



Boral Australia Investor Day Presentation

Sydney, 31 May 2019

Agenda



PRESENTATIONS and Q&A:

Boral Australia:

- Wayne Manners, President & CEO Boral Australia
- Greg Price, Executive GM, NSW & Major Projects
- Brian Tasker, National GM, Property with Judy McKittrick, National Land Development Manager

Boral Limited:

- Ross Harper, Group President Operations
- Ros Ng, Group President Ventures and CFO
- Mike Kane, CEO & Managing Director

LUNCH: ~12.30pm

SITE VISIT to Artarmon Concrete Plant

Depart ~1.15pm, return ~3.30pm



Boral Group: snapshot

Today's investor day focuses on Boral Australia, an important part of the Boral Group

A\$6.1b

market capitalisation¹
S&P/ASX 100 company

17

countries

~670

operating sites²

17,098

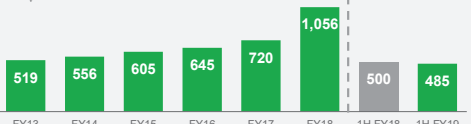
employees³

plus ~8,700 contractors

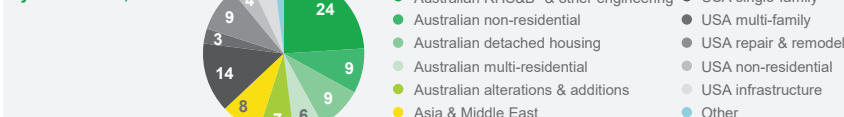
1H FY2019 revenue by division⁴, %



EBITDA⁵
A\$m



Boral 1H FY2019 revenue⁴
by end-market, %



1. As at 30 May 2019

2. As at 30 June 2018, adjusted for the sale of Block

3. Full-time equivalent employees, including in joint ventures, as at 31 December 2018

4. Includes Boral's 50% share of underlying revenue from USG Boral and Meridian Brick joint ventures, which are not included in Group reported revenue and excludes discontinued operations

5. Excluding significant items

6. RHS&B: Roads, highways, subdivisions & bridges

Agenda



New West Melbourne Concrete Plant, Vic

Boral Australia overview and focus

Wayne Manners

Supplying a strong infrastructure segment

Greg Price

A reliable earnings stream from Property

Brian Tasker and Judy McKittrick

Boral's sustainability focus

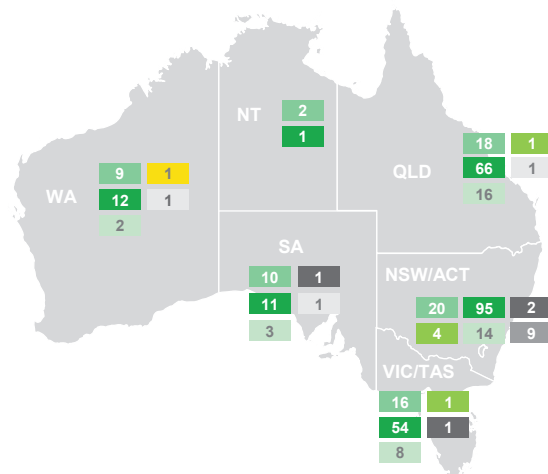
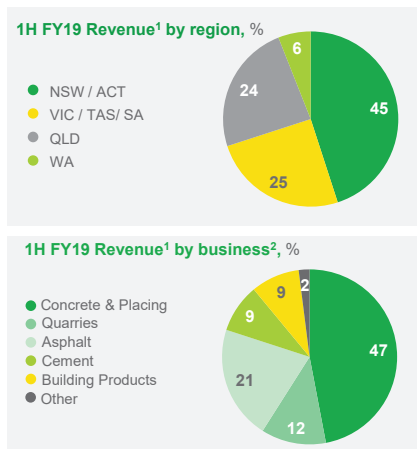
Ross Harper

USG Boral strategic options update

Ros Ng and Mike Kane

Boral Australia is a strong, well positioned business

Diversified geographic exposure increasingly focused on construction materials



402 operating sites³

Quarries	75
Concrete	239
Asphalt	43
Cement ⁴	6
Bricks WA	1
Roof tiles	4
Timber ⁵	9
Masonry	3

~6,500 employees and
~5,000 contractors

1. Boral Australia external revenue for the 6 months ended 31 December 2018
 2. Other includes Transport, Landfill and Property revenues
 3. As at 30 June 2018. Includes 22 clay pits, transport, recycling and R&D sites. Concrete sites include mobile plants. Excludes mothballed plants
 4. Includes cement manufacturing, grinding, bagging and lime plants in NSW, a clinker grinding plant in Victoria and a clinker grinding JV in Queensland
 5. Includes eight Boral Hardwood mills and one JV Softwood operation

With valuable upstream and downstream operations

Vertically integrated positions in key markets, especially in strong East Coast markets



1. Includes Boral's share of 1.5m tonnes of grinding capacity in 50% owned Sunstate Cement JV
 2. Based on long-term historical average
 3. For sand and aggregates only

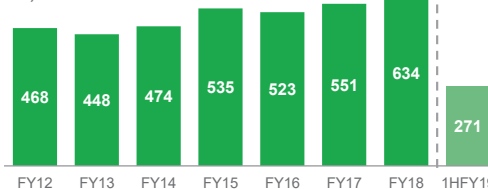


Boral Australia is a great business performing well

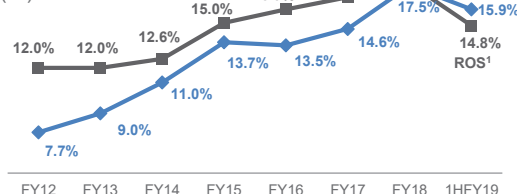
We are focused on continuing to improve our business

- Strong, **above cost of capital returns**
- Secure **long term reserves** and **leading integrated networks** in key geographies
- **Leveraging growth** in Australia's infrastructure markets
- **Recent capital investments** further strengthens positions for the future
- **Investments in excellence programs** and capability supporting margin growth
- **Strong customer base** across diverse segments
- **Engaged and motivated people** with deep sector expertise

Reported EBITDA (\$m)



Reported returns (%)



1. ROFE is EBIT before significant items on divisional funds employed; ROS is EBITDA on sales. Data includes Construction Materials and Building Products combined, which were reported separately between FY2012-16.



How is Boral Australia tracking in 2H FY2019?

EXTERNAL DRIVERS

- Shifting segment focus from residential to infrastructure: slowdown impacting in SEQ; NSW residential softening; Vic infrastructure strengthening; WA & SA slow
- Infrastructure projects delayed in 1H now largely on track, some other delays experienced (Vic, WA, Qld)
- Overall, concrete volumes continue to be softer relative to prior year
- No unusually adverse weather impacts experienced so far in 2H

2H FY2019 PRIORITIES

- Organisational Effectiveness (OE) review to lower overheads and rightsizing to align resources & demand
 - OE delivering modest savings in 4QFY19 via ~150 fewer positions by 30 June 2019, and ~\$20 million benefit in FY2020
 - Plus ongoing rightsizing of operations, with particular focus on WA and SEQ in FY2019
- Reducing costs through Operational Excellence programs including Supply Chain Optimisation
- Organisational restructure providing development opportunities and refocusing priorities

2H broadly in range of our expectations including property on track to deliver around \$30 million in FY2019, as guided; as always we need a strong June to finish the year



Leadership team and organisational structure

Organisational restructure is improving focus, coordination and leveraging experience

Boral Australia CEO
Wayne Manners

QLD & Supply Chain
Simon Jeffery

NSW & Major Projects
Greg Price

South Region & Diversity Inclusion
Lloyd Wallace

WA/NT
John Ralph

Cement ¹
Rajeev Ramankutty

Boral Land & Property Group
Brian Tasker

FUNCTIONAL TEAM
Strategy & Development
Finance
Human Resources
HSE
Commercial Development & Marketing
Digital Solutions
Procurement

- Project Management Office (Major Projects) reporting to NSW Executive GM
- Supply chain initiative being led by Qld Executive GM
- New WA and cement Executive GMs
- Dedicated Health, Safety & Environment (HSE) resource with elevated reporting to Boral Australia CEO
- Product Councils consolidated to report to Strategy & Development to leverage activities and optimise resources
- Consolidated Customer Experience and Commercial Excellence under Commercial Development & Marketing

1. From 1 July 2019



Strengthening the business for today and the long term

Focused on sustaining a strong business through capability and strategic investments

- Driving a **people based, safety focused culture** that maximises performance and supports business objectives
- Completing **generational investments** in quarries and cement to further strengthen our leading positions, as well as strategic downstream concrete and asphalt investments
- Building on the **continuous improvement** approach to optimise Boral's cost base and improve efficiencies, including through innovation and technology
- Embedding a **customer orientation** and effective **pricing practices** across all businesses
- Strengthening **business responsiveness** to changes in the external environment eg. customers, markets, competition, regulation

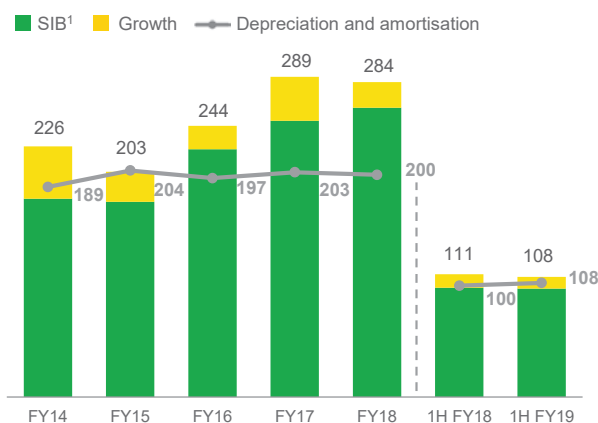


Orange Grove Quarry, WA

Boral Australia capital expenditure

Capex above depreciation reflects generational reinvestments

Total capital expenditure, \$m



1. Stay in business capital expenditure

- Capex in recent years largely reflects Quarry and Cement investments, which will deliver benefits:
 - Deer Park Quarry (Vic) upgrade – *commissioned*
 - Orange Grove Quarry (WA) upgrade – *commissioned*
 - Ormeau Quarry (Qld) upgrade – *commissioning*
 - Berrima alternative fuels – *commissioned*
 - Portside clinker grinding facility Geelong (Vic) – *due 2020*
- Recent capex also includes downstream network:
 - Replacement asphalt plant at Canberra (ACT)
 - Project concrete plants for rail precast supply at Perth, Sydney and Melbourne
 - Replacement concrete plant at West Melbourne (Vic)
 - Replacement asphalt plant at Toowoomba (Qld)
 - New concrete plant at Redbank (Qld)
- Expect similar capex in FY2019 as FY2018, but at slightly lower levels going forward despite capital allocation in FY2020 to complete Geelong facility

