



Department Application Bronze and Silver Award



ATHENA SWAN BRONZE DEPARTMENT AWARDS

Recognise that in addition to institution-wide policies, the department is working to promote gender equality and to identify and address challenges particular to the department and discipline.

ATHENA SWAN SILVER DEPARTMENT AWARDS

In addition to the future planning required for Bronze department recognition, Silver department awards recognise that the department has taken action in response to previously identified challenges and can demonstrate the impact of the actions implemented.

Note: Not all institutions use the term 'department'. There are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' can be found in the Athena SWAN awards handbook.

COMPLETING THE FORM

DO NOT ATTEMPT TO COMPLETE THIS APPLICATION FORM WITHOUT READING THE ATHENA SWAN AWARDS HANDBOOK.

This form should be used for applications for Bronze and Silver department awards.

You should complete each section of the application applicable to the award level you are applying for.

Additional areas for Silver applications are highlighted throughout the form: 5.2, 5.4, 5.5(iv)

If you need to insert a landscape page in your application, please copy and paste the template page at the end of the document, as per the instructions on that page. Please do not insert any section breaks as to do so will disrupt the page numbers.

WORD COUNT

The overall word limit for applications are shown in the following table.

There are no specific word limits for the individual sections and you may distribute words over each of the sections as appropriate. At the end of every section, please state how many words you have used in that section. We have provided the following recommendations as a guide.

Department application	Bronze	Silver	ENGIN Silver
Word limit	10,500	12,000	11967
<i>Recommended word count</i>			
1.Letter of endorsement	500	500	506
2.Description of the department	500	500	373
3. Self-assessment process	1,000	1,000	719
4. Picture of the department	2,000	2,000	2443
5. Supporting and advancing women's careers	6,000	6,500	7002
6. Case studies	n/a	1,000	924
7. Further information	500	500	

Glossary of acronyms

ACE	Architectural, Civil and Civil and Environmental Engineering
AP	Action Point
AS	Athena SWAN
BEng	Bachelor of Engineering
CPD	Continued Professional Development
CU	Cardiff University
CUROP	Cardiff University Research Opportunity Programme
E&D	Equality and Diversity
ECR	Early Career Researcher
EDI	Equality, Diversity and Inclusivity
EEE	Electrical and Electronic Engineering
EIA	Equality Impact Assessment
Eng	Engineering
ENGIN	Cardiff School of Engineering
FPE	Full person equivalent
HESA	Higher Education Statistics Agency
HoS	Head of School
LGBT+	Lesbian Gay Bisexual Transgender+
MEng	Master of Engineering
MMM	Mechanical, Manufacturing and Medical Engineering
PGR	Postgraduate Research
PGT	Postgraduate Taught
PSE	College of Physical Sciences and Engineering
PVC	Pro Vice -Chancellor
REF	Research Excellent Framework
SAT	Self-Assessment Team
SET	Science, Engineering and Technology
STEM(M)	Science, Technology, Engineering, (Medicine) and Mathematics
TEC	Teaching Executive Committee
TWISTEM	Trevithick Women in Science group
UCAS	The Universities' and Colleges' Admissions Service in the UK
UG	Undergraduate
WAMS	Workload Allocation Management System
WLM	Workload Model

WES

Women's Engineering Society

WISE

Women in Science and Engineering

Name of institution	Cardiff University	
Department	Engineering	
Focus of department	STEMM	
Date of application	April 2019	
Award Level	Silver	
Institution Athena SWAN award	Date: April 2014	Level: Bronze
Contact for application <small>Must be based in the department</small>	Prof David Kennedy Ms Gaynor James	
Email	KennedyD@cardiff.ac.uk JamesG5@cardiff.ac.uk	
Telephone	029 2087 5340 029 2087 5951	
Departmental website	www.cardiff.ac.uk/engineering	

1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

An accompanying letter of endorsement from the head of department should be included. If the head of department is soon to be succeeded, or has recently taken up the post, applicants should include an additional short statement from the incoming head.

Note: Please insert the endorsement letter **immediately after** this cover page.

Advance HE
First Floor, Westminster Tower
3 Albert Embankment
London
SE1 7SP

Dear Athena Swan Team

As Head of School, I give my wholehearted support to our Athena SWAN Silver Award application and highlight our School's long-standing commitment to the Charter.

I am strongly committed to gender equality, which has long been an important issue in engineering. Our female undergraduates have been around 20% for several years, well above the sector average, and I note with particular pleasure that we have 27% female students in Architectural and Civil Engineering.

Our proportion of female academic staff is somewhat lower, but similar at all levels, demonstrating a strong pipeline for career progression; we have more than doubled the number of female professors since 2015.

The major bottleneck in the recruitment of female engineers is before GCSE level, so we have dedicated considerable effort to engaging with this age group, led by a permanent member of staff. Since 2016 we have taken part in 107 events and engaged with more than 30,000 people.

I am well aware of the difficulty of balancing family commitments with a successful career, having been a single parent and coped with serious illness and bereavements in my immediate family, and managing these issues in a sympathetic and supportive way is an important priority for me. Major changes to our management structure have enabled much more effective line management, which I feel is the key to supporting staff. We have developed a successful return to work scheme, which is now being adopted across the College, promoted flexible working, and adopted a "core hours" policy for meetings and other activities. We have good uptake of parental leave and we have devoted considerable efforts to staff wellbeing.

We have a very well developed workload allocation model, which has enabled us to identify and solve numerous workload issues and to share our teaching and other commitments fairly. We have an effective system for identifying, risk assessing and managing workload and stress issues, which we have used successfully to resolve problems for a number of our staff.

I have been supported in these initiatives by an excellent HR team and Deputy Head with responsibility for staff, and I believe we have been able to make a real difference. Our application includes two case studies that illustrate how we have been able to combine these initiatives to help our staff overcome major problems; effective line management where we work with individuals and listen to their individual needs is the key, rather than vague general commitments.

Our initiatives take place in the context of a strong University commitment to equality, evidenced for example by equal numbers of male and female PVCs. The University is one of Stonewall's top 100 LGBT+ employers, and the highest ranked UK university (11th), and we were one of the first UK universities to receive the HR Excellence in Research Award.

I am very proud of our School's achievements to date and sincerely hope that this application is successful.

I confirm that the information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the School.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sam Evans', with a stylized, flowing script.

Professor Sam Evans

Head, School of Engineering

506 words

2. DESCRIPTION OF THE DEPARTMENT

Recommended word count: Bronze: 500 words | Silver: 500 words

Please provide a brief description of the department including any relevant contextual information. Present data on the total number of academic staff, professional and support staff and students by gender.

The School of Engineering is the largest of the seven schools that make up the College of Physical Sciences and Engineering, but in the context of Russell Group University schools of engineering is smaller than average. The School currently has 110 academic (16% female compared to 17% sector aggregate), 95 research (19% female compared to 18% sector aggregate) and 90 support staff (44% female compared to 44% sector aggregate) of which approximately two thirds are administrative and one third technical (HESA FPE sector data 2017/18). The School has ca. 1900 students, 1430 of which are undergraduates (UGs) (20% female – significantly above the sector average for engineering), 272 are postgraduate taught students (21% female) and 210 postgraduate research students (19% female).

The School underwent a significant reorganisation of its academic management structures in 2017/18 introducing new line management arrangements based around three new departments within the School (see Fig 1).

All management roles that became available through the restructuring (including the three new Head of Department roles) were advertised internally and open to all relevant staff to apply, in line with the School's policy of transparency when filling management roles. The three departments largely mirror the School's three teaching disciplines and contain a total of fourteen academic groupings which form the direct line management of academic staff. The new structure allows for more integrated and effective management of research and teaching activities, and more effective, supportive and flexible line management. The restructuring also led to rationalisation of the School Board membership and a wider review and rationalisation of the School's committee structure.

The School teaches seven main undergraduate programmes in the areas of civil, civil and environmental, architectural, electrical and electronic, mechanical, medical and integrated engineering. There are 12 MSc programmes that span these disciplines. The School prides itself on the high quality of its teaching and research, with an overall satisfaction rating of 88% in the 2018 NSS. ENGIN was ranked 1st in Civil and Construction Engineering and 7th in General Engineering units of assessments in the 2014 REF. The School has strong links with industry, with an active Industrial Advisory Board and was ranked first for the quality of its research impact in both Civil and General Engineering panels in REF 2014.

373 words

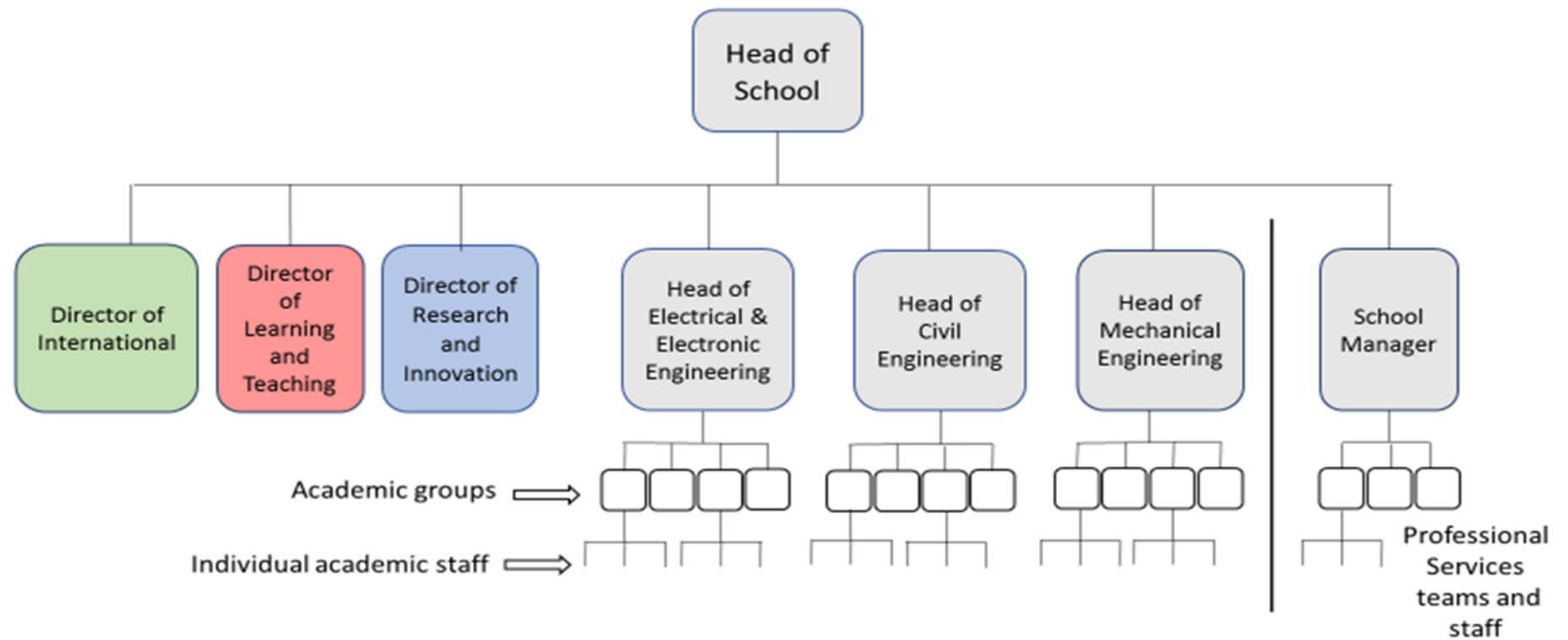


Fig. 1: School of Engineering Academic structure

3. THE SELF-ASSESSMENT PROCESS

Recommended word count: Bronze: 1000 words | Silver: 1000 words

Describe the self-assessment process. This should include:

- (i) a description of the self-assessment team

The original SAT established in 2009 was extremely large and did not function optimally. As part of the Committee Structure review the SAT and the E&D Committee were merged to form the EDI Committee that has Athena Swan within its remit.

The EDI Committee includes staff who hold relevant roles within the School as well as members who are co-opted onto the Committee for a term of office of 2 years via an expressions of interest process. This embeds the EDI culture across the School by involving more people in the work of the Committee. We were unsuccessful in recruiting student representation onto the Committee therefore this will be a priority when the new cohort of students arrive **(AP 1A)**.

The Committee has strong male representation and we will ensure that this stays the case as recent research¹ indicates that women tend to be over-represented in Athena SWAN work. We recognise that most of the female staff on the Committee are from Professional Services and we will consider this when refreshing our Committee membership **(AP 1B)**.

The work of the Committee is recognised in the Workload Allocation Management System where the Chair receives 40 hours with members receiving 20 hours. During the application writing period, those drafting the application receive a discretionary allowance to cover the extra commitment.

Table 1: Members of the EDI Committee and their roles in the School

Staff member and role	Specific responsibility on EDI Committee	Additional information
Professor David Kennedy	Co-chair of the EDI Committee representing Academic staff (co-opted)	David has benefited from informal flexibility to balance long-distance caring responsibilities for his mother and his elderly aunt.
Mrs Gaynor James	Senior HR Advisor, Co-chair representing Professional Services	A School representative on the College EDI Network, Gaynor works full-time and flexibly to

¹ Caffrey L, Wyatt D., Fudge N., et al. (2016) Gender equity programmes in academic medicine: a realist evaluation approach to Athena SWAN processes. British Medical Journal Open 2016

		assist with childcare arrangements.
Dr Peter Cleall	Head of Department (ACE) Deputy Head (Staff) EDI representative on School Board	Peter is part of a dual career family with 2 daughters of school age.
Mr Will Gale	School Manager EDI representative on School Board	Will has two young children and benefits from the Schools informal flexible working arrangements to manage his work-life balance.
Mr Michael Francis	School Safety, Health and Wellbeing Manager Representing Professional Services staff	Mike is one of the founding members of the School's Wellbeing group.
Dr Samantha Jones	Student Services Manager Disability contact Wellbeing Group lead	Sam worked part time when her children were young and returned to full-time work when her caring responsibilities reduced.
Dr Maurizio Albano	Lecturer Research Staff Coordinator	Maurizio has experience of managing work life balance as a single parent with full time caring responsibilities.
Mrs Mirjam Trowbridge	Dignity at work contacts group lead	A member of Professional Services staff who manages the Registry Office, Mirjam represents professional/support services.
Dr Michael Jones	Senior Lecturer, Co-opted member of academic staff	Primary carer for a daughter with Asperger's and Wife with MS, further benefited from informal flexible working to care for parents.
Dr Sanjana Bushra	Research Associate, Co-opted member	A member of the WEFO funded, CU led project, FLEXIS, Sanjana coordinates the Equal Opportunities and Gender Mainstreaming component.

Dr Riccardo Maddalena	Research Associate, Co-opted member	As a gay man and member of the ENFYS network of Cardiff University, Riccardo represent LGBT+ staff on the committee.
Undergraduate Student representation	Vacancy	
Postgraduate Student representation	Vacancy	
Mrs Bev Jones	Committee Support	Bev works part time and cares for her grandson. She has benefited from informal flexibility to support her caring responsibilities.

(ii) an account of the self-assessment process

The EDI Committee meets quarterly, provides strategic direction for the School's EDI agenda and initiates actions to be taken forward outside the formal Committee meetings. Action groups involving staff from across the School have been created to progress actions that are relevant to their areas of work.

EDI (including AS) is a standing item on the School Board agenda (the key decision-making body of the School), and action plan progress is communicated via all-School meetings. The Committee papers are shared with members via Teams (a folder sharing system) however we recognise the need for more transparency and better communication with staff and students **(AP 2)**.

The Committee reports directly to School Board in 2 ways:

- The Co-Chairs attend School Board 3 times a year to report on progress, seek approval on proposed initiatives and to highlight areas of concern
- The Deputy Head (Staff) and School Manager are full members of School Board and can raise any issues at any time.

The School has representation (both Co-Chairs are members) on the PSE College EDI Network that meets quarterly. This is a forum for actions which cannot be taken at School-level and is pro-active, both sharing existing practice but also promoting and supporting University-level actions.

The committee is responsible for consulting with staff and reviewing the results in order to identify any issues and develop plans to deal with the issues. With an excellent response rate of 73% the 2017 Staff Survey results have provided a valuable foundation for gauging our progress and identifying further areas of activity.

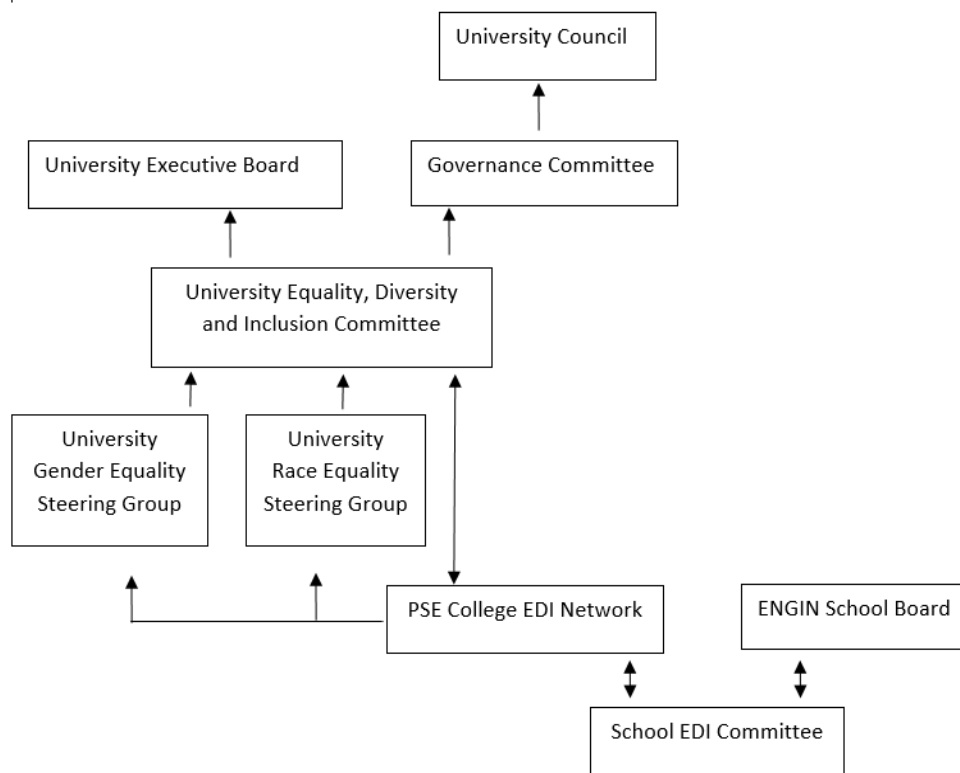


Fig. 2: Reporting structure for the School's EDI Committee within the College and University context

To plan for drafting the application a member of the EDI committee attended, as an observer, an Athena Swan assessment panel. The preparation of the Athena Swan application was led by the Co-Chairs and School Manager with members of the EDI Committee involved in drafting sections of the application. Writing days were also scheduled to draft and review the final application.

(iii) plans for the future of the self-assessment team

The Committee will meet every quarter to review progress against the action plan and to identify areas for new actions / working groups. Action groups will meet more regularly to work on specific projects and groups will report on progress at the EDI Committee meeting.

An annual culture survey for staff and students is under development with a plan to launch it by June 2019 **(AP 3A)**. The survey results will be used to further develop our action plan which will be updated in line with the School's priorities **(AP 3B)**.

