



## **Athena SWAN Bronze department award application**

Name of university: **UNIVERSITY OF CAMBRIDGE**

Department: **MATERIALS SCIENCE & METALLURGY**

Date of application: **NOVEMBER 2012**

Date of university Bronze and/or Silver SWAN award: **BRONZE RENEWAL 2009**

Contact for application:

**PROFESSOR RUTH CAMERON: CHAIR ATHENA SWAN COMMITTEE**

**PROFESSOR LINDSAY GREER: HEAD OF DEPARTMENT**

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

#### **Statement of Support from Professor A.L. Greer Head of Department**

I fully support this application, and indeed the increasing emphasis on Athena SWAN objectives throughout the Department. Our newly formed Athena SWAN Committee (on which I serve) is designed to have representatives of key groups, and is very ably led by Professor Ruth Cameron. The Committee reports to our main Staff Meeting, which now has Athena Swan business as a standing item on its agenda.

In March 2012 the Department had 22 permanently established academic posts. Of these, 6 were occupied by women and this number has since risen to 7. Our 3 female Professors make up 27% of that rank, our 2 female Readers 40% of that rank. The fraction of women in our undergraduate cohorts averages around 30%. While we wish that all these percentages were higher, we are very pleased that the proportion of women is almost as high at professorial level as it is at undergraduate level, and is essentially maintained at the intermediate stages. Such a "pipeline" must be rather unusual in a physical science/engineering department. I attribute it to our excellent female academics who are

such superb and proactive role models and mentors. Having a significant female fraction of course greatly facilitates having appropriate representation on committees without overworking the individuals concerned. All people who have responsibility for the management of staff and/or research facilities, including committee representation are encouraged to participate in the University's equality and diversity training opportunities.

The Department is very happy to accommodate career breaks and part-time working. Women who have taken advantage of these options have not found their promotion prospects to be harmed. In my time as Head of Department (i.e. since 2006) 3 women have applied for promotion to Professor, 2 for promotion to Reader; every case has been successful.

We recognise that there is no room for complacency. As set out in this application, we are making efforts to improve across all areas.

The Department, being relatively small, is very cohesive. I can say with confidence that the academic staff are fully committed to the objectives set out in this application. We are indeed fortunate that we have a significant female fraction in all academic ranks, providing a good basis for further progress.

A. L. Greer  
Head of Department

(383 words)

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

*Describe the self-assessment process. This should include:*

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

The Department's commitment to Athena SWAN began in August 2011. An intentionally small initial committee was created to lead the process, and the early preparation of the Athena SWAN application. Additional input was sought as the principles of Athena SWAN were communicated throughout the Department, and the action plan evolved.

The group comprises:

Professor Ruth Cameron  
(Chair)

Joint head of the Cambridge Centre for Medical Materials; employed 80% of full time; member of academic staff since 1993; Mother of two school-age boys.

Miss Lorraine Dann	Administrative Secretary to the department since 1991. Managerial responsibility for the Assistant Staff of the Department, administration of recruitment exercises for postdoctoral research staff, support of the research grant application process, operational financial responsibility for the research grants held by the Department.
Professor Lindsay Greer	Head of Department since 2006. Overall responsibility for academic strategy and resource allocation.
Dr Sohini Kar-Narayan	Royal Society Dorothy Hodgkin Fellow since January 2012, previously Postdoctoral Research Associate since 2008. Mother of small daughter, returning from maternity leave after 4 months, uses the option of flexible working hours available under fellowship for managing childcare.
Dr Howard Stone	Assistant Director of Research, 2006 to present day, Rolls-Royce UTC in Advanced Materials; father of four small children. Altered daily working hours to accommodate wife's evening work commitments, while children were very young.
Dr Rosie Ward (Secretary)	Academic Secretary of the Department since 1996. Responsibility for the Graduate School, administrative support of the recruitment exercises for academic posts (excluding Professorships).

**(b) 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.*

Following a number of informal discussions with representatives of the University's Equality and Diversity Section, and within the Department, including the main twice-termly meeting of academic staff (the 'Staff Meeting'), a short inaugural meeting took place on 21 June 2012. Extensive discussions over the incorporation of the Athena SWAN principles in the

day-to-day operation of the Department took place over summer 2012, and we were in a position to start the academic year 2012/13 in earnest, with a new focus on how we could promote a range of working practices, for the benefit of all Departmental members bearing in mind the aim to facilitate the recruitment, retention and advancement of women in our subject. The Committee met on 21 June, 25 September, 22 October, 5 November and 20 November 2012 to review feedback and identify items for the action plan. Minutes of the Committee's discussions were made available to members of the Department, via the website; and comments on the draft application were invited. The application we present below was prepared on the basis of these discussions.

**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.**

From early 2012, a standing Athena SWAN Committee has been incorporated into the Department's existing committee structure. This Committee reports to Staff Meeting but has a remit that covers all aspects of the Department's activities: teaching, research, staff and students. The Committee will meet termly from 2013 to review the implementation of the objectives listed in the action plan (Action 1.2).

(486 words)

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

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

Materials Science & Metallurgy had its origins in the Chemistry Department at Cambridge, and emerged as an independent department with the establishment of the Goldsmiths' Professorship in 1930. Unlike many Materials departments, we are associated with the physical sciences, not with engineering. Our undergraduate teaching is thus within Cambridge's Natural Sciences Tripos (NST).

The Department has over 30 academic staff, (including staff extended beyond retirement age, established academic staff and early-career research fellows), roughly 50 administrative, technical and other support staff, and roughly 50 postdoctoral researchers, 150 postgraduate students and 20 visiting scientists at any time. Our research falls into five themes: structural materials, device materials, materials chemistry, medical & pharmaceutical materials, and materials characterisation (particularly electron microscopy). In the RAE 2008, the Department had the highest-scoring 'quality profile' in the Metallurgy and Materials subject area, with 95% of our research rated 'world-leading' (4\*) or 'internationally excellent' (3\*). Research funding comes from a variety of sources: about 56% from the research councils, 16% from industry, 21% from the EU, 3% from the UK government, and 4% from overseas governments and charities.

The Department offers a 3 or 4 year BA/MSci degree within the NST, with the majority of students completing the 4-year course. In year 1 the students read four subjects, in year 2 three subjects, before specialising in one subject only. Over 250 take Materials Science in year 1, over 75 in year 2, and over 35 in years 3 and 4. All of these numbers are currently rising rapidly: total FTE undergraduates are some 165 in October 2012, climbing from a low of 55 in 2004. Year 4 includes students who have transferred from other universities to read for the Master of Advanced Studies (MASt) degree. In addition, 10 to 20 students are admitted each year to the one-year MPhil in Micro- and Nanotechnology Enterprise.

We have a thriving Graduate School. Almost all the postgraduate research students are working for the PhD, which they complete on average in 3.5 years. We play a prominent role in two doctoral training centres, the NanoDTC (headquartered in the Physics Department at Cambridge), and the DTC in Structural Metallics linking Materials at Cambridge with sister departments at Birmingham and Swansea.

Materials Science at Cambridge faces the same difficulties of recruitment and retention of female scientists as other SET subjects. We are pleased, however, that at all career stages women are well represented, with no significant falling off in the fraction of women in the higher ranks. The Department can look back on a long history of outstanding contributions by women. These started in the very early days of the Department, in the mid 1930s, with the lectures of Florence Tipper. Her pioneering book *The Distortion of Metal Crystals* (1935) led on to a distinguished career as a Reader in the Engineering Department at Cambridge.

(472 words)

- 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**

We plan to improve the accessibility on undergraduate and postgraduate students and the timeframe for acquisition so that analysis is easier in the future (Action 2.1).

(24 words)

- (i) **Numbers of males and females on access or foundation courses** – *comment on the data and describe any initiatives taken to attract women to the courses.*

We do not offer any access or foundation courses.

(9 words)

- (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 plans for the future.*

The University of Cambridge and its Colleges are committed to widening participation to the University and to higher education in general. Hundreds of outreach initiatives and events are run each year both in Cambridge and in schools and colleges across the UK. The Department itself has little direct control over first year admissions to the Natural Sciences undergraduate course because this is handled separately by the Colleges. However, staff are deeply involved in the admissions process, and they actively encourage potential students, male and female, to consider embarking on a career in Materials Science.

Students are admitted to read Natural Sciences rather than Materials Science per se, and it is not until the 3<sup>rd</sup> and 4<sup>th</sup> years that students specialise in our subject alone.

The numbers of male and female students in their 3<sup>rd</sup> and 4<sup>th</sup> undergraduate years are set out below (Table 3.1 and Figure 3.1). Information on students in their 1<sup>st</sup> and 2<sup>nd</sup> years is less clear, as at this stage students have not specialised in Materials Science.

	2008/2009	2009/2010	2010/2011	2011/2012	Total 2008-2011
<b>Male</b>	20 (65%)	23 (68%)	32 (67%)	47 (76 %)	122 (70%)
<b>Female</b>	11 (35%)	11 (32%)	16 (33%)	15 (24%)	53 (30%)

Table 3.1: The combined numbers and proportions of male and female students in their 3<sup>rd</sup> and 4<sup>th</sup> undergraduate years.

