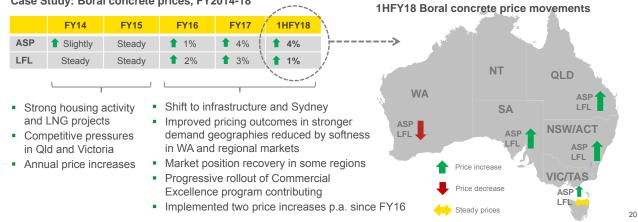
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45 Pricing

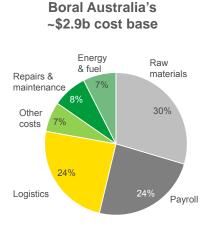
### We have delivered price growth on the east coast

- · Average selling price (ASP) increases required to offset inflationary cost increases
- · ASP impacted by a range of issues including geographic, segment and product mixes
- Like-for-like (LFL) movements impacted by demand and competitive dynamics

#### Case Study: Boral concrete prices, FY2014-18



### Cost Base Material inputs, payroll and logistics make up ~75-80% of our cost base



Source: Management accounts

- Materials costs: internationally traded clinker and bitumen prices increasing in line with Asian markets and exchange rate
- Payroll: average wage inflation of ~3%
- Logistics: higher subcontractor cartage costs in east coast markets due to higher demand to move tunnel material and supply underlying markets
- Energy and fuel: electricity & gas ~\$20m higher in FY2018 (to be ~\$110–\$120m) and diesel usage ~100m litres p.a.
- East coast quarry capacity being supplemented with mobile contract crushing plants and sourcing materials from quarries outside metropolitan areas and external purchases
- Key quarry, concrete and asphalt investments will reduce future operating costs

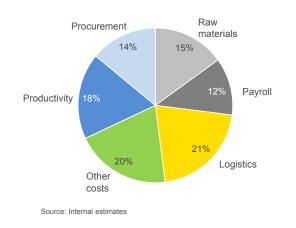
21

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### Coperational Excellence

Continued success from Operational Excellence initiatives



### Cost improvement focus areas for FY2018

### **Operational Excellence**

- Cost improvement programs delivered around average \$60-70m p.a. (~\$250m since FY2015<sup>1</sup>)
- Productivity based improvements from OEE<sup>2</sup>, plant configuration and waste reduction
- Restructuring and labour right-sizing
- Procurement initiatives
- Ongoing supply chain optimisation
- Strategic and operational capital allocation
- Contributing to growing margins and offset cost increases

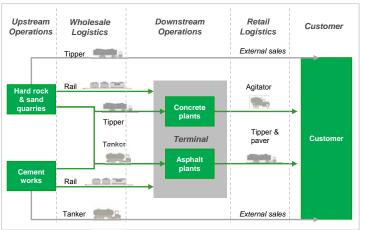
1. Cumulative benefits as presented at results from FY2015 – 1HFY2018, including restructuring, diesel, energy, procurement savings 2. Overall Equipment Effectiveness

## Supply Chain Optimisation

We are optimising our supply chain to lower costs and improve customer service

We have ~2,500 road vehicles, including ~1,400 agitators and ~1,100 tippers and tankers. We spend over \$650m p.a. moving more than 100m tonnes of materials and finished goods by road, rail & ship

#### Materials movements



Sales and Operations Planning

- Using fleet to improve connectivity between 225 concrete plants, 78 quarries and 41 asphalt sites
- Standardising and automating processes that evolved organically across independently run businesses
- Building common tools and systems, as well as people capability, for a sustainable outcome
- Our 3 year journey into supply chain excellence commenced January 2018
- Network optimisation will lower costs and demonstrate the true benefits of scale

23

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#### Supply Chain Optimisation BORA We are making progress on our multi-year supply chain program **Objectives Progress** Reducing 'costs to transport' and improving • Completed internal and external Optimising our customer service / reliability benchmarking, identified 5-10% supply network to drive chain opportunity over 3 years Performing diagnostics to prioritise areas of margin growth opportunity - digital, people and process Recruited external supply chain resources areas identified Standardising logistic processes and Optimising national standard S&OP Building building supporting infrastructure practices common tools & System upgrades to automate despatch Building new reports with key logistics processes • and S&OP1 investments measures and weekly dashboards · Improving connectivity between logistics Piloting initial allocations improvements in fleets and our large integrated Southern Region Improving operational footprint connectivity Piloting national concrete economic order · Leveraging network scale and reach sourcing model in SEQ

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## Building a culture of customer focused innovation and commercialisation

#### **Objectives**

Driving margin

growth through

new products

Commercialisation

Focus on

collaboration and

partnerships

<ul> <li>Continual review of product, service</li> </ul>	ce and
business models to maximise the	potential
benefits of innovation	

- · Digital innovation to feature heavily
- Commercialising products centred on customer needs and materials science
- Includes early strength and low carbon concrete and recycled asphalt products
- Leveraging Boral's history of innovation, product development and technical capability
- Greater collaboration with USA and USG Boral as well as external partners

### Progress

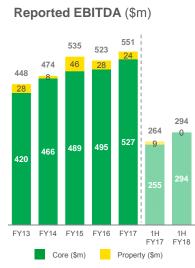
- In-house R&D and product innovation centres at Maldon and Baulkham Hills
- New B/Hub 'idea incubator' site for agile development / commercialisation
- Launching Concrete customer apps and new website with enhanced mobility and e-commerce functions
- Launch of new products including Vantage<sup>®</sup> and Aspire<sup>®</sup>
- Strengthening technical sales capability
- Expanding links with Boral Innovation Factory in San Antonio
- Partnerships established with leading Australian universities

25

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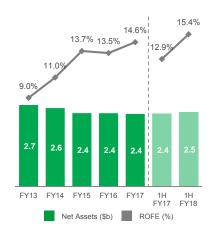
## Sinancial Performance

Solid earnings growth reflects successful progress on key strategies





### Return on funds employed (ROFE, %)



Including Property, Boral Australia is now expected to deliver improved earnings growth with an expected increase of approximately 10-20% in FY2018 compared with FY2017, on both an EBITDA and EBIT basis.
 Earnings in Boral Australia were lower than we expected in the March quarter due to an unscheduled kiln outage at Berrima, continued challenging conditions in Western Australia, and a rain impacted Queensland market. However, a strong June 2018 quarter is expected from Boral Australia, especially if favourable weather conditions occur as they did in the June 2017 quarter.
 Boral now expects a total EBITDA contribution from Property in FY2018 of

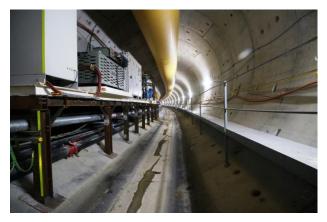
 Boral now expects a total EBITDA contribution from Property in FY2018 of approximately \$55 million to \$65 million, with the sale of the Prospect site having progressed earlier than expected.

