

ASSESSMENT

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Monash University

Green Bond Assessment - Climate Bond No. 3

Summary analysis



Summary opinion

A GB1 (Excellent) Green Bond Assessment (GBA) assigned to Monash University's proposed A\$116 million (US\$86 million) Climate Bond No. 3 primarily reflects the following considerations:

- » Dedicated team within the university with broad representation and expertise to consider and evaluate eligible environmental project proposals
- » Full allocation of net proceeds to a new Technology Education Building targeting high performance and low emissions intensity, and aligned with the Green Bond Principles and Climate Bonds Initiative (CBI) standard
- » Independent auditing firm to provide pre-issuance and post-issuance assurance statements on the alignment of the climate bond offering with the CBI standard
- » University commitment to separately track net proceeds and confirm that such proceeds are used for green purposes as set forth in its policy framework document
- » Post-issuance reporting highlighting use of funds and actual environmental benefits achieved to be provided annually over the life of the bonds

Factor	Factor Weights	Score	Weighted Score
Organization	15%	1	0.15
Use of Proceeds	40%	1	0.40
Disclosure on the Use of Proceeds	10%	1	0.10
Management of Proceeds	15%	1	0.15
Ongoing Reporting and Disclosure	20%	1	0.20
Weighted Score			1.00

The transaction's weighted score, using the green bond scorecard, is 1.00. This, in turn, corresponds to a GB1 grade. We also maintain the GB1 and 1.00 weighted scores assigned to the university's [Climate Bond No. 1](#) issued in December 2016 and [Climate Bond No. 2](#) issued in December 2017.

Profile

Monash was founded in 1958, and is Australia's largest university by enrollment. The university was established by an act of Parliament in 1958, and is governed under the Monash University Act of 2009. It is one of the country's Group of Eight universities with a strong international reputation in research and higher education teaching. The university has four campuses in the [State of Victoria](#) (Treasury Corporation of Victoria, Aaa stable), with two main campuses located close to the City of Melbourne.

The university has an extensive presence overseas when compared to its Australian peers, including sizeable operations in Malaysia and a teaching center in South Africa, as well as alliances with universities in India, China, the UK and Italy. Monash has just over 62,000 students,¹ of which over 52,000 are studying in Australia, with the balance located overseas in programs run jointly with international partners.

The university offers comprehensive programs in 10 faculties, and operates a specialist college – Monash College – that acts as a pathway school for international students. Monash has embedded a strong environmental and sustainability focus into its operating profile and targets 100% renewable energy usage by 2030.

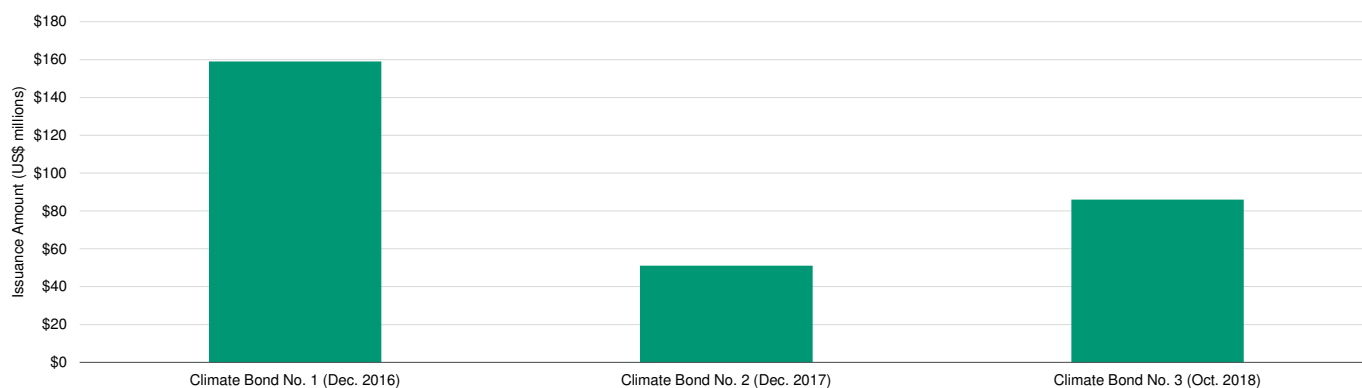
As highlighted in [our latest credit opinion](#), the Aa1 issuer ratings assigned to the university reflect its role as one of Australia's most prominent research and teaching institutions, as well as its renowned global academic reputation. The ratings are also supported by the university's healthy financial performance, characterized by solid and favorable cash flow margins, which are underpinned by sizeable grants from the [Government of Australia](#) (Aaa stable). Growth in international students and Monash's strong research reputation underpin revenue diversity. Monash has embedded adequate flexibility into its cost base to adapt to declining student demand from potential changes in international student preferences. The university is well placed to manage changes to higher education funding in the Government of Australia's mid-year update for fiscal 2018, due to its strong market position and revenue diversity.

