



## **Athena SWAN Silver department award application**

**Name of university:** The University of Birmingham

**Department:** Chemistry

**Date of application:** 28/4/2016

**Date of university Bronze Athena SWAN award:** November 2014

**Contact for application:** Prof. Zoe Pikramenou

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## 1. Letter of endorsement from the head of department: maximum 500 words

An accompanying letter of endorsement from the head of department should explain how the SWAN action plan and activities in the department contribute to the overall department strategy and academic mission.

The letter is an opportunity for the head of department to confirm their support for the application and to endorse and commend any women and STEMM activities that have made a significant contribution to the achievement of the departmental mission.

Abbreviations	
APPS	Academic Policy, Procedures and Strategy Committee
AVD	Applicant Visit Day
Dep HoS	Deputy Heads of School
DoE	Director of Education
DTC	Doctoral Training Centre
E&D	Equality and Diversity
EPS College	College of Engineering and Physical Sciences
HoS	Head of School
PDR	Performance and Development Review
PG	Postgraduate
PGR	Postgraduate Research
PGT	Postgraduate Taught
POD	People and Organisational Development
QA	Quality Assurance group
RSLC	Research School Liaison Committee
SSLC	Undergraduate Student-Staff Liaison Committee
UG	Undergraduate
UoB	University of Birmingham

## 2. The self-assessment process: maximum 1000 words

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### 2a) A description of the self-assessment team (SAT): members' roles (both within the department and as part of the team) and their experiences of work-life balance.

The SAT comprises members of the School with diverse expertise of School life. It includes three postgraduates who are specifically helping to address the key career transition point to postdoctoral research, as identified in our Bronze submission. In 2012, the team expanded its remit to include all E&D issues.

School of Chemistry Athena SAT	
<b>Zoe Pikramenou (Professor, Chair)</b>	Zoe champions E&D matters for the School at College and University levels. She has been involved in many aspects of School life through leading teaching and research units. She is married with three children.
<b>Liam Cox (Senior Lecturer).</b>	Liam is currently Teaching Convener for Organic Chemistry and brings his expertise as Director of PG and UG Admissions. He represented UoB at the 4th EU Gender Summit in Brussels in 2014. He is single.
<b>Bryan Fryer (Operations Manager).</b>	Bryan has been involved with setting up and analysing the staff and student surveys. He previously worked in outreach, schools liaison and on widening participation projects.
<b>Richard Grainger (Senior Lecturer).</b>	Richard is currently a member of the undergraduate Admissions team. He is married with two children.
<b>Roy Johnston (Professor).</b>	Roy is currently Dep HoS and has been Director of Research and Director of the Chemistry Graduate Research School. He is married with two children.
<b>Greg O'Callaghan (Postgraduate)</b>	After graduating in 2013, Greg remained at Birmingham to carry out postgraduate studies.
<b>Shani Osborne (Postgraduate).</b>	Shani champions E&D issues to the RSLC. As a STEMM Ambassador she recently secured RSC funding for an outreach event which will allow students from low-achieving schools in the area to spend time in the School of Chemistry.
<b>Anna Peacock (Lecturer).</b>	Anna brings her experience as a Research and Inorganic Teaching unit lead. Anna is married and for many years had to sustain a long-distance relationship.
<b>Jon Preece (Professor).</b>	During his tenure as HoS (since 2011), Jon has taken a special interest in growing the School's outreach activities and works closely with the RSC West Midlands Chemistry Teachers Centre. Jon has a three-year-old son and will marry in August.
<b>Holly Roberts (Postgraduate).</b>	Holly is a married mother of a two-year-old child. As a STEMM Ambassador and member of the RSLC she promotes work-life balance to other students and staff.

<b>Natalie Rowley (Senior Lecturer).</b>	Natalie is currently Head of Quality Assurance and has led innovation in teaching in the School. Recently, she has faced a challenging health issue, which has caused a temporary disability, resulting in her having to adjust her working conditions accordingly.
<b>Iain Wilkinson (E&amp;D Administrator)</b>	Iain joined UoB in 2014. He takes the minutes of meetings and assists in communication and organisation matters.

**2b) An 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.**

The SAT meets five times a year as an E&D Committee to (i) oversee the Athena SWAN Bronze Award actions, (ii) work towards the Silver Award, and (iii) develop policies under the broader E&D agenda. The Team reports to the APPS and School Committees, the College E&D and the University AthenaSWAN Committees. The Chair is a member of the APPS and Promotion Committees.

The monitoring of specific actions and initiation of new ones has been achieved by distributing tasks amongst the Team, and by allocating specific actions (relating to the website, UG, PG and postdoctoral matters and outreach) to those members of the School with the appropriate expertise. SAT members have prepared, distributed and analysed UG, PG and staff questionnaires.

UGs have provided feedback via the SSLC, biweekly meetings organised by the Head of Teaching Administration and an appointed UG E&D representative. PG and postdoctoral researchers have provided feedback through the RSLC. Owing to the small number of postdoctoral researchers, a focus group, facilitated by a member of POD (external to the School), helped to identify specific issues from this cohort. The Chair of E&D now delivers an Athena SWAN information session as part of the School's annual PG symposium whilst PG E&D committee members hold informal feedback sessions through monthly regular coffee mornings. The feedback received from all channels has informed the actions proposed in this Silver application.

External visitors to the School have shared good practice with members of the E&D team through badged E&D School seminars [Prof. Yellowlees (RSC President, 2014), Prof. Ingham (Leeds, 2014), Prof. Walton (York, 2015)], which are advertised to all Schools, as well as University-wide E&D events [Prof. Donald, (Cambridge, 2013), Prof. Hill (York, 2015)].

At an RSC AthenaSWAN event in 2014, the E&D Chair gave a presentation entitled, "Building Strong Foundations: Our CASE for Bronze" and with another SAT member (Peacock) led discussions on E&D across UK Chemistry departments. In 2013-14 the E&D Chair joined a University-wide staff group, established to oversee actions for "Advancing Equality in Employment" and has helped to develop a new University staff questionnaire. In 2014 the School's Outreach Officer attended an event "Promoting STEM Subjects to Girls in Primary Schools" and provided feedback to SAT and the School. A member of SAT (Cox) attended the 4th EU Gender Summit in Brussels in 2014 and provided feedback which was used by UoB's EU research office.

All of these activities have led to a conduit for disseminating good practice to the Chemistry SAT. As well as sharing experiences with other Universities the SAT has initiated new policies and influenced senior figures and committees at UoB (Provost, HR) to them to campus-wide E&D policies (e.g shortlisting, return from maternity leave, provision of breastfeeding room).

**2c) 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.**

Since our Bronze application there has been a 60% change in SAT membership. SAT membership will continue to be reviewed and we will encourage new members including staff from professional services and postdoctoral researchers to join, and contribute while retaining the expertise of existing members. The team will meet bi-monthly to monitor the actions of the plan, following the pattern established in the Bronze Award in which SAT members champion particular actions. Feedback from established questionnaires at all levels will be discussed more frequently through informal “themed” meetings (**ACTION D6**) and monitored through the School’s formal reporting routes. Progress will also be monitored by the University SAT.

(994 words)

### 3. A picture of the department: maximum 2000 words

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

The School of Chemistry is part of the College of Engineering and Physical Sciences (EPS). There are 445 Chemistry undergraduates and 138 postgraduates, with 40 of these comprising an interdisciplinary Doctoral Training Centre in the Physical Sciences for Health (*SciPhy4Health*) based in and led by Chemistry and 10 in the postgraduate taught programme *Drug Discovery & Medicinal Chemistry*. Twenty professional services staff (10 male, 10 female) across teaching, research and administration support 24 research-active academic staff (6 female, 18 male) and six teaching-focused academic staff (2 female, 4 male).

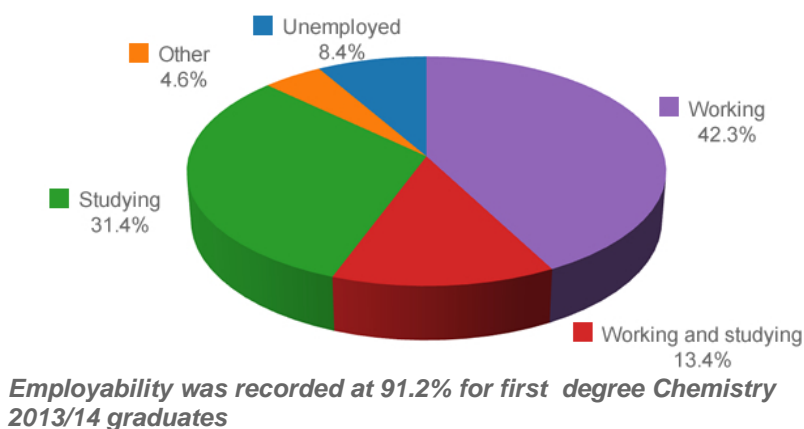
The academic staff has a relatively young age profile (all but four under 50 years of age) and a high proportion of academic staff at the early career stage reflecting a raft of 6 recent appointments. Female academic staff numbers were historically low - 3 (13%) in 2004 - and have increased significantly to 9 (27%) in 2016 including a recent appointee to cover for a member of staff on a fellowship. The School underwent a significant structural staffing change in 2013, when six academic staff elected to become teaching-focused, reflecting the School's commitment to enhance the educational offer to students. These six experienced members of staff undertake major administrative roles,.

The School adopts a professional, friendly and open approach to prospective students, which is regularly highlighted in the feedback provided by UCAS applicants and their parents / guardians. The School believes that maintaining a good working relationship between students and staff is integral to student success, which is reflected in

exceptional levels of student satisfaction: the National Students Survey ranked Birmingham Chemistry 1<sup>st</sup> from all RG Chemistry departments for overall student satisfaction in 2013 and 2014. We rank 6<sup>th</sup> amongst RG Chemistry departments in graduate employability (2015).

Recently, young academic, Zoe Schnepf was awarded the EPS College Outstanding Teacher Award for her innovative methods in tutorials and lectures, and the *SciPhy4Health* DTC academic and support staff received the 2015 University Award for Research Informed Teaching.

The staff have research strengths across a broad spectrum of activity with extensive collaborations with Chemical Engineering, Physics, Biosciences and the Medical School. More than 95% of the



School's outputs rated as internationally excellent or world leading in the recent REF, placing the School 8th out of the 37 UK Chemistry submissions.

All staff have recognised that AthenaSWAN values promote policies which allow clear communication lines, and work to support female students and researchers through their studies at Birmingham. There is a strong collegiate feeling amongst staff, which has sustained a supportive environment where there is much consideration for others in challenging situations including health issues or when balancing career with family life.

I took parental leave and my School responsibilities and commitments were rearranged and met by my colleagues. I have since also covered for colleagues who have needed to rearrange teaching for a wide range of reasons. The positive attitude of both managers, administrators and colleagues towards such matters is hugely supportive and engenders a strong team ethos amongst staff which is beneficial to the entire working environment.

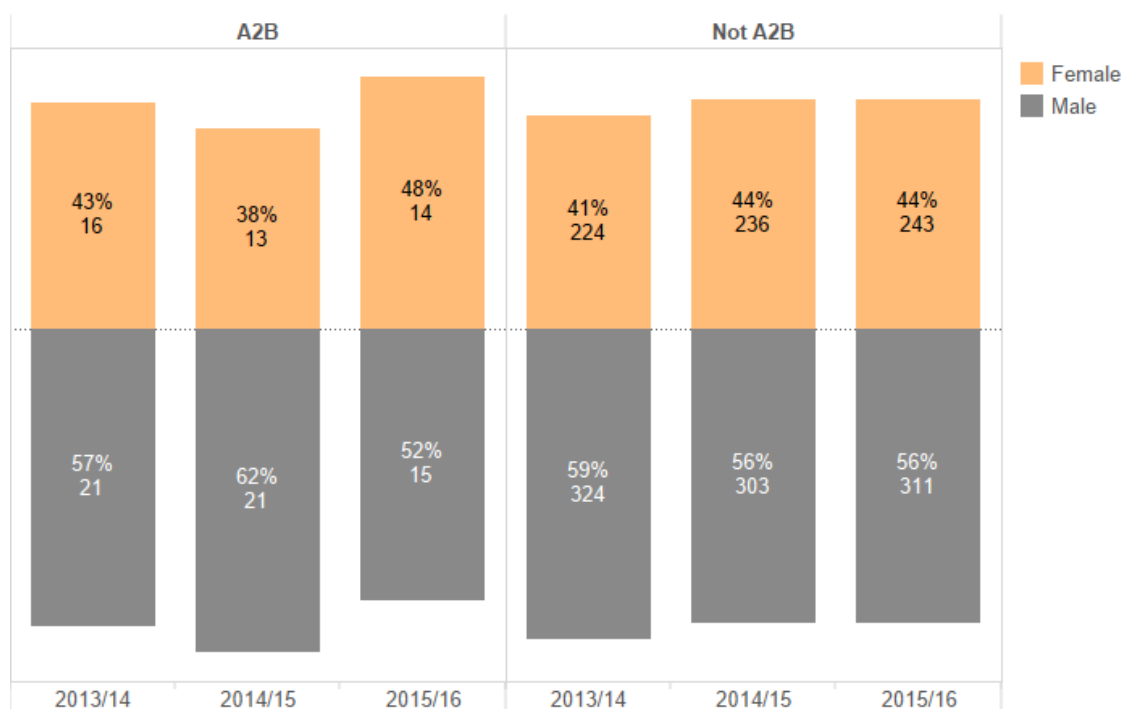
*Adrian SL*

Shani, MSci UG, at an Energy Summer School, European Campus of Excellence, in Switzerland, supported by tutors to receive the place in 30 EU students.

## Student data

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

UoB's fair access scheme (Access2Birmingham, **A2B**), targets students in the Greater West Midlands from families with little or no experience of Higher Education. The numbers have risen to nine in 2015. The female proportion of the A2B student population was disappointing low (28%) in 2012 but that has been rectified (48%; Figure 1) following a sustained effort to highlight the scheme to prospective applicants in all our Chemistry Admissions activities.