Funding will be available to staff and students wishing to attend events to promote EDI initiatives. The availability of funds will be more widely communicated to ensure that all staff / student have equal access to the funds available **(AP 3C)**.

Progress against the AS action plan will be reported to School Board and the Committee will communicate to staff and students through a number of channels in order to generate more discussion and awareness **(AP 2)**.

719 words

4. A PICTURE OF THE DEPARTMENT

Recommended word count: Bronze: 2000 words | Silver: 2000 words

4.1. Student data

If courses in the categories below do not exist, please enter n/a.

(i) Numbers of men and women on access or foundation courses

ENGIN runs a Foundation Year, designed to enable applicants without A-level Maths to enter an Engineering programme. Total numbers have increased annually (38 in 2013/14, to 86 in 2017/18), with consolidation in the number of female students (Fig. 3). The foundation programme directly supports the entry of female students who may not have made appropriate A-level selections to engineering degree programmes.

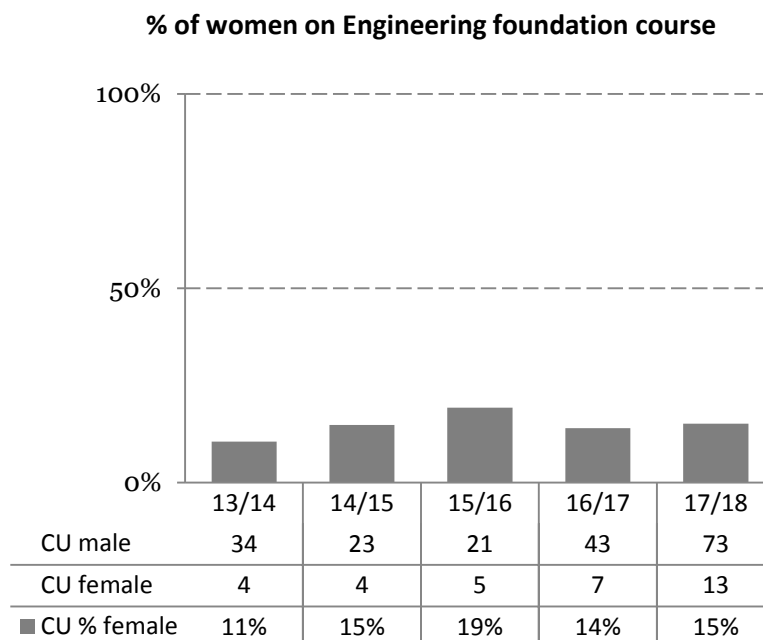


Fig. 3: Percentage and numbers of women on ENGIN's foundation courses

(ii) Numbers of undergraduate students by gender

Full- and part-time by programme. Provide data on course applications, offers, and acceptance rates, and degree attainment by gender.

Numbers presented in this section show University students (FPE) compared with sector average (HESA FPE figures). ENGIN remains significantly above the UK national average with a consistently high proportion of female students. Over the last 10 years the percentage of female UG students studying engineering has been well above the sector average and has slowly increased from around 16% to 20% of the total cohort (Fig 4). The year 1 intake for 2018/19 was substantially better than this at 26% female.

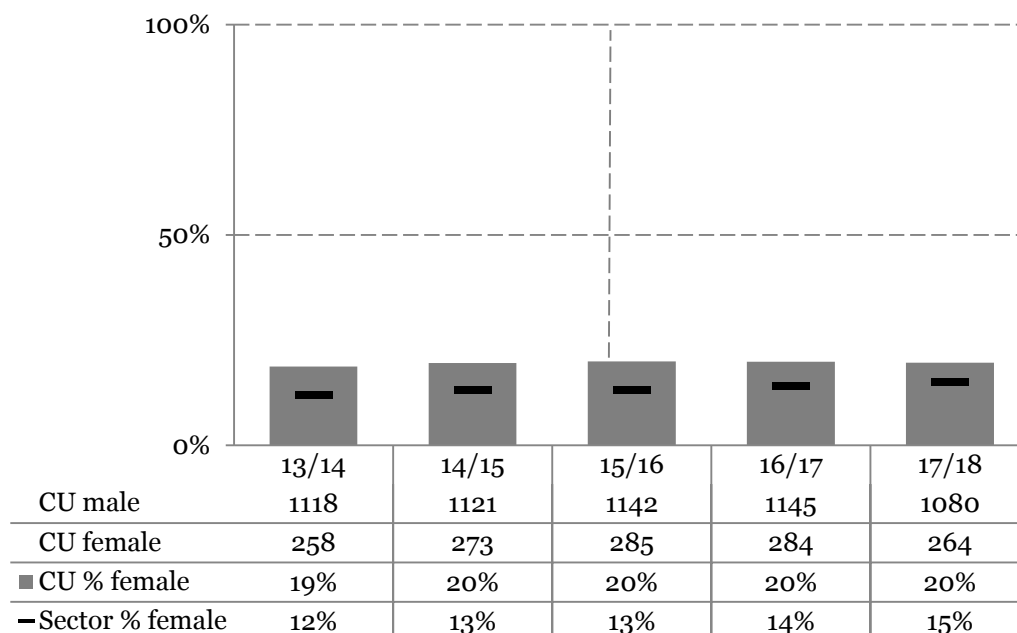


Fig. 4: Percentage and numbers of female UG students across all of ENGIN (sector data for JACS codes H1 (General Eng), H2 (Civil Eng), H3 (Mechanical Eng) and H6 (Electrical Eng)).

ACE attracts the highest percentage of female students of the School's three disciplines at 27% compared to 17% in MMM and 15% in EEE (all above sector average).

Traditionally Architectural Engineering and Medical Engineering programmes attract the highest proportion of female students, with both consistently around 50% female in recent years (Architectural 57% and Medical 53% at present).

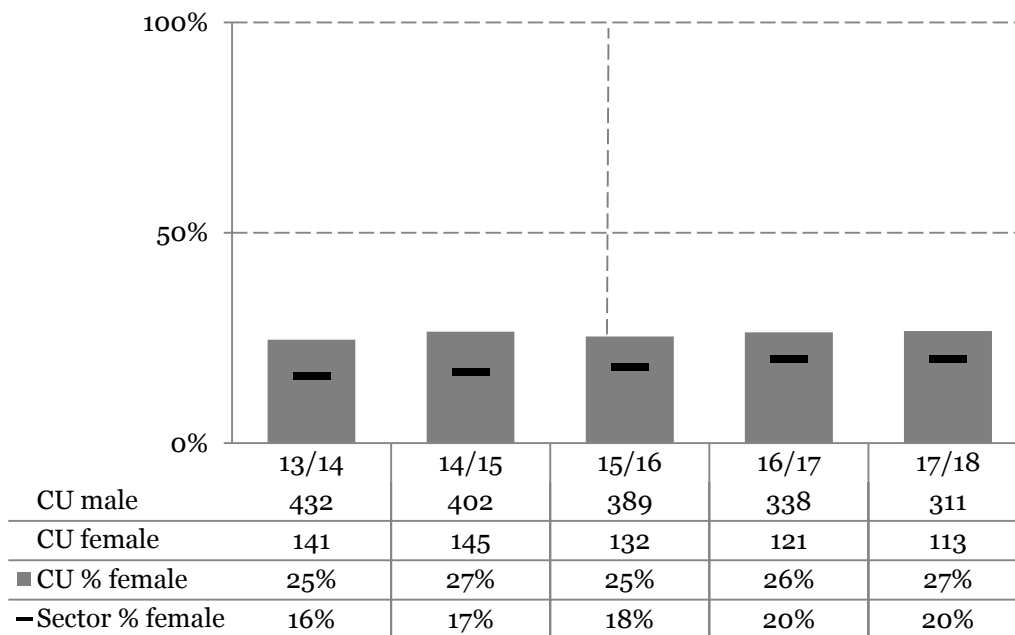


Fig. 5: Percentage and numbers of female UG ACE students (Civil, Civil and Environmental, Architectural programmes) compared with sector average (HESA JACS area H2).

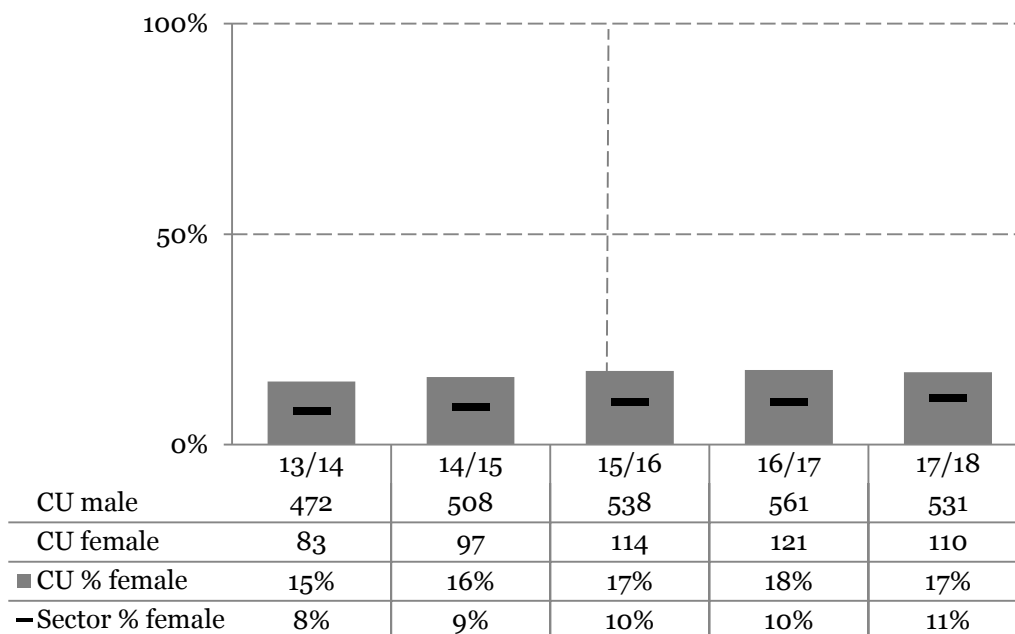


Fig. 6: Percentage and numbers of female UG MMM students (Mechanical and Medical programmes) compared with sector average (HESA JACS area H3).

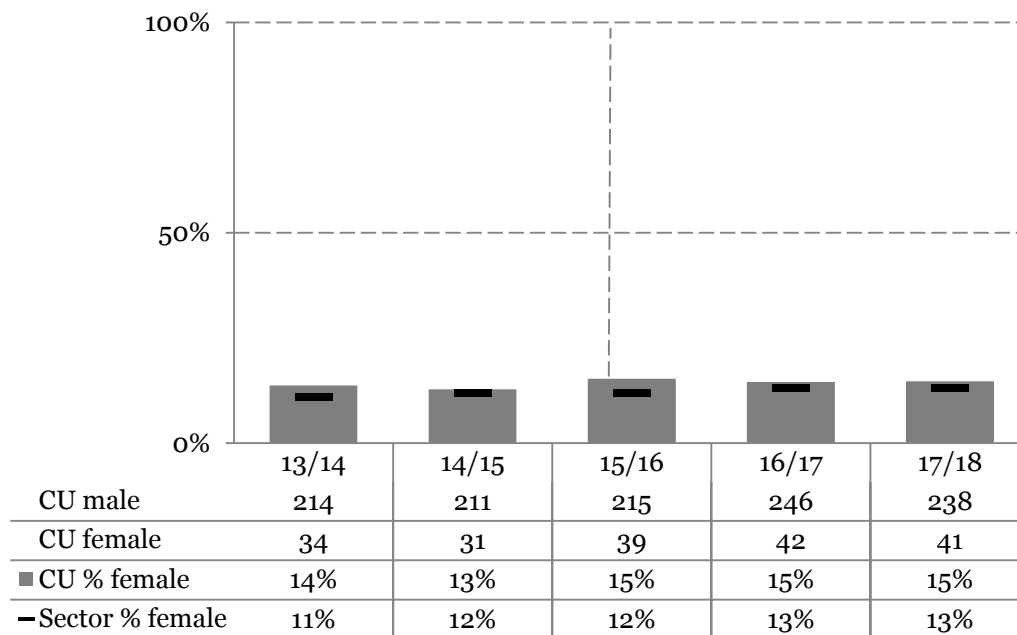


Fig. 7: Percentage and numbers of female UG EEE students (Electrical/Electronic and Integrated programmes) compared with sector average (HESA JACS area H6).

Looking at the data for applications, offers and acceptances for the last five years (Fig. 8), female applicants have received offers at the same rate at which they applied, or at a slightly higher rate, indicating that application processing does not discriminate against female applicants; the proportion of applicants given an offer has been consistently higher for women than men in recent years. The proportion of offers accepted is generally lower but not significantly lower than the same figure for male applicants (22% cf. 24% in 2018/19).

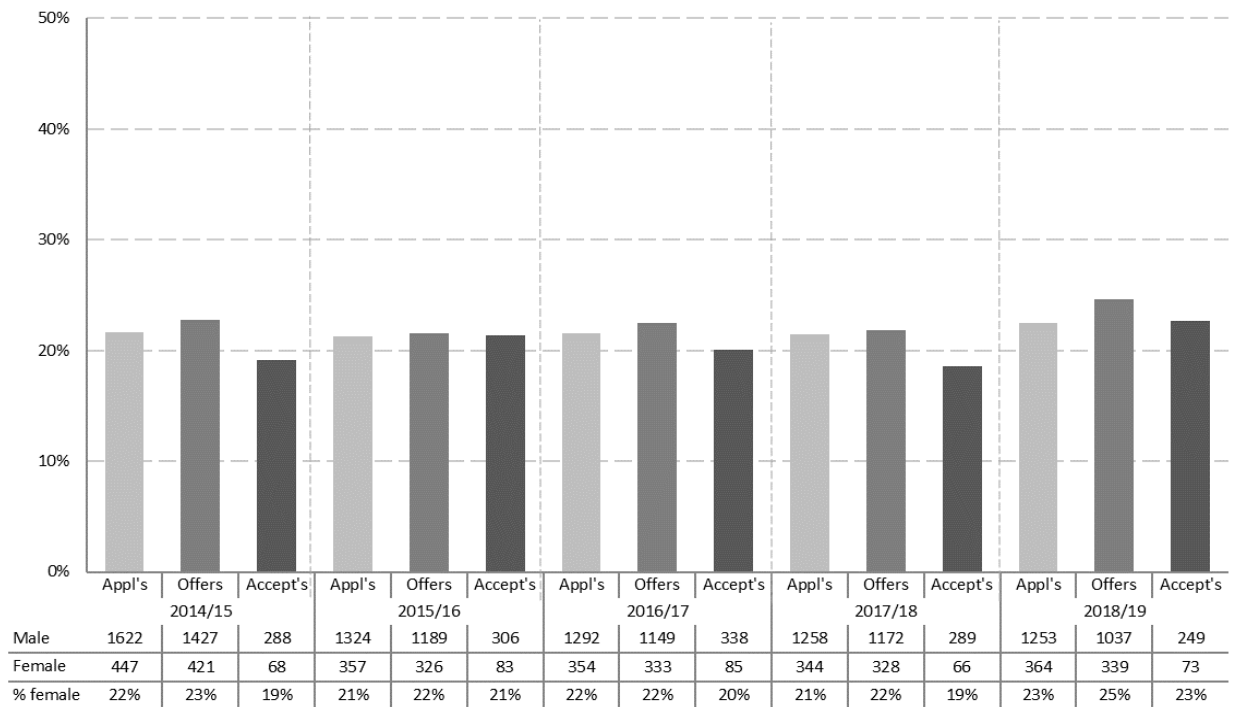
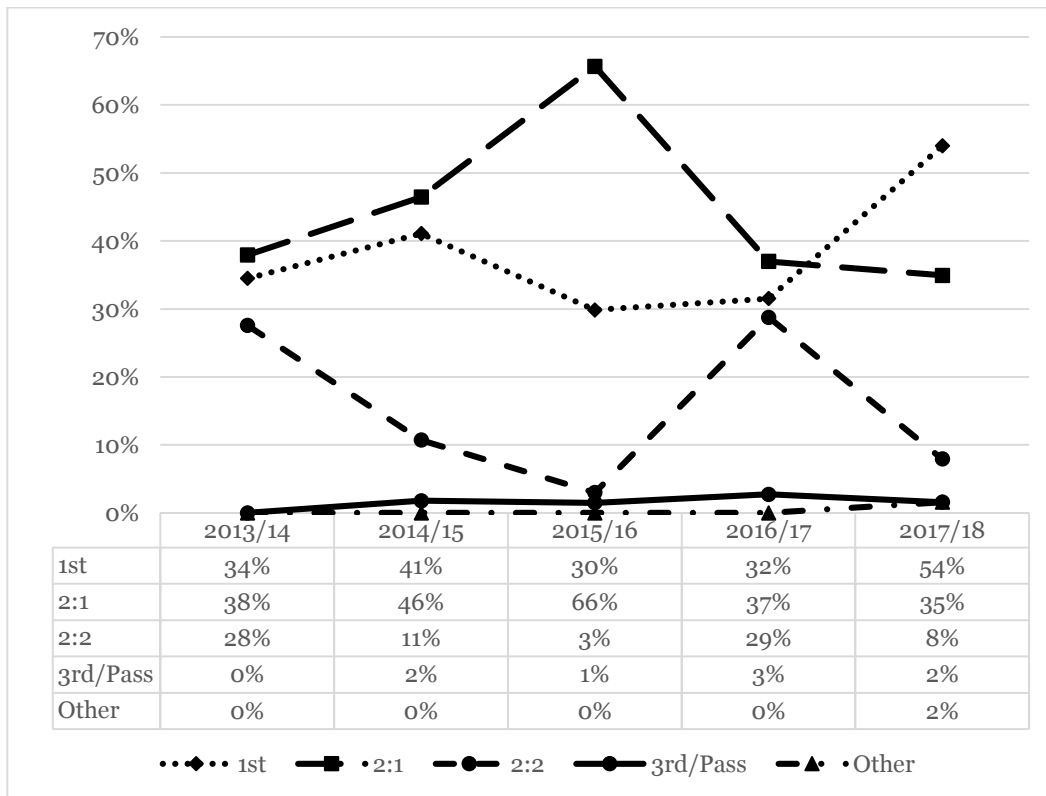


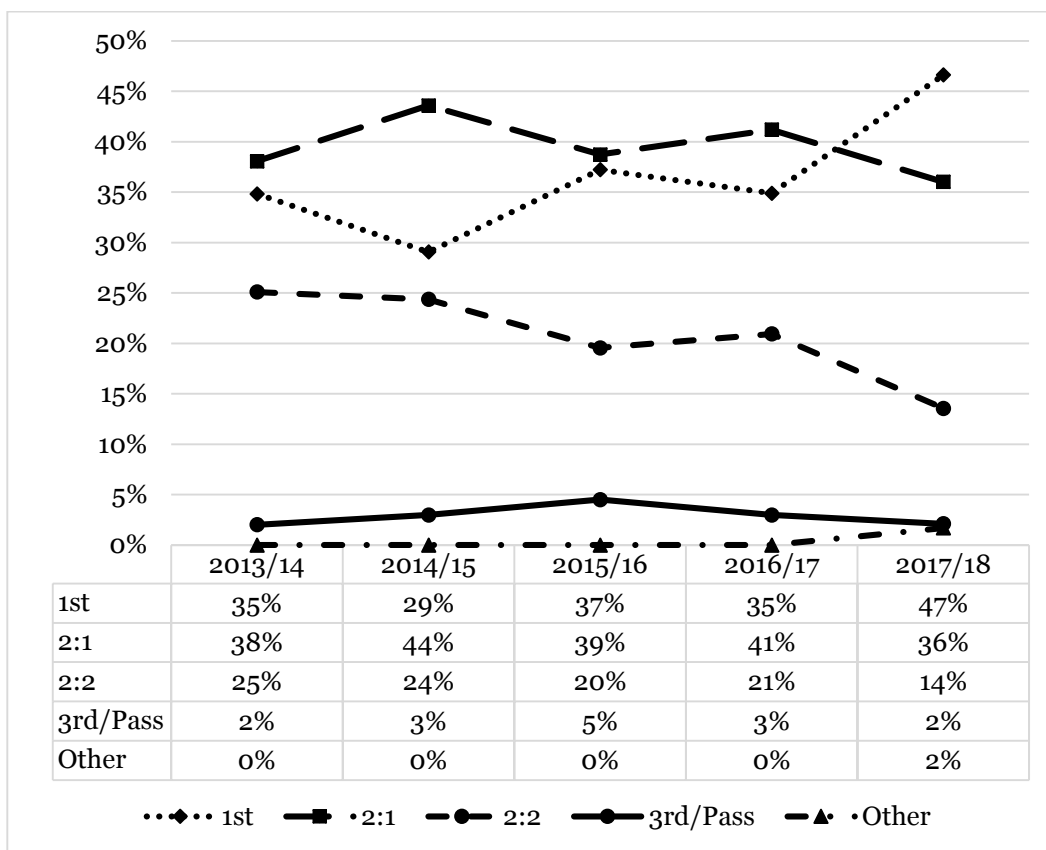
Fig. 8: Percentages and numbers of female applicants to the School, all undergraduates, by initial applications, offers made, and subsequent acceptance of offers.

