SCHOOL OF MATHEMATICS

UNIVERSITY OF EAST ANGLIA

ATHENA SWAN BRONZE APPLICATION

April 2015

GLOSSARY OF ACRONYMS

AP	Action Point
ARM	Admissions, Recruitment and Marketing
ASCSG	UEA Athena SWAN Central Steering Group
ASSG	School of Mathematics' Athena SWAN self-assessment group
ATR	Academic, Teaching and Research
ATS	Academic, Teaching and Scholarship
BEng	Bachelor of Engineering (undergraduate) degree
BSc	Bachelor of Science (undergraduate) degree
CMP	School of Computing Sciences
CSED	Centre for Staff and Educational Development
DEq	School of Mathematics' Director of Equality and Diversity
E&D	Equality and Diversity Office
ENG	Engineering (within the School of Mathematics)
ENV	School of Environmental Sciences
EPSRC	Engineering and Physical Sciences Research Council
ET	School of Mathematics Executive Team
FMH	Faculty of Medicine and Health Sciences
FTE	Full time equivalent
HEI	Higher Education Institution
HoS	Head of School of Mathematics
HR	Human Resources Division
LMS	London Mathematical Society
LSO	Local Support Office
LTS	Learning and Teaching Service
MEng	Master of Engineering (4 year) undergraduate degree
MMath	Master of Mathematics (4 year) undergraduate degree
MSc	Master of Science (postgraduate) degree
MTH	School of Mathematics
NERC	Natural Environment Research Council
PGR	Postgraduate Research
PGT	Postgraduate Taught
PhD	Doctor of Philosophy degree
RA	Research Associate
REF	Research Excellence Framework
UEA	University of East Anglia
UG	Undergraduate

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Athena SWAN Bronze Department Award Application

Name of University: University of East Anglia

Department: School of Mathematics

Date of application: April 2015

Date of University Bronze Athena SWAN Award: 29 July 2012

Contact details: Prof. David Evans/Ms Helen Murdoch

Roles: Head of School/Head of Equality & Diversity

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1. LETTER OF ENDORSEMENT FROM THE HEAD OF DEPARTMENT:

Dear Athena SWAN panel,

I am very pleased to give my strongest support to the School of Mathematics' bid for the Athena SWAN Bronze Award. The School aims to provide an inclusive, friendly and supportive environment for its staff and students whilst maintaining the highest standards in teaching and research. Along with many colleagues, I have benefitted from the School's flexible attitude towards working from home and it is pleasing to see the way in which children of staff and students are welcomed into our workplace when necessary.

The process of applying for the Award has already had significant impact and involved the whole School, with a panel representing students and staff from different career stages and personal circumstances. The School appointed a Director of Equality and Diversity, enabling us to embed the highest standards of equality and diversity within the School. The Director: is a member of the School's Executive Team (ET), providing regular reports; chairs the School's Athena SWAN Steering Group (ASSG); represents the School on the University Athena SWAN Central Steering Group (ASCSG); and is the School contact for the London Mathematical Society (LMS) Good Practice Scheme, which we have supported since August 2011. Since starting my second term as Head of School, I have participated in ASSG meetings and been impressed by the insights and ideas which have emerged.

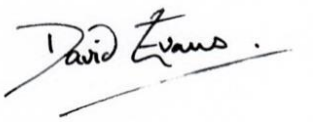
The School has seen an increase in the proportion of female staff. In Mathematics there are currently one professor, one senior lecturer and two lecturers (both promoted to senior lectureships from August 2015). In Engineering, one of the four members of staff is female. Such levels are perhaps in line with national averages, but there is no complacency about this. The Action Plan includes ideas for increasing the number of female applicants for future positions, such as the use of search committees. We are proud of our inclusive School promotions process where all staff are expected to provide a short CV each year, enabling the promotions committee to consider everyone irrespective of whether they have applied.

A key concern is that the proportion of female students has fallen significantly below national averages in recent years, although it is pleasing that our female students outperform their male counterparts in terms of good honours. The former issue was identified by ASSG and we are seeking to understand and address this as a matter of urgency.