11

Focused on delivering benefits from capital projects

Strengthening our leading positions and improving our cost competitiveness



Deer Park Quarry

- ~\$75m capex
- New crushing & screening plant
- Increased capacity
- Enhanced product yield with upgraded screening technology



Orange Grove Quarry

- ~\$50m capex
- New crushing plant
- Increased capacity
- Lower production costs improves competitive position



Ormeau Quarry

- ~\$60m capex
- New crushing & screening plant
- Large capacity plant replacing 3 sub-scale operations
- Lower production costs



Geelong clinker storage

- ~\$130m capex
- New clinker grinding import / storage facility
- Due to complete 2H CY2020
- Lower cost, increased capacity, expanded product range

12

Zero | one | ten – provides internal drive and focus

Three pillars of success to being the undisputed industry leader

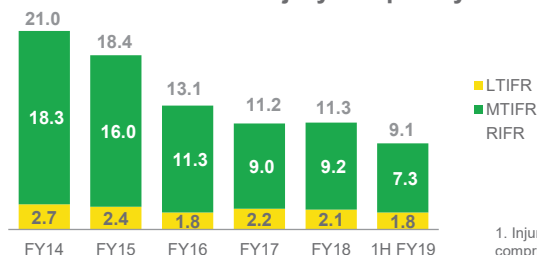


Safety Excellence

ZERO HARM TODAY remains our first priority

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

Division Recordable Injury Frequency Rate¹



■ LTIFR
■ MTIFR
RIFR

Digital solutions helping reduce risks and change behaviours



Boral's internally developed Angel-i smart CCTV is designed to detect pedestrians in exclusion zones on Boral's sites, with immediate notifications via flashing lights and audible alarms to warn drivers. The technology also records incidents for improved reporting.

1. 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)



Customer Excellence

Incorporating Commercial Excellence to improve customer orientation and pricing practices

>7m³ of concrete, >2m tonne of Asphalt, >30m tonne of Quarries material, 1.5m tonne of clinker capacity and 4m tonne of Cement milling capacity to service our customers generating external revenue of ~\$3.6b

	Objectives	Progress
Drive customer centricity	<ul style="list-style-type: none"> Measure & improve customer loyalty Understand customer journeys & pain points Deliver solutions to revolutionise the customer experience 	<ul style="list-style-type: none"> Ongoing Net Promoter Score reporting for Concrete Mapped current journey, created future state blueprint and validated roadmap with customers Launched SMS confirmation, Concrete Deliveries App, Customer Portal showing current and future orders
Enhance commercial culture	<ul style="list-style-type: none"> Embed pricing principles and 'One Boral' behaviour Build sales competency Increase commercial acumen 	<ul style="list-style-type: none"> Clear pricing principles in place Compulsory Bronze accreditation of sales roles. Silver Accreditation and Sales Manager Program underway Sales Dashboards & Sales Incentive Scheme in place
Standardise sales process & systems	<ul style="list-style-type: none"> Optimise integrated margins Constantly review customer product value Improve decision making with disciplined fact based quoting system 	<ul style="list-style-type: none"> Long term price planning process in place Bi-annual pricing reviews including two increases in FY2019, supporting pricing outcomes National Quotation system roll out by Q1 FY2020

15



Pricing outcomes

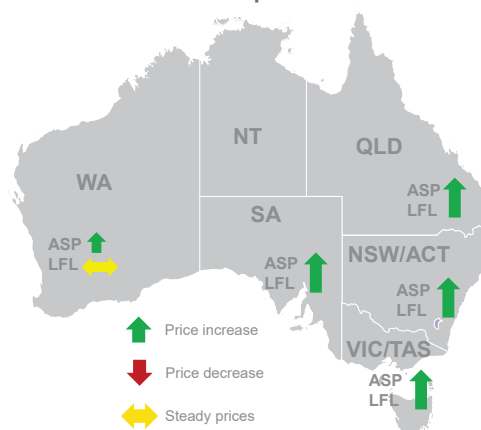
Disciplined pricing growth has been supported by strong markets

Our pricing objective is to cover cost increases and achieve a return on investment that consistently exceeds the cost of capital through the cycle to ensure our long term future

Case Study: Boral concrete prices, FY2014-19

	FY14	FY15	FY16	FY17	FY18	1HFY19
ASP	↑ Slightly	Steady	↑ 1%	↑ 4%	↑ 3%	↑ 4%
LFL	Steady	Steady	↑ 2%	↑ 3%	↑ 2%	↑ 3%

1HFY19 Boral concrete price movements



Improved pricing outcomes **reflects a period of strong residential markets and growing infrastructure** coupled with **progressive rollout of Commercial Excellence** and implementation of **two price increases per annum**, with better outcomes in stronger demand geographies

16

Operational Excellence

Continued program success driving annual savings, which is critically important to support margins and optimise costs

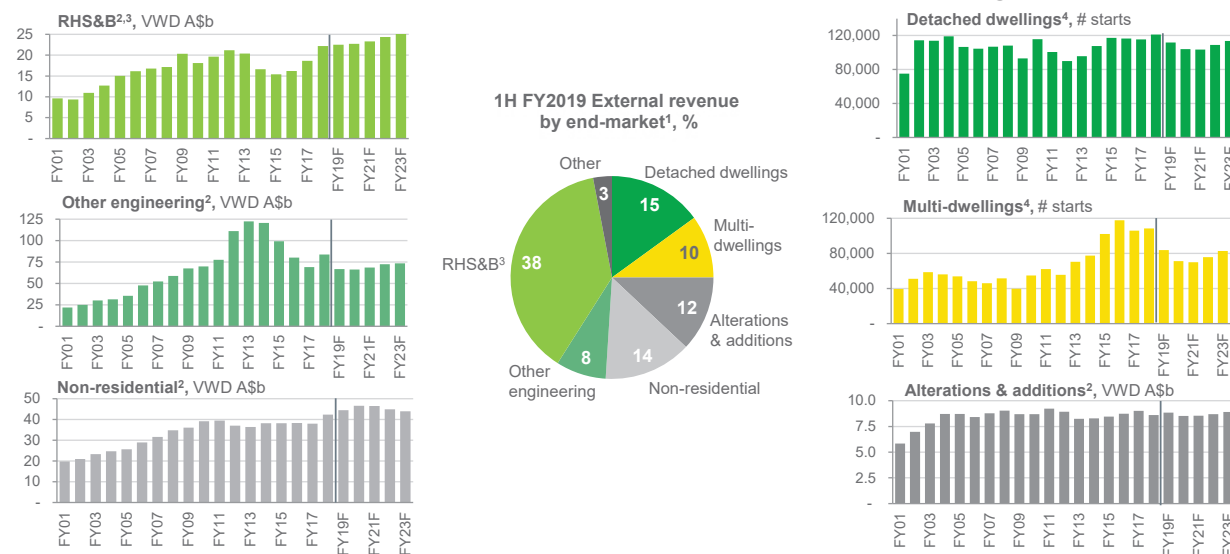
With a strong history of increasing efficiencies of assets, people and processes, Boral Australia is redoubling efforts to lower costs and improve efficiencies in response to input cost increases and volume changes

	Objectives	Progress
Operational Improvements	<ul style="list-style-type: none"> Improve output from physical assets including lifting Operating Equipment Effectiveness (OEE) Deliver material, energy, R&M, labour savings Ensure operations / resources match demand 	<ul style="list-style-type: none"> ✓ OEE lift via plant configuration & waste reduction ✓ Capital projects tracking to plan – eg. Quarry upgrades, Berrima alternate fuels delivering savings ✓ Ongoing rightsizing¹ of business
Supply Chain Optimisation	<ul style="list-style-type: none"> Reduce 'costs to transport' and increase customer reliability / fleet to asset connectivity Standardise / automate processes Target 5-10% reduction in costs 	<ul style="list-style-type: none"> ✓ Benchmarking and reporting systems setup, and Commercial contracts under review ✓ 5-10% cost opportunities identified ✓ Expecting ~\$15m to contribute to cost savings in FY2019 and ~\$25m in FY2020
Admin & Procurement Efficiency	<ul style="list-style-type: none"> Optimise overhead costs through Organisational Effectiveness (OE) program Savings from long 'tail' of procurement contracts Eliminate legacy back office processes 	<ul style="list-style-type: none"> ✓ Through OE ~150 FTE reduction¹ by 30-Jun-19, delivering modest savings in FY2019; with further savings targeting to deliver ~\$20m in FY2020 ✓ Second tier procurement review underway

1. OE and rightsizing restructuring costs to be reported as a significant item in FY2019

Boral Australia's revenue derived from various markets

Australian residential markets continue to soften while infrastructure is strong



1. Based on split of 1H FY2019 Boral Australia external revenues

2. BS historical data, BIS Oxford Economics and Macromonitor forecasts, constant 2016/17 dollars

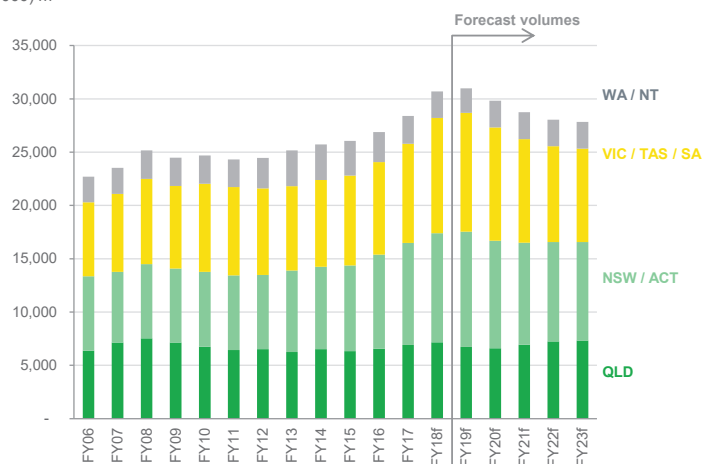
3. Roads, highways, subdivisions and bridges

4. ABS historical data, BIS Oxford Economics, Macromonitor and HIA forecasts

Concrete demand in Australia

Industry concrete demand forecast to peak in FY2019 but to stay at historically strong levels in FY2020

Macromonitor forecast¹ pre mix concrete demand across all Australian construction markets
('000) m³