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### Agenda

Major Projects are an avenue for continued Boral Australia growth

- Boral Australia Overview Joe Goss
- Major Projects
   Wayne Manners
- Cement
   Ross Harper
- Property
   Brian Tasker
- QLD Region
   Simon Jeffery



Forrestfield Airport Link, WA (Photo supplied courtesy of Salini)

## Boral's Project Pipeline We have secured and are executing on a strong pipeline of projects

Dreieste committed		Boral material supply				
Projects committed	Quarries <sup>1</sup>	Concrete	Asphalt	Cement <sup>1</sup>	completion	
Bringelly Road Stage 1, NSW	√		✓	✓		
Pacific Hwy, NSW	1	1	✓	1		
Toowoomba Second Range, Qld	1	1		1	0040	
Warrego Highway stage 2, Qld	×		1		2018	
Amrun Project, Qld	✓	✓				
NorthLink stage 1, WA	1		1			
Northern Beaches hospital, NSW	×		✓	1		
NorthConnex, NSW	✓	1		1		
Gateway Upgrade North, Qld	1		1	1	0040	
Kingsford Smith Drive, Qld	1	1	1	1	2019	
Logan Motorway, Qld	1		1	1		
Forrestfield Airport Link (Precast), WA	1	1				
Sydney Metro (City/SW precast), NSW	1	1		✓		
Northern Road stage 2, NSW	1		1	1		
Northern Road stage 3, NSW	✓	1		1	0000	
Melbourne Metro (Precast), VIC	1	1		1	2020	
Pacific Motorway, Qld	1	1		1		
Northern Connector, SA	✓		1			

1. Includes supply through concrete or asphalt

Note: Materials revenue from major road projects is typically 1-5% of project cost

Projects currently tendering Albion Park Rail Bypass, NSW Brisbane Airport Runway, Qld Haughton River Bridge, Qld Inland Rail, Qld, NSW, VIC Smithfield Transport Corridor Upgrade, Qld Melbourne Airport Runway, VIC Lal Lal Windfarm, VIC Newell Hwy Upgrade, NSW / QLD Outer Suburban Arterial Roads, VIC Pacific Hwy W2B, NSW Barangaroo Residential Tower, NSW Princes Hwy Upgrade, NSW Sunshine Coast Airport, Qld WestConnex Stage 3, NSW West Gate Tunnel, VIC Badgery's Creek Airport, NSW (pre-tender)



Note the dates listed under each project are start date - completion date

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29

## Boral Project Capability Boral continues to prove its ability to deliver on major projects

For several years we have made statements around the importance of major projects, building Boral Australia's project management, execution and technical capability and winning projects



# Technical Capability Success in Precast projects Case study: precast concrete supply to line tunnels for metro rail projects

#### **Technical investment**

- · Early concrete solution based investment
- · Technically complex solutions developed
- · Early engagement with project critical
- Leveraging Boral experience and learnings from • other major projects
- Supplying large volumes via 'bolt on' concrete plants • attached to customers precast facility
- Deploying equipment and people nationally •
- Demonstrating our strong safety management and chain of responsibility

#### Fire testing







### Case study: Precast rail projects

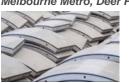
### Forrestfield Airport Link, Perth



#### Sydney Metro, Marrickville



#### Melbourne Metro, Deer Park



- 180,000m<sup>3</sup> concrete
- 54,000 segments and stations (9,000 rings)
- 2017 to 2019
- 140,000m<sup>3</sup> concrete
- 99,000 segments
- 2018 to 2019 •

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- 90,000m<sup>3</sup> concrete
- 50,000 segments
- 2018 to 2020
- 32

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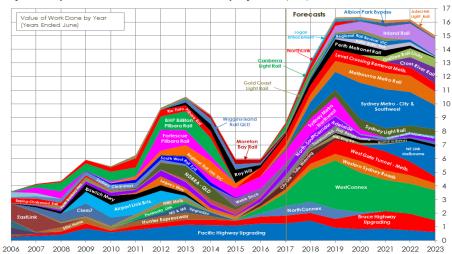
# Project Pipeline – Medium Term We are in the earlier stages of a strong infrastructure cycle in key east coast markets

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33

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#### Major transport infrastructure construction projects<sup>1,2</sup> (A\$b)



- Infrastructure pipeline is • east coast dominant
- Projects are close to integrated Boral operations
- Boral Project Management • Office aligning strategy
- Avoid 'winners curse' by ensuring capacity to service both major project demand and underlying core markets

Source: Macromonitor, Construction Materials forecast, February 2018 estimates
 Chart prepared exclusively by Macromonitor based on publicly available data. Boral has not independently verified either the historical data or forecasts. Chart shows financial years and projects with total value >A\$500m only
 Forecast spending represents Macromonitor's indicative estimation of likely spending based on currently available information. There can be no assurance that actual results will be as forecasted and such differences can be material.
 There can be no assurance regarding the proportion of forecast project spending that represents requirements for which Boral is a potential supplier, or that Boral will be successful in generating revenue from any of these projects

# Project Pipeline – Longer Term The major project pipeline post 2022 is building with government announcements



#### 'The government's 10-year national infrastructure plan'

- Key projects announced in NSW and Vic where Boral has a strong integrated position
- · Projects are in early stages and indicate a continued long-term pipeline of major projects
- Federal and State government budgets include funding for large infrastructure projects
- Boral will engage early to build solutions utilising our capability to differentiate and effectively compete

### Agenda

Boral Cement continues to be a highly profitable part of Boral Australia

- Boral Australia Overview
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Resource derived fuels loader for the Berrima Kiln

35

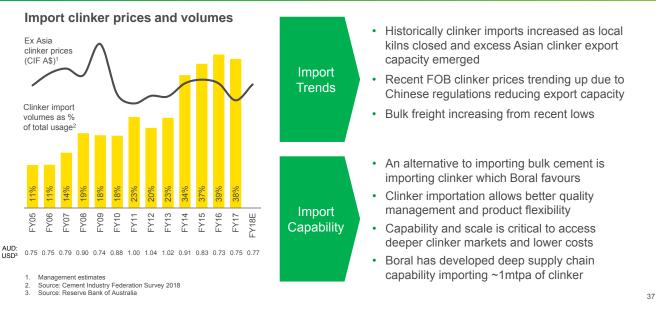
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#### **Boral Cement Portfolio** BORAL A strong portfolio of businesses that source and supply a wide range of products Berrima Maldon Waurn Ponds Sunstate JV Marulan DeMartin & NSW NSW Qld NSW Gasparini, NSW Vic Clinker & cement Limestone & Lime **Multiple cements Concrete Placing** Specialty cements Grey cement Clinker (1.5mt) - 2 mills (900kt)<sup>1</sup> 2 mills (750kt)<sup>1</sup> 3 mills (1.5mt)<sup>1</sup> >80 years 19 concrete pumps fully utilised kiln limestone reserves Imported Clinker 50:50 JV with ABL Berrima clinker . . 30 concrete placing Assets 2 mills (1.6mt)1 transported inland 3.3mt of limestone tower booms Packaging plant Import clinker quarried in FY18 Rail link to CBD NSW focused Rail link to Berrima . Portside facility Lime kiln (130kt) Dry mix capability . SL & HE cement Cement: SL & GP Grey cement: Grey cement: GP, Limestone . Concrete pumping Products GP. HE HE & SL & placing Grey & O/W Slag Lime Clinker Blends at Slag, fly ash, O/W Contracting Specialty & blends Manufactured sand Somerton terminal packages Fly ash via FAA Blends & Bagged Bagged products

