



**Department Application**  
**Bronze and Silver Award**  
**[REDACTED]**

School of Mathematics  
and Statistics

University of St Andrews



## WORD COUNT

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

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

We have provided the following recommendations as a guide.

Department application	Actual	Recommended
<b>Word limit</b>	<b>10,479</b>	<b>10,500</b>
<i>Recommended word count</i>		
1.Letter of endorsement	523	500
2.Description of the department	586	500
3. Self-assessment process	867	1,000
4. Picture of the department	2,037	2,000
5. Supporting and advancing women's careers	5854	6,000
6. Case studies	n/a	n/a
7. Further information	612	500

<b>Name of institution</b>	University of St Andrews
<b>Department</b>	School of Mathematics and Statistics
<b>Focus of department</b>	STEMM
<b>Date of application</b>	18 May 2018
<b>Award Level</b>	Bronze
<b>Institution Athena SWAN award</b>	Date: 7 May 2018      Level: Bronze
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#### 1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT



Professor Thomas Neukirch  
Head of School of Mathematics and Statistics

Athena SWAN Coordinator  
Equality Challenge Unit  
Queen's House  
55/56 Lincoln's Inn Fields  
London WC2A 3LJ

St Andrews, 10 May 2018

Dear Athena SWAN Coordinator,

This Athena SWAN Bronze Award application has my full support. It is the outcome of a strong joint effort of our School. I confirm that the information presented in the application (including qualitative and quantitative data) is an honest, accurate and true representation of the School.

Our School aspires to provide an inclusive and diverse environment in which staff and students can thrive. The working environment is extremely collegial and the hierarchy within our School is flat. One example of this is that our self-assessment team has been led very competently by Dr Michail Papathomas, who currently is a lecturer. We have become aware through the feedback received for our previous Athena SWAN application and through ECU-led workshops that having a lecturer as chair of the SAT could be regarded as the School not putting sufficient emphasis on the importance of the Athena SWAN process. I would like to stress that this is not at all the case for our School. A large proportion of staff members, including professorial staff such as myself, actively contributed to the current application and the leader of our SAT had the full support of me as Head of School and of our School's Management Group as well as having access to the necessary resources, e.g. in terms of delegating tasks to the SAT. Any work undertaken for our School's Equality and Diversity Committee and the SAT is taken into account in our School's new workload model.

Our core SAT has been complemented by staff working groups, which focussed on the discussion and analysis of specific Equality relevant topics, coming up, for example, with actions to increase the number of female PGR students. I am delighted by the level of

engagement and wide participation by my colleagues in the self-assessment process for this application.

Considering also the ECU feedback to our 2016 application, this process has led us to identify a number of key problem areas that we consider as priorities for our action plan over the next three years:

- We have a systematically lower proportion of female undergraduate students who achieve a First Class Honours degree.
- Compared to our relatively high percentage of female undergraduate students our School has a disappointingly low percentage of female PhD students.
- We want to increase the overall percentage of our female staff at all levels and to achieve that we need to further improve our processes and mechanisms related to retaining, recruiting and promoting female academic staff, starting at postdoctoral level.
- To ensure fairness and inclusivity we need to further increase the awareness of staff on unconscious bias.

As Head of School I have taken an active part in the assessment leading to this application and I will ensure that the action plan is delivered, in particular to make our School fairer in supporting the career advancement of students and staff of all identities.

Yours sincerely



Prof. Thomas Neukirch  
Head of School  
School of Mathematics and Statistics

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## List of Acronyms

AS – Athena SWAN  
BDM – Business Development Manager  
BME – Black and Minority Ethnic  
CAPOD – Centre for Academic, Professional and Organisational Development  
DoR – Director of Research  
DoT – Co Director of Teaching  
E&D – Equality and Diversity  
EMS – Edinburgh Mathematical Society  
FAS – Financial Advice and Support  
FT – Full time  
FTE – Full-time equivalent  
HEA – Higher Education Academy  
HESA – Higher Education Statistical Agency  
HoS – Head of School  
HR – Human Resources  
iSAT – Institutional Self-assessment Team  
KIT – Keep in Touch  
LERU – League of European Research Universities  
LMS – London Mathematical Society  
NSS – National Student Survey  
PG – Postgraduate  
PGR – Postgraduate Research  
PGT – Postgraduate Taught  
PRF – Passport to Research Futures  
PT – Part time  
REF – Research Excellence Framework  
RSE – Royal Society of Edinburgh  
SAT – Self-assessment Team  
SMG – School Management Group  
STFC – Science and Technology Facilities Council  
UBD – University Business Development  
UG – Undergraduate

## 2. DESCRIPTION OF THE DEPARTMENT

The University of St Andrews has 9,140 students and is situated in St Andrews, Scotland (population 16,800). Efforts to improve its track record on gender, social and ethnic diversity and inclusion, resulted in Institutional Bronze awards in 2013 and 2018. The preceding and present Principals (Vice-Chancellors) are female.

The School prides itself on its friendly atmosphere. Its teaching provision is routinely ranked among the top 5 in the UK, e.g. 4th in the last NSS, and 3rd in the 2017 Guardian and Times League Tables. In the 2014 REF the School ranked 11th in the UK.

The May 2018 staff profile for the School is 82% white, with the remainder 18% disclosed as Asian, Mixed, Other, Information Refused or Not Known. Student and Staff numbers and gender proportions are given in Tables 1 and 2 below. Student data are presented in FTE, and Staff data in headcount, unless otherwise stated. National data are sourced using data provided by HESA referring to the (122) Mathematics cost centre. Professional support staff consists of 5 administrators and 3 computing officers. Communal areas include two coffee/common rooms and one meeting room. The Statistical Ecology research group is based in a building that is 10 minutes' walk from the main mathematics building.

*Table 1 Student Population 2017/18 (FTE)*

Level	2017-18 Student Numbers			
	Female	Male	Total	% Female
Undergraduate	178	259	437	41%
Postgraduate Taught	13	16	29	45%
Postgraduate Research	8	31	39	21%
Total	199	306	505	39%

*Table 2a Staff Numbers 31 July 2017 (Headcount)*

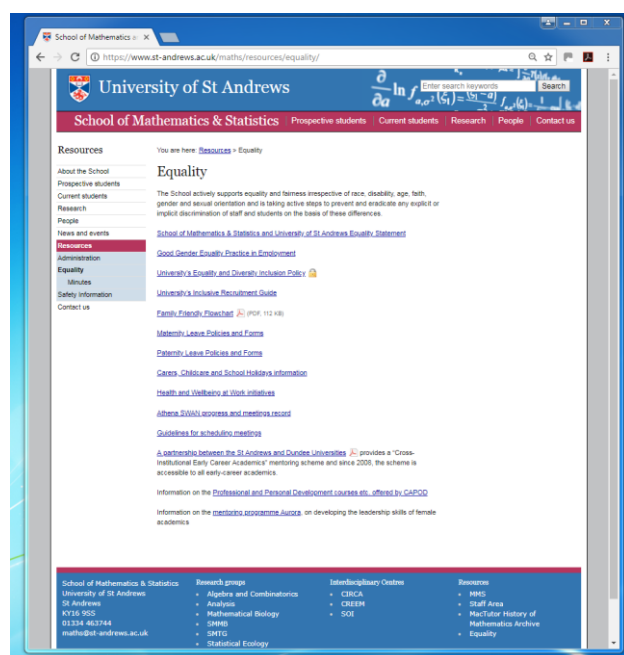
Job Category	2017 Staff Numbers			
	Female	Male	Total	% Female
Research Only	9	10	19	47%
Teaching Only	3	3	6	50%
Research & Teaching	9	19	28	32%
Professional & Support	6	2	8	75%
Total	27	34	61	44%



Senior roles (rotated on a 3-5 year basis)	
Role	Gender
Head of School	Male
Deputy Head of School	Female
Director of Research	Female
Director of Teaching	Female
Director of Postgraduate Studies	Male
Head of Pure Maths division	Male
Head of Applied Maths division	Male
Head of Statistics division	Male (Female from Sep 2018)
Admissions Officer – Deputy Adm. Officer	Female - Male
E&D/SAT Chair	Male
Exams officer	Male
Outreach coordinator	Female
Impact officer	Male

In addition, the advising coordinator is female.

A snapshot of the School's Equality webpage is shown below.



Our School is strong in some areas of gender equality. This includes successful initiatives relevant to organization and culture [Staff Lunch+Chat meetings (Section 5.4(i)), Student Discussion Forum (Sections 5.4(i) and 6], and flexible working (Section 5.3). Among others, our School has been commended by the ECU in our 2016 AS application for ‘female staff promotions’, ‘SAT committee representation’, ‘meetings timing’, ‘cross-institutional mentoring scheme’, and ‘good practice sharing’. We maintain female percentages for Staff, UG and PGT students higher than national averages. Specifically, proportions of female staff in our School stood at 47% for Teaching -only vs 36% nationally in 2016/2017, 42% for Research-only vs 23% nationally, and 25% for Teaching and Research vs 18%. (ORTUS LMS recent Departmental Benchmarking Report) We consistently have about 10% more UG female students than the national average (see Figure 2), whilst in 2017 we had 46% female PGT students as opposed to 39% in the rest of the UK (benchmarking based on HESA cost centre for Mathematics).

In the 2016 Staff/PGR E&D survey, comments were made on increased workload. The refined workload model may have helped address these concerns, as we saw no such comment in the 2017 survey. In 2016, comments were made on fixed term contracts and job security. The University introduced a bridging fund that allows payments to continue to the member of staff pending funds being secured or between teaching contracts. Again, we saw no similar comments in 2017.

School of Mathematics and Statistics highlighted achievements since 2015
1. A compulsory staff appraisal process, linked to the pre-promotion process, where females can choose to be assessed by a female.
2. Increased presence of female staff in senior roles (near 50% from 30% in 2014), whilst ensuring workload is fairly distributed.
3. Monthly informal Lunch+Chat staff meetings. [Section 5.4(i).]
4. A flourishing Student Discussion Forum, also organising E&D events. [Sections 5.4(i) and 6]
5. A more integrated and transparent workload model.
6. Near 100% uptake for the ‘Equality and Diversity’ and ‘Unconscious Bias’ training modules (not compulsory).
7. Introduced self-assessment staff groups.
8. 3 months of maternity leave for Post-doctoral researchers is covered by School funds when cover is not provided by the research grant.

Our self-assessment identified 4 pressing challenges, forming corresponding groups of actions.

School of Mathematics and Statistics key priorities to address
1. A notably smaller percentage of female UG students attains a 1 <sup>st</sup> degree classification. (Action 4.4 a,b,c,d,e,f,g)
2. The proportion of female PGR students remains low. (Action 4.7 a,b,c,d,e,f,g)
3. Further increase the proportion of female staff across all grades. (Action 5.1 a,b,c,d,e,f,g, Action 5.2 a,b,c,d,e,f,g and Action 5.3 a,b)
4. Address comments in Staff/PGR survey relating to interpersonal communications. (Action 5.5 a,b)

### 3. THE SELF-ASSESSMENT PROCESS

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

The School's Equality and Diversity (E&D) committee was established in 2013. A student representative was included to form the School's self-assessment team (SAT). Dr Michail Papathomas replaced Professor Ineke De Moortel as the E&D/SAT chair in 2014. Professor Thomas Neukirch became Head of School and member of the E&D/SAT, replacing the former Head of School. In 2015, a PGR student representative was included to extend student representation, and a member of the School's professional support staff to extend the remit of the SAT. In 2017 two individuals left the committee and two joined. The rest of the committee remained unchanged to maintain a degree of continuity. It consists of 6 males and 3 females. E&D/SAT membership is acknowledged as a duty in the School's workload model.

Our School believes that offering leadership roles to Lecturers or Senior Lecturers is a reflection of its non-hierarchical culture. This has created an atmosphere of mutual support and equal treatment irrespective of rank. Dr Michail Papathomas (E&D/SAT chair, and member of the Institutional SAT) was given unrestricted powers to delegate tasks, and had the full support of senior members of staff, including the HoS. However, we understand ECU concerns for likely implications for the perceived stature of a committee chaired by a Lecturer. To alleviate concerns, from October 2018, the SAT will be chaired or co-chaired by a Professor (**Action 3.1**).

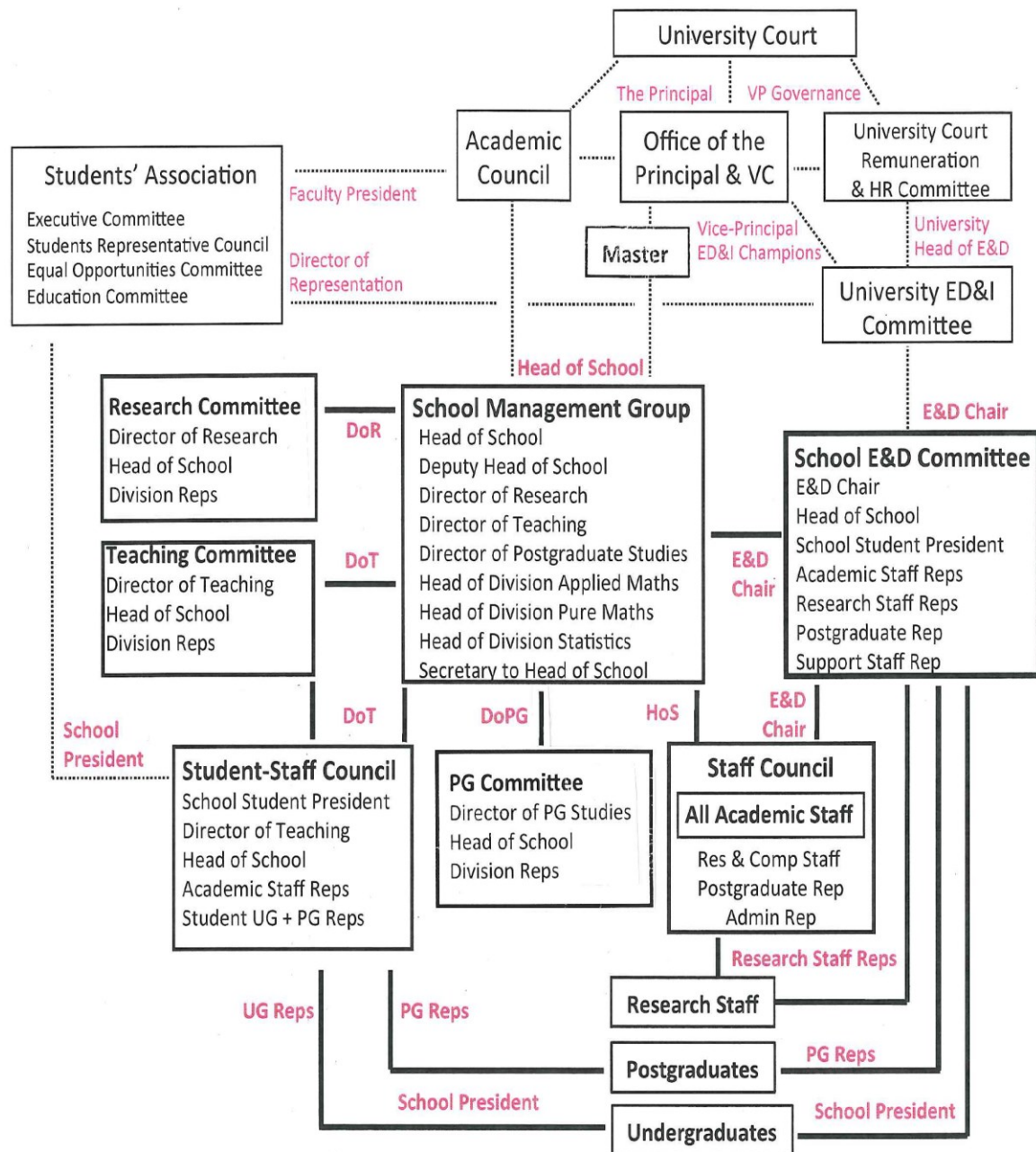
Name	Position
Vasilis Archontis	Royal Society University Research Fellow
Louise Burt	Research staff
Magda Carr	Senior Lecturer
Thomas Howson	PhD student
Andy Lynch	Professor
Fiona McFarlane	Professional Support staff
UG student	School President
Thomas Neukirch	Head of School
Michail Papathomas	Lecturer (E&D/SAT Chair)

SAT members are representative of a range of career stages. Membership of the SAT and E&D committees has been the same over the last few years, to advance equality beyond gender, also considering race or disability. (See Section 3(ii) below on the formation of self-assessment staff groups to further enhance staff participation in self-assessment.) We do not present data split by Division, although this has been a criticism by the ECU. We are still concerned that such a split would be unhelpful in promoting integration, considering also that the School still occupies two different buildings.

The School's E&D/SAT chair has been reporting at School Staff Council Meetings (twice per year) and informal Lunch+Chat meetings (once every month since November 2015). Progress is monitored on the School's Equality webpage.

**Action 3.1** The E&D/SAT team will be chaired or co-chaired by a member of the School's professorial team from October 2018.

***Organizational chart of School's Management Structure and Reporting, in relation to the University's Management Structure.***



## (ii) An account of the self-assessment process

The School's E&D/SAT committee has met 5 times in 2015, 4 times in 2016, 4 times in 2017, and has already met 4 times in 2018. All SAT members were involved in the preparation of this document, which has been signed off by the School's senior management. The School received a Bronze Athena SWAN award in 2013. We applied for a Silver award in November 2016. In May 2017 we were invited to resubmit an application in 2018. Feedback and email communications indicated that a significant shortcoming was our Action Plan. We remained committed to the 2016 Action Plan, and adhered to the Quarterly Cycle of Business, which formalised and standardised the self-assessment process, first introduced in the 2016 application.

Two surveys were run in the last 2 years, in September 2016 and December 2017. 51 individuals responded (21 female, 30 male), out of a possible 100. We are pleased with the increase in the number of participants (from 45 in 2016 to 51 in 2017).

### 2017 Staff/PGR Survey: Primary role of respondents.

Response	Portion of total respondents
PhD Student	30%
Research only	14%
Teaching only	4%
Teaching and research	46%
Admin/IT	6%

Since May 2017, our self-assessment spanned three phases. In **Phase 1** (May 2017 – August 2017), we identified areas for improvement, based on reflection and ECU feedback. For example we discussed limitations in the Action plan, and reflected on the staff and student experience in our School.

**Phase 2** (September 2017 – December 2018) included full and smaller scale SAT meetings. We modified some of the Staff/PGR survey questions to gain insight. We discussed acquired data, and planned and implemented actions such as the formation of the self-assessment staff groups. We scrutinised the implementation of the new Workload Model through Staff Council meetings and the less formal Lunch+Chat meetings.

In **Phase 3** (January 2018 - April 2018) the self-assessment staff groups started meeting, and also drafted parts of our submission. Each group was chaired by a SAT member. Groups met at least once with additional electronic communications. They purposely included staff members without previous involvement in self-assessment to increase awareness.

Group themes
Staff data and School practices.
Supporting and advancing women's careers. Career development.
Student data and School practices
Career transition points Flexible working Managing career breaks'
The self-assessment process School Organisation and Culture.

To further enhance staff engagement, the groups' involvement will span the whole period between AS applications, group size will increase, and record keeping will be formalised (**Action 3.2, Action 3.3**).

Further consultation with staff has taken place through staff surveys, and Staff Council and Lunch+Chat meetings considering, among others, the workload model, timing and gender balance of seminars, and keeping in touch when on maternity leave. Good practice is shared over Institutional E&D meetings, less formal meetings between E&D chairs, and the University's E&D webpages. Discussions with the School of Biology helped form the new workload model. Discussions with the School of Astronomy and Physics led to introducing a policy where 3 months of maternity leave for Post-doctoral researchers is covered by School funds when this is not possible by the research grant. Our School obtained feedback on the application document from the E&D chair of the School of Mathematics at the University of Edinburgh. Furthermore, we participated in the recent LMS benchmarking exercise, receiving feedback through the ORTUS LMS Departmental Report, and the E&D/SAT chair attended 2 LMS workshops on E&D.

**Action 3.2** Extend the membership of the self-assessment subgroups to at least 3 staff members per group, excluding the group's convener. Membership to reflect gender proportions within the School.



**Action 3.3** Extend the timeframe of the operation of the SAT subgroups to cover the window between AS applications. Formalise timetabling and record keeping for the SAT subgroup meetings.

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

We will remain committed to our Action plan, whether or not our submission is successful. The E&D/SAT committee will continue to meet, at least 4 times per year, to implement the Quarterly Cycle of Business (**Action 3.4**) and monitor/revise the action plan (**Action 3.5**), as part of its intention to strive for an AS Silver award. The committee will report to the Staff Council, School Management Group, Lunch+Chat meetings, whilst updating information on relevant websites. (**Action 3.6**. In the recent Staff/PGR survey, 20% indicated were not aware where to find information on maternity/paternity/carer leave.) We will maintain close collaboration with the School President, to ensure the Student Discussion Forum continuous to flourish.

**Action 3.4** Maintain E&D/SAT committee meetings at a frequency of at least 4 per year.

**Action 3.5a** Form a SAT subgroup to monitor progress in the implementation of the action plan.

**Action 3.5b** Conduct a full review of the action plan's implementation in March 2020.

**Action 3.6** The E&D/SAT chair will continue reporting to Staff Council, whilst updating information on relevant websites. The E&D/SAT chair will start reporting regularly to the School Management Group (at least twice every year).

## 4. A PICTURE OF THE DEPARTMENT

### 4.1. Student data

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

n/a

(ii) Numbers of undergraduate students by gender

We offer BSc/MA and MMath degrees in Pure/Applied Mathematics and Statistics, as well as joint degrees which are included within these statistics. Our students are predominantly full-time (1 part-time UG since 2013). Student data are in FTE with the exception of awards.

