



Athena SWAN Bronze department award application

Name of university: University of Bath

Department: Department of Mathematical Sciences

Date of application: April 2016

Date of university Bronze and/or Silver SWAN award: April 2014

Contact for application: Dr K A Jane White

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List of Acronyms:

CDT Centre for Doctoral Training
DEC Departmental Executive Committee
DEDC Departmental Equalities & Diversity Committee
DfE Department for Education
DLTQC Departmental Learning and Teaching Quality Committee
DoLT Director of Learning & Teaching
DoS Director of Studies
DSAT Departmental Self-Assessment Team
EPSRC Engineering and Physical Sciences Research Council
FMSP Further Mathematics Support Programme
FTC Fixed Term Contract
HoD Head of Department
HoG Head of Group
HoDoMS Heads of Departments of Mathematical Sciences
HR Human Resources
IMI Institute for Mathematical Innovation
IMO International Mathematical Olympiad
LMS London Mathematical Society
L/SL/R Lecturer/Senior Lecturer/Reader
PAL Peer assisted learning
PDRA Postdoctoral Research Associate
PGR Post Graduate Research (student)
PGT Post Graduate Taught (student)
REF Research Excellence Framework
SAMBa Statistical Applied Mathematics at Bath
SDPR Staff Development and Progress Review
SSLC Student Staff Liaison Committee
SU Students Union
TEF Teaching Excellence Framework
UG Undergraduate
USAT University Self-Assessment Team



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Ms S Dickinson
Senior Policy Advisor
Athena SWAN

20 April 2016

Dear Ms Dickinson,

I am writing to give my strong support to the attached application for an Athena SWAN Bronze Award. I started as Head of Department on **February 1st 2016** and from the first day, the Athena SWAN charter and the work of our DSAT have given me invaluable guidance for my departmental change agenda.

The DSAT is chaired by our Director of Learning and Teaching, Dr Jane White, who also serves on the USAT. The team meets monthly, and currently consists of 11 female and 9 male members, matching the large size of our department and representing all stages of academic life, including the previous HoD and our Equality and Diversity Officer.

When I started my new role, returning from sabbatical, the preparation of the application had already progressed to an advanced stage. I immediately became personally involved in its completion, interacting with Jane, attending the DSAT meetings in March and April, and familiarising myself with the university-wide action plan. Our action plan was discussed in an all-staff meeting on February 23rd, and I can report a very high level of commitment from across the department.

Through this process the Department has learned a lot about its diversity profile. We have a female/male ratio in undergraduate mathematics which is close to the sector average, but our academic staff is only 14% female, compared to 23% nationally (2014). The loss of females at the interfaces between undergraduate, postgraduate, postdoctoral and permanent career stages is therefore an issue that we are giving urgent attention.

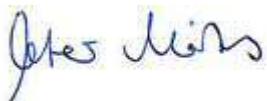
Career development, in particular of female staff, is one of my top priorities. One of my first actions was to set in motion replacing the traditional meeting of the professoriate by a promotions committee with an inclusive representation of staff in its membership, including a nominated representative of DSAT. The committee will identify cases for promotion at an early stage and offer mentoring and support for promotion cases over longer time scales. This will offer much better support for candidates with unusual or interrupted career patterns.

One of my personal targets is to welcome the first female professors in our department, by external appointment, internal promotion or, better, both. While appointing exclusively on merit, our policy is proactively to identify suitable female candidates and personally encourage them to apply. We ensure a gender mix on shortlists and all members of interview panels receive equality and diversity training. Recent recruitment statistics look healthy: in 2015/16 we recruited 9 academic staff, 5 of which are female.

Going forward the DSAT will be replaced by an **Equality and Diversity Committee** meeting bi-monthly with a broad membership and an independent budget supporting its activities.

The department has a long way to go in improving its gender balance, and I am personally strongly committed to address this as a matter of highest priority. I believe our strategies and action plan represent a step in the right direction, and a successful outcome of this application would help us moving forward.

Yours sincerely,

A handwritten signature in blue ink that reads "Peter Mörters".

Peter Mörters

(495 words)

2. The Self-Assessment Process – maximum 1000 words

(a) The Self-Assessment Team

Our DSAT is now chaired by Dr Jane White, who is also our Director of Learning and Teaching and serves on the USAT. DSAT has met regularly since its formation in 2014. It was originally chaired by the Deputy HoD, Professor Anthony Dooley, who subsequently left to take up a post in Australia. DSAT currently consists of 11 female and 9 male members, representing all stages of academic life, including the previous HoD, and Equality and Diversity Officer.

Name	Role	Background and experiences of work-life balance
Nicole Augustine	Senior Lecturer	2 children aged 7 and 11. Two career family.
Chris Budd OBE	Professor	Professor at the Royal Institution. One son and one daughter both at university. Son has a disability.
Myla Dixon	Departmental Administrator	Departmental Administration overview. Young child, two career family. Recently changed full-time working to part-time (0.8FTE), one day from home.
Anthony Dooley	Professor Deputy Head Dept Chair of DSAT to 11/15	Involved with Equal Opportunities for Women, UNSW, Sydney; chaired travel fund for academic women. 3 grown-up children. Two career family.
Susie Douglas	Manager, SAMBa CDT	Oversight of postgraduate training, delivery of large events for department. SAMBa keen to increase diversity in mathematics. Two career household.
Evangelos Evangleou	Lecturer	Young academic less than 10 years from PhD. Member of Individual Mitigating Circumstances Committee and SSLC. Two career household.
Veronique Fischer	Senior Lecturer	Female academic with partner living and working in a different city. Equalities and diversity officer.
Katy Gaythorpe	PhD student	Postgraduate student perspective.
Ivan Graham	Professor HoD 2012-15	Member of department for 31 years. Extensive experience of mentoring students, PDRAs and staff.
Chris Hallsworth	Teaching Fellow	Part-time teaching fellow, balancing a second position at the university. Recently relocated from working overseas.
Jennifer Jones	PhD student Maths and Pharmacology	Postgraduate and interdisciplinary perspectives.
Cecile Mailler	PDRA	Postdoc and international perspective.
Apala Majumdar	Reader , EPSRC career acceleration fellow	Young female academic balancing work and life choices.
Matt Roberts	Bath Prize Fellow EPSRC Fellow	Former member of Warwick Statistics DSAT. Worked in 4 countries in 3 years at start of career.
Tim Rogers	Royal Society Research Fellow	Ran postdoc/postgrad survey. One infant; recently took paternity leave.

Lucia Scardia	Lecturer	Female academic with partner living and working in a different city.
Emily Senft	Final year undergraduate	SU equalities & diversity representative.
Daniel Simpson	Probationary Lecturer	Young academic balancing work and life choices.
Jane White	Senior Lecturer, DoLT Chair of DSAT since 11/15.	Member USAT; 3 school age children, 3 periods of maternity leave, worked part-time until August 2015. Two career family.
Johannes Zimmer	Professor Director of Research	Former member of Diversity Committee at Caltech. 2 young children. Two career family.

(b) Account of the self-assessment process: *details of the self-assessment team meetings, including any consultation with staff or individuals outside of the University, and how these have fed into the submission.*

We see the improvement of our working culture and environment as an ongoing process which, in recent years, has benefited from the additional momentum created by our engagement with the Athena SWAN agenda. Since 2012, there have been significant improvements to social space and staff social activities; we have scheduled key meetings and seminars within core hours; and we have improved departmental communication processes and mentoring schemes.

The DSAT was originally formed early in 2014 and the Department made an unsuccessful Athena SWAN application in late 2014. This experience prompted a period of serious reflection within the DEC. On assuming leadership of the DSAT, Dr White reviewed its membership to ensure that it had representation from all key stakeholders, including both staff and students. She reports monthly progress to the DEC (of which she is a member) and has made it a priority to obtain departmental buy-in to the Athena SWAN agenda by ensuring DSAT discussed the developing action plan in focus groups appropriate to career stage and departmental activity. Feedback from the focus groups, and ideas generated by them, has been pivotal in developing the plan. During the writing phase for our submission, DSAT members provided constructive input to all sections during meetings and via email correspondence. A small group took the lead in drafting our action plan based around issues identified when discussing the data presented in this submission. Dr White presented the submission at a full departmental staff meeting in February 2016. We believe that our new application is robust and demonstrates the progress that we have made since our previous application (see Section 5). Many of the actions proposed in our 2014 submission were implemented in 2015. Diagram 1 outlines the journey to our current submission.

In 2014, we surveyed postgraduate students and PDRAAs to canvass their views on departmental culture and career progression; this led to actions in our previous submission which have been implemented to involve PDRAAs more within the department. For example, PDRAAs are now invited to attend departmental meetings and every PDRA is assigned a mentor to support their career development.

In 2015, following the suggestion of the Panel, we surveyed all staff. We received 63 responses from across the department: academic staff, academic-related staff and administrative support staff. As we anticipated, this survey indicated that staff feel the department has a very positive working culture (85% of respondents) and people treat each other with respect (91%). However, it also highlighted improvements that could be made which have been included within our action plan: more staff involved in departmental decision making (35%) (**AP-6.3**), greater emphasis on rewarding non-research activities in promotions (29%) (**AP-4.2**), and more social meetings (29%) (**AP-6.6**).

In July 2015, a final year student carried out a survey of mathematics undergraduates which provided some additional qualitative information, brief details of which are provided in Section 5. We decided not to survey

the entire undergraduate population again in the current academic year to avoid survey fatigue, although it is our intention to conduct biennial student surveys of departmental culture and career opportunities (**AP-6.2**).

We have also taken guidance from external sources. Professor Dooley attended a meeting of HoDoMS in 2014 where Professor Peter Clarkson presented a session on applying for AS Bronze and Silver awards. In autumn 2014, Professor Simon Chandler-Wilde (HoD, Reading, Silver Athena SWAN) gave a seminar in Bath entitled *Athena SWAN: the Reading Experience*. In December 2014 the Department joined the LMS Good Practice Scheme; a CDT group within this good practice scheme was initiated by SAMBa staff based in the department and now has 4 other centre members.

The present action plan was ratified and approved by the DEC in March 2016, and then by the University Vice-Chancellor's Group.

(c) Plans for the future of the self-assessment team: *such as how often the team will continue to meet, any reporting mechanisms and in particular, how the self-assessment team intends to monitor implementation of the action plan.*

The remit of the DSAT to monitor the implementation of the action plan will be subsumed as a core activity of the newly formed Departmental Equalities & Diversity Committee (DEDC). Six members of DSAT, together with the Chair, will form the core DEDC supported by an advisory team, initially comprising the other members of DSAT. Membership of DEDC will be for 3 years with overlapping periods of tenure for continuity. DEDC will take direct responsibility for the implementation of a number of the actions proposed in this application and will monitor progress across all actions. To do this, each member will be charged with oversight of one section of the action plan together with components of **AP-6** and they will work with the person/people responsible for the action to ensure a successful outcome. The DEDC will meet bimonthly to discuss progress; every third meeting will be joint with the advisory team who will take the role of a critical friend to ensure that all actions are carried out robustly. The DEDC will report to DEC.

