Athena SWAN Silver department award application

Name of university: UNIVERSITY OF CAMBRIDGE

Department: PLANT SCIENCES

Date of application: APRIL 2015

Date of university Bronze and/or Silver Athena SWAN award: UNIVERSITY BRONZE RENEWED 2012; UNIVERSITY SILVER 2014

Contact for application: Julia DAVIES

Email: jmd32@cam.ac.uk

Telephone: 01223 333 939

Departmental website address: www.plantsci.cam.ac.uk

Athena SWAN **Silver Department** awards recognise that in addition to university-wide policies the department is working to promote gender equality and to address challenges particular to the discipline.

Not all institutions use the term 'department' and there are many equivalent academic groupings with different names, sizes and compositions. The definition of a 'department' for SWAN purposes can be found on the Athena SWAN website. If in doubt, contact the Athena SWAN Officer well in advance to check eligibility.

It is essential that the contact person for the application is based in the department.

Sections to be included

At the end of each section state the number of words used. Click here for additional guidance on completing the template.

Table of Contents

Abbreviations

AP Action Point

BBSRC Biotechnology and Biological Sciences Research Council **BG** Beverley Glover

CB Catherine Butler **CPPS** Cambridge Partnership for Plant Sciences

DA Departmental Administrator **DDA** Deputy Departmental Administrator **DH** Del Hawtin **DTP** Doctoral Training Programme

ECU Equality Challenge Unit **E and D** Equality and Diversity **EPSO** European Plant Science Organisation

FRS Fellow of the Royal Society

GEC Graduate Education Committee

HEI Higher Education Institute **HoD** Head of Department **HR** Human Resources

IOSH Institute of Occupational Health and Safety

JD Julia Davies **JIC** John Innes Centre

KH Katharine Hubbard

NC Nik Cunniffe **NST** Natural Sciences Tripos

OECD Organisation for Economic Co-Operation and Development **OU** Open University

PG Postgraduate **PMS** Plant and Microbial Sciences **PS** Plant Sciences

RDP Researcher Development Programme **RI** Research Institute

SAT Self-Assessment Team **SBS** School of Biological Sciences **STEMM** Science, Technology, Engineering, Maths and Medicine

TC Teaching Committee

UG Undergraduate

Throughout the document we use the term Appraisal to mean Staff Development Reviews in all their forms

Figures and Tables

Professor Alison G Smith FSB

Professor of Plant Biochemistry
Acting Head of Department

UNIVERSITY OF CAMBRIDGE

Department of Plant Sciences

April 7th, 2015

Dear Sarah,

Re: Athena SWAN Silver Application

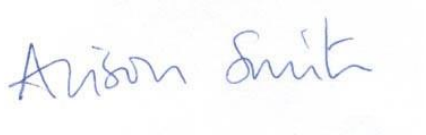
I would like to give my strongest support to the application from the Department of Plant Sciences for an Athena SWAN Silver Award. We were disappointed not to have succeeded in our Bronze Award application in 2013, but the feedback has been very helpful in considering how best to demonstrate the impact of our actions, consider ongoing challenges and enshrine SWAN values in our operations.

I can vouch for the collegiate and supportive atmosphere personally, having worked in the Department for over 30 years, starting as a postdoc. As the need to encourage and celebrate diversity has become the norm, we have looked carefully at our attitudes and assumptions in recruitment and staff development, and in the way we organize the working environment. One illustration of this is that, when I first joined the Department, there was only one female member of academic staff, but now over a third are women. Moreover, as well as myself as Head of Department, there are three other women in leadership roles: the Directors of the Botanic Garden and the Sainsbury Laboratory, and the Departmental Administrator. This is a testament both to the individuals, and to the Department's providing the appropriate environment for these appointments. Our recent successes include significant increases in the proportion of female professors (to 50%) and research fellows (75%) with formal flexible working arrangements in place now for 10 staff compared to none in 2011.

The strategic vision of the Department is to be the premier University Department devoted to the study of Plant Sciences, tackling global challenges such as food security and conservation of biodiversity, while at the same time ensuring that we train the next generation of scientists to continue this cutting edge research. We consider it paramount that to achieve these two aims the environment should enable all staff, irrespective of gender or indeed any other characteristic, to achieve their full potential. Key issues to tackle are in recruitment, to work towards our aspiration of gender parity, and in mentoring and staff development. To this end, I am committed to ensuring that all staff are subject to regular staff development reviews (appraisals), and have the opportunity for peer mentoring if they wish. Moreover, everyone with responsibilities for hiring or supervising others is required to undergo Equality and Diversity training.

The following application document expands on these points and makes clear our successes, and where we have not done so well. We recognise that there is a need to maintain a proactive approach to ensuring women can participate equally in all aspects of the Department, but our action plan will help us to benchmark our activities, and adjust them if necessary. As you will see, reports come to me and I am fully committed to ensuring that actions are fulfilled. I very much hope that the Athena SWAN panel will be able to appreciate the inclusive ethos of the Department as much as I have done in my career.

Yours sincerely



Professor Alison Smith **[500]**

2. The self-assessment process: maximum 1000 words [794 including table/1000]

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

Summary The self-assessment team (**SAT**; **Table 1**) represents the Department of Plant Sciences (**PS**), from Head (**HoD**) to post-graduate (**PG**) students, including all staff groups (Assistant, Researcher, Academic-related and Academic). It was chosen according to Athena guidelines and is gender balanced. SAT includes senior and junior academics and staff working flexibly. Academics and administrators are represented at 4:3. Members have recent experience of being promoted or administrating promotions. Nine members are in partnerships or married; 5 partners or spouses are not working in STEMM subjects. Seven are parents, two are "sandwich" carers.

Table 1. Plant Sciences Self-Assessment Team.

SAT Member	Job title	SAT role	Experience of work/life balance
Mrs. Catherine **BUTLER** (**CB**)	Departmental Administrator (**DA**)	Administrative lead; HR advisor	Flexible working after maternity leave; daughter at University Nursery
Mr. Kevin **COUTINHO**	University Equality and Diversity Officer	Athena SWAN advisor	Flexible working
Dr. Nik **CUNNIFFE (NC)**	Lecturer in mathematical biology (since 2008)	Teaching; data analysis	Two pre-school daughters
Dr. Julia **DAVIES (JD)**	Reader (joined as Lecturer 1997)	Chair; Academic Lead; data analysis	Mother of two school children
Prof. Beverley **GLOVER (BG)**	Professor, Director of Botanic Garden (joined as Research Fellow 1996)	Family policies; promotions; outreach	**Case Study A** "Sandwich" carer of two young children and elderly parents; two maternity leaves
Mr. Del **HAWTIN (DH)**	Deputy Departmental Administrator **DDA** (promoted 2012)	Represents Assistant Staff	New parent on flexible working post paternity leave
Dr. Katharine **HUBBARD** (**KH**)	Teaching Associate since 2013	Represents Academic-related staff; Teaching; surveys; data analysis	Balances PS and College teaching commitments with family life
Dr. Mark **SCAIFE**	Post-Doctoral Researcher, joined 2011	Represents Researchers	Pre-school son, took paternity leave

Prof. Alison **SMITH (AS)**	Acting Head of Department (**HoD**), joined 1981 as Researcher	Overview; resource planning; ultimate responsibility	Two children in higher education, carer of elderly mother; two maternity leaves
Mr. Francis **WAMONJE**	Second year PhD (overseas) student	Represents PG students; advises on minorities	Married, long-distance family commitments

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

Terms of reference The SAT pro-actively maintains an overview of the mechanisms by which PS addresses Athena SWAN criteria and good practice to benefit all its staff and students. This includes initiating and acting upon staff/student surveys, and collating relevant data and text for the Departmental Athena SWAN award submission. It is the conduit for dissemination of good practice and information from the University's central Athena SWAN team and the University's Athena SWAN network to staff and students.

Process Ongoing since July 2012, SAT membership was refreshed in September 2014. The two leads (CB and JD) and HoD assessed possible members against Athena SWAN criteria for experience of work-life balance, experience of promotions, and skills. All of the first choices accepted the offer to join the SAT. We have always had PG students represented, a practice that is now part of the Cambridge Physics Gold Action Plan. Meetings are monthly, addressing Athena SWAN criteria and good practice to benefit all staff and students. CB and JD received University training on data handling, mentoring and Athena SWAN good practice.

Analyses We initiated proactive support for women in 2011 (also summarised in the Action Plan) and looked for outcomes by:

- Analysing University and departmental data on staff and students
- Analysing student entry/exit surveys and termly feedback
- Asking all staff groups and students for opinions
- Forming a Researcher focus group
- Contacting staff and student alumnae/alumni
- Benchmarking cultural progress with an anonymous Staff Survey (January 2015; 94.4% response) as a partial repeat of the 2013 School of Biological Sciences (**SBS**) Staff Survey (95% response). This revealed no differences between genders.

Consultation and Benchmarking To assess our performance and improve practices we:

- Consulted Cambridge Silver and Gold Departments
- Consulted Oxford Plant Sciences (Silver) as the only other UK PS department
- Consulted UK Bioscience Departments offering Plant Sciences (Botany) as a first degree
- Consulted York Biology (Gold).

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

Maintaining momentum will be achieved by:

- Meeting six times a year, increasing to monthly prior to an Athena SWAN submission (Action Point (AP) 1.1)
- Retaining breadth of representation from HoD to PG student representative
- Repeating Staff Survey in 2017 (AP1.2)
- **SAT Chair** rotating to male for a new viewpoint, to role model male support of women and minorities and to prevent committee overload for female colleagues (AP1.3).

Our Departmental Committee structure is shown in **Figure 1**, with the termly Staff Meeting as the ultimate decision-making body. At inception in 2012 we structured and positioned the SAT within this to ensure that staff and student feedback is received, information is disseminated and actions implemented. SAT will remain the conduit to the University Athena SWAN Network, reporting annually to the University SWAN Governance Panel and also sharing good practice within the SBS. As an additional mechanism (not shown in Figure 1), Prof. Ottoline Leyser is an **SBS Gender Champion** who can report officially to the termly Staff Meeting and informally to the SAT.

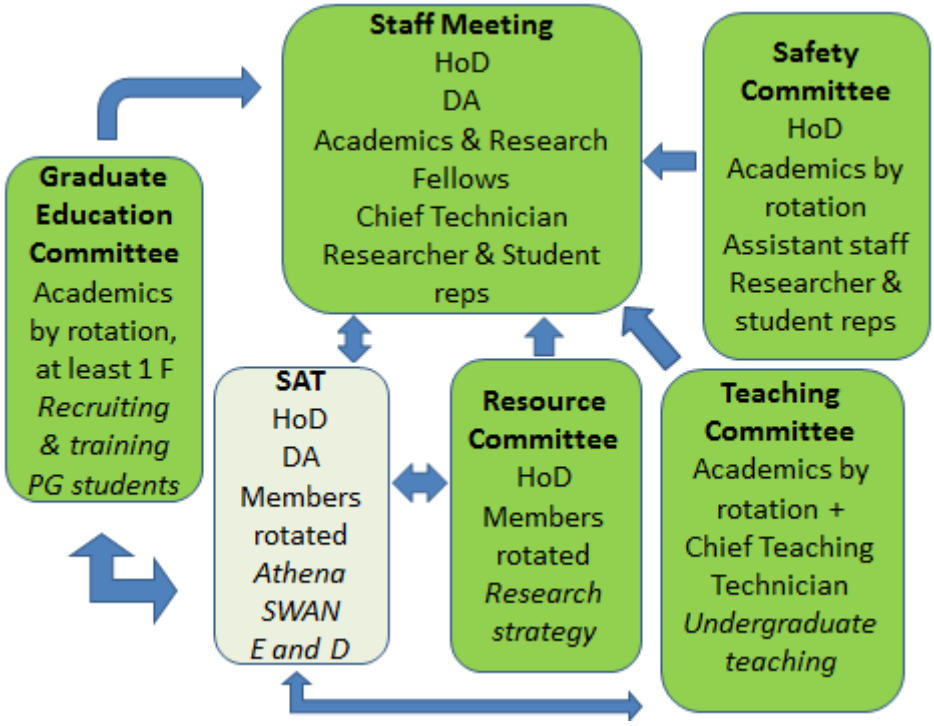


Figure 1. SAT is embedded in the PS committee structure that reports to the termly Staff Meeting. Reporting lines include the SAT. All staff grades and PG students are represented at the Staff Meeting and SAT to permit reporting to cohorts and feedback. F = female.

360 reporting and implementation mechanism is outlined in **Figure 1** and will be achieved by:

- **SAT Chair** continuing to report to the termly Staff Meeting
- **SAT Chair** and **Departmental administrator (DA)** reporting to the termly academic and assistant staff meetings
- **Implementors (Resource, Graduate Education** and **Teaching Committees)** reporting to Staff Meeting, **DA** and **SAT Chair**.
- Representatives of all staff and PG students embedded in the Staff Meeting and SAT reporting to cohorts and feeding back (AP1.4).