*Table 3 Number of Undergraduate applications, offers, acceptances and entrants*

Year of Entry	Offer Type	Gender		
		Female	Male	% Female
2017-18	Applications	490	834	37%
	Offers	159	310	34%
	Acceptances	50	83	38%
	Entrants	40	69	37%
2016-17	Applications	449	734	38%
	Offers	198	291	40%
	Acceptances	48	94	34%
	Entrants	32	66	33%
2015-16	Applications	363	534	40%
	Offers	170	218	44%
	Acceptances	78	101	44%
	Entrants	39	52	39%
2014-15	Applications	335	468	42%
	Offers	226	305	43%
	Acceptances	110	136	45%
	Entrants	70	65	52%
2013-14	Applications	332	564	37%
	Offers	166	272	38%
	Acceptances	72	114	39%
	Entrants	48	59	45%

Figure 1 Percentage of UG female applications, offers, acceptances and entrants

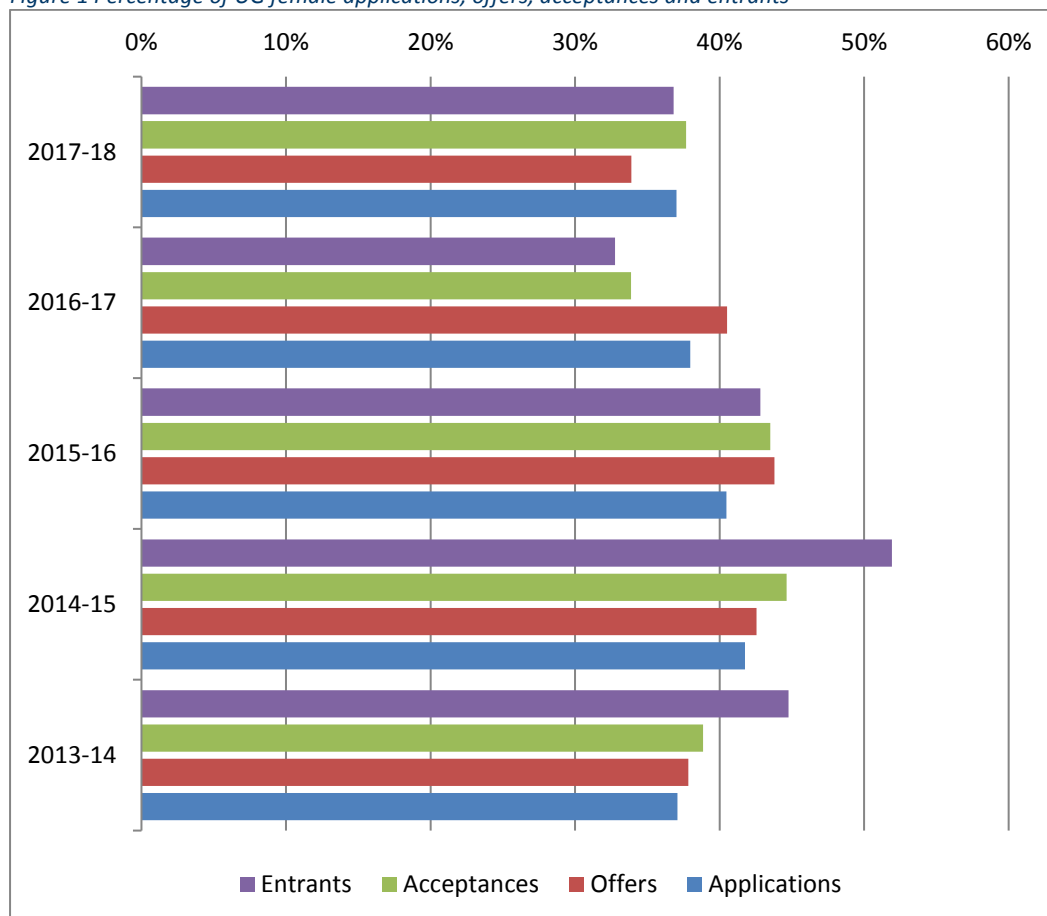
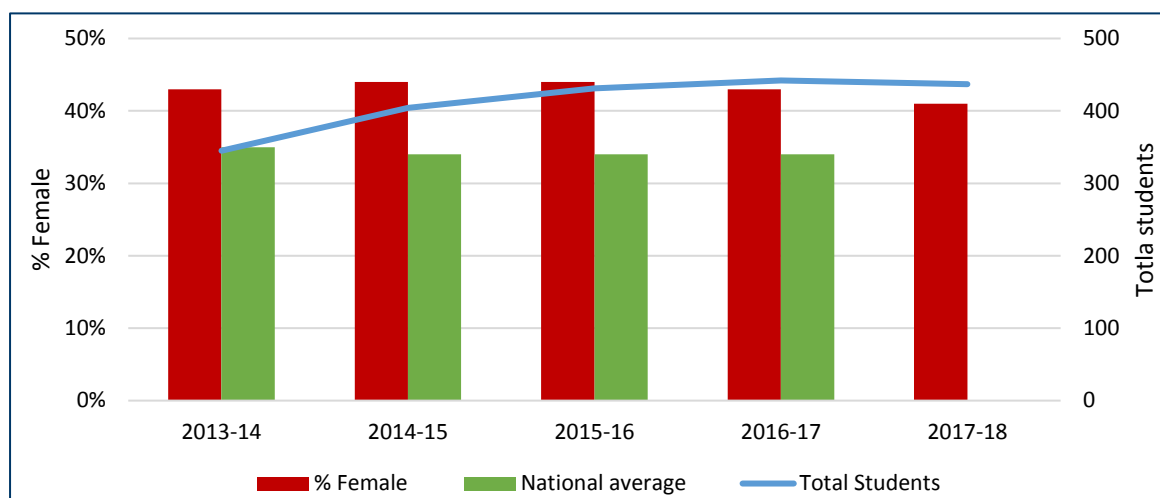


Table 3 and Figure 1 show numbers of UG applications, offers, acceptances and enrolments. Our UG admissions policy does not demonstrate gender bias, with rates for applications closely matching those for offers. The data show that we are successful in persuading women who receive offers to enter courses at St Andrews. The percentage of females applying is at an equivalent level to those doing A level mathematics (39% in 2015) and it is significantly higher than those choosing to do further A level mathematics (29% in 2015) (<http://furthermaths.org.uk/files/FMSP-Girls-in-Maths.pdf>).

Table 4 Total Number of Undergraduate student population by gender

Academic Year	Total Students	% Female
2017-18	437	41%
2016-17	442	43%
2015-16	431	44%
2014-15	404	44%
2013-14	345	43%

Figure 2 Percentage of females in the UG student population



The total number of UG students by gender is given in Table 4 and Figure 2. We consistently have about 10% more female students than the national average; see Figure 2 (benchmarking based on HESA cost centre for Mathematics). We should be vigilant to avoid observing a downward trend. Student feedback from the Student Discussion Forum points to the presence of friendly female staff in School open days as a decisive factor. We will continue ensuring that admissions materials and open days include input from both genders, to reflect that our female staff levels are higher than average in other UK HEIs, as well as monitor the perceptions of current students. (**Actions 4.1a, 4.1b, 4.2, 4.3**).

**Action 4.1a** Continue ensuring that admission materials and open days include input from both genders

**Action 4.1b** The E&D UG/MSc student survey to be conducted annually every February.

**Action 4.2** Future UG/PGT E&D surveys will be advertised by both the E&D chair and the School President. Explain that repeated participation is crucial for detecting trends, and communicate the survey's value for both genders.

**Action 4.3** Make the UG/PGT survey mobile friendly.

*Table 5 Number and percentage of awards for undergraduate students by degree classification. Percentages are presented as a proportion of that year's gender group*

Year of Award	Classification	% Female	% Male
2016-17	1 <sup>st</sup>	40%	51%
	2:1	47%	35%
2015-16	1 <sup>st</sup>	26%	43%
	2:1	53%	41%
2014-15	1 <sup>st</sup>	30%	51%
	2:1	57%	37%
2013-14	1 <sup>st</sup>	36%	36%
	2:1	44%	48%
2012-13	1 <sup>st</sup>	30%	57%
	2:1	65%	36%

*Figure 3 UG degree classifications by gender*

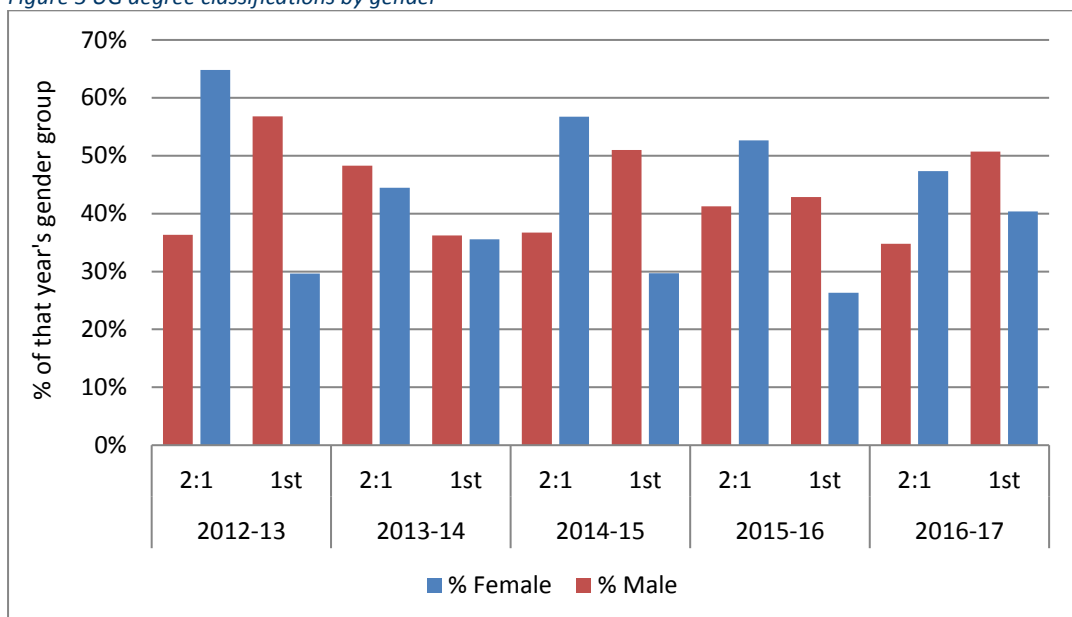


Table 5 and Figure 3 show that male UGs outperform female UGs in securing 1<sup>st</sup> class degrees. Female graduates are more likely to obtain 2:1s, however a 1<sup>st</sup> is required for top jobs and an academic career. A recent Student Discussion Forum (SDF) meeting (Semester 1, 2017/18) highlighted the importance of further data collection and analysis. A pilot analysis by our Director of Teaching suggested that female students at 2<sup>nd</sup> level perform better when they are lectured by a female. This warrants further investigation (**Action 4.4a, Action 4.4b**). In the SDF (Semester 2, 2016/2017), students found the suggestion that the proportion of continuous assessment can be a factor dubious, and a significant proportion of our Honours modules have a continuous assessment component. The SDF points towards increased anxiety, particularly related to exams, and reduced confidence levels. We will devote another SDF meeting to further explore this (**Action 4.4c**). We will improve signposting for University mental health support (**Action 4.4d**). We will contact the university's Centre for Academic, Professional and Organisational Development (CAPOD) to organise a School workshop on psychological resilience (**Action 4.4e**). The School President is setting up a *mentoring scheme* where female students will mentor female students at a lower stage of study. (**Action 4.4f**). Finally, new modules will be designed considering E&D in the curriculum (**Action 4.4g**).

**Action 4.4a** Employ a student with good statistical knowledge to look into our anonymised data. Look at larger cohort courses at all levels, to identify the point at which results diverge most. Directly compare individual student grades as they progress through our degree. Contrast the graduating 1<sup>st</sup> class cohort with the 2.1 cohort at 2<sup>nd</sup> year.

**Action 4.4b** The University Planning Statistics department will work with the UG student to gather and analyse data on the performance of female UGs relative to the gender of their lecturer – analysis to be done at all levels for all students.

**Action 4.4c** Further discuss and investigate the discrepancy in attained degree through the established students Discussion Forum, by conducting an event (focussed on confidence) in 2018/2019.

**Action 4.4d** Increase/improve signposting for the University mental health support in website and locations such as lavatories.

**Action 4.4e** Contact the University's Centre for Academic, Professional and Organisational Development (CAPOD), and arrange for a School workshop on psychological resilience.

**Action 4.4f** Set up a *mentoring scheme* where female students at different stages of study (Honours, MSc, PhD, Post-doc) mentor female students at a lower stage.

**Action 4.4g** Make diversity in the curriculum a required consideration in new module proposals, taking into account the HEA 'Embedding E&D in the Curriculum' workshop (St Andrews Nov/Dec 2016), in-line with the University's 'Inclusive Curriculum Toolkit' (utilising ECU resources).

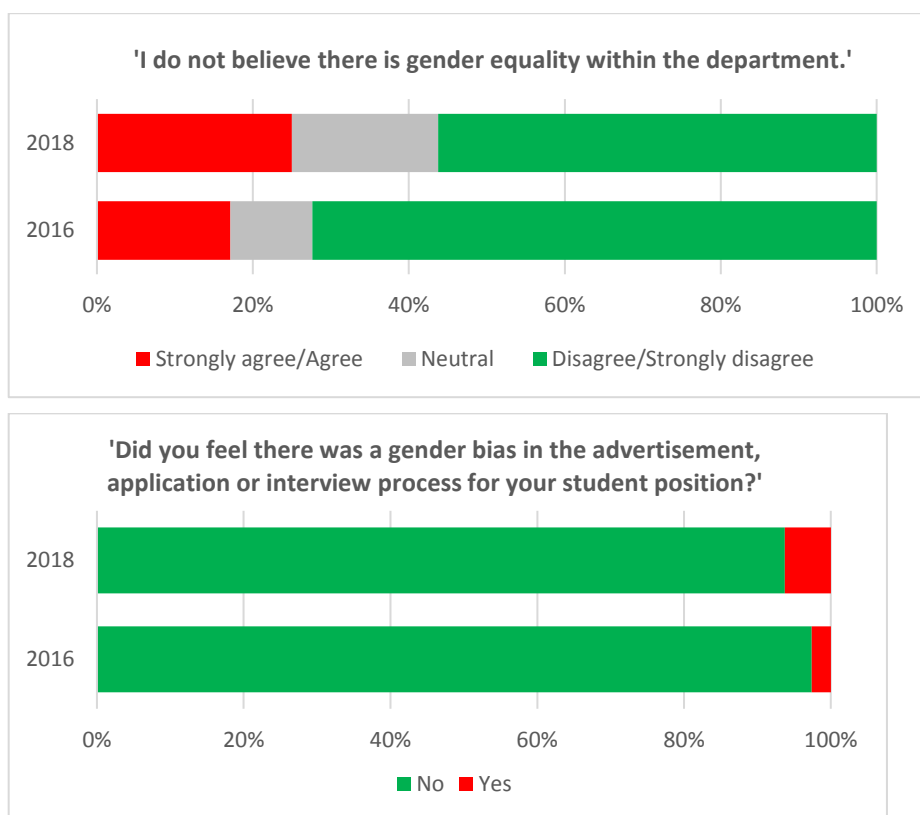
The School first conducted an UG/PGT E&D survey in September 2016, with 78 participants (33 females, 41 males, 4 that did not specify). In 2018, disappointingly, 18 students responded (11 females/ 7 males) out of a possible 466. See **Action 4.2** on the advertisement of future surveys, and **Action 4.3** on making future surveys mobile friendly.

**Action 4.2** Future UG/PGT E&D surveys will be advertised by both the E&D chair and the School President. Explain that repeated participation is crucial for detecting trends, and communicate the survey's value for both genders.

**Action 4.3** Make the UG/PGT survey mobile friendly.

17% of students (38% of whom were female) responding to this question believed there is no gender equality within the department in 2016. 25% (all female) believed the same in 2018. Only 3% of students (50% female) felt there was gender bias in the application or interview process.

*Survey outcomes from UG student survey (September 2016, February 2018)*



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

There have been no part-time postgraduate students over the last three years.

*Table 6 Postgraduate Taught applications, offers, acceptances and entrants*

Year of Entry	Offer Type	Gender	
		Female	Male
2017-18	Applications	134	146
	Offers	98	77
	Acceptances	15	18
	Entrants	13	16
2016-17	Applications	103	105
	Offers	67	59
	Acceptances	15	19
	Entrants	11	13
2015-16	Applications	88	97
	Offers	65	49
	Acceptances	19	17
	Entrants	14	15
2014-15	Applications	80	86
	Offers	51	53
	Acceptances	11	16
	Entrants	10	15
2013-14	Applications	72	101
	Offers	47	51
	Acceptances	11	15
	Entrants	8	13

In absolute numbers, over the last 3 years we made more offers to female applicants than male (Table 6). However, there is a slightly higher number of male PGT acceptances and entries. Observations are aggregated over different MSc degrees and Home and Overseas students. Thus, it is difficult to speculate on possible reasons, as Yule's paradox may be distorting the true picture. In preparation for applying for Silver award, we will split student data by Home and Overseas students (**Action 4.5**) to enhance our understanding.

**Action 4.5** Student data to also distinguish between Home and Overseas students.



Figure 4 Percentage of PGT female applications, offers, acceptances and entrants

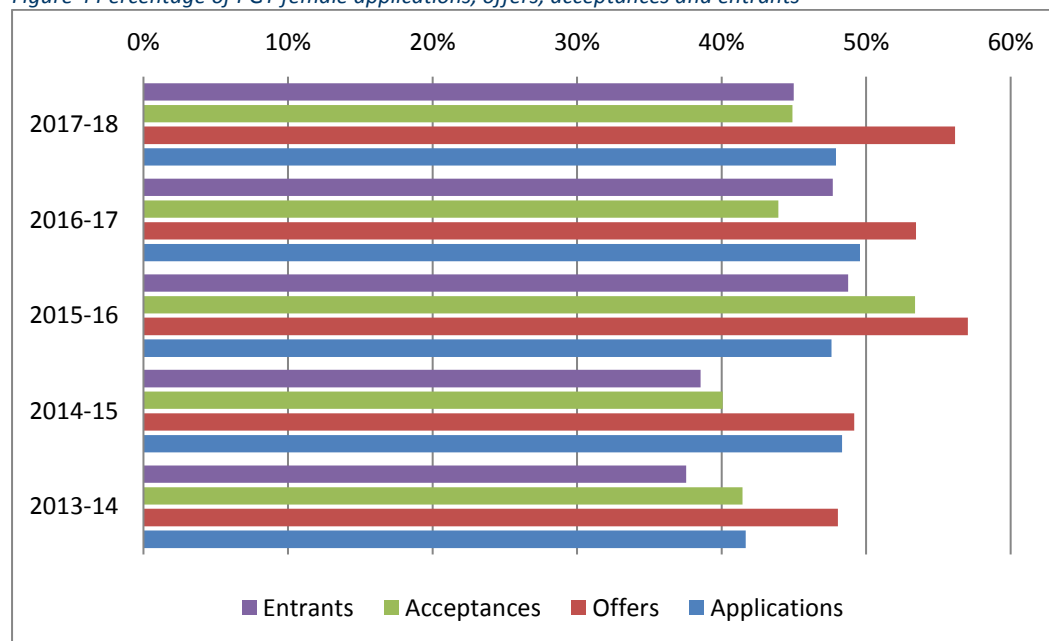


Table 7 Total Postgraduate Taught student population

Academic Year	Total Students	% Female
2017-18	29	45%
2016-17	26	48%
2015-16	30	47%
2014-15	25	39%
2013-14	22	36%

Figure 5 Percentage of females in PGT student population

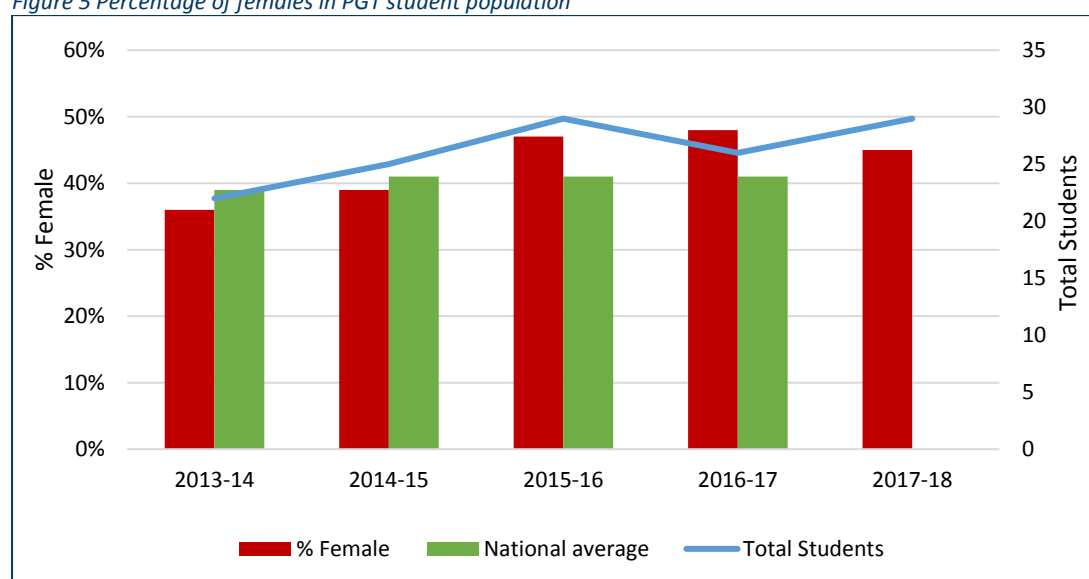
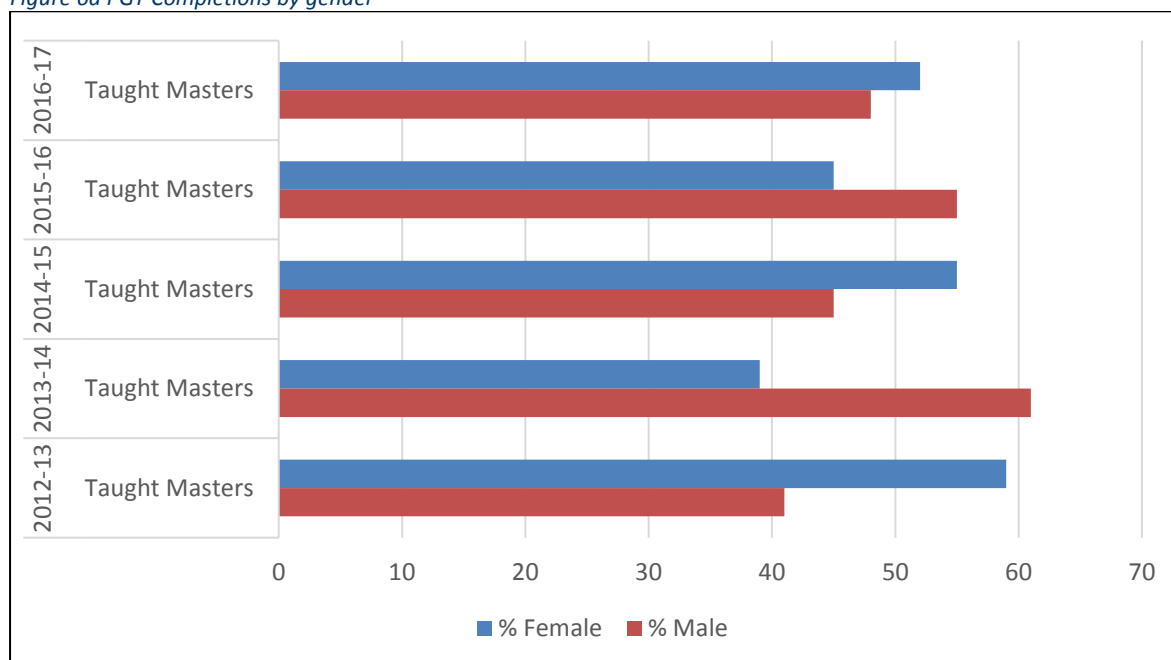


Table 8a Postgraduate Taught Completions by gender

Academic Year	Qualification	Total	%Female
2016-17	Taught Masters	31	52%
	Postgraduate Diploma	1	
2015-16	Taught Masters	29	45%
	Postgraduate Diploma	2	
2014-15	Taught Masters	31	55%
	Postgraduate Diploma	3	
2013-14	Taught Masters	33	39%
	Postgraduate Diploma	2	
2012-13	Taught Masters	32	59%
	Postgraduate Diploma	1	

Figure 6a PGT Completions by gender



The percentage of females entering (Table 6) and completing (Table 8a) our PGT courses are healthy. The proportion of female entrants in 2017/2018 is 45% (Table 7), in line with the equivalent measure at UG level (42% - Table 3) and A level [Section (ii)], suggesting that female students are not lost at this stage. Although this compares favourably to the rest of the UK (Figure 5), we will run a specific Student Discussion Forum event on why PG students choose to come to St Andrews, to maintain and enhance female PGT numbers (**Action 4.6**).

