Build something great™

Results Announcement

for the full year ended 30 June 2020

Management Discussion & Analysis

28 August 2020

Commentary throughout this Management Discussion & Analysis, unless otherwise stated, is based on earnings from continuing operations excluding the impact of the new IFRS leasing standard (AASB 16) and compared to the prior year. In addition, FY2019 comparative figures have been restated – see note 1d of the preliminary final report for further details.

FY2020 results summary

Challenging conditions, including a housing downturn in Australia coupled with bushfire and COVID-19 impacts reflected in the result. Substantially lower 2H production volumes resulted in inventory reductions and strong cash generation but lower fixed cost recoveries impacted earnings.

- **Revenue** of **$5,671m** declined 1% on the prior corresponding period (pcp)
- **EBITDA**[1,2] of **$715m** declined 29% on pcp
- **EBITDA**[1,2] **margin of 12.6%** (17.5% pcp)
- **Statutory NPAT**[2] of **($1,135)m**; and **underlying NPAT**[1,2] of **$181m** down 57% on pcp
- **EPS**[1,2] of **15.2 cents** (35.7 cents pcp)
- **No final dividend** as payout ratio of 63% delivered with payment of 9.5 cent interim dividend
- **Operating cash flow** of **$537m** down 30% on pcp
- **ROFE**[1,3] **including impairments** of **4.7%** (7.9% pcp)
- **Reported Statutory NPAT (including AASB 16 impact) of ($1,139)m** is **after significant items of ($1,404m)**

Divisional overview[1]

- **Boral Australia** – Revenue declined 5% reflecting a 19% decline in housing starts and bushfire disruptions, and softer prices. EBITDA of $447m was 25% lower reflecting an adverse geographic and product mix shift, higher costs and lower production. Cost savings of $99m from improvement programs were delivered and Property made a strong earnings contribution of $55m. Excluding Property, EBITDA was down 30%.
- **Boral North America** – Revenue was down 2% to US$1,566m but EBITDA was down 32% to US$188m as costs increased and ~80% of plants experienced COVID-19 related production and cost impacts in 2H. Fly ash price gains, synergies and an improved contribution from Meridian Brick only partially offset the impact of higher costs and lower volumes.
- **USG Boral** – Underlying EBITDA was down 25% to $190m reflecting housing downturns in Australia and South Korea, price declines in South Korea, and a significant impact from COVID-19 related sales and production volume declines in 2H. Boral's equity accounted post-tax earnings from USG Boral was down 56% to $25m due to lower EBITDA performance and a higher effective tax rate.

Priorities

- **Safety** – Recordable injury frequency rate[4] of 7.6 was steady, while lost time injury frequency rate[4] of 1.6 increased slightly. Measures to help manage the risk of spreading COVID-19 have been a key priority. Social distancing, hygiene regimes and monitoring have been comprehensively adopted for the health and wellbeing of our people and customers.
- **Responding to challenges** – Boral has taken decisive action in response to the ongoing and uncertain impacts of COVID-19. Where demand has slowed and adequate inventories available, production has been curtailed to maximise cash flow, strengthen liquidity and reduce cash costs. Plant shuts and slowdowns adversely impacted fixed cost recoveries by $27m in Australia, $22m in North America and $10m in USG Boral. Efforts to preserve cash and strengthen liquidity resulted in an operating cash flow $537m. Net debt of $2.197b was flat and liquidity increased from $1.3b to $1.66b.
- **Strategy** – With commencement of a new CEO on 1 July, a comprehensive portfolio review is underway to re-set Boral's priorities. The outcomes of the review are expected to be announced around the end of October.

Outlook

The business environment remains uncertain including continued disruptions due to COVID-19. With insufficient market visibility, Boral is unable to provide guidance for FY2021.

For July 2021, revenues are lower but earnings are only slightly lower than pcp. Stage 4 lockdowns in Melbourne, are impacting sales and cost recoveries in Boral Australia with Melbourne metro concrete volumes down ~20% on pcp for the duration.

While the outcomes of Boral's portfolio review, to be announced in late October, will set clear priorities for FY21 and define plans for value creation, current focus remains on recovering and strengthening margins, delivering strong cash flows, and divisional improvement initiatives.

Footnotes appear at end of document

Group financial overview

A$m *Figures may not add due to rounding*		**FY20** Reported	**FY20** pre-AASB16	**FY19** **restated**	**Var %** pre-AASB16
Revenue	– total operations basis	5,728	5,728	5,861	(2)
	– continuing operations basis	**5,671**	**5,671**	**5,738**	**(1)**
EBITDA[1,2]	– total operations basis	821	710	1,010	(30)
	– continuing operations basis	**825**	**715**	**1,005**	**(29)**
EBIT[1,2]	**– continuing operations basis**	337	325	634	(49)
ROFE[1,3], %		4.6	4.7	7.9	
Net interest		(126)	(109)	(103)	(6)
Tax[1]		(25)	(26)	(110)	76
NPAT[1,2]		**177**	**181**	**419**	**(57)**
Significant items (gross)		(1,404)	(1,404)	(193)	
Tax on significant items		88	88	25	
Statutory NPAT[2]		(1,139)	(1,135)	**251**	
Cash flow from operating activities		**631**	**537**	**762**	**(30)**
EPS (cents)[1,2]		14.8	15.2	35.7	
Dividend (cents)		**9.5**	**9.5**	**26.5**	

- **Sales revenue** of $5,671m was down 1%, while **EBITDA[1]** of $715m declined 29%, reflecting COVID-related impacts, an adverse mix shift and higher costs.
- **Income tax expense declined $84m to $26m,** resulting in an effective tax rate of 12.5% primarily due to the utilisation of previously unrecognised US tax losses and Australian capital losses. Excluding these, the effective tax rate was 19.5%.
- **Significant items:** A net loss of ($1,316m) of significant items primarily relate to non-cash impairment charges reflecting revised estimates for Boral North America, Boral's investment in Meridian Brick and Boral Australia's construction materials business in WA & NT, and the Timber and Roofing business. See page 18 for details.
- **Operating cash flow of $537m declined 30%,** reflecting lower earnings partially offset by the benefit of lower inventory levels.
- **Capital expenditure of $346m** ($228m of stay-in-business and $118m of growth expenditure) was down from $453m in the prior year and included investments in the new Port of Geelong clinker import terminal in Vic, various quarry and plant upgrades, and the new Windows plant in Houston.
- **No final dividend**: The decision to not pay a final dividend reflects the interim dividend of 9.5 cents per share being a payout ratio of ~63% of full year earnings, which is in line with Boral's dividend policy.
- Excluding lease liabilities, **net debt at 30 June 2020 was $2,197m**, flat on $2,193m at 30 June 2019. **Including lease liabilities, net debt at 30 June 2020** was $2,580m.
- **Gearing** (net debt/(net debt + equity)) excluding AASB16 was 33%, up from 27% at 30 June 2019 due to the impact of impairment (28% excluding the impact of impairment and AASB16).

