

INVESTOR SITE TOUR & PRESENTATIONS

Boral North America

Atlanta, Georgia and Lake Wales, Florida 18–19 September 2018

Day 1 and day 2 schedule Tuesday and Wednesday, 18-19 September 2018

Sep 18 – Time Agenda 8:00 a.m. - 12:10 p.m. **Management Presentations and Q&A** 12:10 p.m. - 12:40 p.m. Lunch 12:40 p.m. – 2:25 p.m. Drive to Bowen plant 2:25 p.m. – 4:20 p.m. Safety Briefing, Tour of Bowen facility 4:20 p.m. – 5:35 p.m. Drive to Four Seasons Hotel Cocktails and Dinner 6:45 p.m. – 9:15 p.m. Sep 19 - Time Agenda 10:30 a.m. – 11:30 a.m. Lunch buffet at Ritz Carlton Orlando 11:30 a.m.- 1:20 p.m. Drive to Lake Wales Roofing Plant Safety Briefing, Demo, Tour of Lake Wales facility 1:20 p.m. – 3:25 p.m 3:25 p.m. – 5:05 p.m. Drive to Ritz Carlton

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Agenda

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



Boral today

Transformation strategy on track with three strong divisions and a robust balance shee

1 BORAL AUSTRALIA

Delivering further gains and maintaining leading positions

- Key supplier to strong & resilient infrastructure, nonresidential and residential construction markets
- Valuable quarry positions and downstream networks
- Strengthening margins and customer experience through excellence programs and innovation
- > ROFE of 17.5%

2 USG BORAL

Positioned to return to earnings growth plus strategic options

- Organic and innovationbased growth including Sheetrock[®], technical board & non-board
- Responding to cyclical demand changes and competitive pressures
- In FY19, strategic opportunity to return to 100% ownership or expanded JV
- > ROFE of 9.9%



Synergy benefits, transformation and growth on track

- Headwaters acquisition is delivering substantial growth and driving ROFE recovery
- Further growth through market recovery, innovation and fly ash strategy
- Short-term operational issues largely addressed
- Four year synergy target increased 15% to US\$115m
- > ROFE of 4.4%

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Solid balance sheet and growing shareholder returns

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- At 30 June 2018, gearing (net D / net D + E) of 30%
- Boral's principle debt gearing covenant well within threshold
- Denver divestment proceeds will reduce net debt from \$2,453m to \$2,281m
- > 28% growth in EPSA1

1. FY18 on prior corresponding period, earnings per share before amoritzation

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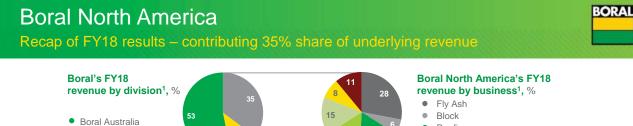
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	 Establishes Boral North America (BNA) as a leader in our product areas 	DELIVERS
STRENGTHENING The Portfolio	 Grows scale of Fly Ash, Stone, Roofing and Light Building Products (LBP) 	✓ Strong businesses
	 Improves capabilities, offering and earnings 	✓ Platform for innovation and
	 Balances end-market exposures, reducing dependence on new residential building 	growth
TRANSFORMING Our Business Position	 Diversifies channel, geography and customer base 	✓ Significant value and synergies
	 Creates a more variable based, low fixed cost asset platform 	✓ Improved quality of earnings
	Establishes a significant LBP platform	• Improved quality of earnings
SCALING Light Building	 Focuses on large repair and remodel segment 	✓ Better positioned to exceed cost of capital through cycle
Products	 Complements Innovation Factory 	



- USG Boral
- Boral North America

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	12



- Roofing
- Stone
- Light Building Products • Windows
- Meridian Brick

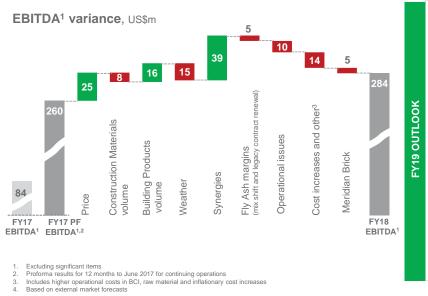
FY18	FY17	proforma	FY18 US\$m	External revenue ⁴	EBITDA ⁴	
1,656	726	1,666			70/	7
284	84	260	, ,			EBITDA ROS 22
17.2	11.6	15.6				
208	55	188	Stone	268 7 2	2%	
12.5	7.6	11.3	Roofing	320 🔺 8	3%	Building Produc
			LBP	276	6%	EBITDA ROS 15
	-	100	Windows	150 🔺 32	2%	
	1,656 284 17.2	1,656 726 284 84 17.2 11.6 208 55 12.5 7.6 161 45	FY18 FY17 proforma 1,656 726 1,666 284 84 260 17.2 11.6 15.6 208 55 188 12.5 7.6 11.3 161 45 158	proforma US\$m 1,656 726 1,666 284 84 260 17.2 11.6 15.6 208 55 188 12.5 7.6 11.3 161 45 158 Windows Windows	FY18 FY17 proforma FY18 External 1,656 726 1,666 US\$m revenue4 1,656 726 1,666 Fly Ash 523 ▲ 17.2 11.6 15.6 Block 117 ▼ 208 55 188 Stone 268 ▼ 2 12.5 7.6 11.3 LBP 276 ▲ 4 161 45 158 Windows 150 43	FY18 FY17 proforma 1,656 726 1,666 284 84 260 17.2 11.6 15.6 208 55 188 12.5 7.6 11.3 161 45 158

Includes Boral's 50% share of underlying revenue from USG Boral and Meridian Brick joint ventures, which are not included in Group reported revenue
 Excluding significant items
 ROFE calculated on funds employed as at 30 June 2018 and average monthly funds employed as at 30 June 2017
 Change from FY18 relative to FY17 PF

Boral North America

Recap of FY18 EBITDA impact and FY19 outlook (as disclosed 29 August 2018)

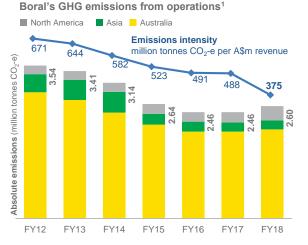
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- EBITDA growth of around 20% or more in FY19 (for continuing operations)
- Further synergies of ~US\$25m and operational improvements
- Underlying market growth expected⁴: ~5% in housing starts to ~1.31m, ~3% in repair & remodel, ~2% in non-residential and ~6% in infrastructure
- · Fly ash volumes should increase at least in line with cement demand, reflecting efforts to increase available supply
- Price growth for most products with margins improving or at least holding across all businesses
- Meridian Brick JV delivering positive and improved earnings
- · Assumes a return to normal weather patterns, with the spring recovery expected from March 2019

Boral's CO₂-e emissions totalled 2.60m tonnes in FY18 and grow lighter weight products is delive

2018 Annual Review & Sustainability Report now published on www.boral.com



In FY18:

- Absolute GHG emissions: 2.6m tonnes CO₂-e p.a. (Scope 1 & 2)
 - 懀 5% in FY18 (largely due to Headwaters)
 - 27% since FY12
- GHG emissions intensity: 375 tonnes CO₂-e per A\$m revenue
 - 23% in FY18 (due to Headwaters)
 - 44% since FY12

Boral's Scope 3 (supply chain) cementitious emissions

- For clinker imported by Boral Cement and cement used in North America Building Products: ~1.2m tonnes CO2-e pa
- Boral's fly ash in supply chain avoids ~5.2m tonnes CO₂-e pa
- Target to reduce supply chain emissions by a further 1.1-1.5m tonnes CO2-e p.a. through increased fly ash supply2

For 100% owned operations and Boral's share of 50%-owned joint ventures. Excludes some JVs which in aggregate are not deemed to have material emissions Based on target to increase net supply of fly ash by 1.5-2.0m tons p.a. over three years

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Agenda – Boral North America

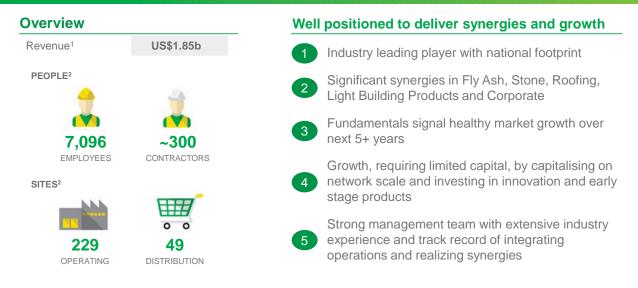


- Year in Review
- Strategic Priorities



Boral North America ("BNA") overview

A leader in fly ash and building products industries



For continuing operations based on 12 months ended 30 June 2018, and includes Boral's 50% share of revenue from the Meridian Brick JV for 12 months ended 30 June 2018
 As of 30 June 2018, people on a full time equivalent basis, includes Headwaters and Meridian Brick employees and sites

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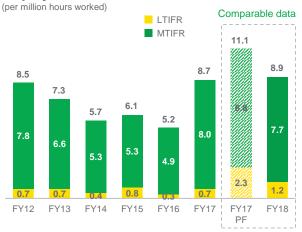
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Safety: a key focus within integration

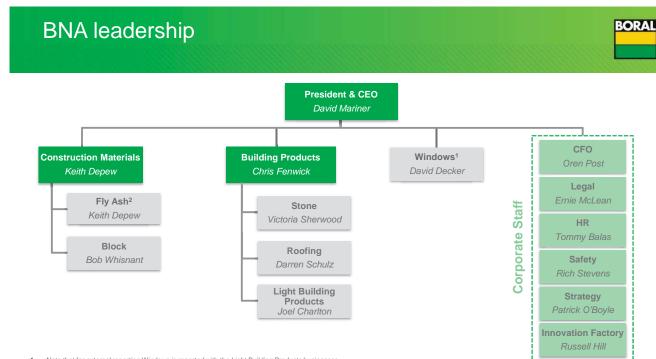
Significant improvements in safety culture and performance

Boral North America employee and contractor RIFR¹

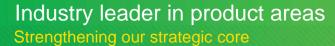


- On a comparable basis (proforma FY17) RIFR of 8.9 down from 11.1 and LTIFR of 1.2 versus 2.3 last year
- RIFR for Headwaters businesses improved 27% year on year to 10.7
- RIFR of 8.9, up from reported 8.7 in FY17 and 5.2 in FY16, reflecting ~4,000 FTEs from Headwaters from May 2017 and ~1,200 FTEs from Meridian Brick from Nov 2016
- Implementing Zero Harm Today culture across all sites, emphasizing hazard and risk awareness
- Implemented safety absolutes and proper incident reporting

Recordable incident frequency rate (RIFR) per million hours worked is made up of lost time in circle requency rate (LTIFR) and medical treatment incident rate (MTIFR). Includes employees and contractors . 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 Brick joint venture operations. FY17PF includes a full 12 months of Headwaters and Meridian Brick safety data for comparable purposes.