1. Denotes grey equivalent; Shrinkage Limited (SL); High Early Strength (HE); Off-White (O/W); General Purpose (GP); Adelaide Brighton (ABL); Fly Ash Australia Joint Venture (FAA)

### **Clinker Importation**

Current market conditions are favourable for importers



**Tailored National Cement Sourcing Models** BORA Cement sourcing models across Australia are optimised to match local conditions Boral Cement sourcing models Cement industry map Mill Vill Australian market ~10mt2 8 Boral  $\bigcirc$ Area Assets Model Rationale Darwin CA 0 0 ABL/ ICL 🔘 0 Clinker Low kiln costs and Berrima NSW manufacturer rail link maintains Other  $\bigcirc$ 0 Maldon NT (1%) 0 ଡ ~1.5mtpa competitiveness Townsville Port Hedland Asian clinker Imported clinker is North Waurn VIC lower cost cement importer QId (9%) adstone Ponds 8 ~0.6mtpa source Ò Sunstate Asian clinker Wagners Imported clinker is WA (10%) SEQ (13%) (50% JV importer Bulwer Island SEQ lower cost cement Sunstate (50% JV Boral and ABL) with ~0.3mtpa source ABL) (Boral share) SA (7%) Bulk cement NSW/ ACT (33%) Lower scale Boral O Newcastle purchaser Local usage combined , Kooraqanq Ana Other °ò supply from local O Glebe Island Mun 0 Berrima with competitive areas BGC contracts sources local suppliers Maldon Port Kembla 0.2-0.4mtpa Birke

Boral Australia periodically reviews the long-term sustainability of sourcing models

~70% of National Cement Demand<sup>1</sup>

- The % against each state refers to proportion of total FY18 Australian cement volume and is sourced from Macromonito Construction Materials Forecast, February 2018
   Cement Industry Federation Survey 2018

Denotes that Boral has a fixed cement position

O Melbourne (50% JV CA and ICL) 38

VIC (25%)

Railton

O TAS (1%)

Waurn

Ponds

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### Flexible East Coast Cement Network

NSW cement operations are key to Boral's network flexibility



### **Clinker sourcing**



- Berrima costs below import parity with strong operational excellence focus
- Boral imports clinker into Port of Geelong and Brisbane with optionality in Port Kembla
- Off white manufacturing and slag processing capability

### Product range



- Maldon mill upgrade enables product supply optimisation
- Maldon blend products including slag and off white
- Package products targeting DIY / builders segment
- Fly ash sourced from FAA JV

# Supply chain



- Berrima & Maldon rail linked for low cost delivery to metro
- NSW rail network allows economic interstate supply
- Road and rail is used to optimise the supply chain of our integrated business

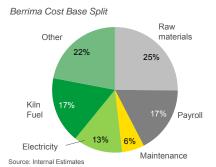
39

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## Securing Berrima Cement Position

Building on our strong cost position and actively managing our energy position

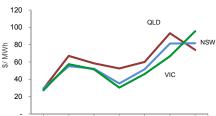
### Berrima Cost Base



- Energy is 30% of Berrima costs
- Raw materials, payroll and maintenance the majority of costs
- Continuous improvement will offset anticipated future cost increases

### Electricity

#### Wholesale Electricity Prices



FY12 FY13 FY14 FY15 FY16 FY17 YTD Source: AEMO as at 31 March 2018

- Electricity prices have risen in NSW, QLD and VIC
- Berrima electricity exposure actively managed including shifting production to low cost time of day

### Kiln Fuel

#### Alternative Fuels



Under construction alternative fuel loader at Berrima using resource derived fuel (cellulose product) in the clinker kiln

- Boral will shortly complete a ~\$10m upgrade to allow alternative fuels to substitute coal usage up to 30%
- Optimising Marulan lime kiln fuel by using less gas and more coal

### **Building a Lower Cost Victorian Position**

Reinvestment offers an opportunity to embrace new products



### Agenda

Property pipeline will continue to provide ongoing earnings opportunities

- Boral Australia Overview
   Joe Goss
- Major Projects
   Wayne Manners
- Cement
   Ross Harper
- Property
   Brian Tasker
- QLD Region
   Simon Jeffery



Waurns Ponds Cement site in VIC

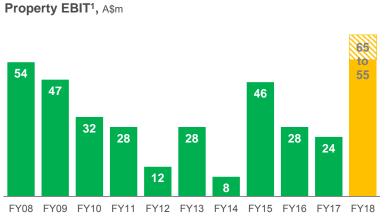
BORA

BORA

### Solid track record of earnings contribution Strong earnings with historical annual EBIT of circa \$30m

BORA





- EBIT earnings secured through a • combination of multi-year developments and smaller sales of surplus land
- Portfolio rationalisation, asset relocations and operational consolidations have released valuable land opportunities
- Sales values are optimised through a variety of value added options including the rezoning of land for residential or industrial purposes
- Earnings from property expected to continue to average ~\$10m to \$20m p.a. over the near term

Excluding significant items. FY2008 – FY2010 includes earnings from significant multi-year developments at Moorebank and Nelsons Ridge, and initial earnings from the Landfill business. FY18 figure is an estimate reflecting Boral expectations, in line with Boral's guidance in ASX announcement 24 April 2018

43

BORA

# Land management and development cycle Boral Australia manages a large land bank (400+ properties)

#### **Key activities**

- Securing site tenure and related government approvals
- Facilitating stakeholder engagement
- Managing leases and property • administration
- Developing future end-use option

#### **Key challenges**

- Securing government approvals for greenfield, upgrades or rezoning
- Ongoing urban encroachment impacting existing locations
- Expanding development timeframes



