SUSTAINABILTY DEEP DIVE SERIES FY20

Environmental Data Pack

Background notes

As a property owner and developer, acquisitions, divestments and development activity within a given year can significantly impact our environmental performance. The table below provides an overview of the activity profile for each of our businesses and how this affects our environmental data.

	Activity Profile	Energy and Emissions	Natural Resources
Group operations	Internal corporate operations.	Unless there are significant changes to the tenancies that we operate from, minor fluctuations generally reflect external factors beyond our control. Scope 1: Vehicle fleet fuel. Scope 2: Purchased electricity. Scope 3: Hire car, airline and rental car travel.	The water, waste and other natural resources are typically managed by the base building that we are tenanting. Where we are a tenant within our own building, these resources are reported under the base building.
Commercial Property	Operating our Retail Town Centre, Workplace and Logistics assets.	Unless there are significant changes to our portfolio, or key infrastructure upgrades/ installations, changes generally reflect energy efficiency programs and initiatives. Scope 1: Gas consumption, refrigerants. Scope 2: Purchased electricity. Scope 3: Transmission losses, operational waste.	Unless there are significant changes to our portfolio, changes reflect water efficiency programs and initiatives, tenancy mix, water leakages, or changes to asset management arrangements. Water: Potable water consumption. Waste: Operational waste, development construction waste.
Communities	Development of our projects and communities, predominantly undertaken by our residential and retirement living community contractors.	Increased civil works activity has a direct correlation with increased energy and emissions. In periods where we are actively developing our assets, our emissions profile is higher. Scope 1: Emissions from gas and fuel consumption reported by our contractors, and our direct gas consumption. Scope 2: Emissions from electricity consumption reported by our contractors, and our purchased electricity. Scope 3: Transmission losses.	Increased civil works activity has a direct correlation with increased water consumption. In periods where we are actively developing our assets, our water consumption, and particularly that of our residential contractors, is higher. Increased finishing works (landscaping and upgrades in our retirement living communities) also contribute to increased water consumption, and retirement living contractors generally undertake these works. Water: Potable and non-potable water consumption reported by our contractors, and our direct water consumption. Waste: Waste generation reported by our contractors. Biodiversity metrics vary and reflect the specific characteristics of our residential community projects.

	Activity Profile	Energy and Emissions	Natural Resources
Communities	Operating our retirement living communities.	Unless there are significant changes to our portfolio (e.g. the acquisition of Aevum in FY11 which nearly doubled the size of our Retirement Living business) annual changes generally reflect energy efficiency programs and initiatives, climatic conditions (i.e. milder temperatures reduce energy demand), unit vacancy and development villages opening to residents. Scope 1: Our direct gas consumption (can include our residents' consumption where a village is not sub-metered). Scope 2: Our direct consumption of purchased electricity (can include our residents' consumption where a village is not sub-metered). Scope 3: Transmission losses.	Unless there are significant changes to our portfolio (e.g. the acquisition of Aevum in FY11 which nearly doubled the size of our Retirement Living business) annual changes reflect water efficiency programs and initiatives and development villages opening to residents. Water: Water consumption.

Environmental impacts from transport are not considered material for our organisation. While we report on Scope 3 emissions as it relates to air and ground transport during business hours, we have excluded employee transport to work due to data reporting challenges. Similarly, we have excluded our supply chain's movement of goods and materials on our behalf.

Carbon and energy

Carbon and energy data within this document is to be read in conjunction with our **Carbon and Energy Deep Dive** available on our **website**.

Boundary and methodology

We report our Scope 1 and Scope 2 emissions according to our operational control boundary under the National Greenhouse and Energy Reporting Act 2007 (NGER Act). We voluntarily report select Scope 3 emissions in accordance with the GHG Protocol Corporate Standard. All of our operations are based in Australia.

Scope	Boundary
Scope 1	Direct emissions, i.e. emissions from fuels that are combusted on site (including natural gas, diesel and petrol from fleet) as well as refrigerant leakage. Direct emissions reported by contractors where we have operational control (typically residential community projects). Contractors are required to supply their gas and fuel consumption data as part of monthly reporting. Emissions from gas consumption across the Retail Town Centre, Workplace, Logistics, Residential and Retirement Living assets for which we have operational control. For those assets that have missing invoices estimates are provided. Tenant gas usage is not included except where we are the tenant. Emissions from use of explosives by civil works contractors are excluded.
Scope 2	Indirect emissions from the consumption of electricity only. Indirect emissions reported by contractors where we have operational control (typically residential community projects). Contractors are required to supply their electricity consumption data as part of monthly reporting. Emissions from base building electricity across the Retail Town Centre, Workplace, Logistics, Residential and Retirement Living assets for which we have operational control. For those assets that have missing invoices estimates are provided. Tenant electricity usage is not included except where we are the tenant.
Scope 3	Other indirect emissions, including hire cars, rental vehicles and airline travel, transmission and production losses from purchased electricity, gas and fleet fuel and operational waste from our Commercial Property portfolio.

Notes:

- Development contractor resource and energy data is provided to us by third party contractors in accordance with NGER Act reporting requirements.
- Logistics data is predominantly related to vacant spaces or minimal external and internal common area lighting. Due to the high volatility of this energy and water consumption, setting meaningful targets becomes difficult. Additionally, there are currently no industry standards and therefore we have decided not to set targets for our Logistics portfolio.
- We have embedded networks within our assets, and the usage of our residents and tenants is removed where the usage is outside of our Operational Control under the NGER Act.