Transaction summary

Monash University's A\$116 million Climate Bond No. 3 is comprised of senior unsecured fixed rate notes with a 20-year maturity. The transaction was issued in the US private placement market in August 2018 and is expected to close in October 2018. This issuance represents the university's third climate/green bond following the issuance of Climate Bond No. 1 (GB1) in December 2016 and Climate Bond No. 2 (GB1) in December 2017 (see Exhibit 1).

Exhibit 1

Issuance represents Monash's third green offering



Climate Bond issuance amounts all converted to US dollars for purposes of this exhibit.

October 2018 is proposed closing for Climate Bond No. 3.

Sources: Monash University, Moody's Investors Service

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Strengths and weaknesses

Strengths	Weaknesses
Strong organizational oversight of the green bond issuance process with multiple teams in the university supporting a commitment to sustainability	Though expected to evolve over time as financed projects become operational, post-issuance reporting to date does not contain granular quantitative data on environmental benefits actually achieved
Net proceeds fully allocated to eligible green projects under the Green Bond Principles and aligned with the Climate Bonds Initiative standard	
Green bond framework includes provisions for disclosure on the anticipated environmental benefits of the financed projects, including annual reporting on the green projects over the life of the bonds	
Separate account for tracking green bond proceeds to be audited by an external independent auditing firm	

Organization



In conjunction with its previous climate bond issuances, Monash created a dedicated team within the university with broad representation and expertise to evaluate eligible environmental project proposals, and manage proceeds and projects over the life of the bonds. This climate bond issuance team consists of specialist external advisors and internal Monash staff, who were brought together from finance, treasury, and the property and building departments (including sustainability disciplines) for the particular purpose of issuing climate bonds. The finance and treasury teams manage all debt-raising activities for the university. The property and building departments manage the capital works and facility management responsibilities across all of the university's Australian campuses, including the sustainability programs. The climate bond issuance team is not only responsible for project selection but also for monitoring the progress of projects and proceeds allocation over the life of the bonds and projects.

The university has a number of committees that provide oversight and guidance for its capital program, including:

- » **The Vice-Chancellor's executive committee**, which is the principal management committee of the university. It oversees and endorses the university's capital program and major projects to ensure the alignment of activities with the university's strategic plan.
- » **The estates committee**, which is a standing committee of the university council. It provides oversight to ensure that sustainability issues are appropriately considered in all aspects of the university's environment and property development.
- » **The Monash University sustainability team**, which assesses eligibility criteria and ensures projects meet emissions requirements.

All projects considered for Monash University climate bonds must meet the Climate Bond Initiative's kg/CO₂ criteria. The following project categories are eligible for climate bond funding, based on Monash University's criteria for selection:

- » **Sustainable buildings**: Any project for an existing or new building that has received, or expects to receive, certification according to third-party verified green building standards, such as 5 Star Green Star by the Green Building Council of Australia, and that is in the top 15% of their city in terms of emissions performance, based on third-party assessment.
- » **Renewable energy**: Development, construction, installation, operation and upgrades of equipment or facilities wholly dedicated to renewable energy generation, or wholly dedicated to transmission infrastructure for renewable energy generation sources.
- » **Energy efficiency**: Development, construction, installation, operation and upgrades of any projects (products or technology) that reduce energy consumption or improve resource efficiency in building operations.

