



INVESTOR SITE TOUR & PRESENTATIONS

Boral North America

Sacramento and Napa, California 19–20 September 2019







Schedule

Thursday and Friday, 19-20 September 2019



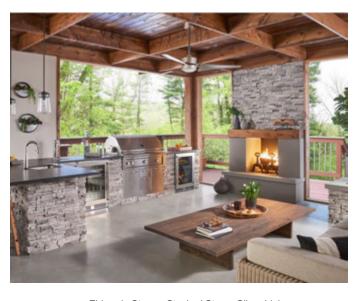
Sep 19 – Time	Agenda
12:00 p.m. – 1:00 p.m.	Lunch
1:00 p.m. – 5:00 p.m.	Management presentations and Q&A
6:00 p.m. – 9:00 p.m.	Dinner – Magnolia Terrace

Sep 20 – Time	Agenda
6:45 a.m. – 7:20 a.m.	Breakfast – Sycamore Ballroom
7:20 a.m. – 8:50 a.m.	Drive to Napa stone plant
9:00 a.m. – 12:00 p.m	Safety briefing; Tour of Napa facility
12:00 p.m. – 1:00 p.m.	Lunch – Napa facility
1:00 p.m.	Bus departures to Sacramento and San Francisco airports

Agenda



Introduction	Mike Kane
Boral North America	David Mariner
Fly Ash	Keith Depew
Stone	Victoria Sherwood
Roofing	Darren Schulz
Light Building Products	Joel Charlton
Windows	David Decker



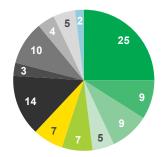
Eldorado Stone - Stacked Stone, Silver Lining



Boral's revenue exposures

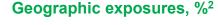
While Boral has cyclical exposures, it has portfolio benefits from diverse end market and diverse geographic exposures

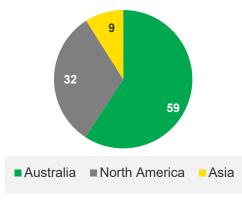
End market exposures, %1



- Australian RHS&B & other engineering
- Australian non-residential
- Australian detached dwelling
- Australian multi-dwelling
- Australian alterations & additions
- Asia & Middle East

- USA single-family
- USA multi-family
- USA repair & remodel
- USA non-residential
- USA infrastructure
- Other





^{1.} End market exposures based on FY2019 revenue, includes Boral's 50% share of underlying revenue from USG Boral and Meridian Brick joint ventures, which are not included in Group reported revenue

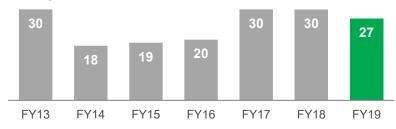
Based on FY2019 revenues adjusted to reflect USG Boral announced transaction. le. Asia includes Boral's 50% share of revenue from expanded USGB JV (total revenue of ~US\$900m), and Australia includes 100% of USG Boral Australia



Boral's balance sheet remains strong

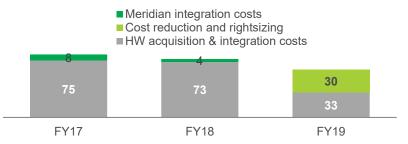
Gearing expected to remain within comfortable range following the Knauf transaction

Gearing (net debt / net debt + equity), %



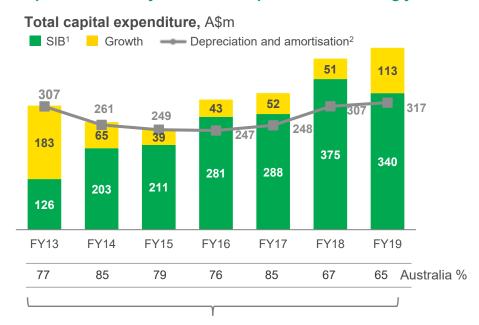
Funding for the USG Boral / Knauf transaction has been structured to maintain current credit rating (Baa2 / BBB)

Boral's integration / resizing costs will be reducing, A\$m



Headwaters integration costs expected to be ~US\$10m in FY2020

After a significant capital investment phase, targeting to reduce capex to be broadly in line with depreciation in coming years



Significant proportion of capital has been invested into the Australian business

- Stay in business capital expenditure
- 2. Excludes amortisation of acquired intangibles

BORAL

Boral Australia: highlights

Boral Australia is a leading integrated construction materials business

Highlights

- Participates across multiple segments including strong infrastructure activity
 - multi-year pipeline of major roads and infrastructure work
 - projects may be delayed but they are not lost, with sustainable margins retained
- Self improvement initiatives continue to deliver benefits:
 - Commercial Excellence
 - Operational Excellence (including supply chain optimisation of ~5-10%)¹
 - Organisational Effectiveness & Rightsizing (~\$13m in FY19)
- Capital investment to drive future efficiency
 - New 1.3m tonne clinker grinding plant and cementitious storage facility at Port of Geelong (due by the end of CY20)
 - ~\$1.5b of investment in Australian business in past 5-6 years including major quarry upgrades and investments in downstream concrete and asphalt assets
- Ongoing earnings from property business averaging ~\$34m pa
- 1. Supply chain cost base of \$650-750m. Delivered ~\$15m savings in FY2019
- 2. FY14 -FY15 results are Boral's CMC division. FY16 onwards are Boral Australia results
- Return on funds employed (ROFE) is based on total EBIT before significant items on funds employed at period end

Consistent margin profile through cycle, EBITDA/sales %



Strong above cost capital returns, ROFE³ %



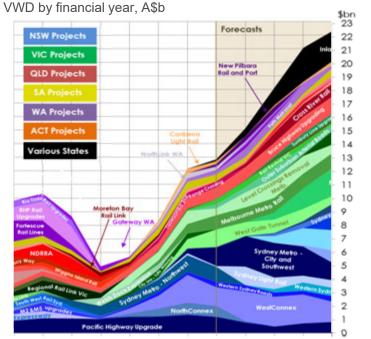
Medium-term outlook

- Continued growth in infrastructure in coming years with Macromonitor forecasting higher volumes in asphalt in FY20, FY21 and FY22
- Forecasters expecting a more modest downturn in residential construction relative to past cycles





Major transport infrastructure construction projects¹

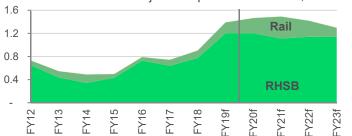


2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

 Macromonitor August 2019 Forecasts. Major projects defined as >\$75m of VWD. NOTE: demand from major transport construction represents ~5% of total industry concrete volumes and ~15% of total industry asphalt volumes in FY19 & FY20 The shifting nature of major transport infrastructure is supporting an increase in asphalt volumes over concrete. Other engineering work such as Snowy Hydro and Warragamba Dam will lift industry concrete volumes from FY21

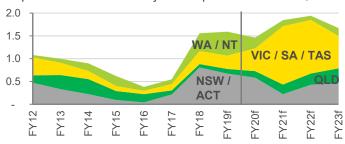
Softer concrete volumes driven by more tunnelling

Premix demand from major transport construction¹, million m³



Growing asphalt volumes driven by Vic demand

Asphalt demand from major transport construction¹, million tonnes





USG Boral: highlights

USG Boral is a well performing, highly attractive business with strong growth potential

Highlights

- Strong long-term growth outlook
 - exposure to growing Asian economies
 - increasing penetration of gypsum-based products
 - continued growth through product innovation
- With strong growth expected in China
 - good brand recognition; positioned at the high-quality end of the market; presence in higher GDP and higher margin areas
- Operational improvement program Project Horizon
 - Rightsizing and LEAN improvement initiative targeting to deliver annualised cost savings of ~A\$21m by FY21;
 ~240 FTE reduction (~7% of the total USG Boral employee base);
 one-off costs ~\$8-9m largely recognised in FY19
- Anticipated expansion of Asia JV with Knauf strengthens the business, creating substantial value
 - synergies of ~US\$30m pa in year 4
 - additional manufacturing capacity; multi-tier branding opportunities; access to world-leading innovation and product development
- Completion of transaction will return 100% ownership of USG Boral Australia & NZ providing attractive cash flows to Boral from a high performing strong business

With a growing revenue profile, US\$m



Consistent margin profile, EBITDA/sales %



Medium-term outlook

- Expected to deliver US\$30m synergies in year 4, to be progressively delivered, as a result of anticipated expanded Asia JV with Knauf
- Expected benefits from Project Horizon to deliver margin improvement offsetting cyclical softness in Australia and South Korea
- Improved cash flows and ROFE from owning 100% of USGB
 Australia & New Zealand if and until Knauf exercises its call option



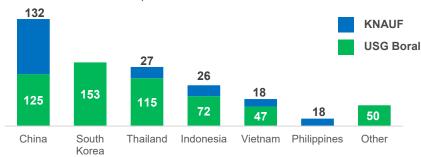
USG Boral: strength of new expanded Asia JV

Once completed, the expanded USG Boral Asia JV will deliver a stronger platform in Asia

Operating footprint¹ (number of operating sites) **USG Boral** South Korea China plasterboard plants 3 2 USG Boral other plants India USG Boral gypsum mines Thailand Vietnam **KNAUF** plasterboard plants **Philippines** Malaysia 1 3 KNAUF other plants Indonesia KNAUF gypsum mines

Plasterboard manufacturing capacity², million m²

USG Boral's 562m m² plus Knauf's 220m m² creates 782m m²

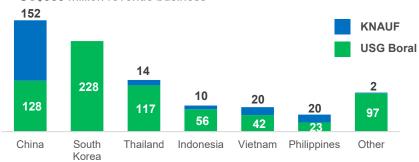


Expanded USG Boral Asia JV FY2019 pro-forma revenue, %



FY2019 pro-forma revenue, US\$ million

~US\$900 million revenue business



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

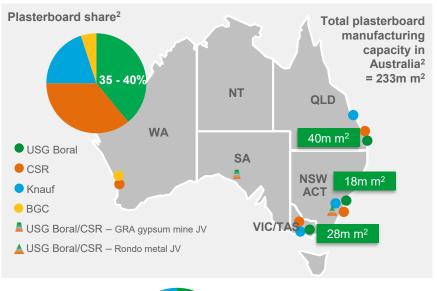
2 4

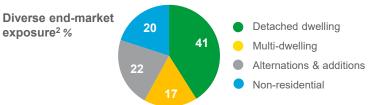
2. Includes new capacity coming on line in USG Boral Vietnam and India, and Knauf's new capacity in the Philippines

BORAL

USG Boral Australia & NZ will deliver strong cash flow

USG Boral Australia has strong share with >40% of revenues derived from segments other than residential; significant cash flow is expected from owning 100% of the business¹





Indicative P&L from USG Boral Australia & NZ acquisition, A\$m

EBITDA	105	p.31 FY19 results presentation ³
Depreciation & amortisation	(21)	p.31 FY19 results presentation (implied)
EBIT	84	
Tax	(25)	~30% tax rate
NPAT	~59	

Indicative cashflow from USG Boral Australia & NZ acquisition, A\$m

EBITDA	105	p.31 FY19 results presentation
Tax	(25)	
Change in working capital	-	not material
Capex	(21)	assume equal to depreciation
Cash flow	~59	

- Knauf has a call option to buy 50% share for US\$200 million (with potential adjustments primarily in relation to Knauf paying 50% of growth capital expenditure invested into the business under Boral's ownership) within five years. The grant and exercise of the call option will be subject to Australian and NZ regulatory approvals.
- 2. USG Boral management estimates, with segment exposures based on FY2019 revenue
- 3. See next slide for a copy of p.31 FY19 results presentation



p.31 FY19 results presentation: Pro-forma earnings and reporting

USG Boral Plasterboard division's underlying results

A\$ million	FY2019 ACTUAL	
Revenue		
100% of current JV	1,606	
100% of expanded JV + Australia NZ		
EBITDA ¹		
100% of current JV	252	
100% of expanded JV + Australia NZ		

FY2019 Pro-forma
1,849
286

Boral's results for USG Boral Plasterboard division

A\$ million	FY2019 ACTUAL
Revenue	-
EBITDA ¹	57
EBIT ¹	57

/2019 -forma
576
127 ²
106

BORAL'S REPORTING IMPLICATIONS

- Share of equity earnings from expanded USG Boral Asia JV and fully consolidated earnings from USG Boral Australia & NZ, to be combined and reported under USG Boral Plasterboard division
- ROFE will be reported with share of JV equity earnings adjusted to an equivalent EBIT basis
- ~3-5% EPS accretive on pro-forma FY2019 basis
- Boral's transaction costs ~A\$20 million in FY2020 and 50% share of one-off implementation costs estimated at ~US\$10 million over 3 years to be reported as significant items
- Synergies of US\$30 million pa expected in year 4 to be progressively delivered

1. EBITDA and EBIT adjusted for one-offs and excluding significant items

A\$127m of EBITDA consists of A\$105m of EBITDA from USG Boral Australia & NZ (this
includes a full year of the revised IP cost), and A\$22m of post tax equity income from the
USG Boral Asia JV (this includes a full year of the revised IP cost and a full year of the
increased interest cost due USG Boral Asia JV borrowing up to US\$200m of debt).

