

SAGE Cygnet Award: Cygnet one



SAGE

SCIENCE IN AUSTRALIA
GENDER EQUITY

Response to Reviewers' Comments

Name of institution	University of Newcastle
Date	9 February 2023
Award Level	Cygnet
Date joined Athena	Cohort One – January 2016
Contact for application	Professor Jennifer Milam, Pro-Vice Chancellor Academic Excellence
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Barrier	Difficulty attracting and recruiting female students and academic staff into the College of Engineering, Science and Environment (CESE)

Acronyms

CESE	College of Engineering, Science and the Environment
FEBE	Faculty of Engineering and Built Environment
FSCI	Faculty of Science
SEEC	School of Electrical Engineering and Computing
MAPS	School of Mathematical and Physical Sciences
SIPS	School of Information and Physical Sciences
SENG	School of Engineering

Cygnets 1 Reviewers' comment:

The Review Group noted that the University of Newcastle has shown a measurable change to their baseline data, however, given the restructure that took place in 2021 the Group would like to see how this data was mapped back to 2017 data (including headcounts) to be able to make a judgement on outcomes as the baseline data is not like for like with current data.

The following information is requested:

- Provide detail of the mapping of data pre and post restructure
- Show headcounts for this data

Response:

Enabling Change process - Detail

In response to operational and financial sustainability imperatives, The University of Newcastle underwent an enabling change process that involved the creation of new College structures as opposed to the previous Faculty structures, with a view to aligning with the goals of its strategic plan 'Looking Ahead'. The process involved operating model development and structural design, Schools review and realignment, and realignment of Divisions. The structural changes include:

- The Faculty of Science (FSCI) and the Faculty of Engineering and Built Environment (FEBE) were consolidated into the College of Engineering, Science and the Environment (CESE) (see Figure 1).
- Two schools, School of Electrical Engineering and Computing (SEEC) within FEBE and the School of Mathematical and Physical Sciences (MAPS) within FSCI were disestablished, and the new School of Information and Physical Sciences (SIPS) was established, bringing together the disciplines and associated academic staff from the antecedent schools.
- The new School of Information and Physical Sciences brought together all disciplines which had previously been in MAPS, as well as the discipline of Computing that had previously been in SEEC.

- The discipline of Electrical Engineering, which had previously been in SEEC, was incorporated into the School of Engineering. (SENG)
- With the disestablishment of SEEC and MAPS, all retrospective data is reported in SENG and SIPS.

A visual summary of these changes is provided in **Table 1** below:

Table 1. CESE structure before and after enabling change

Faculty Structure prior to change process		College Structure following change process	
FEBE	Architecture and Built Environment	Architecture and Built Environment	CESE
	Engineering	Engineering	
	Electrical Engineering and Computing		
FSCI	Mathematics and Physical Sciences	Information and Physical Sciences	
	Environmental and Life Sciences	Environmental and Life Sciences	
	School of Psychology	Psychological Sciences	

Mapping of Data

The University of Newcastle maintains a cross-reference mapping table of all organisational unit changes to ensure the data before the structural change is **like-for-like** with the current data (post-enabling change), **see Appendix A**. The mapping table enables the University to report historic data under the current structure (*when an organisational unit is disestablished, all retrospective data will be reported under the current organisational unit codes*).

Appendix A presents the details of the pre-restructure coding of the Faculty of Science and the Faculty of Engineering and Built Environment schools and units. The post-restructure (current) College of Engineering Science and Environment codes are shown on the right-hand side of the table. The table validates that all pre-restructure schools and units have been mapped to the current structure.

Headcounts

Table 2 shows the number of academic staff in CESE before the structural change from 2017 to 2020 and after the change in 2021. You will note that the schools of SEEC and MAPS were disestablished in 2021 and 2020 respectively, and the new school SIPS was established in 2021.