Dissemination of good practice Since 2011 we have contributed to University Athena SWAN activities (described in later sections) and our action plan addresses reaching a national and international audience (AP1.5). [794 including table]

3. A picture of the department: maximum 2000 words [1794/2000]

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

Snapshot PS is home to 280 people (staff, students, visitors), drawn from all continents, and is one of only two surviving UK plant sciences (botany) departments. PS structure is shown in **Figure 1**. PS was the first Cambridge Department to have a female Professorial Chair (Prof. Enid MacRobbie FRS). She was also our first female HoD. The challenge our discipline faces is training the next generation of plant scientists to tackle the global problems of food production, bioenergy and conservation. We contribute to all inter-departmental first year courses and teach specialised plant sciences courses in the final two years of the Undergraduate (**UG**) degree. We train research postgraduates (**PG**). Research is funded by national and international sources. We are home to the University's Global Food Security Initiative and OpenPlant Synthetic Biology Centre. We run the Cambridge Partnership for Plant Sciences (**CPPS**) as an East Anglian network uniting academia and industry. Our activities reflect our commitment to first class research, training the next generation, and raising public awareness. PS has many female leaders and gender champions (**Figure 2**). Our Staff Survey showed that 84% of female staff would recommend PS as a workplace.

Achievements for women Since our campaign start in 2011 we have:

- Gained Professorial gender parity (3 female)
- Increased from 40% to **75**% female Research Fellows
- Appointed a female Lecturer
- Stopped the decline in female Researcher numbers
- Supported 87% of female Researchers to stay on in STEMM
- Regained gender parity for PhD admissions
- Achieved a 100% graduation rate for female PhD and Masters students
- Maintained gender parity in PhD submissions and graduation
- Achieved 50% or more female UGs, with 93% of those leaving qualified for PhD programmes
- Achieved gender balance in assistant staff promotions
- Achieved a 100% maternity-return rate and gained extra funding for these staff

- Established an annual "Women in Science" research seminar and networking event.

Our ambitions We aim to be the destination of choice for women in our discipline at all levels and to help them secure careers. We will aim to create even more posts, encourage female applicants and train the incumbents to maintain our Departmental commitment to the future of women in our discipline.

Figure 2. Female role models direct operations. Women occupy significant and strategic positions.

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

Student data

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

No University access/foundation courses.

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

Proportion of females exceeds National average Students choose our two full-time courses: Second year "Plant and Microbial Sciences, PMS" (as one of three subject choices) and third year "Plant Sciences" as a single subject. Students join second year PMS from the first-year Natural (Biological and Physical) Sciences Tripos (NST) cohort (averaging 637 students since 2009, 39% female). We successfully attract students from this female minority to achieve an average **58% female** in PMS since 2009 (**Figure 3**). We have maintained an appropriate gender balance in Year 3 Plant Sciences, averaging **56% female** (**Figure 3**) since 2009 and 55% since 2012, exceeding the

48% female for UK HEIs offering plant sciences (botany). Our UG brochures encourage women to succeed and also highlight Athena SWAN (**Figure 4**).

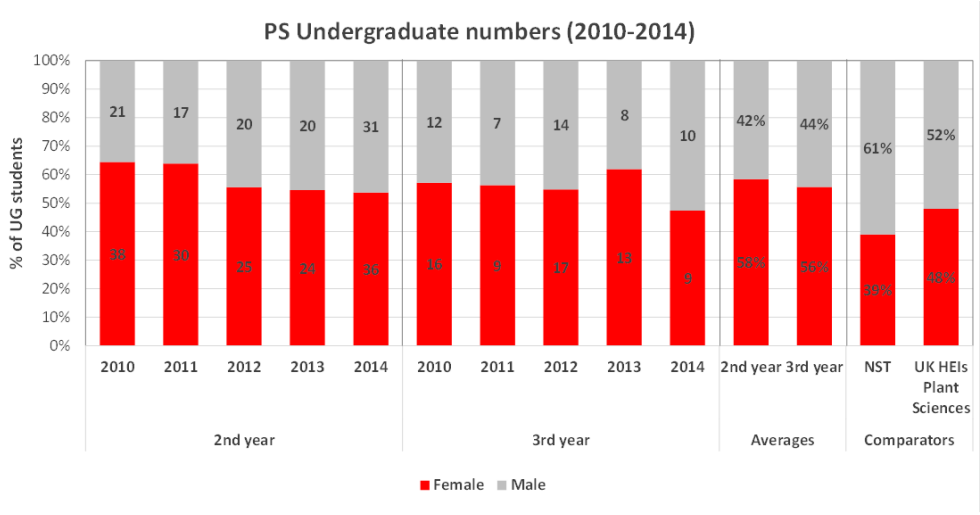
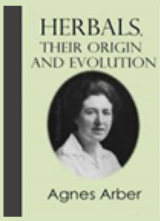


Figure 3. Sustained high female presence in second and third year courses. % of cohort with student numbers. Averages are from 2009. Comparison is made with the whole Cambridge Natural Sciences Tripos (NST) and UK HEIs offering plant sciences (botany).

Plant and Microbial Sciences – Equality and Diversity

Women@plantsci Women are successful here. The first female plant scientist to become a Fellow of the Royal Society (Agnes Arber) studied with us. Today, our female students have an outstanding track record, with 93 % graduating with a Ist or II.i (the PhD entry requirement) between 2010 and 2014. We support the Athena SWAN Charter for Women in Science (www.ecu.ac.uk) in its mission to advance the careers of women in science. Too many women don't fulfil their potential, in part due to a belief that it requires a "brilliance" they think they don't have and that the work ethic they know they can apply isn't enough (*Science*, **347**; 234). Well, this is what Charles Darwin[1] had to say: "At no time am I a quick thinker or writer; whatever I have done in science has solely been by long pondering, patience and industry". We value the talents women have. JOIN US!



[1] OK, in his "Descent of Man" he was bang out of order about women and non-Europeans; more pondering clearly needed there.

Figure 4. PS course brochures encourage women to fulfil their potential. Page extracted from brochures for students choosing our Year 2 and 3 courses.

Training the next generation is our discipline's challenge (AP2.1). We created a Teaching Associate post in 2013 to develop UG teaching and appointed Dr. Katharine Hubbard (**KH**; SAT) as an influential role model. An UG and PhD student in PS, she chose teaching as her career after post-doctoral research. Her surveys show students choose us on subject interest, support and teaching quality, not on staff gender or "female-friendliness". This helps workload planning, we do not need to deploy more female teaching staff to attract female UGs. We plan to maintain female UGs at 50% of cohort to match the national benchmark (AP2.2).

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

No taught courses.

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

Gender balance at MSc level Between 2011-14, 6 students in total studied for a Masters by full-time research, 3 were female (no part-time students).

PhD entry through two separate streams. All PhD students are full-time and admission streams are described in **Figure 5**: "PS stream" and from 2012 the BBSRC Doctoral Training Programme ("DTP stream"). The DTP is a new inter-departmental programme lead and administered by Plant Sciences. Supervisor gender is apparent in advertising.

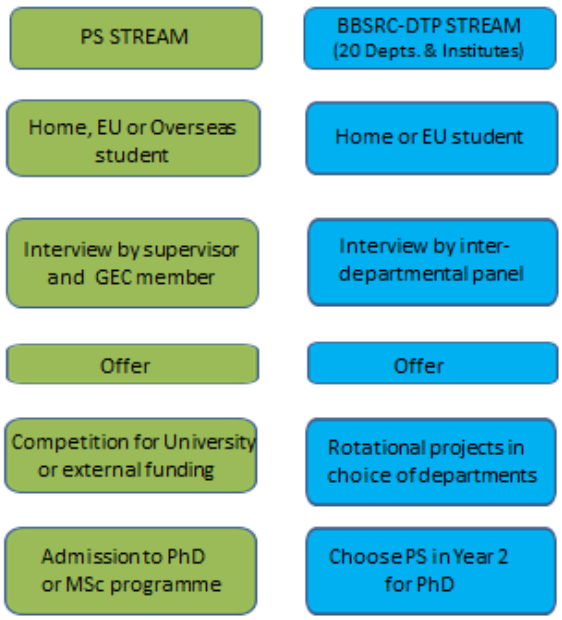


Figure 5. PS and DTP streams for PhD entry. The Graduate Education Committee (GEC) selects in the PS stream. It has at least one female academic; University Equality and Diversity training is compulsory.

Regaining PhD gender balance From 2004-2010 the baseline PS stream (*the only stream then*) averaged **56% female** (**Figure 6**). We have recovered from a drop and regained **50% female** in 2014 (**Figure 6**). Recovery in 2014 is not by chance but a recovery in PS stream female applications coupled with better funding success (see applications section, page 15). This 50% level (and our 2004-10 baseline) compares well with 53.5% for plant sciences (botany) nationally, the Russell Group (48%) and the John Innes Centre Research Institute (JIC, Silver; 47%). Maintaining female participation at 50% is consistent with the UG proportion and the national benchmark (AP 2.3).

Analysis reveals the potential for imbalance from the DTP stream. A small number of DTP students chose us in 2012 (2 male, both chose female supervisors) and 2013 (3 male and 1 female; 1 male chose a female supervisor), increasing male representation. No gender bias was evident in initial recruitment (see applications section, page 15); students chose us after their inter-departmental rotations. Now we are aware of this unexpected effect, we aim to achieve a gender-balanced and increased DTP cohort (AP2.4).

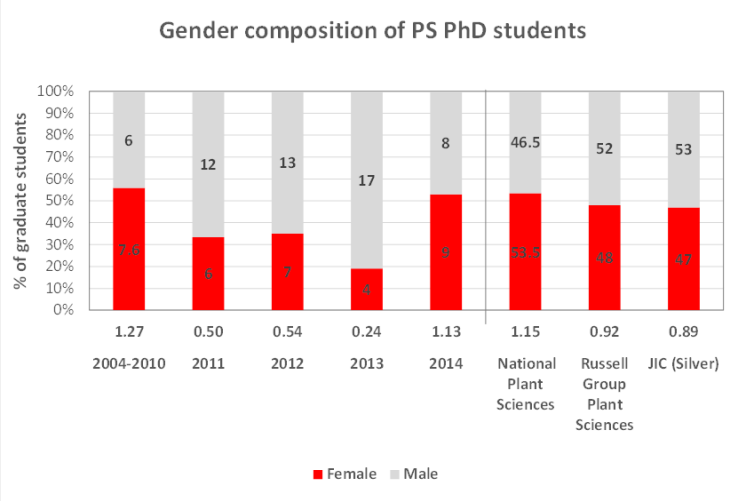


Figure 6. Regaining appropriate PhD gender balance. Admissions through PS stream and (from 2012) additionally the DTP. The 2004-2010 average is shown. Ratio of female to male PhD students admitted each academic year (>1 = more women) is above the admission year. Numbers admitted each year are shown on bars. Comparator values show % of total cohort (JIC = John Innes Centre).

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

High Undergraduate female numbers At Cambridge the Colleges, not the University, admit UGs. UGs choose PS in their second and third years. We accept all students choosing us therefore ratios of applications to offers and acceptances are the gender ratios shown in **Figure 3**.

Gender balance at MSc level From 2011 there have been 5 female and 5 male applicants, with gender parity at offer and admission levels.

Regaining balance for PhD PS stream **Figure 6** shows that the gender balance in PS stream applications recovered in 2014, after renewed effort in advertising. We found no significant

difference between genders in the application to offer ratio. All offers were accepted. The ratio of offers to admissions as the indicator of ability to gain funding shows women did better than men except for 2013 (**Figure 7**). The combination of low female application rate and poor funding success in 2013 caused the lowest female cohort. This has driven our AP2.3 to minimise gender imbalances.

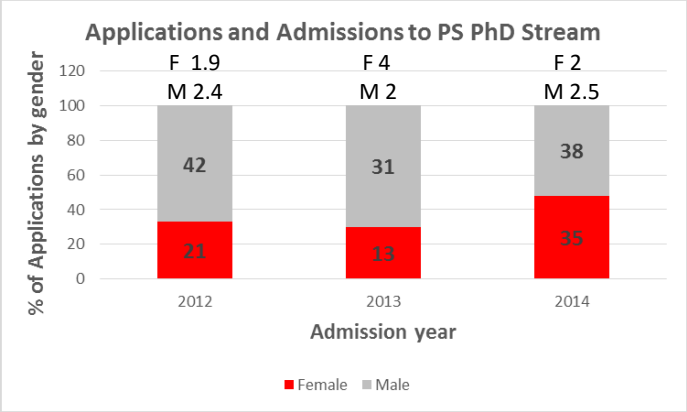


Figure 7. Regaining PS PhD stream gender balance. Applicant numbers by admission year are shown on the % by gender columns. Gender balance recovered in 2014. Above each column is the ratio of offers to admissions, an indicator of how successful each gender was in obtaining funding after accepting an offer; a low number is greater success. Females (F) did better than males (M) except in 2013 when low application and poor funding success rate caused our lowest female intake.

Gender balance in DTP stream This PhD stream is inter-departmental (20 Departments and Institutes) but administered by PS. There has been gender balance in applications and acceptances since commencement in 2012 (**Figure 8**). After first year rotation projects, two males chose a PhD in PS in 2012 (with female supervisors) while one female and 3 males chose us in 2014 (one male chose a female supervisor, all others chose males). Numbers are small but contribute to gender skew hence AP2.4 to increase this cohort and aim for gender balance.

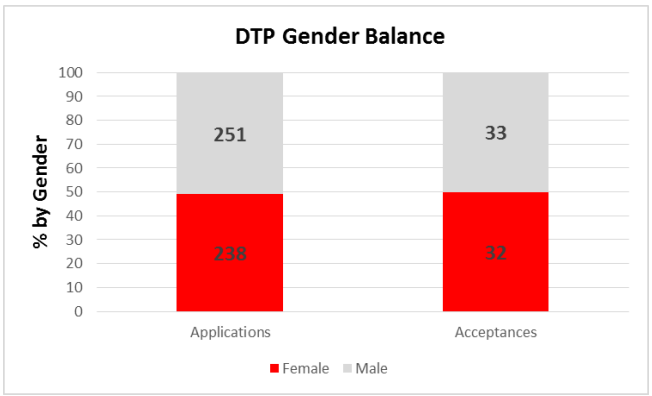


Figure 8. DTP stream gender balance. Average applications and acceptances to this inter-departmental scheme for 2012-2014. Ratio of applications to offers was 5 for female and 7 for males. Student numbers on bars.