Before synergies, Boral's funding costs and purchase price accounting (PPA) adjustments

Boral North America: highlights



Boral North America is a leader in fly ash and building products, with highly attractive growth prospects

Highlights

- Strong positions in all key segments where the business operates
- A transformed business after the Headwaters acquisition
 - More diverse end-markets / reduced exposure to high fixed-cost businesses
- Strong and expanding margins and improving ROFE profile
- Headwaters synergies
 - US\$71m p.a of synergies delivered since closing the acquisition
 - On track to deliver US\$115m of synergies by end of FY2021
- Capital investment driving future efficiency
 - US\$114m of capital invested during FY2019
 - including investments in fly ash reclaim and storage to take total storage to 600k ton

With a growing revenue profile, US\$m



An expanding margin profile, EBITDA/sales, %



And improving returns on funds employed, ROFE¹ %



Medium-term outlook

- Delivery of ROFE above the cost of capital (currently ~9% equivalent) underpinned by remaining ~\$45m synergies and market returning to long-term average levels of ~1.5m housing starts
- Fly Ash growth and other growth opportunities will further strengthen ROFE above the cost of capital and offset any lower than expected levels of market recovery



A multi-year transformation to build 3 strong divisions

Boral's divisions are focused on execution of strategy after a period of transformation

Our objectives are clear ...



Maximise returns from fully integrated, leading construction materials business

- Profitably supply the market including multi-year growth in major roads and infrastructure
- Harness #1 supplier of choice in the eyes of our customers and fully integrated position
- Deliver benefits from quarry, cement and plant network reinvestments
- Maintain strong returns and margins through customer, commercial and operational excellence programs

2 BORAL NORTH AMERICA

Execute plans and deliver returns from transformed fly ash and building products business

- Drive improved returns on funds employed (ROFE)
- Leverage growth from the Headwaters acquisition including on track delivery of our four-year synergy target of US\$115m
- o Grow through market recovery, innovation, and by delivering our fly ash strategy to increase volumes for the long term for our customers and utility suppliers

3 USG BORAL

Fully extract value from strategic investments in Asia and Australia/NZ and deliver long-term growth

- Deliver significant value through anticipated new expanded USG Boral Asia JV with Knauf
- Maintain strong returns and harness opportunities from Australian business
- Grow through product penetration and innovation for customers including next gen Sheetrock®
- Deliver business improvement initiatives to respond to near-term cyclical and competitive pressures

4 BORAL GROUP

Deliver returns that exceed the cost of capital and maintain a strong balance sheet

- Continue to drive performance to deliver returns above the cost of capital
- Maintain prudent balance sheet management while funding growth and paying a good dividend
- Multi-year reinvestments and cost of transformation coming to an end
- Rating agency affirmed credit rating BBB/Baa2



Boral is a great business

Each of Boral's divisions have attractive performance and growth attributes, and should be considered relative to the markets in which they operate

Highlights

- Boral offers a portfolio of businesses with diverse building and construction materials end markets and geographic exposures in Australia, North America and Asia
 - Boral Australia a leading integrated construction materials business maintaining solid margins and delivering good returns
 - Boral North America a leader in fly ash and building products, with strategies to grow returns and capture future growth
 - USG Boral a leading plasterboard business with an anticipated expanded & strengthened growth platform in Asia and enhanced cashflows from Australia
 - Within each geography, Boral has strong positions, with leading brands and products, and well-invested asset positions
 - Operating in competitive environments, Boral has proven capabilities around safety, product & service delivery, technical know how and innovation
- Delivering strong EBITDA margins¹ of 17.6% with opportunities for further improvement
- Strong and improving cash flows from operating activities
- Executing strategies to grow ROFE² from 8.2% to above cost of capital
- Delivering attractive dividends per share: 26.5 cents in FY2019
- Boral's portfolio is supported by prudent balance sheet management funding growth while maintaining metrics to support credit ratings of BBB/Baa2

Before significant items

Return on funds employed (ROFE) is based on total EBIT before significant items on funds employed at period end

Agenda



Introduction	Mike Kane
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Windows	David Decker



Boral Roofing Concrete Tile – Saxony 900 Slate, White

Agenda – Boral North America



- Business Overview
- Year in Review
- Strategic Priorities



Boral North America ("BNA") overview

A leader in fly ash and building products

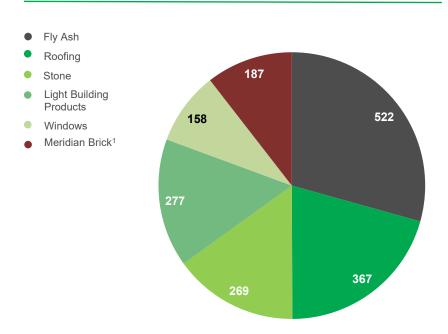


Overview



223
OPERATING³

Revenue¹ by business unit – US\$m



- 1. For continuing operations based on 12 months ended 30 June 2019; pie chart includes Boral's 50% share of revenue from the Meridian Brick JV, which is not included in reported revenue of US\$1.59b
- 2. As at 30 June 2019, people on a full-time equivalent basis, includes Meridian Brick employees and sites

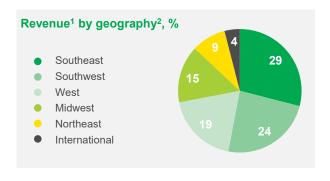
DISTRIBUTION

3. As at 30 June 2019. Operating sites include 44 clay mines and 4 R&D sites. Excludes mothballed plants and distribution locations

Extensive national footprint

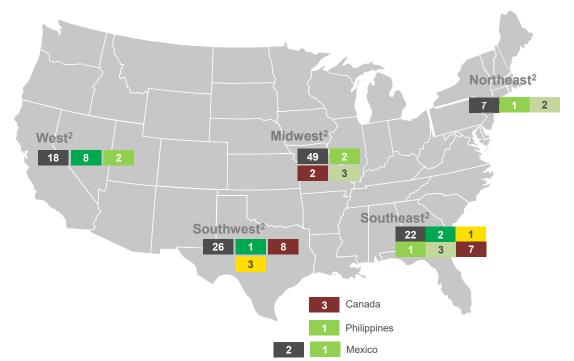
BORAL®

Strong national networks in building products and fly ash



223 operating sites³

Fly ash	124	Stone	8
Roofing	11	Windows	4
Light Building Products	8	Meridian Brick	20



^{1.} Based on FY19 external revenue, including Boral's 50% share of Meridian Brick JV revenue, which is not included in reported revenue

^{2.} Southeast – AL, FL, GA, KY, MS, NC, SC, TN, VA, WV; Southwest – AR, LA, OK, TX; West – AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY; Midwest – IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI; Northeast - CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT

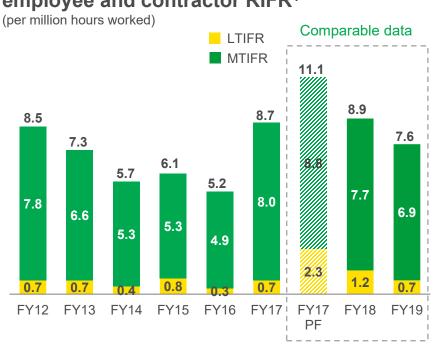
^{3.} As at June 2019. Includes 44 clay mines and four R&D sites. Excludes mothballed plants and distribution sites

Safety: a key focus across the business





Boral North America employee and contractor RIFR¹



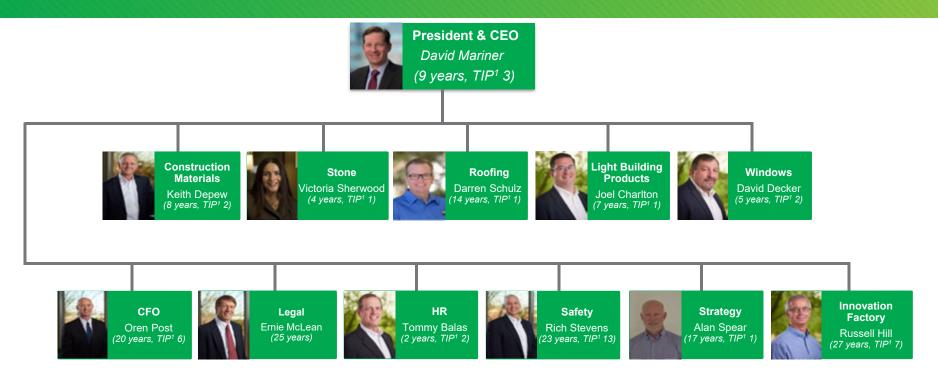
FY19 progress

- FY19 RIFR of 7.6 down from 8.9 in FY18, and LTIFR of 0.7 versus 1.2 last year
- Implementing Zero Harm Today culture across all sites, emphasizing hazard and risk awareness
- Embedded safety absolutes and expanded hazard reporting
- Improving pedestrian and mobile equipment interaction by using hard barriers – ongoing
- Reducing respirable silica dust generation to meet higher standards

^{1.} Recordable incident frequency rate (RIFR) per million hours worked is made up of lost time incident frequency rate (LTIFR) and medical treatment incident rate (MTIFR). Includes employees and contractors. FY19, FY18 and FY17PF include 100%-owned businesses including Headwaters and all joint ventures regardless of equity interest. Prior years include 100%-owned businesses and 50%-owned joint venture operations only. FY17 includes 2 months of Headwaters and 8 months of Meridian JV operations. FY17PF includes a full 12 months of Headwaters and Meridian Brick safety data for comparable purposes.

