

<b>Name of institution</b>	Imperial College London	
<b>Department</b>	Earth Science and Engineering	
<b>Focus of department</b>	<b>STEMM</b>	
<b>Date of application</b>	November 2020	
<b>Award Level</b>	<b>Bronze</b>	
<b>Institution Athena SWAN award</b>	<b>Date: April 2016</b>	<b>Level: Silver</b>
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<b>Telephone</b>	02075940903	
<b>Departmental website</b>	<a href="http://www.imperial.ac.uk/earth-science">http://www.imperial.ac.uk/earth-science</a>	

<b>Department application</b>	<b>Bronze</b>	<b>Actual</b>
<b>Word limit</b>	<b>10,500</b>	<b>10,149</b>
<i>Recommended word count</i>		
1. Letter of endorsement	500	500
2. Description of the department	500	450
3. Self-assessment process	1,000	801
4. Picture of the department	2,000	1,946
5. Supporting and advancing women's careers	6,000	5,988
6. Case studies	n/a	
7. Further information	500	464

## **1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT**

### **Word count: 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.*

27 November 2020

**Professor Mark Sephton**

Dani Glazzard  
Head of Athena SWAN

First Floor, Napier House  
24 High Holborn,  
London,  
WC1V 6AZ

Dear Dani Glazzard,

I am Head of Department of Earth Science and Engineering (ESE) and chair our new Equality, Diversity, Inclusion and Culture (EDIC) Committee. One of my key motivations for taking the position in 2016 was the opportunity to develop the Department's culture and put equality, diversity and inclusion (EDI) at its heart. We have already improved processes and started new initiatives, and I am proud to write this letter in support of ESE's application.

Our primary departmental aim is to increase the number of female researchers. Currently 21% of all academic staff are women and 21% of professors are women. We are proud that our percentage of female professors and undergraduates are above the relevant national benchmarks, but remain aware of the "leaky pipeline".

My focus is to develop a departmental culture where all can thrive and to provide a workplace where women want to study or work. I personally meet every senior Postdoctoral Research Associate (PDRA) annually to discuss their career and hold biannual Q&A sessions for all our research staff, recognising this is such a key career transition stage.

I support EDI in ESE and set an annual budget of £100,000 to ensure that activities to promote EDI are fully resourced. We have run EDI development workshops since 2014. In 2017, I introduced Active Bystander training for all staff and students. This year we added Promoting Equality and Diversity, Bullying and Harassment, Unconscious Bias and Racism Awareness training. ESE has also pioneered workshops on the menopause at Imperial, including to inform managers of the extra challenges women may face at this time and how to support them. We have converted one of our rooms into a "tranquillity room" for people who need quiet time, for example for mental health or breast-feeding. We are considerate of those with caring responsibilities, hold departmental seminars within core hours 10am – 4pm, and I advocate flexible working.

Gender equality requires improved representation of women in the department. In our 2019 academic staff recruitment drive, I led recruitment process changes, and of 308 applicants, 30% were women, and 50% of the shortlisted candidates were women: gender-coded words were removed from job adverts, and the shortlist and interview panel were reasonably gender balanced. At the interview day, where candidates typically were invited to an evening dinner, I instead hosted lunch, resulting in positive feedback from candidates with caring responsibilities. As a result of the process, we hired two new senior lecturers, one female and one male.

We developed this application under the leadership of Dr Rebecca Bell. I am excited that the work and the discussion leading to this application and action plan provides an excellent framework for our strategy on gender equality. I will view it as a key part of our overall EDI strategy as a department. I can certify that the information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the department.

Yours sincerely,

Professor Mark Sephton  
ESE Head of Department

## Abbreviations

ACSE	Applied Computational Science and Engineering
APP	Academic Promotions Panel
BSc	Bachelor of Science
DOM	Department Operations Manager
DoR	Director of Research
DPS	Director of Postgraduate Studies
DRC	Departmental Research Committee
ECR	Early Career Researcher
EDDC	Equality, Diversity and Departmental Culture
EDI	Equality, Diversity and Inclusion
EDIC	Equality, Diversity, Inclusion and Culture
ESE	Earth Science and Engineering
FTE	Full Time Equivalent
GradSoc	Postgraduate Society
HoD	Head of Department
JLR	Job Level Review
KIT	Keeping In Touch
MEF	Metals and Energy Finance
MHAT	Mental Health Awareness Team
MSc	Master of Science (PGT programme)
MSci	Master in Science (4-year UG programme)
NERC	Natural Environment Research Council
PDRA	Postdoctoral Research Associate
PE	Petroleum Engineering
PFDC	Postdoc and Fellows Development Centre
PG	Petroleum Geoscience
PGC	Postgraduate Committee
PGR	Postgraduate Research
PGT	Postgraduate Taught
PhD	Doctor of Philosophy
PRDP	Personal Review Development Plan
PTO	Professional, Technical and Operational Services
REF	Research Excellence Framework
Reps	Representatives
RSM	Royal School of Mines
RSMU	Royal School of Mines Union
SAT	Self-Assessment Team
UG	Undergraduate

## 2. DESCRIPTION OF THE DEPARTMENT

Word count: 450 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 Department of Earth Science and Engineering (ESE) at Imperial College London is engaged in the teaching and research of science and engineering that is both blue skies and applied and ranges from the outer reaches of the Cosmos to the inner recesses of the Earth. We are one of only two departments worldwide where Earth Science and Engineering are coupled, which provides a unique opportunity to put theory into practice and we are well known for our strong links with industry. Our research groups are organised under three research sections – Earth and Planets, Computational Geoscience and Engineering, and Natural Resources Geoscience and Engineering – but processes and practices are consistent across all three as we operate organisationally as a single department.

*Figure removed as individuals are shown*

*Figure 1: a) and b) The Royal School of Mines, c) the RSM café, d) a strong sense of community exists in the RSM and students often like to wear the RSM logo.*

As of 1 November 2019, we have 43 members of Academic staff ranging from Lecturer to Professor (9 women), 69 Research staff (13 women), 8 Learning and Teaching staff (4 women), 24 Professional and Operational Services staff (16 women) and 9 Technical Services staff (3 women). Our research-active staff work on both pure Earth Science and Earth Engineering topics. Given this mix we have chosen to benchmark our Academic staff data against both UK Earth, marine and environmental science departments (HESA cost centre 111) and Mineral, metallurgy and materials engineering departments (HESA cost centre 117).

We offer three undergraduate programmes which can be taken as a 3-year BSc, or a 4-year MSc. As of 31 December 2019, we have 257 undergraduates across the four year-groups (102 women). We also offer four MSc programmes. As of December 2019, we have 175 MSc students (60 women) and 165 full-time and 10 part-time PhD students (56 and 3 women, respectively). We benchmark our student numbers against HESA subject codes F6 Geology and H8 Chemical, process and energy engineering. As our MSc Applied Computational Science and Engineering (ACSE) course has only been running since 2018-19 we do not compare the student numbers yet to a national benchmark. In 2020, we launched a new MSc, Environmental Data Science and Machine Learning, which will accept applications for 2021 entry onwards.

Total number of staff and students by gender				
	Number of Women	Number of Men	Total number	Percentage Women
Academic Staff	9	34	43	21%
Research Staff	13	56	69	19%
Learning and Teaching Staff	4	4	8	50%
Professional and Operational Staff	16	8	24	67%
Technical Services Staff	3	6	9	33%
<b>Staff total</b>	<b>45</b>	<b>108</b>	<b>153</b>	<b>42%</b>

UG Students	102	155	257	40%
MSc Students	60	115	175	34%
PhD Students	59	116	175	34%
<b>Student total</b>	<b>221</b>	<b>376</b>	<b>597</b>	<b>37%</b>

*Table 1: Data on total number of staff and students by gender (31/12/2019)*

We are a friendly and inclusive medium sized department within Imperial and based mainly in the Royal School of Mines (RSM) building in South Kensington, Central London (Fig. 1) with one research group recently established at the White City Campus. There is a café in the RSM and several common rooms in ESE for staff and students to relax and socialise. We hold a daily coffee break at 11am for staff and PhD students. Our students develop a strong sense of identity with the RSM and its Union of ESE and Materials departments and have lots of opportunities to bond during fieldtrips and department-hosted activities.

*Figure removed as individuals are shown*

*Figure 2: Examples of different ESE working environments a) Laboratories, b) MSc student conference, c) Fieldtrips and d) Away Days.*

### **3. THE SELF-ASSESSMENT PROCESS**

**Word count: 801 words**

*Describe the self-assessment process.*

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

The current Athena SWAN self-assessment team (SAT) was assembled in July 2019 when Dr Rebecca Bell was appointed as the SAT chair. An open invitation to staff and PhD students asked for volunteers from ESE with an interest in gender equality issues to join the SAT. Everyone who responded positively was invited to join.

We have 16 members (9 women) which represent PhD students, academic staff at all levels, and professional, technical and operational services (PTO) staff. There is a near 50:50 gender balance and the team includes people of different nationalities and cultures (Fig. 3). The SAT welcomes all volunteers to join, and we do not seek out to achieve a particular gender balance on the team though we are grateful to have it. Several members of the SAT have caring responsibilities and many work flexibly. A member of Imperial's department of Chemical Engineering SAT sits on our team to share experiences and help promote best practice amongst different SATs. One of our SAT members sits on the Imperial's Civil Engineering department EDDC committee. Membership of the SAT is recognised as an important internal contribution in our annual Personal Review Development Plan (PRDP) appraisal process.

As of 2020 the ESE SAT reports to the department's new Equality, Diversity, Inclusion and Culture (EDIC) committee led by the Head of Department (HoD), which will meet termly from November 2020. The Athena SWAN SAT chair is also a member of the Engineering Faculty Equality, Diversity and Culture committee and College Athena SWAN committee who meet termly.

The ESE SAT has access to an annual EDI budget of at least £100,000 to support activities initiated such as International Women's Day and Women in Engineering Day events, photography, focus groups, seminars and workshops.



**Dr. Rebecca Bell**

Senior Lecturer

Experience of ESE as a PDRA and academic. Taking maternity leave in Oct 2020 for birth of first child

**Chair of SAT, early-mid career representative**

Coordinated the submission and was involved in writing of all sections Section 2,3, 4.2



**Dr. Emma Passmore**

Senior Teaching Fellow

Two periods of maternity leave in-post. Working mother with young children; recently PT.

**Senior Tutor, Deputy Admissions Tutor**

Sections 4.1, 5.5, 5.6



**Prof. Chris Jackson**

Equinor Professor of Basin Analysis

Working father with three young children Spouse not an academic Racial minority from a working-class background

**Deputy Co-Director (MSc Petroleum Geoscience)**

Sections 5.3, 5.6



**Ms Victoria Murphy**

Liaison and Communications Manager

I work flexibly to fulfil volunteer commitments.

**Communications and outreach representative**

Sections 2, 5



**Dr. Katharina Kreissig**

Laboratory Manager

Was a PDRA and Marie Curie Fellow until she became mother to two children. Worked in Industry before current technical support staff position (PT 0.8FTE).

**Technical support representative and represent ESE SAT on the Civil Engineering department SAT**

Coordinated submission as co-chair Section 4.1



**Dr. Peter Fitch**

Senior Teaching Fellow

Experience as PDRA and academic staff member. Supporting students' across curriculum and signposting support (inc. wellbeing)

**PGT Senior Tutor, Department Disabilities Officer, PGT Admissions tutor**

Section 4.1



**Dr. Valentin Laurent**

Senior Teaching Fellow in Pedagogic Transformation

Working father with 1 young child. Spouse is an academic.

**Undergraduate data analyst**

Section 4.1



**Alex Lipp**

PhD student

Experience in department as a PGR student

**PhD representative**

Section 5.6



**Victoria Fernandes**

PhD student

International PGR student from a latino background. Member of GradSoc committee 2018-2019

**PhD representative**

Section 5.6



**David Pedreros Bastidas**

PhD student







International PGR student from a latino background. Member of GradSoc committee 2019-2020

**PhD representative**

Section 5.6

12 years industry experience



	<p><b>Dr Matthew Genge</b> Senior Lecturer</p> <p>Balanced work and childcare during early part of career</p>	<p><b>Undergraduate teaching, career progression and fieldwork</b></p> <p>Section 4.1, 7.1</p>
	<p><b>Dr. Sam Krevor</b> Senior Lecturer</p> <p>Working father with young children</p>	<p><b>Member of the Postgraduate Research Committee</b></p> <p>Coordinated submission as co-chair Section 5.3, 5.6</p>
	<p><b>Dr. Adriana Paluszny</b> Senior Lecturer</p> <p>Working mother with young children</p>	<p><b>Member of the Postgraduate Research Committee</b></p> <p>Section 5.5</p>
	<p><b>Dr. Emma Watson</b> Department Operations manager</p> <p>Manages work with caring responsibilities</p>	<p><b>Department Operations Manager</b></p> <p>Section 5</p>
	<p><b>Katie Rycraft</b> Resources and Research Administrator</p> <p>Working mother with young children. Works flexibly</p>	<p><b>ESE HR representative</b></p> <p>Section 5</p>
	<p><b>Sneha Saunders</b> Administration Manager and Staffing Coordinator</p> <p>Recently returned from maternity leave</p>	<p><b>Representative from the Chemical Engineering Department SAT</b></p> <p>External review of submission</p>

*Figure 3: The ESE Athena SWAN SAT for 2019-20*

(ii) An account of the self-assessment process

The ESE SAT meets monthly to analyse data, identify and discuss issues, and develop action items and activities that enhance gender equality and improve culture in ESE. Meetings are scheduled months in advance and include video conferencing to increase participation and inclusivity. We communicate and share information securely by email and using a shared folder. At the start of COVID-19, we moved our meetings online. Minutes and notes are circulated for off-line review. The SAT breaks into sub-groups who focus on specific aspects of gender equality, engaging with the department and accessing datasets, reporting back during meetings. From subsequent analyses and discussions, we developed action plans.

The quantitative and qualitative data presented in this application come from:

- 1) **Compiled data** on staff and students from academic years 2016-17 – 2018-19 and 2019-20 (when data were available). In some cases, we show longer datasets to see long-term trends.
- 2) The department's results of a **College organised all Staff Survey** in March 2019 (64 of 149 staff responded [43%], 36% of responses from women). The survey looked at key aspects of staff experience at the College such as role, development, communications, line management and perceptions. During 2020 whilst working on this application, the data of this survey split by gender have been lost and could not be retrieved as the College is changing its commissioned company and all past survey data will be passed directly to the new firm once contracted.
- 3) The results of an **ESE Athena SWAN staff survey** in February 2020 (54 staff responded [38%], 40% of responses from women). This survey involved 49 questions and included topics on work/life balance, perceptions of gender equality in the department and culture.

The SAT reports to the department in monthly academic as well as PTO staff meetings where EDI is a fixed agenda item (Fig. 4). PhD student members of SAT also report on findings of the SAT at Postgraduate Society ("GradSoc") student meetings. The chair of the SAT sits on the ESE EDIC committee. The chair of the EDIC committee (HoD) reports to the management committee and when appropriate the chair of the SAT attends management committee meetings to present and discuss findings and action plans.

All staff and PhD students were circulated a draft of the application for comments and suggestions before submission. A draft was also reviewed by the College Athena SWAN Coordinator and another member of Imperial staff with experience of Athena SWAN assessment panels.

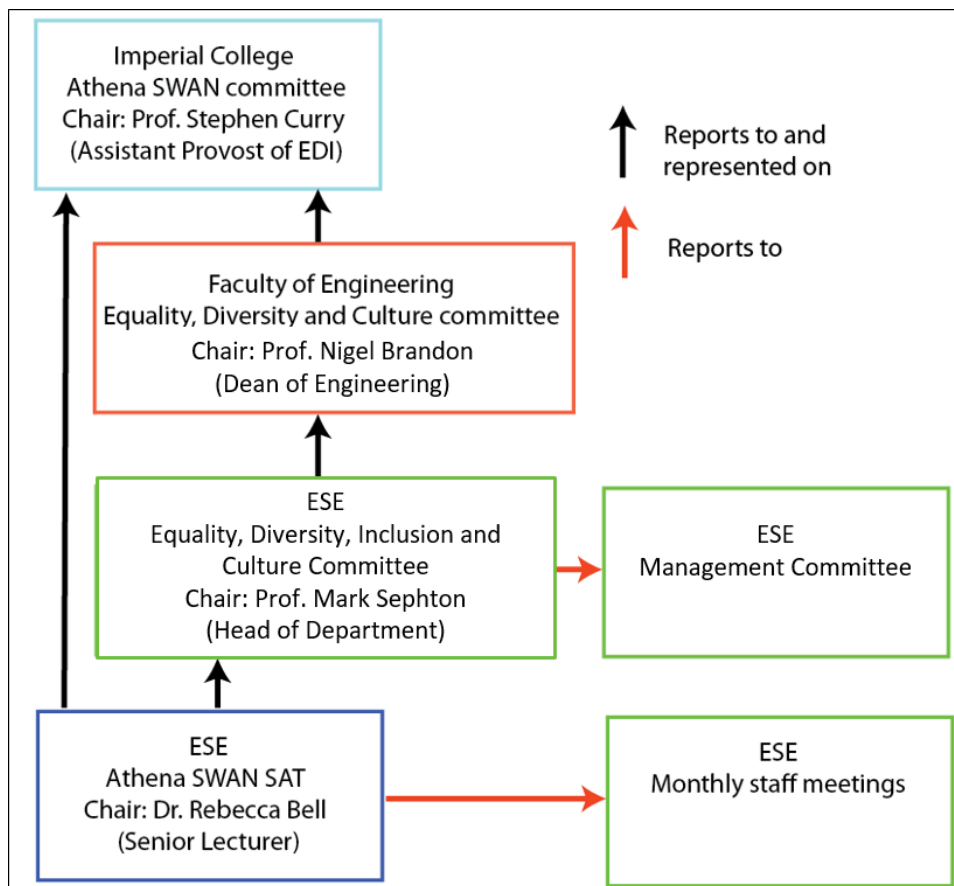


Figure 4: SAT and EDI reporting structure within the department, faculty and college.

(iii) Plans for the future

The SAT will continue to meet monthly/bi-monthly and report at monthly staff meetings.

**Action 4.4.1.:** We aim to move to a model where there are two SAT co-chairs whose start dates are staggered to ensure continuity of leadership.

Two new co-chairs (Sam Krevor and Katharina Kreissig) have been selected to lead the SAT during current chair Rebecca Bell's maternity leave from Oct 2020-Jul 2021.

**Action 4.4.2.:** Athena SWAN SAT Terms of Reference drawn up to include the duration of the co-chair appointment.

**Action 4.4.3.:** Every November we will seek new volunteers to join the SAT and current members can rotate off if they wish. We have no limit to the number of people who can be involved in the SAT, but we will aim for a committee that reflects the entire ESE community.

**Action 1.3.3. and 2.5.2.:** We will invite undergraduate and taught postgraduate (MSc) representatives onto the SAT.

**Action 4.2.1./2.5.3.:** We will develop an Athena SWAN survey for PhD, MSc and undergraduate students to better identify gender issues facing these cohorts.

**Action 4.3.1.:** We will re-run our departmental Athena SWAN survey every year in April and investigate how gender equality perceptions in the department have changed.

**Action 4.5.1.:** Invite at least 2 PDRA/Fellow representations to join the Athena SWAN SAT. We did not receive any volunteers from the PDRA/Fellow community to join the SAT when

we issued a general invitation in July 2019 and will discuss with the PDRA/Fellow representatives how best to seek volunteers.

#### 4. A PICTURE OF THE DEPARTMENT

Word count: 1,946 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

n/a

(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.*

Since 2008, the total number of female and male undergraduate students in our department has increased until 2014 and then decreased (Fig. 5). This evolution is similar to the number of UK A-Level geology entries, (Fig. 6; Boatright et al., 2019) suggesting that A-level Geology has a significant impact on undergraduate recruitment.

Since 2010, the percentage of female undergraduate students in our department has been above the UK national benchmark for HESA subject code (F6) Geology (Fig. 7, Table 2). We attribute this to the impact of various **outreach efforts/department branding** conducted over the last decade such as:

- **fore-fronting women in our marketing materials**, including on printed materials aimed at prospective undergraduates, in **images on our website** landing page, and in videos about our courses.
- Departmental Open and Taster Days have **both men and women giving academic talks or leading academic sessions**.

Our undergraduate degree programmes are not offered part-time. However, we strongly support students who are struggling with their studies following mitigating circumstances via a dedicated and effective **undergraduate wellbeing team**.

