



University of Cambridge  
Department of Physics  
The Cavendish Laboratory

# Athena SWAN Gold Application



Entrance foyer at the Cavendish Laboratory



November 2013

# Athena SWAN at The Cavendish



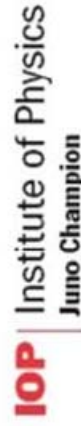
**Understanding our working environment**  
fuelling change to the way things are organised and done

**Staff Review and Development**  
**Measuring career progression**

**Addressing inequality**  
supporting women into senior academic positions  
**Mock interviews**  
**Individual careers advice**

**Valuing Individuals**  
recognising that balancing work with the rest of life is not simple

**Families at the Cavendish**  
**Staff workload model**



**Supporting careers**  
meeting key development needs at different transition points

**Culture**  
providing a comfortable work and social atmosphere accessible to all

**Transferable skills training**  
**Fellowships workshop**

**Summer Barbecue**  
**Christmas party**

<http://www.phy.cam.ac.uk/athenaswan/>

Our Athena SWAN poster as displayed on all notice boards in the Department

## **Athena SWAN Gold department award application**

**Name of university:** University of Cambridge

**Department:** Physics (the Cavendish Laboratory)

**Date of application:** November 2013

**Date of Silver Athena SWAN award:** July 2010

**Date of University Bronze Athena SWAN award:** Bronze renewed April 2013

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**Contact for application:** Professor Valerie Gibson

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**Departmental website address:** <http://www.phy.cam.ac.uk/>

## Introduction

The University of Cambridge, Department of Physics (the Cavendish Laboratory) is committed to “best practice for all” and adheres to the Athena SWAN Code of Practice for the advancement and promotion of women in science. The Department was awarded Athena SWAN Silver status in July 2010. This application for an Athena SWAN Gold Award follows 10 years of sustained activity to monitor, assess and act upon gender and equality issues within the Department and influence activities at the University and national level. Our main successes in the last 5 years include:

- a 64% increase in the number of women academic staff (3.2 FTE women appointed<sup>1</sup> to Lecturer/Reader compared to 4 men);
- all female academics, eligible for promotion, have been promoted at least once;
- positive impact from the re-design of our undergraduate Physics course and an action plan to address the performance of women undergraduates at the end of their first year;
- a requirement that all staff undergo Equality and Diversity (E&D) training;
- a significant expansion in career advice activities for research staff;
- a review of the Staff Review and Development scheme, resulting in an increased coverage from 40% to 80% of the target cohort;
- the formation of a very active Research Staff Committee (meeting termly) and associated events (monthly postdoc teas and targeted workshops);
- a Workload Model for academic and senior research staff, in its second year of operation;
- formation of the Cavendish Social Committee and associated events (meeting termly, with 2 or 3 events held each year); and
- influential engagement with Athena SWAN and other gender equality activities at both the University and national levels.

We are the beacon Department in the University and the driving force behind many of its Athena SWAN activities, all of which are enthusiastically endorsed by the Vice-Chancellor, Sir Leszek Borysiewicz. We are grateful for the funds received from the Vice-Chancellor, in recognition of our Athena SWAN Silver award, and the additional support from the IoP and Trinity College.

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

An accompanying letter of endorsement from the head of department should confirm how the SWAN action plan and activities in the department contribute to the overall department strategy and academic mission, and spell out what is next for the department, what difficulties might be experienced, and what the department most looks forward to.

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 initiatives that have made a significant contribution to the achievement of the departmental mission.

Please see letters overleaf from the Vice-Chancellor, the new and previous Head of Department (HoD).

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<sup>1</sup> One currently under offer.



Ms Sarah Dickinson  
Athena SWAN Manager  
Equality Challenge Unit  
7th floor, Queens House  
55/56 Lincoln's Inn Fields  
London WC2A 3LJ


6 February 2014

*Dear Sarah*

I am delighted to endorse the Department of Physics in their application for an Athena SWAN Gold Award. The Department is a beacon not only in the quality of its research but also in promoting gender equality through the Athena SWAN and Juno initiatives. The Department was the first to gain an Athena SWAN Award in the University in 2010 and leads the way for other University Departments who now hold or are working towards Athena SWAN Awards. Their willingness to share their experiences of tackling gender equality issues and ensuring a positive and lasting impact on the culture of their Department has been exemplary. In particular, their progress in supporting researchers with fellowship applications, workload modelling for Academic staff and extensive outreach programme are initiatives that the University would like to see extended across other disciplines at Cambridge.

In a subject which has less than 5% female Professors at a national level we are extremely fortunate to have two outstanding role models. As a University, we are indebted to Professor Dame Athene Donald, Professor of Experimental Physics, for her commitment, dedication and service to supporting women in science as our Gender Equality Champion, Director of WiSETI (Women in Science, Engineering and Technology Initiative), elected member of Council and Chair of the Gender Equality Group (GEG). GEG is a pivotal University Committee which oversees substantial activities such as biannual Equal Pay Reviews and the work of the Senior Gender Equality Network, which I launched in 2012. Similarly, Professor Val Gibson, Head of High Energy Physics, leads the advancement of Athena SWAN principles in her own Department, within the School of Physical Sciences and beyond. She has recently been recognised for her role in championing female talent in science by winning the 2013 Women in Science and Engineering (WISE) Leader award. Both women are highly respected for their science and also for their high profile outreach work nationally and internationally, promoting Physics as an exciting and attractive option for girls, as well as being very visible and vocal role models for women across all subjects.

The University is extremely committed to progressing gender equality and we are beginning to see the impact of the significant resources and initiatives dedicated to improving the numbers of women across all career stages. The Department of Physics has played and will continue to have a key role in supporting and promoting women in STEMM.

*Yours sincerely*  


L K Borysiewicz

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**UNIVERSITY OF  
CAMBRIDGE**

**Department of Physics**

**Professor M A Parker**  
Head of Department

Ms Sarah Dickinson  
The Senior Policy Advisor (Athena SWAN)  
Athena SWAN Charter,  
Equality Challenge Unit,  
Queen's House,  
55-56 Lincoln's Inn Fields,  
London WC2A 3LJ

10<sup>th</sup> February 2014

Dear Sarah,

I am very happy to write in support of the application for an Athena-SWAN Gold Award by the Department of Physics. As incoming Head of Department, I have made this issue a personal priority. I want to build on the excellent track record of the Department which was the first in the University to gain an Athena-SWAN award.

Since my appointment, I have visited every research group and made personal contact with as many of the staff as possible at levels. I have emphasised the equality and diversity agenda at every opportunity with the goal of embedding the culture change which we have achieved into all of our processes. It has been very encouraging to see the positive feedback from the staff.

In the last five years we have seen a rise of 64% in the number of female academic staff, with 3.2 women appointed at Lecturer/Reader level compared to 4 men and every female academic eligible for promotion has been promoted at least once. The workloads of all academic staff are now monitored by the Head of Department's office, via the Workload model, to ensure that teaching and administrative tasks are fairly shared and that women have opportunities to contribute across the piece. All staff are now required to undergo Equality and Diversity training without which they are ineligible to sit on appointment and promotion committees.

We are aiming to drive change by offering positive support and mentoring wherever possible. The Personnel and Research Staff Committees are key to this work and many new initiatives are under way to engage our staff. It is noteworthy that the Staff Review and Development scheme has now doubled to reach 80% of the potential cohort. Career development is one of the priorities of my team. Since taking over as Head of Department I have been involved with the mentoring of newly appointed staff including sitting in on several practical sessions with female staff to guide them in making applications for promotion and for funding applications. The results so far have been excellent.

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— We are committed to improving the proportion of female students in Physics. Our undergraduate courses have been redesigned to take into account feedback from our students and we have an action plan, monitored by the Teaching Committee, the Graduate Committee and the Student Consultative Committee, to address any issues we identify. It should be noted that the Department has no role in the admission of undergraduates to the Natural Sciences Tripos. This means that we can only act on the perception of the cohort which we first encounter when they study Physics for 25% of their time in their first year. We have studied their performance in detail and continue to make adjustments where possible to help them. In order to understand the drivers for female progression in physics, we have extended our work to investigate student performance to cover first year undergraduates and comparisons of UK versus non-UK PhD students. This sort of work is normally undertaken by national organisations such as the Institute of Physics and goes beyond the scope even of a normal Gold Award Department.

Our assistant staff and academic-related staff are equally important in this work. I have personally interviewed most of the administrative staff, which includes a high proportion of women, in order to understand their concerns and ambitions. It is very encouraging to see that they see and welcome the changes brought about by the Equality and Diversity efforts in the Department.

Our Athena-SWAN work is not confined to the Department. I have been very impressed by the breadth of gender activities across the University since I have joined the Senior Gender Equality Network. The Physics Department's success is inspiring others to take the same path and our advice is actively sought by departments across the University. This leadership is evident in the prominent roles played by Professor Athene Donald (Chair of the Gender Equality Group) and Professor Valerie Gibson who leads on Athena-SWAN in the School of Physical Sciences. Both are recognised nationally and internationally as inspiring role models for women in science, as evidenced by their regular appearances in the media, at outreach events and as recipients of prizes and awards.

It is my intention, supported by the entire Senior Management of the Department, to continue our efforts to progress gender equality and to improve still further on our current successes. Thanks to the Athena-SWAN team here, we have a clear plan of work to follow and this will be pursued at all levels. I look forward to seeing the careers of our female staff continue to flourish in the future.

Yours sincerely



Professor M A Parker  
Head of Department



**UNIVERSITY OF  
CAMBRIDGE**  
**Department of Physics**

**Professor James Stirling CBE FRS**  
Head of Department

Ms Sarah Dickinson  
The Senior Policy Advisor (Athena SWAN)  
Athena SWAN Charter,  
Equality Challenge Unit,  
Queen's House,  
55-56 Lincoln's Inn Fields,  
London WC2A 3LJ

24<sup>th</sup> April 2013

Dear Sarah,

When I took over as Head of Department, in 2011, the Department held both Athena SWAN Silver and IoP Juno Champion status. Going back ten years, much had been done to support women in science, but equally much remained to do. I therefore made Athena SWAN a central part of the Department's strategy. I am immensely proud of our achievements, and delighted to support our application for Gold status.

The broader context is vitally important. As the top-ranked Physics Department in Europe,<sup>1</sup> we have a responsibility to lead by example. It is tempting to simply measure this purely in terms of research and teaching quality, but we also have a responsibility to set an example in the way we advance and promote women. The low participation of women in Physics and the decline in the proportion of women at the various student and academic career stages are nothing short of a national scandal. Our application describes the many ways in which we are addressing this, beginning in schools and then at every career level through to the promotion of women to the very highest level.

The application describes in great detail the work we have done, our successes, and the work that still needs to be done. Highlights include mandatory E&D training for academic staff, the introduction of "family friendly" policies, and the detailed analysis of gender imbalance in the performance of our undergraduates. I am particularly proud of the fact that we have recruited more women to academic positions in the past few years, and are redressing the gender imbalance in all areas of the Department's work. We do this not by setting quotas or ticking boxes, but by instilling a culture among all our staff that the E&D agenda is essential and non-negotiable. It is no exaggeration to say that Athena SWAN is now firmly embedded in all activities in the Department and highly visible on screens and notice boards throughout the buildings.

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<sup>1</sup> Source: Shanghai Jiao Tong Academic Ranking of World Universities 2012.

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The achievement of a Gold Award would not in any sense signal an end to our work. The process of properly addressing inequality in Physics HE will take many years; the Cavendish will be in the vanguard. We will, for example, continue our work on gender imbalance in undergraduate performance. This work is, I believe, unique in the country, and when we have a better understanding may be worthy of dissemination across the sector. There is no doubt that a Gold Award would significantly motivate our staff, and help us spread best practice across the University and the HE Physics sector as a whole. Regardless of whether this application succeeds or not, the tireless efforts of our Athena SWAN team over a long period have ensured that the Department is in a much better place regarding the recruitment, support and advancement of women.

Finally, and on a personal note, I will soon be leaving to pursue my new career at Imperial College. I have made clear to my new colleagues that I will bring strong support for Athena SWAN, informed by the very many measures we have successfully introduced in the Cavendish. An outgoing Head of Department might wish to measure their success in office in terms of the Department's performance in research grant income, prizes, world rankings etc., but for me an Athena SWAN Gold Award, in recognition of all we have done to advance and support women, would be my greatest achievement.

Yours sincerely

A handwritten signature in black ink that reads "W. James Stirling". The signature is written in a cursive, slightly slanted style.

Professor James Stirling, CBE FRS  
Head of Department

## 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 Athena SWAN Self-Assessment Team (SAT) consists of all members of the Cavendish Personnel Committee (PC), the HoD, Prof. Athene Donald, and invited members of the University external to the Department. The PC<sup>2</sup> dates from a 2003 IoP "Women in Physics" site visit. It oversees all Departmental personnel issues and monitors the activities of designated individuals in implementing our SWAN Action Plan. The membership spans the breadth of experience and roles within the Department. It forms the "core" SAT. The external members bring additional expertise and national perspectives on our SWAN programme. A particular strength of our SAT has been continuity over the whole period of our SWAN work, reinforced by new members when appropriate.

The SAT members are:

**Prof. Dame Athene Donald FRS:** Deputy Vice-Chancellor and the University's Gender Equality Champion, Director of Cambridge WiSETI.<sup>3</sup> Member of University Council and committees for Human Resources (HR) and E&D. Chair of the University's Gender Equality Group.<sup>4</sup> Outside Cambridge she is Chair of the Athena Forum and the Royal Society Education Committee. She has a significant social media profile highlighting equality issues for women in science. She has served on University promotions and appointments panels and has brought up two children during her academic career.

**Ms Sigrid Fisher (external):** Head of the University's E&D section, incorporating WiSETI, which oversees Athena SWAN submissions. Her career has been in the field of equalities, initially in the voluntary sector. She has managed complex social projects primarily in the areas of poverty and social deprivation, race discrimination and women's empowerment. She moved into academic administration in student support and diversity, and has worked as an Equalities Officer for a local authority. She juggles a career with family responsibilities, sustaining continuous employment through part-time/flexible working.

**Dr Chris Ford (PC):** Reader in Quantum Electronics. He is in charge of the Department's workload survey, producing web pages for gathering and analysing data, and assisting other Departments within the University to adapt our Workload Model. He is married with one school-age child.

**Prof. Valerie Gibson (PC):** Chair of the PC and the Department's Athena SWAN and IoP Juno key contact. Member of the University's Senior Gender Equality Network and the School's<sup>5</sup> E&D

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<sup>2</sup> Terms of reference can be found at [http://www.phy.cam.ac.uk/committees/committees-phy-only/personnel\\_committee/](http://www.phy.cam.ac.uk/committees/committees-phy-only/personnel_committee/)

<sup>3</sup> Women in Science, Engineering and Technology Initiative, <http://www.admin.cam.ac.uk/offices/hr/equality/wiseti/>

<sup>4</sup> <http://www.admin.cam.ac.uk/offices/hr/equality/cambridge/gender/>

<sup>5</sup> The School of Physical Sciences is one of six Schools making up the academic work of the University. It covers Mathematics, Astronomy, Physics, Chemistry, Materials Science, Earth Sciences and Geography. See <http://www.physsci.cam.ac.uk/> for more information.

Forum. She has served on University promotions and appointment panels. She is married to a senior academic and has two school-age children.

**Dr Susan Haines (PC):** Research Fellow at Newnham College and member of the High Energy Physics group. She studied Natural Sciences as an undergraduate and completed her PhD in 2012. She participates in Research Staff events, including Fellowship Workshops where she speaks about her experiences of applying for personal fellowships.

**Mr Robert Hay (PC):** Academic Secretary of the Department, with substantial experience in educational management. Responsible for the administration of the academic programme and is the Disability Liaison Officer.

**Ms Emily Heavens (PC):** Group Administrator in the Microelectronics and Optoelectronics Groups. Her work supports the groups' academic and research staff and postgraduate students. She is a member of the Cavendish Social Committee.

**Dr Vivien Hodges (external):** WiSETI Project Officer, Secretary to the WiSETI Steering Committee and Secretary of the Athena SWAN Governance Panel. She co-ordinates Athena SWAN and WiSETI activities across the University, including career development workshops, the Senior Academic Promotions CV Scheme and the WiSETI Annual Lecture, and sits on Departmental Athena SWAN panels.

**Dr Tom Kehoe (PC):** Research Associate in Optoelectronics and member of the Research Staff Committee. He organises events for postdocs to highlight and encourage the use of the resources for personal development and career management, and to bring postdocs together to foster an informal network of support.

**Mr David Peet (PC):** Administrative Secretary of the Department, co-leading the support functions with the Academic Secretary. He is married to the Executive Headteacher of the largest federation of primary schools in Cambridgeshire. They have fully shared childcare responsibilities and have appreciated the flexibility of their respective roles. He has extensive involvement in local and national SWAN initiatives.

**Prof. Jeremy Sanders FRS (external):** Pro-Vice-Chancellor for Institutional Affairs, including oversight of all dimensions of E&D. Chair of the University's Athena SWAN Governance Panel and of the WiSETI Steering Group. Former Head of the Cambridge Chemistry Department.

**Prof. James Stirling CBE FRS:** HoD and Head of Theoretical High Energy Physics. Member of STFC Council and the University's Research Policy Committee. Over the course of their academic careers, he and his wife have brought up two children, coping with conflicting life pressures through part-time/flexible working. He has personal experience of resolving the 'two-body' problem, in the various career moves he has made.

**Mr Alan Turner (PC):** Head of maintenance, having joined the Department as a plumber. His role is to provide day-to-day maintenance and to ensure that building services are maintained to a high standard of safety and comply with building regulations. Married for 25 years and has 3 children. He is a member of the Cavendish Social Committee.

- b) An account of the self assessment process: details of the self assessment team meetings, including any consultation processes that were undertaken with staff or individuals outside of the university, and how these have fed into the submission.

The PC, as the “core” SAT, reports formally to the Department’s Advisory Board (page 14) each year and informally to the Departmental Staff Meeting each term. The PC is very active, meeting once per term, with all members soliciting advice from their respective peer groups. It works in close collaboration with the HoD and draws matters to the attention of the Senior Management Group (SMG) when required. The Chair and Secretary (Valerie Gibson and David Peet) also meet regularly with the University WiSETI officer (Vivien Hodges).

This application has been written in consultation with the HoD, the SMG and Departmental committees, and has been fully scrutinized by the full SAT. The full SAT, including all external members, developed the submission via regular email circulation and formally met twice to finalise the application.

The contents of the application have been informed through many sources:

- baseline data;
- explicit tailored surveys of students;
- an explicit survey, based on the UKRC-WISE survey,<sup>6</sup> of research and academic staff in November 2012;
- the ASSET 2010 survey;<sup>7</sup>
- implicit surveys of staff through the Staff Review and Development scheme (page 35), the mentoring scheme (page 33), exit questionnaires; and
- peer group discussions, such as undergraduate focus groups, the Graduate Consultative Committee (page 38), Research Staff Committee (page 33) and informal senior women discussion groups.

Our baseline data, surveys and focus groups serve as excellent resources. In our recent UKRC-WISE survey, 70% of academics and 40% of research staff submitted returns; the results from which are embedded throughout this application. We will extend our activities in this area as part of our Action Plan, in particular to include assistant and academic-related staff and to track and evaluate our range of engagement/consultation/survey methods (Actions G.1.1, G.1.2 and G.1.3).

*UKRC Survey: 100% (86%) of academic (research) staff agree or strongly agree with the statement “I understand the Department’s reasons for engaging with gender equality”.*

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

<sup>6</sup> UKRC-WISE (<http://www.wisecampaign.org.uk/>) QuickCAT plus survey.

<sup>7</sup> <http://www.athenasurvey.org.uk/results.htm>



The PC and its Athena SWAN activities are fully embedded in the structure of the Department. The committee will continue its regular meetings and consultations. The main turnover of team members arises from short-term contract research staff, replaced in consultation with the Research Staff Committee. We will also invite a representative of the postgraduate student community to serve on the PC (**Action G.1.8**).

The implementation of the Action Plan is monitored by the PC, as the “core” SAT, and this monitoring informs all reporting processes. This process is longstanding and effective as can be judged by the success of the 2010 Action Plan. In the future, in addition to the formal reporting to the Department’s Advisory Board, we will extend the formal monitoring of the Action Plan by reporting annually to the full SAT and the School’s E&D Forum (**Action G.1.4**).

1331/1000 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.

The Cavendish Laboratory is one of the largest physics departments in the country and the 2<sup>nd</sup> largest department within the University. Based on the West Cambridge site (1.5 miles from the centre of Cambridge), it is currently undergoing a long-term programme of re-development, including the construction of the Physics of Medicine building, the Kavli Institute for Cosmology and the Battcock Centre for Experimental Astrophysics.