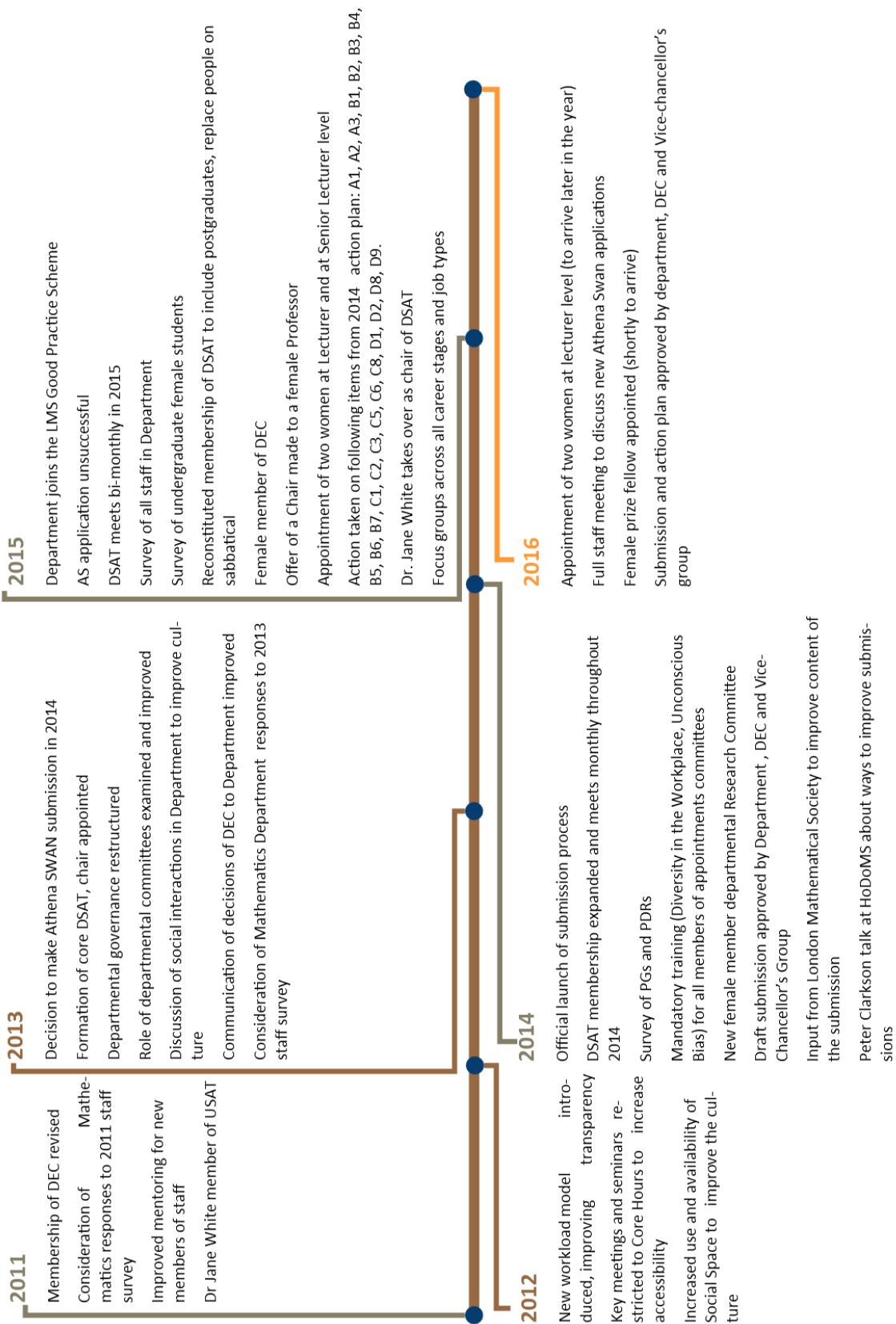
DEDC will have responsibility for ensuring that the action plan is carried out; will coordinate the biennial staff and student surveys and approve additional actions in response to feedback from those surveys as well as from good practice identified across our own campus and from other mathematical sciences departments; and will run one social event per year. In assuming this oversight, DEDC will also be well-placed to take our agenda forward as we aspire to achieve Silver Award status in due course.

The first meeting of DEDC will be in May 2016 following submission of this application.

The Chair of DEDC will be assigned 60 hours annually in the workload model and other committee members 20 hours (**AP-6.4**).

Word count: 987 words

Diagram 1: The journey to submission 2011-2016



3. A picture of the Department

a) Provide a pen-picture of the department to set the context for the application, outlining in particular any significant and relevant features.

The Department of Mathematical Sciences has for many years been a very desirable place for students to study and for staff to work. It currently employs 12 female academic staff and 64 male, and has an annual intake of around 310 undergraduates, of which approximately 37% are female. The total student population is around 1114 undergraduates and 84 postgraduates. A further 5 academic staff will be joining us in the coming months; three of these are female.

The Department has a vibrant research environment. We achieved a positive result in REF 2014 and are embarking on new plans to extend our portfolio of external research contracts, building on new academic and industrial research links.

In 2014 we were awarded an EPSRC Centre for Doctoral Training (CDT) in Statistical Applied Mathematics (SAMBa). Our CDT had its first intake in October 2014 and will support the sustainability of our PGR programme for the future. In early 2015 the Bath Institute for Mathematical Innovation (IMI) was established. We anticipate that the IMI will provide an excellent conduit for a step change in the impact and visibility of our research.

Departmental management and strategic vision are the responsibility of the departmental executive (DEC), led by the Head of Department (HoD). Human resources policies are set by the University. HoDs are appointed on a 3-year cycle on the recommendation of a Committee chaired by the Vice-Chancellor after the Dean of Science consults the department. In addition to the Head, DEC comprises the Deputy HoD, the Director of Learning and Teaching (DoLT), the Director of Research, two Heads Group (HoG) one each for mathematics and statistics, and the Departmental Administrator. All posts, except Departmental Administrator, are appointed for a period of 3 years. The HoD invites nominations to these posts and co-ordinates recruitment to them, in discussion with the Dean of Science.

The HoD has overall responsibility for the strategic direction of and academic activity within the department. The Deputy HoD role focusses on staff development and career progression. The DoLT has strategic responsibility for learning and teaching, chairs the DLTQC and will take the lead on departmental engagement with the TEF. The Director of Research has responsibility for the research environment and strategic direction of research in the department and takes the lead on departmental REF submissions. The HoGs take responsibility for staffing and teaching allocations within the two groups – mathematics and statistics; they also co-ordinate curriculum changes and, together with the HoD, have an oversight of workload within the department. The Departmental Administrator leads the administrative support in the department and, although based in the department, her reporting line is at the faculty level.

There are a further 6 administrative staff, currently all female, who are based in the department. Four staff support our undergraduate programmes and departmental activity, and are line-managed at the faculty level; the remaining two staff support SAMBa and are managed within the department. Irrespective of reporting line, all administrative staff are very much part of the department team and are invited to participate in department events and to comment on departmental issues and strategy.

Our undergraduate provision is extensive. We offer BSc and MMath programmes, each of which can be supplemented by an industrial placement or study year abroad in the penultimate year. Around 50% of BSc students undertake industrial placement; for MMath this is a recent addition but in 2014/15 around 30% of eligible students undertook a placement. Consequently programme duration varies between 3 years for a BSc programme and 5 years for an MMath with placement/study year. BSc provision is further divided into

programmes in Mathematics, Mathematical Sciences, Mathematics and Statistics, and Statistics. Currently we also offer MSc programmes in Mathematical Sciences and Modern Applications of Mathematics.

b) Provide data for the past three years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance and how they have affected action planning.

Student data

(i) Numbers of males and females on access or foundation courses

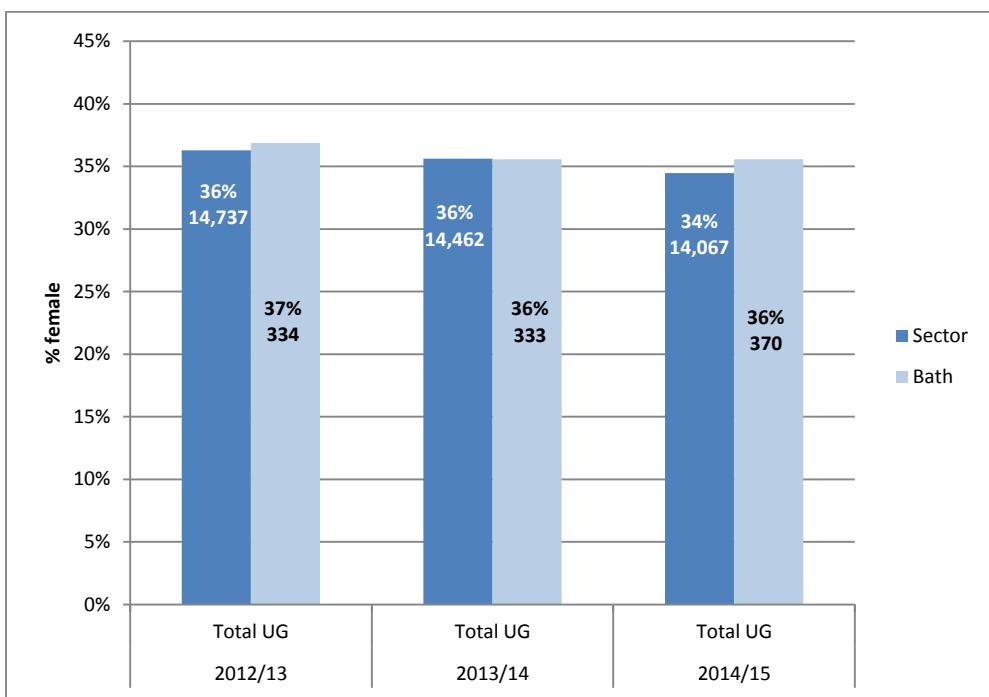
The Department does not offer any access or foundation courses.

(ii) Undergraduate male and female numbers – full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the impact to date. Comment upon any future plans

The percentage of females among undergraduate full-time students over the past 3 years, shown in Graph 1, is 36-37%, in line with national figures. In feedback on our 2014 submission, the panel pointed out that HESA data shows there are 39.9% females in Mathematical Sciences in 2012/13, rather than 36.3%. This discrepancy is between HESA's JACS mathematical sciences subject area data (39.9% female in 12/13), and HESA's mathematics cost centre data (36.3% female in 12/13). We feel that HESA cost centre data is more appropriate as it is closest to the student intake that is within the Department's control. It also allows for consistency with staff data, which is only available on a cost centre basis.

We do not offer part-time programmes but do offer part-time study in special circumstances. In recent years this has been taken up by two elite athletes, one female, to allow them to compete internationally whilst studying.

Table 1 shows the gender breakdown of undergraduates for both full-time and part-time students; numbers from the sector suggest that part-time provision would not increase female participation. The data presented does not differentiate between our degree programmes. Although at the cohort level there is no apparent gender imbalance, it would be beneficial to investigate disaggregated data for potential biases at a lower level. We plan to collect enhanced programme-based data and will use it with HESA first destination data to determine whether there are any gender biases in our programmes and graduate destinations that might contribute to the leaky pipeline (**AP-1.1**).

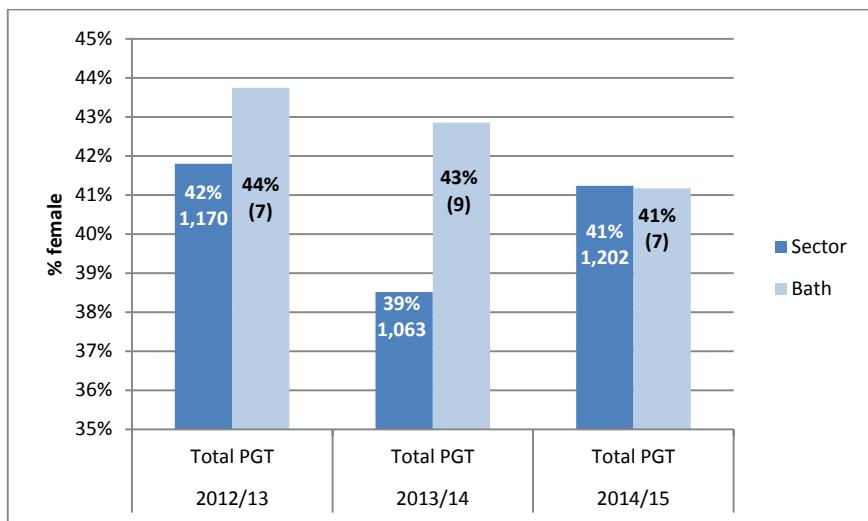
Graph 1: Gender breakdown of mathematics undergraduates, Bath and sector**Table 1:** Gender breakdown of full-time and part-time mathematics undergraduates

HESA cost centre: Mathematics																
FTE	2012/13					2013/14					2014/15					
	UNDERGRADUATE (FIRST DEGREE) STUDENTS	Female	Male	Other	% Female	% Male	Female	Male	Other	% Female	% Male	Female	Male	Other	% Female	% Male
University of Bath																
Total	334	572	0	37%	63%		333	603	0	36%	64%	370	670	0	36%	64%
Full time	334	572	0	37%	63%		333	603	0	36%	64%	370	669	0	36%	64%
Part time	0	0	0	-	-		0	0	0	-	-	0	1	0	0%	100%
Sector																
Total	14,737	25,867	3	36%	64%		14,462	26,152	5	36%	64%	14,067	26,755	5	34%	66%
Full time	12,995	22,506	3	37%	63%		12,973	23,276	5	36%	64%	12,586	23,781	5	35%	65%
Part time	1,741	3,361	0	34%	66%		1,489	2,876	0	34%	66%	1,481	2,975	0	33%	67%

Note: figures have been calculated from the total minus those who have selected sex as 'Other'.