**Figure 1. A2B Student population and non-A2B student population in the School as a comparison.**

The University's Outreach Office continues to establish relationships with new feeder schools and FE colleges across the region. We will continue to publicise the scheme widely, including more website pictures / soundbites / short interviews (podcasts) of A2B students (male and female from diverse ethnic backgrounds) who are enrolled on our degree programmes. **ACTION A1.**

The School contributes to a College-wide Science Foundation Programme.

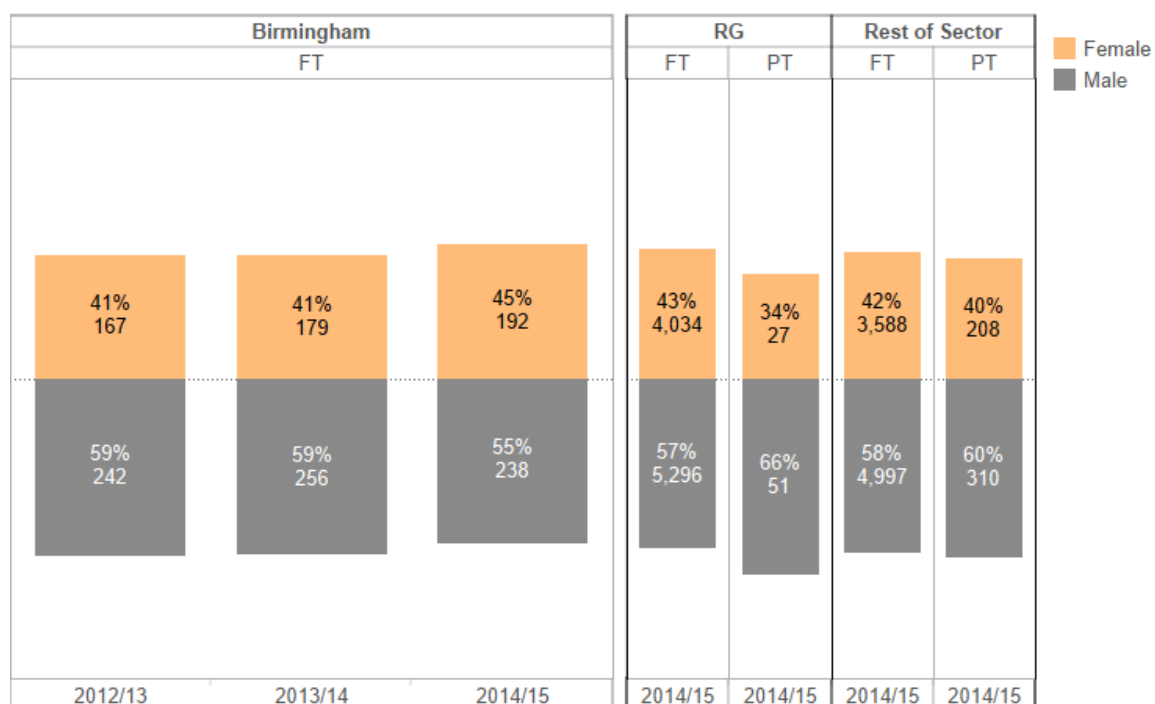
### (ii) Undergraduate male and female numbers – full and part-time.

**Ratio of course applications to offers and acceptances by gender.**

**Degree classification by gender.**

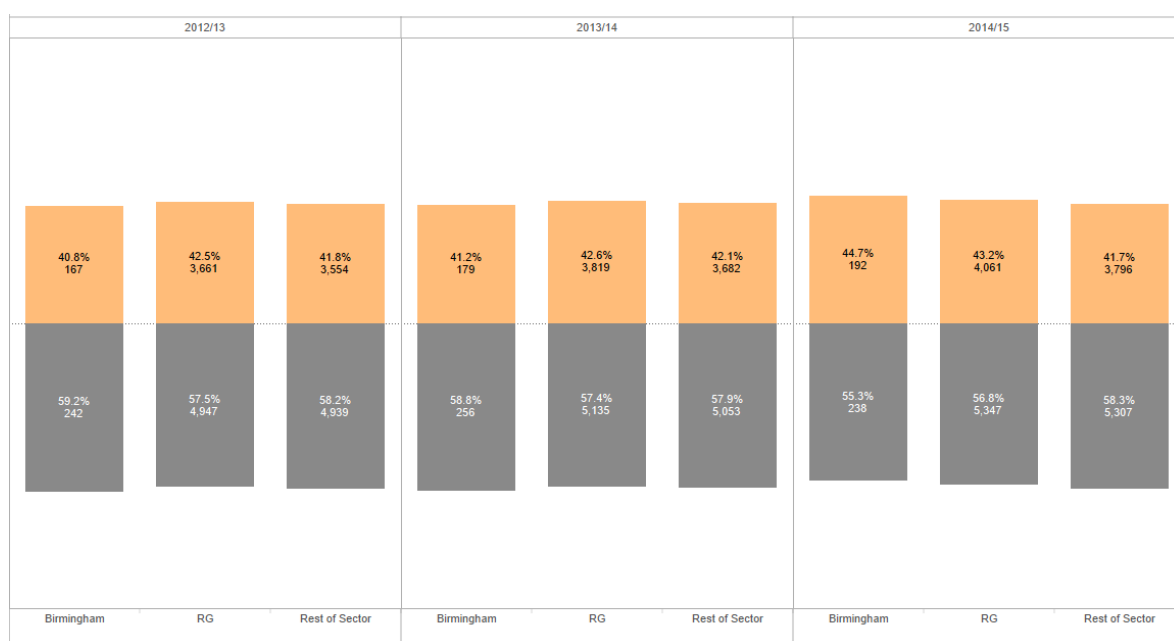
All of our current UG students are enrolled as full-time (FT) students (Figure 2), 2014/15 data reveal 0.7% of all female students in the RG and 5.5% of all female students in the rest of the sector are registered for part-time Chemistry degrees. We have received no requests for PT degrees.





**Figure 2. Part-time (PT) and Full-time (FT) UG student numbers; comparison with the Russell Group (RG) and the rest of the sector (HESA data).**

Across the sector, girls are less likely to study Chemistry than boys (Figure 3). Since 2012 the Birmingham Chemistry female population has moved from slightly below the sector average to slightly above in response to some of our changes to our website publicity material to highlight female role models (news and images).

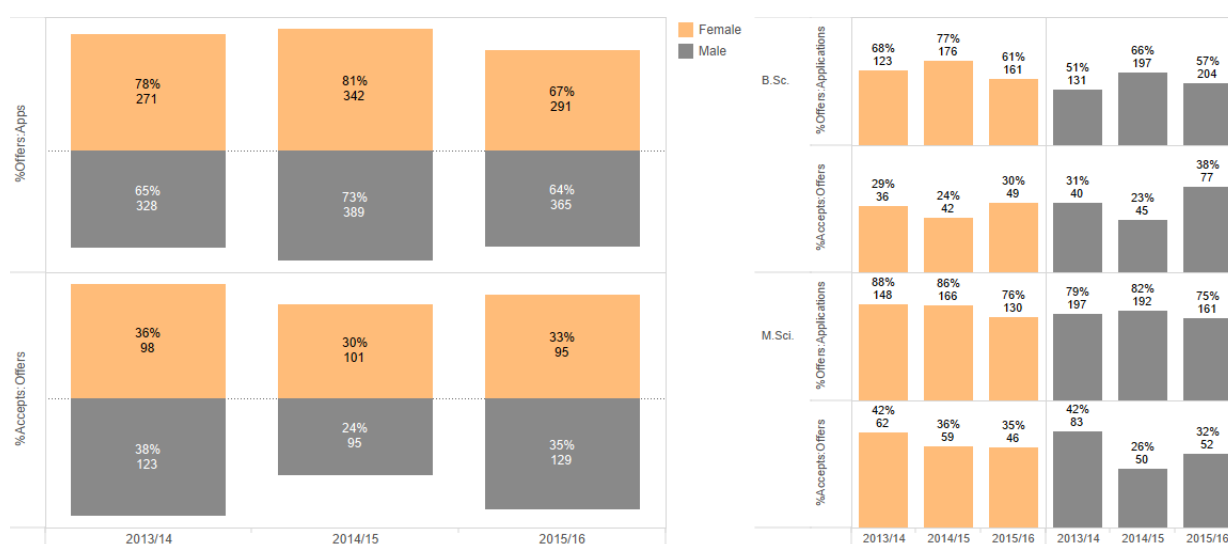


**Figure 3. UG student numbers in Chemistry at Birmingham (UoB), comparison with Russell group (RG) and rest of sector (HESA data).**

- We plan to further develop the website with podcasts of staff and postgraduates and case studies from students with different backgrounds. **ACTION A1.**

### UG applications, offers and acceptance rates

Admissions data is presented in Figure 4 and BSc vs MSci applications in Table 1. Female offers/applications is higher than male offers/applications across the period: a higher proportion of female applicants satisfy our entry requirements and are therefore made offers.



**Figure 4. UG offer and acceptance rates by gender and year of entry (%).**

All applicants who are likely to satisfy the School's entry requirements are invited to attend an Applicant Visit Day (AVD). During AVDs, great care is taken to involve female members of the academic staff and employ female undergraduate and postgraduate students for discussions and as tour guides. Applicants frequently mention their positive experience of University Open Days and the friendliness of the staff as influencing their decision to apply to Birmingham.

Acceptance / offer ratios provide a measure of conversion. There is little difference in conversion rates between males and females .

**Table 1. Number of UG applications for BSc and MSci degrees, comparison by gender.**

	2013/14		2014/15		2015/16	
	Number	%	Number	%	Number	%

<b>BSc</b>	<b>Female</b>	<b>181</b>	<b>41</b>	<b>229</b>	<b>43</b>	<b>266</b>	<b>43</b>
	Male	259	59	298	57	360	57
<b>MSci</b>	<b>Female</b>	<b>168</b>	<b>40</b>	<b>192</b>	<b>45</b>	<b>171</b>	<b>44</b>
	Male	248	60	235	55	214	56
<b>Total</b>		856		954		1011	

MSci degrees are recommended for those wishing to pursue research careers in Chemistry. Therefore, we monitor BSc vs MSci preferences as this decision has an impact on early career choices (Table 1). The observed decline in the number of MSci applications is primarily a result of a relatively large reduction in MSci applications from males (8% reduction over the period) whilst female MSci applications have seen a smaller decline (3% reduction over the period). However the reduction in MSci applications, especially for males, has been compensated to an extent by an increase in the number of BSc to MSci programme transfers in 2014 and 2015, taking place in students' second year of study (Table 2).

**Table 2. Transfers from BSc to MSci programmes and from MSci to BSc programmes by gender.**

		2013	2014	2015
<b>BSc to MSci</b>	<b>Female</b>	<b>1</b>	<b>11</b>	<b>4</b>
	Male	0	14	10
Total BSc to MSci transfers		1	25	14
<b>MSci to BSc</b>	<b>Female</b>	<b>10</b>	<b>18</b>	<b>7</b>
	Male	12	14	3
Total MSci to BSc transfers		22	32	10
Total course transfers		23	57	24

In the last few years we have monitored admissions data for gender preferences in applications made to *Single-Honours Chemistry* compared with Major/Minor Programmes (*Chemistry with Pharmacology* and *Chemistry with Business Studies*). This was identified in the Bronze application as showing a gender difference. Across the current period, a larger proportion of applications to both of our major/minor programmes came from females than was the case for applications to our single honours programmes; however, we are not seeing a significant shift in the numbers of females applying for these two programmes (Table 3).

**Table 3: Number of UG applications for *Single Honours Chemistry (Other)*, and *Major/Minor Courses: Chemistry with Pharmacology (Pharm)* and *Chemistry with Business (Bus)*.**

		2013/14		2014/15		2015/16	
		Number	%	Number	%	Number	%
<b>Other</b>	<b>Female</b>	<b>298</b>	39	<b>361</b>	<b>43</b>	<b>352</b>	<b>41</b>
	Male	471	61	469	57	499	59
<b>Pharm</b>	<b>Female</b>	<b>31</b>	58	<b>43</b>	<b>49</b>	<b>62</b>	<b>56</b>
	Male	22	42	44	51	48	44
<b>Bus</b>	<b>Female</b>	<b>20</b>	59	<b>17</b>	<b>46</b>	<b>23</b>	<b>46</b>
	Male	14	41	20	54	27	54

- We will continue to analyse our conversion rate and correlate this with outreach efforts in order to gain an understanding of trends to influence further actions and priorities. We will introduce gender monitoring in feedback questionnaires for AVDs, outreach events and open days **ACTIONS A2, A3, A4.**
- With a support we will develop our careers guidance in Years 1 and 2 to ensure that student make an informed choice of BSc/MSci degree. **ACTION A5**

### **UG Degree Classification**

The overall picture does not show any gender variation, apart from 2013/14 when a smaller percentage of females achieved a 1<sup>st</sup> and 2i classification at MSci level (Figure 5). We will analyse module performances by gender. **Any areas of the course which show gender imbalance will be investigated and additional support/modifications will be introduced where needed. ACTION A6.**