# Prospect Masonry Sale Announced A case study in well-executed long term land development strategy

### Prospect Masonry, NSW

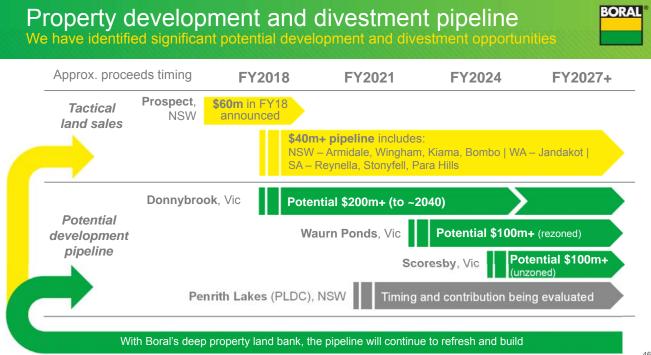


Property outline indicative only

- 12.9 ha land area
- Former Boral Masonry site at Clunies Ross Street in Greystanes
- Sale plan commenced in May 2014
- Deal executed / announced in April 2018
- Proceeds of \$60m giving an EBIT contribution of \$56m in FY2018
- Sale timed to capture strong market with the sale proceeding quicker than expected
- Final land sale of the broader Greystanes Estate, which included Nelsons Ridge, 'The Quarry' industrial park and Northern Employment lands, delivered total revenue exceeding \$650m over a decade plus

45

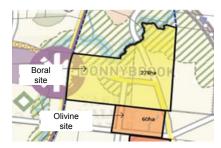
BORAL



### Future potential development opportunities

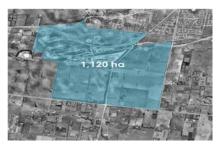
Boral has identified several large near term opportunities, all in Victoria

### Donnybrook, VIC



- 340 ha total land area
- Adjoins Mirvac Olivine estate
- Boral land rezoned in Nov 2017
- Subject to current negotiations
- Potential earnings of \$200m+ over 20 years

### Waurn Ponds, VIC



- 1,020 ha land area with rehabilitation required post cement operations
- Designated growth corridor adjacent to Armstrong Creek SW of Geelong
- Land rezoning strategy underway with land value directly related to rezoning
- Potential rezoned land value \$100m+

### Scoresby, VIC



- 84 ha parklands and 87 ha proposed residential infill land
- Clay pits rehabilitation underway with manufacturing site leased until 2025
- Rezoning strategy underway
- Potential 'unzoned' land value \$100m+

47

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### Agenda

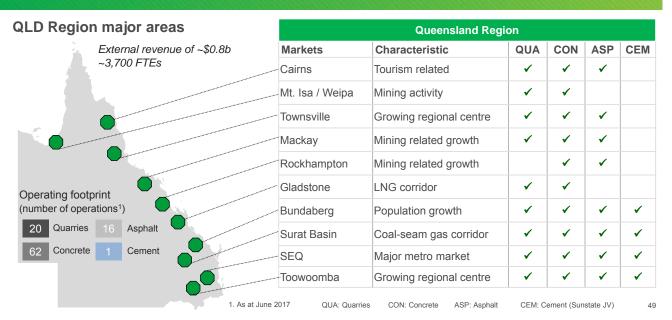
Strengthening and maintaining our position in South East Queensland (SEQ)

- Boral Australia Overview Joe Goss
- Major Projects
   Wayne Manners
- Cement
   Ross Harper
- Property
   Brian Tasker
- QLD Region
   Simon Jeffery



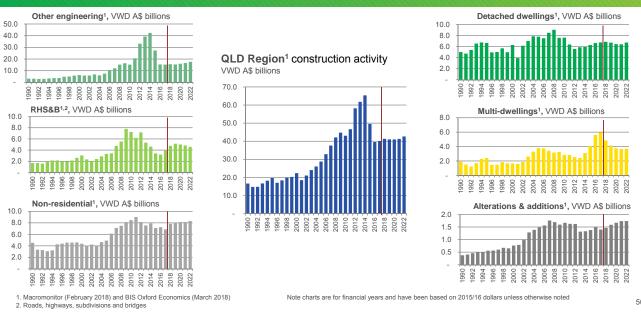
Gateway Bridge, Qld

# Queensland Region Footprint Boral has a large integrated footprint supplying key markets in Queensland



### **Queensland Construction activity strengthening**

Demand is shifting from residential towards infrastructure



BORAL

BORAL

### Strong QLD Materials Demand Outlook

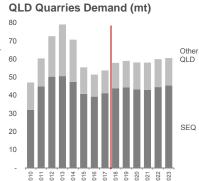
Resilient concrete demand and rising asphalt activity with an SEQ focus

QLD Premix Concrete Demand (mm3) 8 7 Other QLD 6 5 4 3 SEO 2

- Recent concrete growth heavily weighted to residential and non residential building activity
- Lifestyle and affordability factors driving higher migration and underpinning future fundamentals



- Strong asphalt demand growth particularly in SEQ and Toowoomba
- Major project and increased maintenance spend driving demand forecasts



- Quarries demand linked to concrete and asphalt activity
- Major road activity contributing to higher quarry volumes

51

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BORAL

### **Major SEQ Initiatives** Maintaining and strengthening Boral's SEQ position

### **Redbank Concrete Plant**



- Plant replacement with improved access to growth corridor SW Bris.
- Capital light solution of ~\$6m using freehold land & surplus LNG plant
- Completion in Oct 2017 with site consented 24/7 and large storage improves supply chain efficiencies

#### Toowoomba Asphalt Plant



- New ~\$10m plant and depot will address current site encroachment
- Completion by late 2018 with capacity of 140ktpa (from 30ktpa)
- Lower cost plant with efficient heating costs, reduced waste and maintenance costs



**SEQ Quarries** 

- Improving SEQ quarry network efficiency and capacity position with Ormeau investment
- Assessing other network options to build competitive long term position
- Balancing natural and manufactured sand positions

## Ormeau Quarry Reinvestment Upgrading Ormeau Quarry strengthens Boral's Brisbane position



#### **Quarry Characteristics**



- Stone extraction first commenced in the 1980s
- 40+ years of reserve life
- Higher quality reserves suitable for high specification aggregates and full range of roadbase products

### **Processing Plant**

#### **Boral Network Solution**



- Plant replacement cost of ~\$55m with completion by end of FY2019
- Increased production capacity from ~0.5mtpa to ~2.0mtpa
- 11 hours/6 days per week consent to process and sell material



- Close to arterial roads, enabling supply into CBD, western and southern Brisbane growth corridors
- Reduce overall production costs with a large scale, single production plant at Ormeau

53

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### **Concrete Product Video Presentation** Boral Australia has developed a suite of innovative concrete designs



A flowing concrete that compacts under its own weight (self compacting) and allows improved placing in difficult conditions



