

Form 603
Corporations Act 2001
Section 671B

Notice of initial substantial holder

To Company Name/Scheme Macquarie Group Limited
ACN/ARSN 122 169 279

1. Details of substantial holder (1)

Name Vanguard Group (The Vanguard Group, Inc. and its controlled entities including those listed in Annexure A)
ACN/ARSN (if applicable) N/A
The holder became a substantial holder on 14 October 2019

2. Details of voting power

The total number of votes attached to all the voting shares in the company or voting interests in the scheme that the substantial holder or an associate (2) had a relevant interest (3) in on the date the substantial holder became a substantial holder are as follows:

Class of securities (4)	Number of securities	Person's votes (5)	Voting power (6)
Ordinary	17,726,376	17,726,376	5.002%

3. Details of relevant interests

The nature of the relevant interest the substantial holder or an associate had in the following voting securities on the date the substantial holder became a substantial holder are as follows:

Holder of relevant interest	Nature of relevant interest (7)	Class and number of securities
Vanguard Group	Vanguard Group is the manager of various Mutual funds and accounts and in that capacity has the power to dispose of the shares. The other members of Vanguard Group have a relevant interest under section 608(3) of the Corporations Act.	Ordinary – 17,726,376

4. Details of present registered holders

The persons registered as holders of the securities referred to in paragraph 3 above are as follows:

Holder of relevant interest	Registered holder of securities	Person entitled to be registered as holder (8)	Class and number of securities
Vanguard Group	Brown Brothers Harriman	Various funds and accounts of Vanguard Group	Ordinary – 834,444
Vanguard Group	BNY Mellon	Various funds and accounts of Vanguard Group	Ordinary – 890,992
Vanguard Group	Citibank	Various funds and accounts of Vanguard Group	Ordinary – 5,362
Vanguard Group	JP Morgan Chase Bank, N.A.	Various funds and accounts of Vanguard Group	Ordinary – 8,648,178
Vanguard Group	State Street Bank and Trust Company	Various funds and accounts of Vanguard Group	Ordinary – 2,197,559
Vanguard Group	Various others	Various funds and accounts of Vanguard Group	Ordinary – 5,149,841

5. Consideration

The consideration paid for each relevant interest referred to in paragraph 3 above, and acquired in the four months prior to the day that the substantial holder became a substantial holder is as follows:

Holder of relevant interest	Date of acquisition	Consideration (9)	Class and number of securities
See Annexure A			

6. Associates

The reasons the persons named in paragraph 3 above are associates of the substantial holder are as follows:

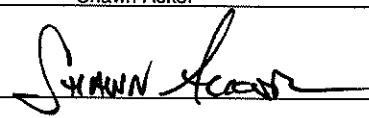
Name and ACN/ARSN (if applicable)	Nature of association
N/A	N/A

7. Addresses

The addresses of persons named in this form are as follows:

Name	Address
Vanguard Group	P.O. Box 2600, V26 Valley Forge, PA 19482 USA

print name Shawn Acker capacity Compliance Manager

sign here  date 16 October 2019

DIRECTIONS

- (1) If there are a number of substantial holders with similar or related interests (eg. a corporation and its related corporations, or the manager and trustee of an equity trust), the names could be included in an annexure to the form. If the relevant interests of a group of persons are essentially similar, they may be referred to throughout the form as a specifically named group if the membership of each group, with the names and addresses of members is clearly set out in paragraph 7 of the form.
- (2) See the definition of "associate" in section 9 of the Corporations Act 2001.
- (3) See the definition of "relevant interest" in sections 608 and 671B(7) of the Corporations Act 2001.
- (4) The voting shares of a company constitute one class unless divided into separate classes.
- (5) The total number of votes attached to all the voting shares in the company or voting interests in the scheme (if any) that the person or an Associate has a relevant interest in.
- (6) The person's votes divided by the total votes in the body corporate or scheme multiplied by 100.
- (7) Include details of:
 - (a) any relevant agreement or other circumstances by which the relevant interest was acquired. If subsection 671B(4) applies, a copy of any document setting out the terms of any relevant agreement, and a statement by the person giving full and accurate details of any contract, scheme or arrangement, must accompany this form, together with a written statement certifying this contract, scheme or arrangement; and
 - (b) any qualification of the power of a person to exercise, control the exercise of, or influence the exercise of, the voting powers or disposal of the securities to which the relevant interest relates (indicating clearly the particular securities to which the qualification applies).See the definition of "relevant agreement" in section 9 of the Corporations Act 2001.
- (8) If the substantial holder is unable to determine the identity of the person (eg. if the relevant interest arises because of an option) write "unknown".
- (9) Details of the consideration must include any and all benefits, moneys and other, that any person from whom a relevant interest has acquired has, or may, become entitled to receive in relation to that acquisition. Details must be included even if the benefit is conditional on the happening or not of a contingency. Details must be included of any benefit paid on behalf of the substantial holder or its associate in relation to the acquisitions, even if they are not paid directly to the person from whom the relevant interest was acquired.