Academic year	Department female percentage	UG national benchmark, female percentage
2004-05	47%	40%
2005-06	45%	41%
2006-07	43%	41%
2007-08	41%	41%
2008-09	39%	40%
2009-10	39%	39%
2010-11	40%	37%
2011-12	41%	36%
2012-13	41%	35%
2013-14	41%	35%
2014-15	41%	35%
2015-16	44%	35%
2016-17	45%	36%
2017-18	45%	37%
2018-19	41%	39%
2019-20	40%	

Table 2: Undergraduate numbers from 2004 – 2019. Benchmark data from Heidi (FPE), JACS (F6) Geology

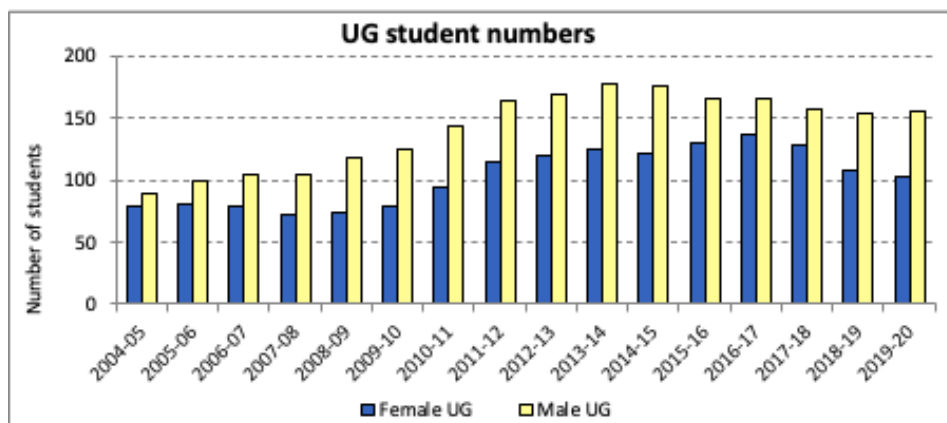


Figure 5: Undergraduate student numbers in ESE 2004-20

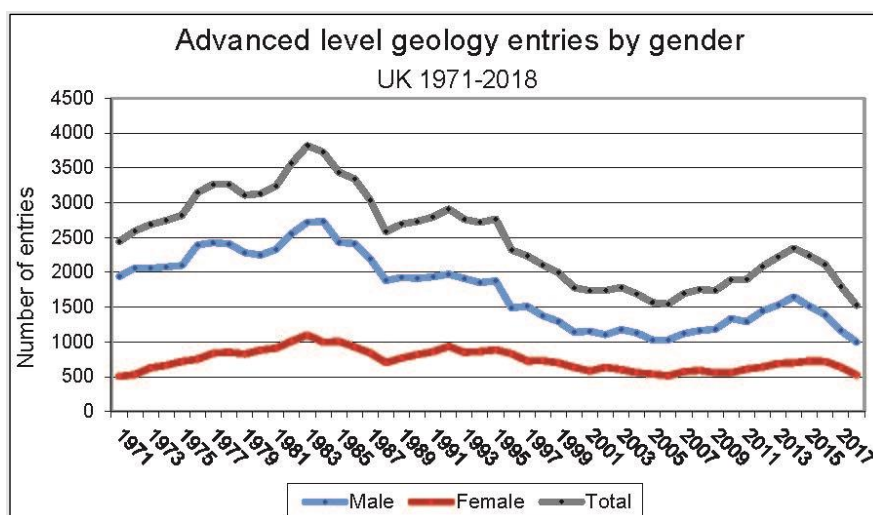


Figure 6: UK A-Level geology entries 1971-2019. After Boatright et al. (2019)

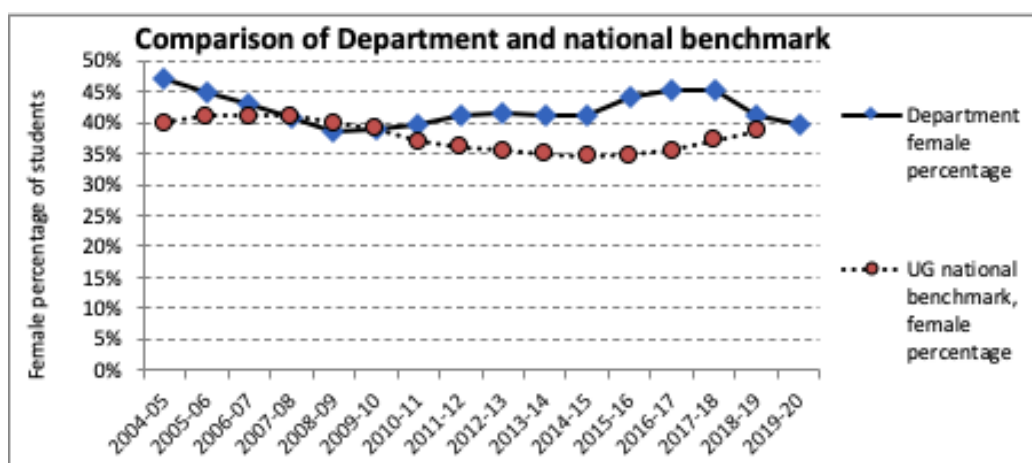


Figure 7: Undergraduate student numbers shown with national benchmark for subject code (F6) Geology.

Over the last 4 years, the number of applications from women for all degree programmes is lower than the number of male applicants by approximately 15-20% (Table 3, Fig. 8). This gender imbalance in applications is directly translated into the gender distribution of offers accepted by applicants and ultimately admissions.

Each of our three undergraduate programmes has around 40% female students. However, our geophysics degree requires A-level Physics, and as fewer female students take A-level Physics this makes reaching gender parity on this degree more difficult.

**Action 1.1.1.:** Ensure gender balance in promotional materials aimed at undergraduate students is maintained.

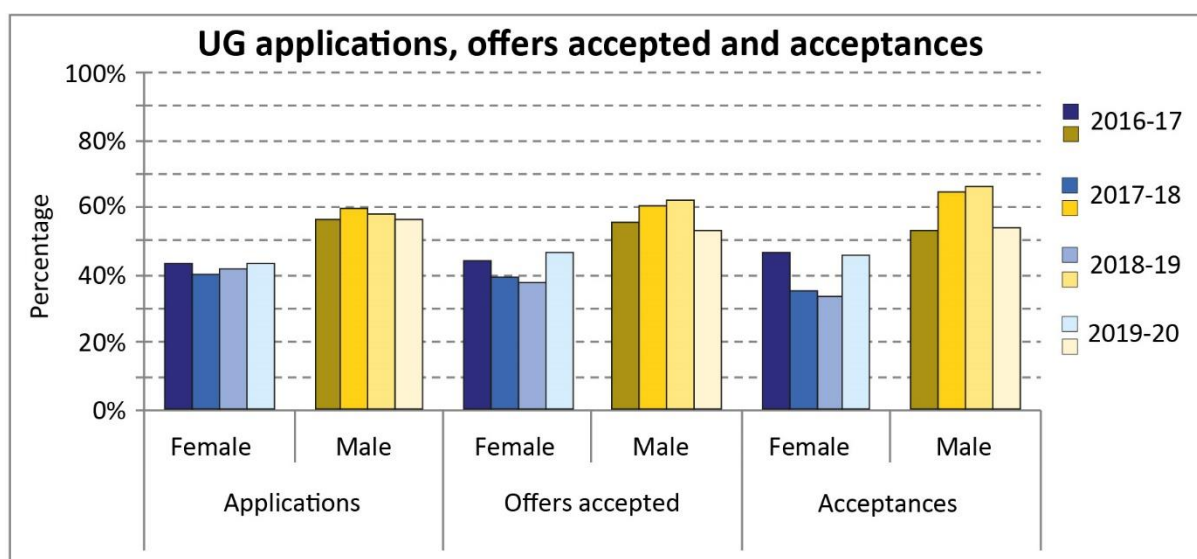
**Action 1.1.2.:** Continued monitoring of the gender balance of applications, offers and acceptances. Data returned to the Athena SWAN SAT annually.

**Action 1.1.3.:** Outreach activities aimed at GCSE level students to encourage female students to consider Earth Science studies at university and take the relevant pre-requisite subjects such as A-level Physics.

**Action 1.1.4.:** We will collaborate with other departments within the College to engage in outreach programmes that specifically engage young women in physics.

	Applications		Offers accepted		Acceptances	
	Female	Male	Female	Male	Female	Male
2016-17	44%	56%	44%	56%	47%	53%
2017-18	40%	60%	40%	60%	35%	65%
2018-19	42%	58%	38%	62%	33%	67%
2019-20	43%	57%	47%	53%	46%	54%

*Table 3: % of UG applications, offers and acceptances by gender. Note, the gender split in acceptances is different to the numbers in Table 2 as Table 2 documents the gender distribution for all undergraduates (not just year 1)*



*Figure 8: Percentage of UG applications, offers and acceptances (admissions) by gender. The lower number of female applicants is mapped into the eventual gender balance of our cohort.*

Since 2004, the percentage of male and female students attaining the top first class and 2:1 mark has been roughly 50/50 (with some exceptions, 2006-07, 2009-10, 2013-14; Table 4). Women are very slightly outperforming men as they make up 40-45% of the students. The percentage of students achieving 2:2 grades is variable each year without consistent trend in attainment by gender. The department has procedures to minimise gender bias in assessment including **anonymity across exam marking and exam boards**.

**Action 1.2.1.:** We commit to set up a guidance document on how to set a fair exam, including agreed methods of assessing that are more inclusive and remove influence of gender.

**Action 1.3.4.:** Advertise and referral to the Colleges anonymous reporting tool for undergraduate students who have gender inequality issues when it is formally rolled out.

	1st		2:1		2:2		Third		Pass		Total	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
2004-05	40%	60%	47%	53%	50%	50%					46%	54%
2005-06	38%	62%	41%	59%	36%	64%	100%	0%			40%	60%
2006-07	64%	36%	41%	59%	56%	44%	100%	0%	0%	100%	51%	49%
2007-08	50%	50%	48%	52%	38%	63%					47%	53%
2008-09	60%	40%	43%	57%	17%	83%	25%	75%			42%	58%
2009-10	26%	74%	36%	64%	0%	100%					30%	70%
2010-11	44%	56%	42%	58%	50%	50%					43%	57%
2011-12	46%	54%	41%	59%	29%	71%					42%	58%
2012-13	54%	46%	32%	68%	0%	100%			100%	0%	39%	61%
2013-14	28%	72%	46%	54%	45%	55%					40%	60%
2014-15	53%	47%	40%	60%	33%	67%					44%	56%
2015-16	52%	48%	38%	62%	50%	50%	0%	100%			44%	56%
2016-17	44%	56%	31%	69%	25%	75%					35%	65%
2017-18	43%	57%	53%	47%	69%	31%					51%	49%
2018-19	53%	47%	39%	61%	46%	54%					46%	54%
<b>Total over time</b>	<b>46%</b>	<b>54%</b>	<b>41%</b>	<b>59%</b>	<b>41%</b>	<b>59%</b>	<b>43%</b>	<b>57%</b>	<b>50%</b>	<b>50%</b>	<b>43%</b>	<b>57%</b>

Table 4: Percentage of female and male students awarded a particular classification.



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

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

ESE offers four MSc courses: Petroleum Engineering (PE), Petroleum Geoscience (PG), Metals and Energy Finance (MEF), Applied Computational Science and Engineering (ACSE). We compare PG and PE and MEF data with H8 (Chemical, process and energy engineering). ACSE launched only in 2018-19 and we did not compare it with any benchmark data. Table 5 and Figures 9 and 10 show MSc student numbers.

Nationally, more women study courses in the F6 category than the H8 category. This is also the case for ESE with about 40% female intake in the PG course (blue line Fig.11).

Academic year	Female PGT	Male PGT	Total PGT	Department female percentage	PGT national benchmark, Geology, female percentage	PGT national benchmark, Chemical, process & energy engineering, female percentage
2015-16	48	94	142	34%	37%	28%
2016-17	39	91	130	30%	38%	27%
2017-18	46	74	120	38%	42%	27%
2018-19	45	96	141	32%	40%	29%
2019-20	60	115	175	34%		

Table 5: Number of MSc students from 2015-20

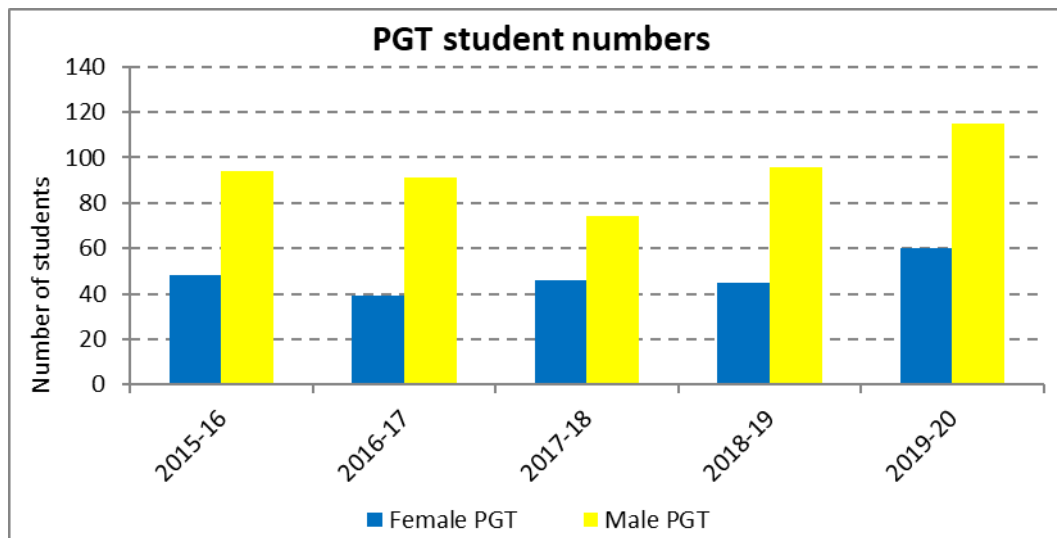


Figure 9: Total number of students on MSc programme by gender

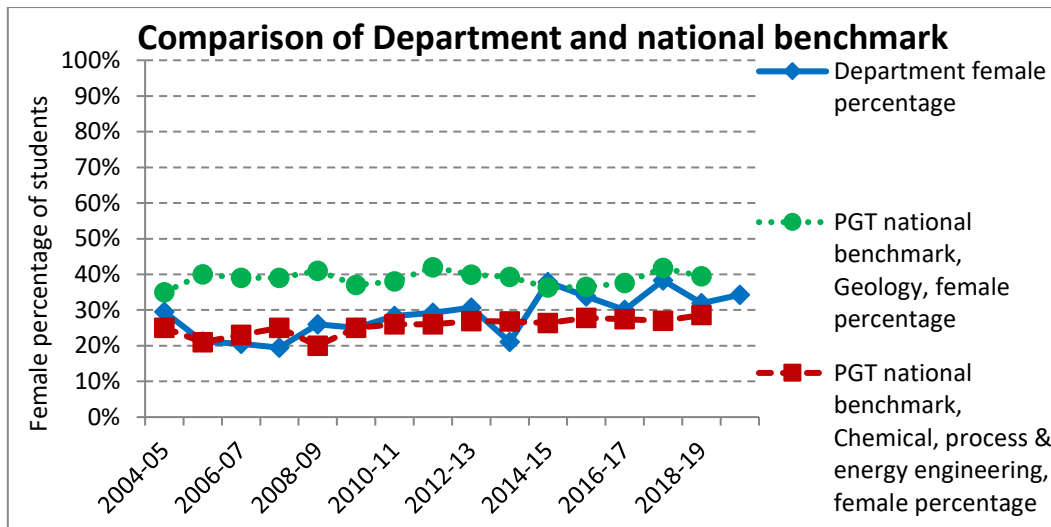


Figure 10: Percentage of female students on MSc courses compared to national benchmark F6 and H8.

The number of applications from men is higher than from women for all four MSc courses (Fig. 11, dotted lines and open star).

Increasing the number of women on all MSc programmes is a priority, including increasing gender balanced promotional material. ESE has grown its marketing in the last three years. In 2018, we commissioned photography and in 2019 reviewed our online media and commissioned new videos ensuring gender balance (Section 5.6. (vii)). We attend a variety of conferences and graduate recruitment events such as the American Association of Petroleum Geologists, and European Association of Geoscientists and Engineers Conferences and Exhibitions.

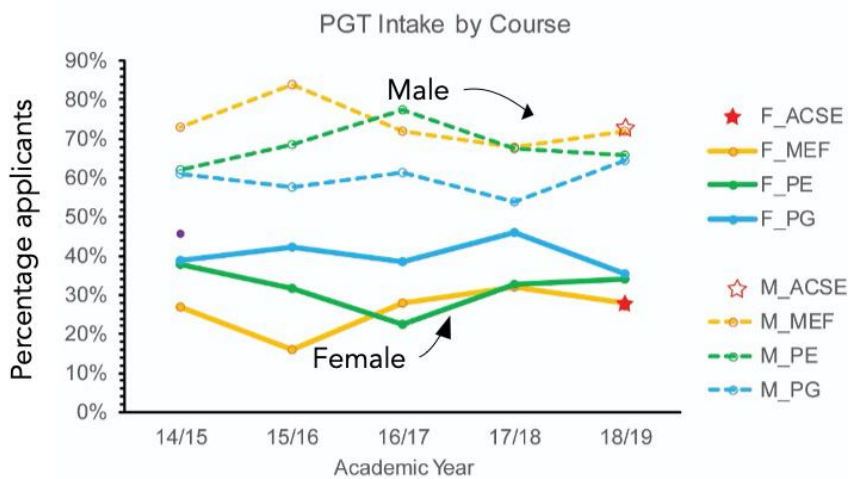
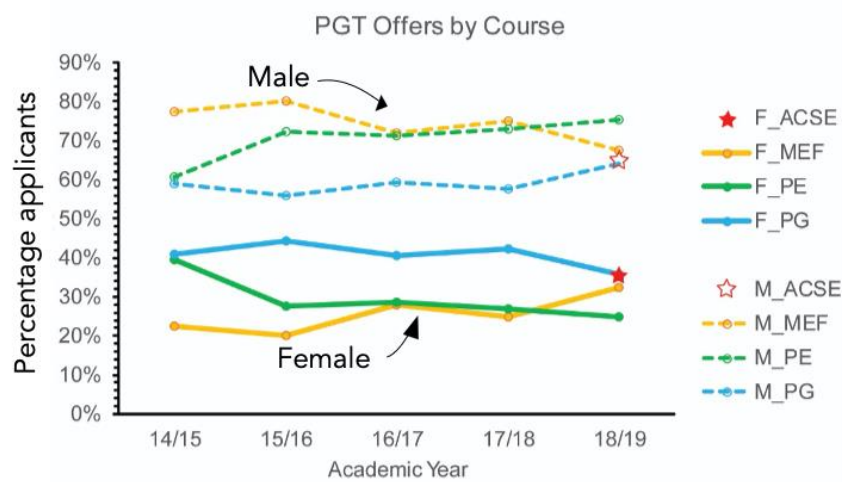
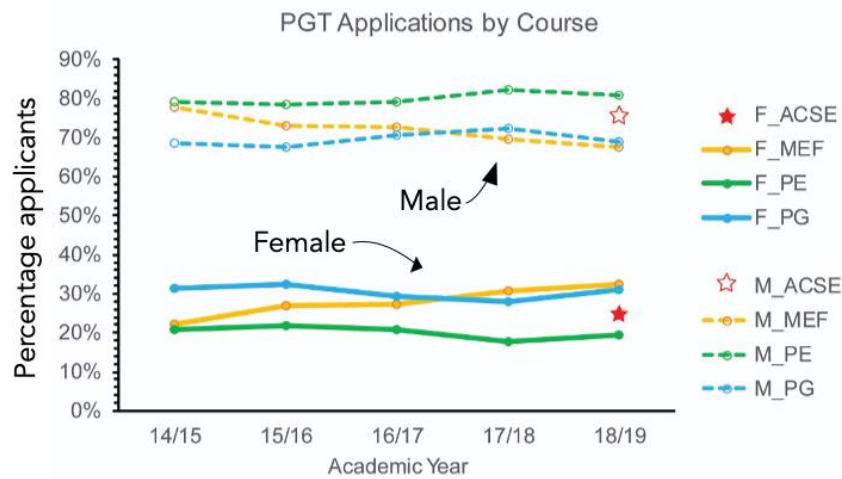


Figure 11: Percentages of female students ('F\_' prefix) compared to male ('M\_' prefix), offers and intake stages across the 4 MSc courses

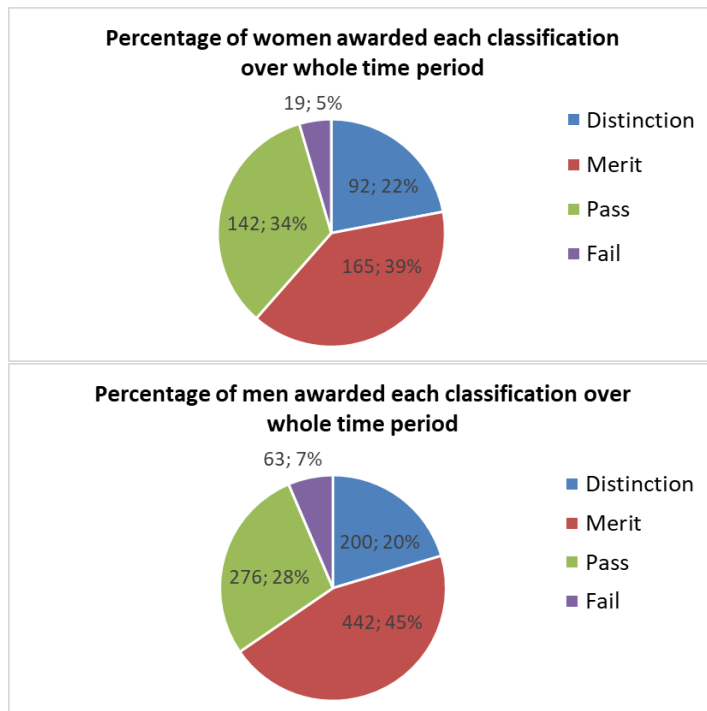


Figure 12: Degree classification rates of PGT students in the Department divided by gender from 2010.