(iii) Postgraduate male and female numbers completing taught courses full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

Graph 2 shows the gender breakdown of PGT students in Bath and UK-wide; our proportion of female PGT students has been slightly higher than nationally. The ratio did worsen over the period 2012-15 but numbers are too small to draw any conclusions. In order to provide comparison with the sector, Graph 2 shows HESA data which includes student numbers in Bath that are not enrolled on either of our current PGT programmes.

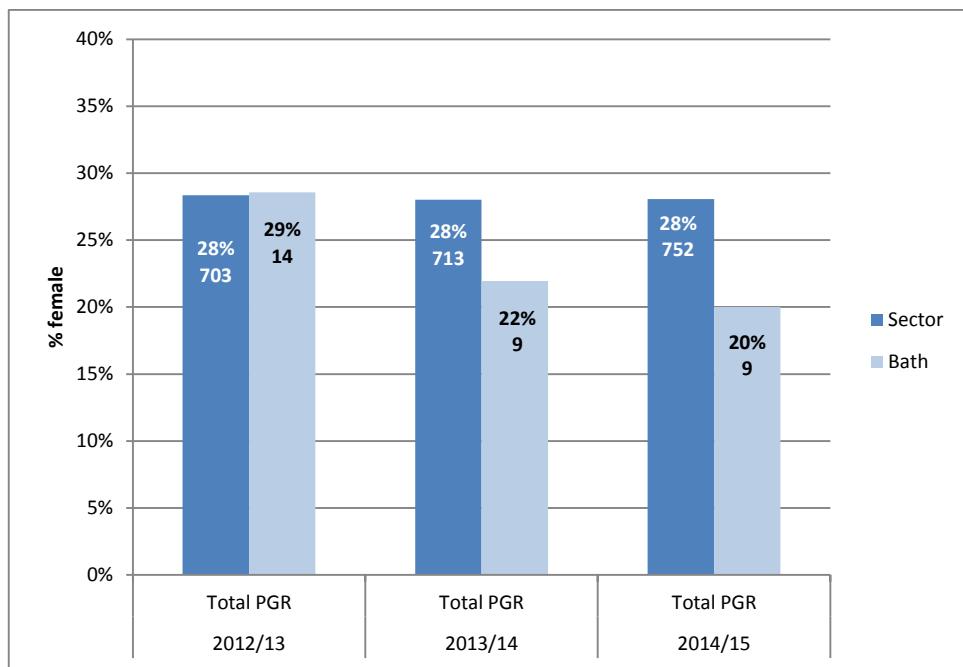
Graph 2: Gender breakdown of mathematics PGT students, Bath and sector

(iv) Postgraduate male and female numbers on research degrees full and part-time – comment on the female:male ratio compared with the national picture for the discipline. Describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

Table 2 and Graph 3 show that we are falling below the national average in the proportion of female PGR students enrolled. In 2014 SAMBa admitted its first cohort of students using a recruitment model aimed at encouraging strong female applications. This includes: carefully wording all promotional material and featuring case studies of former female PhD students on website; inviting students for interview in batches so that all applicants meet a gender mix of other applicants; ensuring that all applicants meet students and departmental staff of both genders; and that interview panels include at least one female. In 2014, SAMBa admitted 25% (2/8) female students rising to 43% (5/12) in 2015. At the time of writing 50% of those recruited for 2016 admission to SAMBa are female. Moving forward, we will extend this recruitment model in an attempt to achieve similar percentage female participation for all PGR provision in the department (**AP-1.3, AP-1.4**). To encourage our undergraduates to consider a research career, we will run an annual series of talks highlighting postgraduate opportunities, and will promote our available summer internships (currently around 15 per year funded by LMS, BBSRC, IMI, SAMBa) – including personally encouraging talented students to apply – as a chance to try out academic research (**AP-1.3**).

Table 2: Gender breakdown of mathematics PGR students, Bath and sector

HESA cost centre: Mathematics													
FTE	2012/13					2013/14					2014/15		
	Female	Male	Other	% Female	% Male	Female	Male	Other	% Female	% Male	Female	Male	Other
University of Bath													
Total	14	35	0	29%	71%	9	32	0	22%	78%	9	36	0
Full time	10	31	0	24%	76%	7	29	0	19%	81%	8	27	0
Part time	3	5	0	38%	63%	0	1	0	0%	100%	0	2	0
Not applicable	-	-	-	-	-	2	2	0	50%	50%	2	7	0
Sector													
Total	703	1,777	1	28%	72%	713	1,831	1	28%	72%	752	1,928	0
Full time	613	1,564	1	28%	72%	633	1,624	1	28%	72%	659	1,690	0
Part time	90	213	0	30%	70%	23	76	0	23%	77%	23	69	0
Not applicable	-	-	-	-	-	56	131	0	30%	70%	70	169	0

Graph 3: Gender breakdown of mathematics PGR students, Bath and sector

(v) Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees *Comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and their effect to data. Comment on any plans for the future*

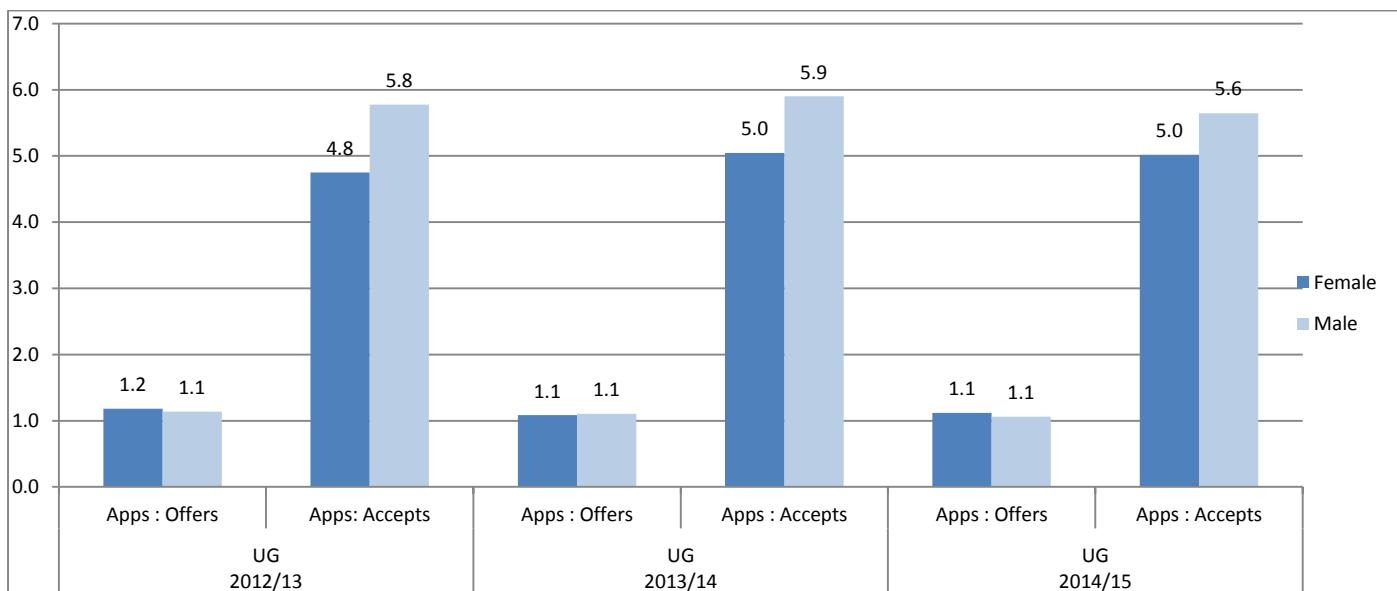
Table 3: Course applications, offers and acceptances by gender

APPLICATIONS, ACCEPTANCES	OFFERS,	2012/13					2013/14					2014/15				
		Apps	Offers	Accepts	Apps:Offers	Apps:Accepts	Apps	Offers	Accepts	Apps:Offers	Apps:Accepts	Apps	Offers	Accepts	Apps:Offers	Apps:Accepts
Undergraduates		1,581	1,373	293	1.2	5.4	1,728	1,573	309	1.1	5.6	1,672	1,550	308	1.1	5.4
Female		518	439	109	1.2	4.8	560	517	111	1.1	5.0	537	479	107	1.1	5.0
Male		1,063	934	184	1.1	5.8	1,168	1,056	198	1.1	5.9	1,135	1,071	201	1.1	5.6
Postgraduate taught		137	68	15	2.0	9.1	140	59	21	2.4	6.7	165	50	17	3.3	9.7
Female		50	28	3	1.8	16.7	51	24	9	2.1	5.7	75	20	6	3.8	12.5
Male		87	40	12	2.2	7.3	89	35	12	2.5	7.4	90	30	11	3.0	8.2
Postgraduate research		99	30	21	3.3	4.7	118	21	15	5.6	7.9	144	34	24	4.2	6.0
Female		32	8	5	4.0	6.4	27	5	3	5.4	9.0	47	9	5	5.2	9.4
Male		67	22	16	3.0	4.2	91	16	12	5.7	7.6	97	25	19	3.9	5.1

Table 3 and Graph 4 indicate that application rates to offers for UG programmes are virtually identical for males and females; females appear more likely to accept an offer. This suggests that we project an attractive culture. Around 30% of our applicants are female. The nature of our degree programmes means that the majority of our offers include Further Mathematics A level; according to the FMSP, around 30% of students studying A level Further Mathematics are female. This means that we are currently recruiting at the expected level. However, we believe that more can be done here. We took the opportunity in 2014, to employ a

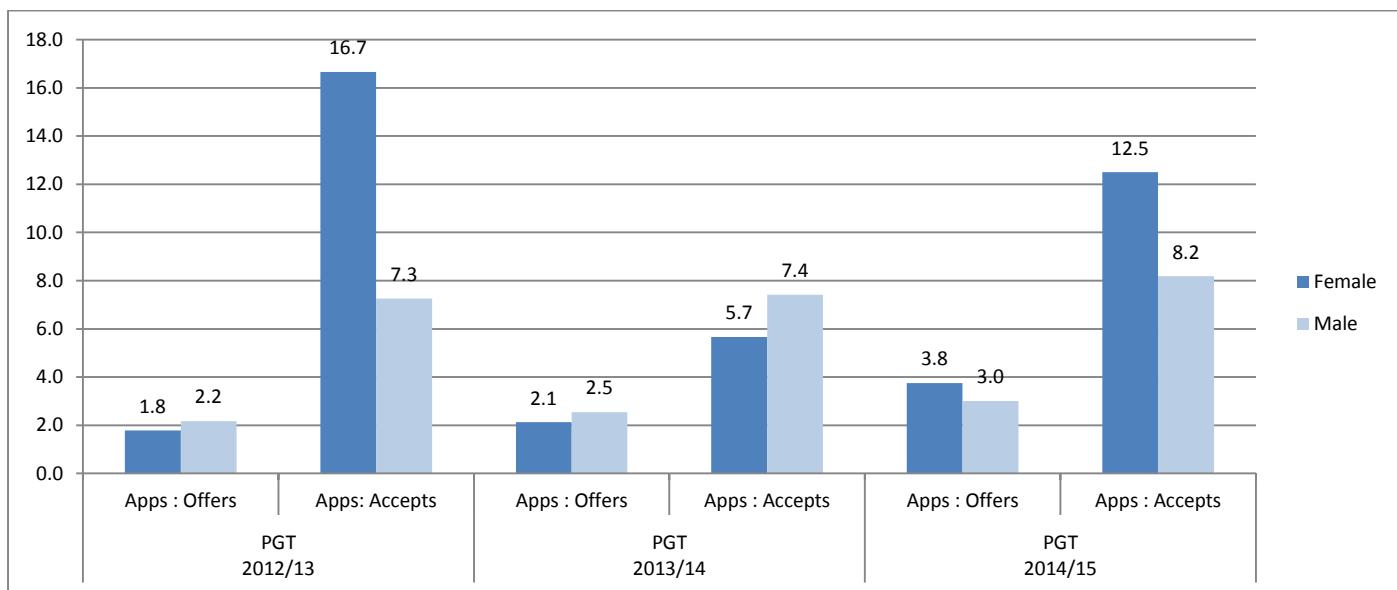
member of the FMSP within the department. This allows us to contribute to FMSP national activities encouraging female participation in Further Mathematics (one of their Key Performance Indicators). We will contribute further by supporting additional outreach activities and work with schools (**AP-1.2**).