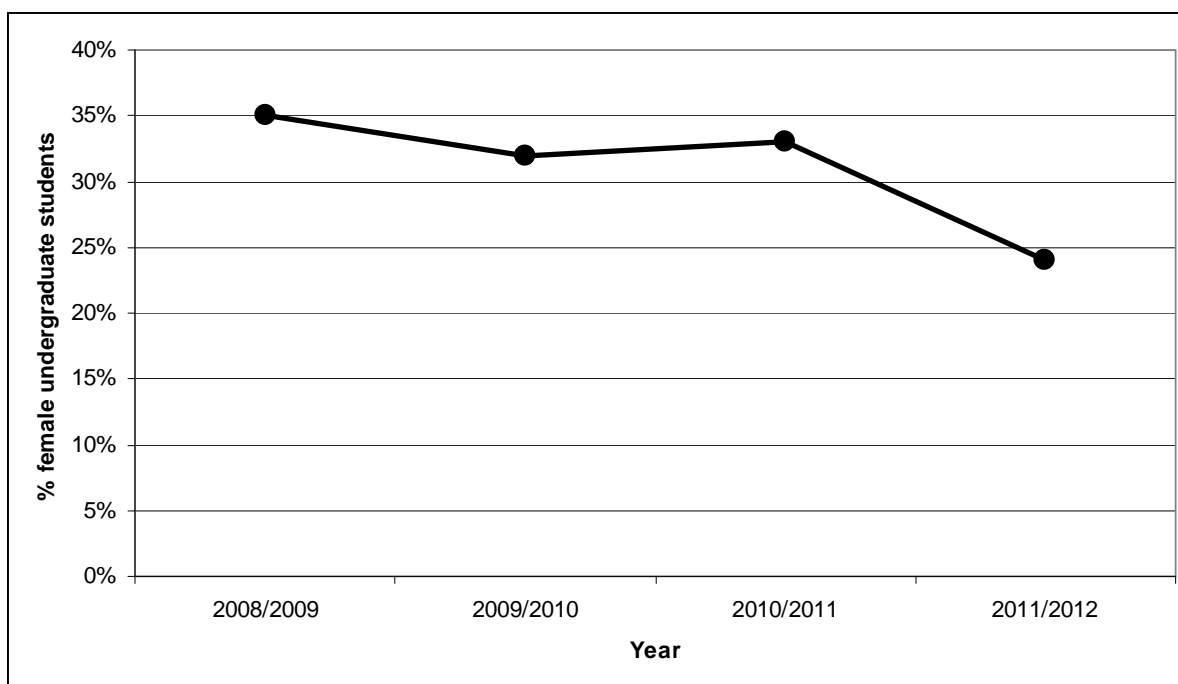


Figure 3.1: The combined percentages of female students in their 3<sup>rd</sup> and 4<sup>th</sup> undergraduate years.

The numbers on our course are small and percentages subject to variation as a result, but our average value of 30% women falls in the mid-range of physical sciences subjects in

Cambridge, where the population of female students ranges from around 22% in Physics, to 52% in Geological Sciences.

The proportion of female undergraduate students in the Department exceeds the national average of around 26.7% in Materials Science and Engineering [reference - The UK Centre for Materials Education (UKCME) National Subject Profile for higher education programmes in Materials, 2008 (Data is for 2006)]. A more recent comparison with Materials undergraduate courses can be made with those from Imperial of 23-26% (2007/8-2009/10) and Oxford of 29-39% (2006/7-2011/12). Again our numbers are broadly in line with these.

(395 words)

**(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.**

The MPhil in Micro- and Nanotechnology Enterprise is a multidisciplinary course delivered by the Departments of Materials Science, Physics, Chemistry and Engineering with contributions from the Judge Business School. The Department of Materials Science oversees the administration, including the admissions process, for this course. All applications are reviewed by the Course Directors (Dr Cate Ducati and Dr Rachel Oliver). Candidates who meet the academic criteria for admission to the course are interviewed by telephone.

Table 3.2 and Figure 3.2 show the number and % female students on the Department’s MPhil in Micro- and Nanotechnology Enterprise course from 2008 to 2011.

	<b>2008/2009</b>	<b>2009/2010</b>	<b>2010/2011</b>	<b>2011/2012</b>	<b>Total 2008-2011</b>
<b>Male</b>	11 (65%)	19 (86%)	12 (63%)	12 (80%)	54 (74 %)
<b>Female</b>	6 (35%)	3 (14%)	7 (37%)	3 (20%)	19 (26%)

Table 3.2: The numbers and proportions of male and female students in the MPhil in Micro- and Nanotechnology Enterprise

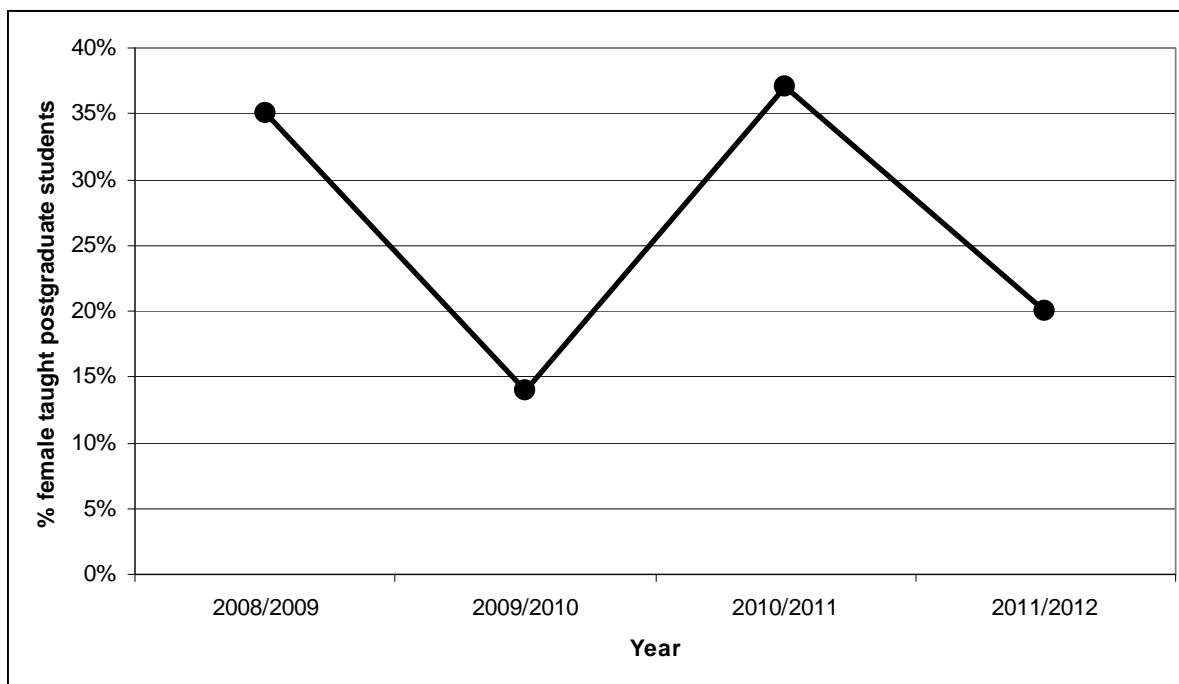


Figure 3.2: The percentage of female students in the MPhil in Micro- and Nanotechnology Enterprise

The UK Centre for Materials Education (UKCME) 2008 National Subject Profile for higher education programmes in Materials quotes a national average of 29% female student on postgraduate taught materials courses for 2005-2006. The figures for our course are broadly in line with this number, given the small intake of students each year.

The Department recognises the need to remain vigilant in terms of encouraging the best students, male and female, to apply for postgraduate studies in the Department, and to ensure that no indirect discrimination is taking place on either the grounds of sex or nationality. In future, we will include a link to the Athena SWAN principles on our website, in any promotional literature about the course, and in our student handbooks (Action 1.1).

(222 words)

- (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.**

The vast majority of postgraduate research students in the Department are studying on a full time basis. One male part time student (60% FTE) began his research programme in April 2012.

The postgraduate research intakes in 2008 to 2011 have been generally consistent at 64-76% male to 24-36% female.



	2008/2009	2009/2010	2010/2011	2011/2012	Total 2008-2011
<b>Male</b>	34 (76%)	14 (64%)	23 (66%)	27 (71%)	98 (70%)
<b>Female</b>	11 (24%)	8 (36%)	12 (34%)	11 (29%)	42 (30%)

Table 3.3: The numbers and proportions of male and female students admitted to PhD study

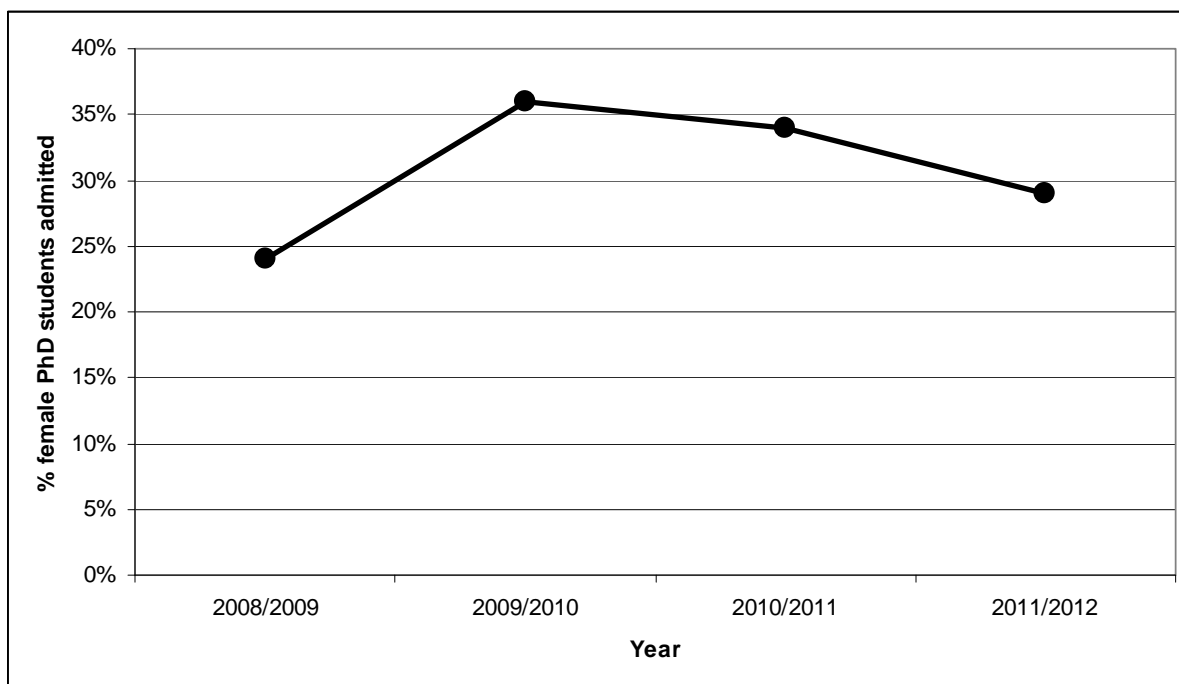


Figure 3.3: The percentage of female students admitted to PhD study

There are no clear national statistics on classification of materials students at postgraduate research level. A comparison can be made with the figures from Imperial of 33-35% (2007/8-2009/10) and Oxford of 19-32% (2006/7-2011/12). Our numbers are broadly in line with these.