Table 2. CESE academic staff (headcount) overall and by gender 2017 – 2022

School/Unit - all academic staff	2017	2018	2019	2020	2021	2022
School of Architecture and Built Environment	36	30	35	35	37	38
School of Engineering	122	119	132	140	134	169
School of Environmental and Life Sciences	94	94	98	107	104	99
School of Psychological Sciences	36	37	41	35	40	47
School of Electrical Engineering and Computing	70	62	62	63	64	
School of Mathematical and Physical Sciences	53	53	55	54		
School of Information and Physical Sciences					55	79
CESE staff not allocated to school/unit	9	8	9	8	5	6
Global Centre for Environmental Remediation	24	24	21	32	33	27
CESE Total	444	427	453	474	472	465
School/Unit - Female academic staff	2017	2018	2019	2020	2021	2022
School of Architecture and Built Environment	9	8	14	14	18	16
School of Engineering	20	19	22	21	18	36
School of Environmental and Life Sciences	38	32	40	46	45	46
School of Psychological Sciences	18	22	25	23	28	32
School of Electrical Engineering and Computing	16	11	12	14	13	
School of Mathematical and Physical Sciences	6	6	11	11		
School of Information and Physical Sciences					13	15
CESE staff not allocated to school/unit	1	1	4	4	2	4
Global Centre for Environmental Remediation	4	5	6	11	11	8
CESE Female Total	112	104	134	144	148	157
School/Unit - Male academic staff	2017	2018	2019	2020	2021	2022
School of Architecture and Built Environment	27	22	21	21	19	22
School of Engineering	102	100	110	119	116	133
School of Environmental and Life Sciences	56	62	58	61	59	53
School of Psychological Sciences	18	15	16	12	12	15
School of Electrical Engineering and Computing	54	51	50	49	51	
School of Mathematical and Physical Sciences	47	47	44	43		
School of Information and Physical Sciences					42	64
CESE staff not allocated to school/unit	8	7	5	4	3	2
Global Centre for Environmental Remediation	20	19	15	21	22	19
CESE Male Total	332	323	319	330	324	308
CESE by Gender (headcount and proportion)	2017	2018	2019	2020	2021	2022
Female	112 (25%)	104 (24%)	134 (30%)	144 (30%)	148 (31%)	157 (34%)
Male	332 (75%)	323 (76%)	319 (70%)	330 (70%)	324 (69%)	308 (66%)
Total	444	427	453	474	472	465

Figure 1 shows all schools in CESE and provides a visual presentation of how the academic staff number has changed pre- and post-restructure.