Graph 4: UG course applications to offers and applications to acceptances



Postgraduate recruitment Graph 5 suggests greater variability in recruitment statistics for females on PGT programmes. Small cohorts (Graph 2) prevent more analysis at this stage.

Graph 5: PGT course applications to offers and applications to acceptances

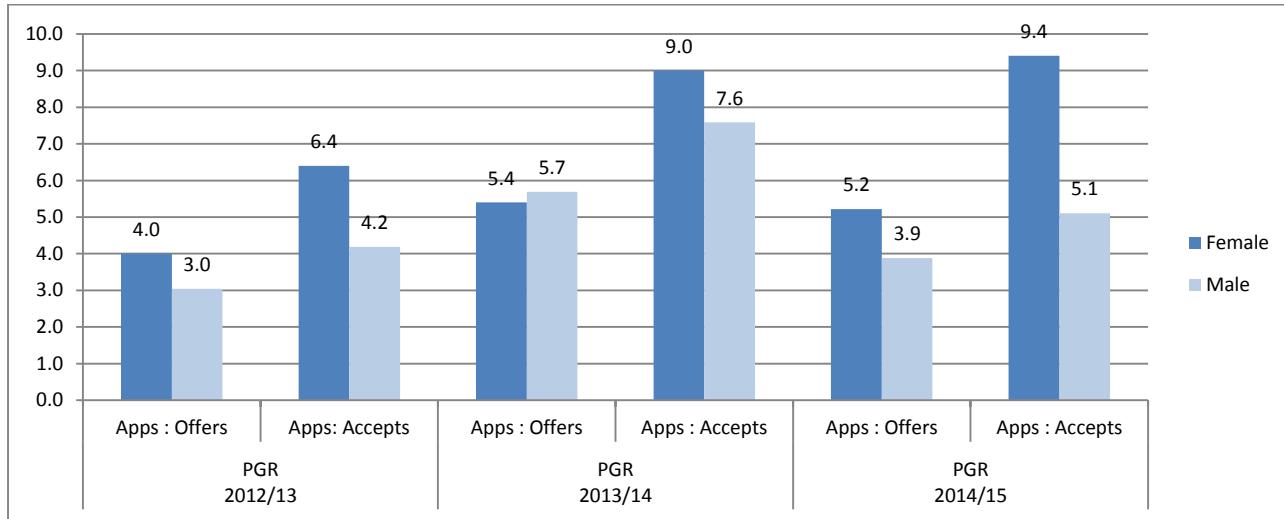


PGR data shown in Table 3 and Graph 6 suggest variability for both genders. Between 23% and 33% of applications were from females; the number of offers made appears gender neutral. We need to increase the number of applications which we will address by encouraging more UG to take up the opportunities developed recently within the department (**AP1.3**): In conjunction with the SSLC, we will host two events annually for UG students at which staff and PGR talk about their research and the research culture in the

department; and we will encourage UG students to apply for summer internships described above (Section 3(b)(iv)).

Female acceptance of offers varied between 55 and 62% whereas male acceptance varied between 72 and 76%. We must carefully nurture students who are given offers to try and increase the conversion rate to acceptance (**AP1.4**).

Graph 6: PGR applications to offers and applications to acceptances

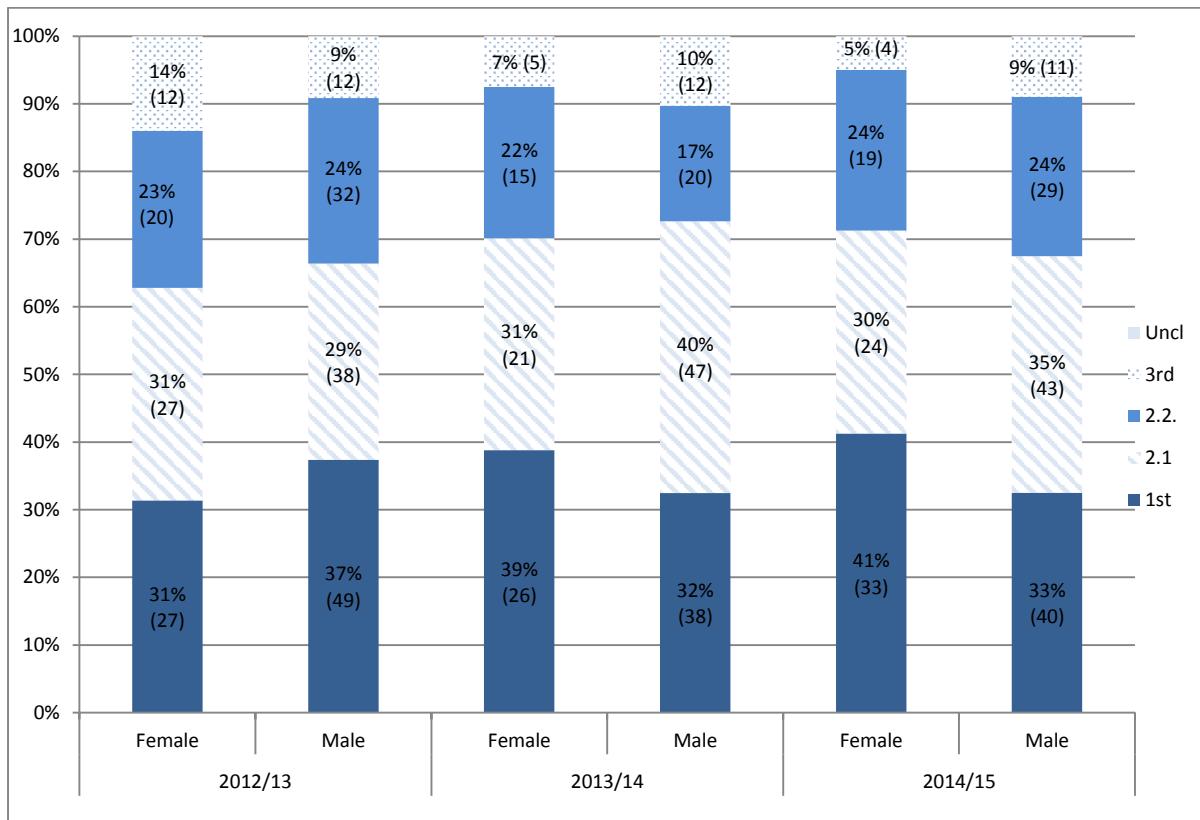


(vi) Degree classification by gender – comment on any differences in degree attainment between males and females and describe what actions are being taken to address any imbalance.

All formal examinations are marked anonymously and data presented at examination boards is also anonymised. In Semester 2 2015-16, we are piloting anonymous marking of coursework in line with institutional policy.

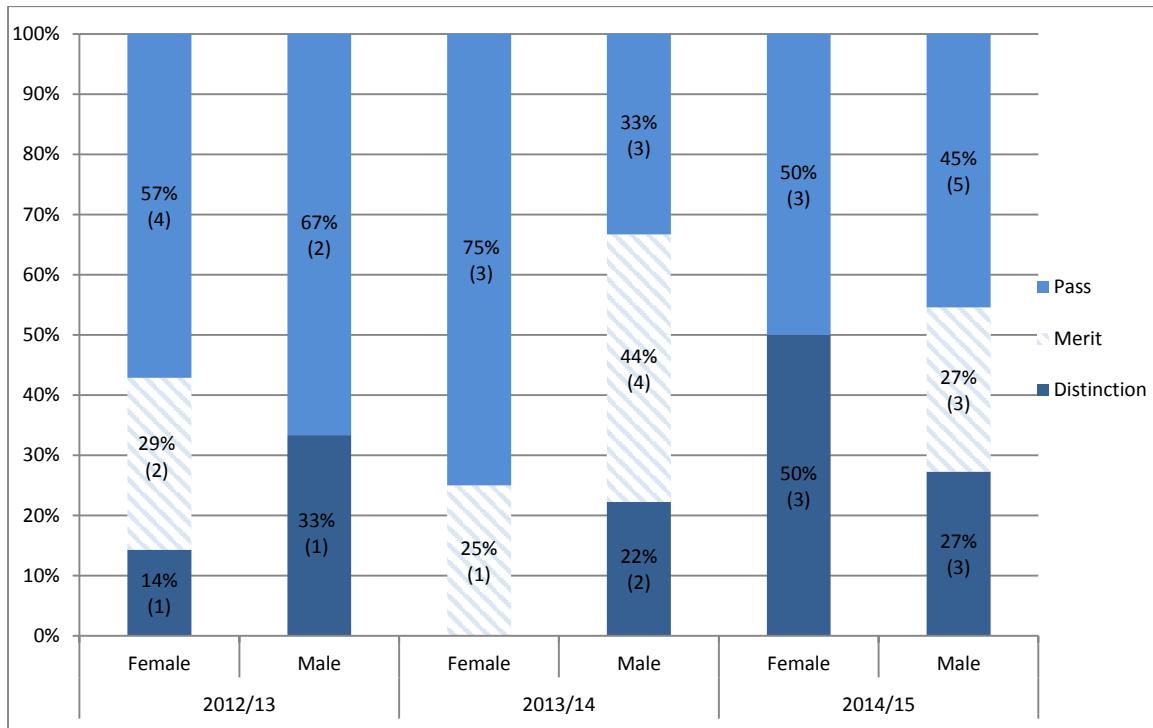
Undergraduate Outcomes Graph 7 shows the degree classifications for males and females. Numbers indicate some variation between years; overall there is no evidence of gender bias.

Graph 7: Undergraduate degree classification by gender. Note: "% of females" refers to the percentage of females amongst all females enrolled.



PGT Outcomes Graph 8 which presents the data for PGT enrolled on departmental MSc programmes suggests no systematic correlation of degree classification with gender, particularly given the very small numbers involved.

Graph 8: Postgraduate taught degree classification by gender



Staff data

(vii) Female:male ratio of academic staff and research staff – researcher, lecturer, senior lecturer, reader, professor (or equivalent). Comment on any differences in numbers between males and females and say what action is being taken to address any underrepresentation at particular grades/levels

Graph 9 shows HESA data for the percentage of female staff in Bath and nationwide; Bath is about 1/3 lower than the national average (Note that numbers include PDRAs and are rounded to the nearest 5).

Graph 9 Gender breakdown of mathematics academic staff, Bath and sector

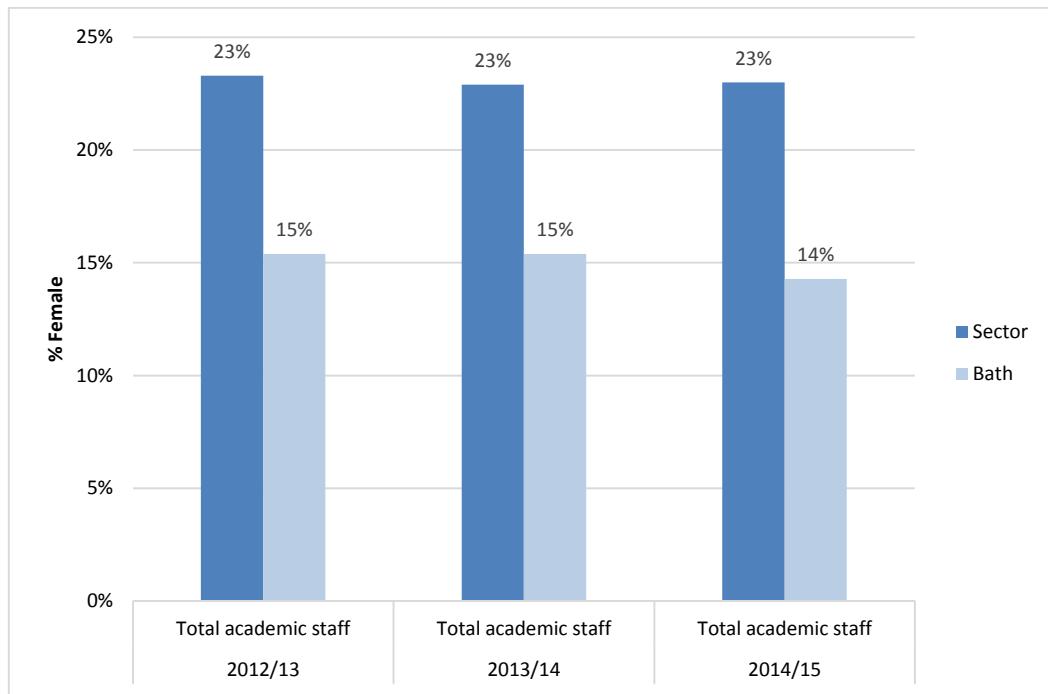


Table 4a shows number and percentage of females by role on the census date July 31 each year; we supplement this with Table 4b to show number of teaching fellows employed in the department each year. In all positions, the number of males is greater than females.