- » **Water and wastewater management:** Development, construction, installation, operation and upgrades of any projects (products or technology) that reduce water consumption or improve resource efficiency in new or existing facilities that are used for the collection, treatment, recycling, or reuse of water, rainwater, wastewater or sewage.

Additional projects may be considered under the "project upgrade" methodology, which allows for building upgrades as long as the new building has 30% to 50% less greenhouse gas emissions per square meter.

Monash's issuance of climate bonds aligns with its overall commitment to sustainability, as evidenced through many facets of the university's operations. In October 2017, the university announced its Net Zero initiative, which highlights the university's ambition to achieve net zero carbon emissions by 2030. As part of this initiative, the university plans to invest \$135 million over 13 years to transform its energy infrastructure and engage on a deep decarbonization strategy to ensure clean energy use across all of its Australian campuses.²

In its latest annual report, Monash highlights its environmental performance in a detailed section. Key topics covered include biodiversity, carbon management, energy consumption, water consumption, waste consumption and sustainable transport. For each of these areas, the university discloses key quantitative metrics that it tracks over time to manage its performance. As seen in Exhibit 2, for example, the university discloses its carbon footprint through Scope 1, 2 and 3 emissions, as well as emissions offsets. Since 2010, the university has decreased its net carbon footprint by 3%, which is 17% below business as usual growth.³

Exhibit 2

Monash University's carbon footprint

Tonnes CO₂ equivalent emitted/year, 2010 – 2016 calendar year

	2010	2011	2012	2013	2014	2015	2016
Scope 1 (on-site emissions arising from combustion of gas and fuels and the use of refrigerants and livestock)	19,053	18,387	19,759	19,958	19,918	21,051	21,604
Scope 2 (indirect emissions arising from the generation of imported electricity)	122,172	118,749	121,177	119,060	112,867	108,730	107,964
Scope 3 (indirect emissions arising from the extraction, production and transport of gas, fuels and electricity; electricity lost in delivery; waste disposal; embodied energy in paper and water; business travel by staff; and transport)	52,569	57,775	59,519	57,450	58,582	60,027	62,321
Additional estimate for small facilities	2,354	2,367	2,435	2,386	2,324	3,204	3,239
Total	196,148	197,278	202,890	198,854	193,691	193,012	195,128
Emissions offsets (tonnes CO ₂ emitted/year)	13,980	20,371	20,945	20,316	19,790	18,883	18,378
Net total of all emissions after including offsets (tonnes CO₂ equivalent emitted/year)	182,168	176,907	181,945	178,538	173,901	174,129	176,750

Data are collected and calculated according to the National Greenhouse and Energy Reporting (Measurement) Determination 2008, the National Greenhouse Accounts (NGA) Factors, July 2014 workbook and the Australian Standard 14064.1-2006.

Data from previous years have been recalculated as more accurate data became available.

Source: Monash University 2017 Annual Report

Beyond its environmental performance reporting, the university also discloses information on its social performance in its annual report. Areas covered by these disclosures include occupational health and safety, diversity and inclusion of the university workforce (including gender diversity), and support for low socioeconomic status students. Additionally, the university discloses the details of its broader environmental, social and governance statement, as well as its environmental sustainability policy.