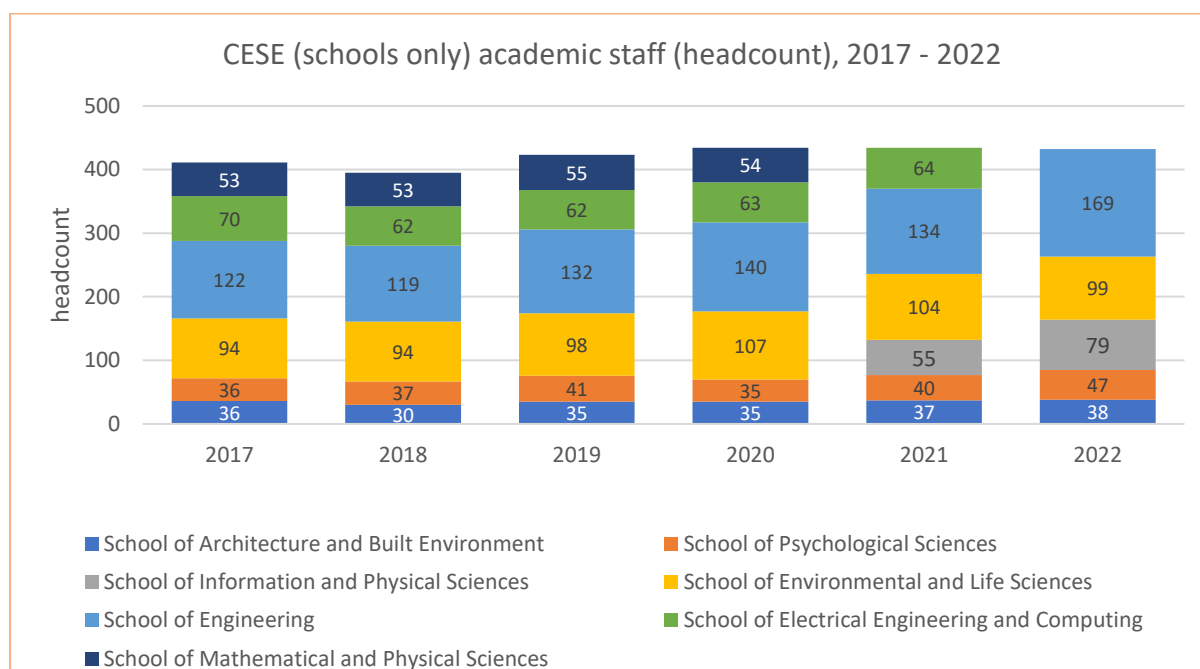


Figure 1. Academic staff (headcount) in CESE schools

Figures 2 and 3 below show the academic staff number (headcount) in the five current schools of the CESE in the years 2017 to 2022; data are **like-for-like**.