The pie charts in Figure 12 are very similar showing nearly equal proportions of female and male PGT students' degree classifications. We are encouraged by the fact that women and men are performing equally well within ESE.

**Action 2.4.1.:** Ensure gender balance in promotional materials aimed at MSc students is maintained.

**Action 2.4.2.:** Increased marketing budget to reach prospective female students.

**Action 2.4.3.:** Collaborate with women specific organisations to increase our visibility among this target audience.

**Action 2.4.4.:** Investigate the possibility of developing scholarships available to underrepresented applicants for all MSc courses.

**Action 2.5.1.:** Ensuring women are not placed in teams for group-work in isolation but that there are at least 2 women per group.

**Action 4.2.1.:** Develop and run an annual Athena SWAN survey to identify any gender equality issues within student cohorts.

2020-21 introduced additional challenges relating to uncertainty surrounding teaching due to the COVID-19 pandemic and the downturn in the oil industry. The latter is likely to particularly affect recruitment to the PG and PE MSc programmes. All applicants accepted on the PG and PE MSc degrees were contacted by telephone: female applicants were contacted by a female professor of petroleum engineering.

**Action 2.4.5.:** Monitor the conversion of accepted applicants to actual attendance and contact students who did not enrol in the course to identify the barriers to attendance.

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

The number of PhD students in the department has steadily increased from a total of 82 in 2004 to a maximum of 183 in 2018-19 and 175 students in 2019-20 (Fig. 13).

All applicants are interviewed to ensure they satisfy departmental criteria of merit (the application, interview, and reference letters showing that departmental criteria are met or exceeded, background that is appropriate for the intended PhD project, and evidence of independence in research). Selective scholarship interviews (about 50% of applicants) are held by the Departmental Postgraduate Committee (PGC, consists of 2 women and 2 men), while at all other interviews at least one member of the PGC is present. At least one female interviewer is present at most interviews.

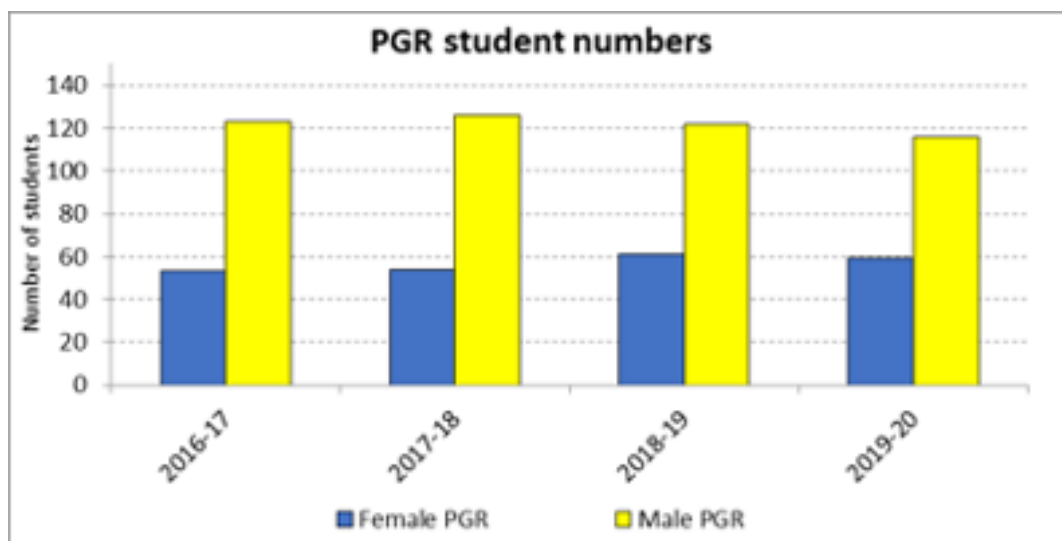


Figure 13: Numbers of PGR students from 2016-20 split by gender

Since 2016-17 ESE has received over 300 applications per year, with on average 26% being from female students (Fig. 14). Around 20% of female and male applicants are made offers. We are encouraged that these statistics indicate there is **no gender bias in our assessment of applications**. Since 2016-17 all staff have been encouraged to **undertake unconscious bias training** (which is now mandatory) and all members of the PGR interview committee have completed this training. A slightly higher percentage of female students accept their offers compared to male students.

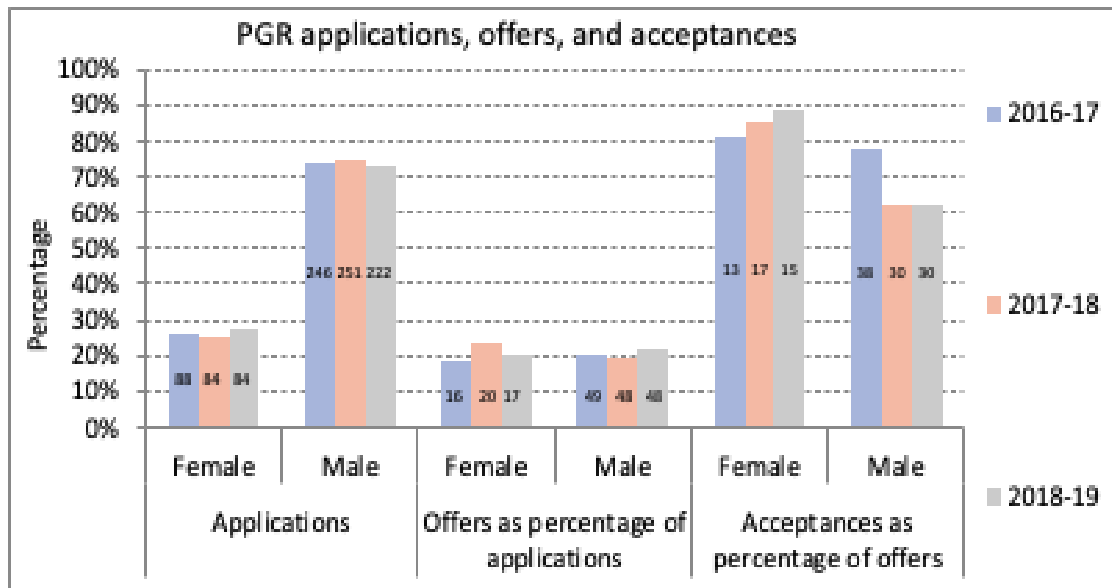


Figure 14: Percentage of PhD applications, offers and acceptances from 2016-19 split by gender, figures in boxes represent actual numbers of application/offers/acceptances.

Students are registered in one of the three different research sections within the department: (1) Earth and Planets with currently 40% female students (2) Natural Resources Geoscience and Engineering with currently 32% women (3) Computational Geosciences and Engineering with only 20% female students currently registered. The courses including mining, engineering and industry attract students from overseas who make up a higher percentage of those doing petroleum and engineering PhDs, whilst domestic female students tend to apply for PhDs within Earth and Planets. It is difficult to judge the underlying causes of these choices; there may be self-selection due to these sectors historically being male dominated; there may be gender bias in scholarship funding directed from industry.

Although there does not seem to be a pervasive bias in the PhD offer process in our department, we recognise the need to increase the number of applications from women. As about half of our PhD student cohort originate from overseas and the EU and about half of them come with their own funding this task is going to be challenging. Additionally, there have been anecdotal incidents of bias and harassment reported and we would like to ensure that there is a good environmental for all students.

**Action 2.1.1.:** Ensure gender balance in promotional materials aimed at PhD students is maintained.

**Action 2.1.2.:** Ensure that all PhD adverts pass a gender decoder test and are not deemed to be gender biased.

**Action 2.1.3.:** Ensure all members of PhD interview panels have undergone unconscious bias training.

**Action 2.1.4.:** Report on PhD interview gender statistics at the end of the academic year to the Athena SAT.

**Action 2.2.1.:** From August 2020 PhD students are required to take part in development workshops on ESE Value, Promoting Equality & Diversity, Unconscious Bias, Bullying & Harassment, Racism Awareness and Active Bystander.

**Action 4.3.2.:** Develop a departmental affirmation of values.

**Action 2.2.3.:** Continue to provide financial and other support to the PhD GradSoc committee so they can continue their excellent work promoting wellbeing.

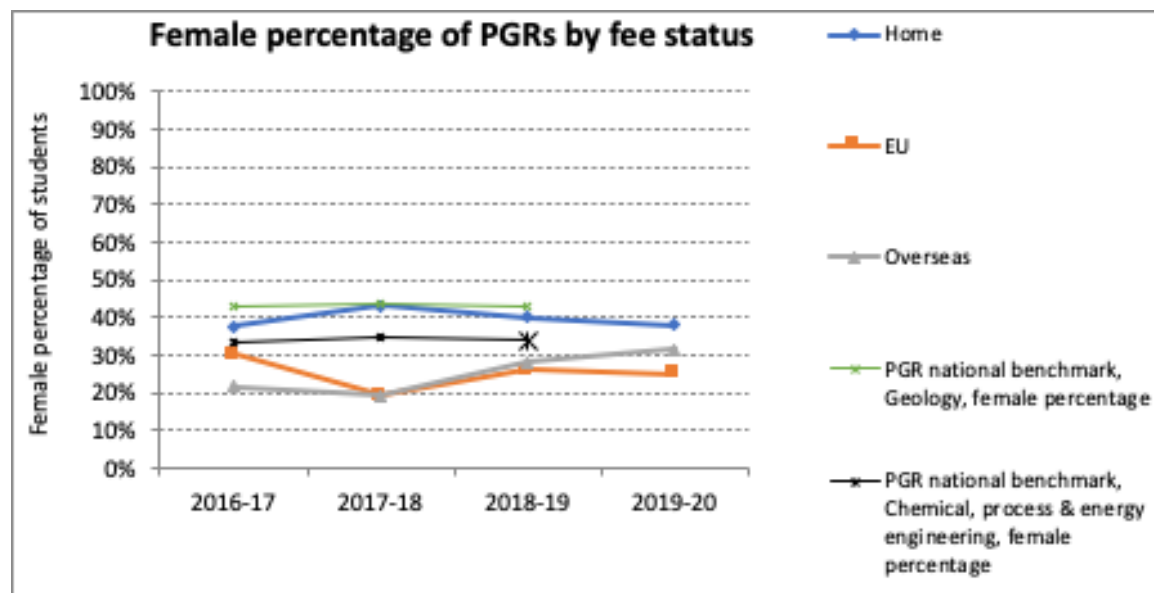


Figure 15: Percentage of female PhD students in the department by fee status (home, overseas, and EU students) from 2016-20 in comparison to the national benchmark data of two JACS Principal Subjects, F6 and H8 (data are taken from HESA)

Academic year	PGR students			Total PGR	Department Female percentage	PGR national benchmark, Geology, Female percentage	PGR national benchmark, Chemical, process & energy engineering, Female percentage
	Home	EU	Overseas				
2016-17	38%	30%	22%	176	30%	43%	34%
2017-18	43%	19%	19%	180	30%	44%	35%
2018-19	40%	26%	28%	183	33%	43%	34%
2019-20	38%	25%	32%	175	34%	43%	34%

Table 6: PGR student numbers from 2016-17 to 2019-20

Completion data for the last 4 years (Table 7 and Fig 16) is only from full-time PhD students.

FT	Completed within 4 years		Completed 4+ years		Ongoing		Failed/Discontinued	
	Female	Male	Female	Male	Female	Male	Female	Male
Cohort starting year								
2011-12	45%	75%	27%	16%	0%	3%	27%	6%
2012-13	67%	74%	19%	17%	10%	0%	5%	9%
2013-14	75%	82%	13%	14%	13%	0%	0%	5%
2014-15	78%	78%	11%	11%	0%	9%	11%	2%
<b>Total over time</b>	<b>65%</b>	<b>77%</b>	<b>18%</b>	<b>13%</b>	<b>6%</b>	<b>4%</b>	<b>10%</b>	<b>5%</b>

Table 7: Number of PGR students completing and not completing their degrees.

Over a period of 4 years, 10% more male students finish their studies within 4 years, whilst more female students need longer for completion. There is a higher percentage of female students who failed or discontinued their studies (10%) in comparison with their male counterparts (5%), although the actual numbers are below 10.

Since 2018, members of the PGC have worked to ensure (a) the students are aware of the support available (supervision team of more than one person, the PGC, the departmental postgraduate tutor, milestone assessors, and College support) and (b) to follow up when students do not complete their annual milestones on time. This way problems are noted early, and support can be given. Last year the handbook for PhD students was improved and made available online with clickable links so students can find easily contacts or support.

**Action 2.3.2.:** Ensure PhD students complete their milestones on time (change attitude amongst students and staff) and all students have at least two Imperial supervisors or one supervisor and one mentor.

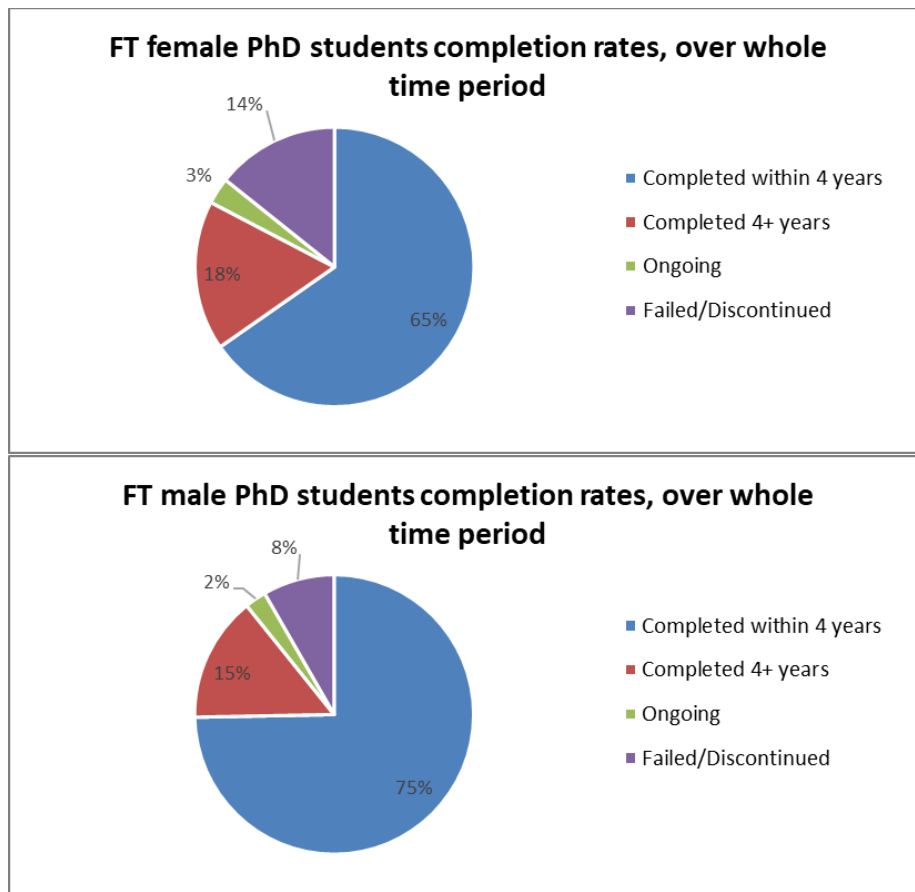


Figure 16: Completion data of full-time PhD students in the department divided by gender (2007–15).



(v) Progression pipeline between undergraduate and postgraduate student levels

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

Our snapshot of UG student career progression suggests a gender imbalance exists in the uptake of PhDs and MScs, with fewer female students taking PhDs and more taking MScs. Although industry destinations are well balanced in most cases, of the five students finding employment in the mining industry, four were male (Fig. 17). We do not have the data to confirm this, but we suspect the number of applications for mining jobs from women is lower than men.

**Action 1.3.1./2.2.2.:** All career talk speakers are asked to include a slide on how their company considers EDI, including gender diversity. Companies are encouraged to select speakers ensuring a gender balance.

**Action 4.2.1.:** Develop and run an annual Athena SWAN survey to identify any gender equality issues within student cohorts.

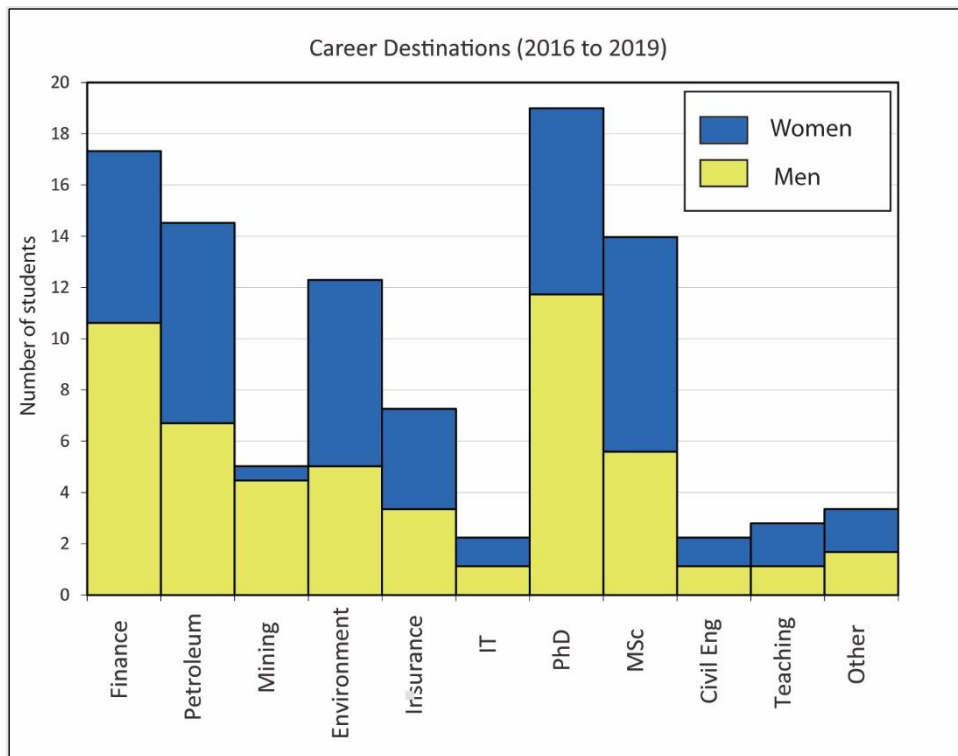


Figure 17: Career destinations of undergraduate students from 2016-19. Data has been collected from students leaving destination information with ESE and LinkedIn.

## 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.*

### 4.2.1. Academic staff

Since 2010 the percentage of female academic staff has been consistent at 20-23% and is currently 21% (Table 8, Fig. 18), below benchmarks for both Earth Science and Minerals, as well as Metallurgy and Materials Engineering.

**Action 3.1.1. - 3.1.4.:** Many of our actions focus on encouraging applications for academic positions from women.

Our percentage of female professors is above national benchmarks, however, (Fig. 19b) due to recent promotions of women. We believe this reflects a supportive culture in the department for women.