The Action Points identified by the ASSG are realistic and practical, focusing on encouraging and supporting women in career development whilst creating a fair and equitable environment for all. They will have a positive effect across all aspects of the School's activities and have the full backing of myself and ET. The benefits of a greater awareness of equality and diversity issues within the School are unquestionable and future activity on this has my full support and commitment.

We plan to work towards Athena SWAN Silver at the earliest opportunity, in the wider context of our commitment to all aspects of equality and diversity.

Yours sincerely,



Professor David Evans, Head of School of Mathematics.

Word Count: 494

2. THE SELF-ASSESSMENT PROCESS:

(A) The Self-Assessment Team

The School of Mathematics (MTH) Athena SWAN Self-assessment Group (ASSG) membership reflects the diversity of roles across the School and wider University (from undergraduate to Head of School), gender and work-life balance, and a variety of personal circumstances of which 42% have parenting or caring responsibilities (Table 1).

The ASSG is supported by the UEA Equality and Diversity Office and the Human Resources Manager for the Faculty of Science. These colleagues attend Athena SWAN meetings for all Schools promoting consistent good practice.

The ASSG reports to the University's Athena SWAN Central Steering Group (ASCSG), chaired by the Pro-Vice-Chancellor (Research and Enterprise), who reports to the UEA Executive Team chaired by the Vice-Chancellor. The ASCSG meets every 6-8 weeks to disseminate and discuss good practice across the Schools at UEA and other universities, and provides advice and support to MTH at a strategic level. More locally the ASSG reports to MTH ET and the School Board.

TABLE 1: Athena SWAN Self-Assessment Group Membership

Name	Job title	Length in post	Any other role at UEA	Role in team
Emine Akgunduz	UG student	2 ½ years		Student representative.
Keith Brown	PhD student	2 ½ years	Associate tutor.	Student representative.
Jodie Cullum	PhD student	2 ½ years	Associate tutor.	Student representative.
Robert Davies	Administrative Assistant	3 months		Administrative support.
Carlos De La Mora	Senior RA	9 months	On MTH Research Executive.	RA representative.
Julia Docampo	PhD student	16 months	Associate tutor.	Student representative.
Mirna Džamonja	Professor of Mathematics	17 years	Lecturer/Reader 1998–2010, Member of MTH Executive Team.	Faculty representative.
David Evans*	HoS (2014-); Professor of Mathematics	27 years	HoS 2007–10, Lecturer/Reader 1988–2007.	Head of School.
Binish George	UG student	2 ½ years		Student representative.
Matthew Gooch	Equality and Diversity Project Officer	2 years	14 years' in a variety of roles at UEA.	Data collection.
Forrest Li	UG Student	6 months	MTH Sports Activator.	Student representative.
Sinéad Lyle	Senior Lecturer	9 years	Lecturer 2007–12.	Faculty representative.
Sonia Melendi-Espina	Lecturer in Engineering	5 months		Faculty representative (ENG).
Helen Murdoch	Head of Equality and Diversity	7 years		Central lead on Athena SWAN at UEA.

Name	Job title	Length in post	Any other role at UEA	Role in team
Richard Purvis	Senior Lecturer	10 years	Lecture 2005-13, MTH Director of Admissions.	Faculty representative.
Jennifer Ryan	Lecturer	2 years	On MTH Research Executive.	Faculty representative.
Timothy Southon	School Manager	3 years	CMP and FMH School Manager.	Administrative expertise.
Shaun Stevens*	Professor of Mathematics	12 years	Lecturer/Reader 2002–2010. MTH Director of Equality and Diversity.	Chair of ASSG and coordinator of Athena SWAN application.
Jenny Summers	Human Resources Manager	16 years	Member of Faculty & University Promotions Committees, member of ASCSG.	Human Resources expertise.

*School Promotions Committee Representatives

(B) The Self-Assessment Process

The process began in April 2014 when the ASSG was established. Members have been recruited to ensure representation of all roles and levels (staff and students). It was quickly apparent that a key issue for MTH in recent years has been the under-recruitment of female staff and students, at both undergraduate and postgraduate level.

As well as ASSG meetings, regular email contact was maintained and wider consultation took place in the form of anonymous surveys of academic and research staff, PhD students and 2nd year undergraduate students. The staff and PhD surveys attracted a greater than 75% response rate, including 100% of female PhD students and faculty. The 2nd year undergraduate survey attracted a 76% response rate, including 86% of female students. The results are incorporated into the relevant sections of this submission.