**Action 4.6** For the Student Discussion Forum, in 2018/2019, organise an event specifically focussed on why PG students choose to come to St Andrews.

Table 8b. PGT by award level and gender

Academic Year	Award Level	Total	% Female
2016-17	Distinction	9	78%
	Pass	22	40%
2015-16	Distinction	5	20%
	Pass	24	50%
2014-15	Distinction	16	50%
	Pass	15	60%
2013-14	Distinction	11	27%
	Pass	22	45%
2012-13	Distinction	8	88%
	Pass	24	50%

Figure 6b PGT awards with distinction by gender and year.

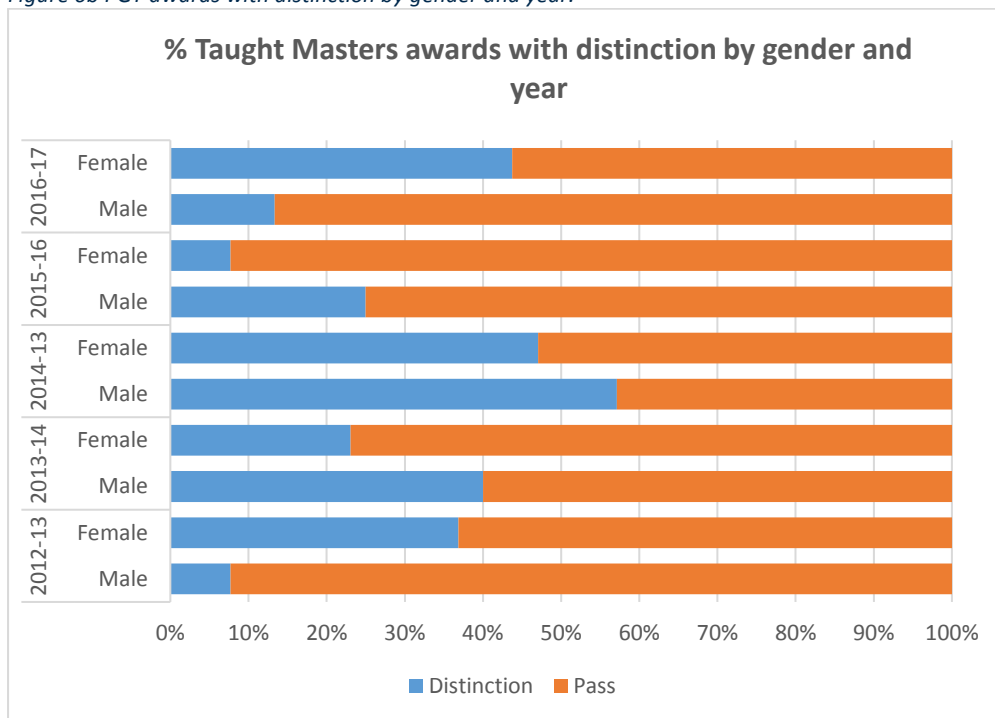


Table 8b and Figure 6b show that the proportion of female students that achieve a Distinction varies considerably. In 2012/13 and 2016/17 this proportion was markedly higher compared to the proportion of male MSc students.



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

*Table 9 Number of postgraduate research applications, offers, acceptances and entrants*

Year of Entry	Offer Type	Total	% Female
2017-18	Applications	63	25%
	Offers	30	20%
	Acceptances	13	
	Entrants	12	
2016-17	Applications	72	14%
	Offers	30	13%
	Acceptances	14	
	Entrants	14	
2015-16	Applications	45	33%
	Offers	16	44%
	Acceptances	9	
	Entrants	6	
2014-15	Applications	59	32%
	Offers	17	12%
	Acceptances	12	
	Entrants	9	
2013-14	Applications	73	33%
	Offers	25	28%
	Acceptances	9	
	Entrants	9	

Figure 7 Percentage of PGR applications, offers, acceptances and entrants

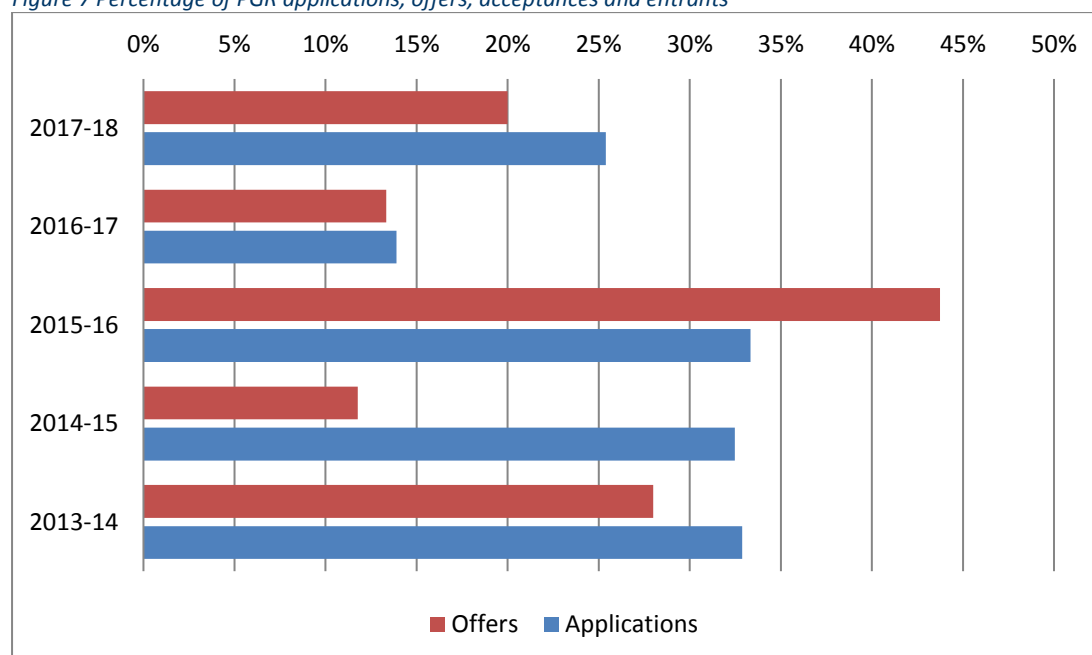


Table 10 Number of students in the postgraduate research population by gender

Academic Year	Total Students	% Female
2017-18	39	21%
2016-17	34	22%
2015-16	29	30%
2014-15	32	23%
2013-14	35	37%

Figure 8 Percentage of female PGR students in student population

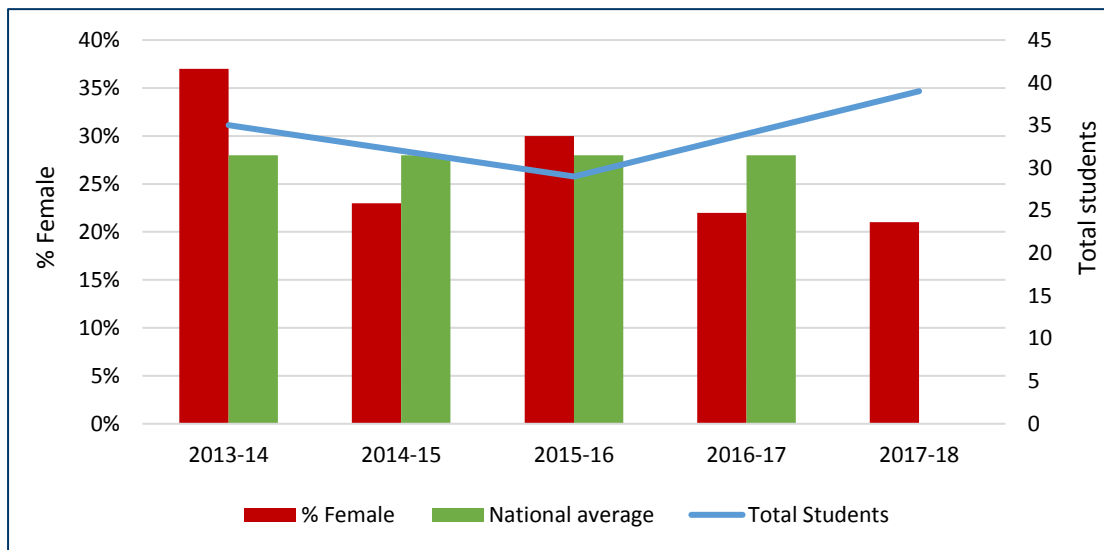


Table 11 Postgraduate research completions by gender

Academic Year	Qualification	Total	%Female
2012-17	PhD	45	44%

Figure 9 PGR completions by gender

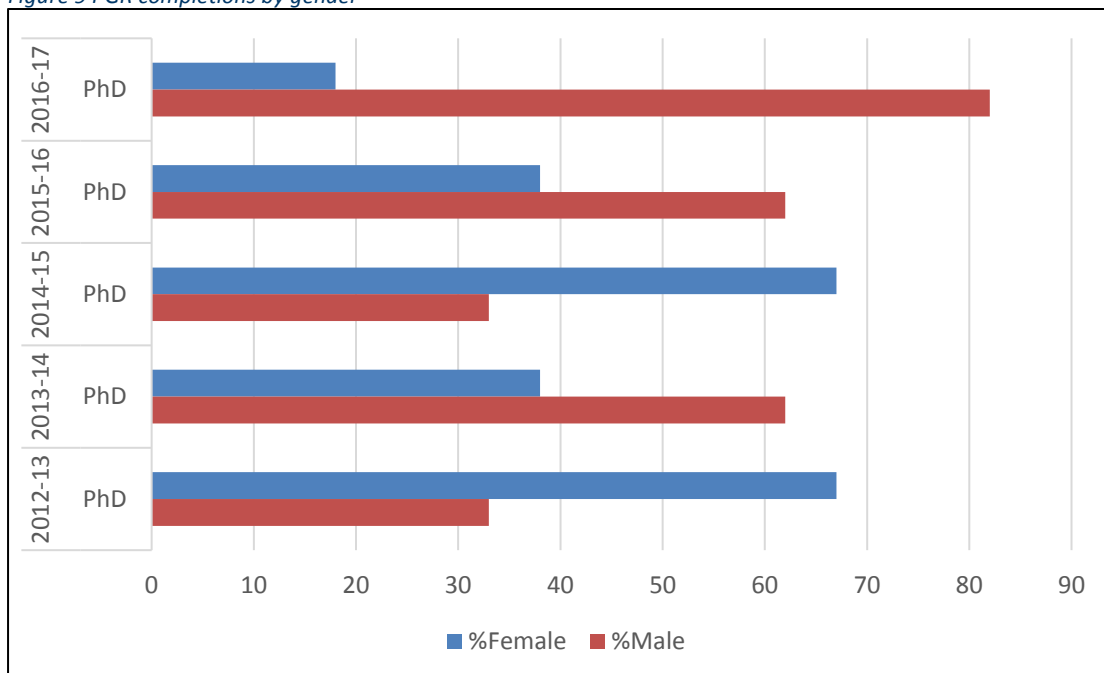


Table 9 shows that the proportion of female students entering a PGR course (averaged over 5 years) was just 20%. This is a huge concern. The trend is further evidenced in the pipeline plot (Figure 10 below). As our PhD students are drawn internationally, this trend may not relate to the smaller proportion of female students achieving a 1<sup>st</sup> class degree [Section (ii) above], or summer research project allocation. Nevertheless, underlying connections may exist. We have recently started recording data on the gender of summer research students and will continue doing so (**Action 4.7a**). Confidence may play a part [see discussion and relevant actions in Section (ii)]. A group-discussion event on this trend was organised by the SAT PGR representative at the School's annual PGR trip, providing useful suggestions (**Action 4.7b, Action 4.7c, Action 4.7d, Action 4.7e, Action 4.7f, Action 4.7g**).

**Action 4.7a** Maintain record keeping on the gender balance of students that undertake summer research projects. Analyse data in September 2018, and annually every September.

**Action 4.7b** individually email the top 10 male and top 10 female students, in their penultimate year of study to encourage them apply for a PhD.

**Action 4.7c** In 2018/2019 semester 1 Staff Council meeting, senior honours project supervisors will be encouraged to talk to good students (in particular female) to apply for a PhD.

**Action 4.7d** A current PhD student will give a talk on her own experience at the annual UG reading parties residential trip.

**Action 4.7e** Upload case studies that include female student and staff stories and experiences to our website for prospective PGR students.

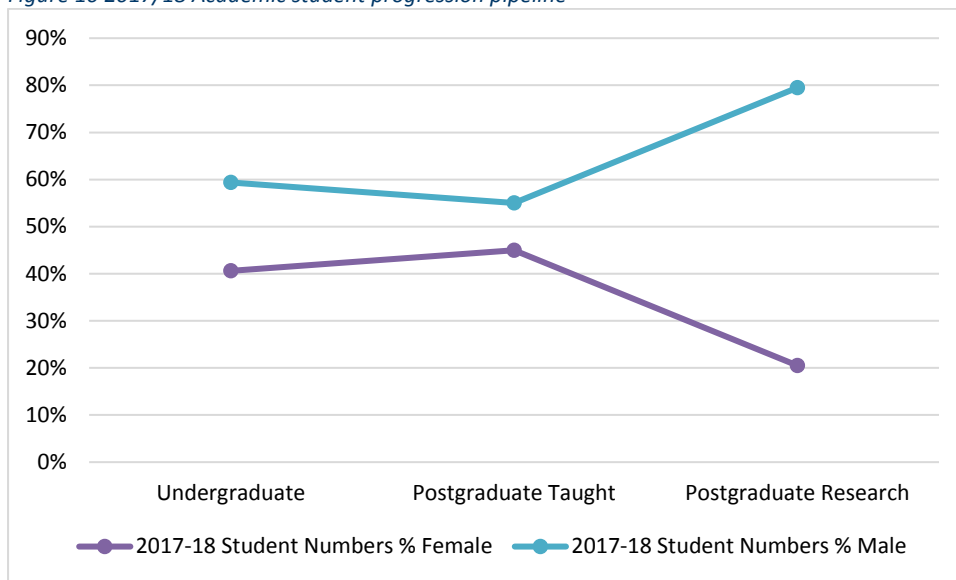
**Action 4.7f** Expand advertising of PGR opportunities (using, for instance, findaphd.com), with suitable wording added to adverts and website promoting our commitment to E&D and encouraging female applications.

**Action 4.7g** As part of the student Mentoring Scheme (to be introduced in Semester 1, 2018/2019), we will ask female PhD students to act as mentors for our promising UG female students.



(v) Progression pipeline between undergraduate and postgraduate student levels

Figure 10 2017/18 Academic student progression pipeline



Please see the discussion in Section (iv) above.

#### **4.2 Academic and research staff data**

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

Table 12 Total number of staff by gender and grade

Job category	2012		2013		2014		2015		2016		2017 (January-July)	
	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female
Research Only	29	48%	27	41%	23	43%	25	36%	24	42%	19	47%
Teaching Only	<5		5	20%	6	17%	6	50%	6	67%	6	50%
Research & Teaching	32	25%	33	27%	32	28%	34	26%	36	25%	36	25%
Academic Total	65	35%	65	32%	61	33%	65	32%	66	35%	61	34%

Numbers shown in Table 12 (headcount) are small and subject to fluctuations, although a gender imbalance is apparent. The overall proportion of female staff has remained stable at around 35%. Recruitment, funding, and promotion procedures involve evaluation, and are prone to implicit gender bias, hampering women's advancement. We therefore turned to a recent LERU advice paper, "Implicit bias in academic..." (LERU 2018) for evidence-based guidance.

Within our School more women hold Research-only and Teaching-only positions than Research and Teaching, and more hold fixed-term than standard contracts (standard contracts are open-ended). This mirrors the leaky pipeline seen in academic careers across Europe, wherein women are disproportionately lost from the academic talent pool. (LERU 2018), although our School employs more female staff than the national average (see Figures 11 and 13). We exceeded the national average number of women on fixed-term contracts by 10-20% since 2015, whereas we employ about 5-8% more women than the national average on standard contracts. Thus, though our School is ahead of the curve in terms of female proportions, the jobs they hold are less permanent or secure.

The largest increase in female staff is at the Teaching-only level, from 20% in 2013 to 50% in 2017; see Table 12. While gender parity in any category is positive, we note a tendency for women to advance more readily in Teaching-only jobs.

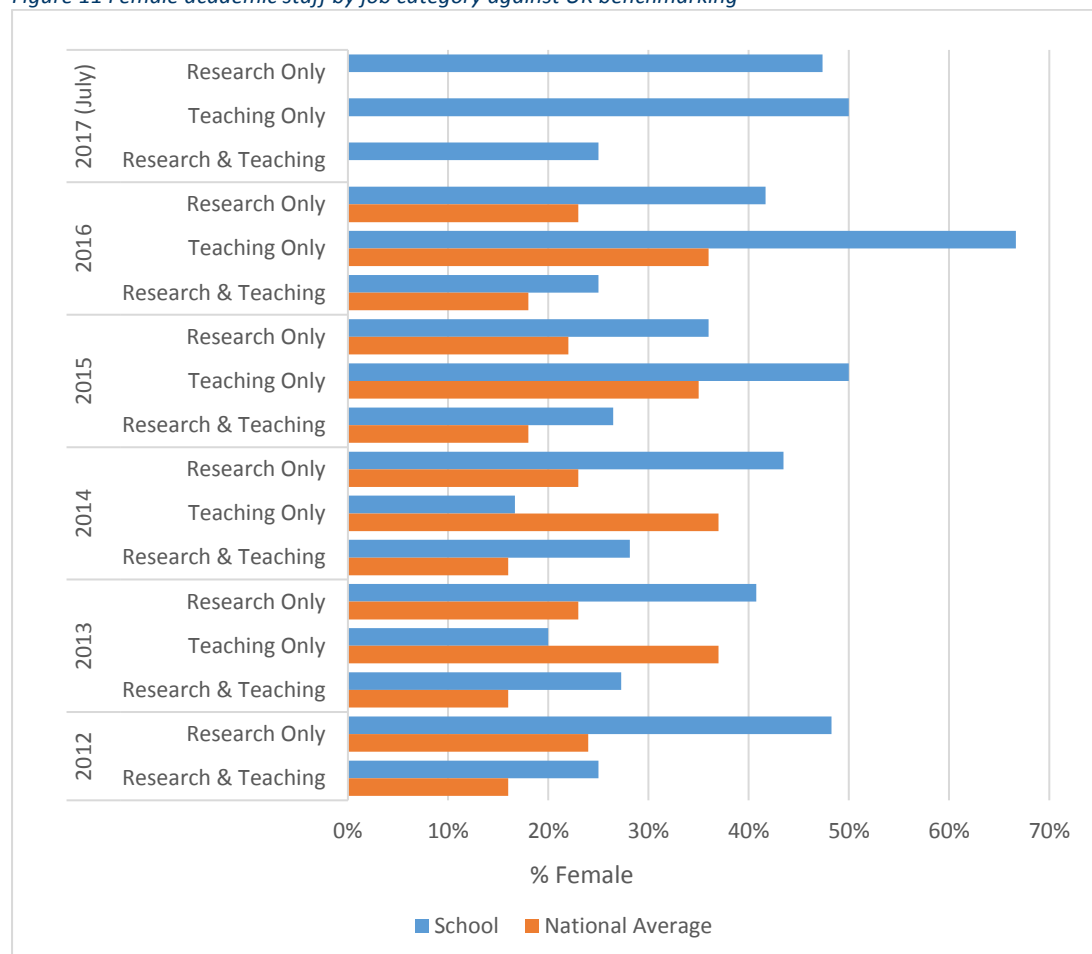
Referring to Table 12, the percentage of females at the Research-only level is 47%. There was a notable decrease in 2015 (to 36%), but overall the percentage of female Research-only staff has been over 40% during the last 6 years.

Discussions with colleagues identified three areas within our department that affect the number of female staff: (1) recruitment practices, (2) promotions practices, and (3) societal and psychological factors influencing the confidence and ambition of women.

***Please see Section 5.1 below*** on our self-assessment and related actions summarised below:

- The School's selection procedures (**Action 5.1 a,b,c,d,e,f,g, Action 5.9**)
- Securing funding and promotions (**Action 5.2 a,b,c,d,e,f,g, )**
- Societal and psychological factors operating within our School as identified by staff (**Action 4.4e, Action 5.1f, Action 5.1g, Action 5.3b, Action 5.5 a,b**)

Figure 11 Female academic staff by job category against UK benchmarking



### External Benchmarking:

In the period 2012 – 2016, and for the Research and Teaching and Research Only categories, there was a considerably larger percentage of female staff in our School in comparison to the national average; see Figure 11 provided by the Planning department. With regard to the Teaching Only category, our percentage was lower until 2014, becoming higher in 2015/2016. Female staff proportions stood at 67% for Teaching-only vs a national 36% in 2016, 42% for Research-only vs a national 23%, and 25% for Teaching and Research vs 18%. We will not become complacent, considering the discussion in the previous subsection, and will strive to increase female staff proportions.

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

Table 13 Number of academic staff on fixed-term contracts

Job category	2012		2013		2014		2015		2016		2017 (January-July)	
	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female
Research Only	21	57%	21	48%	15	53%	18	39%	13	38%	7	43%
Teaching Only	<5		<5		<5		<5		<5		<5	
Research & Teaching	<5		<5		<5		<5		<5		<5	
Academic Total	24	50%	27	41%	20	45%	23	43%	19	47%	13	54%

The School has no staff on zero-hour contracts. The University employs staff on ‘bank worker contracts’, offering an agreed amount of work over an agreed period. Although numbers are small, Table 13 shows that the percentage of females in the Teaching-only and Research and Teaching grades, on fixed contracts in 2017, is higher compared to males. The percentage of females in the Research-only grades is 43%. Proportions seem quite balanced. Figure 13 below shows that our School compares favourably with national averages, in terms of female staff with both types of contract, although Figure 12 shows that females are more likely to be on fixed-term contracts.

Table 14 Number of academic staff on standard contracts

Job category	2012		2013		2014		2015		2016		2017 (January-July)	
	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female	Total	% Female
Research Only	8	25%	6	17%	8	25%	7	29%	11	45%	12	50%
Teaching Only	<5		<5		<5		<5		<5		<5	
Research & Teaching	30	27%	29	28%	30	27%	31	23%	33	21%	33	21%
Academic Total	41	27%	38	26%	41	27%	42	26%	47	30%	48	29%

Table 14 shows the percentage of female staff on standard contracts. We note an apparent trend where the percentage of female Research-only staff has increased over the last 3 years. Our School can improve by working toward gender balance not only overall, but in terms of the split between fixed term and standard contracts. **See Section 5.2** for a description on the School's efforts, considering funding restrictions for certain placements that may be dependent in consultancies or grants.