  Boral is well within its funding covenants. Boral's principal debt gearing covenant (gross debt/ (gross debt + equity)) of 41%, up from 30% at June 2019 (but well within the threshold of <60%) due to cash drawn and impairment. **No refinancing required until May-22.**
- Excluding AASB16 impact on liabilities and EBITDA, **net debt/EBITDA** of 3.1x reflects lower earnings.
- **Significant liquidity and undrawn committed facilities of $1.66b**, including $904m of cash.

COVID-19 operating environment

In most jurisdictions, Boral's operations are considered to be within the critical construction sectors permitted to operate as essential businesses through the duration of COVID-19. We have adopted extensive hygiene, safety and quarantine practices and protocols, and in some cases plant reconfigurations have been undertaken to allow for social distancing.

In some jurisdictions, stricter mandates and measures have resulted in temporary closures, and substantial disruptions and complexity to manage. In Boral North America alone, the business has had over 225 state and government health orders to comply with.

In general, Boral has not met eligibility to access government incentives and concessions. In FY20, Boral received no wage subsidies for 100% owned businesses in Australia or the USA. Boral's share of wage subsidies through joint venture businesses (received in NZ, Canada and Australia), together with a small direct wage subsidy received in the UK, totalled ~$800k in FY20.

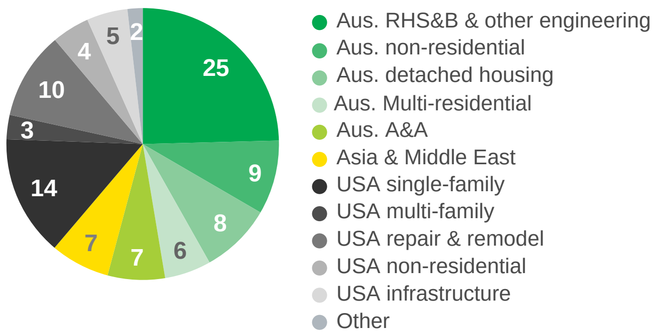
Market conditions

In FY2020 in Australia, RHS&B infrastructure activity softened and residential activity declined; 2H impacted by bushfires & floods and COVID-19.

US housing activity strengthened but extensive COVID-related slowdowns and disruptions in 2H.

Conditions in Asia were mixed with South Korea in downturn and COVID-19 impacting broadly.

Boral FY20 external revenue[5] by market, %



AUSTRALIA

Boral Australia's largest exposure is to **roads, highways, subdivisions & bridges (RHS&B)[6]**.

FY20 RHS&B value of work declined by an estimated 2%. While the value of work in NSW and WA grew 2% in Qld, SA and Vic it declined 11%, 6% and 3% respectively.

Other engineering activity[6] declined by ~9% with lower levels of activity in SA, Qld, Vic, NSW and WA.

FY20 Australian **housing starts**[7] are down around 19% to an estimated 160,000 annualised starts. **Detached housing** starts are estimated to be down 15%, with **multi-residential** starts down 24%. On a state by state basis, housing starts declined 27% in NSW, 24% in Qld, 13% in Vic and 13% in WA. SA starts increased 4%.

Australian **alterations & additions** (A&A) activity[8] declined by an estimated ~6%.

Non-residential activity[8] grew by an estimated 5% with higher demand in NSW, Vic, Qld and WA. Activity in SA was steady.

USA

US housing starts[9] increased ~8%, with a significant lift in December, to an annualised 1.31m starts. Single-family starts were up ~5% and multi-family starts up ~14%.

Activity in the **US repair & remodel**[10] and **infrastructure**[11] sectors grew by ~4% and ~2% respectively.

Non-residential[12] construction markets were lower by an estimated 2%.

ASIA[13]

South Korean residential and non-residential construction declined further following the onset of COVID-19.

In **China**, the country was mostly in lock down from late January to early March due to COVID-19. Growth slowed due to lower exports, ongoing trade tensions and global economic uncertainty.

In **Indonesia**, economic growth has slowed further as the impacts from COVID-19 are being fully realised.

Thailand construction activity was stable as the sector was permitted to operate as an essential business.

Activity in **India** was constrained by closure orders. Conditions in **Vietnam** are mixed, with retail market growth being driven by better household disposal income and urbanisation progress, which is helping to offset weakness elsewhere.

Selection of Australian project work & potential pipeline (as at July 2020)

	Estimated completion
Barangaroo 1B – Tower 1, NSW	FY2021
Norfolk Island Airport, Qld	
Melbourne Metro Rail Project (Precast), Vic	
Pacific Motorway, Varsity Lakes to Tugun Upgrade, Qld	
RAAF – East Sale, Vic	
Karratha Tom Price Road, WA	
Queens Wharf – resort development, Qld	FY2022
Mordialloc Bypass, Vic	
West Gate Tunnel, Vic	FY2023
Snowy Hydro 2.0, NSW (precast)	
Sydney Metro (Martin Place Station), NSW	
WestConnex 3B (above ground), NSW	FY2024
Road Asset Management Contracts, Qld	
DPTI Road Work Network maintenance, Zone 4, SA	
Bruce Highway upgrade (various), SE Qld	Tendering
Cross River Rail, Qld	
Gold Coast Light Rail, 3A, Qld	
Golden Plains Wind Farm, Vic	
Kidston Hydro Project, Qld	
M6 – Kogarah, NSW	
Monash Freeway Upgrade – Stage 2, Vic	
North East Link, Melbourne, Vic	
Pacific Motorway M1 (various), SE Qld	
RAAF Williamtown, NSW	
Snowy Hydro 2.0, NSW	
Sydney Gateway Project, NSW	
Sydney Road Asset Performance Contract, NSW	
Sydney Metro (various stations), NSW	
Tonkin Highway extension, WA	
Western Sydney Airport, NSW	
Bunbury Outer Ring Road, WA	Pre-tendering
Coffs Harbour Bypass, NSW	
Inland Rail Project, Qld, NSW & Vic	
New M12 Motorway, NSW	
Sydney Metro, West extension, NSW	
Warragamba Dam raising, NSW	

Divisional reviews

A summary of divisional results is provided in the table with detailed commentary in the following pages. Corporate costs increased from $32m to $38m in FY2020 reflecting executive severance payments, higher legal costs and additional audit and control reviews.