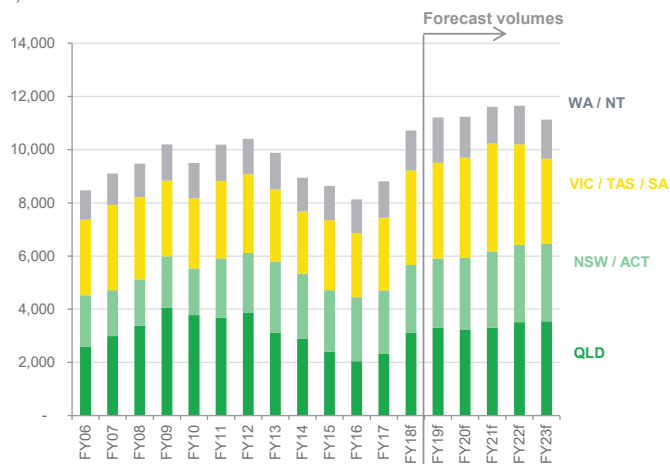
- Concrete volumes expected to remain high but Macromonitor is forecasting concrete industry volumes to reduce by ~4% nationally and ~7% in NSW in FY2020 as residential activity slows (Macromonitor is forecasting ~180k housing starts in FY2020)
- Concrete volume movements will depend on rate of new infrastructure projects coming through and shape of residential cycle

1. Source: Macromonitor, Construction Materials forecast, February 2019 estimates

Asphalt demand in Australia

Industry asphalt demand forecast to increase in FY2019 and remain at high levels

Macromonitor forecast¹ asphalt demand across all Australian construction markets
('000) tonne³



- Macromonitor is forecasting asphalt industry volumes to remain high in FY2020 with further growth in next 2-3 years, as ongoing government spending and infrastructure projects come through
- Forecast demand growth across most states, underpinned by major infrastructure activity

1. Source: Macromonitor, Construction Materials forecast, February 2019 estimates



Summary – Boral Australia

Boral is well positioned to respond to the external environment while continuing to strengthen our footprint and the underlying business

- Responding to changes in market demand by **rightsizing** the business and **reducing costs**
- **Leveraging our capability** to supply continued **strong infrastructure markets**
- **Operational Excellence and efficiency programs** will help us service future construction activity more cost effectively
- **Customer Excellence and engagement** to support and improve customer experience and margins
- Delivering **benefits from capital investments** to more cost effectively supply demand; **capital expenditure** should reduce going forward despite completion of Geelong expenditure in FY2020
- **Property** earnings remain an ongoing feature of the business including around \$30 million in FY2019
- Update and FY2020 guidance to be provided at FY2019 results announcement in August

21



Agenda



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

Boral Australia overview and focus

Wayne Manners

Supplying a strong infrastructure segment

Greg Price

A reliable earnings stream from Property

Brian Tasker and Judy McKittrick

Boral's sustainability focus

Ross Harper

USG Boral strategic options update

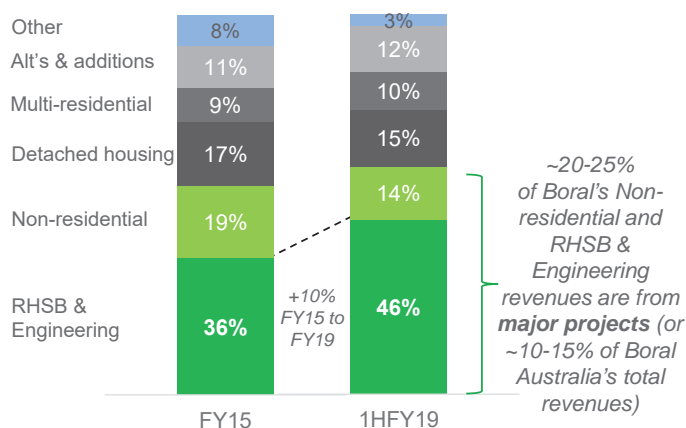
Ros Ng and Mike Kane

22

Boral Australia's revenue exposure has shifted

Increased exposure to RHSB & Engineering work over past five years

Boral Australia external revenue by end-market



- Residential revenue exposure steady while exposure to RHSB & Engineering has grown
- Lower Non-residential as a proportion of revenue in FY2019 reflects higher level of health and retail non residential construction activity and Barangaroo in FY2015
- Growth in RHSB & Engineering reflects investments in major road, rail, ports and energy projects
- Non major projects in RHSB & Engineering includes local and state government road maintenance work, plus construction of new roads, bridges and subdivisions, rail, ports, water and energy projects
- Boral generally defines 'major projects' as contributing >\$15 million revenue to Boral

Source: Based on 1HFY2019 and FY2015 split of Boral Australia external revenue

1. Other includes non construction activity revenues such as landfill royalties and materials supply to mining and agricultural sectors

A segment shift presents opportunities & challenges

Matching capabilities and delivery as we transition from residential to infrastructure work

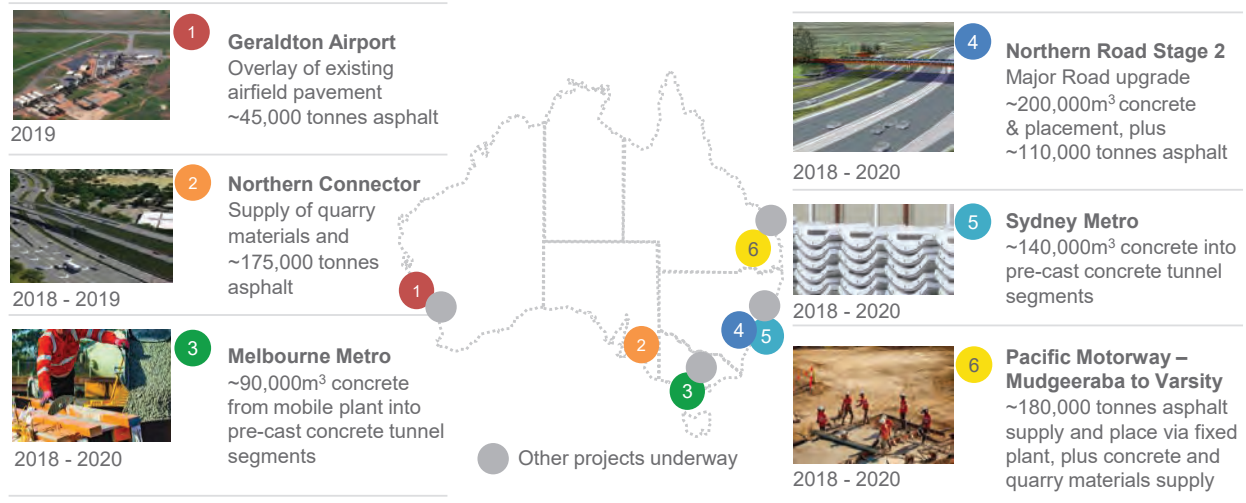
	Residential	Infrastructure (RHSB & Engineering)
Segment attributes		
Location	Metro	Metro & regional
Scale	Variable and shorter	Large scale, multi-year
Capacity	Peak time	24 / 7 operations
Technical	Moderate	Specific client needs
Supply	Concrete focused	Integrated offering
Network	Fixed plant / distribution	Fixed and mobile plants
Other	Multi-relationship	Project & Risk management
Materials use ¹	2% to 5% of VWD	1% to 6% of VWD

- Strong infrastructure demand offers opportunity for large, integrated, profitable volumes
- However, large projects can have higher cost to serve due to locations and technical requirements
- Execution is important to maintain strong margins
- Volume delays outside of our control can occur – 1H delays now largely on track but some new project delays experienced

1. Management estimates of construction materials industry share of value of work done (VWD); non-residential is 3% to 5% of VWD

Major projects represent ~10-15% of external revenue

Boral's major projects are spread across the country predominantly in infrastructure segment

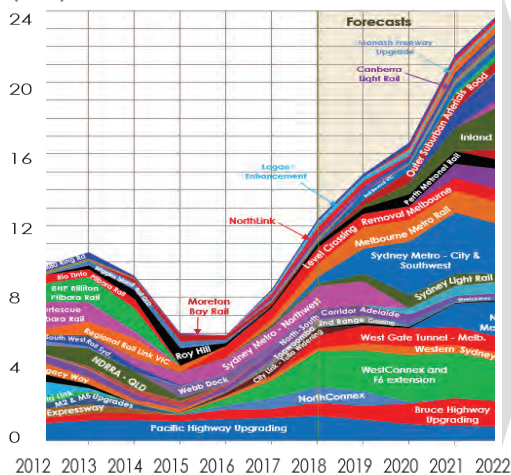


Note the dates listed under each project are start date – completion date

A strong medium term project pipeline

While the pipeline is strong, the shifting nature of work is changing materials intensity

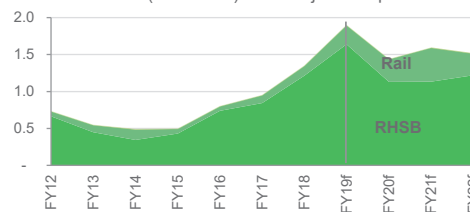
Major transport infrastructure construction projects¹ (A\$b)



1. Source: Macromonitor February 2019 Forecasts. Major projects defined as >\$75m iof WVD

Softer concrete volumes driven by more tunnelling

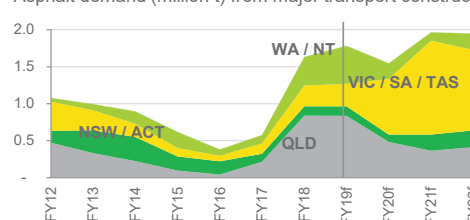
Premix demand (million m³) from major transport construction¹



NOTE:
demand from major transport construction represents ~5% of total industry concrete volumes and ~15% of total industry asphalt volumes in FY19 & FY20