Table 15a Academic Staff by job function, contract type and gender

Job Function	Contract Type	Total	% Female
Research Only	Fixed-term	7	43%
	Standard	12	50%
Teaching Only	Fixed-term	<5	
	Standard	<5	
Research & Teaching	Fixed-term	<5	
	Standard	33	21%

Table 15b Staff by full-time/part-time status 31 July 2017

	Female		Male	
	Part-time	Full-time	Part-time	Full-time
Total	5	16	5	35

Figure 12 Percentage of staff by job category, contract type & gender

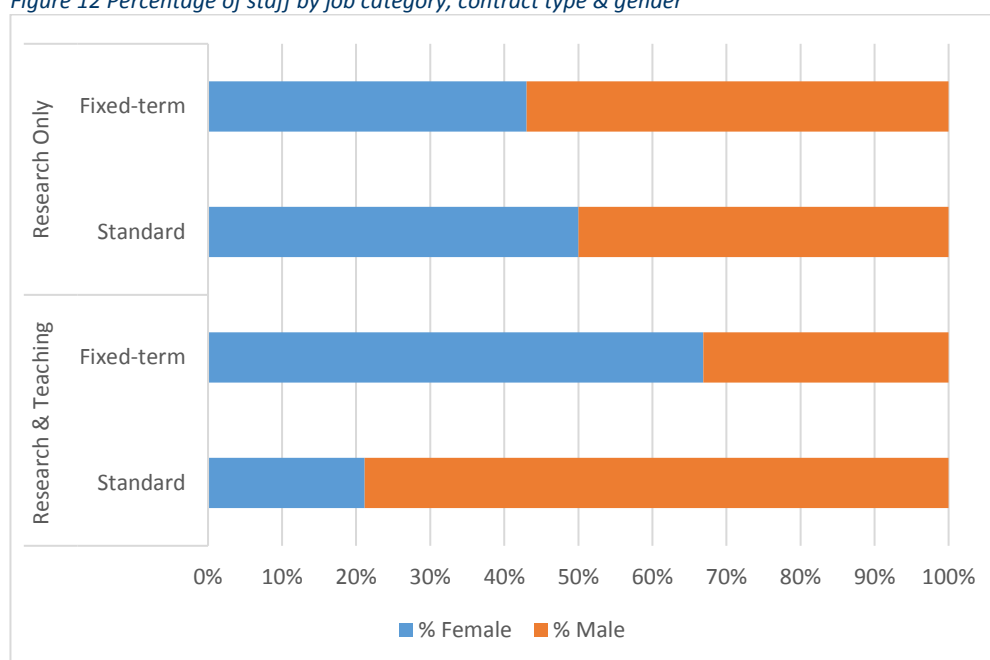
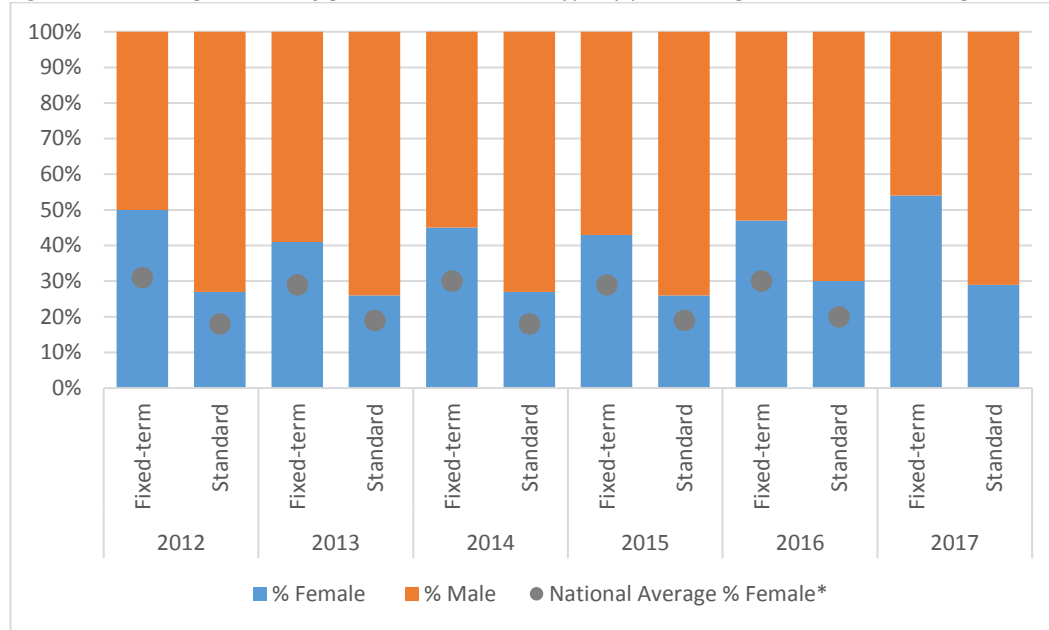


Figure 13 Percentage balance of gender within contract type by year and against UK benchmarking



\*Data provided by HESA referring to the (122) Mathematics cost centre.

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

*Table 15c Leavers by grade and gender and full/part time status. Includes both standard and fixed term contracts.*

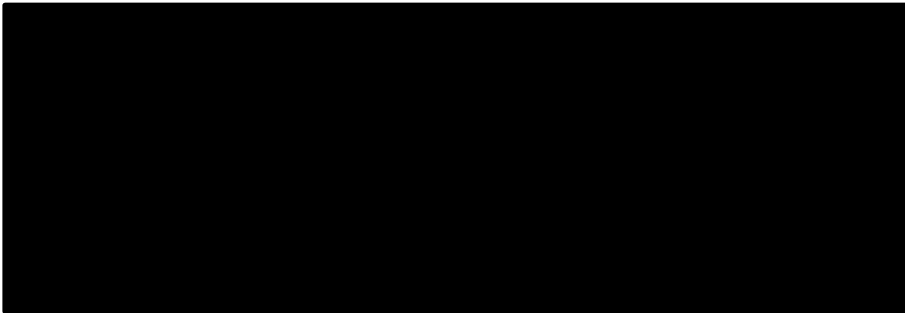
Year	Female	Male	Total
<b>2017*</b>	<b>2</b>	<b>3</b>	<b>5</b>
2016	<b>4</b>	<b>5</b>	<b>9</b>
2015	<b>5</b>	<b>11</b>	<b>16</b>
2014	<b>1</b>	<b>7</b>	<b>8</b>
2013	<b>3</b>	<b>5</b>	<b>8</b>

\*2017 data January – July only.

*Figure 14 Summary of academic staff leavers by year and occupancy*



*Figure 15 Academic leavers by contract type and gender*



Data are provided by the University's HR department, whilst reasons for leaving were provided by exit interviews and the HoS. Table 15c shows the number and grade of staff leaving the School by gender. There is no indication of gender bias in staff leaving. In 2015, the year with the highest number of leavers, 11 Research staff left. In 2016 and 2017, proportions seem quite balanced. Since 2013, mostly fixed-term contract staff left because the contract ended. We will enhance the analysis of leavers' data, as unconscious bias may be undetected when the School does not examine data and practices (**Action 4.8**).

**Action 4.8** The School Management Group will assume responsibility for analysing the online exit survey data collected by the HR department.

## **5. SUPPORTING AND ADVANCING WOMEN'S CAREERS**

Due to a central change in data capture for Athena SWAN, 2017 Staff data is only available as at 31 July 2017, resulting in a reflection of 7 months for cumulative figures such as New Starts, Recruitment, Leavers, Maternity/Paternity leave.

## 5.1. Key career transition points: academic staff

### (i) Recruitment

Table 16 Recruitment pipeline for academic posts 2012-2017

Year	Job Category	Applications		Shortlisted	Offers
		Total	% F		
<b>2017*</b>	Research		-		
	Teaching	5	20%		
	Lecturer	<5	0%		
	Senior Lecturer		-		
	Reader		-		
	Professor		-		
<b>2016</b>	Research	16	25%		
	Teaching	<5	0%		
	Lecturer	122	16%		
	Senior Lecturer		-		
	Reader		-		
	Professor		0%		
<b>2015</b>	Research	34	18%		
	Teaching	16	31%		
	Lecturer	117	12%		
	Senior Lecturer		-		
	Reader		-		
	Professor		29%		
<b>2014</b>	Research	14	29%		
	Teaching		-		
	Lecturer		-		
	Senior Lecturer		-		
	Reader		-		
	Professor	28	7%		
<b>2013</b>	Research	30	30%		
	Teaching	17	24%		
	Lecturer		-		
	Senior Lecturer		-		
	Reader		-		
	Professor	20	10%		
<b>2012</b>	Research	<5	67%		
	Teaching	8	25%		
	Lecturer	<5	0%		
	Senior Lecturer		-		
	Reader		-		
	Professor		-		

\*2017 data January – July only.

\*\*This post was open to applicants beyond July 2017 so figures only represent those who applied in July and not the whole applicant pool.

Since 2012, people who do not report their sex constitute 5% of applications, 9% of short-listed positions and 13% of total appointments. Recruitment data

captures applicants by the year they applied and states their progression stage to the end of the given year. For this reason the number of offers made will not precisely match the number of New Starts reported here.

Table 16 shows that much staff turnover takes place at the Research category (the majority of postdoctoral research contracts are fixed term), as well as the Teaching, and Lecturer levels. Contract research and teaching-focussed positions tend to have fewer applications per post than standard contract academic positions (e.g. in 2016, 16 applications per appointment vs 118), and a higher proportion of women applying (e.g. 25% vs 16% in 2016). Shortlisting female proportions show extreme variation, from 0% to 75%, across different levels and years. Offers at the Research category (with a constantly high number of applications), were made to females at 50%, in 2012, 2013, 2014 and 2016. This can be interpreted as no evidence of female applicants being disadvantaged by the process. Nevertheless, it is imperative that the School examines its selection procedures and implements strategies for filtering out implicit/unconscious bias.

Recruitment is managed by the University's HR department and according to the University's Athena SWAN commitments under its Bronze award. We will support recent proposals by the University management on addressing inequalities in the recruitment process, for example on the non-admissibility of single gender shortlists (**Action 5.1a**).

Advertisements [e.g. Figure 15b] show the University Athena SWAN award prominently, are written in gender neutral language and include statements to the effect that i) "Applications are particularly welcome from women who are under-represented in Science posts at the University" and ii) "The University is committed to equality for all, demonstrated through our working on diversity awards". Links to University E&D webpages are shown. We propose **Action 5.1 b,c,d,e** to further improve our advertisements.

Selection committees should be of mixed gender and will have undergone appropriate online training (c.f. University Athena SWAN action plan, and **Action 5.1 f,g** in the School's submission). For academic posts, a representative of the Principal's office and the Dean of Science act as external participants and observers in recruitment. Long-listing tends to be performed by a subset of the committee, short-listing by the entire committee.

Seminar invitations often identify promising candidates. The School will endeavour to have at least 35% female speakers considering all seminar series by 2020 (**Action 5.8**).

Table 17 New Starts 2012-2016

Year	Total	% Female
2017	<5	0%
2016	6	33%
2015	9	33%
2014	<5	0%
2013	5	20%

\*2017 data January – July only.

The number of appointments is small and an individual appointment can have a great effect on proportions. The proportion of starters identifying as female in 2015 and 2016 seem to be in line with the offers made in 2014-2016; see Tables 16 and 17. Discrepancies may be partly explained by the lag between offers being made and successful applicants starting.

**Action 5.1a** Implement no single-sex-shortlists for academic posts through institutional HR processes.



**Action 5.1b** Introduce a gender balance of 2 staff (members of the E&D/SAT committee) as informal contacts for prospective applicants. Publicise this on School website.

**Action 5.1c** Recruitment adverts will contain a link to the School's equality and diversity webpages.

**Action 5.1d** Recruitment adverts will mention the School's positive attitude towards flexible working.

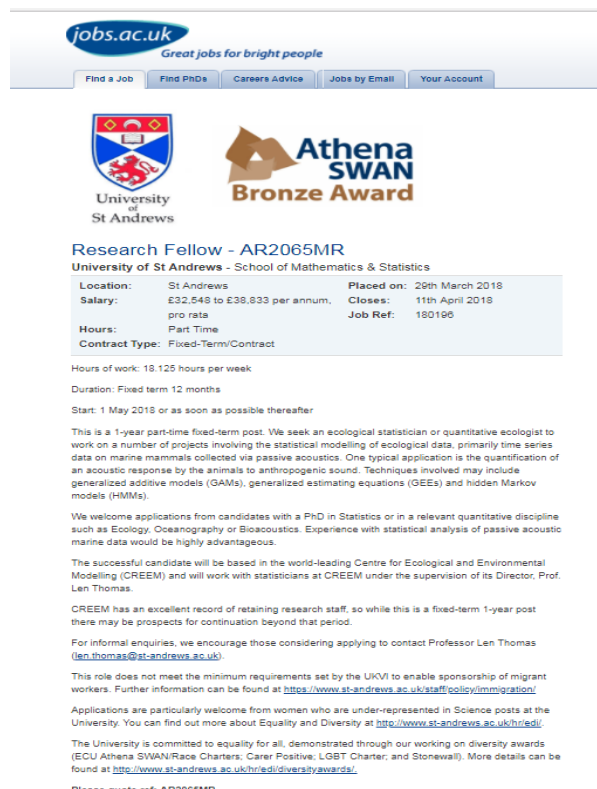
**Action 5.1e** A designated E&D committee member will analyse the gender balance in informal enquiries, in relation to applications made.

**Action 5.1f** Ensure all members of staff involved in all stages of the recruitment process complete the [Online Staff Recruitment Training Module](#)

**Action 5.1g** Staff members involved in appraisal or recruitment will be required to read the 2018 LERU paper on implicit bias.

**Action 5.8** The HoS and designated SAT committee member will meet with seminar organisers at the start of semester 2 each year, with seminar organisers reporting female percentages and discussing reasons if the target has not been reached.



Figure 15b Advertisement example.



The screenshot shows a job advertisement on the jobs.ac.uk website. The header includes the jobs.ac.uk logo and navigation links: Find a Job, Find PhDs, Careers Advice, Jobs by Email, and Your Account. Below the header, the University of St Andrews logo and the Athena SWAN Bronze Award logo are displayed. The job title is "Research Fellow - AR2065MR" at the "University of St Andrews - School of Mathematics & Statistics". A table provides key details: Location (St Andrews), Salary (£32,548 to £38,933 per annum, pro rata), Hours (Part Time), Contract Type (Fixed-Term/Contract), Placed on (20th March 2018), Closes (11th April 2018), and Job Ref (180196). The advertisement text describes a 1-year part-time fixed-term post for an ecological statistician or quantitative ecologist. It mentions the Centre for Ecological and Environmental Modelling (CREEM) and the supervisor, Prof. Len Thomas. It also includes information about equality and diversity awards and a link to the university's equality and diversity page.

**jobs.ac.uk**  
Great jobs for bright people

Find a Job Find PhDs Careers Advice Jobs by Email Your Account

**Research Fellow - AR2065MR**  
University of St Andrews - School of Mathematics & Statistics

Location:	St Andrews	Placed on:	20th March 2018
Salary:	£32,548 to £38,933 per annum, pro rata	Closes:	11th April 2018
Hours:	Part Time	Job Ref:	180196
Contract Type:	Fixed-Term/Contract		

Hours of work: 18.125 hours per week  
Duration: Fixed term 12 months  
Start: 1 May 2018 or as soon as possible thereafter

This is a 1-year part-time fixed-term post. We seek an ecological statistician or quantitative ecologist to work on a number of projects involving the statistical modelling of ecological data, primarily time series data on marine mammals collected via passive acoustics. One typical application is the quantification of an acoustic response by the animals to anthropogenic sound. Techniques involved may include generalized additive models (GAMs), generalized estimating equations (GEEs) and hidden Markov models (HMMs).

We welcome applications from candidates with a PhD in Statistics or in a relevant quantitative discipline such as Ecology, Oceanography or Bioacoustics. Experience with statistical analysis of passive acoustic marine data would be highly advantageous.

The successful candidate will be based in the world-leading Centre for Ecological and Environmental Modelling (CREEM) and will work with statisticians at CREEM under the supervision of its Director, Prof. Len Thomas.

CREEM has an excellent record of retaining research staff, so while this is a fixed-term 1-year post there may be prospects for continuation beyond that period.

For informal enquiries, we encourage those considering applying to contact Professor Len Thomas ([len.thomas@st-andrews.ac.uk](mailto:len.thomas@st-andrews.ac.uk)).

This role does not meet the minimum requirements set by the UKVI to enable sponsorship of migrant workers. Further information can be found at <https://www.st-andrews.ac.uk/staff/equality/migration/>.

Applications are particularly welcome from women who are under-represented in Science posts at the University. You can find out more about Equality and Diversity at <http://www.st-andrews.ac.uk/hr/edi/>.

The University is committed to equality for all, demonstrated through our working on diversity awards (ECU Athena SWAN/Race Charters; Carer Positive; LGBT Charter; and Stonewall). More details can be found at <http://www.st-andrews.ac.uk/hr/edi/diversityawards/>.

Please quote ref: AR2065MR

## (ii) Induction

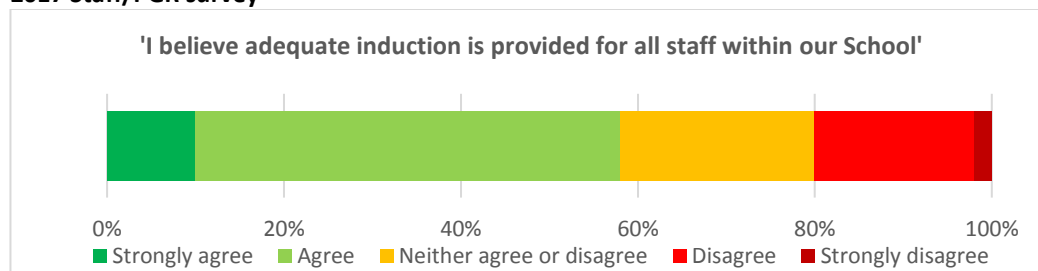
The University of St Andrews has a compulsory Staff Induction programme. This programme includes a session on Diversity Awareness training. (See **Action 5.3b** on the School's online staff training, which does not refer to yearly 'refreshers', as this would cause 'fatigue', and the modules were only introduced a few years ago.) The Professional and Personal Development web resource provides details on staff induction and also how to apply for flexible working and family-friendly policies. A School mentor, assigned by the Head of Division, guides every new member of staff on digital tools and resources, and teaching regulations. It is School tradition to assign new staff with a lighter teaching and administrative load, to allow them to settle in and enhance or kick start their research careers.

In the 2017 Staff/PGR survey, 20% of respondents (of whom 56% were female) believe that adequate induction is not provided within our School. To improve matters, our School has, in the last year, produced an electronic handbook, detailing key policies and contacts. An Induction Checklist will be introduced (**Action 5.6**). New staff are explicitly encouraged to attend the weekly tea and biscuits social event, as well as being welcomed into daily coffee/tea routines and the monthly Lunch+Chat meetings that serve as an informal news/feedback session.

**Action 5.3b** Maintain near 100% completion for the [Online Staff Diversity Training Module](#) and the [Online Staff Unconscious Bias Training Module](#) , by issuing timely reminders twice a year.

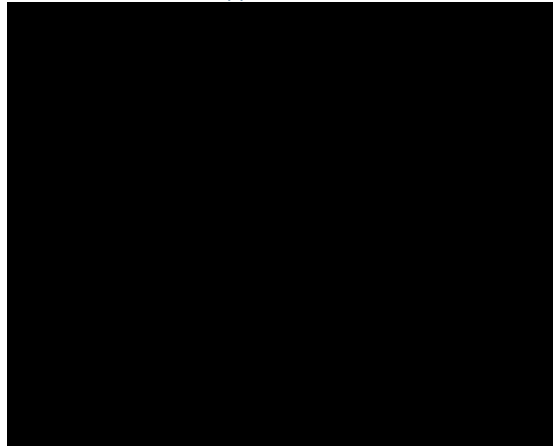
**Action 5.6** Introduce an Induction Checklist, that will contain key information that new staff/PGR should be given in their first month

### 2017 Staff/PGR survey



### (iii) Promotion

*Table 17b Promotion applications and success rates 2013-2017*



The 12 promotions in the past five years have been split 6:6 between the sexes; see Table 17b. There are noticeably more applications from men (broadly in line with the sex ratios within the school), meaning that applications from female staff have been more successful. Successful promotions for men in the last 2 years are observed at slightly higher levels of seniority (Reader and Professor).

Promotion panels are appointed by the University and are of mixed gender. The promotions guidelines have recently been revised following consultation with the institutional SAT. The staff appraisal procedure, revised in 2015 to be yearly and compulsory, is used to identify staff members that should come forward for promotion. A female member of staff can be appraised by a female senior colleague if she so wishes. See also **Action 5.2a**. In addition, the HoS consults with professorial staff in the School to identify potential applicants to avoid HoS patronage. Senior staff assist applicants preparing the best possible application and previously successful applications are often shared. Unsuccessful applications receive feedback from the promotions panel and the HoS.

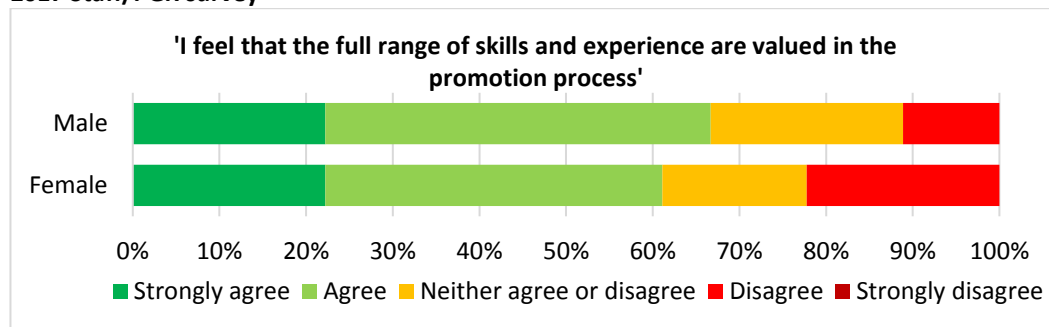
Career tracks are available in the university for those with a research, education, or research and education focus, with recent changes allowing promotion to Professor within the education-focus track.

In the 2017 Staff/PGR survey 12% of respondents disagreed with the statement “I feel that the full range of skills and experience are valued in the promotion process”. This is marginally down from previous years, but there is a need to systematically identify staff who are good candidates, particularly females. Women may lack the confidence to put themselves forward for promotion or

funding (not limited to funding specific to females – *we have received positive comments on being good at notifying women of this type of funding*). We will produce a document on the annual appraisals (**Action 5.2b**) that will enhance and clarify the link between the staff appraisal scheme and the pre-promotion process. The document will instruct senior members of staff to look at the full CV of other staff to encourage funding applications and identify candidates for promotion. (This would have to be screened for bias through the annual staff survey. We understand it relies heavily on the staff appraisal scheme, and that further actions may have to be taken over the next 3 years.)

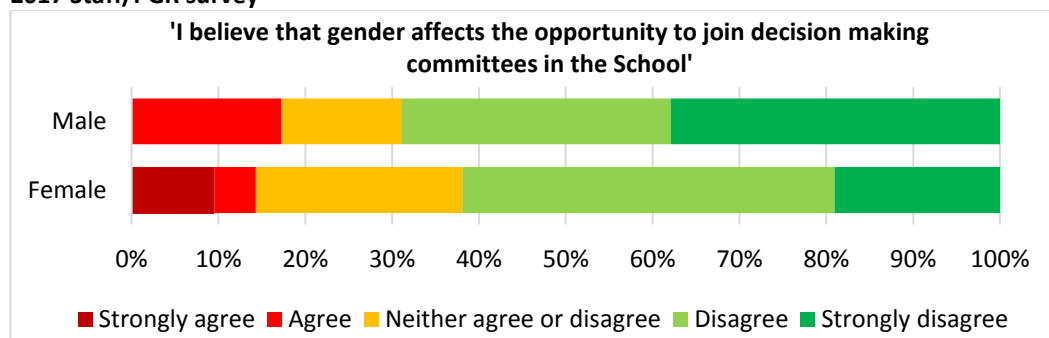
From (LERU 2018), women are less likely to feel they are suitable for advancement, and are more likely to take on multiple responsibilities negatively impacting their research time. Senior mentors have a role to play in bolstering early-career women's confidence. Enhanced staff training through **Actions 4.4e, 5.1f, 5.1g, 5.3b, 5.5b** should help address these issues.