Factor 1: Organization (15%)	Yes	No
Environmental governance and organization structure appear to be effective	●	
Policies and procedures enable rigorous review and decision making process	●	
Qualified and experienced personnel and/or reliance on qualified third parties	●	
Explicit and comprehensive criteria for investment selection, including measurable impact results	●	
External evaluations for decision making in line with project characteristics	●	
Factor Score	1	

Use of proceeds



Monash University issued its A\$116 million Climate Bond No. 3 in August 2018 in the U.S. private placement market, proceeds from which are targeting the financing needs to build a new Technology Education Building, which is expected to cost A\$165 million. The building is aligned with the Green Bond Principles and CBI standard as it is targeting high performance and low emissions intensity. It will include elements of Passive House design, including thermal bridge free construction and airtightness. Investment in the Technology Education Building is aligned with the university's green bond framework as well as its five-year capital development plan.

Per Monash's green bond framework, all new university buildings are independently certified to either Passive House Standard or 5 Star Green Star by the Green Building Council of Australia. In addition to meeting CBI's emissions eligibility criteria, these new buildings deliver a number of other environmental benefits including: indoor air quality, potable water efficiency, non-potable water utilization, water harvesting and storage, permeable landscapes, outdoor shading, solar energy harvesting, waste management and sustainable transport facilities.

Elements of Passive House design that are being adopted for the Technology Education Building will allow the building to achieve a 5.5 Star NABERS Energy Rating. NABERS (the National Australian Built Environment Rating System) is an Australian rating system used to measure a building's energy efficiency, carbon emissions, as well as the water consumed, the waste produced and compare it to similar buildings. The scale ranges from 1 Star (Poor) to 6 Stars (Market Leading).⁴

The Technology Education Building is the latest in a line of capital investments financed with climate bonds and aligned with the university's sustainability goals. As seen below in Exhibit 3, the university has now identified nine investments in energy efficiency, renewable energy and green building projects to receive funding from its three climate bonds.

Exhibit 3

Majority of Monash climate bond proceeds are allocated to low-carbon building investments

Monash University's list of all climate bond nominated projects and the bond they support

Climate Bond Issuance	Nominated Project	Value	Taxonomy	Refinancing
Climate Bond No. 1 (Dec. 2016) - A\$218 million	Learning and Teaching Building	A\$180 million	Low-Carbon Buildings - Commercial building	No
	Caulfield Library redevelopment	A\$43.4 million	Low-Carbon Buildings - Building upgrade	Yes
	Peninsula Campus Library	A\$16 million	Low-Carbon Buildings - Building upgrade	Yes
Climate Bond No. 2 (Dec. 2017) - A\$66 million	Chancellery Building*	A\$55 million	Low-Carbon Buildings - Building upgrade	No
	Planned Solar panel installation**	A\$6.6 million	Solar	No
	Buiding 56 Passive Building refurbishment**	A\$4.2 million	Low-Carbon Buildings - Commercial building	Yes
	External lighting project**	A\$3.5 million	Low-Carbon Buildings - Outdoor LED upgrade	No
	Existing Solar panel installation**	A\$1.6 million	Solar	Yes
Climate Bond No. 3 (Oct. 2018) - A\$116 million	Technology Education Building	A\$165 million***	Low-Carbon Buildings - Commercial building	No

*Project added for Climate Bond No. 2.

**Project assured during Climate Bond No. 1 pre-issuance assurance and reallocated to Climate Bond No. 2.

***Reflects total project cost.

Source: Monash University

Factor 2: Use of Proceeds	Yes	No
>95% - 100% of proceeds allocated to eligible project categories that are determined based on the issuer's adopted policies and the categories established under the Green Bond Principles that will be further informed by one or more robust and widely recognized green bond frameworks or taxonomies that qualify eligible projects, including any applicable regulatory guidelines.	•	
Factor Score	1	