Trial concrete pour at Ormeau Quarry

#### Aspire<sup>®</sup> Concrete

A high strength concrete that maximises floorplans in commercial and high-rise buildings and increases productivity



High rise structures / lift cores are suitable for Aspire

#### Envisia<sup>®</sup> Concrete

A lower carbon concrete with excellent performance benefits including low shrinkage, high early strength and durability



Envisia testing in QLD for precast use

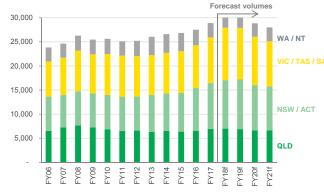
This promotional video highlights the innovation behind Vantage®, Boral's self compacting concrete, and is accessible on Boral's website www.boral.com



## Boral is benefiting from industry demand that is forecast to remain at high levels

BORAL

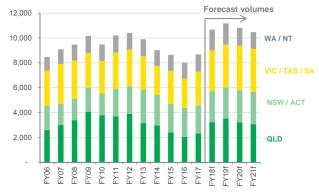
Premix Concrete demand forecast ('000m3) Source: Macromonitor as at February 2018



Forecast growth in RHS&B<sup>1</sup> and non-residential building to offset a decline in multi-residential activity keeping demand at historically high levels

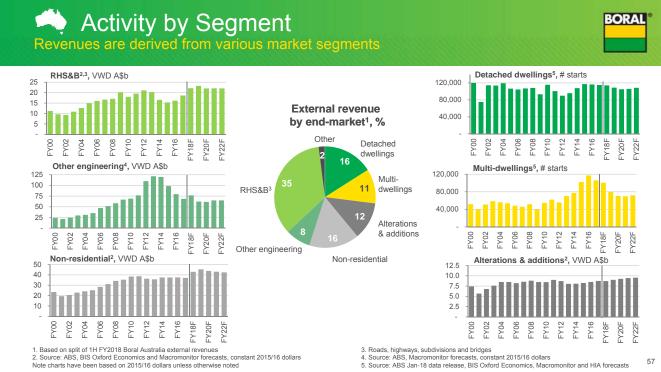
### Asphalt demand forecast ('000t)

Source: Macromonitor as at February 2018

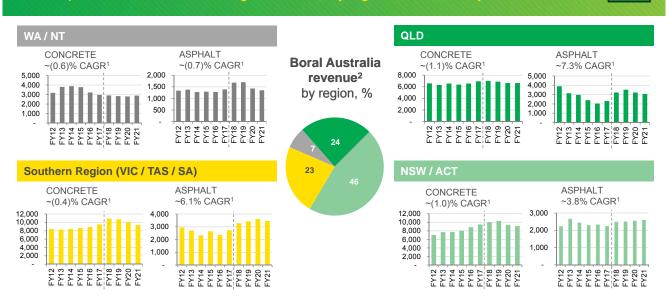


National growth in roads infrastructure keeping demand at historically high levels with QLD and VIC responsible for near term rises

1. Roads, highways, subdivisions & bridges



## Well positioned to take advantage of historically high levels of activity



Compound annual growth rate from FY2017 to FY2021 forecast by Macromonitor, February 2018 (Concrete in '000 m<sup>3</sup> and Asphalt in '000 tonnes) Based on 1HFY2018 split of Boral Australia external revenue

BORAL



## AN ATTRACTIVE GROWTH PLATFORM



### PART 1: Frederic de Rougemont, CEO, USG Boral

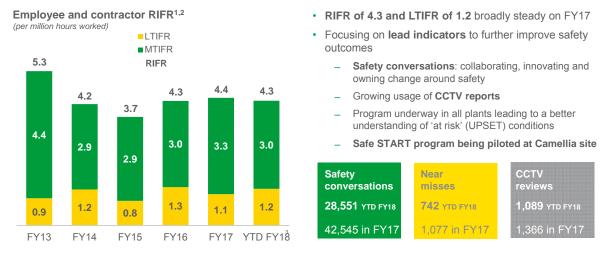
- 1. Safety performance
- 2. Delivering on our JV strategy
- 3. Building on our position

### PART 2: Tony Charnock, Senior Vice President Asia Pacific, USG Boral

4. Asia Pacific (Australia / New Zealand and Indonesia) - country dynamics and opportunities







Recordable Injury Frequency Rate (RIFR) per million hours worked is made up of Lost Time Injury Frequency Rate (LTIFR) and Medical Treatment Injury Rate (MTIFR). Totals may not add due to rounding
 RIFR, LTIFR and MTIFR per million hours worked includes employees and contractors in 100%-owned businesses and all joint venture operations
 YTD FY18 refers to 9 months to 31 March 2018

#### 61

### DELIVERING ON OUR JV STRATEGY

Frederic de Rougemont CEO, USG Boral

### **DELIVERING ON OUR JV STRATEGY**



- Leveraging USG Boral's partnership to deliver revenue and earnings growth, including >US\$50m of synergies in <4 years
- ✓ Successful adoption of Sheetrock<sup>®</sup> leading to maintain / grow strong positions with price premium
- $\checkmark$ Expanded product portfolio delivering enhanced revenue and earnings
- $\checkmark$ Leveraging leading manufacturing platform to meet growing demand
- $\checkmark$ Driving innovation in building products and systems and accelerated adoption of plasterboard in partitions and walls
- Delivering customer excellence and leading solutions

### **REVENUE AND EARNINGS GROWTH**



1H FY17 1H FY18

1H FY17 1H FY18

11.1

1,478

FY17

11.6

FY17

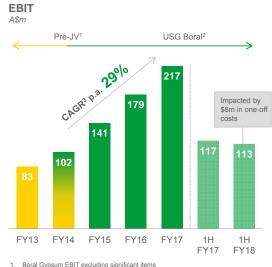
Delivering above Boral's cost of capital since FY17

1.39

FY16

9.4

FY16



Boral Gypsum EBIT excluding significant items
USG Boral underlying EBIT excluding significant items
Compound annual growth rate from FY14 to FY17
Based on Boral Gypsum / USG Boral divisional moving annual total EBIT (excluding significant items) on divisional funds employed (segment assets less segment liabilities) at period end 3. 4

Underlying revenue

CAGR<sup>3</sup> p.a. **11%** 

1.268

FY15

7.4

FY15

**ROFE<sup>4</sup>** (for Boral)

A\$m

1,091

FY14

6.1

FY14

### DRIVERS OF PERFORMANCE

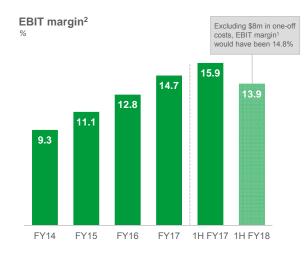


- Revenue CAGR of 11%<sup>1</sup> p.a.
- Significant EBIT margin expansion •
- Successful adoption of Sheetrock® brand-• strengthening our position with price premium
- Synergies: revenue, adjacent products and costs •
- Cost management •
- Operational excellence •
- In Australia and Korea: •
  - enhanced product and customer mix
  - underlying market growth \_
  - robust pricing

