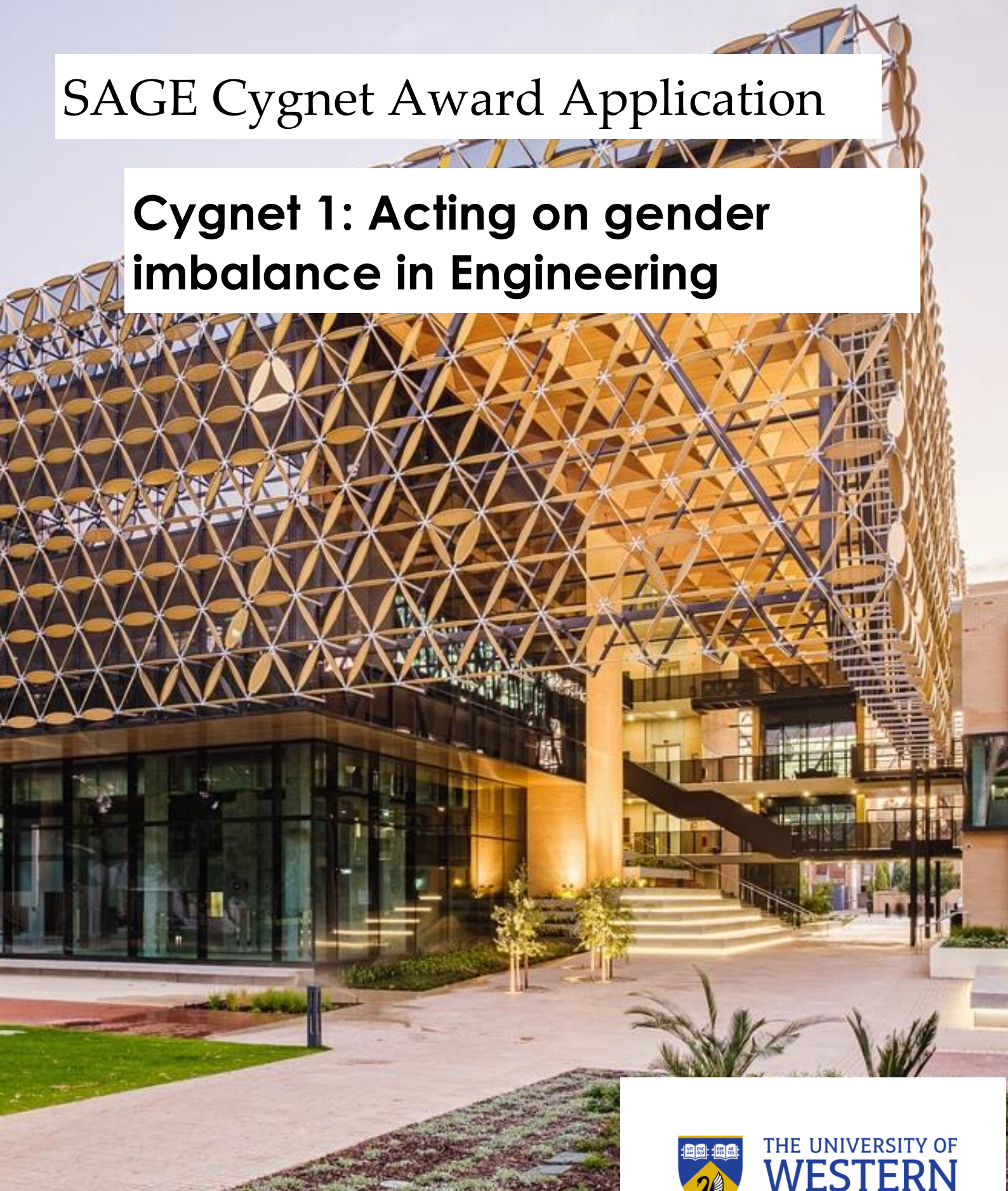


# SAGE Cygnet Award Application

## Cygnet 1: Acting on gender imbalance in Engineering



THE UNIVERSITY OF  
**WESTERN  
AUSTRALIA**

# SAGE CYGNET AWARD APPLICATION FORM



## SAGE Cygnet Award Application

<b>Name of Institution</b>	The University of Western Australia
<b>Date of Application</b>	September 2024
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## The University of Western Australia: SAGE CYGNET #1

	Barrier
[Mandatory] Sub-group barrier	Acting on gender imbalance in Engineering
[Mandatory] Institution-wide barrier	Visibility of women (unsubmitted)
Institution-wide	Changing how we define academic success (unsubmitted)
Institution-wide	Academic promotions (unsubmitted)
Institution-wide	Improving access to Policy (unsubmitted)

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## Glossary of Terms

ABLE	Faculty of Arts, Business, Law, and Education (2016-2020)
ASBAP	Athena Swan Bronze Action Plan
DEI	Diversity, Equity, and Inclusion
ECM	Faculty of Engineering, Computing and Mathematics (2011-2015)
EMS	Faculty of Engineering and Mathematical Sciences (2016-2020)
FLT	Faculty Leadership Team
GEWG	Gender Equity Working Group
GiE	UWA Girls in Engineering (GiE)
HMS	Faculty of Health and Medical Sciences (2016-2020)
HoS	Head of School
HR	Human Resources
MDHS	Faculty of Medicine, Dentistry and Health Sciences (2011-2015)
PVC	Pro Vice-Chancellor
PVC-DEI	Pro Vice-Chancellor (Diversity, Equity, and Inclusion)
SAGE	Science in Australia Gender Equity
SAT	Self-Assessment Team
SDVC	Senior Deputy Vice -Chancellor
SoE	School of Engineering
STEM	Science, Technology, Engineering, Mathematics
STEMM	Science, Technology, Engineering, Mathematics and Medicine
T&R	Teaching and Research (contract)

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## 1. Key barrier

The proportion of women in Engineering at UWA had always been much lower than the other STEMM faculties. The reasons and causes for continued gender imbalance were not well explored or understood, nor were they factored into workforce planning, resulting in an ongoing barrier to recruitment, retention, and progression for women.

This Cygnet therefore explores the **action taken to address the lack of women in Engineering** starting with tackling systemic issues in the Faculty<sup>1</sup>, and concluding with a woman focussed recruitment drive in the School of Engineering<sup>2</sup>.

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<sup>1</sup> Note: UWA was part of the Athena Swan Pilot in 2015. UWA's Bronze Action Plan focused on a broad set of findings under the "Supporting and advancing women's careers" heading. The actions were intended to be implemented organisation wide, and not specifically to the School of Engineering. However, there were actions that could be applied directly to the School of Engineering to increase the number of academic women.

<sup>2</sup>UWA went through a major restructure in 2016, and another in 2020. UWA's Bronze submission referred to the **Faculty of Engineering, Computing and Mathematics (ECM)**, this Cygnet refers to **Faculty of Engineering and Mathematical Sciences (EMS)**, and then highlights the outcomes and impacts for the **School of Engineering**. Full details of faculties and their schools, through the major restructures can be found in the Institutional Context [2024]. Breakdown of the 'Engineering' faculty and the School of Engineering shown below.

2011-2015: UWA has nine faculties with 45 schools

**Faculty of Engineering, Computing and Mathematics (ECM)**

- School of Civil and Resource Engineering
- School of Computer Science and Software Engineering
- School of Electrical, Electronic and Computer Engineering
- School of Environmental Systems Engineering
- School of Mathematics and Statistics
- School of Mechanical and Chemical Engineering

2016-2020: UWA has four faculties with 21 Schools

**Faculty of Engineering and Mathematical Sciences (EMS)**

- School of Physics, Mathematics and Computer Science
- School of Engineering
- Oceans Graduate School

2021 to now: UWA has the College of Schools with 22 Schools

**School of Engineering (SoE)**

- Department of Chemical Engineering
- Department of Civil, Environmental and Mining Engineering
- Department of Electrical, Electronic and Computer Engineering
- Department of Mechanical Engineering

## 2. Evidence of the barrier

### 2.1. Denial of the problem

Gender equity was not viewed as an actionable priority for the Faculty of Engineering, Computing and Mathematics (ECM) leadership team. In 2011, an external consultant, Dr Jen de Vries, was engaged by the UWA Executive and the Dean of the faculty to analyse staff data and conduct interviews with women academics and the ECM leadership team. The resulting report<sup>3</sup> (de Vries, 2012) provided an excellent description of the baseline environment within Engineering, enabling UWA's commitment to the Athena Swan Pilot in 2015. A key conclusion by de Vries was that the ECM leadership team were not in agreement that there was a "gender problem".