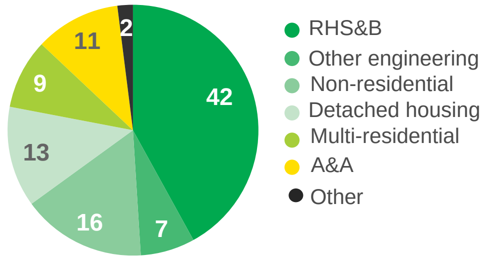
A$m *Figures may not add due to rounding*	Sales revenue		EBITDA[1]		EBIT[1]	
	FY20	FY19	FY20	FY19	FY20	FY19
Boral Australia	3,336	3,511	447	592	225	385
Boral North America	2,336	2,227	281	388	113	225
USG Boral (Boral's 50% post-tax earnings)	-	-	25	57	25	57
Corporate	-	-	(38)	(32)	(39)	(33)
TOTAL (continuing operations basis)	**5,671**	5,738	**715**	1,005	**324**	634
Discontinued (Bricks & Denver CM & Block)	57	123	(5)	5	(8)	(1)
TOTAL reported (total operations basis)	**5,728**	5,861	**710**	1,010	**317**	632

Boral Australia

Concrete & Placing, Asphalt, Quarries, Cement, Transport, Property, Building Products (Timber, Roofing)

Volume declines due to the housing market downturn were exacerbated by bushfire impacts in 2H; the business was further impacted by COVID-19 related disruptions and production slowdowns from March

FY20 external revenue, %



BORAL AUSTRALIA (continuing operations)

A$m	FY20	FY19	Var %	2HFY20	2HFY19	Var %
Revenue	3,336	3,511	▼ 5	1,584	1,717	▼ 8
EBITDA[1]	486	592		199	322	
EBITDA[1] *pre-AASB16*	**447**	**592**	**▼25**	**180**	**322**	**▼ 44**
EBITDA[1] ROS pre-AASB16	13.4%	16.9%		11.4%	18.8%	
EBIT[1]	229	385		69	217	
EBIT[1] *pre-AASB16*	**225**	**385**	**▼42**	**67**	**217**	**▼ 69**
EBIT[1] ROS pre-AASB16	6.8%	11.0%		4.2%	12.6%	
Property	55	33	▲66	26	36	▼28
EBITDA[1] *excl. Property & pre-AASB16*	392	559	▼30	154	286	▼46
EBITDA[1] ROS excl. Property & pre-AASB16	11.7%	16.0%		9.6%	16.8%	
ROFE[1,3] *pre-AASB16*	9.5%	15.7%				
Capex	246	290	▼15			

FY20 underlying revenue declined 5%, reflecting:

- Higher revenue from Asphalt, Concrete Placing was offset by lower revenue from Concrete, Cement and Building Products.
- Concrete volumes declined 10% on pcp, with 2H down 12%, due to the housing market decline, bushfires and floods in January and February.
- Average selling prices and like for like prices were broadly steady in Aggregates and Cement, and down 2% in Concrete.

FY20 EBITDA decline reflecting:

- A negative mix shift with a substantial decline in NSW concrete / cement volumes, and a higher share of revenue from lower margin Asphalt and Concrete Placing work. Asphalt as a share of total external revenue increased from 22% in FY19 to 25% in FY20.
- One-off costs of $23m, including costs associated with 1H outages at Peppertree Quarry and Berrima Cement, and direct costs associated with bushfires and COVID-19.
- Inflationary cost pressures, largely offset by cost savings from improvement programs of ~$99m.
- COVID-19 related production slowdowns and temporary plant shuts resulted in under-recovery of fixed costs impacting EBITDA by $36m.
- Property earnings contribution up $22m to $55m, with earnings from Scoresby in 1H and Donnybrook in 2H.

2H EBITDA margins were negatively impacted by ~2% due to lower price, and due to adverse product (concrete vs asphalt) and geographic mix (NSW vs other states); and ~4% due to extraordinary events (bushfires & COVID-19).

As a result of the lower production, including targeted inventory deleveraging to maximise cash, inventory reduced by $47m from 31 December to $378m at 30 June.

A$m	FY20			2HFY20		
	External Revenue		EBITDA pre-AASB16	External Revenue		EBITDA pre-AASB16
Concrete & Placing	1,499	▼10%	▼	686	▼14%	▼
Asphalt	825	▲8%	▲	438	▲13%	steady
Quarries	440	steady	▼	219	▲1%	▼
Cement	306	▼5%	▼	144	▼9%	▼
Building Products	219	▼15%	▼	105	▼10%	▼

Var %	FY20 vs FY19			2HFY20 vs 2HFY19		
	Volume[14]	ASP[15]	LFL price[15]	Volume[14]	ASP[15]	LFL price[15]
Concrete	(10)	(2)	(2)	(12)	(4)	(3)
Quarries	(3)	(1)	steady	1	(6)	(3)
Aggregates	(11)	1	(1)	(9)	(2)	(3)
Cement	(6)[16]	Steady[17]	(1)	(13)[16]	2[17]	(2)

Major projects contributed ~13% of Boral Australia revenue. During FY20, Boral supplied concrete to Sydney Metro Rail in NSW and precast concrete to Vic Metro Rail projects; asphalt to roadwork including the Logan Enhancement project (primarily in the first half) and the Mudgeeraba to Varsity Lakes upgrade in Qld. Asphalt was also supplied to the Pacific Highway and Northern Road in NSW. Work on the Norfolk Island Airport in Qld ramped up in 2H, and Boral commenced supply of asphalt to the West Gate Tunnel in Vic, however this project has been delayed.

Concrete reported 10% lower concrete volumes and 2% price declines, partially offset by strong **Concrete Placing** revenue growth and higher earnings. Concrete volumes and pull-through margins were adversely impacted by lower residential activity, particularly multi-residential declines. Major project completions such as NorthConnex and Sydney Metro Rail in NSW added to the Sydney metro volume declines.

Concrete placing completed a number of majors pours at the Crown Sydney project at Barangaroo, Wynyard Place, Parramatta Square and Greenland Centre project in NSW.

Quarries delivered modest growth in external volumes in NSW, Vic and WA, which helped offset lower internal pull through volumes due to lower concrete demand. Earnings declined due to significantly lower aggregate volumes, an adverse product mix, soft pricing and higher costs associated with unplanned disruptions and one-off costs.

As reported in 1H, an unplanned disruption at Peppertree and subsequent remediation works resulted in a one-off cost of ~$5m. Higher direct costs of ~$4m were incurred in December and January as a result of bushfires including purchased water.

Cement earnings declined due to lower volumes (particularly in NSW), unscheduled downtime at the Berrima kiln in 1H costing $7m and a three week shut of the kiln in June to manage inventory levels, an adverse product mix shift, higher clinker costs and a lower contribution from the Sunstate JV.

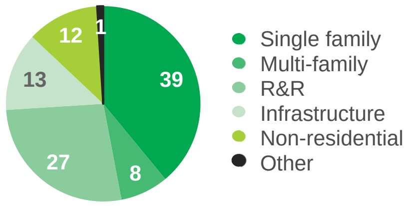
Asphalt posted solid revenue and earnings primarily due to the commencement of major projects such as Norfolk Island and Emerald Airport in Qld and the RAAF East Sale project in Vic. Other projects that contributed to revenue and earnings in the full year included the Pacific Highway (NSW) and various WA projects such as Murdoch Drive, Kwinana Highway and Port Hedland.

Building Products (Timber & Roofing) reported lower volumes and higher costs, which offset the benefit of cost improvement initiatives and higher price outcomes in Roofing. The Timber business was substantially disrupted by bushfires and continues to be impacted by wood supply issues. Building Products was also affected by actions taken in response to COVID-19. A number of timber plants and the Wyee clay roof tile plant were temporarily shut, resulting in lower fixed cost recoveries and contributing to lower margins.