The Department prides itself on its excellence in research and teaching. The core of the Department’s research programme is experimental physics, supported by excellence in theory. Research activities include a broad range of topics, encompassed under the “Four Universe” headings of Extreme, Biological, Quantum and Materials. New research initiatives, such as the £20M Winton Programme for the Physics of Sustainability,<sup>8</sup> and collaborative research with colleagues in other departments, Universities and industry, form major strategic developments.

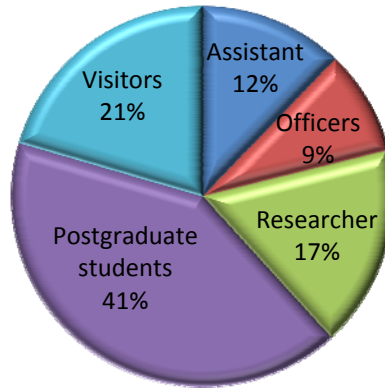
The Department is an international community with many nationalities represented amongst its staff and students. It is currently home to about 900 people, including 55 academic staff (5 female), 155 research staff (~40% from overseas) and 373 postgraduate students, as well as ~700 undergraduates. The Department has also seen a significant growth in the number of visitors, largely Masters students from the EU or overseas undertaking short-term experimental work. The Department recently introduced a category of visitors of particular value and esteem, called Cavendish Visiting Fellows, who collaborate with academic staff and are recognised for their significant contributions to the Department. We will actively seek to obtain an above average (f:m) gender balance in this category of fellows (**Action G.1.1**). A full breakdown of the user categories is shown in Fig. 1.

Prof. James Stirling succeeded Prof. Peter Littlewood as HoD in 2011. Prof. Stirling recently became Provost of Imperial College and has been replaced by Prof. Andy Parker, previously a Deputy Head (DHoD), who fully supports the Department’s Athena SWAN activities (**Action G.1.5**). The Department’s committee structure<sup>9</sup> is shown in Fig. 2. The HoD, advised by the SMG (meeting

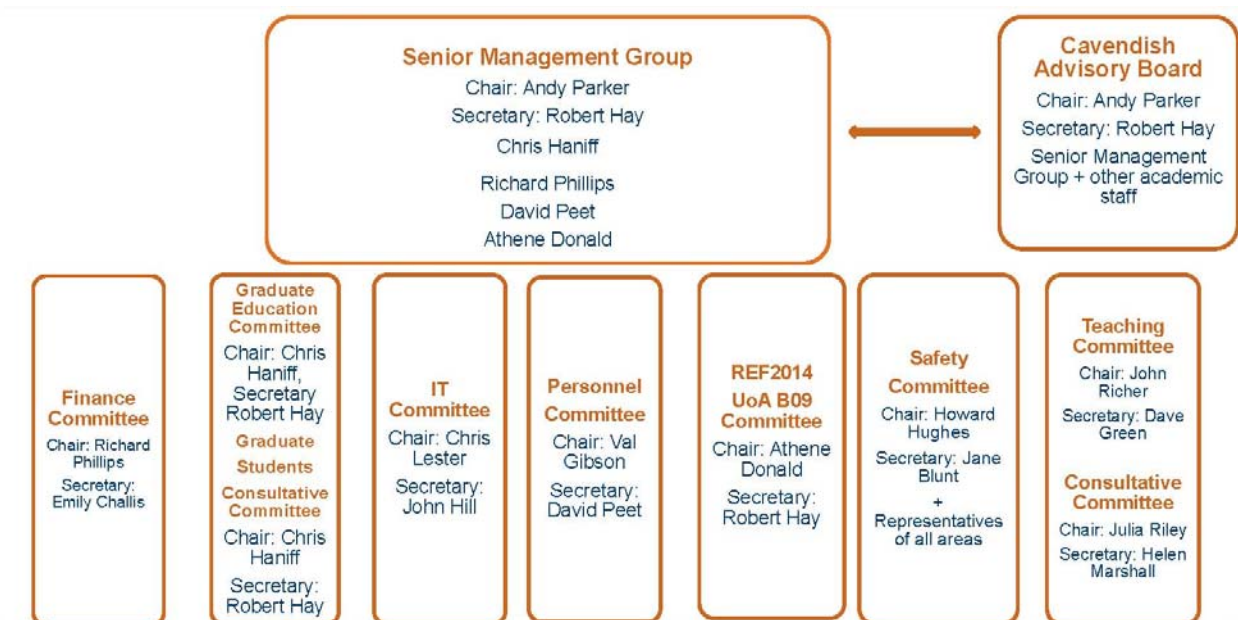
<sup>8</sup> <http://www.phy.cam.ac.uk/research/winton/>

<sup>9</sup> <http://www.phy.cam.ac.uk/admin/>

## Cavendish Users (2012-13)



**Figure 1:** Department users by category. Officers include academic and academic-related staff.



**Figure 2:** Departmental committee structure (November 2013). All Committees report annually to the Cavendish Advisory Board and, when needed, directly to the SMG.

weekly) and overseen by the Cavendish Advisory Board, is responsible for the day-to-day running of the Department and interaction with all official bodies. The HoD has the mandate to carry out duties as specified by the University ordinances, and appoints deputies and heads of groups (in consultation with senior academic members of the research group in question) to delegate his/her responsibilities. There are two Deputy Heads (for Finance and for Teaching) and 17 Research Groups (consisting of between 5 and 135 staff and students). The Head of Research Group (HoG) reports directly to the HoD and has a mandate that includes Athena SWAN responsibilities (**Action G.1.6**). The HoD and Principal Investigator (PI) are the line-managers for academics and research staff, respectively. The Research Staff Committee, formed in 2011 as part of our Athena SWAN Action Plan, is the driving force behind many activities focusing on careers and networking.

The Colleges, which are separate and legally autonomous from the University, admit students to read the various undergraduate courses. **The Department has no direct involvement with admissions, and hence no control over its entry.** Over 600 undergraduates are admitted annually to read the Natural Sciences (NatSci) course, which includes a wide range of physical and biological subjects, and ultimately leads to a degree in one of 16 subjects. In the first year, students study 3 experimental subjects (Physics is one of 8 options) and Mathematics. Approximately 350 students choose Physics as one of their options. In the second year, students develop a stronger subject focus; approximately 150 continue to read Physics and one or two other options. During the first two years, lectures in the centre of Cambridge and practical classes at West Cambridge are organised by the Department; the Colleges oversee their own students' progress and provide small group teaching. Students choose their specialist subject at the start of the third or fourth year. Approximately 120 and 100 students read Physics in the third and fourth year, respectively. This course is solely organised by the Department with the majority of lectures and research projects undertaken on-site.

In 2010, the Department expanded its postgraduate programme to include one-year taught courses in Physics and Scientific Computing. In addition, ~350 students apply annually to the Department to undertake a PhD; ~70-90 are selected by the research groups.

A snapshot of the number and percentage of women in the Department in 2012 and the projection for 2013, which includes new appointments, is shown in Fig. 3. The data are compared to the 3 year HESA<sup>10</sup> averages (2009-12) in the table below. The data includes all educational and academic stages, from those studying Physics as part of the Year 1 NatSci course through to the most senior academics. The Department hosts well-above the national averages in the Year 1 of the NatSci course (24.5% compared to 20.6% who sat Physics at A2-level in 2011<sup>11</sup>) and in postgraduate research, mainly due to a proportionally larger cohort of female overseas/EU students. Key pinch-points are the retention of women undergraduates who specialise in Physics from Year 2 onwards (page 17), and the recruitment of women to research associate (page 31) and academic positions (page 27).

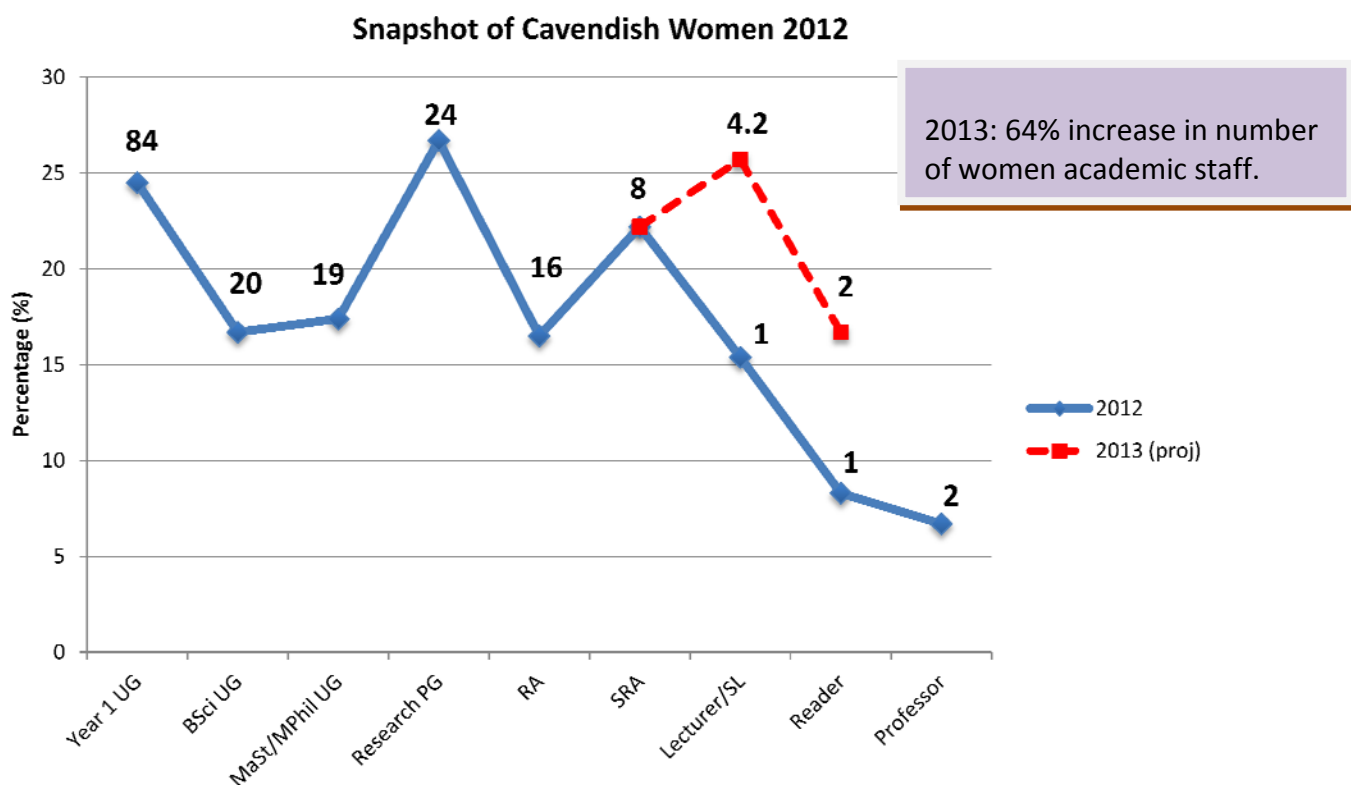
- a) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award.

The collection and monitoring of all student and staff data is routinely performed (**Action G.1.1**). The University has deployed extra staff to extract data from the central system in formats that support Athena SWAN applications. The HoD has also recognised the need to increase resources in this area; and this forms part of the job description for the new Education Administrator (**Action G.1.7**).

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<sup>10</sup> Higher Education Statistics Agency: <https://www.hesa.ac.uk/>

<sup>11</sup> Source: "It's Different for Girls", IoP 2012.



	Department 2012 (2013 projection)	HESA Russell Group (All UK) universities
Year 1 UG	24.5%	
BSci UG	16.7%	21.2% (21.2%)
MaSt/MPhil UG	17.4%	
Research PG	26.7%	23.1% (22.9%)
Researchers (RA+SRA)	18.0%	19.5% (18.9%)
All academics	9.1% (14.1%)	11.4% (11.3%)
Professors	6.7%	5.8% (4.4%)

**Figure 3:** Snapshot of the percentage of women in the Department at all education and career stages. Numbers are given on the figure for Year 1 of NatSci course (Year 1 UG), Year 3 of NatSci course (BSci UG), Year 4 of NatSci course (MaSt/MPhil UG), early career Research Associate (RA), Senior Research Associate (SRA), Lecturer and Senior Lecturers (SL), Readers and Professors.



## Student data

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

The Department does not offer access or foundation courses.

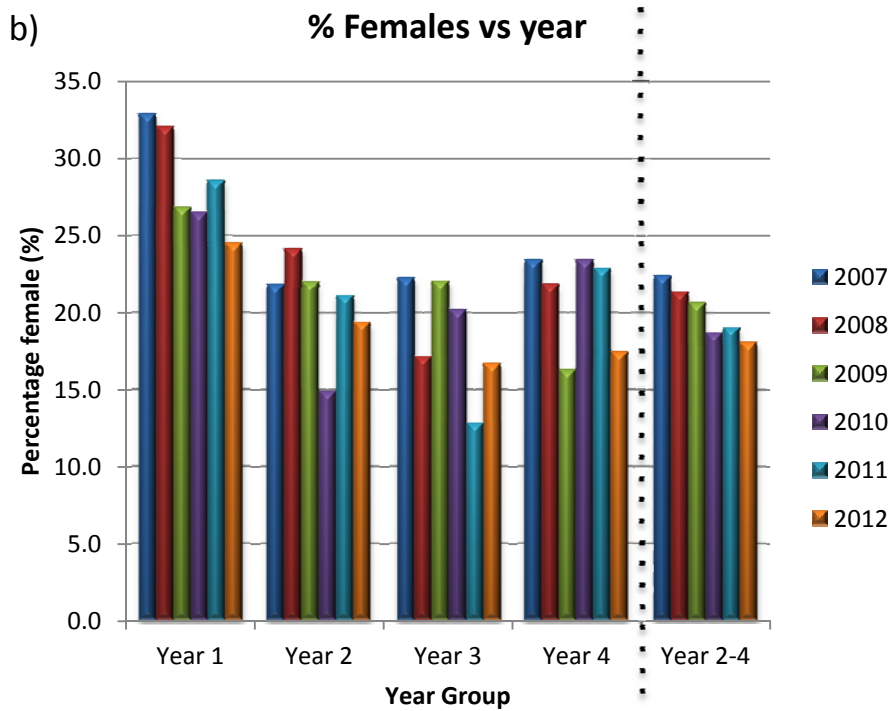
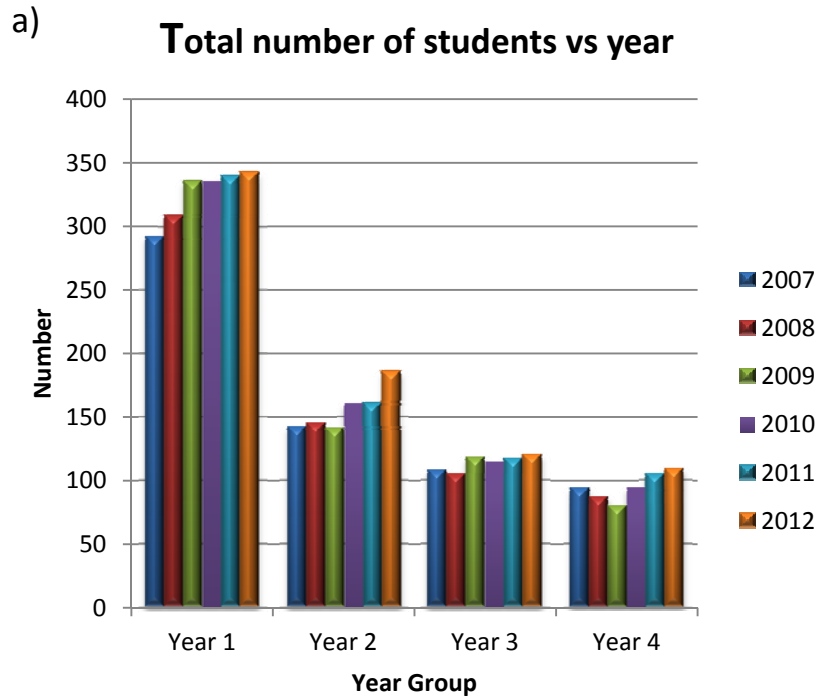
- (ii) **Undergraduate male and female numbers** – full and part-time – comment on the female:male ratio compared with the national picture in the discipline. Describe any initiatives taken to address any imbalance or negative trends and the impact to date. Comment upon any plans for the future.

As explained above, undergraduates are admitted annually to read the Natural Sciences (NatSci) course. The total number of undergraduates who read Physics as part of the NatSci course in each year group is shown in Fig. 4a. There is an increasing trend in the number of students in the first two years, with the number specialising in Physics in Years 3 and 4 remaining approximately constant. The percentage of females who read Physics in the first and subsequent years is shown in Fig. 4b. The percentage in the first year, currently 24.5%, is much higher than the national 20.6% who sat Physics at A2-level in 2011.<sup>12</sup> This is mainly due to a proportionally larger cohort of female overseas/EU students. However, the percentage in subsequent years seems to be gradually declining below the national average of 21.1%.<sup>13</sup> The trend is also seen in other physical science subjects (e.g. Chemistry and Engineering) and may be indicative of a) changes in the choice of A2-level (or equivalent) subjects, b) candidature for Further Mathematics A2-level becoming disproportionately male (many NatSci students take “double maths”) or c) a broader choice of experimental subjects available in Year 1, with emphasis on biological sciences a common option for women (HESA benchmark for biological sciences is 61% female undergraduates). Since the numbers are totally dependent on the Colleges’ admissions procedures, we plan to engage with College Admissions Tutors and those Admissions Officers based in the Department to review selection criteria and practices ([Action G.2.1](#)).

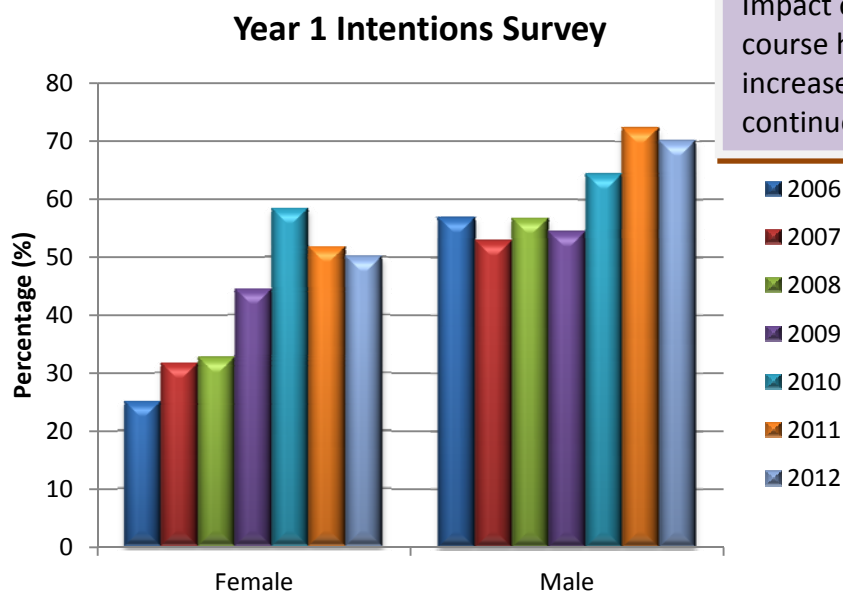
The number of women who read Physics in the first year is key to the career pipeline. After Year 1 the students develop a stronger subject focus and the number choosing Physics in Year 2 is the earliest indicator of the success of the Department’s SWAN actions. The impact of our work is evident from the annual “intentions” survey of the Year 1 students at the end of the academic year. Figure 5 shows the percentage who declared, prior to end of year exams, their intention to continue Physics in Year 2 as a fraction of those who intended to study Physics in all four years when they arrived in Cambridge. A significant positive increase in the intentions of the women undergraduates is observed. This is due to the re-design of the first-year course to smooth the transition from school to University. It now provides a gradual introduction to the more mathematical aspects of the course, and includes teamwork and a structured approach to practical sessions. The Department has also made a positive action to expose the first two years of undergraduates to all female academic staff members. Although more progress has yet to be made to achieve gender parity, the retention of women to Year 2 has risen by 39% between 2010 and 2012 compared to 11% for the men; these data provide clear evidence for positive impact.

<sup>12</sup> Source: “It’s Different for Girls”, IoP 2012.

<sup>13</sup> Source : “Physics Students in UK Higher Education Institutions”, IoP March 2012.