Emissions

Total greenhouse gas emissions (tCO_2-e)

	FY20	FY19	FY18	FY17	FY16
Stockland group total Scope 1	21,028	24,230	25,453	26,884	35,036
Stockland group total Scope 2	53,751	70,545	82,591	87,860	89,881
Stockland group total Scope 1+2 emissions	**74,779**	94,775	108,044	114,744	124,917

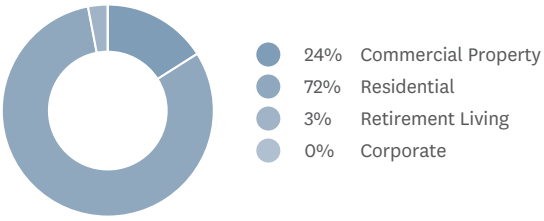
Total scope 1 emissions (tCO_2-e)

	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks base building gas	1,179	1,231[1]	1,160	1,010	1,080
Logistics centres gas	-	-	-	-	–
Retail Town Centres gas	1,269	1,477	1,487	1,451	398[2]
Vehicle fleet fuel	52	86	88	84	86
Refrigerant leaks[3]	2,655	1,149	3,203	3,224	3,091
Residential sites fuel & gas[4]	118	100	69	52	10
Residential contractors fuel and gas	15,092	19,498	18,666	20,278[5]	29,525[6]
Retirement living communities fuel & gas[7]	663	688	780	745	487
Retirement living contractors fuel, gas	-	-	-[8]	393	360
Total Scope 1 emissions	**21,028**	24,229	25,453	27,237	35,037

1 Increase due to major heating issues at Optus causing the boilers to operate longer and harder.
2 Gas increase due to the removal of electric duct heaters to efficient central boiler heating system.
3 Excludes Refrigerant R-22 in line with NGERs reporting protocol.
4 FY17 onwards includes fuel (for residential site office usage), whereas previous years only consumed gas.
5 Construction activities across master planned residential communities transition from civil works in FY16 to residential lots in FY17.
6 Figures reflect our activity profile: continuing increased development activity on existing and new sites.
7 FY19 onwards includes fuel (LPG), whereas previous years only consumed gas.
8 No development works in our Retirement Living business were considered to be within our operational control boundary from FY18.

Scope 1 emissions by business unit

Communities (Residential) constitutes the largest proportion of our Scope 1 emissions due to contractor construction activity across our developments.



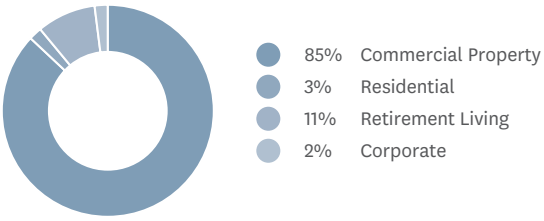
Total scope 2 emissions (tCO_2-e) – location based

	FY20	FY19	FY18	FY17	FY16
Corporate tenancies electricity[1]	1,114	1,409	1,421	1,418	1,353
Workplace and Business Parks base building electricity	13,072	16,513	17,603	18,350	19,657
Logistics centres electricity	1,216	1,771	4,254	4,321	1,291
Retail Town Centres electricity	31,214	43,250	51,032	54,327	58,839
Residential sites electricity	1,316	1,532	1,413	1,413	1,515
Residential contractors electricity	80	35	84	147	299
Retirement living communities electricity	5,738	6,035	6,785	7,874	6,918
Retirement living contractors electricity	0	-	-[2]	8	8
Total Scope 2 emissions	**53,751**	70,545	82,592[3]	87,858	89,880

1 In FY20 we began to procure Green Power to serve our Melbourne head office post relocation. Carbon emissions associated with green power are taken to be zero.
2 No development works in our Retirement Living business were considered to be within our operational control boundary from FY18.
3 This figure (82,592) varies from the Scope 2 emissions figure provided on page 3 (82,591) because of rounding in this table.

Scope 2 emissions by business unit

Commercial Property constitutes our largest proportion of Scope 2 emissions and remains the focus of our strategic energy efficiency initiatives and our investment in renewable energy generation. See our **Carbon and Energy Deep Dive** for further information on initiatives that contributed to our FY20 performance.



Total scope 3 (tCO_2-e)

	FY20	FY19	FY18	FY17	FY16
Total transmission and production losses (from purchased electricity, gas, water and fleet fuel)	7,518	10,469	13,216	14,675	14,782
Waste disposal[1]	11,494	13,803	14,892	11,990	20,571
Vehicle hire and hire car travel	26	38	64	35	42
Airline travel	1,912	3262	5694	4415	4233
Total Scope 3 emissions	**20,950**	27,572	33,866	31,115	39,628

1 From FY16 we expanded our boundary to include scope 3 emissions from waste generated at our Commercial Property assets.

Grid purchased (kWh)

	FY20	FY19	FY18	FY17	FY16
Grid Purchased Electricity	65,332,536	84,032,338	98,976,436	104,704,935	106,364,803
• GreenPower	30,427				
• Renewables (Grid)	12,407,401	15,966,144	15,836,230	14,658,691	13,827,424
• Grid (Brown)	52,894,709	68,066,194	83,140,206	90,046,244	92,537,379

Total scope 2 emissions (tCO2-e) – market based

	FY20	FY19	FY18	FY17	FY16
• GreenPower	0				
• Renewables (Grid)	0	0	0	0	0
• Brown (Grid)	51,589	66,386	78,191	83,764	85,092

Total large generating certificates (LGC) sold

	FY20	FY19	FY18	FY17	FY16
LGC sold (MWh)	15,287	11,573	589	2,139	1,918
LGC sold (tCO2-e)	14,910	11,287	554	1,990	1,764

Total scope 2 emissions (tCO2-e) – market based

	FY20	FY19	FY18	FY17	FY16
Total Scope 2 emissions - Net	66,498	77,673	78,745	85,754	86,856

Total scope 2 emissions (tCO2-e) – market based – factors

	FY20	FY19	FY18	FY17	FY16
Renewable Power Percentage %	0.19	0.19	0.16	0.14	0.13
National Emission Factor - Scope 2 (Market)	0.79	0.79	0.79	0.80	0.80
Estimated National RMF (kgCO2e/kWh)	0.98	0.98	0.94	0.93	0.92

Total greenhouse gas emissions (tCO2-e) – market based

	FY20	FY19	FY18	FY17	FY16
Stockland group total Scope 1	21,028	24,230	25,453	26,884	35,036
Stockland group total Scope 2	66,498	77,673	78,745	85,754	86,856
Stockland group total Scope 1+2 emissions	**87,526**	101,903	104,198	112,638	121,892