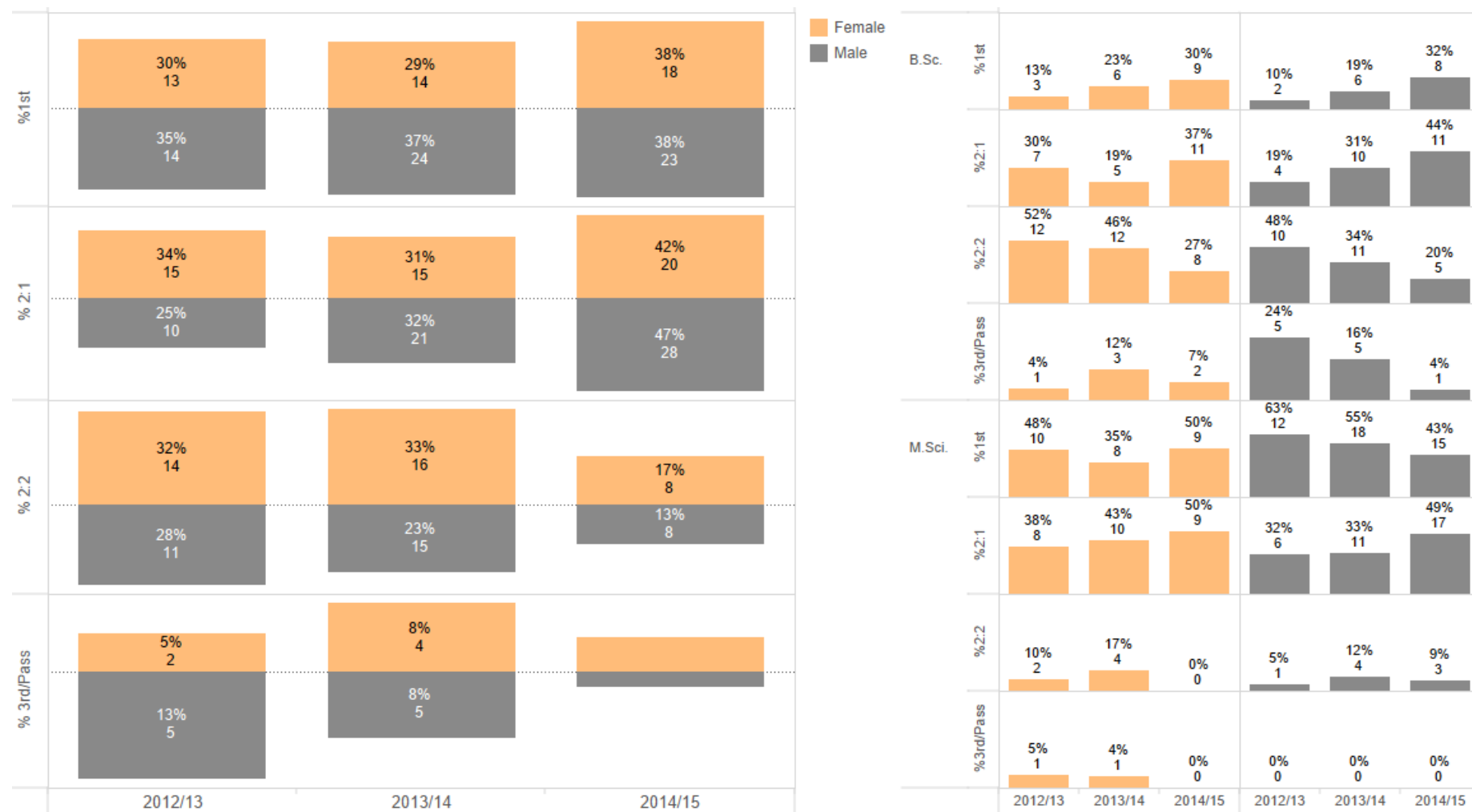
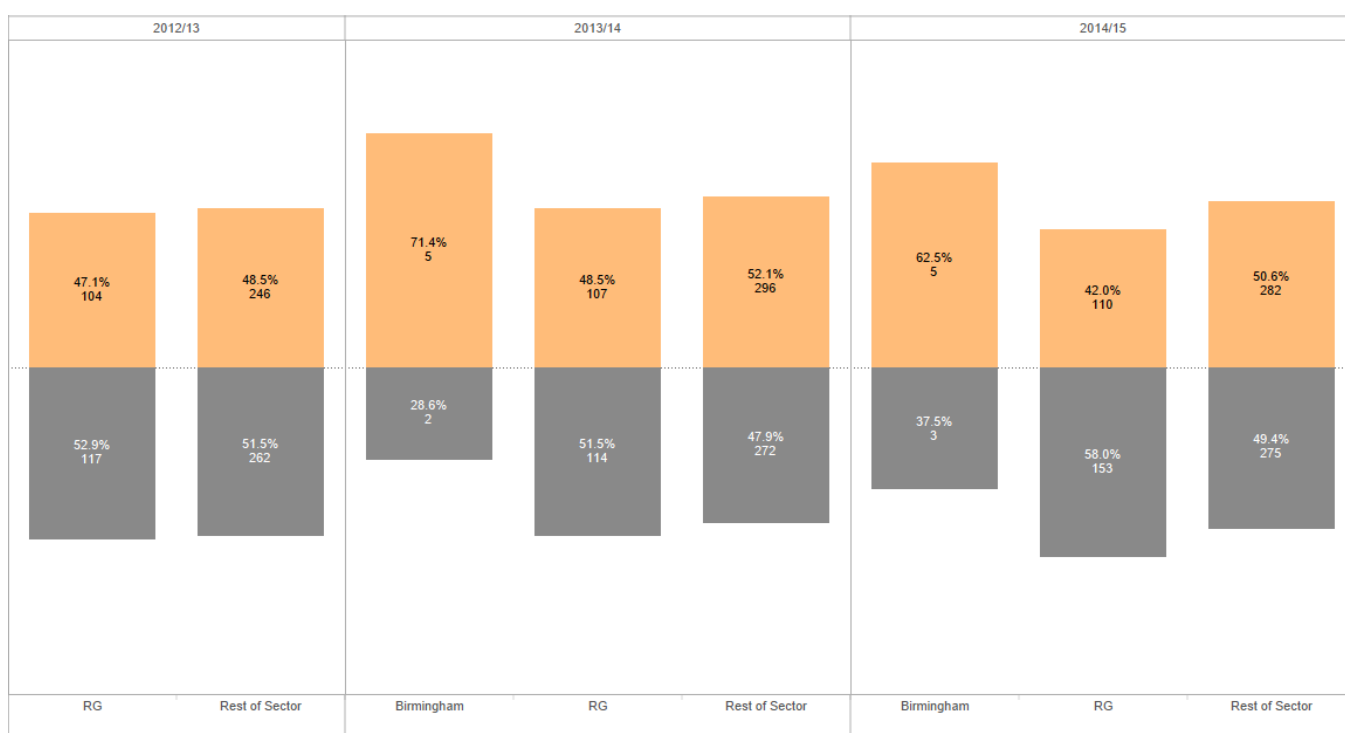


Figure 5. UG degree classification data by gender(left) and BSc, MSci classification data by gender (right)

- (iii) **Postgraduate numbers on taught courses and applications received.**  
**Ratio of course applications to offers and acceptances by gender.**  
**Degree completion by gender.**

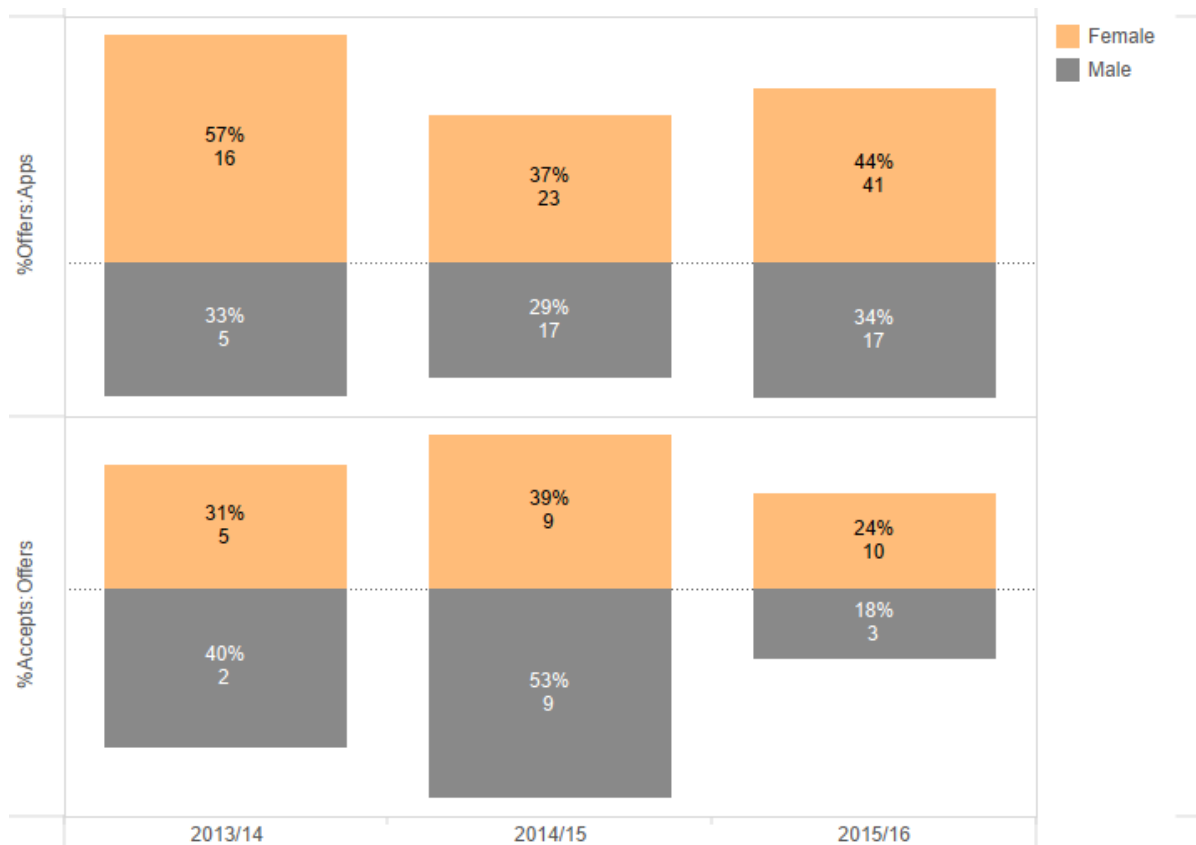
Our PGT student numbers are small (Figure 6) but we will continue to monitor these data and analyse the current high percentage of female students in comparison with PGR and career destinations as established in one of the Bronze application actions. Applications from females are high (Table 4) as is their proportion of offers/applications and conversion rate acceptances/offers (Figure 7).



**Figure 6. PGT student numbers, comparison with Russell group (RG) and rest of sector (HESA data).**

**Table 4. Number of applications for PGT programmes, comparison by gender.**

		2013/14		2014/15		2015/16	
		Number	%	Number	%	Number	%
PGT	Female	28	65	62	51	94	65
	Male	15	35	59	49	50	35



**Figure 7. PGT offer and acceptance rates by gender and year of entry (%).**

MSc degree completion and classification numbers (Figure 8) are currently too small to identify any trends but we will continue to monitor the progress of MSc students by gender and initiate actions as needed.

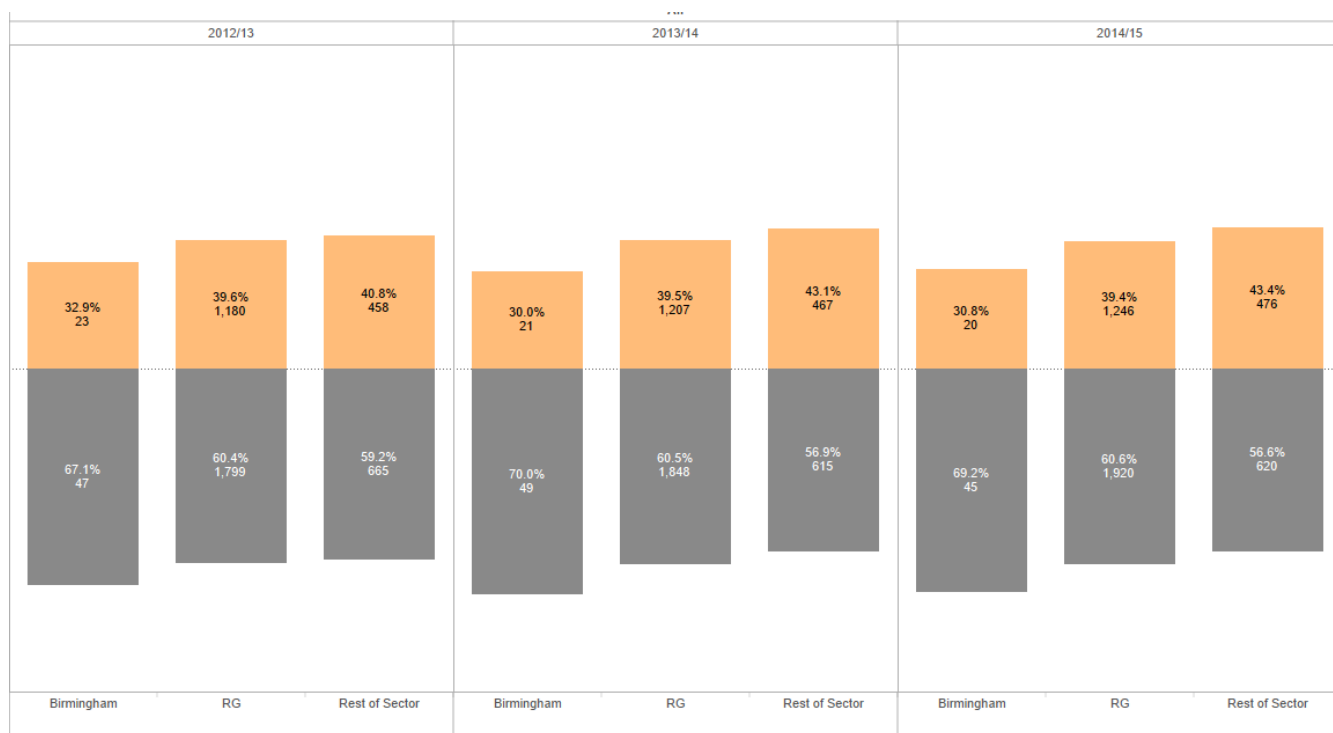


**Figure 8. PGT degree classification by gender (%).**

(iv) **Postgraduate numbers on research degrees**  
**Ratio of course applications to offers and acceptances by gender.**  
**Degree completion**

In the indicated period we only have 2 male part-time students in 2012/13; all other students are full-time.