#### 2017 Staff/PGR survey

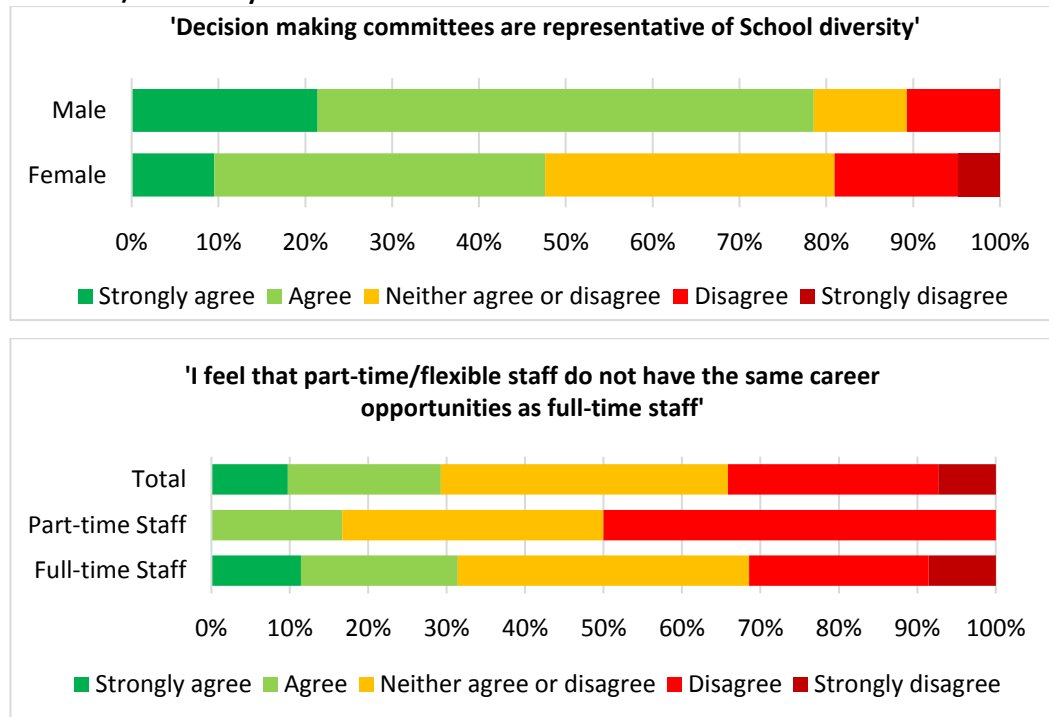


Activities that are likely to help the progression to seniority such as appearing on committees are also monitored in the staff/PGR survey (**Action 5.3a**). Small numbers feel that gender affects opportunities to join committees, with similar numbers feeling that the committees do not reflect diversity. Part-time staff are less likely to agree with the statement “I feel that part-time staff do not have the same career opportunities as full-time staff.”

#### 2017 Staff/PGR survey



## 2017 Staff/PGR survey



**Action 4.4e** Liaise with CAPOD and organise a School workshop on psychological resilience

**Action 5.1f** Ensure all members of staff involved in all stages of the recruitment process complete the [Online Staff Recruitment Training Module](#)

**Action 5.1g** Staff members involved in appraisal or recruitment will be required to read the LERU paper on implicit bias

**Action 5.2a** The uptake % for the new mandatory appraisals scheme to be included in the annual HoS report to the SAT/E&D committee, noting reasons for exemptions.

**Action 5.2b** Create a document describing the pre-promotion process and disseminate to members of staff.

**Action 5.3a** The Staff/PGR survey to be conducted annually every December.

**Action 5.3b** Maintain near 100% completion for the [Online Staff Diversity Training Module](#) and the [Online Staff Unconscious Bias Training Module](#) , by issuing timely reminders twice a year.

**Action 5.5b** Organise an in-house training workshop on Equality and Diversity issues in 2018/2019.

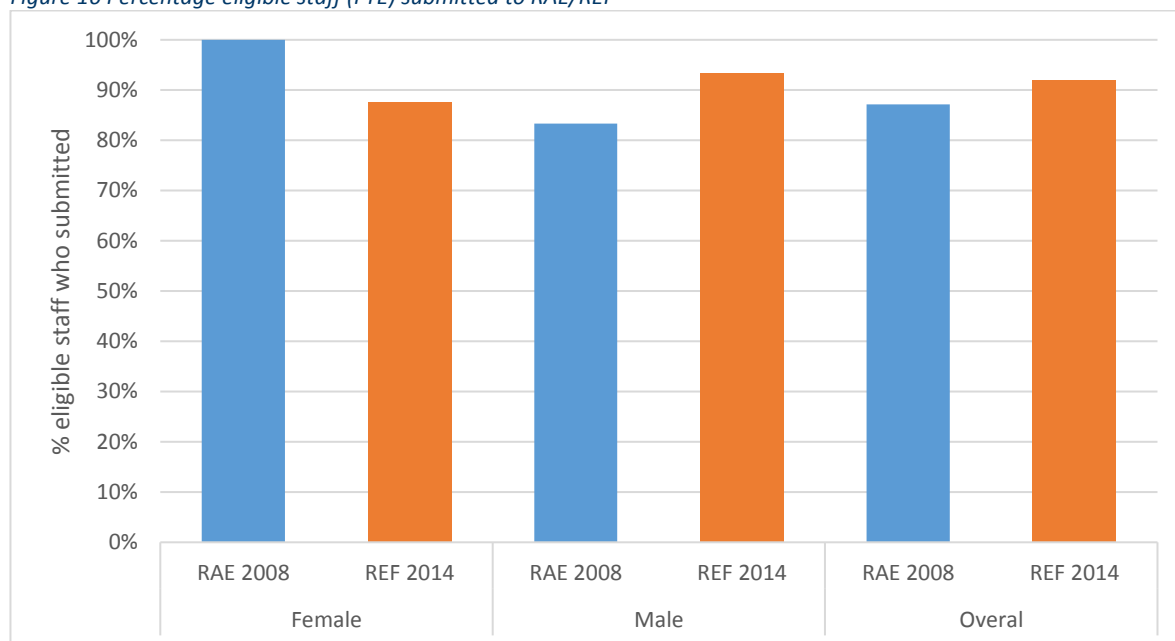
(iv) Department submissions to the Research Excellence Framework (REF)

Data are shown in the Table and Figure below. Numbers are too small to draw any conclusion other than the vast majority of eligible staff were submitted for both genders.

Table 17c School submissions summary for Research Excellence Framework (FTE)

[Redacted Table Content]

Figure 16 Percentage eligible staff (FTE) submitted to RAE/REF



## 5.2. Career development: academic staff

### (i) Training

The Centre for Academic, Professional and Organisational Development (CAPOD) provides a comprehensive range of courses to support personal, professional and academic development for all staff.

- Academic Staff Development Programme (ASDP) is a series of workshops for staff who teach and
- Contract Researcher (CoRe) Skills are specifically designed to support research staff and early career academics improve their research capability.

The Table below shows the numbers of staff in the School who have attended at least one ASDP workshop and at least one CoRe skills course.

Year	ADSP	CoRe
2015-2016	7	6
2014-2015	3	6
2013-2014	5	1

Passport to Excellence is a CAPOD development programme designed for professional support staff. Passport to Research Futures (PRF) is a structured development programme for early career researchers. Four research staff have completed the PRF programme and three are currently enrolled. All CAPOD courses are free of charge, and staff have access to individual modules. We will ensure that staff (including support staff) are aware of CAPOD development programmes by sending emails to members of staff with a list of the offered courses (**Action 5.2d**).

Two colleagues have completed the Scottish Crucible Programme. This is a leadership and development programme for Scotland's research leaders of the future, provided by the Royal Society of Edinburgh.

With regard to management training, our HoS has attended sessions with a management performance consultant, offered by HR to senior members of staff.

Within the School, training is done informally, for example the peer observation mentoring scheme which has been running since 2006. Members of staff joining the voluntary scheme are paired and observe each other lecturing, providing confidential feedback.

All PhD students benefit from courses run by the Scottish Mathematical Science Training Centre. Statistics students attend the Academy for PhD Training in Statistics. PhD students who wish to tutor attend two training workshops run by CAPOD. A mentoring system has recently (2017/2018) been introduced for first year PhD students, to provide feedback and support on their tutoring.

## (ii) Appraisal/development review

The School operates an annual appraisal review for all academic and research staff. It provides a platform to discuss workload, career aspirations, research leave, promotion and development. The HoS is responsible for undertaking the review of all academic staff and some research staff: Other research staff are reviewed by their line manager. A female member of staff can be appraised by a female senior colleague if she so wishes. Uptake was sporadic with the old opt-in scheme. See **Action 5.1g** on the training of reviewers and **Action 5.2a** on the participation rate.

**Action 5.1g** Staff members involved in recruitment and appraisal will be required to read the LERU 2018 paper on implicit bias.

**Action 5.2a** The uptake % for the new mandatory appraisals scheme to be included in the annual HoS report to SAT/E&D Committee, noting reasons for exceptions.

## (iii) Support given to academic staff for career progression

A Teaching, Research and Academic Mentoring Scheme has been running for over a decade and matches experienced academics with colleagues at an earlier stage. The partnership includes St Andrews, Dundee and Abertay Universities and the Glasgow School of Art. Over the last 2 years, 2 colleagues have participated in this programme. The University's mentoring work was recognised by the ECU as an example of good practice in their 2012 paper "Mentoring: Progressing Women's Careers in HE." This programme is relevant to postdoctoral researchers, who are financially supported for conference attendance in a manner identical to permanent staff, and do not teach, unless there is mutual agreement, for example to gain teaching experience. Advice is routinely given by senior staff on grant applications and career progression, as well as encouragement to attend CAPOD training courses. The University Careers Centre advises staff as well as students. A School policy was introduced in 2018, where 3 months of maternity leave for Post-doctoral researchers is covered by School funds when cover is not provided by the research grant. (This concerns 2-week paternity leave too.) Consequently, the full grant allocation is always used for producing research outcomes.

The University offers the external Aurora Leadership Programme for Women. Over the next year, our School will identify and support 2 female academics to participate in the Aurora scheme (**Action 5.2c**).

New permanent lecturers receive a lighter teaching and administrative load. All staff members can apply for conference attendance funding, research visits, and organising workshops. We will start recording data on staff conference participation by gender to take action if necessary to ensure that female members of staff attend conferences as regularly as male staff. This also relates to talent spotting and recruitment (**Action 5.2e**).



Starting in 2017, the Elizabeth Garret Mentoring programme has been created for women in senior academic roles to support women in, or aspiring to, academic leadership roles. We will improve monitoring participation (of both mentees and mentors) in all mentoring schemes, to detect any reduction in the participation in this scheme, and take positive action if necessary (**Action 5.2f**).

**Action 5.2c** Our School will identify and support 2 female academics to participate in the Aurora or other appropriate mentoring scheme.

**Action 5.2e** Start recording data on staff conference participation by gender.

**Action 5.2f** Implement a scheme, in collaboration with the University and CAPOD, which will allow for the systematic collection of data with regard to participation in career development programmes.

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

All students and graduates benefit from the Careers Centre provided by the University. Advice is also obtained from the Director of Teaching, advisors of studies, and the Director of Postgraduate Research for PGR students. PhD students in the School are encouraged to attend an annual residential trip where talks on career options are presented.

MSc students are contacted by the careers service. The MSc coordinator meets on a one-to-one basis if requested, informs on electronic resources for monitoring job vacancies and arranges for companies to visit and give talks (e.g. Royal Bank of Scotland). Some of the students undertake projects with external organisations.

The School offers paid internships (roughly 15 each year) for 6-week summer research projects. The UG Summer Research Committee e-mails all students in their penultimate year. Roughly 30 students express an interest each year. Grades play a crucial role in the selection, as well as performance associated to specific research areas. A Summer Research Forum for interested students is organised in early November to provide detailed information. In late January the UG Summer Research Committee sends a further e-mail to well-qualified students (in the 2.1 and 1'st class band) inviting them to express an interest. We will start collecting data on the gender of selected students to detect any bias in the selection process. (**Action 4.7a**).

A recent initiative is Maths Base, a drop-in help centre for sub-honours students, where help is provided on non-assessed work by staff, PhD students, and senior honours students provided they have support from their Advisor of Studies. A certificate recognising their contribution is provided.

(v) Support offered to those applying for research grants

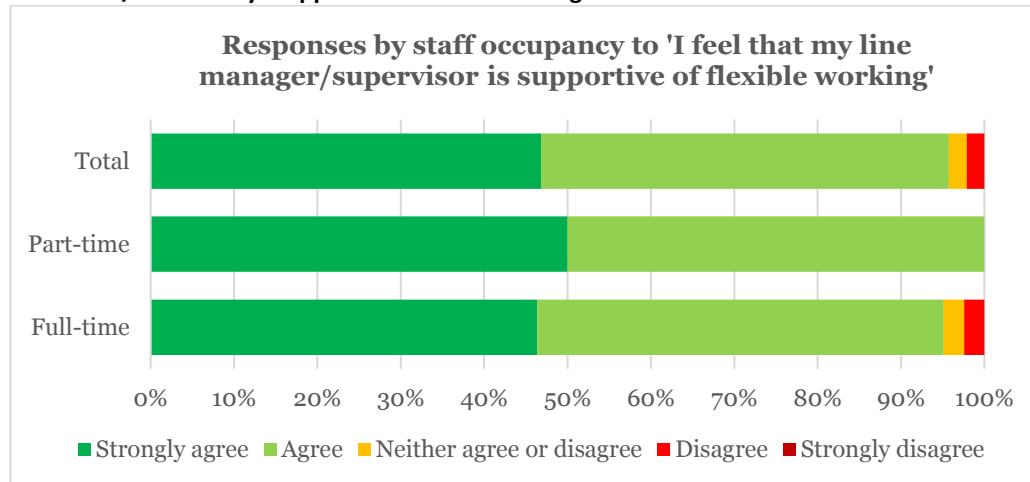
Academic and research staff are encouraged to apply for external funding. The University Business Development (UBD) officer visits the School every month and provides information on funding opportunities and guidance on applications. UBD also organise visits and talks by major funding bodies to the University. The Financial Advice and Support department provide help with costing and managing contracts. CAPOD organise workshops on costing and grant proposal writing targeted at the Sciences. The Director of Research and HoS provide support and disseminate information on funding opportunities. Senior staff routinely provide feedback on grant applications written by early-career researchers, and advise on how to utilise unsuccessful applications, similarly to the UBD officer. We will start to systematically analyse data on grant applications made, in relation amount, gender and outcome, to infer trends and detect biases (**Action 5.2g**).

### 5.3. Flexible working and managing career breaks

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

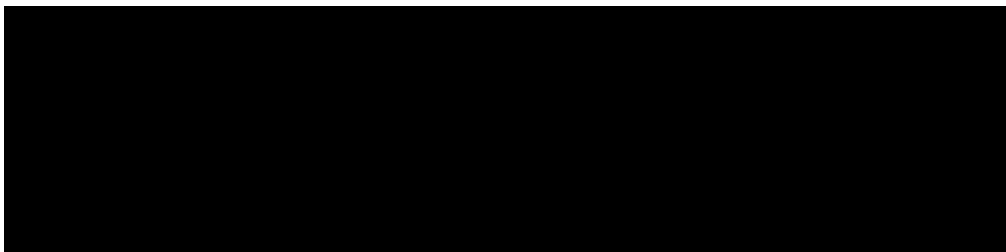
All staff benefit from an environment that is supportive of flexible working, and this applies equally to staff soon to be taking maternity or adoption leave. In the last Staff/PGR survey, 96% of respondents felt their line manager was supportive of flexible working.

#### 2017 Staff/PGR survey: Support for flexible working



Most people know where to find information about maternity leave (see Table below), although 19% of respondents stated otherwise.

#### 2017 Staff/PGR survey: I know where to find information about maternity/paternity/carer leave:



Links to university policies in this area now appear in the departmental handbook and in the School's E&D webpage (see **Action 5.4a** on the maintenance of those links and the updating of information). Supervisors have been briefed as to the procedures to follow if students take such leave. A risk assessment is conducted for each member of staff who informs the Head of School that she is pregnant, and workloads adjusted accordingly (**Action 5.4b**).

**Action 5.4a** Continue ensuring that the link on the School's Equality webpages to the HR Maternity Leave policy, Paternity, Adoption and Parental Leave, and Family Friendly policies (which include the Flexible Working Policy) is updated regularly.

**Action 5.4b** E&D committee member to scrutinize that a risk assessment is conducted for each member of staff who informs the Head of School that she is pregnant, and workloads adjusted accordingly.

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

The university offers 10 Keeping-In-Touch (KIT) days to staff on maternity leave. Staff retain their office/desk space during their leave. They are invited to social events, and are welcome and encouraged to visit the School from time to time (either informally or using KIT days). Staff on leave could be paired with a designated colleague as a link to keep them up-to-date (**Action 5.4c**).

Staff numbers have been high enough to sometimes cover for the member of staff on leave by some reshuffling of duties, without a formal request by the HoS or a significant increase in workload for certain individuals. However, cover for maternity leave is available as standard University policy. The HoS can apply for such cover, asking the University management to approve additional temporary teaching resources.

**Action 5.4c** Members of staff on leave will be offered the option that the Head of Division asks another member of staff to act as a link between the person on leave and the School.

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

Returners are routinely assigned lighter workloads to enable a smoother return. Usually, a member of staff just back from leave after the start of the semester will not be expected to perform any teaching in that semester, providing time to rebuild a research portfolio. Requests for special considerations by staff with young families in terms of the timing of their teaching are routinely viewed sympathetically.

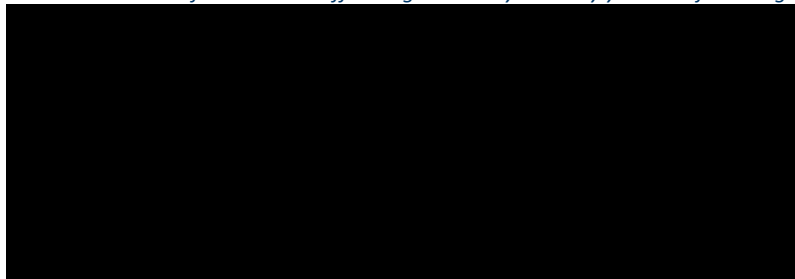
The university has commissioned a new nursery (opened in April 2017) to increase childcare provision. Discounts are available at several local nurseries and there is a Childcare Voucher scheme in which the University of St Andrews takes part. There is a discretionary fund to which post-graduate students can apply for help with childcare costs.

We do not have designated baby changing or breast-feeding facilities, but are in the early stages of designing a new building for which these will be desired features. The Medical School, which is next to the Mathematics Institute, has a breast-feeding area that our staff can make use of if they wish, and ad-hoc use of the many meeting rooms and offices of the School is possible. We will add this information to our Staff handbook (**Action 5.4d**).

**Action 5.4d** Add to the Staff handbook that the Medical School, which is physically linked to the Mathematics Institute, has a breast-feeding area that our staff can make use of if they wish.

#### (iv) Maternity return rate

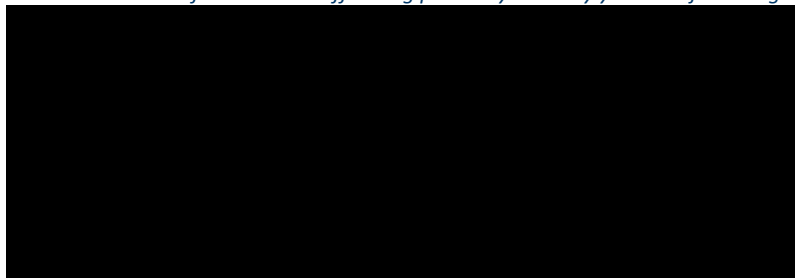
*Table 18 Number of academic staff taking maternity leave by year and job category*

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\*2017 data January – July only.

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

*Table 19 Number of academic staff taking paternity leave by year and job category*

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\*2017 data January – July only.

All staff who have taken maternity leave or shared parental/adoption have returned following their leave.

#### (vi) Flexible working

For many years the School's culture is that all academic staff can benefit from flexible working hours (outside of teaching commitments), without the need for formal arrangements. Teaching allocation can be flexible to accommodate staff caring responsibilities. Spending research time outside of one's office is not uncommon. There is no compulsory formal system to follow, but there is an expectation that staff will inform the School administrator and the Head of Division.

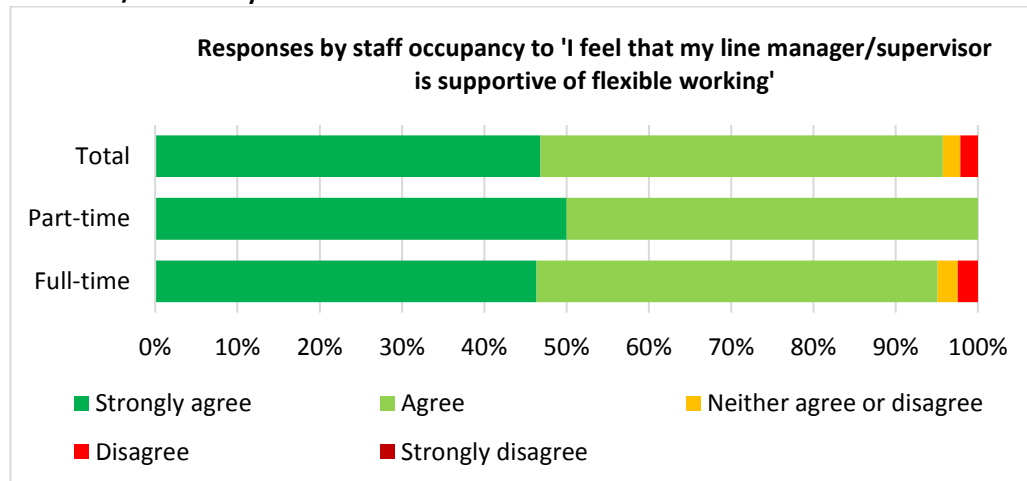
Some colleagues with young families stop working earlier, to collect children from school/playgroup, and then make this time up in the evening. For more specific arrangements, the member of staff talks with the HoS, and arrangements are made, usually without any formal record. In the past, teaching was re-allocated for staff members with primary school children, to avoid a 9am start.

A number of support staff on part-time contracts work flexible hours.

Formal arrangements are possible, and since 2013 there have been 4 staff granted formal flexible work agreements.

We aim to detect any real and perceived gender imbalance in flexible working by means of the annual staff survey for informal arrangements (**Action 5.4e**), and by examining data provided by HR for formal arrangements (**Action 5.4f**).

#### 2017 Staff/PGR survey



**Action 5.4e** Monitor any real and perceived gender imbalance in informal flexible working (mainly “working from home”) by means of the annual staff survey, by adding at least one relevant question.