For reasons of cost-effectiveness, the printed media are no longer used to publicise our postgraduate opportunities, but the courses available are advertised widely on the Department and University websites, externally on jobs.ac.uk and on occasion, other specialist postgraduate recruitment websites. All applications are now made online, via the University's postgraduate records system 'CamSIS', and received electronically by the Department once applicants have provided transcripts, references and a CV.

A range of projects is advertised on the Departmental website, with those that are funded highlighted. All applications for PhD places are reviewed by at least two members of the academic staff, usually those who are prospective supervisors or who work in a relevant field of research. Interviews, either in person or by telephone, are strongly encouraged. Candidates considered to be suitable potential students are made a conditional offer of admission by the Board of Graduate Studies once their papers are approved by the Degree Committee for the Faculty of Physics and Chemistry.

As for the taught MPhil course, the Department recognises the need to remain vigilant in terms of encouraging the best students, male and female, to apply for postgraduate studies in the Department, and to ensure that no indirect discrimination is taking place on either the grounds of sex or nationality. In future, we will include a link to the Athena SWAN principles on our website, in any promotional literature about the course, and in our student handbooks (Actions 1.1, 4.1).

(341 words)

- (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 date. Comment upon any plans for the future.*

Undergraduates apply to and are admitted by Colleges to read Natural Sciences which covers both biological and physical sciences. Detailed admissions data are not available. Although the Department is not able to influence selection directly, many academic staff take part in their own College’s admission process.

At the MPhil and PhD level an analysis of the proportions of women who apply, who receive offers and who are ultimately admitted over recent years reveals no bias towards the admission of male students (Tables 3.4 and 3.5 and Figures 3.4 and 3.5).

Admissions for post graduate courses is strongly influenced by the availability of funding for which competition is intense. A range of scholarships is available from a wide variety of sources including those available to overseas students from independent organisations. The Department does not therefore have influence over all funding decisions.

MPhils	Academic year				
	2008/2009	2009/2010	2010/2011	2011/2012	Total 2008-2012
<b>%F applications</b>	13 (22%)	12 (18%)	23 (32%)	15 (25%)	63 (24%)
<b>%F offers</b>	11 (12%)	4 (13%)	13 (37%)	6 (24%)	34 (28%)
<b>%F admissions</b>	6 (35%)	3 (14%)	7 (37%)	3 (20%)	19 (26%)

Table 3.4: The numbers and proportions of women who apply, receive offers and who are ultimately admitted to the MPhil in Micro- and Nanotechnology Enterprise

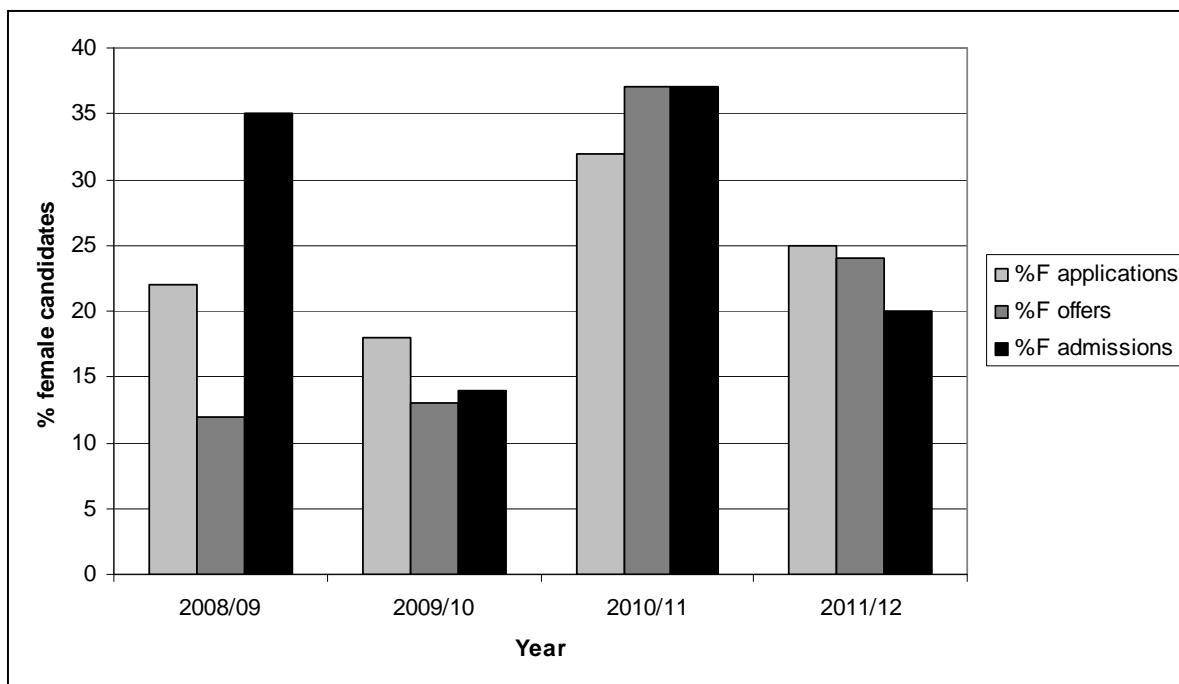


Figure 3.4: The numbers and proportions of women who apply, receive offers and who are ultimately admitted to the MPhil in Micro- and Nanotechnology Enterprise

PhDs	Academic year				
	2008/2009	2009/2010	2010/2011	2011/2012	Total 2008-2012
<b>%F applications</b>	37 (31%)	42 (33%)	38 (27%)	25 (21%)	142 (28%)
<b>%F offers</b>	20 (31%)	19 (39%)	18 (25%)	17 (27%)	74 (30%)
<b>%F admissions</b>	11 (25%)	8 (36%)	12 (34%)	11 (29%)	42 (30%)

Table 3.5: The numbers and proportions of women who apply, receive offers and who are ultimately admitted to PhD study.

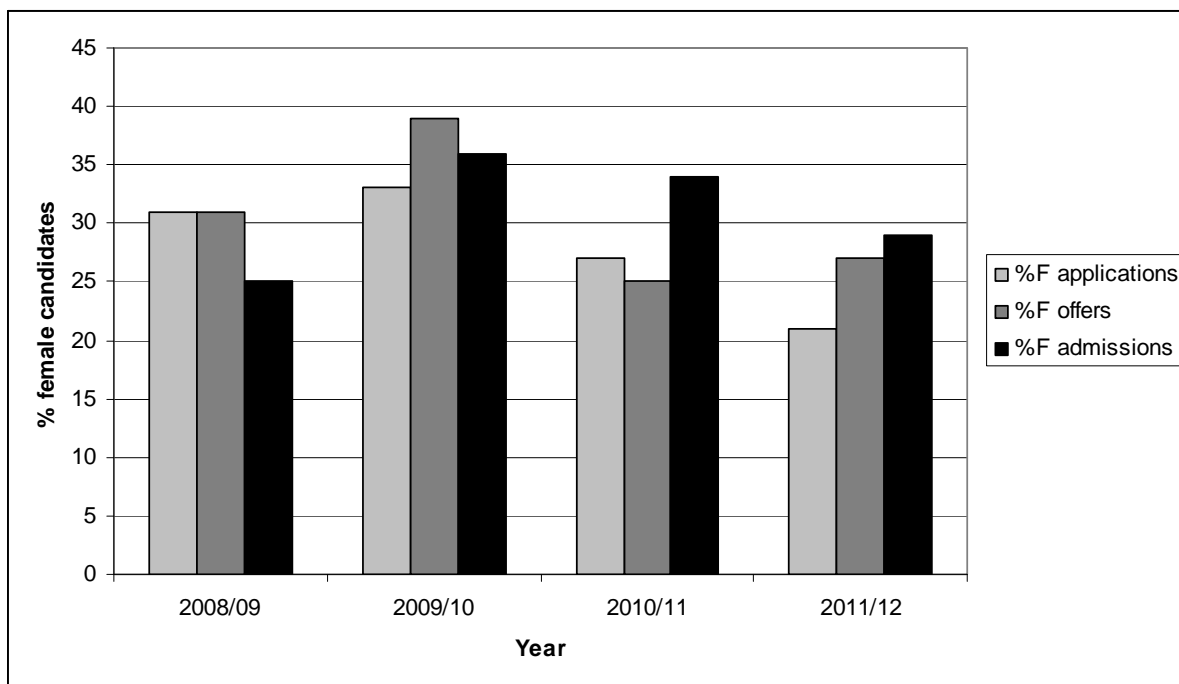


Figure 3.5: The numbers and proportions of women who apply, receive offers and who are ultimately admitted to PhD study.

Although the proportion of female applicants is lower than that of men in all years, the figures show that once an application is made, a female candidate is generally as likely as a male candidate to receive an offer and to be admitted. The variation in these percentage figures from year to year is not believed to be significant given the low numbers of students involved. We plan to ensure that consistent reference is made to the University's family friendly working policies in recruitment literature to encourage a broad spectrum of high quality applicants for all posts (Action 4.1).

(206 words)

- (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.*

The structure of the Natural Science Tripos means that students specialise in Materials Science only in their 3<sup>rd</sup> and 4<sup>th</sup> years. The great majority graduate with an MSci after 4 years. The data below represent an average over the last three years of results (data for students graduated in 2010-2012 by year of graduation). We have averaged the data over the time period concerned to smooth out to some extent the year by year variation resulting from the small sample size (Table 3.6 and Figure 3.6).

	Male	Female
<b>First</b>	45 (44%)	15 (36%)
<b>Lower Second</b>	36 (35%)	22 (52%)
<b>Upper Second</b>	13 (13%)	4 (10%)
<b>Third</b>	8 (8%)	1 (2%)

Table 3.6: The numbers and proportions of men and women awarded MSci degrees by degree class averaged over graduation years 2010-2012 inclusive.