Analysis of the non-DTC PGR student population data (Figure 9) shows a percentage of female students (average 31%) lower than the RG (40%) or the rest of the sector (43%). However when the DTC is factored in the percentage of females rises to 44%. (The DTC although run from and by Chemistry is not classified in HESA-returned data under Chemistry, owing to the different contributions from other Schools in the College and the distinct nature). The DTC PhD programme experience appears more attractive to female applicants; analysis of the School-based PG questionnaire (initiated from one of the actions in our Bronze application) supports this and our mixed portfolio of DTC and traditional PhD is thus important. A comparison of the PGR data for Home/EU vs Overseas students (Figure 10) shows that the lower percentage of female students relates to Home/EU recruitment.



**Figure 9. Overall PGR student numbers, comparison with Russell group (RG) and rest of sector (HESA data).**



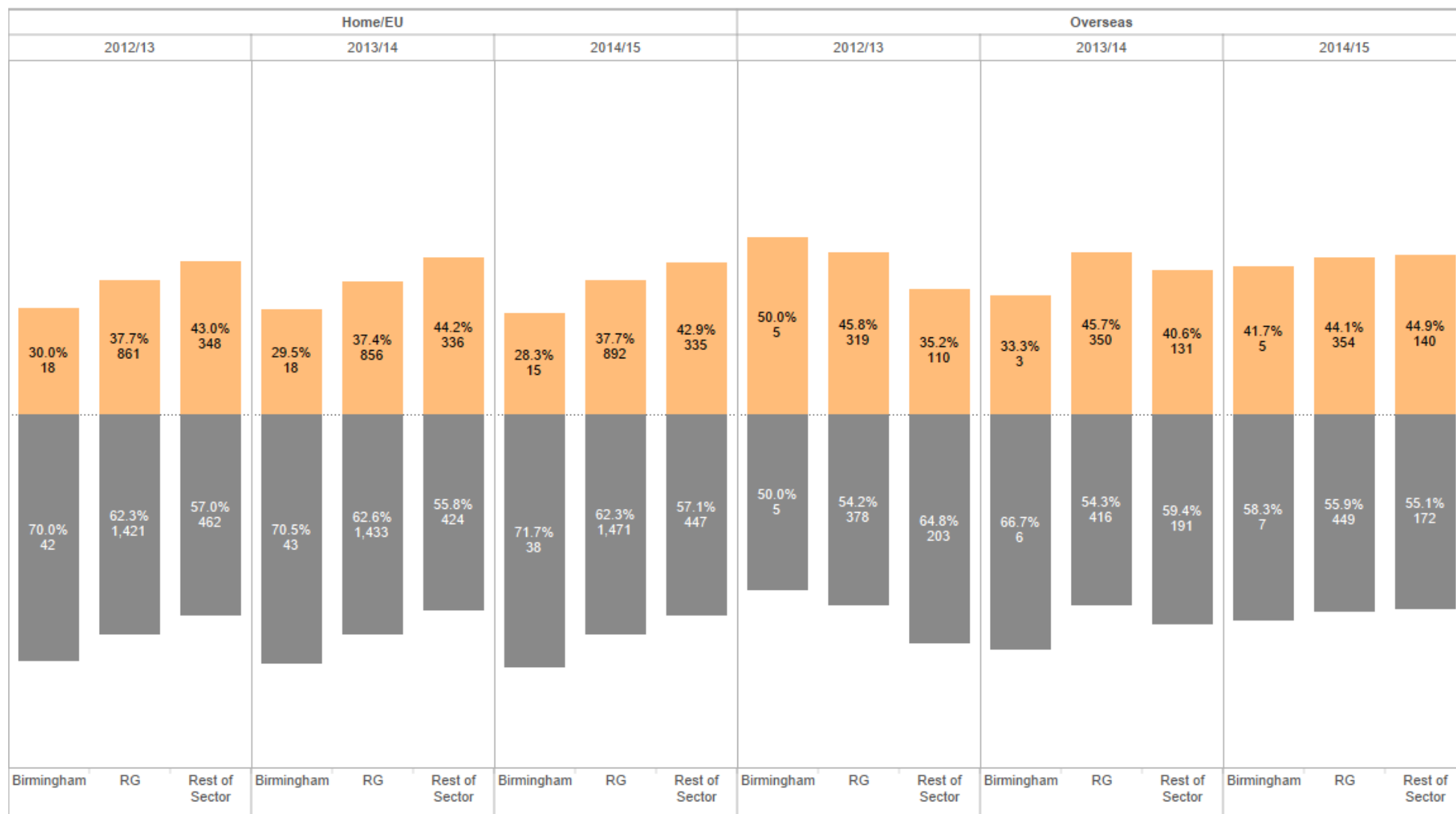
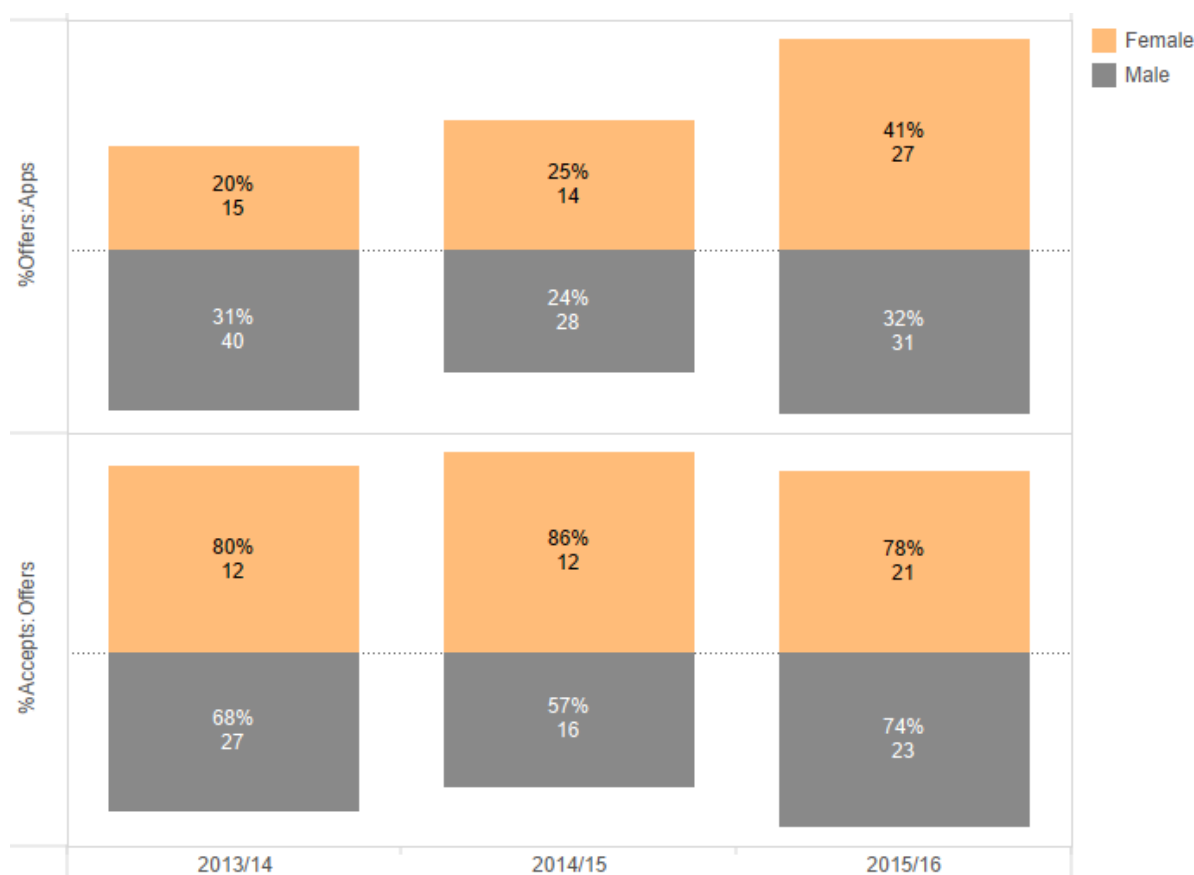


Figure 10. PGR student numbers Home/EU and Overseas, comparison with Russell group (RG) and rest of sector (HESA data).

**Table 5. PGR population data (UoB) analysed for PhD in DTC and Chemistry for gender balance.**

		2013/14	2014/15	2015/16
		% (numbers)	% (numbers)	% (numbers)
<b>PhD Chemistry</b>	<b>Female</b>	<b>30 (25)</b>	<b>31(25)</b>	<b>33 (28)</b>
	Male	70(59)	69(55)	67 (57)
<b>PhD DTC</b>	<b>Female</b>	<b>50 (24)</b>	<b>52(52)</b>	<b>60 (24)</b>
	Male	50 (24)	48(48)	40(16)

The overall picture of PGR admissions in the recorded period (Figure 11) shows improvements in the proportion of female applications (stimulated by more extensive promotion of our programmes, Table 6) and high accepts/offers ratios for females.



**Figure 11. Overall PGR offer and acceptance rates by gender and year of entry (%).**

**Table 6. PGR data by different programme, offer and acceptance rates by gender and year of entry (%).**

			2013/14		2014/15		2015/16	
			Num ber	%	Num ber	%	Num ber	%
<b>PhD Chemistry</b>	Applications	<b>Female</b>	<b>43</b>	<b>33</b>	<b>35</b>	<b>30</b>	<b>44</b>	<b>41</b>
		Male	87	67	81	70	63	59
	Offers/applicati ons	<b>Female</b>		<b>14</b>		<b>26</b>		<b>30</b>
		Male		34		22		35
	Accepts/Offers	<b>Female</b>		<b>100</b>		<b>78</b>		<b>100</b>
		Male		67		61		86
<b>PhD DTC</b>	Applications	<b>Female</b>	<b>19</b>	<b>35</b>	<b>15</b>	<b>38</b>	<b>15</b>	<b>46</b>
		Male	35	65	24	62	18	54
	Offers/applicati ons	<b>Female</b>		<b>37</b>		<b>27</b>		<b>73</b>
		Male		26		21		33
	Accepts/Offers	<b>Female</b>		<b>71</b>		<b>100</b>		<b>64</b>
		Male		78		60		67
<b>MSc (Research)</b>	Applications	<b>Female</b>	<b>10</b>	<b>67</b>	<b>5</b>	<b>31</b>	<b>4</b>	<b>31</b>
		Male	5	33	11	69	9	69
	Offers/ applications	<b>Female</b>		<b>20</b>		<b>20</b>		<b>75</b>
		Male		20		36		33
	Accepts/Offers	<b>Female</b>		<b>50</b>		<b>100</b>		<b>33</b>
		Male		0		50		0
<b>M.Res.</b>	Applications	<b>Female</b>	<b>3</b>	<b>75</b>	<b>1</b>	<b>100</b>	<b>3</b>	<b>30</b>
		Male	1	25	0	0	7	70
	Offers/ applications	<b>Female</b>		<b>0</b>		<b>0</b>		<b>0</b>
		Male	0	100		0		0
	Accepts/Offers	<b>Female</b>	<b>0</b>		<b>0</b>		<b>0</b>	

To expand further the female PG population, we need to increase the number of female applicants. We will undertake the following activities:

- Highlight academic careers to UG students with female role models, in order to promote academic pathways. **ACTION C4**
- Improve publicity of Chemistry PhD opportunities by introducing student podcasts “What’s it like to do a PhD?” on website, content and location of adverts. **ACTION A7**
- advertise the School-event more widely and revise presentations to include research themes and highlight female role models. **ACTION A7**

- investigate any preference of research areas in the School by gender to inform recruitment activities; use focus groups of female and male final-year UGs to identify any barriers affecting students' decisions to make a postgraduate application. **ACTION A8**

PGR completion rates (Figure 12) are closely monitored. Non-completions are most commonly withdrawals due to ill health and no gender bias is observed.

- To ensure further support during completion of the degrees, in addition to existing PG progress monitoring and support activities, we will introduce a pool of mentors and monitor mentor uptake. **ACTION C11.**