*Figure 1: Extracts from 2012 report "Optimising Faculty Performance: Maximising the potential of academic women".*

"Awareness of the gender profile was low. Apart from the male Dean who initiated this Review, many of the male leaders interviewed had given little thought to gender as an issue. They were not convinced that it was a problem, had only a rough idea of the numbers and/or percentages in their schools and across the Faculty and had no useful benchmarks to use as a point of comparison. It was not on the Faculty Leadership Team (FLT) radar according to a number of Heads: 'Most discussion takes place at FLT.... don't ever recall talking about gender and staff...maybe once a year at Faculty Board but only in regard to students' and this issue 'not discussed at Faculty Board for more than five minutes'. Several HoS were openly antagonistic or defensive about the issue."

De Vries (2012) p57

"Given the differing views on whether the gender profile in EMS was an issue, it was not surprising to find a large gulf in the responses to the question as to whether changes should be sought. For those who were more gender aware, the need to improve gender equity was clear.... There were, however, clear signs of resistance to change on the part of male and female interviewees. Quotas were raised and rejected by quite a few interviewees and the idea of merit was deemed to be unproblematic: 'I don't see gender as a priority. When recruiting, it should be fair, everyone equal, go for quality, not targets.' Another remarked, 'we have policy. I don't see any intention to bias or discriminate'. Several male leaders advocated that equal treatment is about treating everyone the same. One expressed it as 'no practice is best practice. If one is supported this entails discriminating against the other...should treat all as equal'. This assumes a level playing field exists for all."

De Vries (2012) p58

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<sup>3</sup> de Vries, J., & Todd, P. (2012). *Optimising Faculty Performance: Maximising the potential of academic women*. Perth, internal report.



UWA's Bronze submission highlighted that women account for between 39-43% of academics Level A to E, across the institution (Table 1). ECM had the lowest proportion of women (17-20%), followed by the Faculty of Science (36-42%). The Faculty of Medicine, Dentistry and Health Sciences (MDHS) had the highest proportion of women, consistently over 50%.

Table 1: Headcount of non-casual academics Level A - E in the STEMM faculties, with numbers and proportion of women shown.

	UWA TOTAL		Engineering, Computing, Mathematics (ECM)		Science		Medical, Dental, Health Sciences (MDHS)	
	women/ total n <sup>‡</sup>	% Women	women/ total n	% Women	women/ total n	% women	women/ total n	% women
2011	654/1657	39%	46/266	17%	177/490	36%	258/506	51%
2012	730/1769	41%	41/254	17%	194/502	39%	304/574	53%
2013	742/1771	42%	49/268	18%	198/496	40%	294/565	52%
2014	765/1799	43%	53/264	20%	199/515	39%	298/555	54%
2015	736/1741	42%	44/258	17%	193/487	40%	294/565	54%
2016	709/1681	42%	42/257	16%	189/468	40%	280/513	55%
2017	678/1602	42%	42/244	17%	185/443	42%	265/493	54%

Data taken from annual government reporting, snapshot at 31 March each year.

Headcount does not include casual academics. Headcount includes academics on Teaching, Teaching & Research, Research contracts that are fixed term or ongoing.

<sup>‡</sup> n= the number of academics in that function group, includes non-binary academics

Heatmap highlights low proportions of women (0%) to high (100%), with light to dark magenta tone.

## 2.2. Blaming the high school 'pipeline'

The gender imbalance amongst academic staff was largely believed to be a "pipeline problem" that needed to be addressed by engaging more primary and high school girls in STEM<sup>4</sup>. Faculty leadership in ECM endorsed and supported the successful **UWA Girls in Engineering (GiE)** initiative, alongside partners Rio Tinto, that pursued outreach programs and engagement with girls in primary and secondary schools in WA.

Coupled with the lack of readily available institutional gendered data (prior to 2015), the faculty leadership team was disempowered to reflect on its own culture; there was a sense that nothing could be done to improve the situation other than wait for the pipeline to improve over the next decade. Consequently, there was no development and implementation of appropriately inclusive recruitment drives, and minimal support strategies to ensure women were recruited.

<sup>4</sup> In this instance: science, technology, engineering and mathematics.

## **Girls+ in Engineering (GiE) at UWA**

The industry funded UWA Girls+ in Engineering (GiE) outreach program inspires young women to take advantage of Science, Technology, Engineering and Mathematics (STEM) study and career pathways. Together with foundational partner, Rio Tinto, they recognise that addressing the gender imbalance in STEM fields begins at young age. Through hands-on school workshops, on-campus and community events and industry partnerships, GiE supports the next generation of women scientists and champions diversity in STEM.

Since 2014, GiE has reached over 20,000 primary and high school students across Western Australia, mentored more than 300 UWA current student ambassadors and collaborated with more than 250 industry volunteers.

### **School outreach**

GiE outreach initiatives are delivered across 24 Western Australian schools, including schools in regional and remote and low-SES area in Perth, Pilbara, and Great Southern regions. The engagement framework for primary, secondary, and tertiary students is modelled on the Australian Academy of Science's national Women in STEM Decadal Plan, addressing barriers women in STEM face at each stage of their career progression, namely, a lack of role models.

Current UWA students and industry partners volunteer their time in-school as role models to talk to students in Years 7–12 about exciting engineering and STEM careers. Through a range of discipline-specific challenges, including environmental, mining and biomimicry activities, students work collaboratively in teams to solve complex problems.

On-campus Discovery Days are held at UWA's Perth campus to showcase a circuit of STEM activities hosted by industry partners, academics, and student societies. Keynote speakers and alumni share their stories and demonstrate the social impact engineering and wider STEM has in improving our world.

### **GiE student ambassador program**

The GiE Student Ambassador program for current UWA students plays an integral role in addressing the gender imbalances in STEM in Australia by providing these role models. The program provides a cohort experience and support for women+ at UWA, and offers students regional travel opportunities, industry site visits and networking, paid casual work, and professional development.

### **GiE team with Rio Tinto in Karijini National Park**



### 2.3. Declining number of junior women in the pipeline

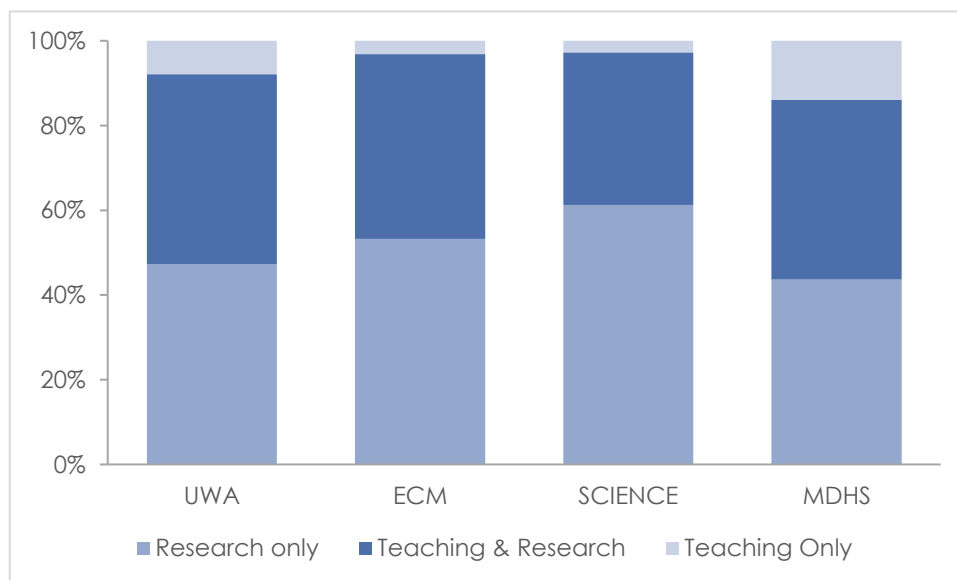
**Teaching and Research** (T&R) positions are viewed as the *academic pipeline* (read more about academic functions in Figure 2). During the Bronze Self-Assessment, 45% of academic positions were T&R (averaged over 2011-2017) and women held around 35% of these positions.

Figure 2: Composition on non-casual staff at UWA.