Plasterboard share<sup>1</sup>

%

Compound annual growth rate from FY14 to FY17 Underlying EBIT (excluding significant items) to revenue



65

### **STRONG GEOGRAPHIC POSITIONS**



45 - 50

#### Revenue contribution from largest to smallest $60 - 65^{2}$ 50 - 55 45 – 50 40 - 45 40 - 45 35 - 40 20 - 25 4 – 6 Australia Vietnam Malaysia/ Philippines South Thailand China Indonesia India

Korea Singapore Total PLB demand<sup>1</sup> ~190 ~300 ~90 ~2,800 ~100 ~70 ~60 ~30 ~20 (m m<sup>2</sup>)

1. USG Boral management estimates for FY17. Note that China 4-6% is based on total China demand however USG Boral's target segment in China is high-end segment only 2. Combined plasterboard share across Malaysia and Singapore

66





- · Price benefiting from increasing contribution from Sheetrock® and technical board
  - Sheetrock<sup>®</sup> premium achieved
- Strong economic conditions and construction activity in developed markets delivered price growth
- Competitive price pressures in Thailand, • Indonesia and Vietnam
- Significant price growth in China in 1H FY18 due to temporary supply constraints and waste paper inflation
- Cost inflation partially offset through price and • optimising product mix

1. Average selling price

#### Plasterboard ASP<sup>1</sup> – pcp

	Australia	Korea	Thailand	China	Indonesia
FY14	1	1	$\leftrightarrow$	+	1
FY15	1	1	$\leftrightarrow$	$\leftrightarrow$	1
FY16	1	+	1	$\leftrightarrow$	$\leftrightarrow$
FY17	1	1	<b>I</b>	$\leftrightarrow$	<b>I</b>
1H FY18	+	+	1	+	1

Growing contribution from Sheetrock® % of plasterboard revenue





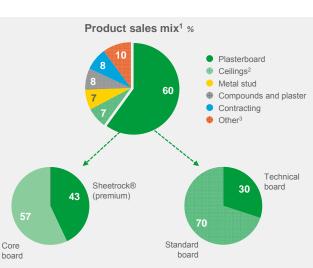
67





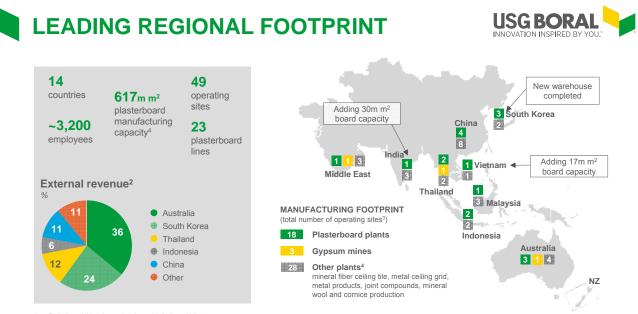
- Customer focused full product suite / system solutions
  - Growing loyalty of our customers to our brand (distributors, subcontractors, contractors)
  - Enhancing revenue and earnings





Based on split of 1H FY18 underlying revenue for USG Boral
 Includes ceiling tile and ceiling grid
 Other includes gypsum, cornice, others

Core



3

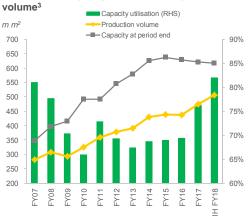
Excludes additional capacity planned in India and Vietnam Based on 1H FV18 underlying revenue for USG Boral As at April 2018. Certain manufacturing facultities and gypsum mines held in JV with third parties Production of plasterboard and other products may be at the same physical location

**CAPACITY UTILISATION REFLECTING GROWING DEMAND** 

- Average capacity utilisation of 82% across • network in 1H FY18, up from ~76% in FY17<sup>1</sup>
- Plasterboard production volume CAGR<sup>2</sup> of • 6% p.a. (including Aus/NZ) and 7% p.a. in Asia (excluding Aus/NZ) since FY07

**USG BOR** VATION INSPIRED B





Based on total production capacity at period end and annualised for 1H FY2018 Compound annual growth rate Includes plasterboard and gypsum ceiling tile volumes

69

### **BUILDING ON OUR POSITION**



- Continue growing high margin sales with innovative products and solutions
  - Sheetrock 2.0
  - Technical board
  - Ensemble<sup>™</sup> Acoustical Drywall Ceiling
- · Market segmentation to deliver higher margin
  - Commercial sector buildings supplied with more technical products and adjacent solutions (acoustic ceilings, building facades)
  - Focus on customers valuing the product range
  - Strengthen distributors' network









- USG Next Generation Sheetrock providing opportunities for USG Boral
  - USG launched Sheetrock® Brand EcoSmart Panels in USA in March 2017
  - Lighter weight with stronger sag performance
  - Strong sustainability attributes: lower carbon emissions and less water used in manufacturing
- Initial trials completed at Pinkenba
- In the next 12 months
  - More work required to optimise technology to achieve preferred product differentiation
  - Assessing customer value proposition
  - Assessing opportunity of reducing energy and gypsum costs

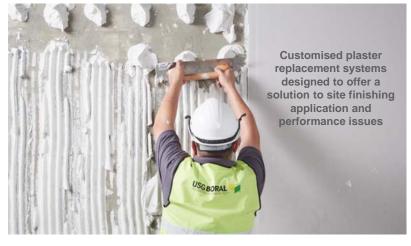




EasyFinish<sup>™</sup> – Wall Lining and Partition Systems

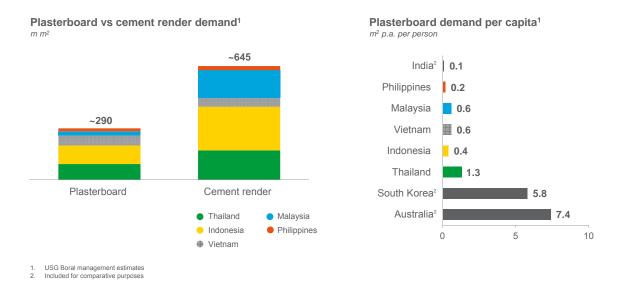
- Accelerate plasterboard adoption in wall partitions as step towards cavity walls in emerging countries
- Convert cement render system to plasterboard lining system
- Market test phase completed in Thailand and Indonesia
- Broader rollout to China, Malaysia, Philippines and Vietnam

Winning in the partition segment by sticking plasterboard on traditional masonry walls