To Company
ACN/ARSN

Macquarie Group Limited
122 169 279

Substantial Holder Name
ACN/ARSN

Vanguard Group
N/A

Date of change	Person whose relevant interest changed	Nature of Change(6)	Consideration given in relation to change(7)	Class	Number of securities affected	Person's votes affected
14-Jun-2019	The Vanguard Group, Inc.	SELL	122.02	Ordinary	(8,913)	(8,913)
14-Jun-2019	The Vanguard Group, Inc.	SELL	122.21	Ordinary	(846)	(846)
14-Jun-2019	The Vanguard Group, Inc.	BUY	122.21	Ordinary	174	174
14-Jun-2019	The Vanguard Group, Inc.	BUY	122.21	Ordinary	174	174
17-Jun-2019	The Vanguard Group, Inc.	BUY	123.38	Ordinary	153	153
17-Jun-2019	The Vanguard Group, Inc.	SELL	123.38	Ordinary	(2,663)	(2,663)
18-Jun-2019	The Vanguard Group, Inc.	SELL	123.60	Ordinary	(2,081)	(2,081)
18-Jun-2019	The Vanguard Group, Inc.	BUY	123.64	Ordinary	7,239	7,239
18-Jun-2019	The Vanguard Group, Inc.	BUY	123.80	Ordinary	286	286
19-Jun-2019	The Vanguard Group, Inc.	BUY	125.00	Ordinary	3,805	3,805
19-Jun-2019	The Vanguard Group, Inc.	SELL	125.00	Ordinary	(3,523)	(3,523)
19-Jun-2019	The Vanguard Group, Inc.	BUY	125.00	Ordinary	368	368
20-Jun-2019	The Vanguard Group, Inc.	BUY	127.67	Ordinary	540	540
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(3,196)	(3,196)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(3,844)	(3,844)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(13,688)	(13,688)
21-Jun-2019	The Vanguard Group, Inc.	BUY	126.05	Ordinary	270	270
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(16,467)	(16,467)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(124)	(124)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(150)	(150)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(404)	(404)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(487)	(487)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(82)	(82)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(68)	(68)
21-Jun-2019	The Vanguard Group, Inc.	BUY	126.00	Ordinary	276	276
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(7)	(7)
21-Jun-2019	The Vanguard Group, Inc.	SELL	126.00	Ordinary	(5)	(5)
24-Jun-2019	The Vanguard Group, Inc.	BUY	126.41	Ordinary	1,680	1,680
25-Jun-2019	The Vanguard Group, Inc.	BUY	126.41	Ordinary	6,802	6,802
25-Jun-2019	The Vanguard Group, Inc.	SELL	125.59	Ordinary	(846)	(846)
25-Jun-2019	The Vanguard Group, Inc.	BUY	125.59	Ordinary	486	486
25-Jun-2019	The Vanguard Group, Inc.	BUY	125.59	Ordinary	324	324
25-Jun-2019	The Vanguard Group, Inc.	BUY	126.31	Ordinary	663	663
26-Jun-2019	The Vanguard Group, Inc.	BUY	125.91	Ordinary	648	648
26-Jun-2019	The Vanguard Group, Inc.	BUY	125.91	Ordinary	378	378
26-Jun-2019	The Vanguard Group, Inc.	BUY	126.17	Ordinary	2,559	2,559
26-Jun-2019	The Vanguard Group, Inc.	BUY	126.18	Ordinary	613	613
26-Jun-2019	The Vanguard Group, Inc.	BUY	126.18	Ordinary	872	872
27-Jun-2019	The Vanguard Group, Inc.	BUY	125.29	Ordinary	12,176	12,176
27-Jun-2019	The Vanguard Group, Inc.	BUY	125.29	Ordinary	545	545
27-Jun-2019	The Vanguard Group, Inc.	SELL	125.70	Ordinary	(295)	(295)
28-Jun-2019	The Vanguard Group, Inc.	BUY	125.39	Ordinary	16,313	16,313
28-Jun-2019	The Vanguard Group, Inc.	BUY	125.64	Ordinary	870	870
28-Jun-2019	The Vanguard Group, Inc.	SELL	125.39	Ordinary	(26)	(26)
1-Jul-2019	The Vanguard Group, Inc.	BUY	127.19	Ordinary	174	174
1-Jul-2019	The Vanguard Group, Inc.	BUY	126.03	Ordinary	747	747
2-Jul-2019	The Vanguard Group, Inc.	BUY	127.17	Ordinary	486	486
2-Jul-2019	The Vanguard Group, Inc.	BUY	127.12	Ordinary	6,016	6,016
2-Jul-2019	The Vanguard Group, Inc.	SELL	127.12	Ordinary	(22)	(22)
3-Jul-2019	The Vanguard Group, Inc.	BUY	126.37	Ordinary	2,812	2,812
4-Jul-2019	The Vanguard Group, Inc.	BUY	128.89	Ordinary	2,892	2,892
5-Jul-2019	The Vanguard Group, Inc.	BUY	130.08	Ordinary	1,284	1,284
8-Jul-2019	The Vanguard Group, Inc.	BUY	130.00	Ordinary	312	312
9-Jul-2019	The Vanguard Group, Inc.	BUY	128.28	Ordinary	540	540
9-Jul-2019	The Vanguard Group, Inc.	BUY	127.74	Ordinary	153	153
10-Jul-2019	The Vanguard Group, Inc.	BUY	128.34	Ordinary	5,900	5,900
10-Jul-2019	The Vanguard Group, Inc.	BUY	128.01	Ordinary	912	912
11-Jul-2019	The Vanguard Group, Inc.	BUY	129.00	Ordinary	498	498
12-Jul-2019	The Vanguard Group, Inc.	SELL	127.51	Ordinary	(2,200)	(2,200)
12-Jul-2019	The Vanguard Group, Inc.	BUY	126.74	Ordinary	418	418
12-Jul-2019	The Vanguard Group, Inc.	SELL	127.51	Ordinary	(4,922)	(4,922)
15-Jul-2019	The Vanguard Group, Inc.	BUY	126.80	Ordinary	1,926	1,926