**Academic positions (non-casual) are split over three functions.**

1. **Research Intensive/Only:** often fixed term contracts.
2. **Teaching & Research:** considered the gold-standard. Generally associated with ongoing contracts, providing security and considerable autonomy and flexibility in time dedicated between teaching, research, and other roles. T&R positions are sought after as career enabling positions.
3. **Teaching Only:** often fixed term contracts

Figure 2.1 The split for each function in the faculties and across UWA, averaged over 2011-2017.



**Casual academics** were not included for review during the Bronze self-assessment and are therefore not included in this Cygnet. Analysis of casual contracts should be reviewed by the Silver Self-Assessment Team.

For clarity, casual academics were used to cover **Teaching Only** positions across the faculties over 2011-2017, on average 121 FTE a year for all UWA.

	EMS	SCIENCE	MDHS	ABLE
Proportion of UWA FTE Casual/ Teaching Only	26%	26%	11%	33%
Proportion FTE held by women casual academics	19%	63%	56%	40%

In ECM, 44% of academic positions over 2011 to 2017 were **Teaching and Research** (T&R) positions. The proportion of women academics in these positions averaged about 18% (Table 2), much lower than the proportion of women in these positions in the other STEMM faculties (Science 30%, and MDHS 41%). There were few T&R **Level A** positions, with none by 2017. **Level B** positions, and the number of women in those positions, declined from 4 (n=14) in 2011, to none (n=6) in 2017 (Table 3).

ECM rarely appointed staff to **Teaching Only** positions, these accounting for around 3% of academic positions across 2011 to 2017 (noting that these data do not include casual staff). **Research Only** positions made up, on average, 53% of positions, and on average 17% of these positions were held by women. Between 2011 – 2015, around 45% of **completing PhD students** in ECM were women.

Even with a strong number of women completing their PhD's, the 'academic pipeline' was not materialising in the way that the leadership team may have envisaged. The numbers of Level A and B women were significantly lower than the other STEMM faculties.

Recruitment drives for academics in ECM had few applications from women; with no women appointed to T&R positions over this period (Table 4).

Table 2: Headcount of non-casual academics, by function, STEMM Faculties, 2011-2017, numbers and proportion of women shown.

**Faculty of Engineering, Computing and Mathematics**

	Research		Teaching & Research		Teaching	
	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women
<b>2011</b>	25/142	18%	19/119	16%	2/5	40%
<b>2012</b>	18/126	14%	21/121	17%	2/7	29%
<b>2013</b>	27/150	18%	20/112	18%	2/6	33%
<b>2014</b>	28/143	20%	24/116	21%	1/5	20%
<b>2015</b>	23/138	17%	20/115	17%	1/5	20%
<b>2016</b>	22/137	16%	18/110	16%	2/9	22%
<b>2017</b>	22/128	17%	18/103	17%	2/11	18%

**Faculty of Science**

	Research		Teaching & Research		Teaching	
	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women
<b>2011</b>	107/255	42%	62/220	28%	8/15	53%
<b>2012</b>	123/277	44%	64/213	30%	7/12	58%
<b>2013</b>	133/284	47%	59/202	29%	6/10	60%
<b>2014</b>	130/293	44%	56/199	28%	13/23	57%
<b>2015</b>	128/282	45%	59/193	31%	6/12	50%
<b>2016</b>	121/255	47%	63/202	31%	5/11	45%
<b>2017</b>	114/231	49%	61/194	31%	10/18	56%

**Faculty of Medicine, Dentistry and Health Sciences**

	Research		Teaching & Research		Teaching	
	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women	Women/n <sup>‡</sup>	% Women
2011	113/177	64%	106/263	40%	39/66	59%
<b>2012</b>	127/198	64%	125/297	42%	52/79	66%
<b>2013</b>	139/213	65%	103/269	38%	52/83	63%
<b>2014</b>	140/199	70%	105/268	39%	53/88	60%
<b>2015</b>	144/211	68%	97/247	39%	52/82	63%
<b>2016</b>	136/199	68%	99/244	41%	45/69	65%
<b>2017</b>	128/187	68%	81/204	40%	56/100	56%

Data taken from annual government reporting, snapshot at 31 March each year.

Headcount does not include casual academics. Note that 'Research' and 'Teaching' contracts are predominantly short/fixed term.

‡ n= the number of academics in that function group, includes non-binary academics.

Heatmap highlights low proportions of women (0%) to high (100%), with light to dark magenta tone.

Table 3: Headcount of 'Teaching & Research' academics, STEMM faculties, 2011-2017 number and proportion of women shown.

**Faculty of Engineering, Computing and Mathematics**

	LEVEL A		LEVEL B		LEVEL C		LEVEL D		LEVEL E	
	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women
<b>2011</b>	0/2	0%	4/16	25%	6/25	24%	8/38	21%	1/38	3%
<b>2012</b>	1/5	20%	3/16	19%	6/25	24%	9/36	25%	2/39	5%
<b>2013</b>	1/4	25%	2/13	15%	4/24	17%	9/32	28%	4/39	10%
<b>2014</b>	1/3	33%	3/14	21%	5/24	21%	11/37	30%	4/38	11%
<b>2015</b>	1/2	50%	2/11	18%	6/26	23%	8/36	22%	3/40	8%
<b>2016</b>	0/0	0%	1/10	10%	6/26	23%	7/35	20%	4/39	10%
<b>2017</b>	0/0	0%	0/6	0%	6/28	21%	8/33	24%	4/36	11%

**Faculty of Science**

	LEVEL A		LEVEL B		LEVEL C		LEVEL D		LEVEL E	
	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women
<b>2011</b>	1/6	17%	23/56	41%	25/63	40%	7/41	17%	6/54	11%
<b>2012</b>	5/11	45%	25/56	45%	22/63	35%	6/37	16%	6/41	13%
<b>2013</b>	0/3	0%	23/54	43%	23/62	37%	7/36	19%	6/47	13%
<b>2014</b>	1/3	33%	18/49	37%	25/69	36%	8/36	22%	4/41	10%
<b>2015</b>	1/3	33%	21/44	48%	22/69	32%	11/38	29%	4/38	10%
<b>2016</b>	2/4	50%	19/41	46%	25/75	33%	12/43	28%	5/39	13%
<b>2017</b>	2/4	50%	14/31	45%	28/76	37%	11/42	26%	6/41	15%

**Faculty of Medicine, Dentistry and Health Sciences**

	LEVEL A		LEVEL B		LEVEL C		LEVEL D		LEVEL E	
	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women
<b>2011</b>	10/14	71%	17/23	74%	55/110	50%	13/40	25%	11/63	17%
<b>2012</b>	7/13	54%	20/25	80%	65/124	52%	17/64	27%	16/71	23%
<b>2013</b>	4/4	100%	15/20	75%	51/113	45%	19/65	29%	14/67	21%
<b>2014</b>	1/1	100%	17/24	71%	54/113	48%	17/62	27%	16/68	24%
<b>2015</b>	2/2	100%	16/21	76%	49/98	50%	14/55	25%	16/71	23%
<b>2016</b>	1/1	100%	18/24	75%	49/89	55%	16/61	26%	15/69	22%
<b>2017</b>	0/1	0%	14/18	78%	39/67	58%	16/54	30%	12/64	19%

Data taken from annual government reporting, snapshot at 31 March each year. Headcount shows non-casual staff. Teaching and Research contracts are mostly ongoing.

‡ n= the number of academics in that cohort/ group, includes non-binary academics.

Heatmap highlights low proportions of women (0%) to high (100%), with light to dark magenta tone.

Table 4: Academic positions advertised for ECM, 2013 to 2017, number and proportion of applications received by women, and gender of successful applicants.

	Academic Level	No. of positions	Applications		Position offered to		
			From women /total*	% from women	Women	Men	Prefer not to say
2013	Level A	5	8/37	22%		4	1
	Level B	5	18/131	14%	1	3	1
	Level C	1	7/47	15%		1	
	Level D	1	0/1	0%		1	
2014	Level A	7	16/90	18%	2	5	
	Level B	7	38/233	16%		7	
	Level C	4	12/133	9%		4	
2015	Level A	12	79/405	20%	2	10	
	Level B	4	35/261	13%		4	
	Level C	2	12/109	11%		2	
	Level E	1	9/34	26%			1
2016	Level A	6	104/304	34%	2	4	
	Level B	1	7/42	17%		1	
2017	Level A	5	46/207	22%	1	4	
	Level B	6	69/323	21%		6	
	Level D	1	0/6	0%		1	

Recruitment data for Research and T&R positions

All 8 positions offered to women were Research only positions.