Key issues for the student surveys were seeking to understand why students had chosen UEA and, in particular, anything which might have put them off, or could increase the attractiveness of MTH to female students; the survey also increased awareness of gender equality issues amongst our students. Key issues for the staff survey were the perceptions of our recruitment and promotions processes, the effectiveness of staff appraisal, and awareness of/access to support available. In many cases, comments and suggestions from the surveys have fed directly into our Action Plan.

The Athena SWAN process, and issues around gender equality, have been a frequent topic of informal staff conversations, for example at lunchtimes, as well being discussed by the MTH School Executive and at School Board meetings. (All permanent faculty are members of the School Board.) All of these informed ASSG discussions. The School Director of Equality (DEq) also attends the ASCSG, facilitating exchange of best practice between MTH and other Schools participating in the Awards.

TABLE 2: Self-Assessment Group Meeting Dates 2014-2015

TABLE 2: MTH ASSG Meeting Dates		
Date (2014)	**Time**	**Venue**
24th April	2.00pm	S1.20
20th June	11.00am	S1.20
9th July	11.00am	S1.09
11th September	2.00pm	S1.20
22nd October	11.00am	S2.29
4th December	9.00am	S2.29
Date (2015)	**Time**	**Venue**
27th January	11.00am	S2.29
25th February	11.00am	S1.20
13th May (Open Meeting)	12.30pm	S1.20
15th October	11.00am	S2.29
18th November (Open Meeting)	12.30pm	S1.20

(C) Plans for the Future of the Assessment Team

The ASSG will continue as a standing committee of MTH, with E&D as a standing item at both School Board and School Executive. Athena SWAN is also regularly discussed at the Faculty Executive, attended by the HoS, and at the ASCSG supporting the central University Athena SWAN strategy **(AP: 6.3).**

The ASSG will meet formally five times per academic year to report and review progress in the Action Plan and to consider further actions. To ensure continuous progress, the DEq will report developments by email to ASSG and in person at School Executive (every 4-6 weeks). Two ASSG meetings per year will be lunchtime Open Meetings: since the Action Points require all the School to be involved, Open Meetings will keep everyone in touch with progress and actions they are expected to undertake. The first of these will be in May 2015.

Prior to the autumn meeting of ASSG, the DEq and Head of School will refresh the membership of ASSG, to ensure as many staff and students as possible have the opportunity to be involved (**AP: 6.2**). The main purpose of the autumn meetings will be to consider the data gathered, paying particular attention to undergraduate and postgraduate numbers and MMath progression (**AP: 1.1**), and plan for the year ahead; this will include ensuring everyone is made aware of their responsibilities within the Action Plan, and planning the staff/student surveys for the year (**AP: 1.2**). The main purpose of the spring meetings will be to review the responses to these surveys and consider the need for further actions in response to this. Alongside these considerations, the DEq and ASSG will begin preparing for a bid for Athena SWAN Silver (or its successor), aiming for submission in November 2016 (**AP: 6.1**).

Word count: 974

3. A PICTURE OF THE SCHOOL:

3A: Pen Picture of the School

MTH is one of six Schools within the Science Faculty. It is a small School but has been growing in recent years, both in Mathematics staff and students, and through the launch of Engineering. Although housed in MTH, the Engineering group runs courses and many committees independently of MTH, so we have disaggregated the data between the subjects to make national comparisons meaningful. The long-term intention is that Engineering will become a separate School.

Staff: At UEA, faculty are appointed to Academic Teaching and Scholarship (ATS) or Academic Teaching and Research (ATR) contracts. As of March 2015, there are 23 full-time faculty members in Mathematics (one joint with the School of Environmental Sciences (ENV)), all of whom are ATR and with all those in post in November 2014 submitted to the Research Excellence Framework (REF); in addition, there are 3 part-time ATS lecturers/tutors (approx. 1FTE). We currently have 5 research associates in Mathematics. There are 4 full-time faculty members in Engineering, comprising 3 ATR staff, appointed in the last 18 months, and one ATS Professor.