**Action 5.4f** Formal Flexible Working requests to be provided by HR for monitoring gender balance on an annual basis.

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

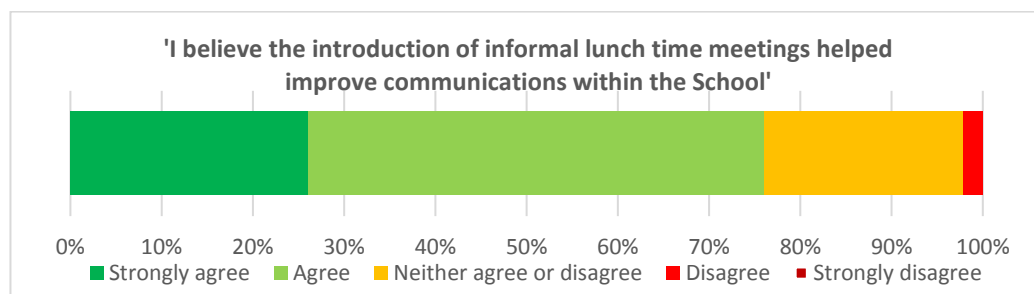
Transition from part-time to full-time employment requires approval by the Master of the University due to budgetary implications. Experience from other Schools is that, with this approval, the return can be seamless. We do not have such case studies in our School, other than one male colleague increasing his FTE from 50% to 70%, and one female from 60% to 80%.

## 5.4. Organisation and culture

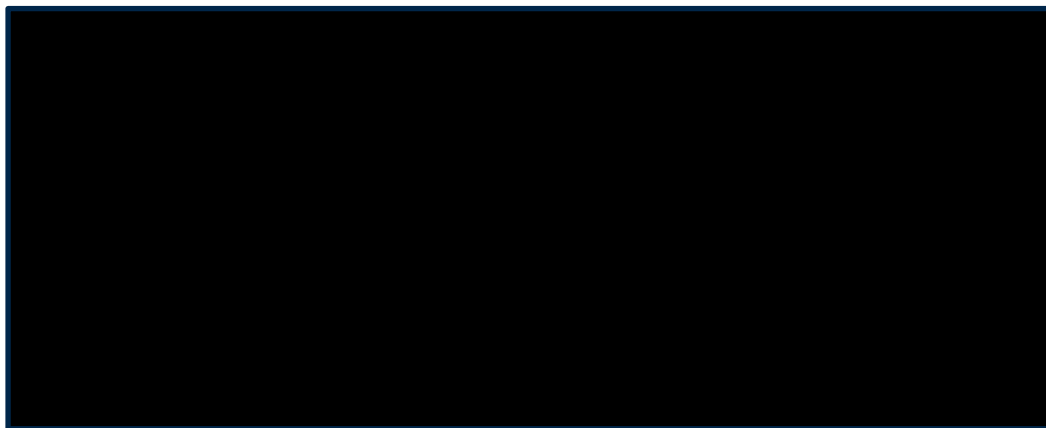
### (i) Culture

Our School is characterised by a friendly and relatively informal atmosphere. Academic staff, support staff and postgraduate students generally use first names. The HoS, along with many staff members, operates an open-door policy. St Andrews is a small town, and members of staff are aware of each other's circumstances. Unexpected absences due to ill children are often covered by colleagues on an ad-hoc basis and it is not uncommon for staff to bring their children into the School for a few hours if the need arises. This is always done with the greatest mutual respect. The Equality webpage includes links to information on 'Carers, Childcare and School Holidays' and 'Health & Wellbeing at Work' initiatives.

Informal monthly Lunch+Chat meetings were introduced in 2015. Staff suggest discussion topics either before or during the meeting. The HoS is always present, along with the majority of staff. In the 2017 Staff/PGR survey, 76% agreed or strongly agreed that these meetings helped improve communications. E&D related issues have been discussed in the vast majority of Lunch+Chat meetings. More formally, an update from the Athena SWAN SAT team is a standing agenda item on the School's Staff Council meeting.



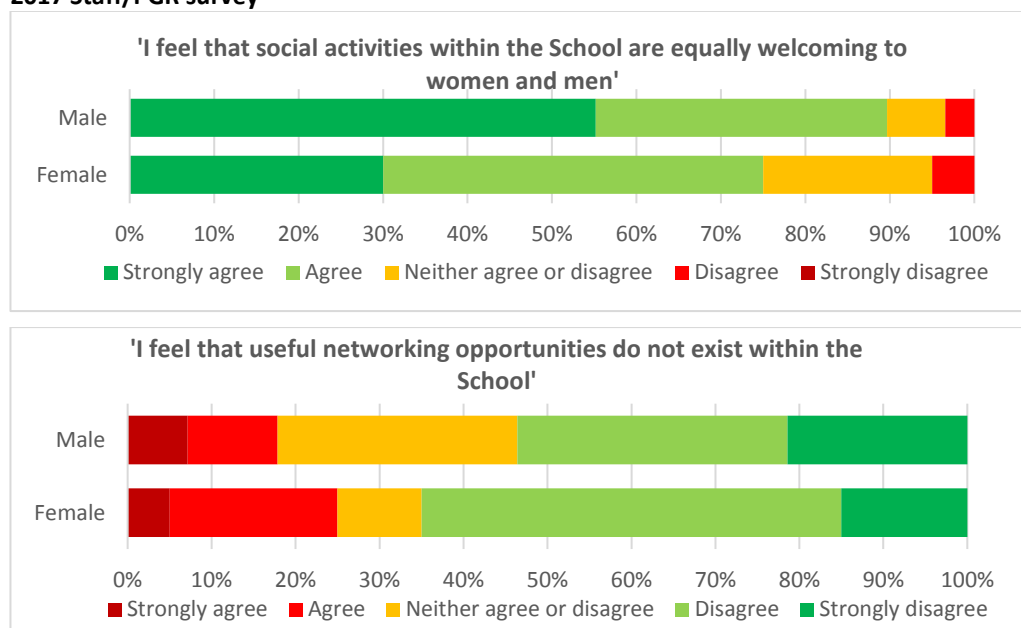
Staff and PhD students meet for tea/coffee at 11am and 4pm daily, with additional biscuits provided at 4pm each Friday. This currently splits over 2 buildings, but a new building is planned, that will unify these activities. Often home baked cakes are brought. A special twitter account records cakes and other news, with @CREEM\_cake recording fun-stats on cakes brought.



Christmas lunch takes place at a restaurant, whilst another Christmas event involves members of staff cooking and bringing food and drinks. A barbecue takes place in the summer, organised by the Statistics division. The annual St Andrews University Mathematics Society (SUMS) Christmas lunch and Pi Day meal involves both staff and students. In the 2017 Staff/PGR survey, only 4% of respondents felt that social activities were not equally welcoming to women and men.

With regard to networking opportunities, 21% of respondents felt that they did not exist. We are not certain if this relates to School or University networking opportunities. We will discuss this in a future Lunch+Chat meeting, to obtain more insight (**Action 5.5a**), and modify this question in the next Staff/PGR survey to produce more informative data.

#### 2017 Staff/PGR survey



We have extended the 4pm Friday biscuits to include UG students twice per semester, receiving positive feedback. The Student Discussion Forum has flourished. It has developed into a Forum that also organises Equality and Diversity events that involve staff, external speakers and discussion panels, providing a rich source of ideas for our Action Plan; see Section 4.1.

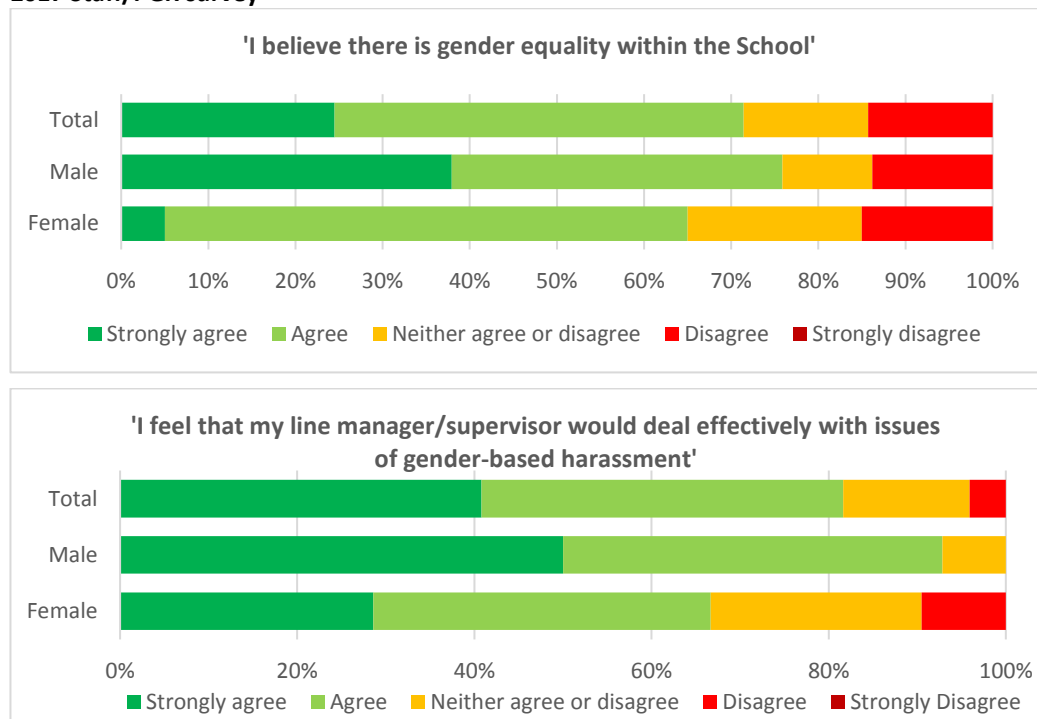
An important challenge is to ensure that we address cases where a colleague feels unequally served by some aspect of School culture; see the proposed actions detailed below. From the Staff/PGR survey, 14% felt that there is no gender equality in the School. To obtain some insight, we turned to the qualitative free-text comments. Whilst acknowledging the positive comments, we noted 3 groups that stood out. One group referred to opinions by female colleagues not being



listened to adequately in discussions. To address this, we will discuss these findings in a Lunch+Chat meeting devoted to the Survey results, within 2018, and run an in-house workshop on Equality and Diversity issues in 2018/2019. (**Action 5.5a, Action 5.5b**). Another group mentioned discrimination based on ethnicity, also including anti-English sentiments. We will ensure that the 2018 E&D workshop (**Action 5.5b**) addresses those incidents. Another group referred to discrimination against males, either witnessed or as a result of lack of mentoring schemes for male colleagues that would mirror the schemes for female colleagues. We will ensure that efforts to inform on career development schemes do not target solely female colleagues; see **Section 5.2** and **Actions 5.2e and 5.2f**.

4% of respondents disagreed with the statement that their line manager or supervisor would deal effectively with issues of gender-based harassment. We expect that **Actions 5.5a and 5.5b** as well as the enhancement of staff awareness by extending participation in the SAT process (**Action 3.2, Action 3.3**) will help address this.

#### 2017 Staff/PGR survey



**Action 5.2e** Start recording data on staff conference participation by gender.

**Action 5.2f** Implement a scheme, in collaboration with the University and CAPOD, which will allow for the systematic collection of data with regard to participation in career development programmes.

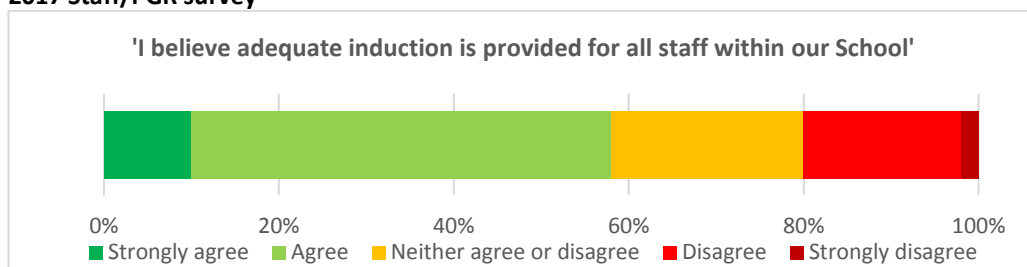
**Action 5.5a** Discuss the December 2017 Staff/PGR findings in a dedicated Lunch+Chat meeting within 2018.

**Action 5.5b** Organise an in-house training workshop on Equality and Diversity issues in Semester 2 of 2018/2019.

## (ii) HR policies

HR policies are available on the University intranet pages, as well as the School's webpages. Schools are supported in applying them by a senior HR officer designated as point of contact for each School. The School organises briefings by the DoT, DoR and Director of Impact to remind staff of core policies. Members of staff are also informed in Staff Council meetings and via email. We recognise the need for a more formal procedure which will allow to confirm that new policies have been disseminated (**Action 5.5c, Action 5.6**). This should help address gaps in the induction process indicated by the Staff/PGR survey.

### 2017 Staff/PGR survey



There have been no formal grievances or reports of harassment or bullying by staff in the School in the last five years. Furthermore, there have been no reports of harassment and bullying among our students. Such events would be addressed by the HoS, Director of Teaching (DoT), and E&D Officer, in consultation with Student Services in accordance with relevant policies.

**Action 5.5c** The School's allocated HR Business Partner will be present in SAT meetings at least twice every year, to ensure dissemination of HR policies to School staff.

**Action 5.6** Introduce an Induction Checklist that will contain key information that new staff/PGR should be given in their first month

## (iii) Representation of men and women on committees

Leadership roles, as well as committee membership, are allocated on an annual basis, usually during July-August. This allows for close monitoring of committee overload for members of staff. Senior administrative roles are appointed by the Head of School. Membership of committees is determined by the HoS and based on factors such as seniority, workload balance across the three divisions, gender balance and personal circumstances when relevant. The main committees are the School Management Group, the Undergraduate Teaching Committee, the Research Committee, the Postgraduate committee, Staff-Student Council, and the E&D/SAT committee.

At the time of writing, close to 50% of senior roles are held by female members of staff. This is a marked improvement compared to the 2014 Athena SWAN application, where roughly 30% of these roles were held by females.

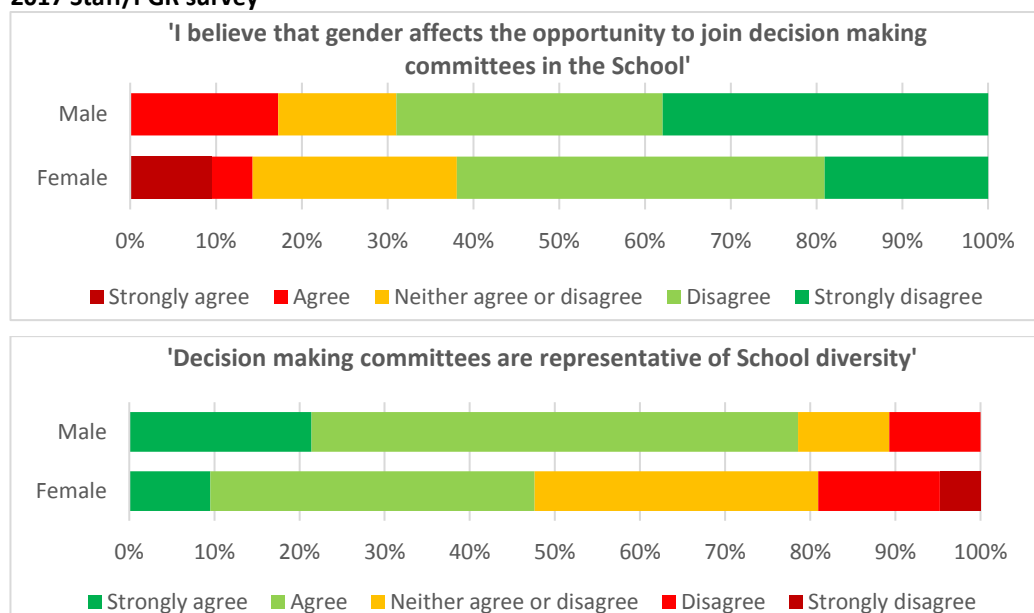
Gender balance on committees is reflected in Table 20 below. Note the increase in female representation over the last 3 years, compared to previous years. In relation to the low proportion of female PGR students, we ensured female representation in the Postgraduate committee over the last 3 years.

Table 20. Representation on Groups/Committees by Gender for Academic/Research staff as at 30 January 2018.

Name of Group/Committee	Meeting frequency	% Female				
		2013	2014	2015	2016	2017
School Management	1 per 2 months	14%	14%	14%	33%	29%
UG Teaching Comm.	1 per 2 months	20%	33%	50%	50%	25%
Research Comm.	2 per year	0%	20%	20%	20%	20%
PG Committee	4 per year	0%	0%	25%	25%	25%
Staff-Student Council	4 per year	25%	75%	43%	75%	43%
E&D Committee	4 per year	57%	57%	44%	56%	33%

In the Staff/PGR survey, 66% of the participants felt that gender did *not* affect the opportunity to join decision-making committees, with a further 18% neither agreeing nor disagreeing. Of the 16% who felt that gender affects committee membership, 62% were male. 65% of respondents believe that decision making committees are representative of School diversity, with a further 20% neither agreeing nor disagreeing.

#### 2017 Staff/PGR survey



We will continue promoting female representation, ensuring that the interests of female members of staff are taken into consideration, whilst care is taken not to over-burden female colleagues. Committee membership is accounted for in the School's workload model.

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

The number of Institutional decision-making committees is relatively low. Currently, the School has female representatives on the Research Forum. Female members of staff are members of influential external committees for a variety of organisations, including with the London Mathematical Society, Edinburgh Mathematical Society, Royal Society of Edinburgh, EPSRC and STFC. Participation in influential committees and panels is recognised in the promotion process.

#### (v) Workload model

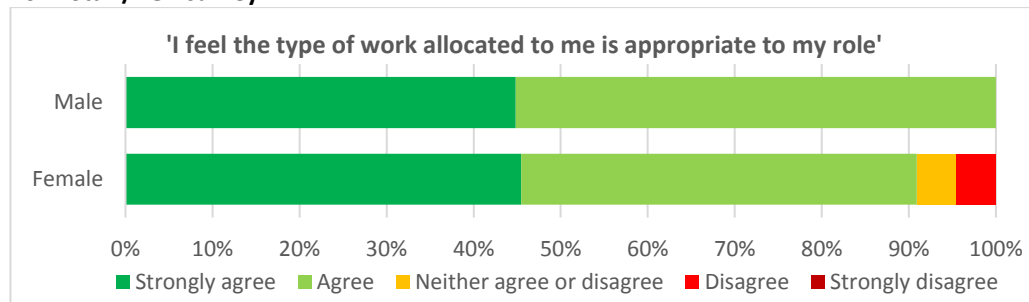
Teaching is allocated on a divisional level and administrative tasks by the HoS. The School has recently developed a comprehensive workload model which takes into account teaching (lectures, tutorials, project supervision, PhD supervision and outreach) as well as service and administrative tasks (School and University service, external service, impact/knowledge transfer). The model is based on the School of Biology model, adapted to the needs of our School. The model was initially discussed by the School Management Group and subsequently refined by all staff at a Staff Council meeting and a dedicated Lunch+Chat meeting. The new model was implemented during Feb-Mar 2018. Workload is reported in quintiles and will be monitored for different cohorts (including gender, seniority, part-time/flexible working, new starts, returning from leave). Special circumstances (also including research leave) are taken into account. A snapshot is shown here.

Staff	Quintile Teaching	Quintile Teaching + PhD supervision	Quintile Service	Quintile TOTAL
1	3	3	5	5
2	2	4	5	5
3	1	1	5	5
4	5	5	5	5
5	2	4	5	5
6	5	5	3	5
7	4	4	5	5
8	5	5	3	4
9	3	3	5	4
10	5	5	4	4
11	2	3	4	4
12	3	3	3	4
13	3	4	4	4
14	4	5	4	4
15	4	4	4	3
16	2	2	2	3
17	4	3	4	3
18	3	2	1	3
19	5	5	1	3
20	1	1	3	3
21	5	5	3	3
22	1	1	2	2
23	2	2	3	2
24	5	4	2	2
25	3	2	4	2
26	4	4	3	2
27	1	1	2	2
28	1	2	2	2
29	2	1	1	1
30	3	2	2	1
31	4	3	2	1
32	4	3	1	1
33	2	2	1	1

School responsibilities with high senior administrative workload are considered to be the Director of Teaching, Director of Research, Postgraduate Director, the Admissions Officer and the E&D Chair (as well as the HoS and the Deputy HoS). These tasks rotate on a 3-5 year cycle. Administrative service is readily recognized in the University's promotions procedures. When allocating the more burdensome administrative roles, several considerations are carefully tensioned against one another such as suitability, seniority, as well as an appropriate gender balance and balance between the School's divisions. With regards to gender, in particular, overburdening the small number of more senior female staff is monitored closely.

In the 2017 Staff/PGR survey, 98% of our colleagues felt that the type of work allocated to them was appropriate for their role. We will investigate the reception of the new workload model by our staff in the 2018 Staff/PGR survey (**Action 5.9**).

#### 2017 Staff/PGR survey



**Action 5.9** Include one or more questions on the effectiveness of the new workload model in the next Staff/PGR survey.

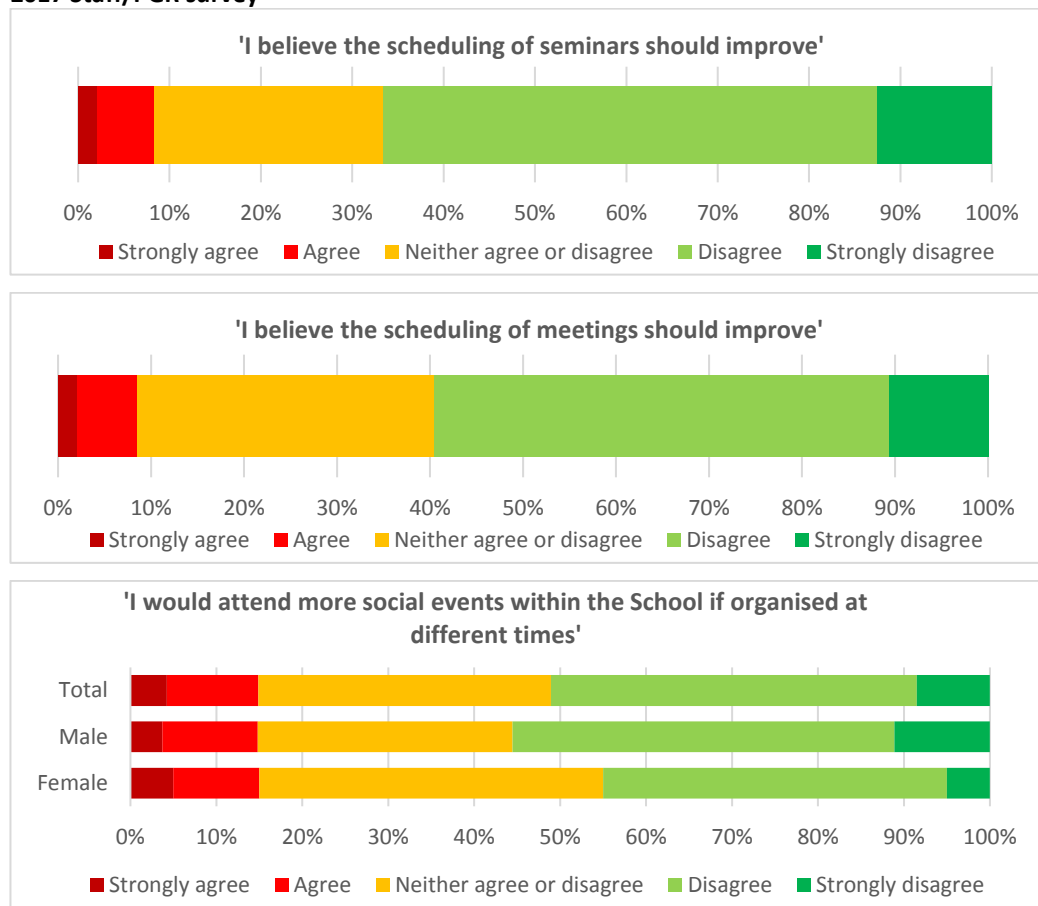
#### (vi) Timing of departmental meetings and social gatherings

Over the last 3 years, it has become School policy to organise all meetings within core hours (10am to 3pm), mainstreaming the University's 'Event and Meeting Inclusion Guide' which is included on the School's webpages. This can extend to 4pm when needed. For example, the School has moved Staff Council meetings from a 4-5pm slot, to a 1pm-3pm slot. Since September 2017, School staff liaises with the HR department for the provision of an onsite crèche child care facility where required, when holding a conference or for social gatherings.