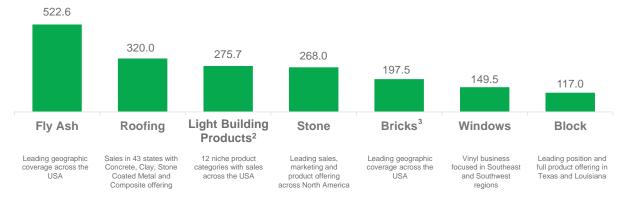


Note that for external reporting Windows is reported with the Light Building Products businesses Former President of the Fly Ash business, Bill Gehrmann, has transitioned to support management through a multi-year consulting agreement 2.







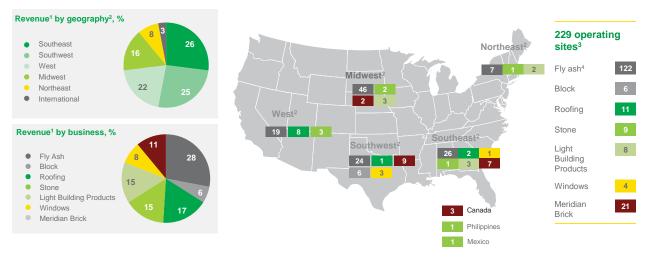


Excludes Derver Construction Materials business divested in July 2018 Light Building Products includes siding, trim, panelized stone, shutters, vents, blocks and tools Represents Boral's 50% share of revenue from the Meridian Brick JV for 12 months ended 30 June 2018 1. 2. 3.

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Extensive national footprint

Strong national networks in building products and fly ash



Based on FY18 external revenue, including Boral's 50% share of Meridian Brick JV revenue, which is not included in reported revenue 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. As at June 2018. Includes 4d clay mines and four R&D sites. Excludes mothballed plants Operating site definition for Fly Ash amended in FY18; site totals are therefore not directly comparable with prior period data 1. 2.

- 3. 4.

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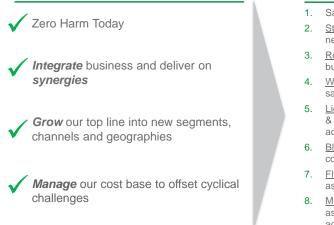
- Agenda Boral North America
- **Business Overview**
- Year in Review
- **Strategic Priorities**



BNA strategic objectives

FY18 progress

Strategic objectives



1. Reflects total recordable incidents, which includes lost time incidents and medical time incidents

FY18 progress

- 1. Safety incident rates down 27%¹
- <u>Stone</u>: completed plant resets and made progress towards network optimization initiatives
- 3. <u>Roofing</u>: significant progress towards integration of Florida tile business and metal turnaround plan
- 4. <u>Windows</u>: improved Magnolia operation and grew multi-family sales by 5x
- Light Building Products: invested in capacity expansion for siding & trim business, expanded retail presence in shutters & accessories business
- 6. <u>Block</u>: gained share in North Texas and increased geographic coverage in Louisiana and Mississippi with 39 new locations
- <u>Fly Ash</u>: invested in storage capacity and laid foundation to grow ash supply
- Meridian: completed integration of IT systems and eliminated associated redundant headcount; implemented price increases across all regions
- 9. Delivered US\$39m in synergies

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Our safety journey Working to achieve zero harm today

FY18 Safety Highlights

- Implemented <u>safety absolutes</u> and trained staff on <u>hazard and risk recognition</u>
- Deployed consistent <u>incident reporting</u>, providing insight into problem areas
- Developed <u>traffic management</u> programs to minimize pedestrian and mobile equipment interactions
- Spent <u>US\$15m¹</u> to bring legacy Headwaters facilities up to Boral standards
- Will focus on <u>behavioral safety</u> programs in FY19

1. Safety spend includes \$6.7m in capital and \$8.8m in expenses





Roof access gate Building Products – Salisbury, NC



Stop saw Stone – Everett, WA



Chop saw guarding Windows – Krestmark TX



Pedestrian signs Block – Alleyton, TX



Hand rails Fly Ash – SynMat, GA

Strengthening our culture

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Finding ways to foster collaboration among our employees and businesses

People

- Presenting employee awards and highlighting achievements
- Awarding tuition scholarships to our teams' children
- Investing in programs to develop talent
- Highlighting employee profiles and success stories



Communications

- Strengthening social media presence
- Delivering newsletters to keep employees informed on latest news
- Highlighting and sharing successes and best practices
- New divisional communications function to drive BNA culture



Collaboration

- Consolidated International Builders Show (IBS) presence
- Pooled cross functional and cross business teams to design margin enhancement projects
- Created cross functional team to identify and execute on procurement opportunities



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Portfolio management

Strengthening capabilities and exiting non-core businesses and product lines

1. Entegra Roofing	Consolidated	Consolidated concrete tile capabilities in Florida into Boral Roofing
2. Denver Construction Materials	Divested	Boral's last ready mix concrete and quarry operations in the US, identified as non-core
3. Clubhouse Decking	Divested	Small decking operation within Tapco at the time of Headwaters purchase
4. Enviroshake Roofing	Divested	Small composite roofing operation at time of Headwaters purchase
5. Energy Business	Divested	Small clean energy operation at the time of Headwaters purchase; identified as non-core

Major wins and new challenges post acquisition Integration & synergies progressing well, operational issues largely addressed

Challenge / Opportunity

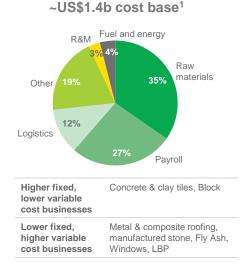
- Synergy opportunities initial Year 1 targets of US\$30-35m (and run rate of US\$50-55m); US\$100m year 4 target
- Safety performance of Headwaters
- Operational issues plant integration (Oceanside, Entegra, Magnolia), commissioning capacity (Lake Wales, Greencastle), safety interventions (StoneCraft)
- Stone result in part reflects share loss and included as a dis-synergy in year 1
- Challenges in Meridian Brick impacted by decline in brick intensity and smaller network post restructuring
- LBP higher production costs in TruExterior® siding & trim associated with a newer siding product line and raw materials
- Fly Ash attractive medium- and longer-term opportunities. Short term supply disruptions
- **Right people** great depth of talent from Boral and Headwaters businesses
- 1. Based on currently known utility retirements as disclosed by the U.S. Energy Information Administration (EIA) www.eia.gov

Response / Status

- ✓ Outperforming US\$39m net synergies delivered, exceeding year 1 target (US\$51m run rate); year 4 target now US\$115m
- 27% improvement in Headwaters RIFR to 10.7 in FY18
- Operational issues largely resolved Oceanside metal roofing (California) will continue to improve in FY19. Capacity upgrades will ramp up in FY19
- Stone share stabilized, working to recover volumes. Manufacturing consolidation underway
- Meridian Brick ongoing focus to deliver synergies of US\$25m in FY21. Expect to be profitable in FY19
- LBP BCI TruExterior® issues being addressed expect improvements from FY19
- ✓ Fly Ash aiming to increase our annual supply of available fly ash to the market by 1.5 – 2.0 million tons¹ in 3 years
- Leadership team strengthened management support expanded plus fly ash support through consulting arrangement

BNA cost base

Recovering cost increases through price



FY18 update

- Raw materials costs: increased ~3-5% depending on region and material. Cement, vinyl, glass, PVC experienced increases. Some materials for composite siding increased more significantly
- Labor: shortage of qualified workers is evident in some regions. Overall, wage rate growth ~3%
- Logistics: availability of carriers and equipment, along with increased fuel prices has been challenging but manageable.
 ~35% of transport costs billed directly to customers (Fly Ash and parts of Roofing, LBP and Block); remaining cost increases recovered through price
- Energy and fuel: electricity, gas & fuel total cost of ~US\$49m in FY18 (versus US\$28m in FY17 reflecting Headwaters acquisition)

In FY19, targeting to recover cost increases through price

1. Excluding Meridian Brick JV

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Agenda – Boral North America

- Business Overview
- Year in Review
- Strategic Priorities



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BNA strategic objectives FY19 progress focus areas

Strategic objectives





Grow our top line into new segments, channels and geographies

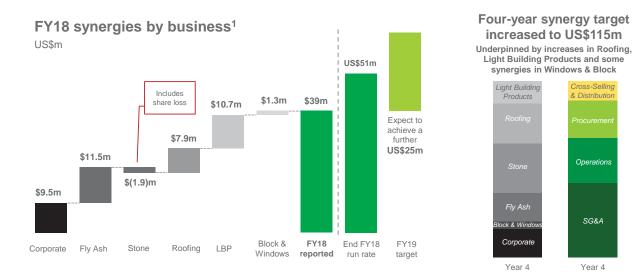
 Manage our cost base to offset cyclical challenges

FY19 focus areas

- 1. Continue Zero Harm Today journey
- 2. <u>Stone</u>: grow share, continue manufacturing optimization
- 3. Roofing: complete Florida tile integration and metal turnaround
- 4. <u>Windows</u>: further lean implementation and operational improvements to create additional capacity
- 5. <u>Light Building Products</u>: continue margin enhancement programs across portfolio and grow siding & trim channel
- 6. <u>Block</u>: expand sales in high-margin products and explore opportunities to increase geographic footprint
- 7. Fly Ash: expand supply
- Meridian Brick: achieve profitability in FY19, execute on US\$25m in synergies by FY21 and implement continuous improvement across network
- Continue to identify and execute on synergy opportunities (targeting ~US\$115m in year 4)

On track to deliver US\$25m FY19 synergy target

Four-year synergy target increased to US\$115m



1. Synergies include cost synergies and estimated cross-selling and distribution revenue synergies, and exclude one-off integration costs estimated at US\$90-\$100m over FY18 and FY19

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Year 4

Agenda

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Agenda – Fly ash

Business Overview

- Year in Review
- Strategic Priorities



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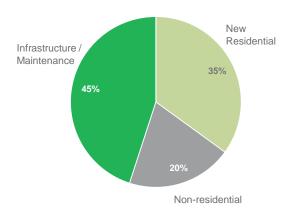
Business overview

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

Snapshot of Boral's position

- FY18 revenue of ~US\$523m
- FY18 supply of >7.1m short tons¹ of fly ash to US construction industry – predominantly ready mix concrete industry
- National supply / distribution footprint with ~122 operational sites providing full service portfolio to utilities and customers
 - 63 fly ash supply, 6 gypsum supply, 7 LA ash sites, 19 service only sites, and 27 distribution terminals
- Leading fly ash beneficiation technologies
- Strong reputation with utilities & fly ash customers, with excellent quality, safety, environmental track record
- National coverage, ash sales in 46 states
- 1. Short tons equals 2,000 pounds; supply reflects FY18 results
- 2. Source: Management estimates on FY18 results





Business overview (cont.)