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

Undergraduates From 2010-14 (**Figure 9**), 40% females gained a First class degree compared with 32% males (53 and 61% respectively for an upper second, II.i). Therefore 93% of both genders graduated with the PhD entry requirement (compared with 86% of the entire NST female cohort). In 2012-2013, 3 of 17 female students attained a II.ii, a grade improvement from their second year. No female achieved a III or failed.

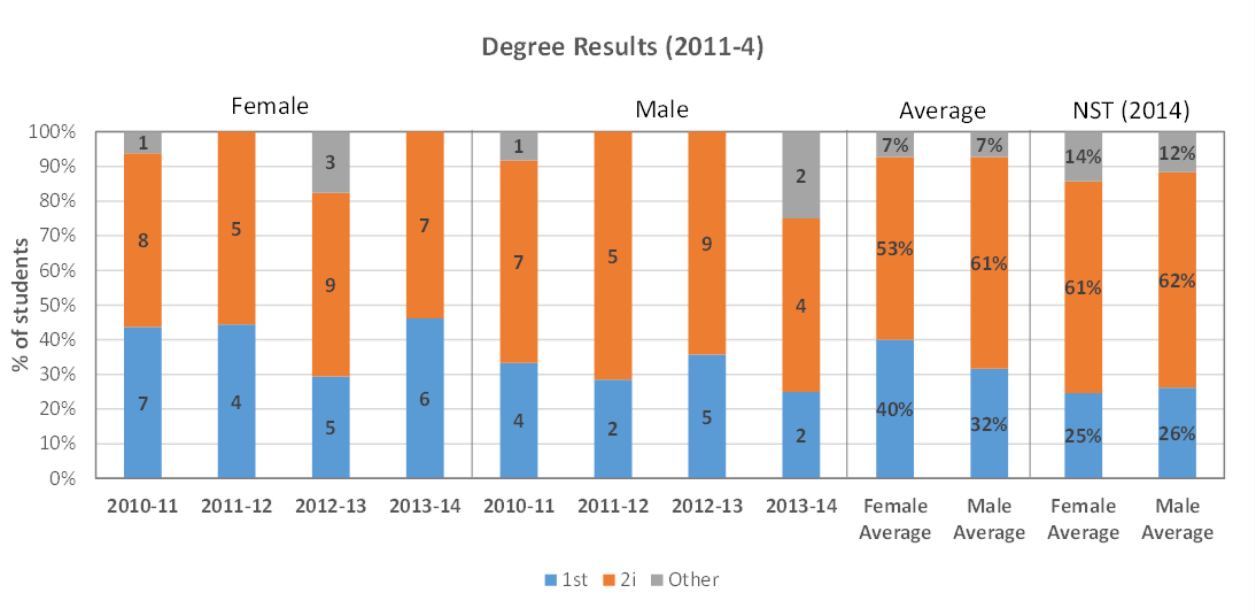


Figure 9. The majority of UG women leave qualified to continue in research with a First or II.i degree. Bars are blue (Ist class), orange (II.i) and grey (other). Student numbers achieving a grade on bars. Averages are shown on the right. Results for the whole NST cohort included for comparison.

Postgraduates We found a ***100%*** completion and graduation rate for female MSc and PhD students since 2004. One male PhD student failed to submit. This compares with 94% completion, 97% PhD graduation for females at the JIC (2005-2007 cohorts). Time taken to submit a PhD increased but with no gender difference (**Figure 10**) and none was found for MSc degrees.

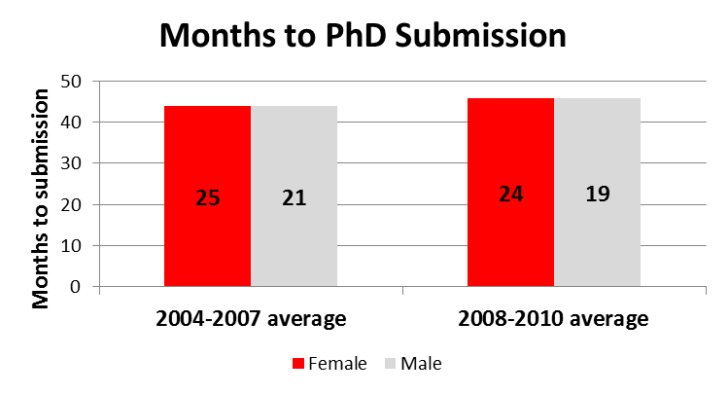


Figure 10. Women and men take the same time to submit a PhD thesis. Average time in months to submit; student numbers on bars by admission years. All women submitting from 2004 cohort onwards graduated with a PhD.

Staff data

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

Impact for Researchers Numbers of female researchers had declined from 2010. Our discipline has limited funding opportunities but our grant success rate increased from 2012 and this, coupled with actions to attract women, has seen female researchers increase from 9 (2012) to 16 (2014) (close to 2010 level; **Figure 11**). However, despite this near doubling of numbers, at 34% female this is still not a gender-balanced group (e.g., compared to Cambridge Biosciences at 48%) as the number of males has increased also. We need more grants to employ Researchers. We will mentor grant applications and support projects that enable grants (AP 3.1), alongside maintaining our recruitment drive for women. Actions to appoint more female Research Fellows have been successful, with an increase from 40% to **75%** (**Figure 11**). This is an excellent platform for gaining academic tenure. We are investigating ways to establish a *new Research Fellowship* potentially for a female scientist, to honour our alumna Agnes Arber who was the first female plant scientist to become an FRS (AP 3.2).

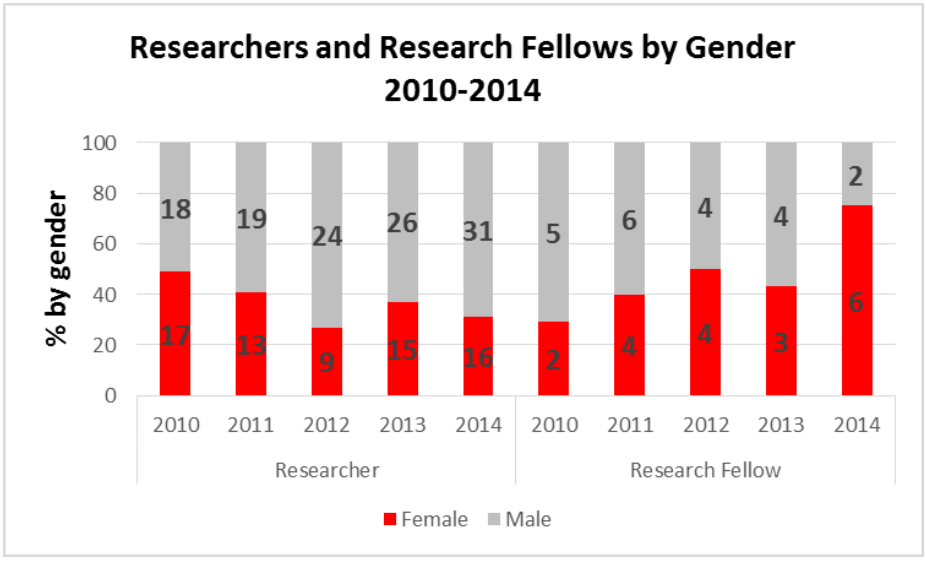


Figure 11. Researcher and Research Fellow profiles have improved. Female Researcher numbers are recovering, female Research Fellows now dominate. Data are from July of the academic year (i.e., 2014 is July of 2013-14).

Securing the Academic pipeline We have appointed and promoted women. Promotion (**Case Study A)** and the arrival of Prof. Leyser (Sainsbury Laboratory) enabled gender balance at professorial level (cf. 26% Cambridge Biosciences, 16% UK HEIs Biosciences, 8% Oxford Plant Sciences). The gap left at Reader shown in **Figure 12** (due to promotion from that grade) has now been filled by promotion of **JD** from Senior Lecturer (October 2014). We gained University funding to appoint Dr. Uta Paszkowski as Lecturer in 2012 to bolster the pipeline, joining Dr. Veronica Bennett (Girton College; affiliated Lecturer). At 33% of academic staff, we outperform the Cambridge Biosciences female average (28%), Oxford Plant Sciences (14%) and equal HEIs Biosciences. We will not be complacent and will show further ambition. We plan to recruit to

lectureships and *professorial chairs* in next few years, due to retirements. We will encourage female applicants (AP 3.3). Mentoring of female staff will continue to maintain excellent success rate in promotions (see promotions section, page 22).

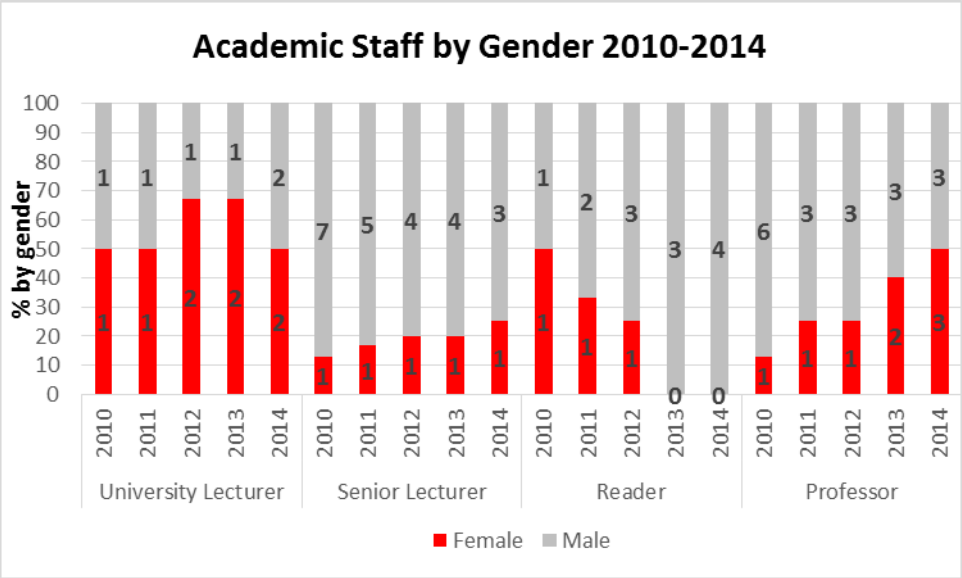


Figure 12. Academic profiles show improvement at the professorial level. Data are from July of the academic year (i.e., 2014 is July of 2013-14).

Overall, our pipeline (**Figure 13**) shows gender balance at key career points and illustrates the needs to recruit and promote that have shaped our action plan.

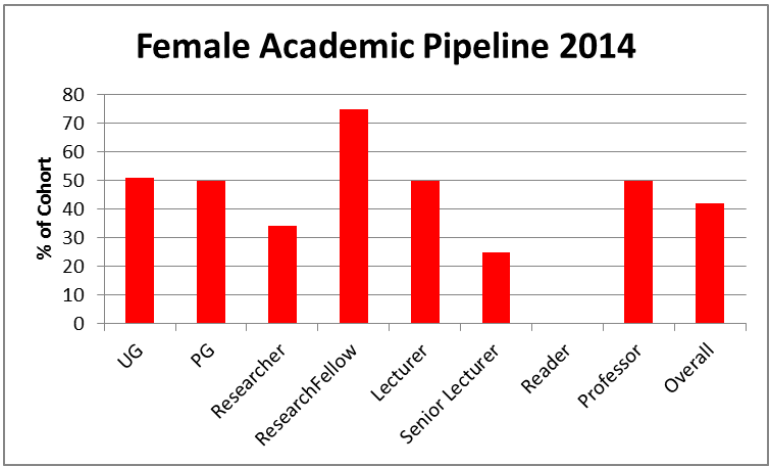


Figure 13. Female academic pipeline. There is gender balance at career entry points and pinnacle (with scope for further balance) and an overall 42% female representation.

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

Researchers There is year on year variation but average turnover from 2010 is 21% female and 18% male (**Figure 14**). All but one researcher left due to end of contract funding. Two female Research Fellows left contract early to take up tenured academic posts elsewhere.

Assistant staff (**Figure 14**) Average turnover from 2010 is 16% female and 17% male. All left at the end of funding except 2 females and 2 males who all retired.

Academics Three male Professors retired and one male Senior Lecturer took voluntary severance in 2011. No female academics have left.

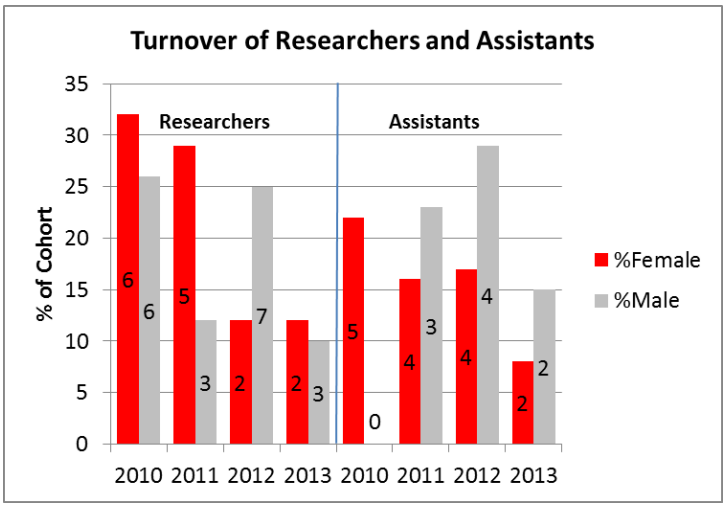


Figure 14. Turnover of Researchers and Assistants. Data are for academic year beginning. Turnover calculated as number leaving (shown) as a % of gender.