## **RESPONDING TO OPPORTUNITIES AND CHALLENGES**



#### Australia

Knauf Bundaberg started in Queensland

- Grow innovation and commercial segment
- Building a niche, high-end position in New Zealand with Sheetrock<sup>®</sup> from Pinkenba

### South Korea

Competitor capacity expansion has started

- Optimised customer / product mix and margins following termination of long-term supply agreement with Byucksan
- Innovation and commercial segment
- China
  - Significant paper and gypsum inflation and tight supply
  - Successfully achieving strong price increases
  - Strong business performance in high-end, growing Sheetrock<sup>®</sup> penetration and new product offerings, focus on home deco segment

Thailand and Indonesia

Protracted soft construction markets, cost inflation and new entrants / capacity

- Protect premium brand with development of a mid-tier brand
- Accelerate penetration of plasterboard in cement render segment with EasyFinish<sup>™</sup>
- Grow exports from Thailand
- Other countries
  - Vietnam: strong growth, benefits from Sheetrock<sup>®</sup> but competitive price pressures
  - *Philippines*: strong growth with well recognised brand
  - India: Strong growth with significant potential



#### India – Chennai

- New 30m m<sup>2</sup> plant under construction expected to be completed FY20
- Leverages our market presence including brand, customer relationships and know how established in Southern India
- Servicing high growth market with 1.3bn population, country GDP ~7% p.a. and one of the lowest plasterboard penetration rates among developing countries

### Vietnam – Ho Chi Minh

- Capacity expansion of 17m  $m^2\,$  expected to be completed FY20
- Upgrading and restarting Ho Chi Minh line 1, currently mothballed
- Addresses existing supply constraints
- Supports strong growth, with country GDP ~6% p.a. and further penetration and adoption of plasterboard and related products



**USG BORAL** 

OPERATIONAL COST IMPROVEMENTS INITIATIVES

Disciplined project management focus

Targeted cost reduction capital improvements Additional LEAN and 6 Sigma resources

Continued supply chain excellence focus Focused plant reliability excellence program

**USG BORA** 

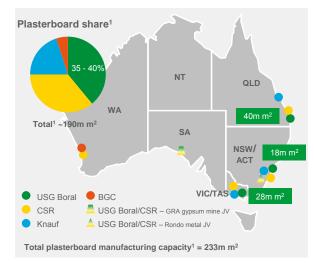
New focus on SE Asia logistics

78

PART 2: AUSTRALIA / NEW ZEALAND AND INDONESIA

Tony Charnock Senior Vice President, Asia Pacific







- Demand remains robust despite multi-residential activity moderating YTD FY18
- Expect moderate softening in activity in FY19 but remain well above historical averages underpinned by east coast detached housing and commercial projects
- Industry utilisation to fall following new entrant in Queensland but remain >80% at current demand
- USG Boral has a leading plasterboard position

USG BORAL AUSTRALIAN FOOTPRINT

WA

7

Board plant

USG Boral owned distribution sites<sup>2</sup>

NT

SA 4

GRA gypsum mine

.IV

QLD

14

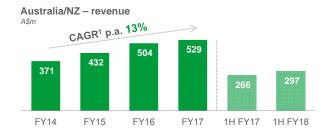
NSW/

ACT

VIC/TAS



- Sheetrock<sup>®</sup> produced at Camellia (NSW), Pinkenba (Qld) and Port Melbourne (Vic)
  - Sheetrock<sup>®</sup> adoption rates > 90%
- Strong distribution network comprising USG Boral owned and independent distributors plus retail distributors
- Significant revenue growth since JV formation driven by strong volume growth and solid price growth; prices moderated in 1H FY18



Compound annual growth rate from FY14 to FY17
 Includes Rondo distribution sites owned in JV with CSR

Joint compound plant 🔺 Rondo metal

81

- ✓ Grow commercial segment exposure
- ✓ NextGen 2.0
- ✓ New products
- ✓ Leverage Pinkenba capacity to grow New Zealand niche market
- ✓ Operational cost improvements





## BUILDING COMMERCIAL SECTOR GROWTH



- Commercial sector including multi-residential high rise, education, health care, hotels, retail projects
- Best in class architectural specification and engineering teams
- Value engineering support highly valued by commercial developers and contractors
- Invested in best in class Building Information Modelling (BIM) technology for architects, designers and contractors with 100k models (data rich) covering full catalogue

### Plasterboard segments<sup>1</sup>



1. USG Boral management estimates based on 1H FY18 revenue



INNOVATION NEXTGEN 2.0 AND NEW PRODUCTS

- High adoption of Sheetrock® achieved
  - Customers recognised superior product attributes and benefits: lighter weight, sag-resistant, stronger
  - Price premium achieved
- NextGen 2.0
  - Optimising technology to achieve preferred product differentiation
  - Developing value proposition
- · Grow new products
  - Ensemble<sup>™</sup> Acoustical Drywall Ceiling
  - Sheetrock® Ultralightweight Joint Compound
  - USG Securock<sup>®</sup> Glass-Mat Roof Board and Gypsum-Fibre Roof Board







### BUILDING A NICHE POSITION NEW ZEALAND



- Build niche high-end position in plasterboard and related products
  - ~27m m<sup>2</sup> plasterboard demand<sup>1</sup>
- Existing strong positions in joint compound and mineral fibre ceiling grid
- · Footprint established
  - Leveraging Sheetrock<sup>®</sup> capacity at Pinkenba
  - Distribution warehouses in Auckland and Wellington
- Metal roll forming business sold to Rondo in Feb-2018
  - Rondo will continue to supply USG Boral NZ
- Winning work and establishing relationships
- 1. USG Boral management estimate



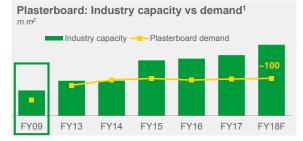
Plasterboard competitor			
Fletcher	Winstone Wall Boards		
	Only local manufacturer of plasterboard		







- Competitive price pressures driven by excess industry capacity
- Competitors building new capacity recognising strong growth potential from increased product penetration
- Expect economic recovery with increased political stability in 2019



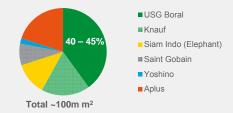
1. USG Boral management estimates

• USG Boral: Player in high-end retail and project segments and growing presence in mid-tier segment