**Figure 4:** a) The total number of NatSci undergraduates studying Physics and b) the percentage of females studying Physics in each year group. Percentages are also given for combined Year 2-4 where statistics are lower.



Impact of the new Year 1 Physics course has seen a significant increase in women intending to continue with Physics.

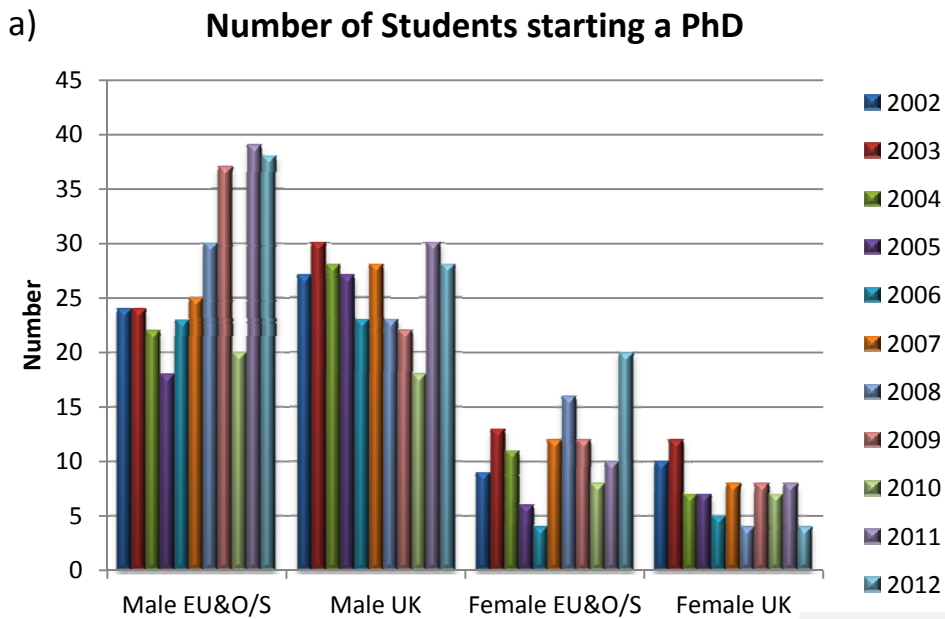
**Figure 5:** Percentage of undergraduates who declared their intention, at the end of the first year, to continue to study Physics in the second year as a fraction of those who intended to study Physics in all 4 years at entry.

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

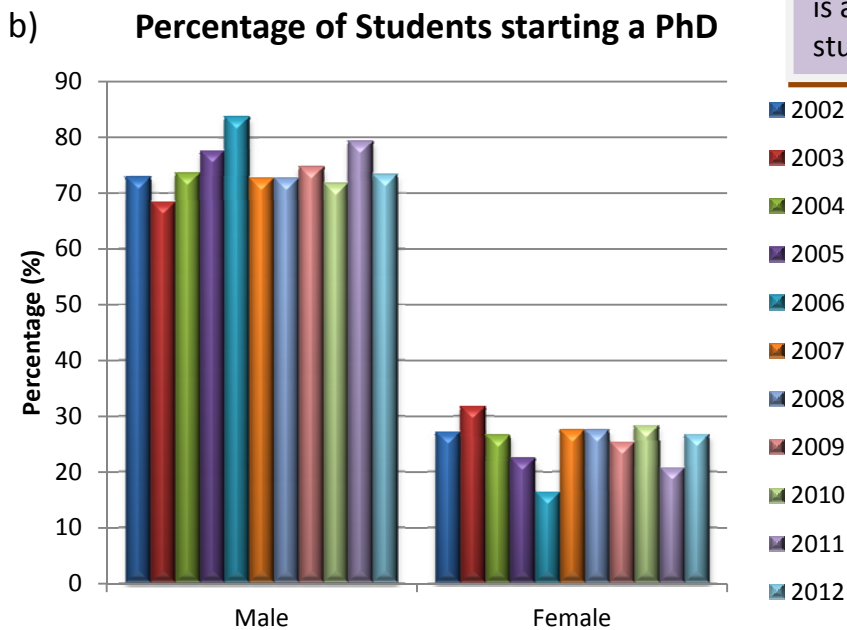
In 2010, the Department introduced one-year taught postgraduate courses in Physics (MASt) and Scientific Computing (MPhil). The courses are open to all UK and overseas/EU graduates and require an upper 2<sup>nd</sup> class degree in Physics or equivalent for entry. The total annual intake from candidates external to the University is approximately 24 students, of which 25% are female. The gender breakdown of student numbers is shown in Fig. 7 on page 22. Since these students have not previously studied in Cambridge, we recognise a need to enhance our special mentoring ([Action G.2.2](#)).

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

Each year ~70 full-time postgraduate students are admitted to the Department to undertake a PhD. At present, all students are registered, in the first instance, for a Certificate of Postgraduate Study (CPGS); this consists of a short dissertation and an oral examination after 9 months of research. The numbers and female/male percentages starting a PhD are shown in Fig. 6. The percentage of female starters is about 25%, consistent with the national picture of 22-23%.<sup>13</sup> A significant proportion (~50%) of postgraduate students are graduates from overseas; the proportion having risen over the past few years. This rise in overseas postgraduate students is a detriment to UK students and will affect the expected gender balance. This key observation extends our Athena SWAN work, will need to be monitored carefully ([Action G.1.1](#)) and acted upon accordingly ([Action G.2.18](#)).



The % of women starting a PhD remains constant. However, additional analysis suggests there is a trend for fewer UK PhD students.



**Figure 6:** a) Number and b) percentage of male/female postgraduate students starting a PhD degree. EU&O/S corresponds to European Union and overseas.



Applications to undertake a part-time postgraduate degree within the Department are invited, although the application must be justified by career or family needs. Very few postgraduate students apply for part-time study, although a few postgraduates (all male) have taken this opportunity sponsored by their respective employer.

The CPGS scheme is currently under review to provide equality of assessment procedures between research subjects, to encompass dissertation planning and guidance, as well as to assess research quality. The School is also applying to host some of the new EPSRC<sup>14</sup> Centres for Doctoral Training (CDTs).<sup>15</sup> We will fully participate in the CPGS review process (Action G.2.3) and influence the gender equality issues related to the CDTs (Action G.2.4).

(v) **Ratio of course applications to offers and acceptances by gender for (ii), (iii) and (iv) above** – comment on the differences between male and female application and success rates and describe any initiatives taken to address any imbalance and the effect to date. Comment upon any plans for the future.

The Department advertises all admissions processes on the Departmental website.<sup>16</sup>

For (ii): Undergraduates apply to and are admitted by Colleges to read NatSci; the course covers both biological and physical sciences. The Department has no direct involvement in admissions, although many academic staff participate in their Colleges admission procedures. Detailed admissions data are not available to the Department (they are not collated by the Colleges). All 5 female members of academic staff hold College fellowships; 4 oversee students' progress and take part in admissions and one is Vice-Mistress of Girton College. Students choose their specialist subject in the third (sometimes second) year. All NatSci students who achieve an upper 2<sup>nd</sup> class mark or above at the end of their third year are eligible to complete the 4-year Physics course (MSci).

For (iii): Admission of external graduates to the one-year taught courses is overseen by the Department. The number of applications has risen from 28 in 2010 to 92 in 2012; a total of approximately 24 students are admitted each year. The applications and admittance statistics are shown in Fig. 7; 80% of the applications and admissions come from overseas/EU students and an average of 25% females are admitted each year. The admission rate relative to the number of applications is higher for women (43%) over the last three years compared to the admission rate for men (36%) and overseas students (37%).

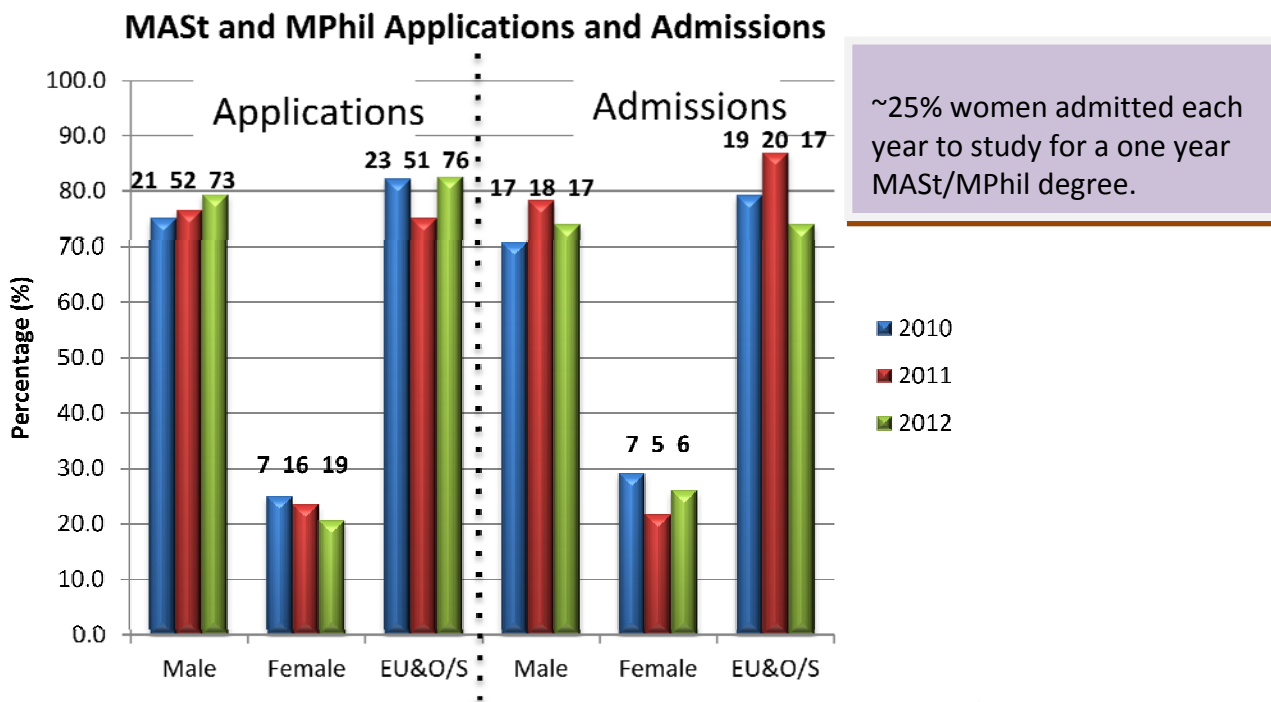
For (iv): Postgraduate research students apply directly to the Department; the applications are considered by the relevant research groups. Studentships are awarded by a committee of academics, who review interview scores and applications. All of the interview/acceptance procedures are monitored by the Departmental central administration. Admittance is much influenced by the availability of funding, with different sources accessible by different groups (e.g. overseas students). The Department has limited scope to influence funding decisions made outside of the Department (the Department has only about 20 studentships per year at its sole disposal). The ratio of the number of acceptances to the number of applicants for female/male

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<sup>14</sup> Engineering and Physical Sciences Research Council

<sup>15</sup> <http://www.epsrc.ac.uk/funding/calls/open/Pages/cdt.aspx>

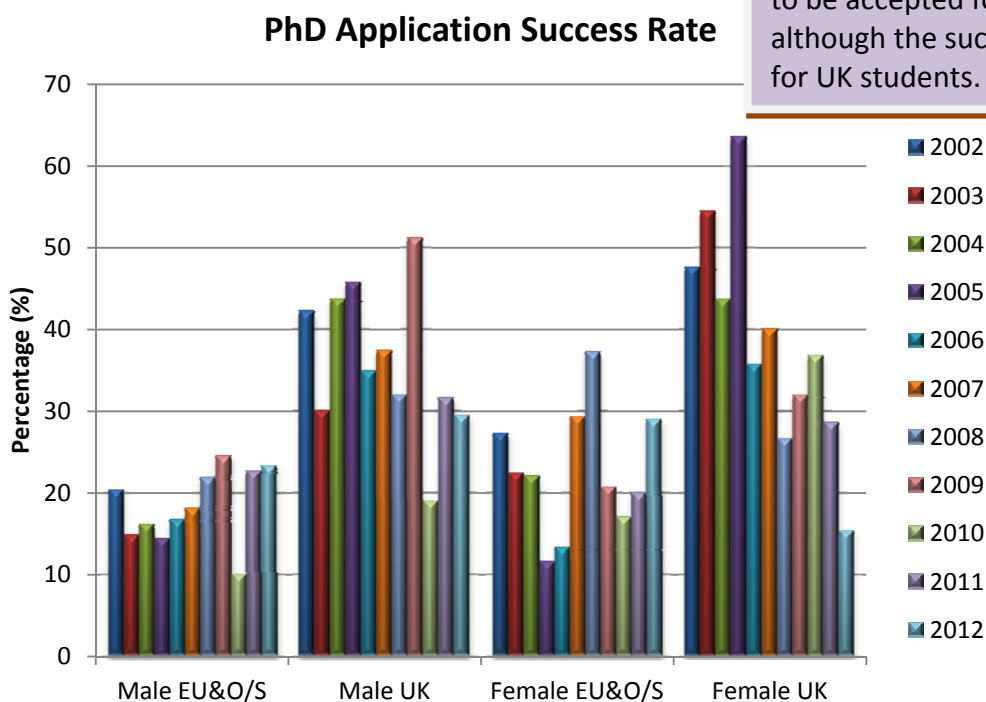
<sup>16</sup> <http://www.phy.cam.ac.uk/admissions/>



**Figure 7:** Percentage of female, male and EU&overseas applications and admissions for the one-year postgraduate taught courses in Physics (MASt) or Scientific Computing (MPhil).

and UK/non-UK students is shown in Fig. 8, which does not include information about students holding multiple offers. There is a decreasing trend for successful applications from UK students. In order to understand this trend, we intend to initially hold focus group discussions with current PhD students (**Action G.1.3**). This will be followed by a series of support workshops for undergraduates, in particular targeted at women, to provide guidance for PhD applications and to explain what PhD research entails (**Action G.2.5**). As part of this initiative, the Department holds a “women-only” event as part of the annual Postgraduate Opportunities Exhibition Week recruitment exhibition. We will also advertise the gender of final year project and PhD supervisors (**Action G.2.6**).

Quote from Year 3 female undergraduate: “Talking to women staff made me realise that I am capable and I am now strongly considering the possibility of a PhD in the future.”



Women and men are equally likely to be accepted for PhD research, although the success rate is falling for UK students.

**Figure 8:** Percentage application success rate for PhD research. Numbers of students is seen in Fig. 6.

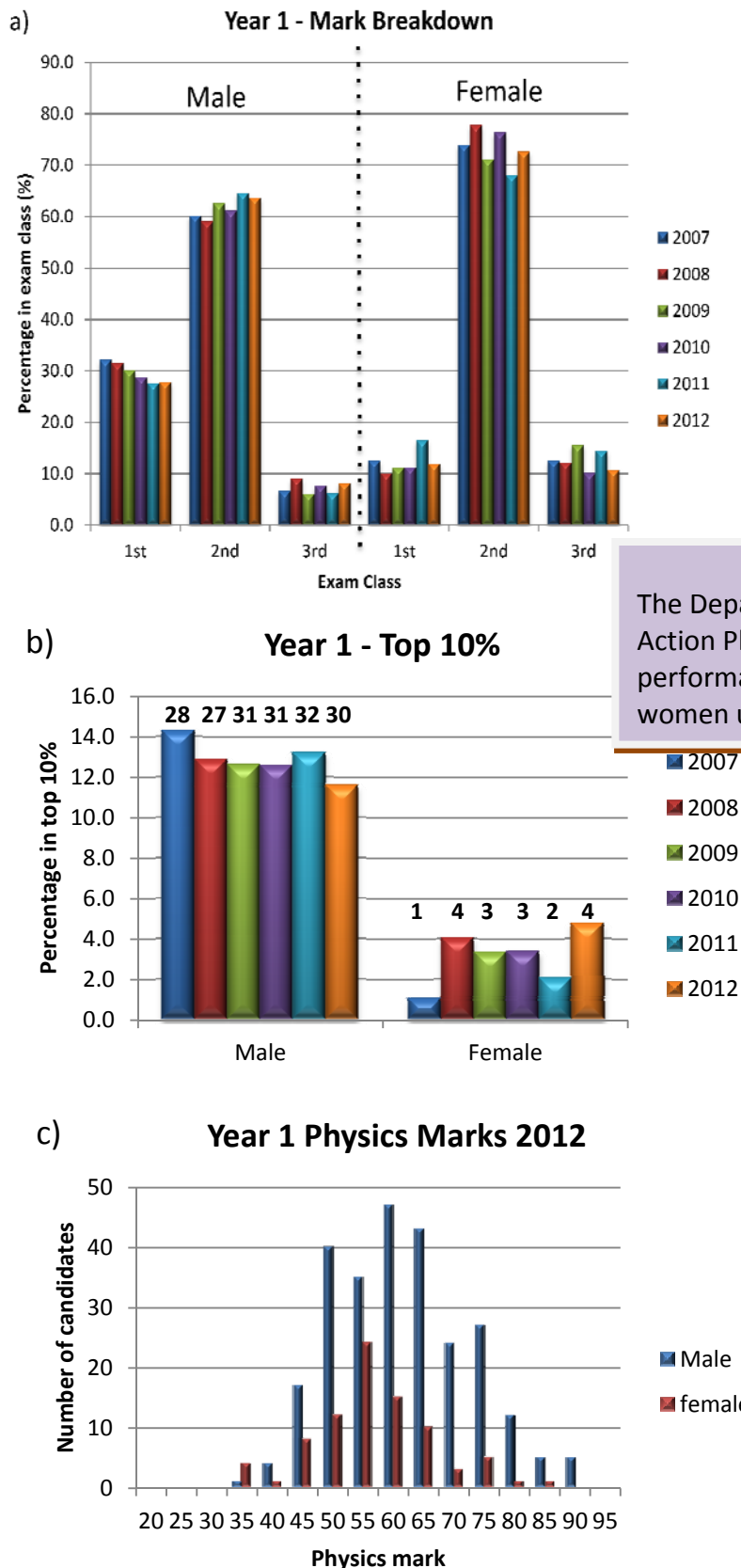
(vi) **Degree classification by gender** – comment on any differences in degree attainment between males and females and say what action is being taken to address any imbalance.

The Department is committed to ensuring that Physics is equally accessible to all undergraduates of equivalent aptitude and ability. We routinely monitor all Physics undergraduates' performance, along with the cohort who progress through all four years of the course, in the end of year examinations. All exam papers are marked blind to gender. We have found that the performance of women reading Physics in their first year is significantly worse than that of men. However, there is no difference in final degree attainment.

The analysis of Year 1 data is shown in Fig. 9. Figure 9a shows that 10% (30%) of women (men) gain 1<sup>st</sup> class marks and 70% (60%) of women (men) gain 2<sup>nd</sup> class marks. Figure 9b shows that 2-4% (12-14%) of women (men) fall in the top 10% of marks. A typical mark distribution is given in Fig. 9c. No discernible difference is observed in the performance in the second year and above.

The Department initiated an investigation into the source and potential solution for the performance difference in the first year of the NatSci course. Our Athena SWAN activities resulted in central monitoring by the University of all NatSci subjects. The results show that the difference in performance in the first year is not just in Physics, but also in cognate physical science subjects such as Mathematics, Earth Sciences and Chemistry.

Since there is a strong correlation between performance in Physics and Mathematics, also related to whether Further Mathematics (or equivalent) has been studied at A2-level, the Department is central to an ongoing review of the teaching of Mathematics for NatSci. The aim is to reduce the



**Figure 9:** Performance of first-year undergraduates in their end of year Physics exam; a) the breakdown of marks into classes (1<sup>st</sup> >70%, 2<sup>nd</sup> 50-70% and 3<sup>rd</sup> 40-50%, only very occasional fails); b) the percentage of undergraduates whose marks lie in the top 10% (number at top of histogram); and c) a typical (2012) Physics mark distribution.

workload in the first-year Mathematics course to provide more time for development of problem-solving skills and consolidation within the Physics course (Action G.2.7).

We have also conducted focus group discussions with women NatSci undergraduates. In all cases, the women stress that they wish to be treated in the same way as the men, but agree that they are less confident and more sensitive to the reactions of Lecturers, small group supervisors and their own peer group. The outcome is that the Department will provide:

- E&D training for all undergraduates (~350 per annum), practical class demonstrators (~30 postgraduates) and small group supervisors (academic staff and postgraduates) (Action G.2.8);
- guidelines for supervising women (Action G.2.9); and
- more exam-style questions on problem sheets and frequent mock exams (Action G.2.10).