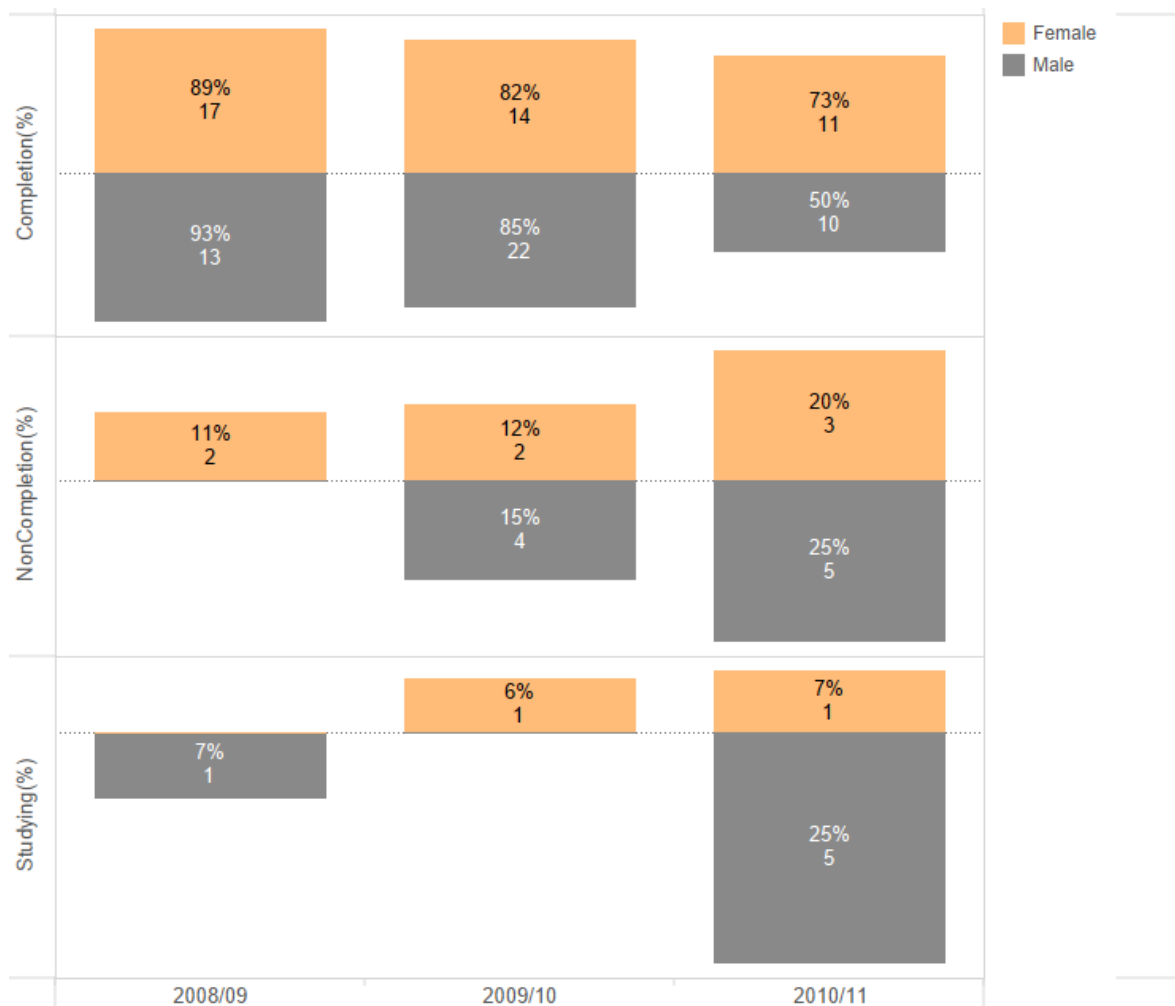
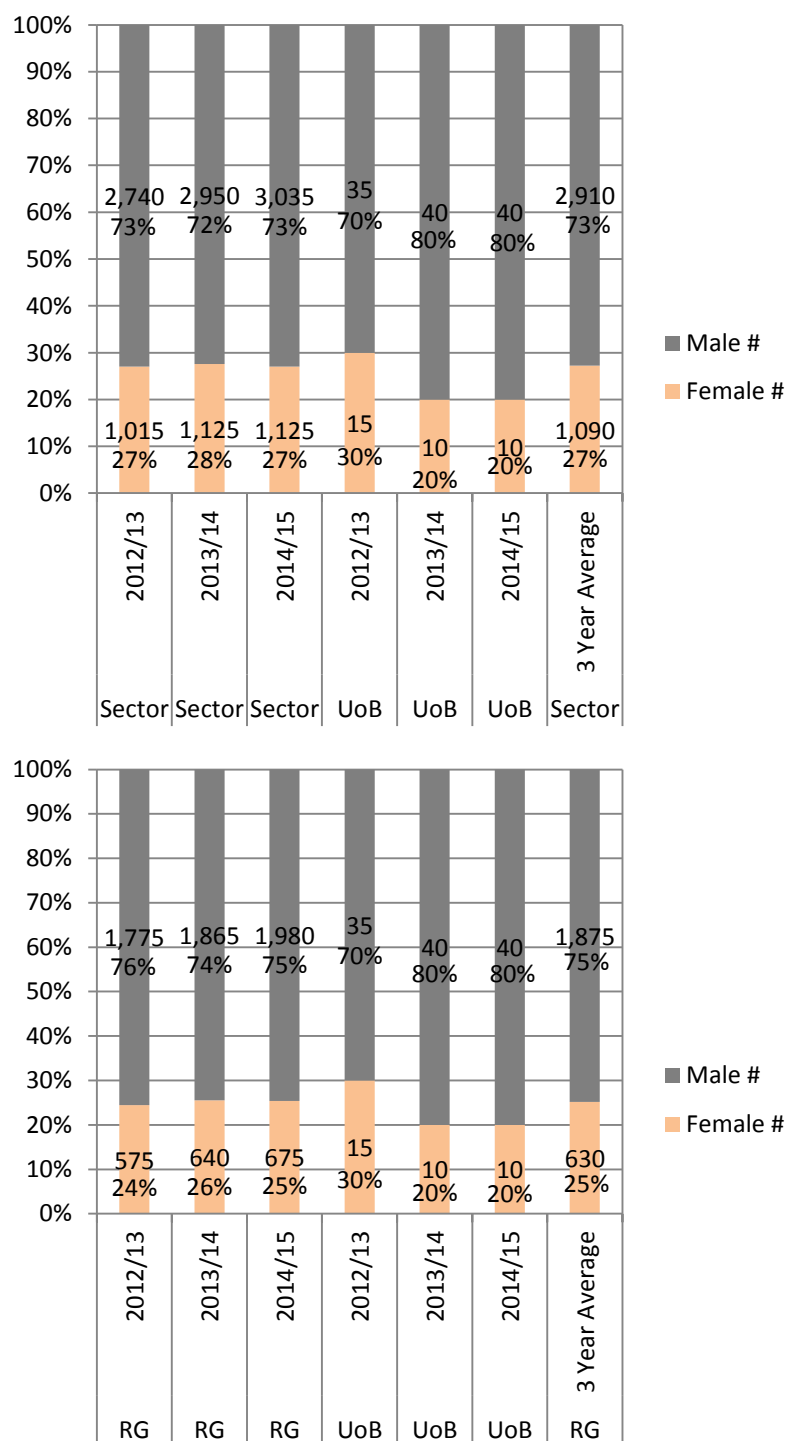


Figure 12. PGR completion data by gender and year of entry.

## Staff data

### (v) Female:male ratio of academic staff and research staff.

In Chemistry, there is a historical low number of female staff proceeding on the academic career and the numbers in the sector and UoB reflect this (Figure 13). Institutions with larger than Birmingham academic staff population (Edinburgh, York, Oxford) also have averages of female population in the low twenties in the last 2 reported years (Table 7). A new female Organic Chemistry Teaching Fellow, not shown in the data, was appointed in 2016.



**Figure 13. Academic and research staff comparisons in Chemistry UoB and sector (Top), Russell Group (RG) (Bottom).**

**Table 7. Female academic and research staff population comparisons with other institutions.**

Year	Gender	The University of Birmingham	The University of Edinburgh	The University of York	The University of Oxford
2012/13	Female #	15	15	40	20
	Total #	50	95	175	85
	<b>Female%</b>	<b>30%</b>	<b>16%</b>	<b>23%</b>	<b>24%</b>
2013/14	Female #	10	20	45	20
	Total #	50	95	190	100
	<b>Female%</b>	<b>20%</b>	<b>21%</b>	<b>24%</b>	<b>20%</b>
2014/15	Female #	10	20	45	25
	Total #	50	100	205	105
	<b>Female%</b>	<b>20%</b>	<b>20%</b>	<b>22%</b>	<b>24%</b>

The distribution of the academic and research staff by grade is shown in Figure 14. The low number of senior female staff is discussed later in relation to promotions.

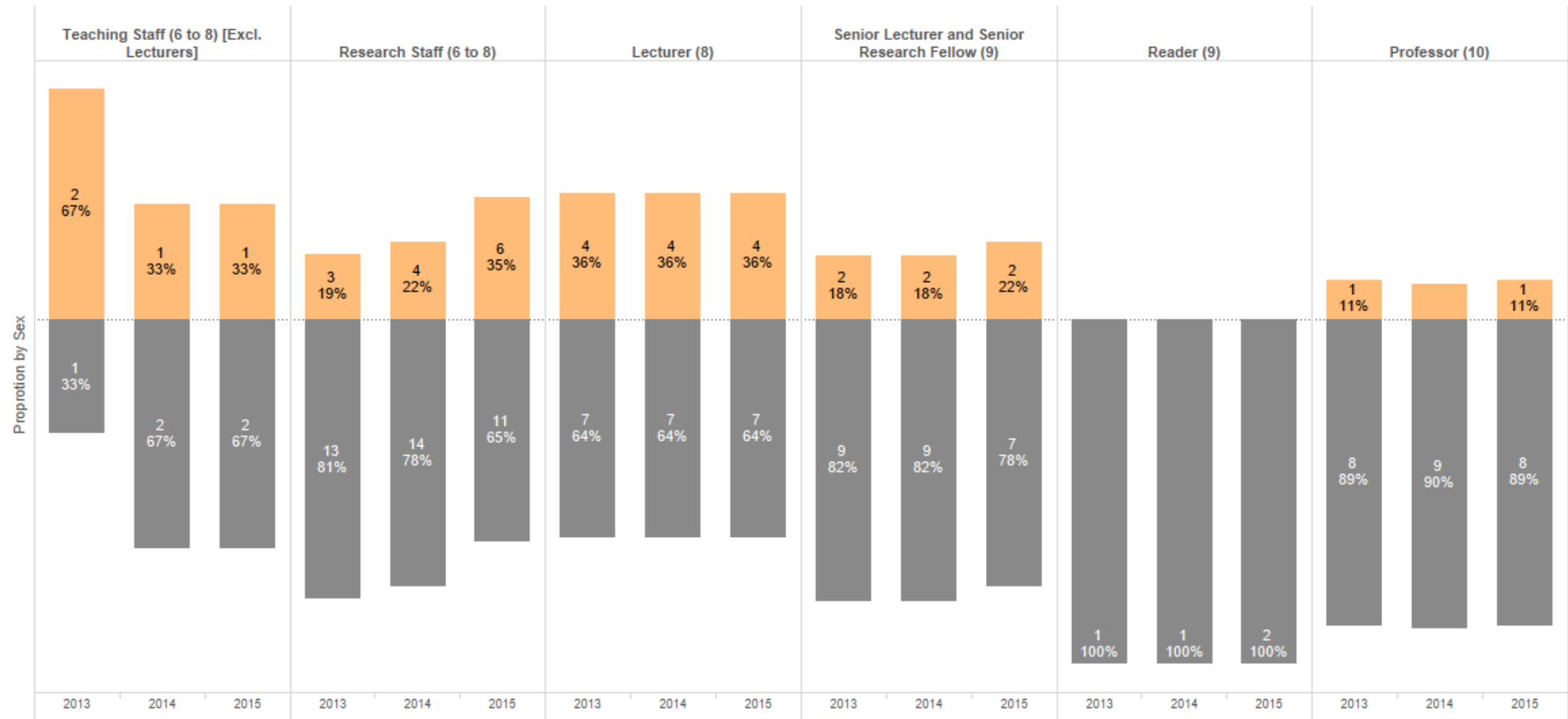


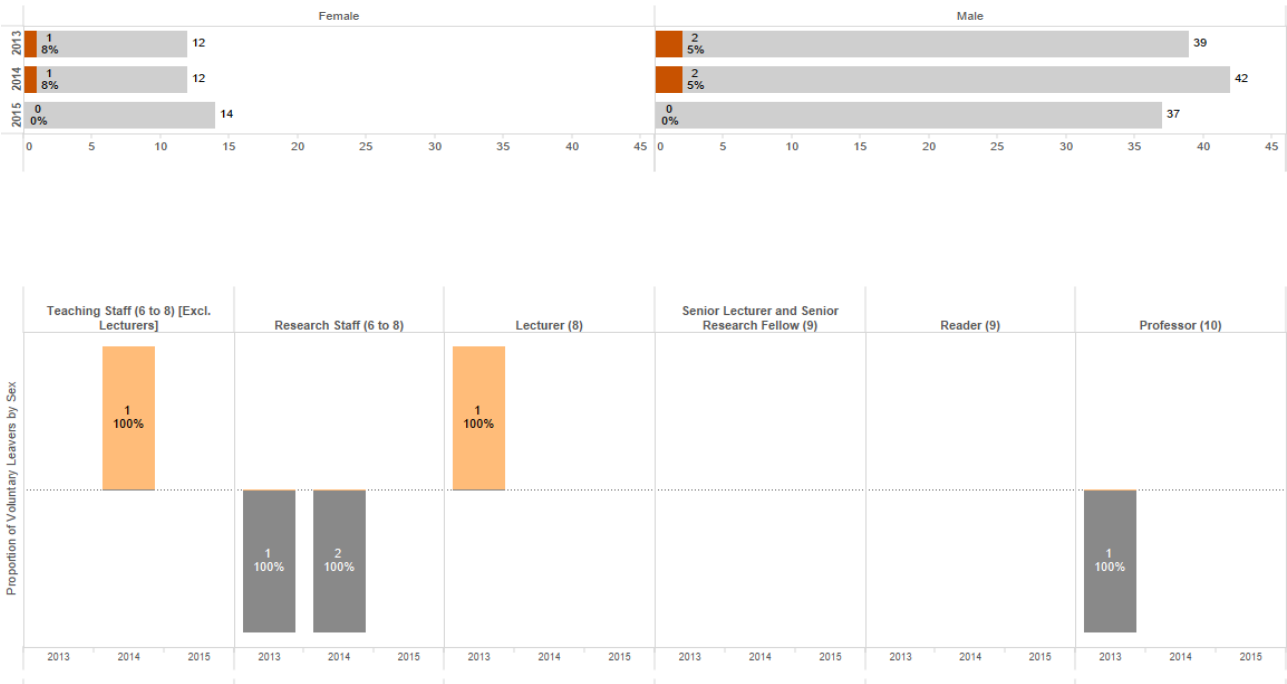
Figure 14. Proportion of female staff data by grade. Data are representative of a snapshot of staff at the end of each calendar year.

In the last three years we have implemented changes in School’s operation and publicity (text for adverts, shortlisting panels, website material) to enhance attraction of females as detailed in section 4b. *We now wish to take a more proactive approach to recruitment at all levels to attract more female applicants, for which we have already laid foundations during our Bronze award.* We aim to address key stage challenges as indicated in part 4a **ACTIONS B1-B4**

In the past few months the HoS has initiated a process to identify potential candidates for new Professorial posts announced by the University. All staff members have been encouraged to put names forwards for consideration and to consider the School’s current gender imbalance in their recommendations.

(vi) **Turnover by grade and gender.**

The staff turn-over (Figure 15) reveals no gender bias: In 2013, a male Professor retired and a female Lecturer left after being head-hunted by the National Physical Laboratory. In 2014 a female Teaching Fellow left the School to move closer to her family.



**Figure 15. Staff Turnover by gender (%)**Top: turnover is presented as a% of female and male staff populations in that year. Bottom: turnover is presented as% of leavers.