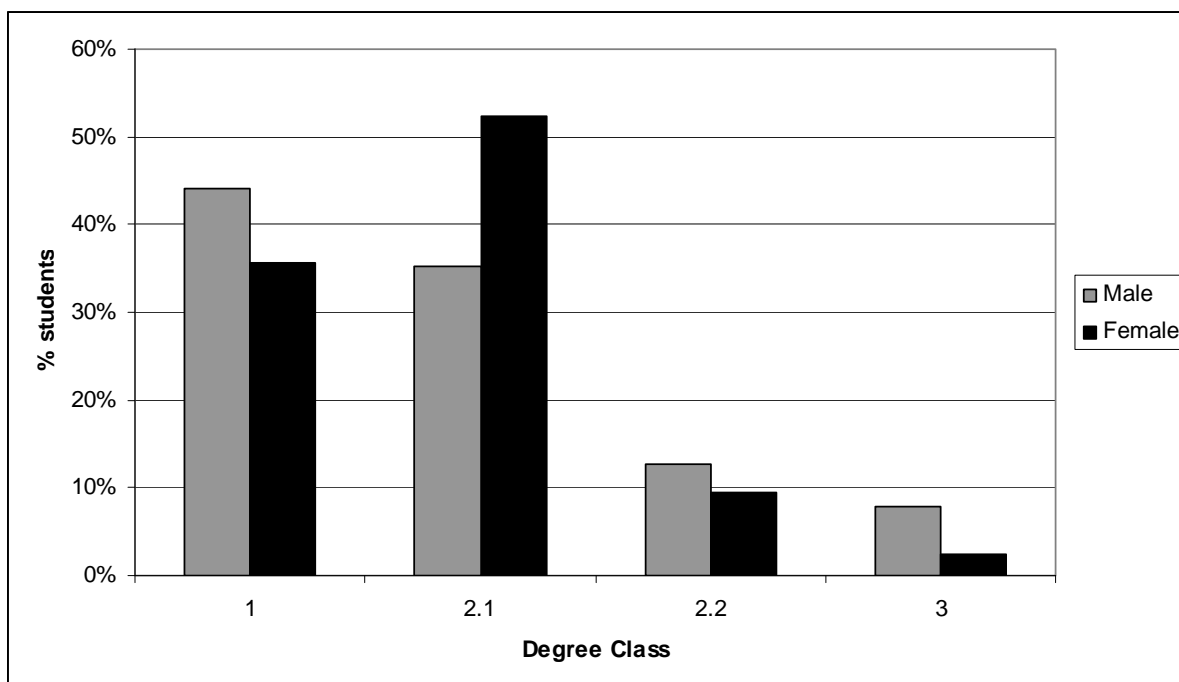


Figure 3.6: The percentages of men and women awarded MSci degrees by degree class averaged over graduation years 2010-2012 inclusive.

Overall, women are more likely to receive a 1<sup>st</sup> or 2.1 (88%) than men (79%). The gender balance in our undergraduate examination results is something we will continue to monitor closely.

In the MPhil in Micro- and Nanotechnology Enterprise, it is possible to obtain a “high pass”, “pass” or “fail” grade in the examinations. The table and figure below shows the data for the last three academic years combined (2010-2012 by year of graduation) (Table 3.7 and Figure 3.7).

	Male	Female
<b>High Pass</b>	18 (44%)	4 (31 %)
<b>Pass</b>	21 (51%)	8 (62 %)
<b>Fail</b>	2 (5%)	1 (7%)

Table 3.7: The numbers and proportions of men and women awarded the MPhil in Micro- and Nanotechnology Enterprise by final result averaged over graduation years 2010-2012 inclusive.

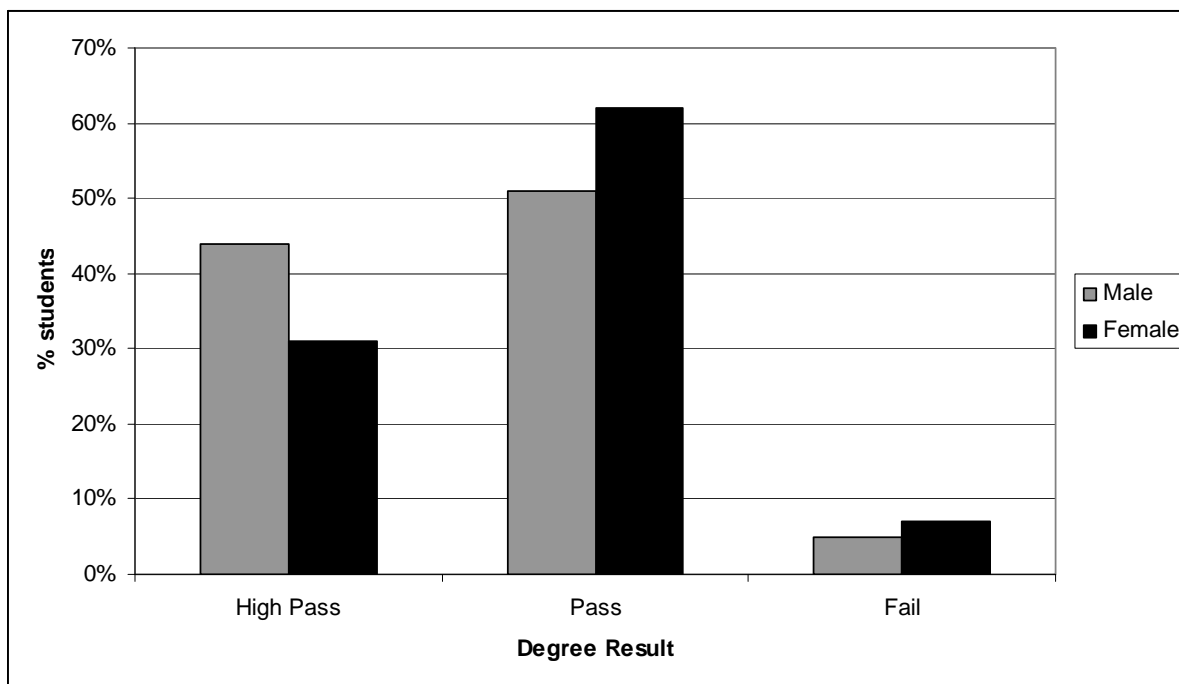


Figure 3.7: The percentages of men and women awarded the MPhil in Micro- and Nanotechnology Enterprise by final result averaged over graduation years 2010-2012 inclusive.

The numbers are too small to offer any evidence of a systematic poorer performance from female candidates, but as with undergraduate examination results, we will continue to monitor performance by gender in the exams.

(226 words)

#### 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 under-representation at particular grades/levels*

Figures 3.8 and 3.9 show a gender breakdown of staff in each category, by year and equivalent data for Science, Engineering and Technology departments within the University. (The data for each year represents the position on 31 March of that year.)

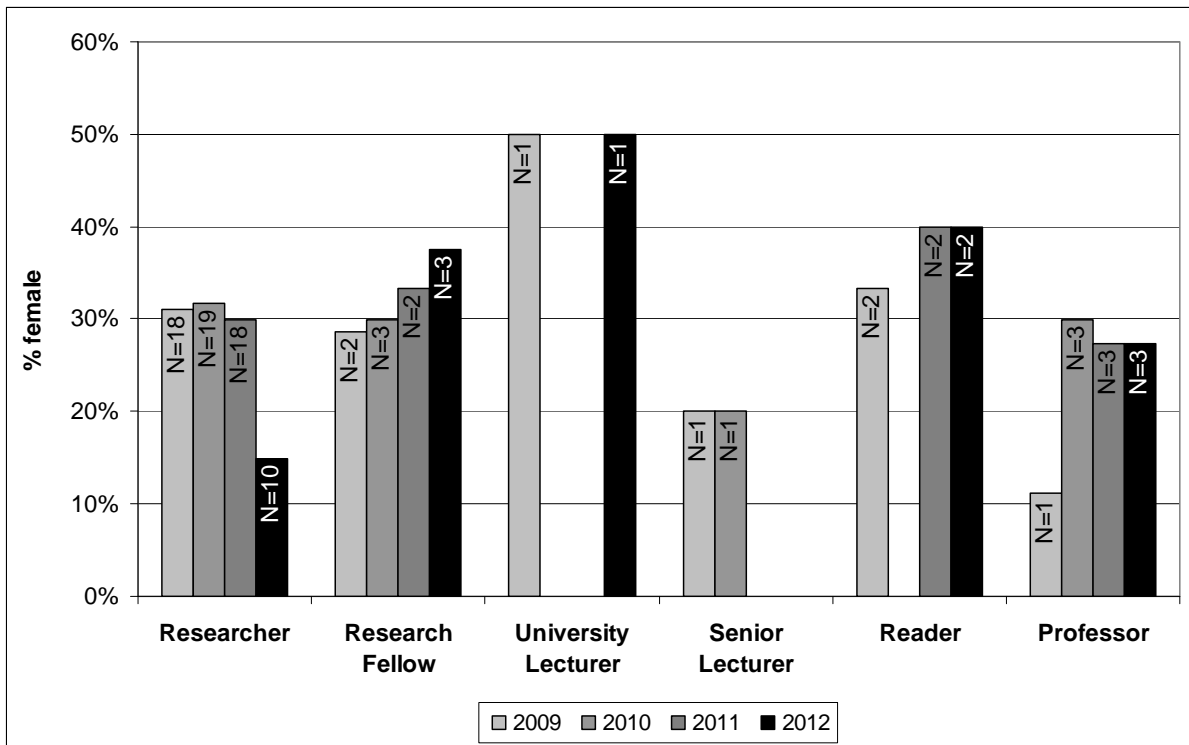


Figure 3.8: Percentage of female staff in the Department by category from 2009 to 2012