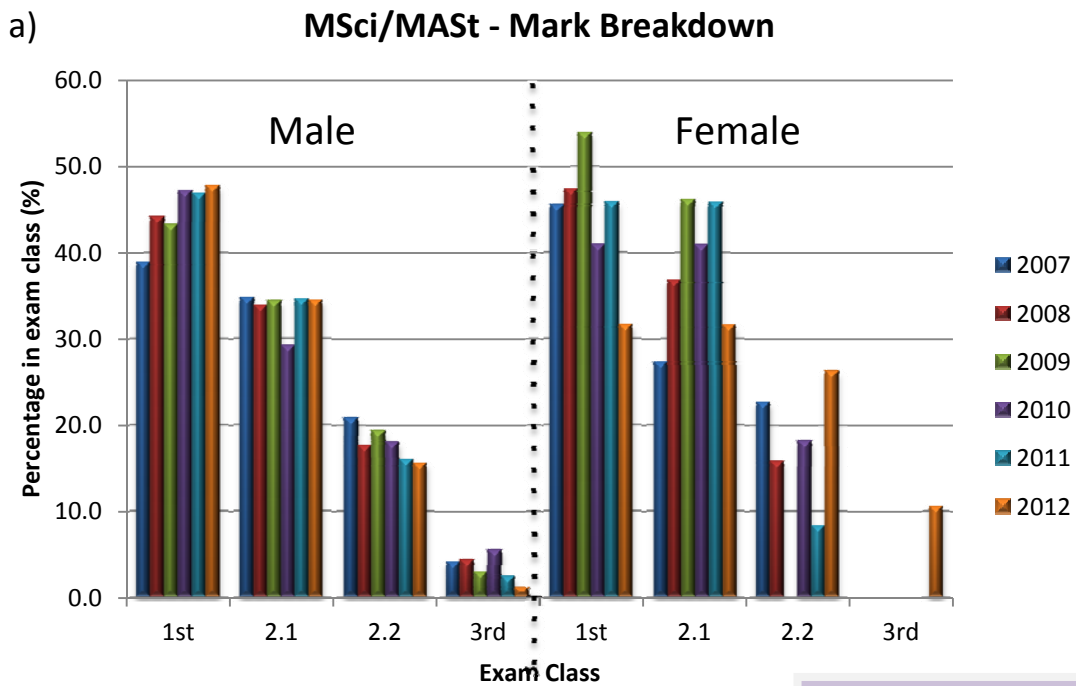
We are also undertaking a innovative project, with funding secured from the IoP, to investigate the performance of Year 1 students depending on the style of exam questions (University or A2-level) in a mock exam (Action G.2.17).

These positive actions will provide more support for women undergraduates and ultimately improve their performance. We will continue to act upon issues that relate to the performance gap (Action G.2.5). In addition, we will collate undergraduate destinations data (Action G.2.11).

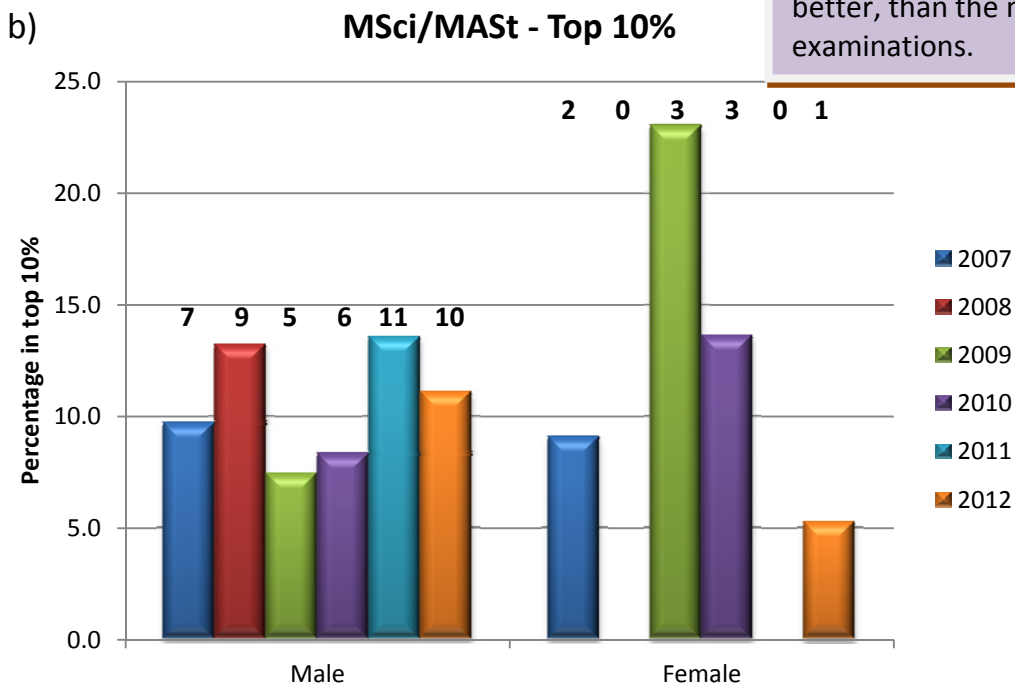
Beyond Year 1, the number of women studying Physics is small (c. 20 per year). Approximately 90% of our undergraduates complete the four-year Physics course (MSci/Mast). Figure 10 shows that the percentage of women gaining “good honours” (degree class 2.1 and above) is better than or as good as that for men, apart from 2012. Figures for 2013 show that women gained 89% good honours (47% 1<sup>st</sup> class) compared with 83% men (46% 1<sup>st</sup> class).

Postgraduates in the Department comprise of a majority who are undertaking a 3-4 year PhD and a minority who are studying a one-year taught MAST or MPhil course. Since external students studying the one-year courses are new to the Department, we intend to understand their needs better by holding a dedicated focus group session (Action G.1.3) and monitor their performance by gender (Action G.2.12).

Figure 11 shows the PhD completion rates. The average is ~45 months and is nearly identical for women and men; virtually all postgraduates complete their PhDs. In order to investigate the need for enhanced support and career advice, we will develop a postgraduate exit questionnaire (Action G.2.13).



Women perform equally, if not better, than the men in final year examinations.



**Figure 10:** Degree classification of Physics MSci and MASt students; a) the breakdown of marks into classes (1<sup>st</sup> >70%, 2<sup>nd</sup> 50-70% and 3<sup>rd</sup> 40-50%, only very occasional fails); and b) the percentage of undergraduates whose marks lie in the top 10% (number at top of histogram).



## Average PhD Completion Time

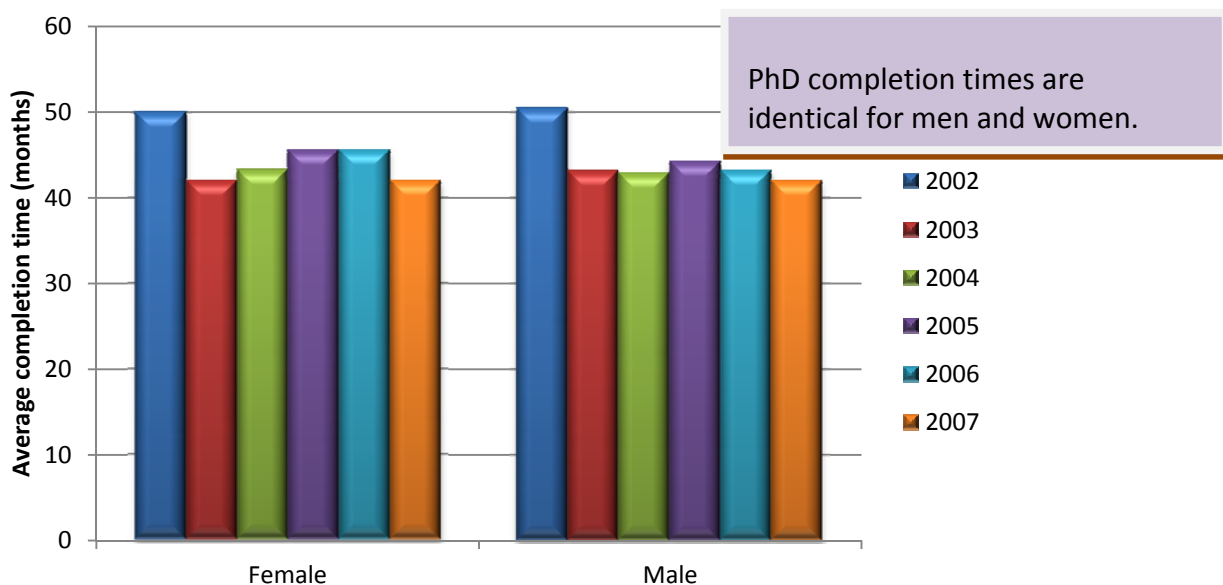


Figure 11: PhD completion time (months) versus year of admission (large cohorts only).

### Staff data

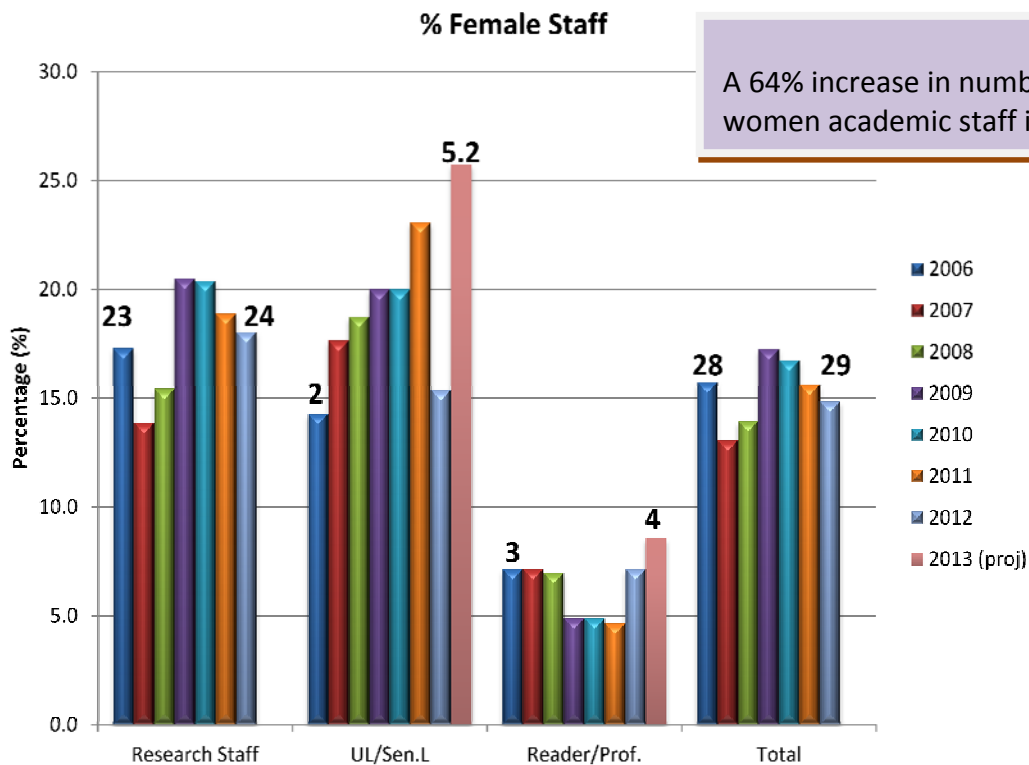
- (i) **Female:male ratio of academic staff and research staff** – researcher, lecturer, senior lecturer, reader, professor (or equivalent). Comment on any differences in numbers between males and females and say what action is being taken to address any underrepresentation at particular grades/levels.

Academic staff are recruited to the Department on merit by external competition. Appointments to Professorial positions are conducted by a Board of Electors, appointed centrally by the University; electors are explicitly required to search for suitable female candidates. Lectureship appointments are conducted within the Department. Research staff almost all join as Research Associates (grade 7). Promotion is possible to Senior Research Associate (grade 9), and is dependent on achievement and funding from the appropriate funding body. Many grade 9 research staff hold personal fellowships such as Royal Society University Research Fellowships (RSURFs). The Department also hosts a number of College Research Fellows who are selected and funded by individual Colleges, but work in association with a Departmental research group.

The Department is currently home to 30 (172) female (male) staff, of which 5 (50) are academics (Lecturer, College Lecturer, Senior Lecturer, Reader and Professor). Most recently, a further 3.2<sup>1</sup> FTE women and 6 men have been appointed to academic positions (Lecturer, Reader and Professor); their appointments have not yet been added to the statistics below.

The proportion of female staff at each grade is shown in Fig. 12. The total percentage of women academic and research staff is currently 14.9%, commensurate with the 16% reported by the IoP.<sup>17</sup> It can also be seen that the percentage of female researchers is consistent with the national average of 18.8%.<sup>17</sup> Of particular note is the gradual increase in the percentage of female

<sup>17</sup> Source: "Academic Physics Staff in UK Higher Education Institutions", IoP January 2012.

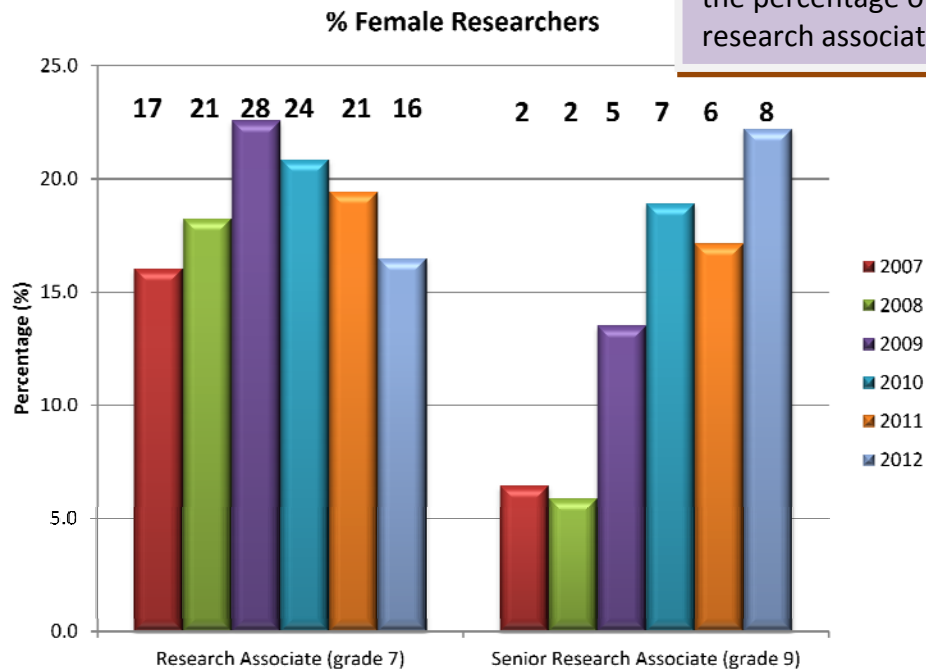


**Figure 12:** Percentage of female staff (FTE) versus year for all grades. The new appointments are included in the projections for 2013.

Lecturers above the national average of 19.8%.<sup>13</sup> The reduction in the percentage of Readers/Professors between 2009 and 2011, due to the retirement of a female Professor, is compensated by recent promotions. Overall, the recent appointments provide a 64% increase in the number of women academic staff, illustrating the impact of our Athena SWAN activities.

In our Athena SWAN Silver application we noted the decrease in the percentage of female researchers between Research Associate (grade 7) and Senior Research Associate (grade 9). Since then the Department has improved the information flow to all research staff, provided enhanced support to female research staff and provided guidance to improve the quality of applications for promotion. As a result, the percentage of women at grade 9 has now increased (Fig. 13); 4 new grade 9 women fellows have been appointed in the last three years.

Our Athena SWAN activities have produced a significant increase in the percentage of women senior research associates since 2007.

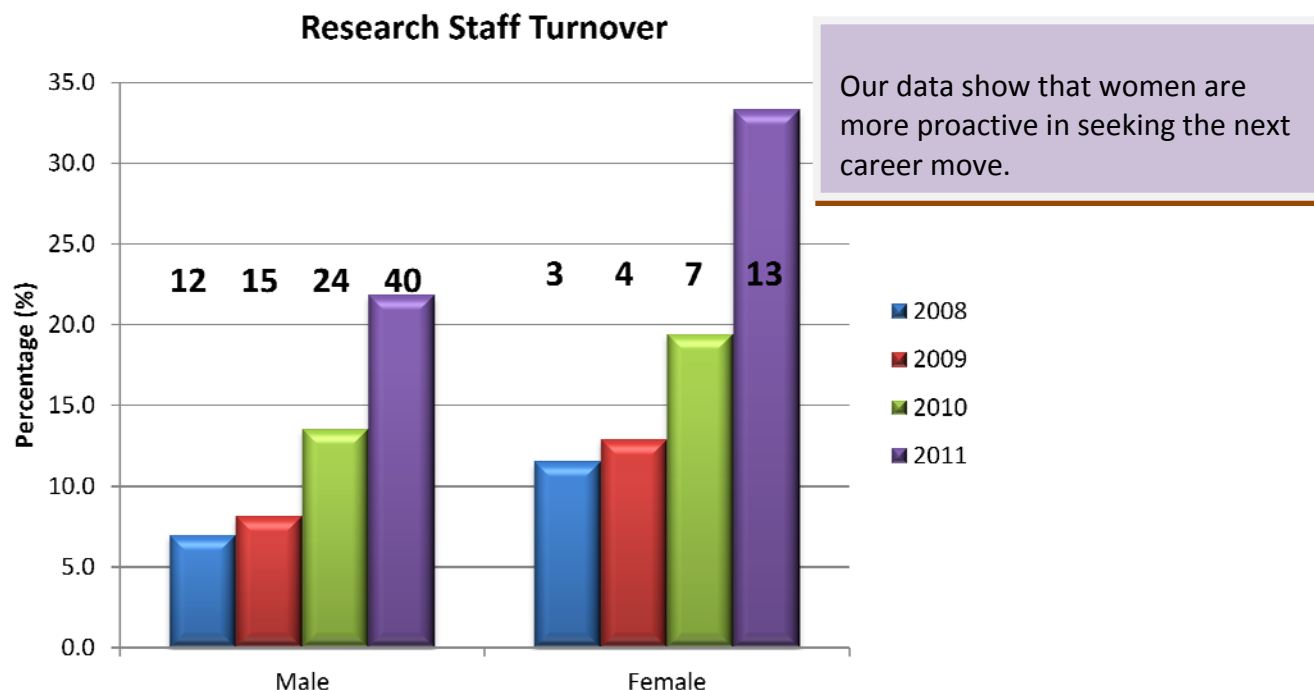


**Figure 13:** Percentage of female staff versus year for Research Associates (grade 7) and Senior Research Associates (grade 9).

- (ii) **Turnover by grade and gender** – comment on any differences between men and women in turnover and say how the department plans to address this. Where the number of staff leaving is small, comment on the reasons why particular individuals left.

The turnover by gender for research staff (excluding end of contract leavers) is shown in Fig. 14. In the last 5 years, 15 women and 44 men have resigned before the end of their contract. The data indicate a recent increase in turnover, more so for women. Although the source of the increase is unknown ([Action G.3.1](#)), the individual data suggest that the women are more pro-active looking for the next position, often in academia and overseas. One recent example is a Senior Research Associate who gained a Lectureship at another University while she was on maternity leave from the Department. Since 2010, the Department has seen 5 academics resign to move on to equivalent or more senior positions; all male.

All members of staff are invited to an exit interview with the Administrative Secretary and to complete an exit questionnaire. The majority of responses come from Research Associates who are very positive about the work environment, conditions of service and opportunities for career development, but express concern about the lack of job security, poor pay and promotion opportunities. The feedback is summarised annually, reported to the PC and forms part of the annual report to the Advisory Board. Examples of positive action taken as part of this process have been the encouragement of participation in the transferable skills programme and careers workshops. We will review the format and questions contained in the research staff exit questionnaire in order to elicit more information on future career plans ([Action G.3.2](#)).



**Figure 14:** Percentage of research staff leavers (turnover), excluding end of contract leavers, for available years of a data.

3219/2000 words

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

##### Key career transition points

- a) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department’s Silver award.
- (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.

Since Athena SWAN Silver, the following appointments/offers in the Department have been made:

- 2 Professors (both male), from a total of 11 applicants (1 female);
- 7 Lecturers (4 male, 3 female), from a total of 314 applicants (11.8% female) of whom 31 were short-listed (22.6% female); the pool contained a high proportion of speculative applications from international men;
- a part-time (20%) Reader (female), following her maternity leave; and
- with extensive support from the Pro Vice-Chancellor and the School, a further Lectureship was offered to a short-listed female candidate, in part so that she could join her partner in Cambridge; she subsequently declined the offer.