Boral North America

Price gains, synergies and improved performance from Meridian Brick only partially offset the impact of higher costs, lower volumes and COVID-19 related production slowdowns

FY20 external revenue, %



BORAL NORTH AMERICA (continuing operations)[18]

A$m[19]	FY20	FY19	Var %	2HFY20	2HFY19	Var %
Revenue	2,336	2,227	▲ 5	1,128	1,123	Steady
EBITDA[1]	350	388		153	203	
EBITDA[1] *pre-AASB16*	**281**	**388**	**▼28**	**118**	**203**	**▼42**
EBIT[1]	121	225		36	120	
EBIT[1] *pre-AASB16*	**113**	**225**	**▼50**	**33**	**120**	**▼73**
US$m						
Revenue	1,566	1,592	▼ 2	741	796	▼ 7
EBITDA[1] *pre-AASB16*	**188**	**278**	**▼32**	**77**	**144**	**▼47**
EBITDA[1] ROS pre-AASB16	12.0%	17.5%		10.4%	18.1%	
EBIT[1] *pre-AASB16*	**76**	**161**	**▼53**	**21**	**85**	**▼75**
EBIT[1] ROS pre-AASB16	4.8%	10.1%		2.8%	10.7%	
ROFE[1,3] *pre-AASB16*	3.4%	5.1%				
Capex	69	113	▼39			

FY20 underlying USD revenue declined 2%, reflecting:

- Steady revenues from Fly Ash and Light Building Products, offset by lower revenues from Stone and Roofing.
- Strong price gains in Fly Ash helped offset a decline in Fly Ash site services work and substantial volume declines in building products businesses, particularly in the second half.

FY20 underlying USD EBITDA declined 32%, reflecting:

- An EBITDA decline of 17% in 1H, followed by a 47% decline in 2H due to substantially lower volumes and higher costs including one-off costs.
- The impact of several mandated plant closures, restrictions and business interruptions associated with COVID-19 as well as production curtailments to reduce inventory substantially lowered fixed cost recoveries. COVID-19 related direct costs, production slows and disruptions adversely impacted earnings by US$19m.
- Sales volumes down 11% in Stone and 6% in Roofing with a more severe decline in production volumes of 24% and 10% respectively, on a pcp basis.
- EBITDA was also impacted by lower fly ash supply with sales volumes down 2% for the year and completion of major fly ash site services contracts and projects, which lowered site services earnings by US$13m.
- One-off costs of US$24m included Windows legal and investigation costs and provisions, a provision associated with the BCI light building product reported in 1H (US$6m), and one-off gains in the pcp.
- Synergies of US$7m delivered in 1H, taking cumulative total to US$78m (versus target of US$115m).

2H EBITDA margins were negatively impacted by ~3% due to lower price and net cost increases, partially offset by improvement from Meridian Brick; and ~4.5% due to extraordinary events and one-offs.

As a result of the lower production, including inventory deleveraging to maximise cash, inventory reduced by US$48m to US$139m. Inventory as a ratio of revenue improved from 11.7% to 8.8%.

US$m	FY20			2HFY20		
	External Revenue		EBITDA pre-AASB16	External Revenue		EBITDA pre-AASB16
Fly Ash	527	▲1%	▼	237	▼3%	▼
– *Fly Ash sales & other*	438	▲9%		196	▲1%	
– *Site Services*	89	▼24%		41	▼21%	
Roofing	332	▼10%	▼	158	▼16%	▼
Stone	244	▼9%	▼	119	▼11%	▼
Light Building Products	279	▲1%	▼	136	▼6%	▼
Windows	185	▲18%	▼	92	▲8%	▼

Var %	FY20 vs FY19			2HFY20 vs 2HFY19		
	Sales volume	Prod. volume	Price[20]	Sales volume	Prod. volume	Price[20]
Fly Ash	(2)	na	10	(9)	na	12
Roofing	(6)	(10)	steady	(13)	(20)	(2)
Stone	(11)	(24)	steady	(11)	(37)	(2)

Fly Ash revenue growth of 1% was underpinned by a 10% price gain, which strengthened in 2H. Fly ash volumes declined 100k tons or 2% to 6.8 million tons primarily due to lower available ash supply in 2H as power plants were impacted by COVID-related slowdowns and intermittent shuts. Lost volumes associated with the previously advised closure of the Navajo plant in Arizona were offset by volumes from new contracts and additional volumes associated with storage and logistics optimisation.

Lower fly ash site services revenue reflects the completion of two major projects which contributed in FY19. Site services represented 17% of total fly ash revenue (compared to 22% in FY19 and 28% in FY18).

Earnings were lower with EBITDA margins of ~19% compared to ~22% in FY19 primarily due to the completion of site services construction projects, site closures and higher costs.

Roofing revenue was down 10% for FY20 with a first half decline of 3% and a 2H significantly impacted by COVID-related disruptions. While prices in 1H were up 3%, 2H prices were weaker on a geographic mix basis resulting in overall steady prices for the year. Earnings were lower in FY20, particularly in 2H, due to:

- lower re-roofing activity in Florida and Colorado following completion of prior period hurricane and hailstorm work, and heightened competition
- an adverse mix shift with higher sales of lower margin product from Arizona and California
- unplanned maintenance and downtime at Lake Wales and Okeechobee plants in Florida, and
- COVID-19 related disruptions, temporary shut downs and inventory reduction and lower production in 2H including extended closures six plants.

Stone revenue declined 9% due to a housing slowdown in Canada and higher volumes in the prior period when a competitor's plant was shut and lower sales volumes in the US including lower volumes associated with COVID-related slowdowns.

A considerable earnings decline, particularly in 2H, reflects disruptions, temporary plant shuts, inventory reduction and lower production in 2H, as well as higher operational and inflationary costs (raw materials and labour) and COVID-related cleaning and other costs.

In the Stone business, mandated and partial closures impacted the Mexico and Napa stone plants, and there was an extended three-month closure of the Washington molds plant.

Light Building Products revenue increased 1% as strong revenue growth between July and February was offset by a decline in revenue from March to June due to COVID-19 impacts. TruExterior and Versetta achieved good average selling price outcomes for the year. Following solid 1H earnings growth, second half weakness resulted in slightly softer earnings for FY20.

As reported in 1H, the result was negatively impacted by a ~US$6m provision adjustment for BCI associated with a poor quality product discontinued in the prior period.

In 2H, COVID-19 related production disruptions coupled with costs associated with cleaning and PPE had an adverse impact. The Metamora plant was closed for approximately two months due to local government mandated COVID-19 shutdowns. Shorter disruption occurred elsewhere as plants were reconfigured to accommodate social distancing and new safety practices.

Windows revenue increased 18% as sales volumes increased through to the end of February reflecting improved housing activity in Texas relative to the weather affected prior period. From March, sales were broadly steady as COVID-19 slowed industry activity and sales.

Earnings declined due to higher legal costs associated with the Windows investigation and provisions, as well as COVID-19 related production impacts and costs associated with cleaning, PPE and inefficiencies related to social distancing in 2H.

While construction of the new manufacturing plant in Houston was completed, its ramp up has been delayed pending assessment of COVID-19 impact on demand in FY21.

Meridian Brick JV delivered a post-tax equity earnings of US$1m, compared with a loss of (US$7m) in the prior period, underpinned by cost reduction and a targeted share recovery program.

A solid lift in underlying performance reflected higher US brick and resale revenues, lower production costs and lower SG&A costs. Brick volumes were up 7% on pcp with strong volume growth in the west and central USA. After a soft first half, Canada recorded a strong finish.