Table 4: (a) Staff gender breakdown by role using July 31 as census point each year;

(a) ACADEMIC AND RESEARCH STAFF	2012/13				2013/14				2014/15			
	Female	Male	% Female	% Male	Female	Male	% Female	% Male	Female	Male	% Female	% Male
Total	10	54	16%	84%	9	58	13%	87%	10	62	14%	86%
Research	3	7	30%	70%	3	10	23%	77%	2	10	17%	83%
Teaching	1	1	50%	50%	0	0	-	-	0	0	-	-
Lecturer	2	8	20%	80%	2	10	17%	83%	3	12	20%	80%
Senior Lecturer	3	6	33%	67%	3	6	33%	67%	4	8	33%	67%
Reader	1	10	9%	91%	1	11	8%	92%	1	7	13%	88%
Professor	0	22	0%	100%	0	21	0%	100%	0	24	0%	100%
Other	0	0	-	-	0	0	-	-	0	1	0%	100%

(b) Gender breakdown of teaching fellows employed in department

(b) TEACHING FELLOWS	2012/13				2013/14				2014/15			
	Female	Male	% Female	% Male	Female	Male	% Female	% Male	Female	Male	% Female	% Male
Teaching	1	2	33%	67%	1	3	25%	75%	0	4	0%	100%

Graph 9 and Table 4 clearly demonstrate that the number, percentage and grade of female staff in the department is one of the most important and urgent issues that we must address.

Number and percentage must be addressed through recruitment. Since 2013, we have developed a proactive recruitment strategy to encourage women to apply. For example, we carefully word advertising materials and we encourage all staff to approach research leaders worldwide asking for suggestions of possible candidates. This approach is now reaping success. In early 2015, two of our four new appointments were women. At the time of submission, we have recruited a further 5 staff to start open-ended contracts, 3 of whom are female. We intend to continue and develop this proactive approach (**AP-3**).

The grade of female staff in the department can be addressed by recruitment of senior female academics and by female career progression within the department (**AP-4**). The staff survey carried out in 2015 indicated a general lack of awareness of career progression mechanisms at the University (**AP-4.1**). The newly-formed Promotions Committee, chaired by the Deputy HoD, and actively discussing promotion options with staff at the SL/reader level underpin our actions to address this (**AP-4.2**).

(viii) Turnover by grade and gender – comment on any differences between men and women in turnover and say what is being done to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left.

Over the period 2012-15, four male permanent academic staff left (two retirements, two returning to their native countries); no female permanent academic staff left (Table 5).

Research fellows are on short-term contracts, usually funded by external agencies, and so we would anticipate the levels of turnover shown. For us to assess our contribution to such careers, and to determine whether PDRA loss from Bath contributes to the leaky pipeline, we must collect accurate exit data (**AP-5.2**).

Teaching fellows have traditionally been employed on short-term (6 month) contracts to cover sabbatical leave and short-term teaching exemptions. Whilst the position is transitory, it is critical to the overall success of the department given the strength of our undergraduate programme. All teaching fellows are offered training through staff development programmes; however, there has been little attention within the department to their career development or progression. Since many of these staff take on short-term positions whilst searching for PDRA/lecturing posts, we need to put mechanisms in place to support them (**AP-5.1, 5.3**).

Table 5 Staff Turnover by grade and gender

LEAVERS	2012/13				2013/14				2014/15			
	Female	Male	% Female	% Male	Female	Male	% Female	% Male	Female	Male	% Female	% Male
Total	3	11	21%	79%	3	6	33%	67%	3	7	30%	70%
Research	3	8	27%	73%	2	1	67%	33%	3	4	43%	57%
Teaching	0	2	0%	100%	1	3	25%	75%	0	2	0%	100%
Lecturer	0	1	0%	100%	0	1	0%	100%	0	0	-	-
Senior Lecturer	0	0	-	-	0	0	-	-	0	0	-	-
Reader	0	0	-	-	0	0	-	-	0	1	0%	100%
Professor	0	0	-	-	0	1	0%	100%	0	0	-	-
Other	0	0	-	-	0	0	-	-	0	0	-	-

(1998/2000 words)

4. Supporting and advancing women's careers

Key career transition points

a) Provide data for the past 3 years on the following with commentary on their significance and how they have affected action planning.

(i) Job application and success rates by gender and grade – comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

In the period 2012-15, there were 38 new appointments in total, of which 8 (21%) were female as shown in Table 6. Female staff were appointed to 3 out of 10 of the open-ended contract positions which is higher than the percentage of female academic staff already in the department on open-ended contracts, though clearly still leaves room for improvement. Since appointments in each particular research area are rare, our job adverts are typically multi-level (L/SL/R) in order to secure the best possible candidate. Therefore the data we have on offers of employment cannot be disaggregated further.

Table 6: Offers of employment by gender (NB Multi-level positions L/SL/R are listed as Lecturer in this table)

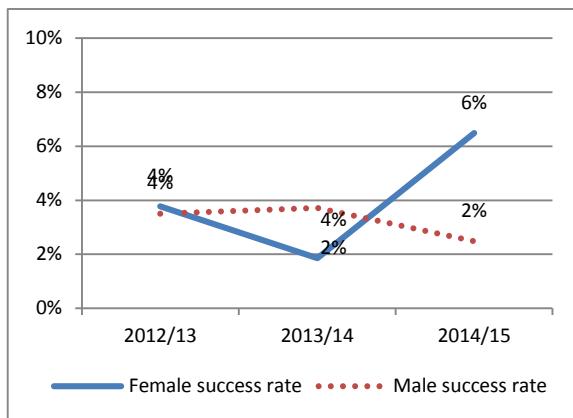
		Applications				Shortlisted				Appointments				Success rate		
		Female	Male	% Female	% Male	Female	Male	% Female	% Male	Female	Male	% Female	% Male	Female	Male	Total
2012/13	Total	53	228	19%	81%	13	33	28%	72%	2	8	20%	80%	4%	4%	4%
	Research	28	92	23%	77%	8	18	31%	69%	2	3	40%	60%	7%	3%	4%
	Teaching	5	17	23%	77%	1	5	17%	83%	0	3	0%	100%	0%	18%	14%
	Lecturer	20	118	14%	86%	4	10	29%	71%	0	2	0%	100%	0%	2%	1%
	Senior Lecturer	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Reader	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Professor	0	1	0%	100%	0	0	-	-	0	0	-	-	-	0%	0%
2013/14	Total	54	269	17%	83%	10	31	24%	76%	1	10	9%	91%	2%	4%	3%
	Research	15	59	20%	80%	3	15	17%	83%	0	5	0%	100%	0%	8%	7%
	Teaching	2	3	40%	60%	1	3	25%	75%	0	2	0%	100%	0%	67%	40%
	Lecturer	37	207	15%	85%	6	13	32%	68%	1	3	25%	75%	3%	1%	2%
	Senior Lecturer	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Reader	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Professor	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
2014/15	Total	77	483	14%	86%	17	47	27%	73%	5	12	29%	71%	6%	2%	3%
	Research	15	73	17%	83%	8	19	30%	70%	2	4	33%	67%	13%	5%	7%
	Teaching	16	67	19%	81%	3	9	25%	75%	1	6	14%	86%	6%	9%	8%
	Lecturer	44	341	11%	89%	5	19	21%	79%	2	2	50%	50%	5%	1%	1%
	Senior Lecturer	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Reader	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-
	Professor	2	2	50%	50%	1	0	100%	0%	0	0	-	-	0%	0%	0%
	Other	0	0	-	-	0	0	-	-	0	0	-	-	-	-	-

Table 6 and Graph 10 show a mildly encouraging trend for appointments of females to open-ended contracts, but large variations in fixed term contracts (research and teaching) and no appointment at the professor level.

Women are under-represented in applications compared with the national figures for female PhD students and so we need to encourage more female applicants. Advertisements already contain an invitation to under-represented groups, including women, to apply. Now we will review the language used in the “further information for candidates” documentation sent to those who enquire about advertised positions and will ensure that initiatives such as flexible working are clearly explained (**AP-3.1**). We will appoint recruitment champions to each research group, who will take the lead in advertising new posts widely, co-ordinating systematic targeting of strong female candidates and encouraging them to apply (**AP-3.2**). We already require all staff formally involved in recruitment to undertake training in unconscious bias and diversity issues. Currently 31 staff have undertaken this training. However, since all staff have a role in creating a supportive environment within the department, we will prioritise this online training for all staff (**AP-6.2**).

In this review period (2012-2015), no women professors were appointed although on two occasions a position was advertised and on one an offer was made. Appointing female professors is of great importance to the department, which we will prioritise both through external appointments (**AP-3**) and internal career progression (**AP-4**).

Graph 10: Success rate (application to appointment) by gender over the past 3 years for all posts in the department



(ii) Applications for promotion and success rates by gender and grade – comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific examples of where women have been through the promotion process. Explain how potential candidates are identified

Table 7 gives the full record of promotions for 2012-2015 and highlights the need for departmental action over female career development (**AP-4**). Note in previous years, two female academics were promoted to SL whilst working part-time.

Promotion to non-professorial grades is overseen at University level by the Academic Staff Committee. Professorial promotions undergo a different route, involving committees chaired by the Vice-Chancellor. All of these institutional committees have membership from both genders. Qualification for promotion is against published criteria covering all aspects of academic activity: teaching, research, administration (including pastoral and outreach work). These activities are grouped into three categories: Research; Learning & Teaching; and Leadership & Management. Each case for promotion (whether to SL/R or to Professor) must demonstrate major contribution in one of the categories and effective contribution in at least one other. These criteria do offer clear promotion routes that are not research-dominant.

Table 7: Applications for promotion 2012-2015

	Applications for promotion
2012/13	1 Male unsuccessful promotion to Senior Teaching Fellow 1 Male promoted to Senior Lecturer 1 Female promoted to Reader
2013/14	1 Male promoted to Professor
2014/15	2 Males promoted to Professor 2 Males promoted to Senior Lecturer

Information about the University promotions policy and procedure is circulated to all academic staff on an annual basis by the HoD and is available on the University website. Until now, the departmental process has comprised the following stages. Staff are invited to discuss promotion cases with senior colleagues, in particular the HoD or relevant HoG, whilst the professoriate is asked to give proactive consideration to all members of the department who are close to being ready for promotion. Departmental support for promotions has been made by a meeting of all professors in the department (currently all male). Individuals may also put themselves forward without departmental support.

In response to the staff survey in which 29% of staff indicated they would like to see greater emphasis on rewarding non-research activities in promotions, and to ensure that female staff are encouraged and supported to promotion in a timely manner, DSAT suggested the need for a departmental review of promotions procedures within the department; hence the formation of a promotions committee (**AP-4.2**). The work of the committee will be supplemented for senior staff by the deputy HoD discussing promotion options with female SL/readers and, where appropriate actively supporting the development of promotion cases (**AP-4.2**).