There have been 7 awards of Personal Fellowships to women research staff:

- a Royal Society University Research Fellow;
- a Dorothy Hodgkin Research Fellow;

- one of the four Winton Advanced Fellows;
- one of the three first Kavli Institute Fellows; and
- 3 College Research Fellows.

There has also been 58 research staff appointments (48 male, 10 female); although the female (male) application to appointment success rate has been variable between 2.4-7.0% (3.4-9.6%) per annum. We will examine the research staff success rate by research area (**Action G.3.3**).

The actions routinely taken to increase the number of women applying for staff positions and to improve to the success rate are discussed below.

- (ii) **Applications for promotion and success rates by gender and grade** – comment on where these differ, whether these have improved and say what further 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.

Over the past 5 years, all women academic staff, eligible for promotion, in the Department have been promoted at least once; one was promoted from Lecturer to Reader in 2011 and another was promoted from Reader to Professor in 2009. The promotion application to success rate is (2/3; 67%) for women and (13/31; 42%) for male academics.

Since Athena SWAN Silver, the Department has supported the successful promotion of 2 women and 1 man from Research Associate to Senior Research Associate. One of the women has just returned from maternity leave and the other was promoted on appointment from another University.

The promotion procedures are discussed on page 35.

- 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.

The Department has put in place the following actions:

- identification and encouragement of high quality women applicants internal to the Department through the mentoring and Staff Review and Development schemes (**Action G.3.4**);
- the identification and encouragement of eligible women external to the Department to apply for posts (**Action G.3.5**);
- an explicit statement about equal opportunities on all job adverts, and provision of Athena SWAN material and a family/carers information sheet as part of the further particulars;
- the presence of at least one female academic on all search and interview committees (**Action G.3.6**);
- coverage of childcare costs for interview candidates (**Action G.3.7**); and

- the requirement that all academic staff have completed the University’s specific E&D online training course<sup>18</sup> (Action G.3.6).

In all cases, the Department complies with University policies well above the minimum requirements. For example, the Department will be holding an “Unconscious Bias” workshop in March 2014 (Action G.3.8) and will trial run the University’s development of an Unconscious Bias training programme, which we will require all staff to complete when available (2013/14) (Action G.3.8).

E&D training is mandatory for all academic staff.

The Department has the highest completion rate within the University.

*UKRC Survey: 60% of academics agree or strongly agree with the statement “The Department takes positive action to encourage women to apply for posts in areas where they are under-represented”.*

- (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 Department actively addresses the need for support and advice at key career transitions, such as from postdoc to a more senior post; securing an academic position and promotion within academia, as well as maintaining an optimal work-life balance. Many positive actions in this area have been put in place:

- a Research Staff Committee;
- two academics (1 male, 1 female) are “Champions for Research Staff” and attend the Research Staff Committee and provide mentoring and career advice;
- the identification and encouragement of high quality women applicants, through the mentoring and Staff Review and Development schemes to apply for available posts, including personal fellowships (Action G.3.4);
- a series of Fellowship Workshops (Action G.3.9);
- a Scientific Writing course, targeted at women, in order to provide guidance on how to write research proposals in an accessible way for assessors (Action G.3.9);
- a mock-interview scheme offered by the HoD for short-listed personal fellowship candidates (Action G.3.9);

*Quotes from postdocs: “The Royal Society University Research Fellowship interview - it went very well and much of this was definitely due to the preparation and feedback from the practice interview.”*

*“The fellowship tutorial organised by the Athena SWAN was extremely useful in my experience. I’ve learned which are the funding opportunities available, which are the key points to make a strong application, and who to ask in the department for help.”*

<sup>18</sup> <http://www.admin.cam.ac.uk/offices/hr/equality/training/online/>



- a reinforced mentoring scheme (**Action G.4.1**);
- a career development website for postdocs; and
- a Continuing Professional Development (CPD) for Research Staff programme (handled through a central booking system, no gender information is retained).

The Research Staff Committee<sup>19</sup> was formed following the Athena SWAN Silver award. The committee is run by 8 postdoctoral members (average ~30% female) and is organised such that the chair rotates so as to not overburden any particular individual. The committee is extremely active and successful. It organises an annual Research Staff Event to inform staff about the CPD for Research Staff programme, University careers advice, mentoring and all aspects of E&D, including Athena SWAN activities. It also advises the PC about support and career development needs, such as the Fellowship Workshops and Scientific Writing course (30% women attendees), and provides networking opportunities and social events, such as monthly postdoc teas and dinners. Research staff events are advertised to all, accompanied by encouraging personal invitations sent by the Chair of the PC to female research staff. The Research Staff Committee will continue its excellent work and identify support needs in cooperation with the PC (**Action G.3.9**).

A perennial issue in the Department has been the implementation of a mentoring scheme that works effectively. Although we run a voluntary mentoring scheme<sup>20</sup> in which all new staff are assigned a mentor, the uptake of mentoring amongst postdocs has been poor. The Department has introduced a revised mentoring scheme for all staff that requires research groups to actively assign mentors to new staff members and report on the uptake (providing name of mentor within a 1 month probationary period). The on-line mentoring support has also been improved with a list of specialist mentors (e.g. maternity and teaching) who advise staff on various aspects of working in the Department; career development in general is published on the website.<sup>21</sup> We will also engage Sarah Bohndiek, Lecturer from July 2013, who has recently written an article entitled “The Good Mentorship Guide”,<sup>22</sup> with our mentoring schemes. We will continue to monitor progress of our mentoring schemes (**Action G.4.1**).

*UKRC Survey: 72% of academic staff agree or strongly agree with the statement “The Department provides me with useful mentoring opportunities (as mentor or mentee)”.*

The Department’s CPD for Research Staff programme<sup>23</sup> is highly successful and staff members are encouraged to participate in a wide range of activities. These include a University transferable skills programme with a dedicated School advisor (female) and informal one-to-one sessions held within the Department. The uptake from research staff (17%) is the largest of any department in the School.

Since Athena SWAN Silver, the Department has appointed a Knowledge Exchange (KE) Programme Coordinator (male) and expanded the programme with the appointment of a KE Facilitator (female). This team provides a point of contact for companies and organisations in possible collaborations with the Department, supports the development of research proposals and holds

<sup>19</sup> <http://www.phy.cam.ac.uk/committees/committees-cam-only/researchstaffcommittee/>

<sup>20</sup> [http://www.phy.cam.ac.uk/resources/resourcesfiles/mentoring\\_topics.pdf](http://www.phy.cam.ac.uk/resources/resourcesfiles/mentoring_topics.pdf)

<sup>21</sup> <http://www.phy.cam.ac.uk/resources/mentoring/>

<sup>22</sup> Source: “The Good Mentorship Guide”, IoP, Physics World (26), April 2013.

<sup>23</sup> [http://www.phy.cam.ac.uk/resources/crs\\_development.php](http://www.phy.cam.ac.uk/resources/crs_development.php)

associated workshops and events. We plan to engage research staff, in particular women, in future knowledge transfer activities (**Action G.4.2**).

In addition to the Department's activities, the University provides many forums for career advice and support at key career transition points. Excellent advice is available from the University Careers Service;<sup>24</sup> the Science Careers Advisor (female) runs 3 surgeries per month, with one-to-one appointments, at the Department to discuss opportunities in academia and industry. Industry frequently visits the Department during exhibitions and open days to discuss with our students career opportunities. We plan to undertake a review of the careers service provision within the Department (**Action G.4.3**).

The University runs a widely-acclaimed Professional Development Programme<sup>25</sup> for PIs at all career levels; activities include a grant submission support scheme, skills development and leadership and management training and the "New Perspectives for Women" workshops.

WiSETI<sup>3</sup> run career development seminars for early career women researchers, topics include confidence building in the workplace, "speaking up and saying no" and "working smarter not harder"; these are widely publicised and encouraged within the Department. The Department also hosts many of these activities, such as the "Cake and Careers" event, with podcasts available on the Careers web-site.

*ASSET 2010 revealed that >50% of staff, including 67% (64%) female academics (postdocs), felt encouraged to undertake career development activities; far higher than across the School which is 45% (57%).*

Further improved figures were achieved in the 2012 UKRC Survey:

*UKRC Survey: 70% (77%) academic (research) staff agree or strongly agree with the statement "I am encouraged to take up career development opportunities".*

## 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?

The Department's career development activities demonstrate commitment far in excess of University expectations and are regularly publicised as "Beacon Activities".

<sup>24</sup> <http://www.careers.cam.ac.uk/index.asp>

<sup>25</sup> <http://www.admin.cam.ac.uk/offices/hr/cppd/pi/>

The Department aims to provide an environment in which all staff are valued and able to flourish. A key part of this provision is the Staff Review and Development (SRD) scheme,<sup>26</sup> which provides an opportunity for individuals to discuss and plan career development with a senior colleague, and to review achievements and issues arising in the course of their work. The Department's scheme is inline with University policy and is administered by the HoD's office. The Departmental Administrators are very much engaged with the developments of the University SRD scheme and will influence changes to improve the quality of reviews for all University research staff, in particular using the Department's experience of the Athena SWAN programme (Action G.4.4).

Following Athena SWAN Silver, the Department's SRD scheme was modified to provide an annual review for research staff in their first 5 years (biennial for established staff), starting 6 months from start of contract and ending 6 months before end of contract, such that appropriate career advice and encouragement to apply for personal fellowships, in particular those targeted at women, could be given. The Department uses a group of skilled senior reviewers, whose contributions are recognised in the Workload Model (page 41). All record forms are scrutinised by the HoD and the PC to monitor, identify and prioritise training and career advice and to identify underlying issues; feedback is given to the Advisory Board and reported at staff meetings.

The review of the SRD scheme resulted in an increased coverage from 40% to 80% of the target cohort.

*ASSET 2010 revealed that 78% (42%) of academics in the Department (School) felt they were reviewed routinely; all female academics and 81% of all staff found their reviews useful.*

Once again, further improved figures were achieved in the 2012 UKRC Survey:

*UKRC Survey: 79% (55%) academic (research) staff agree or strongly agree with the statement "The Department provides me with a helpful biennial Staff Review and Development meeting".*

Promotion to Senior Research Associate (SRA)<sup>27</sup> is conducted via nomination by the PI to the HoD and is endorsed by the Faculty Board<sup>28</sup> subject to funding through the respective grant; SRAs are expected to have at least 3 years' postdoctoral experience. The Department has few (1-2) SRA promotions per year; most staff either move on or apply for personal fellowships. A salary increment scheme<sup>29</sup> is run each term; any one researcher is eligible for 3 increments within one year provided the finances are available. The PI nominates staff members and the HoD writes a supporting letter to the General Board. The gender-balance of SRA promotions and salary increments are monitored and the Department has implemented active steps to remove dependence on particular PI nominations; RAs are directly contacted each term requesting applications to the HoD for promotion and salary increments. All research staff are given guidance through the Department's SRD scheme and in discussion with the HoD.

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<sup>26</sup> [http://www.phy.cam.ac.uk/admin/admin-cam-only/8\\_staff\\_review\\_development.php](http://www.phy.cam.ac.uk/admin/admin-cam-only/8_staff_review_development.php)

<sup>27</sup> <http://www.admin.cam.ac.uk/offices/hr/staff/guide/terms/promotion.html>

<sup>28</sup> Faculty of Physics and Chemistry, statutorily responsible to the University General Board.

<sup>29</sup> <http://www.admin.cam.ac.uk/offices/hr/reward/policy/research.html>

The Senior Academic Promotions (SAP)<sup>30</sup> exercise is conducted annually. Recent SAP data (2006-2012) have been reviewed by the University’s Gender Equality Group. A number of recommendations were made and the SAP exercise was significantly updated. This included the implementation of a scoring methodology (see Table 1), which provides more scope for distinguishing between candidates, particularly those demonstrating strong and outstanding evidence. The individual scoring of Research/Scholarship, Teaching and General Contribution ensures that all three areas must pass the minimum threshold for promotion to be considered. The evidence shows that this numerical scale allows greater recognition of particular contributions (including outreach) and is particularly advantageous to women. In addition, in 2013, SAP open fora were hosted by the Pro-Vice-Chancellor for Institutional Affairs which aimed to improve the transparency of the SAP procedure, dispel some common misconceptions and provide the opportunity for question and answers. These sessions were attended by 128 staff from across the University including staff from the Department.

All female academics, eligible for promotion, in the Department have been promoted at least once.

Within the Department, all eligible academic staff receive the SAP booklet, prepared by the University’s HR division and distributed by the Faculty Promotions Committee. The HoD actively encourages all eligible women to apply for promotion. In addition, all staff receive advice through the SRD scheme and women are offered CV mentoring, currently delivered through WiSETI. Both of the Department’s female Professors sit on University SAP panels in STEM subjects and will influence the monitoring and changes to the SAP scheme through their respective gender equality roles within the University (Action G.4.5).

Each candidate is given a score of 1 to 10 for each of 3 areas:	
<ul style="list-style-type: none"> <li>• Research/Scholarship</li> <li>• Teaching</li> <li>• General Contribution</li> </ul>	
Banding using performance descriptors is:	
• 8–10	Outstanding evidence
• 5–7	Strong evidence
• 3–4	Clear evidence
• 2	Insufficient evidence
• 1	Clearly unsatisfactory

**Table 1:** Senior Academic Promotions scoring model.

*UKRC Survey: 93% of academic staff agree or strongly agree with the statement “I understand the promotion process and criteria in the University/Department” and 65% of academics agree or strongly agree with the statement “The Department/University values and rewards the full range of skills and experience including pastoral work, outreach work, teaching and administration in considering promotions”.*

*Quote from new Lecturer: “The Department fully recognises the need for collective action in order to provide both men and women with equal choices and opportunities regarding childcare and career progression in UK academia”.*

<sup>30</sup> <http://www.admin.cam.ac.uk/offices/hr/promotion/>

- (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?

Induction and mentoring of all new staff is mostly performed by the Research Groups. The Department runs a mandatory course that covers Health and Safety and, since Athena SWAN Silver, includes an E&D component that introduces the Athena SWAN activities and requires participants to complete the online E&D course; course certificates are collated centrally.

New research staff attend a welcome induction meeting with the Administrative Secretary who gives an overview of the organisational structure, explains the role of the PI and provides briefing and support documents on career development and transferable skills opportunities. An induction checklist is completed during the 1 month probationary period. The Department keeps record of research staff who express an interest in becoming involved with College activities and reacts to any requests from Colleges for contacts to research staff.

The Department recognises that new academics need support in the early stages to develop their own research programmes and provides this through:

- Start-up packages for funding of equipment and laboratories, underwriting of RA posts, preferential allocation of studentships and additional funding for consumables. As well as supporting new academics, the overall infrastructure of the Department is enhanced, providing an improved environment for all.
- All new staff are provided with a mentor and lectures of all academic staff are monitored through an informal peer review scheme.

Further support is available through University training schemes (page 34) and membership of a College.

*UKRC Survey: 88% (64%) academic (research) staff agree or strongly agree with the statement “The Department has made it clear to me what its policies are in relation to gender equality (e.g. on discrimination, parental leave, carer’s leave, flexible working)”.*

- (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.

Much of the support provided by the Department applies to both genders. We pro-actively augment all activities by sending personal invitations to the women students, such that they will benefit proportionally more.

Much of the pastoral care, such as tutorial advice from a personal tutor, overseeing an individual’s course, a women’s advisor and a teaching staff contact (independent of the Department) take place within the College environment. This is the case for both undergraduate and postgraduate

students. The Department has also published a policy on harassment<sup>31</sup> and has appointed two advisors (1 male, 1 female) who are available to all students for guidance and support.

Undergraduate students and graduate students on one-year taught courses are encouraged to discuss teaching matters with their course supervisors and send comments through their student representatives (1 female and 1 male per year group) to the Consultative Committee, which meets once per term. We also recognise a need to assign mentors to those MAST and MPhil graduate students from outside Cambridge (Action G.2.2).

All PhD students are appointed a second supervisor, in addition to their primary research supervisor, who oversees progress and can act if any problems arise. PhD students are encouraged to send comments through their representatives on the Graduate Committee, which meets once per term, and they receive a transferable skills log as part of their arrival package, which is monitored annually through their respective group administrators.

The Department runs an annual Postgraduate Opportunities Exhibition Week, which gives potential postgraduate students an opportunity to see the research in individual research groups and to discuss possible research projects with the supervisors. As part of the Exhibition Week, we hold a female-only student session to encourage undergraduates to consider PhD research (Action G.2.14). The Department also runs a popular annual postgraduate conference that features talks from postgraduates from all research groups and is balanced according to gender. Postgraduate student attendance at their own research group's and main Departmental seminars is mandatory.

We have identified other areas of support for (female) PhD students that we include in our Action Plan. We will run a focus group for women postgraduate students to ascertain their needs for support and career advice (Action G.1.3). We will implement a start of final year review with a senior member of staff, independent of the PhD student's supervisors, in order to discuss research progress, writing-up plans and career options (Action G.2.15) and hold targeted workshops focussed on guidance for writing up (Action G.2.16).

*Quote from course organisers:  
"28% of the postgraduate students who take the student mechanical engineering workshop course, and 40% of the undergraduate students who take the Physics Education course in association with our local schools, are women."*

### Organisation and culture

- a) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department's Silver award.
  - (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 representation of women on committees within the Department is currently 23% (18% of women staff), commensurate with the total number in the Department. One member of the SMG and the Chair of the Personnel Committee are female. All committees have non-academic representation. The current gender balance on each committee is given in Table 2. The only

<sup>31</sup> <http://www.phy.cam.ac.uk/admin/>



committee without female representation is the Information Technology committee, which will change once a female IT officer is appointed (Action G.5.3).

Committee	Number (%) of Females	Number of Males
SMG & Advisory Board	2 (11.1%)	16
Personnel	4 (44.4%)	5
Teaching	4 (36.4%)	7
Information Technology (IT)	0 (0%)	8
Safety	3 (13%)	20
Finance	1 (12.5%)	7
Graduate Education	1 (16.7%)	5
Research Staff	3 (23.1%)	10
<b>Total</b>	<b>18 (23%)</b>	<b>78</b>

**Table 2:** Number staff on committees (2012-13).

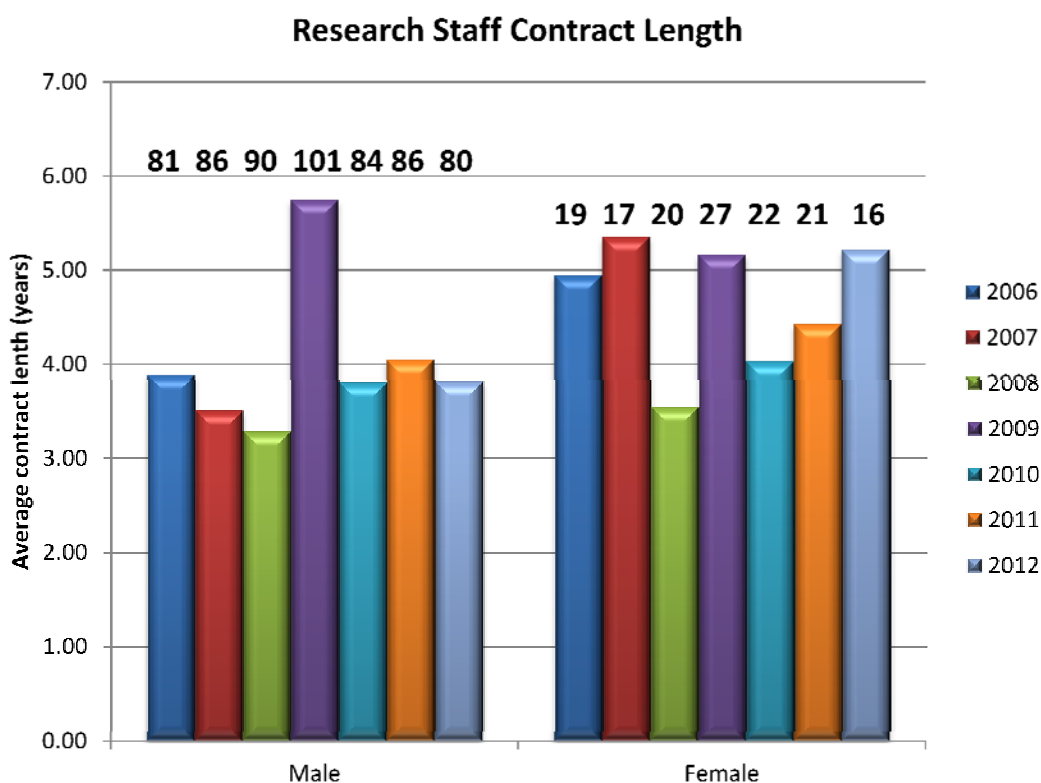
*ASSET 2010 revealed that 71% of staff feel they have the opportunity to serve on important departmental committees, compared with 60% in the School, and that more female academics have been members of appointments/promotion committees for both the Department and the University than other women in the School.*

*UKRC Survey: 95% (80%) of academic (research) staff agree or strongly agree with the statement "The Department uses senior women as well as senior men as visible role models".*

*UKRC Survey: 84% (66%) academic (research) staff agree or strongly agree with the statement "I am encouraged and given opportunities to represent the Department externally and/or internally".*

- (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.