Date of change	Person whose relevant interest changed	Nature of Change(6)	Consideration given in relation to change(7)	Class	Number of securities affected	Person's votes affected
16-Jul-2019	The Vanguard Group, Inc.	BUY	126.50	Ordinary	6,587	6,587
17-Jul-2019	The Vanguard Group, Inc.	BUY	127.71	Ordinary	270	270
17-Jul-2019	The Vanguard Group, Inc.	BUY	127.71	Ordinary	540	540
17-Jul-2019	The Vanguard Group, Inc.	BUY	127.71	Ordinary	378	378
17-Jul-2019	The Vanguard Group, Inc.	SELL	128.21	Ordinary	(236)	(236)
18-Jul-2019	The Vanguard Group, Inc.	BUY	126.70	Ordinary	295	295
19-Jul-2019	The Vanguard Group, Inc.	BUY	126.76	Ordinary	384	384
22-Jul-2019	The Vanguard Group, Inc.	BUY	127.47	Ordinary	540	540
22-Jul-2019	The Vanguard Group, Inc.	BUY	127.47	Ordinary	1,605	1,605
22-Jul-2019	The Vanguard Group, Inc.	BUY	127.47	Ordinary	1,605	1,605
22-Jul-2019	The Vanguard Group, Inc.	BUY	127.47	Ordinary	384	384
22-Jul-2019	The Vanguard Group, Inc.	SELL	127.42	Ordinary	(5,696)	(5,696)
23-Jul-2019	The Vanguard Group, Inc.	BUY	129.40	Ordinary	540	540
23-Jul-2019	The Vanguard Group, Inc.	BUY	128.88	Ordinary	132	132
23-Jul-2019	The Vanguard Group, Inc.	BUY	128.88	Ordinary	956	956
24-Jul-2019	The Vanguard Group, Inc.	BUY	129.08	Ordinary	9,629	9,629
25-Jul-2019	The Vanguard Group, Inc.	BUY	130.12	Ordinary	630	630
26-Jul-2019	The Vanguard Group, Inc.	BUY	128.89	Ordinary	8,980	8,980
26-Jul-2019	The Vanguard Group, Inc.	BUY	129.15	Ordinary	486	486
26-Jul-2019	The Vanguard Group, Inc.	BUY	129.15	Ordinary	1,050	1,050
26-Jul-2019	The Vanguard Group, Inc.	BUY	129.15	Ordinary	384	384
26-Jul-2019	The Vanguard Group, Inc.	SELL	128.68	Ordinary	(1,244)	(1,244)
26-Jul-2019	The Vanguard Group, Inc.	BUY	128.68	Ordinary	78	78
29-Jul-2019	The Vanguard Group, Inc.	SELL	129.71	Ordinary	(7,035)	(7,035)
30-Jul-2019	The Vanguard Group, Inc.	SELL	128.89	Ordinary	(1,128)	(1,128)
30-Jul-2019	The Vanguard Group, Inc.	SELL	129.50	Ordinary	(120)	(120)
30-Jul-2019	The Vanguard Group, Inc.	BUY	128.89	Ordinary	170	170
30-Jul-2019	The Vanguard Group, Inc.	BUY	128.98	Ordinary	595	595
30-Jul-2019	The Vanguard Group, Inc.	BUY	129.02	Ordinary	4,180	4,180
30-Jul-2019	The Vanguard Group, Inc.	BUY	129.02	Ordinary	761	761
31-Jul-2019	The Vanguard Group, Inc.	BUY	127.98	Ordinary	486	486
1-Aug-2019	The Vanguard Group, Inc.	BUY	128.32	Ordinary	15,525	15,525
1-Aug-2019	The Vanguard Group, Inc.	BUY	127.40	Ordinary	2,889	2,889