Research: Mathematics Research is divided into four groups: Fluid and Solid Mechanics (including Environmental Mathematics, Industrial Mathematics, Mathematical Biology), Algebra and Combinatorics, Logic, and Number Theory. There are many overlaps between the groups, and members of different groups interact via joint working seminars and study groups, joint publications and co-supervision of PhD students. We gain research funding from EPSRC, NERC, Leverhulme Trust, LMS, with a total in excess of £2m in the previous REF period. The School typically has around 30 PhD students enrolled.

Teaching: Mathematics undergraduate students study for a 3-year BSc in Mathematics, or Mathematics with Business, or a 4-year MMath, with the possibility of taking the 3rd year abroad (usually North America or Australia). We typically take in 90-100 students each year, offering approximately 30 modules aimed at Mathematics students (often also taken by Natural Science students), with a rolling programme of optional 2nd/3rd/4th year modules, as well as providing teaching for Mathematics modules in the foundation year and ENV. Our students therefore have a diverse choice of modules (including those in Statistics taught by the School of Computing Science).

In Engineering, we have recently started 3- and 4-year undergraduate degrees in Energy Engineering with Environmental Management (BEng and MEng, first intake in 2013). We also offer an MSc degree in the same subject (1 year full-time, or up to 4 years part-time), with the first intake in 2011. For now, the annual intakes are small (around 12 undergraduates and 12 postgraduates).

Lecturers who join MTH are required to complete a Postgraduate Certificate in Higher Education Practice as part of probation, leading to fellowship of the Higher Education Academy, and we participate in annual peer review. Our commitment is evidenced by our consistent excellent performance in the National Student Survey (we have featured in the UK top ten for student satisfaction every year since the survey began).

3B: SCHOOL DATA

Student data is provided by academic year (up to 2013/14), and staff data by calendar year (up to 2014), separately for Mathematics and Engineering. For Engineering, the numbers are very small and the courses new, so that no meaningful conclusions can be drawn, but we will continue to monitor this (**AP: 1.1**).

STUDENT DATA (2009/10-2013/14)

i) Numbers of Males and Females on Access or Foundation Courses

Table 3 gives student numbers on the Science-wide foundation course, while Figure 1 gives the numbers transferring to MTH.

TABLE 3: UEA Science Foundation Year Data										
	2009/10		2010/11		2011/12		2012/13		2013/14	
	START	TRANSFER	START	TRANSFER	START	TRANSFER	START	TRANSFER	START	TRANSFER
FEMALE	62	26	57	24	61	25	57	32	34	24
MALE	107	54	103	43	76	31	67	34	51	48
TOTAL	**169**	**80**	**160**	**67**	**137**	**56**	**124**	**66**	**85**	**72**
% FEMALE	**37**	**33**	**36**	**36**	**45**	**45**	**46**	**49**	**40**	**33**

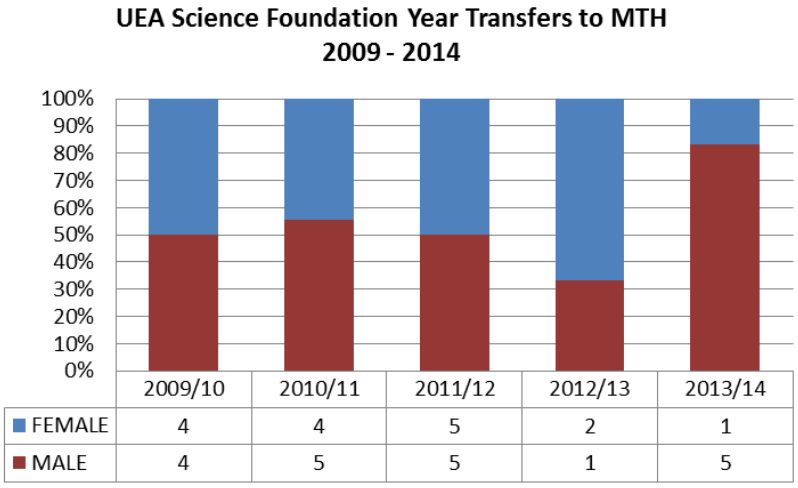
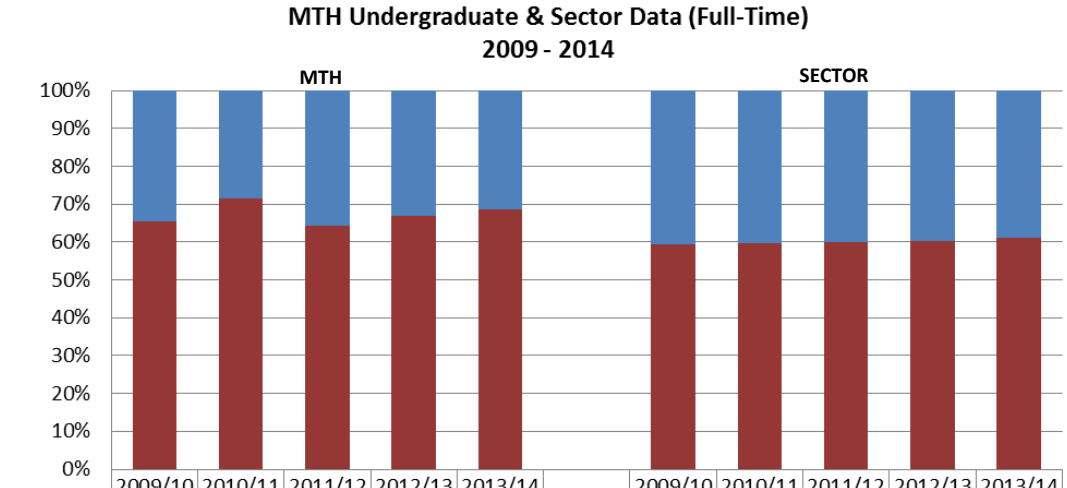