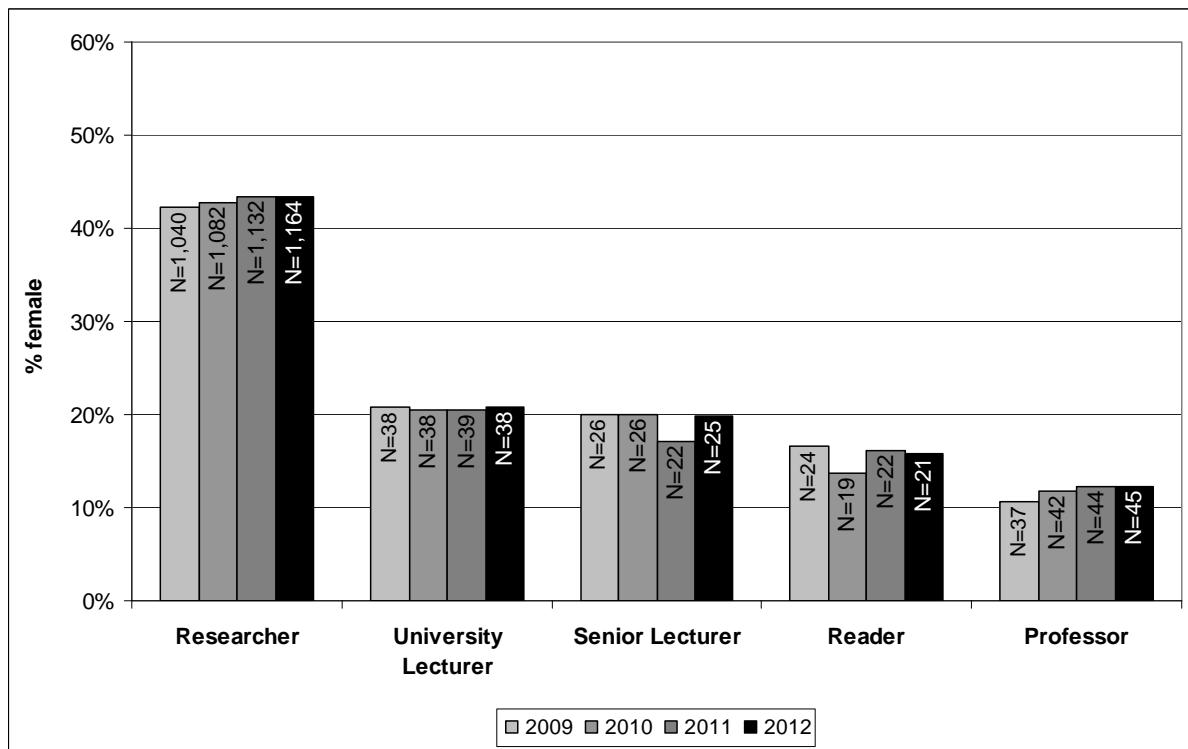


Figure 3.9: Percentage of female staff in the University in Science Engineering and Technology Departments by category from 2009 to 2012

Figure 3.10 shows the pipeline from undergraduate to Professor for the Department, with data averaged over the last 4 years (2009 -2012). (Staff data are averaged over the snapshots taken at 31 March over the years 2009-2012. Student data are averaged over the

academic year cohorts from 2008/9 – 2011/12). Also shown are the 2012 figures for Science, Engineering and Technology departments within the University and for departments within the University’s School of Physical Sciences.

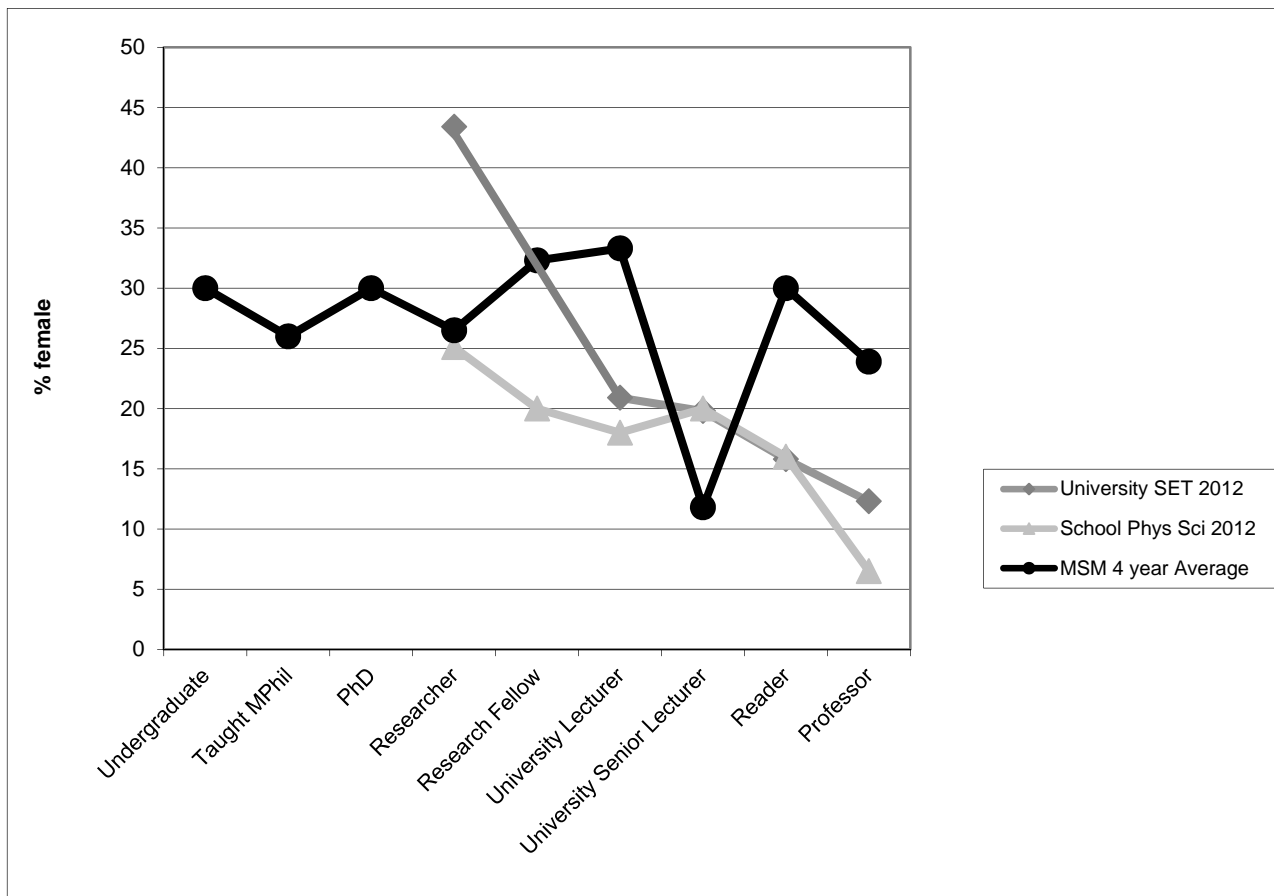


Figure 3.10: The pipeline from undergraduate to Professor for the Department, with data averaged over the last 4 years (2009 -2012), shown together with the data for 2012 for the University Science, Engineering and Technology Departments, and for the University’s School of Physical Sciences Departments.

Although we recognise that it would be desirable to have a greater proportion of women at each grade, it is noteworthy that the percentage of women in the Department remains consistent at around 30% at all grades. We aim to improve this further towards a more representative level across all bands.

Only at the University Senior Lecturer grade does the % of women fall below the broadly consistent values seen at other grades. Numbers at this level are very low indeed, so small differences in numbers cause large fluctuations in % values. We do not believe this variation from the broader trend to be significant.

The numbers of people in each category are small in all cases apart from the Researcher category. Here, the proportion of women has dropped over past year. We suspect that this reflects natural variation, but we will ensure that the situation is monitored and action taken where required. The Department recognises the need to monitor the postdoctoral



recruitment process more closely to ensure that there is no unintentional bias in operation during the selection process. In future, statistical information will be collected on all such appointments (in a similar fashion to how this is done already for academic appointments), (Action 4.2).

(2338 words)

(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.*

Turnover of permanent academic staff is very low, with the exception of retirements. No member of established academic staff has left in the past 4 years, apart from expected retirements. Some staff at professorial level have continued past retirement in salaried positions, but in each case any underlying post has been released and refilled.

Turnover of Researchers and Research Fellows is given in Table 3.8.

	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>2010/11</b>	<b>Total</b>
<b>Number of Male Researchers leaving</b>	23	20	12	18	<b>73</b>
<b>Number of Female Researchers leaving</b>	6	5	1	8	<b>20</b>
<b>% of Researchers leaving who are female</b>	21%	20%	8%	31%	<b>22%</b>
<b>Number of Male Research Fellows leaving</b>	0	0	3	2	<b>5</b>
<b>Number of Female Research Fellows leaving</b>	0	0	0	1	<b>1</b>
<b>% of Research Fellows leaving who are female</b>			0%	33%	<b>17%</b>

Table 3.8 Turnover of Researchers and Research Fellows

The percentage of researchers leaving who are female, broadly reflects the percentage of employees who are female in these categories (see section 3(vii).) An analysis of the reasons why researchers left the department over this period reveals that was no gender differences in the proportions of those leaving because of redundancy/end of contract (55% for both men and women) and those resigning (45% for both men and women).

(131 words)

## Supporting and advancing women's careers – maximum 5000 words

### 4. 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.**

Only one recruitment exercise to the established academic staff has been carried out in recent years. In 2009 two Lectureships were advertised simultaneously, and applications invited from candidates in any field of Materials, with a view to maximising the number of high quality applicants considered. Of the 162 applicants, 23 were female. A much higher proportion of women candidates was included on the shortlist of 14 (9M, 5F). As a result, 7 (3M, 4F) were invited to interview following consideration of a least two references for each candidate. Following a rigorous assessment process, including a presentation and interview by a selection panel which contained external representation, two candidates were appointed on their academic merits and research potential. Both were female\*.

Information on the recruitment exercises at the researcher level is incomplete. As mentioned in section 3(vii), action will be taken to collect and monitor these data more thoroughly with the introduction of more sophisticated online systems to be introduced by the University this academic year (Action 2.2).

\*Both continued to hold their research fellowships before taking up their lectureship appointments, and consequently there is a delay before they appear in the staff statistics in figures 3.8 and 3.10, one only taking up the position after the 2012 census date used.