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

Connect the utility to end use

Utility

 Utilities motivated by production costs & demand

Marketer

Marketers need:

1

2

3

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

End User

- End users seek:
 - Low landed cost, consistent supply and quality
- 1. Sites with only site service operations, Boral provides services at many marketing sites.

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 19 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

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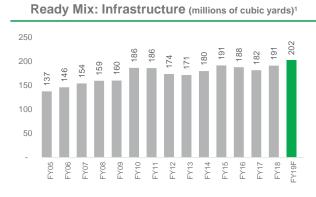
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Fly ash is a growth business for Boral Boral is well-positioned to continue growing the business

We are targeting to meet and exceed the rate of ready mix demand growth and to increase fly ash substitution over time, while continuing to deliver price gains and synergies

- Demand is growing
- ✓ Price is growing in a competitive environment, 8-10% p.a. since FY17
- Growing fly ash supply through several strategic opportunities
- Margins are strong, albeit FY18 impacted by extreme weather and realignment of Texas network
- Delivered US\$11.5m of synergies in FY18 and confident of achieving US\$20m of synergies in year 4

Construction driving fly ash volume



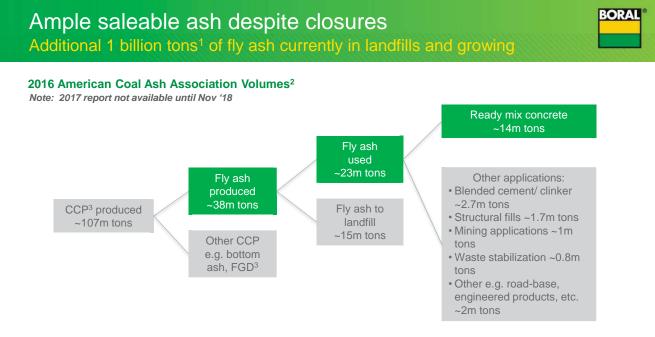
 Forecast growth of ~6% in FY19 driven by continued investment into US Infrastructure

Source: Dodge Data & Analytics, Infrastructure Ready Mix Demand. Portland Cement Association: Spring 2018 Forecast USGS Annual Yearbook: July 10, 2018

- Fly ash growth could exceed ready mix growth as replacement rates increase from 16% currently
- Fly ash demand underpinned by ready mix demand, substitution rates and growth in non-traditional products
- Strong ready mix growth expectations driven by continued investment in national infrastructure
- Cement sales forecast of 96.8m tons² in CY18, approaching domestic capacity of 104m tons³
- Non-traditional products sales continue to improve in high strength concrete, filler applications, and engineered products

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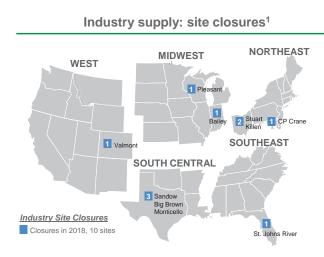


~1 billion tons of fly ash currently landfilled (source: American Coal Ash Association) | ~1.5 billion tons of CCPs landfilled (source: US EPA)

ACAA 2016 Coal Combustion Product (CCP) Production & Use Survey report CCP is Coal Combustion Products; FGD is flue gas desulfurization which includes gypsum and sludge

Industry supply impacted by closures

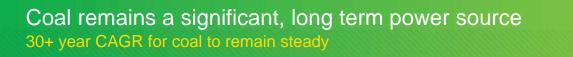
Closures in FY18 impacted industry sales by ~1m tons

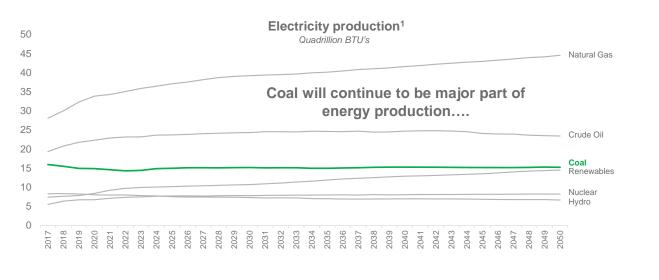


Closure impacts¹

- 10 plants closed in FY18
- 2.5m tons of annual production taken offline
- Impacted annual industry sales by ~1.0m tons of annual sales

1. Source: EIA, publicly available announcements



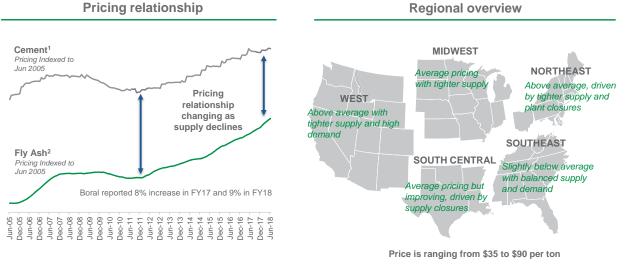


1. EIA: 2018 Energy Outlook: Total Energy Supply, Deposition, and Pricing, Energy Production

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Industry pricing dynamics strong

Boral pricing up ~9% in FY18, driven by high demand and tightening supply



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



Contracts and services¹

- Products make up 70-80% of revenue
- Site services make up 20-30% of revenue
- Fly Ash supply 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

Examples of Competitors





Boral's presence across the US



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Our value proposition

One stop shop, solutions provider for utilities and our end users

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



1. Coal combustion residuals

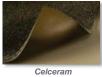




Wet to Dry Conversion

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: Widely required in many state DOT / federal project works to improve durability
- Increasing use in concrete to increase strength and improve properties in building construction





Harvesting





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Agenda – Fly ash

- Business Overview
- Year in Review
- Strategic Priorities



Fly ash strategic priorities

Integrating the businesses while managing our supply

Strategic objectives

- ✓ Zero Harm Today
- Expand marketable supply through storage, ash harvesting, wet to dry conversion, and technology
- Deliver synergy value through integration, including best practices and technology
- ✓ Leverage full *service offering* to market

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

✓ Manage supply base

FY18 progress

- 1. Safety incidents down ~8%¹
- 2. Achieved price increases of ~9%
- Expanded supply through wet to dry conversions and increased storage to capture seasonal supply in 3 areas
- 4. First US dry harvesting operation nearing implementation in Pennsylvania
- Bundled service platform to include plant services, gypsum, and circulated fluidized bed (CFB)
- 6. Managing through dynamics of utility closures
- 7. Delivered ~US\$11.5m in synergies

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Challenging year due to supply correction 6 site closures in 2018, four sites selling marketable material



Boral supply: 2018 site closures

Challenges

- FY18 sales decreased 0.4m tons
 - 0.2m net tons from Texas closures
 - 0.2m net tons from weather, intermittent closures and St. Johns closure

Actions taken in FY18

- Repositioned supply in Texas through optimization
- Commenced Dallas distribution terminal
- Finished Houston distribution terminal
- Gained new Florida contract

We expanded storage to manage our supply

Expanded fixed storage by ~65k tons

Fixed storage

- In FY18, expanded fixed storage
 - 20k tons in Houston
 - 35k ton dome in Georgia
 - 10k ton silo in Boston
 - Capex of US\$12m1 for 65k tons of new storage
- New storage will support capture of incremental tons in key areas





Houston terminal

Bowen, GA Dome

Approved and spent in FY18 Approved and committed in FY18, to be spent in 1HFY19

Floating storage

- FY18 approval to expand rail car fleet by 170 cars that leverages ~20k tons of floating storage
 - 70 cars to support Western US
 - 100 cars to support Texas strategy
 - Capex of ~US\$13m² for additional 20k tons of new storage
- Targeting 8 to 10 turns per year





Rail loading system

Bowen loadout

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BORAL

Began harvesting / wet to dry conversion operations Incremental supply through non-traditional outlets, targeted at similar margins

Dry harvesting in Pennsylvania

- Partnered with utility for the first harvesting of a closed • landfill in the USA
- Removes and beneficiates material that was historically i, disposed
- Site has ~2m tons of reserves that will support undersupplied Northeastern area
- First shipment from site anticipated to occur in September 2018
- Expect ~40-50k tons p.a. initially, growing to >100k p.a.
- Ξ. ~US\$6m in capital



Stockpiled Ash



Harvesting Site

Wet to dry conversion in Alabama

- Wet sluicing was normal practice in the industry, ash is not marketed at these facilities
- Regulations eliminating this practice
- Boral converted 2 sites from wet to dry in Alabama and maintained the marketing rights
- New supply coming online in FY19 •
- Minimal capital



Alabama Project

Alabama Project

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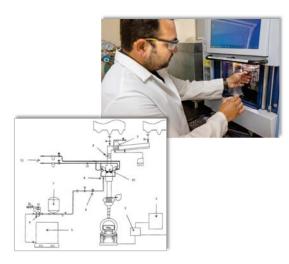
Optimized our beneficiation technology

BORAL[®]

Leveraging improved beneficiation technology to increase supply

RestoreAir $^{\!\otimes}$ – Technology to mitigate the impact of carbon in ash for use in concrete

- Integrated the two legacy technologies (PACT[®] and RestoreAir[®]) based on best practices
- New reagent formulation (RA4.2) with improved dispersion and better compatibility with concrete admixtures
- RA4.2 was formulated and released within 6 months of transaction
- Large sources were converted within 1 year; whole system converted within 15 months
- Implemented system improvements to optimise reagent dosage and reduce cost
- Deployed a robust QC program to improve product quality
- New formula estimated to support growth at 7 sites



Virtually eliminated customer complaints and down-time

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Strengthened our service offering Offered utilities a wide range of civil, design, and engineering services

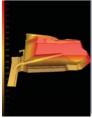
 As a % of total sales, Boral Plant Services (BPS) contributed:

- ~22% in FY17
- ~28% in FY18 due to two major projects
- Forecast ~20% in FY19
- Services provided include:
 - Design: Provide design expertise on onsite projects
 - Engineering: Provide engineering support across many 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 less than fly ash margins









Design / Engineering



Landfill Oversight

Construction

1. Coal combustion residuals

Providing other non-traditional services Offered utilities services beyond traditional collection and marketing

Synthetic materials

- Leaders in synthetic gypsum dewatering equipment design, processing, and sales management
- Offer expertise on dewatering and separation technologies
- Mobile technology is marketable beyond contracted sites
- Margins in line with fly ash sales margins



LA ash

- Collects 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



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Agenda – Fly ash



- Business Overview
- Year in Review
- Strategic Priorities



FY19: supply, our central focus

Focused pipeline of initiatives to manage and grow our supply

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Growing our fly ash volumes Immediate focus on capturing seasonal contracted tons

Plans to increase supply of Fly Ash by capturing more from current contracted volumes and increasing total contracted volumes



IMMEDIATE OPPORTUNITY: ~3.5m tons of fly ash to landfill for seasonal, quality, network reasons etc:

- A proportion of this presents a valuable, untapped source, depending on location, availability, quality, storage etc
- Reduce good quality ash to landfill through network optimization and storage
- Reduce lower quality ash to landfill through beneficiation and blending

ADDITIONAL OPPORTUNITIES:

- New contracts
- Reclaim
- Other: wet to dry ponding, imports

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

Plans to increase annual available supply by net 1.5 to 2.0 million tons in 3 years



1. Based on currently known utility retirements estimated to impact Boral's network by ~800k tons p.a. (including ~300k ton p.a. from Texas closures in FY2019)



~70k tons, bringing total storage to ~600k tons

Southwest

50

ĥ

BORAL 2. Pursuit of new domestic contracts Expanding domestic contracts through full service offering Expanding marketing presence Internal review of competitive landscape Plant services... completed during FY18 Identified key domestic contract targets for the short and medium term Developing strategy to make strategic bid for all Technology.. contracts that support growth pipeline Leverage beneficiation technologies and full . service offering, i.e. wet to dry conversion Next phase is to understand where new beneficiation technologies may unlock supply Logistics... that was historically not saleable Three contracts gained in FY18 51

3. Harvesting ash

Two separate streams, short and medium/long term horizons

Dry impoundment

- Remove landfill materials, beneficiate and market
- Medium to long term opportunity with a large reserve of quality ash in dry landfills
- Boral first to offer beneficiation service in US, opening the first of its kind harvesting operation in a closed landfill in Pennsylvania
- Targeting 5 additional contracts over next 3 years



Dry landfill in Pennsylvania

Ponded material

- Opportunity to harvest and beneficiate ponded material being driven by regulatory changes
- Mainly focused in East Coast
- Boral is leading industry player that provides a full service solution to the utilities, i.e. technology, harvesting, site services
- Boral to participate in multiple upcoming proposals in the next 3 years



Fly ash pond at operational facility

BORAI

4. Grinding & blending

Extend supply with non-traditional materials

Natural pozzolan

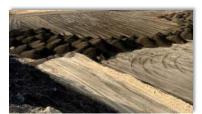
- Completed purchase of a ~4.5m ton reserve of natural pozzolan in Utah in August 2018
- Reserve was purchased for US\$4.5m + \$1/ton when used
- Natural pozzolan will be processed and blended with fly ash to extend supply
- Targeting incremental ~150k tons post capital investment



Reserve Pile #4: Eureka, UT

Multi source blending

- Blend marginal quality ash with high quality to grow supply
- Blend in regions that are supply constrained
- Still meet ASTM standards
- Enhance performance to grow sales



Bottom ash reserves

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5. Imports Medium term strategy, targeting first shipments in FY19

Bringing additional supply to constrained regions

Imports background / key metrics

- 1. Targeting US fly ash imports sourced from:
 - Land bound options
 - Ocean bound countries
- 2. Future opportunities will continue to be explored
 - Coal power plants will remain a critical portion of the global energy supply
 - We estimate millions of tons of disposed material to provide opportunities for the medium and long term

Supply chain opportunities

- 1. Demand / supply optimization underway
- 2. Exploring barge opportunities from port to local MSA's¹
- 3. Exploring partnerships to reduce capital needs
- 4. Plan is to continuously optimize network to identify gaps and future opportunities





1. Metropolitan statistical area

6. Technology

Technologies, LLC. in March 2018

LOI, a key ASTM standard

Acquired beneficiation technology and partnered with aggregate technology

LSA agreement

- In June 2018, Boral completed an agreement to maintain exclusive licensing for the LSA aggregate manufacturing process in the US
- The technology provides an outlet for high carbon fly ash that needs to be encapsulated and provides needed aggregate supply to undersupplied US markets
- The technology does not require additional fuel due to combustion of residual coal in the fly ash
- This option enhances Boral's ability to bid on marketing and harvesting opportunities



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Boral Acquires PMI Ash Beneficiation choose and the second seco

Carbon Burn Out (CBO)

Completed acquisition of CBO technology from PMI Ash

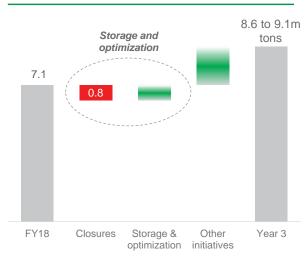
Technology burns excess carbon in fly ash and lowers

Currently 4 CBOs with this technology are in the US¹

Exploring opportunities with multiples utilities

1. CBOs are not owned by Boral

Outlook is strong for Boral Targeting volume growth of ~1.5 to 2.0m tons in three years



Ash Outlook (millions of tons)

Business outlook

- <u>Price</u>: Continued opportunity to narrow gap with cement
- <u>Demand</u>: Underpinned by ready mix concrete and specifications
- <u>Supply</u>: Growing capabilities with full portfolio offering
- <u>Sales</u>: Generating incremental sales from key initiatives, underpinned by demand growth
- <u>Margin</u>: Targeting to maintain or exceed current performance

Agenda

Introduction	Mike Kane
Boral North America	David Mariner
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Light Building Products	Joel Charlton
Windows	David Decker



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Agenda – Block



- Year in Review
- Strategic Priorities



Brick, *block* & paver industry: Product categories

Multiple offerings from basic masonry units to high-end non-residential block



FY18 overview

Product Category		Commentary	Revenue breakdown by type
Colored Custom	-	Specialized blocks Unique solutions for customers	Colored Custom Other Manufactured Foundation
Gray Block		Standard gray masonry units High safety standards	Ballostapes 3% Gray Block
Foundation		Shims, cylinders, caps, and other High strength standards	Manufacturing footprint
Hardscapes		Pavers, stepping stones, and other Range of styles, sizes, and textures	• Dallas
Other Manufactured	Sol and a second	Various products	Palestine San Antonio Houston Baton Rouge Alleyton

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Agenda – Block

- Business Overview
- Year in Review
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FY18 focus areas and priorities

Strategic objectives



Expand geographic coverage



Diversify end-markets



FY18 progress

- 1. Safety incidents decreased by 36%¹
- 2. Gained share in North Texas
- 3. Increased sales of resale products
- 4. Reduced operational cost in Dallas operation by ~10%
- Increased geographic coverage in Louisiana and Mississippi with 39 additional big box stores

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

Safety journey Continued focus on safety at all sites

Safety overview

- 4 locations with 365 days incident free
- Embracing new safety changes, with painting, 5S¹system, and guarding machinery
- Safety steering committees in all locations driving safety culture
- Safety audits performed routinely
- Traffic management plan in place to prevent incidents between mobile equipment and pedestrians
- 1. Process in organizing spaces for work to be performed efficiently, effectively, and safely







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New handrails for catwali

Utilizing big board machine to expand production Delivering efficiencies and creating new opportunities

Big board FY18 update

- Boral's big board machine is the largest in the US
 - Big board makes 18 blocks¹ at a time
 - Traditional Besser makes 4 blocks¹ at a time
- FY18 was the first full year of operation
- Significant efficiencies added capacity allowing the business to expand production in FY18
 - Purchased several new molds to introduce new SKUs into other retail outlets
 - Added hardscape products to provide more offerings for variety of customers
 - Big board production increase from 10 to 15 hours per day





New alameda edger

New wood grain block

Big board production Dec-17 through Jun-18 ('000s of block per day)



Feb Dec Jan Mar Apr May Jun

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1. Block unit defined as standard 8 inch block

Education construction is a key driver for growth

Education bonds are a good proxy for two year forward revenue

School construction in Texas

- High margin block products are used in school construction due to their product attributes
- Texas' high population growth, well above the national average, is expected to generate construction of 150 new campuses through year 2025¹
- Texas funds local public schools through education bonds issued by municipalities, state and federal funds
- Once approved, a bond provides a pretty accurate two year forward estimate of our bonded, manufactured product revenue
- School construction in Texas drives higher revenues and margins for the business
- I. Source: National center for education statistics, school planning and management, and ASCE



Texas schools showcasing our products

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Hurricane Harvey's impact and outlook Hurricanes driving changes in construction industry and opportunities in FY19

The damage of Hurricane Harvey¹

- Second-most costly hurricane in US history, ~US\$125bn
- Third, 500-year flood event in Houston since 2015
- 60+ inches of rain over southeastern Texas
- Delayed construction projects
- Boral network offline for 14 total days²



Statistics from National Oceanic and Atmospheric Administration Report (May 9, 2018)
 Reflected combined total for all impacted plants

Outlook and recovery post-Harvey

- Delayed projects from FY18 set to pickup in FY19
- New building codes to result in additional construction spending, specifically for durable masonry products
 - Retaining walls required to better withstand winds and flooding
 - New homes and businesses required to be built 2ft above ground, 8-10ft for coastal areas
 - Incentive to lift existing buildings to maintain value and marketability
- Boral is positioned to capitalize on demand uplift





House lift with foundation products

Coast house lift with foundation products

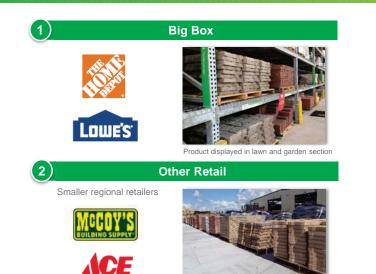
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Growing presence in retail channel