Figure 1

We recruit rather few students from the Foundation year at UEA (which has not been Maths specific) and, with the exception of 2013/14, the numbers have been well-balanced between genders. There will be a specific Mathematics stream from 2015/16 for which the recruitment of female students will be proactively considered as part of the wider review of recruitment (**AP: 2.1**).

(ii) Undergraduate Male and Female Numbers

Figure 2 gives the numbers of undergraduate students in Mathematics, with national figures for comparison.

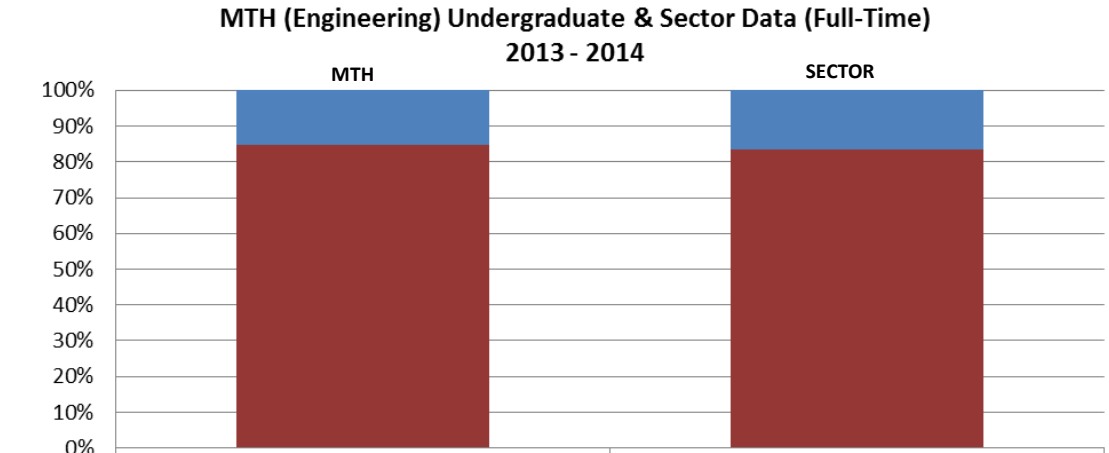


	2009/10	2010/11	2011/12	2012/13	2013/14		2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	87	70	104	97	104		9,655	10,060	10,590	10,695	10,700
MALE	165	175	188	197	228		14,065	14,915	15,820	16,315	16,930

Figure 2

The proportion of female undergraduate students in MTH is a serious concern for us: not only has it been consistently below the national average (around 33% for MTH, compared with 40% nationally) but the trend has been downwards – indeed, the proportion of female admissions in the last two years has been particularly low (22% in 2013/14 and 23% in 2014/15). Since the problem appears already at the application stage, we discuss it further below.