(210 words)

- (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.**

Since the present Head of Department was appointed (1 January 2006), there have been 4 promotions to Reader (2F, 2M) and 6 promotions to Professor (3F, 3M). All applications from women since 2006 have been successful. In the same period, the overall success rate in promotions (sometimes after more than one attempt) has been 69% of the individuals applying. Given the small number of staff, there is little statistical significance in these numbers. We can say, though, that we have a significant cohort of younger staff (F and M) who are very active in research and are rising rapidly through the promotion ranks. Essentially all permanent members of academic staff who are not already in the professorial rank are potential candidates for promotion. They may decide themselves to apply, but are often encouraged to do so by colleagues or by the Head of Department. All applicants

develop their cases for promotion in consultation with, and with the advice of, the Head of Department and often other colleagues as well. We plan to improve our process by publicising the Senior Academic Promotion CV scheme and fora planned for 2013 on our website (Action 4.3).

(193 words)

**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*

For academic staff appointments there is a Search Committee whose first role is to seek out good candidates and encourage them to apply. The Search Committees follow University guidelines in having at least one woman, and they are in particular encouraged to identify top female applicants. The Committee's final selection is then confirmed by a Faculty Appointments Committee that also follows the University guidelines. At all stages, the F/M balance of applications, and of the committees considering them, are recorded.

For researcher positions, recruitment is organised by the principal investigator on the grant. From 2012, all posts will be advertised to encourage a wide pool of applicants. In future, we will further refine existing procedures to ensure that statistical information will be systematically collected on all such appointments (in a similar fashion to how this is done already for academic appointments) (Action 4.2)..

(142 words)

**(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.*

Career advice is available from the University Careers Service, which has a dedicated (female) careers advisor for researchers in the Physical Sciences. The service operates as an independent confidential source of advice.

Guidance for principal investigators is provided by Employment and Career Management Scheme (ECMS) which draws on the framework of the National Concordat to Support the Career Development of Researchers.

Both a mentoring scheme which operates within the Department, and training programmes which are run at a University level provide additional support and opportunities to staff.

All new members of the academic staff including Research Fellows are offered a mentor from among the more senior and experienced members of staff. It is intended that a mentor can provide information about the structure of the University and the services and opportunities available, as well as the organisation and local arrangements of the host Department. Advice is provided about achieving a balance between teaching, research and other commitments; developing networks and contacts; involvement with the Colleges and seeking research funding. For this reason a mentor will be chosen from among the more senior academic staff, and will usually be from a research group different from that in which the new member of staff is working, to help foster a comfortable relationship and avoid any conflicts of interest.

Take-up of the option to have a mentor is less strong among the postdoctoral research workers and it is our intention to provide a stronger supportive framework for such staff at the time of their appointment, and to offer female staff the option of a female mentor (Action 3.2).

The formal mentoring scheme is complemented by numerous opportunities for informal mentoring at all levels, and facilitated among the postgraduate students by a 'networking lunch' early in their first year. Within the University, the Women in Science, Engineering and Technology Initiative 'WiSETI', established in 1999, aims to redress an under-representation of women in employment and career progression in STEM subjects in Cambridge. Activities offered include an annual lecture featuring a distinguished woman scientist, career-development seminars and 'cake and careers' seminars aimed at staff and students. Female staff of the Department have contributed to the seminar programme, and if there is sufficient interest, we intend to hold 'cake and careers' events in the Department, in collaboration with WiSETI.

(380 words)

## **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?*

Quality is a priority over quantity in all our activities. The pursuit of quality underpins our submissions to the REF (as for earlier RAEs) and to the University's internal learning and teaching reviews as part of our programme to monitor quality of teaching under HEFCE guidelines.

The Senior Academic Promotions Exercise was significantly reformed in 2011 and 2012. The process assesses three areas of activity for promotion: Research/Scholarship, Teaching and General Contributions. A numerical scoring system was introduced in 2012 to evaluate evidence of contribution towards these three criteria, providing more scope for distinguishing between candidates.

Full details of the annual Senior Academic Promotion Exercise are sent to all eligible candidates every year. This provides information on the promotion criteria, and clear guidelines on the appraisal and career development processes that lead to applications for promotion. A wide range of responsibilities/contributions are taken into consideration, including teaching research, administration, pastoral work and outreach activities. As noted earlier, the principal emphasis is on quality, though the absolute quantity of work is also considered.

It is fair to say that an appraisal system for academic staff and research workers has been implemented only partially in the Department. New members of academic staff are included in regular progress reviews as part of the probationary process, and a much more rigorous performance management scheme is under development by the University. The majority of academic and research staff have not expressed a desire to participate in an appraisal scheme. However, it is recognised that such a system is a valued contribution to the fair overall assessment of staff and that people stand only to benefit from the feedback it provides, at the early stages of career development in particular. It is our aim to develop a performance management system that will be offered to all members of academic staff, and to monitor male/female uptake and feedback on its operation (Action 3.1).

All staff are strongly encouraged to apply for competitive research funding, and individual support for the application process is available, particularly for those funding opportunities available to early-career researchers. We have supported female holders of Daphne Jackson and Dorothy Hodgkin Fellowships over a number of years.

(360 words)

- (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?*

Staff and students are very much encouraged to take responsibility for recognising their own training and development needs, and to explore the many opportunities available in Cambridge. The University offers a wide range of training opportunities from the Centre for Personal and Professional Development, Library, Language Centre, Safety Office, WiSETI, Equality and Diversity Office, and Counselling and Computing Services. The courses offered are publicised widely in the Department, and drawn to the attention of individual members of staff as appropriate. Participation is largely voluntary but the Pathways in Higher Education Practice programme is compulsory for new academic staff and aims to provide support and networking opportunities for all staff during their probationary period.

Analysis of training data for staff and research students reveals no gender bias and the fraction of women attending closely match the proportions of female and staff and students in the Department.

The Researcher Development Programme is a newly devised scheme aimed specifically at postdoctoral research staff and PhD students, and provides training in teaching, as well as managing research projects, writing and developing personal strengths in communicating and working with others.

Courses on Equality and Diversity are widely promoted to all groups of staff.

(198 words)

- (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.*

During their time in the Department, in accordance with the University's Code of Practice for Research Degrees, all research students are provided with an Advisor, who acts as a secondary source of academic advice. At present, Advisors are allocated on a reciprocal basis across research groups, or individually according to an individual's academic interests. Students are invited to nominate an alternative Advisor if they feel that another person would be more appropriate for their needs. In future, specific reference will be made to the availability of career development advice from Advisors, and female students will be alerted to the possibility of asking for a female Advisor, if they would like one (Action 3.3).

Cambridge students at all levels are fortunate in being able to call on the College system for additional support and advice, including pastoral care. There are three Colleges for women only, and many Colleges have special events for female students.

From the start of their registration as postgraduates, our students are strongly encouraged to make contact with the Careers Service, where there are female and male professional advisors, and contact with alumni in all fields of work, who have volunteered to contribute their experience to current students interested in similar careers.

Student representatives are frequently sought for consultative committees, learning and teaching reviews, meetings with potential donors etc, and great care is taken in their selection to include a balanced mix, including female representatives.

The Careers Service holds regular events about careers in science, and in academia; at which women speakers are selected specifically to speak about their career development and work-life balance, including family responsibilities.

(269 words)

## 6. 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.

Our committee structure is shown in Figure 6.1.

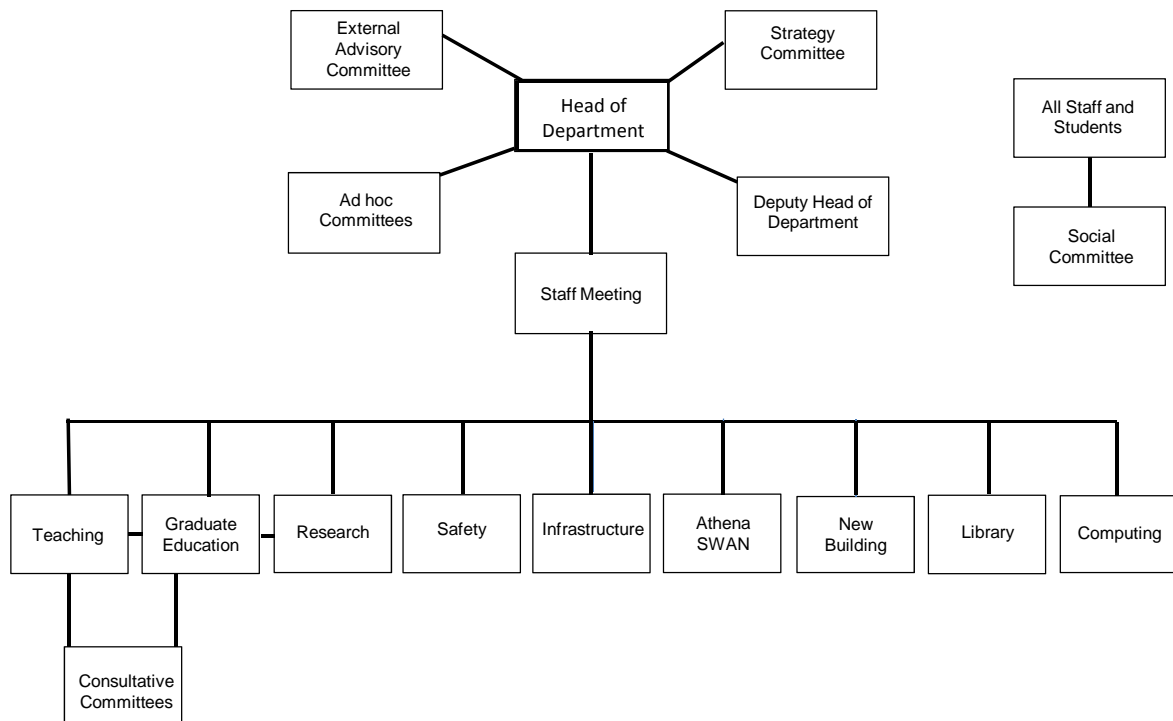


Figure 6.1: Committee organisation

Our committee membership has been fairly static for the past twelve years and is due for revision (Table 6.1). Potential members are identified primarily on the basis of their expertise, interests and experience. An active effort is made to ensure diverse representation, including broad range of interests, career stage, gender and ethnicity.