MERIDAN BRICK UNDERLYING RESULT (100% of business)

US$m	FY20	FY19
Revenue	401	375
EBIT[1]	2	(15)

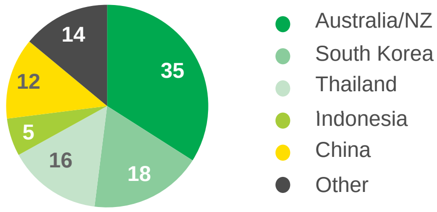
COVID-19 related disruptions and temporary shut downs occurred with the part closure of the Michigan plant and full closure of the Canadian plants for a month. All locations are now operational.

USG Boral

50%-owned USG Boral JV in 14 countries across Australia, New Zealand, Asia and Middle East

A cyclical decline in Australia and COVID-19 impacts and shut downs throughout Asia in 2H significantly impacted underlying performance. An increase in tax further lowered Boral's equity income.

FY20 external revenue, %



BORAL'S REPORTED RESULT

A$m	FY20	FY19	Var %	2HFY20	2HFY19	Var %
Equity income[21]	**25**	57	▼ 56	**2**	32	▼ 94

USG BORAL UNDERLYING RESULT

A$m	FY20	FY19	Var %	2HFY20	2HFY19	Var %
Revenue	1,474	1,606	▼ 8	662	775	▼ 15
Australia & NZ	523	576	▼ 9	246	269	▼ 9
Asia	951	1,029	▼ 8	416	506	▼ 18
EBITDA[1]	217	252		90	127	
EBITDA[1] *pre-AASB16*	**190**	**252**	▼25	**75**	**127**	▼ **41**
EBITDA[1] ROS pre-AASB16	12.9%	15.7%		11.3%	16.4%	
EBIT[1]	107	168		32	84	
EBIT[1] *pre-AASB16*	**107**	**168**	▼**36**	**32**	**84**	▼ **62**
EBIT[1] ROS pre-AASB16	7.3%	10.5%		4.8%	10.8%	
Tax, interest & NCI[22]	(57)	(55)		(28)	(20)	
NPAT	50	113		4	64	
ROFE[1,3] *pre-AASB16*	5.2%	8.1%				
Capex	82	111	▼26			

Boral's equity income declined 56%, reflecting:

- Lower underlying profitability of the joint venture predominately due to COVID-19 impacts and actions.
- Higher effective tax rate of 44% compared to 30% in FY2019, due to various tax audits and tax loss benefits written off or not recognised in certain jurisdictions due to recoverability uncertainty.

FY20 underlying revenue declined 8% due to:

- Total board sales down 6% on pcp and down 15% in 2H, due to declining housing markets in South Korea and Australia, coupled with COVID-19 restrictions and slowdowns.
- Non-board sales (42% of total revenue) down 5% pcp and 14% in 2H.
- Average pricing (ASP) outcomes in Australia (+3%) offset by lower ASP in South Korea (-8%).

FY20 underlying EBITDA declined 25%, reflecting:

- Cost savings of $53m, including $13m from Project Horizon, more than offset by lower volumes, lower prices and higher costs.
- Second half COVID-19 disruptions resulting in $32m of direct volume impacts and under-recovery of fixed costs as production slowed in China, Korea and Thailand, and shutdowns impacted sales in most markets including India, Malaysia, the Philippines, Singapore, and New Zealand.

2H EBITDA margins were negatively impacted by ~3% due to lower price and the impact of lower recovery of fixed and SG&A costs because of lower sales volumes: and 2% due to COVID production slows and disruptions, and other one-offs.

AUSTRALIA AND NEW ZEALAND

Revenue of $523m declined 9% on pcp and declined 9% in 2H. Board sales volumes declined in FY20 reflecting the cyclical downturn in the Australian housing market. Volume declines were evident in NSW and Qld, while Vic volumes were steady.

Sales of other manufactured product categories (including ceiling tile and metal stud) were lower in FY20.

Cost savings helped to offset inflationary cost increases, however, earnings primarily declined due to lower volumes, and higher transport costs associated with the transfer of product to support growth in commercial projects in Melbourne, Vic.

ASIA

Revenue of $951m from Asia declined 8% on pcp and declined 18% in 2H. Board sales volumes declined 6% on pcp and by a more substantial 17% in 2H, primarily due to COVID interruptions and slowdowns.

Other manufactured product sales were lower and recorded double digit declines in 2H, with the exception of China which recorded higher metal stud volumes in FY20

Higher earnings in China and Thailand were offset by declines across other Asian markets.

- **South Korea** reported lower revenue as plasterboard volumes declined 9% on pcp and 23% in 2H; and non-board volumes were lower in 2H. While average selling prices were significantly lower in the first half reflecting intense competition, pricing improved in 2H but remained soft (down ~6%). Earnings declined as prices, lower volumes and COVID-19 shutdowns offset cost savings.
- **China** reported lower revenue. While technical board and metal stud product grew, standard board declined. Even though our operations were temporarily shut from late January and until mid to late February, sales were quick to recover with Q4 FY20 revenue exceeding Q4 FY19. Earnings were higher than prior year as lower costs (including lower raw material and energy prices) and sales excellence initiatives offset volumes declines.
- **Thailand** reported lower revenue. While board volumes grew 10% as USG Boral's market share position continued to strengthen; non board sales and intercompany sales to India were lower. The Boonya mine, which temporarily ceased operations in April 2019 also led to lower volumes and revenues. Earnings improved, as cost savings (including lower raw material prices) helped to offset lower prices, softer non-board volumes and COVID-19 impacts.
- **Indonesia** revenue was lower as plasterboard volumes declined 5% on pcp and 3% in 2H. Average selling prices were soft and reflected a highly competitive market driven by excess market capacity. Earnings were steady as cost savings (including lower raw material prices) helped to offset lower selling prices, lower volumes and COVID-19 impacts.
- **Vietnam** revenue was lower as plasterboard volumes declined 9% on pcp and 29% in 2H; and non-board sales were significantly weaker over the year and in 2H. Average selling prices were soft due to heighted competitive pressure, especially in 2H. Earnings declined as cost savings were offset by lower volumes and COVID-19 impacts. Lower levels of activity also coincided with expansion of our Ho Chi Minh City plant.
- **India** reported lower revenue and earnings as our operations were subject to closure orders for six weeks which coincided with the ramp up of the newly completed Chennai plant.

Safety

Boral's safety performance strengthened in some areas with a recordable injury frequency rate (RIFR)[4] of 7.6 broadly in line with FY19. Lost time injury frequency rate (LTIFR)[4] of 1.6, compared with 1.3 in FY19, reflecting some reversion in contractor safety performance, primarily in Boral Australia. FY20 remained fatality free for Boral employees and contractors.