## 4. Supporting and advancing women's careers: maximum 5000 words

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### B. Key career transition points

a) 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.

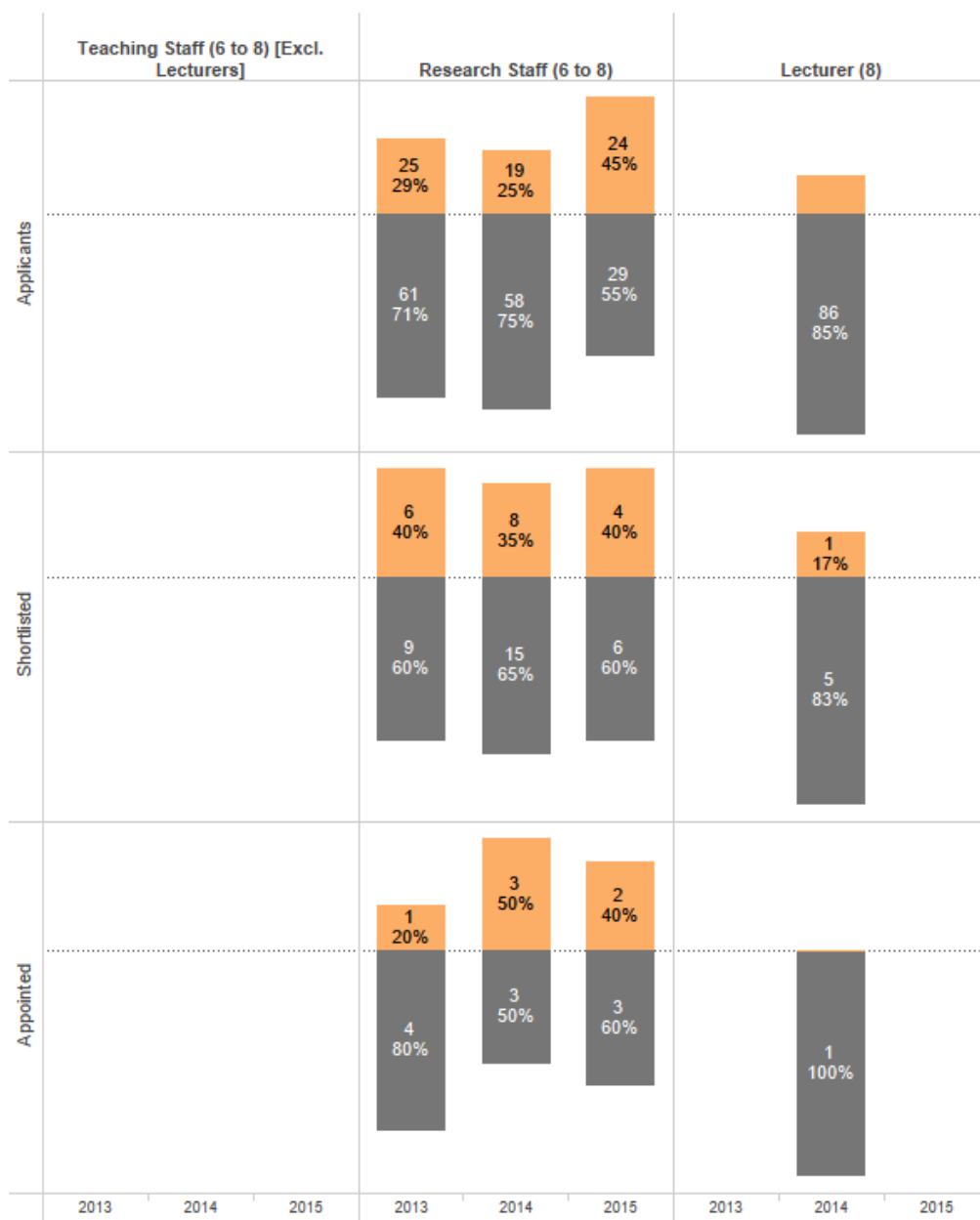
(i) **Job application and success rates by gender and grade** – comment on any differences in recruitment between men and women at any level and say what action is being taken to address this.

Whilst still low, the proportion of female applicants for researcher positions has increased from an average of 23% in the 2010-2012 period to 33% in the reported period 2013-15 (Figure 16). An increase in the proportion of female applicants was observed from 29% in 2013 to 45% in 2015. A higher proportion (around 24%) of female applicants were shortlisted (15% of male applicants were shortlisted) suggests strong applicants were attracted to the positions.

We have incorporated changes during the reported period, which may have influenced the observed trend in researcher applications: since 2014, all job adverts now include the statement, *"The University is a family-friendly employer and the School of Chemistry welcomes flexible working to suit family or other commitments. The University has on-campus childcare facilities."* The School's Athena SWAN webpage is also regularly updated with relevant E&D links, the available support for parents/carers, nursery facilities, holiday-club opportunities, pay/benefits for staff and a twitter page also advertises news and promotes successes.

To increase the number of female applications we will make changes in the further particulars that accompany the job description. The impact of the *language* in job adverts on applications is well recognised and it is important to show the *collegiality* of the School.

- We will modify the detailed particulars in our adverts to improve presentation of the School's environment and change the contact for position to include more options and a female member of staff. **ACTION B1**
- We will liaise with College and University HR to improve information on website about working at UoB, environment, well-being, investment in Equality and Diversity issues. **ACTION B2**
- Establish an internal process of termly discussion amongst all staff to identify and proactively approach potential female staff candidates for appointments at *all* levels. **ACTION B3**



**Figure 16. Job applications analysed by gender for shortlisted candidates and appointments.**

More female than male applicants to research posts (grades 6-8) were shortlisted and appointed in proportion to their application rate. The data included in Figure 16 do not include “named” appointments, *i.e.* research grants involving named fellows, however the number of shortlisted applicants in 2015(10) does not correlate with the number of appointments that were made (5). UoB HR department is working to resolve the disparity. An HR-led session with the University Athena committee took place and feedback from the committee has been sought to initiate HR actions.

For the single Lecturer post that was advertised in the last three years, the shortlisting panel considered the selected applications for the gender balance and examined for any unusual

background to ensure no candidate was disadvantaged. In the interview panel, the ratio of female:male was 1:2, doubled from the most common 1:5 ratio.

The School examined the small number of female applicants for this position, which may have indicated that in that area of physical chemistry the female research base was smaller.

- We plan to initiate a feedback mechanism for applicants to find out what factors attracted the applicants to apply. We will also monitor applications/appointments with research areas to find if there are any trends. **ACTION B4.**
- Record female involvement to interview panels to all posts.. **ACTION B6.**
- To increase the number of research fellows in the School we will also formalise an internal process to identify promising female candidates and proactively approach candidates for fellowships. **ACTION B7.**

(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.

The applications and promotions are shown in Table 8. The data indicate the numbers of initial applications at the School level and the numbers of promotions at the University Committee. The promotions criteria are published by HR and a call for applications with a timeline of the process is widely publicised. Thus, individuals can self-nominate and are encouraged to discuss with HoS. The applications from the School are forwarded to the Head of the EPS College. A College promotions committee is set-up with varied expertise and contribution of different disciplines. Readers and Professorial promotions are then subjected to a formal interview process. For two-legged contracts, there is now a progression to Readership and Professorship, teaching-focused. Approved applicants from the College are forwarded to the University Promotions and Titles Committee (PTC). The PTC then decides on whether the individuals are fit for promotion.

In the last three years, the School has changed its approach to promotions and the HoS is now proactively approaching candidates when the call is announced, after discussion with the School promotions committee. Consideration of readiness of promotion is an integral part of the PDR review, which was introduced in 2012. The staff who wish to apply, submit their CV to APPS committee and they receive feedback of their application by the HoS.

Responses from our staff questionnaire about years taken to the first promotion, show that there was no specific trend based on gender. *We will continue monitoring these data*, to inform our actions if females need further support at the promotion career stage.

**Table 8. Applications and promotions by gender and grade.**

College-wide promotion workshops were established following comments from the female academic staff focus group and participation was encouraged by the HoS (3 F attended). However, mixed feedback indicated that the workshops were not addressing discipline related issues.

We will now modify our procedures to provide more support for staff through the interview process:

- encourage staff to discuss their application with a senior chemistry academic, before the College submission and organise preparation sessions for the interview for Reader and Professor. **ACTION B8**
  - organize promotion workshop for staff in two-legged contracts and/or invite a teaching focused Professor for a consultation session. **ACTION B8**
  - Establish a working group to identify **changes in PDR process** that can support career development and promotion. **ACTION B9**
  - Introduce a set of available **mentors** for staff for matters of career progression. **ACTION B10**
- 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

Our data show that there is a large M/F gap in the number of female applications received. It is commonly observed in the sector and it may be due to smaller number of females coming through the academic career path, but it may also be to females being more reserved in their approach to apply if the area in an advert does not fit exactly with their expertise, or if they think they are not as well qualified for that post.

- To address the recruitment of female staff we will proactively approach staff of all grades. We will encourage staff to identify and approach promising female candidates for fellowships, alongside the more senior appointments **ACTIONS B1 -B4, B7.**
- We will target advertising to websites, mailing lists through the Royal Society of Chemistry Women Member Network, and associations such as WiSE (Association for Women in Science and Engineering) and WiTEC (European Association for Women in Science, Engineering and Technology) **ACTION B5.**

During our Bronze award, we introduced a new policy that at least two academic staff should shortlist for researcher posts (with one being a female based on availability), when the University does not require this and a single person, usually the grant holder, could shortlist for the post. In the cases of shortlisting for academic positions, the policy of the School is to make available the applications to all staff with opportunities to send feedback to HoS.

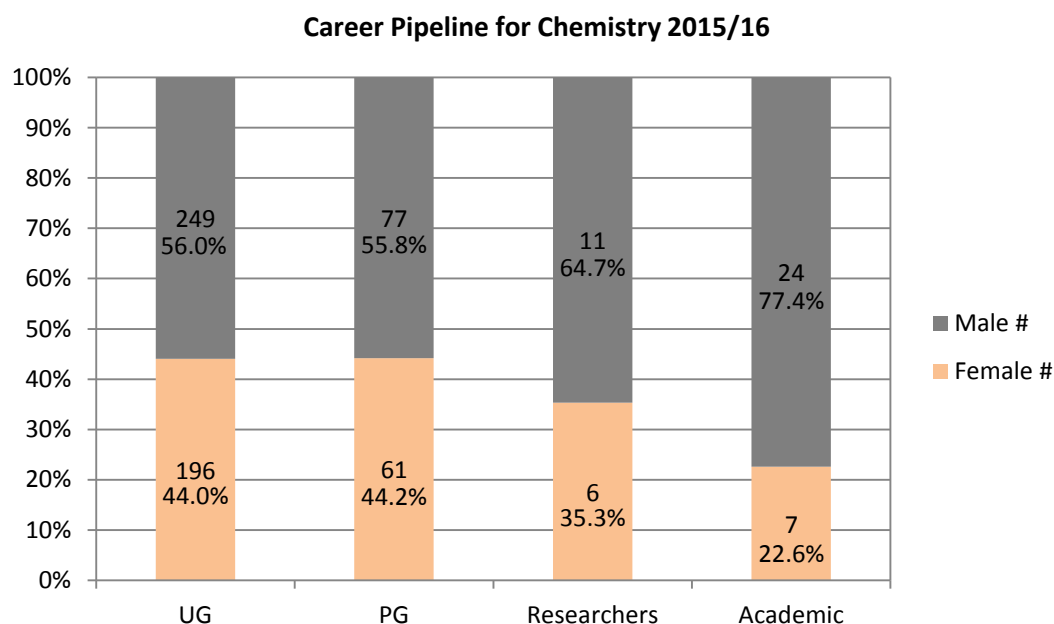
It is a requirement for female staff to be part of all interview panels. This policy has been executed for some time and we will now monitor at the School level membership of the interview panel **ACTION B6**

The Chair of E&D has been involved in the review of the University's recruitment practice which is currently taking place. As part of this review overt unity is being explored where improvements can be made regarding enhancing the candidate experience and opportunity as well as making decisions more transparent and objective.

It is University policy that staff will only be able to sit on recruitment and promotion panels if they have (i) attended the recruitment and selection workshop, and (ii) completed the online equality and diversity training, which includes a session on *unconscious bias* and the impact it can have on decision-making in recruitment.

- (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 the different career stages.

The career progression from postdoctoral researcher to lecturer is a key transition point that needs to be supported by raising the job profile and supporting researchers towards and during the academic career path. We had a positive trend during our Bronze for number of applications for researchers and the number of researchers in the school, which we need to sustain. We have identified the following mechanisms for supporting PG, researchers and staff.



**Figure 17. Population by gender at different career stages in the School, 2015 UoB data.**

**Leadership Training** Seven out of 31 members of the Chemistry staff have undertaken the Leadership training programmes : *Emerging Leaders* and the *Senior Leadership* and seven attended the *Medici* training which is valuable for entrepreneurship and overall research management. HoS will continue encouraging staff to attend these programmes through PDR.

- We will encourage *postdoctoral researchers* for participation of a newly established development course for researchers *Developing as a research team leader*. A programme *Leading Academics for Doctoral Researchers* is offered and Chemistry postgraduate students proposed by supervisors have already attended in the last 2 years. We will encourage supervisors to nominate researchers. **ACTION C2**

**Networking** For academic staff the University runs an alumni Leadership programme which has been popular and provides the opportunity for further networking.

- For *postdoctoral researchers* we will encourage participation to the newly established, annual conference “*From Postdoc to Professor*” and set up a networking group from the participants using a dynamic web page, where people can upload a photo and profile of themselves to facilitate the network. This new postdoctoral network will also *provide support for induction and mentoring* amongst researchers **Action C5**.
- We will improve the networking between PG students and postdoctoral researchers by organisation of events between RSLC and the Chemistry postdoc focus group. **ACTION C6**

During our Bronze Award, we promoted academic career paths asking guest seminar speakers to discuss career paths and challenges with work-life balance. This has been well received from our researchers. We also asked academic visitors to provide a career talk about academic pathways (Prof. Anslyn, Texas A&M), responding to more school career events raised in our PG questionnaire.