1-Aug-2019	The Vanguard Group, Inc.	SELL	127.93	Ordinary	(12,133)	(12,133)
1-Aug-2019	The Vanguard Group, Inc.	SELL	128.02	Ordinary	(264)	(264)
2-Aug-2019	The Vanguard Group, Inc.	BUY	126.79	Ordinary	8,789	8,789
2-Aug-2019	The Vanguard Group, Inc.	BUY	125.65	Ordinary	840	840
5-Aug-2019	The Vanguard Group, Inc.	BUY	125.50	Ordinary	1,165	1,165
5-Aug-2019	The Vanguard Group, Inc.	BUY	121.66	Ordinary	540	540
5-Aug-2019	The Vanguard Group, Inc.	SELL	121.66	Ordinary	(274)	(274)
5-Aug-2019	The Vanguard Group, Inc.	SELL	121.66	Ordinary	(685)	(685)
5-Aug-2019	The Vanguard Group, Inc.	BUY	121.66	Ordinary	1,050	1,050
5-Aug-2019	The Vanguard Group, Inc.	BUY	123.33	Ordinary	264	264
6-Aug-2019	The Vanguard Group, Inc.	BUY	119.44	Ordinary	8,824	8,824
6-Aug-2019	The Vanguard Group, Inc.	SELL	120.61	Ordinary	(1,096)	(1,096)
6-Aug-2019	The Vanguard Group, Inc.	SELL	120.61	Ordinary	(2,329)	(2,329)
6-Aug-2019	The Vanguard Group, Inc.	BUY	120.61	Ordinary	192	192
6-Aug-2019	The Vanguard Group, Inc.	BUY	120.61	Ordinary	170	170
6-Aug-2019	The Vanguard Group, Inc.	BUY	119.63	Ordinary	3,564	3,564
7-Aug-2019	The Vanguard Group, Inc.	BUY	120.35	Ordinary	11,201	11,201
7-Aug-2019	The Vanguard Group, Inc.	BUY	120.35	Ordinary	3,433	3,433
7-Aug-2019	The Vanguard Group, Inc.	SELL	120.59	Ordinary	(107)	(107)
8-Aug-2019	The Vanguard Group, Inc.	SELL	123.43	Ordinary	(1,410)	(1,410)
8-Aug-2019	The Vanguard Group, Inc.	BUY	122.38	Ordinary	467	467
8-Aug-2019	The Vanguard Group, Inc.	BUY	120.47	Ordinary	3,070	3,070
9-Aug-2019	The Vanguard Group, Inc.	BUY	122.50	Ordinary	7,230	7,230
9-Aug-2019	The Vanguard Group, Inc.	BUY	122.50	Ordinary	920	920
9-Aug-2019	The Vanguard Group, Inc.	BUY	122.50	Ordinary	576	576
12-Aug-2019	The Vanguard Group, Inc.	BUY	121.44	Ordinary	864	864
12-Aug-2019	The Vanguard Group, Inc.	BUY	122.37	Ordinary	132	132
13-Aug-2019	The Vanguard Group, Inc.	SELL	121.44	Ordinary	(1,974)	(1,974)
13-Aug-2019	The Vanguard Group, Inc.	BUY	121.44	Ordinary	384	384
13-Aug-2019	The Vanguard Group, Inc.	BUY	120.80	Ordinary	234	234
14-Aug-2019	The Vanguard Group, Inc.	BUY	121.98	Ordinary	153	153
14-Aug-2019	The Vanguard Group, Inc.	SELL	121.28	Ordinary	(631)	(631)
15-Aug-2019	The Vanguard Group, Inc.	SELL	117.88	Ordinary	(1,692)	(1,692)
15-Aug-2019	The Vanguard Group, Inc.	BUY	119.33	Ordinary	13,786	13,786
15-Aug-2019	The Vanguard Group, Inc.	BUY	118.00	Ordinary	281	281
16-Aug-2019	The Vanguard Group, Inc.	BUY	118.09	Ordinary	7,889	7,889