Growing asphalt volumes driven by Vic demand

Asphalt demand (million t) from major transport construction¹





Boral's largest projects and potential pipeline

We are well placed to supply current and future projects

Project completion	Status	Projects under tender	Status
Barangaroo – Crown Casino, NSW	Estimated completion CY2019	Barangaroo – One Sydney Harbour Basement	Currently tendering
Bringelly Road – Stage 1, NSW		Cross River Rail, Qld	
Forrestfield Airport Link Part 1, WA		Haughton River Bridge, Qld	
Geraldton Airport, WA		Inland Rail Project Narromine to North Star, NSW	
Logan Motorway – Enhancement Works, Qld		RAAF – East Sale, Vic	
NorthConnex, NSW		Smithfield Transport Corridor, Qld	
Northern Beaches Hospital, NSW		Snowy Hydro 2.0, NSW	
Pacific Motorway, M1 M3 Merge, Qld		Strategic road upgrades, Vic	
Cairns Southern Access Corridor – Stage 4		Sydney Metro O/S, NSW	
Kingsford Smith Drive, Qld		Warrego Highway – Safety Upgrade, Qld	
Norfolk Island Airport 2018, Qld	Estimated completion CY2020	WestConnex – Stage 3B, NSW	Pre-tendering
Northern Road Stage 2 & 3, NSW		West Gate Tunnel, Vic	
North–South Corridor Adelaide, SA		Western Sydney Airport, NSW	
Pacific Highway W2B various sections, NSW		Coffs Harbour Bypass, NSW	
Pacific Motorway M2VL		Melbourne Third Runway, Vic	
Sydney Metro (City/SW precast), NSW		North East Link, Vic	
Melbourne Metro Rail Project (precast), Vic		Warragamba Dam, NSW	
Westgate Tunnel segments Benalla, Vic			

1. Boral's major projects are generally defined as contributing >\$15m of revenue to Boral

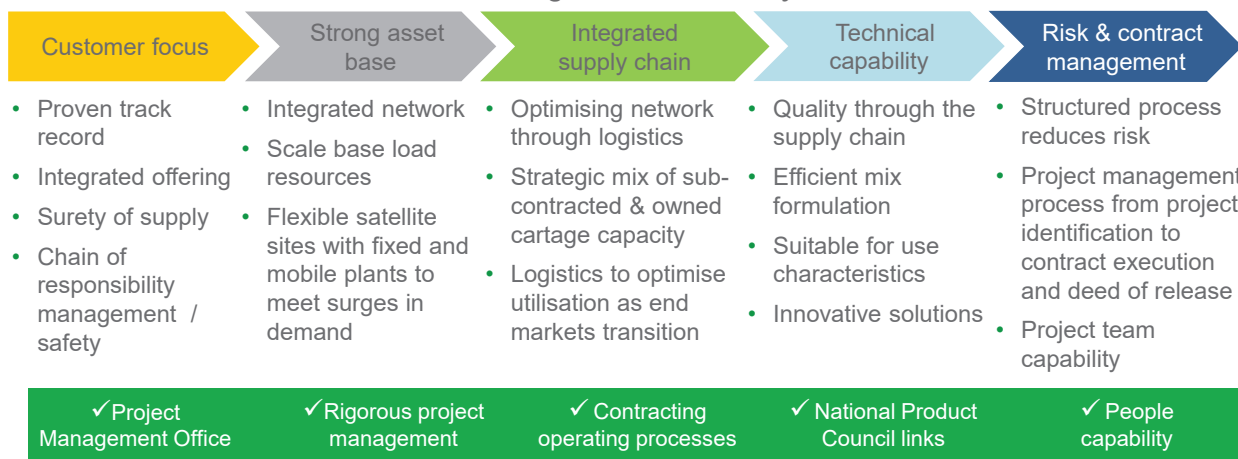
27



Continuing our success through major project work

We have a strong track record supplying major projects and other infrastructure backed by Boral's network positions and improved capabilities

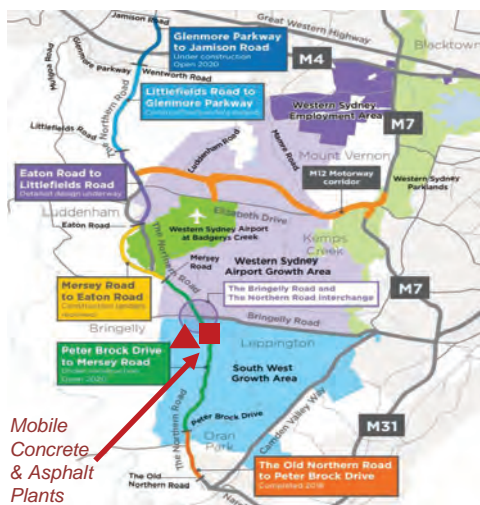
Boral delivers value to our customers through excellence in key success factors



28

Case study: Northern Road Stage 2 (revenue \$60m)

Success in multi-product bids



Boral is uniquely positioned in major infrastructure to offer a package for asphalt and concrete

Multiple pain points solved for our customer

- Quarries & Cement – one service provider versus multiple
- Asphalt – dedicated production plant, security of upstream materials, program time savings, intrastate flex crew capacity
- Concrete – quality assurance through wet batch technology, program management (agitator fleet)

Key success factors

- Early engagement (pain points resolved)
- Availability of high productivity production plants
- Strong client relationships from previous projects
- Solution mindset

Case study: precast rail projects

Success in technical solutions / capabilities

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



Flex testing



Slump testing



Forrestfield Airport Link, Perth



- 180,000m³ concrete
- 54,000 segments and stations (9,000 rings)
- 2017 to 2019

Sydney Metro, Marrickville



- 140,000m³ concrete
- 99,000 segments
- 2018 to 2020

Melbourne Metro, Deer Park



- 90,000m³ concrete
- 50,000 segments
- 2018 to 2020



Summary – supplying a strong infrastructure market

We are well placed to continue to supply Boral's strong infrastructure pipeline

MARKET DRIVERS

- **Strong pipeline of work** especially in major projects
- Infrastructure pipeline is **east coast dominant**
- Future work **more asphalt intensive**
- Understanding major projects pipeline and **targeting best for Boral** work
- Volume **delays / disruptions can occur**, which are outside Boral's control eg. technical challenges, project scheduling, resourcing, weather interruption

INTERNAL CAPABILITY

- **Strong** fixed and mobile **network**
- Boral's **Project Management Office capability** is aligning to customer needs and optimising outcomes
- Delivering on key success factors eg. **technical know how**, supply **quality** and **continuity**, **HSE**
- **Integrated product offering**
- **Execution** is important to maintain strong margins

31



Agenda



Artist impression of Penrith Lakes development

Boral Australia overview and focus

Wayne Manners

Supplying a strong infrastructure segment

Greg Price

A reliable earnings stream from Property

Brian Tasker and Judy McKittrick

Boral's sustainability focus

Ross Harper

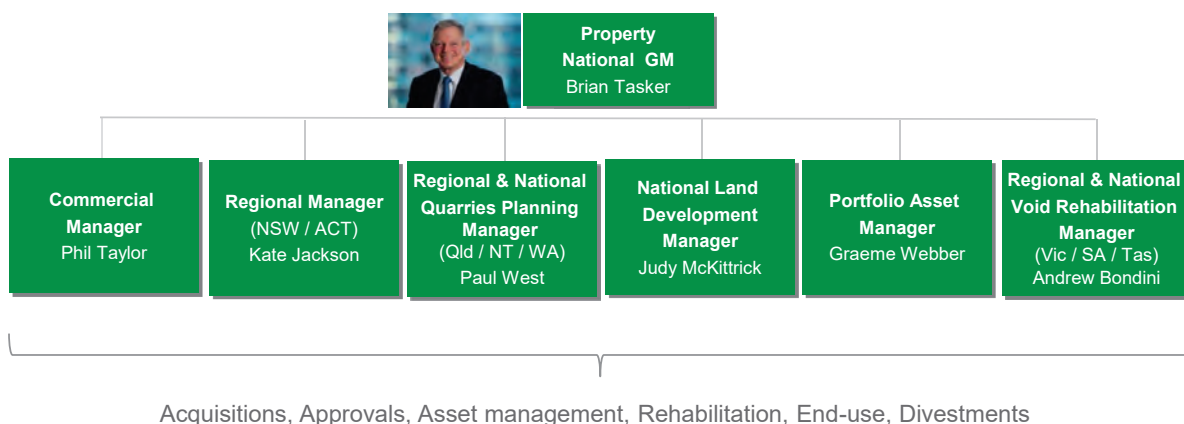
USG Boral strategic options update

Ros Ng and Mike Kane

32

Property leadership team

Boral's team operates across all aspects of the property cycle



Property is an ongoing contributor to earnings

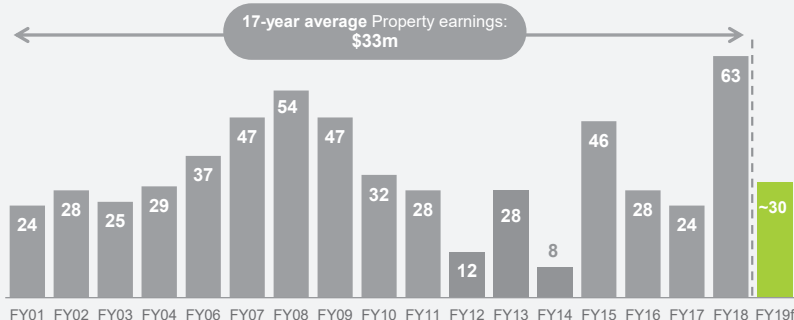
Boral has a strong track record of maximising returns from property assets

Property earnings

- Earnings secured through multi-year projects and smaller sales of surplus land
- Investment in strategic asset lifecycle management, portfolio rationalisation, and operational consolidations have released valuable property opportunities
- Optimising returns through value-added land management including rezoning for residential or industrial purposes

Guidance of ~\$30m in FY2019

Property EBIT¹ A\$m



1. Excluding significant items (including divestment proceeds from Deer Park Landfill) and ongoing landfill royalties.

Generating significant value through an integrated life-cycle approach to land management

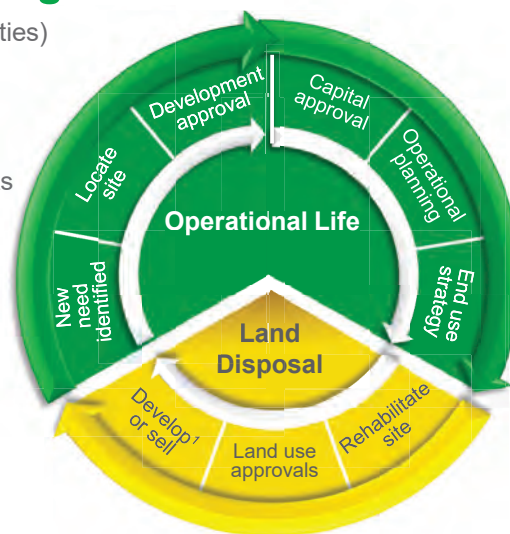
Boral Australia manages a large land bank (400+ properties) through all operational stages to disposal

Key activities

- Securing site tenure and related government approvals, including land use to supply major projects
- Facilitating stakeholder engagement
- Managing leases and property administration
- Developing future end-use options