Emissions intensity

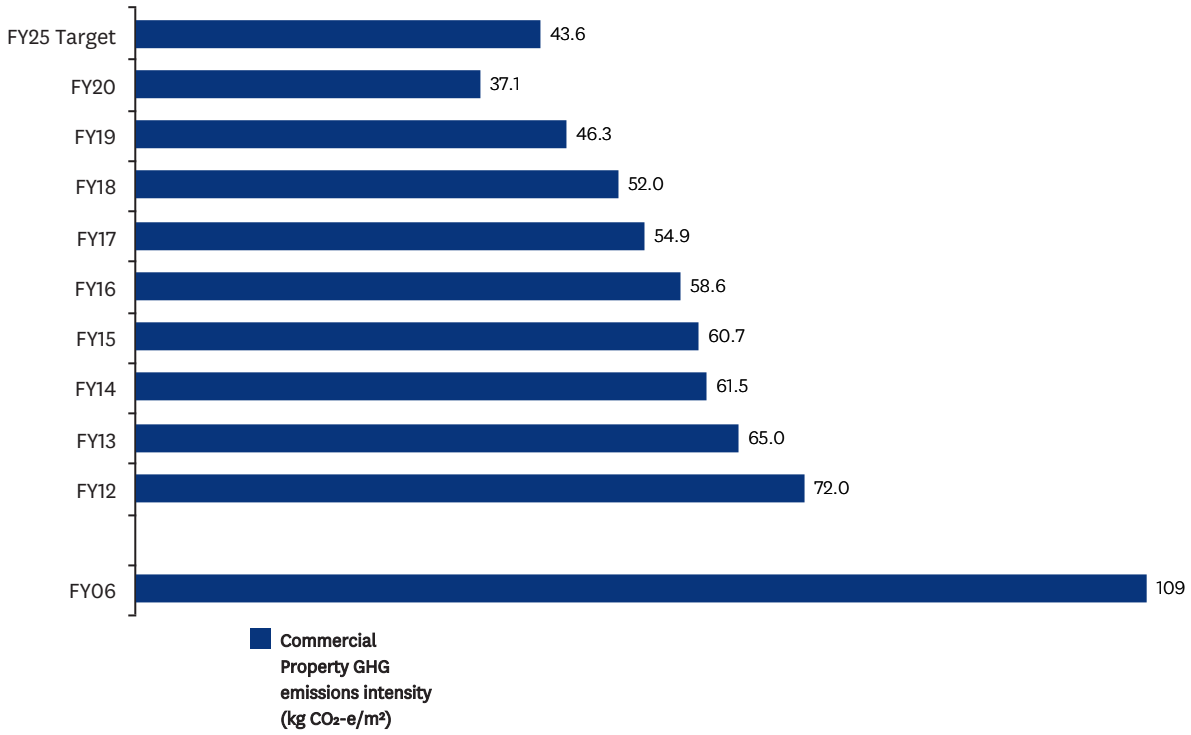
We track our emissions on an intensity basis as this helps represent the greenhouse gas emissions from our Commercial Property portfolio in a way that is isolated from the increases and decreases in emissions due to investments, divestments and vacancies. Intensity metrics are based on the standard measures of net lettable area (NLA) or gross lettable area (GLA) in square metres (where appropriate for each asset class). Emissions intensities only apply to stable operating assets such as the Commercial Property portfolio.

Greenhouse gas emissions intensity ($kgCO_2$-e/m^2)

	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks base buildings	**53.64**	**61.18**	**60.41**	**61.7**	**64.98**
Floor area (NLA) of buildings in intensity metric (m^2)	266,128	290,083	310,586	313,830	320,943[1]
% portfolio in intensity metric	100%	100%	100%	100%	100%
Retail Town Centres base buildings	**32.66**	**42.25**	**49.54**	**52.92**	**56.58**
Floor area (GLA) of buildings in intensity metric (m^2)	994,896	1,057,605	1,056,205	1,054,234	1,047,054
% portfolio in intensity metric	100%	100%	100%	100%	100%
Commercial Property[2]	**37.09**	**46.32**	**52**	**54.93**	**58.55**
Floor area of buildings in intensity metric (m^2)	1,260,794	1,347,716	1,366,882	1,368,011	1,366,279
% portfolio in intensity metric	100%	100%	100%	100%	100%

1 Area-weighted intensity combination of Workplace and Business Parks assets.
2 Combined Workplace, Business Parks, and Retail Town Centres.

Greenhouse gas emissions intensity ($kgCO_2$-e/m^2)



Emissions intensity reductions

	Annual Intensity Change (%)				
	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks	-12.3%	1.0%	-2.0%	-5.0%	-4.0%
Retail Town Centres	-22.7%	-14.7%	-6.0%	-6.0%	-3.0%
Commercial Property	**-19.9%**	**-10.9%**	**-5.0%**	**-6.0%**	**-4.0%**

Other emissions

Stockland's emissions of ozone-depleting substances are minimal and not considered material for reporting.

NOx and SOx are material for property companies that operate key generation plants including trigeneration. Stockland has Scope 2 exposure to trigeneration, and is not in control of this plant, so we do not report emissions from generation, as per other energy generation.

Energy consumption

This section details the consumption of specific energy types across the three businesses and group operations. These are the sources of the greenhouse gas emissions reported under Scope 1 and 2.

Electricity

Purchased electricity (kWh)

	FY20	FY19	FY18	FY17	FY16
Corporate tenancies	1,384,698	1,669,975	1,665,878	1,648,037	1,556,157
Workplace and Business Parks base buildings	15,311,742	19,246,269	21,644,622	22,255,609	24,120,329
Logistics centres	1,499,476	2,186,021	5,189,496	5,129,175	1,577,286
Retail Town Centres	38,522,642	52,039,389	60,791,065	64,878,522	69,088,256
Residential sites	1,593,538	1,828,237	1,695,059	1,729,655	1,824,740
Residential contractors	96,427	42,228	102,385	180,211	331,110
Retirement living communities	6,924,014	7,020,219	7,887,931	8,876,288	7,859,963
Retirement living contractors	0	0	0[1]	7,438	6,962
Total	**65,332,536**	**84,032,338**	**98,976,436**	**104,704,935**	**106,364,803**

1 No development works in our Retirement Living business were considered to be within our operational control boundary from FY18.