Membership of the promotions committee will not be restricted to the professoriate and will include female and male staff including one member of DEDC. Additionally, we will use improved departmental communication plans to remind colleagues of the procedure (**AP-6.1**). These changes will make the promotions process more visible: the 2015 staff survey showed that although there was not widespread discontent with the procedure itself, there is less awareness of how one goes about getting promoted than is desirable.

Whilst promotion may be discussed at the annual SDPR, there is no requirement for this to happen and so it relies on individual staff or their reviewer to raise the issue. This has the potential for unconscious bias and may be one mechanism which disadvantages female staff members. To guard against that possibility, departmental policy will in future include explicit discussion of career development and/or promotion as part of the review (**AP-4.3**)

b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) Recruitment of staff – comment on how the department’s recruitment processes ensure that female candidates are attracted to apply, and how the department ensures its short listing, selection processes and criteria comply with the university’s equal opportunities policies

Recruitment of staff is conducted at university level in accordance with approved HR procedures. Advertisements are carefully constructed to ensure that they provide an informative, welcoming view of the department’s work and ethos. Since October 2013, Departmental policy has been that all advertisements include a statement that women are encouraged to apply. All advertisements from 2015 are circulated on

women in mathematics websites including the Association for Women in Mathematics and the European Women in Mathematics sites.

Appointments committees are configured individually when a position is advertised and use the University's guidance on fair recruitment at all stages of the process. Both genders have been represented on appointments committees for all Mathematics panels for at least the past five years. From November 2014, every member of an appointment committee must have completed the University Recruitment and Selection training and programme in Unconscious Bias and Diversity in the Workplace. For academic posts, shortlists are reviewed by the Dean; single gender lists are queried and, in general, will not be submitted for review.

To comply with HR procedures, appointments are made against criteria detailed in the job specification and feedback is provided to all short-listed candidates. Recent successes at the early career stage give us confidence in the approach that we have been developing since 2013.

(ii) Support for staff at key career transition points – having identified key areas of attrition of female staff in the department, comment on any interventions programmes and activities that support women at the crucial stages, such as personal development training, opportunities for networking, mentoring programmes and leadership training. Identify which have been found to work best at different career stages.

There has been no recent attrition of permanent female staff.

We do lose a large number of women at the transition from PDRA to lecturer, as almost all such staff are on fixed-term contracts from external funding bodies; similarly for teaching fellows. We intend to gather data on PDRA destinations (**AP-5.2**) to discover whether we are contributing to the leaky pipeline at this stage or whether our PDRAAs are moving to academic positions elsewhere. In addition, the University has created **Prize Fellowships**, which involve an initial period of 2-3 years as a PDRA on a fixed term contract, before transitioning – if agreed targets are met – to a probationary lecturer contract. The Department has previously secured three such positions, which we see as an important new way to move staff smoothly from PDRA to lecturer level. In the recent round at the start of 2016, two further prize fellowships were awarded to the department, one of which was to a woman; both fellows will arrive later in the year.

Leadership: In 2013/14, a senior lecturer participated in the inaugural Leadership Foundation Aurora Programme for women supported by the department through relief of other commitments; she has subsequently taken on a leadership role in the department. Following this success, we will encourage all staff to participate in such programmes (**AP-4.4**).

Mentoring plays a critical role particularly in support at career transition points and so we have created a departmental mentoring co-ordinator. (**AP-4.1**). Based on the staff survey, we do not anticipate that there will be excessive demand for gender-specific mentors. However, if there is, we will discuss with Staff Development about working collaboratively with other departments.

For academic staff, attendance at conferences and collaborating with colleagues elsewhere and joining research networks is an important part of career development. Every academic member of staff receives £500 per annum which can be used for travel, research visitors, conferences etc. Requests for further support are made to the HoD and typically at least £10,000 additional funding is available from the operating budget on a competitive basis.

All new permanent academic staff can apply for start-up funds of up to £5K for innovative projects. In addition, they are given priority for University Studentships to support postgraduate students.

As part of its own Athena SWAN commitment, the university delivers a number of events specifically aimed at women's career development. We will actively encourage staff to participate in these opportunities and will host an event within the department as part of the wider institutional engagement with Athena SWAN (**AP-4.4**).

5. Career development

- a) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) Promotion and Career Development – *comment on the appraisal and career development process, and promotion criteria and whether these take into consideration responsibilities for teaching, research, administration, pastoral work and outreach work; is quality of work emphasised over quantity of work?*

For non-probationary academic staff, there is a **mandatory annual review (SDPR)**. In 2015, all members of staff completed the SDPR process; the staff survey showed that it was considered a valuable exercise by 89% of staff. The SDPR is an opportunity for staff members to: reflect on the year, in relation to agreed objectives from the previous SDPR highlighting particular achievements and challenges; set objectives for the coming year; and to discuss professional development needs. There is no requirement for objectives to cover all aspects of an academic job. SDPR reviewers are members of the professoriate assigned by the HoD. An individual can request an alternative reviewer.

Promotion criteria for academic staff consider all aspects of academic work, including teaching, research & scholarship, administration, pastoral care and outreach. Quality of work is prioritised as evidenced by two female staff successfully being promoted whilst working part-time. The staff survey indicated some uncertainty about how the criteria are applied. Clearer communication (**AP6.1**) and the formation of the Promotions committee (**AP4.2**) is our attempt to address this situation. Staff who submit unsuccessful cases are required by the university to develop Personal Action Plans (PAP).

All **probationary** academic staff must successfully complete the **Bath Course**, a development programme which covers all areas of an academic role: teaching; research; and administration. Some of the more generic aspects of the course are not well-received. In response to this, the department is working with staff development to create more activities based within the department and focussed within the discipline (**AP-6.2**).

A survey of PDRAs in the department prior to our submission in November 2014 has been influential in the development of departmental support for **PDRA career development**. To introduce PDRAs to the working practices of academic staff, they are encouraged to attend staff meetings and departmental activities and their contact details are included in staff lists. All PDRAs are offered a mentor in addition to their academic supervisor. They have full access to academic staff development at the university and are given opportunities to teach, either as a tutor or in a lecturing role. It is timely to review this activity and, in collaboration with the PDRAs in the department, to explore additional activities that would benefit their academic career development; as part of this we will host an annual early career workshop to support fixed-term staff in continuing their careers (**AP-5.3**).

(ii) Induction and Training- *describe the support provided to new staff at all levels, as well as details of any gender equality training. To what extent are good employment practices in the institution, such as opportunities for networking, the flexible working policy, and professional and personal development opportunities promoted to staff from the outset?*

All new members of staff are required to undertake an institutional induction programme arranged by HR and covering a wide range of topics, including key institutional policies such as flexible working. It provides networking opportunities to meet colleagues from other departments and to become familiar with critical professional services such as Learning & Teaching Enhancement Office, and Staff Development. Within the department, new staff are provided with operational information by the Departmental Administrator, their HoG and, in the case of PDRAs and probationary staff, their mentors.

To supplement existing practice, we propose that all new staff and PGR students are given a welcome pack, providing useful operational and cultural information about the Department (key departmental staff and roles; working practices; departmental meetings, seminars, social activity) (**AP-6.1**). We will embed the practice of undertaking equality training as part of this induction process; moreover, to show our commitment to equality and diversity, we will commit to all staff undertaking training in diversity and unconscious bias in the next 3 years (**AP6.2**).

As the department grows, it is important that we make sure that **all staff** are aware of departmental operational policies and procedures. The staff survey indicated that staff are not as aware of these as is desirable. We will review the mechanisms of providing information in a timely and relevant manner (**AP-6.1**).

(iii) Support for female students – *describe the support (formal and informal) provided for female students to enable them to make the transition to a sustainable academic career, particularly from postgraduate to researcher, such as mentoring, seminars and pastoral support and the right to request a female personal tutor. Comment on whether these activities are run by female staff and how this work is formally recognised by the department.*

Every new undergraduate is appointed a personal tutor, with whom they meet weekly in the first semester, and then at regular intervals for the remainder of their studies. Personal tutors are reminded by email about forthcoming important dates in the undergraduate programme with advice on how to support their personal students and how to respond to frequently asked questions. Almost all academic staff, including the HoD, act as personal tutors. Students may request a change of personal tutor in confidence and we are currently able to respond positively to requests by female students who would like a female tutor. Personal tutoring is included within the departmental workload model. The department is fully engaged with the SU PAL scheme which provides academic peer support to our first year undergraduates.

All PGR students have a supervisor and co-supervisor whose roles have been clearly set out in the institutional QA documentation. From 2016, all PGR will be offered a peer mentor, trained in collaboration with the SU. Students complete an annual audit of skills training which complement research activity and can provide opportunities for academic development. PGR students become members of the research groups of their supervisors and are exposed to new ideas and networking opportunities by attending the regular seminars and journal clubs. The student cohort organises its own seminar series which broadens the scope of the research environment for students. Regular activities are supplemented by an annual PGR away day and financial support to attend conferences including LMS Women in Maths days.

The DSAT includes two PGR representatives who have provided valuable input. They organised a focus group discussion which highlighted the desire for better support and training for tutoring and more exposure to role models who have addressed work-life balance, particularly in relation to women and childcare. We plan to address these issues (**AP-2.1**) and to hold an annual open forum to discuss ideas for PGR career development events (**AP-2.2**). The department also commits to actively encouraging participation in national events for women in mathematics by promoting events and providing financial support for PGR to attend (**AP-2.2**).

6. Organisation and culture

- a) Provide data for the past 3 years on the following with commentary on their significance and how they have affected action planning.

(i) Male and female representation on committees – *provide a breakdown by committee and explain any differences between male and female representation. Explain how potential members are identified.*

The formal Departmental Committees are: DEC, Research Committee, Learning and Teaching Quality Committee and the Athena SWAN DSAT which will become DEDC following submission of this application.

Committee membership is determined by leadership and administrative role in the department. An informal outreach committee, co-ordinated by the outreach officers, was also established in 2014 to co-ordinate the increasing volume of outreach activity. The Department has a small number of committees to minimise committee overload, and each one is therefore influential. Following the previous Athena SWAN submission, we increased our efforts to ensure we have female representation on every committee and since August 2015 we have achieved this. Data for the previous 3 years is presented in Table 8. Since August 2015, following the appointment of a woman to the role of DoLT, all committees have female members, albeit a single woman in each of the research and executive committees.

We are determined to ensure that female representation is maintained on all committees and, as the number of female staff increases, we commit to increasing representation on committees at least in line with staff gender ratios (**AP-6.3**).

Table 8: Gender representation on committees

	2012/13			2013/14			2014/15		
	# Female	# Male	% Female	# Female	# Male	% Female	# Female	# Male	% Female
Total	8	28	22%	10	37	21%	10	37	21%
Executive (DEC)	1	4	20%	0	6	0%	0	7	0%
Research	0	6	0%	0	7	0%	1	6	14%
DLTQC*	5	16	24%	4	16	20%	4	16	20%
DSAT	2	2	50%	6	8	43%	6	8	43%

*DLTQC includes student representation which in 2014/15 was 50% female.

(ii) Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts – comment on any differences between male and female staff representation on fixed-term contracts and say what is being done to address them.

Table 9 shows percentage of female staff on fixed-term contracts. It demonstrates the progress we have made in securing more female open-ended contracts. In 2014/15, there is no significant gender difference in the data.

Table 9: Numbers and Percentage by gender on fixed term and open contracts

CONTRACT TYPE	Female				Male				TOTAL			
	FTC	Open	% FTC	% Open	FTC	Open	% FTC	% Open	FTC	Open	% FTC	% Open
2012/13	3	7	30%	70%	7	47	13%	87%	10	54	16%	84%
2013/14	3	6	33%	67%	10	48	17%	83%	13	54	19%	81%
2014/15	2	8	20%	80%	11	51	18%	82%	13	59	18%	82%

- b) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) Representation on decision-making committees – comment on evidence of gender equality in the mechanism for selecting representatives. What evidence is there that women are encouraged to sit on a range of influential committees inside and outside the department? How is the issue of ‘committee overload’ addressed where there are small numbers of female staff?

Committee membership is according to leadership or administrative role in the department. Leadership roles are advertised internally to all academic staff and, if several candidates come forward, an application process involving the Dean of Science is undertaken. Administrative roles are assigned according to workload and career stage. This mechanism avoids overburdening any individual with too much administration but now we need to undertake a careful review to ensure it provides equal opportunities for career development and promotion (**AP-6.3**). Since membership of decision-making committees is linked to these departmental roles, the workload model is used to guard against ‘committee overload’.