\*Total includes all applications including from those who identify as non-binary and those who prefer not to answer

## 2.4. Senior women felt undervalued.

Prior to 2023, no senior academic women stayed through to retirement in any of the engineering disciplines. Through focus groups and interviews it was understood that the Level D and E women in EMS did not feel supported and valued and chose to leave UWA for better prospects. Three Level E women who left expressed bitterness that the institution in which they had invested so much energy appeared uninterested in keeping them.

Figure 3: Quotes from senior women who resigned between 2015 and 2019.

<b>Retention of Level E women in Engineering not a priority</b>
<p>"I was headhunted for a leadership role at a European research institute. I didn't want to leave UWA or Perth; I had a house here, my kids were in school here. I discussed my offer with the UWA Executive. I wasn't even offered a pot plant to stay. I left UWA soon after that discussion."</p>
<p>"I talked to my manager about applying for a Chair position that had recently been created in Engineering. I was told not to bother as my performance didn't match such a senior role. Soon after I was appointed as Professor at a leading UK university. Sadly, I left Perth and UWA."</p>
<p>"I applied for a senior leadership role in the Faculty but didn't get the position. My feedback was that I had not done enough for UWA. A few months later I was chairing UWA's Promotions Committee, and the person appointed to the leadership role had applied for promotion to Level E. On seeing their application, I laughed as I realised I had done so much more for UWA than them."</p>

### 3. Activities and outputs

This section references the Bronze actions<sup>5</sup> implemented by the School (summarised in Table 5) and tells the story of how change was introduced into the School of Engineering.

Table 5: Summary of Athena Swan Bronze actions implemented by the School of Engineering, and actual outputs.

Bronze Outcomes	Bronze Action	Bronze Success measure	SUMMARY of Actual Output
Outcome A1: The institution has clear and ambitious aspirations for gender representation and monitors progress towards this	A1.2 Set School gender targets that align with Gender Equity Indices, and regularly report progress against targets	Progress against gender equity targets reported biannually at University level	<ul style="list-style-type: none"> <li>• New School Governance Constitution</li> <li>• Creation of Inclusion and Diversity Advisory group</li> <li>• Position created: 0.2 FTE Academic Lead for Diversity, Equity, and Inclusion (DEI)</li> <li>• Target for School Board of 40:40:20</li> <li>• Target for Heads of Department: 50%</li> </ul>
Outcome C2. Staff are aware of their biases and are conscious of making more inclusive decisions	C2.1 Implement unconscious bias training for all staff who participate in workforce decisions to empower them to make more inclusive decisions	Training is mandatory, compliance is recorded	<p><b>2018</b> Two Tailored <b>Unconscious Bias</b> sessions for EMS 14 Women and 9 Men from EMS attended.</p> <p><b>2019</b> Four Tailored <b>Unconscious Bias</b> sessions for EMS 14 Women and 49 men from EMS attended.</p> <p><b>2020-2022</b> 14 <b>Unconscious Bias</b> sessions run open to all staff 14 Women and 10 Men from EMS attended.</p> <p>In total, 21 sessions were run, grossing 325 attendees. Most, if not all EMS women attended (42) and about 38% of EMS men (78) attended.</p>
Outcome C2. Staff are aware of their biases and are conscious of making more inclusive decisions	C2.2 Review criteria for staff recruitment selection committees to ensure there is relevant representation.	Representation on committees provides visible balance.	<ul style="list-style-type: none"> <li>• Review of position descriptions and accompanying job advertisements and selection criteria</li> <li>• Review of selection processes within the School</li> </ul>

<sup>5</sup> Note: UWA was part of the Athena Swan Pilot in 2015; the Bronze Action Plan addressed a broad set of findings under the "Supporting and advancing women's careers" heading. The actions were intended to be implemented organisation wide, and not specifically to the School of Engineering. However, certain actions resonated with leaders in the School, and they worked to implement what they could.



Bronze Outcomes	Bronze Action	Bronze Success measure	SUMMARY of Actual Output
Outcome C4. A culture fostering Inclusion and Diversity	C4.2 Implement a step in the recruitment process that requires a hiring area to understand the diversity of the potential applicant pool and encourages our academics to engage broadly to optimise the opportunity for the applicant pool to represent an equivalent diversity,	Improved response from women staff (particularly from STEMM faculties) to relevant questions in Your Say survey	<ul style="list-style-type: none"> <li>• Unconscious Bias training</li> <li>• Meetings with SAGE and academic experts to understand the barriers women academics experience.</li> <li>• International search for potential candidates</li> <li>• Personalised connection with the talent pool through one-on-one virtual meetings</li> </ul>
Outcome D2: Academic women have an equivalent opportunity as men to advance their careers	D2.5 Develop and implement a talent attraction and retention strategy for academic women at levels D and E	More balanced representation of genders at the higher academic levels.	<ul style="list-style-type: none"> <li>• Development of existing Pre-Retirement Policy</li> <li>• A focus on workforce planning with Heads of School, including the utilisation of pre-retirement contracts (PRC)</li> <li>• Active promotion of PRCs to academics across the institution</li> </ul>

### 3.1. Understanding gendered experiences and data

In 2020, UWA underwent a restructure which replaced the faculties with the College of Schools<sup>6</sup>. The **School of Engineering** was established with a new leadership team who were supportive of gender equity and inclusive decision-making.

Gender equity considerations were being introduced and embedded in strategic planning processes, particularly in the development of a new *School Governance Constitution*. Gender targets were on the School Board agenda, as well as possible strategies for achieving them.

Senior leaders attended workshops with the UWA Athena Swan Lead<sup>7</sup> and senior Executives from another WA university leading the way in gender equity, to understand the benefits of a

<sup>6</sup> Full details of UWA's restructures can be found in the Institutional Context.

<sup>7</sup> UWA's Athena Swan Lead through the Pilot and Bronze was Professor Carolyn Oldham, who had been one of the very few women in Engineering since 1994. Professor Oldham was instrumental in supporting the School of Engineering through these changes.

diverse workforce, and the unique barriers women faced as academics, particularly in male dominated schools. In collaboration with the Human Resource department, Unconscious Bias training was tailored and delivered to academics in EMS.

A *Diversity and Inclusion Advisory Group* was added to the School Committee structure, and in 2021, a 0.2 FTE leadership position of *Academic Lead for Diversity, Equity, and Inclusion (DEI)* was established. The School Board agreed to the very aspirational target of 50% women in Head of Department positions, and for the Board to adhere to the 40:40:20 gender representation.

Following feedback from senior women, Heads of Department and the HoS trialled a range of strategies to better support academic women, including improving how annual performance reviews were conducted, expanding on opportunities for professional development, in-house mentoring and encouraging flexible work arrangements.

### 3.2. Strategy and implementation

With no direct action, it would take a very long time to improve the numbers of women in the School. Long term success required long term planning. The *Academic Lead DEI* presented the idea of a women-only “cluster hire” to boost the numbers of junior women on T&R contracts, which would reinforce and strengthen the pipeline.

To enable a future cluster hire, positions vacated over several years by retiring academic staff were quarantined and temporarily filled with casual staff to cover immediate teaching requirements. A key enabler of this strategy was UWA's favourable pre-retirement contracts to eligible academics.

#### **UWA's Pre-Retirement Contracts (PRC)**

The University Policy on Pre-Retirement Contracts was introduced in 2011 to assist with workforce planning decisions. In 2013, Human Resources conducted a survey of staff nearing retirement on their retirement Intentions, to better understand the factors influencing their retirement plans.

Improvements were made to the terms of the policy over time, including guaranteed rates of superannuation on loadings, post-employment options, and salary packaging,

The worldwide pandemic in 2020 resulted in a financial contraction at the University and led to a review of workforce planning. Pre-Retirement Contracts were reviewed and promoted more widely to academic staff.

The PRC's offered a loading of up to 20% of base salary, plus superannuation, if an academic committed to retire within 12 months. The increased value and visibility of the PRC triggered interest in the scheme from Level E academics, which translated into action for Heads of Schools for workforce transformation.

Interestingly, the PRCs in Go8 Universities appear to be of higher value to academics than PRCs in other universities and the higher value may be a more effective enabler of workforce transformation. This needs further investigation.

The HoS stressed the importance of utilising PRCs in providing critical opportunities for new appointments that could start to address the Schools gender imbalance. A decision was made to replace retiring Level E academics with Level B women academics, in part due to financial constraints but also as part of the broader strategy to introduce the School to a new generation of academics.