Figure 3 gives the numbers of undergraduate students in Engineering (started 2013), with national figures for comparison.

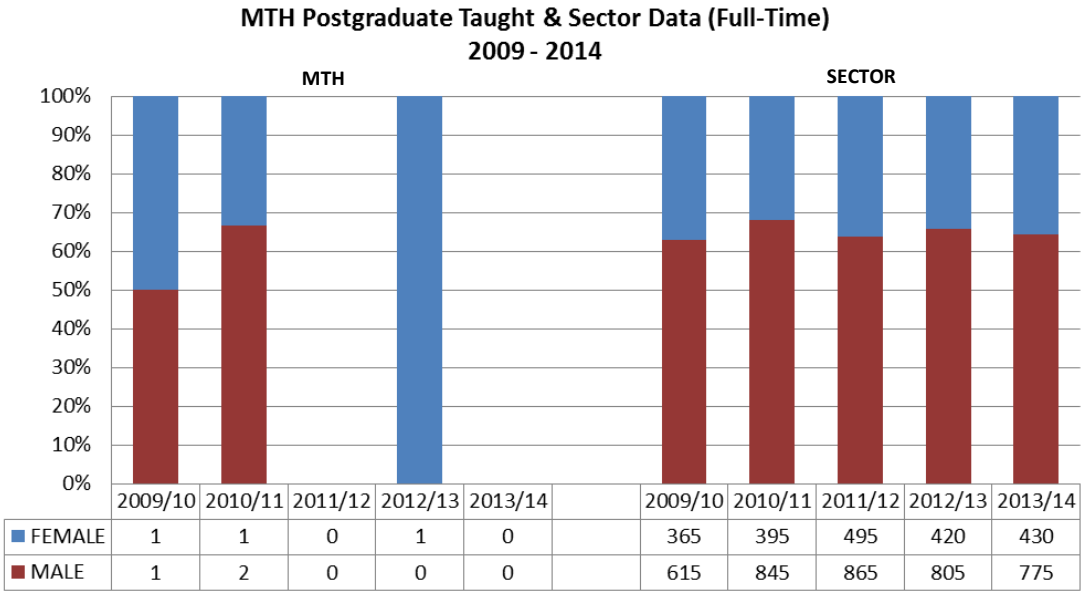


	2013/14	2013/14
FEMALE	2	2,555
MALE	11	12,770

Figure 3

(iii) Postgraduate Taught Male and Female Data

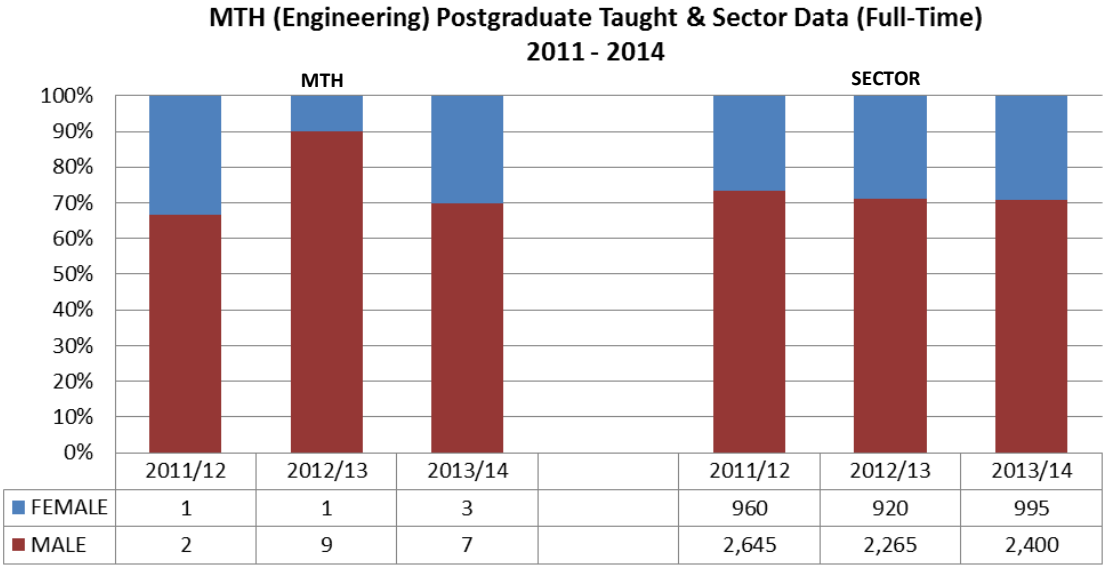
Figure 4 gives the numbers of PGT students in Mathematics, with national figures for comparison. The MSc in Mathematics was discontinued after 2012/13 so we make no comment on these.