Figs. 9 (female) and 10 (male) show trends in the award of different degree classifications by gender. Based on the proportion of students achieving a 1st or 2:1 degree, female student performance is excellent and similar, or better than male students in each of the five years.



	2013/14	2014/15	2015/16	2016/17	2017/18
1st	20	23	20	23	34
2:1	22	26	44	27	22
2:2	16	6	2	21	5
3rd/Pass	0	1	1	2	1
Other	0	0	0	0	1

Fig. 9: UG degree outcomes of female students, percentage and absolute number in different degree classifications.



	2013/14	2014/15	2015/16	2016/17	2017/18
1st	86	68	99	105	110
2:1	94	102	103	124	85
2:2	62	57	52	63	32
3rd/Pass	5	7	12	9	5
Other	0	0	0	0	4

Fig. 10: UG degree outcomes of male students, percentage and absolute number in different degree classifications.

(iii) Numbers of men and women on postgraduate taught degrees

Full- and part-time. Provide data on course application, offers and acceptance rates and degree completion rates by gender.

Due to the interdisciplinary nature of PGT courses and the relatively small numbers of students, the data for PGT students are shown at school level. Fig. 11 shows that the proportion of full-time female PGT students is lower than the UK average. There is no significant difference in the proportion of female students for full-time and part-time study, although the low number of part time students makes it difficult to identify

meaningful trends; part-time numbers have reduced significantly which is related specifically to the discontinuation of two medical MSc programmes.

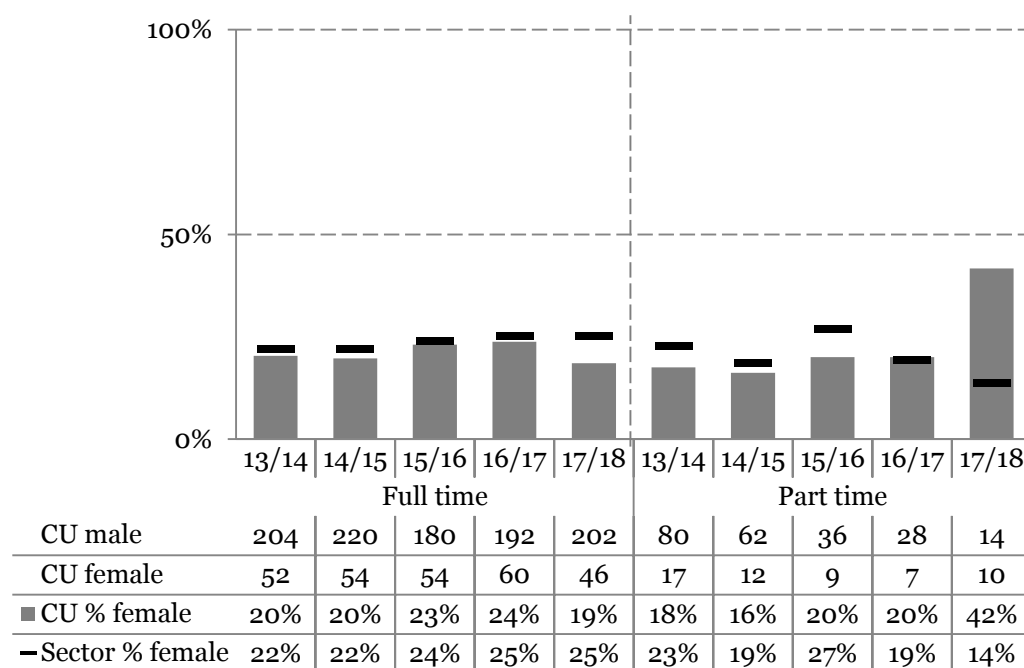


Fig. 11: Percentage and numbers of full-time and part-time female ENGIN PGT students compared with sector average (HESA, JACS areas H1, H2, H3, H6).

Fig. 12 gives the data for applications, offers and acceptances for PGT students. There is a healthy picture for the offer-making process, but a drop in the rate of acceptances compared with offers made for female students. However, when compared to male students the acceptance rate is actually very similar (15.6% compared to 16.4% for men in 2018/19).

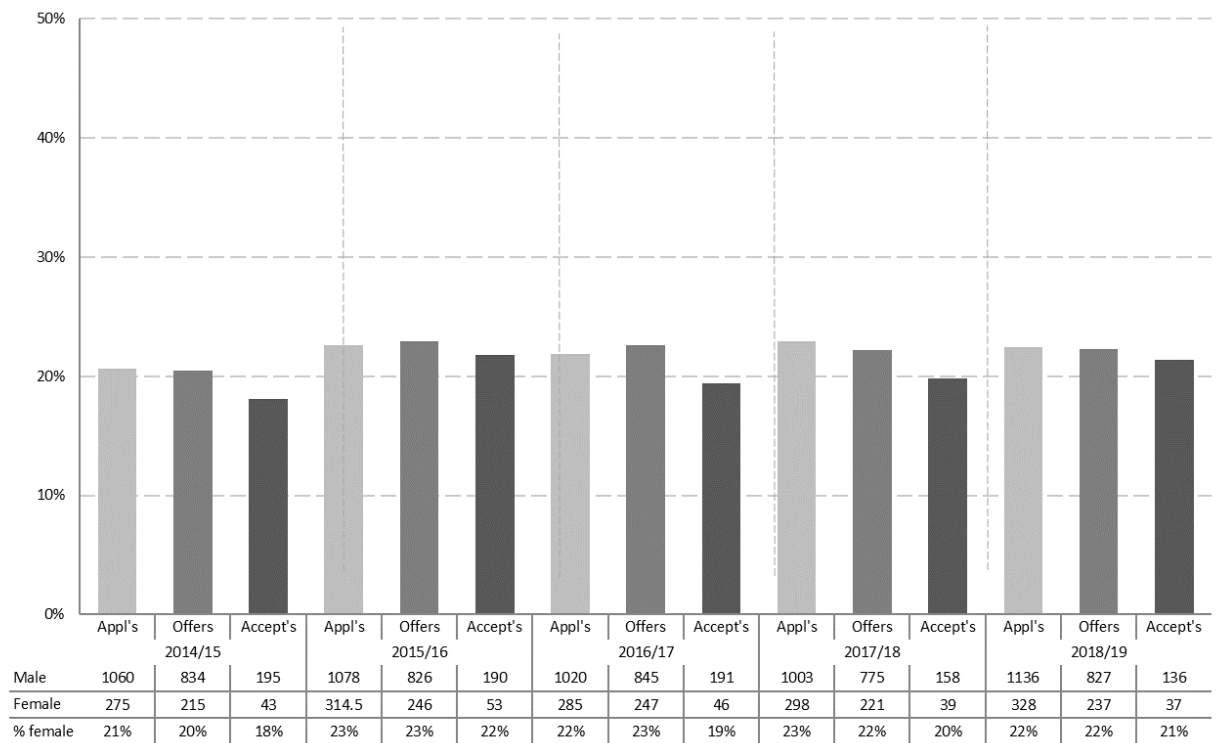
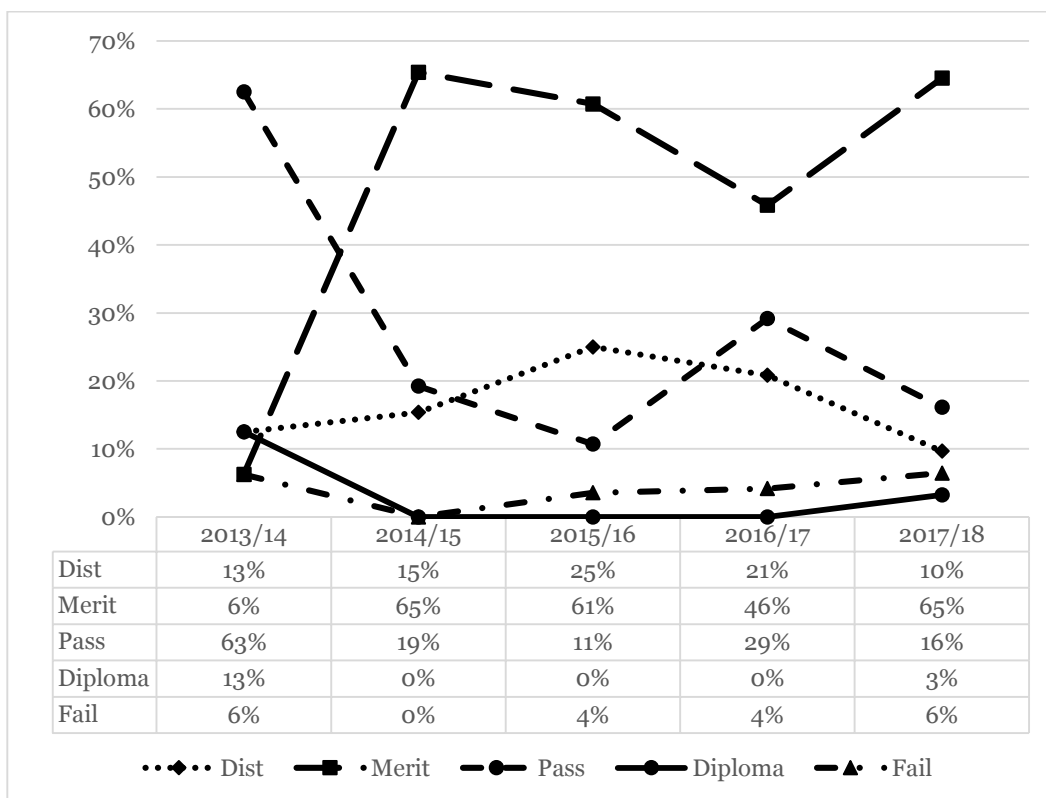


Fig. 12: Percentages and numbers of female applicants to the School, all PGT programmes, by initial applications, offers made, and subsequent acceptance of offers.

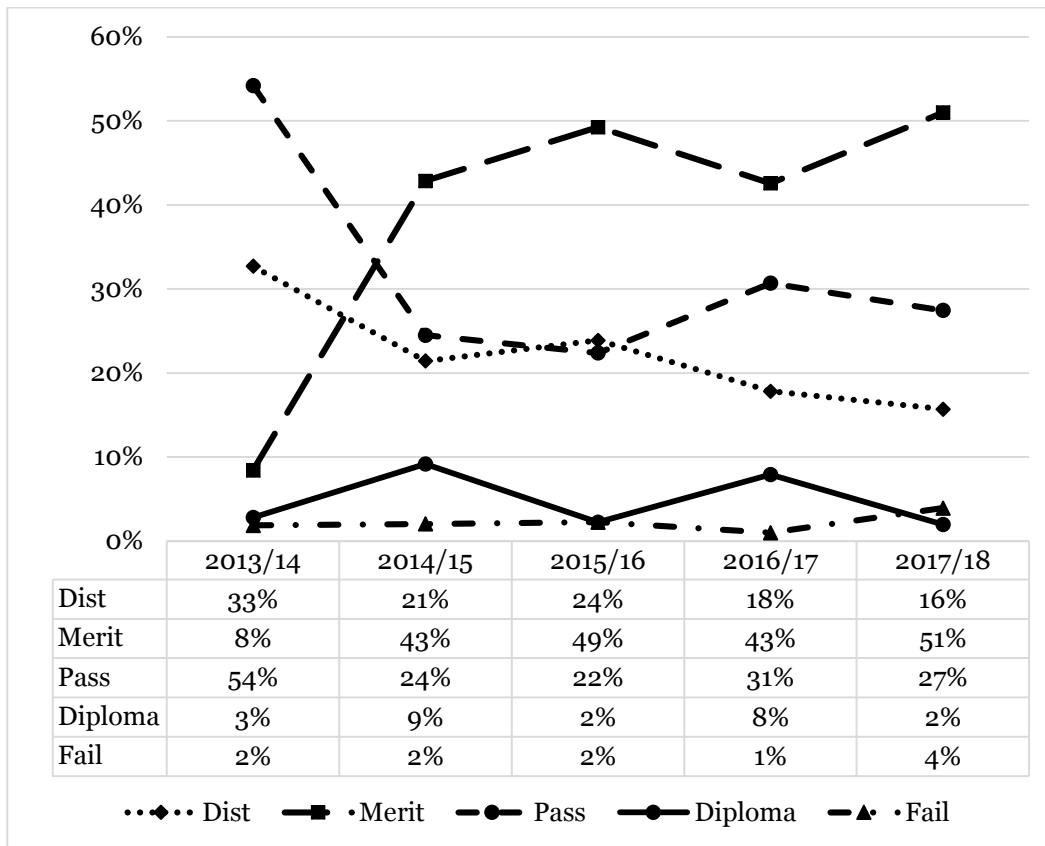
In relation to PGT student completion 33 non-completions have been registered for PGT students within the School over the last five years and of these 3 (9%) have been female students. This is significantly lower than the overall proportion of PGT students that are female (between 19% and 24% over the period), suggesting no significant issue in relation to PGT non-completion.

Figs. 13 (female) and 14 (male) show trends in the award of degree classifications for PGT students across all disciplines from 2013/14 onwards. Assessment of the performance of female PGT students needs to consider the relatively small numbers involved, and therefore a lack of any statistical significance. However, no discernible systemic issues with the performance of either gender is evident.



	2013/14	2014/15	2015/16	2016/17	2017/18
Dist	2	4	7	5	3
Merit	1	17	17	11	20
Pass	10	5	3	7	5
Diploma	2	0	0	0	1
Fail	0	0	0	0	1

Fig. 13: PGT degree outcomes of female students, percentage and absolute number in different degree classifications awarded by gender.



	2013/14	2014/15	2015/16	2016/17	2017/18
Dist	35	21	32	18	16
Merit	9	42	66	43	52
Pass	58	24	30	31	28
Diploma	3	9	3	8	2
Fail	0	0	0	0	4

Fig. 14: PGT degree outcomes of male students, percentage and absolute number in different degree classifications awarded by gender.

(iv) Numbers of men and women on postgraduate research degrees

Full- and part-time. Provide data on course application, offers, acceptance and degree completion rates by gender.

Fig. 15 shows the numbers and proportions of female PGR students between 2013/14 and 2017/18. Data is aggregated at School level due to the inter-disciplinary nature of many PGR projects. It can be seen that the percentage of full-time female PGR students in ENGIN has remained relatively consistent over the years, close to the sector average, but has dropped in the last two years. The reasons for this are currently unclear but we will undertake further work to determine possible reasons (**AP 4**). Numbers of part-time students are very low and it is not possible to determine any trends.

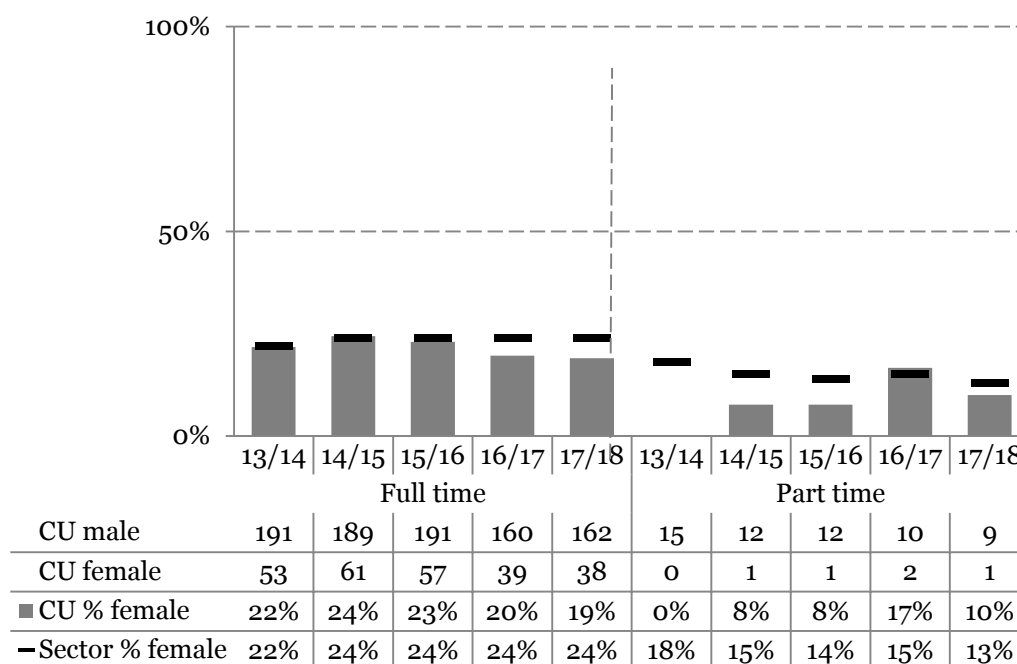


Fig. 15: Percentage and numbers of female PGR students in ENGIN vs UK HEIs compared with sector average (HESA, JACS areas H1, H2, H3, H6). N.b Figures exclude those writing up.

Fig. 16 gives the data for applications, offers and acceptances for PGR students. The picture is mixed across the five years. Applications from both men and women have varied significantly throughout the period and this is likely due to the availability of funded studentships within the School and arrangements with sponsors. It is noticeable that the proportion of offer holders and those accepting offers who are women has fallen in the last two years.