- We will now organize School career talks from alumni; this will enhance networking, mentoring opportunities and career advice. **ACTION C7**

**Mentoring** Currently mentoring is formally only set-up for probationers and two female staff members have acted to be mentors for female new appointees. Our *female responses in the staff questionnaire showed that all female staff would have liked a mentor if available*. We plan to establish a pool of available trained mentors for all staff and researchers. We will encourage staff participation to the University mentoring programmes as part of the PDR. We will continue to encourage postdoctoral researchers to apply for fellowships and mentor them through the application process. **ACTIONS B10, C8**

**Career Development Training** UoB provides a variety of development programmes including time-management, grant writing workshops, self-assertiveness sessions, science communications training. A *Researcher Development Framework* offers a series of training courses (some on line) and workshops on personal effectiveness, engagement, influence and impact (*i.e.* talent pool for researchers, a transferrable skills programme with industry) or support on library sources and software. PGR are required to fill in a *Development Need Analysis* form and discuss it with their supervisor. It is updated annually and assists the student to identify important needs for career development.

Our feedback from PG and postdoctoral researchers questionnaires and focus group indicated the need of discipline specific teaching training courses.

- We will introduce new teaching courses and briefing sessions for PGs and postdoctoral researchers **ACTION C3**
- We will encourage participation in journal article - writing and grant-writing workshops. **ACTION C4**

**PG Hardship.** In the last few years we had PG students with young families and became aware of the difficulties they face if genuine and unavoidable financial difficulties arise: e.g spouse losing a job and struggling with nursery costs or other financial costs.

- We plan to establish a School-fund for cases of unavoidable hardship to give students time to recover. **ACTION C9**

**Postdoctoral PDR.** During our Bronze Award we extended the PDR to postdoctoral researchers. All 12 postdoctoral researchers had PDR arranged annually. Based on the feedback from the postdoctoral focus group

- we will change the procedure, such that the review will be by a member of staff other than the supervisor **ACTION C10** .

## C. Career development

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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?

The (mandatory) Performance and Development Review for academic staff is an opportunity for an individual to have a structured, constructive conversation about their performance and development needs with HoS, and to agree stretching, but achievable objectives. It covers all areas of staff engagement in School life (including outreach, well-being, E&D, Health and Safety, open days, alumni visits) and available courses for development. Our *staff questionnaire* revealed that staff value different aspects of the PDR process. However, we received mixed responses about its relation to the objectives set and how it can be improved. This feedback has informed our action:

- we will establish a working group to examine changes to PDR process to assist staff with targets for career development and promotion **ACTION B9**.

Promotion criteria are published widely by the HR College team and are standard University-wide. The criteria are clearly stated and include research, teaching, administration responsibilities and citizenship. Supervision of students, outreach, career breaks, other scholarship activities are included.

Research grant performance is important for the success of promotion applications; for staff in two legged contracts leadership, innovation and citizenship are important. UoB uses an academic grant credit system which may not always attribute due credit to co-investigators, especially for interdisciplinary grants. The E&D Champion has *submitted a proposal* to the DoR in the EPS College to revise the procedure by recording academic credit recognition at the submission of the grant.

To identify ways to support female staff better we will

- analyse research grant information for gender: applications, success rate and funding requested **ACTION B12**
- examine that the agreed academic credit between investigators is applied in successful grants. **ACTION B12**
- monitor leadership and citizenship in activities of the teaching-focused staff **ACTION B13**

(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?

*Academic Staff and Postdoctoral Researchers.* The induction process commences with a meeting with HR that provides a check-list for “actions for the first few weeks”. The appointee then meets (same day) with the HoS, the School Managers and the Chemistry Health and Safety Officer who explain all procedures and regulations.

All staff undertake compulsory online E&D training on joining and compliance is monitored. Both the HR and AthenaSWAN intranet websites provide detailed information about flexible working and resources for staff. Staff networking opportunities are provided within the research units and themes, interdisciplinary meetings and teaching fora, which take place at regular intervals each term.

During our Bronze award:

- we initiated a web-based package “*Introduction to School*” which includes School Organisation, staff roles, (all staff, internal and external roles to encourage communication lines), Health and Safety, information about UG and PG degrees and policies important to a new colleague. The development of the chemistry intranet pages is an ongoing project and we plan to update them with links to the updated Athena SWAN website.
- to address the introduction of postdoctoral researcher to the School, we introduced two sessions of short seminars by postdoctoral researchers to the whole School, where they present their previous work and their project at UoB. These have been very well received by the postdoctoral researchers and staff based on the *high attendance* in the seminars.
- We will encourage the postdoctoral group to be involved in the induction of researchers and assist new comers in networking in the School and the University. **ACTION C6**

*Postgraduate Researchers.* The Chemistry graduate school runs a well-established induction programme for postgraduates including the requirements and expectations of a PhD in Chemistry, supervisory arrangements, monitoring and progression, student support structure, School structure, names and locations of key people, University and School-level chemical and safety training, information skills, research ethics and demonstrating training.

The feedback of the student questionnaire informed our action:

- we will provide information of the School’s organisation, leave of absence, maternity leave as part of the PG induction package **ACTION D1**

(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.

*Undergraduate students.* All undergraduates are assigned an academic staff personal tutor who mentors the student throughout their studies; compulsory semester progress meetings are

documented and monitored. Female and male School welfare tutors (experienced academic staff) are available to all students to discuss welfare matters.

"I also benefited from a first-rate pastoral system, with approachable and understanding tutors to help and guide me through the inevitable difficult times. My time at Birmingham has been the most rewarding experience and part of me wishes it didn't have to end" Sue mature student with two children. (BSc, PhD, Chemistry)

*"I loved being in the lab everyday...it was really great...there were so many nice, friendly people there to help you"*  
Kate (MSci) about her 4<sup>th</sup> year project

A student has the right to request to change their personal tutor (as indicated in our Bronze application).

- We will publicise the choice of tutor change more widely, in the induction week in Year 1, and in our information material on the web-based Canvas platform. We will also update the student information material in Canvas with links to the intranet website about support for students parents/carers and E&D. **ACTION D2**

We have established (several years) an UG questionnaire to identify and understand any gender differences within our undergraduate cohort. Questionnaires sampled students' perceptions of their confidence in the traditional sub-disciplines of Chemistry, laboratory and practical skills, maths, writing, IT and presentation skills, as well as engagement in extracurricular activities (sport, music *etc*) and career aspirations. The results have informed our proposed actions in this application.

There are two areas where gender differences are apparent: students' confidence in Organic Chemistry; career planning.

In Year 1, both males and even more so females highlighted Physical Chemistry as the sub-discipline in which they felt they needed the most support. In subsequent years, female students consistently highlighted Organic Chemistry as where they were least confident whilst male students highlighted this as where they were most confident.

In the area of career aspirations, in Year 1 a similar proportion (41% M, 44% F) of students were undecided on their future career. By Year 2, however, female students consistently have a clearer

idea of what they want to do after graduation and in Year 3, the figures were 67% M and 53% F. Moreover, it was encouraging to see that a good proportion of females aspired to careers in research and industry.

To understand the origin of lack of confidence in certain area we will take further action to find out if there are changes in teaching styles (e.g inquiry based learning) or the provision of additional support material which may redress the current imbalance.

- We will analyse performance in modules by gender and use focus groups to better understand the different perceptions between the two genders. **ACTION A6**
- Review the careers guidance and support that we provide to our undergraduate cohort and include academic career examples from female members of staff and analyse Leavers' Destination Survey to assess whether the gender difference is apparent in actual employability statistics . **ACTION C1**

#### *Postgraduate students*

Doctoral students are assigned a second academic supervisor, additional to their PhD supervisor, to help in monitoring their progress. Regular review meetings between the student and the two supervisors are recorded together with the monthly supervisor meetings.

The responses from the recent School PGR questionnaire, together with the feedback of the PG students in the SAT have informed our proposed PG actions. Some examples are highlighted:

In the question of *Opportunity to discuss my research?*

Significantly higher% of female respondents responded "Yes" (93% for F vs. 61% for M).

Female responses are also more positive on the question about the **research environment** stimulates their work, 67% "Yes" for F compared with 37% for M)

We will ensure the implementation of mentoring by adding a relevant section in the PG monitoring forms of the Training Need Analysis.

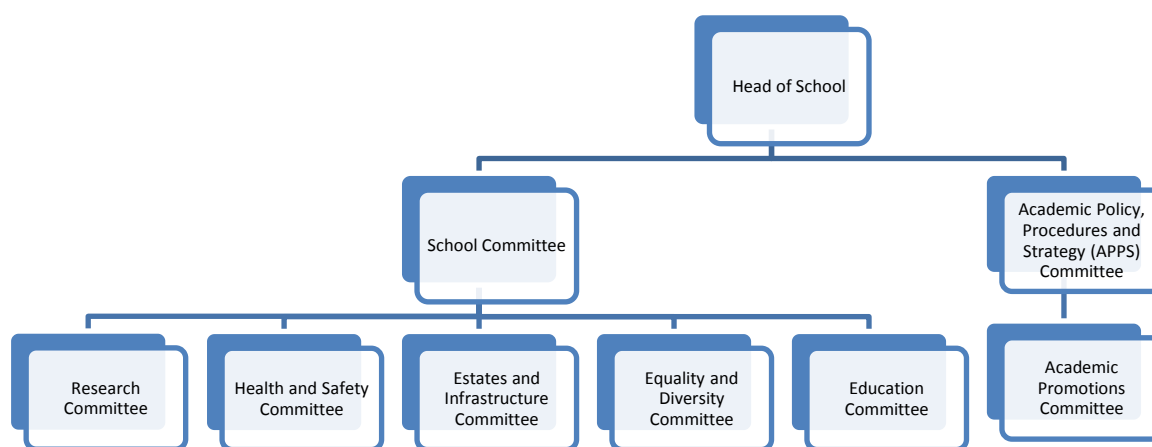
- We plan to organise more career events from alumni visiting the school to strengthen the interaction between students and alumni. Female alumni will be targeted from contacts of the supervisors for additional support. **ACTION C7**
- We will also provide the student the opportunity to choose a mentor other than supervisors if they wish to and we will promote availability of female mentors. **ACTION C8**

## D. Organisation and culture

a) 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.

(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 committee structure of the School's operation is shown in the scheme (Figure 18).



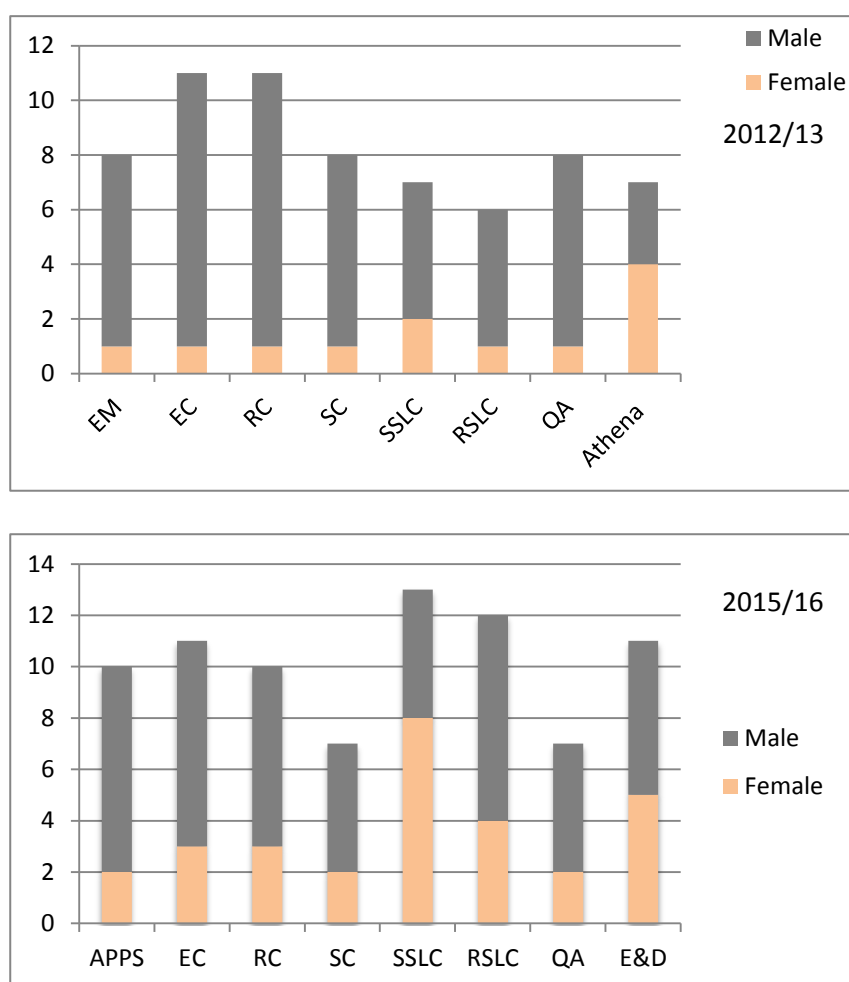
**Figure 18. Schematic structure of committees in the School of Chemistry.**

Committee membership is based on the leading roles of academic staff. These are discussed by HoS in the PDR process and are decided taking consideration of staff own interests and recommendations from other staff. The key-decision committees are listed below:

Academic Policy, Procedures and Strategy Committee (APPS)	This changed from Executive Management Group and includes Head of School, Deputy HoS, Director of Research, Head of Education, Director of DTC, Chairs of E&D, Quality Assurance, Admissions Lead, Operations and Technical Managers.
Education Committee (EC)	It includes Leads of Teaching Fora, student representatives, Labs coordinator, Admissions Tutor, Head of Quality Audit, one UG and one PG student representatives.
Equality and Diversity (E&D)	Previous Athena@Chem. It includes staff with wide expertise and at different career stage.
Research School Liaison Committee (RSLC)	This includes postgraduate students, postdoctoral researchers, Director of PG studies.