Disclosure on the use of proceeds



Monash University will use net proceeds for eligible projects in accordance with the university's green bond framework and the CBI certification it obtained for the transaction (see "Use of proceeds" above). The university has engaged EY (Ernst & Young) to provide a pre-issuance assurance statement on the alignment of the climate bond offering with the CBI standard. EY, which has performed a similar service for the university's previous two climate bonds, will additionally undertake a post-issuance assurance within 12 months of the bond issue to ensure that the assets continue to perform in compliance with the CBI certification and that the funds are allocated appropriately. EY issued its post-issuance assurance on Climate Bond No. 1 in a timely manner, finding that the university's bond issuance process with regard to Climate Bond No. 1 "meets the project identification, project minimum criteria, management of proceeds, and reporting requirements of the Climate Bond Standard, in all material respects."⁵

Factor 3: Disclosure on the Use of Proceeds	Yes	No
Description of green projects, including portfolio level descriptions, actual or intended	•	
Adequacy of funding and/or strategies to complete projects	•	
Quantitative and/or qualitative descriptions for targeted environmental results	•	
Methods and criteria, both quantitative and qualitative, for calculating performance against targeted environmental results	•	
Issuer relies on external assurances: Second Party reviews, audits and/or third party certifications	•	
Factor Score	1	

Management of proceeds



Monash has committed to track separately the net proceeds of its climate bonds and will confirm that such proceeds are used for green purposes as set forth in its green bond framework. The university has also committed to continued disclosures on the portfolio balance of unallocated proceeds and has engaged EY to audit that all the funds have been allocated appropriately. Monash's treasury department will manage any net proceeds not immediately allocated to fund eligible green projects and hold them in accordance with the CBI standard.

Proceeds from the bond issue will be held in a dedicated and separate account within the finance ledger. The university's treasury area of corporate finance manages cash on a daily basis that includes monitoring the receipt of proceeds from the bonds and tracking expenditures on the nominated projects in the forecast models. The building and projects team provides cash outlay projections and timing to the treasury team on the nominated projects.

Any unspent proceeds are monitored through Monash's treasury management processes and, based on the most current expenditure projections, will either be held in internally managed term deposits, Monash's externally managed cash fund or the university's interest-bearing bank account until fully expended.

The asset register will track expenditures on all eligible projects that can be matched against the bond proceeds. This practice will continue until the proceeds of the bond have been fully used.

Factor 4: Management of Proceeds	Yes	No
Bond proceeds are segregated and separately tracked on an accounting basis or via a method by which proceeds are earmarked	•	
Application of proceeds is tracked by environmental category and project type	•	
Robust process for reconciling planned investments against actual allocations	•	
Clear eligibility rules for investment of cash balances	•	
Audit by external organization or independent internal audit unit	•	
Factor Score	1	

Ongoing reporting and disclosure



As with previous climate bonds, Monash will make public disclosures at least annually on Climate Bond No. 3. The university will publish a specific post-issuance report for Climate Bond No. 3, to be shared with bondholders. The university will publish separate reports for each of its climate bonds, with content to include the list of projects financed, confirmation that projects meet CBI standards, the balance of unallocated proceeds, as well as various impact reporting elements. Beyond its climate bond reporting, the university also discloses significant detail on its broader sustainability initiatives in its annual report (see "Organization" above).

To date, the university has published one post-issuance report, for Climate Bond No. 1, published in April 2018. This report contains assurance from the university's CFO that as of December 31, 2017, the university was in conformance with the certification requirements of the Climate Bond Standard. The report also contains specific information on the projects financed with the bonds and expected environmental impacts, as well as the amount of funding drawn to date (see Exhibit 4). As of December 31, 2017, the university had drawn A\$204 million of the total A\$218 million issued, leaving another A\$14 million to be allocated.