Date of change	Person whose relevant interest changed	Nature of Change(6)	Consideration given in relation to change(7)	Class	Number of securities affected	Person's votes affected
16-Aug-2019	The Vanguard Group, Inc.	BUY	118.54	Ordinary	301	301
19-Aug-2019	The Vanguard Group, Inc.	BUY	122.73	Ordinary	170	170
19-Aug-2019	The Vanguard Group, Inc.	BUY	122.22	Ordinary	3,456	3,456
19-Aug-2019	The Vanguard Group, Inc.	SELL	122.22	Ordinary	(213)	(213)
19-Aug-2019	The Vanguard Group, Inc.	BUY	122.22	Ordinary	2,280	2,280
20-Aug-2019	The Vanguard Group, Inc.	SELL	122.72	Ordinary	(548)	(548)
20-Aug-2019	The Vanguard Group, Inc.	BUY	122.72	Ordinary	170	170
20-Aug-2019	The Vanguard Group, Inc.	SELL	122.26	Ordinary	(635)	(635)
22-Aug-2019	The Vanguard Group, Inc.	BUY	124.38	Ordinary	1,080	1,080
22-Aug-2019	The Vanguard Group, Inc.	SELL	124.99	Ordinary	(2,374)	(2,374)
23-Aug-2019	The Vanguard Group, Inc.	BUY	122.38	Ordinary	170	170
27-Aug-2019	The Vanguard Group, Inc.	SELL	123.56	Ordinary	(1,348)	(1,348)
29-Aug-2019	The Vanguard Group, Inc.	BUY	122.53	Ordinary	4,528	4,528
30-Aug-2019	The Vanguard Group, Inc.	BUY	123.84	Ordinary	10,882	10,882
2-Sep-2019	The Vanguard Group, Inc.	BUY	123.50	Ordinary	3,236	3,236
5-Sep-2019	The Vanguard Group, Inc.	BUY	124.27	Ordinary	11,465	11,465
6-Sep-2019	The Vanguard Group, Inc.	SELL	125.50	Ordinary	(132)	(132)
6-Sep-2019	The Vanguard Group, Inc.	BUY	127.08	Ordinary	160	160
6-Sep-2019	The Vanguard Group, Inc.	SELL	125.50	Ordinary	(695)	(695)
9-Sep-2019	The Vanguard Group, Inc.	BUY	127.62	Ordinary	702	702
11-Sep-2019	The Vanguard Group, Inc.	BUY	129.18	Ordinary	702	702
12-Sep-2019	The Vanguard Group, Inc.	BUY	128.83	Ordinary	540	540
12-Sep-2019	The Vanguard Group, Inc.	BUY	128.87	Ordinary	100	100
13-Sep-2019	The Vanguard Group, Inc.	SELL	129.00	Ordinary	(143)	(143)
16-Sep-2019	The Vanguard Group, Inc.	SELL	129.43	Ordinary	(2,201)	(2,201)
16-Sep-2019	The Vanguard Group, Inc.	BUY	129.62	Ordinary	858	858
16-Sep-2019	The Vanguard Group, Inc.	BUY	129.62	Ordinary	170	170
16-Sep-2019	The Vanguard Group, Inc.	BUY	129.43	Ordinary	1,768	1,768
17-Sep-2019	The Vanguard Group, Inc.	BUY	128.81	Ordinary	138	138
18-Sep-2019	The Vanguard Group, Inc.	BUY	128.93	Ordinary	486	486
20-Sep-2019	The Vanguard Group, Inc.	SELL	131.11	Ordinary	(33,815)	(33,815)
20-Sep-2019	The Vanguard Group, Inc.	BUY	131.05	Ordinary	303	303
20-Sep-2019	The Vanguard Group, Inc.	SELL	131.11	Ordinary	(410)	(410)