Boral North America leadership





Agenda – Boral North America



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Boral North America strategic objectives

FY19 progress



Strategic objectives

- 1. Zero Harm Today
- Integrate business and deliver on synergies
- **3.** *Grow* our top line into new segments, channels and geographies
- **Deliver** returns that exceed cost of capital & EBITDA margins >20%

FY19 progress

- ✓ Safety incident rates improved by 15%¹
- ✓ Headwaters businesses meeting Boral standards
- ✓ Delivering synergies US\$32m in FY19, cumulative US\$71m delivered; Year 4 target of US\$115m on track
- ✓ Operational issues resolved
- ✓ Revenue growth in Roofing, Windows and Fly Ash marketing (ex-site services)
- ✓ Tru Exterior® strong growth
- ✓ Stone share stabilized
- ✓ Rebuilding Meridian Brick share after challenging year
- ✓ EBITDA margins up to 18.6%
- ✓ ROFE improved to 5.6%



Our safety journey

Working to achieve zero harm today



FY19 Safety Highlights

- Focus on <u>safety absolutes</u> and <u>hazard and risk recognition</u>
- <u>Critical control gemba walks</u> conducted by BNA CEO at lowest performing sites
- Continued development of <u>traffic management</u> programs to minimize pedestrian and mobile equipment interactions
- Conducted company-wide <u>safety cultural survey</u> results were above benchmark companies
- Implementing new <u>EH&S management system</u> for incident, near miss and observation management
- Continued focus and implementation of <u>behavioral safety</u> <u>programs</u> in FY20 (SafeStart and DuPont STOP)



Safe lifting sign
Building Products – Westfield, MA



Shared work zone sign
Building Products – Westfield, MA



Laser assisted pedestrian traffic control system Stone – Holmesville, OH



New emergency exit stairs Windows – Krestmark, TX



Optimizer rail Windows - Baldwin, GA



Overhead fall protection system Fly Ash – Cleburne, TX

Market drivers



New home construction lower in FY19 – other sectors moderately higher

Residential¹

- Single family starts down 3.4% from FY18
- Affordability and labor shortage main drag on growth
- Supply of homes for sale remains low
- Multi-family helped by push for urban development
- Extreme weather slowed activity

-2.4%

Non-Residential²

- Warehouse and office buildings are main drivers
- Recent activity data centers, education and offices



Repair & Remodel³

- Pace of growth slowing from prior years
- Home sales impact activity



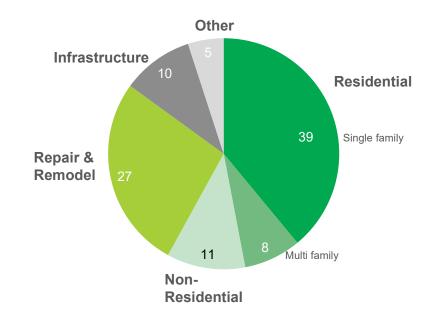
Infrastructure⁴

- Aging infrastructure continuing to drive demand
- Highways and bridges are the biggest driver
- Ability of governments to fund projects impact activity



- 1. US Census seasonally adjusted annualized housing starts. Based on data up to July 2019
- 2. Management estimate of square feet area using Dodge Data & Analytics and US Census data
- 3. Moody's retail sales of building products, July 2019
- 4. Management estimate of ready mix demand using Dodge Data & Analytics, and Portland Cement Association shipments

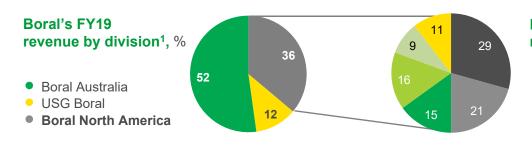
FY19 Boral revenue by segment, %



Boral North America



Recap of FY19 results – contributing 36% share of underlying revenue



Boral North America's FY19 revenue by business¹, %

- Fly Ash
- Roofing
- Stone
- Light Building Products
- Windows
- Meridian Brick

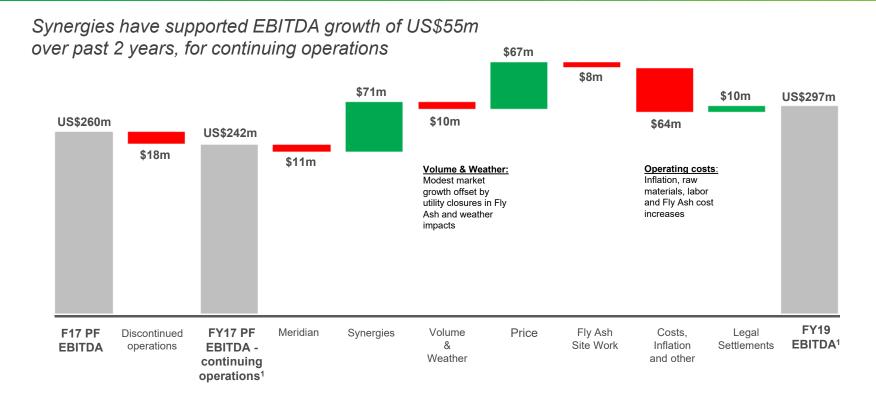
US\$m	FY19	FY18
Revenue	1,592	1,539
EBITDA ²	297	270
EBITDA ROS ²	18.6%	17.5
EBIT ²	180	154
ROFE ³ , %	5.6	4.4

FY19 US\$m		ernal nue ⁴	EBITDA ⁴	Price
Fly Ash	522	Steady	▼	+11%
Stone	269	Steady		+3%
Roofing	367	▲ 15%		+5%
LBP	277	Steady		•
Windows	158	▲ 5%		+1%
Meridian ⁵	187	▼ -5%	▼	+3%

- 1. Includes Boral's 50% share of underlying revenue from USG Boral and Meridian Brick joint ventures, which are not included in Group reported revenue. Excludes discontinued operations.
- 2. Excluding significant items
- 3. ROFE calculated on funds employed as at 30 June 2019 and average monthly funds employed as at 30 June 2018
- 4. Change from FY19 relative to FY18
- 5. Boral's 50% interest in Meridian Brick FY19 revenue.

Boral North America EBITDA





¹ Excludes significant items and discontinued operations

Agenda – Boral North America



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Boral North America – strategic objectives

FY20 focus



Strategic objectives

- 1. Zero Harm Today
- 2. **Deliver on synergies** and manage our cost base to offset cyclical challenges
- **3.** *Grow our top line* into new segments, channels and geographies

4. Deliver returns that exceed cost of capital & EBITDA margins >20%

FY20 focus

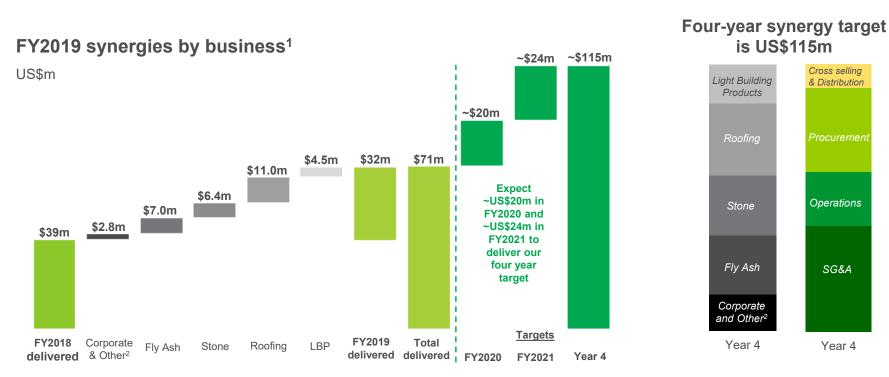


- Continue to execute on synergy opportunities targeting ~US\$20m in FY20
- Execute continuous improvement and performance excellence programs within our manufacturing operations
- Expand fly ash supply
- Leverage strong brand recognition and distribution to grow our stone and siding and trim product lines
- Build on turnaround of our metal roofing business and further optimize our Florida roof tile operations
- Execute Windows expansion into Houston, TX
- Pricing to at least offset inflationary pressures
- Deliver EBITDA improvements in FY20 across businesses through continuous improvement initiatives
- Drive towards 20% EBITDA margins for division

Boral North America - synergies



Acquisition synergies of US\$32m were ahead of our FY2019 US\$25m target



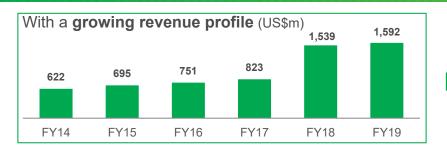
^{1.} Synergies include cost synergies and estimated cross-selling and distribution revenue synergies, and excludes one-off integration costs estimated at US\$90-\$100m predominately in FY18 & FY19

^{2.} Other includes Windows and Block (in year 1 only)

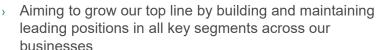
Boral North America is an attractive business

BORAL

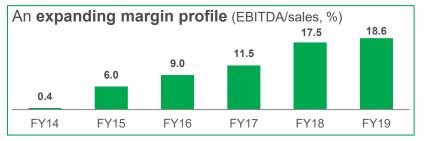
With opportunities and strategies for further growth







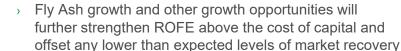
Targeting revenue growth through price and volume gains as well as product development and market stepouts





- Aiming to deliver 20%+ EBITDA margins
- Delivery of remaining ~\$45m synergies will support this goal
- Aiming to deliver ROFE above the cost of capital (currently ~9% equivalent)
- Delivery of remaining ~\$45m synergies and market demand returning to long-term average levels of ~1.5m housing starts will underpin delivery of this goal





Agenda



Introduction	Mike	Kane
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Boral North America David Mariner

Fly Ash	Keith Depew

Stone Victoria Sherwood

Roofing Darren Schulz

Light Building Products Joel Charlton

Windows David Decker



Fly Ash facility in Austin, TX

Agenda – Fly ash



- Business Overview
- Industry Overview
- Year in Review & Strategic Update



Fly Ash facility in Austin, TX

Business overview

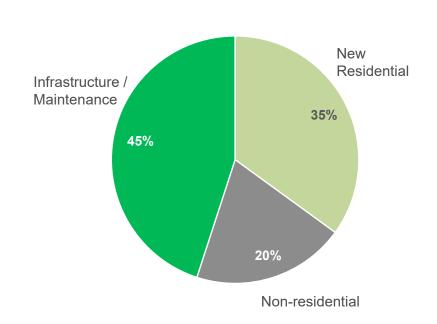
BORAL®

Boral is the only national fly ash marketer with a full service platform

Snapshot of Boral's position

- FY19 revenue of ~US\$522m
- Fly ash sales of ~7m short tons¹ in FY19 predominantly to ready mix concrete industry
- National supply / distribution footprint with 124 operational sites providing full service portfolio to utilities and customers
- Leading fly ash beneficiation technologies
- Strong reputation with utilities & fly ash customers, with excellent quality, safety, environmental track record
- National coverage, ash sales in 45 states plus Canada

Fly ash sales by segment²



Short tons equals 2,000 pounds or 907 kilograms

^{2.} Source: Management estimates on FY19 results

Business overview: our footprint



National footprint with strong infrastructure and full service offering

Contracts and services

- Marketing/supply products comprise 70 -80% of revenue
 - Fly ash marketing and site service contracts with utilities, terms range from 1 year to life of plant
 - Industry practice is to pay utilities royalty based on revenues
- Site services makes up 20-30% of revenue
 - variable year by year
 - Site services include day to day support of utility and larger project work

Boral's presence across the US



- 64 Fly ash source
- 15 Services only
- 6 Synthetic gypsum sources

- 33 Terminal
- 6 LA ash

Business model

BORAL®

Boral is the link between the utilities and the ready mix concrete industry

1

Utility

Utilities motivated by production costs & demand

2

Marketer

- Marketers need:
 - Manageable royalties and minimum volumes
 - Supply availability (seasonality)
 - Consistent quality

3

End user

- End users seek:
 - Low landed cost, consistent supply and quality

Connect the utility to end user

Boral's Fly Ash business model

- Boral has relationships with utilities and end users as we connect fly ash resources to markets
- Low capital intensive operations
- Low ongoing operating costs, as proportion of revenue, with minimal plant and equipment required
- Percentage of revenue / royalty share with utilities
- Boral provides site services across 15 sites¹
- Boral creates value through technical know how (fly ash beneficiation), benefits of a national network and other capabilities (e.g. storage)
- Defined strategy to increase future volumes

^{1.} Sites with only site service operations, Boral provides services at many marketing sites.