Table 8 has been removed to protect personal information

Table 8: Number of academic staff at each career level from November 2010 -November 2019

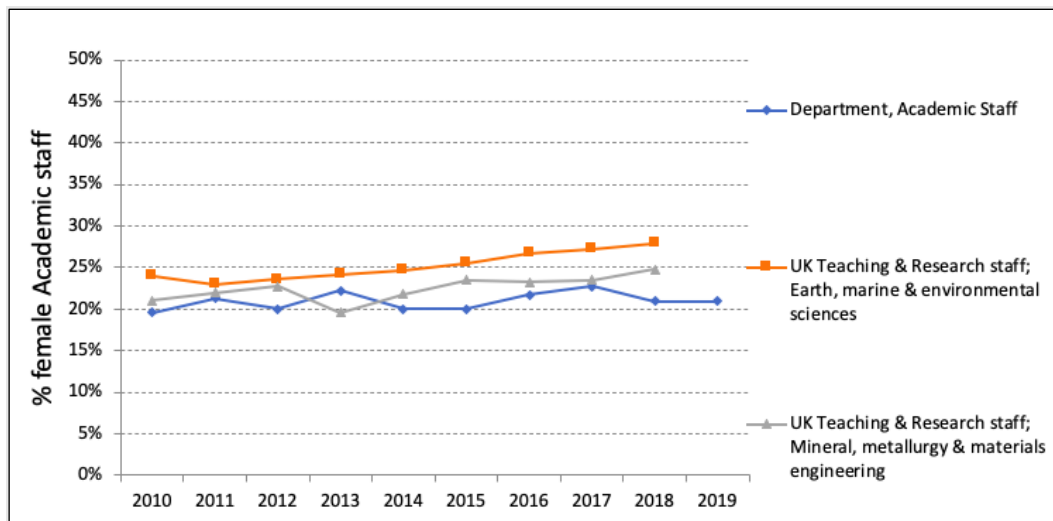
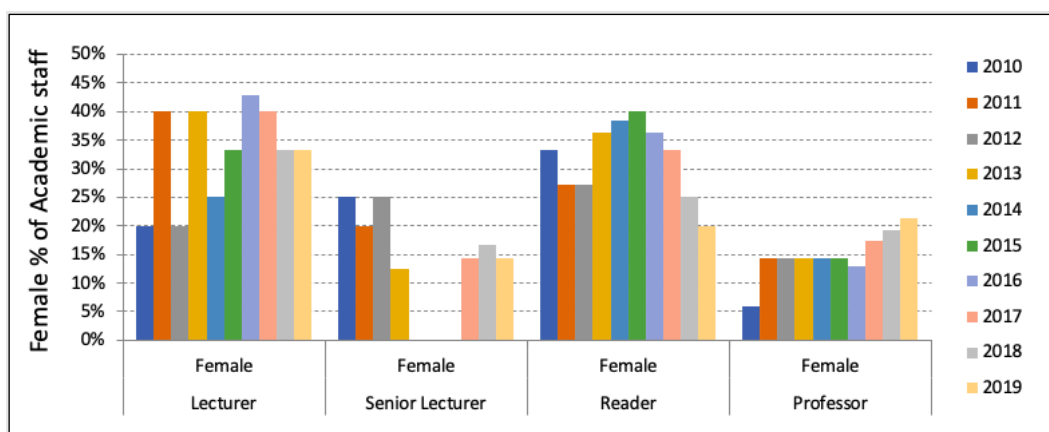


Figure 18: Percentage of female Academic staff in ESE with benchmarks

a)



b)

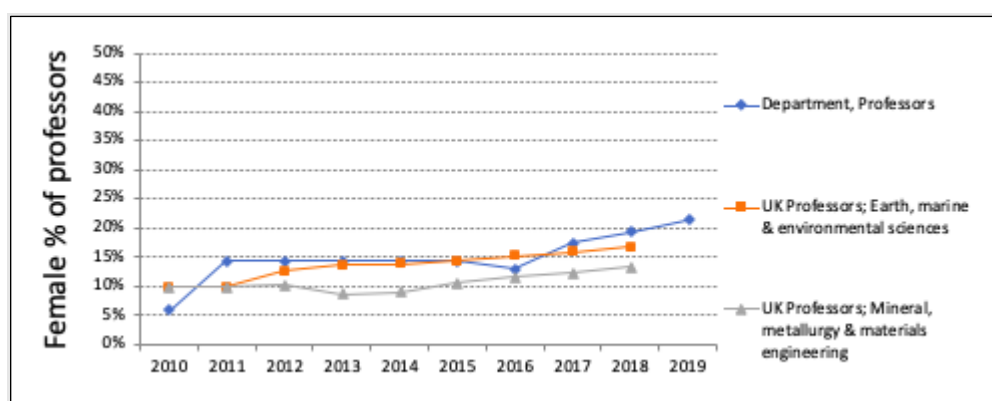


Figure 19: a) shows the percentage of academic staff at each grade who are female. b) Shows % of female professors.

Currently 33% of female Academic staff work part-time compared to 12% of male Academic staff (Table 9). The percentage of male and female staff working part-time has increased substantially since 2017. This is related to Academic staff taking partial retirement and moving from full-time to part-time.

Academic Staff		
*Total does not include SRIs		
Total Academic Staff	% of Women on Part-time	% of Men on Part-time
2010	22%	3%
2011	20%	3%
2012	22%	3%
2013	20%	0%
2014	22%	3%
2015	11%	3%
2016	20%	3%
2017	20%	3%
2018	22%	12%
2019	33%	12%

Table 9: Percentage of men and women academic staff on part-time contracts

#### 4.2.2. Research-only staff

The percentage of female Research-only staff has reduced considerably since 2010 and is significantly below the national benchmarks for Earth Science and Minerals, and to a lesser extent Metallurgy and Materials Engineering (Table 10, Fig. 20). A preliminary review of applications to research posts since 2016 suggests that this drop may be linked to a shift in the applied and awarded grant funding within the department and that most of our current research staff cohort is aligned to Metallurgy and Materials Engineering. We have also had an increase in computational research.

**Action 3.1.5.:** Investigate the underlying causes for the disproportionate male uptake of Research staff positions. Enact an immediate recruitment and retention plan to change course.

Currently 8% of female Research-only staff work part-time and 4% of male Research-only staff (Table 11).

	Total Research Staff			
	Female	Male	Female	Male
2010	22	56	28%	72%
2011	22	55	29%	71%
2012	18	50	26%	74%
2013	16	62	21%	79%
2014	19	61	24%	76%
2015	23	65	26%	74%
2016	22	68	24%	76%
2017	17	66	20%	80%
2018	15	64	19%	81%
2019	13	56	19%	81%

*Table 10: Number of Research only staff by gender*

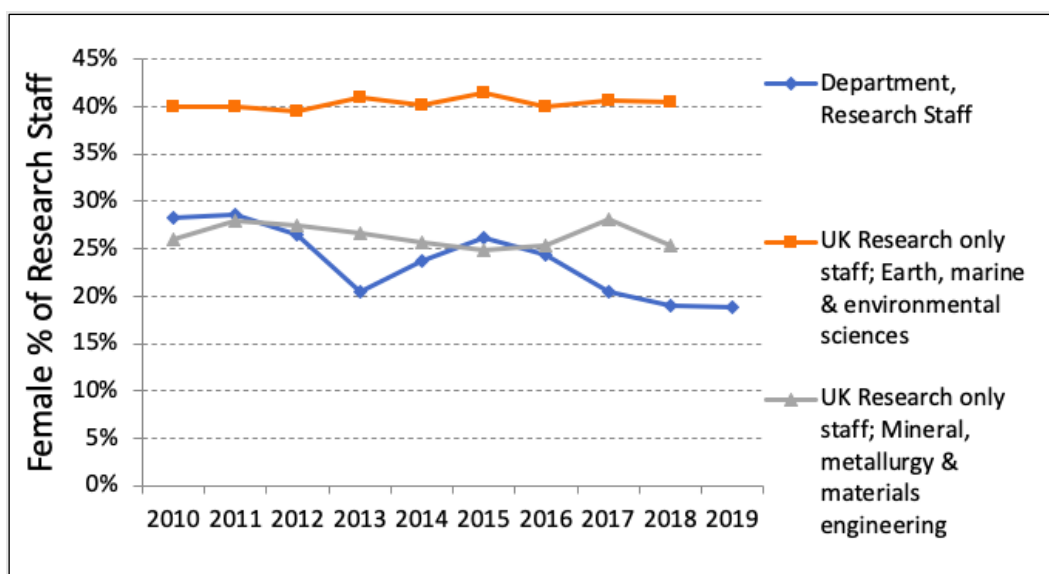


Figure 20: Percentage of Research-only staff by gender

Research Staff		
Total Research Staff	% of Women on Part-time	% of Men on Part-time
2010	14%	7%
2011	14%	0%
2012	11%	0%
2013	13%	3%
2014	16%	0%
2015	13%	2%
2016	9%	4%
2017	6%	3%
2018	13%	8%
2019	8%	4%

Table 11: Percentage of Research only staff on Part-time contracts by gender

### 4.2.3. Learning and Teaching staff

Currently 50% of our Learning and Teaching staff are women, similar to the UK national benchmark for Earth Science departments (Table 12, Fig.21). Currently 50% of both male and female Learning and Teaching staff work part-time (Table 13).

	Total Learning & Teaching Staff	
	Female	Male
2012	33%	67%
2013	33%	67%
2014	50%	50%
2015	40%	60%
2016	57%	43%
2017	50%	50%
2018	50%	50%
2019	50%	50%

Table 12: Percentage of Learning and Teaching staff by gender

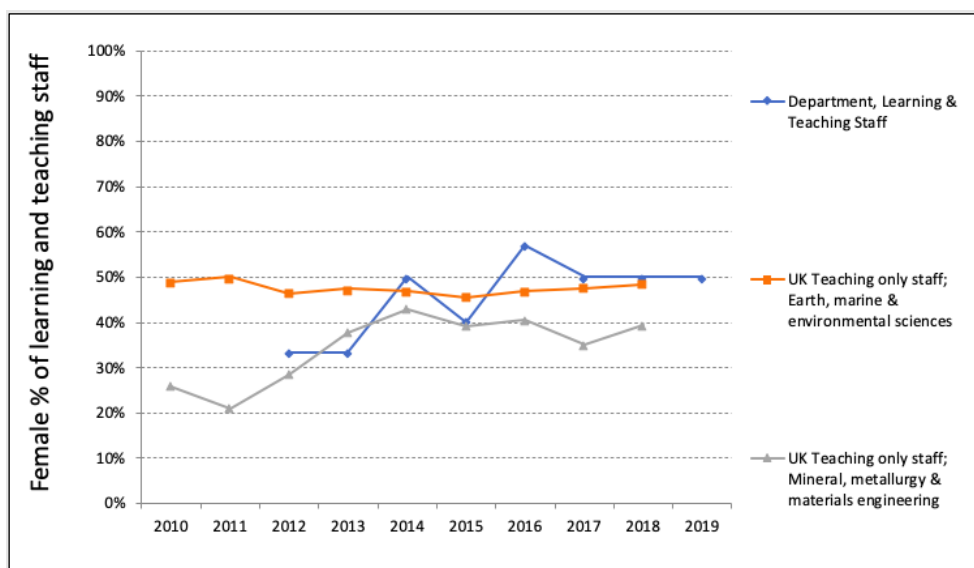


Figure 21: Percentage of Learning and Teaching staff by gender compared to national benchmarks.

Total L&T Staff	% of Women on Part-time	% of Men on Part-time
2012	0%	0%
2013	0%	50%
2014	0%	50%
2015	0%	33%
2016	50%	33%
2017	50%	25%
2018	25%	50%
2019	50%	50%

Table 13: Percentage of Learning and Teaching staff on Part-time contracts by gender

#### 4.2.4. Academic career pipeline

The percentage of women decreases by almost 50% between student and research staff career stage (Fig. 22 and 23). This is the point in the ESE pipeline where the percentage of women significantly drops.

**Actions 3.1.1. - 3.1.4.:** In order to reach gender equality at academic staff level, the gender inequality in Research staff needs to be addressed, as well as recruitment of women into academic positions.

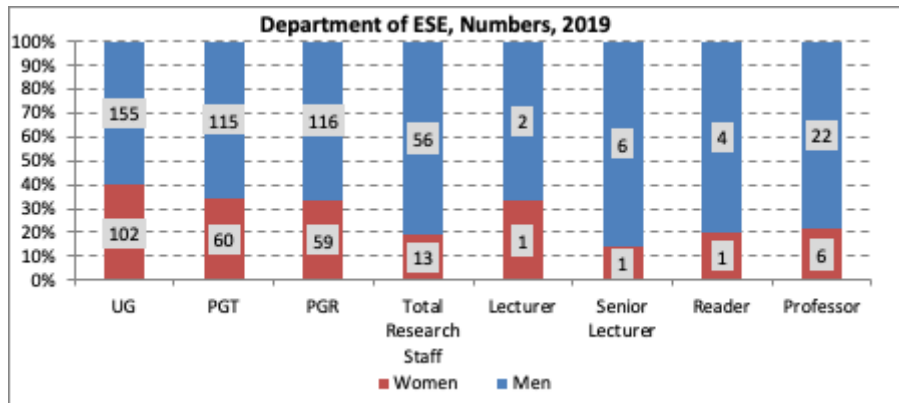


Figure 22: Number of students and academic staff at different levels by gender currently in ESE

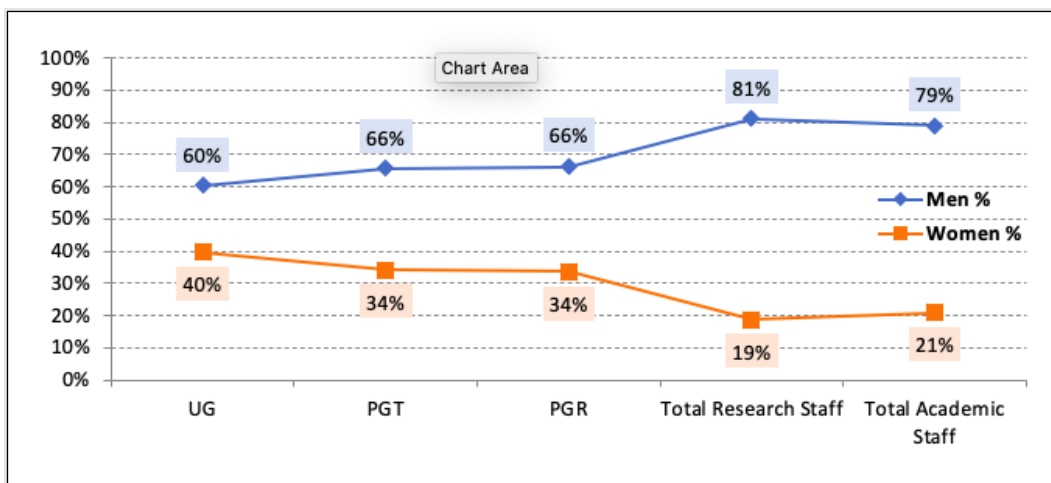


Figure 23: Percentage of men and women students and staff currently in ESE. Total numbers behind these % are shown in Table 7.

#### SILVER APPLICATIONS ONLY

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

(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.*

Most research staff are on fixed-term fixed-funding contracts, as is common for the Higher Education sector. In 2019, the percentage of female Research staff on fixed-funding open-ended contracts (31%) is similar to the percentage of men (33%) (Table 14) and is an indication of how long they have been in employment at the College. Staff on fixed-term fixed-funding contracts are converted to open-ended fixed-funding contract after 4 years.

Although before 2015 a greater percentage of female academic staff held open-ended contracts than men this situation has now reversed and in 2019 78% of female Academic staff have open-ended contracts compared to 91% of men (Table 15). The increase is mainly a reflection of male Academic staff retiring and returning on fixed-term contracts.

**Action 3.4.1.:** We will ensure that during the annual PRDP line managers will discuss career prospects and opportunities for career progression within Imperial with all staff, but in particular those on fixed-term contracts.

<b>Research Staff</b>		
<b>Total Research Staff</b>	<b>% of Women on Open-ended Contracts</b>	<b>% of Men on Open-ended Contracts</b>
2010	23%	36%
2011	23%	35%
2012	22%	34%
2013	31%	29%
2014	32%	30%
2015	22%	25%
2016	18%	32%
2017	24%	32%
2018	27%	38%
2019	31%	33%

*Table 14: Percentage of Research-only staff on open-ended contracts by gender*



<b>Academic Staff</b>		
*Total does not include SRIs		
<b>Total Academic Staff</b>	<b>% of Women on Open-ended Contracts</b>	<b>% of Men on Open-ended Contracts</b>
2010	100%	95%
2011	100%	95%
2012	100%	94%
2013	100%	97%
2014	100%	97%
2015	100%	97%
2016	90%	97%
2017	90%	97%
2018	89%	91%
2019	78%	91%

*Table 15: Percentage of Academic staff on open-ended contracts by gender*

<b>Total L&amp;T Staff</b>	<b>% of Women on Open-ended Contracts</b>	<b>% of Men on Open-ended Contracts</b>
2012	100%	100%
2013	100%	50%
2014	100%	50%
2015	100%	100%
2016	100%	100%
2017	100%	100%
2018	100%	50%
2019	100%	50%

*Table 16: Learning and Teaching staff on open-ended and short-term contracts by gender*

Since 2012, all female Learning and Teaching staff are on open-ended contracts. In contrast, for four years, half of the men were on fixed term contracts. These include academic retirements and return to part-time fixed-term Learning and Teaching roles, maternity covers and fixed-funding project work. Overall, the numbers are small and statistically not meaningful (Table 16).

### (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.*

Since 2016-17 only 7 members of Academic staff have left the department.

The numbers are small and potentially sensitive, therefore, this section has been removed before publication.

*Figure 24: Reasons for leaving for men and women (Academic Staff) in the last 10 years.*

*Figure 25: Reasons for leaving for men and women (Research Staff) in the last 10 years.*

## 5. SUPPORTING AND ADVANCING WOMEN'S CAREERS

Word count: 5988 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.*

Everyone involved in staff recruitment must take the College courses on recruitment and selection, unconscious bias, and EDI.

Table 17 shows recruitment data for Academic staff. Two Senior Lecturers were appointed in 2019, one woman and one man. Four Learning and Teaching positions were filled with men since 2018. All Research staff offers were accepted. Six of the 40 positions were given to women since 2018.

Position	Date	Vacancies	Applications			Shortlisted		Offers Made	
			Male	Female	not declared	Male	Female	Male	Female
Lecturer/ Senior Lecturer/ Reader	2019	3	212 (69%)	91 (30%)	5 (1%)	7 (50%)	7 (50%)	1 (33%)	2 (67%)
Learning and Teaching Staff	since 2018	4	20 (67%)	9 (30%)	1 (3%)	8 (80%)	2 (20%)	4 (100%)	
Research Staff	since 2018	40	647 (81%)	142 (18%)	12 (1%)	118 (79%)	31 (21%)	34 (85%)	6 (15%)

*Table 17: Applications, shortlist and offers made, by gender for academic positions and Research staff since 2018.*

Since 2018, academic job adverts have been screened to ensure gender neutral language is used. Since 2020, a gender decoding software was used for all College adverts. A recruitment panel, comprising management committee and non-professorial staff also analyse the adverts. Recruitment panels provide a balance of genders, subject expertise, and experience. In 2019, the recruitment panel consisting of 10 people, 23% of Academic staff in the department, and 30% women. Department and central HR ensure College best-practice is followed.

We are encouraged by the increase in high-quality applications from women, including a 50/50 gender split in the shortlist for academic vacancies in 2019 and subsequent appointments (Table 17).

In 2019 we removed the evening dinner for the panel and candidates that had been part of the interview process. Attendance could be more difficult for candidates with caring responsibilities and may have subconsciously influenced panel decisions against candidates who were not able to attend. The interview schedule now takes place on a single day and involves lunch, rather than dinner. All candidates are offered the use of our tranquillity room for rest or any parental needs. Feedback from shortlisted candidates in 2019 was that they greatly appreciated this new format.

**Action 3.1.1.:** All adverts are put through a gender coder by ESE HR and the recruiting manager will be informed and provided support to ensure the advert to be gender neutral before publication.

**Action 3.1.2.:** Single-gendered short-lists are strongly discouraged. If single-gendered short-lists are proposed, the line manager will be asked to explain in writing why this is the case.

**Action 3.1.3.:** We will provide template non-gender coded adverts for academic and PDRA research staff positions.

**Action 3.1.4.:** Continue to ensure that all parts of interviews take place in a standard working day.

Although we recruited only a small number of Learning and Teaching fellow positions in the last three years, all appointments were to men. The positions were geoscience and research software engineering or computational science. Detailed data cannot be shown as the individuals are identifiable. However, we note that we received overall a very small number of applications for each position (maximum 13), and of these, very few (maximum 4), or no applications from women for these posts. The posts were advertised internally and externally, were a mixture of part-time and full-time, and were fixed-term contracts. No definitive trends can be identified from such a small set of varied data, but action should be taken to increase applications to positions and aim to target a wider audience.