One senior female academic is a member of the institutional advisory group on the academic year, and another is on the USAT. Since being part of influential committees feeds into the University career progression framework, our changes to staff development practices (**AP-4.2, AP-4.3**) should encourage all staff to take on these roles.

(ii) Workload model – *describe the systems in place to ensure that workload allocations, including pastoral and administrative responsibilities (including the responsibility for work on women and science) are taken into account at appraisal and in promotion criteria. Comment on the rotation of responsibilities eg. responsibilities with a heavy workload and those that are seen as good for an individual’s career.*

In 2011, the Department formulated a new workload model covering all aspects of academic activity: teaching, research and administration. Pastoral support in the form of personal tutoring, supervision of research students, all teaching related roles as well as all leadership roles have time allocated within the model. There is also a register of small jobs such as exam invigilation and observing a postgraduate tutor; all staff are expected to engage with these activities which are allocated points according to how much time they require. Participation in register activities is monitored by HoGs. There is currently no allocation for outreach activity beyond departmental outreach officer even though this activity can be particularly time-consuming (**AP-6.4**).

All staff are informed of time allocation associated with roles and, on an annual basis, they are made aware of their workload allocation and the departmental mean. They are invited to comment upon information before it is used for decisions. HoGs allocate teaching based on the workload allocation. Allocation of other tasks is done by the HoD in consultation with HoGs and in relation to workload allocations. For the past 2 years, workload allocation has been included in SDPR paperwork which helps to align workload with career progression and development opportunities. The staff survey indicated some lack of confidence in the workload model and how it strives for fairness and parity; we intend to address this (**AP-6.4**).

Leadership and administrative roles are rotated on a 3 year cycle; since the roles are openly advertised within the department, this cycle allows staff opportunities to engage with departmental governance and leadership that will support their career development and progression (**AP-6.3**).

(iii) Timing of departmental meetings and social gatherings – *provide evidence of consideration for those with family responsibilities, for example what the department considers to be core hours and whether there is a more flexible system in place.*

Since 2013, all departmental meetings and seminars are scheduled during core hours (10.15am - 4.05pm). One DSAT focus group proposed recording seminars where possible which we will implement (**AP-6.5**) in the coming year provided that the seminar speaker agrees. Weekly coffee and occasional social gatherings such as Christmas drinks are hosted within the core hours. Individual research groups adapt to the requirements of their core staff; for example the mathematical biology seminar has moved frequently in response to flexible working patterns within its group.

(iv) Culture – *demonstrate how the department is female-friendly and inclusive. Culture refers to the language, behaviours and other informal interactions that characterise the atmosphere of the department, and includes all staff and students.*

The Staff Survey included a number of questions on culture. The majority view was very positive, highlighting a collegiate and friendly atmosphere and lack of hierarchical structure. It was felt, however, that more social space would enhance the working environment. The department's social area is currently being reviewed to make it more of a focal point for activity.

Space for breast-feeding is provided by the university on the campus. The University also has a highly-regarded nursery on campus which can be paid for through a salary sacrifice scheme. There is also a childcare voucher scheme which is often used to pay for the care of/activities for older children during the school holidays.

Of the 6 support staff currently based in the department, two currently have flexible working agreements that we fully support. For example, this year DEC meetings are held at times to fit the flexible working pattern of our departmental administrator .

Analysis of seminar speakers revealed that we had an average of 17% female speakers in the 2013/14 academic year, increasing to 26% in 2014/15. We are committed to maintaining this higher level of external female engagement (**AP-6.5**).

In the past two years the Department has worked hard to improve its internal communication. The HoD began sending summaries of the DEC meetings to the whole department and this has had a positive response. Following discussions in DEC in preparation of the Athena SWAN submission, it has been agreed that minutes of decision-making committees should be made readily available to all staff (**AP-6.1**). We will also facilitate a more inclusive mechanism for agenda setting in all departmental committees and will trial open meetings of DLTQC, Research committee and E&D committee (**AP-6.1**).

Whilst we are not in a position to increase departmental space, we are able to provide more social opportunities to use the space we have effectively and creatively. Since late 2013 we have run a weekly staff coffee morning for both academic and administrative staff. This is now well-attended and recognised as a good opportunity to catch up with colleagues, and to find out at an informal level what is going on in the Department. Coffee and tea are also served before our fortnightly Departmental colloquium. We arrange an annual Departmental Christmas dinner for all staff and postgraduate students, which has grown from around 30 attendees in 2013 to 60 in 2015. Since that is an evening event, paid for by individuals, the DEC decided to host Christmas drinks in the final departmental colloquium slot of 2015 which was well-attended. A summer time event will be introduced to help maintain cohesiveness in a growing department (**AP-6.6**).

(v) Outreach activities – comment on the level of participation by female and male staff in outreach activities with schools and colleges and other centres. Describe who the programmes are aimed at, and how this activity is formally recognised as part of the workload and in appraisal and promotion processes.

The department has a long history of outreach and public engagement activity; two senior staff have been awarded Queen's honours for their work in this field. An informal outreach committee, comprising 5 male and 2 female staff members, was established in 2014 to monitor activities, and to provide a coherent development plan for this work.

The Wessex Masterclasses began in 1990 for enthusiastic and mathematically able year 8 students. Approximately 50% of the students are female. Sessions are delivered by members of the department, including one session annually from undergraduates as part of the Communicating Maths final year unit in which around 65% of students are female.

Bath Taps into Science, an award winning science fair, has roots in the department and each year a number of undergraduates participate by running mathematics activities for school students and families.

Dr Geoff Smith MBE is Chair of the Advisory board of the IMO and in 2012 founded the European Girls Mathematical Olympiad.

The department has strengthened its ties to school mathematics by jointly appointing an assistant area co-ordinator with the FMSP. The FMSP has a remit from the DfE to develop initiatives to address the gender imbalance in numbers of female students choosing to study (Further) Mathematics at A level. The department engages with this activity to support work aiming to encourage female students to study A level Further Mathematics (**AP-1.2**).

Departmental engagement with outreach is growing; it is an area for which the department is well-known both locally and nationally. In order to maintain and develop our work, in particular with the remit of encouraging girls to study mathematics, we must ensure that this activity is recognised within the workload model appropriately (**AP-6.4**).

7. Flexible working and managing career breaks

(i) Maternity return rate – comment on whether maternity return rate in the department has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

The provision of 52 weeks (39 weeks paid) is University policy. During the period 2012 to 2015, no members of staff took maternity leave. The Department is happy to support any member of staff who takes maternity leave. In the past decade, three academic staff have taken maternity leave, two of whom returned part-time using the flexible working agreement. One student took two periods of maternity leave during her PhD, returning part-time. With the support of her supervisor, she successfully completed her research and is now a PDRA in Bristol.

(ii) Paternity, adoption and parental leave uptake – comment on the uptake of paternity leave by grade and parental and adoption leave by gender and grade. Has this improved or deteriorated and what plans are there to improve further.

Table 10 shows the take-up of paternity leave in the Department. Everyone who applied was granted this leave.

Table 10: Paternity Leave 2012-2015

PATERNITY LEAVE UPTAKE	2012/13	2013/14	2014/15
Totals	2	2	1
Research	0	1	1
Teaching	0	0	0
Lecturer	1	0	0
Senior Lecturer	0	1	0
Reader	0	0	0
Professor	1	0	0
Other	0	0	0

Unlike cases for maternity leave, it is not immediately evident when staff would be eligible for paternity, adoption or parental leave so the department must be pro-active in advertising these options in order that everyone might benefit. This information will be put into the new starters pack for staff and added to the staff Moodle zone (**AP-6.1**).

(iii) Numbers of applications and success rates for flexible working by gender and grade – comment on any disparities. Where the number of women in the department is small applicants may wish to comment on specific examples.

There were three applications for flexible working in the last 3 years, all of them successful.

B) For each of the areas below, explain what the key issues are in the department, what steps have been taken to address any imbalances, what success/impact has been achieved so far and what additional steps may be needed.

(i) Flexible working - *comment on the numbers of staff working flexibly and their grades and gender, whether there is a formal or informal system, the support and training provided for managers in promoting and managing flexible working arrangements, and how the department raises awareness of the options available.*

Since 30th June 2014 all staff have the right to apply for flexible working after 26 weeks service, whether for family reasons or not. There is a formal system administered by HR for handling such requests. The Flexible Working Policy is posted on the HR web pages, and it includes the application and appeals procedure. The HoD raises awareness of the options available by emailing the whole department at least once every academic year. The scheme includes part-time working, working from home and flexi-working. We already have an informal departmental agreement that academic staff can work from home when not required on campus and this has worked very well for a long period of time. Teaching exemption forms are distributed annually and staff with flexible working agreements are able to specify times during the week when they are unavailable to teach. These requests have all been met over the past 3 years. The recent staff survey highlighted the supportive nature of the department but we must not be complacent. The recent departmental expansion risks problems with communication such that some staff may not become aware of relevant initiatives and information (**AP-7.1**).

(ii) Cover for maternity and adoption leave and support on return – *explain what the department does, beyond the university maternity policy package, to support female staff before they go on maternity leave, arrangements for covering work during absence, and to help them achieve a suitable work-life balance on their return*

The department's approach to long-term leave has been largely informal, with reduced teaching and administration loads on return agreed on a case-by-case basis with the HoD, and the handing over of supervision and administration roles usually arranged unofficially. We realise that, as the department grows, this is increasingly untenable. We will write a plan to support staff before they take maternity or paternity leave, including flexible working practices and arranging contingency plans in case duties (e.g. teaching) need to be covered at short notice. Supervision and administration roles will be formally taken over during any long-term period of leave. On return from caring leave, or long term sick leave, staff will be given a lower teaching load (a maximum of one course) in their first year and priority in the department's competitive travel budget. This will include paying for travel for a collaborator to visit Bath rather than expecting the staff member to travel themselves. These policies will all be written formally, circulated as part of a welcome pack, and stated clearly online (**AP-7.2**).

At the Departmental level, we are large enough that teaching can be reallocated easily. If the number of people not available to teach becomes too large, the HoD will apply to the University to have a teaching fellow appointed for some period.

To facilitate flexible working, some women and men with caring responsibilities have requested and obtained the facility to return to work at a lower percentage than full-time, to achieve work-life balance. In one recent case, a colleague returned to work from maternity leave on reduced hours and gained promotion.

(4459/5000 words)

Any other comments

Here we explain our response to the improvements suggested following our previous submission which complements information in Diagram 1.

Feedback on Nov 2014 submission: Things to improve

Would like to see	Reference to the response within this re-submission
Letter of endorsement from HoD	
Link between gender equality and the departmental strategy noted	Letter
Reference to resourcing DSAT activity	Letter; Section 2(b) - time allocated in workload model AP-6.4
Self assessment process	
Consideration of including postgraduate student representation on the SAT	Done: Section 2(a)
A department-wide survey having been undertaken	Section 2(b); PGR and PDRA done for previous submission AP-6.2 biennial surveys of staff (2017 onwards) and students (2018 onwards).
List of acronyms presented at start of document	Done
Picture of Department	
Creative ways to attract women to apply for professorships	Section3(b)(vii) and AP-3.2
Further narrative on staff	Throughout document
Clarity over the source of the sector comparison data.	Section 3(b)(ii)3 b) ii)
Three years of applicant data presented	Done
Detail on how SAMBa programme will work	Section 3(b)(iv)
More solutions to low PGR female	Section 3(b)(iii), AP1.2, 1.4, 1.5
All headline figures presented in the text at the start of the section	Done
Key Transition Points	
Consideration that support staff with caring responsibilities may need to take up career opportunities.	Section 6 b) iv)
More focus on key career transition points in department	Section 4(b)(ii)
More focus on teaching staff	Section 3(b)(viii), AP-5.1, 5.3
Utilisation of women in maths mailing lists	Section 4(b)(i)
Career Development	

Completion rate of appraisal, and feedback on its usefulness	Section 5(a)(i), AP-4.3
Local induction processes that build on the university provision, and a reflection on how it can be improved	Section 5a(ii), AP-6.1, 6.2
Actions on promotion, particularly as there is a serious gender gap. Section would have benefitted significantly from further qualitative data regarding how staff experience the department	HoD letter, Sections 3(b)(vii), 4(a)(ii), 4(b)(ii), 5(a)(i), AP-4. AP-6 responds to feedback on staff experience, and instigates biennial staff surveys Section 2(c) - advisory team to provide on-going input on staff experience to DEDC
Organisation and Culture	
Clearer plan about committee gender balance	Section 6(a)(i), AP-6.3
Staff opinions on culture assessed	Section 2(b), AP-6.2
Information on how transfer to open-ended contracts will be achieved	Section 4(b)(ii)
Flexibility and managing career breaks	
More in place regarding cover for maternity leave. Under what circumstances the department appoints teaching fellows	Section 7(b)(ii), AP-7.2
Further consideration of support for returners from long term leave	Section 7(b)(ii), AP-7.2
Wider caring responsibilities considered	Section 7(b)(i), AP-7.1
Paternity leave uptake considered in the context of the eligible population	Section 7(a)(ii) – data provided based on number requesting paternity leave.