Purchased electricity intensity (kWh/m²)

	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks base buildings	**62.62**	**70.91**	**69.68**	**70.96**	**75.77**
Floor area (NLA) of buildings in intensity metric (m2)[1]	265,681	289,996	310,658	313,700	320,097
% of portfolio covered in intensity metric	100%	100%	100%	100%	100%
Retail Town Centres	**38.75**	**49.15**	**57.32**	**61.79**	**65.98**
Floor area (GLA) of buildings in intensity metric (m²)	994,532	1,057,562	1,056,145	1,050,411	1,047,054
% of portfolio covered in intensity metric	100%	100%	100%	100%	100%
Commercial Property[2]	**43.78**	**53.83**	**60.13**	**63.89**	**68.26**
Floor area of buildings in intensity metric (m²)	1,260,011	1,347,613	1,366,791	1,364,156	1,365,954
% of portfolio covered in intensity metric	100%	100%	100%	100%	100%

1 NLA – Net Lettable Area; GLA – Gross Lettable Area.
2 Area weighted intensity combination of Workplace, Business Parks, and Retail Town Centre assets

Purchased electricity intensity reductions

	Annual Intensity Change (%)				
	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks	-12%	2%	-2%	-6%	-3%
Retail Town Centres	-21%	-14%	-7%	-6%	0%
Commercial Property[1]	**-19%**	**-10%**	**-6%**	**-6%**	**-2%**

1 Area-weighted intensity combination of Workplace, Business Parks, and Retail Town Centre assets.

Renewables generation – Retail

	FY20	FY19	FY18	FY17	FY16
Solar generation (kWh)	22,246,182	12,958,224	3,274,463	2,387,168	1,940,689
Per cent of Retail Town Centre portfolio electricity usage	36.6%	19.9	5.1	3.6	2.8
Solar capacity installed (at period end) (kW)	16,781	16,400	4,360	2,260	1,360

Renewables generation – Logistics

	FY20	FY19	FY18	FY17	FY16
Solar generation (kWh)[1]	60,114	-	-	-	-
Per cent of Logistics portfolio electricity usage	3.9%	-	-	-	-
Solar capacity installed (at period end) (kW)	770	-	-	-	-

1 Figures relate to total electricity generation from photovoltaic power within financial year.

Fuels

Gas consumption (MJ)

	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks base buildings	22,876,338	23,893,430	22,503,346	19,605,661	20,949,926
Logistics centres	0	0	0	0	0
Retail Town Centres	24,620,332	28,656,262	28,850,605	28,164,870[1]	7,726,710
Residential sites	170,631	194,936	184,905	231,633	196,216
Residential contractors	4	0	0	0	0
Retirement living communities[2]	12,001,402	13,291,200	15,137,631	14,448,049[3]	9,451,522
Retirement living contractors	0	0	0	0	0
Total	**59,668,708**	**66,035,828**	**66,676,487**	**62,450,213**	**38,324,374**

1 Increase due to additional meters being found during embedded network assurance exercise.
2 FY19 onwards includes fuel (LPG), whereas previous years only consumed gas.
3 Increase in retirement living village gas consumption primarily associated with villages transitioning from externally managed to internally managed and villages under development transitioning to operational facilities.

Fuel consumption[1]

	FY20[1]	FY19	FY18	FY17	FY16
Diesel (L)	5,524,236	7,119,975	6,770,937	7,356,552	10,344,491
Bio diesel (L)	0	0	2,395	2,070	525,463
Petrol (L)	90,492	102,157	133,092	129,554	169,636
Ethanol (L)	2,198	7,789	8,636	8,451	4,689
LPG (L)	297	642	1,375	246	556
Oil (L)	17,470	25,938	37,291	42,802	71,973
Grease (kg)	13,057	16,350	17,386	32,592	66,070

1 Comprises corporate fleet fuel, and residential and retirement living developments contractor fuel consumption (where in Stockland operational control).

[1] Comprises corporate fleet fuel, and residential and retirement living developments contractor fuel consumption (where in Stockland operational control).

Biodiversity

Biodiversity data presented in this section is to be read in conjunction with our **Biodiversity Deep Dive** available on our **website**.

Biodiversity impact and management

	FY20	FY19	FY18	FY17	FY16
Portfolio					
Total projects with masterplan approval[1]	31	29	30	36	31
Total land area (ha)	9,617	8,751	9,088	10,312	8,637
Biodiversity impact					
Total projects with areas of significant biodiversity value[2]	23	20	20	25	25
Total land area of significant biodiversity value (ha)	1,769	1,525	1,410	1,972	1,332
Total land area of significant biodiversity value to be cleared (ha)	848	749	576	587	425
Total land area to be conserved for biodiversity, including onsite and offsite (ha)	2,735	2,410	2,202	1,972	1,750
Biodiversity management					
Total projects with areas of significant biodiversity value that have a biodiversity management plan	83%	80%	85%	48%	58%
Total land area to be regenerated, revegetated, restored or rehabilitated on ground or through offsets (ha)	2,190	1,998	1,671	1,567	1,641
Total projects working with community and non-governmental organisations	2	2	3	3	6

1 Our biodiversity results are representative of our residential projects that have received masterplan approval and/or were active developments as at 30 June 2020.

2 As defined by the relevant state or federal legislation. All of our projects that with significant biodiversity on site are required to develop a biodiversity management plan (see Biodiversity Deep Dive).

Projects with areas of significant biodiversity value

The below table shows residential communities projects with areas of significant biodiversity value that have an approved masterplan. The change in biodiversity value refers to projects that have been assessed under our biodiversity calculator since it was developed in FY15.

			FY20		
Region	**Development**	**Location**	**Total land (ha)**	**Total Biodiversity Area Approx (ha)[1]**	**Change in Biodiversity Index[2]**
Victoria	Cloverton	Kalkallo	1141	300	18.05
	Edgebrook	Clyde	65.118	1	8.62
	Grandview	Truganina	120	120	
	Highlands	Craigieburn	978.4	43.9	
	Minta	Berwick	116.44	9.94	3.47
	Mt Atkinson	Truganina	319.4	38.66	4.11
Western Australia	Amberton	Eglington	198	20	
	Calleya	Banjup	145	12.2	3.2
	Sienna Wood	Perth	330	7.4	
	Sinagra	Perth	40.5	14.5	
	Vale (WA)	Aveley	541	50	
New South Wales	Altrove	Sydney	50	1	2.7
	West Dapto 2	West Dapto	113	31.79	39.45
	The Gables	Box Hill	380	26.7	
	Willowdale	Leppington	350	100	
Queensland	Augustine Heights	Augustine Heights	183	47	
	Aura	Caloundra	1595	300	
	Foreshore	Coomera	116	51	7.02
	Kalina	Springfield	38	38	
	North Shore	Burdell	1031	275	
	Pallara	Brisbane	122.462	32	27.59
	Paradise Waters	Deeping Heights	338	249	31.53

1 Total land area of significant biodiversity value is measured before development in our annual CCAP project survey.

2 A change in Biodiversity Index result is available for projects that achieved masterplan approval following the introduction of our calculator in 2016 and where approval is granted for delivery of over 500 lots.