While these are our reportable injury rates amongst our employee and contractor workforce, we also have an important responsibility to keep members of the community safe, including visitors to our sites and road users. In June 2020, a contractor driver was involved in a serious incident, which sadly resulted in the fatality of a cyclist. A month later, an employee cement tanker driver was involved in a devastating crash which resulted in the death of a young girl and serious harm to several others. We were deeply saddened by these events, and our heartfelt sympathy goes out to those affected. In both cases, we immediately activated our Crisis Management Team to ensure appropriate support and actions were taken. In such circumstances, we cooperate with authorities as they undertake their investigations and we consider in depth what we can learn from the investigations.

Our continued focus on safety reflects a culture of Zero Harm Today, which has extended to making all efforts to minimise the risk of spreading the COVID-19 virus in order to keep our people, our customers and our communities safe and healthy.

As at 24 August, we have a total of 48 cases of COVID-19 among Boral's employees mainly in the USA and in geographies where community transmissions are high; and a further 240 people have recovered and returned to work. Sadly, two US employees that suffered COVID-19 related complications have passed away.

Portfolio review

A comprehensive review is underway to re-set Boral's portfolio, operating model and capital structure. The internally-led portfolio review is drawing on targeted consulting support, and is covering all of Boral's businesses. The review involves looking at the market outlook and competitive positioning of Boral's businesses as well as future earnings and growth potential. The assessment of Boral's operating model includes the way we are organised, our approach and execution, and Boral's capital structure. The outcomes of the review are expected to be announced around the end of October.

Responding to challenges

BORAL AUSTRALIA

Boral Australia remained focused on responding to the impacts of COVID-19 and maintaining a safe and reliable supply to its customers, with enhanced safety and hygiene measures in place. As the cyclical decline in housing markets gathered pace and was exacerbated by bushfire impacts in 2H, our key priority was to focus on maximising cash generation and lowering costs.

Boral Australia has been lowering overhead costs through our Organisational Effectiveness (OE) program and rightsizing the business to align resources with reduced demand. Overall, through OE and rightsizing, 544 positions were taken out of the business in FY19/FY20.

Boral Australia delivered $99m of benefits from structured improvement programs in FY20 (which includes $38m of savings from headcount reductions).

In addition to continuing to safely supply customers in a COVID-19 environment while flexing production to match demand, in FY21 Boral Australia is focused on a range of initiatives to address the current cyclical market challenges and margin pressures. Boral Australia's FY21 priorities and responses include:

- Salary freezes, organisational rightsizing and operational improvement plans, including the recently announced 250 headcount reduction.
- Targeting a reduction in fixed costs and SG&A to reflect market declines.
- Deliver benefits from quarry, cement and plant network investments.
- Build supply chain capabilities to improve customer service and lower costs.

BORAL NORTH AMERICA

While Boral North America continued to operate in line with strict hygiene measures, more stringent mandates and restrictions resulted in temporary closures of several operations. Boral's US Fly Ash business, which provides an essential service to the energy sector, continued to operate but was impacted by lower available fly ash as demand on power utilities reduced as a result of COVID-19 slowdowns.

While the ongoing COVID-19 impacts on the US housing and other end markets remain uncertain, we are focused on continuing to generate strong cash flows while also lowering costs and addressing operational challenges.

In FY20, total synergies of US$7m were achieved, all in 1H, to bring the cumulative Headwaters synergies to US$78m against a target of US$115m. While opportunities remain to deliver further synergy benefits, the immediate priorities for the business are to safely supply in a COVID-impacted environment while addressing the specific issues of declining volumes and higher costs.

In FY21, the priorities are to focus on safely operating and maintaining customer supply in a COVID-19 environment, while flexing production to match demand to avoid inventory builds.

The business is focusing efforts on growing volumes and margins with targeted OEE and quality improvement programs in place in all businesses, together with targeted price increase strategies. The following specific initiatives are also underway:

- In **Stone**, new products are planned to be launched in Q2 and Q3; a targeted premium segment share recovery program is in place; the sales organisation and incentives have been restructured; and there is a renewed focus on brand strategy.

  We are optimising the sales mix in Stone to maximise margins plus we expect enhanced Stonecraft margins in FY21 as a result of improvements delivered in the Stonecraft plant at the end of FY20.
- In **Roofing,** improved product availability is expected through production and operational improvements in the Florida plants.
- In **Fly Ash**, the strategy to grow volumes is continuing. We are working to minimise volume loss through current channels, including via network optimisation; harvesting and import opportunities; and, the Kirkland natural pozzolan source, which is due to come on line in June 2021. New contracts secured in FY20 representing 1.3m tons per annum (tpa) will progressively deliver benefits from FY21. This is partially offset by lower volumes associated with contracts lost in FY20 representing ~230k tpa. We continue to target new sources of fly ash to grow supply and offset expected utility closures over time and potential contract losses.
- The reorganised **Windows** business is now operating within **Light Building Products** with stronger financial and operational oversight. The margin growth program in Windows is focused on plant network optimisation and manufacturing operations to reduce waste and lower labour and materials costs.

  Other Light Building Products businesses remain focused on optimising margins including through production and targeted sales strategies.
- In **Meridian Brick**, the targeted share recovery program is expected to continue to deliver gains in FY21.

USG BORAL

In response to cyclical market declines in South Korea and Australia, USG Boral implemented cost excellence programs. In FY20, total cost savings of $53m were delivered, including cost benefits of ~$13m, from Project Horizon.

In FY21, USG Boral will continue to manage manufacturing to match demand in the short term with some businesses having shifted to a shorter working week. The business is targeting around ~$13m of savings through further headcount reductions, with 133 positions taken out in late FY20 and 1QFY21.

USG Boral is maintaining a strong focus on keeping variable costs flat, with targeted procurement and operating efficiencies to offset variable cost inflation. A customer focused program is also in place intended to deliver improved market share and margins with a better customer and product mix.

Balance sheet

In FY20 Boral focused on maintaining a strong liquidity position and robust balance sheet, including maintaining investment grade credit ratings. During the period, Boral entered into the following facilities.

- Bilateral facilities: New committed two-year bilateral loan facilities totalling ~A$359m were entered into on 28 May 2020. The facilities were undrawn at 30 June 2020. Boral also entered into new committed bilateral loan facilities totalling US$740m on 28 May 2020, maturing June 2024. The facilities were partially drawn by US$467m at 30 June 2020. These facilities replaced the US$750m multi-currency debt facility that was due to mature in July 2021.
- US senior notes – private placement: US$200m of private placement senior notes were issued in May 2020 with US$100m maturing in 2025 and US$100m maturing in 2027. The proceeds were used, together with existing cash to refinance the CHF150m, Euro Medium Term Notes that matured in February 2020 and US$76.2m of senior unsecured notes that matured in April 2020.
- Acquisition loan facility: The US$1b acquisition loan facility which was put in place to complete the transaction with Knauf was replaced by a US$400m acquisition syndicated loan facility in December 2019. Boral allowed the acquisition loan facility to lapse in March 2020 given that it had become apparent that the regulatory approvals required to allow the transaction to complete would not be achieved by the transaction's sunset date.

With a weighted average debt maturity of 4.7 years, Boral does not have any debt maturities until May 2022.