20-Sep-2019	The Vanguard Group, Inc.	SELL	131.05	Ordinary	(756)	(756)
23-Sep-2019	The Vanguard Group, Inc.	BUY	131.17	Ordinary	540	540
24-Sep-2019	The Vanguard Group, Inc.	BUY	132.13	Ordinary	1,979	1,979
24-Sep-2019	The Vanguard Group, Inc.	BUY	132.13	Ordinary	4,924	4,924
24-Sep-2019	The Vanguard Group, Inc.	SELL	132.13	Ordinary	(251)	(251)
24-Sep-2019	The Vanguard Group, Inc.	BUY	132.13	Ordinary	400	400
25-Sep-2019	The Vanguard Group, Inc.	BUY	132.74	Ordinary	540	540
25-Sep-2019	The Vanguard Group, Inc.	BUY	131.93	Ordinary	4,819	4,819
25-Sep-2019	The Vanguard Group, Inc.	BUY	130.05	Ordinary	300	300
26-Sep-2019	The Vanguard Group, Inc.	BUY	132.36	Ordinary	2,049	2,049
27-Sep-2019	The Vanguard Group, Inc.	SELL	132.09	Ordinary	(105)	(105)
27-Sep-2019	The Vanguard Group, Inc.	BUY	132.09	Ordinary	215	215
30-Sep-2019	The Vanguard Group, Inc.	BUY	131.33	Ordinary	384	384
30-Sep-2019	The Vanguard Group, Inc.	SELL	132.18	Ordinary	(2,349)	(2,349)
30-Sep-2019	The Vanguard Group, Inc.	SELL	131.08	Ordinary	(314)	(314)
1-Oct-2019	The Vanguard Group, Inc.	BUY	131.99	Ordinary	242	242
1-Oct-2019	The Vanguard Group, Inc.	BUY	131.99	Ordinary	599	599
2-Oct-2019	The Vanguard Group, Inc.	BUY	128.23	Ordinary	192	192
2-Oct-2019	The Vanguard Group, Inc.	BUY	128.23	Ordinary	170	170
4-Oct-2019	The Vanguard Group, Inc.	BUY	127.77	Ordinary	170	170
4-Oct-2019	The Vanguard Group, Inc.	BUY	126.44	Ordinary	111	111
8-Oct-2019	The Vanguard Group, Inc.	BUY	125.08	Ordinary	170	170
8-Oct-2019	The Vanguard Group, Inc.	BUY	126.99	Ordinary	108	108
10-Oct-2019	The Vanguard Group, Inc.	BUY	127.41	Ordinary	540	540
10-Oct-2019	The Vanguard Group, Inc.	BUY	127.41	Ordinary	1,620	1,620
10-Oct-2019	The Vanguard Group, Inc.	SELL	127.41	Ordinary	(1,008)	(1,008)
17-Jun-2019	Vanguard Investments Australia Ltd.	BUY	123.38	Ordinary	2,328	2,328
20-Jun-2019	Vanguard Investments Australia Ltd.	SELL	127.15	Ordinary	(1,375)	(1,375)
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	1,630	1,630
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	483	483
21-Jun-2019	Vanguard Investments Australia Ltd.	SELL	126.00	Ordinary	(584)	(584)
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	5,424	5,424
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	1,020	1,020
21-Jun-2019	Vanguard Investments Australia Ltd.	SELL	126.00	Ordinary	(14,140)	(14,140)
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	1,746	1,746
21-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.00	Ordinary	13,500	13,500