Water management and quality

Water data in this section is to be read in conjunction with our **Water Management and Quality Deep Dive** available on our website.

Boundary and methodology

We report our water consumption according to our operational control boundary under the NGER Act. Communities water consumption results are provided by collecting and collating water use from invoices. Where invoices are unavailable or extend across financial years, estimates are provided for relevant periods. Water consumption by contractors operating on our development sites is compiled using invoice data and estimates, supplied by contractors through monthly health, safety and environment reports. These figures are based on a combination of contractor estimates and invoice data. Reported non-potable consumption includes rainwater tanks and bore water.

Water consumption

Communities water consumption (kL)

Communities water data varies from year to year due to activities such as filling lakes in large developments and location specific variables such as natural rainfall, project life cycles, market conditions, site management techniques and local landscaping requirements set by councils.

	FY20	FY19	FY18	FY17	FY16
Residential sites	260,614	217,578	620,654	546,670	600,623
Retirement living communities	1,679,904	1,757,203	1,683,353	1,463,459[1]	58,158
Contractors – Residential[2]	494,832	451,937	392,940	577,592[3]	1,948,614
Contractors – Retirement Living	0	-	-[4]	573[5]	8,985
Total	**2,435,350**	**2,426,718**	**2,696,947**	**2,588,294**	**2,616,380**

1 A combination of more operational sites and increased data capture in FY17 has translated to an increase in comparison to previous years for Retirement Living.
2 Residential contractor water data varies from year to year due to activities such as dust suppression, to abnormal usage (filling lakes) in large developments and location specific variables such as natural rainfall, project life cycles, market conditions, site management techniques and local landscaping requirements set by councils. Furthermore, contractors self-report water data, which means we do not review each contractor's data collection processes.
3 Large civil works in FY16 for master planned communities have reduced in FY17 across developments such as Aura (Qld), Cloverton (Vic) and Calleya (WA).
4 No development works in our Retirement Living business were considered to be within our operational control boundary from FY18.
5 Decrease in Retirement Living contractor consumption due to management of site and reporting by principal contractor.

Communities water consumption – potable and non potable (kL)

	Potable				
	FY20	FY19	FY18	FY17	FY16
Residential sites	50,262	71,092	149,872	173,841	171,830
Retirement living communities	1,679,904	1,757,203	1,683,353	1,463,459	58,158
Contractors – residential	248,369	184,275	113,264	232,585	829,592
Contractors – retirement living	0	-	0	327	8,682
Total	**1,978,535**	**2,012,570**	**1,946,489**	**1,870,212**	**1,068,262**

	Non-potable				
	FY20	FY19	FY18	FY17	FY16
Residential sites	210,352	146,486	470,782	372,829	428,793
Retirement living communities	0	-	0	0	0
Contractors – residential	246,463	267,661	279,675	345,007	1,119,022
Contractors – retirement living	0	-	-	246	303
Total	**456,815**	**414,147**	**750,457**	**718,082**	**1,548,118**

Commercial property water consumption (kL)

	FY20	FY19	FY18	FY17	FY16
Workplace and Logistics	197,146	209,924	236,906	228,108	220,704
Retail Town Centres	961,482	1,101,228	1,097,238	1,112,672	1,153,565
Total Commercial Property[1]	**1,158,629**	**1,311,152**	**1,334,144**	**1,340,780**	**1,374,269**

1 Consumption Intensity data calculated based on Workplace and Business Parks, and Retail Town Centre consumption figures only. Does not include Logistics.

Water consumption intensity

Intensity figures in Commercial Property are derived from the total water consumption for each asset class over the year divided by the total floor area. Retail Town Centre and Workplace assets without a full 12 months of data include estimates for the missing months.

Commercial property water consumption intensity (kL/m²)

	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks	0.55	0.62	0.67	0.64	0.65
Retail Town Centres	0.97	1.05	1.04	1.09	1.11
Total Commercial Property	**0.88**	**0.96**	**1**	**1**	**1**

Commercial property water consumption intensity reductions

	Annual Intensity Change (%)				
	FY20	FY19	FY18	FY17	FY16
Workplace and Business Parks	-11%	-7%	5%	-5%	12%
Retail Town Centres	-8%	1%	-5%	-2%	0%
Total Commercial Property	**-8%**	**0%**	**1%**	**-5%**	**4%**

Waste

Waste data in this section is to be read in conjunction with the **Waste and Materials Deep Dive** available on our website.

Boundary

We report against the same NGER Act operational control boundary that we use for energy and water. We report on all properties within this boundary, with the exception of some properties where our tenants run their own waste contracts. We also report on a small number of additional properties that fall out of our NGER Act boundary, but where we manage the waste contract for service provision purposes. Data provided by waste contractors is based on estimates (bin volumes converted to tonnes rather than weighed).

Operational waste

Operational waste (tonnes)

	Retail Town Centres					Workplace and Business Parks				
	FY20	FY19	FY18	FY17[1]	FY16	FY20	FY19	FY18	FY17[1]	FY16
Total waste	14,367	17,265	17,577	17,351	17,895	531	1,007	1043	1,193	1,182
Total waste to landfill	9,212	10,768	11,730	11,969	10,858	339	712	661	739	680
Total waste recycled	5,155	6,497	5,846	5,382	7,038	192	295	383	454	502
Diversion from landfill (%)	36%	38	33	31	39	36%	29	37	38	42
% portfolio reporting	97	97	97	95	95	70	85	85	85	100

1 FY17 data restated due to contractor reporting error.

Development waste

Commercial Property

Our Commercial Property development construction waste is calculated based on the total number of projects for which we are the developer. Active waste is tracked through the builders, as for these sites the principal contractor has active control.

The data reported relates to our Retail Town Centre developments as there have been no significant Workplace developments since FY12.

Retail town centres development waste (tonnes)

	FY18-FY20	FY20	FY19	FY18	FY17	FY16
Total waste	5,284	35	878	4,371	1,396	3,253
Waste recycled	4,768	29	829	3,910	678	2,684
Waste to landfill	152	6	50	461	718	569
Diversion from landfill	90%	83%	94%	89%	49%	83%
Developments included (% by project value)	100%	100%	100%	100%	96%	100%

Communities

All Communities waste data was provided by contractors operating on our development sites during the reporting period. Data is estimated by contractors and is collected from monthly health, safety and environment reports submitted to us by our contractors for all developments within our operational control.