[1794/2000]

4. Supporting and advancing women's careers: maximum 5000 words [4586/5000]

Key career transition points

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

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

High numbers of female applicants We revised recruitment materials to encourage female applicants. Information on family-friendly policies including parental leave, childcare, salary sacrifice scheme and childcare vouchers, is now standard information on further particulars for all posts. Applications are welcomed from those considering part-time or flexible working options and are sent to **CB** the Departmental Administrator. This good practice was adopted from Queen's University Belfast (Gold) where a female first contact can encourage women to apply.

We have kept records since 2012 so we can monitor impact (**Figure 15**). We are near parity at all grades for applications (overall **45% female**) and need to keep numbers of female applicants high. OECD research suggests that females are more likely to research careers online. Our analysis

reveals that jobs.ac.uk and the University's www.jobs.cam.ac.uk draw the greatest numbers of applicants (both genders) and we shall continue to use these sites. We have participated in a successful University trial of social media. Our plan (AP4.1) is that:

- Our website, job adverts and descriptions will use the female-friendly language described by Gaucher et al. in their study of recruitment bias. We shall emphasise that we value the skills and qualities that women feel they have (*Science*, **347**; 234), as we do in UG material (Figure 4).
- Our Departmental Twitter and Facebook accounts will include job adverts and we shall also use LinkedIn.
- We will promote our commitment to women actively with posters to HEIs and RIs, plus articles in professional journals and plant science/researcher blogs. For example, Prof. Sir David Baulcombe FRS is President of the Biochemical Society (ECU sponsor) and he will disseminate the Department's experience in a Presidential article to the Society.
- The "Saplings" campaign will aim to highlight the Departments' family-friendliness. It will include website videos by female researchers with childcare responsibilities. Information on our family-friendly policies will have greater detail upfront (e.g., career support, support with parking, free admission to the Botanic Garden). A prototype is shown in **Figure 16** with artwork by **NC**'s daughter.

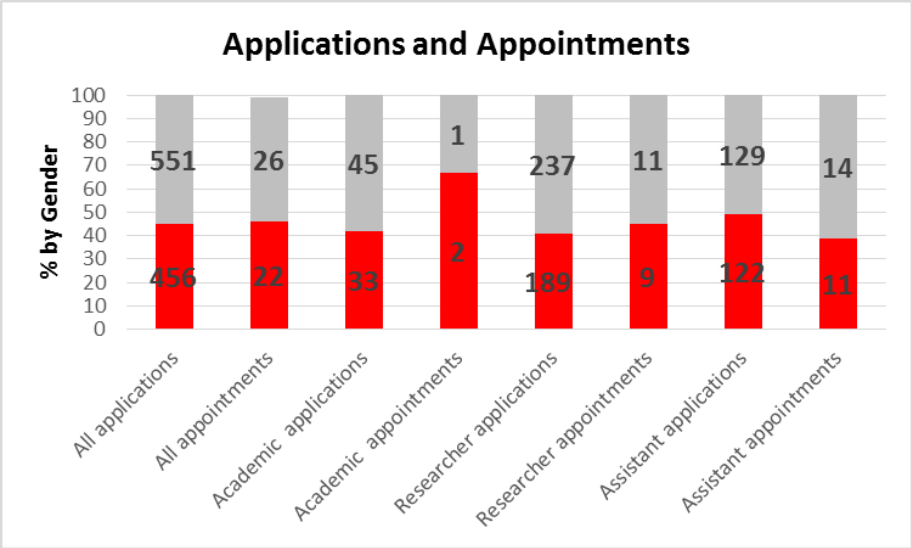


Figure 15. Gender profile of applicants and appointments since 2012; closing the gap. Red = Female. Gender % is calculated as % of grade cohort; numbers of people are shown on bars. For academics, one lecturer of each gender was appointed and KH was appointed as Teaching Associate (an "academic-related" post).

Parents in Plant Sciences

Parents and Carers are warmly welcomed. We offer:

Informal and formal flexible working

Support with maternity, paternity, adoption and parental leave

Advice on childcare and voucher scheme

Networking and Research support

Free car parking

Free entry to the child-friendly University Botanic Garden.

Contact Mrs Catherine Butler saplings@plantsci.cam.ac.uk

Department of Plant Sciences

The University is an equal opportunities employer and we encourage minority applicants.

Figure 16. Saplings information sheet will accompany job descriptions.

Significant female appointments Equality and diversity training for all staff involved in recruitment has been mandatory since 2011**.** Overall, **46%** of appointments were females. We have found no evidence of bias. Our ambition to make academic appointments was realised. Females were appointed to Academic (Lecturer) and an Academic-related (Teaching Associate) positions (**Figure 15**). Additionally, for Researchers, although fewer females applied they were relatively more successful with a ratio of applicants to appointments of 21 (24 for males). For assistants this is 9 for males and 11 for females.

(ii) **Applications for promotion and success rates by gender and grade** – comment on whether these differ for men and women and if they do explain what action may be taken. Where the number of women is small applicants may comment on specific

examples of where women have been through the promotion process. Explain how potential candidates are identified.

We realised at the start of our activities in 2011 that just making annual calls for promotion applications could disadvantage more reticent staff, particularly women. We have become more pro-active with line managers/supervisors and mentors expected to raise promotion and, to embed this in our culture, appraisals (i.e., Staff Development Reviews) now formally address promotion. For women, **BG** was promoted to Senior Lecturer, Reader then Professor in 2013 (**Case Study A**). More recently **JD** was promoted to Reader (outside audit shown in Figure 12). Our aim is to support Lecturers in promotion to senior levels. We now need to increase the numbers of applicants from Researchers and Assistants. Since 2011 five Researchers have applied for and been promoted (three males, two females). Our 2015 Staff Survey shows that Researchers would like more support in career aspirations (regardless of gender). Seven female and two male assistants have been promoted since 2011. This is in proportion to gender representation at this level.

Increasing applications requires good appraisal rates to ensure that promotion is addressed. However, funding a performance-related promotion for Researchers depends on the funding body and UK Research Councils do not allow for this in their budgeting. We will lobby the Research Councils to change this so that contract-funded Researchers can have performance rewarded, for the benefit of all UK Researchers (AP 4.2).

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 key issue is attracting and appointing female Researchers. Overhaul of advertising started in 2011 including website changes and a PS Brochure. Job descriptions and invitations to interview were revised to re-affirm our commitment to female success. Information on family-friendly policies including parental leave, childcare, salary sacrifice scheme and childcare vouchers, is now standard information on further particulars for all posts. Applications are welcomed from those considering part-time or flexible working options and are sent to **CB** the DA. From 2011, all staff involved in recruitment must pass University Equality and Diversity training (now at 100%). All aspects of the appointment process are overseen by **CB** as DA and **DH** as the Deputy DA. They ensure compliance with equal opportunities policies and the procedures issued by University Human Resources.

As **Figures 11** and **13** showed, we have made progress in increasing numbers of female Researchers (from 9 in 2012 to 16 in 2014) but at 34% of cohort this level is below what we used to achieve, below the relevant benchmarks and not in keeping with our pipeline. Our discipline will suffer if we cannot correct this. These findings have driven AP3.1-3.3, AP4.1 to enhance female recruitment and appointment.

(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.

(a) Assistant Staff and Researchers are leaving due to end of funded contract.

Career development is overseen by line managers and supervisors with support from **CB** and **DH** (Departmental Administrators). We found a significant improvement in satisfaction with development opportunities for both genders in our 2015 Staff Survey compared with 2013 (79% versus 64% in 2013). We have talks by external and internal careers advisors, including the SBS post-doctoral careers advisor Dr. Anne Forde. The Deputy Departmental Administrator (**DH**; SAT member) maintains a database of fellowship funding to help researchers make that transition. Mentoring has benefitted both assistant staff and Researchers (**Table 2; Figure 17**). We show in a later section (page 26, **Table 3**) that our Researchers are making successful career transitions. Since 2012 we identify candidates for fellowships and mentor their applications (**Table 2**). The impact of this is clear from Figures 11 and 13; 75% of this cohort is now female. Staff reaching the end of their contract are counselled by the DAs **(CB** and **DH),** offered assistance with finding redeployment and offered assistance from University HR.

The 2015 Staff Survey shows we still need to improve support for Researchers in their career aspirations. We realised during the self-assessment that Researchers may not be making the most of the University's Researcher Development Programme (**RDP**). Operated by Human Resources and the Office for Post-Doctoral Affairs, this encourages and directs "ownership" of one's career, addressing training for career progression. For women this includes the "Springboard" programme. Our action will therefore be to make the RDP a mandatory component of Researcher induction, to be addressed as a part of the appraisal. Hand in hand with this, all supervisors will be issued with HR's "Guide to Managing Researcher Careers" which gives detailed advice on supporting staff in the RDP (AP 4.3). We know that developmental mentoring is effective and appreciated (**Table 2**) but that further benefits can come from peer- and external mentoring (*Journal of Vocational Behaviour* **72**, 245). We will encourage and facilitate both (AP4.3).

Table 2. Developmental mentoring enables successful career transitions at all staff levels.

Career transition	***Recent examples of impact***
Assistant staff to new contract	***Olga Mielczarek*** Publication of *Nature* paper, acceptance on a Biosciences PhD programme, Babraham Institute. ***Jana Knerova*** Became a PS PhD student. *"After working as a research assistant for two years, my supervisor gave me all the support and encouragement I needed to start a PhD."*
Assistant staff to senior grade	***Suzy Stoodley*** Grade 3 to Grade 5 administrative assistant in two years. Selected as an outstanding female University staff member in 2013 (**Figure 17**). Departmental funding for part-time OU BA in Leadership and Management. *"It's a confidence thing. Without the Department's encouragement I would not have done this."*

Researcher to non-research STEMM career	***Katharine Hubbard*** Appointed to newly-created post of Teaching Associate in 2013 and Bye-Fellow in Churchill College. *"The Department has supported my transition to a teaching-orientated career. It provides funding to attend scientific education meetings to allow me to network. Encouragement from a Departmental mentor helped me obtain a college teaching fellowship*."
Early years post-doctoral research in PS and beyond	***Katherine Helliwell*** Stayed on from PhD as a Researcher. Selected for a prestigious British Council Research Workshop in Brazil. *"A major factor has been encouragement and support from mentors and other members of staff who will happily spend time discussing ideas and offering encouragement."* ***Theresia Staedtler*** PhD in Pharmacology, first Researcher contract in PS, now Researcher at a UK RI. *"I found mentoring the most helpful. One-to-one conversations about my career development were definitely the most productive."*
Researcher to Research Fellow	***Stéphanie Swarbreck*** (**Case Study B**) and ***Natasha Yelina*** identified for transition by supervisors, both gained Research Fellowships in 2013.
New Academic	***Uta Paszkowski*** Lecturer appointed 2012 now with a group of 3 researchers, 1 PG student and an assistant. *"Academic colleagues have supported my integration into the UK at personal and professional levels. Strategic advice has been invaluable."*
Academic to Senior Academic	***Beverley Glover*** (**Case Study A**) Appointed Professor in 2013.

Figure 17. Suzy Stoodley's success celebrated by the University. Circled top right, Suzy has benefited from mentoring and training. Moreover, Prof. Ottoline Leyser FRS; Plant Sciences and Director of the Sainsbury Laboratory was also identified as a role model (top left).

Training We found a significant improvement in satisfaction with training opportunities for both genders in our 2015 Staff Survey (79%) compared with 2013 (64%). All staff receive the University's training newsletters and training is addressed formally in appraisals. Since 2011,

opportunities for women are emailed by **JD** as the PS representative of the University's Athena SWAN Network. We nominate researchers for elite leadership training by the University (**Case Study B**). PS considers individual requests for funding for external training which could assist with career development and progression (see **Table 2**; **Case Study B**). Researchers are trained in undergraduate teaching by **KH** and provided with teaching opportunities that do not compromise research output. The Department is willing to fund training by external agencies.

Networking We have an annual Research Day and qualitative data suggest it is appreciated. A female Researcher describes it as "an excellent platform for in-house networking that has enabled me to form new discussions with other members of staff". We have started to assess attendance and our first data from December 2014 (**Figure 18**) show that we need to increase participation by assistant staff; we will also have an exit survey to evaluate the event quantitatively (AP 4.4). Since 2013 we have an annual networking event for female researchers, PG and UG students tied to the "Women in Science" lecture. Feedback to **JD** has been very positive. We promote networking/training/vacancies through our co-ordination of the CPPS and host an annual networking event. We encourage women to sign up to the University's Women's Staff Network. Additionally, since 2011 PS funds networking opportunities (**Table 2**).