The company's principal gearing covenant is gross debt / (gross debt + equity) and Boral remains well within its threshold level of less than 60%. As at 30 June 2020, this measure was 41%, up from 30% at June 2019 with cash drawn having an adverse impact of ~5% and impairment an adverse impact of ~6%. The principal gearing covenant excludes the impact of the AASB16. Boral has considerable liquidity and undrawn committed facilities of $1.66b, including $904m in cash at 30 June 2020. Boral does not have any earnings based debt covenants.

Capital projects and transactions

In light of the ongoing impacts of COVID-19 measures, Boral continues to take decisive actions to preserve cash and rigorously manage cash flow, working capital and reduce capex. In FY20, capex totalled $346m, down from $453m in FY19 as all non-essential capex was suspended.

BORAL AUSTRALIA: A total of $246m of capital was invested, down from $290m in the prior year.

- Concrete network: Essential works and upgrades at West Melbourne (Vic), Bringelly (NSW) and Nowra (NSW) Concrete plants now complete.
- Quarry reinvestment program: Generational capex program finished with the upgrade of Ormeau Quarry in Qld completed in early FY20. Work at Bacchus Marsh sand operations (Vic) also completed.
- Cement Geelong storage and grinding facility: Construction of the 1.3 million tonne clinker and slag grinding plant and cementitious storage facility at the Port of Geelong in Vic remains a key priority. However, there have been some delays in delivery of key components from overseas and capex has been slowed. The facility is now expected to be operational by the end of FY21.
- Sale of Midland Brick: In Aug-2019, Boral entered into an agreement with a WA consortium to sell its Midland Brick business, including associated landholdings. Net proceeds are expected to be ~$82m following working capital and other completion adjustments. Boral has received $9m with ~$73m due at financial close. Together with the consortium, Boral continues to work through a number of pre-closing conditions (including third party consents) with an objective to complete the transaction in FY21.

BORAL NORTH AMERICA: A total of US$69m of capital invested, down from US$113m in the prior year.

- Fly Ash: Development of the Kirkland natural pozzolan deposit in Arizona is on track (after a two-month pause) and material is expected to be available for sale in Q4 of FY21
- Windows: Construction of the Houston manufacturing plant is complete. However, ramp up has been delayed pending assessment of COVID-19 impacts on demand in FY21.

USG BORAL: A total of $82m of capital invested, down from $111m in the prior year.

- Plants: Construction of the cornice plant in Australia has been postponed by six months. The new plasterboard plant in Chennai (India) and a new plasterboard line at the Ho Chi Minh plant (Vietnam) were both completed and commissioned in late CY2019.
- USG Boral transaction: Discussions with Knauf around potential transactions are continuing. Options for USG Boral are being considered in the context of Boral's broader portfolio review.

FY2021 outlook, trading and priorities

FY2021 outlook

The business environment remains challenging with continued disruptions and risks due to COVID-19, declining demand in key housing markets and mixed views on market recovery.

At this point in time, we are unable to provide guidance on FY2021 due to insufficient market visibility and uncertainty.

Early FY2021 trading

In early FY2021 trading, we are experiencing less disruptions in most businesses, providing an opportunity for improved outcomes. However, there is potential for further disruptions and uncertainty remains.

In July, lower revenues were delivered but only slightly lower earnings relative to pcp.

Overall, July **EBITDA margins** recovered relative to 2HFY2020 and they were broadly in line with 1HFY2020 margins.

From a divisional perspective:

- **Boral Australia**: July concrete volumes were down ~12%. Melbourne Stage 4 lockdown, which started in August, is impacting our business with Melbourne metro concrete volumes down ~20% on pcp. It is unclear how long the stage 4 lockdowns will continue.
- **Boral North America:** there are positive signs of demand lifting, but labour constraints and absenteeism are resulting in industry lead times increasing. July sales volumes improved relative to recent months but were still below pcp; Stone volumes were down ~1%, Roofing down ~9%, and Fly Ash down ~10% in July relative to pcp.
- **USG Boral:** July plasterboard volumes were down ~6% in Australia and ~11% in Asia versus pcp.

FY2021 priorities

Our immediate priorities are:

- Delivering divisional **improvement initiatives** to recover margins / reduce costs
- **Safely operating** with continuity of supply in a COVID-19 environment, while maintaining **strong cash conversion**
- **Completing our portfolio review** including **operating model** and **capital structure** by the end of October.

Results at a glance

A$m unless stated	FY20 Reported	FY20 pre-AASB16	FY19 Restated	Var %, pre-AASB16
Revenue	5,728	5,728	5,861	(2)
EBITDA[1,2]	**821**	**710**	**1,010**	**(30)**
EBIT[1,2]	**329**	**317**	**632**	**(50)**
Net interest	(126)	(109)	(103)	(6)
Profit before tax[1]	203	207	529	(61)
Tax[1]	(25)	(26)	(110)	76
Net profit after tax[1]	**177**	**181**	**419**	**(57)**
Net significant items	(1,316)	(1,316)	(168)	
Statutory net (loss) /profit after tax	**(1,139)**	**(1,135)**	**251**	
Net profit after tax before acquired amortisation	224	228	464	(51)
Cash flow from operating activities	631	537	762	
Gross assets	9,202	8,829	9,520	
Funds employed	7,115	6,741	8,026	
Liabilities	4,667	4,284	3,688	
Net debt	2,580	2,197	2,193	
Stay-in-business capital expenditure	228	232	340	
Growth capital expenditure	118	118	113	
Acquisition capital expenditure	0	0	11	
Depreciation and amortisation (D&A)	492	393	378	
D&A excluding acquired amortisation	429	330	316	
Boral employees	11,073	11,073	11,916	
Total employees including in joint ventures	16,169	16,169	17,104	
Revenue per Boral employee, $ million	0.516	0.516	0.492	
Net tangible asset backing, $ per share	1.89	1.89	2.10	
EBITDA margin on revenue[1], %	14.3	12.4	17.2	
EBIT margin on revenue[1], %	5.7	5.5	10.8	
EBIT return on funds employed[1,3] %	4.6	4.7	7.9	
EBIT return on average funds employed[1,23] %	4.3	4.3	7.8	
Return on equity[1],%	3.9	4.0	7.2	
Gearing				
Net debt/equity, %	57	48	38	
Net debt/net debt + equity, %	36	33	27	
Interest cover[1], times	2.6	2.9	6.1	
Earnings per share[1], ¢	14.8	15.2	35.7	
Dividend per share, ¢	9.5	9.5	26.5	
Employee safety[24]: (per million hours worked)				
Lost time injury frequency rate	1.6	1.6	1.3	
Recordable injury frequency rate	7.6	7.6	7.5	

**FY19 results have been restated. See Note 1d of the preliminary final report for further details.*

Non – IFRS information

Boral Limited's statutory results are reported under International Financial Reporting Standards. A number of non-IFRS measures are reported in order to provide a greater understanding of the underlying business performance of the Group.

Significant items are detailed in Note 2.1 of the Full Year Financial Report and relate to amounts of income and expense that are associated with significant business restructuring, business disposals, impairment or individual transactions.