**Action 3.1.7.:** Increase social and professional media interactions for Learning and Teaching positions.

A preliminary review of staff recruitment since 2016 indicates that the decrease in applications and recruitment of female staff to research posts may be linked to the shift in research funding.

**Action 3.1.5.:** Investigate the underlying causes for the disproportionate male uptake of Research staff positions. Enact an immediate recruitment and retention plan to change course.

## (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.*

All new staff must complete a probation period, which includes completion of the College's 'Essentials' programme providing key College information. Training is provided on teaching and learning, student supervision, personal tutoring and pastoral care. All new staff are also invited to a College induction event, 'Imperial Insights', and ESE encourages attendance.

The HoD meets all new academic starters, and all staff meet with key personnel including their Section Head.

**Action 3.4.2.:** We are standardising our induction for new starters. This new induction pack will be rolled-out for both those who are new to Imperial, and those who are moving internally.

### (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.*

ESE strives for a transparent and inclusive promotion process, improved over the past decade. Academic, senior Research and Learning and Teaching staff can apply for promotion through the annual **academic promotions** process. Learning and Teaching staff can also apply for promotion via a specific pathway which has three annual deadlines. Research assistants, postdoctoral research associates, PTO staff can apply for promotion via the **Job Level Review**.

#### **Academic promotions**

The College process requires the submission of a detailed application form with supporting information. For promotion beyond Senior Lecturer, an interview is required. The College runs briefing sessions for all staff at the beginning of the promotion process which ESE circulates widely.

At departmental level, the promotion process is supported by the Academic Promotions Panel (APP), comprising a Chair, the three Section Heads, and at least one non-professorial Academic staff member. It is diverse with regards to gender and seniority. The purpose of the departmental process is three-fold: to provide advice to those aiming for promotion; to provide a recommendation to the HoD on whether the department should support a staff member's application to the College for promotion; and to support staff whose applications are supported by the department in both the preparation of their paperwork and for their College panel interview.

Our departmental process begins when staff meet with their line manager for their PRDP. They review their activities considering the Colleges expectations for promotion which are available online. Line managers provide advice as to whether the candidate should submit their CV to be evaluated by the APP, although their advice is not binding or required.

In September, the APP invites all staff to submit their CV for review, for promotion in the current cycle or future cycles, encouraging individuals to review the promotion application form and criteria. Each year, 5 to 10 members of staff submit their CV to the APP for evaluation. The decision of the panel is either an invitation to submit a full draft application, followed by a discussion with the panel, or feedback to the candidate outlining areas to develop further to better position themselves for future promotion. The purpose of this initial phase is to provide staff with valuable informal feedback on their case for promotion without them needing to expend significant effort on the application form or internal interview.

About two-thirds of the staff who submit their CVs for review are invited to the next stage, where their application is evaluated by the APP. In a subsequent discussion with the APP the staff member can clarify their case for promotion, receive feedback on their draft paperwork and gain familiarity with a typical promotion interview experience. The APP recommends about two-thirds of these candidates to the HoD to be put forward to the formal College promotions application panel. Normally the HoD will follow the advice of the APP. Unsuccessful candidates receive feedback on how to improve their profile for future promotion. Successful candidates are given

feedback to improve their application and interview style. Applicants not supported by the department are still able to apply for promotion to the College-level panel.

Candidates who are supported by the department are invited to attend a “mock interview” with the APP, which mimics the Faculty-level interview. The APP helps the candidate prepare for success at interview including reflection on how to improve their answers. The final decision on promotions is then made at a College-level panel.

Academic promotion success rates are higher for women than men (Table 18).

Total	Total Men	Total Women	Professor	Reader	Senior Lecturer	Senior Research Fellow
(42%)	(36%)	(54%)	(47%)	(44%)	(50%)	(33%)

*Table 18: Success rates (e.g. 14 successful promotions out of 33 attempts equal to 42%) over the last four years (all candidates were full-time; rates are computed based on initial submissions to the ESE promotions panel)*

### **Job Level Review (JLR)**

The College JLR has three annual deadlines, which are preceded by a Faculty deadline and a departmental deadline. Within ESE, the process is led by the Job Level Review panel, comprising the HoD, Department Operations Manager (DOM), Chair of the APP, Athena SAT Chair, Chair of the Teaching Committee and a Technical staff representative. Annual deadlines, application forms, criteria and requirements are circulated regularly to all staff. Staff submit the College application to the departmental panel for review, either supported by their line manager or as a self-nomination. The panel reviews all applications, provides detailed feedback and recommends either going forward or delaying to a future deadline. Applications submitted to the Faculty for review are further assessed and feedback provided to applicants. Finally, applications are submitted to College. Following an unsuccessful application at College level, staff cannot apply for one year.

From 2016 to 2019, 13 staff applications were submitted to the JLR panel (all full-time): 1 female Learning and Teaching staff, 1 male Technical staff, 11 Research staff (1 female, 10 male). Detailed data cannot be shown for anonymity reasons as the individuals are identifiable. All applications supported by the panel and forwarded to College were successful (12). Of these, three applications were initially delayed to the next deadline. One application was not recommended to the College as it did not meet the criteria but was referred to the pay relativity panel and a salary increase was awarded.

**Action 3.4.5.:** Include targeted questions about staff views around inclusivity and transparency in the promotion process in the upcoming Athena Swan survey. Identify an enact ways to improve perceptions of inclusivity and transparency in the promotion process identified from the survey.

(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.*

In 2008 and 2014, ESE submitted research outputs from all eligible staff. In both years there were 50 REF-eligible staff. In 2008 there were 9 REF-eligible women (18%) and 41 REF-eligible men (82%). In 2014 there were 10 REF-eligible women (20%) and 40 REF-eligible men (80%).

#### 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.

(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.

##### 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?*

Training is available through College and within the department. Centrally, staff can take courses run by centres including the Educational Development Unit, EDI Centre, and Learning and Development Centre. Research staff are provided with training opportunities through the Postdoc and Fellows Development Centre (PFDC) and have an allowance of up to 10 days a year for personal and professional development. Courses are advertised through email, the website and staff meetings. Other training courses are provided by Estates, Finance, and HR. Uptake numbers from 2012-18 (Table 19) indicate significant participation in training courses.

ESE has organised workshops in unconscious bias, active bystander, promoting equality and diversity, bullying and harassment, and racism awareness, which are compulsory for all staff and PhD students since August 2020. We have run courses during our annual Away Days (section 5.6 i) on lectureship interviews or applications for research staff, achieving balance in academia and mindful effectiveness. We aim to run courses on different days and times to increase opportunity of participation for those teaching, those with caring responsibilities or working part-time. All courses are evaluated for course leaders to improve and integrate feedback. Courses with low uptake are run less regularly and courses with low evaluation are reconsidered or stopped.

The College runs a development programme for Women (Springboard) which is circulated widely within the department and staff are encouraged to take part.

Members of the SAT created new courses on issues affecting women’s health, (see section 5.6. (i)).

Training Provider	Female	Male	Grand Total
Educational Development Unit	66	89	155
Equality Diversity and Inclusion Centre	26	28	54
Estates Specialist Training		2	2
Faculty of Engineering	2	7	9
Finance	17	6	23
Human Resources Division	2		2
IT Services Training	2	3	5
Learning and Development Centre	62	68	130
Postdoc and Fellows Development Centre	30	55	85
Research Office	8	2	10
Safety Training	48	135	183
Talent Development	9	2	11
Operational Excellence	9	3	12
<b>Grand Total</b>	<b>281</b>	<b>400</b>	<b>681</b>

*Table 19: Number of staff taking personal development courses in various topics from 2012-19.*

**(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.*

Annually, all staff are required to discuss a PRDP with their line manager or an alternative colleague. PRDPs focus on the previous year’s work, plans and objectives for the forthcoming year, and include preparing an individual development plan. Staff can fill in an optional form which is tailored to the different staff groups. The academic form e.g. suggests comments on research, teaching, professional and personal development, internal and external contributions. We hold PRDP training sessions, including specific sessions for research staff. Staff are strongly encouraged to attend these sessions, including regular refreshers. Recognising that 2020 posed



challenges in communications due to remote working, we piloted communication workshops, aiming to help staff navigate difficult remote conversations.

In the 2019 Staff Survey, 81% of staff said they had had a PRDP, and 60% of respondents found the process useful.

**Action 3.4.1.:** Develop guidelines for line-managers for PRDP meetings including points that must be discussed (e.g. Plans for promotion, plans for after fixed-funding contracts end).

**Action 3.4.6.:** Improve recording of occurrence of PRDP meetings using our internal software ICIS. Keep annual statistics about uptake by gender.

### (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.*

New academic appointments receive a start-up package specific to their role and field, usually including a PhD scholarship. In addition to the support and guidance provided during the academic probation and PRDP, academic staff can take part in Leadership and Management Development programmes. Imperial College offers coaching as a bespoke development opportunity for all staff.

**Action 3.4.1.:** Develop guidelines for line-managers for PRDP meetings including points that must be discussed (e.g. Plans for promotion, plans for after fixed-funding contracts end).

Teaching fellows are provided with yearly funds towards professional development not covered by College training.

Research staff also have career support discussions with their line managers as a part of their PRDP meeting. The HoD invites all long-standing research staff (over 4 years) to an individual meeting to discuss their career plans annually.

Research staff matters are a standing item on the Management Committee and staff meeting agendas. Postdoc Representatives (Reps) attend staff meetings and submit topics to the Management Committee for discussion and resolution. Research staff are supported by the university PFDC who come to ESE regularly to promote the support they provide. The PFDC runs career development workshops and supports individuals applying for fellowships, including mock interviews with a high success rate.

The Postdoc Reps hold a series of events supporting career development and networking. Since 2018, examples include a funding development workshop, transitioning between academia and industry, and career development workshops. They hold bi-monthly meetings with research staff, and Q&A meetings with the HoD where discussions have included understanding university finances, pay relativity processes, and teaching opportunities.

In September 2020, the Postdoc Reps launched 'Postdoc Espresso' which is a bi-weekly event, run remotely with a talk or seminar and followed by a Q&A or an informal chat. Guests have included the PFDC and a senior software engineer from Google.

The department funds Arthur Holmes Centenary Research Grants of up to £3,000 for postdoctoral research staff for research training towards the development and improvement of their career. Externally funded research fellows are provided yearly funds towards costs not funded through their fellowship.

Brexit will potentially make it more difficult for European staff to choose to stay in the UK, or for new staff to join Imperial. College set up a Brexit Advisory Group to support staff with immigration. ESE pays for Indefinite Leave to Remain and other visas for all staff.

**Action 3.4.7.:** Develop record keeping of success rates for grants by gender. Review for indications of gender bias and enact measures to mitigate.

**(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).*

UG and Postgraduate students have a support network in the department led by the Careers Officer, Senior Tutors and Postgraduate tutors. The network comprises UG personal tutors, UG student mentors, Postgraduate supervisors and Postgraduate mentors who provide training in effective applications, interview and presentation techniques, as well as signposting opportunities such as internships.

UG students can undertake paid summer internships within ESE. UGs receive support from MSci project supervisors offering introduction to academic careers. During ESE UG Careers Day, UG students hear about internships, PhDs, and from academics and Imperial Careers Service staff. PhD students have access to the University career service and Graduate School who host talks on career opportunities.

Support for PhD students is primarily through supervisors. At Away Days we have organised panel-discussions for Early Career Researchers to provide advice to PhD students on careers in academia.

**Action 1.3.1./2.2.2.:** All career talk speakers are asked to include a slide on how their company considers EDI, including gender diversity. Companies are encouraged to select speakers ensuring a gender balance.

**Action 2.3.1.:** Include panel discussions on careers specifically aimed at PhD students at the annual Away Day.

(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 College's Research Office supports staff with funding opportunities, costing proposals, research governance, research contracts, intellectual property policies and training.

Staff are supported by the Pre-Award Hub and ESE's Research and Finance Management team who together will support and advise funding applications from preliminary costings to final submissions.

The department has two research committees: the Departmental Research Committee (DRC) and NERC Research Committee. The DRC supports staff with regular, comprehensive updates about upcoming calls and funding opportunities. It organises workshops on developing funding applications, tailored to individual funding bodies and career stage. It hosts meetings with key funding bodies providing advice and up-to-date guidance and supports staff in building intra- and inter-departmental networks for cross-disciplinary funding applications.

The DRC operates a volunteer peer-review process where staff can submit grant applications to any funding body for feedback prior to submission, including practice interviews ahead of panel assessments. Following unsuccessful applications, staff can request support from the DRC in reviewing feedback and resubmitting proposals.

The NERC Research Committee supports funding applications to the bi-annual call for standard and new investigator grants from the Natural Environment Research Council (NERC), for which institutions have a cap on application number. It provides peer-review of the applications ahead of the submission to the College's NERC review panel, which selects those applications that will be submitted to NERC. Feedback is provided and proposals not selected for submission to NERC can be revised and resubmitted to the committee.

In addition to departmental support, Research staff can access fellowship support from the PFDC who will review funding applications and prepare staff for interview including organising panel and mock fellowship applications.

**Action 3.4.2.:** Include information about departmental research support in the new induction pack.

## 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?

#### (vi) 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.

#### (ii) 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.

### 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.*

The College has a number of resources surrounding family leave, including extensive information around maternity, adoption, surrogacy, shared parental leave and leave for fertility treatment. Each information page includes a referral to the policy, and a guidance section for staff and for managers. The College is a member of Working Families which is the UK's leading work-life balance organisation. It has a dedicated Parents' Network where staff can find everything related to being an Imperial parent in one place. It hosts online guidance and training for managers 'Managing Family Related Leave'.

A staff member's immediate support is provided by their line manager, and the Research and Finance team, with whom staff discuss current commitments.

We recruit maternity cover for Learning and Teaching and PTO staff. Research staff cover will be dependent on the project duration and funder, and seniority of the member of staff. Research fellows with externally funded fellowships may require a no-cost extension to their funding. Academic staff currently arrange teaching cover themselves among colleagues where possible or discuss with the course directors.

**Action 4.6.1.:** Chair of the Teaching Committee to coordinate teaching cover for staff taking and returning from family leave, coordinating with Course Directors.

Staff members discuss their PhD student supervision with co-supervisors, colleagues or the Director of Postgraduate Studies (DPS).

**Action 4.6.2.:** DPS systematically has a discussion with staff taking and returning from family leave, helping coordinate associated paperwork, co-supervision and student milestones.

Given the small number of staff who have taken maternity leave (Table 21) (no instances of adoption leave) many line managers do not have experience in how to prepare their staff. The ESE SAT spoke to some of the women who have taken maternity leave in recent years confirming that due to varying levels of experience, support provided by line managers or administrative teams, was variable. Staff themselves, particularly new parents or those considering starting a family, will not be familiar with family leave policies and support.

**Action 4.6.3.:** When the staff member informs the Research and Finance Team, they will ensure the line manager and administrative support are informed of the College's family leave information and undertake the online training 'Managing Family Related Leave'. This will be reiterated prior to staff returning from parental leave.

**Action 4.6.8.:** Include information on family leave in regular departmental updates.

**Action 4.6.9.:** "Focus on..." poster on family leave, including information on the importance of paternity and shared parental leave.

**Action 4.6.6.:** Encourage parents to sign up to the College's Parents' Network and newsletters.

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

The College provides help and support to all new parents while they are on leave. This includes workshops, 'Babies and Bumps' coffee mornings, buddy schemes, and parent mentoring. Parent mentors are trained in practical mentoring skills and can share their personal experiences and offer support and advice on a range of issues around being a working parent or parent to be. The College has ten parent mentors, including Professor Chris Jackson, SAT Member.

Prior to going on leave, staff members and line managers discuss making reasonable contact during leave. Contact will include updating staff on what is happening at work, promotion opportunities and discussing their return to work.

Staff are entitled to Keeping In Touch (KIT) days which allow staff to keep in touch with their work and colleagues during their family leave.

**Action 4.6.7.:** Encourage parents to become a parent mentor.

(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.*

From the discussions with recent mothers, SAT identified that the return from family leave and welcome back to the department is variable. We wish to ensure the return to work is a positive

experience and consistent for all staff. It is important that staff and line managers are reminded of the College’s family leave and flexible working policies and that staff discuss their return to work. Currently, staff returning from family leave discuss returning to their teaching commitments with the relevant course director(s). In addition, we commit that the Chair of the Teaching Committee will invite the staff member to a discussion to support them returning to their teaching. We support all eligible academic staff and fellows in applying for the College’s Elsie Widdowson Fellowships. The Fellowship allows staff to concentrate on their research upon returning from leave and enables the department to relieve the academic member of staff of teaching or administrative duties.

Additionally, there are several external funding opportunities available to staff returning from family leave. We will support all eligible staff in applying for external funding upon returning from family leave and ensure their applications are internally peer reviewed and feedback provided.

**Action 4.6.3.:** Prior to staff returning from family leave, line managers and administrators will be reminded of the policy and online training ‘Managing Family Related Leave’.

**Action 4.6.5.:** Separate focus groups with recent parents and line managers of recent parents identifying good practice and areas for improvement.

**Action 4.7.1.:** Staff and line managers are reminded of the flexible working policy on a regular basis and individually prior to the staff member returning from family leave.

**Action 4.6.1. and 4.6.2.:** Chair of the Teaching committee and DPS to support staff member before they go on family leave and when they return.

**Action 4.6.4.:** Director of Research (DoR) to discuss funding opportunities with returning staff member. DoR to organise review of staff returners grants.

(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.*

	<b>Return Rate</b>	<b>Proportion of Returners Employed at 6 Months Post-Return</b>	<b>Proportion of Returners Employed at 12 Months Post-Return</b>	<b>Proportion of Returners Employed at 18 Months Post-Return</b>
Academic Staff	100%	100%	50%	50%
Research Staff	79%	64%	55%	45%
Learning & Teaching	100%	100%	100%	100%
Professional Services	100%	100%	100%	100%
Technical Services				
<b>TOTAL</b>	<b>84%</b>	<b>75%</b>	<b>63%</b>	<b>53%</b>

*Table 20: Return rates for staff and retention after 6 months, 12 months and 18 months following the end of maternity leave from 2007 until 2019.*

The return and retention rates of Learning and Teaching and PTO staff are 100% still being in post 18 months after maternity/adoption leave (Table 20). The return and retention rates for Research Staff is significantly lower. However, this is often because of fixed-funding contracts that have finished by the time they reach 18 months after leave. For Academic Staff, 1 of 2 individuals who have taken maternity leave were still in post 12 months later.

#### SILVER APPLICATIONS ONLY

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

#### (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.*

*Data removed as dataset so small individuals could be identified*

*Table 21: Instances of reported paternity leave and shared parental leave from 2007-19.*

There have been no instances of adoption leave between 2007-19 and one instance of shared parental leave (Table 21). With their personal knowledge of men who have had children in the review period, the SAT feel that the instances of reported paternity leave fall below the number of men who have had children. We anticipate that paternity leave is not being recorded in many cases. Academic staff, who typically have flexible working arrangements, may not feel they need to apply for paternity leave.

In the 2020 ESE Athena SWAN survey responses to “How long is the maximum length of time for “paternity leave”” ranged from 2 to 52 weeks. Responses to “How long is the maximum length of time for “shared leave”” spanned from 0 to 54 weeks. This revealed a varied understanding of the options available irrespective of gender.

**Action 4.6.9.:** “Focus on...” poster on family leave, including information on the importance of paternity and shared parental leave.

**Action 4.6.8.:** Include information on family leave in regular departmental updates.

**Action 4.6.6.:** Encourage parents to sign up to the College’s Parents’ Network and newsletters.

#### (vi) Flexible working

*Provide information on the flexible working arrangements available.*

The College and department support flexible working, which typically includes regular home-working, job-sharing, staggered hours, reducing hours or shift working. Some changes are permanent, but temporary changes may also be agreed. Flexible working can be requested informally or formally. Informal arrangements may be agreed between the staff member and their line manager following an informal meeting or discussion. When a formal request is required (e.g. reducing hours), the request will follow a set procedure in line with employment legislation and may result in a formal change to contract.

Applicants can discuss flexible working arrangements during the recruitment period with the proposed line manager. Adverts include a College statement regarding its inclusive environment. Current staff are usually made aware by the line manager that there are various options to work flexibly.

In the 2019 Staff Survey, 76% of respondents confirmed working flexibly to fulfil the duties of their role.