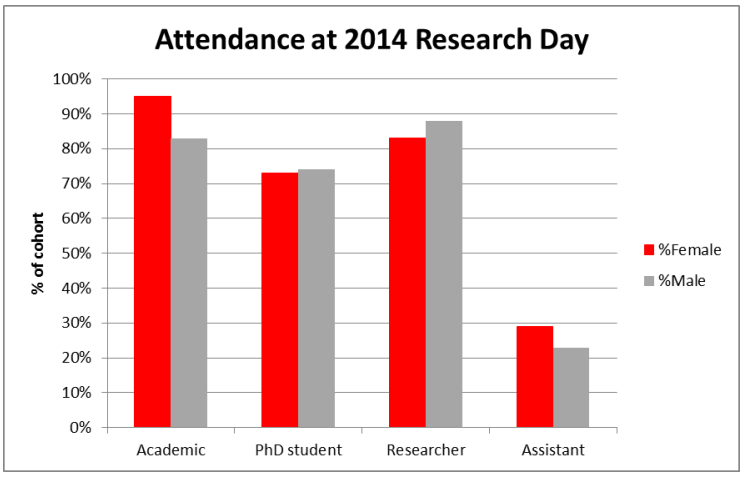


Figure 18. Research day is well attended by all but assistant staff.

(b) Academic staff are successfully retained and are being promoted.

New appointees have minimal teaching or administration in their first two years. We mentor their funding applications so that they can build up their research groups (**Table 2**). Support is also provided for teaching, including feedback from senior colleagues who sit in on lectures. Both research success and effective teaching are key criteria for passing probation and promotion.

Academic staff and Senior Research Fellows have two PS research mentors. Since 2014, grant applications are peer-reviewed in termly meetings. Female academic staff use the University's CV mentoring scheme for promotion to Reader and Professor (**Case Study A**).

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 key issue is enabling staff to make the next career transition, whether it is with us or another organisation.

Career development strategies were described in section 4.b.(ii), page 23. The 2015 Staff Survey (which had no significant differences between genders) revealed a significant increase in career development/training satisfaction from 2013 (up from 64% to 79%) although there is still work to do on making people feel supported in their aspirations (57% - a new question for 2015) (APs 4.2, 4.3).

For us an important diagnostic is whether staff make an effective next career step. We have gathered next destination data from 2010 for Researchers and Research Fellows and found that 87% of women were retained in the academic pipeline compared with 57% of men **(Table 3).**

Next appointment	**Researcher**		**Research Fellow**		**Academic**	
	Female	Male	Female	Male	Female	Male
2010-2014	7	7	2	0	4	6

Table 3. Female Researcher and Fellow success in next appointments. Of the 15 women leaving between 201 and 2014, 13 were appointed as Researchers, Research Fellows or Academics (87%). This compares with 57% of men.

Appraisals **CB** (Departmental Administrator) oversees these, which since 2012 *must* address promotion so that reticent (female) staff are not disadvantaged. Appraisal forms are bespoke for each staff group. Academics are appraised by the HoD and this closes the loop – their appraisal addresses the completion rate for their group. Those carrying out appraisals complete University training. Appraisees are also offered a course to help them get the most out of the process. CB highlights this information. Our key concern is for Researchers. Since 2013, appraisal completion for Researchers has increased from 10% to 30% but there is still work to do here to ensure staff have the greatest support possible (AP 4.5), and the scheme was relaunched in January 2015.

Promotions There is an annual University call for academic promotions and applications by both genders have been successful since 2004. Success criteria are excellence in research and teaching, including administrative, pastoral and outreach activities. Excellence demands quality over quantity. Female applicants can have family commitments taken into consideration. Academic

staff applying for promotion are given individual support by the **HoD** and women can use the University's Senior Academic Promotion mentoring scheme (**Case Study A**). **CB** advises and assists other staff groups and their line managers/supervisors on success criteria and procedure for applying for promotion. Our data and actions on promotion (AP4.2) were described previously.

(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?

Good employment practices are promoted from the outset by including them in the job description and conditional offer of appointment. This includes flexible working policy, career break scheme, parental and family leave, E and D training, family-friendly benefits, training and development courses plus well-being initiatives and commitment to Athena SWAN.

The key issue is follow-through on this.

We re-enforce the message through:

- Induction booklet (that must be signed as read) and website
- Induction by the supervisor/line manager
- Compulsory Departmental Induction lectures (attendance monitored)
- Compulsory University induction courses (attendance monitored)
- Appraisals and email reminders
- Promoting the University's "Benefits Roadshows".

The impact of this since 2011 is described in the "Flexibility" section (starting page 36) where we show a 100% return rate from maternity leave, a 9-fold increase in uptake of paternity leave and an increase from 0 to 10 staff working flexibly.

Gender equality induction for all From 2014, Departmental Induction (and booklet) addresses the University E and D policies "Dignity@work" and "Dignity@study". Existing staff and PG students were emailed the information. PG, UG Year 2 and 3 handbooks and induction address policy. All staff involved in recruitment must pass University online E and D training (100% completion rate).

Promoting training PG students are notified by the SBS and advised by their supervisors. The 2015 Staff Survey (which had no significant differences between genders) revealed a significant increase in career development/training satisfaction from 2013 (up from 64% to 79%). Staff receive University training course information termly. Female-specific courses/events are also advertised to women through women@plantsci.cam.ac.uk. Since 2010, 73 University training courses have been taken by women versus 65 by men. We encourage staff to undertake external training and part-fund expenses. Recent examples of funding for women include an OU Foundation degree in leadership and management (**Table 2; Figure 17**), research workshops (**Table 2**; **Case Study B**), and IOSH training for the PS Safety Manager. Uptake and needs are addressed informally and at appraisals.

Promoting networking The annual Research Day is our main internal networking event (**Figure 18**); we need greater participation by assistant staff (AP 4.4). Since 2013 we have an annual networking event for female researchers, PG and UG students (attached to the "Women in Science" seminar). We promote networking/training through our co-ordination of the Cambridge Partnership for Plant Sciences and host an annual networking event. Additionally since 2011 we use PS funds to support external networking, an example being our Teaching Associate Dr. Katharine Hubbard's attending the Society for Experimental Biology's 'Teaching and Communicating Science in a Digital Age' (**Table 2**).

(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.

The key issue is enabling career progression through academic success and confidence building.

All teaching, supervisory and administrative activities (run by both genders unless stated) are recognised in the workload model and contribute to academic promotion.

Female undergraduates benefit from our:

- Small group teaching and social media peer mentoring
- Organising and funding summer lab-internships
- Final year project in research lab
- Year 3 "course advisor" mentoring (female can be requested)
- Year 3 enrichment sessions building skills needed for transition to academia
- Careers for women in science talk by a female academic (from 2012 and counted in teaching hours)
- Annual networking opportunity with the "Women in Science" lecturer, PGs and Researchers
- Providing sessions with a University careers advisor
- "Blogs" from female graduates signposting career success
- Anonymised examination marking.

We gauge impact by degree success and exit surveys that we have been conducting for many years. With 40% of women gaining a first class degree and 53% an upper second, the vast majority leave qualified for research degrees (**Figure 9**). Furthermore, when we looked for impact of our Year 3 support we found that our 44% of our students improved on their Year 2 grade in comparison to 33% of their peers in Natural Sciences.

Our exit (graduation) surveys show high levels of appreciation from female students (**Figure 19**). They also show students of both genders leaving for PG degrees or to take a year out with an aspiration to continue in research. This, combined with incomplete data from the Careers Office (not all students use the service), means that while we write references for graduates who apply for PG courses, we do not know exactly how many students make the transition to postgraduate

research. We have therefore established our own database of alumnae/alumni from the 2003 intake (AP 4.6) that will enable us to track and guide careers, guide our UG training and provide career pathways for UG students. Of the 51% female students responding, 86% (66) have STEMM careers (versus 55% male response of which 74% (38) are in STEMM).

Figure 19. Female undergraduates appreciate Departmental support. Quotes from females in Year 3 exit (graduation) surveys.

Female Postgraduates are trained to succeed by:

- Weekly mentoring by primary supervisor (termly by secondary supervisor)
- A GEC supervisor overseeing progress and pastoral care (female can be requested)
- Progress log, termly (self) assessment and feedback
- Compulsory and elective points-based research and personal development training courses primarily through PS and SBS; 20 points each year
- Compulsory attendance of and presentation at Research Group seminars
- Compulsory attendance at Departmental Research seminars
- Additional careers advice and support through SBS and University Careers Service.

Female Postgraduates build confidence and ambition through:

- Writing a first year assessed thesis with oral exam
- Giving two assessed Departmental seminars
- Chairing PG Departmental seminars
- Presenting an assessed poster at the annual Research Day
- Networking at the annual "Women in Science" research seminar
- Attending female-only confidence building courses

"The Sprint programme at Newnham College was very rewarding for me as an aspiring female scientist, by helping me to reflect actively upon my core values, to understand that other females share similar experiences, and to identify practical ways to deal with challenges."

- Joining a professional society and attending conferences with Departmental financial support
- Attending Departmental research seminars by external speakers (50% female) and taking them to lunch
- Organising inter-Departmental Research seminar series
- Organising a one-day research and networking symposium with PG students from University of East Anglia and the JIC
- Representing the cohort at the Staff Meeting and Safety Committee
- Supervising UG students (after training)
- Knowing that fieldwork (which can put women at additional risk; Clancy *et al*., 2014 *PLoS One* **9** e102172) has been geared to ensure their safety, with provision of communication devices to maintain contact and enable emergency help even in a jungle.

We have only recently introduced an exit survey and have data from one cohort. Students appreciate the regular milestones and assessment, pastoral support and friendliness. When we contacted alumnae in research, we gained qualitative evidence for appreciation of our systems (**Figure 20**).

Successful transitions In addition to the 100% completion rate for women (page X), impact is evident in that 68% of female PhD students were successful in making the next career step (**Table 4** and **Figure 20**). This is lower than for men (85%). We also support PGs beyond their first Researcher destination to help them gain tenured academic positions (**Figure 20**).

During self-assessment, our current cohort requested more information on "how to be a post-doc" and more career roadmaps for our discipline. This action will address the gender imbalance in going into research careers (AP 4.6).

	Researcher		**Research Fellow**		**Academic**	
Entry years	Female	Male	Female	Male	Female	Male
2008-2010	17	15	1	1	1	1

Table 4. Female success in first appointment post-PhD graduation. Data are for cohorts starting in 2008, 2009 and 2010. For women, 68% of the cohort made the next step versus 85% of men.

Figure 20. Mentoring leads to PG success.

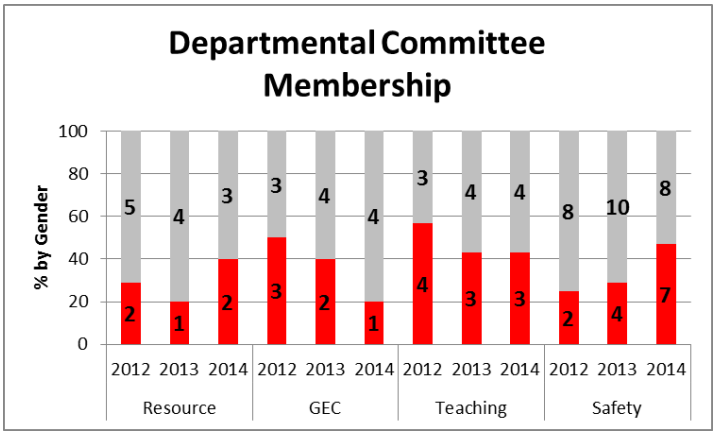
Organisation and culture

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

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

We actively prevent over-commitment; from 2013 no female (except HoD) serves on more than two committees at a time (**Figure 21**).

Figure 21. Committees by gender; no female (except HoD) serves on more than two committees a year.
Committee structure is shown in Figure 1. GEC = Graduate Education Committee. Females in red.



Resource Committee Comprises academic staff by rotation.

GEC Academic staff on rotation. High workload. Women were over-represented and numbers have been reduced since 2012 to a proportion consistent with % of total academic staff.

Teaching Academics (on rotation), Teaching Associate (female) and Chief Teaching Technician (female).

Safety *Standing members*: HoD (female), DA (female), Safety Manager (female), Chief Technician (male), Senior First Aider (female), Facilities Manager (male), Radiation Protection Assistant (male). *Academics by rotation*: Safety Officer, Biological Safety Officer, Radiation Protection Supervisor, Laser Safety Officer. *Volunteers*: Assistant staff representative, Researcher representative, PG and UG representatives. The increase in % female is due to academic staff rotations.

(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.

We adhere to the University's Employment and Career Management Scheme for Researchers. All initial contracts are fixed-term, for no more than 5 years, justified by limited grant funding/a specific project. This is University policy. Research staff move to open-ended contracts after 4 years if renewed, although a funding clause remains in place. PS has more men on open-ended contracts (**Figure 22**), due to the dip in female researchers in 2012. However, there is near-parity at fixed-term level, which will filter through to open-ended if staff are renewed. This is dependent on funding (the Department's research grant portfolio has increased in the past 3 years and further expansion is planned AP3.1-3.3). When a grant-funded vacancy is advertised, current staff apply in open competition with external candidates. All those on a fixed-term contract meet with their supervisor, then the **DA** or **DDA** well in advance of their contract end date to discuss funding options and to be offered assistance with re-deployment if appropriate.