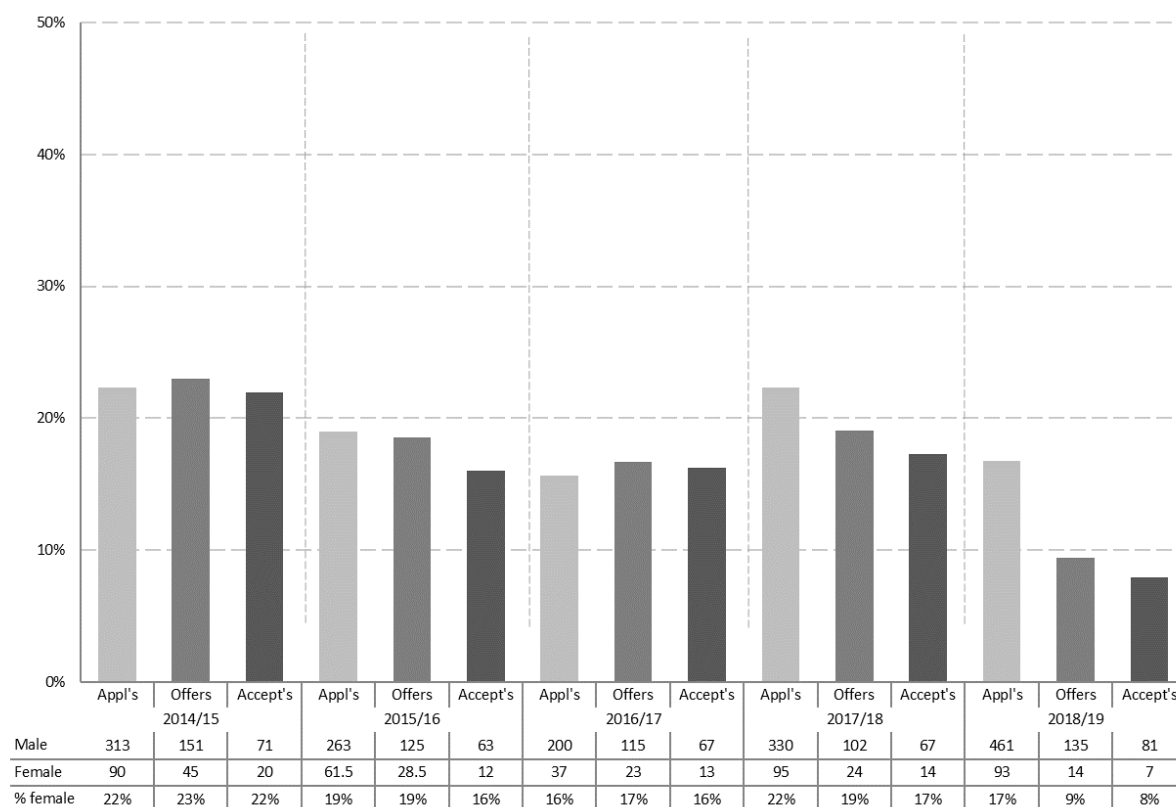


Fig. 16: Percentages and numbers of female applicants to the School to all PGT programmes, by initial applications, offers made, and subsequent acceptance of offers.

Tables 2 and 3 analyse this further, showing the conversion rates of applications to offers and offers to acceptances for men and women. Conversion of applications to offers declines for both men and women in the last two years, but more noticeably for women. However, the conversion of offers to acceptances is more consistent. The changes identified may be linked to the changes noted under student numbers analysis above and will be investigated.

Table 2: Percentage of applicants who received an offer

	2014/15	2015/16	2016/17	2017/18	2018/19
Male	48%	48%	58%	31%	29%
Female	50%	46%	62%	25%	15%

Table 3: Percentage of offers that were accepted.

	2014/15	2015/16	2016/17	2017/18	2018/19
Male	47%	50%	58%	66%	60%
Female	44%	42%	57%	58%	50%

In relation to PGR student completion 41 non-completions have been registered for PGR students within the School over the last five years and of these 10 (22%) have been female students. This is comparable with the proportion of PGR students that are female (between 19% and 24% over the period), indicating that there is no noticeable issue related to female students completing PGR degrees.

(v) Progression pipeline between undergraduate and postgraduate student levels

Identify and comment on any issues in the pipeline between undergraduate and postgraduate degrees.

The female student pipeline in Fig. 19 shows that there is a relatively even proportion of female students across the different levels of study in ENGIN. The highest proportions are at UG degree and PGT levels. There is a slight leak in the pipeline to PGR. It has been noted above that there are issues in relation to female PGR student numbers and recruitment and this will be investigated.

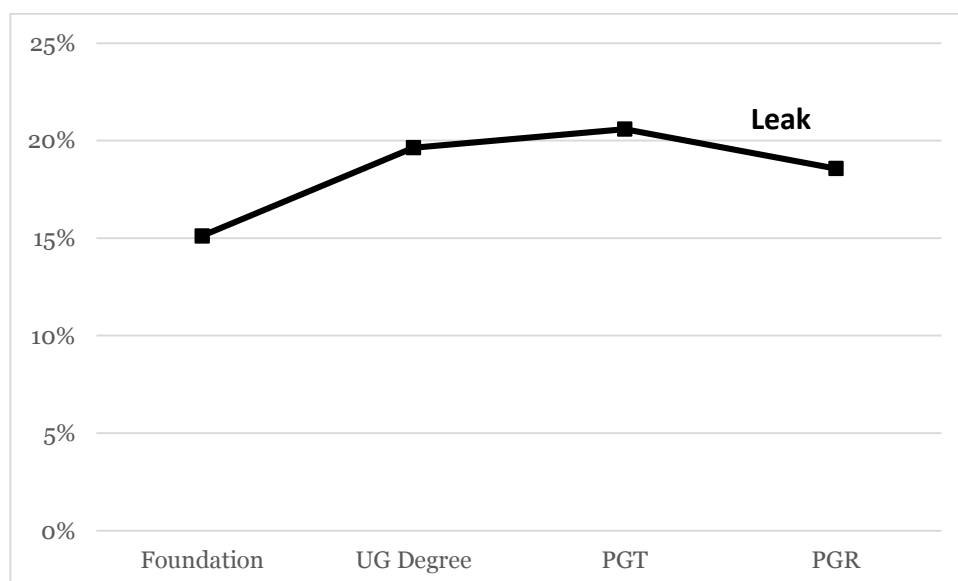


Fig. 19: Percentage of students within the School who are female, at different levels of study (2017/18).

4.2. Academic and research staff data

- (i) Academic staff by grade, contract function and gender: research-only, teaching and research or teaching-only

Look at the career pipeline and comment on and explain any differences between men and women. Identify any gender issues in the pipeline at particular grades/job type/academic contract type.

All ENGIN data presented is based on headcount. Benchmark data is HESA FPE, based on cost centres 118 Civil Engineering, 119 Electrical, Electronic and Computer Engineering and 120 Mechanical, Aero and Production Engineering.

Research-only staff includes all Research Assistants, Associates and Fellows.

In 2015 the number of female research staff was at its highest at 27 (23% of the researcher population). In 2016 and 2017 this number dropped considerably as did the overall research staff numbers (119 in 2015 to 93 in 2016) but this reduction impacted more on female research staff numbers where the proportion decreased from 23% in 2015 to 15% in 2016. In 2018 we saw an increase in the number and proportion of female research staff from 16 to 24 (19% of the total research population).

The proportion of female academic staff (from lecturer to professor) has increased from 15% in 2015 (15 staff members) to 16% in 2018 (18 staff members). This is slightly less than the sector average at 17%. This improvement can be attributed to the improvements made to the recruitment process as part of the School's 2015 AS action plan (see section 5.1.i).

During the 4-year period there has been an increase in the number of female lecturers from three in 2015 to five in 2018, and the proportion of female lecturers over that same period has increased from 10% to 14% of the overall lectureship population.

In contrast the number of female senior lecturers and readers have decreased during the period from 8 to 6 for senior lecturers and 2 to 1 for readers as a result of successful academic promotions from senior lecturer through to Reader and then Professor. In 2018 the School had 6 female professors (15%) in comparison with 2 in 2015 (7%).

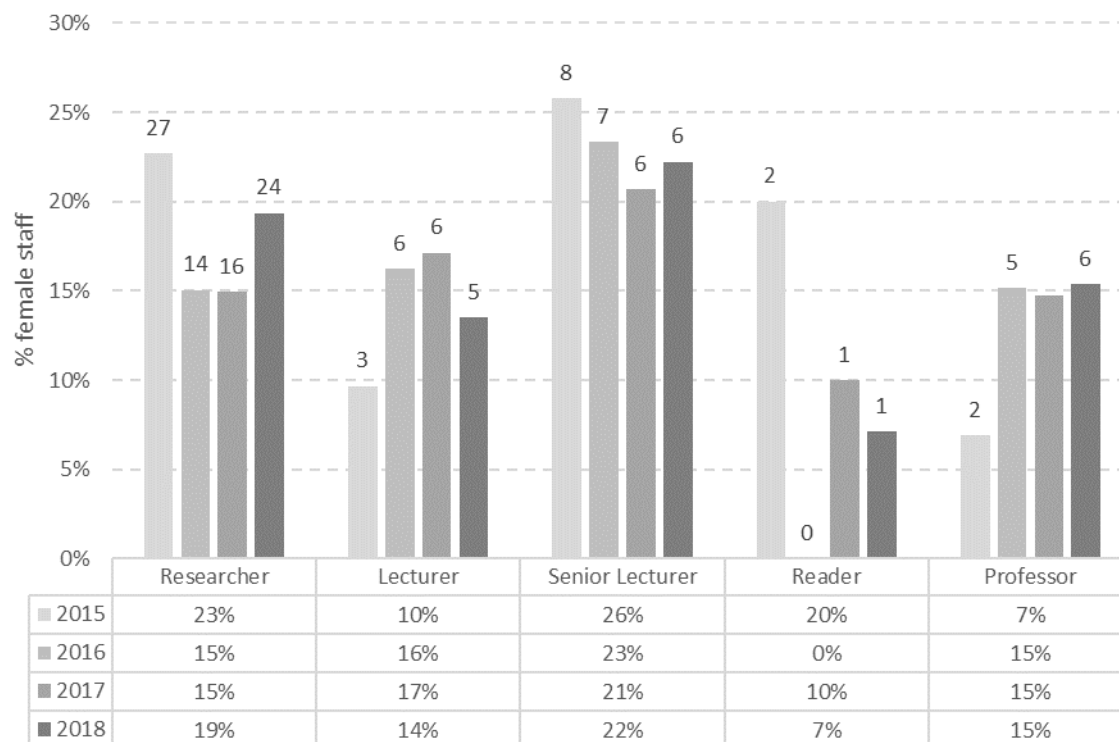


Fig. 20: Proportion and total numbers of female academic and research staff by job category. Snap shot data taken annually on 1 August.

There is a difference in female staff numbers at different academic grades when the data is analysed at department level. Female academic staff within ACE can be found at lecturer or senior lecturer level (Fig. 21). There are no female academics at reader level or above. The total number of female academics has increased from five in 2015 (15%) to six in 2018 (17%). This is lower than the sector average of female academic staff at 21%.

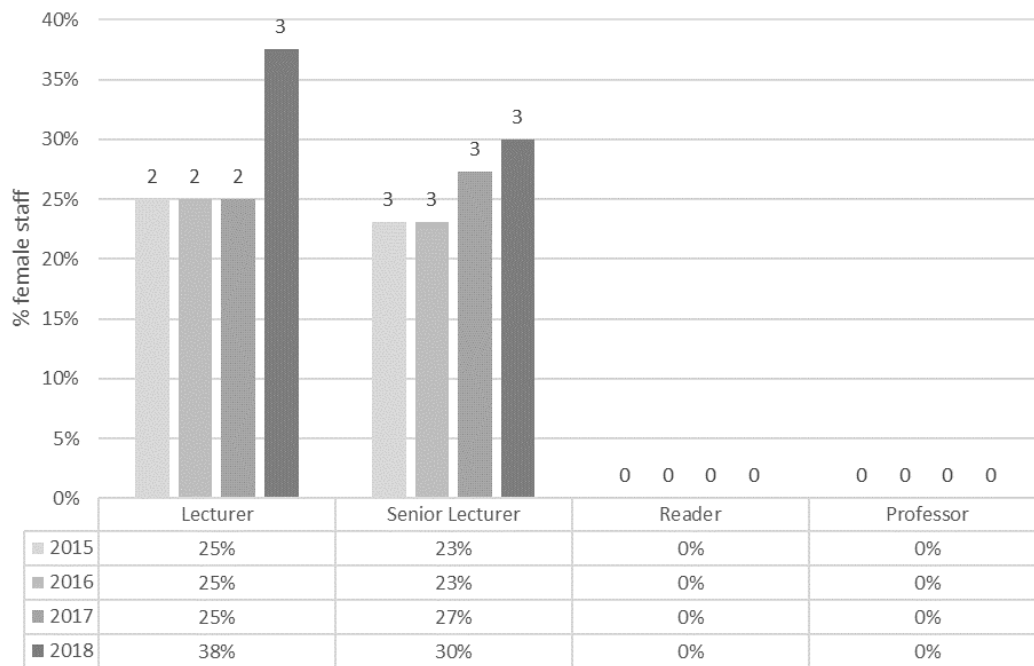


Fig. 21: Proportion and total numbers of female academic staff by job category in ACE. Snap shot data taken annually on 1 August.

The proportion of female academics in MMM has increase from 18% in 2015 to 24% in 2018 and compares favourably to the sector average of 16%. Fig.22 shows that there is female representation at all levels except Reader. The change in staff distribution across Senior Lecturer through to Professor is accounted for by successful promotions.

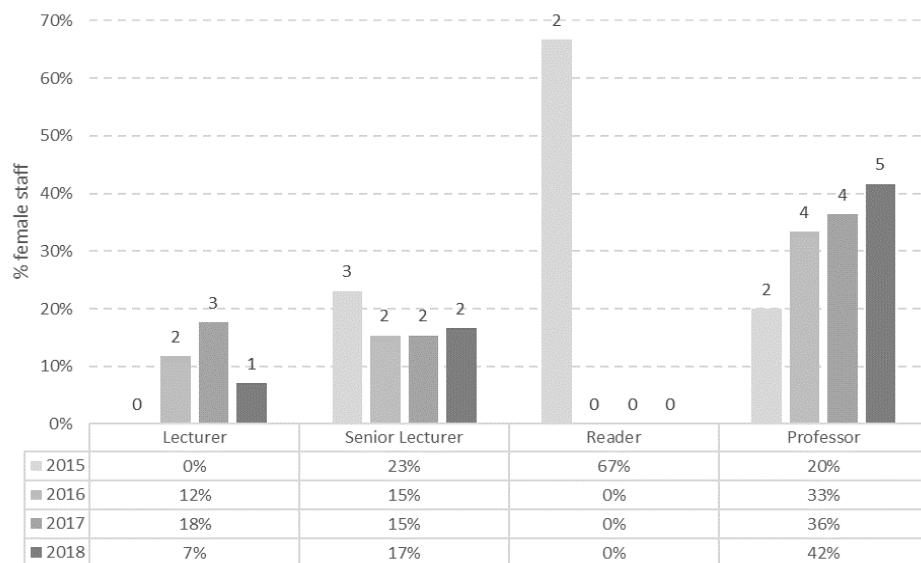


Fig. 22: Proportion and total numbers of female academic staff by job category in MMM. Snap shot data taken annually on 1 August.

Since 2014, when all EEE female academics were Lecturers and Senior Lecturers, there has been a change in the profile with one female academic promoted to Reader and an appointment at Professor level (Fig. 23). Over the period the number of female academics has remained at 4 (11% against the sector average of 15%).

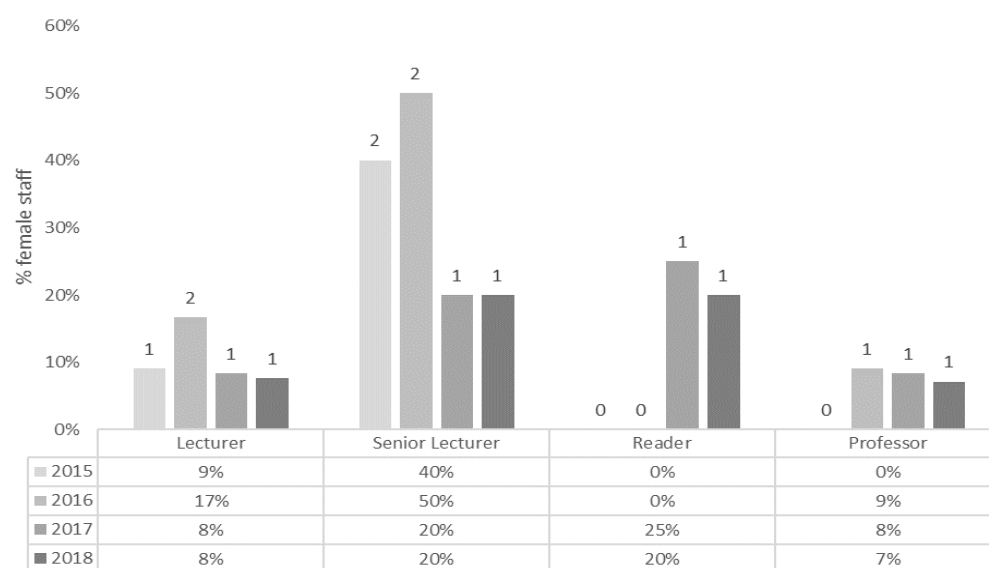


Fig. 23: Proportion and total numbers of female academic staff by job category in EEE. Snap shot data taken annually on 1 August.

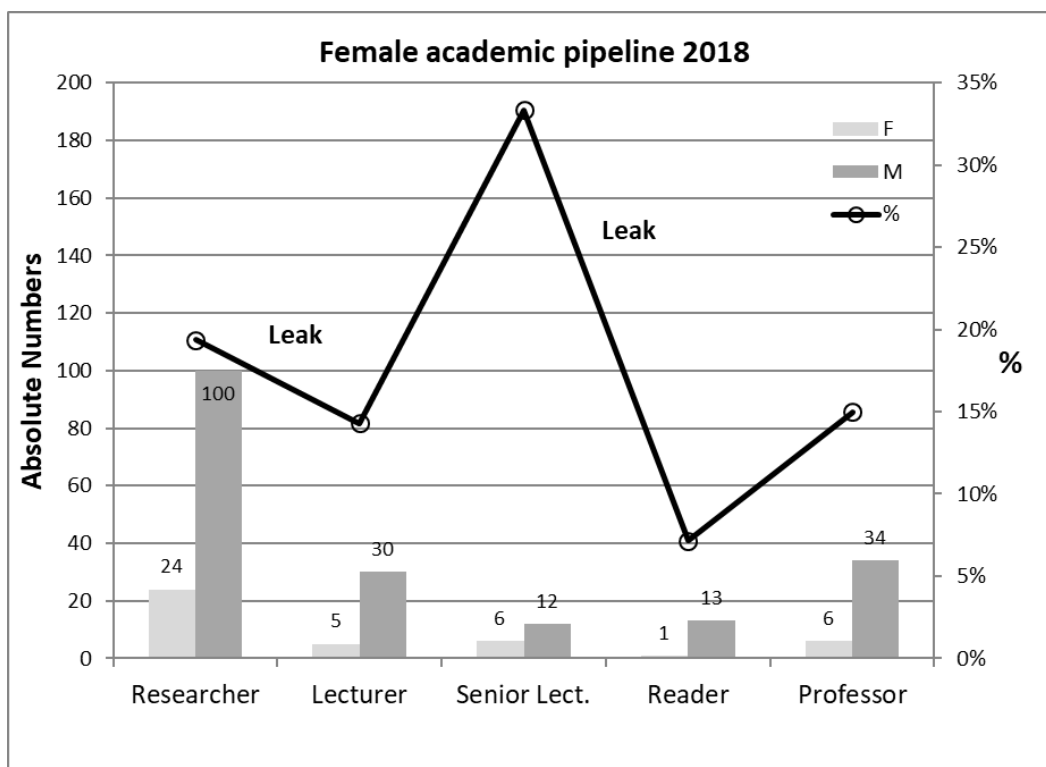


Fig. 24: Female academic pipeline identifying the leaks in the pipeline. Data as at 1 August 2018.