### **3.3. Connecting with the talent pool**

The HoS initiated an informal search for potential candidates. Academic staff in the School were asked to nominate senior women professors from around the world and connect them with the HoS. The HoS then contacted the professors for recommendations for high performing early-career women who were ready for an academic position. The HoS had one-on-one conversation with each of the nominated early-career women, to explore their interest in applying for an academic position at UWA. Nearly all indicated that they would apply for a position, once advertised.

### **3.4. Working towards an inclusive recruitment process**

The standard job advertisement (Figure 4) was revised to speak directly to potential Level B women. The need to bring diversity of thinking and decision-making to the School was added as a selection criterion, and the paragraph describing UWA's commitment to inclusion and diversity was expanded. More specific information was added around parental leave provisions and on-campus childcare (Figure 5).

Early conversations between the School Board and HR used terms like “female-only” or “female-focused” recruitment. After discussions about the difference between sex and gender with the School leadership team, the wording was changed to the more inclusive “women-only” and “women-focused” positions.

The position was advertised between late 2022 and early 2023, and received 525 applications, of which 128 were women<sup>8</sup>. It is notable that an advertisement leading with “positions prioritised for suitably qualified women” still attracted 377 applications from men.

Fifteen women were interviewed via Teams by a selection panel that was 50% women, and eight candidates were brought to Perth for a more formal selection process that included presentation of a research seminar and a first-year engineering lecture, one-on-one discussions with potential collaborators in Perth, a formal interview and an informal lunch and dinner. The HoS sought feedback from all academics who had been to the seminars or interacted with the candidates, and this feedback was provided to the Selection Committee.

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<sup>8</sup> Total complete applications = 525, 28% women (n=128), 72% men (n=377), 4% preferred not to state their gender (or identified as non-binary). Applications for all academic positions in the Engineering discipline average 19% women and 77% men (data averaged from 2014-2023) and for Teaching and Research positions, applications were from 17% women and 80% men. Excluding the women focussed recruitment in 2022/23, two women were appointed to T&R positions from 2011.

### 3.5. Intersectionality

Cultural diversity is not considered an issue in the School of Engineering; both women and men academics come from a range of cultures, and they have been supported and promoted through to leadership positions. Historically, while the leadership teams within the Faculty have all been men, they have consistently been culturally diverse. Interestingly, all four of the women appointed in this recruitment drive are from culturally diverse backgrounds.

Boosting intersectional data collation is a focus for 2024 so that considerations beyond country of origin can be made.

*Figure 4: Standard wording on job advertisement.*

#### **About the opportunity**

You will provide academic leadership, coordinate undergraduate and postgraduate teaching, and develop research specific to your field of engineering.

The successful candidate will conduct high quality and high impact research that will build a strong, internationally recognised research programme that complements existing research groups. As a passionate advocate for teaching excellence the successful candidate will develop and deliver undergraduate and masters curricula with on a focus on your discipline of engineering.

#### **About you**

We are seeking applications from high energy, forward thinking and collaborative academics, with a track record of excellence and impact. The School of Engineering at UWA is driving an initiative to improve diversity, equity, and inclusion amongst its academic staff; increased gender diversity amongst staff and students is a key priority for the School. This position is prioritised for suitably qualified women.

#### **Our commitment to inclusion and diversity**

- UWA is committed to a diverse workforce. We celebrate inclusion and diversity and believe gender equity is fundamental to achieving our goals.
- We have child friendly areas on campus, including childcare facilities.
- Flexible work arrangements, part-time hours and job sharing will all be considered.
- UWA has been awarded Bronze Employer Status for being a Top Ten Employer for LGBTI Inclusion by the Australian Workplace Equity Index (AWEI -2021)
- UWA has also been awarded Athena Swan Bronze Accreditation in 2020

Figure 5: Re-drafted advertisement for the women-focussed recruitment round for Engineering<sup>9</sup>

**Jobs at UWA**

## Prospective staff

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### Lecturer (multiple Engineering disciplines)

**Job no:** 512613  
**Work type:** part time, full time  
**Location:** Crawley  
**Categories:** Engineering and Mathematical Sciences

**Positions prioritised for suitably qualified women.**

**UWA is committed to improving the representation of women in Science, Technology, Engineering, Mathematics (STEM) through its Athena SWAN Action Plan. This opportunity is offered in accordance with section 31 of the Equal Opportunity Act 1984 (WA).**

**School of Engineering**

- ❖ UWA is seeking applications from high energy, forward thinking and collaborative academics, with passion for teaching and research.
- ❖ Multiple opportunities are available across the School of Engineering, including in automation and robotics, biomedical, civil, environmental, mining, chemical, mechanical, electrical and electronic engineering.
- ❖ Salary range: Level B: \$102,983 - \$121,864
- ❖ Full time or part time ongoing appointment - we are supportive of flexible working arrangements.

There are exciting opportunities to work with an institution at the most exciting and dynamic time in its history. With the UWA vision identifying the best ways to build on our strong reputation for excellence in teaching, learning and research, the University is an energetic centre for innovation, inspiring students, staff and stakeholders alike to make a global impact.

Joining UWA will put you at the forefront of excellence, where you can challenge convention and make the most of unlimited possibilities. It's not just one of the top 100 universities in the world, it's an environment in which you can make a real difference – and encourage others to do the same.

We offer access to an exceptional support network committed to creating change, from membership in the Group of Eight – a coalition of leading research-intensive Australian universities – to colleagues who are academic leaders in the broadest sense, having established international reputations as outstanding teachers and researchers.

We look forward to hearing from like-minded candidates.

**About the school**

The School of Engineering has a dedicated, award-winning team of teaching and research academics providing undergraduate and post-graduate programmes across multiple engineering disciplines, including biomedical, civil, environmental, mining, chemical, mechanical, electrical and electronic and automation and robotics. In research, the School also spans a wide range of engineering disciplines, with groups often comprising multi- and trans-disciplinary researchers who work with industry to produce solutions to a range of challenges within mining development and production, ocean engineering, agriculture, health, transport, energy, water supply and community development.

UWA ranks in the world's top universities, as measured by key independent rankings, including QS World University Rankings for Mineral & Mining Engineering (11th) and Civil Engineering (48th); and Shanghai Rankings for Mineral & Mining Engineering (7th) and Environmental Science and Engineering (16th).

The School of Engineering at UWA is driving an initiative to improve diversity, equity and inclusion amongst its academic staff; increased gender diversity amongst staff and students is a key priority for the School.

<sup>9</sup> Screenshot from the UWA Job Board, <https://external.jobs.uwa.edu.au/en/job/512613/lecturer-multiple-engineering-disciplines>

**Work type:** part time, full time  
**Location:** Crawley  
**Categories:** Engineering and Mathematical Sciences

**Positions prioritised for suitably qualified women.**

**UWA is committed to improving the representation of women in Science, Technology, Engineering, Mathematics (STEM) through its Athena SWAN Action Plan. This opportunity is offered in accordance with section 31 of the Equal Opportunity Act 1984 (WA).**

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#### **Our commitment to inclusion and diversity**

UWA is committed to a diverse workforce and an equitable and inclusive workplace. We celebrate difference and believe diversity is fundamental to achieving our goals as a globally recognised Top 100 educational and research institution. We are committed to creating a safe work environment for Aboriginal and Torres Strait Islander people, women, people from culturally and linguistically diverse backgrounds, the LGBTIQ+ community and people living with disability. UWA demonstrates this commitment through:

- ❖ providing globally competitive, gender neutral parental leave policy with 26 weeks paid leave after 12 months service and 36 weeks after 5 years.
- ❖ UWA has on-campus childcare facilities for children (6 weeks to 4 years).
- ❖ UWA has been awarded Bronze Employer Status for being a Top Ten Employer for LGBTI Inclusion by the Australian Workplace Equity Index (AWEI -2021).
- ❖ UWA has Athena SWAN Bronze accreditation and actively works to improve gender equity.