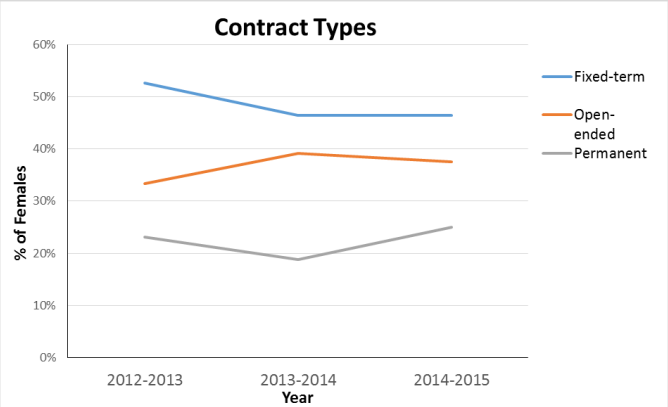


Figure 22. Fixed-term, open-ended and permanent contracts for female Researchers and Academic Staff.

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

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

The key issue is benefit to individual and our scientific discipline without overload.

Departmental Membership is by rotation. To prevent over-commitment, from 2013 no female (except HoD) serves on more than two of these committees concurrently.

University, National and International University membership is *ex officio* (by virtue of holding an office, e.g., Professorship or GEC Chair) or by invitation (which can be declined). Staff are encouraged to sit on national and international research and policy committees, particularly as this contributes to senior academic promotion. Membership is at the discretion of the individual and is by invitation or election. Examples are shown in **Table 5**.

Table 5. Female membership of influential committees. Our female professors can influence research and policy (including gender equality).

	University	**National and International**
Prof. Alison **SMITH** 	Faculty of Biology Senior Academic Promotions Committee; Faculty Board of Biology	BBSRC People and Skills Expert Working Group; BBSRC Industrial Biotechnology and Bioenergy Strategy Advisory Panel; Member National Institute of Agricultural Botany Board
Prof. Beverley **GLOVER** 	Council of the School of Biological Sciences; Senior Academic Promotions Subcommittee for the Schools of Biological Science and Clinical Medicine	Council of the Systematics Association; Council of the European Society of Evolutionary Developmental Biology; Linnean Society Education Committee
Prof. Ottoline **LEYSER** FRS 	University Gender Equality Group; University Planning and Resources Committee; Council of the School of Biological Sciences	UK Ministry for Universities and Science Diversity Steering Group; Royal Society Council ;Chair of Royal Society Science Policy Advisory Group;Chair of Athena Forum; Chair of British Society for Developmental Biology ; European Research Council Advanced Grant Panel for Cellular and Developmental Biology

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

The key issue is opportunity without overload. ***Workload model transparency*** Since 2012, the HoD sends out an annual spreadsheet showing the agreed workload allocations of the entire academic cohort (including teaching, administrative duties and work on women in science). From 2014, "snapshots" to show overall contributions by gender are shared to improve transparency (**Figure 23**). ***Fairness through rotation*** The HoD ensures rotation of responsibilities. This permits staff to undertake key activities beneficial for promotion and builds in a "recovery period" from heavier allocations (e.g., GEC Chair is positive for promotion but onerous). ***Appraisal and promotion*** Appraisal forms include workloads. University academic promotion criteria are excellence in research, teaching and general contribution; these include outreach, pastoral and administrative duties.

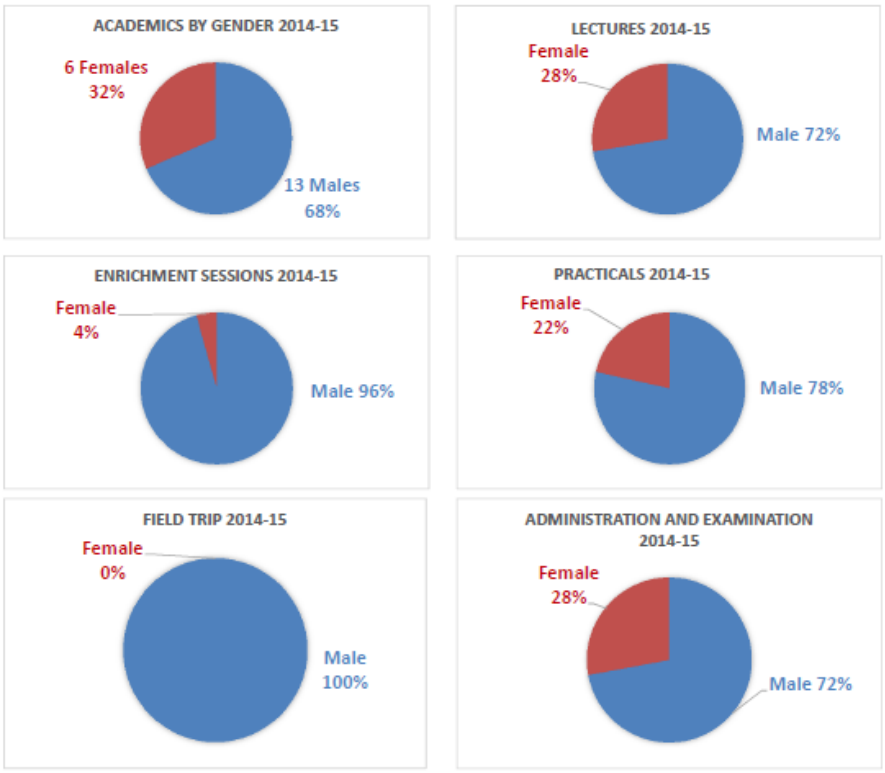


Figure 23. Transparent workload model shows appropriate female contribution. Staff can easily see the contribution made by female staff (red), in this case to teaching activities and know they are not overcommitted.

(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.

The key issue is arrival/departure time. We know staff need flexibility for family commitments and also commuting. We have an eight hour core day but start time is flexible (**Case Study B**).

Group meetings and seminars have been in family-friendly hours since 2011 to allow for the morning "school run" and afternoon pick-up. For example, Departmental Research seminars were rescheduled from 4pm to 1pm and Academic staff meetings are conducted over lunch.

We gather socially twice a day in the Tea Room (10.30 am and 3.15 pm) and have an off-site, subsidised Departmental Christmas lunch. There is a social gathering on alternate Fridays at 5 pm. We plan a family picnic as a summer event (AP 5.1).

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

The key issue is remaining an inclusive Department, defined by courtesy, equality and mutual respect. Our 2015 Staff Survey revealed no significant differences in responses between genders. For women, 91% reported being treated with respect. At Induction, we re-iterate that inclusion is standing policy and the language we use must be respectful. We do not use "he" or "she" in our literature. Our infrastructure and working/teaching practices include reasonable adjustments for disabled staff and students. Our website has photos of women in every section. The Department Reception is decorated with stories celebrating our female successes. Walls have photos of our students and staff to make our female cohort evident. We have welcome events for staff and students. Students are supported by a female librarian. Staff and students take joint tea and lunch breaks in the Tea Room in which we have a Book Club, charity cake sales and a portrait of Prof. Enid MacRobbie FRS (our first female HoD) takes pride of place. We have a mixed-gender rounders team and squash ladder.

(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 key issue is making outreach effective and efficient; *how many people can we reach per unit preparation and delivery time?* Activities are discussed at appraisal and contribute to promotion as part of staff's "general contribution".

We communicate with the general public through:

- Two annual all-day events; National Science Festival Open Day (typically 1500 visitors) and EPSO Fascination of Plants
- National Science Festival lectures
- Royal Society Exhibitions
- Botanic Garden (200,000 visitors annually)
- Featuring in BBC productions (e.g. "Great British Garden Revival").

We engage with schools and colleges through:

- University Widening Participation scheme
- Talks and workshops for state schools, females, ethnic minorities and students in care
- "Science and Plants for Schools" (curriculum development charity based at the Botanic Garden)
- Botanic Garden school visits (10,000 students per year)
- Sutton Trust summer schools.

We have found no evidence of disproportionate female participation. For example, Academics holding grants must do outreach. From 2012, 31% of grants are held by female academics who make up 33% of cohort so outreach representation is fair. Additionally, volunteers for our two main public activities are mostly male (**Figure 24**).

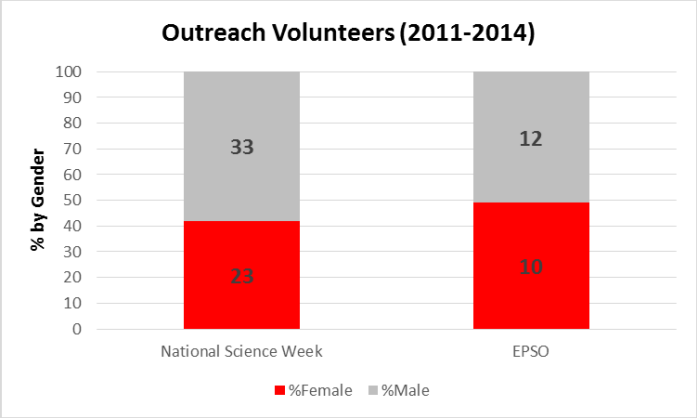


Figure 24. Men volunteer for outreach. Data are for 2011-2014. EPSO organises the International "Fascination of Plants Day". Data from Department Enterprise Officer.

We have now gained £18.5k funding for student outreach that will include breaking gender stereotyping (AP2.1). Outreach will include dissemination of Athena experiences via the University network, direct contact to HEIs and RIs in plant sciences plus science/education media. (AP 1.5, 4.1,5.2).

Flexibility and managing career breaks

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

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

Since 2011 we have improved our support package (described on page 39) and return rate is now 100% (**Figure 25**). We aim to maintain this return rate.

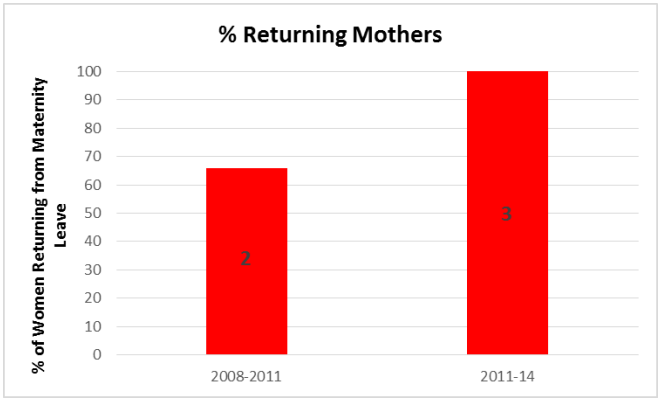


Figure 25. Improved maternity return rate to 100%. See also **Case Studies**.

(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.

There have been no adopters recently. Paternity leave uptake has increased significantly for Assistants and Researchers since we started promoting it in 2011 (**Figure 26**). We will encourage male staff who have taken leave to disseminate their experiences to help break stereotypes and encourage others (AP5.2). One Assistant (male) took parental leave in 2013. Managers and supervisors engage positively with staff to enable them to fulfil parental duties through informal working arrangements.

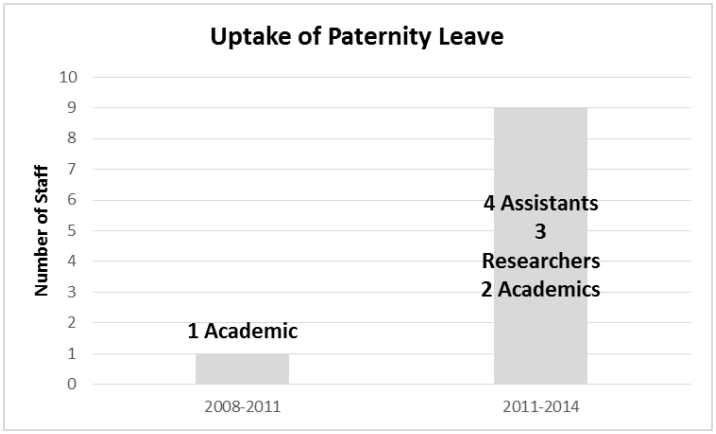


Figure 26. Marked increase in Paternity leave uptake.

(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.

We have promoted flexible working patterns since 2011 and staff applying have a 100% success rate (**Figure 27**). Of the 60% females, half took flexible working after maternity leave (**Case Study B**).

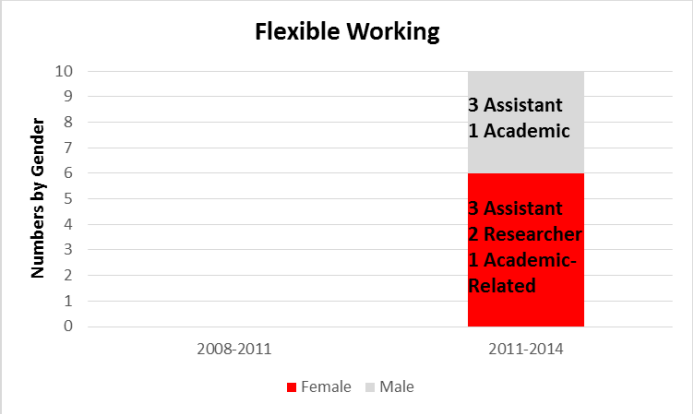


Figure 27. Promoting flexible working has been effective. This has been a success story that shows our internal campaigns are effective. All applications were successful.

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

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

The key issue is uptake of formal flexible working and we have been promoting flexible working since 2011, by:

- Flagging up in adverts, job description and appointment letter
- Follow up at Induction, appraisal, by emails and staff meetings
- Workshops on family-friendly careers (as trainers - both genders- and participants)
- DA's advising managers
- Using the University's personal development training programme on effective management
- Informal arrangements with supervisor/line manager (**Case Study B**).

This has resulted in:

- Increased uptake of formal flexible working across all grades and both genders (**Figure 27** and **Case Study B**)
- Male academic role models (following paternity leave).