Key challenges

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



1. Boral engages external land developers to manage this process

Building and protecting our leading positions

Our goal is to build and protect Boral's leading positions through a life-cycle approach throughout the operational life of our land assets



Decades of proactive planning, investment and stewardship to secure resource positions, through:

- Identification and securing land and resource assets
- Working with Government on extractive policy to protect sites
- Delivering timely, cost effective, sector leading regulatory approvals
- Maintaining regulatory compliance and community support to operate



Operational life case study 1:

LYSTERFIELD QUARRY, VICTORIA

Removing the staging sequence to maximise extraction and minimise costs



Background

- Under *Lysterfield Act 1986* quarry operations commenced May 1986 for 50 year term expiring 5 May 2036

Key activities

- 2018: with extraction within Stage 1 of quarry almost complete, an application to remove sequence of staging is submitted to The Minister of Resources
- Dec 2018: Department approved removal of staging sequence without need to amend the *Lysterfield Act 1986*

Benefits

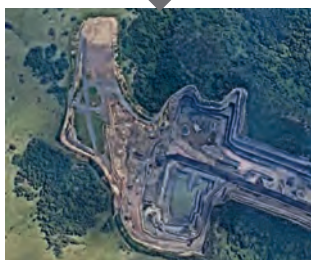
- Optimising quarrying and underlying geology (freeing up 5m tonne of resource)
- Enables ongoing extraction without relocating plant, which has useful life of 15+ years and replacement cost of \$50-60m

37

Operational life case study 2:

DUNMORE QUARRY, NSW

Securing adjacent land and new approvals to extend resource positions



Background

- Quarry reserves diminished faster than anticipated due to increased demand
- Additional resource identified west of existing site

Key activities

- 2016: 225 ha of lands purchased from neighbouring farmer. Approvals process to secure additional 34m tonnes of reserve
- 2017: approval secured and quarrying commences in new area, extending reserve life by up to 20 years

Benefits

- Dunmore Quarry is Boral's second largest quarry, approved for 2.5m tonne pa via rail and/or road
- Secures raw material for downstream concrete and asphalt businesses

38

End use case study 1:

GREYSTANES ESTATE DEVELOPMENT delivered significant end use value with ~\$260m of EBIT over 15+ years: completed in 2018

- 1998 – end use development potential identified
- 1999/2000 – rezoning and planning approvals secured
- 2001 – End of quarry life, with sale of Northern Employment Lands (NEL)
- 2002 – Delfin Lend Lease commences Nelsons Ridge residential development under a property development agreement
- 2007 – All operations of 100+ year Prospect Quarry cease
- 2007 – SEL Eastern rehabilitated quarry floor sold to Dexus
- 2014 – SEL Western rehabilitated quarry floor sold to Dexus
- 2016 – Nelsons Ridge project completed
- 2018 – Sale of Boral's former Masonry plant adjacent to SEL

Precinct (A\$) million 2002-2018	Revenue	EBIT
Northern Employment Land (NEL)	115	66
Southern Employment lands (SEL) (Phase 1)	160	32
SEL (Phase 2)	66	6
Nelsons Ridge	269	100
Prospect Masonry	60	56
Total	670	260

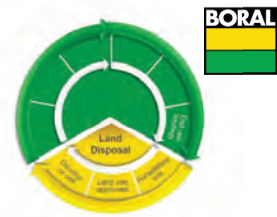


39

End use case study 2:

DEER PARK QUARRY TO LANDFILL STRATEGY is extracting significant value through sale of past and future quarry voids, with a projected earnings contribution of >\$500m¹

- Ongoing quarry and landfill operation located ~25km west of Melbourne's CBD
- 1965 – Deer Park Quarry commenced operations
- 1993 – Deer Park Asphalt established
- 1999 – Landfill operations commenced concurrently with quarry
- 2001 – Deer Park Concrete established
- 2014 – Landfill business divested to Cleanaway Waste Management (formerly Transpacific Industries) for \$150m²
- 2015 – Royalties commenced at ~\$15m pa, growing over time for the life of the landfill
- 2019 – zero cost Earth Exchange program underway – accepting clean fill from major infrastructure project for future quarry development and permanent rehabilitation of same areas
- Landfill earnings reported in underlying business (not shown in Property earnings)

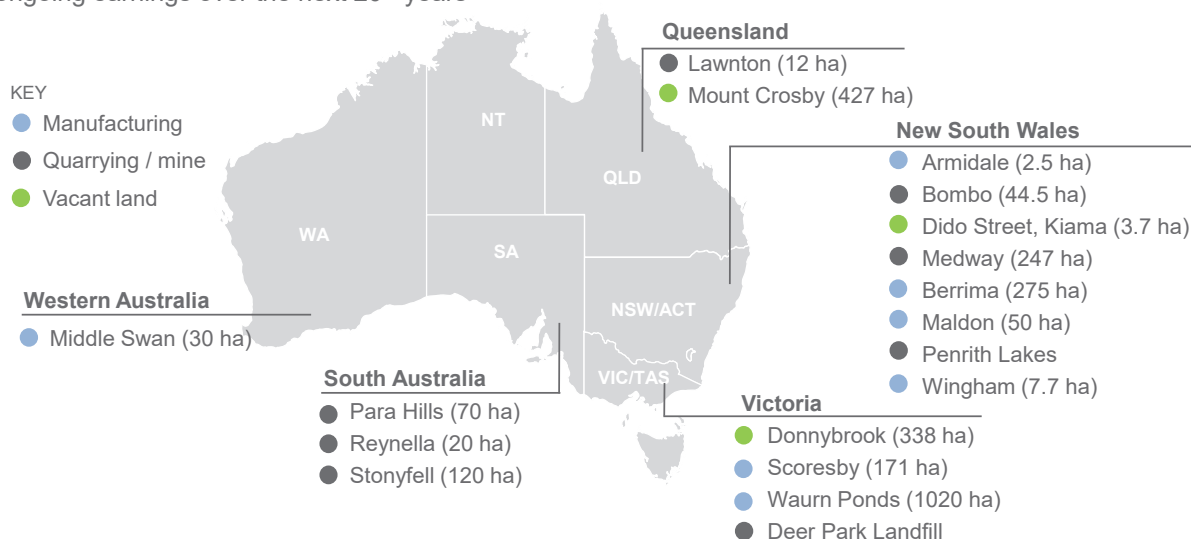


1. Based on gain on disposal of Western Landfill business (which was reported as a significant item in FY2015) and assuming current landfill royalties (reported as earnings in operating business rather than Property earnings) to continue at a similar level for the life of the current consented landfill, subject to required approvals
 2. Under the agreement Boral received \$150m as an upfront payment and \$15m for site preparation works

40

Boral's potential surplus property and project pipeline

A national portfolio of approximately 2,800 hectares¹ with potential to yield end use value and generate ongoing earnings over the next 20+ years

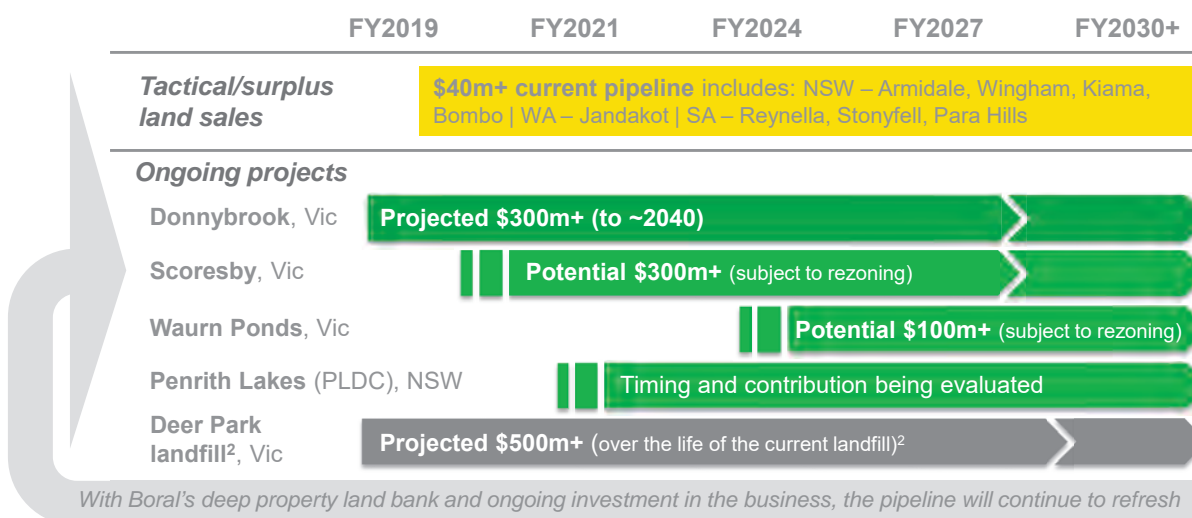


1. Excludes Penrith Lakes and Deer Park Landfill

41

Sustainable property & landfill earnings into the future

Ongoing earnings projected from property, including ~\$30m¹ in FY2019, and a significant potential pipeline



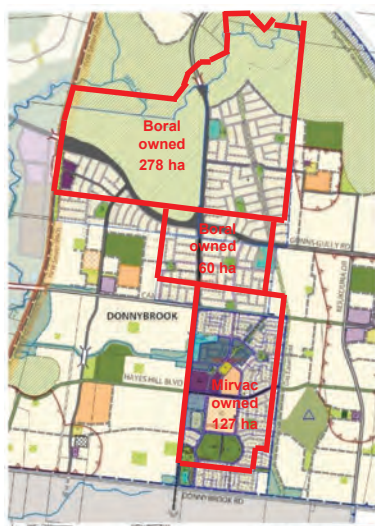
1. FY2019 includes earnings from sale of Penrith Lakes employment lands, as well as contribution from Donnybrook

2. Based on gain on disposal of Western Landfill business (which was reported as a significant item in FY2015) and assuming current landfill royalties (reported as earnings in operating business) to continue at a similar level for the life of the current consented landfill, subject to required approvals

42

Current project: Donnybrook, Vic

Vacant, surplus land to residential development being undertaken by Mirvac projected to deliver \$300m+ of earnings to Boral to 2037



- Donnybrook site acquired >15 years ago as a hard rock quarry, subsequent inclusion in Melbourne's urban growth boundary precluded future quarrying
- 2013: initial Boral and Mirvac agreement involved sale of 127 ha of land to Mirvac and development by Mirvac of a further 60 ha retained by Boral
- May 2018: new agreements executed with Mirvac
- Olivine project: 465 ha in total, with Boral retaining 338 ha of land, supporting >4,000 dwellings when fully developed, incl. ~3,000 on Boral's land