In the 2020 ESE Athena SWAN Survey, 80% of respondents (48% women) agreed that their line manager was supportive of requests for flexible working.

Staff can access College services while working from home, including their office computer and shared group space through the College virtual private network and Office 365. Staff who regularly work from home are supported with their home setup. The telephone system can divert to a designated telephone number if desired.

In March 2020 the COVID-19 pandemic forced the entire department to work remotely, described in Section 7.2.

(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.*

Currently, staff discuss with their line manager how to manage the transition from part-time to full-time after career breaks and this is treated flexibly.

**Action 4.7.1.:** Staff and line managers are reminded of the flexible working policy on a regular basis and individually prior to the staff member returning from family leave.

## 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.*

ESE prides itself on a friendly culture and is prioritising core values to improve our culture. In the 2019 staff survey, 57% felt confident about expressing their views and opinions without fear of negative consequences, and 66% are treated with dignity and respect. We responded to these results by organising listening sessions to talk about race, develop ESE values, and active bystander training.

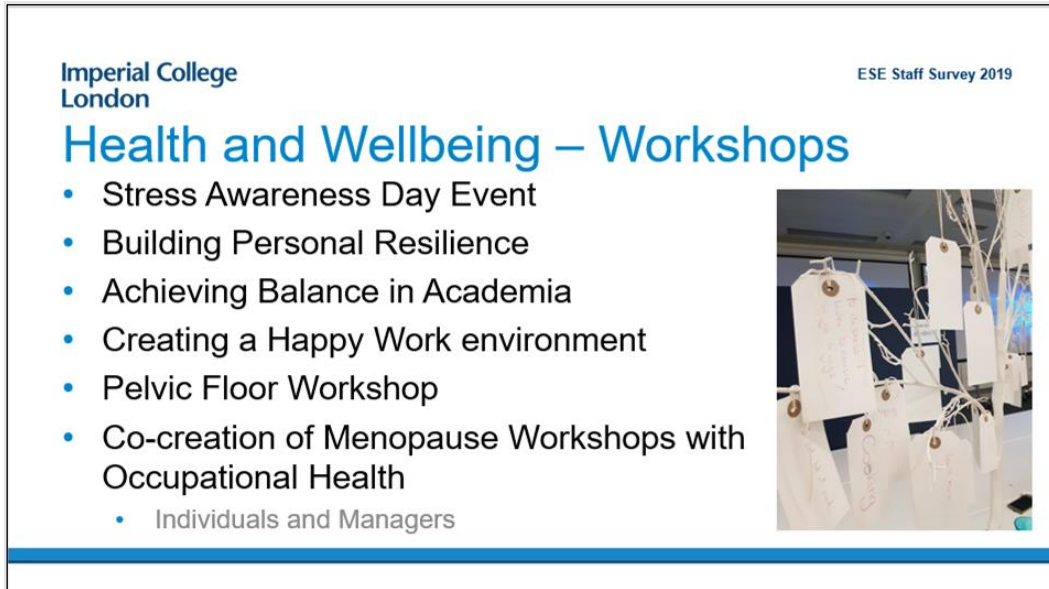
The Paleomagnetic Laboratories moved to White City in 2017 to avoid magnetic noise, however, the members of that research group are based at the RSM and are very integrated in our culture. PhD students and all staff attend daily coffee at 11am facilitating informal interaction. We recognise – through events and communications – International Women’s Day, Women in Engineering Day, World Mental Health Day, LGBTQ+ in STEM day, and acknowledge religious festivals, for example Eid, Diwali and Christmas. Since 2014, we have held an annual Away Day for PhD students and staff where we reflect on the department culture (2020 postponed due to COVID-19). A “save the date” for this event is sent months in advance. In 2019, 99 attendees participated in the drafting of six ESE core-values, which were voted on by 158 individuals to be: “Excellence, Supportive, Inclusive, Inspiring, Integrity and Innovative”. These were communicated in posters (Fig. 28), in an announcement email, and in weekly updates. We are now running Values workshops for staff and students to embed the values in our culture.



**Action 4.3.2.:** Develop a departmental affirmation of values.

**Action 3.1.6.:** Demonstrate our culture in outward-facing webpage by stating values and adding to EDI page.

Wellbeing is valued highly in ESE, yet in the 2019 Staff Survey only 37% responded that they feel that College cared about their health and wellbeing. We responded by signposting to College resources, for example through our monthly department newsletter, and delivering ESE wellbeing workshops (Fig. 26).



Imperial College  
London

ESE Staff Survey 2019

## Health and Wellbeing – Workshops

- Stress Awareness Day Event
- Building Personal Resilience
- Achieving Balance in Academia
- Creating a Happy Work environment
- Pelvic Floor Workshop
- Co-creation of Menopause Workshops with Occupational Health

- Individuals and Managers

*Figure 26: Slide from presentation of actions following staff survey 2019.*

These workshops built on the department’s development of a “Mental Health Awareness Team” (MHAT), a group of Mental-Health First-Aid trained staff who provide advice and signpost resources. Members of MHAT give talks to students and have published an article about mental health during student fieldtrips (John and Khan, 2018, Nature Geoscience).

In 2019, in response to the staff survey, we launched initiatives to improve the workplace for women. This includes a “Tranquillity room” to provide a quiet space for individuals which can be used for parents. ESE SAT members initiated sessions on Pelvic Floor Health and the Menopause for women and managers. In response to these sessions, ESE has led the deployment of free sanitary products in all women’s and accessible toilets (Fig. 27). A store of brand-new spare clothes and underwear in various sizes is available for emergencies. These workshops received positive feedback, and ESE staff have been invited to share their experience at Advance HE’s EDI conference (postponed to 2021). The workshops were repeated in March 2020 as part of Women@Imperial week with Faculty and College to ensure all women in College could take part. We commissioned videos for the Occupational Health website and in October 2020 held an online workshop in celebration of World Menopause Day, focusing on women, the menopause and lockdown.

GradSoc is critical to the ESE culture and runs regular wellbeing events (Fig. 28). Events include “Stress-less week”, offering meditation, Zumba, yoga, mental health talks, and origami. The activities are designed to be inclusive. The GradSoc reports to the PGC who support them in

these efforts. During the COVID-19 crisis GradSoc organised weekly activities to boost the spirits of students and staff (see section 7.2). They manage their annual budget allocation.

The Royal School of Mines Union (RSMU) of ESE and Materials departments coordinates socials and competitive sports for undergraduate students.

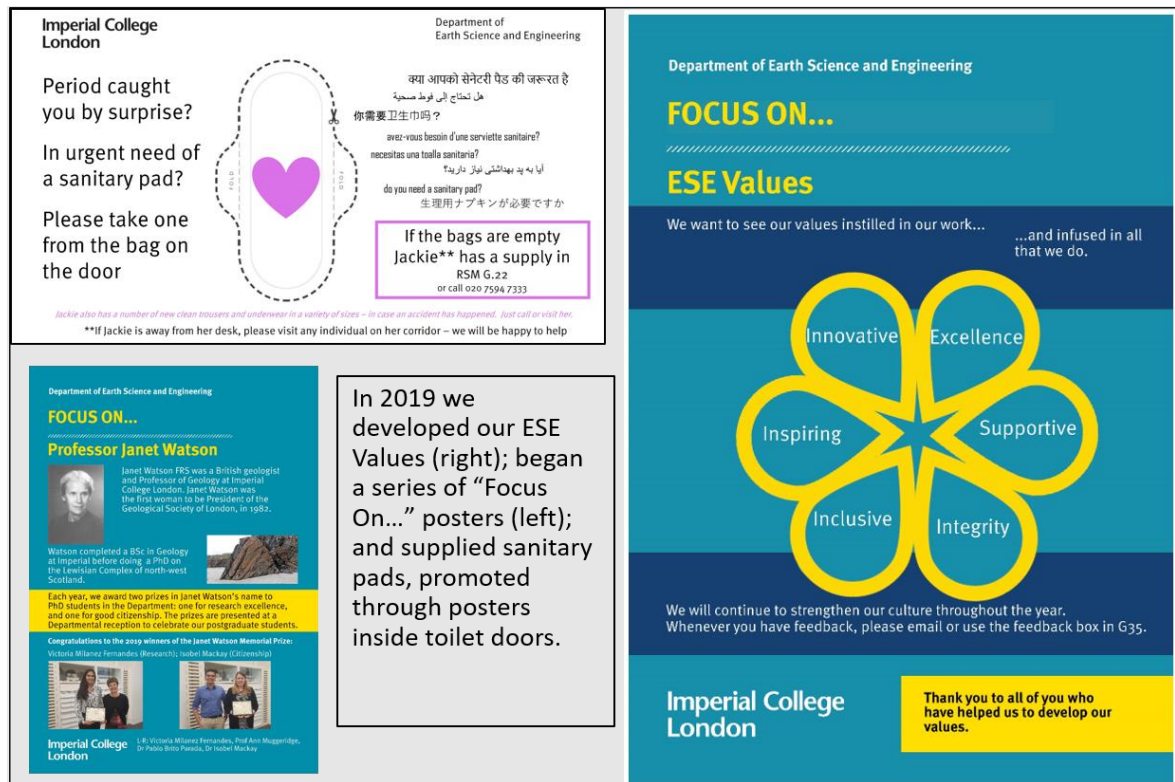


Figure 27: Posters for sanitary pads in toilets, and “Focus on...” posters creating visibility for female geoscientists and highlighting our values as a department.

Figure removed as individuals are shown

Figure 28: A compilation of wellbeing activities organised by GradSoc over the last three years to support ESE PhD student wellbeing.

(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.

Our Research and Finance team helps all staff locally. The Research and Finance Manager supports staff with their research grants, including spend and recruitment timelines. ESE Resources and Research Administrator (SAT member) supports staff with HR procedures and processes, including staff recruitment and end of contracts. The Faculty HR team supports strategic initiatives such as personnel development, gender and race initiatives, as well as

support with complaints and grievances. Staff have direct access to the College HR Hub should they have any questions. The College's Employee Relations Team supports and processes all grievance and disciplinary processes. The College's Report and Support tool enables staff to report instances of bullying and harassments, confidentially if they prefer. The department signposts to these services regularly.

Staff are provided with the appropriate information to follow HR policies, and the team ensure that they are being undertaken appropriately. All correspondence and paperwork are electronic and trackable. All policies have a checklist to ensure process is being followed and have an approval pathway which enables any potential issues or inconsistencies in process to be identified.

All new or updated regulations or procedures are circulated by email to all staff, discussed at the monthly academic and professional staff meetings and included in minutes of all these meetings. The College's HR website contains all the relevant information and links to full policies.

The department, Faculty and College run regular workshops on various processes such as recruitment, line management, sickness absence, and mediation.

Various College surveys, such as the College Staff Survey, or our department's Information and Resource follow-up survey and the ESE Athena SWAN survey, provide information on where staff feel they require further 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.*

Figure 29 shows our committee and reporting structure. Our most influential, decision-making committee is the Management Committee. This committee represents all staff and students. We aspire to a qualified, representative and diverse committee. Currently 33% are women (Table 23), a slightly higher proportion than that of all Academic staff (Fig. 18). To ensure gender balance it is critical to ensure a pipeline of women taking on leadership roles.

**Action 3.3.1.:** We will encourage women to participate in leadership courses and ensure that participation in these courses is valued in future workload models.

The gender balance in departmental committees and panels is shown in Table 22. Many are partly composed of people who hold specific departmental roles and others who are invited by the chair to be involved.

The SAT recognise the importance of having gender balance on influential committees. We also note that this could burden the smaller number of female staff with a higher administrative workload.

**Action 3.2.1. and 3.2.4.:** We will ensure that committee membership is properly valued in future workload models.

**Action 3.2.2.:** Communicate ESE committee structure, roles and time commitment. This will be done by updating webpage, course handbooks, and highlighting the structure and work of committees in the department at the annual away day.

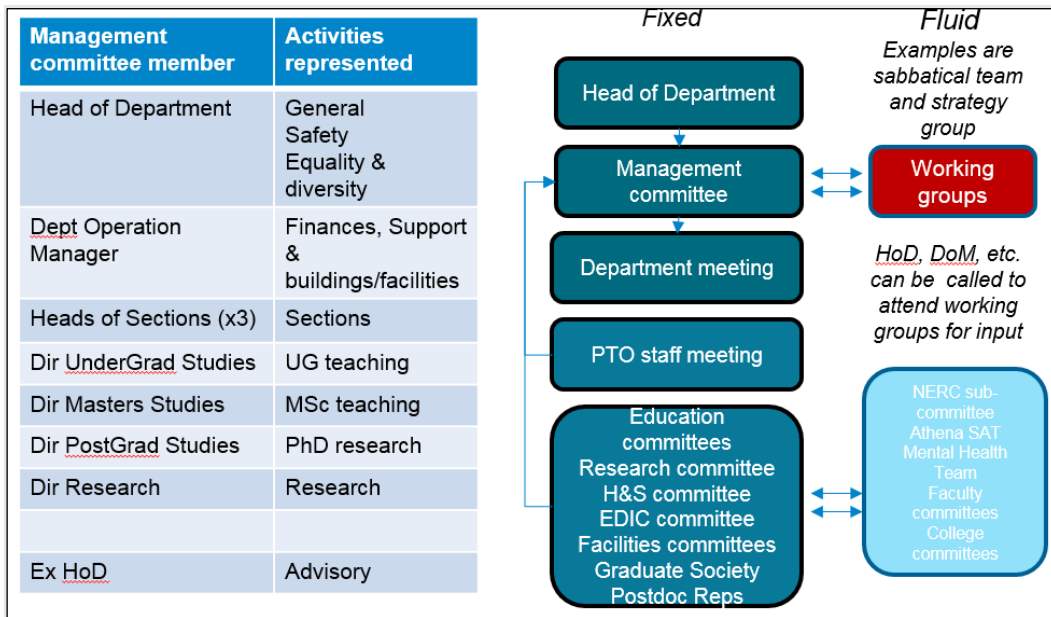


Figure 29: The ESE management structure. All staff and students are represented and can identify their representative to communicate issues to the decision-making committees.

Committee	Oct-20		Oct-19		Oct-18		Oct-17		Oct-16		Oct-15	
	FTE	%	FTE	%	FTE	%	FTE	%	FTE	%	FTE	%
Management Committee	12	33%	12	33%	12	33%	12	25%	11	36%	16	31%
H&S Committee	10	20%	10	20%	10	20%	10	20%	10	20%	11	18%
UG Teaching Committee	13	38%	12	33%	11	36%	15	40%	13	54%	13	46%
Research Committee	7	29%	7	29%	7	29%	7	29%	7	29%	6	33%
NERC Committee	5	20%	5	20%	7	43%	8	50%	5	60%		
PG Research Committee	5	40%	6	33%	5	40%	4	25%	4	25%	4	25%
GradSoc	7	50%	7	50%	6	57%	7	50%	0	0%	0	0%
EDIC Committee*	55	49%										
Athena SAT	15	60%	15	53%	12	58%	N/A	N/A	14	71%	15	67%
Academic Promotions	6	33%	7	29%	7	29%	8	25%	7	43%	7	43%
Job Level Review Panel**	6	50%	6	33%	7	29%						
Pay Relativity Panel**	N/A	N/A	7	29%	7	29%						
Internal Awards Panel***	7	29%										

Table 22: Total FTE and the percentage of women who sit on ESE committees and panels as a snapshot each October since 2015. \*Created in 2020, \*\* created in 2018, \*\*\*created in November 2020.

#### (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?*

We circulate opportunities to apply for external committee roles widely, by email and during monthly staff meetings. Line managers encourage their staff to take on external committee roles and there are sections on the PRDP form, as well as staff professional webpages, to record evidence of esteem. Proof of participation on external committees is also covered in promotions paperwork. We do not currently have a departmental record of staff participation on external committees other than self-reported information on professional staff webpages.

**Action 3.4.3.:** Collate an annual snapshot of staff participation in external committees, review data for gender representation.

**Action 3.4.4.:** Identify members of staff eligible to apply to specific opportunities on external committees. Provide tailored support and encouragement with the applications, ensuring and reviewing for gender representation. Keep records of success rates.

#### (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.*

Currently, ESE operates an informal workload model. Academic staff and research fellows have access to a personal academic profile that provides information on research portfolio and student supervision. In their PRDP meeting staff discuss their teaching and administrative workloads and imbalances are acted on by line managers. In the ESE Athena SWAN 2020 survey staff were asked to comment on their perceptions of workload balance in the department. Almost as many staff agreed that workload was distributed fairly as those that disagreed (Fig. 30). The results did not show any gender differences. Following the 2019 Staff Survey, the HoD committed to developing a workload model.

**Action 3.2.4.:** A new workload model will be developed for ESE staff to be able to better monitor and identify those with anomalously high workloads.

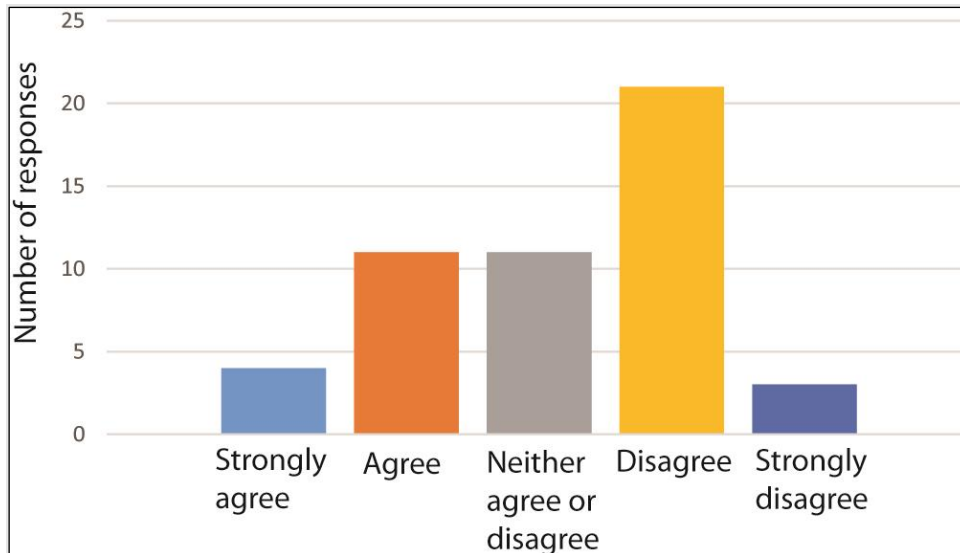


Figure 30: Responses to the Athena SWAN survey 2020 “I believe workload is fairly shared in the department.”

(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.

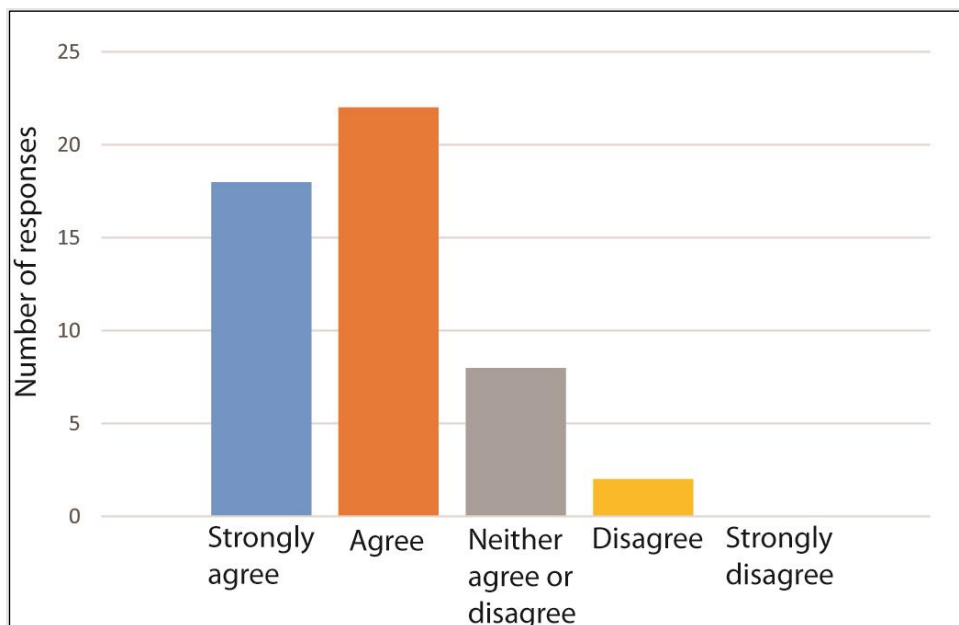


Figure 31: Responses to the Athena SWAN survey 2020 question “Meetings in the department are held during core hours allowing those with caring responsibilities to attend”.