In the 2017 Staff/PGR survey, 8% of respondents suggested that the scheduling of meetings/seminars can improve. Pure mathematics seminars are still scheduled at 4pm. Staff in the Pure division are in favour of this, without any opposing voice. In fact, colleagues within this division were vocal in their support for a 4pm slot during discussions with the E&D chair. The E&D committee will continue discussion with the Pure division, to ensure there is unanimous support on the timing of the seminars (**Action 5.7**).

14% of the survey participants felt that they would attend more social events if they were arranged at different times. The majority of social events take place at lunch time, and families are encouraged to attend the evening Christmas event. Dinners with invited speakers are arranged at times that accommodate travelling arrangements by the speakers. Timings of events will be discussed in the Lunch+Chat meeting dedicated to the outcomes from the recent Staff/PGR survey (**Action 5.5a**)

#### 2017 Staff/PGR survey

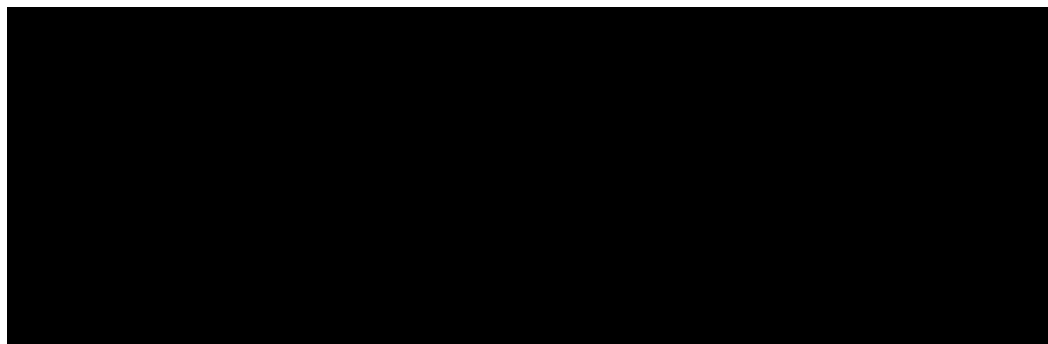


**Action 5.5a** Discuss the December 2017 Staff/PGR findings in a dedicated Lunch+Chat meeting within 2018

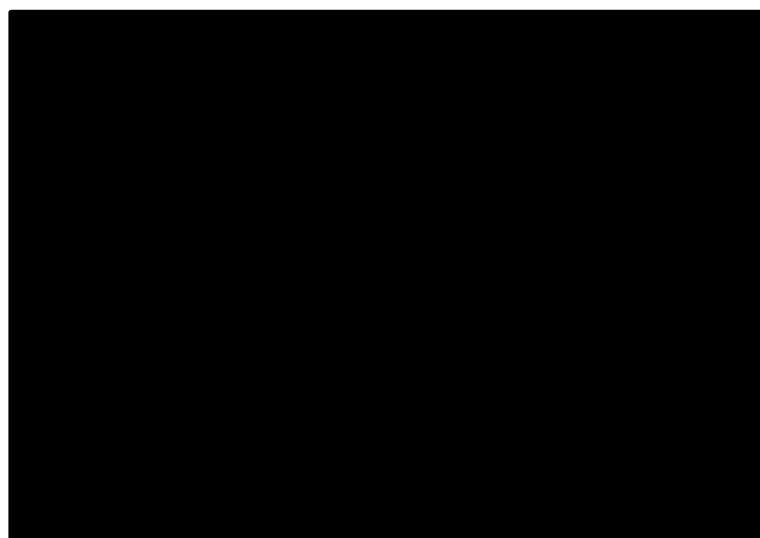
**Action 5.7** The E&D/SAT chair to discuss the scheduling of the Pure mathematics seminars with the seminar organiser once a year, with an additional staff discussion in a Lunch+Chat meeting.

### (vii) Visibility of role models

We ensure that female teaching and research staff are present in the School open days. We have received positive feedback for this from the Student Discussion Forum. This Forum often addresses gender and race related issues, inviting high profile female speakers. School publicity material includes wording and images that include female students and staff.



The book 'Academic Women Here!' was edited by Profs Sharon Ashbrook (Chemistry), Aileen Fyfe (History) and Ineke De Moortel (Mathematics and Statistics), and was launched on 6 February 2018. The book celebrates the diversity of research interests and career paths of female mid-career academics in the University.



The Table below shows the number of female speakers over the total number of speakers, for the School's 5 main seminar series, for each of the last 5 academic years. The proportion of female speakers has increased in the last two years to an average of 33%. This reflects efforts by seminar organisers to increase female representation. The overall average, however, is 26% which is quite low. (See **Action 5.8**).

	% female speakers					
Year	CREEM (Statistics of Ecology)	Applied Mathemat ics	Algebra/ Combin.*	Pure Math.	Statistics	Overall annual % female
2017/18	33%	17%		60%	18%	<b>38%</b>
2016/17	29%	18%		18%	62%	<b>29%</b>
2015/16	31%	0%		18%	12%	<b>19%</b>
2014/15	33%	40%		21%	7%	<b>24%</b>
2013/14	29%	21%		14%	7%	<b>20%</b>
Overall % female per series	<b>31%</b> (27/88)	<b>31%</b> (9/45)	<b>31%</b> (7/28)	<b>31%</b> (25/93)	<b>31%</b> (16/69)	<b>26%</b> <b>overall</b>

\*Most speakers are PhD students giving talks for training purposes. Thus, numbers would replicate proportions discussed in Section 4. An overall % was provided for speakers other than PGR.

**Action 5.8** The School will endeavour to maintain or increase the proportion of female speakers in all seminar series to 35-40%. The HoS and designated SAT committee member will meet with seminar organisers at the start of semester 2 each year, with seminar organisers reporting female percentages and discussing reasons if the target has not been reached

#### (viii) Outreach activities

We believe that female participation in outreach activities is one of the main drivers in attracting more young women into Maths. Professor Clare Parnell is the School's coordinator for outreach activities. Roughly 65% of staff (including postdocs) and PhD students have participated in outreach events over the last two years. Outreach activities include events at different Science Festivals, talks/demonstrations/fun maths classes for primary and secondary schools, and popular lectures at a host of different events (e.g. for amateur societies, etc.) both in the UK and elsewhere in the world (e.g., Africa, New Zealand, Japan and the US).

Recent outreach examples showcases the wide range of events involving female members of staff include a week-long series of 'street-entertainment' events showcasing mathematics, talks during cruises run by SAGA Sapphire, the blog (<http://isobelf.wordpress.com>), the Leon Davies 2018 Lecture at the Glasgow Astronomical Society, youtube channel on the history of maths ([https://www.youtube.com/channel/UCfe5L6EX94tiNvQpkdc2N\\_w](https://www.youtube.com/channel/UCfe5L6EX94tiNvQpkdc2N_w)), and development of the mathematical model that underpins the game and treatment outcomes of an international award winning game called Sanitarium in which the player is a doctor who treats tuberculosis patients.



A number of the groups within the School run twitter feeds and various members of staff have been interviewed for both newspapers and radio programs, nationally and locally. The School continues to run the Scottish Schools Maths Challenge which has been held for more than twenty years.

Public outreach work is formally included in the School's refined workload model. Public outreach is viewed positively in all appraisal and promotion processes.

## 6. FURTHER INFORMATION

### Key positive results from 2016/2017 surveys compared to 2014 survey

(Percentages shown as %/% for the two surveys in 2016/2017.)

More than...

- 85%/85% believe that social activities are equally welcoming to men and women (76% in 2014 survey).
- 23%/16% believe that gender affects the opportunity to join decision making committees (down from 27% in 2014 survey).
- 72%/65% believe that decision making committees are representative of School diversity (53% in 2014 survey).
- 80%/83% believe that staff on a break are included in ongoing life in the department if they wish (74% in 2014 survey).
- 2%/4% believe their contribution is not valued within the School (down from 10% in 2014 survey).

Also, in the 2017 survey,

- 98% feel that Lunch-Time meetings helped improve communications within the School
- 92% are aware of how to access professional training opportunities
- 93% believe there is no reason to further modify the scheduling of either seminars or meetings

### Highlighted areas of concern from 2017 Staff/PGR survey and plans for addressing them

- 14% of respondents disagree with the statement that there is gender equality within the School. Please see our discussion in Section 5.4(i) where specific actions are described.
- 12% of respondents feel that the full range of skills and experience is not valued in the promotion process. 22% feel that they are not provided with meaningful appraisals. The new appraisal process should gradually help address this concern. See Section 5.1(iii) for a discussion and Actions relevant to promotions.

### **Intersectionality**

The SAT encourages the School President to organise Student Discussion Forum meetings that cover a broad range of equality and diversity issues. For example, the experience of non-binary staff and students in Mathematics departments, and mental health and confidence levels among female maths students. The School is currently gathering best sector practice in attracting more BME staff under the University's Race Charter initiative from 2018/19, such as outreach and targeted advertising.

## **7. ACTION PLAN**

## **May 2018 – April 2022: University of St Andrews Athena SWAN Action Plan – School of Mathematics & Statistics**

The E&D/Athena SWAN SAT presents the following outcomes-focused Action Plan, addressing key issues identified in our submission. In particular, we would like to highlight the following objectives:

1. Ensuring the number of female undergraduates in the School continues to be at least 7% above the national average (Action 4.1 a,b).
2. We aim, by 2022, to observe a difference in 1<sup>st</sup> attainment between male and female students of 5%, compared to 17% in 2015/2016 and 11% in 2016/2017 (Action 4.4 a,b,c,d,e,f,g)
3. Commitment to increasing the numbers of female PGR's to become 5% above the national average (Action 4.7 a,b,c,d,e,f,g).
4. Although the number of female professors in the School at 21% (3 female, 11 male) is significantly higher than the national average, we will strive to 30% (Action 5.1 a,b,c,d,e,f,g and Action 5.2 a,b,c,d,e,f,g) over the lifetime of the action plan.

In order to achieve our goals and ensure efficient working of the E&D/SAT Committee with sustained follow-up, we will:

5. Promote an inclusive culture within our School and ensure that E&D is an intrinsic aspect of the management and working in our School.
6. Adhere to the quarterly cycle of business as detailed at the end of the AP.
7. Maintain the annual surveys of both students (UG and PGT) and staff (including PGR students) at fixed points through the academic year.

The proportion of female (senior) staff in our School is substantially above the national average. We aim to 'future-proof' the School's position by focusing on opportunities for recruitment at lecturer-level and securing the long-term supply pipeline from UG students to PGRs, through to researchers.

We will monitor E&D activities and progress towards the implementation of the Action Plan, and update the AP as necessary, throughout 2018-2022.

	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight (bold) implementation	Success Criteria & Outcome
	<b>Section 3: The self-assessment process</b>						
	<b>3.1</b>	As from October 2018, the SAT team will be chaired or co-chaired by a member of the School's professorial team.	Alleviate ECU concerns on likely implications for the perceived stature of the SAT committee.	SAT chair appointment.	October 2018	<b>Head of School</b> Head of School	SAT chair appointment.
<i>There is a need to increase staff participation in the self-assessment working groups, extend the timeframe of the groups' operation, and</i>	<b>3.2</b>	Extend the membership of the self-assessment groups to at least 3 staff members per group, excluding the group's convener. Membership to reflect gender proportions within the School.	Increase staff participation in the self-assessment process.	SAT group membership.	December 2018	<b>E&amp;D/SAT chair</b> E&D/SAT senior committee members	Self-assessment group membership of at least 4 staff members each, including the SAT convener.

<i><b>formalise timetabling and record keeping.</b></i>	<b>3.3</b>	Extend the timeframe of the operation of the self-assessment groups to cover the window between AS applications. Formalise timetabling and record keeping for the self-assessment group meetings.	Further involve staff members in the self-assessment process.  Ensure this process runs smoothly and recognise possible problems.	Self-assessment group operation span, and number of meetings.	February 2019  (and continuing through to 2022)	<b>E&amp;D/SAT chair</b>  E&D/SAT senior committee members	Meetings taking place from February 2019. Convene at least 2 meetings per academic year.
	<b>Ref.</b>	<b>Planned Action/ Objective</b>	<b>Rationale</b>	<b>Key Outputs &amp; Milestones</b>	<b>Timeframe (Start/end date)</b>	<b>Responsibility: oversight (bold) implementation</b>	<b>Success Criteria &amp; Outcome</b>
<i><b>Ensure efficient working of the SAT and consistent and sustained follow-up of the Action Plan.</b></i>	<b>3.4</b>	Maintain the E&D/SAT meetings at a frequency of at least 4 meetings per year.	Ensure efficient working of the SAT, and the implementation of the Action Plan.	The quarterly cycle of business will be maintained through a fixed cycle of meetings of the E&D/SAT committee in September, December, March and June.	2018 -2022  (established as a quarterly cycle of business)	<b>E&amp;D/SAT chair</b>  E&D/SAT Chair	60% of the action plan completed by the March 2020 midpoint.

	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight (bold) implementation	Success Criteria & Outcome
It is important to monitor progress on our Action Plan and report to the School Management Group (SMG) A vital role of the SAT will be in assessing the effectiveness of our actions and proposing new ones as necessary.	<b>3.5</b>	(a) Form a SAT subgroup to monitor progress in the implementation of the action plan.  (b) Conduct a full review of the action plan's implementation in March 2020.	Ensure the action plan is implemented within the specified timeframe.	(a) Formation of action plan monitoring subgroup.  (b) Action plan review and report to the SMG.	(a) November 2018  (b) March 2020	<b>E&amp;D/SAT chair</b>  E&D/SAT monitoring subgroup.	Ensure that 60% of the action plan is completed by the March 2020 midpoint.

	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight (bold) implementation	Success Criteria & Outcome
<i><b>There is a need for greater awareness of the work of the SAT/E&amp;D Committee and a more 'joined-up' approach to E&amp;D issues throughout the School</b></i>	<b>3.6</b>	The E&D/SAT chair will continue reporting to Staff Council, whilst updating information on relevant websites. The E&D/SAT chair will start reporting regularly to the School Management Group at least twice every year.	Increase awareness on E&D related issues. Ensure the link between E&D/SAT and the SMG is always in place.	Twice-yearly reports to the School Management Group (April and October, appearing as an Agenda item), where timely progression of action plan tasks is to be championed and supported.	October 2018  (and continuing through to 2022)	<b>E&amp;D/SAT chair</b>  E&D/SAT chair	Increase awareness on maternity/paternity/carer leave from 81% to 90%. Maintain awareness on training opportunities to 95% or higher. (The 2 questions were asked in the recent Staff/PGR survey, and thus offer a benchmark and proxy for general awareness.)



	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
	<b>Section 4: A picture of the department</b>						
Our School has a very healthy percentage of female undergraduates which has been about 7% higher than the national average since 2011/12. <b><i>However, we should be vigilant against taking this situation for granted and closely monitor UG student numbers.</i></b>	<b>4.1</b>	<p>(a) Continue ensuring that admission materials and open days include input from both genders.</p> <p>(b) The E&amp;D UG/PGT student survey to be conducted annually every February.</p>	<p>(a) Encourage applications from female students. Reflect that the proportion of female members of staff and UG students in our School is higher than the average in UK HEIs.</p> <p>(b) Acquire insight into E&amp;D issues relevant to our students and develop evidence-based actions. Update the AP when necessary.</p>	<p>(a) Admission materials and open days will continue including input from both genders.</p> <p>(b) E&amp;D UG/PGT survey conducted annually.</p>	<p>(a) Dec 2018-2022</p> <p>(b) From February 2019, and every February until 2022 <i>(part of quart. cycle of business)</i></p>	<p><b>E&amp;D/SAT chair</b></p> <p>(a) UG Admissions Officer</p> <p>(b) E&amp;D/SAT designated committee member.</p>	Maintain the percentage (currently ~41%) of female UG students at a level of at least 7% above the national average (currently ~34%).

	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: <b>oversight (bold)</b> implementation	Success Criteria & Outcome
There was a considerable drop in participation in the last UG/PGT E&D survey. (18 respondents out of a possible 466.)	<b>4.2</b>	Future UG/PGT E&D surveys will be advertised by both the E&D chair and the School President. Explain that repeated participation is crucial for detecting trends, and communicate the survey's value for both genders.	Increase participation in the UG/PGT E&D survey.	Survey advertisements.	January 2019  (and continuing through to 2022)	<b>E&amp;D/SAT chair</b>  E&D/SAT chair and School President.	Increase participation in the 2019 UG/PGT E&D survey by at least 400%, compared to the 2018 survey, to record the participation rate observed in 2016.
	<b>4.3</b>	UG/PGT E&D surveys to become mobile friendly.	Increase participation in the UG/PGT E&D survey.	Survey to become mobile friendly.	December 2018	<b>E&amp;D/SAT chair</b>  E&D/SAT chair and School President.	We aim for a participation rate of at least 30% by 2022.

<p>At UG level, data since 2010/11 indicate that <b>a lower proportion of female students achieves a first-class degree, compared to their male counterparts.</b> It is likely the discrepancy in degree classification builds up during the 3-5 years of the degree and hence, our goal of reducing (and in the longer term completely eliminating) the discrepancy necessarily has to be longer term.</p>	<p><b>4.4</b></p>	<p>(a) Employ a student with good statistical knowledge to look into anonymised data. Look at larger cohort courses at all levels, to identify the point at which results diverge most. Directly compare individual grades as students progress through the years. Contrast the graduating 1<sup>st</sup> class cohort with the 2.1 cohort at 2<sup>nd</sup> year.</p> <p>(b) The University Planning Statistics department will work with the UG student to gather and analyse data on the performance of female UGs relative to the gender of their lecturer – analysis to be done at all levels for all students</p>	<p>(a) Understand when differences in performance begin and why. Ascertain if the attainment gap is present at 2<sup>nd</sup> year or not. Develop evidence-based actions to reduce (and eventually eliminate) the discrepancy. Update the AP accordingly.</p> <p>(b) The initial analysis by the DoT is provisional and warrants further investigation.</p>	<p>(a) (b) Student employment and implementation of analysis.</p>	<p>(a) October 2018 - October 2019</p> <p>(b) October 2018 – October 2019</p>	<p><b>(a) E&amp;D/SAT chair</b></p> <p>UG student, Director of Teaching and School President</p> <p><b>(b) E&amp;D/SAT chair</b></p> <p>UG Student, Planning Statistics Department, Director of Teaching and School President</p>	<p>In 2016/2017 we noted a difference in 1<sup>st</sup> attainment of 11%, smaller to the 17% observed in 2015/2016. We aim, by 2022, to observe a difference of 5%.</p>
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		<p>(c) Further discuss and investigate the discrepancy in attained degree through the established Student Discussion Forum, by conducting an event (focussed on confidence) in 2018/2019.</p> <p>(d) Increase/improve signposting for the University mental health support in website and locations such as lavatories.</p> <p>(e) Contact the University's Centre for Academic, Professional and Organisational Development (CAPOD) and organise a School workshop on psychological resilience.</p>	<p>(c) Understand the students' perspective on the gender difference in degree attainment, also in relation to teaching style, and take this into account when developing evidence based-actions.</p> <p>(d) Input from the SDF so far suggests anxiety related to exams might play a role in the degree discrepancy.</p> <p>(e) (f) Input from the SDF so far suggests female students lack confidence compared to male students, which may play a role in the degree discrepancy. Increase the visibility of female role models.</p>	<p>(c) Student Discussion Forum event.</p> <p>(d) Improved signposting in School website and locations within campus.</p> <p>(e) Workshop taking place and attendance record.</p>	<p>(c) 2<sup>nd</sup> semester of 2018/2019</p> <p>(d) June 2018 – October 2018</p> <p>(e) Semester 2 2018/2019</p>	<p><b>(c) School President</b></p> <p>School President</p> <p><b>(d) E&amp;D/SAT com. member</b></p> <p>Comp. officer and E&amp;D/SAT com. member.</p> <p><b>(e) E&amp;D/SAT chair and School President</b></p> <p>Director of Teaching + School President + E&amp;D/SAT chair.</p>	
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		<p>(f) Set up a <i>mentoring scheme</i> where female students at different stages of study (Honours, MSc, PhD, Post-doc) mentor female students at a lower stage.</p> <p>(g) Make diversity in the curriculum a required consideration in new module proposals, taking into account the HEA 'Embedding E&amp;D in the Curriculum' workshop (St Andrews Nov/Dec 2016), in-line with the University's 'Inclusive Curriculum Toolkit' (utilising ECU resources).</p>	<p>(g) This is not currently standard practice in our School.</p>	<p>(f) Implementation of mentoring scheme.</p> <p>(g) Director of Teaching to discuss principles and practical implementation issues in a Semester 1 2018/2019 Lunch+Chat meeting.</p>	<p>(f) May 2018 – December 2018</p> <p>(g) Semester 1 2018/2019</p>	<p><b>(f) Head of School</b></p> <p>Director of Teaching, School President.</p> <p><b>(g) Director of Teaching</b></p> <p>Director of Teaching</p>	
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	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<p>The total number of PGTs in our School is small and hence the percentage of females can fluctuate substantially based on very small numbers.</p> <p><b><i>Our aim is to maintain the proportion of female PGT numbers in line with the national average or higher.</i></b></p>	4.5	Student data to also distinguish between Home and Overseas students.	Explain why, over the last 3 years, although we make more offers to female PGT applicants, there is a slightly higher number for male acceptances and entries.	Data received from the Planning Statistics university department.	<p>September 2018</p> <p><i>(part of quarterly cycle of business – September meeting)</i></p>	<p><b>E&amp;D/SAT chair</b></p> <p>Planning Statistics department</p>	<p>From 2018 to 2022 consistently achieve a proportion of female PGT students at least in line with the national averages (40-50%).</p> <p>[Due to the strong fluctuations caused by the small total number of PGT students, giving a more exact percentage</p>

	<b>4.6</b>	For the Student Discussion Forum, organise an event specifically focussed on why PG students choose to come to St Andrews.	Further explore the perception of our UG female students on postgraduate study in St Andrews. Understand the recent drop in female PG students, and decide on evidence-based actions to rectify that.	Event taking place in Semester 1 of 2018/2019.	1 <sup>st</sup> semester of 2018/2019	<b>School President</b> School President	would be unrealistic.]
	<b>Ref.</b>	<b>Planned Action/ Objective</b>	<b>Rationale</b>	<b>Key Outputs &amp; Milestones</b>	<b>Timeframe (Start/end date)</b>	<b>Responsibility: oversight (bold) implementation</b>	<b>Success Criteria &amp; Outcome</b>