Academic staff are all on permanent contracts. Research staff are appointed on a fixed-term contract, extensions are usually to open-ended contracts but with limited funding. At any one time the Department hosts ~160 Research Associates. The average funded contract length is shown in Fig. 15. Following the retirement of one or two long-serving female staff in 2008, the average length of funding is now approximately the same for women and men.



**Figure 15:** Research Staff length of funding.

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 balance 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?

Representation on Departmental committees is considered annually by the HoD, in consultation with the SMG, who made a positive decision to include early career staff, once settled into their research activities. The aim is to optimise the potential to influence decision making, personal career development and succession planning within the Department. All committee work internal and external to the Department is taken into account in the Workload Model (page 41); a major advantage of this is to reduce “committee burden” on female academics by reducing workload in other areas, whilst protecting research time. All the women academics in the Department sit on external committees either in the University (e.g. University Council, Director of Education in the School) and/or at a national (e.g. IoP Juno assessment panel, STFC Science Board, Royal Society Council) and international (e.g. Editor Nuclear Physics B, European Research Council) level.

The Department strives to make all decisions by its committees transparent and fair; all Chairs are required to have undergone E&D training and be briefed, by the HoD, about transparency, fairness, committee culture and unconscious bias (**Action G.5.2**).

- (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.

A beacon activity within the University is our annual workload survey, launched in 2011, which provides an overall picture of the work that academic and senior research staff undertake on behalf of the Department. It provides a crucial tool for the HoD and SMG when assigning Departmental responsibilities, such as teaching tasks and committee work, writing cases for promotion and allocation of resources.

The Workload Model is based on a pre-determined points system and is divided into categories:

- Departmental undergraduate teaching (incl. one-year taught courses),
- undergraduate examining,
- postgraduate education,
- Departmental administration,
- outreach,
- University administration,
- mentoring and appraisal,
- College responsibilities that impact upon the Department (e.g. small group teaching, overseeing of individual students course, open days, admissions); and
- contributions external to the Department (e.g. examining, appointment committees and Research Council committees).

Guidelines for the expected number of points in each category are advertised. For example, the guideline for outreach is 5-50 points per year (which in this case is equivalent to number of hours). No member of staff is required to undertake outreach, although those that choose to do so can reduce their contributions in other areas accordingly. For the academic year 2012-13, the median number of total Workload Model points for academics is 831.

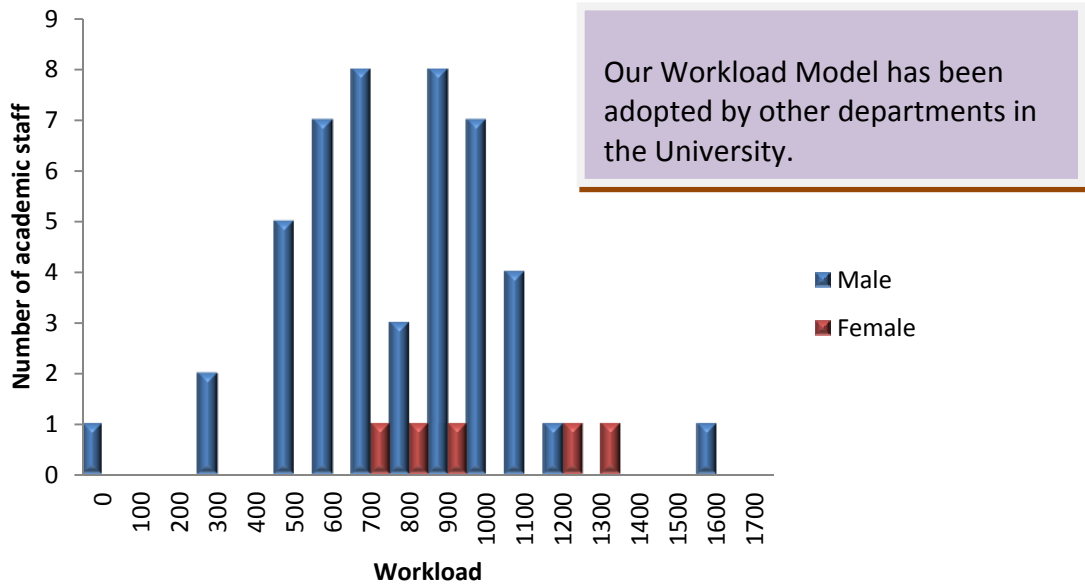
Extra-ordinary contributions, such as the preparation of the Athena SWAN Gold application, are fully accounted for. Some categories, such as number of PhD students and College teaching, are capped to prevent focussed activities in these areas. The Workload Model is independent of seniority and the total workload points should be roughly equal for all academic staff, except for new staff and those on leave. Work on women in science is embedded within all categories.

The workload survey is conducted via a web-based facility. The results are accessible to all; each user can access their own workload and compare it to the distributions and averages for all. Access to individual returns is provided for the HoD, the SMG and the Chair of the PC. A summary of the workload for academic staff is shown in Figs. 16 and 17.

Our workload survey is considered to be a great success and widely accepted as fair to all. It is used as a prime example of good practice in the School’s E&D Forum and the University’s Gender Equality Group and is being adopted by other departments. We will monitor and use our workload survey results to modify the workload of individuals (**Action G.5.4**) and advise other departments (**Action G.5.5**).

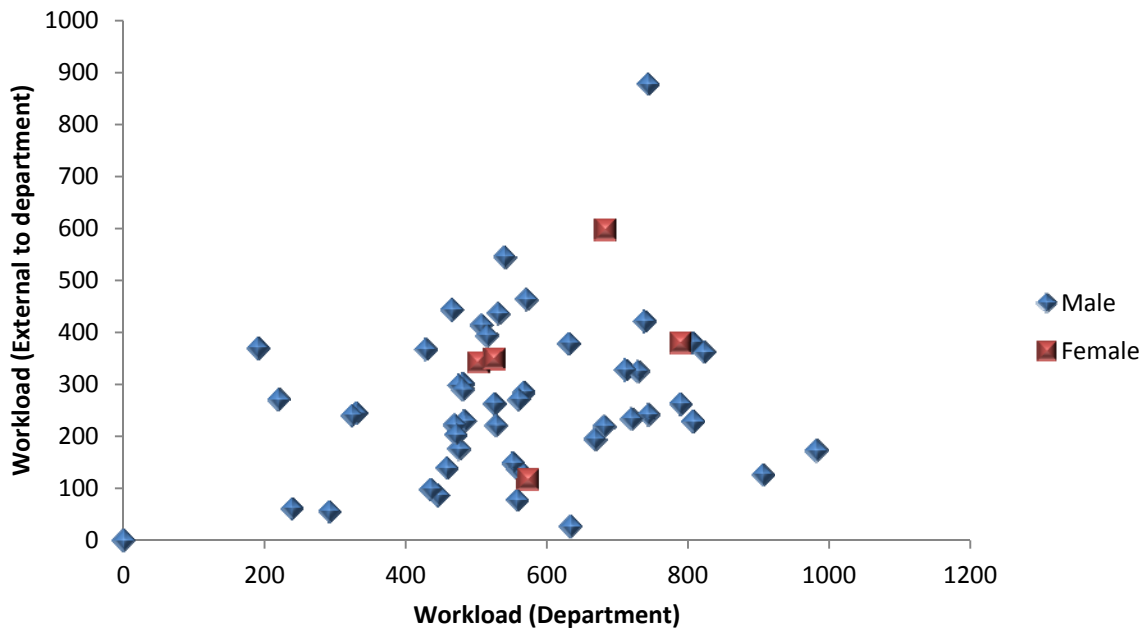
*UKRC Survey: 91% of academics agree or strongly agree with the statement “In the Department, work is allocated on a clear and fair basis irrespective of gender”.*

### Academic Staff Workload



**Figure 16:** Number of academic staff versus workload (July 2012). Extra-ordinary contributions are included and returns scaled to take into account sabbatical leave.

### Academic Staff Workload



**Figure 17:** Workload external to the Department (University, College and external to Cambridge) versus workload in the Department (July 2012).

- (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.

All Departmental meetings are held during the main part of the working day (10-4pm); termly Staff meetings are held at 3pm. The timing of meetings was reviewed and the need to balance research and seminar/committee commitments within core hours was highlighted particularly by female staff. The main Departmental seminar, advertised as mandatory for postgraduates, is held at 4pm followed by a drinks reception. The timing of the Staff meeting and seminar were specifically brought forward to an earlier time to allow for attendance of all staff members, especially those with childcare/carer commitments.

Due to the short Cambridge term (8 weeks), undergraduate lectures within the University are also scheduled on a Saturday morning. The Department has made a positive action to be flexible with the assignment of courses to staff who request that their family/carer responsibilities are taken into account, e.g. one female academic staff does not lecture on a Saturday. The Department has also made a positive decision to only schedule lectures, solely organized by the Department, between Monday and Friday. This includes the Year 3 and 4 Physics lectures, with the exception of those Year 4 courses that are run by other departments.

As part of the Athena SWAN activities, the Department formed a Social Committee run by members of the assistant staff. The Social Committee is very active and organises many events, including a Xmas evening dinner-dance for all staff members and a summer event for families in the grounds of the Cavendish Laboratory (**Action G.5.6**). The HoD's office also organises receptions for undergraduate prize-winners and new postgraduate students, and a dinner for new academic or promoted staff and their partners. Many social gatherings are organised by the Colleges for students and many of the research groups have regular group activities.

*UKRC Survey: 98% (72%) academic (research) staff agree or strongly agree with the statement "Meetings in the Department are completed in core hours to enable those with caring responsibilities to attend".*

*UKRC Survey: 91% (83%) academic (research) staff agree or strongly agree with the statement "Work related social activities in the Department such as staff parties, team building or networking events, are likely to be welcoming to both women and men".*

- (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.

A major aim of the Department is to treat women and men as equals, at the same time as being sensitive to individual needs, and to develop a culture that is open and comfortable for all.

*ASSET 2010 revealed that the Department was very highly rated:*

- 88% (100%) of all (female) staff and 82% of postdocs feel that the working environment is friendly and colleagues are co-operative;
- 92% of academics are WiSETI aware; 42% are actively engaged; and
- 83% of academics feel that the management is accessible to respondents.

Other aspects that influence the Department's culture:

- **Athena SWAN/Juno:** our Athena SWAN and Juno achievements are displayed prominently at the entrance to the Cavendish Laboratory (front cover) and all notices boards display our Athena SWAN poster (inside front cover);
- **E&D training:** all academic staff are required to complete the online E&D training course;
- **WiSETI:** female staff and students are actively encouraged (via E&D termly calendars and email) to participate in activities and events, such as the WiSETI Lecture and “Cake & Careers”;
- **University E&D:** staff are encouraged to participate in the University's diversity networks, including the Women's Staff Network, which gives them access to the organisation's decision making structures for equality matters;
- **Child Policy:** the Department has introduced a Child Policy<sup>32</sup> that welcomes children in designated safe areas e.g. the common room, museum and main lecture theatre foyer;
- **Baby facilities:** baby-changing facilities are accessible to both men and women and high-chairs are provided in the common room;
- **Maternity:** pre- and post-maternity needs, such as car-parking, breast-feeding/expressing facilities, are accommodated, if possible;
- **Family/carers:** a “Families at the Cavendish” information leaflet<sup>33</sup> is available for all staff;
- **Communication:** through the Cavendish website, staff meetings (*all* staff are invited), HoGs and research group meetings, and the celebrated Cavendish magazine, CavMag;<sup>34</sup>
- **Discussion groups:** e.g. the Research Staff Committee gives researchers the opportunity to address issues, such as career advice, mentoring, induction and social activities;
- a small **museum** celebrates the success of alumni and has a vision to include career profiles of successful women, along with the University's forthcoming book/website “The Meaning of Success” project (page 50);
- a **Nominations Committee** puts staff forward for external awards and prizes (**Action G.5.7**). Women academics have been very successful and their successes are advertised widely;
- **transport** : family commitments and unsociable working hours are high on the list of criteria for allocation of car-parking spaces; and
- **website and publicity material:** actively promotes women's achievements and has balanced range of images.

We will continue to monitor culture within the Department through all staff surveys and focus groups (**Action G.5.8**) and extend our activities to monitor the practices of individual research groups (**Action G.5.9**).

*UKRC Survey: 84% (69%) academic (research) staff agree or strongly agree with the statement “The Department makes it clear that unsupportive language and behaviour are not acceptable” and 79% (58%) agree or strongly agree with “Inappropriate images that stereotype women or men are not allowed in the Department”.*

*Quote: “Many social events in the Cavendish are open to family members and children. Whereas a few years ago children were not allowed in the Department (reception staff would point this out very clearly), this rule has now been changed at least in the common social areas.”*

<sup>32</sup> [http://www.phy.cam.ac.uk/resources/cavendish\\_children\\_policy.pdf](http://www.phy.cam.ac.uk/resources/cavendish_children_policy.pdf)

<sup>33</sup> [http://www.phy.cam.ac.uk/resources/families\\_at\\_the\\_cavendish\\_web.pdf](http://www.phy.cam.ac.uk/resources/families_at_the_cavendish_web.pdf)

<sup>34</sup> <http://www.phy.cam.ac.uk/alumni/>; the Jan 2014 issue of CavMag will be guest edited by Prof. Val Gibson and will showcase women in the Department.



- (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 runs a very active Outreach programme,<sup>35</sup> directed by a female Outreach Officer, Dr Lisa Jardine-Wright, and assisted by a part-time (half-day per week) male outreach officer. Lisa received the 2012 IoP Philips award for her dedication to outreach and contributions to the IoP East Anglia branch. The outreach strategy of the Department is to raise aspirations and widen participation of students aged 11-19 by offering a diverse range of activities, mostly for schools in East Anglia and the South East, and increasingly reaching all areas of the UK.

Numerous events are run throughout the year by the Department and individual research groups, relying on the support and contributions of academic staff, researchers and students. Contributions vary from hour-long lectures to practical demonstrations and experimental support and are recognised as essential transferable skills in researcher and postgraduate training programmes. In all events, we expose participants to our female lecturers and demonstrators. Some of our main annual events include:

- the Physics at Work Exhibition (2200 pupils per year with 50% male and 50% female participants);
- the Senior Physics Challenge<sup>36</sup> (> 20% female participants);
- the “Science Saturday” and keynote speakers (including females) during the Cambridge Science Festival; and
- School Workshops and the High Energy Physics Masterclass.

Of particular note are two schemes that specifically address the “girls into physics” issue:

- the work experience scheme, where we target high-achieving local pupils (especially girls) who have a real desire to study Physics; over the last 4 years, 25 (44) girls (boys) have been supervised by 26 (43) women (men); and
- the Newnham Women in Science project (linked to the all-female Newnham College), which links the Department with under-represented groups in Cambridge and the London boroughs. Photos from the Newnham scheme are shown in Fig. 18.

Individual contributions to Outreach are taken into account in the Workload Model. In general, the female members of the Department contribute disproportionately to the number of Outreach activities. Fine examples include female RAs who have taken the initiative to participate in the STFC Member of Parliament pairing, the Royal Society School Partnership and the IoP Physics in Africa schemes.

*Quotes from Newnham project girls: “Physics can be seen as a boys’ subject, but the residential has shown us that women can be just as successful.”*

*“The laboratory work was really good. Meeting so many women involved in science has been inspirational.”*

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<sup>35</sup> <http://www.phy.cam.ac.uk/outreach/> and <http://www.hep.phy.cam.ac.uk/outreach/>

<sup>36</sup> <http://www.tcm.phy.cam.ac.uk/~mw141/teaching.html>



**Figure 18:** Girls from the Newnham project visit the Cavendish for a practical class session (March 2013).

### Flexibility and managing career breaks

- a) Provide data for the past five years (where possible with clearly labelled graphical illustrations) on the following with commentary on their significance, how they have affected action planning, and any improvements since the department’s Silver award.
- (i) **Maternity return rate** – comment on whether maternity return rate has improved or deteriorated and any plans for further improvement. If the department is unable to provide a maternity return rate, please explain why.

The University promotes explicit procedures for maternity<sup>37</sup> (and paternity) leave and return to work through its website and at staff induction in the Department. The return rate in the Department has always been 100%. Since 2010, 4 members of research staff have taken maternity leave; 3 have returned full-time (one promoted to a Senior Research Associate). The other is still on leave, but taking full advantage of “keeping in touch” days and email contact.

- (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.

Over the past three years, there have been 6 members of staff (all research staff) who have taken paternity leave. The paternity forms and guidelines are accessible from the Departmental website and all staff used the University approved procedure. In a focus group with research staff in the Department, the ease and openness of paternity leave was mentioned, as well as the flexibility around needing to take time off at short notice for children for a variety of reasons including illness, dropping them off/picking them up from school etc. In addition, in 2011 the University introduced a policy for additional paternity leave which is widely publicised across the Department.

<sup>37</sup> <http://www.admin.cam.ac.uk/offices/hr/policy/maternity/>

- (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.

Over the past 5 years, there has been one formal request for working part-time from a female postdoc (see Section 7). All academic and research staff who work part-time are automatically granted permission to return to full-time work, provided funding exists (Action G.6.1). The Department has also acceded to requests for flexible and part-time working from a number of support staff, to cope with on-going child care needs, care of elderly relatives and adoption leave.

- 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 University's policy for flexible working<sup>38</sup> is well advertised; a link to the University HR site is posted on the website to remind staff that the Department recognizes the many forms of flexible working and to provide guidelines on how to obtain a suitable flexible working arrangement. We plan to raise awareness of our flexible working policy, in particular through the "Families at the Cavendish" website (Action G.6.1).

All academics are free to set their own hours of work and many take advantage of working from home when their commitments allow. Research staff arrange their hours in association with their supervisor and requests to reduce hours and graduated return to work are usually accommodated. Assistant staff work defined hours, allowing for considerable flexibility to meet the needs of childcare etc. Since many areas of the Department offer a time-defined service where flexi-time is inappropriate, the above is deemed an equitable arrangement.

All academics are entitled to paid sabbatical leave of one term for every six terms of service. The application is endorsed by the HoD and granted by the General Board; to date all applications for sabbatical leave have been granted. While on sabbatical, the duties of an academic are covered by other staff members, and this is taken into account in the Workload Model.

*UKRC Survey: 70% of research staff agree or strongly agree with the statement "My line manager is supportive of requests for flexible working".*

*ASSET 2010 revealed that 4% (3%) of academics (postdocs) work less than full-time, although, at some point, 33% (21%) of female academics (postdocs) have worked part-time; 83% (100%) of all staff (postdocs) feel they can take time off at short notice, 96% (100%) feel they have flexibility in the work pattern and 100% (89%) say they can work remotely– this is more than in the School.*

<sup>38</sup> <http://www.admin.cam.ac.uk/offices/hr/policy/flexible/>

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

The number of female staff who have taken maternity leave from the Department is rather small; several male staff have taken paternity leave. In the Department there are 3 female academic staff, 1 part-time Lecturer and 2 Professors, who have children.

The Department has assigned a Maternity Mentor (female) who discusses pre- and post-maternity arrangements with individuals requesting maternity leave. The Department accommodates requests, consistent with our Child Policy, such as provision of breast feeding/expressing facilities and keeping in touch days. The Maternity Mentor provides further support prior to maternity leave and during the return to work period.

The Departmental policy is that the teaching load for female academic staff taking maternity leave is covered by other existing staff in their absence; arrangements for research responsibilities are covered by individual research groups. On return from maternity leave female academics are relieved from lectures in the first term and no new lecture courses are assigned in the first 12 months. For those Research Associates/Fellows employed on Research Council/Royal Society funding, the tenure of the appointment is extended accordingly; for non-Research Council Research Associates, maternity leave is given according to the terms of the employment.

All staff have good access to childcare through the University nurseries (one located adjacent to the Department) and the University play scheme, which runs during the school holidays. The University also runs a Returning Carers scheme,<sup>39</sup> which can be tailored to individual needs, e.g. providing teaching “buy-out” or covering the cost of a family member/nanny to accompany new mothers to conferences, and a salary sacrifice scheme, which in effect provides tax-free nursery provision. We will continue to monitor maternity and paternity leave rates (Action G.6.2) and account for leave in the Workload Model (Action G.6.3).