Most departmental meetings are scheduled during core working hours (10am-4pm). The staff meeting is held monthly on Thursdays 12-2pm and departmental seminars are held weekly (when staff meetings are not held) every Thursday lunchtime (12-1pm). Similarly, most research seminars are scheduled for lunchtimes. After-hours departmental social functions are notified in advance to facilitate caring arrangements. They are planned to be inclusive given the topics, times, organisers and lecturers or speakers invited.

Postgraduates organise an informal social gathering on Fridays at 4.45pm for all PhDs and staff. Social gatherings for taught students are organised at lunchtimes. The annual Away Day (10:00-16:30) and development workshops are set in advance and organised on different days to increase inclusivity.

#### (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.*

Our principal mechanism to give visibility to role models is our weekly seminar series which is attended by students and staff. It is organised by staff of different professional grade/experience and drawn from across the range of ESE research activities. Seminars are recorded to maximise accessibility.

The organising committee compiles the speaker programme following a call for nominations. In 2020, the seminar team has noted and attempted to achieve gender balance amongst the speakers. Our data suggest that in some years the balance has been better than in others (Fig. 32). Before 2017 there was an emphasis on selecting speakers based on seniority. Figure 33 shows the number of years since our speakers completed their PhD, and that the year we reached 36% women speakers, we were inviting a larger proportion of early career researchers (ECRs). This indicates that it is possible to improve access to speaker slots but that consistent efforts are required.

**Action 4.1.2.:** We will develop Terms of Reference and guidance for the seminar organising committee which will 1) encourage invitations to ECRs and 2) aim for at least 30% women speakers in line with the national benchmark (Fig. 16).

**Action 4.1.3.:** To encourage female speakers to agree to participate in our seminar series we will offer speakers the opportunity to deliver a virtual seminar remotely. The COVID-19 crisis has shown that this method of delivery is completely effective and may be a better option for those who cannot travel easily.

**Action 4.1.4.:** We will develop an information pack for speakers with logistical information and details of the audience so they can feel supported in planning their presentation.



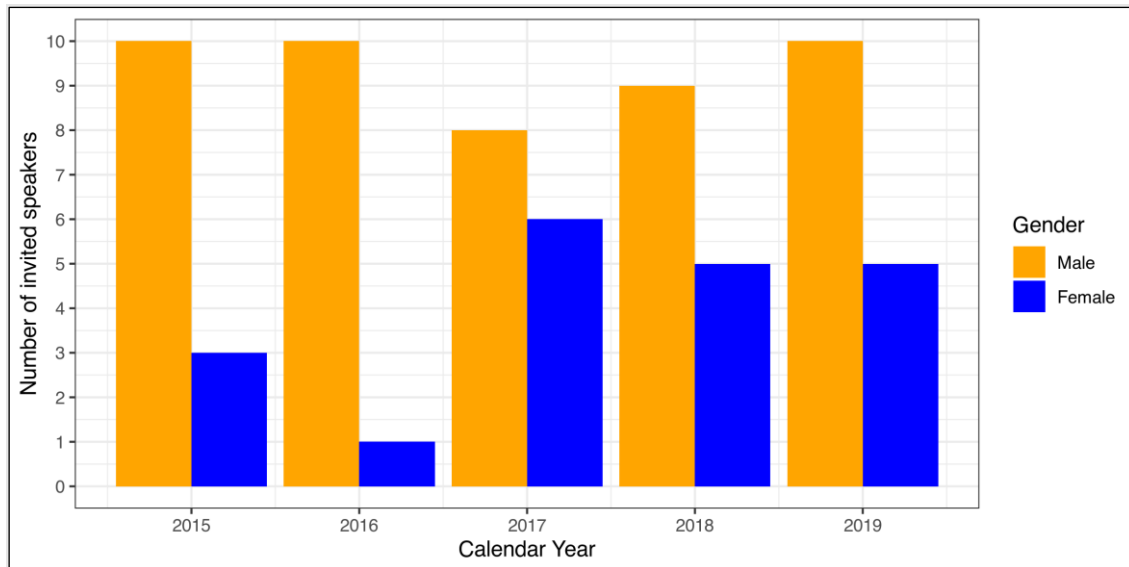


Figure 32: Number of invited departmental seminar speakers by gender from 2015-19

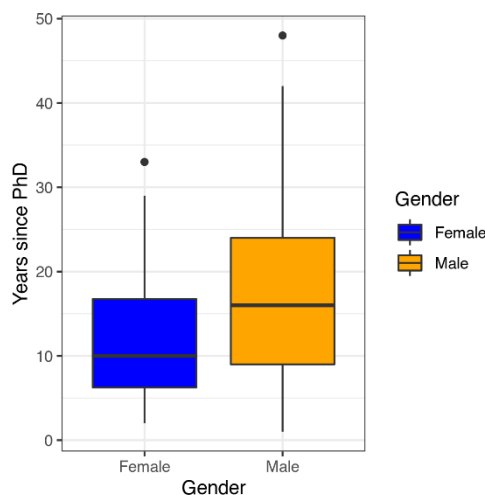


Figure 33: Number of years since PhD for male and female invited department seminar speakers

The [Watson Forum](#), established by Dr Adriana Paluszny, SAT member, is a series of interviews that highlight the contributions of women worldwide to numerical modelling, simulation, and programming in the context of STEM, in particular Maths, Physics, and Earth Sciences and Engineering. Many of the interviewees have hybrid careers that combine modelling with activities such as experimental and fieldwork. The Forum also aims to motivate young women to embark on studies involving numerical skills and modelling, and to celebrate female role models in academia and industry. The Department hosts the website to the project and has promoted some of the interviews. The Forum is presented on YouTube, has had nearly 10,000 views to date and has a Twitter presence.

ESE also gives role models visibility via public-facing promotional material, e.g. print or digital media. Women are more likely to apply for a job in ESE if they feel that the department is gender balanced. In 2018, we took photos of staff and students to update their research webpages, as well as to update our image library for the website and for our promotional material. We aim for regular ‘photo shoots’ to keep our research and promotional material up-to-date, always ensuring gender balance. In 2019, we reviewed all our online media and commissioned new

promotional videos including social media edits for our taught courses, also ensuring gender balanced representation. These were due to be completed in 2020 but COVID-19 stopped the production of the final video which will be finalised in 2021.

Within the building, we have been updating our teaching and research presentations and promotional posters in our corridors and meeting rooms, ensuring balanced representation of our scientific research and teaching areas while maintaining gender balance.

In our ESE Athena SWAN survey, 56% of respondents felt that the department used as many women as men as visible role models (13 women, 13 men and 2 who did not specify gender out of 50 people felt that way).

**Action 4.1.1.:** Maintain gender balance in internal and external research, teaching and promotional material.

#### (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.*

All staff and students within the department are encouraged and supported to take part in outreach activities. This includes helping at open days, activities within schools, the Sutton Trust Summer School, Great Exhibition Road Festival, Students in Engineering events and the Faculty's Bring Your Child to Work Day.

Since 2017, all PhD students are offered an introduction to outreach during their induction. In 2020, we put together a library of outreach activities and leader notes that staff and students can easily deliver.

Outreach and societal engagement activities are recognised in a variety of ways. These include being thanked by the activity organiser, recognition in the monthly newsletter or student prizes. In November 2020, we launched an Internal Awards and Recognition Scheme open to all staff and teaching assistants, in response to the 2019 Staff Survey.

Staff discuss their outreach activities during the PRDP and promotions processes. Known contributions are discussed during the pay relativity exercise. However, other than records of departmentally led activities, there is currently no mechanism to capture outreach activities.

**Action 3.2.3.:** Set up a self-reporting tool for outreach for staff, review annually identifying any gender balances.

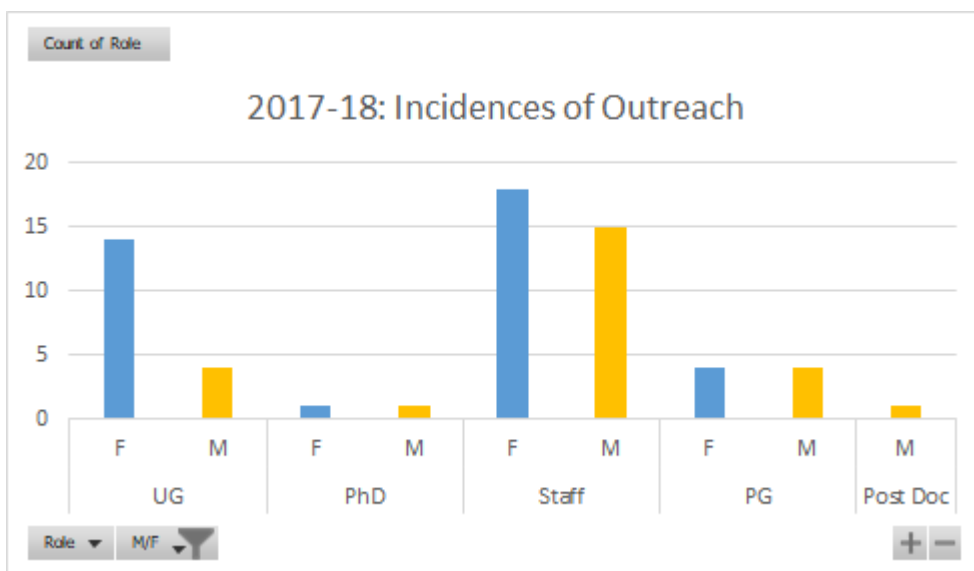
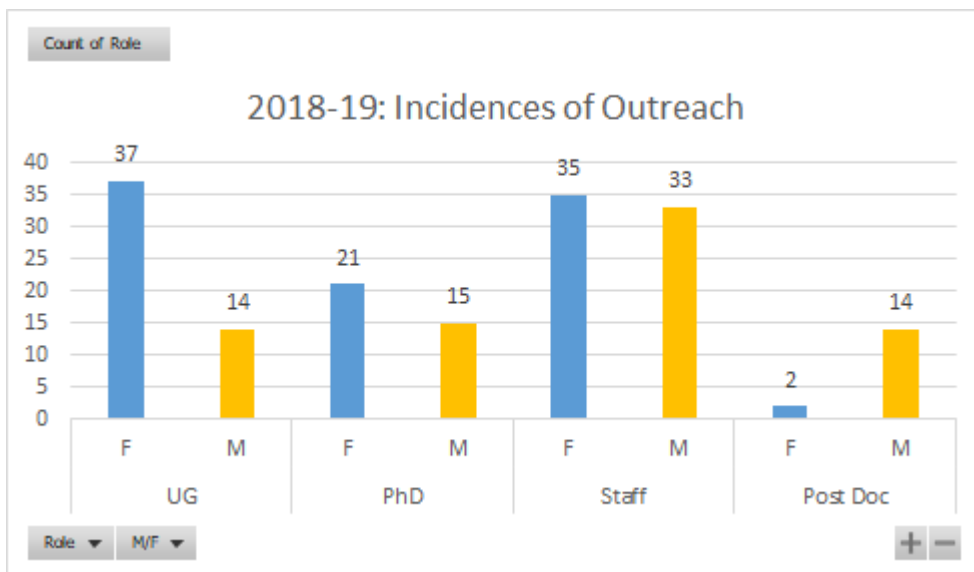
**Action 1.3.2.:** Add reporting tool on our departmental student database for students to report outreach activities. Monitor gender balance of activities.

**Action 3.4.1.:** Develop guidelines for line managers for PRDP meetings including discussion of outreach.

**Action 3.2.4.:** Development of a workload model which is inclusive of research, teaching, outreach, committee membership, administration, etc.

In 2019, the SAT undertook a review of contribution of outreach activities in ESE. It reviewed departmentally held records for outreach activity undertaken by students and staff, analysing research staff separately. Contributions to outreach activities were measured by counting the total number of individual outreach participations, "incidences of outreach". Individuals are counted multiple times if they have contributed more than once.

Figure 34 represents the outcome of this review by gender and role from 2015-16 to 2018-19. It shows that more incidences of outreach activities were undertaken by women than men, save for research staff. The incidence rate for women is significantly higher than for men as they are proportionality less represented in the department.



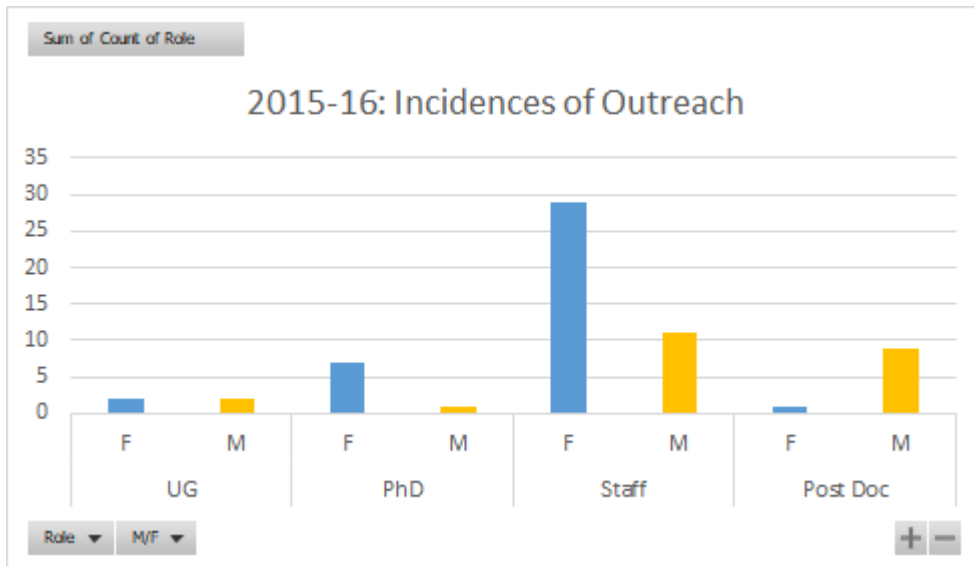
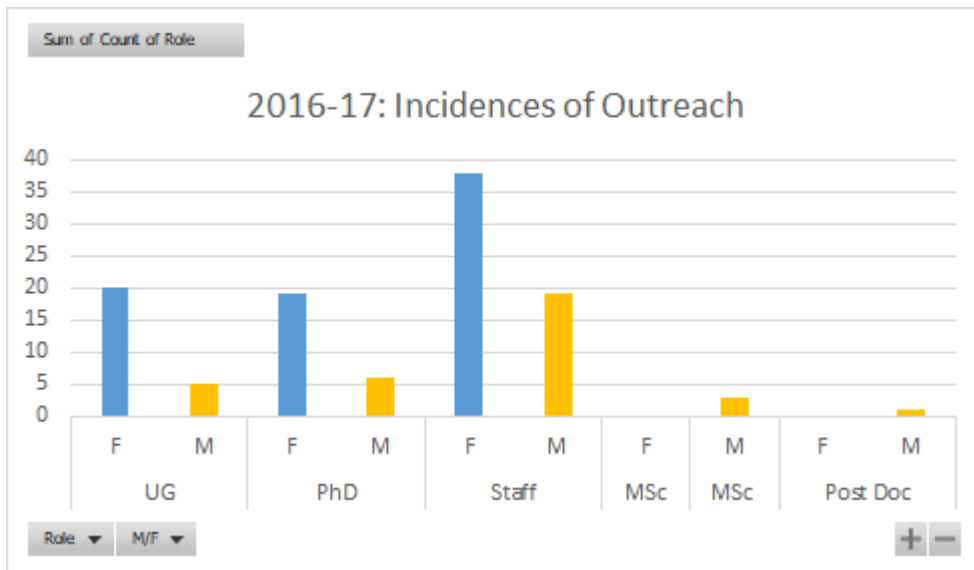


Figure 34: Departmentally recorded incidences of outreach conducted by men and women in academic years 2015-16 to 2018-19.

The 2020 Athena SWAN Survey asked staff whether they regarded outreach/societal engagement activities as an activity ESE men and women undertake equally. Of the 50 staff who answered this question, 60% agreed or strongly agreed (40% of those answers came from women).

Additionally, 33 (15 women) out of 48 staff confirmed they had been involved in ESE outreach or societal engagement activities. When asked what barriers they had to undertaking any or more societal engagement, the majority commented it was time.

The discrepancy between the perception that outreach is shared equally between women and men (Athena AWAN survey) and the SAT review of centrally held records of incidences of outreach predominantly undertaken by women might be explained by the fact that positions with a high proportion of outreach activity are filled by women within ESE.

## SILVER APPLICATIONS ONLY

### 6. CASE STUDIES: IMPACT ON INDIVIDUALS

Recommended word count: Silver 1000 words

Two individuals working in the department should describe how the department's activities have benefitted them.

The subject of one of these case studies should be a member of the self-assessment team.

The second case study should be related to someone else in the department. More information on case studies is available in the awards handbook.

## 7. FURTHER INFORMATION

Word count: 464 words

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

### 7.1. Student fieldwork

ESE conducts high-quality fieldtrips, typically to remote areas, allowing students to put theory into practice, supported by staff and PhD students. Although many report that fieldwork is the most enjoyable part of their degree, it can cause anxiety for some (e.g. biological differences mean that men are typically more comfortable in a "field bathroom") and are difficult for those with certain physical conditions. We strive to ensure at least one female fieldtrip leader/teaching assistant attends all fieldtrips, recognising that this can overburden women in the department. From 2018, we included menstrual hygiene kits in the fieldtrip supplies. In 2019, SAT members, Dr Emma Passmore and Dr Peter Fitch, led a working group to identify best practice in fieldwork, resulting in a code of conduct for staff and students outlining the expected standards of behaviour to be upheld during fieldwork.

The development of virtual fieldtrips, following the pandemic, has increased accessibility.

**Action 1.3.5.:** Continue to ensure at least one female fieldtrip leader/teaching assistant (holding menstrual hygiene kits) attends all student fieldtrips.

**Action 1.3.6.:** Update fieldtrip briefings and handbooks to include information on bathroom stops. Train all field leaders in good practice for providing adequate bathroom opportunities.

### 7.2. COVID-19 crisis response

ESE closed officially on 18th March 2020 due to the COVID-19 crisis. Within one week most staff migrated their research groups onto Microsoft Teams, continuing their regular meetings and interactions. PhD supervisors were strongly encouraged to check-in with students weekly. A formal recording platform for this was installed. Those not checking in are contacted by the DPS to check their wellbeing. We distributed home-working, computer health questionnaires to identify people who had inadequate home set-ups and then provided them with appropriate equipment. So far, ESE has sent >380 items (desk chairs, desks, screens, laptop stands, keyboard/mouse, laptops and desktops).

We transitioned rapidly to online teaching and assessment. Timetables were adapted, courses were delivered remotely at short notice (with good student feedback) and there was an almost seamless completion of remote assessments. Nearly all ESE Autumn Term courses were delivered remotely ensuring equal learning opportunities. A departmental fund supports students struggling financially to purchase equipment for remote learning in addition to central College's provision. To date, 100 students have received a total of £32,500.

ESE recognised that carers were most acutely impacted by this crisis and reinforced messages from Faculty that everyone should support those having to prioritise caring over work. We initiated a streamlined weekly communication of important notices, following feedback that initial dissemination of information was overwhelming.

Most people are still working from home. Some have returned to campus: those working in laboratories, whose home environments are detrimental to their physical or mental wellbeing or who find it difficult to work from home.

In November, the PostDoc Reps contacted research staff individually to check their wellbeing. Over the Christmas closure period, there will be a daily, virtual, drop-in helping to ensure nobody is isolated.

In 2021, ESE will reflect on 2020 to identify opportunities in our changed teaching, working and collaboration practices building on the inclusivity and good practice that developed through COVID-19.

## **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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Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
<b>1. Undergraduate students</b>						
1.1. Aspire to achieve 50/50 gender balance on our undergraduate degrees.	There was a decrease in the % of female undergraduate students to 40%. We will work to get back to at least 45% and improve gender split numbers to hopefully 50:50 by 2030.	1.1.1. Ensure gender balance in promotional materials aimed at undergraduate students is maintained. (see also Action 4.1.1).	4.1. (ii)	Liaison and Communications Manager, Undergraduate Team	Ongoing	Increase in number of applications from female students. 45% female students by 2025 and 50% by 2030. Data presented annually.
		1.1.2. Continued monitoring of the gender balance of applications, offers and acceptances.  Data returned to the Athena SWAN SAT annually.	4.1. (ii)	Undergraduate Education Manager	Ongoing  November 2020, then annually	
		1.1.3. Outreach activities aimed at GCSE level students to encourage female students to consider Earth Science studies at university and take the relevant pre-requisite subjects such as A-level Physics (see also Action 1.3.2).	4.1. (ii)	Liaison and Communications Manager	June 2021 until end 2022	Tracking of outreach activities shows increase in GCSE targeted activities by 2022.
		1.1.4. We will collaborate with other departments within the College to engage in outreach programmes that specifically engage young women in physics.	4.1. (ii)	Undergraduate Admissions Tutor	January 2021/2023	Collaborations set up.
1.2. Continued gender balance in exam performance.	Gender bias may be introduced in assessments.	1.2.1. We commit to set up a guidance document on how to set a fair exam including agreed methods of assessing that are more inclusive and remove influence of gender.	4.1. (ii)	Undergraduate Team	June 2021 (review annually)	Document written.  No gender bias in exam performance.