Undergraduate Student-Staff Liaison Committee (SSLC)	This includes members of teaching staff and undergraduates students of all degree years.
Research Committee (RC)	It includes Leads of Research Units and Themes, Lead of International Relations, Directors of PGR and Admissions, Manager of Facilities, one PG student.
Safety Committee (SC)	It includes representatives of Laboratories, Teaching and Research units, Radiation and Laser officers, Technical Manager, PG student representative, Facilities representative.
Quality Assurance Group (QA)	It includes staff from all areas of teaching.

The female membership of the committees has been improved in the 2015/16 academic year since our last submission of 2012/13 (Figure 19).



**Figure 19. Membership of School Committees by gender. Top: 2012/13, Bottom 2015/16.**

- (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.

All academic staff hold open-ended contracts Figure 20.

Postdoctoral researchers hold fixed-term contracts and the low numbers of female population (3F, 9M in 2015) is indicative of the large drop-off in numbers from PG to postdoctoral researcher. The School relies on grant funding to resource postdoctoral positions which are unavoidably fixed-term contracts and not favourable for females at this career stage.

**Figure 20. Fixed-term and permanent contracts by gender (%).**

- 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?

The female membership of the committees has been improved in the 2015/16 academic year since our last submission of 2012/13 (Figure 19). Three female staff are leads of research units, teaching fora and lab innovation and two female staff chair committees (E&D, QA). Three female staff have also been involved in staff-appointment committees and four have been involved in University/College committees. We have a small number of female staff and committee overload is a concern. Committee membership is monitored annually and taken into account in the regular review of the workload model. External responsibilities are also taken into account. **ACTION D12**

- (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 e.g. responsibilities with a heavy workload and those that are seen as good for an individual's career.

We have established a workload model in the School which includes teaching and administrative activities. This model was established by consultation with academic staff and information based on workload models in other schools. Teaching data include lectures, examining, tutorial, lab demonstrating and marking, project supervision, external outreach activities, College activities. The workload is discussed during PDR where the staff can discuss changes of a role or compare teaching and administrative loads, in order to bring transparency and equity to staff workloads.

In the last two years, a group chaired by the DepHoS, with representation from across the School and with a balanced F/M composition) was set up to review the workload model. At this time, emphasis was placed on administrative roles and weightings were adjusted following discussions with the relevant colleagues and by comparison with similar roles. Up-to-date information was also collected from colleagues concerning their external activities, though at present not all of these activities have been included in the model, pending the inclusion of research activities in the model.

- We will now extend the workload model to include research activities explicitly, such as taking into account the number of PhD and postdoctoral researchers supervised, the percentage of staff time covered by research grants, any further activities in E&D not contributed. **ACTION D12**

- (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.

During our Bronze Award, we established core hours for all committees, meetings and seminars should take place in the period 9.30 am-3 pm to consider staff with family responsibilities. This was a major cultural change in the School and all colleagues have embraced the policy.

All School and Research unit seminars are organised by a single member of academic staff to ensure consistency with any changes of schedule and avoid organisation of seminars as fit. There have been very few seminars organised at 3 pm based on some clashes.

Our teaching commitments span the time period 9 am to 6 pm. Staff can request constraints to their teaching (e.g to deal with care responsibilities, restrictions for health issues). An email is sent early in advance March/April of the preceding academic year for staff to send their requests. The HoS reviews all requests.

We have increased the number of social gatherings to improve the culture of the School and to

celebrate successes. These include (Christmas and end of the academic year celebrations, lunches celebrating for NSS success rates and staff-student cricket) and *staff have been encouraged to bring their children and spouses*.

(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.

There is a friendly, open working atmosphere aided by strong collegiality amongst staff. A great majority of our social events are organised within working hours and some are student led. Inclusivity is encouraged at all activities, few described below , some have gone beyond our Bronze actions:

- Monitoring of the **membership of our UG student representatives** and positive encouragement from tutors.
- The ratio of F/M is monitored and varies through the years:
  - 2012-13: 8M, 7F;    2013-14: 5M, 11F
  - 2014-15: 6M, 11F;    2015-16: 6M, 9F
- Monitoring **speakers in career events** for gender, to ensure female role model presentation:
  - 2012-13: 2F, 3M ; 2013-14: 3F, 1M; 2014-15: 2F, 4M
- Publicity of **E&D campaigns through the School**. The “NOT ON” campaign to address sexual harassment on campus is included in all induction events.
- Introduction of a new **student-aimed E&D training**, established University-wide.
- Monitoring **gender ratio of seminar speaker presentations** and encouraging staff to consider female seminar speakers; 2012-13: 1 F, 3 M; 2013-14: 1F, 1.8M; 2014-15 1F, 2M.
- Including female **external examiners of UG programmes** : 1F:2M for the last 5 years.
- Introduction of a **School Google calendar** to publicize all seminars, committee meetings and major School events.
- Organisation an **unconscious-bias workshop only** for School of Chemistry staff (attended by 1/3 of the staff).
- **Awareness about Athena SWAN and E&D issues is increased in the School**: Chemistry **UG** students take part in Women in Engineering and Science Society, an Athena SWAN poster is displayed in our School entrance. **PG and Staff** attended Athena SWAN talks (PG symposium), seminars illustrating career paths and work-life balance, involvement of PG students in committee and their dissemination to fellow PG students through an organized coffee morning on E&D; **E&D talks** recorded in **Panopto** for staff that were unable to attend.
- **2016 Staff** questionnaire responses recognize how E&D issues have become more prominent since they joined the school (86%F, 94%M).



To further improve communication

- We will establish a main calendar for staff absences held by HoS office, in order to facilitate *back up supervision* of research group when a member of staff cannot be at School at short notice e.g caring commitment or sickness. **ACTION D3**
- We will improve timetabling of operations e.g assignments for subsequent year to link with PDR timing and scheduling of all meeting **ACTION D4**
- We will establish a *monthly newsletter* by the HoS office. **ACTION D5**

We will continue our monitoring at all levels and to improve culture we will take the following actions:

To increase awareness of gender issue issues we will:

- Introduce staff “themed” coffee mornings to disseminate and discuss issues. **ACTION D6**
- Introduce E&D online training to all PGs and postdoctoral researchers as part of induction. **ACTION D7**
- Seek College support to continue “culture awareness in classroom” course for all PGs and Postdoctoral researchers who are involved in teaching. **ACTION D8**
- Establish an E&D representative in Staff-Student Liaison Committee and in College E&D Committee. **ACTION D9**

To increase female role models, we will continue our previous actions (website, communicating successes) and we will

- introduce named PG prizes for demonstrating and outreach. **ACTION D10**
- organise meetings with dedicated time slots only for PG and postdoctoral researchers. **ACTION D11**
- continue to vary our social events and introduce more social events on premises external to University Based on staff feedback. **ACTION D13**

**(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 model and in appraisal and promotion processes.

In the last three years our database which captures the School-related Outreach activities has increased and we now have 42 girls’ schools, 34 boys’ schools, 271 co-educational. We have enthusiastic staff that are involved in several activities led by the Outreach officer. The British Science Festival at Birmingham in 2014, Salters festivals, Soapbox Science Headstart, RAISE, Chemistry Busking are few examples of the events the School participated in the last few years. For 2 consecutive years the School has hosted the Year 9 *Girls in STEM* at Birmingham by female members of staff. Postgraduates from the DTC programmes were also involved during February half term time in “Meet the Scientist” experiments at Thinktank.

In the Open Days and Admission Days, several female postgraduate students participate

demonstrating experiments and hosting the visitors in tours of the School. We have identified inspiring female academic staff to give talks on Admissions and Open days . Outreach activities are considered in the workload model and recognized in promotions as part of citizenship.

- We plan to continue our activities and will continue to approach diverse school to ensure a gender balance in terms of pupils who have attended these events **ACTION A2**
- Recently we have received feedback of our outreach in UCAS applications and we plan to monitor these in our future actions **ACTIONS A3, A4.**

*Extract from UCAS quotation*

*"I attended an event at  
Birmingham Chemistry. The  
day provided me with  
fantastic hands-on experience  
and reinforced to me how  
powerful Chemistry is"  
Nayomi, School in Harborne*

## E. Flexibility and managing career breaks

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a) **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.**

(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.

In the period 2012-15 two staff took maternity leaves: one postdoctoral researcher (leave in 2013) who came back for a few months after her return and then left due to the end of her grant, and more recently (December 2015) a Lecturer who is still on leave. She has visited the School to introduce her daughter during the staff coffee mornings and to catch up using *keep in touch days*.

(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.

One member of staff took paternity leave in 2012. All of the colleagues in School who became father have taken paternity leave in the last 6 years.

(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.

In the reported period, few staff have applied to work part time. All staff that applied had their applications accepted. The portion of staff working part time is shown in Figure 21. These are research fellows who opted to work part time for family commitments and professors who phased their retirement.

**Figure 21.** FT and PT staff by gender balance (%).

**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.

Flexible working policies are published on the website and publicized by HR. The Athena SWAN intranet website also includes details of the policy. Apart from the formal applications about PT working as detailed above, there are no other formal applications. Staff work flexibly, some take occasional days working from home to finish proposals or manuscripts and there are also requests for timetabling as highlighted above. Our staff questionnaire revealed that some staff are unclear about the flexible working arrangements (55%M, 25%F) and we will

- invite HR to provide sessions to raise awareness of flexible working and worklife balance. **ACTION E1.**
- monitor flexible working amongst all staff and review arrangements. **ACTION E2.**

- (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.

As part of our Bronze plan we introduced a new return-to-work after maternity arrangement such that the member of staff has a reduced load the first semester upon return from maternity leave, with a maximum commitment of teaching one lecture course and light administrative roles. We presented this policy and the importance of staff adjusting back to work to the University Athena committee chaired by the Provost. This idea has been embraced and new University support has been ring-fenced for staff to be relieved from teaching/administration coming back from parental leave. In our School we offer a lighter load for returners coming back from a long period leave. We did not have any member of staff coming back from maternity/adoption leave in the last 3 years. Members of staff who plan to take on maternity/adoption leave discuss with the HoS their plans and arrangements are made to facilitate their preparation for maternity/adoption leave (*e.g* find co-supervisors for PhD students, scheduling of exam questions and replacement teaching).

Recently, it came to light that there was no provision by the University for enhanced shared parental leave this is an action we wish to take forward to University. A proposal has already been submitted to University with support from Chemistry. We will continue to:

- Lobby for enhanced shared parental leave; provide case studies to University Athena committee. **ACTION E3**
- Lobby for further nursery provision and for better discounts for students. **ACTION E4**

WORDS 3605(excl. action points)

## 5. Any other comments: maximum 500 words

Please comment here on any other elements which are relevant to the application, e.g. other STEMM-specific initiatives of special interest that have not been covered in the previous sections. Include any other relevant data (e.g. results from staff surveys), provide a commentary on it and indicate how it is planned to address any gender disparities identified.

### ***Feedback for Postdoctoral researchers re: role models***

*External: Dear Prof. Pikramenou, I am writing to thank you again for the interesting session we have had on the role of women in science when you visited our group in Strasbourg and when we recently met in Cambridge. I found it really inspiring. For a woman it is not really easy to establish her career in a male-dominated field as science. Even more difficult it is to combine career and family. However as you demonstrate it is possible! I would like to thank you also because it is thanks to the tenacity and determination of women like you that things are changing. Elena L. postdoc, Strasbourg, 2015.*

### ***UoB FROM POSTDOC TO PROFESSOR- WORKSHOP (3/2/2016)***

The event attracted over 140 researchers across campus and highlighted different aspects of postdoctoral careers in academia, including *personal experience balancing family and academic career*.

These sessions proved highly popular, who in response told us that they enjoyed “*listening to real stories rather than theory based talks*” and “*hearing from fellows/lecturers on how they managed their work/life balance and still achieve progression*”.

***Feedback from Outreach conference*** in 2014 (Belfast) which has informed our activities:

### ***“Promoting STEM Subjects to Girls in Primary Schools”, from Mark Read, Outreach Officer***

- Girls are less impressed by the ‘flash bang’ demonstrations but are drawn to events where the chemistry has a tangible link to something that benefits others (e.g. drug discovery and saving lives)
- Girls require role models, women who they can relate to and who come from the same background
- Girls participate more, feel more engaged and confident during during ‘girls only’ events.

### ***Career development***

Marie Stroe UG, Summer Scholarship encouraged by tutor

Overall, I am very grateful for having had such a rewarding experience. Most people choose to engage in research experience in their second year, but I did it in my third year, so my message would be that it is never too late to gain more experience, enhance your skills and CV and meet lots of interesting people!

**In the 2016 Staff questionnaire, most of the responses to questions did not show any gender difference.** We highlight below the ones they did:

*I am clear about what I am expected to achieve in my job, 100%F positive compared to 63%M*

*Have any of the following factors contributed to the success of your career to date?*

The only factor that was significantly higher than for male respondents, was: luck.

Overall, male respondents identified almost four times the number of factors than female respondents (research publications, size of grant income, support and encouragement from partners/family, work on high- profile/successful research/projects).

*Have any of the following factors been detrimental to your career to date?*

The factors that were significantly higher for female than male respondents, were: Long hours working culture and family/caring responsibilities. Responses from male staff with factors that were significantly higher than for female: absence of mentoring, overly heavy admin/teaching load, insufficient funds to develop your research group.

Words 498

## 6. Action plan

Provide an action plan as an appendix. An action plan template is available on the Athena SWAN website.

The Action Plan should be a table or a spreadsheet comprising actions to address the priorities identified by the analysis of relevant data presented in this application, success/outcome measures, the post holder responsible for each action and a timeline for completion. The plan should cover current initiatives and your aspirations **for the next three years**.

**SILVER ACTION PLAN Pages 51-61**

***BRONZE ACTION PLAN AT THE END OF THE DOCUMENT***

## 7. Case study: impacting on individuals: maximum 1000 words

Describe how the department's SWAN activities have benefitted **two** individuals working in the department. One of these case studies should be a member of the self assessment team, the other someone else in the department. More information on case studies is available in the guidance.

**CASE STUDIES Pages 62-63**