Earnings contribution

- \$9 million received in FY2018
- Approximately \$9-\$14m pa EBITDA expected through to FY2021, and then again between FY2025 and FY2027
- Further significant earnings expected from FY2027-FY2037
- **Potential Boral earnings** now projected **>\$300m over 20 years from FY2018, with ~\$75m expected prior to FY2027** as outlined above

Potential project: Scoresby, Vic

Brick operations to mixed use



- Boral's share of east coast brick JV divested to CSR in November 2016 with Scoresby land retained by Boral; CSR continues to lease part of site
- Rehabilitation of former clay pit and rezoning underway
- 87 ha proposed residential infill land and 84 ha parklands, subject to rezoning including removal of existing Victorian State Government parks acquisition overlay
- In process of appointing a developer for Scoresby
- Scoresby could deliver overall earnings similar to Donnybrook, when rezoned
- Adding to the \$134m of proceeds already received through the divestment of the Brick operations to CSR in November 2016

The [video](#) highlights the scale and development opportunity of the Scoresby site, subject to rezoning; and is accessible at www.boral.com

Potential project: Waurm Ponds

Cement operations to mixed use urban development



- 1,020 ha land area in designated growth corridor adjacent to Armstrong Creek, south west of Geelong
- Cement operations to cease in next 18-24 months with rehabilitation required post cement operational life
- Taking tunnelling spoil and fill materials from infrastructure projects for a fee, partially offsetting rehabilitation costs
- Land rezoning strategy underway with land value directly related to rezoning
- Potential rezoned land value \$100m+

The [video](#) highlights the scale and development opportunity of the Waurm Ponds site, subject to rezoning; and is accessible at www.boral.com

Potential project: Penrith Lakes

Penrith Lakes Development Corporation (PLDC) is jointly owned by Boral (40%), Holcim (40%) & Hanson (20%) and was previously Sydney's main quarry supply

- 1960: Shareholders of PLDC acquire freehold land for the quarry & proposed Penrith Lakes Scheme
- 1980: Penrith Lakes Development Corporation formed
- 1984: Department of Planning completed review of Scheme of Options & commenced negotiations for the Main Lake System
- 1987: PLDC and the State Government enter into the 1987 Deed of Agreement
- 1991: Penrith City Council Local Environmental Plan recognises heritage places within the Penrith Lakes Scheme area
- 2000: Sydney Olympics rowing venue
- 2012: Water Management Plan Stage 1 approved – detailing major weirs, associated works and flood planning levels
- 2014: Quarrying ceases. Water evacuation infrastructure complete
- 2017: Site rezoned through Urban Instrument; further rezoning required to unlock full development potential



Status of Penrith Lakes

Australia's largest water-based urban parkland



The [video](#) highlights the scale and development opportunity of the Penrith Lakes site, subject to further rezoning; and is accessible at www.boral.com

Penrith Lakes total size 1,935 ha land area

- ~ 410 ha of land allocated for potential urban development
- ~ 560 ha remaining development/dedication
- ~ 960 ha for 9 lakes and foreshores dedicated to government

Potential scope of residential development

- Current zoning enables limited development in residential, employment, industrial and tourism-related land uses
- ~ 200 ha of land is now ready to build
- Further rezoning required to unlock full development potential
- Collaborative master-planning of site could deliver 5,000+ homes subject to resolution of flood evacuation issues
- Majority of un-rehabilitated employment lands sold, with some share of EBIT in 2H FY2019 (included in Boral's ~\$30m FY2019 guidance)

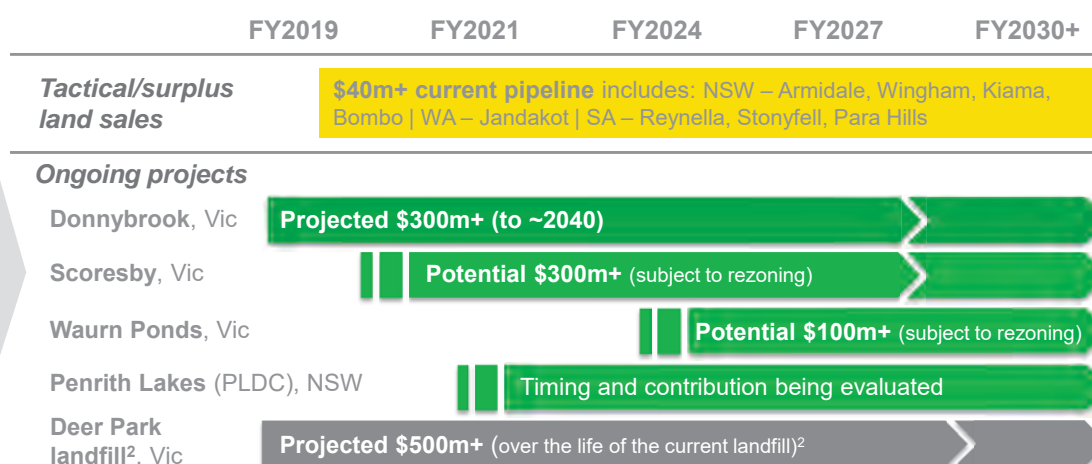
Next steps

- Discussions with NSW State Government are continuing

47

Summary: property will deliver earnings into the future

Ongoing earnings projected from property, including ~\$30m¹ in FY2019, and a significant potential pipeline



With Boral's deep property land bank and ongoing investment in the business, the pipeline will continue to refresh

1. FY2019 includes earnings from sale of Penrith Lakes employment lands, as well as contribution from Donnybrook
 2. Based on gain on disposal of Western Landfill business (which was reported as a significant item in FY2015) and assuming current landfill royalties (reported as earnings in operating business) to continue at a similar level for the life of the current consented landfill, subject to required approvals

48

Agenda



Boral supplying Envisia concrete to Crown Sydney Barangaroo, NSW

Boral Australia overview and focus

Wayne Manners

Supplying a strong infrastructure segment

Greg Price

A reliable earnings stream from Property

Brian Tasker and Judy McKittrick

Boral's sustainability focus

Ross Harper

USG Boral strategic options update

Ros Ng and Mike Kane

Ensuring Boral's sustainability for the long-term

Our objective is to deliver shareholder returns above our cost of capital through the cycle, while creating value for our customers, employees, suppliers and the communities in which we operate.

We strive to create value for these stakeholders by:

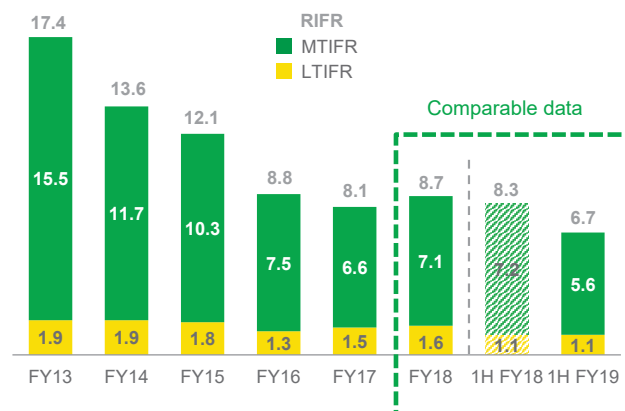
- **Driving safety** performance towards world's best practice and **investing in our people** to enable them to deliver on our strategy
- Reducing our environmental footprint and building our **resilience to climate-related impacts**
- Delivering **innovative, superior performing** and more **sustainable products** and solutions that respond to a changing world and better meet our customers' needs
- Being a **socially responsible** member of the communities in which we operate

Safety performance

Reaching industry best practice levels

Employee and contractor RIFR¹

(per million hours worked)



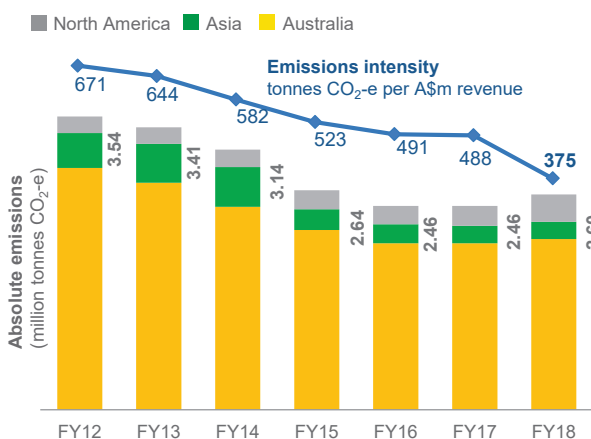
- All divisions recorded RIFR¹ improvements in 1H FY2019 compared to FY2018
- 1H FY2019:**
 - RIFR of **6.7** (8.7 in FY2018)
 - LTIFR of **1.1** (1.6 in FY2018)
- Headwaters businesses delivered a significant turnaround, and Meridian Brick also improved

FY2019 YTD (Apr-19)	LTIFR	RIFR
Boral Australia	1.6	9.7
Boral North America	0.8	7.4
USG Boral	1.0	3.4
BORAL	1.1	7.1

1. Recordable Injury Frequency Rate (RIFR) per million hours worked is the combined Lost Time Injury Frequency Rate (LTIFR) and Medical Treatment Injury Rate (MTIFR). Includes employees and contractors in all businesses including Headwaters and all joint ventures regardless of equity interest from FY2018. Prior years include 100%-owned businesses and 50%-owned joint venture operations only

Boral's GHG emissions have been reducing

Boral's GHG emissions from operations¹

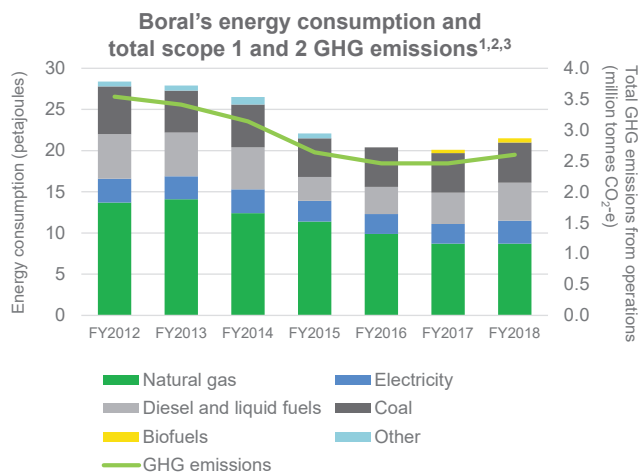


- Absolute GHG emissions** of 2.60m tonnes CO₂-e pa (scope 1 & 2)
 - ↑ **5% in FY2018** (largely due to Headwaters)
 - ↓ **27% since FY2012**
- Emissions intensity** 375 tonnes CO₂-e/A\$m revenue
 - ↓ **23% in FY2018** (due to Headwaters)
 - ↓ **44% since FY2012**
 - Target:** a further 10-20% reduction in intensity by 2023
- Boral's fly ash in the supply chain:**
 - ~5.2m tonnes pa of avoided CO₂-e emissions
 - Target:** avoid a further 1.1-1.5m tonnes CO₂-e pa in supply chain by 2022 through increased fly ash supply²