	2009/10	2010/11	2011/12	2012/13	2013/14		2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	1	1	0	1	0		365	395	495	420	430
MALE	1	2	0	0	0		615	845	865	805	775

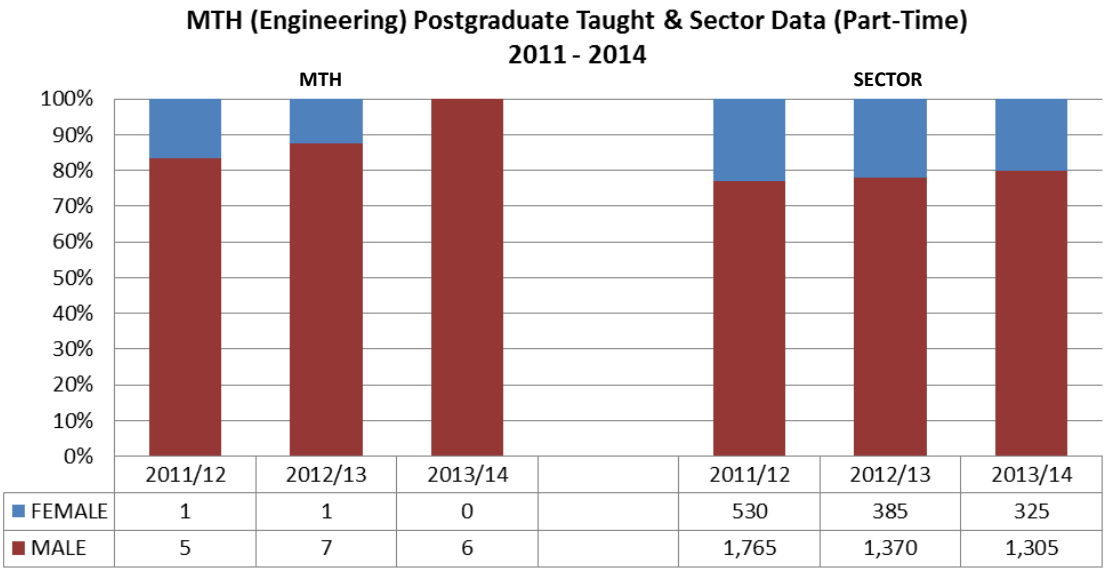
Figure 4

Figures 5 and 6 give the numbers of full-time (respectively, part-time) PGT students in Engineering, with national figures for comparison.