Leveraging Boral's reputation in the region to win new business

Growth in retail

- Big Box and Other Retail account for 30% of total Block revenue
- Channel focused on reliable, on-time delivery, quality, and affordable product
- Currently offering products in 95% of stores in coverage area
- Added 39 new Big Box locations in Louisiana and Mississippi in FY18
- Additional SKUs introduced in other retail outlets



Inventory at McCoy's store

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Agenda – Block



- Business Overview
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FY19 focus areas and priorities



FY19 focus areas

- 1. Implement Zero Harm Today
- 2. Expansion of hardscape opportunities
- 3. Explore opportunities to increase geographic footprint
- 4. Expand sales in custom, architectural specification products
- 5. Continue to drive resale product lines
- 6. Deliver synergies (Block and Windows combined targeting ~US\$5m in year 4)

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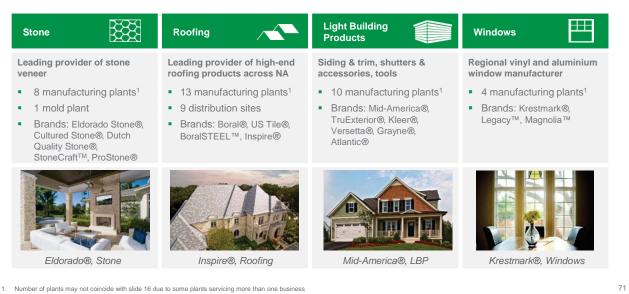
Agenda

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Building Products Group	Chris Fenwick
Building Products Group Roofing	Chris Fenwick Darren Schulz
Roofing	Darren Schulz



Building Products Portfolio of industry leading businesses with significant synergies

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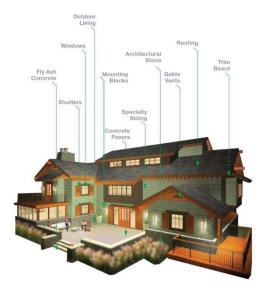


Building products Portfolio of products targeting the building envelope

Building product envelope

- Shutters
- Windows
- Outdoor Living
- Speciality Siding
- Architectural Stone
- Gable Vents
- Trim
- Siding Accessories

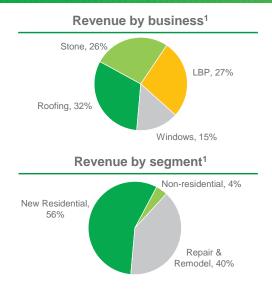
- Clay Roof Tile
- Concrete Roof Tile
- Composite Roofing
- Metal Roofing
- Bead Board
 - Moulding
 - Roof Components
 - Stone Accessories



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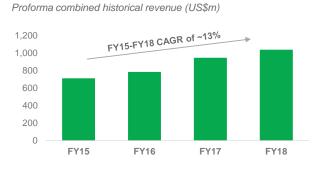
Building products revenue

Proforma revenue CAGR of 13% from FY15 – FY18 (excluding Bricks)



1. 12 months ended 30 June for 2018; excludes Bricks

Building Products¹



- FY17 and FY18 growth supported by Windows acquisitions
- FY18 growth result of organic business and high growth categories

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Agenda

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Windows	David Decker



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Agenda – Roofing



- Year in Review
- Strategic Priorities







Hayward scheduled for closure September 2018 and Courtland scheduled for closure October 2018
 Metamora is primarily a Light Building Products site, but also manufactures some roofing product

Agenda – Roofing

- Business Overview
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Roofing strategic objectives FY18 progress on Florida integration and metal roofing fix

Strategic objectives

Zero Harm Today



Expand geographic reach beyond the traditional tile regions

Expand product offerings beyond the traditional clay and concrete offerings

Diversify end-market exposure growing non-residential and re-roof segments

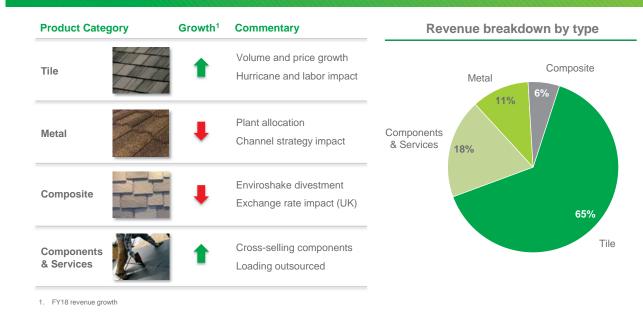
FY18 progress

- 1. Safety incidents down 39%¹
- 2. Revenue up, led by stronger tile and roof component sales
- 3. Tile: significant progress in Florida integration
- 4. <u>Components & Services</u>: significant growth, result of cross-selling
- 5. Metal: fix underway
- 6. <u>Composite</u>: consolidated manufacturing operations
- 7. Delivered US\$7.9m in synergies

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

FY18 overview

BORAL



Florida tile: commercial Implementing our commercial sales strategy through integration

Florida Integration

- Sales consolidation
- Single brand strategy
- Single distribution strategy
- Design centre optimization
- Cross-selling of full offering
- Increased focus on price and volume
- Exit loading service
- Continue to convert customers away from asphalt

Entegra





Portfolio remastering to produce across network



Boral

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Florida tile: operations

Improvements in plant performance driving production increases

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Florida Integration

- Acquired remaining minority interest in Entegra
- Optimized operations
 - 1. Okeechobee reset
 - 2. Lake Wales automation
 - 3. Deerfield closure and sale
 - 4. Jacksonville land sale
- Three distribution locations
- Product line optimization (in process) •
 - Products remastered
 - Further equipment investment scheduled in FY19

Okeechobee reset

- Safety reset, 8 to 0 LTIs
- Lower rejects
- Improved labor productivity
- Lift in OEE, 35% to 62%



Lake Wales automation

- Line 3 commissioned
- Capacity unlocked

(2)

- Production optimized
- Reduction in labor, 6 robots
- Increase in efficiency



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BORAL

Metal roofing: commercial On path to improved performance in FY19

Background

- 3 brands, >8,400 SKUs Portfolio:
- distribution and direct Channel:
- Organization: 24 reps across NA
- high pricing, high rebates Pricing:







FY18 actions

Single brand:

Organization:

Pricing:

sora

- Simplified portfolio:
 - >90% reduction in SKUs
- Channel alignment: 100% distribution

BoralSTEEL™

- 70 reps, cross-selling
- Premium to concrete tile



Metal roofing: operations

On path to improved performance in FY19

Background

- Headwaters consolidated 3 plants into 1 in Oceanside, California in FY17
- Consolidation caused drop in throughput, which led to increased production costs and capacity constraints
- Boral commissioned dedicated team to execute a plant turnaround

FY18 actions

- Safety reset and investment, 4 to 1 LTI
- Changed leadership in the plant (multi layers)
- Addressed shift and labor issues
- Reorganized plant and warehouse sites
- Doubled production of panels
- Reduced reject rate by 40%



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BORAL

BORAL

Agenda – Roofing

- Business Overview
- Year in Review
- Strategic Priorities



Roofing strategic objectives

FY19 focus on Florida integration, metal turnaround, and cross-selling

Strategic objectives



Zero Harm Today

Expand geographic reach beyond the traditional tile regions

Expand product offerings beyond the traditional clay and concrete offerings

Diversify end-market exposure growing non-residential and re-roof segments

FY19 focus areas

- 1. Drive down safety incident rates
- 2. <u>Tile</u>: complete integration of Florida business
 - Sales volume and price plans
 - Product portfolio optimization
 - Deliver service platform
- <u>Components & Services</u>: enhance value to our customers with broader portfolio, better service, strengthened network
 - Complete ERP conversion
- 4. <u>Metal</u>: complete turnaround plan and increase profitability in FY19
- 5. <u>Composite</u>: Focused growth in North America and Europe
- Deliver synergies with key focus on expanding crossselling opportunities (targeting ~US\$27m in year 4)

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Agenda

Introduction	Mike Kane
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Light Building Products	Joel Charlton
Windows	David Decker



Agenda – Stone

Business Overview

- Year in Review
- Strategic Priorities



Masonry industry: product categories Stone competes at different value points in industry

Stucco Economical Stucco Premium Block Brick Manufactured Stone Manufactured Stone Thin Brick Economical Premium Real Stone Advantages Aesthetics Durable Low maintenance Sustainable Ease of installation Availability Cost and perceived value

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BORAL



Agenda – Stone

- Business Overview
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Stone strategic objectives

FY18 progress on sales stabilization and network optimization

BORAL

Strategic objectives Zero Harm Today Strong brand portfolio with expanded opportunities for growth across broader distribution network Increased category awareness through marketing and new product development

Expanded sales through architectural specifications

FY18 progress

- 1. Safety incidents down 46%¹
- 2. Enhanced customer value, broader product "Good, Better, Best" offering
- Plant resets complete, progress towards network optimization in Western and Eastern United States
- Stabilized share following integration of Stone businesses

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

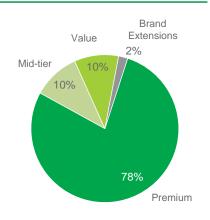
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BORAL

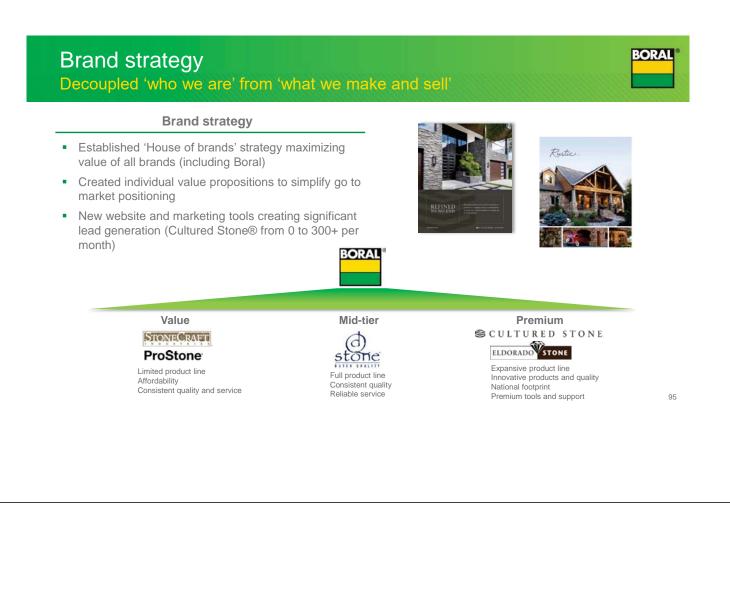
FY18 overview Revenue 2% softer in FY18 due to lower volumes offset by price increases