1. For 100% owned operations and Boral's share of 50%-owned joint ventures. Excludes some JV's which in aggregate are deemed not to be material
 2. Based on target to increase net supply of fly ash by 1.5-2.0m tons pa over next three years

Integrating sustainability and business strategy

Since 2012 our energy use and carbon emissions have reduced 24% and 27% respectively



Fly ash reclaim at Montour, Pennsylvania demonstrates Boral's capability to increase fly ash supply in the market, and therefore reduce cement usage



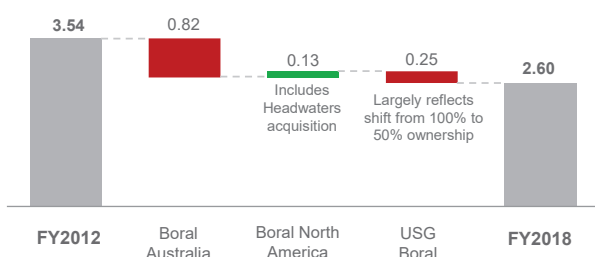
Boral also has proven capability to repurpose fly ash - combined with polymers, it becomes a durable building product

1. Data provided for Scope 1 and Scope 2 GHG emissions and energy consumption is for 100%-owned operations and Boral's share of 50%-owned joint venture operations – it excludes some joint ventures which in aggregate are not deemed to have material emissions
 2. USG Boral Asia emissions data for FY2017 has been restated using local electricity emissions factors where available
 3. Figures may not add due to rounding

Boral's emissions reductions primarily from Australia

Some reductions are permanent, some from divestments, some replaced with imports

Boral's Scope 1 & 2 GHG emissions, million tonnes CO₂-e FY2012-FY2018¹



- Boral's strategy has been to reduce exposure to energy and emissions-intensive operations and build a portfolio of lighter weight products, with lower fixed costs
- Boral Australia emissions are lower due to:
 - exiting higher cost, less efficient cement kilns at Waurin Ponds and Maldon
 - divestments of East Coast Bricks and Landfill business in Victoria
 - energy and operational efficiency programs
- No intention to invest in new cement or brick kilns

1. For the purpose of this analysis, emissions associated with Boral's Australian plasterboard business in FY2012, which was part of Boral Building Products in FY2012 have been reclassified as USG Boral GHG emissions

Managing sustainability issues

Boral is focused on protecting and growing our operations through sustainable practices e.g. Boral Australia's current focus:

Climate-related impacts and energy	<ul style="list-style-type: none"> • Completed scenario analysis work in Cement consistent with TCFD recommendations • Well-positioned for regulatory transitions given long history of emissions reductions • Boral Cement is meeting its safeguard mechanism baseline targets for large emitters • Managing physical impacts of weather with flood, storm deluge plans & crisis response plans in place • Comprehensive review of integrity and monitoring of any on-site dams against risk of deluge • New investments recognise and address increased physical risks
Waste and recycling	<ul style="list-style-type: none"> • Re-use of waste materials (concrete washout, recycled asphalt pavement) across sites • Use of alternative fuels (eg. wood & other waste) reducing coal consumption & operational emissions
Water	<ul style="list-style-type: none"> • Upgrade of stormwater management infrastructure complete • Developing plans to improve water efficiency
Biodiversity	<ul style="list-style-type: none"> • Protection of biodiversity values at and around our sites • Aim to improve biodiversity outcomes by partnering with statutory bodies in research & other initiatives
Compliance	<ul style="list-style-type: none"> • Target zero environmental infringements across all of our operating sites • Centralised information management system monitors environmental licence conditions in Australia

Delivering more sustainable business outcomes

Investment in innovation benefits customers with development of more **sustainable products**; currently ~9% of revenues from low carbon, high-recycled products, with targeted growth in:

- Fly ash
- Lower carbon concrete and cementitious products eg. Envisia®
- Boral TruExterior® siding & trim, and related products (~70% fly ash / polymer composites)
- Boral Recycling and other waste based products eg. manufactured sand, recycled asphalt pavement
- Next generation Sheetrock® EcoSmart Panels – lower water and energy consumption



Envisia® concrete pour



Sheetrock®



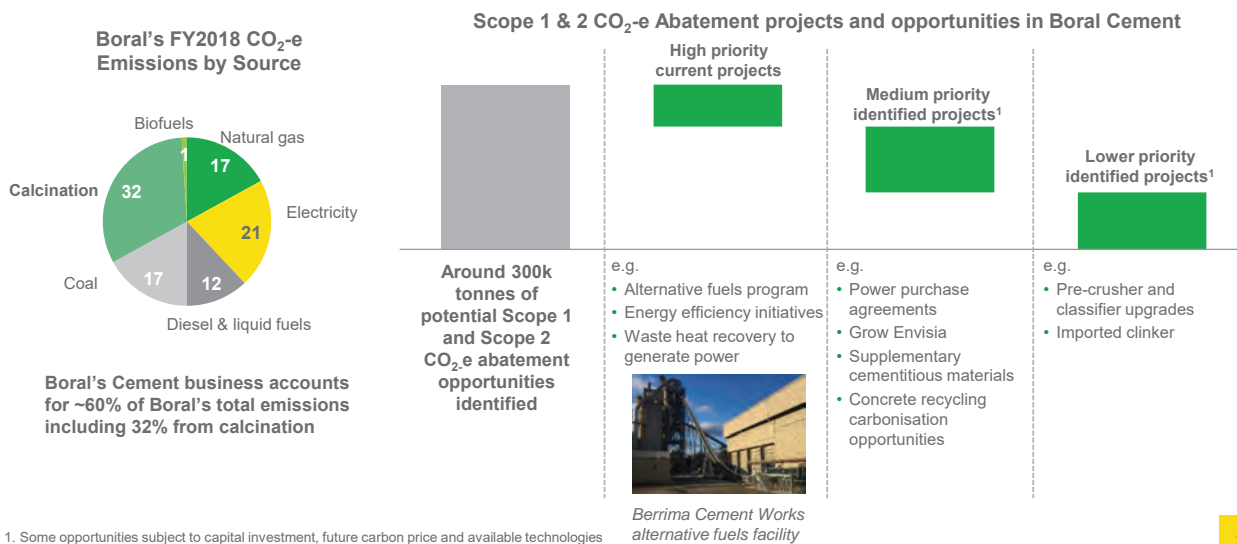
Boral Recycling at Widemere facility, NSW



Boral TruExterior® – composite siding & trim

Delivering more sustainable business outcomes

Boral Cement has a roadmap to reduce Scope 1 and 2 CO₂-e emissions by up to around 300k tonnes pa, with some opportunities dependent on carbon pricing, capital investment and future lower cost alternatives



1. Some opportunities subject to capital investment, future carbon price and available technologies

Agenda



USG Boral EasyFinish™

Boral Australia overview and focus

Wayne Manners

Supplying a strong infrastructure segment

Greg Price

A reliable earnings stream from Property

Brian Tasker and Judy McKittrick

Boral's sustainability focus

Ross Harper

USG Boral strategic options update

Ros Ng and Mike Kane

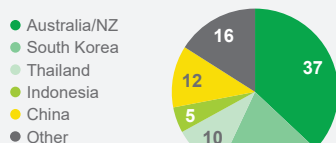
USG Boral is an attractive long term growth business

50%-owned joint venture in Australasia, Asia & Middle East

Underlying USG Boral results, A\$m

	1H FY2019	FY2018
Revenue	831	1,575
EBITDA ¹	125	268
EBITDA ¹ ROS	15.1%	17.0%
EBIT ¹	84	194
Net Assets	2,031	1,955
ROFE ^{1,2}	8.1%	9.9%

1H FY2019 External revenue³, %



Operating Footprint (number of operating sites⁴)

18 Plasterboard plants
628m² capacity⁵
23 board lines / 6 ceiling lines

3 Gypsum mines

29 Other plants⁶



1. Excluding significant items
2. EBIT before significant items on funds employed
3. Based on split of underlying revenue for USG Boral. USG Boral's revenue is not reported in Boral's income statement as this 50% investment is equity accounted
4. As at 31 December 2018. Certain manufacturing facilities and gypsum mines are held in joint venture with third parties
5. Excludes capacity under construction in India and Vietnam
6. Production of plasterboard and other products may be at the same physical location. Other plants include mineral fibre ceiling tile, metal ceiling grid, metal products, joint compounds, mineral wool and cornice production

We are progressing discussions with Knauf to form an even better business in Asia for USG Boral

- 24 April - Knauf completed acquisition of USG Corporation
- Progressing preferred option as outlined in February, including negotiations to:
 - form a new expanded Asia plasterboard JV with Knauf
 - acquire USG Boral's Australasian¹ plasterboard business returning Boral to 100% ownership in that region
- Due Diligence now underway – including site visits and deeper review of Knauf's operations in Asia
- Transaction with Knauf remains subject to due diligence and execution of definitive documents
- Boral remains under no obligation and will only invest if it is value creating for Boral's shareholders, but we are optimistic about the opportunities to form an expanded JV in Asia and return to 100% ownership in Australia.

NOTE: Valuation process commenced with USG for the USG Boral business continues to progress, with contractual arrangements in place to preserve Boral's call option in the event a transaction is not agreed to with Knauf. Contractual arrangements also in place to provide a standstill on any potential litigation by Boral against Knauf, while negotiations are continuing.