Focus groups held in November 2015 to provide input to development of action plan: PGT/PGR;PDRAs & Research fellows; Teaching Fellows; Probationary staff and lecturers; Senior Lecturers & Readers; Professors; Outreach.

(466/500 words

6. Action Plan: May 2016 – April 2019

The core DEDC will be responsible for overseeing all actions and ensuring that the plan is carried out and success criteria are met. The person(s) listed in the table below will be responsible for implementing the relevant actions.

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
1 Student data					
1.1	UG data does not currently distinguish between BSc and MMath programmes	Collate enhanced UG data (including destination data) and identify any differences in gender balance across all degree programmes	Discussion of data in DEDC minutes, actions agreed to address any imbalances	February 2017	DEDC DoS team UG admissions tutor
1.2	Not enough female students studying A-level Further Mathematics	Deliver two outreach sessions per year to GCSE students in collaboration with FMSP. Involve a gender mix of UG students in the sessions	Sessions delivered. Data on female participation available	From September 2016	Outreach committee FMSP area co-ordinator
1.3	Female PGR numbers low	Carefully word all promotional material and feature case studies of former female PhD students on Department website (in line with current SAMBa practices)	Better than 35% female applicants (in line with sector average UG proportion)	Changes made by early 2017, improvement seen by 2018/19	PGR admissions tutors DEDC
		Run annual series of research talks to Bath undergraduates highlighting postgraduate opportunities and culture	At least 30% of UG attend a session in their first 2 years	From academic year 2016/17	DoLT SSLC
		Promote summer UG internships to Bath UG and externally as opportunity to try out academic research; encourage talented students to apply	Female participation in internships representative of UG cohort	By summer 2018	IMI coordinator of research internships

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
1.4	Female PGR acceptance lower than male	Interview candidates in batches where possible; aim to include gender mix of interviewees in batch. Ensure that interviewees meet a cross-section of the Department	Reduce gender discrepancy in applns:accepts ratio by at least 50%	Practice introduced from 2017, improvement seen by 2018/19	PGR admissions tutors
2. Postgraduate experience					
2.1	PG students want further training and information for their role in the department	Create online Moodle zone for PGR students populated with operational information about the department	Moodle zone created. PG student survey shows at least 75% satisfied with integration into department	Initiated in Summer 2016; all relevant information on site by summer 2017	Departmental Administrator PGR representatives on DEDC
		Develop tutor training programme in collaboration with PG representatives to support development of teaching aspects of an academic career	Programme developed. PG student survey shows at least 75% satisfied with tutor training	Programme in place by summer 2017; survey in 2018	DoLT PGR DoS
2.2	PG students are concerned about career development and work-life balance	Hold annual open forum for PGR students to discuss career development concerns, develop new research/career development initiatives	Open forum held annually. PGR survey shows increased satisfaction with career development	Annual event from 2016/17, survey in 2018	PGR DoS PGR representatives on DEDC
		Promote LMS Women in Mathematics events to all PGT/PGR students and support attendance at events by funding travel to them (the events themselves are typically free)	PGT/PGR attendance at events annually; positive feedback from those students attending	October 2016 onwards	DEDC

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
3. Staff recruitment					
3.1	Female application rates low	All adverts to use agreed template including statement on culture of department, in particular mentioning the possibility of flexible working	Applications to increase to at least 23% (sector average percentage of female academic staff)	March 2019	Recruitment champions
		Disseminate adverts via established networks, e.g., WISE, Daphnet	DEDC list of emails sent out	From October 2016	Recruitment champions, DEDC
3.2	Historical lack of female recruitment, especially at higher levels	Appointment of recruitment champions	Recruitment champions recruited for each departmental group	Summer 2016 and then as required	HoD Deputy HoD
		Systematic search for strong female candidates, asking research leaders worldwide for suggestions	List of potential female candidates for each advertised position	From October 2016	Recruitment champions
		Invite well-qualified female candidates to apply	Applications and percentage of interviewees in line with sector proportion of women	From October 2016	Recruitment champions
		Interviewees to meet a cross-section of the department	Acceptance in line with sector proportion of women	From October 2016	Recruitment champions
4. Staff career development and progression					
4.1	Lack of awareness of career development and progression opportunities	All staff given opportunity to request mentor	Staff survey shows at least 90% aware of opportunity	Policy in place Summer 2016; survey in 2017	Mentoring co-ordinator
		Train mentors and provide with information on career development and progression pathways	Sufficient numbers of staff trained in mentoring to meet demand	From October 2016	Mentoring co-ordinator
		Information on promotions guidelines and staff development opportunities to be collated and included in staff Moodle zone and welcome pack distributed to new starters	Staff survey shows at least 90% aware of development opportunities and promotions guidelines	Information collated and distributed by January 2017; survey in 2018	Department administrator DEDC

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
4.2	Ensuring that promotion occurs in a timely manner for all staff, taking into account the different routes that are available at the institution	Formation of departmental promotions committee to include mix of genders and career stages	Promotions committee formed, including at least one member of DEDC	Summer 2016	HoD Deputy HoD
		Promotions committee to identify potential candidates for promotion, encourage and help them to apply	Evidence in minutes of promotions committee	Summer 2017 onwards	Promotions committee
		Deputy HoD to discuss promotion options with all female SL/readers in the department in addition to any discussions undertaken as part of SDPR and, where appropriate, to actively support development of promotion cases	At least one female staff member promoted to professor	Discussions initiated Summer 2016, appointment by Summer 2018	Deputy HoD
		Personal action plans offered to all staff not simply those who made unsuccessful promotion applications	Staff survey shows at least 90% aware of opportunity	Summer 2017 onwards	Promotions committee
4.3	Variable approach to discussions about career progression during SDPR	Create departmental guidelines on including career progression discussions in SDPR interviews	Guidelines created and posted on staff Moodle zone	March 2017	HoD DEDC
		Disseminate information about guidelines to department	Feedback on SDPR forms indicate that discussions have taken place	Summer 2017 onwards	HoD
4.4	Low participation in institutional women's networks	Network events advertised to academic staff	Audit of staff indicate participation in events	March 2017	Chair DEDC
		Department to host an institutional network event	Event takes place and attended by staff from across campus	March 2019	DEDC
5. Fixed Term Staff					
5.1	Lack of systematic support for fixed-term teaching fellow staff	Create a single line manager for all teaching fellows	Line manager appointed	October 2016	HoD

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
5.2	No data on PDRA destinations; cannot tell whether we are contributing to leaky pipeline	Gather data on destinations of PDRAAs when they leave	Analysis of data by DEDC shown in minutes	October 2018	Departmental administrator DEDC
5.3	Lack of career development for fixed term staff	Create departmental guidelines for mentors of fixed term staff including details of minimum offering of career development opportunities Host annual early career workshop to support fixed-term staff in continuing their careers	Guidelines created and distributed to all new fixed term staff and their mentors Workshop delivered	Summer 2018 Spring 2017	Mentoring coordinator Director of research
6. Organisation and culture					
6.1	As the department has grown, it has been increasingly difficult to ensure good communication	Create a welcome pack for all new starters in the department (PGR, academic and non-academic staff)	All new starters receive pack. Staff and PG student survey show at least 75% feel they understand operation aspects of department	Pack created and distributed by Jan 2017; survey summer 2017	Departmental administrator DEDC
		Review staff Moodle zone to make it easier for staff to use and access information as they need it	DEDC minutes show annual review. Positive feedback via staff survey	Moodle staff zone overhaul by summer 2017; the updated annually	Departmental administrator DEDC
		Post approved minutes from all departmental decision making committees on Moodle staff zone in timely manner	Minutes available online and linked from Moodle staff zone	Within 2 weeks from approval, from October 2016	Departmental administrator Committee chairs

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
6.2	Want to provide best possible working environment within department	All department staff to complete training in Diversity in Workplace and Unconscious Bias	All staff completed training	Summer 2017 then ongoing	HoD
		Departmental staff participate in national events discussing diversity eg. LMS good practice scheme events	At least 1 staff member to attend a meeting each year	From January 2017	DEDC
		Create departmental activities for probationary staff that can be used in the Bath Course	Activities agreed with Staff Development and probationary staff engaged with them	Summer 2016 agree activities engagement from Oct 2016	Head of Staff Development HoD
		Introduce biennial surveys of all students and staff	DEDC to have survey data	2017 and 2019 staff surveys, 2018 student survey	DEDC DoS team
6.3	Need to ensure that all staff feel able to contribute to departmental governance and that female representation is at an appropriate level	Hold one open meeting of DLTQC, DEDC and Research Committee each year to which all staff are invited	Staff survey indicates at least 75% feel confident about how decision making committees work in department	From academic year 2016-17. Staff survey 2019	Chairs of committees
		Monitor committee membership by gender and maintain gender balance in line with departmental ratios	Gender balance on all departmental committees in line with departmental ratios	From academic year 2016-17	HoD
		As leadership roles in department become vacant, advertise internally indicating how they contribute to career development and progression	Emails sent out for each vacant role with invitation to apply and how to get more information	Summer 2016 onwards	HoD
6.4	Some dissatisfaction with workload model	Devise realistic contribution for different outreach activities	More staff willing to participate in outreach	Ongoing from 2016-17 academic year	HoGs Outreach committee

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
		Annual review of workload model with input from open staff meeting	Staff survey shows at least 10% improvement in satisfaction with model	2017 staff survey	HoGs
		Membership of DEDC recognised in workload	Workload to include DEDC membership	From academic year 2016-17	HoGs
6.5	Need to ensure departmental seminars support Athena SWAN principles	Record seminars where possible, and if the speaker agrees, using institutional Panopto system and make available online	Staff and PG student surveys show at least 90% satisfied with seminars fitting around working pattern	October 2016 onwards; survey in 2017	Departmental administrator
		Encourage seminar organisers to consider the proportion of female speakers at departmental seminars	Proportion of female speakers at least in line with sector average female staff	October 2016 onwards	DEDC
6.6	Desire for more social events	Introduce summer social event, open to staff and their family members	Event takes place annually	From Summer 2016	DEDC
7. Flexible working					
7.1	Staff unaware of flexible working opportunities	Annual reminder of provision in departmental staff meeting and email	Staff survey indicates that 90% of respondents aware of scheme and what it offers	Summer 2017	DEDC
7.2	Need to formalise department support for staff who take long term leave	Write flexible plan to support female staff during pregnancy before they take maternity leave, including flexible working practices and arranging contingency plans for short notice cover of duties	Plan is agreed by DEC	December 2018	DEC

	Issue	Action	Success Criteria	Timescale	Person(s) responsible
		When a colleague takes caring leave the department will ensure than any supervisory roles are formally taken over	Records kept by DEDC	From October 2016	DEDC HoD
		On return from maternity leave, or long term sick leave, staff will be given a lower teaching load in the first year (max one course)	Policy clearly stated on Moodle staff zone and in welcome pack. Positive feedback from returners	From October 2016	HoGs
		The department will give priority to caring leave returners in the travel budget. This will include paying for travel for a collaborator to visit Bath rather than expecting the staff member to travel	Priority clearly stated on Moodle staff zone and in welcome pack	From October 2016	HoD