*ASSET 2010 revealed that 100% of the women staff in the Department, compared to 67% in the School, who went on maternity leave utilized flexible working on their return.*

5867/5000 words

##### **5. Any other comments: maximum 500 words**

Please comment here on any other elements relevant to the application, e.g. other STEM-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 the department plans to address any gender disparities identified.

Athena SWAN is fully embedded in the Department, which is known to be a leader of “best practice” in the University. Examples of good practice include the annual data monitoring, surveys and focus groups with staff and students, mandatory E&D training, exit interviews, staff appointments and promotion, the Staff Review & Development scheme, and accountability

<sup>39</sup> <http://www.medschl.cam.ac.uk/news/carers2012.html>

through the workload model. We have helped other departments through sharing of good practice via the School's E&D Forum, the Gender Equality Group and the University's WiSETI Officer. We have also launched our Workload Model in other departments e.g. Chemistry and our posters and family friendly leaflet has been adopted by other departments e.g. Zoology and Chemistry.

In addition to the outreach activities highlighted on page 47, the Department is also involved with the Cambridgeshire Further Mathematics Centre (FMC)<sup>40</sup>, which delivers Further Mathematics teaching to students in the Cambridgeshire and Peterborough area in collaboration with local schools/colleges. It is based at the Centre for Mathematical Sciences at the University of Cambridge. The Cambridgeshire FMC is linked to the Millennium Mathematics Project (MMP). The HoD (Physics) sits on the MMP Management Committee and the Administrative Secretary on the MMP Executive Committee. These additional projects address one of our main concerns that girls seem to have less confidence and problem solving skills in Mathematics than boys and this impacts on their Physics performance, particularly in their first year at Cambridge.

All members of academic and research staff who have connections with the Colleges also take part in their respective science open days, alumni and other outreach activities. Many of these activities include "women-only" sessions. Of particular note are the women only open days at Newnham College, Trinity Women events, as well as College visits to single-sex schools.

Since receiving our Silver award, the Department has significantly increased its level of active promotion of Athena SWAN and women in science initiatives both at the University and national levels. In particular, a number of members of the Department now have a prominent national profile in this sphere.

Athene Donald, one of the UK's most prominent female physicists, plays a significant role in addressing and progressing gender equality issues not only at a local level within the Department and University but also through national and international platforms. She is the University's Gender Equality Champion, Chair of the University's Gender Equality Group,<sup>4</sup> and Director of WiSETI.<sup>3</sup> Outside the University, Athene regularly contributes to the development of science policy and chairs the Royal Society's Education Committee as well as sitting on their Council. She chaired the Athena forum<sup>41</sup>, an organisation which aims to provide a strategic oversight of developments that seek to, or have proven to, advance the career progression and representation of women in STEMM in UK higher education. Athene was the founding chair of the IoP Biological Physics Group and is Project Director of the IoP's Teaching Biological Physics project. She is also a member of the Advisory Council of the Campaign for Science and Engineering, was appointed a Trustee of the Science Museum Group in 2011 and is member of the Scientific Council of the European Research Council. Athene is Chair of the new Women of the World (WoW) Advisory Group, which will collaborate with the Southbank Centre to increase the profile of women in science in WoW festivals both in Cambridge and London. She also leads the University's newly-introduced, high-profile International Women's day activities.

Athene was a recipient of the 2009 L'Oréal-UNESCO Awards for Women in Science award<sup>42</sup> and

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<sup>40</sup> <http://www.furthermaths.org.uk/index.php>

<sup>41</sup> <http://www.athenaforum.org.uk/>

<sup>42</sup> [L'Oréal-UNESCO Awards for Women in Science](#)

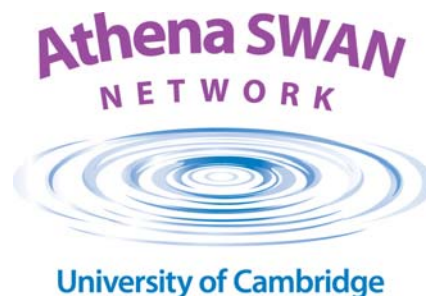


also won the UKRC's Women of Outstanding Achievement's Lifetime Achievement Award in 2011.<sup>43</sup> Through formal presentations to Universities and committees and informal interactions at events, for example soapbox science (see photo below), Athene is one of the UK's leading advocates for women in science and Athena SWAN. She reaches a diverse audience through Twitter (> 7000 followers) and her regular blogs<sup>44,45</sup>, to highlight issues for women in science, often citing her own career experiences and activities to help women from the Department, as well as drawing attention to the issues for girls progressing to study Physics at A2-level and beyond. From October 2014 she takes up the role of Master of Churchill College.



Athene was instrumental in the development of a new University project 'The Meaning of Success: Insights from women at Cambridge', which explores a more inclusive definition of success within the higher education sector. More than 125 female staff in a range of positions, all of whom were judged successful by their peers, were surveyed to understand what shaped their views around success, the barriers they had faced on their way to becoming successful, and what techniques they had used to overcome barriers during their careers. A book and website, which also features Val Gibson, will be launched in March 2014.<sup>46</sup>

David Peet regularly gives presentations about Athena SWAN at Cambridge and in particular the experiences of the application process and examples of good practice within the Physics Department at national Athena SWAN (e.g. "Going for Silver"<sup>47</sup> and "Sharing Best-Practice") and IoP Juno workshops. He regularly provides advice to other departments supporting the development of their Athena SWAN programmes within and outside Cambridge. David serves on the University's Gender Equality Group and the Athena SWAN Governance Panel as well as chairing national Athena SWAN panels. He is also a key member of the University Athena SWAN Network, launched in 2013, which provides opportunities for Departments to meet and share best practice.



Val Gibson is central to the University's Senior Gender Equality Network launched in 2012 by the Vice-Chancellor. She is a member of the School's E&D Forum, which links the Department to the

<sup>43</sup> <http://www.wisecampaign.org.uk/news/2011/05/ukrc-awards-evening-recognises-achievement-of-women-and-businesses>

<sup>44</sup> <http://occamstypewriter.org/athenedonald/>

<sup>45</sup> <http://physicsfocus.org/author/athenedonald/>

<sup>46</sup> <http://www.cam.ac.uk/for-staff/news/women-at-cambridge-a-question-of-success>

<sup>47</sup> <http://www.athenaswan.org.uk/content/going-silver-seminar-0>



wider University E&D agenda and serves as a key environment for exchanging information and good practices particularly around Athena SWAN issues and initiatives. Nationally, Val appears in the IoP web-cast “Becoming a Juno Champion”<sup>48</sup> and is a member of the IoP’s Juno assessment panel, using these platforms to showcase the Department’s activities and achievements. She has featured in the ‘What I See’ Project<sup>49</sup>, a global exploration of what it means to be a woman. Val has been recognised for championing female talent in science and was presented with the 2013 Women in Science and Engineering (WISE) Leader award (see photo below). WISE recognised her major leadership role in championing women in science, particularly those pursuing physics as students, researchers and academics and that her hard work, passion and commitment have been key factors in the Cavendish Laboratory’s Athena SWAN progress.



The Department and its role models will continue to disseminate best practice and influence activities in the University, national and international arenas, as well as bringing back key information and practices from wider consultations (Action G.5.1). For example, the Department is central to and promotes the University initiatives in:

- the Senior Academic Promotions (SAP) CV scheme and open SAP fora;
- progression of gender equality as part of the University’s networks and committees, including Council, GEG, Athena SWAN Governance Panel, Senior Gender Equality Network and Athena SWAN Network;
- the upcoming book and web resources “The Meaning of Success: Insights from Women in Cambridge”;
- the Returning Carers Scheme, which provides funding support to help returning carers restart research careers (e.g. after maternity leave);
- the University Parents’ and Carers’ Network “Family Ties”; and
- developments in the University recruitment policies, which ensure fair representation of women on the short-lists for University elections to Professorship.

1,200/500 words

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<sup>48</sup> <http://www.youtube.com/watch?v=murwpcICxF0>

<sup>49</sup> <http://whatiseeproject.com/>

## 6. Action plan

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

This should be a table or a spreadsheet comprising plans 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**.

Over the past 10 years the Department has worked tirelessly to identify and act upon E&D issues that address the promotion and advancement of women in science. Our Athena SWAN Action Plan (see appendix) provides a focussed summary of our achievements within the last 3 years and a forward look into the next 3 years. The majority of actions identified for our Athena SWAN Silver award are now complete; a few are ongoing and one is now addressed as part of our new Action Plan. We are therefore pleased to present our new Action Plan as part of our Gold application.

The themes for the new Action Plan address:

- the appointment of women at all levels (undergraduate and postgraduate admissions, research and academic staff);
- the performance of, and support for, women undergraduates;
- guidance and career advice for postgraduates;
- reinforcement of research staff mentoring and career management practices;
- E&D training for all staff and students;
- the workload of all academic staff;
- surveys and focus groups for all categories of staff (including assistant staff);
- reinforcement of good practice at the research group level; and
- our influence of the progression of E&D activities at the University and national level.

The Action Plan is presented under the following headings:

- Baseline data and supporting evidence;
- Undergraduate and postgraduate students;
- Key career transition points, appointments and promotions;
- Career advice and support;
- Culture, communications and departmental organization; and
- Career breaks and flexible working.

Under each heading we highlight the progress of our Silver Action Plan (grey boxes) and present a comprehensive plan for the next 3 years.

## 7. Case study: impacting on individuals : maximum 1500 words

Describe how the department has changed and how its staff have benefited on the journey to applying for Gold.

Provide a small number of case studies of individuals working in the department and show how the inclusive culture and working practices of the department have enabled them to pursue a career in STEM.

At least one of these case studies should be a member of the self assessment team, and at least one should be someone else in the department. There should also be at least one case study from a male member of staff. More information on case studies is available in the guidance.

### Maternity support and flexible working

**Dr Rosie Bolton:** MSci Cambridge, PhD Cambridge.

I came up to Gonville and



Caius College to study NatSci (Physics) in 1997. In 2001 I started a PhD in the Astrophysics group in the Department. Upon completion of my PhD I worked as a consultant physicist at a technology development firm for 14 months before returning to the Department as a Research Associate on the Square Kilometre Array radio telescope project. In 2010 I was elected as a Fellow at Selwyn College, where I now advise and oversee the Physics courses of individual students; I also supervise small groups of physics students. In 2012 I took 18 weeks' maternity leave for the birth of my son. I am currently benefiting from the Department's flexible working policy and have reduced my hours to work a four-day week. Additionally, my son was given a place at the University nursery, offering considerable savings on nursery fees compared to a privately owned nursery. The Department is very supportive of my career and accommodating to my personal circumstances. I am very happy that the Department has introduced baby-changing facilities and high-chairs into the canteen, and provided common areas where I can "hand-over" when needed.

### Balancing family life with academic start-up

**Dr Pietro Cicuta:** Laurea Milan, PhD Cambridge.

I joined the Department in 2000, starting my PhD in the Biological and Soft



Systems research sector. I am part of a dual-academic career couple; my wife was awarded a Dorothy Hodgkin and a RSURF, and later a Lectureship in another department. We had our first child in 2003, just before I submitted my PhD, and a second child in 2007, a few months after my appointment to a Lectureship and election to a College Fellowship. Although I did not need to take paternity leave, the unreserved support, encouragement and flexibility in working hours provided by my research group and the Department have been essential for allowing a balanced family life. I have benefited from the Department's policy of assigning a very light teaching load during the first year of my Lectureship and teaching tasks within my core area of expertise later on. This has been crucial for a smooth transition into the teaching role. Within the Department, I have benefited from start-up and PhD student funding,

the mentoring supplied by various senior colleagues, the SRD scheme and the timing of seminars and staff meetings. I attended the excellent University induction course and passed the E&D online training course. Overall the Department provides a very warm environment, and there are a range of social activities centrally and within research groups.

**National and international gender equality champion**

**Prof. Dame Athene Donald**  
**FRS:** BA and PhD University of Cambridge; I am the first woman to hold a Lectureship



in the Cavendish, when I was also pregnant. My two children were born in 1986 and 1988, when formal flexible working was not an option although academic life made it relatively easy, nevertheless, to work flexibly. I was appointed Reader in 1995, Professor in 1998, elected to the Royal Society in 1999 and appointed DBE in 2010. I am the founding Chair of the PC and have been DHoD. In 2007, I became Director of the university-wide WiSETI (which pioneered the CV mentoring scheme for women applying for promotion, now rolled out across the university). In 2010, I became the University's Gender Equality Champion, chairing the Gender Equality Group, and sit on University Council, the HR and E&D committees and the Remuneration Committee. Nationally, I chair the Athena Forum and sit on the Royal Society's E&D Advisory Network and Council. I frequently speak at other universities' Athena SWAN/women in science events and have a significant social media profile highlighting issues for women in science, with over 7000 twitter followers and a blog at my own website, in the Guardian and most recently at the IoP's own blogsite Physics Focus. I use these positions to showcase beacon activities in the University and the Department.

**Family and an academic career**

**Prof. Valerie Gibson:** BSc Sheffield, DPhil Oxford. I came to the Department in 1989 from



CERN in Geneva having joined my partner. My HoG (High Energy Physics), sensitive to the needs of couples, provided me with interim resources whilst I applied for funding. I secured a five year SERC Advanced Fellowship and a College Senior Research Fellowship. In 1994, I became a University Lecturer and was elected fellow of Trinity College where I remain as the most senior female fellow. In 1998 and 2002 I took full advantage of the University's policies on maternity leave, flexible working and graduated return to work following the birth of my two children. In 2006, I was promoted to Reader and in 2009 to Professor. I am Chair of the PC and am the driving force behind the Department's Athena SWAN and IoP Juno activities. I represent the Department on the School's E&D Forum and am a member of the University's Senior Gender Equality Network, advising the Gender Equality Group and Vice-Chancellor on gender related issues. I have recently become a member of the IoP Juno assessment panel and drive E&D activities on an international scale through CERN. I use all my positions to showcase the Department's Athena SWAN and Juno activities.

### **Mentoring support within the Department**

**Dr Suchitra Sebastian:** BSc Chennai, India and PhD Stanford, USA. I came to Cambridge in



2006 as a Trinity College Research Fellow (Quantum Matter Group). The move was challenging, since I needed to set up my own laboratory with limited funding. I was greatly assisted by the mentoring provided by my HoG and the HoD who advised on aspects of undertaking research within the challenges of a new environment. I found both unstinting in time, encouragement and practical help. I also received a postdoctoral award from the Institute of Complex Adaptive Matter for collaboration with the National High Magnetic Field Laboratory (USA). Once again, both my mentors were extremely encouraging with respect to my experiments that required travel to international laboratories and which proved to be very successful. In 2010 I was encouraged by the HoD to apply for a RSURF and help was provided with preparation for the interview. My application was successful and I was granted some Science Research Investment Fund (SRIF) funding to purchase equipment for my laboratory. In 2012, I was nominated by the Department and received the Young Scientist Medal in Magnetism by the IUPAP and the Moseley Medal by the IoP. These awards came at a very important stage in my career. I have greatly benefited from extensive career-related and physics-related advice and have found many senior colleagues helpful regarding all aspects of academic life, including preparation for fellowships and grants. I am very pleased to report that I have just been offered a Lectureship in the Department.

### **Attracting senior woman academics to join the Department**

**Dr Sarah Teichmann:** BA Cambridge, PhD Cambridge. I read NatSci at Trinity College (1993-96) and was aware of



Prof. Valerie Gibson as the only female science academic in the College at that time. Returning to Cambridge after a period of postdoctoral research at University College London, I started a Computational Genomics group as an MRC Career Track Programme Leader in 2001 at the MRC Laboratory of Molecular Biology and became a Research Fellow at Trinity College. I was tenured in 2005 to an MRC Programme Leader, as well as becoming a Teaching Fellow at Trinity. I moved to a joint appointment between the EMBL-European Bioinformatics Institute and the Wellcome Trust Sanger Institute in 2013. My research has been recognized by a Lister Prize (2010), a Colworth Medal (Biochemical Society, 2011), a Crick Lecture (Royal Society, 2012) and I am a member of the European Molecular Biology Organisation (2012). In early 2013, I accepted a part-time Reader position in the Physics Department, where I collaborate and interact with colleagues on a variety of research problems. A principal reason for this move followed my experience during my two maternity leaves (2008 and 2012), while outside the Physics Department, when I tried to continue to supervise my group members' research and keep the group momentum on projects moving with minimal disruption. To my surprise, other academics and administrators assumed that academics in charge of research groups should take care of administrative tasks within days of giving birth. There was minimal support for someone on parental leave, in charge of a baby, to be able to supervise students and postdocs and parental leave did not seem to be taken into account in many evaluation schemes. The fact that the Cavendish has an Athena SWAN programme and is an outspoken champion of family-friendly policies made it an especially interesting and attractive department to join. I am honoured to be part of this Gold application and support it wholeheartedly.

1468/1500 words



## Glossary

<b>CDT</b>	Centre for Doctoral Training (EPSRC funded)
<b>CPD</b>	Continuing Professional Development
<b>CPGS</b>	Certificate of Postgraduate Study
<b>DHoD</b>	Deputy Head of Department
<b>EPSRC</b>	Engineering and Physical Sciences Research Council
<b>E&amp;D</b>	Equality and Diversity
<b>HoG</b>	Head of Research Group
<b>HoD</b>	Head of Department
<b>HR</b>	Human Resources
<b>IoP</b>	Institute of Physics
<b>IUPAP</b>	International Union of Pure and Applied Physics
<b>KE</b>	Knowledge Exchange
<b>MRC</b>	Medical Research Council
<b>NatSci</b>	Natural Sciences undergraduate course
<b>PC</b>	Cavendish Personnel Committee
<b>PI</b>	Principal Investigator
<b>RSURF</b>	Royal Society University Research Fellowship
<b>SAP</b>	Senior Academic Promotions
<b>SAT</b>	Athena SWAN Self-Assessment Team
<b>School</b>	School of Physical Science
<b>SMG</b>	Senior Management Group
<b>STEM</b>	Science, Technology, Engineering and Mathematics
<b>WiSETI</b>	Women in Science Engineering and Technology Initiative



**Appendix: University of Cambridge, Department of Physics. Athena SWAN Action Plan 2013**

**Colour Key**

**Review of 2010 Action Plan**

Achieved

Partially achieved / in progress

Not achieved / replaced



**Start Date**

Already embedded/ in progress /first year of Action Plan

Second year of Action Plan

Third year of Action Plan

**Colour**



1	<b>Baseline Data and Supporting Evidence</b>					
<b>Update from Silver Action Plan 2010</b>	1.1	Monitor undergraduate data by gender	New data collections systems created (both from central University and Department sources); gender balance of undergraduates maintained; benchmark data collected from IoP publications.			
	1.2	Monitor undergraduate performance by gender	Women are performing as well as / better than men in all years other than the first; additional actions (consultation with Colleges and focus groups) with undergraduates have been implemented to understand further the issue in the first year. Further action planned (G.1.1)			
	1.3	Monitor A2 UMS scores against undergraduate performance	There is no central University store of A2 UMS marks, so using AS UMS marks as proxy, we have revealed significant underperformance by women in the first year, in Physics and Maths. Further action planned (G.1.3, G.2.5)			
	1.4	Review and monitor first year 'Intentions' survey	Relatively more women are choosing to remain with Physics at the end of the first year as a percentage of those intending to do so at the start of the course, a significant success			
	1.5	Monitor postgraduate completion rates by gender	PhD submission rate maintained. No gender difference in completion rate / time. Recent reduction in female acceptance rate will be investigated further (new action G.1.3)			
	1.6	Monitor staff data by grade and gender	Staff data show a steady percentage of female staff. Recent appointments increase female Lecturers/Readers by 64%.			
	1.7	Comparison of staff data with other STEM departments in the University	New central University data systems deployed to support SWAN applications; data indicate Physics is broadly in line with Engineering, Chemistry by gender for academic staff; for research staff, percentage of women is behind Chemistry but in line with Engineering and ahead of Mathematics			
	1.8	Monitor staff appointments	Increased rate of return of Equal Opportunities spreadsheets achieved. Number of new appointments has been falling; percentage of women appointed has reduced (but small number) (but new actions G1.3, G1.5). Uptake of Equality and Diversity training is increasing.			
	1.9	Monitor academic and research staff destinations	Number of leavers has reduced; data collection reveals no significant gender difference			
	1.10	Monitor Senior Academic Promotions exercise	Women have been relatively more successful			
	1.11	Monitor promotion rate by gender from RA (grade 7) to SRA (Grade 9)	Small numbers. One male; two female promotions in last year. Note that 1 of 4 Winton (grade 9) fellows appointed to date (last two years) are female			
	<b>Additional action</b> Academic and Research Staff survey executed	Survey run in 2012; good response rate and positive responses using UKRC culture question set, without modification, to allow benchmarking against other Departments.				
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.1.1	Continue to monitor staff, postgraduate and undergraduate student data. Track/evaluate all consultation methods (incl. focus groups and surveys)	Data collection systems in place; Department giving input into University SWAN data requirements / reporting	Additional resource to be deployed to collect and analyse data Monitor appointment of new Cavendish Visiting Fellows (CVFs)	Education Administrator, Teaching and Graduate student Committees; Personnel Committee	1/9/ 14  1/8/14	New post filled  New appointee produces complete set of annual data to meet SWAN requirements. Process for monitoring CVF appointments proves effective / review