Product C	ategory	Growth ¹	Commentary
Premium		~	 Eldorado and Cultured Stone® Some share erosion Distribution strategy in place
Mid-tier		ŧ	 Dutch Quality Multi-family decline in central region New sales initiatives
Value		ŧ	 StoneCraft and ProStone® StoneCraft plant allocation Plant reset in progress
Product Extensions	s	1	Outdoor living, fire bowlsGood growth, retail strategy

Revenue breakdown by type



1. FY18 revenue growth



Go to market strategy

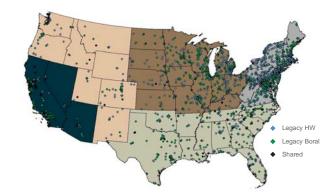
Enhanced sales discipline and realigned capability with customer channels

Go-to market strategy

- Redesigned sales organizational structure to better align with differing customer channels
 - Established national and regional teams
 - Bolstered architect / designer capability
 Expanded sales leadership
- Increased CRM pipeline opportunity 5x
- Product extensions' innovative market strategy already delivering significant margins and growth



Distribution network



 Utilized portfolio through expanded network in Southwest and Southeast primarily through strategic distributor alignment

Optimizing our eastern operations Converting StoneCraft facility to a low cost, value tier line

BORAL

Background

- Specialized facilities for good, better, best products
- Well positioned to service large Northeast, Southeast, and European regions
- Distribution warehouses to reach customers
- FY18 cost reduction focus in Chester
- StoneCraft upgrade underway
- Greencastle plant commissioned



StoneCraft strategy

- Site investment
- Specialized manufacturing for value tier line
- Equipment upgrade to large format molds
- Reduced material, labor and mold costs
- Low fixed cost operation with ability to scale
- Launch in 2H FY19

Current mold





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Greencastle commissioning FY17 and FY18 investment to deliver benefits in FY19

Background

- Eldorado plant servicing domestic and international customers
- Historically constrained site:
 - Standalone production and warehouse
 - Insufficient capacity
 - Poor layout and inefficient production
- Headwaters initiated upgrade project prior to acquisition



FY18 Actions

- Built and commissioned high efficiency plant
- Consolidated manufacturing and warehousing in new 400,000 square foot facility
- Successful incorporation of simple robotics
- Leveraged best practices
- Ability to scale for minimal investment





Optimizing our western operations Two low cost, high capacity plants to service our customers

Western Operations

Paris

Rosarito, MX

Mold Plant Tacoma Royal City

Napa

Open Plant
Plant Closure
Warehouse

Background

Optimize production across low cost, high

Distribution warehouses to reach

efficiency plants

Production ramp up

Royal City closure

announced - 1Q

Service USA and

cost savings

Results in significant

in Rosarito and Napa

customers

FY19

Canada

Rosarito plant in Mexico

- Low landed cost
- 20% production increase
- Additional capacity available
- Low labor rates

Low fixed cost



BORAL

Napa plant in California

- World class, automated plant
- Low landed cost
- High efficiency operation
- Additional capacity available
- Mature and stable workforce



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BORAL

Agenda – Stone

- Business Overview
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Stone strategic objectives

FY19 focus on sales growth and network optimization

BORAL

Strategic objectives

 Stronger brand portfolio with expanded opportunities for growth across broader distribution network

Zero Harm Today

Increased category awareness through marketing and new product development

Expanded sales through architectural specifications

FY19 focus areas

- 1. Drive down safety incident rates
- 2. Leverage brand strategy and complete product offering to achieve growth
- 3. Expand distribution strategy and key partnerships
- Continue Eastern manufacturing optimization with StoneCraft investment for value products on new platform
- 5. Complete Western manufacturing optimization with Royal City closure
- 6. Deliver synergies (targeting ~US\$29m in year 4)

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Agenda

Light Building Products	Joel Charlton
Stone	Victoria Sherwood
Roofing	Darren Schulz
Building Products Group	Chris Fenwick
Block	Bob Whisnant
Fly Ash	Keith Depew
Boral North America	David Mariner
Introduction	Mike Kane



Windows

David Decker

Agenda – Light building products

Business Overview

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Light building products: portfolio overview The portfolio consists of three main product categories

Category	Description	Primary Material	Brands	Light Building Products
	Vinyl Siding	Vinyl	Grayne™	GRAYNE
Siding and Trim	PVC Trim	Polyvinyl chloride (PVC)	Kleer®	ENGINEERED SHARE & SHINGLE
Invest in high growth products	Poly Ash Siding / Trim	Polyurethane	TruExterior®	KLEER TRUEXTERIOR
	Panelized Stone Siding	Concrete	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®	
Nurture mature, cash-generating products	Egress wells	Polyethylene	Wellcraft®	egress systems

Light building products industry: siding & trim

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Categories range from low-end wood to high-performance composite materials



Light building products: channel overview We reach our customers through three primary channels to market

Channel	% of Total Sales ¹	Distributors	Brands	Benefits
One Step Distribution	~40%	Alside_	Wellcraft egress systems	Access to complementary productsExtension of sales effortsMove high volume materials
Two Step Distribution	~40%	Boston Cedar Boise Cascade	GRAYNE RLEER TRUEXTERIOR VERSETTA	Break bulk materialsAccess to dealersExtension of sales efforts
Retail	~20%	LOWE'S	MID-AMERICA Siding Components Muantic Premium Shutters VERSETTA STORE	 Exposure with ~4,500 locations Ease of doing business, purchasing E-commerce leadership

1. Management estimates

Light building products: manufacturing footprint

Industry leading competitor in key geographic areas



1. Napa and Chester operate primarily as Stone plants, but also manufacture Light Building Products' Versetta Stone

Agenda – Light building products

- Business Overview
- Year in Review
- Strategic Priorities



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Light building products strategic objectives

FY18 progress on portfolio alignment and high growth products

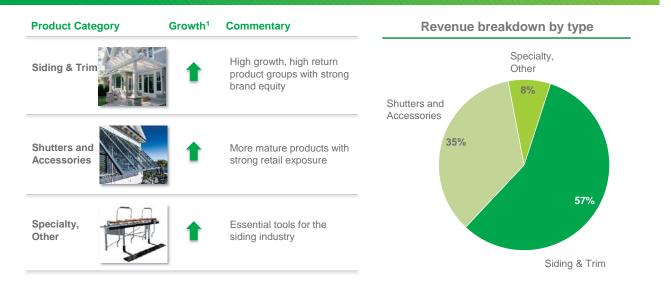
FY18 progress

- 1. Safety incidents down 52%¹
- 2. Revenue up, led by strong siding & trim growth
- <u>Siding & Trim</u>: invested in capacity expansion to meet demand and grew channel
- 4. <u>Shutters & Accessories</u>: nurtured through channel expansion in retail and 2-step
- <u>Tools & Other</u>: margin enhancement programs
- 6. Delivered ~US\$10.7m in synergies

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FY18 overview Revenue growth of 6% in FY18



1. FY18 revenue growth

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

Siding & trim portfolio strategy

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"Invest" - focused on accelerating high growth 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 market pain points
- Partner with Innovation Factory to commercialize next generation LBP product / platform





TruExterior®

FY18 actions

- <u>Kleer®</u>: Added capacity to meet growing demand
- <u>Versetta</u>®: Wausau win, the largest opening order in Versetta history
- <u>Versetta</u>®: Canadian distributor Kaycan added category, supporting much of eastern Canada
- <u>TruExterior</u>®: Significant growth from key channel partners in 2018
- <u>Grayne</u>[™]: Launched accessories to improve install experience





Versetta®

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Shutters, accessories & tools portfolio strategy "Nurture" – rounding out offering across retail and 2-step distribution

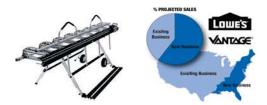
Background

- <u>Nurture</u> 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



FY18 actions

- <u>Vantage</u>: Acquired Lowe's east coast business, now have nationwide distribution both in-store and through special order desk
- <u>Mid-America®</u>: Leveraged Versetta® to cross-sell into national program with Morton
- <u>Atlantic®</u>: Margin enhancement program
- Tools: Restructured pricing program

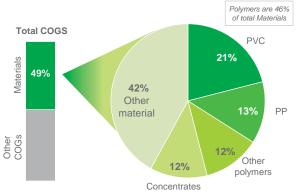


Raw material management

Addressing cost escalations through regrind¹ program and strategic sourcing

Background

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



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

FY18 actions

- Contract management, renegotiation
- Secured multiple supply sources
- Synergies with Boral Windows
 - Access to polymer supply
 - Regrind¹ equipment in place



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Operational improvements Driving a cross-functional effort to improve network margins

Home Depot label

- Automated label installation
- Improved ergonomics
- Reduced direct labor spend
- Improved part quality
- Part to label verification

Franklin, OH plant

- Consume window scrap
- Reduce raw material cost
- Blended mix at lower cost
 - Convey blended mix directly
- Consume black, internal regrind

Versetta® accessories

- Vertically integrated
- Improved quality
- Reduced manufacturing cost
- Reduced raw material cost
- Top line growth



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Agenda – Light building products

- Business Overview
- Year in Review
- Strategic Priorities



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Light building products strategic objectives FY19 focus on price, margin, and operational initiatives

Strategic objectives

Zero Harm Today

Maintain and leverage established products, and develop and grow new lightweight composite products

 Grow capabilities in high end, niche product areas

. Leverage distribution footprint to accelerate penetration of new, high growth products

FY19 focus areas

- 1. Zero Harm Today
- <u>Siding & Trim</u>: grow channel and broaden customer offering; continue cost improvement journey
- 3. <u>Shutters & Accessories</u>: margin enhancement through raw material management and lean
- 4. <u>Tools & Other</u>: continue margin enhancement programs
- 5. Leverage operations and R&D resources
- 6. Deliver synergies (targeting ~US\$15m in year 4)

Agenda

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



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Agenda – Windows

- Business Overview
- Year in Review
- Strategic Priorities



Business overview

History

- 2004: Krestmark® founded, manufactured aluminum windows in Texas
- 2006: Developed new vinyl window product line
- 2014: Established Legacy brand
- 2016: Acquired by Headwaters
- 2017: Acquisition of Magnolia[™] Windows in Georgia



Geographic footprint



- Regional focus mainly in Texas and Georgia
- Roughly 700 mile distribution footprint connects plant network
- Sales in 14 states across the southwest and southeast regions