Analysis of data illustrates that once female academics are appointed they are developed effectively enabling them to successfully gain promotion. Since 2015 the School has been through a period of growth, where we have seen the proportion of female academic staff increase from 15% in 2015 to 16% in 2018 and there has been an increase in the number of female academics at a senior level (2 Professors in 2015 compared to 6 in 2018).

Due to a range of economic pressures there may be limited opportunity for growth over the next few years, therefore there will be less opportunity to influence the gender breakdown through recruitment. Despite this we will continue to ensure that recruitment processes are further developed and implemented consistently **(AP 10)**.

Fig. 24 highlights that the main area of concern is the transition from research through to academic. The numbers of readers are too small to be significant. To support this area, the school will:

- Introduce a School specific Research Staff Development Programme in order to identify individual development needs of female researchers to give them the skills and confidence they need to apply for academic vacancies **(AP 5)**.

- Introduce, across the Department structure, an initiative to support academics by reviewing the length of time in post and initiate discussions with those who have been at their grade for longer than the norm to discuss tailored support requirements to enable them to advance **(AP 6)**.

SILVER APPLICATIONS ONLY

Where relevant, comment on the transition of technical staff to academic role.

During the review period, no technical staff transitioned into academic roles, however technicians contribute to the delivery of teaching modules and the team plays an important role in reviewing teaching structures.

The School nominates members of the technical team for the annual Celebrating Excellence awards and during the review period 5 of our technicians have been successful. A technician was supported to complete an Engineering undergraduate degree and technicians benefit greatly from a range of training opportunities offered. The School has also pledged support to the technical commitment and we will focus on supporting the career development of technicians **(AP 7)**.

(ii) Academic and research staff by grade on fixed-term, open-ended/permanent and zero-hour contracts by gender

Comment on the proportions of men and women on these contracts. Comment on what is being done to ensure continuity of employment and to address any other issues, including redeployment schemes.

The School does not engage staff on zero-hour contracts.

All research staff are employed on a fixed term basis as they are recruited specifically to undertake research work on time limited projects.

There are two areas where academic staff (T&R, T&S and T only) are employed on a fixed term basis. These include Teachers at grade 6, largely recruited to cover staff absences, and academic staff at Professorial level who have been reengaged after retirement.

The number of fixed term female academic staff increased from 1 to 2 in 2018 as a result of a successful promotion application from a research fellow to Professor.

Line managers are pro-active in trying to ensure continuity of employment for staff by:

- Holding ongoing career development discussions with staff throughout the contract period both formally via the probation / PDR processes and informally during one to one support meeting
- Encouraging Research staff to attend relevant training courses to develop the necessary skills to take up their next post
- encouraging and supporting them in preparing Fellowship applications to secure individual funding
- naming specific researchers in research proposal to ensure continuity of employment.

Staff reaching the end of their contract will also be eligible for the University's redeployment scheme which is open to all staff who will have been in post for at least 12 months at the end of their contract and are within 6 months of the end date. The scheme allows staff to have priority access to apply for jobs across the University before the opportunities are made available to other staff and externally.

The School has a good record of conversion of fixed term research staff to permanent academic staff. Since 2015 9 research staff (100% male) previously employed on fixed-term research contracts have progressed into academic posts. In order to improve the conversion of female researchers we will consult with them to establish what barriers exist to prevent them from advancing into academic posts and provide tailored support needed to enable progression **(AP 8)**. We will also support and encourage research staff to progress by implementing the Research Staff Development Programme **(AP 5)**.

Research

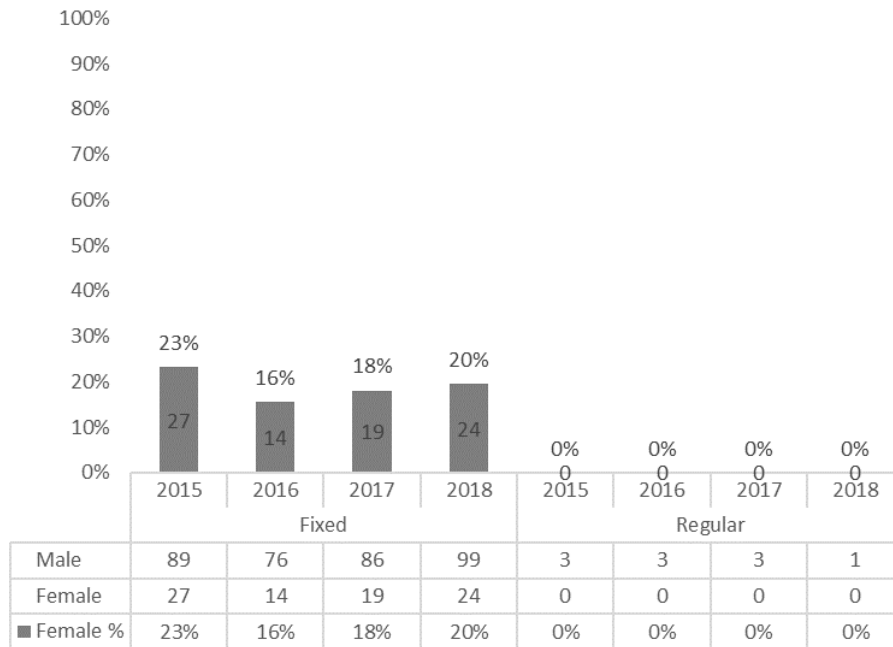


Fig. 25: Number and proportion of female research staff by contract type

Academic

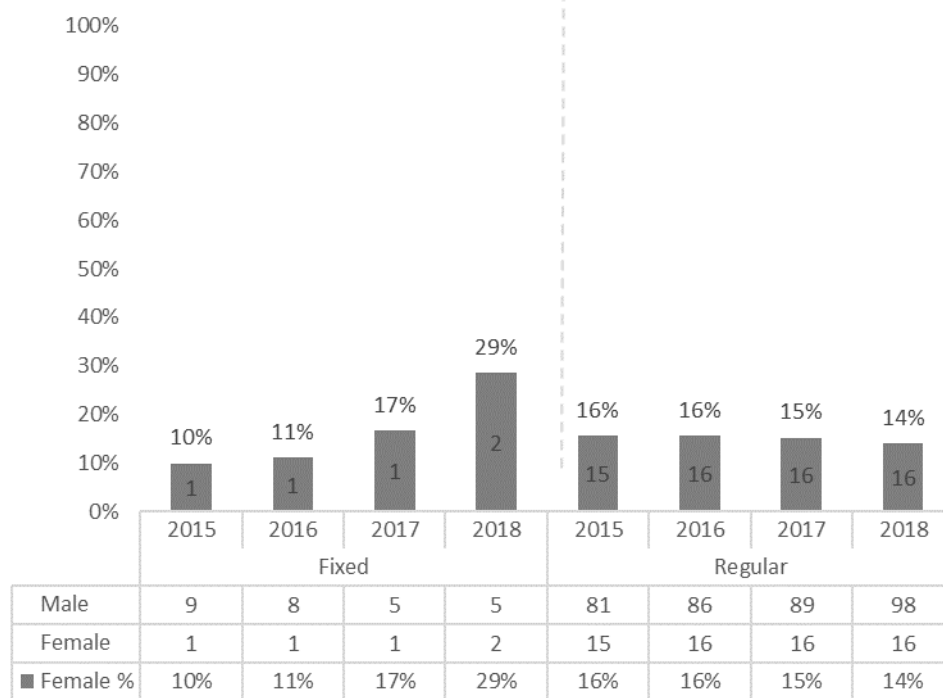


Fig. 26: Number and proportion of female academic staff by contract type

(iii) Academic leavers by grade and gender and full/part-time status

Comment on the reasons academic staff leave the department, any differences by gender and the mechanisms for collecting this data.

Table 4: breakdown of academic and research leavers by grade and gender for 2015 through to 2018

Turnover by grade	2015		2016		2017		2018	
	F	M	F	M	F	M	F	M
Research	7	11	6	13	2	20	4	19
Lecturer	0	2	0	1	2	1	0	0
Senior Lecturer	0	0	0	0	0	0	1	0
Reader	0	0	0	0	0	0	0	0
Professor	0	0	0	0	0	3	0	6
Total	7	13	6	14	4	24	5	25

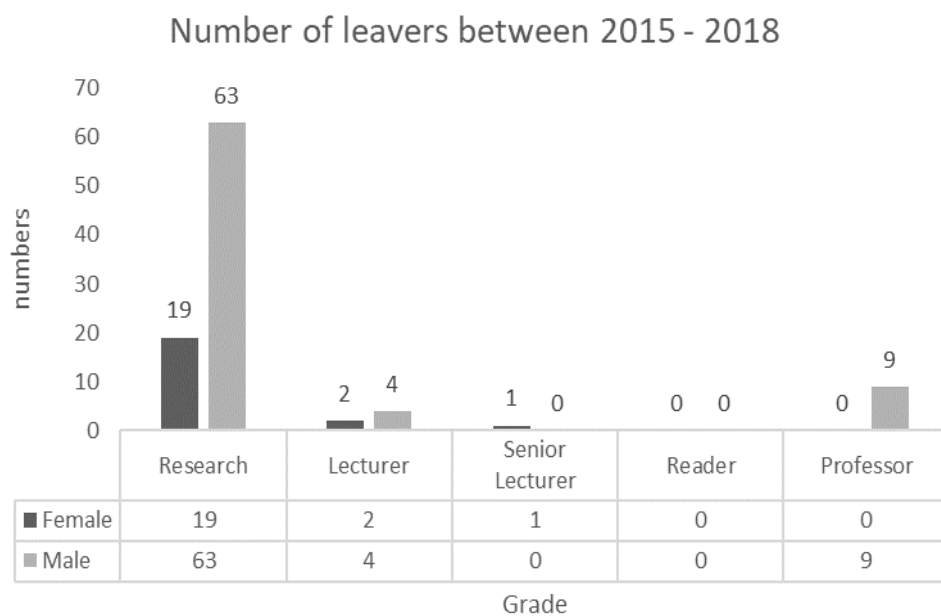


Fig. 27: Aggregated number of leavers over the period 2015 - 2018

Fig. 27 shows that the highest number of leavers over the period were researchers which is in line with the wider University. In 2015 38% (7 people) of all researchers who left were female compared to 23% female research staff employed by the School in that year. In 2018 the proportion of female staff leavers dropped to 17% (4 people)

compared with 19% female research staff numbers. The number of part time Research leavers were small (2016 2 female, 1 male; 2017 1 female; 2018 2 male, 1 female).

Over the 4-year period, two female lecturers left (in 2017) compared with four male lecturers (two in 2015, one in 2016 and one in 2017). The female academics left because, following their relocation to Cardiff, their partners were unable to find suitable employment. As a result, one returned to her home country and took up a post within a research institute and the other successfully obtained employment at another UK University near her partner. The male lecturers secured positions in industry or were appointed to higher level academic positions at other Universities.

During 2017 three Professors retired and in 2018 the University offered a Voluntary Severance Scheme and as a result 1 part-time female senior lecturer and 6 male Professors were approved for release. The female academic left the University to launch her own business and the 6 Professors retired.

Leaver data, including reason for leaving and future employment (where available), is collected by the University's HR department. All leavers are emailed an exit questionnaire however this data is not shared with Schools. Academic staff often have meetings with their line managers, local HR and Head of School to discuss the resignation however this process is informal and not applied consistently. We will develop a leaver process to include formal exit interviews (AP 9).

2443 words

5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

Recommended word count: Bronze: 6000 words | Silver: 6500 words

5.1. Key career transition points: academic staff

(i) Recruitment

Break down data by gender and grade for applications to academic posts including shortlisted candidates, offer and acceptance rates. Comment on how the department's recruitment processes ensure that women (and men where there is an underrepresentation in numbers) are encouraged to apply.

The 2015 Action Plan identified a number of initiatives (see 2019 action plan) developing our recruitment processes to improve the recruitment of females. The data shows that during the review period the School appointed 26 new academics (5 female: 21 male (24%)) mainly at Lecturer level. The appointments were made across all three departments as shown in tables 5 – 7.

The data for EEE shows (table 5) that we received applications from female candidates but the proportion of female staff shortlisted is below the proportion of female

applications received. During the period only one female was shortlisted across all 7 posts. For MMM (table 6) the data shows that the proportion of shortlisted females is significantly higher than the proportion of female applications received.

The data suggests that the School may have a problem at shortlisting therefore further investigation is required to ensure that unconscious bias isn't playing a role in the process. A review of the shortlisting process will be undertaken and shortlisting panels of 2-3 people will be introduced into the academic recruitment process. Panel members will review the applications independently before confirming a final shortlist **(AP 10)**.

We aim to increase the proportion female appointments for academic posts therefore we will improve the recruitment message, develop effective advert text and use a gender decoder tool to ensure that the language used attracts female applicants **(AP 10)**.

Table 5: Academic appointments made in EEE broken down by gender for each stage of the recruitment process

EEE		2015		2016			2017	
Application	Male	12	18	9	32	9	27	31
	Female	3	4	1	4	1	6	4
	% female	20%	18%	10%	11%	10%	18%	11%
Shortlist	Male	4	3	4	10	8	1	4
	Female	0	0	0	0	1	0	0
	% female	0%	0%	0%	0%	11%	0%	0%
Offer	Male	2	1	1	2	0	1	0
	Female	0	0	0	0	1	0	0
Appointment made	Male	2	1	1	2	0	1	0
	Female	0	0	0	0	0	0	0
		Lec in High Voltage (2 posts)	Lecturer	Lec in Radio Frequency	Compound semiconductors	Prof Compound semiconductors	Lec / Sr Lec (2 posts)	Appointments Compound semiconductors

Table 6: Academic appointments made in MMM broken down by gender for each stage of the recruitment process

MMM		2015		2016					2017		
Applicatio	Male	7	24	16	12	18	0	20	4	3	23
	Female	0	8	3	5	3	1	5	0	3	3
	% female	0%	25%	16%	29%	14%	100%	20%	0%	50%	12%
Shortlist	Male	2	2	5	3	2	0	3	1	3	2
	Female	0	3	0	3	0	1	3	0	3	1
	% female	0%	60%	0%	50%	0%	100%	50%	0%	50%	33%
Offer	Male	0	0	1	0	1	0	0	1	1	1
	Female	0	1	0	1	0	1	1	0	0	0
Appointm ent made	Male	0	0	1	0	1	0	3	1	1	1
	Female	0	1	0	1	0	1	1	0	0	0
		Chair in Mechanical	Lecturer in Energy Materials	Lec in Medical Imaging	Lec in HVM (Laser Machining)	Lec in HVM (Autonomous systems)	Lecturer in Materials	Lecturer in Materials (4 post)	Lec (Laser Micro-Machining)	Lec (Metal ALM)	Lec in Energy Materials

Table 7: Academic appointments made in ACE broken down by gender for each stage of the recruitment process

ACE		2015	2016	2017	2018		
Applicatio	Male	10	13	15	13	22	22
	Female	3	5	5	3	2	4
	% female	23%	28%	25%	19%	8%	15%
Shortlist	Male	2	3	2	3	3	5
	Female	0	0	2	2	1	0
	% female	0%	0%	50%	40%	25%	0%
Offer	Male	1	1	1	1	1	1
	Female	0	0	1	0	0	0
Appointm ent made	Male	1	1	1	1	1	1
	Female	0	0	1	0	0	0
		Lec in Construction	Lec in Water Engineering	Lec / Sr Lec (T&S) (2 posts)	Lec in Smart Infrastructure Engineering	Lec in Advanced Solid Mechanics	Lec in Computational Hydraulics

(ii) Induction

Describe the induction and support provided to all new academic staff at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

New starters receive a joining pack “your first 90 days” that supports individuals during the first 90 days of employment. It outlines key contacts within the School, and lists actions that need to be taken during day 1, week 1, the first 30 days, 60 days and 90 days. Line managers also receive a copy which is used to support ongoing discussions with the new employee. After 90 days the individual is asked to evaluate the process by completing a review questionnaire. As the joining pack has been in operation since 2017 the School needs to review its effectiveness **(AP 11)**.

New members of academic staff will, on their first day, meet with relevant staff members, (e.g. Head of School, the Senior HR Advisor, and the line manager) to ensure that they receive the School handbook. They are taken on a tour of the School and introduced to members of their team, technical staff within their area of work and support staff in the administrative offices. The handbook is only available in hardcopy therefore to ensure easy access to up to date information it will be made available electronically **(AP 11)**.

Academic staff attend the University Academic Orientation programme, a 2.5 day programme that delivers key strategic messages, and introduces newly appointed staff to senior academic and professional services staff across the University.

Staff will also attend the local School induction which is compulsory for all and runs every 6 weeks. It provides information on the School teaching programmes, structures, finances, Health and Safety as well as HR / Staff Development information. It has been running regularly for a number of years but currently there is no evaluation mechanism. A priority will be to instigate an evaluation process and implement staff feedback **(AP 11)**.

The School had been running a “drop in session” open to all staff, both existing and new, to allow them to speak with the Senior HR Advisor and Deputy Head (Staff) on a one to one basis about role specific or personal issues. This action was implemented as part of the School’s 2015 AS AP with the aim of improving the dissemination of information, however attendance was low. The School consulted staff via a survey to gather data on what information staff want, in what format and how often. The results showed that staff wanted short sessions that included a short presentation on the topic followed by an opportunity to discuss. In response a programme of 30 minute sessions are offered focusing on the areas staff highlighted in the survey (table 8). Evaluation forms are completed after each session in order to make improvements. Staff will be

consulted annually on what information they would like covered in these sessions (**AP 11**).

Table 8: Schedule of information sessions requested by Staff members

Information session	Date
Leave types	28 November 2018
Wellbeing	30 January 2019
Staff Development	21 February 2019
Dignity at work	26 March 2019
Sickness absence	29 April 2019
Probation	23 May 2019
Contract Management	28 June 2019
Flexible working	30 July 2019

(iii) Promotion

Provide data on staff applying for promotion and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

Table 9: Academic promotion results from 2013/14 academic year through to 2017/2018.