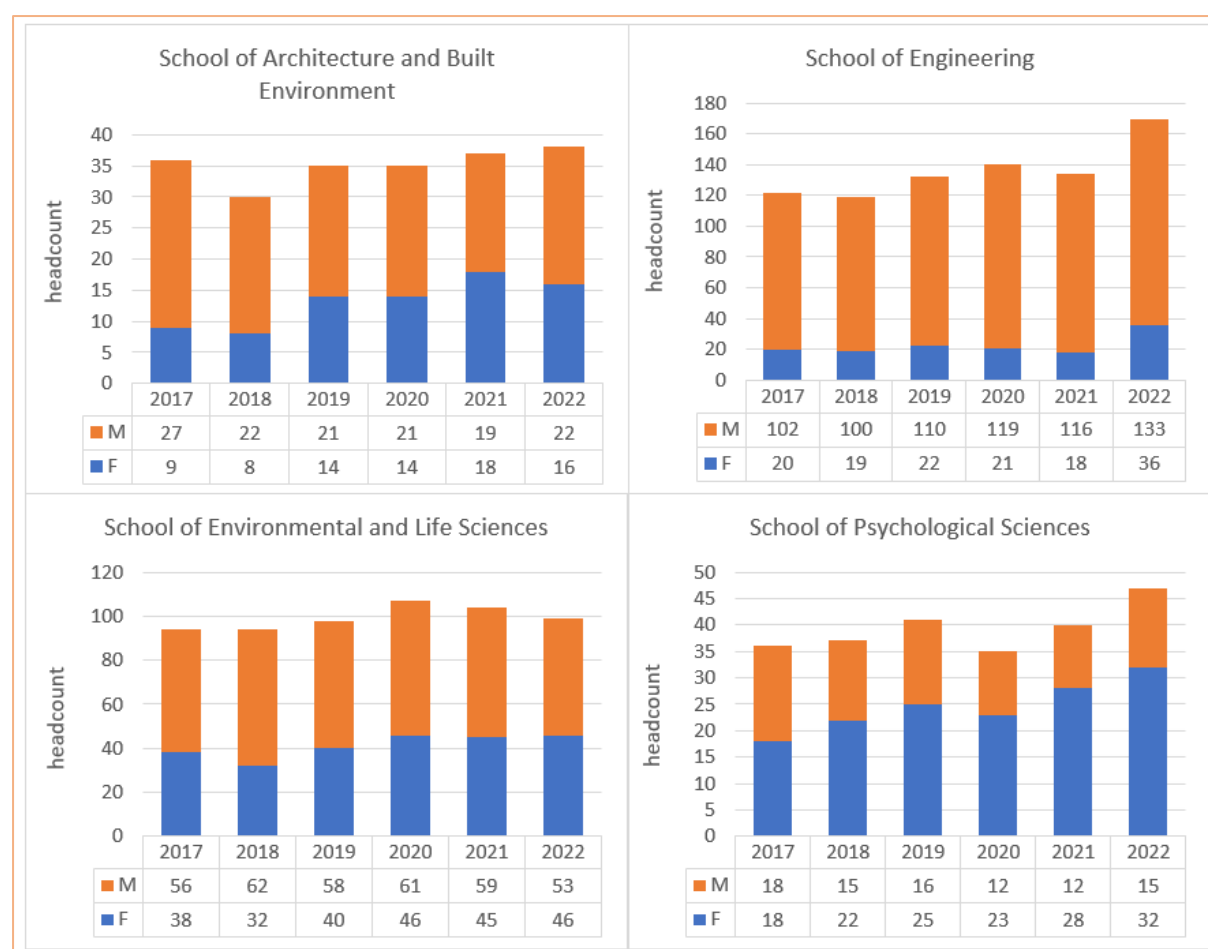


Figure 2. CESE academic staff (headcount) in four schools of CESE by gender 2017 – 2022

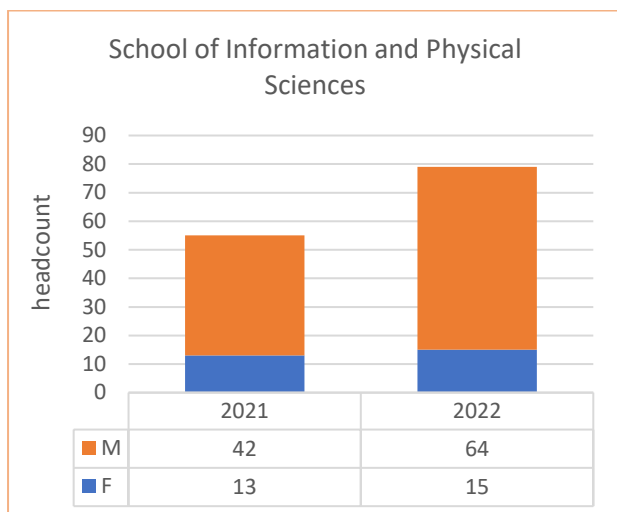


Figure 3. The newly established School of Information and Physical Sciences (previously Mathematical and Physical Sciences and SEEC Computing discipline).

Figure 4 shows academic staff (headcount) in the two schools which were disestablished in the structure, 2020 and 2021.

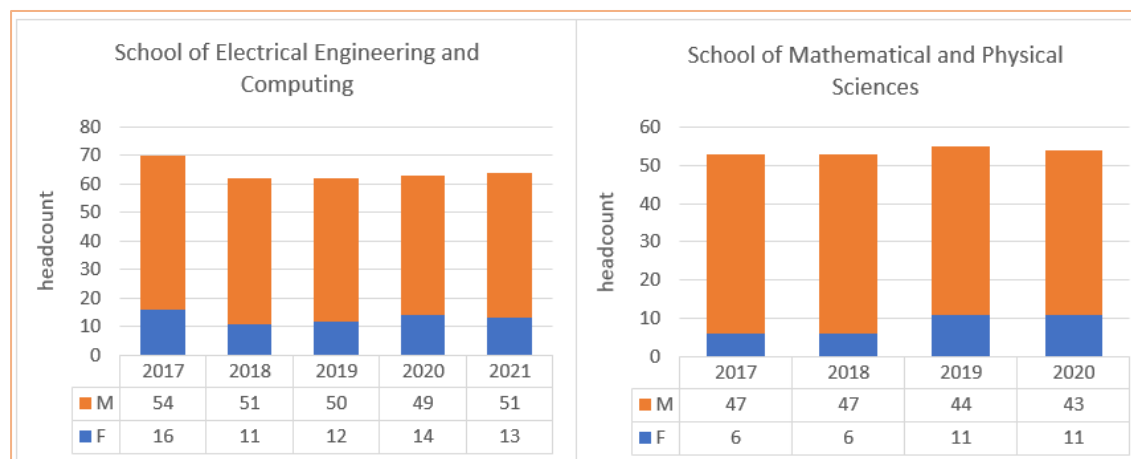


Figure 4. Schools that were disestablished in the restructure.