Our 2015 survey showed some improvement in satisfaction with work/life balance (64% versus 60% in 2013) and 72% were satisfied with Departmental support for family commitments (new question for 2015). We will continue to promote flexible working to all staff groups and encourage male staff who have taken leave to disseminate their experiences to help break stereotypes (AP5.2).

(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.

We apply the University's maternity and adoption policy regardless of grade or funding body (this includes up to 10 paid Keeping in Touch days). Additionally

Early intervention comprises:

- Meeting with Ms. **Aspinall** (Safety Manager) to discuss changes to work practices
- **DA**'s advising on maternity leave policy and return to work.

Cover involves:

- Staff rota revision
- Suspension of fixed term contracts
- Applications for external funding to provide temporary cover or support (**Case Study B**)
- Encouraging mothers to maintain contact and visit work informally before leave expires (**Case Study A**).

The key issue is support on return and since 2011:

- **DA** contacts mothers to plan their return
- We keep our own database on childcare opportunities
- **DA** and **DDA** advise on salary sacrifice scheme and childcare vouchers
- We have a designated breast-feeding room
- Children are welcome in the tea-room and toys are provided
- **JD** (adopter) is ready to advise on adoption
- We fund childcare costs for researchers to attend conferences, network or undertake field studies.
- We support applications for the University's "Returning Carers" fund (£10,000 in research support). Three (75%) have been successful (**Case Studies**).
- We encourage formal flexible working on return and have a 100% uptake rate since 2011 (**Figure 27**)

We will continue with our support plan for any further colleagues taking this leave. [4586/5000]

Any other comments: maximum 500 words [283/500]

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

Our 2015 Staff Survey (shown below in **Figure 28** against 2013 responses; both genders and undeclared) revealed no gender disparities. The key issues for staff are career support (including appraisals) and work/life balance; the impact of these findings on action planning have been described previously.

Figure 28. Comparison of 2015 Staff Survey responses with 2013. The % of all staff agreeing with the question is shown.

We were very disappointed that our Bronze application in 2013 was considered premature. We have continued with our actions to achieve the results we report here. We have responded positively to criticism, as follows. We increased male representation on the SAT, kept meeting momentum and repeated the Staff Survey. We disseminate information to men (Figure 1). We had a drive to increase female numbers at all levels. We have increased benchmarking and quantitative/qualitative data sets. Data on applications have been broken down. Graphical representations have been improved. The male academic on a fixed term contract was queried; this was sabbatical cover (as we stated). Key issues are now more clearly highlighted. Appraisals are described fully. Academic staff do not wish to have annual appraisals; they are content for biennial. We are improving appraisal rate of Researchers. We aim for all staff to be promoted;

staff groups were advised of success criteria and adjudication. We have kept records of outreach involvement. We describe the opportunities to serve on committees in more detail and show examples in Table 5. Academic staff see each other's workload in an annual spreadsheet; to improve upon this transparency, % contributions by females are now made transparent. Responsibilities for actions have been re-considered. There was always parity in maternity leave provision regardless of funding body. The male who declined paternity leave preferred to take informal leave. We have a full record of flexible working uptake. [283]

5. Department of Plant Sciences, University of Cambridge Action Plan 2015

Start date	Colour
Already embedded/in progress/first year of action plan	
Second year of action plan	
Third year of action plan	

Where Responsibility for an action is designated as belonging to a Committee, the Chair will direct Committee participants as needed. DA will be supported by DDA and secretarial staff.

1	Self Assessment				
Actions taken since 2011/2012 and outcomes: Baseline data and supporting evidence					
Monitor #UG by gender	Data collection systems (University and Departmental sources) now operational; appropriate gender balance maintained benchmarked against HESA data and data collected from UK HEIs offering PS degree.				
Monitor UG performance by gender	Females outperforming males in attaining first class degrees; 93% of both genders leave qualified for PhD entry.				
Survey UG students at entry to Year 2 and Year 3 PS courses	Both genders choose PS courses through subject interest; gender of teaching staff does not influence choice; perception of "female-friendly" culture does not influence choice. No need to deploy more female staff to aid recruitment.				
Termly survey of Year 2 and 3 teaching quality	Quantitative surveys showed overall student satisfaction with lectures, practicals, supervisions, research projects; feedback to Teaching Committee for actions.				
Exit Survey Year 3 UG students	Surveys revealed both genders satisfied with course; requires details of next destination see AP 4.6.				
Track UG destinations	Data collection ongoing; high proportion of female retained in STEMM; see Action Point 4.6.				
Monitor #PG by gender	Data collection systems (University and Departmental sources) now operational; appropriate gender balance regained, see AP 2.3, 2.4.				
Monitor PG performance by gender	100% success rate for females; no gender difference in time to submit.				
Termly survey of PG performance	Supervisor assessments and student self-assessments considered by Graduate Education Committee; no gender disparities found.				
PG exit survey and destination tracking	Survey reveals both genders satisfied with provision. Destination tracking ongoing and reveals high female retention in STEMM. See AP 4.6.				
Monitor staff data by gender	Data collection systems (University and Departmental sources) now operational. Female researchers increased from 9 to 16, Research Fellows from 4 to 6, Lecturers from 1 to 2, Professors from 1 to 3.				
Monitor appraisal rates	Departmental data collection system operational; increased Researcher appraisal rate from 10 to 30%. See AP 4.5				
Monitor promotion applications	Data collection systems (University and Departmental sources) now operational; all applications successful.				
Monitor uptake of flexible working, carer leave and maternity return	Data collection systems (University and Departmental sources) now operational; paternity leave increased from 1 to 9, maternity return rate increased from 65 to 100%, flexible working uptake increased from 0 to 10 (all applications successful).				
Staff cultural survey March 2013 and repeated January 2015	94.4% return rate in 2015 shows continued engagement from 2013 (95%); results analysed and disseminated to staff; considered by SAT to inform Action Plan (1.2).				
Action	**Description of action**	**Actions already taken since 2011**	**Further action planned, timescale and priority**	**Responsibility**	**Success Measure**
1.1	Maintain SAT momentum.	Regular meetings, monthly in 2013 and monthly from September 2014 onwards.	Meet six times a year, increasing to monthly six months prior to an Athena SWAN submission HIGH.	SAT Chair	Meeting schedule followed with minutes on our intranet.
1.2	Repeating Staff Survey.	SBS Survey 2013, PS Survey 2015.	Repeat Staff Cultural Survey in January 2017; modify according to issues raised	SAT	Maintain or improve on the 95% return rate. Use survey to quantify

			by feedback mechanisms in preceding year. See also 1.4. LOW in 2015 reaching HIGH in 2017.		key targets for improvement highlighted within the action plan.
1.3	SAT Chair rotation.	Female Chairs since 2012.	Identify senior male academic to lead SAT. MODERATE. Shadows existing Chair for 3 months prior to appointment in April 2016.	HoD and SAT Chair	Appointment of senior male academic as SAT Chair in April 2016.
1.4	Continued monitoring of Athena SWAN metrics, co-ordinated reactions to metrics with student/staff awareness of issues and actions.	Data collected and scrutinised annually by TC, GEC and SAT; Athena/E & D standing item at termly Staff Meeting; dissemination & feedback mechanisms in Figure 1; email list to PS women for rapid dissemination of information.	Responses to Staff Survey disseminated by June 2015 HIGH. Increased internal Athena SWAN publicity – noticeboard in tearoom and teaching lab, greater prominence in Staff induction manual, UG and PG induction material. MODERATE ready for October 2015. Modification of 2017 Staff Survey to test for Athena SWAN awareness.	SAT Chair, HoD, TC, GEC	At least 80% of PS staff aware of Athena SWAN values and impact in 2017 survey. At least 80% of students aware of Athena SWAN values and impact in exit surveys.
1.5	Dissemination of good practice for family-friendly working.	Female and male staff participation in University events (x3 promoting family-friendly working; "The Meaning of Success, see Fig. 17).	Continued participation in promoting family-friendly working in University; Successful strategies shared via termly University/SBS SWAN Network and externally (see also AP 4.1, 5.2). MODERATE. Repeat in YEAR 2 and YEAR 3.	SAT and DA	At least one staff member annually taking part in/attending University family-friendly promotional event; experiences shared internally also in YEAR 2 and YEAR 3; articles disseminated externally (see AP 4.1,5.2).
2	**Actions for student recruitment**				
Actions taken since 2011 and outcomes: Baseline data and supporting evidence					
Created new academic-related Teaching Associate post		Dr. Katharine Hubbard (**KH**) appointed 2013, first degree and PhD in PS; forging a teaching career after a post-doctoral position in the US; female role model for research career alternatives. SAT member, implemented course choice student surveys.			
Application by KH for outreach		£18,500 awarded by University to establish the Cambridge Colleges Biosciences Experience project to encourage			

		female students to study Plant Sciences at UG level; will run alongside Physics equivalent.			
Course advertising revised to encourage female students to join		UG female numbers steady at a nationally appropriate level. PG gender balance regained at nationally appropriate level.			
Compulsory University E and D training for all GEC members		All GEC passed E and D training; no evidence of gender discrimination in applications and offers.			
BBSRC DTP grant awarded and administered by PS		Gender balance in total cohort studying across 20 Departments and partner institutes from 2012.			
Action	**Description of action**	**Actions already taken since 2011**	**Further action planned, timescale and priority**	**Responsibility**	**Success Measure**
2.1	Cambridge Colleges Biosciences Experience.	Successful application made to University Widening Participation fund.	Annual workshop and lecture to encourage state school students, particularly female and minorities, to study plant sciences at UG level. MODERATE	KH supported by teaching technical staff.	Entry/Exit surveys indicate increased interest in studying PS at UG level.
			Repeat in Year 3		
2.2	Maintain female numbers in UG cohort.	Revised recruitment materials to encourage females; monitoring, surveys, feedback as described in section 1.	Given the year on year steady baseline, actions will be triggered by female UG numbers dropping significantly below the national benchmark of 48% - Annual refreshment of course booklets/posters guided by continuing survey data on why females do/don't take our courses (February). Female UG students comprise 50% of course ambassadors at annual recruitment lunches (March) MODERATE.	TC	Annual evaluation would show UG female cohort maintained at 50% which is appropriate given the national benchmark of 48%.
			Repeat in Year 3		
2.3	Maintain appropriate gender balance of PG students in Plant Sciences stream.	Compulsory University E and D training for GEC: Revision of recruitment materials: Supervisor gender is	Target female recruitment to maintain parity at application to PS stream. This will include online videos by female PhD students, modelled on the University's successful "Be Cambridge" UG recruitment campaign. We will include	GEC	Annual evaluation would show PG female cohort maintained at 50% which is appropriate given the national benchmark of 53.5% and Russell Group 48%.

		apparent in advertising; Recording and analyses of applications, offers and admissions data as described in section 1.	career profiles that show the success of our female PhDs (see also AP 4.6). HIGH Completion for October 2015. Pro-active support for accepted female applicants in Plant Sciences stream to obtain funding; advice on funding opportunities, letters of support, coaching on application letters and CVs. HIGH in YEAR 2 and YEAR3.		
2.4	Increase a gender-balanced DTP cohort choosing PS Department for PhD after first year rotation projects.	Programme co-ordinated by PS. Supervisor gender is apparent in advertising;PS staff supervise First year rotation projects; Participation in annual recruitment event; capture and analysis of student data as described in section 1. Recruitment systems are supporting gender balance in applications and appointments.	A quota of studentships under "Food Security" will be introduced. Students will apply to this theme and be locked into it from year 1. This could increase numbers of students choosing Plant Sciences after year 1 project rotations. Survey students about their choices at the end of year 1. Starting October 2015 for October 2016 entry then repeated in YEAR 2 and YEAR 3. HIGH.	GEC	Annual evaluation would show at least 20% of Food Security studentships joining Plant Sciences (reflecting 20% of Food Security theme supervisors in PS). 50% female cohort in Food Security in line with national and Russell Group benchmarks. Surveys will provide valuable information on why students do or do not choose Plant Sciences for their PhD at the end of their first year and this will be fed into further action planning.