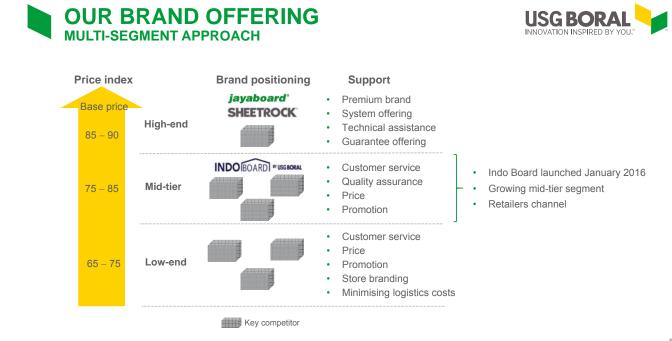
**USG BORA** 

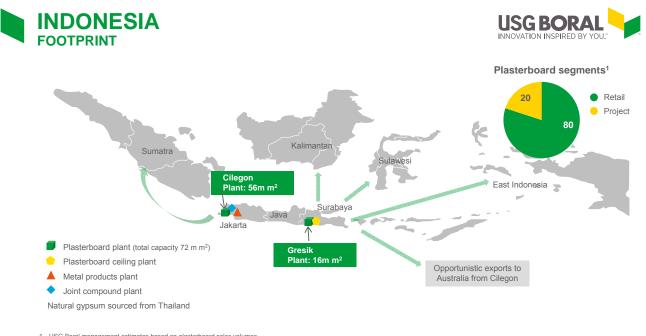
- Knauf, St Gobain and Yoshino are key competitors in mid-tier segment
- Aplus and other brands compete in low-end retail segment







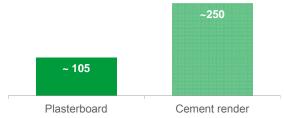




1. USG Boral management estimates based on plasterboard sales volumes

**EASYFINISH<sup>TM</sup>** ACCELERATING PENETRATION IN WALL PARTITIONS

Plasterboard vs cement render demand  $m m^2$ 



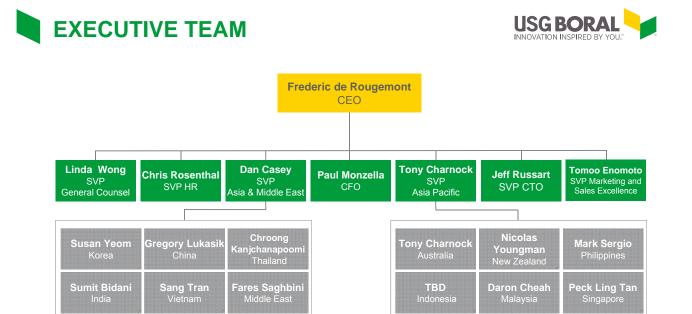
- Accelerate plasterboard adoption in wall partitions as step towards cavity walls in emerging countries
- Leverage EasyFinish<sup>™</sup> to convert cement render system to plasterboard lining system
- Very positive initial take-up in Indonesia but early days
- · Initial focus on hotels and multi-residential projects



USG BOR

Branz, Gold Coast, West Vista Apartment Jakarta





**MANUFACTURING CAPACITY BENEFITING FROM PRIOR INVESTMENT** 



Plasterboard manufacturing capacity<sup>1</sup> Following capacity expansions *m m*<sup>2</sup> Chongqing 3 Ho Chi Minh 2 and Shandong Chengdu closed<sup>2</sup> Ho Chi Minh 1 Chongqing 4 Port Melbourne<sup>2</sup> Chennai Chengdu (West) Pinkenba<sup>2</sup> Ho Chi Minh 1 Cilegon 2 Oman closed Port Melbourne<sup>2</sup> 664 Dangjin 2 Saraburi 2 637 629 625 622 617 Oman Baoshan (East) Pinkenba<sup>2</sup> 580 Khushkhera 545 🛚 India 492 492 Malaysia 416 396 Vietnam 348 China Indonesia Thailand Korea Australia FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 1H FY18 FY20F As at period end
 Capacity expansion / closures recognised over two financial years

**EXTENSIVE INFRASTRUCTURE** 



		Plasterboard				Metal products	Mineral fibre ceiling tile	Joint compound	Gypsum	Other
		pacity	Plants	Board	Ceiling	Plants	Plants	Plants	Mine	Plants
	m m²	bsf <sup>3</sup>		lines lines						
Total	617	6.6		23		11		12		
Australia	86	0.9	3	3		14		1	17	2 cornice
Korea	153	1.6	3	4	1			2		
China	143	1.5	4	6	1	3	16	3		Mineral wool <sup>6</sup>
Thailand	105 <sup>1</sup>	1.1 <sup>1</sup>	2	3 <sup>1</sup>	1 <sup>1</sup>	1		1	1	
Indonesia	72	0.8	2	3	1	1		1		
Vietnam	30	0.3	1	1	1	1				
India	9	0.1	1	1		24		1		
Malay./Sing	11.1	0.1	1	1	1	14		2		
Saudi Arab.						15	15	1 <sup>5</sup>		
Oman	8 <sup>2</sup>	0.1 <sup>2</sup>	1	1 <sup>2</sup>					1 <sup>2</sup>	

71% ownership interest in SGI. Boonya gypsum mine and PLT are 100% owned Owned in JV with Zawawi Minerals; own 55% of mine. 100% owned plasterboard plant 1. 2.

3. 4. Billion square feet 50/50 JV with CSR (Rondo)

45/55 JV with local partner Saudi Structured Contracting Company 50/50 Star-USG JV with BBMG Group 50/50 JV with CSR (GRA) 5. 6. 7.

# PRODUCTION CAPACITY BY PLANT



Overall production capacity: 617m m<sup>2</sup>

Country	Plant	Capacity, m m <sup>2</sup>	Sheetrock <sup>1</sup>
Australia 3 plants, 3 lines	Pinkenba	40	$\checkmark$
	Port Melbourne	28	$\checkmark$
Total: 86m m <sup>2</sup>	Camellia	18	$\checkmark$
<b>Korea</b> 3 plants, 4 lines	Ulsan	46	✓
	Dangjin 1	37	$\checkmark$
	Dangjin 2	35	$\checkmark$
Total: 153m m <sup>2</sup>	Yosu	35	
China 4 plants, 6 lines	Baoshan	35	✓
	Shandong	35	$\checkmark$
	Chongqing 2	13	
	Chongqing 3 & 4	30	$\checkmark$
Total: 143m m <sup>2</sup>	Pudong	30	

Country	Plant	Capacity, m m <sup>2</sup>	Sheetrock <sup>1</sup>
Thailand	Saraburi 1	50	$\checkmark$
2 plants, 3 lines	Saraburi 2	35	$\checkmark$
Total: 105m m <sup>2</sup>	Songkhla	20	$\checkmark$
Indonesia 2 plants, 3 lines	Cilegon 1	26	✓
	Cilegon 2	30	$\checkmark$
Total: 72m m <sup>2</sup>	Gresik	17	$\checkmark$
Vietnam	Ho Chi Minh 2	30	✓
Malaysia	Parit Buntar	11	√
India	Khushkhera	9	√
Oman	Oman	8	✓

1. Plants with Sheetrock® technology