1. Includes Australia, New Zealand, Papua New Guinea and islands in the South West Pacific



Strategic considerations and objectives underpinning Boral's decision making

- Deliver EPS accretion for Boral's shareholders
- Factor market cycles into valuations, including downturn in Australia
- Aim to fund transaction through debt and proceeds from divestments while maintaining robust balance sheet including maintenance of our existing BBB / Baa2 credit rating from S&P and Moody's
- Strengthen an already attractive growth business in Asia by capturing potential synergies
 - Additional manufacturing capacity (currently running around 80%+ utilisation)
 - Multi-tier branding opportunities
 - SG&A cost savings
- Additional technology opportunities – USG + Knauf backing
- Ensure ongoing ability to secure R&D support / IP in Australia

61



USG Boral's & Knauf's current footprints in Asia

Negotiations with Knauf are based on combining plasterboard assets in Asia to form an expanded Asian plasterboard joint venture with highly complementary assets in the region

Operating footprint

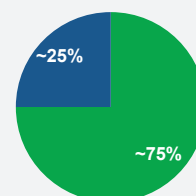
(number of operating sites)

- 14 USG Boral Plasterboard plants
- 9 KNAUF Plasterboard plants
- 1 USG Boral Gypsum mines
- 21 USG Boral Other plants¹
- 13 KNAUF Other plants/mines¹



Approximate shares of combined revenues in Asia, %

- USG Boral
- KNAUF



1. Other plants include mineral fibre ceiling tile, metal ceiling grid, metal products, joint compounds, mineral wool and cornice production

62

Questions



USG Boral Ensemble™ at Chancery House, Perth



The team at the precast facility, Deer Park Vic

Artarmon concrete plant site visit



Sydney Metro Concrete Agitator

Hosted by

- **Greg Price**
Executive General Manager,
NSW and Major Projects
- **Geoff McDonnell**
Operations Manager Metro NSW
Boral Concrete
- **Richard Bugeja**
Production Manager Sydney North
Boral Concrete
- **Adam Tointon**
Business Improvement Manager
Boral Construction Materials

Artarmon Concrete plant site visit

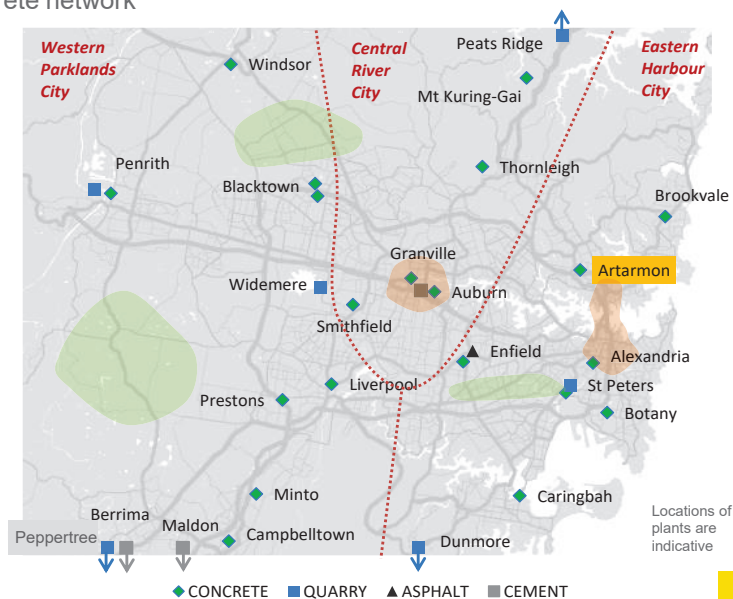
Artarmon is a key part of Boral's NSW concrete network



NSW /ACT operating footprint (number of operations¹)

20	Quarries
95	Concrete
14	Asphalt
4	Cement ²

1. As at 30 June 2018
2. Includes cement manufacturing plant, bagging plant and lime plant

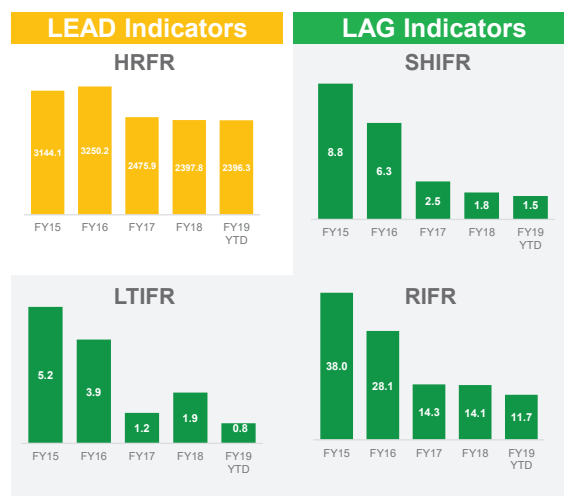


NSW / ACT safety performance

Safety remains our first priority

We have seen great improvement in lag indicators through key programs which include:

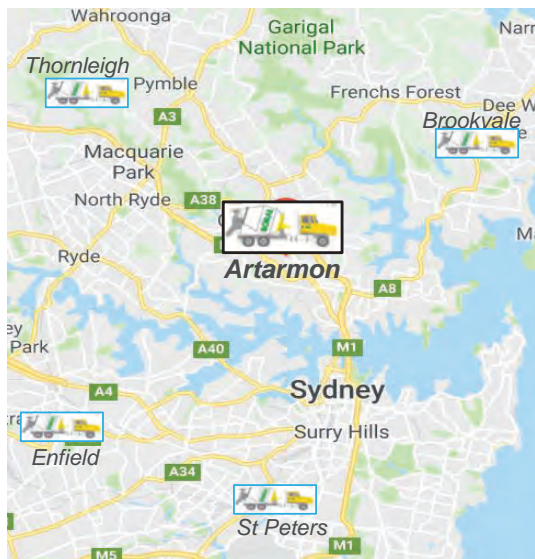
- ✓ A strong focus on serious harm prevention particularly high risk elements such as vehicle and pedestrian interactions and isolation
- ✓ Focusing on improving individual behaviours through our annual stop for safety program
- ✓ Empowering our front line leaders through the Zero One Ten leader program



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), Serious Harm Incident Frequency Rate (SHIFR), Hazard Reported Frequency Rate (HRFR) and Near Miss Frequency Rate

Artarmon plant overview

Artarmon is part of Boral's Metro network



History

- Long term Boral owned site
- Rebuilt in 2010
- 6,000m² footprint

Market

- 8km from Sydney CBD
- High rise and infrastructure works
- Supplementary supply to NorthConnex

Operating conditions

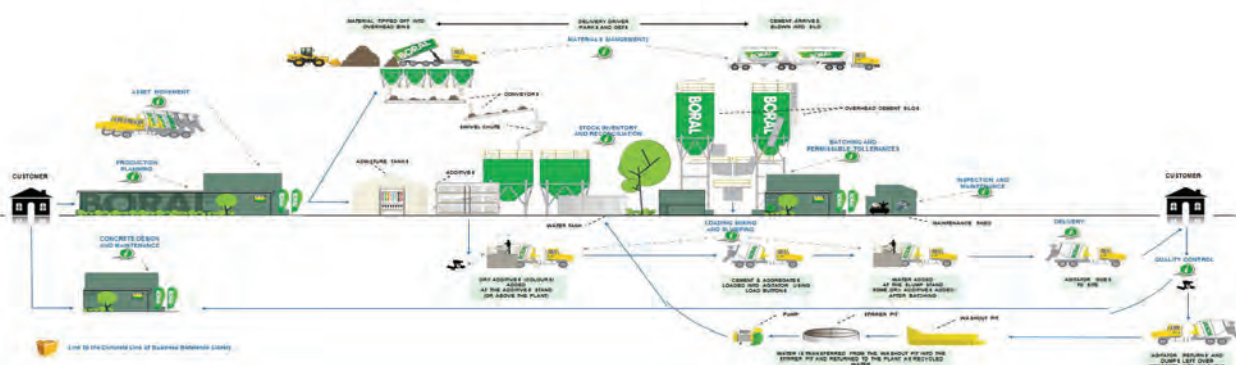
- 24 hour operating consent
- 500k m³ per annum production consent
- Fully integrated raw material set

People

- 2 onsite plant staff
- 15 agitator drivers (owned & contractors)
- 70 raw material truck deliveries per day

Supply chain process

Concrete virtual flow



Capture and plan

- Review specifications
- Central ordering
- Central allocation
- Demand planning

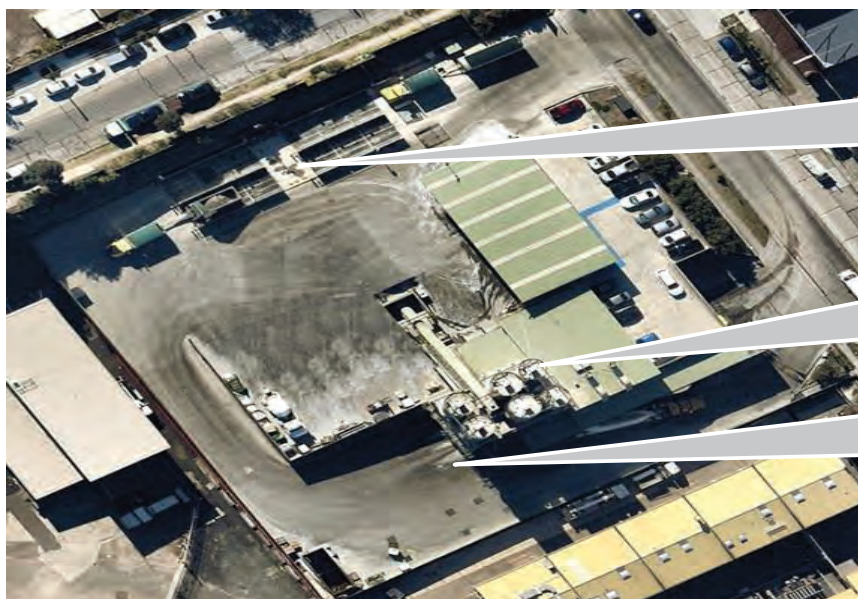
Pre production

- Mix designs set / loaded
- Stock control and ordering
- Customer sites inspected
- Staff resourced and briefed

Manufacture / deliver

- Production in tolerance
- Tested for compliance
- On time in full
- Idle time and waste reduction

Artarmon satellite site map



1,500 tonnes aggregate and sand storage
Drive over bins
Peppertree material
Train to St Peters – road to plant

700 tonnes of powder storage
Boral Cement Berrima
Train to Clyde – road to plant
Fly Ash – Eraring by road

2 production lanes
4 slump stands (mixing points)
36 loads per hour

Disclaimer

The material contained in this document is a presentation of information about the Group's activities current at the date of the presentation, 31 May 2019. It is provided in summary form and does not purport to be complete. It should be read in conjunction with the Group's periodic reporting and other announcements lodged with the Australian Securities Exchange (ASX).

To the extent that this document may contain forward-looking statements, such statements are not guarantees or predictions of future performance, and involve known and unknown risks, uncertainties and other factors, many of which are beyond our control, and which may cause actual results to differ materially from those expressed in the statements contained in this release.

This document is not intended to be relied upon as advice to investors or potential investors and does not take into account the investment objectives, financial situation or needs of any particular investor.