<p>The number of female PGR students is slightly lower than the national average, and has declined in recent years (from being 10-15% above the national average). <b><i>We will aim to increase the percentage of female PGRs again.</i></b></p> <p>The percentages of offers, acceptances and entrants are roughly in line for female students (where total numbers for PGT and PGR students are</p>	<b>4.7</b>	<p>(a) Maintain record keeping on the gender balance of students that undertake summer research projects. Analyse data in September 2018, and annually every September.</p> <p>(b) Individually email the top 10 male and top 10 female students at the end of their penultimate year of study to encourage them apply for a PhD</p> <p>(c) Senior honours project supervisors will be encouraged to talk to good students to apply for PhD, especially female.</p>	<p>(a) Explore any possible correlation between summer project participation and female PG student numbers.</p> <p>(b) (c)</p> <p>Encourage good female UG students apply for a PhD.</p>	<p>(a) Data analysis in September 2018.</p> <p>(b) Email dispatch.</p> <p>(c) Item in next Staff Council meeting (Semester 1 of 2018/2019)</p>	<p>(a) Sept 2018, and each September through to 2022</p> <p><i>(part of quart. cycle of business – Sep meeting)</i></p> <p>(b) Semester 2 of 2018/2019 Repeated annually until 2022.</p> <p>(c) Semester 1 of 2018/2019</p>	<p><b>(a) E&amp;D/SAT chair</b></p> <p>Summer research projects coordinator</p> <p><b>(b) Director of PGR studies</b></p> <p>Director of PGR studies.</p> <p><b>(c) E&amp;D/SAT chair</b></p> <p>E&amp;D/SAT chair</p>	<p>Increase the % of female PGR applications to 33% from 25% by 2020.</p> <p>Raise the percentage of female PGRs in line with the national average (currently ~30%) by 2022.</p> <p>In the longer term (2022-2025), to increase the proportion to 5% above the national average (aiming for 35%).</p> <p>Maintain our balanced application/offer/acceptance proportions, so</p>
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small). <b>However, there is substantial fluctuation in female PGR proportions and there was a strong drop in 2014/15 entrants.</b>		<p>(d) A current PhD student will give a talk on her own experience of being a PGR at annual UG reading parties residential trip.</p> <p>(e) Upload case studies that include female student and staff stories and experiences to our website for prospective PGR students.</p> <p>(f) Expand advertising of PGR opportunities (using, for instance, findaphd.com), with suitable wording added to adverts and website promoting our commitment to E&amp;D and encouraging female applications.</p>	<p>(d) This will give UG students a better idea of what is involved and demonstrate that working one to one with staff is not to be scared of.</p> <p>(e) (f) (g) Encourage good female UG students apply for a PhD.</p>	<p>(d) Talk at next PGR residential trip.</p> <p>(e) Webpage modification.</p> <p>(f) Implementation of new advertising strategy.</p>	<p>(d) Semester 2 of 2018/2019 To be repeated annually until 2022.</p> <p>(e) Semester 1 of 2018/2019</p> <p>(f) Semester 1 of 2018/2019</p>	<p><b>(d) PGR E&amp;D committee representative</b></p> <p>PhD student.</p> <p><b>(e) PGR E&amp;D committee representative</b></p> <p>Webpage administrator</p> <p><b>(f) E&amp;D/SAT chair</b></p> <p>Director of PGR studies.</p>	that female students are not lost in this pipeline, as observed in academic years 2015/16 and 2017/18 (Table 9).
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		(g) As part of the student Mentoring Scheme (to be introduced in Sem. 1, 2018/2019), we will ask female PhD students to act as mentors for our promising UG female students.		(g) Introduction of Student Mentoring Scheme, and inclusion of PGR female mentors.	(g) Semester 1 of 2018/2019	<b>(g) Director of Teaching</b> School President	
	<b>Ref.</b>	<b>Planned Action/ Objective</b>	<b>Rationale</b>	<b>Key Outputs &amp; Milestones</b>	<b>Timeframe (Start/end date)</b>	<b>Responsibility: oversight (bold) implementation</b>	<b>Success Criteria &amp; Outcome</b>

	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
The overall proportion of female staff in our School is high compared to the sector as a whole (and increased from 27% in 2011 to 34% in 2017) which we believe reflects the positive culture in our School. The proportion of female lecturers is currently lower due to recent promotions and recent appointments not included in the data	<b>4.8</b>	The School Management Group will assume responsibility for analysing online exit survey data collected by HR.	Consider and discuss in a more methodical manner the reasons staff leave the School and develop evidence-based actions as necessary.	Annual report from HoS to E&D committee.	February 2018  To be repeated annually, in February, until 2022.  HoS report due before the March meeting of the SAT/E&D Committee.	<b>Head of School</b>  Head of School	Roughly, the proportion of female staff in our School is about 10% higher than the national average for the sector. (specifically, 47% in our School vs 36% in UK for Teaching-only, 42% in our School vs 23% in UK for Research- only, 25% in our School vs 18% in UK for Teaching and Research. Source: ORTUS LMS recent

<b><i>Notwithstanding our current comparatively positive staff ratio, we will strive to increase female proportions at all levels.</i></b>							Benchmarking report.) We aim to maintain or even increase this level above the national average by 2%-5%, by 2022.
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Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<b>Section 5: Supporting and advancing women's careers</b>							
Overall proportion of female research and academic staff has increased from 27% in 2011 to 34% in 2017, about 10% higher than the national average. (ORTUS LMS recent Departmental Report) Although the current low proportion of female lecturers is due to recent successful promotions, and recent appointments	<b>5.1</b>	<p>(a) Implement no single-sex-shortlists for academic posts through institutional HR processes.</p> <p>(b) Introduce a gender balance of 2 staff (members of the E&amp;D/SAT committee) as informal contacts for prospective applicants. Publicise this on School website.</p> <p>(c) Recruitment adverts will contain a link to the School's equality and diversity webpages.</p>	<p>(a) Benefit from actions and strategies to avoid introducing bias in recruitment.</p> <p>(b) (c) (d) Encourage applications from female applicants.</p>	<p>(a) Policy implementation.</p> <p>(b) Modified School website.</p> <p>(c) (d) Modified adverts.</p>	<p>(a) June 2018</p> <p>(b) June 2018.</p> <p>(c) September 2018.</p>	<p><b>(a) E&amp;D/SAT chair</b></p> <p>E&amp;D/SAT committee</p> <p><b>(b) Head of School and E&amp;D/SAT chair</b></p> <p>Head of School and School computing officer</p> <p><b>(c) (d) Head of School and E&amp;D/SAT chair</b></p> <p>HR recruitment officer.</p>	We aim to have 25% applications from females, averaged over all grades [compared to 18% in 2016 and 14% in 2017 (Table 16)], by 2022.

not included in the data, <b><i>we will aim to increase the proportion of female staff (and lecturers in particular) to safeguard against a future imbalance.</i></b>		(d) Recruitment adverts will mention the School's positive attitude towards flexible working.			(d) September 2018.		
	(e) Monitor informal enquiries on job adverts with respect to gender.	(e) Evaluate the effect of actions against discrimination in recruitment.	(e) Collected data.	(e) Sept. 2018. Data collected over 2018-2022.	<b>(e) HoS and E&amp;D/SAT chair</b>  Designated E&D/SAT com. member.		
	(f) Ensure all members of staff involved in all stages of the recruitment process complete the Online Staff Recruitment Training Module  (g) Staff members involved in recruitment and appraisal will be required to read the LERU 2018 paper on implicit bias.	(f) Ensure gender equality is practiced throughout the recruitment process (from job design to offering a post). Ensure effective data collection on training completion.  (g) Ensure that gender equality is practiced throughout all stages of the recruitment process.	(f) All relevant members of staff completing recruitment training and complying with the Online Inclusive Recruitment Guide.  (g) All relevant members of staff reading the LERU paper on implicit bias.	(f) October 2018  Completion monitored through to 2022.  (g) October 2018  Compliance monitored through to 2022.	<b>(f) (g) Head of School and HR Equality &amp; Diversity Officer</b>  HR Equality and Diversity Officer		

Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<b><i>Females continue to be underrepresented at professorial level. We currently have 21% female professors which is still lower than the proportion of ~30% at lecturer/senior lecturer level</i></b>	<b>5.2</b>	<p>(a) The uptake % for the new mandatory appraisals scheme to be included in the annual HoS report to the SAT/E&amp;D committee, noting reasons for exceptions.</p> <p>(b) Create a document describing the pre-promotion process and disseminate to members of staff.</p>	<p>(a) Uptake was sporadic with the old opt-in scheme. Should be observing full participation under the new compulsory scheme.</p> <p>(b) Enhance/clarify the link between the appraisal scheme and pre-promotion process. Act as a reminder to senior staff to encourage funding/promotion applications by females.</p>	<p>(a) Inclusion of the percentage of the appraisals uptake and reasons for exemptions.</p> <p>(b) Dissemination of document.</p>	<p>(a) From 2019 aim for 100% uptake. HoS report due before the March 2019 SAT com. meeting.</p> <p>(b) November 2018</p>	<p><b>(a) (b) (c)</b> <b>Head of school</b> Head of School</p>	<p>We aim to increase the proportion of female staff at professorial level to 30% (currently 21%, Table 12), in line with the current proportion of female staff at lecturer/senior lecturer level, by 2022.</p>

		<p>(c) Our School will identify and support 2 female academics to participate in the Aurora or other appropriate mentoring scheme.</p> <p>(d) Ensure that staff are aware of and engaging with CAPOD development programmes. Emails sent to members of staff with a list of the offered programs.</p> <p>(e) Start recording data on staff conference participation by gender.</p>	<p>(c) Enhance female staff participation in leadership schemes and the University Cross-Institutional Staff Mentoring scheme.</p> <p>(d) Such programs are a valuable part of ongoing staff development but sometimes escape the attention of staff.</p> <p>(e) Ensure that female members of staff attend conferences as regularly as male staff. This also relates to talent spotting and recruitment. Take positive action, if necessary.</p>	<p>(c) Participation of 2 female academics in the Aurora (or other) mentoring scheme.</p> <p>(d) Collected data on staff participation. Confirmation of awareness in annual Staff and PhD students' survey.</p> <p>(e) Data obtained on staff participation in conferences by gender.</p>	<p>(c) Oct 2018-2019</p> <p>(d) Sept 2018, and every September until 2022.</p> <p>(e) September 2018, and every October until 2022 <i>(quart. cycle of business – Dec Meeting))</i></p>	<p><b>(d)</b> <b>E&amp;D/SAT chair</b></p> <p>E&amp;D/SAT designated committee member</p> <p><b>(e)</b> <b>E&amp;D/SAT chair</b></p> <p>Professional support staff member that handles conference bookings and expenses.</p>	
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		<p>(f) Implement a scheme, in collaboration with the University and CAPOD, which will allow for the systematic collection of data with regard to participation in career development programmes.</p>	<p>(f) Improve data collection on the participation in mentoring schemes.</p>	<p>(f) Data obtained on staff participation in the School's mentoring schemes.</p>	<p>(f) Sept. 2018, and throughout Oct 2018-2022</p> <p><i>(part of quart. cycle of business – Dec Meeting))</i></p>	<p><b>(f)</b> <b>E&amp;D/SAT chair</b></p> <p>Designated Professional support staff member.</p>	
		<p>(g) We will start to systematically analyse data on grant applications made, in relation amount, gender and outcome, to infer trends and detect biases, by introducing a dedicated SAT meeting.</p>	<p>(g) Infer trends and detect biases in relation to the proportion of funding applications by female colleagues.</p>	<p>(g) Data obtained on grant applications.</p>	<p>(g) September 2018</p> <p>and throughout Dec 2018-2022</p> <p><i>(part of quarterly cycle of business – Dec Meeting)</i></p>	<p><b>(g)</b> <b>E&amp;D/SAT chair</b></p> <p>Director of Research.</p>	

Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
Ensure all staff understand bullying, harassment or discrimination in the higher education context, and are aware of implicit bias. Although we have achieved near 100% completion for the training modules, we should maintain this completion percentage in the future.	5.3	<p>(a) The Staff/PGR survey to be conducted annually, every December. Explain to PhD students, via email, that their participation is crucial.</p> <p>(b) Maintain near 100% completion for the Online Staff Diversity Training Module and the Online Staff Unconscious Bias Training Module, by issuing timely reminders twice a year.</p>	<p>(a) Implement new actions where necessary, to improve staff opinion on the existence of equality in our School. The survey also triggers reflection on E&amp;D matters.</p> <p>(b) Maintain the very high uptake for these modules.</p>	<p>(a) Staff/PGR survey outcomes received every January.</p> <p>(b) All members of staff completing the 2 modules. Staff will be reminded during academic reviews of the importance of completing these training modules.</p>	<p>(a) Dec 2018  To be repeated annually, every December, until 2022.  <i>(part of quarterly cycle of business – Dec Meeting)</i>  (b) 2018-2022.</p>	<p><b>(a) Head of School</b>  E&amp;D/SAT committee + Heads of Divisions</p> <p><b>(b) Head of School</b>  Head of School</p>	<p>Increase participation to the Staff/PGR survey from 51% (36 staff+15 PGR out of a possible 61 staff+39 PGR) to 60%.</p> <p>100% completion of training modules on diversity and unconscious bias.</p>

Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
To support our aim to develop a fair and inclusive workplace, <i><b>we recognise the need to promote awareness and accessibility of policies for staff with caring responsibilities.</b></i>	<b>5.4</b>	<p>(a) Continue ensuring the link on the School's Equality webpages to the HR Maternity Leave policy, Paternity, Adoption and Parental Leave, and Family Friendly policies (which include the Flexible Working Policy) is updated regularly.</p> <p>(b) E&amp;D committee member to scrutinize that a risk assessment is conducted for each member of staff who informs the Head of School that she is pregnant, and workloads adjusted accordingly.</p>	<p>(a) Include any future changes in the School's webpages.</p> <p>(b) We will ensure conformity to this rule, as this was overlooked until now</p>	<p>(a) Annually updated webpages.</p> <p>(b) Designate duty to E&amp;D committee member.</p>	<p>(a) 2018-2022 <i>(part of quarterly cycle of business – June meeting)</i></p> <p>(b) October 2018</p>	<p><b>(a) School's computing officer.</b>  School's computing officer</p> <p><b>(b) E&amp;D/SAT chair</b>  E&amp;D/SAT designated committee member</p>	An annual check and update of the School's webpage will be carried out. We aim for a target of more than 90% of our staff surveyed not perceiving any gender inequality.

		<p>(c) Members of staff on leave will be offered the option that the Head of Division asks another member of staff to act as a link between the person on leave and the School.</p> <p>(d) Add to the Staff handbook that the Medical School, which is physically linked to the Mathematics Institute, has a breast-feeding area that our staff can make use of if they wish.</p>	<p>(c) Further enable keeping in touch with the School.</p> <p>(d) This information is not included in our Staff handbook.</p>	<p>(c) Implementation of policy.</p> <p>(d) Staff handbook update.</p>	<p>(c) May 2018</p> <p>(d) September 2018</p>	<p><b>(c)</b> <b>Head of School</b></p> <p>Head of School and Heads of Division</p> <p><b>(d)</b> <b>E&amp;D/SAT chair</b></p> <p>Member of staff responsible for editing the Staff handbook.</p>	
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		<p>(e) Monitor any real and perceived gender imbalance in informal flexible working (mainly “working from home”) by means of the annual Staff/PGR survey, by adding a relevant question.</p> <p>(f) Formal Flexible Working requests to be provided from HR for monitoring gender balance on an annual basis.</p>	<p>(e) Staff survey is one way of monitoring the effect of informal policies.</p> <p>(f) This way gender balance in formal requests will be monitored.</p>	<p>(e) Design and implementation of Staff survey – to be held annually in December.</p> <p>(f) Data provided by HR.</p>	<p>(e) December 2018</p> <p>To be repeated annually, in December, until 2022.</p> <p>(f) September 2018</p> <p><i>(part of quart. cycle of business – June meeting)</i></p>	<p><b>(e) E&amp;D/SAT chair and Head of School</b></p> <p>E&amp;D/SAT chair.</p> <p><b>(f) E&amp;D/SAT chair</b></p> <p>E&amp;D/SAT committee.</p>	
Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome

<p><b><i>Comments in the recent staff survey indicated that we should increase awareness on E&amp;D issues with regard to interpersonal communication.</i></b></p>	<p><b>5.5</b></p>	<p>(a) Discuss the December 2017 Staff/PGR findings in a dedicated Lunch+Chat meeting within 2018</p> <p>(b) Organise an in-house training workshop on Equality and Diversity issues in Semester 2 of 2018/2019.</p> <p>(c) HR Business Partner will be present in SAT meetings at least twice every year, to ensure dissemination of HR policies to School staff.</p>	<p>(a) Share findings and make colleagues aware of specific issues that were raised.</p> <p>(b) Further increase awareness on E&amp;D issues, including aspects of interpersonal communication.</p> <p>(c) Ensure dissemination of HR policies to School staff</p>	<p>(a) Lunch+Chat meeting</p> <p>(b) Training workshop taking place in 2018/2019.</p> <p>(c) Presence of HR Business Partner at least twice every year to SAT meetings</p>	<p>(a) November 2018.</p> <p>(b) April 2019</p> <p>(c) 2018-2022</p>	<p><b>(a) Head of School</b> Head of School</p> <p><b>(b) E&amp;D/SAT chair and Head of School</b> E&amp;D/SAT chair</p> <p><b>(c) E&amp;D/SAT chair</b> E&amp;D/SAT chair</p>	<p>In 2019 Staff/PGR survey, increase awareness on maternity/paternity/carer leave from 81% to 90%, and maintain awareness on training opportunities to 95% or higher. (The 2 questions were asked in the recent Staff/PGR survey, and thus offer a benchmark and proxy for general awareness. An additional more general question on awareness to be asked too.) Observe a numerical</p>
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							<p>reduction of comments on interpersonal communications compared to the 2017 Staff/PGR survey, by 50% in 2019 Staff/PGR survey.</p> <p>Attendance of E&amp;D School workshop by at least 50% of our staff.</p>
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Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<b><i>Gaps in the induction process indicated by the Staff/PGR survey, with 9 colleagues disagreeing or strongly disagreeing with the statement that adequate induction is provided.</i></b>	<b>5.6</b>	Introduce an Induction Checklist that will contain key information that new staff/PGR should be given in their first month.	This should help towards addressing gaps in the induction process indicated by the Staff/PGR survey	Introduction of Induction Checklist.	October 2018.	<b>Designated E&amp;D/SAT committee member</b>  Designated E&D/SAT committee member – School administrator - HR administrator	Reduce the number of colleagues that disagreed or strongly disagreed with the statement that adequate induction is provided by at least 50% by 2019.
<b><i>Ensure meetings and seminars are scheduled at times that suit and benefit members of staff and students.</i></b>	<b>5.7</b>	The E&D/SAT chair to discuss the scheduling of the Pure mathematics seminars with the seminar organiser once a year, with an additional staff discussion in a Lunch+Chat meeting.	Ensure scheduling suits all participants.	Emails and reports that record the discussions among the E&D chair and the Pure Maths seminars organiser. Agree on an arrangement that suits all participants.	May 2019, and annually in May until 2022.	<b>Pure Mathematics Seminar organiser.</b>  Pure Math. seminar organiser, E&D chair.	Absence of complaints on the scheduling of the Pure mathematics seminar series, both in staff discussions and in the Staff/PGR survey.



Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<i>Enhance female speaker proportion, to act as role models, and also to influence positively the recruitment of female academic staff.</i>	5.8	The HoS and designated SAT committee member will meet annually with seminar organisers at the start of semester 2, with organisers reporting female percentages and discussing reasons if the target has not been reached.	Female speakers act as positive role models. Furthermore, seminar series often function as a pre-recruitment process	Overall proportion of female speakers.	February 2018  To be repeated every February until 2022.	<b>Designated E&amp;D/SAT committee member</b>  Seminar series organisers.	We aim to stabilise the proportion of female seminar speakers to at least 35% over 2018-2020, and increase the proportion of female speakers to 40% on average over all series by 2022.
More than 84% of our staff do not perceive gender inequality. <i>There is still room for improvement, and workload is a significant factor.</i>	5.9	Include one or more questions on the effectiveness of the new workload model in the next Staff/PGR survey.	The new workload model will allow for monitoring workload allocation in terms of gender, and this could potentially have a positive effect on staff perceptions regarding gender equality.	Inclusion of question(s).	December 2018.	<b>Head of School, School - Management Group - E&amp;D/SAT chair.</b>  E&D/SAT chair	We aim to eliminate perceived gender inequality in our School. Aim for more than 90% of staff surveyed not perceiving any gender inequality

Issue	Ref.	Planned Action/ Objective	Rationale	Key Outputs & Milestones	Timeframe (Start/end date)	Responsibility: oversight ( <b>bold</b> ) implementation	Success Criteria & Outcome
<b>Section 7: Further information</b>							
<i><b>We recognised the need to establish a quarterly business cycle for the SAT/E&amp;D committee to ensure efficient and sustained monitoring. This is novel and its implementation should be cemented, considering future changes in the E&amp;D/SAT.</b></i>	<b>7.1</b>	Continue implementing the quarterly business cycle for the SAT/E&D Committee. Revise as necessary to efficiently align timescales on different School committees.	To obtain consistent and sustained monitoring and reporting patterns.	A well-established cycle of business confirmed through the reports to Staff Council and School Management in October and April.	2018-2022	<b>E&amp;D/SAT chair</b>  E&D/SAT Chair, HoS	Cement the implementation of the annual cycle of business (shown below) for the E&D/SAT committee.

### **SAT/E&D Committee Quarterly Cycle of Business:**

#### **September:**

- General update on matters arising
- Progress on the implementation of the AP and any changes to the AP
- Specific items to review:
  - o UG/PGT/PGR gender balance
  - o Gender balance in summer project participation
  - o Admissions report: balance in applications/offers/acceptance ratios
  - o Gender balance in degree classifications
  - o Gender balance in promotion applications and outcome
  - o Gender balance in workload model and School decision-making committees
- Prepare full annual report for the School Management Group and Staff Council

#### **December:**

- General update on matters arising
- Progress on the implementation of the AP and any changes to the AP
- Specific items to review:
  - o Staff workload
  - o Participation in mentoring schemes (mentors and mentees)
  - o Staff Survey: focus on promotions
  - o Review of admissions material
  - o Conference participation
  - o Review of grant applications submitted by gender

#### **March:**

- General update on matters arising
- Progress on the implementation of the AP and any changes to the AP
- Specific items to review:
  - o Staff gender ratios
  - o Staff turnover data

- Analysis of leavers exit interviews
  - Gender ratios in applications and new starts (if any)
  - Uptake of annual appraisals
- Prepare interim report for the School Management Group and Staff Council

June:

- General update on matters arising
- Progress on the implementation of the AP and any changes to the AP
- Specific items to review:
  - Annual Student Survey (UG and PGT)
  - Annual Staff Survey (includes PGR students)
  - Participation in Outreach activities
  - Annual check of School website (including links to University policies)
  - Formal flexible working requests