*UWA is committed to inclusive recruitment and is happy to adjust the recruitment process for your accessibility requirements. If you have queries in relation to the application process, please contact [talent-hr@uwa.edu.au](mailto:talent-hr@uwa.edu.au) referencing the 6-digit job reference number and type of communication you prefer, and a member of our team will be in touch to discuss your requirements.*

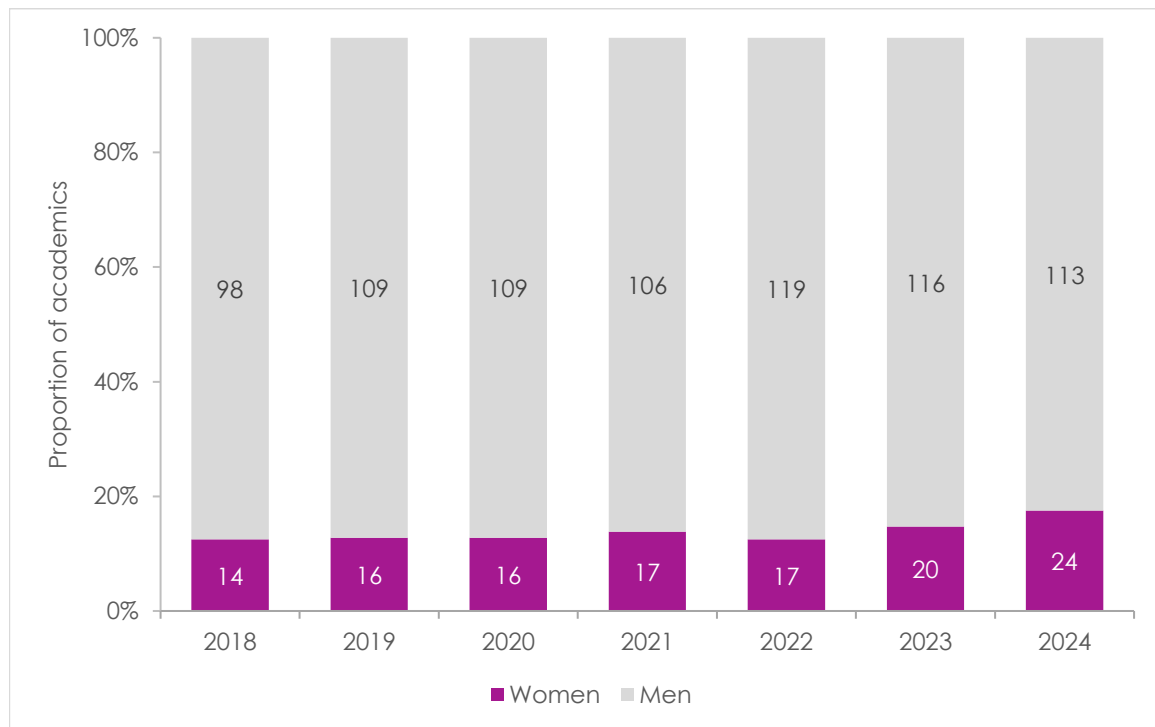
**Advertised:** 04 Oct 2022 W. Australia Standard Time  
**Applications close:** 01 Nov 2022 11:55 PM W. Australia Standard Time

## 4. Outcomes<sup>10</sup>

### 4.1. Increasing the number of academic women in the School

Overall, the School has shown a moderate increase in the number of women academics since 2018 (Figure 6), from 13% (14/112 academics) to 18% (24/137 academics) in 2024.

Figure 6: Proportion of women and men, non-casual academics, Level A – E. 2018-2024. Actual numbers shown. School of Engineering.



Data taken from annual government reporting, snapshot on 31 March each year.

Headcount does not include casual academics.

All academics shown, combination of research only, teaching and research, and teaching only contracts.

<sup>10</sup> A note on UWA's Bronze Action Plan outcomes - The actions outlined in UWA's Bronze Action Plan are not all SMART actions, meaning some are not readily measurable. Outcomes are often broad and difficult to evaluate. In this section we focus on outcomes relevant to the current environment, that more directly indicate the required impact.

## 4.2. Improving the ‘academic pipeline’

Four women were offered Level B teaching and research positions through the focussed recruitment round and all four accepted. Women now make up 71% (5/7) of Level B's in the T&R cohort, up from 0% (Table 6). Positively, additional junior women have recently been hired (Level A and Level B, shown in Table 6), further bolstering the pipeline.

The proportion of women in the T&R cohort has grown from 13% (7/53) in 2018, to 23% (15/66) in 2024 (Table 7).

Table 6: Headcount of teaching and research academics Level A-E, numbers and proportion of women shown. School of Engineering, 2018-2024

	LEVEL A		LEVEL B		LEVEL C		LEVEL D		LEVEL E	
	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women
<b>2018</b>	0/0	0%	0/3	0%	1/9	11%	4/21	19%	2/20	10%
<b>2019</b>	0/0	0%	0/1	0%	0/11	0%	5/21	24%	2/23	9%
<b>2020</b>	0/0	0%	0/1	0%	1/12	8%	6/24	25%	2/23	9%
<b>2021</b>	0/0	0%	0/0	0%	1/11	9%	4/22	18%	2/25	8%
<b>2022</b>	0/0	0%	0/1	0%	2/13	15%	5/25	20%	2/22	9%
<b>2023</b>	0/0	0%	0/1	0%	2/11	18%	5/19	26%	3/27	11%
<b>2024</b>	1/1	100%	5/7	71%	3/10	30%	3/19	16%	3/29	10%

Data taken from annual government reporting, snapshot on 31 March each year.

Headcount does not include casual academics, and only shows academics on Teaching and Research contracts.

‡ n= the number of academics in that cohort/ group, includes those who identify as non-binary

Table 7: Headcount of non-casual academics by function, Level A-E, numbers and proportion of women shown. School of Engineering, 2018-2024.

	Research only		Teaching and research		Teaching only	
	Women /total n <sup>‡</sup>	% women	Women /total n <sup>‡</sup>	% women	Women /total n <sup>‡</sup>	% women
<b>2018</b>	7/55	13%	7/53	13%	0/4	0%
<b>2019</b>	9/65	14%	7/56	13%	0/4	0%
<b>2020</b>	7/54	11%	9/60	15%	0/4	0%
<b>2021</b>	10/50	17%	7/58	12%	0/5	0%
<b>2022</b>	5/64	8%	9/61	15%	3/11	27%
<b>2023</b>	8/67	12%	10/58	17%	2/11	18%
<b>2024</b>	6/58	10%	15/66	23%	3/13	23%

Data taken from annual government reporting, snapshot on 31 March each year.

Headcount does not include casual academics.

‡ n= the number of academics in that cohort/ group, includes those who identify as non-binary



Across the profile of all academics in the SoE, the proportion of Level B academics who are women has had the most marked improvement, from 9% to 24%.

Two Level E women retired over 2023 and 2024, and two Level D women were promoted to Level E, leaving a smaller number of Level D women than in previous years. The recruitment of Level B women described in this application suggests that this drop at Level D will recover in the coming years.

*Table 8: Headcount of all non-casual academics, Level A-E, numbers and proportion of women shown, School of Engineering 2018-2024*

	LEVEL A		LEVEL B		LEVEL C		LEVEL D		LEVEL E	
	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women	Women /total n <sup>‡</sup>	% Women
<b>2018</b>	4/24	17%	2/22	9%	1/17	6%	5/28	18%	2/21	10%
<b>2019</b>	6/33	18%	2/23	9%	0/18	0%	6/27	22%	2/24	8%
<b>2020</b>	3/32	9%	4/22	18%	1/18	6%	6/29	21%	2/24	8%
<b>2021</b>	5/27	19%	4/25	16%	1/18	6%	5/27	19%	2/26	8%
<b>2022</b>	2/32	6%	5/31	16%	2/20	9%	5/23	18%	3/28	13%
<b>2023</b>	5/29	17%	3/31	10%	4/23	17%	5/25	20%	3/28	11%
<b>2024</b>	5/24	21%	9/38	24%	4/21	19%	3/24	13%	3/30	10%

Data taken from annual government reporting, snapshot on 31 March each year.

Headcount does not include casual academics.

‡ n = the number of academics in that cohort/ group, includes those who identify as non-binary

Compared to the STEMM Schools, the School of Engineering still has a low proportion of academic women (Table 9), but this has increased from 13% to 18%. The School of Physics, Mathematics and Computing, originally coupled with Engineering in EMS, has also shown continued growth in the proportion of women, from 19% in 2017, to 26%.

Table 9: Headcount of non-casual academics in the STEMM Schools 2018-2024, proportion of women shown.