Communities contractor waste (tonnes)

	FY20	FY19	FY18	FY17	FY16
Total waste	49,567	41,093	19,625	41,237	35,424
Waste diverted from landfill	48,633	40,430	18,441	39,923	33,881
Waste sent to landfill	934	663	1,184	1,314	1,542
Diversion from landfill	98%	98%	94%	97%	96%

Asset ratings and certifications

The tables below list ratings and certifications achieved across our portfolio, focusing on Green Star and NABERS rating tools. Information on achievements specific to FY20 are provided in our **Carbon and Energy Deep Dive**. Information on our use of ratings and certifications across our portfolio is provided in **Our Management Approach to Asset Rating and Certification**.

Green Star Performance

Green Star Performance is a voluntary certification that rates building performance in operation.

Green Star Performance, Retail Town Centres

Building name	Potable Water (kL/m²/annum)	GHG emissions (kg/CO2-e/annum/m²)	Points awarded	Rating
StocklandGlendale (NSW)	0.89	14	40	3 Star
Stockland Baulkham Hills (NSW)	1.41	62	33.5	3 Star
StocklandForster (NSW)	0.6	9	44.5	3 Star
StocklandNowra (NSW)	0.51	35	40.5	3 Star
StocklandRockhampton (Qld)	1.62	109	30	3 Star
StocklandCaloundra (Qld)	0.53	45	38.5	3 Star
Stockland Green Hills (NSW)	0	0	24	2 Star
StocklandShellharbour (NSW)	1.73	68	34	3 Star
StocklandTownsville (Qld)	1.26	112	36.5	3 Star
StocklandGladstone (Qld)	1.1	33	34.5	3 Star
StocklandCairns (Qld)	1.25	90	39.5	3 Star
Stockland Burleigh Heads (Qld)	0.58	74	37	3 Star
StocklandBundaberg (Qld)	0.94	69	35	3 Star
Stockland Bull Creek (WA)	0	25	32	3 Star
StocklandRiverton (WA)	0.98	35	34	3 Star
Stockland Hervey Bay (Qld)	0.69	73	39.5	3 Star
Stockland Point Cook (Vic)	0.79	103	31.5	3 Star
StocklandTraralgon (Vic)	0.58	64	38	3 Star
Stockland The Pines (Vic)	1.01	91	28	2 Star
StocklandWendouree (Vic)	0.64	45	37.5	3 Star
Stockland Merrylands	1.42	89	32	3 Star
Stockland Wetherill Park	-	93	32.5	3 Star
Stockland Baldivis	1.42	68	26	2 Star

Green Star Performance, Workplace and Business Parks

Building name	Potable Water (kL/m²/annum)	GHG emissions (kg/CO2-e/ annum/m²)	Points awarded	Rating
110 Walker Street (NSW)	0.872	63	31.5	3 Star
16 Giffnock Avenue (NSW)	0.695	90	28.5	2 Star
2 Victoria Ave (WA)	-	-	18	1 Star
601 Pacific Highway (NSW)	0.682	67	31.5	3 Star
66 Waterloo Road (NSW)	0.469	54	34	3 Star
Durack Centre (WA)	-	62	23	2 Star
Macquarie Technology Centre (NSW)	3.073	155	17	1 Star
Optus Centre (NSW)	0.72	84	31.5	3 Star
Satellite Corporate Centre 350 Wellington Road (Vic)	1.04	122	21	2 Star
Satellite Corporate Centre 352 Wellington Road (Vic)	0.546	140	23.5	2 Star
Satellite Corporate Centre 690 Springvale Road (Vic)	0.726	357	15	1 Star
Triniti Business Campus Building T1 (NSW)	0.805	72	37	3 Star
Triniti Business Campus Building T2 NSW)	0.805	83	36	3 Star
Triniti Business Campus Building T3 (NSW)	0.805	63	38	3 Star
133 Castlereagh Street (NSW)			31	3 Star
222 Pitt Street (NSW)			33.5	3 Star

Green Star Built Form rating tools

Our Green Star ratings achieved using built form rating tools including Green Star Design & As Built, Green Star Communities, and Green Star Interiors, are provided in the table below.

Asset type	Asset	Design rating (star)	As Built rating (star)	Green Star Tool
Retail Town Centre	Stockland North Shore (Qld)	4	4	Retail Centre v1
	Stockland Townsville (Qld)	4	4	Retail Centre v1
	Stockland Merrylands (Stages 3 & 4) (NSW)	4	–	Retail Centre v1
	Stockland Shellharbour (NSW)	4	4	Retail Centre v1
	Stockland Hervey Bay (Qld)	4	4	Retail Centre v1
	Stockland Baldivis (WA)	4	4	Retail Centre v1
	Stockland Wetherill Park (NSW)	5	5	Retail Centre v1
	Stockland Harrisdale (WA)	4	4	Retail Centre v1
	Stockland Green Hills (NSW)	5	5	Retail Centre v1
	Stockland Birtinya (QLD)	-	5	Design & As Built v1.1
Workplace	Triniti, Building A, 39 Delhi Road, North Ryde, NSW	–	5	Office v2
	Triniti, Building B, 39 Delhi Road, North Ryde, NSW	–	5	Office v2
	Triniti, Building C, 39 Delhi Road, North Ryde, NSW	–	5	Office v2
	2 Victoria Avenue, Perth, WA	6	5	Office v2
	Brisbane Head Office, Level 4, 99 Melbourne Street, Brisbane, QLD	-	6	Interiors v1.1
	Sydney Head Office, L22-29, 133 Castlereagh Street, Sydney, NSW	–	6	Interiors v1.1
Communities (Residential)	Aura (formerly Caloundra South) (Qld)	6		Communities Pilot
	Altrove (NSW)	5		Communities
	Willowdale (NSW)	6		Communities
	Cloverton (Vic)	6		Communities
	Calleya (WA)	6		Communities
	Newport (Qld)	5		Communities
	Waterlea (formerly Stamford Park)(Vic)	6		Communities
Communities (Retirement Living)	Affinity Clubhouse at Affinity Retirement Village, Baldivis (WA)	5	5	Public Building Pilot
	Newport Retirement Living Village (Qld)	4	4	Design and As Built v1.1
	Shine Birtinya Retirement Living Village (QLD)		4	Design and As Built v1.1
	Selandra Rise Retirement Village (Vic)	4	–	Custom
	Mernda Retirement Village (Vic)	4	–	Custom
	Willowdale Retirement Village (NSW)	4	–	Custom

NABERS

We undertake NABERS Energy and NABERS Water ratings on the base building across Retail Town Centre, Workplace and Business Parks assets. NABERS ratings are completed on a calendar year basis.