		Applicants		Successful		Unsuccessful	
		M	F	M	F	M	F
2013/2014	Personal Chair	1	0	0	0	1	0
	Reader	2	1	2	0	0	1
	Senior Lecturer	7	1	6	1	1	0
2014/2015	Personal Chair	2	2	1	2	1	0
	Reader	4	1	2	0	2	1
	Senior Lecturer	3	0	3	0	0	0
2015/2016	Personal Chair	2	0	2	0	0	0
	Reader	4	1	3	1	1	0
	Senior Lecturer	4	0	3	0	1	0
2016/2017	Personal Chair	4	1	4	1	0	0
	Reader	5	0	5	0	0	0
	Senior Lecturer	3	0	3	0	0	0
2017/2018	Personal Chair	2	0	2	0	0	0
	Reader	2	0	2	0	0	0
	Senior Lecturer	3	0	3	0	0	0

Two female Readers were promoted to Personal Chair in 2014/2015, a female Senior Lecturer was promoted to Reader in 2015/2016, and one part-time Senior Research Fellow (Research career pathway) to Personal Chair in 2016/2017. There were two unsuccessful applications from female members of staff during this period.

In addition to having two successful promotions of female staff to Chair, Professor Karen Holford (academic and former Head of School) has progressed to the position of Deputy Vice-Chancellor (Karen was a Pro Vice-Chancellor at the start of the review period).

Table 10: Aggregated promotions data from 2013/2014 and success rates.

	Female		Male	
	Applications	% success	Applications	% success
Sr Lec	1	100%	20	91%
Reader	3	60%	17	85%
Prof	3	100%	11	85%
Total	7	87%	49	87%

Table 10 shows that 100% of the promotion applications received from female academics for Senior Lecturer and Professor were successful in comparison to male success at 91% at Senior Lecturer and 85% at Professor level. The success rate for females applying for Reader was only 60% in comparison with 85% for male academics. Overall the academic promotions picture for female staff looks positive. During the period 2013/2014 – 2017/2018 the success rate for male and female applicants was 87%.

Promotion is a two-stage process run by the University. It provides a framework and expectation levels for T&R, T&S and R (Gr 7) colleagues to apply for promotion. The first stage involves a School review and the second is University review with external feedback sought. Feedback is provided to applicants at both stages of the process, from the Head of School initially and then by the PVC.

Staff are encouraged to attend the University Promotion information sessions, are able to view successful promotion applications and readiness for promotion is discussed at PDR meetings.

In conjunction with the appointment of a new Deputy Head (Staff) and in light of the promotion data above, a time in post analysis was undertaken for all academic staff. This exercise highlighted staff members who had been on the same grade for a number of years and a meeting was held with them to discuss tailored support required to

progress. As a result three female academics benefited from this process in the following ways:

- Application for study leave encouraged and approved
- Support from external career coach
- Review of workload and imbalances addressed.

This initiative will be embedded within each Department by each Heads of Department **(AP 6)**.

(iv) Department submissions to the Research Excellence Framework (REF)

Provide data on the staff, by gender, submitted to REF versus those that were eligible. Compare this to the data for the Research Assessment Exercise 2008. Comment on any gender imbalances identified.

Table 11: Staff submitted to RAE 2008 compared to REF 2014 versus those that were eligible.

	RAE 2008		REF 2014	
	Eligible	Returned	Eligible	Returned
Male	68	60	78	46
Female	10	10	12	4
% Female	13%	14%	13%	8%

In REF 2014 the School made submissions to the Units of Assessment covering Civil and Construction Engineering and General Engineering. In line with University strategy for a highly selective return, 56% of eligible staff were returned with a slight gender imbalance towards male staff. Individual meetings were held with all academic staff to discuss their eligibility and the quality of their publications. Special circumstances were considered confidentially by a University panel and a detailed Equality Impact Assessment was carried out prior to submission.

Our submissions to three Units of Assessment in the 2008 RAE included all but a few eligible staff, with all of the eligible female staff being returned. The School will fully engage with the requirements for REF 2021 and will return all eligible staff.

SILVER APPLICATIONS ONLY

5.2. KEY CAREER TRANSITION POINTS: PROFESSIONAL AND SUPPORT STAFF

(i) Induction

Describe the induction and support provided to all new professional and support staff, at all levels. Comment on the uptake of this and how its effectiveness is reviewed.

There is no distinction between the School induction processes and support offered to PS and academic staff which have been detailed in section 5.1.ii.

The first probation meeting is held within the first week and line managers ensure staff have booked to attend the University Professional Services induction session and have completed any mandatory and essential training.

All PS staff who are new to the University or the job role are allocated a mentor.

(ii) Promotion

Provide data on staff applying for promotion, and comment on applications and success rates by gender, grade and full- and part-time status. Comment on how staff are encouraged and supported through the process.

Regrading is the process for PS staff to be promoted. It recognises an increase in the level of responsibility of the post rather than the performance of the post holder. The individual completes an application form outlining the duties and responsibilities of the role which are analysed via Higher Education Roles Analysis).

Table 12: Number of applications and success of regrading for PS staff since 2014

	Application		Successful	
	M	F	M	F
Gr 2	0	1	0	1
Gr 3	1	1	1	1
Gr 4	7	6	7	5
Gr 5	3	0	2	0
Gr 6	1	1	1	0
Total	12	9	11	7

Table 12 shows that since 2014 21 PS staff members applied for regrading (10F:12M). In total 18 staff members were successful (7F:11M): eight members of administrative staff (all female,) one from Grade 2-4, one from Grade 3-4 and six from Grade 4-5; eight members of technical staff (all male) one from Grade 3-4 and seven from Grade 4-5. Two members of Managerial Professional Services (both male) from Gr 5-6 and one researcher (male) from Grade 6-7.

Four of these were part-time members of staff with another working full time but flexibly. There were 3 unsuccessful applications (14% of all applications) from different job categories.

Regrading (if relevant) is discussed at PDR meetings and those considering regrading are advised to attend the University's "regrading explained" workshop. They receive support and guidance from their line manager, as well as the School's HR team and they are buddied with another member of staff within the same career pathway who has successfully been regraded.

Staff are also encouraged to apply for internal secondments as a means of gaining experience and temporary promotion. The School will only decline secondment requests if there is no other way of filling the vacated post.

5.3. Career development: academic staff

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation?

Cardiff University has a Staff Development Department which offers a range of in-house courses accessible to all staff and which are widely advertised. Other training opportunities are offered locally by the School and external training is also supported and funded. Development needs and training opportunities are discussed at all probation and PDR meetings and new staff are made aware of how to access training via induction processes.

Table 13: Uptake of leadership training opportunities by Academic staff since 2015

	2015		2016		2017		2018	
	M	F	M	F	M	F	M	F
Cardiff Futures	1	1	5	0	2	0	3	0
Developing Leaders	0	0	0	0	2	0	0	1
Leadership and Management Development - Research Team Leaders	2	1	0	3	4	0	0	0
Moving into Leadership	0	0	1	0	0	0	2	0
Practical Leadership for University Management	6	0	0	0	5	0	0	1
Professorial Leadership Programme	0	0	0	0	5	1	6	0

Table 13 shows the uptake of leadership training by gender which has been extremely low over the period. A priority will be to encourage female staff to attend leadership programmes (AP 6).

There are a number of mandatory training courses at University level: Equality, diversity and Inclusivity; Information security; as well as at local level: Unconscious bias and Line manager training (3 modules: Recruitment and contract management, Managing and supporting performance, Managing staff wellbeing) introduced in May 2018 in response to a number of issues highlighted in the 2017 Staff Survey (fig 28). Evaluation of these modules is collated via an evaluation form and informal evaluation is received at the end of each session. Feedback is used to update the content and delivery of sessions and indicates that sessions are considered useful. To date 41 line managers (61%) (9F:32M) have attended these sessions, which will continue on a monthly basis to ensure all line managers attend.

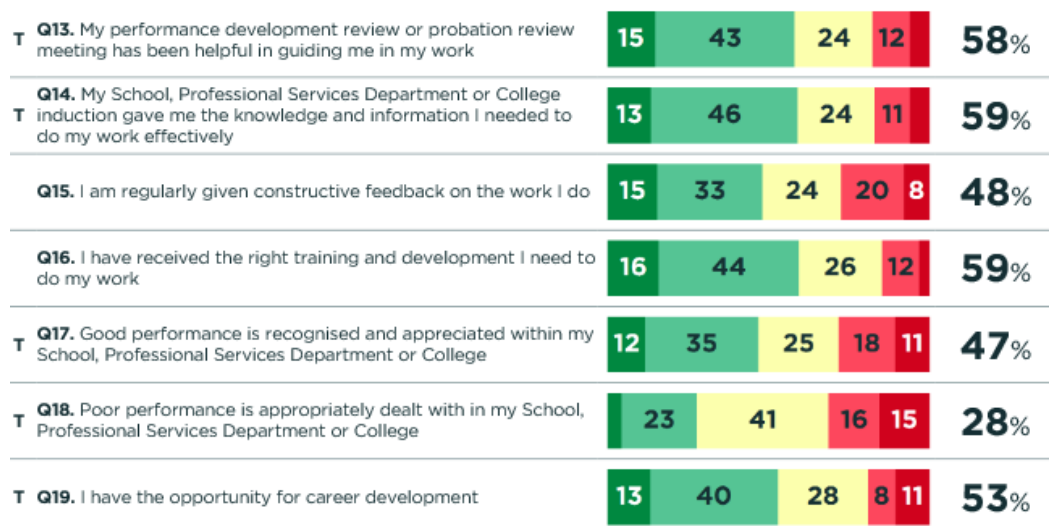


Fig. 28: Extract from 2017 staff survey which led to the decision to develop and mandate Line management training for all line managers

The School employs a large number of research staff on fixed term contracts. Unfortunately, we cannot commit to appointing them to academic posts at the end of the fixed term period. We do however recognise our role in developing our research staff and the School is therefore working with research staff to develop a Research Staff Development Programme **(AP 5)**. The programme will enable researchers to gain the skills, knowledge and experience required to apply for academic posts and includes the opportunity to:

- Gain teaching skills with support from a mentor to assist with preparing, developing and delivering lectures
- Hold Assistant Supervisor role to act as an assistant supervisor within the PhD supervisory team
- Attend relevant training courses in the areas of teaching, research supervision, developing research ideas / proposals, writing publications
- Take part in mock academic interview panels to give researchers the support in preparing for and attending an academic interview.

The programme will run annually and will be available to all research staff who have ambitions of advancing into academic careers.

(ii) Appraisal/development review

Describe current appraisal/development review schemes for staff at all levels, including postdoctoral researchers and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

All staff, unless they are subject to probation, will be subject to PDR. In the 2017 staff survey 91% of staff stated that they'd had a probation review or PDR meeting in the last 12 months, in 2018 the School achieved 100% PDR completion. In the 2017 staff survey only 58% of staff (fig 28) felt that the PDR review was helpful in guiding them in their work. This feedback led to the development of the line management training modules (see section 5.2.1).

The School also reviewed the academic management structure and introduced academic departments in order to have a more robust structure. Additionally the School has developed an expectations document that clearly outlines academic expectations. Line manager guidance will now be developed to enable line managers to make the PDR discussions as meaningful as possible **(AP 13)**.

(iii) Support given to academic staff for career progression

Comment and reflect on support given to academic staff, especially postdoctoral researchers, to assist in their career progression.

All research and academic staff on probation are assigned an academic mentor and individuals not on probation can request a mentor as and when needed. There is a College-wide mentoring system for staff at all career stages which is promoted by the HoS and the Cardiff Academic provides clarity on expectations and supports planning for future career development.

Newly appointed academics receive enhanced Personal Development Funds of £2500 (or substantially more if needed) to support academic collaboration and travel. Career development is supported through rotation of committee responsibilities, in-house training courses and School funding for external courses/ conferences. The School actively encourages staff members to request study leave to support their research via a School specific scheme that is publicised regularly with a view for leave periods to start either at the beginning of the academic year or at the beginning of the calendar year. Since 2015 15 of our academic staff (5 females) have been supported to take study leave which has allowed them to focus on their research.

Researchers have access to researcher-specific career development support from Staff Development who offer training courses that are specifically for developing an academic career. They also have access to one-to-one career consultation appointments. There are two active early career researcher networks, one at College level to enhance collaboration and provide peer support and the other at School level, organised and managed by the Research Staff Coordinator (an academic member of staff allocated with the responsibility of working with researchers to support their development) supported by a group of academic and research staff. The School Network runs regular seminars on topics requested by researchers. Substantial support is provided in preparing Fellowship applications, including ERC, Marie Skłodowska-Curie and EPSRC. The School will also be launching a Research Staff Development Programme (section 5.2.1).

(iv) Support given to students (at any level) for academic career progression

Comment and reflect on support given to students at any level to enable them to make informed decisions about their career (including the transition to a sustainable academic career).

Students are informed about career opportunities via:

- Regular bulletins to students about courses, jobs, and funding opportunities

- Very active central Careers Service support, which covers all aspects of a future career, including postgraduate opportunities
- CUROP, a popular programme which provides funded summer placement opportunities for UG students to undertake research, enhance their academic skills and make a more informed decision on furthering their research at postgraduate experiences. The Programme is now considered to be one of the largest undergraduate research schemes in the UK, with almost 800 students taking part since 2008.
- A high rate of students undertaking Year in Industry schemes, where they learn about the skills valued by employers.

The success of these mechanisms is borne out by the excellent data for employability of Cardiff Engineering students after their degrees (both UG and PG) (fig. 29).

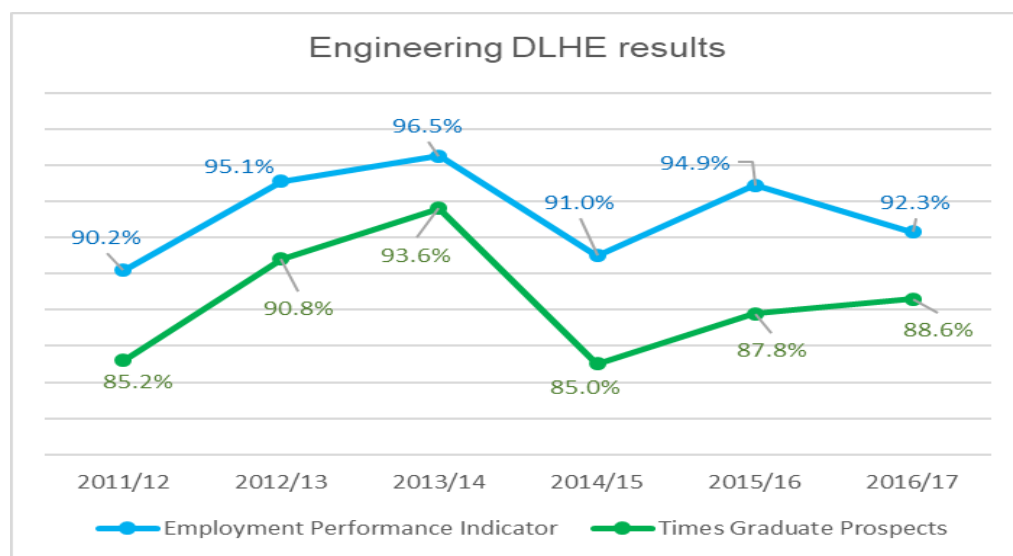


Fig. 29: Cardiff School of Engineering Graduate employability rates. Source: The DLHE survey

Postgraduate research students are encouraged by their supervisors to engage in networking opportunities (national and international conferences, seminars and research events), and seminars and networking opportunities are also advertised via flyers and e-mail.

The School organises an annual student conference which is very successful and is integral in fostering a research culture and interaction throughout the School's wider postgraduate research student community.

Table 14: Attendance at Gregynog conference for Research students (2015 – 2018)

	M	F	Total	% female
2015	28	3	31	10%
2016	27	3	30	10%
2017	31	8	39	21%
2018	20	4	24	17%



Fig. 30: Attendees at Gregynog student conference 2018

PGRs are supported in drafting papers for publication in high impact Journals and Conference proceedings and the majority of postgraduate students will have published at least one paper prior to completing their PhD. Teaching opportunities are provided in the form of demonstrating and assessing undergraduate work.

Supervisors work with PGRs to identify training needs as part of regular progress monitoring reviews. Training is provided both within the School, and via the University's Doctoral Academy to enhance skills to support PhD completion, as well as aid future career planning. The School provides Engineering-specific courses, and the Doctoral Academy provides a wide platform of training on research skills, teaching and professional development courses.

In addition to the above, PGRs on industrially funded PhD Programmes will carry out Research work with the Industrial partners, gaining access to state of the art facilities and industrial knowledge.

(v) Support offered to those applying for research grant applications

Comment and reflect on support given to staff who apply for funding and what support is offered to those who are unsuccessful.

The School supports those applying for funding by providing:

- Workshops and training on applying for grants, how to write a good application, costings etc
- A number of focussed development programmes of support focussing on particular funders (e.g. EPSRC, H2020, RAEng), particular cohorts (e.g. Early Career Researchers, EPSRC New Investigator eligible staff), or particular types of schemes (Fellowships, Marie Curie). These programmes are structured over a number of weeks and run annually, encouraging a cohort approach where applications are developed over a number of weeks or months and where participants can draw on group support and encouragement.
- Specific calls (e.g. EPSRC Manufacturing the future, Future Healthcare Technologies) are promoted through workshops and mini sandpits, and events where external funder representatives promote schemes or programmes (e.g. GCRF, EPSRC Programme leads, UKRO for European funding).
- A number of internal funding schemes provide seedcorn funding and access to devolved research funding (e.g. GCRF or EPSRC Impact Acceleration account). These are run in such a way as to replicate major funder scheme to give applicants experience of competitive grant funding.
- Assistance from ENGIN's research grants office which provides support for bid development. The office distributes weekly funding updates and maintains a grant pipeline to help plan workloads, put in place appropriate support and manage deadlines.
- Support from academic mentors, Line Managers/ Group leaders who are responsible for developing the research pipeline.
- A robust internal peer review process ensuring that applications have been thoroughly reviewed.

Where applications are unsuccessful applicants are encouraged to share feedback and investigate potential routes for revised applications, if appropriate. Training needs and sources of additional support are discussed and focus on areas of weakness identified by reviewers.

SILVER APPLICATIONS ONLY

5.4. CAREER DEVELOPMENT: PROFESSIONAL AND SUPPORT STAFF

(i) Training

Describe the training available to staff at all levels in the department. Provide details of uptake by gender and how existing staff are kept up to date with training. How is its effectiveness monitored and developed in response to levels of uptake and evaluation.

The University's staff development programme is the primary training provider for PS staff and includes courses for personal and professional development with face-to-face training as well as online modules. Online mandatory training is in line with requirements for academic staff. PS Line managers are required to attend the mandatory line management training at a local level and can attend Leadership and management programmes to develop further as line managers.

The School has an annual Staff Development budget of £25,000 with the opportunity to request more should the need arise. This budget is spent in its entirety annually and during the 3 year period August 2015 – July 2018 PS Staff completed 322 University Staff Development training courses with females attending 216 (67%) of the events.

(ii) Appraisal/development review

Describe current appraisal/development review schemes for professional and support staff at all levels and provide data on uptake by gender. Provide details of any appraisal/review training offered and the uptake of this, as well as staff feedback about the process.

The School has a 100% PDR completion rate. This is an opportunity to both assess the past year as well as to set objectives for the coming year. All line managers attend mandatory line manager training which includes training on undertaking PDRs. The attendance level for PS line managers on the Line manager training course is 100%. Evaluation of the course is collated via a formal feedback form as well as informal feedback collected at the event and it is used to further develop the training.

(iii) Support given to professional and support staff for career progression

Comment and reflect on support given to professional and support staff to assist in their career progression.