The breakdown of CESE academic staff (headcount) at the School level (Table 2 and Figure 1) supports the overall CESE Figure reported in our Cygnet 1 report that *female academic representation increased overall by 10% in CESE over the years 2018-2022. Specifically, the number of female academic staff increased from 104 (24%) female academic staff in 2018 to 157 (34%) in 2022. The increase in SIPS and SENG (combined) is from 42 (17%) to 51 (21%) female academic staff in 2017 and 2022 respectively.*

Appendix A: University of Newcastle Cross Reference Mapping Table

CODE	CODE_DESC	CURRENT_CODE	CURRENT_DESC
1112510510000	Faculty of Engineering and Built Environment	1113720720000	College of Engineering, Science and Environment
1112510510596	Institute of Bulk Materials Handling	1113720729000	Office PVC - Engineering, Science and Environment
1112510510903	Office - PVC - Engineering and Computer Science	1113720720000	College of Engineering, Science and Environment
1112510511000	School of Architecture and Built Environment	1113720511000	School of Architecture and Built Environment
1112510512000	School of Engineering	1113720512000	School of Engineering
1112510512520	Centre for Bulk Solids and Particulate Technol	1113720720000	College of Engineering, Science and Environment
1112510513000	School of Electrical Engineering and Computing	1113720513000	School of Electrical Engineering and Computing
1112510514000	Office PVC - Engineering, Science and Environment	1113720729000	Office PVC - Engineering, Science and Environment
1112510519000	Faculty Service Centre	1113720729000	Office PVC - Engineering, Science and Environment
1112510596510	Institute of Bulk Materials Handling	1113720720000	College of Engineering, Science and Environment
1112720720000	Faculty of Science	1113720720000	College of Engineering, Science and Environment
1112720720905	Office PVC - Science	1113720729000	Office PVC - Engineering, Science and Environment
1112720721000	School of Applied Sciences	1113720723000	School of Environmental and Life Sciences
1112720722000	School of Psychology	1113720722000	School of Psychological Sciences
1112720723000	School of Environmental and Life Sciences	1113720723000	School of Environmental and Life Sciences
1112720724000	School of Mathematical and Physical Sciences	1113720724000	School of Information and Physical Sciences
1112720725000	School of Design Communication and IT	1113720720000	College of Engineering, Science and Environment
1112720726000	Office - PVC - Science and Information Technology	1113720729000	Office PVC - Engineering, Science and Environment
1112720727000	Global Centre for Environmental Remediation	1113720727000	Global Centre for Environmental Remediation
1112720729000	Office PVC - Science	1113720729000	Office PVC - Engineering, Science and Environment
1113720511000	School of Architecture and Built Environment	1113720511000	School of Architecture and Built Environment
1113720512000	School of Engineering	1113720512000	School of Engineering
1113720513000	School of Electrical Engineering and Computing	1113720513000	School of Electrical Engineering and Computing
1113720720000	College of Engineering, Science and Environment	1113720720000	College of Engineering, Science and Environment
1113720722000	School of Psychological Sciences	1113720722000	School of Psychological Sciences
1113720723000	School of Environmental and Life Sciences	1113720723000	School of Environmental and Life Sciences
1113720724000	School of Information and Physical Sciences	1113720724000	School of Information and Physical Sciences
1113720727000	Global Centre for Environmental Remediation	1113720727000	Global Centre for Environmental Remediation
1113720729000	Office PVC - Engineering, Science and Environment	1113720729000	Office PVC - Engineering, Science and Environment