	Year			
	2008-2009	2009-2010	2010-2011	2011-2012
Committee	Percentage of Female Academics			
Teaching Committee	2 (20%)	3 (27.3%)	8 (57.1%)	6 (50.0%)
Research Committee	8 (12.5%)	1 (12.5%)	3 (30.0%)	3 (27.3%)
Computing Committee	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Graduate Education Committee	n/a	n/a	3 (60.0%)	3 (60.0%)
Safety Committee	1 (20.0%)	1 (16.7%)	1 (16.7%)	1 (20.0%)
Infrastructure Committee	in abeyance			
Library Committee	1 (25.0%)	2 (40.0%)	1 (25.0%)	1 (25.0%)
New Building Committee	3 (27.3%)	3 (27.3%)	3 (30.0%)	3 (33.3%)
Strategy Committee	3 (37.5%)	3 (37.5%)	3 (37.5%)	3 (37.5%)
Social Committee	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Athena SWAN Committee	N/A	N/A	N/A	2 (50%)

Table 6.1 Numbers and percentages of female academics serving on Department committees

From early 2012, a standing Athena SWAN Committee has been incorporated into the Department's existing committee structure. This Committee reports to the Staff Meeting but has a remit that covers all aspects of the Department's activities: teaching, research, staff and students. The Committee will meet termly from 2013 to review the implementation of the objectives listed in the action plan (Action 1.2).

(119 words)

- (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.*

Figure 6.2 shows the percentage of women in fixed term and open ended (permanent) contracts. The percentages of women mirror the values in the pipeline diagram (Figure 3.10). As in the pipeline diagram, there is no evidence of systematic bias from this data.



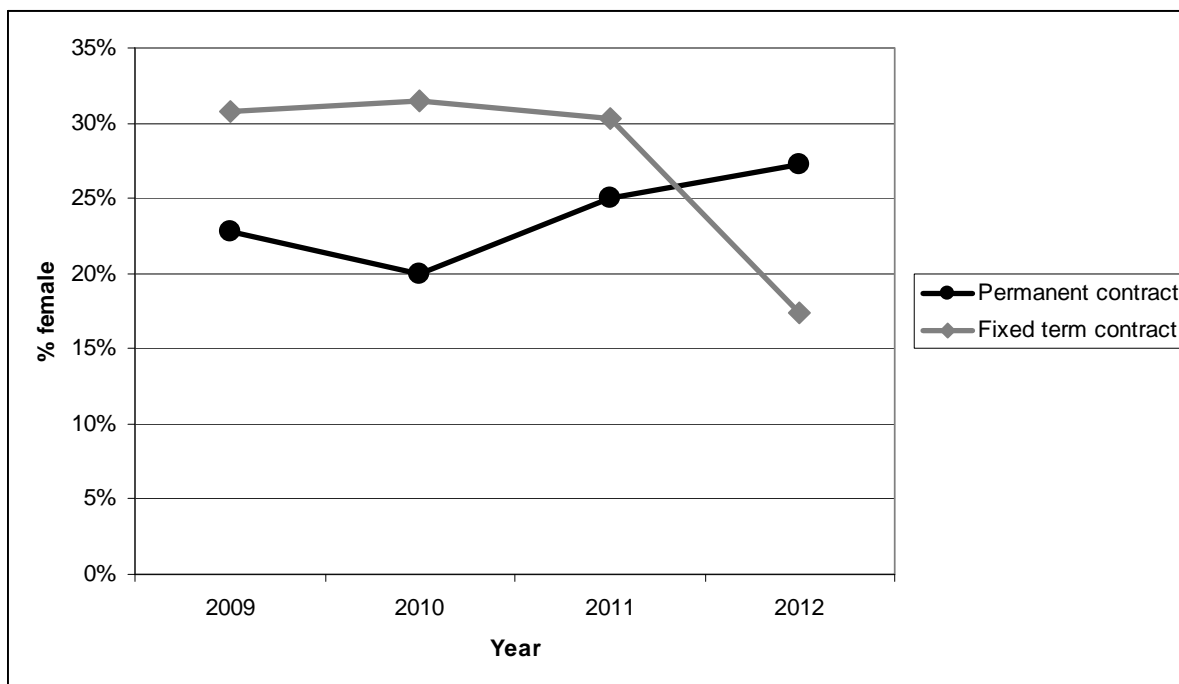


Figure 6.2 The percentage of women in fixed term and open ended (permanent) contracts.

(43 words)

**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?*

When ad hoc committees are constituted, for example short-listing and interview panels, great care is taken to ensure that all academic interests including those of women are represented. Academic recruitment panels receive a briefing on good practice and legal obligations to be observed in recruitment exercises so that any potential inadvertent discrimination can be avoided. We believe that we have sufficient numbers of female staff at all levels, to mean that an undue committee overload is not placed on a disproportionately small group.

(83 words)

*(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.*

The Department has a workload model that covers all academic staff in terms of teaching examining and related duties in addition to any managerial responsibilities they have.

For newly appointed academic staff an important aspect of appraisal is career planning with a view to promotion, and the criteria for promotion are therefore considered explicitly. The emphasis is not so much on workload allocations but on the quality of the contributions, which are classified into three areas: (A) Research/Scholarship, including evidence of (i) originality, (ii) contribution to the advancement of knowledge, and (iii) reputation; (B) Teaching; and (C) General Contribution. Thresholds are at different levels, depending on the rank sought. Taking Research/Scholarship as an example, promotion to University Senior Lecturer requires “achievement ... of at least a national standard of excellence”, to Reader requires “international recognition”, and to Professor requires “established international leadership”. The promotions criteria for Teaching include: “course development and innovation; the delivery of teaching including, as appropriate, lecturing, conducting seminars, supervising undergraduate and graduate students, and directing studies”. A similarly wide range is found for General Contribution: “administration and, where appropriate, management of research groups, and the creation and management of multi-institutional/national/international research facilities. It may also include contributions to the subject made more widely, for example, widening participation activity and the design and delivery of outreach programmes, also editorial work, and clinical work.” The promotions criteria are thus helpful in allowing/encouraging credit to be given for a particularly wide range of possible contributions, including those targeted on widening participation.

There is rotation of responsibilities, for all sorts of reasons: sharing workload, broadening expertise, refreshing of courses. The period ranges depending on the activity, from 1 or 2 years for a Senior Examiner appointment to 4 or 5 years for delivery of a first-year lecture course. Workload allocation is principally the responsibility of the Department Teaching Committee. This Committee meets around 10 times per year and maintains a register to monitor and control the distribution of work.

(329 words)

- (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.*

Almost without exception, meetings and teaching activities take place within conventional working hours (9am to 5pm). It has long been the tradition that the Staff Meeting takes place at 4pm on Monday afternoons, so that staff can plan commitments well in advance. Other meetings, for example the Teaching Committee and Research Committee take place in the afternoons to avoid clashes with primary teaching commitments. Our main department-wide social events – largely barbeques and quizzes, retirement presentations and Christmas closure party – take place at lunchtimes. In general, academic and researcher contracts do not specify fixed hours of work on a daily basis and there is therefore a great deal of natural flexibility in their working schedule.

(114 words)

**(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 Department strives to ensure an inclusive culture, not just with regard to gender but all characteristics – race, country of origin, age etc. Our common room is open to all staff and postgraduate students, and undergraduates in their 3<sup>rd</sup> and 4<sup>th</sup> years, once they specialise in the study of Materials Science. There is an Annual Meeting in a large lecture theatre to which all staff and students are invited. At this, the highlights of the year, and plans for the future are reviewed, and a short research talk is presented. Care is taken at this and other events to ensure that over the years, all members of the academic staff – male or female - newly-recruited or established in their careers – are given an opportunity to speak. Similarly, equal representation is considered when identifying our ‘paper of the month’ feature on the Department’s website, and the staff profile in our twice-yearly newsletter, Material Eyes. In addition, there are many female role-models among members of the academic and administrative staff at all levels.

(171 words)

**(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.**

The Department is committed to the promotion of science and the enrichment of learning by holding events within schools and colleges, and residential courses and open days for pupils and teachers. We hold numerous events in Science Week, as part of the largest single event under this umbrella. Our main outreach activities in recent years have been lead by two senior members of academic staff, one male and one female, and there is wide ranging participation from among the researchers and post-graduate students. In addition, female academic staff have also participated in events aimed at girls of school age.

(98 words)

## **7. Flexibility and managing career breaks**

**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.**

From 2006 to date there has been a total of 8 staff taking maternity leave. Maternity leave was taken in 2007 (4), 2009 (1), 2010 (2) and 2012 (1). These women were all research staff. All of the women have returned to work except one . In this case,, the end of the researcher’s maternity leave period coincided with the end of her fixed-term contract and

she left Cambridge to follow her partner who had obtained a post elsewhere. The researcher currently on leave has indicated that she intends to return to work.

(92 words)

- (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.*

From 2011, the University introduced additional paternity leave and pay, providing parents with the option of dividing a period of paid leave entitlement between them. All employees, whose children are born or placed for adoption, who meet the statutory requirements, are entitled to a maximum of 26 weeks additional paternity leave with a maximum of 13 weeks additional paternity pay. The University aims to promote paternity leave entitlements more widely for all staff.

From 2006 to date there has been a total of 5 staff taking paternity leave. Paternity leave was taken in 2006 (1), 2008 (4), 2011 (2) and 2012 (2). Of these men, 2 were members of the academic staff and 3 researchers. One member of academic staff has taken 3 periods of paternity leave and one academic and one researcher have each had 2 periods of paternity leave. We are aware of three further researchers who have not taken up paternity leave on the birth of their children.

There have been no cases of adoption leave amongst academic and research staff.

The numbers are too small to show any trends over time.

(185 words)

- (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.*

Flexible working has been applied for and granted to one female academic for 5 years initially from October 2011 and to one male academic who worked flexibly for the period 2007 to 2012. The Department is sympathetic to these requests and there is every expectation that should the female academic apply for a further period of flexible working this will be granted. Throughout the period from 2006, 2 female professors have continued to work part-time following the births of their children pre-2006.