Business overview: Our value proposition





Value to utilities

- Historically, material was a waste stream and cost burden
- Marketers transformed the annual waste cost into a revenue stream through beneficiation and royalty payments
- A 'full service' solution offering for environmental / CCR1 reclamation

Products





Concrete Fly Ash



Department of Transportation





Micron3



Wet to Dry Conversion

Value to end users

- ~20 years ago: Optional material, cost savings versus cement
- ~10 years ago: Cost savings material with marketable quality advantages versus cement
- Today: Required in many state DOT² / federal project works to improve durability
- Use in concrete increases strength and improves properties



Celceram



Harvesting



Gypsum



Fluidized Bed

Agenda – Fly ash



- Business Overview
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Fly Ash facility in Austin, TX

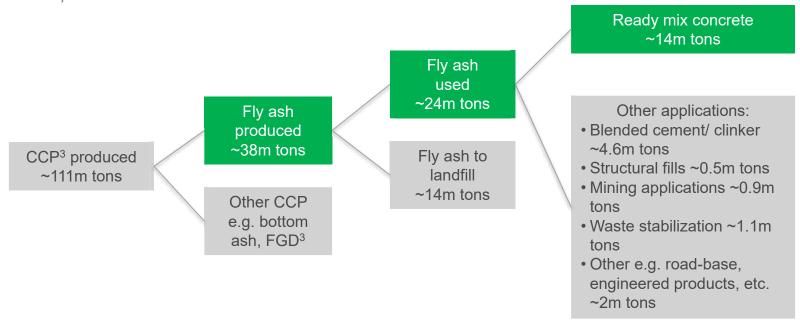
Industry overview: Ample saleable ash despite closures



Additional 1 billion tons¹ of fly ash currently in landfills and growing

2017 American Coal Ash Association volumes²

Note: 2018 report available Nov '19

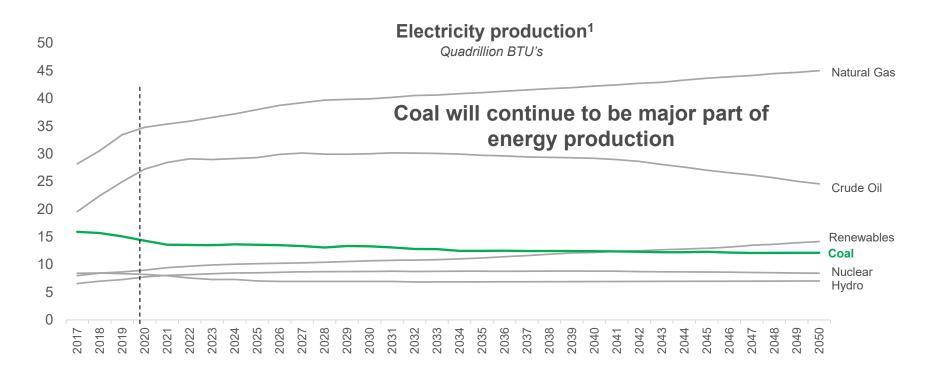


- 1. ~1 billion tons of fly ash currently landfilled (source: American Coal Ash Association) | ~1.5 billion tons of CCPs landfilled (source: US EPA)
- 2. ACAA 2017 Coal Combustion Product (CCP) Production & Use Survey report
- 3. CCP is Coal Combustion Products; FGD is flue gas desulfurization which includes gypsum and sludge

Industry overview: Coal remains a long term power source



Declines from retirements expected to slow in future



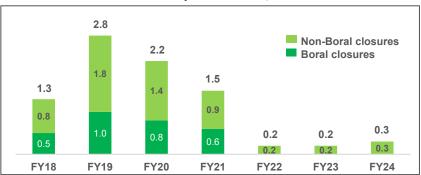
^{1.} US Energy Information Administration (EIA): 2019 Energy Outlook: Total Energy Supply, Deposition, and Pricing, Energy Production

Industry overview: EIA announced utility closures¹



The impact of announced utility closures is declining

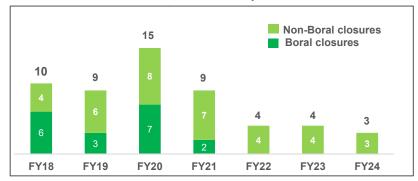
Plant closures – total ash production¹, m tons



Plant closures – ash sold impacts¹, m tons



EIA announced closures², number of plants



Plant closure impacts: FY18 – FY24

- 54 actual or announced closures; represents ~17% of 2017 plants
- Total saleable ash impacted ~3.5m tons p.a. (~15% of industry saleable ash)
- Boral FY18/19 closures impacted sales ~800k tons p.a.
- Boral closures FY20 forward include:
 - Navajo impact ~400k tons p.a. in FY20/21
 - Vistra closures of 4 Illinois plants announced August 2019 impact ~75k tons p.a. in FY20/21

^{1.} EIA announced utility plant closures, adjusted for Boral financial years

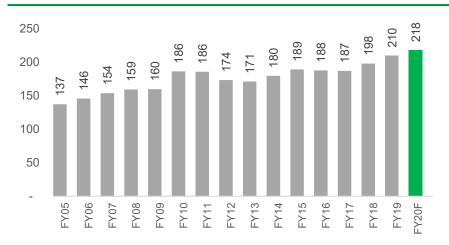
^{2.} EIA data tables for June 2019 Electric Power Monthly plus closures announced subsequent to the EIA publication

Construction driving fly ash volume





Ready mix: Infrastructure (millions of cubic yards)¹



- Infrastructure underpins 45% of fly ash demand
- Ready mix demand for infrastructure forecast to grow ~3-4% in FY20 driven by continued investment into US Infrastructure

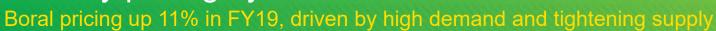
- Fly ash demand underpinned by ready mix demand, substitution rates and growth in non-traditional products
- Fly ash growth could exceed ready mix growth as replacement rates increase
- Continued ready mix growth expectations driven by continued investment in national infrastructure
- Cement sales forecast of 100.1m tons² in CY20, approaching domestic capacity of 104m tons³
- Non-traditional products sales continue to improve in high strength concrete, filler applications, and engineered products

^{1.} Dodge Data & Analytics, Infrastructure Ready Mix Demand

^{2.} Portland Cement Association: Summer 2019 Forecast

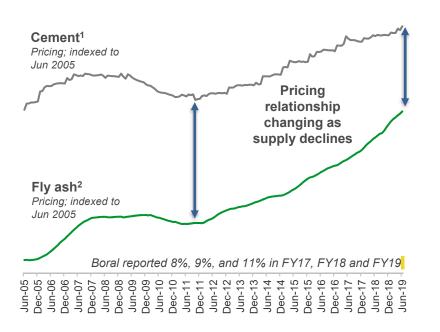
^{3.} USGS Annual Yearbook: July 10, 2018

Industry pricing dynamics

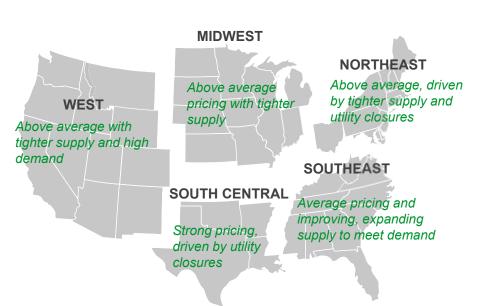




Pricing relationship



Regional overview



Price ranges from \$40 to \$100 per ton

- 1. Cement average selling price (ASP); source: Bureau of Labor Statistics, (producer price indexed to June 2005)
- Management estimate of industry fly ash average selling price (ASP), indexed to June 2005

Industry overview: Competitive landscape



National and local operators serve the market and have different areas of focus

Examples of competitors¹

LafargeHolcim	LafargeHolcim	 Midwest and Texas Complements cement manufacturing with downstream outlet
Waste Management	FlyAshDirect.	 10 fly ash locations, weighted towards Texas Waste management purchased FlyAshDirect in 2012 Strengths in disposal, landfill management
Charah	Charah ^a	 Publicly traded; 14 fly ash locations Nuclear maintenance and services Active in remediation and compliance services (site services)
SEFA	SEFA	 9 locations, Southeastern US – TN, VA, SC Privately owned STAR beneficiation technology core to value proposition
Other	Separation Technologies LLC	 Smaller regional players with modest source locations Separation Technologies owned by Titan America, a cement and concrete producer

I. Per Company websites and management estimate.

Industry overview: Regulatory environment

Changes in regulatory environment underpin opportunities



Regulatory milestones

- 2008 Kingston coal ash spill occurs
- 2009 EPA initiates formal rulemaking for coal ash disposal under RCRA
- 2015 Coal Ash Disposal Regulation put into effect
 - EPA completes final rule
 - States take over compliance with national standards
- 2018 EPA proposes changes to regulation
 - Beneficial use exempt
- 2019 North Carolina and Virginia enact legislation around landfills
- Current EPA rule reconsideration process underway since 2018 court ruling – now extending well into 2020

Industry update

- Regulatory activity at the Federal and state level will continue to run its course
- Demand for fly ash will remain strong, and beneficial use will likely remain exempt from regulation



Agenda – Fly ash



- Business Overview
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Fly Ash facility in Austin, TX

Fly ash strategic priorities

Integrating the businesses while growing our supply



Strategic objectives

- 1. Zero Harm Today
- Expand marketable supply through storage, ash harvesting, wet to dry conversion, technology and imports
- 3. Deliver **synergy** value through integration, including best practices and technology
- 4. Leverage full **service offering** to market
- 5. **Maintain and grow** EBITDA margin

FY19 progress

- ✓ Safety *incidents down* ~55%¹ from FY18; RIFR of 1.9
- Expanded supply through new sources coming on stream, better utilization and increased storage to capture seasonal supply
- ✓ First US dry harvesting operation in Pennsylvania fully operational
- ✓ Delivered incremental synergies of ~US\$7.0m
- ✓ Bundled service platform includes marketing, plant services, synthetic gypsum, and circulated fluidized bed (CFB)
- ✓ Managing through dynamics of *utility closures*
- ✓ Achieved *price increase* of 11% based on supply/demand and service level



Year in review

BORAL®

Earnings impacted by completion of two large profitable site services projects

	FY19	
Revenue	\$522m (steady)	
Fly Ash sales	\$405m (7%)	Volume decline offset by price increasesSite services impacted by completion of
Site Services	\$117m (19%)	Barry & Gaston projects
EBITDA on PY	ı	
Fly Ash	Steady	
Site services	1	
EBITDA margin	~ 22%	• Down from ~24% in FY18
% of site services of total sales	~22%	Down from 28% in FY18
Fly Ash sales volumes	7.0m tons	 Down from 7.1m tons in FY18
Price	(11%)	
New domestic contracts secured	3 new contracts	 Potential ash supply ~320k tons p.a.
Storage	70k tons added	 Total storage across network is now 600k tons



Year in review: Ash volumes



New contracts and network utilization largely offset impact of closed plants





FY19 Activity

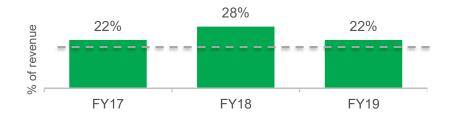
- Plant closures in FY18 and FY19 impacted available ash
- Abnormal weather patterns, including flooding, impacted the Midwest and West regions
- New contracts helped offset impacts of plant closures
- Supply chain investments allowed more efficient use of available material