G.1.2	Extend staff survey programme	Initial academic and research staff surveys undertaken December 2012 using UKRC questions; data reveal no major concerns regarding culture	Include assistant and academic-related staff survey planned for 2014; repeat academic and research staff UKRC survey in 2014 Encourage participation in next ASSET survey, when announced	Personnel Committee	1/9/14	>70% participation rate for all staff categories
G.1.3	Extend focus groups to provide more information and to support and explain quantitative data issues	Focus groups on first year undergraduate performance held Feb 2013	Research staff focus group programme defined – fellowships and career development Final year undergraduate, MAST and MPhil group, and first year postgraduate group to look at PhD applications	Research staff committee; Teaching Committee, Personnel Committee	1/5/14	Three new initiatives identified to advance career development for women
G.1.4	External reporting of Action Plan progress to extended SAT, to Equality and Diversity groups and committees in the wider University and the School of the Physical Sciences	Chair of PC reports to School's E&D Forum	Ensure that Annual Report to Cavendish Committees is fit for external use with minimal editing	Chair, Secretary of Personnel Committee	1/4/14	Enhanced dissemination of good practice
G.1.5	Brief new HoD on Equality and Diversity matters and policies and Athena SWAN	New HoD appointed and briefed.	COMPLETED– In place; new E&D training modules launched with good feedback. HoD has had focus group discussions with all research groups and staff.	Chair, Secretary of Personnel Committee	1/6/13	COMPLETED
G1.6	HoD to brief each HoG about E&D issues (fair and open research staff promotions, maternity leave, induction and mentoring)	All HoGs are E&D trained	HoG mandate completed	HoD, Chair and Secretary PC	1/02/14	Agreed briefing sheet and HoD briefed all HoGs. COMPLETED
G.1.7	Appoint and brief new Education Administrator	Role description in preparation. Review/ensure diversity of applicants.	Appointment to be made in next few months	Academic Secretary; Chair, Secretary of Personnel Committee	1/9/14	New role holder enhances data collection and analysis systems in support of SWAN Action Plan
G.1.8	Appoint a postgraduate student representative to the Personnel Committee	Consultation with PG committee.	Agreed appointment	Secretary of Personnel Committee	1/10/14	Postgraduate attending PC meetings.

2	<b>Undergraduate (UG) and Postgraduate (PG) Students</b>					
<b>Update from Silver Action Plan 2010</b>	2.1	Comparison of UG performance	Data acquired from new central system; common issue over underperformance of women (fewer firsts) especially in early years			
	2.2	Identify cause of different performance by gender in first year (1A)	Analysis undertaken against AS Level UMS marks. Some correlation to performance in Further Maths; and whether or not Further Maths has been taken. Could also be an issue with confidence of female students and/or factors related to Supervision in Colleges. Additional action: Focus groups held to identify qualitative factors			
	2.3	UG exit questionnaire	Feedback received on individual courses; End of 3 or 4 year course questionnaire to be developed			
	2.4	PG exit questionnaire	Exit questionnaire still to be developed			
	2.5	Advertise Department policy on part-time PG degrees	Done			
	2.6	Report actions to School of the Physical Sciences to embed best practice	Prof Gibson sits on School Committee tasked with embedding SWAN principles across the School and encouraging further award applications. Prof Gibson and Mr Peet advise other departments on SWAN data analysis and applications			
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.2.1	Engage with College admissions tutors regarding selection criteria and practices for undergraduates	There is already an extensive programme of training in place	Particular focus needs to be given to addressing areas of concern arising from G.1.3	DHoD (Teaching); College Directors of Studies	1/9/14 1/7/15	New guidance / training produced for 2014 UG admissions round, leading to Reduction in performance gap (as G.2.1)
G.2.2	Masters courses – enhance mentoring	MASt already has a dedicated member of academic staff to oversee	Extend to MPhil in scientific computing; ensure female students feel well supported	Academic Secretary, Education Administrator	1/10/14	Positive feedback (>75% satisfaction) from exit questionnaire (G.2.2)
G.2.3	Monitor Certificate of Postgraduate Studies review for E&D compliance	Review planned	Full engagement with review group	Graduate Education Committee	Externally driven	No gender difference observed
G.2.4	Engage School of the Physical Sciences in Athena SWAN dimension of new Centres for Doctoral Training across the School and cognate STEM departments		Ensure good gender mix of supervisors; best practice in recruitment, etc. Train Supervisors	Physical Sciences Graduate Education Committee; Physics Graduate Education Committee	1/10/14	Recruitment to CDTs to exceed University norms and IoP benchmarks for female enrolments
G.2.5	Develop Action Plan based on findings from Silver Action 1.3 e.g. support workshops for women undergraduates, particularly highlighting PhD research		Develop programme in consultation with Teaching Committee and College Directors of Studies	DHoD (Teaching), Teaching Committee	1/6/14	Action Plan in place. Target is no gender difference in first year performance; immediate goal (3 years) is 50% reduction in current performance gap. Reverse decline in female PhD UK acceptances/application rate and return to above 20%
G.2.6	Final year and PhD projects – advertise whether supervisor is male / female		Develop existing project proposal procedure to identify supervisor (incl. gender)	Teaching Office	1/6/14	25% More internal female applicants for PhD places by 2015

G.2.7	Mathematics Review in Natural Sciences Tripos	Need for review has been established – course no longer fit for different purposes	Full engagement with review group	DHoD (Teaching); Teaching Committee	1/9/14	New course developed which recognises and addresses gender differences
G.2.8	E&D training for all undergraduates, demonstrators in practical classes, small group supervisors and directors of studies.	Need for E&D training established	Develop training package fit for purpose. Run E&D training course for undergraduates at entry. Demonstrators and supervisors to complete E&D training. Encourage Colleges to only use supervisors for Physics who have completed E&D training. Monitor uptake.	DHoD (Teaching); Teaching Committee; University HR	1/6/14	Training package produced. All undergraduates, demonstrators and small group supervisors E&D trained. Positive verbal feedback from undergraduate classes, consultative committees and focus groups
G.2.9	Guidelines to Lecturers and small group supervisors	Guidelines available from Mathematics department	Adapt guidelines for own use	DHoD (Teaching); Teaching Committee	1/10/14	Guidelines in place. Positive feedback from surveys/focus groups.
G.2.10	Increase exam questions on undergraduate problem sheet and centralise mock exams, increase frequency.	Exam questions already included, many Colleges already set mock exams	Lecturers to increase frequency of exam-like questions. Centralise mock exams in Department.	DHoD (Teaching); Teaching Committee	1/10/14	Lecturers increase exam-like questions (all lecture courses). Mock exam system in place. Positive verbal feedback from undergraduate Consultative Committee.
G.2.11	Collate undergraduate destinations data	HESA data available	Extract Department statistics	Education Administrator, DHoD (Teaching), Secretary Personnel Committee	1/10/14	Procedure in place and on-going data collection
G.2.12	Monitor performance by gender on Masters courses	Data sets are currently small	Investigate performance at module / sub-course level	Education Administrator	1/10/14	No significant gender difference observed
G.2.13	Develop Postgraduate exit questionnaire	Committee reminded	Create questionnaire	Physics Graduate Education Committee	1/10/14	Questionnaire created and implemented by 1/10/13 Achieve high completion rate 60% over period to 30/9/15
G.2.14	Hold event for female final year students during Postgraduate PhD Recruitment Exhibition	First event held end 13	Organise future events	Education Administrator	1/12/13	Hold event with good female attendance (48 female staff and students attended) COMPLETED Increased female applications for PhD places for 2014 entry.
G.2.15	Final year postgraduate review with independent reviewer			Graduate Education Committee	1/1/14	Improvement in completion rate, increase female applications for postdoc posts

G.2.16	Write-up guidance and workshop for final year PhD students		Scientific writing course for postdocs, encourage better writing skills in PhD students through dedicated workshop	Graduate Education Committee; Transferable skills co-ordinator	1/10/14	Increase female applications and success rates for post-doc appointments to match male By 2015
G.2.17	UG Maths project, comparing performance on A2-Level and UG-style physics problems completed; data analysed and disseminated	Funding achieved; staff commissioned	Questions set		1/9/14	Supervisors, lecturers and examiners report changes to problem sets and support in problem solving
G.2.18	Decide policy for UK versus EU/overseas PhD intake	Data suggest EU/overseas intake rising	Monitor data Decide policy on intake.	HoD, DHoD (Teaching)	1/10/16	Policy in place



3	<b>Key Career Transition Points, Appointments and Promotions</b>					
<b>Update from Silver Action Plan 2010</b>	3.1	Identify reduction in women researchers between Grade 7 (Research Associate) and Grade 9 (Senior Research Associate)	Fellowship applications show fewer submitted by women and lower success rate. Therefore need to improve information flow, support, and quality of applications. Programme of Fellowship Workshops implemented. These workshops showed the need for better writing of applications to match different audiences. So workshops in 'Scientific Writing' started. Continuing support through Staff Review and Development (SRD) Scheme (New action 3.1, already implemented). 4 new Grade 9 women Fellows appointed in last three years			
	3.2	2010 ASSET Questionnaire	High return rate achieved. Data analysed. Resulting actions included development of Research Staff Committee and events (see new action G.3.9); improvement of web pages; extra dimensions to SRD for researchers. Department data compared favourably to School and University (e.g. awareness of gender initiatives )			
	3.3	Improve awareness of fellowship competitions, contribution increment rounds	Information disseminated by Research Grants Administrator routinely; pay round information circulated by Administrative Secretary of the Department; Research Staff Committee established. Series of events held. Main annual event has been run for three years – briefings, career advice, networking			
	3.4	Staff exit questionnaire	Return rate is variable. Not much new information emerging: research staff value the reputation of the Department and training given. Revise format and re-launch			
		<b>Additional Action</b> Ran UKRC Cultural survey across academic and research staff, following on from ASSET survey				
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.3.1	Understand increase in staff turnover	Individual data suggest women staff are more proactive in looking for next post, often in academia and often overseas	Detailed study of turnover data required	Administrative Secretary	1/10/14	Increase understood and measures put in place, if necessary
G.3.2	Staff exit questionnaire		Review format and questions to elicit more information on future career plans	Administrative Secretary	1/1/14	High return rate – 80% Produce report on destinations – fellowships and permanent posts
G.3.3	Examine Research Staff appointment success rate by Research Group		Breakdown current and future data	Administrative Secretary	1/10/14	Monitoring procedure in place and outcome known
G.3.4	Enhance Staff Review and Development Scheme.	Reviews now offered annually to researchers in first five years of first contract, with selected senior staff members as reviewers	Monitor outcomes	Personnel Committee	current 1/10/14	Continued high uptake; high quality outcomes for individuals (e.g. training plan) Summary reports from SRD report positive outcomes of career initiatives
G.3.5	Formalise policy and procedure for identifying women candidates, especially for academic staff posts	Current policy is ad hoc	Policy to be written and agreed by SMG	HoD	1/6/14	Policy implemented. Percentage of female applicants to reflect percentage of females at previous career stage
G.3.6	Lectureship appointments	All panel members must	All new appointments to be	HoD	1/5/13	All in place at 1/2/14

		have completed E&D Training. Active searches for qualified female applicants. University procedure requires male and female staff on all appointment committees	closely monitored; active steps taken with Pro-vice-chancellor, etc., to resolve two-body problems			
G.3.7	Cover of childcare costs for all staff interviews	Cost of extra childcare covered for a female Lectureship candidate	Advertise policy for cover of childcare costs for interviews	HoD, Academic Secretary	1/10/13	Policy in place -COMPLETED
G.3.8	Unconscious bias training programme	University developing programme	Require all staff to undertake unconscious bias training	HoD	1/10/15	All staff taken unconscious bias training – now Mar 14
G.3.9	Extend programme of fellowship (and other) workshops	HoD now offers panel mock interviews for all shortlisted candidates for senior fellowships and scientific writing course	Extend mentoring through new contacts list on website. Identify new workshops in consultation with Research Staff Committee	Research Staff Committee, Postdoc champion, Administrative Secretary	1/5/13	Annual programme of workshops held -COMPLETED, EMBEDDED

4	<b>Career Advice and Support</b>					
<b>Update from Silver Action Plan 2010</b>	4.1	Monitor uptake of mentoring scheme	New mentoring scheme implemented, with responsibility for mentoring embedded in research groups. Still problems with uptake and effectiveness (SRD feedback, Research Staff Committee feedback). Updated action G.4.1			
	4.2	Update Staff Review and Development (SRD) scheme for research associates	New scheme implemented – see G.3.4 above. New action G.4.4			
	4.3	Feedback on mentoring, SRD and careers advice	Feedback received from Survey and Research Staff Committee. Updated action G.4.1			
	4.4	Careers Advice for Research Staff	Careers surgeries continue using transferable skills funding; uptake remains high and feedback positive			
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.4.1	Reinforce mentoring scheme, not only for new appointments	Research Groups now required to provide better reporting on uptake of mentoring scheme. New list of specialist mentors published on website; online support of mentoring improved	Monitor information and feedback	Personnel Committee; Administrative Secretary	1/10/13	uptake / decline to be >90%; zero complaints through SRD and Research Staff feedback
G.4.2	Knowledge exchange		Involve research staff in knowledge exchange events and workshops	KE facilitator	1/10/13	New appointment – KE facilitator – made; 3 events per year run with postdoc involvement
G.4.3	Careers Service provision		Undertake review against Research Staff feedback	Research Staff Committee; Administrative Secretary; Careers Service	1/5/14	Funding provision maintained; offering better aligned to staff needs
G.4.4	Influence changes to University SRD scheme to improve quality of reviews for research staff in particular, using experience from SWAN programme		Administrative Secretary will continue to take part in University working group and monitor for E&D compliance	Administrative Secretary	Current, but time frame will be long (IT development)	New on-line system viewed as accessible and an enhancement to the SRD process by research staff <del>DELETED – development postponed indefinitely by University</del>
G.4.5	Influencing of University policy regarding Senior Academic Promotions	Current policy has recently been upgraded with Equality and Diversity issues in mind	Ensure that feedback from candidates / HoD reaches the central Human Resources division	HoD	1/10/13	SAP outcomes reflect no gender bias

5	<b>Culture, Communications and Departmental Organization</b>					
<b>Update from Silver Action Plan 2010</b>	5.1	Improve awareness of Equality and Diversity	New package introduced to Department induction events; posters on display in all research Groups; SWAN and Juno awards and certificates prominently displayed in Department (Reception, HoD office); logos displayed on letterheads; further information for jobs; regular session on SWAN at termly staff meetings; University and Department events and workshops advertised under SWAN banner.			
	5.2	Review Department organisation	HoD has introduced weekly SMG in place of Executive Board. SMG has female member. New group has more time to consider E&D issues. New action G.5.8			
	5.3	Monitor Committee membership	Done. Balance maintained. High percentage of women on new Research Staff Committee			
	5.4	Review and document new academic staff Workload Model	Major project achieved and accepted by staff. New range of factors included for first time, including outreach and College teaching. Caps introduced on some areas. Now being used as a model across other departments			
	5.5	Monitor workload with new model	We have two years' worth of data. We will continue to accumulate data and ensure that these are actively used to moderate workloads (new action G.5.4)			
	5.6	Review and develop the mandate of the Nominations Committee for prizes	Informal steps have been taken to widen the group of people approached for nominations to include women. Practice still needs to be codified			
	5.7	Update museum displays	Athena SWAN material now included; gallery of male photos removed and replaced with new interactive display			
	5.8	Publicise awards and prizes on website	Revised website allows for news items and successes have been prominently displayed (e.g. Athene Donald, Suchitra Sebastian). Biannual 'CavMag' also sent to alumni publicises successes as well. Announcements made at termly staff meetings			
	5.9	Form Research Staff Committee	Done. Group is proving effective (see other actions, survey results, etc.)			
	5.10	Review timing of Cavendish Physical Society seminars	Done. Brought earlier to allow for children to be collected, etc. after school			
	5.11	Improve social aspects of Department life	New social committee (since 2010 SWAN Award) has established a series of events for staff across the Department including Christmas party (in addition to those held at work / research group level) and Summer Family event			
		<b>Additional action</b> 'Families at the Cavendish' produced, published on web and included in all induction packs	Summary sheet of facilities and services available to parents and carers working in the Department. Facilities in the Common Room improved to include high chairs and baby changing facilities			
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.5.1	Dissemination of best practice / beacon activities. Continue to influence University and National initiatives through membership of committees, speaking and writing	Staff involved in SGEN; SWAN governance; national SWAN / Juno organisations	Continue monitoring involvement	Chair Personnel Committee, Administrative Secretary	1/10/14	Survey past year's activity. 10 events registered
G.5.2	HoD to brief Chairs of all committees about transparency, fairness, committee culture and unconscious bias		Produce briefing paper for Chairs of Committees	HoD, Chair and Secretary of Personnel Committee	1/10/13	All Chairs briefed and "unconscious bias" trained
G.5.3	Monitor Committee membership and appoint suitable female to IT Committee if possible and PhD student to Personnel Committee	Committees audited annually	Search for suitable female IT specialist; consider rotation of committee membership	HoD	1/10/13	Balance across committees retained
G.5.4	Use Workload Model to modify the workload of individuals		Collect data over coming years; report outliers to	DHoD (Teaching); HoD	1/8/13	Tangible record of work being removed from the over-burdened

			Teaching Committee & SMG			and re-allocated to the under committed COMPLETED - EMBEDDED
G.5.5	Roll-out Workload Model	Model developed in Physics and shared with other departments	Create a package which allows easy roll-out to other departments	Personnel Committee	1/10/13	Comparable data produced from other departments. Chemistry completed.
G.5.6	Extend social activities as demand requires		Meet with Social Committee	Administrative Secretary	1/1/14	Events continue to be supported by all sections of Departmental community
G.5.7	Document and publicise the working of the Nominations Committee		Publicise committee and remit on website	HoD	1/5/14	Continued recognition of achievements of women and men
G.5.8	Monitor Departmental culture		With another new HoD taking up post, we will continue to monitor committee and management structures and practices	Personnel Committee	1/11/13	Committee membership remains representative. Briefing document on departmental culture produced for new academic staff; consider roll-out to other staff groups
G.5.9	Enhance monitoring of practices in research groups		Survey seminar speakers by gender; meeting times	SMG; Personnel Committee	1/1/15	Check results: at least 25% women

6	<b>Career breaks/flexible working</b>					
<b>Update from Silver Action Plan 2010</b>	6.1	Advertise parental leave, return to work and flexible leave policies	Done – website updated; 100% return rate amongst academic and research staff maintained			
	6.2	Case studies	Done – in preparation for this application. Will be published on website			
	6.3	Advertise policy for workload for academic staff on return from maternity leave	Done – published in ‘Families at the Cavendish’ (as above)			
<b>Action</b>	<b>Description of action</b>	<b>Action taken already and outcome at November 2013</b>	<b>Further action planned at November 13</b>	<b>Responsibility</b>	<b>Target Date</b>	<b>Success Measure</b>
G.6.1	Flexible and part-time working policies	Policies published on website	Increase staff awareness through ‘Families at the Cavendish’, website and continue to monitor uptake	Administrative Secretary	1/10/14	Evidence of increased awareness through SRD scheme
G.6.2	Monitor maternity / paternity leave arrangements		With new legislation, ensure that Department is fully briefed in line with HR Division rules. Ensure these rules reflect SWAN best practice	Administrative Secretary; Chair, personnel Committee	ongoing	Zero complaints; positive feedback from 2014 survey
G.6.3	Ensure maternity leave is correctly included in Workload Model		New Workload Model will need manual adjustment, which is seen to be fair	Personnel and Teaching Committees	1/10/13	No errors on reports