Date of change	Person whose relevant interest changed	Nature of Change(6)	Consideration given in relation to change(7)	Class	Number of securities affected	Person's votes affected
25-Jun-2019	Vanguard Investments Australia Ltd.	SELL	126.31	Ordinary	(4,080)	(4,080)
26-Jun-2019	Vanguard Investments Australia Ltd.	BUY	126.18	Ordinary	999	999
27-Jun-2019	Vanguard Investments Australia Ltd.	SELL	125.70	Ordinary	(2,581)	(2,581)
27-Jun-2019	Vanguard Investments Australia Ltd.	BUY	125.70	Ordinary	1,332	1,332
27-Jun-2019	Vanguard Investments Australia Ltd.	BUY	125.70	Ordinary	2,044	2,044
28-Jun-2019	Vanguard Investments Australia Ltd.	SELL	125.39	Ordinary	(3,379)	(3,379)
2-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.12	Ordinary	987	987
2-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.12	Ordinary	3,480	3,480
5-Jul-2019	Vanguard Investments Australia Ltd.	BUY	129.79	Ordinary	4,635	4,635
8-Jul-2019	Vanguard Investments Australia Ltd.	BUY	128.52	Ordinary	1,974	1,974
8-Jul-2019	Vanguard Investments Australia Ltd.	BUY	128.52	Ordinary	1,740	1,740
9-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.74	Ordinary	1,728	1,728
9-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.74	Ordinary	3,405	3,405
11-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.96	Ordinary	702	702
11-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.02	Ordinary	1,734	1,734
15-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.07	Ordinary	1,080	1,080
15-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.07	Ordinary	6,001	6,001
15-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.91	Ordinary	987	987
16-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.62	Ordinary	4,161	4,161
16-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.62	Ordinary	784	784
16-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.62	Ordinary	3,201	3,201
16-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.50	Ordinary	3,468	3,468
16-Jul-2019	Vanguard Investments Australia Ltd.	BUY	126.50	Ordinary	2,657	2,657
17-Jul-2019	Vanguard Investments Australia Ltd.	SELL	128.21	Ordinary	(2,814)	(2,814)
18-Jul-2019	Vanguard Investments Australia Ltd.	SELL	126.70	Ordinary	(1,305)	(1,305)
19-Jul-2019	Vanguard Investments Australia Ltd.	SELL	127.29	Ordinary	(1,562)	(1,562)
19-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.29	Ordinary	3,709	3,709
22-Jul-2019	Vanguard Investments Australia Ltd.	SELL	127.42	Ordinary	(194,885)	(194,885)
22-Jul-2019	Vanguard Investments Australia Ltd.	BUY	127.42	Ordinary	987	987
23-Jul-2019	Vanguard Investments Australia Ltd.	SELL	128.88	Ordinary	(1,439)	(1,439)
24-Jul-2019	Vanguard Investments Australia Ltd.	BUY	129.31	Ordinary	1,836	1,836
26-Jul-2019	Vanguard Investments Australia Ltd.	SELL	128.79	Ordinary	(1,290)	(1,290)
30-Jul-2019	Vanguard Investments Australia Ltd.	BUY	129.02	Ordinary	3,168	3,168
31-Jul-2019	Vanguard Investments Australia Ltd.	BUY	128.79	Ordinary	6,544	6,544
31-Jul-2019	Vanguard Investments Australia Ltd.	BUY	128.79	Ordinary	987	987
1-Aug-2019	Vanguard Investments Australia Ltd.	SELL	127.93	Ordinary	(1,978)	(1,978)
2-Aug-2019	Vanguard Investments Australia Ltd.	SELL	126.01	Ordinary	(2,860)	(2,860)
6-Aug-2019	Vanguard Investments Australia Ltd.	BUY	119.57	Ordinary	1,316	1,316
6-Aug-2019	Vanguard Investments Australia Ltd.	BUY	119.57	Ordinary	2,601	2,601
6-Aug-2019	Vanguard Investments Australia Ltd.	BUY	119.57	Ordinary	2,601	2,601
6-Aug-2019	Vanguard Investments Australia Ltd.	BUY	119.57	Ordinary	3,661	3,661
7-Aug-2019	Vanguard Investments Australia Ltd.	BUY	120.69	Ordinary	2,303	2,303
7-Aug-2019	Vanguard Investments Australia Ltd.	BUY	120.69	Ordinary	3,952	3,952
8-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.38	Ordinary	3,179	3,179
8-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.38	Ordinary	4,625	4,625
9-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.78	Ordinary	3,365	3,365
12-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.37	Ordinary	3,190	3,190
13-Aug-2019	Vanguard Investments Australia Ltd.	SELL	120.80	Ordinary	(1,400)	(1,400)
14-Aug-2019	Vanguard Investments Australia Ltd.	BUY	121.98	Ordinary	770	770
14-Aug-2019	Vanguard Investments Australia Ltd.	BUY	121.98	Ordinary	1,320	1,320
14-Aug-2019	Vanguard Investments Australia Ltd.	BUY	121.98	Ordinary	2,702	2,702
15-Aug-2019	Vanguard Investments Australia Ltd.	BUY	118.00	Ordinary	1,320	1,320
16-Aug-2019	Vanguard Investments Australia Ltd.	BUY	118.54	Ordinary	7,696	7,696
19-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.22	Ordinary	6,112	6,112
20-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.38	Ordinary	2,407	2,407
20-Aug-2019	Vanguard Investments Australia Ltd.	SELL	123.38	Ordinary	(1,061)	(1,061)
20-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.38	Ordinary	3,671	3,671
21-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.93	Ordinary	993	993
22-Aug-2019	Vanguard Investments Australia Ltd.	BUY	124.51	Ordinary	4,417	4,417
27-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.51	Ordinary	396	396
27-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.51	Ordinary	1,012	1,012
27-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.51	Ordinary	125,068	125,068
27-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.51	Ordinary	3,898	3,898
29-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.00	Ordinary	5,096	5,096
29-Aug-2019	Vanguard Investments Australia Ltd.	BUY	122.53	Ordinary	996	996
30-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.84	Ordinary	7,227	7,227
30-Aug-2019	Vanguard Investments Australia Ltd.	BUY	123.84	Ordinary	1,770	1,770
2-Sep-2019	Vanguard Investments Australia Ltd.	BUY	123.50	Ordinary	6,424	6,424
3-Sep-2019	Vanguard Investments Australia Ltd.	BUY	123.44	Ordinary	31,347	31,347