School	2018		2019		2020		2021		2022		2023		2024	
	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women	Women /Total n <sup>‡</sup>	% Women
Dental School	8/27	30%	8/27	30%	6/24	25%	10/28	36%	10/30	33%	10/30	33%	13/32	41%
Medical School	138/267	52%	144/267	54%	159/282	56%	166/302	55%	130/244	53%	174/330	53%	190/346	55%
Oceans Graduate School	0/0	0%	0/2	0%	1/3	33%	0/1	0%	0/1	0%	5/7	71%	3/7	43%
† Agriculture and Environment	35/82	43%	39/91	43%	37/86	43%	32/72	44%	33/75	44%	32/78	41%	33/82	40%
† Allied Health	26/34	76%	27/34	79%	30/42	71%	32/46	70%	62/82	76%	81/110	74%	86/116	74%
† Biological Sciences	34/74	46%	31/70	44%	34/73	47%	36/78	46%	30/82	41%	34/72	47%	42/89	47%
† Biomedical Sciences	42/80	53%	38/71	54%	36/66	55%	33/64	52%	35/67	52%	35/65	54%	34/64	53%
† Earth Sciences	14/40	35%	12/41	29%	11/41	27%	11/123	25%	10/42	24%	10/44	23%	11/43	26%
† <b>Engineering</b>	14/112	13%	16/125	13%	16/125	13%	17/62	14%	17/136	13%	20/136	15%	24/137	18%
† Human Sciences	39/78	50%	35/73	48%	33/64	52%	32/62	52%	32/61	52%	28/58	48%	34/63	54%
† Molecular Sciences	31/84	37%	31/84	37%	28/81	35%	29/82	35%	28/74	38%	27/75	36%	26/75	35%
† <b>Physics, Maths &amp; Computing</b>	22/117	19%	17/88	19%	17/90	19%	21/95	22%	25/109	23%	24/98	24%	27/105	26%
† Population and Global Health	36/52	69%	45/61	74%	53/71	75%	56/72	78%	32/48	67%	34/50	68%	33/47	70%
† Psychological Science	26/50	52%	28/51	55%	36/64	56%	29/61	48%	27/58	47%	32/62	52%	31/60	52%

Note: STEMM Schools listed alphabetically. UWA's College of Schools has 14 STEMM and eight NON-STEMM Schools. An explanation of dissolution of Faculty's is provided in the Institutional Context.

Snapshot data from 31 March as per annual Government reporting. Headcount includes academics on Teaching, Teaching & Research, Research contracts that are fixed term or ongoing.

† 'School of'

‡ n= the number of academics in that cohort/ group, includes non-binary academics

Heatmap highlights low proportions of women (0%) to high (100%), with light to dark magenta tone.

### 4.3. Valuing senior women as leaders

Women academics have been actively encouraged to take on leadership roles within the School of Engineering; in 2019 senior women were appointed to Head of Department roles (Table 10). The School aimed for at least 50% women as Heads of Department, and for the School Board to have at least 40% women, but the small number of senior women in SoE has made parity difficult.

The School has identified that achieving and maintaining the targets is something that must be planned for, and that unachievable targets may have a negative effect on morale when they cannot be maintained. The requirements and expectations of those in Head of Department roles is being reviewed, and additional leadership opportunities are being identified. Strategies to support junior women are being implemented including extensive professional development opportunities and considering how best to support women to undertake leadership roles whilst maintaining equitable workloads.

Table 10: School of Engineering departments, showing gender of the Head of Department, 2019-2024

	2019	2020	2021	2022	2023	2024
Head of Department, Chemical Engineering	M	M	M	M	M	M
Head of Department, Civil, Environmental and Mining Engineering	W	W	W	M	M	M
Head of Department, Electrical, Electronic & Computer Engineering	M	M	M	M	M	M
Head of Department, Mechanical Engineering	W	W	W	M	M	M
<b>Proportion Women</b>	<b>50%</b>	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

Table 11: Members of the School Board, School of Engineering, by gender

	Women	Men	Total	Proportion women
<b>2021</b>	5	6	11	45%
<b>2022</b>	3	8	11	27%
<b>2023</b>	2	8	10	20%
<b>2024</b>	2	8	10	20%

The continued focus on gender considerations seems to have impacted the experiences of senior women, with only one Level D women resigning since 2018. In 2023, the School achieved a poignant milestone - for the first time in its history, women professors who had been with the School for the length of their academic career retired.

## 5. Impact

### 5.1. Perceptions of the workforce

Following the worldwide pandemic and structural changes at UWA, an extended Engagement Survey to compare longitudinal results has not been run. In 2023, an abridged version of the survey was run, using the Glint platform. Key themes have been carried through (e.g., role clarity, engagement, confidence in direct manager, wellbeing) allowing some longitudinal comparison. The recent survey had 28 succinct questions, with the goal of understanding overall engagement.

Compared to academic women across the College of Schools, women in the School of Engineering reported higher levels of purpose and empowerment.

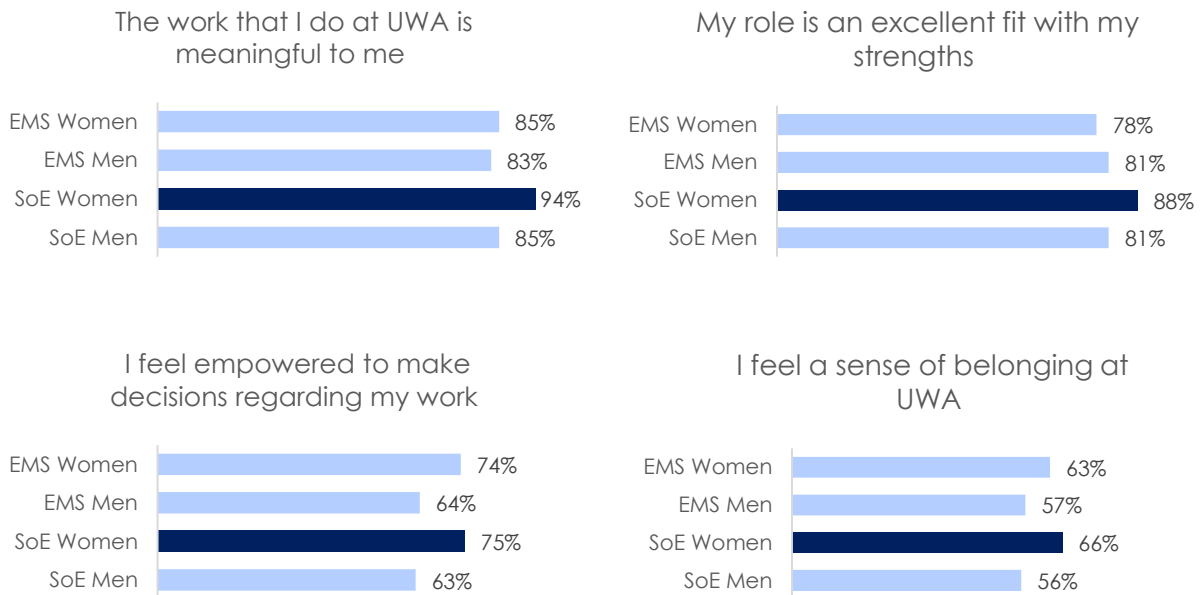
*Table 12: Top responses for academic women in the School of Engineering, compared to academic women across the STEMM disciplines and all NON-STEMM schools. Engagement Survey 2023.*

	SoE	EMS	SCIENCE	HMS	NON-STEMM
<b>Response Rate</b>	<b>50%</b>	<b>52%</b>	<b>58%</b>	<b>44%</b>	<b>64%</b>
<b>Respondents (women/ n women)</b>	<b>8/16</b>	<b>36/69</b>	<b>119/205</b>	<b>132/298</b>	<b>107/166</b>
The work that I do at UWA is meaningful to me	94%	85%	84%	79%	84%
My manager has the right skills to lead our team	88%	81%	70%	75%	73%
My role is an excellent fit with my strengths	88%	78%	78%	79%	76%
I know what I should be focusing on right now	81%	80%	79%	79%	79%
I feel empowered to make decisions regarding my work	75%	74%	68%	67%	61%

Responses grouped by the faculty groupings, including EMS, and the School of Engineering for comparison, with key points shown below. Response rate for SoE academic women 50%, n=8/16, SoE academic men 43%, n= 54/110, EMS academic women 52%, n= 36/69, EMS academic men 49% n=100/209.

Women academics in the SoE responded more positively than their peers in the School and in EMS, when asked about whether they felt their work was meaningful and aligned to their strengths (Figure 7).

Figure 7: Comparing positive responses from academic women in the SoE, with academics from EMS.