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
1.3. Ensure a positive environment for female UG students.	Undergraduate students may be reluctant to apply to male dominated careers.	1.3.1. All career talk speakers are asked to include a slide on how their company considers EDI, including gender diversity. Companies are encouraged to select speakers ensuring a gender balance.	4.1. (v) 5.3. (iv)	Undergraduate Careers Officer	Ongoing	30% of careers speakers are women. All speakers show EDI slide by June 2022.
	Outreach and engagement activities are disproportionately done by women.	1.3.2. Add reporting tool on our departmental student database for students to report outreach activities. Monitor gender balance of activities.	5.6. (viii)	Undergraduate Education Manager, Database Manager	March 2021	Record of outreach activities undertaken by UG students.
	Improve our understanding of gender equality challenges amongst undergraduates.	1.3.3. Invite undergraduate student representatives to join the Athena SWAN SAT.	3. (iii)	Undergraduate Senior Tutor, Athena SWAN Chair	Jan 2021 and then ongoing	At least 2 student representatives will join the Athena SWAN SAT by Jan 2021.
		1.3.4. Advertise and referral to the Colleges anonymous reporting tool for undergraduate students who have gender inequality issues.	4.1. (ii)	Undergraduate Team	When it is formally rolled out to students.	>70% of female students should feel supported in the ESE Athena SWAN survey.
	Supporting female students on fieldwork.	1.3.5. Continue to ensure that there is at least 1 female staff member or GTA on all student fieldtrips. These field leaders will	7.1.	Undergraduate Fieldtrip Coordinators,	Ongoing	>70% of female students should feel supported on

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
		also hold feminine hygiene kits which students can ask to utilise.		Rock Collection and Fieldwork Administrator		fieldwork in the ESE Athena SWAN survey.
		1.3.6. Fieldtrip briefings and handbooks will be updated to formally include information on bathroom stops during the day. All field leaders will be trained in good practice for providing adequate bathroom opportunities.	7.1.			
<b>2. Postgraduate students</b>						
2.1. Increase the number of PhD applications from female students.	Currently the number of male applicants (70%) is much higher than female, which translates into a higher proportion of male students accepted.	2.1.1. Ensure gender balance in promotional materials aimed at PhD students is maintained.	4.1. (iv)	Postgraduate Research Administrator, Liaison and Communications Manager	Ongoing	Increase numbers of applications from women to at least 40% (benchmark for Geology).
		2.1.2. Ensure that all PhD adverts pass a gender decoder test and are not deemed to be gender biased.	4.1. (iv)	Postgraduate Research Administrator	December 2020, ongoing	
		2.1.3. Ensure all members of PhD interview panels have undergone unconscious bias training.	4.1. (iv)	Management Committee	Ongoing	100% of staff to have attended unconscious bias training by July 2021.

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
		2.1.4. Report on PhD interview gender statistics at the end of the academic year to the Athena SAT.	4.1. (iv)	Director of Postgraduate Studies, Postgraduate Education Manager	August 2021, then annually	Increase in number of women students accepted onto PhD programs.
2.2. Ensure a positive environment for all PhD students.	Ensuring EDI training amongst PhD researchers and creating visibility around how EDI is addressed in career options will contribute to a positive environment for all students.	2.2.1. From August 2020 PhD students are required to take part in development workshops on ESE Values, Promoting Equality & Diversity, Unconscious Bias, Bullying & Harassment, Racism Awareness and Active Bystander; Director and Deputy Director of Postgraduate studies, and Wellbeing Advisor will stay up to date with key trainings.	4.1. (iv)	Postgraduate Research Committee	August 2020/ August 2024	100% of students have attended workshops prior to the completion of their degrees; Director and Deputy Director of Postgraduate studies, Wellbeing advisor are up to date with trainings.
		2.2.2. All career talk speakers are asked to include a slide on how their company considers EDI, including gender diversity. Companies are encouraged to select speakers ensuring a gender balance.	4.1. (v) 5.3. (iv)	Liaison and Communications Manager	Oct 2020	30% of careers talk speakers are women. All speakers show EDI slide.
	GradSoc activities support PhD wellness.	2.2.3. Continue to provide financial and other support to the PhD GradSoc committee so they can continue their excellent work promoting wellbeing.	4.1. (iv)	DOM, Postgraduate Research Committee	Ongoing	GradSoc will continue to run events.

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
						>60% Positive feedback from event evaluations.
2.3. Support PhD career development.	Female students may be reluctant to apply to male dominated careers.	2.3.1. Include panel discussions on careers specifically aimed at PhD students at the annual Away Day. These career panel discussions would run every other year so all PhD students can attend the event at least once during their PhD. The panel will be made up of PDRAs and ex-Imperial students who now work in industry and we will aim for gender balance.	5.3. (iv)	HoD, DOM, Liaison and Communications Manager	Oct 2021 and every 2 years after	>60% Feedback survey response.  >60% Positive feedback from PhD students on the event.
	Completion rates for female students are currently lower than male students.	2.3.2. Ensure PhD students complete their milestones on time (change attitude amongst students and staff) and all students have at least two internal supervisors or one supervisor and one mentor.	4.1. (iv)	Postgraduate Research Committee	Ongoing	Milestones undertaken on time by July 2022. Gender balance in PhD completion rates by 2024.
2.4. Increase the number of women on all our MSc courses.	We are not near a 50/50 gender balance on any MSc course.	2.4.1. Ensure gender balance in promotional materials aimed at MSc students is maintained (see also Action 1.1.1 and 4.1.1).	4.1. (iii)	Liaison and Communications manager, Postgraduate Education Manager	Ongoing	Gender balance on courses equal or above national benchmarks by 2024 entry.

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
	We are not near a 50/50 gender balance on any MSc course.	2.4.2. Increased marketing budget to reach prospective female students.	4.1. (iii)	DOM, Liaison and Communications manager	October 2020	Increased applications to courses for 2021 entry.
		2.4.3. Collaborate with women specific organisations to increase our visibility among this target audience.	4.1. (iii)	Liaison and Communications manager, MSc Course Directors	January 2021	One new collaboration per course by 2022.
	Improve our understanding of gender equality challenges amongst ESE Postgraduates.	2.4.4. Investigate the possibility of developing scholarships available to underrepresented (including gender) applicants for all MSc courses.	4.1. (iii)	HoD, DOM, MSc Course Directors	January 2021/2023	Funding secured for scholarships available to underrepresented applicants.
		2.4.5. Monitor the conversion of accepted applicants to actual attendance and contact students who did not enrol in the course to identify the barriers to attendance.	4.1. (iii)	Postgraduate Education Team, MSc Course Directors	October 2021	Identify barriers to female students accepting offers to our MSc courses.
2.5. Ensure a positive environment for female MSc students.	Ensure the environment in these currently male dominated MSc cohorts is supportive for women.	2.5.1. Ensuring women are not placed in teams for group-work in isolation but that there are at least 2 women per group.	4.1. (iii)	MSc Course Directors	2020-21 Academic year and ongoing	No project groups with only 1 female student.

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
	Improve our understanding of gender equality challenges amongst ESE Postgraduates.	2.5.2. Invite MSc student representatives to join the Athena SWAN SAT.	3. (iii)	Athena SWAN Chair	Nov 2021 and each November thereafter	At least 2 student representatives on Athena SWAN committee by January 2021.
		2.5.3. Create a survey (similar to the Athena SWAN staff survey) for post graduate students, re-run annually and evaluate.				
<b>3. Staff</b>						
3.1. Increase the number of women academics in ESE.	The % of women academics in ESE (21%) is below the national average for Earth Science (30%). Until this number increases, we cannot achieve 50/50 gender splits in leadership roles/committees / teaching or outreach without burdening the smaller number of women who make up the department.	3.1.1. All adverts are put through a gender decoder by ESE HR and the recruiting manager will be informed and provided support to ensure the advert is gender neutral before publication.	4.2.1., 4.2.4., 5.1. (i)	Resources and Research Administrator, Line Managers	Ongoing	Increased numbers of job applications from women, in line with relevant benchmarks by end 2022
		3.1.2. Encourage non-single-gendered short lists.				
			3.1.3. We will provide template non-gender coded adverts for academic and research staff positions.	4.2.1., 4.2.4., 5.1. (i)	Athena SWAN SAT, Resources and Research Administrator	July 2021

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
3.1. Increase the number of women academics in ESE.	The number of female research staff has been in steady decline for the last 10 years.	3.1.4. Continue to ensure that all parts of interviews take place in a standard working day.	4.2.1., 4.2.4., 5.1. (i)	HoD, Management Committee, Resources and Research Administrator	Ongoing July 2021 Ongoing	All recruitments take place during working hours.
		3.1.5 Investigate the underlying causes for the disproportionate male uptake of Research staff positions. Enact an immediate recruitment and retention plan to change course.	4.2.2., 5.1. (i)	Director of Resources, Resources and Research Administrator	January 2021/January 2022	Possible identification of underlying reasons for the decline and enactment of recruitment and retention plan.
		3.1.6. Demonstrate our culture in outward-facing webpage by stating values and adding to EDI page.	5.6. (i)	Liaison and Communications Manager	April 2021/December 2022	New content on website.
	Applications to Learning and Teaching positions are disproportionately low.	3.1.7. Increase social and professional media interactions for Learning and Teaching positions.	5.1. (i)	Resources and Research Administrator, Liaison and Communications Manager, Line Managers	November 2020 and ongoing	Increase application rate to Learning and Teaching positions.
3.2. Ensure women do not have a heavier administrative or	To have more equal gender representation on committees, the smaller number of	3.2.1. Committee membership is a valued part of a new workload model for the department.	5.6. (iii)	HoD	2021/2023	ESE staff survey question in 2022 will ask if staff feel committee work valued, and



Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
outreach workload than men.	female academics would need to take on more administrative duties. This would leave those women with less time for research, teaching and grant fundraising.					compared to future staff survey response
		3.2.2 Communicate ESE committee structure, roles and time commitment. This will be done by updating webpage, course handbooks, and highlighting the structure and work of committees in the department at the annual away day.	5.6. (iii)	HoD	2021 Away day and annual thereafter, Autumn 2022 for materials updates	Information is described at the away day and the materials are updated
		3.2.3. Set up a self-reporting tool for outreach, review annually identifying any gender imbalances.	5.6. (viii)	Liaison and Communication Manager	Tool set up by August 2021	Perceptions of how much outreach is valued have improved in ESE staff survey 2021 responses over those in 2020.
		3.2.4. Development of a workload model which is inclusive of research, teaching, outreach, committee membership, administration, etc.	5.6. (iii) 5.6. (v) 5.6. (viii)	HoD, Management Committee	August 2022	Staff respond more positively to questions regarding workload balance in ESE staff survey 2022.
3.3. Ensure a pipeline of women academics to take	Our most influential committee, the	3.3.1. Encourage women academics to take leadership training courses and provide leadership mentors to provide	5.6. (iii)	HoD, Heads of Section, DOM	Ongoing (review annually)	Maintain > 30% women on

Objective	Rationale	Description and implementation	Reference in application	Responsibility (Action owner)	Timeframe start/end date	Measure of success
on leadership roles in ESE.	Management Committee is composed of section leaders and other positions of responsibility (e.g. DOM, DPS). There is a need to ensure a pipeline of women to fill these positions, so this committee remains balanced.	advice. Ensure that participation in these courses is included in the workload model developed in action 3.2.6.				management committee.
3.4. Improve working environment for all staff.	Create a better environment in line with ESE values.	3.4.1. Develop guidelines for line-managers for PRDP meetings including points that must be discussed (e.g., Plans for promotion, plans for after fixed-funding contracts end).	4.2. (ii) 5.3. (ii) 5.3. (iii) 5.6. (viii)	Management Committee Athena SWAN SAT Line Managers	May 2021	80% of staff find the process useful in future staff surveys.
		3.4.2. Develop a new induction pack to formalise and standardise the process of induction: All new starters will get the same information and experience within their job category (e.g., academic staff, support staff). As a part of this we will also seek feedback from new starters to develop and improve the process.	5.1. (ii) 5.3. (v)	Management Committee DOM	June 2021	Evaluation of new starters' experience of induction, with aim to maintain as >70% positive.

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		3.4.3. Collate an annual snapshot of staff participation in external committees, review data for gender representation.	5.6. (iv)	Director of Research, Department Research Committee, Communications Officer	February 2021, then annually	80% Response rate to collection exercise.
		3.4.4. Identify members of staff eligible to apply to specific opportunities on external committees. Provide tailored support and encouragement with the applications, ensuring and reviewing for gender representation. Keep records of success rates.	5.6. (iv)	Director of Research, Research and Finance Manager	May 2021, then ongoing	Applications to external committees and increase success rate.
		3.4.5 Include targeted questions about staff views around inclusivity and transparency in the promotion process in the upcoming Athena Swan survey. Find ways to improve perceptions of inclusivity and transparency in the promotion process identified from the survey. Look at other Departments for inspiration.	5.1. (iii)	Athena SWAN SAT, Department Promotions Committee	Autumn 2021, ongoing annual promotions cycles	Identification of and enactment of ways to improve perceptions of inclusivity and transparency in the promotions process.
		3.4.6 Improve recording of occurrence of PRDP meetings using our internal software ICIS. Keep annual statistics about uptake by gender.	5.3. (ii)	DOM, Line Managers	June 2022, ongoing annual cycles	Record of occurrence of PRDPs and statistics about uptake by gender.
		3.4.7. Develop record keeping of success rates for grants by gender. Review for	5.3. (iii)	Research committee, DOM	June 2022	Record of grant success by gender, measures

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		indications of gender bias and enact measures to mitigate.				enacted upon any findings of gender bias.
<b>4. Organisation and culture</b>						
4.1. Raising the profile of women in ESE.	Create an environment with visible female role-models and provide support for women to take on these roles, to support pipeline in ESE. Recognise that heavier administrative loads and caring responsibilities may mean flexibility and changes to current practice may be required to allow women to fully participate as role models.	4.1.1. Maintain gender balance in internal and external research, teaching and promotional material.	5.6. (vii)	Liaison and Communications Manager	Ongoing (Review annually)	50/50 representation in ESE produced materials.
		4.1.2. Develop Terms of Reference and guidance for the seminar organising committee.	5.6. (vii)	Department seminar organisers, Athena SWAN SAT		30% women speakers in department seminars annually (mirror % of women Earth Science & Engineering academics in UK).
		4.1.3. Continue to facilitate departmental seminars to be given remotely, after the Covid 19 crisis, or to be recorded in order to maximise speaker availability and audience attendance.	5.6. (vii)	Department seminar organisers, Management Committee	June 2021 and ongoing	All seminars are available to view online, and no speaker declines due to travel requirements.
		4.1.4. Develop information packs for prospective speakers (i.e., information on talk length, audience number and experience level, travel or virtual seminar software requirements and related	5.6. (vii)	Department seminar organisers	May 2021	>70 % positive responses of collected feedback on experience.

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		logistics). This will allow all speakers when invited to prepare themselves fully.				
4.2. Increase appreciation of gender equality issues within the undergraduate, postgraduate and PhD communities.		4.2.1. Develop and run an annual Athena SWAN survey to identify any gender equality issues within student cohorts.	3. (iii), 4.1. (iii), 4.1. (v)	Athena SWAN SAT, EDIC Centre, Education Teams	April 2021	Response rate >40%.  Identification of gender issues.
4.3. Increase appreciation of gender equality issues within staff.	In 2020 we ran a survey for academics and PDRAs which provided vital information on areas of EDI that require improvement.	4.3.1. We will re-run the 2020 ESE Athena SWAN staff survey annually from 2021.	3. (iii)	Athena SWAN SAT, EDIC Centre	April 2021 and every April thereafter	Response rate of > 40%.  Identification of gender issues.
		4.3.2 Develop a departmental affirmation of values.	4.1. (iv), 5.6. (i)	Management Committee	August 2022	Departmental affirmation of values created and distributed annually at onboarding events
4.4. Ensure continuity and energy of the Athena SWAN SAT.	It is important for new members to regularly join the SAT to provide new ideas and energy.	4.4.1. Move to a model where there are 2 Athena SWAN co-chairs rather than 1 chair. This will allow the load to be shared but also ensure continuity if one of the co-chairs needs to step-down temporarily (e.g., a period of parental leave) or permanently (e.g., if they leave the department).	3. (iii)	Athena SWAN SAT, HoD	Oct 2020	We will have 2 co-chairs by Jan 2021.

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		4.4.2. Athena SWAN SAT Terms of Reference drawn up to include the duration of the co-chair appointment.	3. (iii)	Athena SWAN SAT, Management Committee	April 2021	Terms of References set up.
		4.4.3. Issue a new call to join the Athena SWAN team every November. Existing members will also be asked whether they would like to continue their membership or rotate off. This will ensure the group remains inclusive and invigorated.	3. (iii)	Athena SWAN Chair	Ongoing every November	We will welcome new members every Dec. By 2023, >50% of staff in the department will have been on the SAT.
4.5. Understand gender issues faced by research staff.	Over the last 10 years there has been a reduction in the number of female PDRA and Fellows. We would like to discover what implications this has for the environment and culture of this cohort.	4.5.1. Invite at least 2 PDRA/Fellow representations to join the Athena SWAN SAT. We did not receive any volunteers from the PDRA/Fellow community to join the SAT when we issued a general invitation in July 2019 and will discuss with the PDRA/Fellow representatives how best to seek volunteers.	3. (iii)	Athena SWAN chair	December 2020	We will have 2 PDRA/Fellows representatives by Jan 2021.

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4.6. Supporting staff in preparing and returning from family leave.	The experience of staff preparing and taking family leave has been variable. Line managers throughout the department have variable experience in how to best prepare their staff before leave and welcome them back afterwards leading to variations in how supported staff are.	4.6.1. Chair of the Teaching Committee to coordinate teaching cover for staff taking and returning from family leave, coordinating with Course Directors.	5.5. (i) 5.5. (iii),	Chair of the Teaching Committee, Course Directors	December 2020, ongoing	Staff surveys to show improvement in feelings around family leave.
		4.6.2: DPS systematically has a discussion with staff taking and returning from family leave, helping coordinate associated paperwork, co-supervision and student milestones.	5.5. (i), 5.5. (iii)	Director of Postgraduate Studies	December 2020, ongoing	
		4.6.3: When the staff member informs the Research and Finance Team, they will ensure the line manager and administrative support are informed of the College's family leave information and undertake the online training 'Managing Family Related Leave'. This will be reiterated prior to staff returning from parental leave.	5.5. (i), 5.5. (iii)	Resources and Research Administrator, Line Managers	December 2020, ongoing	
		4.6.4: Director of Research (DoR) to discuss funding opportunities with returning staff member. DoR to organise review of staff returners grants.	5.5. (iii)	Director of Research, Department Research Committee	July 2021 ongoing (first family leave returner)	
		4.6.5: Separate focus groups with recent parents and line managers of recent parents identifying good practice and areas for improvement.	5.5. (iii)	Resources and Research Administrator, Employee Relations Team	April 2022	Confidential and anonymised report submitted providing good practice and

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						areas for improvement.
		4.6.6: Encourage parents to sign up to the College's Parents' Network and newsletters.	5.5. (i), 5.5. (v)	Athena SWAN SAT, Liaison and Communications Manager		Staff surveys to show improvement in feelings around family leave.
		4.6.7: Encourage parents to become a parent mentor.	5.5. (ii)	Athena SWAN SAT		
	There is a clear variation of knowledge around family leave.	4.6.8: Include information on family leave in regular departmental updates.	5.5. (i), 5.5. (v)	HoD, Liaison and Communications Manager		
		4.6.9: "Focus on..." poster on family leave, including information on the importance of paternity and shared parental leave.	5.5. (i), 5.5. (v)	Athena SWAN SAT, Liaison and Communications Manager		
4.7. Encouraging and supporting a flexible working environment.		4.7.1. Staff and line managers are reminded of the flexible working policy on a regular basis and individually prior to the staff member returning from family leave.	5.5. (iii), 5.5. (vii)	Resources and Research Administrator, Line Managers	Ongoing	Positive feedback in staff surveys.