Date of change	Person whose relevant interest changed	Nature of Change(6)	Consideration given in relation to change(7)	Class	Number of securities affected	Person's votes affected
4-Sep-2019	Vanguard Investments Australia Ltd.	BUY	122.94	Ordinary	4,716	4,716
4-Sep-2019	Vanguard Investments Australia Ltd.	BUY	122.94	Ordinary	1,332	1,332
5-Sep-2019	Vanguard Investments Australia Ltd.	BUY	125.26	Ordinary	113	113
5-Sep-2019	Vanguard Investments Australia Ltd.	BUY	125.26	Ordinary	1,336	1,336
5-Sep-2019	Vanguard Investments Australia Ltd.	BUY	125.26	Ordinary	4,047	4,047
5-Sep-2019	Vanguard Investments Australia Ltd.	BUY	125.26	Ordinary	6,249	6,249
6-Sep-2019	Vanguard Investments Australia Ltd.	SELL	127.08	Ordinary	(680)	(680)
9-Sep-2019	Vanguard Investments Australia Ltd.	BUY	127.72	Ordinary	1,336	1,336
10-Sep-2019	Vanguard Investments Australia Ltd.	BUY	127.52	Ordinary	2,138	2,138
12-Sep-2019	Vanguard Investments Australia Ltd.	BUY	128.50	Ordinary	2,285	2,285
13-Sep-2019	Vanguard Investments Australia Ltd.	BUY	129.29	Ordinary	1,264	1,264
13-Sep-2019	Vanguard Investments Australia Ltd.	SELL	129.29	Ordinary	(1,437)	(1,437)
17-Sep-2019	Vanguard Investments Australia Ltd.	BUY	128.81	Ordinary	1,170	1,170
17-Sep-2019	Vanguard Investments Australia Ltd.	SELL	128.81	Ordinary	(936)	(936)
17-Sep-2019	Vanguard Investments Australia Ltd.	BUY	128.81	Ordinary	5,586	5,586
18-Sep-2019	Vanguard Investments Australia Ltd.	SELL	128.74	Ordinary	(1,591)	(1,591)
19-Sep-2019	Vanguard Investments Australia Ltd.	BUY	131.77	Ordinary	1,002	1,002
20-Sep-2019	Vanguard Investments Australia Ltd.	SELL	131.11	Ordinary	(3,338)	(3,338)
20-Sep-2019	Vanguard Investments Australia Ltd.	BUY	131.05	Ordinary	2,940	2,940
23-Sep-2019	Vanguard Investments Australia Ltd.	BUY	131.37	Ordinary	4,395	4,395
24-Sep-2019	Vanguard Investments Australia Ltd.	BUY	132.13	Ordinary	729	729
25-Sep-2019	Vanguard Investments Australia Ltd.	SELL	131.93	Ordinary	(1,361)	(1,361)
25-Sep-2019	Vanguard Investments Australia Ltd.	BUY	131.93	Ordinary	4,102	4,102
27-Sep-2019	Vanguard Investments Australia Ltd.	BUY	132.09	Ordinary	2,331	2,331
27-Sep-2019	Vanguard Investments Australia Ltd.	BUY	132.09	Ordinary	1,332	1,332
27-Sep-2019	Vanguard Investments Australia Ltd.	BUY	132.09	Ordinary	3,516	3,516
30-Sep-2019	Vanguard Investments Australia Ltd.	SELL	131.08	Ordinary	(267)	(267)
30-Sep-2019	Vanguard Investments Australia Ltd.	SELL	131.08	Ordinary	(5,747)	(5,747)
2-Oct-2019	Vanguard Investments Australia Ltd.	BUY	130.13	Ordinary	8,780	8,780
2-Oct-2019	Vanguard Investments Australia Ltd.	BUY	130.13	Ordinary	1,213	1,213
2-Oct-2019	Vanguard Investments Australia Ltd.	BUY	130.13	Ordinary	1,791	1,791
2-Oct-2019	Vanguard Investments Australia Ltd.	BUY	129.85	Ordinary	5,510	5,510
2-Oct-2019	Vanguard Investments Australia Ltd.	SELL	129.85	Ordinary	(6,960)	(6,960)
3-Oct-2019	Vanguard Investments Australia Ltd.	BUY	126.19	Ordinary	5,530	5,530
3-Oct-2019	Vanguard Investments Australia Ltd.	BUY	126.27	Ordinary	1,968	1,968
4-Oct-2019	Vanguard Investments Australia Ltd.	BUY	126.44	Ordinary	1,461	1,461
4-Oct-2019	Vanguard Investments Australia Ltd.	BUY	126.44	Ordinary	4,785	4,785
4-Oct-2019	Vanguard Investments Australia Ltd.	BUY	126.44	Ordinary	4,930	4,930
7-Oct-2019	Vanguard Investments Australia Ltd.	BUY	125.90	Ordinary	902	902
9-Oct-2019	Vanguard Investments Australia Ltd.	BUY	125.41	Ordinary	1,640	1,640
11-Oct-2019	Vanguard Investments Australia Ltd.	BUY	129.39	Ordinary	1,528	1,528
11-Oct-2019	Vanguard Investments Australia Ltd.	BUY	129.39	Ordinary	2,312	2,312
14-Oct-2019	Vanguard Investments Australia Ltd.	BUY	131.24	Ordinary	42,608	42,608
14-Oct-2019	Vanguard Investments Australia Ltd.	SELL	131.24	Ordinary	(837)	(837)

This is Annexure A of 5 pages referred to in Form 603, Notice of initial substantial holder.

Signature: 

Name: Shawn Acker

Capacity: Compliance Manager

Date: 16 October 2019