Exhibit 4

First post-issuance report covers investments made with Climate Bond No. 1 proceeds

Project	Investment Area	Drawn Funding as of December 31, 2017 (A\$ millions)	Key environmental features
Learning & Teaching Building	Low Carbon Buildings	164.9	<ul style="list-style-type: none"> • Targeting 5 Star Green Star • 600-panel solar array • Solar shading • Options for night purging/natural ventilation • Double glazed windows • Air-cooled chillers/evaporative pre-cooling • High level of insulation • Lighting controls - dimming, zone control, motion detectors <p>The project delivered all of the intended environmental features as designed. The expected impact of the project is in line with the performance expectations as per the Climate Bond Standard.</p>
Peninsula Campus Library	Low Carbon Buildings	0.5	<ul style="list-style-type: none"> • 540-panel solar array servicing 73% of total building electricity • Energy efficient LED lighting with daylight harvesting and occupancy sensor controls
Caulfield Library redevelopment	Low Carbon Buildings	38.6	<ul style="list-style-type: none"> • Improved thermal envelope performance <ul style="list-style-type: none"> » Increased insulation » External shading and installation of window films to reduce solar heat gains • Increased levels of natural daylight • Water harvesting from the Caulfield Campus Green • Water efficient fittings

A number of projects in the green asset pool assured during Climate Bond No. 1 pre-issuance assurance were reallocated to Climate Bond No. 2.

Source: Monash University, "Annual Report for the Certified Monash University Climate Bond 1 (2016 A\$218m)"

Although this Climate Bond No. 1 post-issuance report contains most of the anticipated content, it does not contain explicit quantitative factors measuring the environmental benefits of the projects financed with the bond. We understand that the absence of this information is a function of timing, given that the financed projects were not in operation for a long enough period to measure the benefits. As such, we are maintaining our Ongoing Reporting and Disclosure factor score of 1, though we note that we may lower this score in the future if the university's reporting does not evolve to include more explicit quantitative environmental benefits.

Moody's Green Bond Assessment (GBA)

Moody's GBA represents a forward-looking, transaction-oriented opinion on the relative effectiveness of the issuer's approach to managing, administering, allocating proceeds to and reporting on environmental projects financed with green bond proceeds. GBAs are expressed using a five-point relative scale, ranging from GB1 (Excellent) to GB5 (Poor). A GBA does not constitute a credit rating.

Moody's related publications

Methodology:

- » [Green Bonds Assessment \(GBA\)](#), March 30, 2016

Green Bond Assessment:

- » [Monash University: Green Bond Assessment - Climate Bond No. 2](#), October 24, 2017
- » [Monash University: Green Bond Assessment - Climate Bond No. 1](#), July 12, 2017

Credit Opinion:

- » [Monash University: New Issuer](#), July 12, 2018

Green Bond Research:

- » [Green Bonds - Global: Second-quarter issuance rebounds but full-year 2018 growth likely to moderate](#), July 31, 2018
- » [Green Bonds – Sovereign: Sovereign green bond market on course for critical mass, but challenges remain](#), July 9, 2018
- » [Green Bonds – Global: Modest Q1 2018 issuance a speed bump on the road to market growth](#), April 30, 2018
- » [Green Bonds - Global: Global municipal green bond issuance will continue to rise](#), March 19, 2018
- » [Green Bonds - Global: Global green bond issuance set to eclipse \\$250 billion in 2018](#), January 31, 2018
- » [Cross-sector - Global: FAQ: The green bond market and Moody's Green Bonds Assessment](#), November 29, 2017
- » [Green Bond Assessments - Global: Issuers exhibit strong organizational frameworks but differ on disclosure](#), September 19, 2017

Sector Research:

- » [Higher education - Global: Rapidly evolving environment presents credit risks and opportunities](#), July, 10, 2018
- » [Higher education - Global: Key credit drivers vary for universities and colleges globally](#), May 30, 2018
- » [Higher Education - Australia: Universities to review expansion plans as funding shortfalls loom](#), January 11, 2018

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Endnotes

- [1](#) As of December 2017, on an Equivalent Full-Time Student Load (EFTSL) basis.
- [2](#) Monash University, [2017 Annual Report](#)
- [3](#) Monash University, [2017 Annual Report](#)
- [4](#) NABERS, "[What is NABERS?](#)"
- [5](#) EY, "Independent Reasonable Assurance Report to the Directors and Management of Monash University," April 19, 2018

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