Site services work normalized in FY19

BORAL®

Offering utilities a wide range of civil, design, and engineering services

- Two major multi year projects concluded in FY19
 - Site Services ~20% of total Fly Ash revenues without major project work
- Services provided include:
 - Design: Onsite project expertise
 - Engineering: Support across many engineering applications
 - Project management: Leads in development of major onsite projects including CCR¹ compliance
 - Civil: Day to day operations on disposal operations (i.e. landfilling)
- EBITDA margins strong but typically less than fly ash margins





Virginia City

1. Coal combustion residuals

Industry closures impacted Boral in FY19



Several closures were non-Boral sites, others had limited sales impact

Industry Supply: Site Closures¹



		FY18	FY19
Full Closures	(# of plants)	10	9
Production Impact	(m's tons)	1.3	2.8
Sales Impact	(m's tons)	0.7	1.3

Boral Supply: Site Closures¹



		FY18	FY19
Full Closures	(# of plants)	6	3
Production Impact	(m's tons)	0.5	1.0
Sales Impact	(m's tons)	0.3	0.5

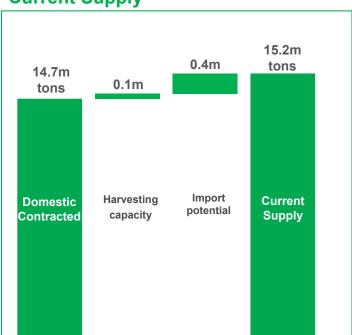
^{1.} Source: EIA, publicly available announcements; management estimates

Ash supply – current status

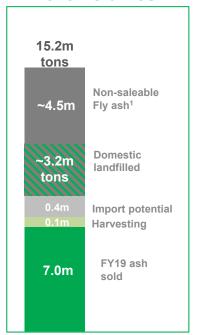


Focus on good quality ash being landfilled has helped to hold volumes steady in FY19

Current Supply



FY2019 volumes



- Domestic contracted tons down from FY18 due to utility plant closures
- Imports minimal in FY19; subject to utility infrastructure upgrades
- Harvesting activities ramping up
- Domestic landfilled remains an opportunity contingent on quality, network and location

^{1.} Non-saleable due to a number of reasons including quality issues, uneconomical logistics, no collection systems in place, wet-sluicing employed

Boral's fly ash supply opportunities



Progress made in FY2019 to grow supply of fly ash by ~1.5-2.0 million tons by 2021

Capturing more from current contracts

Expanded storage & network optimisation

- Fixed and floating storage helps with seasonality and intermittent shuts
- Added ~70k tons p.a. in FY19 including 200 rail cars for mobile storage
- Current capacity ~600k tons with turns of 1 to 10 times p.a.
- Captured additional ~400k tons in FY19

Growing total contracted volumes

New domestic contracts

- > Three new contracts in FY19 ~320k tons p.a.
- New contracts and renewing contracts come available over time
- Targeting best US available contracts

Harvesting ash from landfill and wet ponds

- Montour reclaim (PA)
 underway initial tons in
 FY19 growing to >100k
 p.a. from ~2m ton
 source
- FY18 conversion of wet to dry processes at two plants preceded new FY19 contracts
- Other reclaim sites under investigation
- Opportunities to harvest ponded ash – tendering underway

Grinding & blending, technology

- Expand volumes through new beneficiation technologies, grinding and blending, and partnerships
- Natural pozzolans new source in Utah can be blended with fly ash to extend supply – investigations underway

Imports

- FY19 commenced imports from Mexico; securing DOT approvals; optimising logistics to grow volumes
- Long-term strategy to import international supply to key areas

Expanded storage and strengthened supply chain capability

BORAL

In FY19, expanded storage by ~70k tons

Expanded storage



Progress

- 600k tons of storage in network 580 tons fixed and 20 tons floating
- US\$21m of capital invested in storage in FY19
- Expanded rail car fleet by ~200 cars to resource longer hauls and provide floating storage
- Targeting additional railcars where economically feasible
- Rapid Deploy Terminal strategy underway (4 added in FY19)
- Additional 20k to 30k additional storage planned for FY20
- Ongoing review of future needs and opportunities

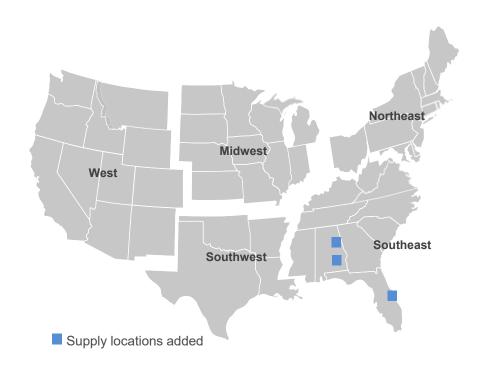




New domestic contracts



In FY19, Boral expanded supply by +300k tons through new domestic contracts



Progress

- Two sites in Alabama added in FY19 post wet to dry conversion project
- New contract in Florida commenced in FY19
- New sources contributed ~200k tons in FY19; anticipate growth to ~320k tons in FY20
- New contracts mainly providing supply to the Southeastern US
- Targeting several additional contracts in FY20 and beyond by offering bundled services, technology, and extensive distribution network









Harvesting ash from landfills

Immediately adding supply capacity in Pennsylvania



Dry impoundment

- Impoundments are landfills where fly ash has been disposed of in dry form
- Process includes removal of landfill materials, beneficiation and marketing
- Boral first to offer beneficiation service in USA, opening the first of its kind harvesting operation in a closed landfill in Montour, Pennsylvania
 - First shipment in FY19
 - Following weather impacts, plant now performing in line with expectations
 - Serves the attractive, underserved Northeast region
- Scalable operation:
 - US\$6-8 million capital
 - ~100k tons p.a. current capacity
 - Margins in line with typical Fly Ash volume

Opportunities

- Further capacity utilization of Montour facility to increase sales
- In discussion with multiple utilities to deploy
- Regulatory environment to influence future activity
- Different royalty structure offsets higher costs and capital investment
- Opportunity to scale up with relatively modest capital requirement







Harvesting site

Harvesting ash from wet ponds

Short-term and medium-term horizons



Ponded material

- Ponds are landfills where material has been disposed of in wet form
- Opportunity to harvest, beneficiate and market material; landfill unused and poor quality material
- Boral's suite of services and technology provides a full service solution to utilities
 - Beneficiation technologies to improve ash to suitable quality
 - National network to move product to meet demand
- Changes in regulatory environment underpinning opportunities

Opportunities

- ~1 billion tons estimated in ponds and landfills¹
- In discussion with multiple utilities; proposals underway
- Timing is dependent on utility and regulations



Fly ash pond at operational facility

Grinding & blending





Grinding

- Actively exploring several opportunities to grind nontraditional materials to supplement fly ash supply in key areas
- Engineering design and equipment to be standardized across future sites
- Targeting execution of 2 projects in next 12 to 24 months



Reserve Pile #1: Eureka, UT

Blending

- Options to improve quality or extend supply with nontraditional cementitious products.
- Blend traditional and non-traditional products to create a 'P2' product with improved cementitious qualities
- Blend traditional fly ash with natural pozzolan or bottom ash to extend supply
- Targeting investment into several key areas over next
 12 to 18 months



Bottom ash reserves

Imports

Extending supply with non-domestic utility based sources



Imports

- Commenced in FY19
- Sourced initially from Mexico: modest volumes currently
- Signed exclusive US marketing rights agreements for 2 plants
- Further growth from Mexico requires infrastructure investment by utility: ~400k tons annual production
- Obtaining DOT approval in key areas
- Targeting to serve Texas and other areas with other Mexico sources
- Further locations / sources being pursued





Technology

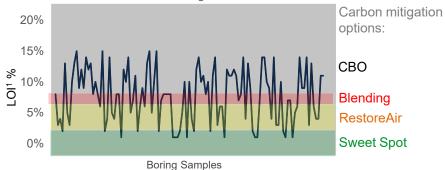


Expanded suite of fly ash technologies to support growth and industry leadership

Process Technologies

- RestoreAir[®]
- Harvested ash processing and beneficiating
- Grinding and Blending
- Carbon Burn-Out
- Ammonia Slip Mitigation





Boral's available <u>process technologies</u> can beneficiate ash at all levels of carbon content

Product Technologies

- Performance Pozzolan (P2)
- Ground Bottom Ash
- Sintered Light Weight Aggregate
- GYPSYN
- MICRON3™
- Celceram®



Boral's <u>product technologies</u> are securing expanded end uses and offering solutions to our customers

Providing other non-traditional services



Offering utilities services beyond traditional collection and marketing

Synthetic materials

- Leaders in synthetic gypsum dewatering equipment design, processing, and sales management
- Offer expertise on dewatering, water treatment, and separation technologies
- Margins in line with fly ash sales margins
- Secured long term extension on key contract during FY19
- Major construction project at TVA Cumberland to be completed in FY20







LA Ash

- Collects, processes, and markets circulating fluidized bed (CFB) by-products for utilities
- End uses include civil, environmental, oil field for soil stabilization, liquid solidification
- Returns traditional waste products to manufacturing process
- Margins in line with fly ash sales margins







Significant opportunity to grow volumes over time

BORAL

Boral is well-placed to capture additional volumes, with timing difficult to control

	Additional volume opportunities (000's tons)
Network optimization (and storage) - Minimize ash going to landfill - Utilize national supply chain	500+
Domestic contractsFull utilization of contracts gained in FY19New contracts bidding	400+
 Harvesting ash from landfills and wet ponds Montour to full capacity Future wet and dry impoundment 	400+
ImportsFull utilization of contracts gained in FY19New contracts bidding	300+
Grinding and blending	400+
Totals	2,000+





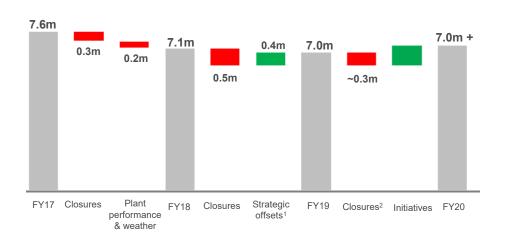


Targeting to increase fly ash supply



Making progress to deliver targeted ~1.5m to ~2.0m tons over next 2 years

Ash outlook (millions of tons)



- 1. Net of volume impacts due to weather disruptions, quality and intermittent closures
- 2. Includes impact of Navajo closure and Vistra closures of 4 Illinois plants announced August 2019
- 3. Available supply may take time to translate to actual sales

Business outlook

- Price: Continued opportunity to narrow gap with cement based on value proposition
- <u>Demand</u>: Underpinned by ready mix concrete and specifications
- Supply³: By the end of FY21, we expect to supply ash at a run rate of at least 8.6m tons p.a., with volume growth coming from a range of initiatives including imports, new contracts, fixed and mobile storage, landfill reclamation, and mining natural pozzolans
- <u>Margin</u>: Targeting to maintain or exceed current performance
- FY2020: expect volume growth despite plant closures (Navajo and Illinois)
- FY2020: completion of TVA Cumberland Synmat will adversely impact revenues and earnings

Agenda



Introduction Mike Kane

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Agenda – Stone



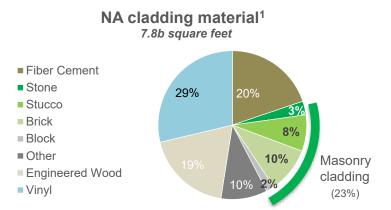
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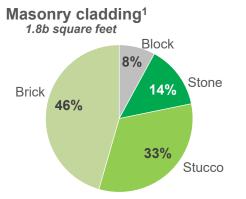


Cladding and decorative stone market



Exterior cladding applications are the primary driver of stone demand





Decorative stone characteristics

- Exterior cladding applications are the single largest demand driver for stone products
- Manufactured stone competes primarily with other masonry products for wall share
- Typically installed as an accent or secondary siding material



¹ Data based on study by DuckerFrontier; 2019

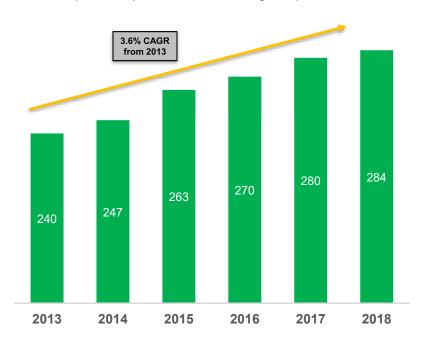
Demand trends





Decorative Stone demand¹

(in million square feet installed coverage area)



Decorative Stone – segment trends

- Growth in commercial, interior applications and outdoor living is outpacing growth in residential cladding applications
- Decorative stone wall share has declined slightly
- Mechanically fastened stone is a small, but fast growing product category - addresses labor shortages and a short installation season in colder climates
- Natural stone has gained some ground against manufactured stone over the past 5 years as new home construction has been skewed toward higher-end and custom homes







Mechanically Fastened



Natural

1. Source: June 2019 study by DuckerFrontier

Market segmentation – decorative stone



Cladding still drives demand, interior accents and outdoor living growing

Interior finishes and outdoor uses growing ...