Looking at the results from Engagement Surveys since 2009, the responses from women in Engineering are more positive with regards to their managers and role clarity, compared to the faculty grouping of EMS. The extent of the impact of intentionally changing the workforce composition will become evident in future all- staff engagement surveys.

Table 13: Longitudinal results for academic women in EMS and women in the School of Engineering

	Academic Women EMS				Women in SoE
	2009	2012	2017	2023	2023
My work gives me a feeling of personal accomplishment <sup>†</sup>	73%	77%	67%	85%	94%
Role clarity (average)	75%	82%	87%	78%	88%
Manager/Supervisor (average)	57%	79%	75%	72%	79%
Wellbeing (average)	63%	70%	47%	56%	60%

## 5.2. Changing the minds of leaders

The SoE leadership team was fundamentally impacted by the series of Athena Swan actions implemented since 2018. It accepted that the School had a gender issue after many years of resistance. Even though the representation of women in the School is still low, the impact of the work outlined above should not be underestimated.

Formal interviews were undertaken with the Head of School of Engineering (a man) and four members of the School of Engineering Board (two men who were also Heads of Department and two senior women) to gain insight on perceptions of the changing culture.

Senior leaders shared insightful comments on their realisations about what would be required, and the amount of work that would be needed to achieve their goals:

### **Quotes from interview with Head of School (man) – School of Engineering**

*“I was originally thinking of recruiting 50% women, but [DEI Academic Lead in the School] told me that would not make a difference! I panicked and wondered why even bother? Then [DEI Academic Lead in the School] suggested 100% of the recruitment needed to be women, and I thought I’m going to have a battle on my hands if I go and try and do this. But once I started raising this as an option, a couple of academics who I thought would be dead against it, actually spoke up in support of it and said it was a good idea. And that gave me encouragement...then I realised this might actually be possible.”*

### **Quotes from interviews with Senior leaders (men) in School of Engineering**

*“It didn't really strike me as unusual to be in an environment that was so gendered. I fit the profile of someone who's in the majority and therefore it took a long time to really realise that we had a problem... and why it is a problem. Besides, as individual, could you make any difference?”*

*“I thought it was a problem that was too hard to tackle. There was a general feeling that this is a problem, but it is going to take too much effort to solve.”*

### **Quotes from interviews with Senior leaders (men) in School of Engineering**

*“If we always use the same selection criteria, we're always going to get the same type of person because we are favouring a certain type of academic and we need to change that if we want to a diverse workforce. That realisation was a turning point for me.”*

*“Many academics think that because there aren't enough women engineers that there are few women engineers who are good enough for us to hire. So, we rationalise why we don't hire women. These myths need to be stopped. “*

### 5.3. The experience of women academics

A concern that arose during the planning for the recruitment drive was how receptive women applicants would be to the women-focused messaging of the advertisement; some men academics argued strongly that the messaging would make the advertisement unattractive to excellent women applicants.

This concern did not appear to materialise, and our first arrival was asked explicitly about her perceptions. The authenticity in addressing gender equity stood out this recruit:

#### **Quote from interviews with the new Level B recruits (women)**

*"When I saw UWA's job advertisement declaring a preference for women candidates, I had a tiny ounce of concern. If there was this effort to fix gender equity, what exactly was the issue and how bad was it? But I know that gender equity is an issue in engineering schools across Australia, so I'm glad UWA is admitting the problem and is on the way to fixing it."*

Two of the recruited Level B women were interviewed by the School's DEI Academic Lead. Both expressed delight at the welcoming and inclusive interview process, their quotes below.

#### **Quote from interviews with the new Level B recruits (women)**

*"I was very nervous in my interview, but seeing senior women smiling warmly across the table, helped me so much."*

*"I'd interviewed for a number of academic positions across Australia, and this was the first time I felt like the School was really wanting to get to know me. I was going to spend a lot of my life with these people, so having an opportunity to get to know them was very important for me. The interview process in other universities were very dry. It made my decision to come to UWA easy."*

*"The support since I have arrived has been amazing. I feel like my colleague's care about me; I could not ask for more."*

The experiences of the women recruited will be examined and considered in planning for the next recruitment rounds (Further Action 1).

Recent observations from the new recruits and existing women academics indicate that there is still room for improvement in the experiences of women.

#### **Quote from interviews: New Level B Recruit, woman**

*"Larger meetings in Engineering are where I start to see the cracks. Some senior men talk so much they don't let others get a word in."*

#### **Quote from interviews with senior academic women in School of Engineering**

*“At my previous university, we had a very strong female leader who pushed very strongly for other leaders in that department be more aware about gender inclusivity. She'd been very, very effective in removing bad behaviours; for me that department was an incredibly safe place to work. One of the things that was really effective was they adopted formal rules for running all meetings. It seemed old-fashioned at first but what it did was prevent people talking over each other and hogging airtime. There was a formal protocol for running all meetings, and that created a more inclusive culture. I think UWA's School of Engineering could learn from that.”*

*“It's really hard to get a research conversation going with my men colleagues in Engineering. I notice that they are much more comfortable talking with my postdoc (who is a man) than talking with me. It's quite strange as I don't find that in other parts of UWA.”*

#### **5.4. Challenges to gender equity in business as usual**

It is important to acknowledge that during this time there has been some resistance to gender equity initiatives. The HoS commented on the difficulty of embedding cultural change into business as usual:

#### **Quotes from interview with Head of School (man) – School of Engineering**

*“Some staff are embedded in their old way of doing things, and consciously or not, it holds us back. They've historically not been challenged and are not happy when they are challenged. These senior staff influence those who maybe have some doubts about our approach, wondering if this was the right thing to do. To get us to the next stage, where gender equity is part of business as usual, we do need to address these pockets of resistance. Believing that you can go back to where you were, is always a more comfortable journey than hearing that you need to change. So, some people think this focus on gender equity will pass... let's just see it out. This is why it's so easy to slide downhill and it's much harder to take people along with you on the journey. That's why this stage is tenuously held; we can't celebrate just yet.”*

The HoS acknowledges that changing the culture requires an enormous amount of work that must be sustained and continued over years to come, and it requires long term vision and planning. In July 2024, the HoS is being approached by other Schools across UWA to understand the learnings from Engineering, and how they might implement the same strategies.



## 5. Further actions

No.	Rationale/ Evidence	Actions & Outputs	Timeframe (start & end)	Person/Group responsible for implementation	Senior Leader accountable for action delivery	Desired Outcomes/ Targets/Success Indicators
1.	The number of women in the T&R pipeline remains low, particularly Level A and B women	Undertake further women-focussed recruitment drives for Level B academics.	2024 - 2030	Head of Departments, Head of School	Head of School	Round 2 – 2024/25 3/3 proposed Level B positions taken up by women. Round 3 – 2025-6 Exact number to be confirmed pending budget discussion, aiming for 80% of available Level B positions taken by women.
	The number of women in the T&R pipeline remains low, particularly Level A and B women	Evaluate Round 1 (2023) of women focussed recruitment drive before next round. Review process, number of applications from women and men, Interviews with cohort of Level B women employed as a group and individually.	2024	External consultant	Head of School	Understand and address barriers women may have experienced with the process,  Improve process from Round 1  Increased rates of women applying (Round 1 = 28%)
2.	Incoming women recruits have historically felt unsupported and unwelcome	Monitor experience of new recruits at regular intervals. Informal feedback sought quarterly for the first year, and formal interviews on cohort experience at 12 months	Dec 2023 - Dec 2028	Heads of Department, External consultant	Head of School	Interviews indicate new recruits have continuous positive experiences and feel supported. Suggestions for support and professional development are implemented by Heads of Department
3.	Recently created DEI Academic Lead position will be vacated by retiring Level E professor in 2023. Position Description required LE professor to hold the role.	Review and rewrite position description and expectations for DEI Academic Lead to be more inclusive of all LB-LE academics, of all genders.	Jan 2024 – Dec 2026	School Board,	Head of School	Support Level B or C academics to take up the role of DEI Academic Lead

No.	Rationale/ Evidence	Actions & Outputs	Timeframe (start & end)	Person/Group responsible for implementation	Senior Leader accountable for action delivery	Desired Outcomes/ Targets/Success Indicators
4	Embedding cultural change has been a long-standing challenge	Improve gender representation on the School Board. Review School Board Constitution to ensure it enables gender equitable representation	2024-2030	Head of School	Head of School	Aim for the standard 40:40:20, review target and actions every two years