Discussions regarding career development and progression are included as part of the probation / PDR discussion. As there isn't a standard route for promotion for PS staff, individuals are encouraged to develop their skills and knowledge through training programmes and also by applying for secondments / other development opportunities across the University. This year the University launched an apprenticeship scheme for PS staff and the School is actively involved in identifying and encouraging staff members to enrol onto the Scheme.

ENGIN supports the implementation of the Cardiff Professional that provides a career planning tool for Professional Services staff and has made a pledge to the Technical Commitment. A University-wide Technical Staff Conference was held on 4 June 2018, organised by technicians, for technicians. All ENGIN technical staff were actively encouraged to attend this event. The 2019 Technical staff conference will be held in ENGIN and organised by the technical team. The School will continue to support Technical staff development **(AP 7)**.

5.5. Flexible working and managing career breaks

Note: Present professional and support staff and academic staff data separately

(i) Cover and support for maternity and adoption leave: before leave

Explain what support the department offers to staff before they go on maternity and adoption leave.

Individuals with 12 months' continuous service qualify for 18 weeks leave at full pay with 8 weeks at half pay, 13 weeks at statutory pay and an option to take a further 13 weeks as unpaid leave. Staff are entitled to reasonable paid time off for antenatal appointments, and treatments advised by a registered medical practitioner. In the case of adoption, the primary adopter is able to take time off to attend up to 5 appointments and the secondary adopter up to 2 appointments.

Before taking leave staff meet with their line manager and the Senior HR Advisor to discuss the eligibility for leave and pay, planning for the absence by following the maternity leave checklist, discussing cover arrangements, calculating the annual leave balance to consider how the annual leave will be used in conjunction with the maternity period, as well as agreeing the contact that will take place during the maternity leave period.

Content for a new section of the intranet has been developed specifically to support line managers to understand their responsibilities both pre, during and post leave. This includes a timeline, a maternity leave calculator and guidance for how line managers can approach Keep in Touch days, and links to support such as the University's nursery, childcare vouchers and other relevant policies. This content will be incorporated onto the School's webpages **(AP 15)**.

(ii) Cover and support for maternity and adoption leave: during leave

Explain what support the department offers to staff during maternity and adoption leave.

When PS staff go on maternity / adoption leave the role is usually covered by a fixed-term replacement. These are advertised as suitable for a secondment (internal development opportunity) or as a fixed-term role.

For academic staff the School may provide cover through the reallocation of duties to other staff members where there is capacity using the University's workload allocation model to ensure fairness. If the reallocation of duties is not possible the work will be covered by a fixed term appointment.

Those on maternity/adoption leave are offered up to 10 'Keeping in touch' (KIT) days, to allow them to attend activities such as seminars, training or departmental meetings. Academic staff who have taken maternity leave over the review period have used KIT days.

Line managers will maintain reasonable contact with staff to discuss return to work plans. Individuals will be made aware of the University's Work Life Balance Policy and the right to apply for flexible working, their ability to make specific requests to support their return such as access to a private room for breastfeeding / expressing during the working day and access to a fridge to store breastmilk, as well as providing information on childcare options / tax free childcare options.

(iii) Cover and support for maternity and adoption leave: returning to work

Explain what support the department offers to staff on return from maternity or adoption leave. Comment on any funding provided to support returning staff.

The School offers a returner's scheme that supports staff returning from long term absence (maternity or sickness absence). The scheme ensures that a meaningful discussion takes place to ensure that the most appropriate form of support is offered to

individuals. Examples of the support that is offered has included a semester free of teaching, or additional research support. The most important aspect of the scheme is that it is discussed specifically with the individual and they decide what support would suit their individual needs. If an individual applies for flexible working, discussions will also take place as to how the work will be covered, and whether additional resources will be required.

Feedback from a recent returner has been positive as evidenced in this quote:

“During discussions with HR and my line manager, we agreed a clear plan of what communication would take place during my maternity leave. The returner’s scheme has helped with my transition back to work. As part of the scheme, I opted for a semester free of teaching which allowed me time to properly integrate back into the department, kick-start my research and prepare for teaching. I appreciated that my employers recognised that returning to work after a year away requires considerable catching up, even when you maintain contact during leave”.

The success of this scheme has fed into a College / University wide scheme.

For PS staff a hand over between the individual covering and the returner takes place to ensure that the return to work goes smoothly.

(iv) Maternity return rate

Provide data and comment on the maternity return rate in the department.

Data of staff whose contracts are not renewed while on maternity leave should be included in the section along with commentary.

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Provide data and comment on the proportion of staff remaining in post six, 12 and 18 months after return from maternity leave.

Table 15: Maternity leave return rate for all staff groups (full-time)

Maternity leave (all staff, full time)				
	2015	2016	2017	2018
Academic	2	0	0	2
Research	0	0	0	1
PS	0	2	0	2
Total maternity	2	2	0	5
Total return	2	2		4
%	100	100		80
6 months post leave	2	2		
%	100	100		
12 months post leave	2	1		
%	100	50		
18 months post leave	2	0		
%	100	0		

During the period 2015 – 2018 8 members of staff (3 academic (with 1 member taking 2 periods of maternity during the period), 1 researcher and 4 PS staff) have taken maternity leave. All have either already returned or are about to return.

100% of academic staff (2) who took maternity leave during 2015 – 2017 returned to work and are still employed at the School 18 months later. 1 returned on a part time basis and 1 on a full time basis.

100% of PS staff (2) returned to work, both on a part time basis. These staff members both worked in the Admissions team and left their posts within 18 months due to a University restructure of Admissions. They were successfully appointed to higher graded posts within other departments.

In 2018 2 academic staff returned to work on a full time basis, and 2 PS staff will return to work in May and June 2019, 1 on a part time basis and 1 full time. The researcher is still currently on maternity leave and arrangements have been made to extend her fixed term contract by the length of her leave period.

(v) **Paternity, shared parental, adoption, and parental leave uptake**

Provide data and comment on the uptake of these types of leave by gender and grade. Comment on what the department does to promote and encourage take-up of paternity leave and shared parental leave.

All staff are entitled to the University's Paternity leave (one week's full pay) regardless of length of service, and those with 26 weeks' continuous service at the end of the 15th week before the expected due date are entitled to Ordinary Statutory Paternity leave which is paid at the statutory paternity rate.

Table 16: Paternity leave for all staff groups

		2015	2016	2017	2018	Total
PS (Tech)	Gr 2	1				1
	Gr 3					
	Gr 4					
PS (Admin)	Gr 2					
	Gr 3			1		1
	Gr 4			1		1
PS (MPS)	Gr 5	1				1
	Gr 6					
	Gr 7					
	Gr 8					
Research	Gr 6	2	1	4	3	10
	Gr 7			1	2	3
	Gr 8			1		1
Academic	Gr 6	1		2	1	4
	Gr 7	2		2		4
	Gr 8			2	1	3
Total		4	3	15	7	29

During the period 2015 – 2018 29 members of staff (100% male) took paternity leave. 86% of the paternity leave was taken by Academic and Research staff (25 people) at Grade 6 or above. Only one member of technical staff and 3 members of Professional Services took paternity leave during the period.

The University offers a number of initiatives to support staff:

Parental Leave	Unpaid leave taken that can be taken by parents with at least one year's continuous service. Entitlement: up to 18 weeks unpaid parental leave per child, four of which can be taken in the same year.
Emergency Leave for Support for Dependants	Time off to deal with an immediate crisis, sudden or unexpected circumstances and not an ongoing problem. The normal expectation is that no more than five days' paid dependants' leave would be taken in 12 months.
Shared Parental leave	Enables eligible parents to choose how to share the care of their child during the first year of birth or adoption.

During the period 2014 – 2018 a total of 86.5 days have been taken as paid emergency leave to support dependants. In 2014 the leave was taken equally by males (5) and females (5) but by 2018 the gender split have moved slightly with a bias towards males (6) compared to 3 females. From 2014 – 2017 Professional Services staff as well as Researchers and Academic staff accessed this benefit however in 2018 no research / academic staff took emergency leave to support dependants.

In 2014 we had one female member of administrative staff take parental leave and since its introduction in the UK in April 2015 one member of academic staff (male) has taken shared parental leave.

Details of these leave schemes are promoted on the University's intranet, on staff notice boards, at the School induction and at various information sessions organised for staff groups within the School. However as the number of research / academic staff accessing dependants leave during 2018 reduced to zero some additional work is required to establish why and to publicise the scheme **(AP 16)**.

(vi) Flexible working

Provide information on the flexible working arrangements available.

All staff can request flexible working but staff members with 26 weeks' continuous service can apply for flexible working by making a statutory application via the flexible working request form. Any staff member who wishes to make a flexible working

request to alter their start/ finish times/ working commitment would apply via the University's formal procedure.

Flexible working is promoted in job adverts, by including a positive statement making people aware that flexible working requests are welcome, at the local induction and through staff information sessions / staff meetings.

All applications for flexible working arrangements have been approved (Since 2014 4 PS staff (2F, 2M), 10 academic staff (5F: 5M)).

Before the start of each academic year, all staff with teaching commitments are invited to submit a request regarding the hours there are available to teach in order to plan the teaching timetable around any other commitments. This allows the School to plan and promotes the availability of flexible working opportunities amongst staff.

The School also promotes a culture of flexibility that enables people to exercise informal flexibility in the way that they work on a day to day basis. Staff have many informal work arrangements agreed with their line managers which aren't recorded.

(vii) Transition from part-time back to full-time work after career breaks

Outline what policy and practice exists to support and enable staff who work part-time after a career break to transition back to full-time roles.

The School's policy is to support all requests if possible. There has only been one request of this nature which was considered in line with the flexible working policy. In this instance a timely discussion took place with the individual and the request was supported.

5.6. Organisation and culture

(i) Culture

Demonstrate how the department actively considers gender equality and inclusivity. Provide details of how the Athena SWAN Charter principles have been, and will continue to be, embedded into the culture and workings of the department.

The School seeks to ensure that gender equality and inclusivity are embedded within decision-making processes and that their consideration by the School is visible to staff and students. The School seeks to "mainstream sustainable structural and cultural changes" in a number of ways:

- ensuring there are women in high profile positions in the School (e.g. the current and previous Director of Research have been women, whilst three out of six main committees are chaired by women);
- ensuring that senior management are involved in discussions on equality issues – two members of the School Board are on the ED&I Committee (Head of Department for Civil Engineering and the School Manager); the Chair of the School's E, D & I Committee has a regular slot at the School Board (three per year) to discuss EDI matters and also meets directly with the Head of School on a regular basis, enabling issues to be raised and discussed and ensuring that they are actively considered by the School's senior team;
- maintaining transparency when filling management roles within the School (these are advertised to give all relevant colleagues an opportunity to express interest and put forward their case for selection);
- highlighting equality-related issues in open communications within the School; e.g. there is a regular opportunity for EDI Committee to present or raise issues at School staff meetings, whilst events and information is promoted via email, posters and other media.

The School has also been pro-active in changing the culture of the School by implementing other initiatives including:

- EDI and Unconscious bias training for all staff
- Out of hours email policy advising staff to limit out of hours emails but if out of hours emails are required to include a strapline in the email stating ““I am sending this email outside of my normal working hours because I have chosen to work flexibly so whilst it suits me to email now, I do not expect a response or action outside of your own working hours”
- Networking opportunities for female staff via the TWISTEM group that meets monthly
- EDI statement on adverts

(ii) HR policies

Describe how the department monitors the consistency in application of HR policies for equality, dignity at work, bullying, harassment, grievance and disciplinary processes. Describe actions taken to address any identified differences between policy and practice. Comment on how the department ensures staff with management responsibilities are kept informed and updated on HR policies.

Issues are surveyed through biannual staff surveys. The last survey was administered in 2017 and results from the survey indicated that 74% of respondents believed that managers understood and acted on their responsibility when dealing with issues related to protected characteristics. 83% of staff thought they were treated fairly and with respect by their line manager and 82% felt that they are treated with respect by colleagues.

All line managers attend compulsory line management training which covers policies and procedures, and changes to policies are publicised via email and announced at relevant staff meetings. We monitor uptake of compulsory training (EDI, Unconscious Bias, Information Security) as a way of ensuring that individuals are aware of policies and procedures. The College HR team are involved in any complaints of equality, bullying, harassment, grievance or disciplinary procedures to ensure consistency of practice.

The 2017 Staff Survey identified that 8% of respondents indicated that they had been subjected to personal bullying or harassment in the past year whilst working at the University and 57% didn't feel able to report bullying/harassment without worrying it would have a negative impact on them. This was an area of concern as whilst we have a Dignity at Work and Study policy it suggested that it wasn't effective. In response the School initiated a follow on survey looking specifically at Bullying and Harassment in the workplace. 120 people responded and the results indicated that there had been instances of bullying, only 43% of respondents knew how to report instances of bullying and harassment, only 36% knew what support was available and 50% agreed that additional support was required.

The School's response to this has been to establish a group of Dignity at Work contacts that are available to provide support in an informal capacity and to assist individuals who would like to raise issues formally. Dignity at work was discussed at all-School meetings as a reminder to staff of their obligations and to inform them of the mechanisms for reporting bullying / harassment as well as to provide information on the available support.

(iii) Representation of men and women on committees

Provide data for all department committees broken down by gender and staff type. Identify the most influential committees. Explain how potential committee members are identified and comment on any consideration given to gender equality in the selection of representatives and what the department is doing to address any gender imbalances. Comment on how the issue of 'committee overload' is addressed where there are small numbers of women or men.

Following the Committee review there are six formal committees (other groups are more informally organised and do not necessarily have a formal agenda or minutes). The most influential committees are the School Board (effectively the senior management team, chaired by the Head of School), the Research Committee (chaired by the Director of Research) and the Teaching Committee (chaired by the Director of Learning and Teaching).

Table 17 shows the female : male ratios for School Committees for 2018/19.

Committee Name	Male Academic	Male Professional Services	Female Academic	Female Professional Services	Female as % of committee membership	Female Academic as % of academic committee membership	Chair
School Board	8	1	1	0	10%	11%	Male academic
Research Committee	4	2	1	0	14%	20%	Female academic
Teaching Committee	4	0	0	1	20%	0%	Male academic
IT Committee	3	4	2	1	30%	40%	Female academic
Equality, Diversity and Inclusivity Committee	4	2	1	3	40%	20%	Female professional services
Health, Safety and Environment Committee	12	4	4	2	27%	25%	Male academic
TOTAL	35	13	9	7	25%	20%	

In addition to the above the School's Board of Studies is chaired by the Director of Learning and Teaching (male) and membership includes all teaching academic staff in the School.

For three of the above committees the Chair is appointed by virtue of another role: the Head of School chairs the School Board, Director of Research and Innovation chairs the Research Committee and the Director of Learning and Teaching chairs the Teaching Committee. Other committee chairs are chosen by the Head of School in discussion with the School Board, following an open, advertised recruitment process among colleagues in the School. Similarly, in order to ensure that the most appropriate people are involved in discussions, membership of committees is also generally dictated by the management/admin roles held by staff. Addressing gender imbalance within committee membership is tackled via allocation of management duties, which are reviewed annually by the School Board.

In certain instances there are academic/research staff representatives on committees (IT Committee and EDI Committee) and these are opened for staff to apply, with decisions taken by the School Board in light of the knowledge and experience of applicants, their workloads and with a view to ensuring an inclusive balance of staff. All but one committee has female academic representation and half of the committees are now chaired by women. The streamlining of the School's committee structure has ensured that the overburdening of female colleagues with committee duties is now less of an issue and the maximum number of committees now attended by a female

academic is two. Whilst committees are generally smaller than in the past representation of staff is ensured by inviting additional colleagues to attend committee meetings for specific relevant discussions and reports.

(iv) **Participation on influential external committees**

How are staff encouraged to participate in other influential external committees and what procedures are in place to encourage women (or men if they are underrepresented) to participate in these committees?

Participating in other influential external committees is encouraged and recognised in the workload allocation model, the University's promotion criteria, and it is promoted as being important for REF. Staff are encouraged to nominate themselves for EPSRC and other research funders as reviewers or members of panels and Committees. Female staff members have specifically been invited to do so, alongside more general requests to all staff.

Calls for panel membership are communicated via the internal research bulletin, whilst particular calls are discussed in Research Committee or directly with the Director of Research where suitable applicants are identified and personally invited to apply. These have often targeted female academics as female staff are often underrepresented on Panels.

Levels of memberships is not consistently captured therefore we are not able to analyse participation by gender. The School will collate and record this information **(AP 17)**.

(v) **Workload model**

Describe any workload allocation model in place and what it includes. Comment on ways in which the model is monitored for gender bias and whether it is taken into account at appraisal/development review and in promotion criteria. Comment on the rotation of responsibilities and if staff consider the model to be transparent and fair.

A WLM has been in place since 2009/10 and was pivotal in the development of a university-wide workload framework. This framework enables WL modelling to take place more proactively, flexibly and equitably in the allocation of teaching, administrative duties and research time. For example, the balance between teaching and research time can be adjusted for individuals, while staff employed on the Teaching

and Scholarship pathway are allocated time for career enhancing scholarship and engagement activities.

Although all staff are expected to contribute to teaching, expectations are adjusted to take into account individual circumstances including part-time staff, those taking study leave and staff managing large research grants.

Allocations are paused for staff on sickness or maternity/paternity leave. In order to support them on their return to work, they are given a phased reduction in teaching load and/or the assistance of a postgraduate researcher through the returner's scheme. Wherever possible, previous teaching duties are re-assigned with no change in syllabus.

Following the academic restructure workload allocations have been undertaken by the Heads of Department, in consultation with Heads of Teaching to ensure that work across all areas of activity are considered. The School Board also considers the draft allocations to ensure consistency across departments and these are then issued to individual staff members for comment and approval. Anonymised (and normalised to one FTE) details of all staff workload allocations are published to allow staff to compare their individual allocation to those of colleagues. The tariff allocations are reviewed yearly by School Board and staff are encouraged to highlight any inconsistencies to ensure that the allocations are as reflective of reality as possible. The impact of workload allocation on gender is only monitored informally at present therefore an Equality Impact Assessment of our allocation process is required **(AP 14)**.

(vi) Timing of departmental meetings and social gatherings

Describe the consideration given to those with caring responsibilities and part-time staff around the timing of departmental meetings and social gatherings.

An annual calendar of meetings is published during August for the following academic year. As an AS implemented initiative (from 2015/16) the School introduced core hours (which states that all formal school meetings will start and end between 10am and 4pm. Beyond this, Departmental meetings and meetings of smaller groups (eg Research groups) are restricted in a similar way to avoid days where part-time staff are not working. School away days always finish mid-afternoon.

The Christmas party takes place during the afternoon and finishes by 4pm. The School's Wellbeing Group has initiated a series of activities many of which (for example yoga classes, museum tour) are scheduled to coincide with typical lunchtime periods to make them as accessible as possible for all.

(vii) **Visibility of role models**

Describe how the institution builds gender equality into organisation of events. Comment on the gender balance of speakers and chairpersons in seminars, workshops and other relevant activities. Comment on publicity materials, including the department's website and images used.

Organisers are strongly encouraged to consider the diversity of speakers at events and there is a good staff / student gender balance at all open days and outreach events. Seminars and events are organised directly by research groups based on academic merit and relevance. Gender balance of seminar speakers is not currently monitored therefore this will be a future action along with reviewing the organisation of the School's seminar series **(AP 18)**.