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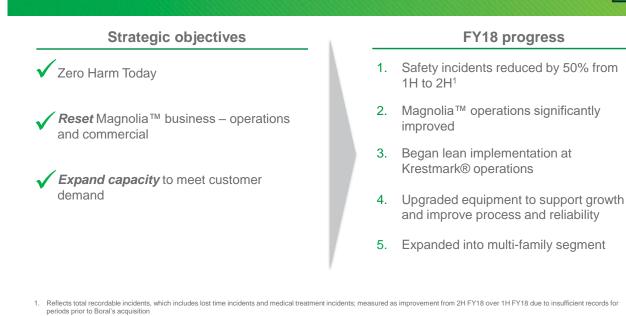
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Agenda – Windows

- Business Overview
- Year in Review
- Strategic Priorities



FY18 focus areas and priorities



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Magnolia[™] plant's transformation journey Achieved break even in late FY18

Background

- Business purchased immediately prior to Headwaters acquisition
 - 1Q FY18 new management made the decision to scale down customer orders and address operational issues at the plant:
 - Poor safety record and highly manual labor
 - Old, unreliable equipment due to little capex in prior years
 - Inconsistent product quality and capacity constraints from operational inefficiencies
 - Limited financial controls, weak analysis/reporting framework





Automated processing center

Glass optimizer

FY18 Actions

- Implemented safety program; 50% decrease in recordable incidents¹
- US\$1.1m capex for upgrades and new machinery
- Reduced manual labor with purchase of automated process machine and glass optimizer
- Performed workflow process improvements resulting in increased efficiencies
- Revamped analytical capabilities via system improvements and additional analysts in the plant
- Improving and managing labor costs

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^{1.} Measured as improvement from 2H FY18 over 1H FY18 due to insufficient records for periods prior to Boral's acquisition

Upgrading Krestmark® operation Focus on revamping safety culture and lean manufacturing principles

extrusion aisle

After

Background

- Highly manual manufacturing processes
- Inefficient workflow leading to manufacturing challenges
- Poor inventory controls resulting in waste

Inventory management

Approaching capacity limits

extrusion aisle

Before -

FY18 Actions

- Improved workflow leading to increased capacity
- Revamped lean manufacturing principles
- ERP system upgrade
- Performed costing and margin analysis to drive decisions
- Implemented full inventory management controls and just-in-time manufacturing leading to less waste

Aft



Workflow improvements

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Diversifying customer base Expanding presence in multi-family residential segment

Background

- Traditional focus on single-family housing
- Concentrated on large national and regional builders
- Limited relationships in multi-family segment
- Multi-family segment requires a different sales approach compared to single-family



FY18 Actions

- New leadership focused on diversifying end-segment exposures to mitigate economic swings
- Leveraged company's strong reputation with 5 day lead times and DIFOT¹ to push into multi-family segment
- Hired dedicated team to focus on multi-family
- 500% increase in multi-family revenue in FY18



1. DIFOT: Delivered in full on time

Agenda – Windows

- Business Overview
- Year in Review
- Strategic Priorities



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FY19 focus areas and priorities

Strategic objectives

✓ Zero Harm Today

- Continue *Magnolia*[™] *reset* operations and commercial
- Continue to expand capacity to meet customer demand
- **Strengthen** multi-family capabilities

FY19 focus areas

- 1. Implement behavioral safety
- 2. Continue share capture
- 3. Continue operational improvements to standardize and streamline processes
- 4. Further lean journey to create capacity
- 5. Deliver synergies (Windows and Block combined targeting ~US\$5m in year 4)

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Appendix

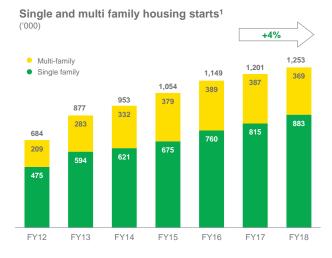
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Housing construction markets continue to recover

Single family growing, affordability high, supply remains challenged



Source: US Census seasonally adjusted annualized housing starts Source: National Association of Realtors (NAR); May 2018 Source: US Census; May 2018

2.

Single Family 71% Mix (FY2018 % of Total) ~3.0 percentage points above FY17 135 Affordability Index² above historical average of 100 0.30m **New Housing** 10.3% up year-on-year; in line with 0.36m long-term average Stock³ **2.0m** Existing Housing Stock² Flat year-on-year; slightly below long-term average of 2.2m

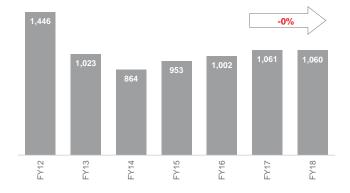
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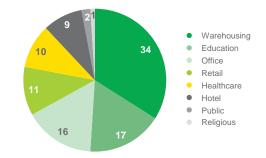
Non-residential Education and Hotels segments drove construction in FY18

Non-residential construction¹ (million square foot area)



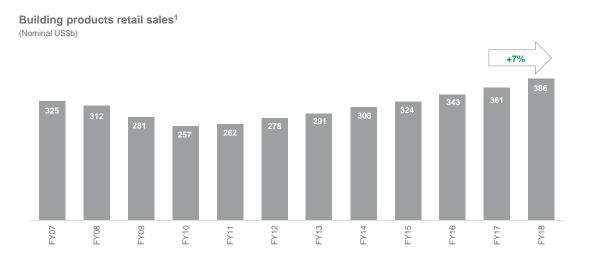
Source: Dodge Data & Analytics. Non-residential square feet area (millions), June 2018
 Source: Dodge Data & Analytics





Repair and remodel (R&R)

Home improvements sales continue to rise



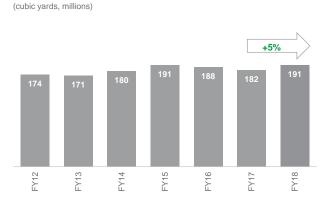
1. Source: Moody's retail sales of building products, July 2018

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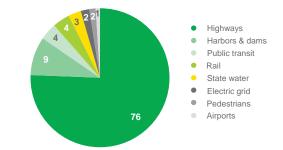
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Infrastructure Highways continue to be the main driver in the infrastructure segment



Infrastructure activity, ready mix demand¹

Infrastructure cement consumption², %



Source: Dodge Data & Analytics, Infrastructure Ready Mix Demand, June 2018
 Source: Portland Cement Association

Boral North America's markets Solid outlook across all markets

BORAL

386 397

361 343

324

715 -V16 = 117 =γ18 -Υ19F







Source: US Census seasonally adjusted annualized housing starts. Forecasts based on an average of analysts' forecasts sourced from NAHB, MBA, Wells Fargo, NAR, Fannie Mae and Freddie Mac, Jan-Jun 2018 Source: Noody's Retail Sales of Building Products
 Source: Dodge Data & Analytics, Non-Residential Area
 Source: Dodge Data & Analytics, Infrastructure Ready Mix Demand

Northeast^{1,2} housing starts

FY04

Midwest^{1,2} housing starts

FY05 FY06 FY08 FY09 FΥ10 FY11 FΥ14 FΥ16 FY19F

FY06 FY07 FY09 FY10 FY11 FY11 FY13 FY13 FY15 FY15 FY15 FY15 FY16

'000

250

200

150

100

50

0

400

300

200

100

0

FY00

FY00 FY01

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FY19 housing growth underpinned by single family Forecasters¹ expect ~1.31m housing starts in FY19

Midwest

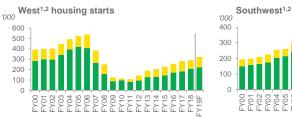
West

Northeas

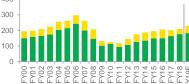
24%

Multi Family

FY18 Revenue by geography^{2,3} Southeast^{1,2} housing starts International *'000* 1.000 Southeast 800 24% 600 400 200 0 FY03 FY065 FY065 FY06 FY07 FY10 FY112 FY12 FY15 FY15 Southwest







Based on the average of Dodge, Wells Fargo, NAR, NAHB, Fannie Mae, Freddie Mac and MBA analysts between Jan-Jun 2018. 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 1H FY2018 Boral North America external revenue, including Boral's 50% share of Meridian Brick JV revenue which is not included in reported revenue

3.

600

500

400

300

200

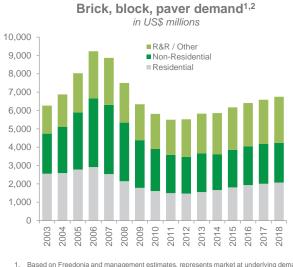
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Brick, *block* & paver industry: market size and segments The brick, block and paver industry is ~US\$7 billion¹



Based on Freedonia and management estimates, represents market at underlying demand
 Freedonia 2014, Bricks, Block, Pavers Report, plus management estimates

Market overview¹

- Overall industry includes brick, block, and pavers; broadly weighted towards all three end-markets (residential, non-residential, repair and remodel)
- Brick demand predominantly driven by residential segment
- Block demand more heavily tied to the nonresidential segment
- Paver demand predominantly driven by repair and remodel segment
- Texas estimated to be ~8% to 10% of overall industry

Brick, block & paver industry: market segments

Well balanced market segments

Non-residential Repair & remodel / Other **New residential** ~**32%**¹ Specification driven Hardscape growing Cyclically driven • Longer sales cycle Strong margins Production builder i, • Higher price and margin Retail channel, Big Box critical Lower price / margin (block) Primarily multi-family (block) State sponsored projects, Foundation products, strong margins • e.g. schools, critical to success





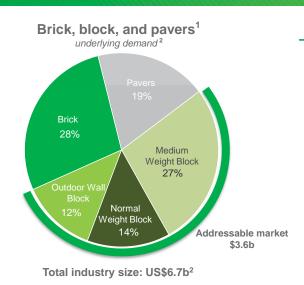


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Brick, block & paver industry: product categories Block represents ~54% of the total industry



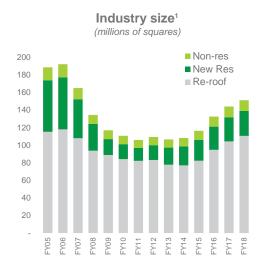
Product positioning

- Block competes in the cladding and hardscape industry
- Cladding:
 - Block considered a premium cladding option
 - Predominantly used in non-residential segment
- Hardscape:
 - Staple in expanding hardscape industry _
 - Mainly tied to repair and remodel segment

Freedonia 2014, Bricks, Block, Pavers Report, management estimates Underlying demand assumed to be average of prior 16 years, 2003 - 2018 1. 2.