Under the University's policy, a request for flexible working from any member of staff is considered sympathetically.

(99 words)

- 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.*

The numbers applying for flexible working are too small to provide any sensible statistics. The option of the University's flexible working system is, however, well known amongst the staff. The University has a nursery and runs holiday play schemes, and many staff take advantage of these facilities to enable them to continue working. We plan to monitor flexible working requests more systematically in future (Action 6.1)

(55 words)

- (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.*

When female staff are going on maternity leave, any courses they are teaching are covered by other members of staff. Each graduate student in the Department has an Advisor in addition to their Supervisor. During the period of a Supervisor's maternity leave, the Advisor oversees the student's work. The contracts of researchers are extended to equal the period of time taken in maternity leave to enable them to finish the project they are working on, where this is allowed by the sponsor. As proposed as part of the University's Bronze renewal submission 2012, the Pro-Vice-Chancellor for Institutional Affairs is piloting a fund to help returning carers restart their research careers (mainly after maternity leave). Academic and research staff within the Department will be encouraged to consider making applications to this fund.

(131 words)

## **8. Any other comments – maximum 500 words**

*Please comment here on any other elements which are relevant to the application, e.g. other SET-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.*

We began the self assessment process uncertain of the information that we would find and the trends that would be revealed. The fact that there is no evidence of a leaky pipeline, is heartening but there is no cause for complacency. As set out in this application, we are making efforts to improve in various areas, such as:

- (i) We are working to achieve broader general awareness of equality and diversity objectives, including those of Athena SWAN, by an enhanced presence and visibility of relevant material on the Department website.

- (ii) We are revising our procedures to ensure that advertisements, further particulars and suchlike are more consistent in highlighting Athena SWAN and family-friendly policies.
- (iii) We need a much better analysis of our recruitment and career development systems at postdoctoral level; upgraded human-resources systems and databases in the central University should help.
- (iv) Our appraisal and mentoring systems need improvement, in particular to encourage greater participation at postdoctoral level.
- (v) Our teaching is within the broader Natural Sciences Tripos, and that has impeded the gathering of subject-specific data on undergraduates, something we are now working to improve.

Each of the female academic role models has achieved significant recognition in her own right. Prof Serena Best has recently been elected as a FEng, Professors Ruth Cameron and Judith Driscoll both hold prestigious ERC Advanced Grants, Dr Cathie Rae and Dr Zoe Barber were both promoted to Reader in October 2011, and our two most recent lectureships were awarded to Dr Rachel Oliver and Dr Caterina Ducati, in a highly competitive selection process.

One initiative proposed by the School of Physical Sciences, with funding provided by the University, is a Staff Questionnaire. The exact nature of this exercise is yet to be finalised, but it will contain questions of direct relevance to Athena Swan (Action 5.1).

We found assembling this Athena Swan self assessment a thought provoking challenge and have welcomed the opportunity to reflect on and improve our working practices. We look forward to continuing to engage with this process in the coming months and years.

R.E. Cameron  
Chair of the Athena Swan Committee

(351 words)

## 9. 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.

The action plan does not need to cover all areas at Bronze; however the expectation is that the department will have the organisational structure to move forward, including collecting the necessary data.

Action	Description of action	Situation at November 2012	Further action planned at November 2012	Responsibility	Timescale	Measure of Success
<b>1. General</b>						
1.1	Publicise the Athena SWAN programme and expand on the Department's approach to achieving these aims	Basic information, meeting minutes and link have been placed on Departmental website	Continue to add material, including the Athena SWAN Bronze application, and links to the University's well-described policies and procedures	Head of Department, Academic Secretary, Administrative Secretary	M2012 onwards	Information readily available on Department website with appropriate links.
1.2	Update the Department's 'family tree' of committees to include Athena SWAN Committee	Completed		Head of Department's Office	Completed	Fully constituted Athena SWAN Committee meets termly, reports to Staff Meetings and is embedded into the normal business of the Department.



Action	Description of action	Situation at November 2012	Further action planned at November 2012	Responsibility	Timescale	Measure of Success
<b>2. Baseline Data and Supporting Evidence</b>						
2.1	Collection and analysis of data on undergraduate and postgraduate students	Levels at which various data are held not always clear because of structure of the NST, and introduction of new application and admission systems and software (CamSIS)	Improve accessibility of data and time frame for acquisition, so that analysis is easier in future (with support from central University)	Graduate Education Committee and Teaching Committee	E2013 onwards	Improved ability to monitor undergraduate and postgraduate M/F student breakdown from application stage through to analysis of examination results. Annual review of students numbers by Athena Swan Committee.
2.2	Collection and analysis of data on postdoctoral researchers and established academic staff	Incomplete data held at University and departmental level	Improve analysis of recruitment and career development	Athena Swan Committee	L2013 onwards	More complete and detailed staff data available for analysis via upgraded CHRIS and RAS online systems.

Action	Description of action	Situation at November 2012	Further action planned at November 2012	Responsibility	Timescale	Measure of Success
<b>3. Career Development</b>						
3.1	Review the system concerning appraisals and consider how best to integrate the University's new scheme with our current practices	Overall take up of appraisal is low.	Aim for a more consistent implementation and take-up of the University scheme.	Head of Department's Office	L2013 onwards	Increased overall participation rate, particularly among post-doctoral staff. Increased participation by academic staff in the appraisal training available from the University.
3.2	Extend mentoring scheme	At present only new academic staff or research fellows are offered a mentor. Take-up under a pilot study of Researchers was low.	Aim to offer all newly-appointed research staff a mentor. Female members of staff offered the option of having a female mentor.	Academic Secretary	L2013 onwards	All postdoctoral research staff are offered a mentor at the time of their appointment and take up is monitored.
3.3	Offer advisors to research students	The majority of research students are offered an advisor.	Continue to offer all new research students an advisor.	Academic Secretary	ongoing	All students have an advisor to call on.

Action	Description of action	Situation at November 2012	Further action planned at November 2012	Responsibility	Timescale	Measure of Success
<b>4. Key Career Transition Points</b>						
4.1	Improve recruitment process	Reference to family friendly policies is not made consistently in recruitment literature	Ensure that reference to the Athena SWAN Scheme and family-friendly policies appears consistently	Administrative Secretary, Academic secretary	L2013 onwards	A broad spectrum of high-quality applicants for academic posts and studentships.
4.2	Monitor postdoctoral recruitment	Unexplained dip in recruitment of women in 2011-12	Monitor %F applicants and % shortlisted and recruited	Athena Swan Committee	L2013 onwards	Maintain a level of at least 30% female applicants consistent with pipeline percentage.
4.3	Ensure that all eligible staff are given the opportunity for promotion	University process in operation	Publicise the Senior Academic Promotion CV Scheme and fora planned for 2013 on website	Head of Department	L2013 onwards	Staff make an application at the <u>right time for them</u> , to maximise chances of success.

Action	Description of action	Situation at November 2012	Further action planned at November 2012	Responsibility	Timescale	Measure of Success
<b>5. Organisation and Culture</b>						
5.1	Consultation with staff and students	Currently discussing nature of a staff survey with the School of the Physical Sciences (who are funding the survey)	Carry out staff survey	Head of Department's Office	M2013	Depends on what emerges, but we could set up focus groups to discuss points of interest or concern generated by the response to the questionnaire  Hold, for example, a 'Cake and Careers' event
<b>6. Flexibility and Managing Career Breaks</b>						
6.1	Monitor flexible working requests	Flexible working recorded centrally from M2012	Evaluate requests for flexible working	Administrative Secretary and Head of Department	M2012 onwards	Improved ability to monitor and evaluate flexible working requests

NST – Natural Sciences Tripos

CamSIS – the online application and record-keeping system for undergraduate and postgraduate students

CHRIS - the Human Resources database used in the central University and Departments

RAS – on-line recruitment administration system

Date	Code
Michaelmas Term 2012	M2012
Lent Term 2013	L2013
Easter Term 2013	E2013
Michaelmas Term 2013	M2013
Lent Term 2014	L2014
Easter Term 2014	E2014
Academic Year 2011-2012	AY2011-2012



UNIVERSITY OF  
CAMBRIDGE

Department of  
Materials Science & Metallurgy

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Head of Department

Athena SWAN Coordinator  
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28<sup>th</sup> November 2012

### Statement of Support

I fully support this application, and indeed the increasing emphasis on Athena SWAN objectives throughout the Department. Our newly formed Athena SWAN Committee (on which I serve) is designed to have representatives of key groups, and is very ably led by Professor Ruth Cameron. The Committee reports to our main Staff Meeting, which now has Athena Swan business as a standing item on its agenda.

In March 2012 the Department had 22 permanently established academic posts. Of these, 6 were occupied by women and this has since risen to 7. Our 3 female Professors make up 27% of that rank, our 2 female Readers 40% of that rank. The fraction of women in our undergraduate cohorts averages around 30%. While we wish that all these percentages were higher, we are very pleased that the proportion of women is almost as high at professorial level as it is at undergraduate level, and is essentially maintained at the intermediate stages. Such a "pipeline" must be rather unusual in a physical science/engineering department. I attribute it to our excellent female academics who are such superb and proactive role models and mentors. Having a significant female fraction of course greatly facilitates having appropriate representation on committees without overworking the individuals concerned. All people who have responsibility for the management of staff and/or research facilities, including committee representation are encouraged to participate in the University's equality and diversity training opportunities.

The Department is very happy to accommodate career breaks and part-time working. Women who have taken advantage of these options have not found their promotion prospects to be harmed. In my time as Head of Department (i.e. since 2006) 3 women have applied for promotion to Professor, 2 for promotion to Reader; every case has been successful.

We recognise that there is no room for complacency. As set out in this application, we are making efforts to improve across all areas.

The Department, being relatively small, is very cohesive. I can say with confidence that the academic staff are fully committed to the objectives set out in this application. We are indeed fortunate that we have a significant female fraction in all academic ranks, providing a good basis for further progress.

Lindsay Greer

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