NABERS Ratings – Retail town centres

	NABERS Energy Rating					NABERS Water Rating				
	2019[1]	2018	2017	2016	2015	2019[1]	2018	2017	2016	2015
StocklandCairns (Qld)	5.5	4.5	4.5	5.0	4.0	4.0	4.0	4.0	NA	4.0
StocklandTownsville (Qld)	4.5	4.5	4.5	4.0	3.5	4.0	3.5	4.0	4.0	4.0
StocklandRockhampton (Qld)	4.0	4.0	3.5	3.0	3.5	2.5	3.0	2.5	2.5	2.5
StocklandGladstone (Qld)	5.5	5.0	5.5	5.5	4.5	4.5	4.5	NA	NA	3.0
StocklandBundaberg (Qld)	6.0	4.5	4.0	4.5	5.0	3.5	3.5	4.0	4.5	4.0
StocklandCaloundra (Qld)	5.5	5.0	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0
Stockland Hervey Bay (Qld)	6.0	5.0	4.5	5.0	4.5	4.0	5.0	5.0	4.0	4.5
Stockland Burleigh Heads (Qld)	5.0	4.0	4.0	3.5	3.5	5.0	4.5	4.5	4.5	5.0
StocklandForster (NSW)	6.0	6.0	6.0	6.0	6.0	4.5	4.5	4.5	4.5	4.5
Stockland Green Hills (NSW)	5.0	NA	NA	NA	3.5	3.0	NA	NA	NA	3.0
StocklandGlendale (NSW)	6.0	6.0	6.0	6.0	6.0	4.0	4.0	3.5	3.5	3.5
Stockland Baulkham Hills (NSW)	4.5	4.5	4.5	4.0	4.0	2.0	2.0	2.0	1.0	0.0
Stockland Wetherill Park (NSW)	4.0	3.0	3.0	2.5	NA	2.0	2.5	3.0	NA	NA
StocklandShellharbour (NSW)	5.0	5.0	5.0	4.0	4.5	2.5	2.5	1.0	1.5	1.5
StocklandNowra (NSW)	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.5	4.5	4.5
StocklandTraralgon (Vic)	5.0	4.0	4.0	4.0	4.0	4.5	5.0	4.5	4.0	4.0
StocklandWendouree (Vic)	5.0	4.5	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.5
Stockland Bull Creek (WA)	4.5	4.5	4.5	4.5	4.0	2.0	1.0	NA	NA	NA
StocklandRiverton (WA)	4.0	4.5	4.5	4.5	4.5	2.0	2.5	2.0	1.5	NA
Stockland The Pines (Vic)	4.0	2.0	2.0	2.0	2.5	3.5	3.0	3.0	3.0	3.0
Stockland Point Cook (Vic)	4.5	3.0	2.5	1.5	2.5	4.5	4.5	4.0	4.0	4.0
StocklandMerrylands (NSW)	4.5	4.0	4.0	NA	NA	2.5	2.5	2.0	NA	NA
StocklandBaldivis (WA)	3.0	3.0	2.5	2.0	NA	3.0	1.0	2.0	NA	NA
Stockland Balgowlah (NSW)	1.5	NA	NA	NA	NA	2.0	NA	NA	NA	NA
Stockland Harrisdale (WA)	0.0	NA	NA	NA	NA	1.0	NA	NA	NA	NA
Stockland Birtinya (QLD)	6.0	NA	NA	NA	NA	3.5	NA	NA	NA	NA
NABERS Retail Portfolio Average	**4.7**	**4.3**	**4.1**	**3.9**	**4.1**	**3.4**	**3.4**	**3.1**	**3.2**	**2.8**
NABERS Retail Portfolio Average (By % ownership)	**4.7**	**4.3**					**3.4**			

1 2019 NABERS data relates to the 2020 NABERS rating period.

NABERS Ratings – Workplace and Business Parks

	NABERS Energy Rating					NABERS Water Rating				
	2019	2018	2017	2016	2015	2019	2018	2017	2016	2015
Workplace										
Piccadilly Tower, 133 Castlereagh St, Sydney	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.5	4.5
Piccadilly Court, 222 Pitt St, Sydney	4.5	5.0	5.0	5.0	5.0	4.0	3.5	4.0	4.0	4.0
110 Walker St, North Sydney	5.0	5.0	5.0	5.0	4.5	3.0	3.5	3.0	3.0	3.5
601 Pacific Hwy, St Leonards	5.0	5.0	5.0	5.0	5.0	3.5	3.0	3.0	4.0	4.0
Durack Centre, 263 Adelaide Terrace, Perth	4.5	4.5	4.5	4.5	5.0	NA	4.5	NA	NA	3.5
2 Victoria Avenue, Perth	4.0	4.0	0.0	NA	5.0	NA	3.5	0.0	NA	4.0
NABERS Workplace Portfolio Average	**4.7**	**4.6**	**4.5**	**4.6**	**4.5**	**3.8**	**3.6**	**3.5**	**3.9**	**3.7**
NABERS Workplace Portfolio Average (By % ownership)	**4.7**	**4.6**				**3.7**	**3.6**			
Business Parks										
Optus Centre, 1 Lyon Park Road, North Ryde	5.0[1]	4.5	4.5	5.0	5.0	NA	NA[2]	4.0	3.5	3.5
Triniti, Building A, 39 Delhi Road, North Ryde[3]		5.0	4.5	4.5	5.0		4.0	3.5	3.5	5.0
Triniti, Building B, 39 Delhi Road, North Ryde	5.5	5.0	4.5	4.5	5.0	3.5	4.0	3.5	3.5	4.0
Triniti, Building C, 39 Delhi Road, North Ryde		5.0	5.0	5.0	5.0		4.0	3.5	3.5	3.5
66 Waterloo Road, North Ryde	5.5	5.5	5.5	5.0	5.0	4.5	4.0	4.0	4.5	4.5
16 Giffnock Ave, North Ryde	4.5	4.0	4.0	4.0	3.5	3.5	3.5	3.5	3.5	3.5
11-17 Khartoum Road, North Ryde	NA	3.0	2.0	2.0	4.0	NA	0.0	0.0	0.0	NA
350 Wellington Rd, Mulgrave	NA	2.0	3.0	NA	3.0	NA	0.0	0.0	NA	NA
352 Wellington Rd, Mulgrave	3.0	3.0	3.0	3.0	3.5	4.5	3.5	3.5	3.5	NA
690 Springvale Rd, Mulgrave	3.0	2.5	2.0	NA	1.5	3.5	4.0	2.5	NA	NA
NABERS Business Parks Portfolio Average	**4.8**	**4.3**	**4.2**	**4.7**	**4.9**	**3.7**	**3.2**	**3.5**	**3.4**	**3.6**
NABERS Business Parks Portfolio Average (By % ownership)	**4.7**	**4.3**				**3.7**	**3.2**			
NABERS Workplace and Business Parks Combined Portfolio Average	**4.8**	**4.4**	**4.3**	**4.7**	**4.7**	**3.7**	**3.4**	**3.5**	**3.6**	**3.6**
NABERS Workplace and Business Parks Combined Portfolio Average (By % ownership)	**4.7**	**4.4**				**3.7**	**3.4**			