Exterior cladding 89%



- Primary end use for stone
- Both residential and commercial applications
- Secondary cladding and accents



- Segment growing based on design trends
- Offers qualities designers seek
- Fireplace, accent walls, kitchen islands

Outdoor living 7%



- Growing segment
- Outdoor kitchens, fireplaces and walls
- Outdoor living spaces becoming an expectation

Increased use in light commercial and R&R applications...

Residential 45%



- · Secondary cladding and accents
- · Higher end homes
- Larger scale tract builders and multifamily drive demand

Non-residential 23%



- Hotels, retail and restaurants are primary drivers
- Specification driven
- · Longer sales cycle

R&R 32%



- Approximately 1/3 going into interior accents and outdoor living
- · Diverse customer base

Competitive Landscape – Manufactured stone



Comprised of national, regional and local players

Participants	1 Description	Manufacturers/Brands	Share ¹
National 4	 Multiple plant operations Complete product lines National scope with multiple channels to market including one-step, two-step, direct and install 	Ply Gem STONE FOR THE PROSTONE ProStone VERSETTA	(% manufactured stone) National ~45% to 50%
Regional ~20	 Tend to be concentrated within one or two regions with growth potential Primary manufacturing site centrally located within its region 	CREATIVE MINES MANAGER OF THE OF MANAGEMENT VINES PROPERTY OF THE OFFICE OF THE OFFI	Regional ~30% to 35%
Local >100	 Operate with one primary location and limited product portfolio Manufacturing plant is primary distribution site Serving a localized radius (often 1-3 states) 	CASCADE STONE CASCADE STONE Z ZEMENT	Local < 20%

^{1.} Data for calendar year 2018 based on June 2019 study by DuckerFrontier

Agenda – Stone



- Industry Overview
- Business Overview
- Year in Review and Strategic Priorities



Business Overview

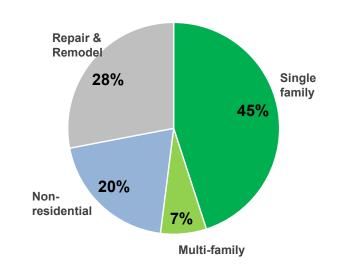




Snapshot of Boral's capabilities

- FY19 revenue of US\$269m¹
- 6 manufacturing plants to serve our customers in the US and Canada and international markets
- National distribution footprint with over 2,600 distribution points in one-step, two-step and retail channels
- Industry leading innovation and product development
- Strong brand recognition with comprehensive product line across all building sectors

Sales by Segment²









^{1.} Excludes sales of Versetta, which is sold through Light Building Products

^{2.} Management estimates based on study conducted by DuckerFrontier

Business Overview - Our footprint



Plant network serving customers in all 50 US states and Canada



Brand identity



Boral brands cover the entire spectrum of segments and applications

Brand market participation

- Product offering to address full spectrum of applications
- Premium lines account for 78% of total sales
- Products address demand trends

Premium

Mid-tier

Value

Premium

easy install

Potential to streamline and focus offerings over time

ELDORADO STONE

STONECRAFT

VERSETTA

STONE.

SCULTURED STONE

ProStone[®]

applications	Segments				
S	New Residential				
over time	Production builder	Custom single family	Multi- family	Commercial	Repair & remodel
Quality – look & feel Broad product offering Modern aesthetic		>		>	>
Regional coverageLimited colorsMid-level pricing	<		>		
Value priced Limited offering Traditional styles	>		>		
Reduced installation cost Lumber channel			>	>	\



Brand

- Represents primary focus

Product classification



Today's portfolio of products satisfies the following three categories

Traditional / classic

- Timeless shapes that reflect look and feel of natural stone
- Mature, cash-generating products

Ledge Irregular 25 textures 199 colors Rectangular 24 textures 174 colors

17 textures 116 colors

Contemporary / modern

- Trendy, dimensional stone shapes with monochromatic colors
- New, high growth products



Mechanically fastened

- Panelized stone products for easy installation to address labor shortages
- Increased adoption rate, high growth products

Versetta

3 textures
9 colors

Agenda – Stone



- Industry Overview
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FY19 Review

Solid performance in the face of market headwinds



Product Category

Growth¹

Commentary

Premium





- Volumes lower on soft housing starts in US and Canada
- · Share stabilized

Mid-tier





• Housing starts off 2% in Midwest

Value





- Price increase offset housing-driven volume shortfall
- Completed StoneCraft plant upgrades

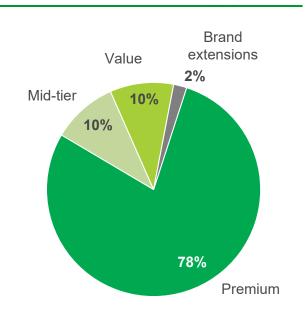
Brand extensions





- · Outdoor living, fire bowls
- Good growth, retail strategy

Revenue breakdown by type



1. FY19 revenue growth

75

Stone strategic objectives





Strategic objectives

- 1. Zero Harm Today
- Leverage brand portfolio and align sales efforts to recapture share and grow sales volumes
- **3.** *Optimize* plant network and execute operations initiatives to *deliver synergies*
- Increase category awareness through marketing and new product development

- Improved safety indicators and reduced injury severity
- ✓ Stabilized share and re-energized key customer base
- ✓ Successfully implemented **price increases** (averaged 3%) based on value proposition
- ✓ Significant progress on optimizing manufacturing and distribution network
- ✓ Delivered US\$6.4m in synergies
- ✓ Continued to evolve sales organization and go to market strategies

Recapture share: Commercial integration

A focus on the customer to gain back share loss



Background

- Merger of industry leaders Eldorado and Cultured Stone – with recognized offerings through the value chain
- Share loss during FY18 due to uncertainty within the channel and customer base
- Sales resources segregated by brand and historical customer relationships as businesses came together
- With initial focus of integration on safety and stabilizing customer base, new product development slowed

- All brands under one name Boral now established
- Large emphasis on clarity of communication and rebuilding trust with channel partners
- Harmonizing of business processes underway with ERP conversion
- Re-aligned resources to support channel partners
- Some distribution changes necessary
- Aligned commercial efforts towards common strategy; upgraded talent and management with common focus on building demand through specification work
- Integrated product development efforts and now focused on next generation of new products

Grow sales: National accounts

Leveraging scale to capture share



Background

- Post acquisition, combined 2 national accounts teams to focus on maintaining/converting national builder and commercial business
- Pull through sales by targeting specifiers and decision makers – specify product early in the process
- Offer end-to-end training capabilities from design to compliance

- Secured several national builder accounts e.g. Toll Brothers
- Secured national specifications with commercial accounts - e.g. Burger King, Hilton Hotels
- Established national technical training capabilities
- Partnering with other Boral divisions where appropriate to present a full suite of products







Grow sales: Outdoor living

Leveraging Boral innovation capability across product suite

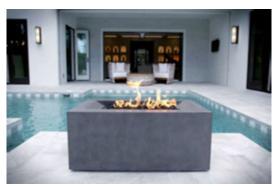


Background

- Line of products developed by Eldorado targeting outdoor living trends
- High end products including fire bowls, fireplace surrounds and components for outdoor kitchens
- Historically sold through Eldorado distribution channels and direct

- Partnered with Boral Innovation Factory to support new product development efforts
- New product development includes next generation lightweight fire bowls
- Expanding sales to legacy Boral distribution channels







Deliver synergies: Optimizing our Eastern operations



Plant upgrades to improve performance and capacity

Background

- Well positioned to service large Northeast, Southeast, and European regions
- Chester plant (Cultured Stone and ProStone lines) cost improvement opportunities
- Holmesville
 (StoneCraft) plant –
 production cost
 inconsistent with value
 line proposition
- Greencastle (Eldorado Stone) upgrade begun pre-acquisition to address aging/inefficient operations
- Navarre distribution small operation with limited customer value



- Greencastle completed upgrade and commissioned plant – October 2018
- Completing StoneCraft upgrade in November 2019 (Holmesville plant)
- Targeted performance improvement at Chester yielded significant cost reductions
- Divested Navarre warehouse to primary distribution partner





StoneCraft upgrade

Transformed manufacturing to lower costs



Background

- StoneCraft is a value tier product targeting production builders
- Production in former Headwaters plant in Holmesville, OH
- Highly manual, labor intensive and inefficient operation
- Production costs not aligned with a value tiered product line





- Constructed best practice, low cost manufacturing platform to drive cost saving synergies
- Reduced direct labor headcount
- Introduced lean, scalable manufacturing process
- Capacity expanded for future growth
- Provides foundation needed to consolidate value lines





Deliver synergies - optimizing our Western operations



Consolidated production in two low cost, high capacity plants

Background

- Rosarita, Mexico (legacy Eldorado) is a large, low cost plant
- Napa (legacy Cultured Stone) world class automated plant, low cost, stable mature work force
- Combined, Napa and Rosarita produce ~40% of total volume
- Rosarita produces a line of brand extensions – fire bowls, fireplace surrounds, outdoor living products
- Royal City (Legacy Eldorado) high cost, low volume



- Rosarita plant upgrades to improve costs and ready plant for expansion
- Closed Royal City and relocated production to Rosarita in November 2018
- Added distribution center in Tacoma, WA in connection with Royal City closure
- Performance excellence projects in Napa lowered production costs





Royal City closure

Significant cost savings realized with transfer of production



Background

- Royal City small, high-cost plant producing Eldorado products
- Rosarita, MX
 - Low labor rates and fixed costs
 - Additional capacity available to grow
- Plant closure and production shift announced Q1 FY19





- Closed Royal City and transferred production to Rosarita in November 2018
- Highly successful closure no injuries, high productivity, retained key employees
- Tacoma distribution centre to serve customers
- Expected cost savings of US\$4.5m per annum



Stone strategic objectives

FY20 focus on sales growth and network optimization



Strategic objectives

- 1. Zero Harm Today
- 2. Leverage brand portfolio and align sales efforts to *grow* sales volumes

- Optimize plant network and execute operations initiatives to deliver synergies
- Increase category awareness through marketing and new product development

FY20 focus areas

- Continue to improve safety incident rates with focus on behavior
- Refine our customer focus beyond distribution network to drive demand
- Continue to deliver manufacturing synergies and optimize the network
- Complete integration onto a single ERP (SAP) system
- Continue product development to address changing market demands and to rationalize and simplify product portfolio