Roofing industry: size and segments

The pitched roof industry is currently ~145 million squares



Source: ARMA, NAHB, Moody's, Dodge, Management Estimates

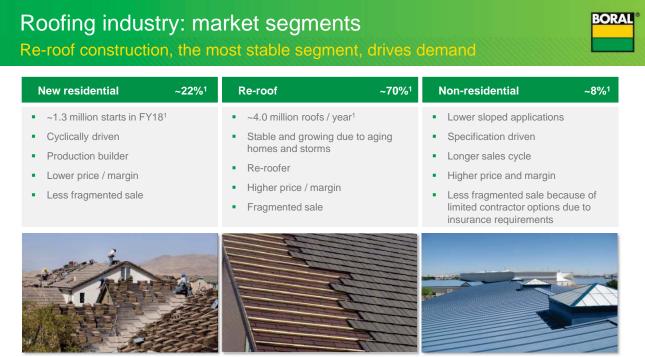
1. 2. Source: ARMA, BCC, Management Estimates; represents size of market at underlying demand

North America overview

- Large industry, ~145m squares
- Three primary pitched roof market segments - Re-roof, new residential, and non-residential
- Industry supported (~70%) by large re-roof demand from +80 million aging singlefamily detached homes in the USA
- Estimated at US\$14.9 billion² annual spend

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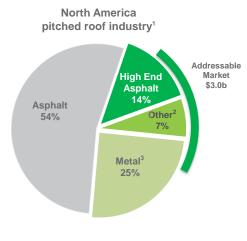
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1. Source: ARMA, NAHB, Moody's, Dodge, Management Estimates; represents market at underlying demand

Roofing industry: product categories

The pitched roof market is US\$14.9b1, Boral's addressable market is ~US\$3.0b



Total industry size: US\$14.9b1

Source: ARMA, BCC, Management Estimates; represents size of industy at underlying demand Other: Concrete Tile, Clay Tile, Composite, Natural Wood Shake, Natural Slate Metal: includes Stone Coated Metal, Standing Seam Metal

North America product overview

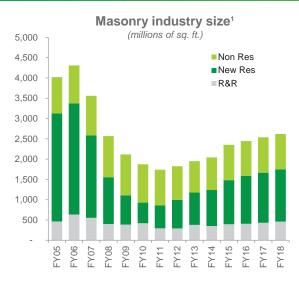
- Asphalt roofing accounts for ~68% of the industry size in North America
- Over last several decades, industry has been converting to higher end asphalt from low-end asphalt
- Other high end products include Tile, Metal, Composite, and Natural Materials (Slate / Wood Shake)
- Other high end products have been gaining share from standard and high end asphalt as customer acceptance increases

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Masonry industry: market size and segments The current industry is ~2,600 million square feet



Market analysis, NAHB for square feet, management estimates
 Source: NAHB, Principia, and management estimates; market size at Underlying Demand

North America overview

- Large industry, ~2,600m square feet
- Mainly driven by new construction but emerging outdoor living driving R&R growth
- R&R and Non Res more stable through the market cycle driven by home remodel projects and retail / commercial accents
- Stone estimated at ~US\$2.3 billion² annual spend which includes manufactured and real stone

Masonry industry: market segments

Higher exposure to new construction

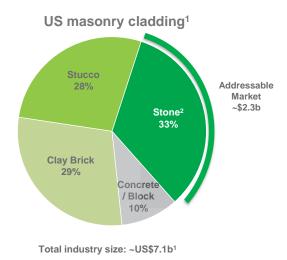
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New residential ~49% ¹	Repair & remodel ~16% ¹	Non-residential ~35% ¹
 ~1.3 million starts in FY18 Cyclically driven Custom builder Regional pricing Less fragmented sale 	 Limited exposure Expanding presence through hardscapes and interior remodel Fragmented sale 	 Specification driven Longer sales cycle Stronger price and margin Strong focus on schools, office and retail applications
	Before After	WHITELEMENTARY SCHOOL
1. Market analysis, NAHB for square feet, management estimates	s; represents industry at underlying demand	

Masonry industry: product categories The masonry cladding industry is ~US\$7.1b¹, Boral's opportunity is ~US\$2.3b



North America product overview

- Brick and Stucco product categories account for ~57% of masonry cladding segment
- Stone, manufactured and real, account for ~33% of the segment, valued at ~US\$2.3 billion¹
- Residential recovery has led to a strong national builder market presence
- Manufactured stone veneer products continue to be highly desirable due to ease of installation, low maintenance and affordability

Source: NAHB, Principia, and management estimates; industry size at underlying demand
 Includes real and manufactured stone

Boral Stone: diversified portfolio A strong "good, better, best" product portfolio to maximize sales

Value Tier (Good) Brands: StoneCraft[™], ProStone®

Streamlined product offering

Value line, limited colors

Priced competitively

Strong regional players

•

Middle Tier (Better)

Brand: Dutch Quality®

- Streamlined product offering
- . Consistent quality
- Competitively priced
- Strong regional player ÷

StoneCraft™

ProSto



Premium Tier (Best)

Brands: Cultured Stone® Eldorado®

- · High authenticity and design
- Large selection of colors and textures
- Architecturally focused
- Available nationwide .

Cultured Stone®

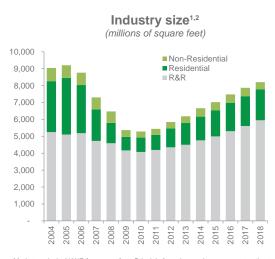


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Light building products industry: market segments The siding & trim industry is currently ~8 billion square feet

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Overview

- Large industry, ~8 billion square feet
- Three primary trim and siding segments repair and remodel, new residential, and nonresidential
- Industry supported (~68% in FY17) by large repair and remodel demand from +80 million aging, single-family detached homes in the USA
- Estimated at ~US\$7.9 billion³ annual spend
- All three segments expected to continue growth trends over next 12 to 24 months⁴

Market analysis, NAHB for square feet, Principia for value, and management estimates

Excludes shutters, accessories, and tools Market analysis, NAHB, Principia, and management estimates; represents industry at underlying demand 3. Δ Based on key external market forecasters

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Light building products industry: market segments BORAL Repair & remodel drives construction, creating stable demand through the cycle -24%1 New Residential ~24%1 Repair & Remodel ~69%1 Non-residential ~7%1

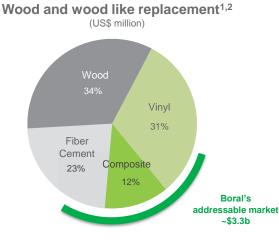
 ~1.3 million starts in FY18 Cyclically driven Custom, production & regional builder 2-step, 1-step 	 Stable and growing due to aging homes and harsh weather Siding installer, contractor 2-step, 1-step, retail Fragmented end user 	Specification drivenLonger sales cycle2-step, 1-step

1. Market analysis, NAHB for square feet, Principia for value, and management estimates; represents industry at underlying demand

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Light building products industry: product categories The total industry is ~US\$7.9b¹, Boral's addressable market is ~US\$3.3b



Product overview

- Wood is leader but comparative growth less than emerging composite and higher grade vinyl and fiber cement products
- Vinyl continues to gain against wood due to low cost installation and low maintenance
- Fiber cement continues to maintain share in cladding and trim markets
- Composite materials show the highest potential with low cost / low risk solutions

Total industry size: US\$7.9b1

Market analysis, NAHB, Principia, and management estimates; represents industry at underlying demand
 Excludes shutters, accessories, and tools industry

North American windows & patio door industry

A large national industry which has changed over time



1. Principia and management estimates, range represents industry size at underlying demand

North America overview

- Industry estimated at ~US\$8-10 billion¹
- 85% to 90% windows; 10% to 15% doors
- Large national players compete with regional and local businesses
- Industry consolidation continues to occur

Examples of competitors



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Windows & patio door industry market segments Industry driven by new residential, single-family construction

~71%¹ **Multi-Family** ~**23**%¹ Single-Family **Light Commercial** ~6%1 1.3 million starts in FY18 Longer sell cycle Specification driven New construction with various quality Standard products Longer sales cycle preferences Low cost / competitive Custom orders Repair and Replacement drives majority of volume Specialty products .



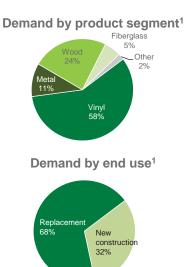




1. Principia and management estimates; represents industry at underlying demand

Windows & patio door industry product segments

Vinyl and replacement windows are largest segments



Product segmentation

- Industry has shifted over time from wood to Vinyl
- As housing stock ages (+80m aging singlefamily homes), replacement window demand to remain strong
- Single-family homes (new and R&R) drives demand



Repair & Remodel



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1. North American totals; source: Principia and management estimates; represents industry at underlying demand



Headwaters acquisition synergies Significant synergies as a result of highly complementary businesses

Synergy drivers by business, US\$m		Delivered in FY18	Targeted Year 1 run rate, pa	Updated target within 4 years, pa
Corporate - incl. executive headcount, public company	y costs, procurement	\$9.5m	~\$17m	~\$19m
Fly Ash	Sub-total	\$11.5m	~\$12m	~\$20m
 Ash supply / network optimization / logistics 				
Procurement				
 Sales coverage expansion & high value product grow 	vth			
 Organizational efficiencies 				
Other				
Stone ¹	Sub-total	(\$1.9m)	~\$6m	~\$29m
 Plant network optimization 				
 Sales coverage 				
Procurement				
 Manufacturing equipment 				
 Other including organizational efficiencies 				

1. Recognises the impact of share loss as a result of the acquisition

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Headwaters acquisition synergies Significant synergies as a result of highly complementary businesses

Synergy drivers by business, US\$m		Delivered in FY18	Targeted Year 1 run rate, pa	Updated target within 4 years, pa
Roofing	Sub-total	\$7.9m	~\$11m	~\$27m
Procurement				
Cross-selling portfolio				
 Manufacturing & network optimization 				
 Manufacturing efficiencies 				
 Other including organizational efficiencies 				
Light Building Products	Sub-total	\$10.7m	~\$6m	~\$15m
Procurement				
 Sales coverage, cross-selling, retail presence 				
 Organizational efficiencies 				
Other				
Other: including Block & Windows	Sub-total	\$1.3m	-	~\$5m
	Total	\$39m	\$50-55m delivered \$51m	\$115m



Disclaimer

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