A reconciliation of these non-IFRS measures to reported statutory profit including the impact of AASB 16 is detailed below:

$m		Earnings before significant items	Significant items	Reported Result[25]
Sales revenue		5,728.4	0.0	5,728.4
Profit /(loss) before depreciation, amortisation, interest & income tax	**EBITDA**	821.3	(1,404.4)	(583.1)
Depreciation & amortisation, excluding amortisation of acquired intangibles		(429.1)	0.0	(429.1)
Profit / (loss) before amortisation of acquired intangibles, interest & tax	**EBITA**	392.2	(1,404.4)	(1,012.2)
Amortisation of acquired intangibles		(63.1)	0.0	(63.1)
Profit / (loss) before interest & income tax	**EBIT**	329.1	(1,404.4)	(1,075.3)
Interest		(126.4)	0.0	(126.4)
Profit / (loss) before tax	**PBT**	202.7	(1,404.4)	(1,201.7)
Tax benefit / (expense)		(25.4)	88.5	63.1
Net profit / (loss) after tax	**NPAT**	177.3	(1,315.9)	(1,138.6)
Add back: Amortisation of acquired intangibles		63.1		
Less: Tax effect of amortisation of acquired intangibles		(16.2)		
Net profit after tax & before amortisation of acquired intangibles	**NPATA**	224.2		
Basic earnings per share,¢	**EPS**[26]	14.8		(95.3)
Basic earnings per share before amortisation of acquired intangibles,¢	**EPSA**[26]	18.8		

The USG Boral division commentary also includes a non-IFRS measure of underlying results excluding significant items representing the 12 months trading results to assist users to better understand the trading results of this division.

The results announcement has not been subject to review or audit however it contains disclosures which are extracted or derived from the Full Year Financial Report for the 12 months ended 30 June 2020.

The Full Year Financial Report for the 12 months ended 30 June 2020 is prepared in accordance with the ASX listing rules and should be read in conjunction with any announcements to the market made by the Group during the year.

Non – IFRS information (cont.)

Significant Items

Following a review of the Company's carrying values, a non-cash, pre-tax impairment charge of ($1,346m) has been recognised in FY20.

A non-cash impairment charge of ($1,223m) relates to assets within Boral North America including goodwill, intangible assets and Boral's investment in the Meridian Brick joint venture.

The carrying value assessment of Boral's North American assets takes into account:

- increased demand uncertainty caused by the COVID-19 pandemic and potential longer-term impacts of prevailing economic and operating conditions, and
- recent operating performance of our businesses.

Recognising this current uncertainty and risks to future cash flows, we have assumed the following in our carrying value assessments for Boral North America:

- lower housing and repair & remodel activity in the near term, with longer term forecast housing starts reduced from 1.5 million to 1.3 million, which is more aligned to the average over the past 30 years
- moderated fly ash volumes to reflect the underlying decline in domestic supply due to coal-fired power plant closures, noting that only committed and approved alternative fly ash supply sources are recognised in the assessment
- a lower terminal growth rate from 2.5% to 2.0%
- increased the after tax discount rate by ~0.5% to reflect market and delivery risk.

A further $123m of the total impairment is in relation to Boral Australia, including certain assets in Australian building products and Western Region construction materials businesses. The assessment of the carrying value of Boral's Australian assets takes into account the significant decline in housing, particularly in New South Wales, low levels of construction activity in Western Australia and the Northern Territory, the impact of recent bushfires on the Timber business, and uncertainty around the extent and timing of recovery given the COVID-19 pandemic.

Further detail of the assumptions used in our carrying value assessment process can be found in the Preliminary Financial Report for the 12 months ended 30 June 2020.

A breakdown of significant items, which include the above impairments is provided below.

A$m	**FY2020**
Asset impairments	
• Boral North America – goodwill and intangible assets	(1,146)
• Boral North America – investment in Meridian Brick JV	(77)
• Boral Australia – WA & NT construction materials businesses and Timber & Roofing building products businesses	(123)
Restructuring costs	(36)
Joint venture matters	(13)
Integration costs	(9)
Expense before interest and tax	**(1,404)**
Income tax benefit	88
Significant items (net)	**(1,316)**

Non – IFRS information (cont.)

A reconciliation of non-IFRS measures for continuing and discontinued operations to reported statutory profit is detailed below:

$m		Continuing operations	Discontinued operations	Total
Sales revenue		5,671.4	57.0	5,728.4
Loss before depreciation, amortisation, interest & income tax	**EBITDA**	(579.1)	(4.0)	(583.1)
Depreciation & amortisation, excluding amortisation of acquired intangibles		(425.4)	(3.7)	(429.1)
Loss before amortisation of acquired intangibles, interest & tax	**EBITA**	(1,004.5)	(7.7)	(1,012.2)
Amortisation of acquired intangibles		(63.1)	0.0	(63.1)
Loss before interest & income tax	**EBIT**	(1,067.6)	(7.7)	(1,075.3)
Interest		(126.4)	0.0	(126.4)
Loss before tax	**PBT**	(1,194.0)	(7.7)	(1,201.7)
Tax benefit		60.9	2.2	63.1
Net loss after tax	**NPAT**	(1,133.1)	(5.5)	(1,138.6)

FOOTNOTES

[1] Excluding significant items

[2] See pages 17-19 for reconciliations and explanations of these items

[3] Return on funds employed (ROFE) is based on moving annual total EBIT before significant items on funds employed at period end

[4] Per million hours worked for employees and contractors in all businesses and all joint ventures regardless of equity interest

[5] Includes Boral's 50% share of underlying revenue from USG Boral and Meridian Brick joint ventures, which are not included in Group reported revenue

[6] Average of BIS Oxford Economics and Macromonitor forecasts

[7] ABS original housing starts to March 2020. Average of BIS Oxford Economics, Macromonitor and HIA for June 2020 quarter

[8] Original series from ABS to March 2020 quarter. Average of BIS Oxford Economics and Macromonitor forecast for June 2020 quarter

[9] US Census seasonally adjusted annualised housing starts (August 2020). Based on data up to June 2020

[10] Moody's retail sales of building products, July 2020

[11] Management estimate of ready mix demand utilising Dodge Data & Analytics June 2020 report and other industry sources

[12] Management estimate of square feet area utilising Dodge Data & Analytics June 2020 report

[13] Based on various indicators of building and construction activity

[14] Includes internal and external sales

[15] For external sales only

[16] For external and internal sales including wholesale cement but excluding Sunstate JV

[17] For external cement sales excluding wholesale cement and Sunstate JV volumes

[18] The prior year excludes Denver Construction Materials and US Block businesses sold on 2 July 2018 and 30 November 2018 respectively

[19] An average AUD/USD exchange rate of 0.6703 used for FY20 and 0.7145 for FY19

[20] Fly Ash, Roofing and Stone price changes are based on ASP. Roofing price data is based on Concrete Tiles only

[21] Post-tax equity income from Boral's 50% share of USG Boral JV, excluding significant items

[22] Non-controlling interest (NCI) related to USG Boral's investment in Thailand

[23] Calculated as MAT EBIT (before significant items) on the average of opening and closing funds employed for the year

[24] Includes employees and contractors in all businesses and all joint venture operations regardless of equity interest

[25] Includes continuing and discontinued operations. Refer to page 19 for reconciliation between the reported result and continuing and discontinued operations

[26] Based on weighted average number of shares on issues of 1,194,951,891