Agenda



Introduction Mike Kane

Boral North America David Mariner

Fly Ash Keith Depew

Stone Victoria Sherwood

Roofing Darren Schulz

Light Building ProductsJoel Charlton

Windows David Decker



Roofing strategic objectives

FY19 – a year of significant progress



Strategic objectives

- 1. Zero Harm Today
- 2. **Deliver synergies** through plant optimization and operational improvements

- **3. Expand product offerings** beyond the traditional clay and concrete offerings
- **4. Diversify end-market exposure** growing non-residential and re-roof segments



- Safety *incidents up* 4%¹ with improvement in H2
- ✓ Completed metal plant performance improvement and cost improvements
- ✓ Delivered *US\$11m in synergies* and completed ERP conversion
- Continuing growth from cross-selling components and services
- ✓ Revenue up 15% led by stronger concrete sales and value-based price increases averaging 5%
- ✓ Leveraged *Florida integration* to grow tile sales

^{1.} Reflects total recordable incidents, which includes lost time incidents and medical treatment incidents

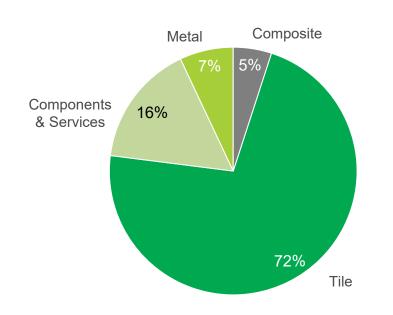
FY19 overview

BORAL

Strong results on increased sales and operational improvements

Commentary Product Category Growth¹ Volume up 15% and price up 5% for concrete Tile Significant growth from Florida integration Significant plant turnaround in 1H resulted in 2H growth Metal Positioned for sales growth in FY20 and beyond Domestic growth² Composite Export to UK Cross-selling components Components Diversifying product range & Services

Revenue breakdown by product category



[.] FY19 revenue growth

^{2.} Improvement vs FY18 is normalized for sale of Enviroshake in 1H FY18

Expand product offerings: Boral Steel

Turnaround results from FY19 "fix production" initiative



Background

- 3 legacy HW businesses rolled up consolidation was underway at closing
- Plant was in poor condition
- Capacity constrained due to inefficient operations
- 6 distribution centers
- 3 brands / product lines, >8,400 SKUs
- Multiple channels to market



- Consolidated into 1 product line
- Implemented LEAN manufacturing principles
- Significant cost and throughput improvements
- Consolidated 6 distribution centers into 1
- Rebranded BoralSTEEL™
- Cleaned up channels; all through distribution
- Strong demand; now positioned to deliver benefits



Deliver synergies: Florida tile

Growth supported by integration and optimization of plant network



Background

- Acquired remaining minority interest in Entegra
- FY19 focus on safety
- Entegra plant underwent "fix"
- Began execution of Florida network optimization







- Continued to upgrade plant performance
- Rationalized SKU's / profiles
- Harmonized product lines
- Re-balanced production across 2 plants
- 24/7 demand profile

Roofing strategic objectives





Strategic objectives

1. Zero Harm Today

 Deliver synergies through plant optimization and operational improvements

- Expand product offerings beyond traditional clay and concrete offerings
- **4. Diversify end-market exposure** growing non-residential and re-roof segments

FY20 focus areas

- Continue to drive down safety incidents with emphasis on plants operating 24/7
- Continue to deliver synergies with key focus on expanding cross-selling opportunities
- Further optimize integration of Florida business:
 - sustain cost improvements on higher volumes
 - final steps in product portfolio optimization
- Enhance value to our customers with broader components portfolio, better service, strengthened network
- Grow metal roofing to sustained profitable volumes

Agenda



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Windows David Decker



Light Building Products strategic objectives



FY19 progress on portfolio alignment and high growth products

Strategic objectives

- 1. Zero Harm Today
- Deliver synergies and execute on continuous improvement projects to offset cost pressure
- 3. *Maintain and leverage* established products, and *develop and grow* new lightweight composite products
- 4. Leverage distribution footprint to accelerate penetration of new, high growth products

- ✓ Zero LTIs; **safety incidents down** 22%¹
- ✓ Delivered ~*US\$4.5m* in synergies (over \$15m to date)
- ✓ Revenue up led by strong siding & trim growth
- ✓ TruExterior® Siding and Trim significant improvements
- ✓ Launched **new products** Versetta® Northern Ash, accessories & fasteners; Tapco M2X[™] and S2X[™] gages





Light Building Products: portfolio overview





Category	Description	Primary material	Brands	Light building products
	Vinyl Siding	Vinyl	Grayne™	CDAVNE
Siding and Trim	PVC Trim	Polyvinyl chloride (PVC)	Kleer®	Trulexterior
Invest in high growth products	Poly Ash Siding / Trim	Polyurethane	TruExterior®	SIDING & TRIM
3 ,	Panelized Stone Siding	Concrete	Versetta®	VERSETTA STONE
Shutters and Accessories	Decorative shutters, vents, blocks	Polyvinyl chloride (PVC)	Mid-America® / Builder's Edge® / Vantage	MID-AMERICA Siding Components
Nurture mature, cash-generating	Blocks and Mounts	Polyvinyl chloride (PVC)	Sturdimount	Atlantic
products	Functional Shutters	Composite	Atlantic®	Premium Shutters**
Specialty / Other	Metal siding tools	Aluminum	Tapco Tools®	Tapco integrated Wellcraft
Nurture mature, cash-generating products	Egress wells	Polyethylene	Wellcraft®	egress systems egress systems

FY19 overview



EBITDA higher and revenue steady in FY19 despite housing headwinds

Product Category

Growth¹

Commentary

Revenue breakdown by type

Siding & Trim





High growth, high return product groups with strong brand equity

Shutters and **Accessories**





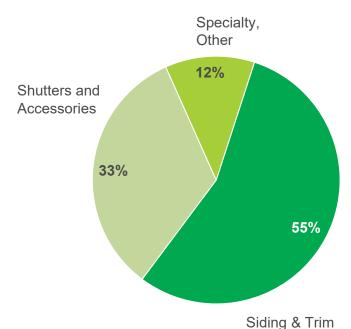
Slower housing activity impacted growth

Specialty, Other





Essential tools for the siding industry



Grow lightweight composite products



Focused on accelerating siding and trim products through the channel

Background

- Strategy to <u>invest</u> in earlier life cycle, high growth products
- Utilize full range of combined distribution channel –
 1-step, 2-step, Retail
- Innovative, premium performance products that address customer pain points
- Partner with Innovation Factory to commercialize next generation LBP product / platform

- Versetta®: launched Northern Ash, accessories & fasteners
- Versetta®: piloting retail program at ~130 Home Depot stores
- <u>TruExterior</u>®: exited unprofitable bevel siding,
 9% price increase based on value proposition
- Grayne™: moved into 1-step distribution









Versetta®

Grayne™

Maintain established products

"Nurture" shutters, accessories and tools portfolio



Background

- Nurture stage of life cycle mature and stable businesses that provide attractive cash flows
- Maximize operating efficiencies and preserve margins
- Utilized combined sales network to deliver opportunistic growth and cross-sell opportunities

- Vantage: Awarded Lowe's east coast business in FY18, now working to streamline product offering to gain efficiencies
- Atlantic®: utilizing higher-end TruExtrerior® relationships to gain sales
- Tools: Launched M2X[™] and S2X[™] gages.









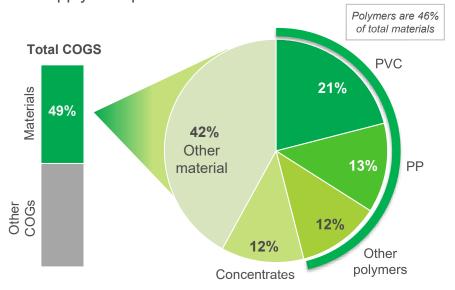
Deliver synergies



Addressing cost escalations through regrind¹ program and strategic sourcing

Background

- Highest input cost is materials
- FY18 Hurricane Harvey drove polymer supply disruptions and cost escalations



FY19 progress

- Leveraged material PVC purchases across division
- Secured multiple supply sources
- Synergies with Boral Windows continues
 - Regrind¹ savings at Franklin facility





1. Regrind: recycled raw material that is used in manufacturing process

Light Building Products strategic objectives





Strategic objectives

- 1. Zero Harm Today
- Deliver synergies and execute on continuous improvement projects to maintain margins
- Maintain and leverage established products, and develop and grow new lightweight composite products
- **4.** Leverage distribution footprint to accelerate penetration of new, high growth products

FY20 focus areas

- Build on strong FY19 safety performance
- Continue to deliver synergies (targeting ~US\$15m in year 4)
- Enhance margins in Shutters and Accessories through raw material management and lean manufacturing
- Leverage operations and R&D resources
- Grow siding and trim channel and broaden customer offering; continue cost improvement journey
- Continue to add tool accessories

Agenda



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Windows strategic priorities





Strategic Objectives

- Zero Harm Today
- Execute performance improvement programs to drive down costs and increase production
- 3. Strengthen multi-family capabilities
- **4. Grow** sales and expand geographical presence

- ✓ Implementing behavioral safety program -30% reduction in incident rate¹
- ✓ Lean initiatives and investments in Texas plants lowered costs and increased capacity
- √ Improved operating costs at Magnolia
- ✓ Increased multi-family sales
- Revenue increased 5% despite poor weather and a soft housing market
- ✓ Laid groundwork for **expansion into**Houston in FY20

^{1.} Reflects total recordable incidents, which includes lost time incidents and medical treatment incidents

FY19 overview

Revenue growth of 5% in FY19



Product category

Growth¹

Commentary

FY19 Revenue – end use segmentation

Residential single family





generated \$15m of new sales Introduced side load window

New customers in FY19

- targeting entry level housing
- · Leveraging Boral brand recognition

Residential multi-family





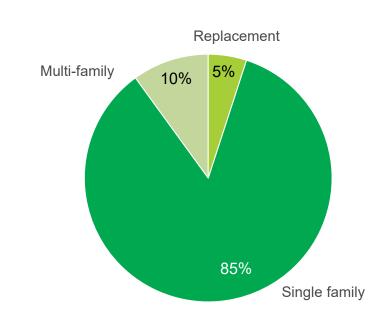
- · Focused effort beginning in FY18 - sales, marketing
- Increased sales 10%
- · Good volume; competitive on price

Repair and





- · Limited offerings
- Sold through distribution network
- Primarily manufactured in Georgia



remodel





1. Growth in FY19 revenue compared to FY18

Performance improvement

Progress on driving down costs and increasing capacity



Background

- Highly manual manufacturing processes
- Tight labor market results in high turnover rate and reliance on temp labor
- Rising raw material costs
- Inefficient workflow opportunities to decrease scrap and improve output
- Approaching capacity limits

Before - extrusion aisle



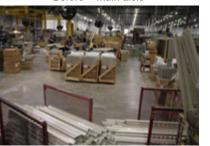
After - extrusion aisle



Inventory management

- Overhauled hiring practices and compensation reduced turnover, labor costs and reliance on temp employees
- Reduced temporary labor from 20% to 4% of hourly workforce
- Added new production line at Carrolton plant 14% increase in production capability
- Uniform vinyl profiles to address both material costs and manufacturing redundancy

Before - main aisle



After – main aisle



Workflow improvements

Grow sales: Houston expansion

Expanding geographical presence and addressing capacity constraints



Background

- Presence in Houston and South Texas limited
- Opportunity to deliver direct to jobsite in Houston
- Optimize network and expand geographical reach

Houston facts:

- Population¹ over 7m, 5th largest metro in the US
- CY18 Starts¹ ~54k, 2nd highest in the US



FY19 Progress

- Secured building location and commenced purchasing equipment for Houston plant
- Purchased Houston distributor and commenced building Houston management team
- Equipment installation and commissioning to begin in Q2 FY20
- Full production and direct delivery in Houston to commence in 2H FY20

Houston plant:

- Located in high growth NW Houston
- Facility sized for expansion
- Will service Houston MSA, South Texas and Louisiana markets



Oxford economics

Windows strategic priorities

FY20 - Capacity expansion to meet customer demand



Strategic Objectives

- 1. Zero Harm Today
- Execute performance improvement programs to drive down costs and increase production
- 3. *Optimize* plant network
- **4. Grow** sales and expand geographical presence

FY20 focus areas

- Implement Dupont STOP behavioral safety training across business
- Continuous improvement of manufacturing operations
- Develop technology platform to allow for more efficient and visible supply chain, inventory control, and scheduling
- Optimize network grow Magnolia volume regionally
- Successful start up of Houston manufacturing operation



Appendix



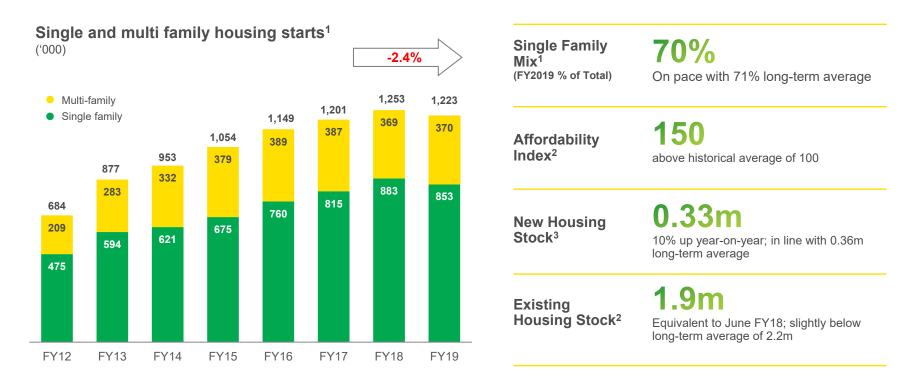
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Macroeconomic market overview

Housing construction markets continue to recover



Single family impacted by labor shortage and affordability



^{1.} Source: US Census seasonally adjusted annualized housing starts, July 17, 2019 release

^{2.} Source: National Association of Realtors (NAR); June 2019

^{3.} Source: US Census; May 2019

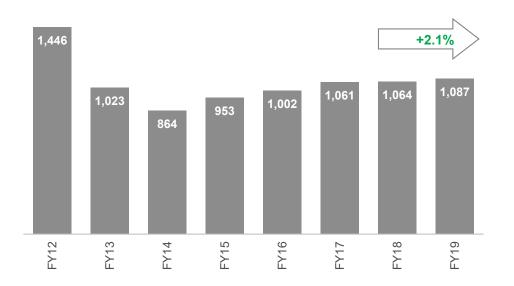
Non-residential

BORAL

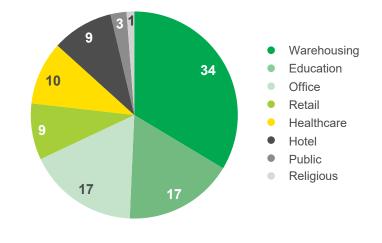
Warehousing, office, and education segments drove construction in FY19

Non-residential construction¹

(million square foot area)



FY19 breakdown by non-residential segment², %



108

^{1.} Source: Dodge Data & Analytics. Non-residential square feet area (millions), June 2019

Source: Dodge Data & Analytics

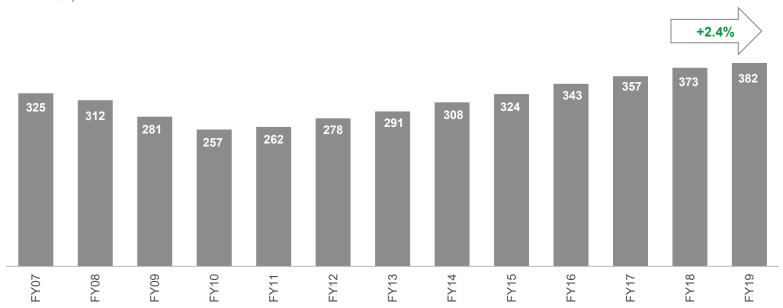
Repair and remodel (R&R)



Home improvement increasing, but at a slower pace than recent years

Building products retail sales¹

(Nominal US\$b)



^{1.} Source: Moody's retail sales of building products, July 2019

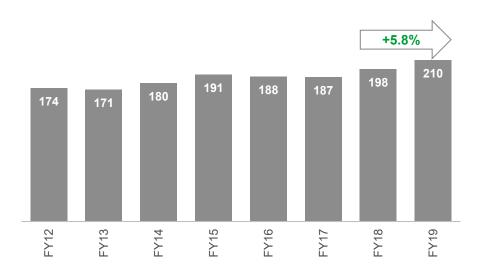
Infrastructure



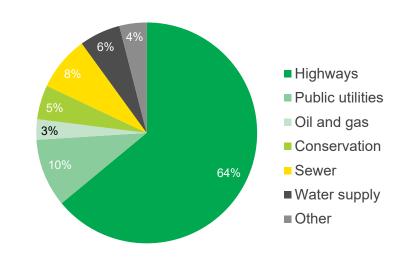
Highways continue to be the main driver in the infrastructure segment

Infrastructure activity, ready mix demand¹

(cubic yards, millions)



Infrastructure cement consumption², %



^{1.} Source: Dodge Data & Analytics, Infrastructure Ready Mix Demand, June 2019

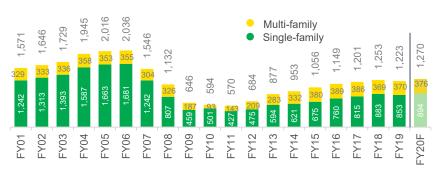
^{2.} Source: Portland Cement Association - Spring 2019

Boral North America's markets

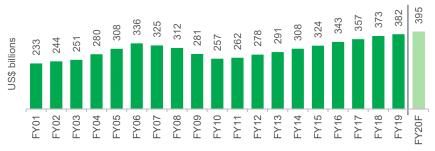
Outlook is for moderate growth across all segments



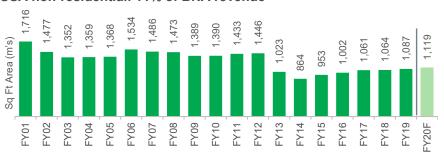




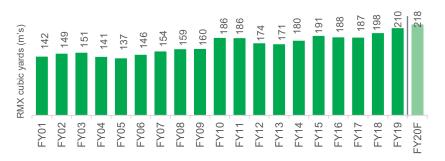
USA repair & remodel: 27% of BNA revenue²



USA non-residential: 11% of BNA revenue³



USA infrastructure: 14% of BNA revenue⁴

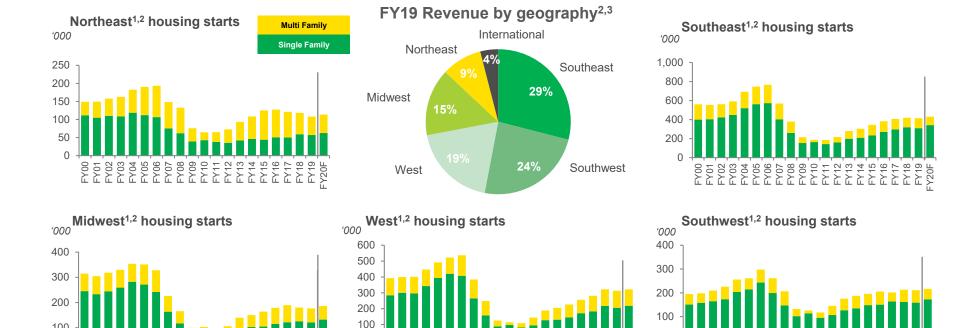


- 1. US Census seasonally adjusted annualized housing starts (July, 2019). Forecasts based on an average of analysts' forecasts sourced from NAHB, MBA, Wells Fargo, NAR, Fannie Mae and Freddie Mac
- Moody's Retail Sales of Building Products (July 2019); Forecast based on Moody's retail sales (July 2019), LIRA (July, 2019) and HIRA (November 2018)
 Dodge Data & Analytics, Non-Residential Area (June 2019, Q2 2019 update), Forecast based on Dodge Data & Analytics (June 2019), Oxford Economics construction forecast (Q2 2019) and FMI US
 - construction outlook (Q2 2019)
- 4. Dodge Data & Analytics, Infrastructure Ready Mix Demand (June 2019). Forecast based on Dodge Data & Analytics, Infrastructure Ready Mix Demand (June 2019) and PCA outlook (Spring 2019)

Housing starts fell across all regions in FY19



Forecasters¹ expect modest improvement in single family activity in FY20



^{1.} Based on the average of Dodge, Wells Fargo, NAR, NAHB, Fannie Mae, Freddie Mac and MBA analysts between Jan-Jun 2019. Historical data – US Census Bureau

[.] SOUTHEAST consists of AL, DE, FL, GA, KY, MD, MS, NC, SC, TN, WV, VA | SOUTHWEST consists of AR, LA, OK, TX | NORTHEAST consists of CT, MA, ME, NH, NJ, NY, PA, RI, VT | MIDWEST consists of IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI | WEST consists of AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY.

[.] Based on external revenue, including Boral's 50% share of Meridian Brick JV revenue which is not included in reported revenue



2.0

Headwaters synergies overview

Headwaters acquisition synergies



Businesses continued to deliver synergies in line with initial assumptions

Synergy drivers by business, US\$		Delivered in FY2019	Cumulative Delivered FY2019	Updated target within 4 years, pa
Corporate – incl. executive headcount, public compa	ny costs, procurement	\$2.1m	\$11.6m	>\$15m
Fly Ash	Sub-total	\$7.0m	\$18.5m	>\$24m
 Ash supply / network optimisation / logistics 				
Procurement				

- Sales coverage expansion & high value product growth Boral faces local supply constraints in some locations, HW has ability to supply
- Organisational efficiencies e.g. consolidating finance systems and overlapping sales coverage, engineering support and operations
- Other including technology / R&D

Stone Sub-total	\$6.4m	\$4.5m ¹	>\$29m
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- Plant network optimisation
- Sales coverage
- Procurement
- Manufacturing equipment
- Other including organisational efficiencies

^{1.} Recognizes the impact of share loss as a result of the acquisition

Headwaters acquisition synergies



Businesses continued to deliver synergies in line with initial assumptions

Synergy drivers by business, US\$		Delivered in FY2019	Cumulative Delivered FY2019	Updated target within 4 years, pa
Roofing	Sub-total	\$11.0m	\$18.9m	>\$30m
Procurement				
■ Cross-selling portfolio – e.g. re-sale products acc	count for ~20% of Boral's R	oofing sales, while	Headwaters has m	inimal exposure
Manufacturing & network optimisation				
 Manufacturing efficiencies 				
 Other including organisational efficiencies 				
Light Building Products	Sub-total	\$4.5m	\$15.2m	>\$16m
Procurement				
 Sales coverage, cross selling, retail presence 				
 Organisational efficiencies 				
Other				
Other: Including Block ¹ & Windows		\$.7m	\$2.0m	>\$1m
	Total	\$31.7m	\$70.7m	\$115m

^{1.} Prior year block synergies included in cumulative figure

Disclaimer



The material contained in this document is a presentation of information about the Group's activities current at the date of the presentation, 19 September 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).

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