3	Actions for staff pipeline				
Actions taken since 2011 and outcomes: Baseline data and supporting evidence					
Lectureship and Teaching Associate post created		Females appointed as Lecturer and Teaching Associate.			
Increased grant income for Researcher post creation and revision of recruitment materials		Number of female Researchers has increased from 9 to 16.			
Identifying and mentoring Fellowship candidates		Number of female Research Fellows has increased from 4 to 6 (75% of cohort)			
Compulsory E and D training for recruiters		All passed E and D training; no evidence of gender discrimination in appointments.			
Action	**Objective**	**Actions already taken since 2011**	**Further action planned, timescale and priority**	**Responsibility**	**Success Measure**
3..1	Increase number of Researcher posts.	Increased grant income and number of female Researchers; monitoring gender distribution; E and D training.	Quarterly grant mentoring workshop to improve grant applications; applications to Research Committee for funding of pump priming projects to enable grant applications. HIGH Repeat in YEAR 2 and YEAR 3.	HoD, ResCom & Academics	Maintain or improve current funding success rates.
3.2	Launch the Agnes Arber Research Fellowship	Identifying and mentoring candidates for existing Fellowships. Laboratory space committed for Arber Fellow.	MEDIUM Investigate options to raise £300-500k to establish this post, perhaps in a collaboration with a College. Complete fund raising by end of YEAR 2. Recruit to post by end of YEAR 3.	HoD, DA and ResCom	Fully-funded Fellowship through collaborative funding. Fellow in post.
3.3	(a) Release of lectureship (post created by	(a) Saving made on post since October 2011. Discussion at	(a) Make a case to SBS Finance Manager after PS and University internal review of teaching. Result for Oct 2015. HIGH	HoD, DA and ResCom	(a) Gender-balanced short lists. Lecturer in post October 2016.

	retirement but now unoccupied through University cost-saving measures) (b) Appoint Chair in Crop Sciences	Res Com on appropriate research field. (b) Collaboration agreed with National Institute for Agricultural Botany and Sainsbury Laboratory to create post.	(b) Make a case to SBS Finance Manager to establish post as part of the University's Crop Science Centre initiative. Result for Oct 2015. HIGH		(b) Gender-balanced short lists. Professor in post October 2016.
4	**Actions for supporting and advancing women's careers; key career transition points and career development**				
Actions taken since 2011 and outcomes: Baseline data and supporting evidence					
Revision of recruitment materials and further particulars;monitoring of applications; trial of social media advertising	45% applications by females overall; data not available pre-2012.				
Compulsory E and D training for recruiters; monitoring of appointments	All recruiters passed training; overall 46% appointments of females.				
Support for promotions and promotions raised at appraisal	In last 4 years, 3 academic staff promoted to Reader, and 3 to Professor, 3 Researchers promoted to Senior Research Associate, and all applications from Assistant Staff for promotion were successful.				
Mentoring, promoting and funding training; new networking opportunities; career support	75% of Research Fellow cohort is female; 87% female Researchers/Research Fellows leaving are retained in academia; Successful female academic promotions; positive feedback on network events; increased satisfaction for development opportunities and training in staff survey (64 to 79%).				
Appraisal training, format relevant to staff group, appraisal addresses promotion; data collection	Low appraisal rate for Researchers recognised, so scheme relaunched in January 2015. Uptake has increased 3-fold, anticipating 60% by July 2015, 80% in October. Formation of network group of Researchers in Dept (Plant-PostDocs) providing additional momentum by increasing awareness of the benefits of appraisal.				
Action	**Objective**	**Actions already taken since 2011**	**Further action planned, timescale and priority**	**Responsibility**	**Success Measure**
4.1	Gender balance at staff applications.	Revision of recruitment materials.	Improved female-friendly language in job descriptions (guided by published research on gender bias) and recruitment	SAT Chair, DA & Academics	Gender balance of staff applicants at all grades. Effectiveness of actions to encourage females to

		Recording & analyses of % females applications/ appointments. Compulsory E and D training for recruiters.	materials with every description checked. Additional use of social media to advertise. Saplings campaign. HIGH Generic materials including posters completed for October 2015. Articles on females in plant sciences disseminated through professional Journals and blogs. LOW YEAR 2 and YEAR 3.	 Academics selected by SAT Chair	apply will be evaluated by % females responding to place of advertisement and a questionnaire returned with application. Gender-balanced short-lists. Reviewed in YEAR 2 and YEAR 3. At least 2 items annually. See also AP 5.2.
4.2	Increased numbers of promotion applications.	Details of promotions process sent to all staff groups. Promotions raised at appraisal. Mentoring.	Target promotion for Lecturers with applications in YEAR 3 MODERATE Assistant staff to attempt performance-related promotion. YEAR 1 YEAR 2 YEAR 3 HIGH Lobby for change to UKRC rules on promotion for contract Researchers to allow budgeting of performance-related increment in grant application. Letter to Councils by October 2015 and follow through as required. MODERATE	Lecturers and mentors; HoD Supervisors and line managers; DA HoD and REsCom	Applications for promotion made by Lecturers in YEAR 3. Annual audit will show increased numbers of applications and identify staff who have not attempted, triggering intervention by DA. Target is 80% of staff employed for a year or more. Change to UKRC procedures to allow promotion pay budget. Increased satisfaction with Departmental support for careers in 2017 Staff Survey.

4.3	Improved career support for Researchers and Assistants.	Developmental mentoring. Supporting internal/external networking including female-only PS event. Highlighting and funding training for females, including leadership. Training in teaching best practice.	Mandatory use of the University's "Researcher Development Programme". HIGH For existing Researchers by October 2015 and all new staff in YEAR 2 and YEAR 3. Researcher Forum; a monthly lunchtime networking/peer mentoring session run by the CRS with invited speakers on career-related issues. Departmental financial support. Feedback mechanism to Researchers on their teaching performance as part of their career development. HIGH In place for October 2015. Peer mentoring and external mentoring for Researchers and Assistants. Staff will be emailed University guidelines on mentoring and asked to volunteer for "PlantMentorNet" on our website. The University's recommended external mentoring system (http://new.coachingnetwork.org.uk/about-the-network/) will be promoted. Details will be promoted in induction mentoring and appraisal. MODERATE In place for early YEAR 2.	Researchers and Researcher Supervisors; DA CRS Rep, DA,TC SAT Chair, DA and DDA	All Researchers using the programme for professional development, checked at appraisal and exit survey in YEAR 1 YEAR 2 and YEAR 3. Increased satisfaction with Departmental support for careers in 2017 Staff Survey. Over 50% of Researchers and Assistants using peer or external mentoring (checked at appraisal, value gauged by exit survey and online survey in YEAR 3)
4.4	Increased Assistant Staff attendance at annual Research Day	Annual offsite Research Day as main networking event for	70% attendance of Research Day by Assistants (30% on rota for essential PS duties). Survey Monkey exit survey.	DDA	Sign in will show 70% attendance in YEAR 1, YEAR 2 and YEAR 3. Exit survey will highlight any need to

	and quantitative evaluation.	staff and students. Analysis of attendance by group shows <30% assistant attend.	MODERATE for YEAR 1, YEAR 2, YEAR 3.		change format, feedback to ResCom.
4.5	Improved response rate to appraisal reminders.	Re-launch and re-organisation of of updated appraisal scheme by HoD, CRS rep and Assistant Staff Group. Online University Appraiser/appraisee training Staff-group specific format Appraisal promotes promotion	Reminders of online preparatory training sent termly. Researcher and Assistant appraisals overseen by Senior Secretary; email reminder if overdue, copied in to HoD. Target is 60% by July 2015 and minimum 80% for October 2015. HIGH 100% target in YEAR 2, YEAR 3. Academic appraisals scheduled by DA. 80% target. HIGH YEAR 1, YEAR 2, YEAR 3.	HoD, DA, Academics and Line Managers	Targets met for all staff groups in YEAR 1, YEAR 2 and YEAR 3. Increased satisfaction with appraisals in 2017 Staff Survey.
4.6	STEMM Career planning and tracking to enable career roadmaps/networks to be established.	"Women in Science" careers talk for UG students. Group and individual Careers Service support for UG students. Careers Service support for PG students. SBS Careers advisor and Athena Network	ALL UG and PG students will receive the Society for Experimental Biology's career leaflet "Your Career in Plant Sciences". MODERATE October of YEAR 1, YEAR 2 and YEAR 3. PG students will be invited to the annual "Women in Science" UG careers talk in YEAR 1, YEAR 2 and YEAR 3. MODERATE Destination database will be used to construct career pathway information for UG, PG students and Researchers.	TC and GEC	We aim to capture at least 80% of UG, PG and Researcher destinations in YEAR 1, YEAR 2 and YEAR 3. Exit surveys will show at least 80% of students satisfied with career support in YEAR 1, YEAR 2 and YEAR 3. Gender balance in PG STEMM destinations by YEAR 3.

		support for Researchers Database of UG, PG and Researcher destinations initiated. Fellowship opportunities database	Alumni/alumnae will be invited to go on to the Plant MentorNet. MODERATE Information will be timed for March UG recruitment events in YEAR 2 and YEAR 3. "How to be a post doc" information event for PG students. MODERATE Run with support from Researchers each summer in YEAR 1, YEAR 2 and YEAR 3.		

5	**Actions for supporting and advancing women's careers; organisation and culture**
Actions taken since 2011 and outcomes: Baseline data and supporting evidence	
Limiting female participation on PS committees	No female serves on more than two except the HoD.
Transparency of workload model	All academic staff know each other's workload and % of activity performed by female cohort, held at or below female % of academic cohort.
Rescheduling of seminars and meetings to family-friendly hours	Staff can now deliver and collect children from childcare/school without missing meetings.
Improved support for new mothers	Maternity return rate increased from 65 to 100%. Funding for cover. Childcare database. Breast-feeding room. Phased returns. 75% success in research support grants for returners.
Promotion of paternity and parental leave	9-fold increase in uptake including senior male academic.
Promotion of formal flexible working	All applications successful, from no staff in 2011 to 10 including senior male academic.

Action	**Objective**	**Actions already taken since 2011**	**Further action planned, timescale and priority**	**Responsibility**	**Success Measure**
5.1	Family-friendly social gathering	Meetings and seminars within core hours. Christmas event within core hours.	Summer event in core hours; Plants Picnic. Children welcome. LOW. Every summer in YEAR 1, YEAR 2 and YEAR 3.	Research groups by rotation.	Event takes place in YEAR 1, YEAR 2 and YEAR 3 with positive feedback. Improved score in 2017 Staff Survey for support of family

					commitments and recommendation as a good place to work.
5.2	Promotion of paternity, new shared parental leave, parental leave and flexible working by male staff.	Internal promotion of these regimes and successful uptake.	Male staff (especially academic) who have taken this leave/adopted flexible working to convey their experience by routes described in AP1.5 and 4.1. LOW Annually in YEAR 1, YEAR 2 and YEAR 3.	Staff selected by SAT Chair	At least one item/article in YEAR 1, YEAR 2 and YEAR 3.

6.Case study: impacting on individuals: maximum 1000 words [841]

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

Case Study A: Prof. Beverley Glover (SAT member)

Beverley has worked in the Department of Plant Sciences for 18 years, progressing from Research Fellow through Lecturer, Senior Lecturer and Reader to a Professorial position.

She joined in 1996, arriving straight from her PhD to take up a college-funded Research Fellowship. She was given a great deal of help to settle in and establish her independent research interests. Lab space and mentoring were provided by Dr. David Hanke while the Head of Department, Professor Enid MacRobbie FRS, guided her on the transition to independence. Professor MacRobbie invited Beverley to attend Staff meetings, as an independent researcher, and arranged for her to have technical help from one of the Department's teaching lab technicians. This help and support were invaluable in giving Beverley the confidence to make the next step of applying for a University Lectureship. She moved into this post in 1999, with support from the Department in the form of a newly refurbished lab, start-up funds to equip it, and a part-time University-funded technician. She was promoted to Senior Lecturer in 2005 and to Reader in 2010. Beverley benefitted from the University's CV mentoring scheme for women attempting senior academic promotion. In 2012 Beverley successfully applied for an established chair in Plant Systematics and Evolution, associated with the Directorship of the Cambridge University Botanic Garden, and took up this post in July 2013.

During her time in the Department Beverley has had two periods of maternity leave (September 2005-September 2006 and January 2009-August 2009). The Department was very flexible and supportive during these periods, encouraging her to come in whenever suited her to maintain contact with her research group. Beverley's teaching and administrative duties were re-allocated. The Department supported Beverley's application to the University's new Returning Carers scheme after her second maternity leave. This application was successful and provided the funds to extend the hours of Beverley's Departmentally-funded Lab Technician from part-time to full-time for 12 months, to gather preliminary data for research council grant applications.

Successive Heads of Department and mentors provided the necessary support and guidance that allowed Beverley to make applications for personal promotion at appropriate stages. The Department has ensured that there were no barriers to Beverley's career progression or her efforts to combine that career with family responsibilities. Beverley has steadfastly supported the careers of the women in her group, resulting in faculty positions at UK universities for four of her past Researchers, three of them women.

Case Study B: Dr. Stéphanie Swarbreck

Stéphanie joined the Department of Plant Sciences in 2011 as an EU International Reintegration Fellow in the group of Dr Julia Davies. The Department successfully gained salary funding for her. Stéphanie took a period of maternity leave in January 2013 until the end of her initial contract in

May 2013. While on maternity leave, Stéphanie was awarded a Broodbank Research Fellowship, which will support her research until October 2016. She decided to start her Broodbank Fellowship in July 2013 and was fully supported in her decision to be employed on a part-time basis (80%). Dr. Davies gained external funding to support a full-time research assistant for one year to support Stéphanie upon her return from maternity leave and this helped her return to the lab. She enjoyed the flexibility of working part-time while her daughter was still very young and decided to increase her hours to full-time from January 2015 as her daughter was settling very well at the nursery. She now has an informal flexible working arrangement to support family life.

Since she has been back from maternity leave, Stéphanie has been awarded a University Returning Carer grant (with support from the Department) that she has used for equipment purchase to make her work more ergonomic. While her time in the Department is now more restricted because of her child caring responsibilities, she has still been involved in the Department's life and organises the seminar series for postdocs and post-graduate students.

Stéphanie has been fully supported in her efforts to gain training in leadership. She applied and was selected by the University to attend the Emerging Research Leaders' Development Programme. In addition, she had the opportunity of training and supervising Part II, MSc, and DTP rotation PhD students as well as a research assistant, thus developing her teaching and management skills. Over the last few years, Stéphanie has attended and presented her work at international conferences held in the UK and plans to attend a conference in the Netherlands in 2015. The Department will help with childcare costs. She has been encouraged to attend conferences to network and continue building her research profile. In addition, she applied and was selected to attend a national training course focusing on wheat genetics that has helped her identified more clearly future directions for her project.

Overall, Stéphanie feels very fortunate to work in a Department where family life is highly valued and flexible working opportunities are provided. This has enabled her to pursue her career while caring for her daughter and achieving a good work-life balance. [841]