Our marketing and publicity materials represent the inclusive culture of the School, are representative of both male and female students and staff, and do not exclude particular groups. Women and girls are represented in a large number of the images and videos and the School ensures that content reflects the achievements of female students and staff in a way that is equivalent to the way male students and staff are portrayed. Inclusive language is used and the marketing team takes care to promote engineering as a broad and diverse field and aims at all times to dispel the idea that it is a career which is more applicable for men.

Achievements of women in engineering are publicised through the website, publications, and social media channels e.g. using Twitter and Facebook to promote news involving women engineers and awards won by our female staff and students.

The School website includes a section on Our Inclusive Culture, and a Women in Engineering page, as part of the About Us section, which includes information about our Athena Swan Award and our commitment to women in engineering.

(viii) **Outreach activities**

Provide data on the staff and students from the department involved in outreach and engagement activities by gender and grade. How is staff and student contribution to outreach and engagement activities formally recognised? Comment on the participant uptake of these activities by gender.

The School is highly committed to the outreach agenda and employs a permanent member of staff to support this work. Engagement activities are discussed at PDRs, are recognised in the workload model and are used to support promotion. Students are

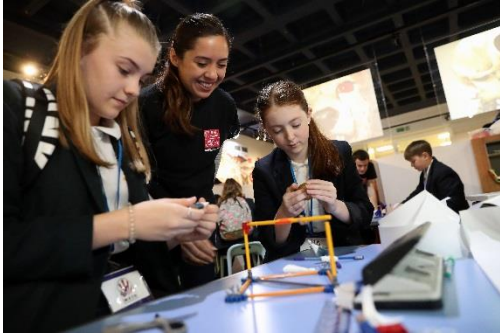
paid the National Living Wage for contributing to outreach events and they receive training and support.

We do not currently record data on staff involved in outreach and engagement activities, however this is a future priority as we understand that females do more outreach which may limited the time available for research work **(AP 19)**. Our outreach strategy ensures that a diverse range of people are involved in activities with students and staff from similar backgrounds to the audience asked to participate. Since our female staff and students are far more active in outreach activities a 50:50 male:female helper ratio is achievable. Outreach volunteers are selected based on their ability to connect with the given audience over and above anything else.

We have a 50:50 gender balance policy when it comes to the audience. The School aims to run activities that can be delivered to entire classes or year groups. When there is limited capacity (such as the STEMLive event) mixed schools are requested to bring a group with a 50:50 gender split. Since March 2016 the School's outreach team have been involved in 107 events with audience participation of approx. 30,000.

Table 18: Examples of outreach activities undertaken by the School

National Eisteddfod Bangor	Catrin Williams ran stand in Science tent as part of NRN contribution	9 th - 10 th Aug	Families	1000	CW
SMASHfest Neath	Ben Mason assisted with festival	2 nd Sept	Families	500	BM
St Athan primary	Cardiff Racing visit with car	27 th Sept	Yr 0-6	200	CR
Oakfield primary	Cardiff Racing visit with car	28 th Sept	Yr 1-6	200	CR
St Philip Evans	Cardiff Racing visit with car	29 th Sept	Yr 4-6	120	CR
New Scientist Live	Heungjae Choi exhibited in Excel London	28 th Sept – 1 st Oct	Schools	2000	PSE/HC
Cwmaber Infants and Juniors	Cardiff Racing visit with car	6 th Oct	Nursery - Yr 6	260	CR
STEMLive2017 Mission to Mars	Hands-on day at National Museum Wales for 12 SW schools	18 th Oct	Yr 8	139	ENGIN
St. Philip Evans After School club	Designing and building kit car for Greenpower Goblin challenge	Oct-Dec	Yr 6	12	BM
Museum After Dark	50 staff and students from ENGIN ran activities and live exhibits	2 nd Nov	Families	1750	ENGIN
Diva Derby @ Whitchurch High	Cardiff Racing assisted with event.	22 nd Nov	Yr 9	80	CR



One of the main areas of improvement has been to create more gender-neutral activities and resources that avoid themes perceived as traditionally masculine (and which are already over-represented in outreach e.g Racing Competitions).

We have been awarded an RAEng Ingenious grant (£28,660) to work with Go Girl Academy and GirlGuiding Cymru over the next 18 months to develop and pilot new resources and also embed gender inclusive practice into our training for outreach volunteers and we were highly commended for the Young Innovator category at the Collaborate to Innovate Awards run by 'The Engineer' in 2017 for our work with Radnor primary school.

7002 words

6. CASE STUDIES

7. FURTHER INFORMATION

Recommended word count: Bronze: 500 words | Silver: 500 words

Please comment here on any other elements that are relevant to the application.

8. ACTION PLAN

The action plan should present prioritised actions to address the issues identified in this application.

Please present the action plan in the form of a table. For each action define an appropriate success/outcome measure, identify the person/position(s) responsible for the action, and timescales for completion.

The plan should cover current initiatives and your aspirations for the next four years. Actions, and their measures of success, should be Specific, Measurable, Achievable, Relevant and Time-bound (SMART).

See the awards handbook for an example template for an action plan.



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Cardiff School of Engineering Athena Swan Action Plan 2019

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
1A	Recruit students onto the EDI Committee - EDI Committee does not currently have student representation and therefore lacks a student voice to support the work of the School.	<p>Committee structure review led to merger of SAT and ED Committee to form EDI Committee.</p> <p>Membership refreshed with many members on the committee as a result of the post they hold. A number of co-opted all holding a 2 year term of office.</p> <p>An expression of interest exercise took place and a number of co-opted members joined the committee.</p>	Recruit students onto the EDI Committee via an expressions of interest process.	Sept - Dec 19	Co-Chairs of EDI Committee Student Services Manager	All student vacancies on the EDI Committee filled ensuring balanced representation of the student population.
1B	Review EDI Committee membership every 2 years and renew call for expressions of	AS SAT and ED Committee merged in 2018 to form the EDI Committee following a full review of School Committees	Evaluate and review Committee Structure to ensure it is delivering on the School's EDI agenda	Jun 20	Co-Chairs of EDI Committee Head of School	Full Committee membership in place to continue to deliver on the School's EDI plans

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	interest in order to support culture change by engaging as many staff and students in the School's EDI efforts.		Consider gender make up of Committee in terms of career pathway Call for expressions of interest to rotate Committee membership	Sept 20		Ensuring a diverse membership taking into account the importance of multiple identities and intersectionality Smooth transition to a new membership of the EDI Committee before the next submission
2	Improve communication of the work of the EDI Committee and the AS action plan as this has previously been verbal and staff focused with little attention given to sharing information with students	Regular reporting to School Board via the Co-chairs and School Board members Information shared via School meetings and Head of School communications	Save EDI Committee documents and action plan on the School shared drive accessible by all staff Develop a School EDI communication plan in conjunction with the College Communications team Work with the student representatives to set up student focus groups to identify the most effective means of communicating	Dec 19 Jan 20 Nov 19	Co-Chairs EDI Committee School Manager College Publicity Officer Student Services Manager College publicity Officer	Staff and students know where to find EDI information and who the contacts are. This will be measured via a specific question in the School's annual Student and Staff culture survey.

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			<p>and sharing information with students</p> <p>Use School-specific intranet to hold information relevant for staff (this is not available for students)</p> <p>Extend and enhance the information on School internet pages for wider / external visibility</p>	<p>March 20</p> <p>March 20</p>	<p>School Manager Senior HR Advisor</p> <p>School Manager College Publicity Officer</p>	
3A	Gain an understanding of the culture within the School by consulting with staff and students	Draft culture survey prepared in preparation for launch in May.	<p>Undertake a review of the draft survey to ensure that information on the relevant areas of the AS action plan are included in the survey in order to be able to assess impact of initiatives.</p> <p>Run annual cultural survey to establish staff and student views on the existing culture and identify issues.</p>	<p>May 19</p> <p>June 19</p>	Working group involving: Co-Chair of EDI Committee, Dignity at work contacts lead Research staff representative	Survey response rate at 50% or above for all staff and students

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
3B	Review of action plan to ensure actions are in line with survey results		Update AS action plan in light of responses to staff and student views	Dec 19		
3C	Athena Swan budget to continue to be available to support AS initiatives and raise the profile of EDI issues across the School	<p>School budget used to support the following initiatives / events:</p> <p>2 funded students (selected via an open call to all students) to attend the WES conference</p> <p>2 researchers to attend the Marie Curie Alumni Association (MCAA) Gender Equality, Diversity and Inclusion Workshop in Newcastle</p> <p>EDI Committee member to observe an Athena Swan assessment panel</p>	<p>Prepare budget bid for School Board to approve to continue to hold AS budget.</p> <p>Publicise funds available via a range of communication methods to students and staff in order to support EDI initiatives.</p> <p>Invite expressions of interest from students (2 places available) to attend the WES student conference annually in November.</p> <p>Hold a Women in Engineering event in the School</p>	<p>June 19</p> <p>Aug - Sept 19</p> <p>Aug – Sept annually</p>	<p>Co-Chair of EDI Committee</p> <p>Co-Chairs of EDI Committee</p> <p>Co-Chairs of EDI Committee</p> <p>Action group to be established once budget request approved</p>	<p>£5000 request approved with ability to request more in year if needed</p> <p>Requests received for funds to support various EDI initiatives:</p> <ul style="list-style-type: none"> - Attendance at events and sharing of good practice via a report to the School's EDI Committee - Funds to support to organisation of an event in Cardiff

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
			Identify a comparable Engineering Department holding a Silver / Gold award for consultation and advice on achieving Athena Swan at a higher level		Co-Chair of EDI Committee School Manager	
4	Student data: Investigate decline in Female PGR student numbers (including applications and acceptances)		Look at cohort data including fee status, country of origin, sponsor, to establish potential underlying explanations to the decrease in numbers over the last 2 years. Identify reasons for the drop in proportion.	July 2020	Director of PGR PGR Office Manager	Clear understanding of the reasons with a clear plan to address the situation in order to increase the proportion of female PGR student by 10%
5	Support Research staff career development	Draft Research Staff Development programme developed and approved by School Board subject to amendments	Final amendments to be made to the proposal prior to it being considered at TEC	Jun 19	Senior HR Advisor Research Staff Coordinator Research staff member	Implementation of the Research Staff Development Programme in 2019 with 20% of eligible researchers (50%

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
			Programme will be organised within the academic departmental structure with formal launch via expressions of interest prior to Sept 19 to coincide with the new academic year.	Sept 19	Heads of Departments, Heads of Teaching with support from Senior HR Advisor	female) completing the programme
6	Support career development of academic staff	Initial exercise undertaken by Deputy Head (Staff) in 2018. Exercise proved useful to identify those academic staff who needed support to progress via the promotion route.	<p>Heads of Departments to be fully briefed on the scheme.</p> <p>Length of time in post data to be reviewed annually at the beginning of the academic year</p> <p>Encourage female academics to complete leadership courses via</p>	<p>Jun - Aug 20</p> <p>Sept 20</p>	<p>Deputy Head (Staff) and Heads of Departments with support from Senior HR Advisor</p> <p>Heads of Departments with Senior HR Advisor</p>	<p>Support discussions to be held with identified individuals in advance of the Promotions application window and the PDR cycle which runs annually from Feb – May.</p> <p>Actions identified to be recorded as part of PDR in order to measure progress throughout the year</p>

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
			direct targeting and the PDR process			
7	Support career development of technical staff	ENGIN has pledged support to the Technical Commitment	<p>ENGIN technical staff to plan and organise a technical conference on site</p> <p>Actively promote technical staff to engage with HEaTED</p> <p>Consult with Technical Staff to establish what resources they require to support their development</p> <p>Support individuals who would like to gain Professional Registration and support them through the process</p>	<p>June 2019</p> <p>Dec 2021</p> <p>June 2021</p> <p>Dec 2022</p>	<p>Technical Services Manager Cross School working group</p> <p>Technical Supervisor (Teaching and Learning)</p> <p>Technical Supervisor (Teaching and Learning) Senior HR Advisor</p> <p>Technical management team: Technical services manager and 4 Technical Supervisors</p>	<p>Successful event attended by 80% of technicians from across the University</p> <p>Improve staff survey results for technical staff in the following areas: "I receive the right training and development I need to do my work" by 20% (from 50%) and "I have the opportunity for career development" by 10% (from 39%)</p>
8	Consult with Research staff to establish what barriers exist that	No action already taken	Hold focus groups with female researchers to identify the barriers that exist in preventing female	Jan 21	Research Staff Coordinator	50% of female research staff to attend the focus groups

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
	prevent female researchers from advancing into academic posts		researchers from moving into academic careers.			Output from the focus groups to be considered by the Research Staff Coordinator, Deputy Head (Staff) and Senior HR Advisor
9	Introduce mechanism for collecting exit feedback from academic staff	A central HR exit questionnaire is sent as a link in an email to all leavers but response rate is low	Develop and implement an exit questionnaire to be used to hold exit interviews with academic and research staff members who choose to leave the School (excluding the end of fixed term contracts) Exit interview feedback considered at School-level to see whether any changes required to School practices.	By Dec 2020 January 2021 onwards	Senior HR Advisor to develop exit interview questionnaire. Exit interviews to be held by the School's HR team.	100% exit interviews completed during the review period Positive actions implemented following exit interview feedback
10	Attract and appoint more female job applicants	EDI statement included on all adverts encouraging applications from under-represented groups and	Use the Gender Decoder tool to ensure that the text used in adverts does not limit our candidate pool by	July 2019	Staff Office team	Increase the number of applications from female academics by 15%

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
		<p>making applicants aware that we encourage requests from those wishing to work flexibly</p> <p>Potential female applicants identified by recruiters and group members in order to directly target them with information about the vacancies</p> <p>Review of recruitment methods with all academic and research posts being advertised on WISE</p> <p>Male and female contacts included on all adverts as options for informal discussions</p> <p>Female academic included on every interview panel for academic posts</p> <p>Mandatory EDI and Unconscious bias training for all staff</p>	<p>putting off female candidates</p> <p>Improve recruitment messages by developing generic advert text to sell the School and the departments in order to increase the number of applications from female applicants</p> <p>Introduce Search Committees in order to identify potential candidates, specifically female candidates in order to personally target individuals</p> <p>Introduce shortlisting panels of 2-3 people into the recruitment process to eliminate the potential for unconscious bias</p>	<p>Sept 2020</p> <p>Dec 2020</p> <p>Dec 2020</p>	<p>Senior HR Advisor School Manager</p> <p>Staff Office team</p> <p>Staff Office team</p>	<p>Improve the proportion of female academics shortlisted by 10%</p>

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		Panel Chairs to have attended chairing University appointing panel training				
11	Embed continuous improvement ethos to induction and new starter information		<p>Develop a mechanism to review the School's local induction and implement recommendations for improvement</p> <p>Review 90 day starter pack evaluation feedback forms and implement feedback</p> <p>Refine the School Staff Handbook by inviting feedback from recently appointed staff.</p> <p>Handbook to be updated and moved online to allow accessible up to date information</p>	<p>June 2020</p> <p>Dec 2020</p> <p>July 2021</p> <p>Dec 2021</p>	<p>Staff Office team leader</p> <p>Senior HR Officer in conjunction with Central HR in order to access feedback / evaluation forms</p> <p>Senior HR Advisor with support from the Staff Office team</p>	<p>Improved response to the question on induction in Staff Survey by 20% (from 59% positive)</p> <p>Staff Handbook updated and fully accessible online by all staff</p>
12	Staff Information sessions – evaluate		Feedback received as part of the evaluation process	Jun 2020	Staff Office Team Leader	

AP	Planned action/ objective and rationale for action	Actions already taken / 2015 AS action plan	Planned actions	Timeframe (start/end date)	Person responsible (include job title)	Success criteria and outcome
	feedback and implement changes.	Recently introduced information sessions in response to staff demand	to be used to further develop sessions. Annual consultation with staff to establish topics for discussion at the information sessions		Staff Office Administrator	5 sessions per year held in areas suggested by staff 100% positive feedback received from the evaluation.
13	Develop line manager guidance to ensure line managers are clear of their expectations and that PDR discussions are as meaningful as possible.	Line manager training developed which covers the role of the line manager in the probation and PDR process	Develop line manager guidance to support the PDR discussions ensuring that relevant topics are covered, for example readiness for promotion	June 2022	Senior HR Advisor School Manager Heads of Departments	Improve staff perception of the usefulness of the appraisal process as indicated in the Staff Survey results. Positive response increased by 20% (from 58%)
14	Continue to review and improve the workload models and teaching allocation process	Ongoing annual review of the Workload Model taking into account feedback from staff that is collected via drop in sessions with management as well as via the WAMS system where academics are able to submit queries and comments	Continue to gather staff feedback on WAMS across the School via the WAMS system and drop in sessions and implement improvements. Review WAMS annually and assess workload by	July 19 and annually thereafter July 19 once allocation for	School Manager Head of School EDI Committee	Improved staff survey results "I can meet the requirements of my job without regularly working unreasonable hours" by 15% (from 51% for all staff, 21% for T&R staff)

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		before accepting their allocation.	gender to safeguard against any bias. Implement Equality Impact Assessment of WAMS to ensure that female academics are not disproportionately affected by the workload allocation.	19/20 published		Workload not disproportionately affecting female academics
15	Develop resources on the School's intranet to include the toolkit on family leave and Line Manager information to support maternity, paternity, adoption leave and the ongoing implementation of the returner's scheme	Returner's scheme trialled successfully	<p>Raise awareness of the paternity, shared parental and parental leave schemes via all staff meetings, the staff handbook and the School intranet</p> <p>Promote the returner's scheme on the intranet, in the School handbook and as part of the Line Manager's guidance</p> <p>Implement and use Planned Leave Checklist</p>	<p>Dec 2021</p> <p>Dec 2021</p> <p>July 2019</p>	<p>Staff Office team</p> <p>Staff Office team</p> <p>Line Managers with support from Senior HR Advisor</p>	<p>100% of staff returning from long term absence to be offered support in line with the returner's scheme</p> <p>Maintain 100% return rate from maternity</p>

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16	Improve awareness of flexible working and the application process	Information about Flexible working is currently shared via staff meetings, information sessions and local induction	Include flexible working information in the Staff Handbook and continue to promote at information sessions / meetings and inductions	Dec 2021	Senior HR Advisor Staff Office team	Improved staff survey results in staff survey question "As long as I get the work done, I have the freedom to work in a way that suits me" by 8% (from 77%)
17	Develop a process for collecting and recording data showing academic representation on external committees		Consistent collection and recording of External Committee membership in order to support the School's REF return and manage workloads	Dec 2021	Research Manager	Robust collection of external committee data with at least 80% of ENGIN staff recorded by 2021.
18	Review the management and organisation of the School's seminar series, to include gender monitoring		Develop an annual School Seminar Programme taking into account gender balance of speakers Monitor and record gender of speakers	Sept 2019 50:50 gender balance by Sept 2021	Head of School Research Office Manager	Robust collection and monitoring of seminar speakers by gender to ensure 50:50 f:m ratio
19	Record data on staff involved in outreach		Collate data in order to accurately record and	July 2021	Outreach Officer	Accurately recorded and allocated Outreach work in WAMS

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			monitor outreach work in the workload model			