1 The NABERS Energy rating for Optus Centre is undergoing a Level 2 audit and is not yet certified (as at Aug 2021).
2 No water rating possible for Optus due to issues with water utility data
3 The energy and water ratings for Triniti (NSW) are both single ratings for the whole campus.

NABERS Ratings – Stockland Corporate Office

We are a CitySwitch signatory for our corporate offices in Sydney, Melbourne and Perth. We complete a NABERS Tenancy rating each calendar year for our corporate offices, as outlined below.

	Tenancy Rating				
	2019	2018	2017	2016	2015
Sydney Head Office, L22-29, 133 Castlereagh Street	5.0[1]	4.0	4.0	4.0	4.5
Melbourne Head Office, L7, 452 Flinders Street	NA	4.0	3.5	3.5	3.5
Perth Head Office, L12, 263 Adelaide Terrace	5.0	4.5	3.5	3.5	3.5
Brisbane Head Office, L4, 99 Melbourne Street	4.5	4.5	4.5	NA	NA

1 The NABERS Energy rating for the Stockland Sydney Head Office is undergoing a Level 2 audit and is not yet certified (as at Aug 2021).

Climate resilience

The tables below summarise the individual climate resilience scores for our retail town centres, residential communities and retirement living communities. In FY20 we have migrated to a new climate resilience assessment tool which has a different scoring methodology. All previously reported scores have been re-scored to align with the new methodology to allow for comparative benchmarking against more recent assessments using the new tool.

Resilience scores range from 1 to 4 (outstanding resilience), 4 to 9 (high resilience), 9 to 16 (moderate resilience) and 16 to 25 (high vulnerability). **Our Management Approach to Climate Resilience** provides more detail on our climate resilience assessment methods.

Climate resilience scores by asset

Location	Year Assessed	Climate Resilience Rating
Commercial Property		
Hendra Distribution Centre, Brisbane	2019	8.07
32 Toll Drive, Altona	2018	8.86
Yennora Distribution Centre, Yennora	2018	6.95
601 Pacific Highway, St Leonards	2018	5.11
Durack Centre & 2 Victoria Avenue, Perth	2011	8.24
Triniti Business Park	2018	7.91
Stockland Baldivis	2020	6.02
Stockland Bull Creek	2013	7.97
Stockland Bundaberg	2015	8.81
Stockland Burleigh Heads	2019	8.13
Stockland Cairns	2017	9.35
Stockland Caloundra	2018	7.59
Stockland Forster	2015	7.03
Stockland Gladstone	2017	8.28
Stockland Green Hills	2012	7.81
Stockland Hervey Bay	2017	8.94
Stockland North Shore	2017	8.12
Stockland Nowra	2016	6.32
Stockland Point Cook	2012	7.93
Stockland Riverton	2020	6.05
Stockland Rockhampton	2013	9.16
Stockland Shellharbour	2019	7.24
Stockland Townsville & K Mart	2018	8.52
Stockland Traralgon	2014	7.89
Stockland Wendouree	2013	7.21
Stockland Wetherill Park	2012	8.22
Commercial Property Average (Climate Resilience)		**7.76**
Portfolio coverage (Logistics)		**14%**
Portfolio coverage (Business Parks)		**17%**
Portfolio coverage (Workplace)		**50%**
Portfolio coverage (Retail)		**68%**
Portfolio coverage (Total)		**44%**

Location	Year Assessed	Climate Resilience Rating
Communities (Residential)		
Altona North	2018	9.77
Altrove	2018	11.13
Braybrook	2018	9.55
Calleya	2017	9.39
Aura	2016	8.55
Cloverton	2016	9.9
Clyde North	2018	10.74
Glendalough	2018	5.45
Hope Island	2019	4.6
Illawarra	2019	7.09
Kalina Springfield (formerly Springview Estate)	2018	6.74
Minta Farm	2019	6.04
Mt Atkinson / Grandview	2018	9.14
Newport (Stage 1)	2016	9.28
Newport (Stage 2)	2018	9.21
North Shore	2017	7.93
Oceanside	2017	8.28
Pallara	2017	9.44
Paradise Waters	2018	6.83
Red Hill	2018	5.35
Rothwell Promenade	2019	7.09
Sienna Wood (Formerly Wungong)	2017	11.45
Stamford Park	2016	9.03
Wellard Farms	2019	7.75
West Dapto 2	2019	6.83
Willowdale	2016	9.09
Communities (Residential) Average		**7.99**

Location	Year Assessed	Climate Resilience Rating
Communities (Retirement Living)		
Bellevue Gardens	2018	10.47
Calleya	2017	8.25
Cardinal Freeman	2017	7.11
Farrington Grove	2017	5.58
Foreshore (Riverstone)	2017	10.93
Gillin Park	2017	9.38
Golden Ponds Resort	2018	10.02
Hillsview	2018	8.39
Maybrook	2016	8.78
Oak Grange	2017	9.18
Oceanside	2017	8.3
Patterson Lakes	2016	9.84
Pine Lake	2020	7.04
The Cove	2016	13.34
The Pines	2017	9.14
The Village Swansea	2017	7.76
Toowong	2017	7.96
Walnut Grove	2016	9.54
Wamberal Gardens	2018	9.54
Willowdale	2017	8.87
Communities (Retirement Living) Average		**8.97**
Portfolio coverage (Retirement Living)		**32%**