	2011/12	2012/13	2013/14		2011/12	2012/13	2013/14
FEMALE	1	1	3		960	920	995
MALE	2	9	7		2,645	2,265	2,400

Figure 5



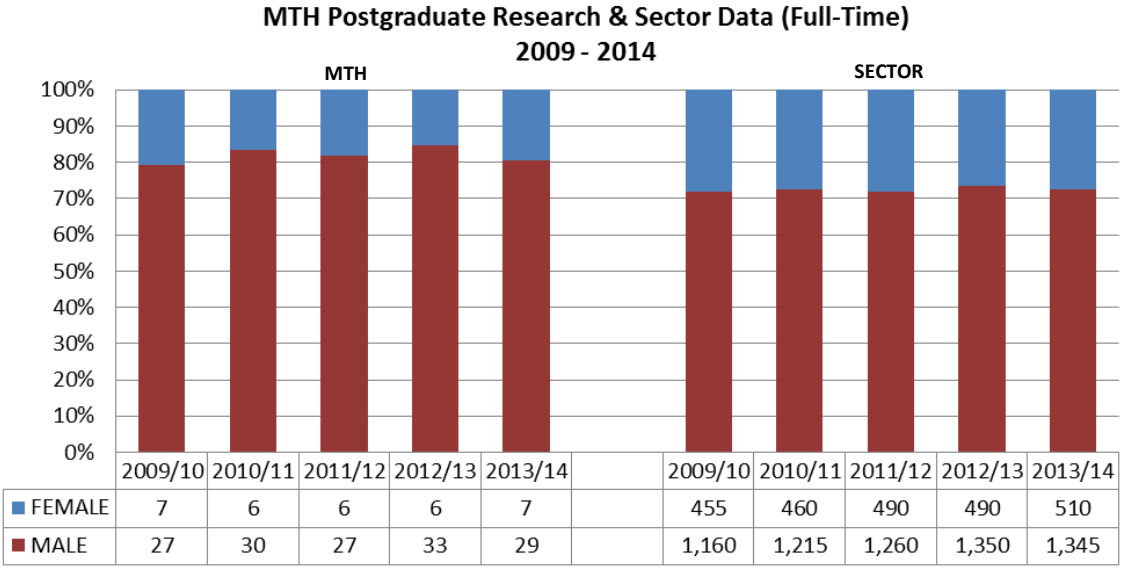
	MTH 2011/12	MTH 2012/13	MTH 2013/14	SECTOR 2011/12	SECTOR 2012/13	SECTOR 2013/14
FEMALE	1	1	0	530	385	325
MALE	5	7	6	1,765	1,370	1,305

Figure 6

The proportion of female full-time PGT students has been broadly in line with national averages, with part-time slightly lower. Monitoring will continue to see if action is required (**AP: 1.1**), while promotional material will be reviewed parallel to that for Mathematics courses, with particular emphasis, especially for part-time student recruitment, on the family-friendly facilities and policies at UEA (**AP: 2.1**).

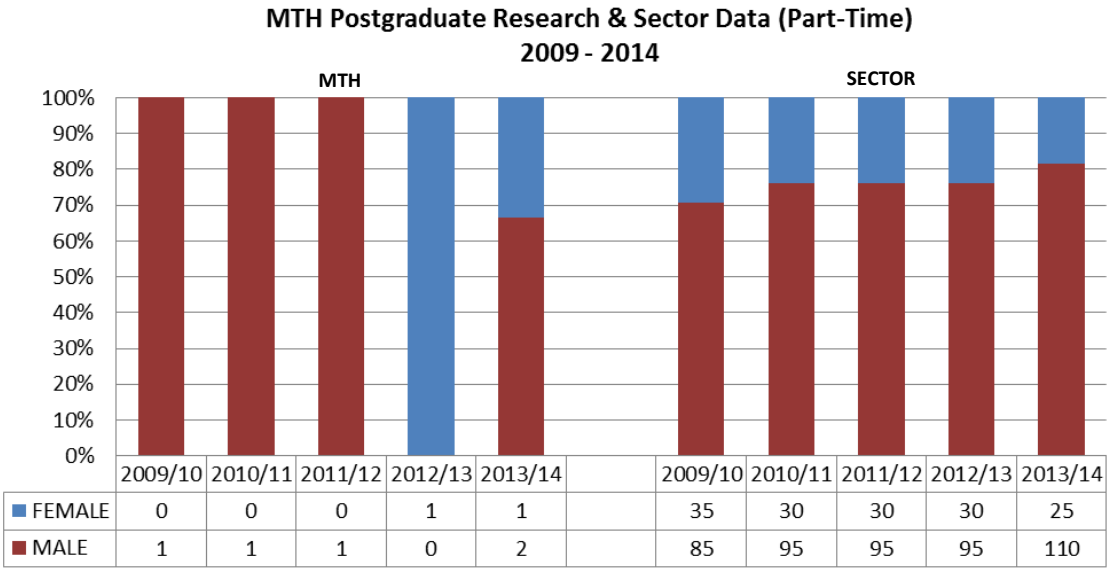
(iv) Postgraduate Research Male and Female Numbers

Figures 7 and 8 give the numbers of full-time (and respectively, part-time) PGR students in Mathematics, with national figures for comparison. (We have not yet had PGR students in Engineering.)



	MTH					SECTOR				
	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	7	6	6	6	7	455	460	490	490	510
MALE	27	30	27	33	29	1,160	1,215	1,260	1,350	1,345

Figure 7



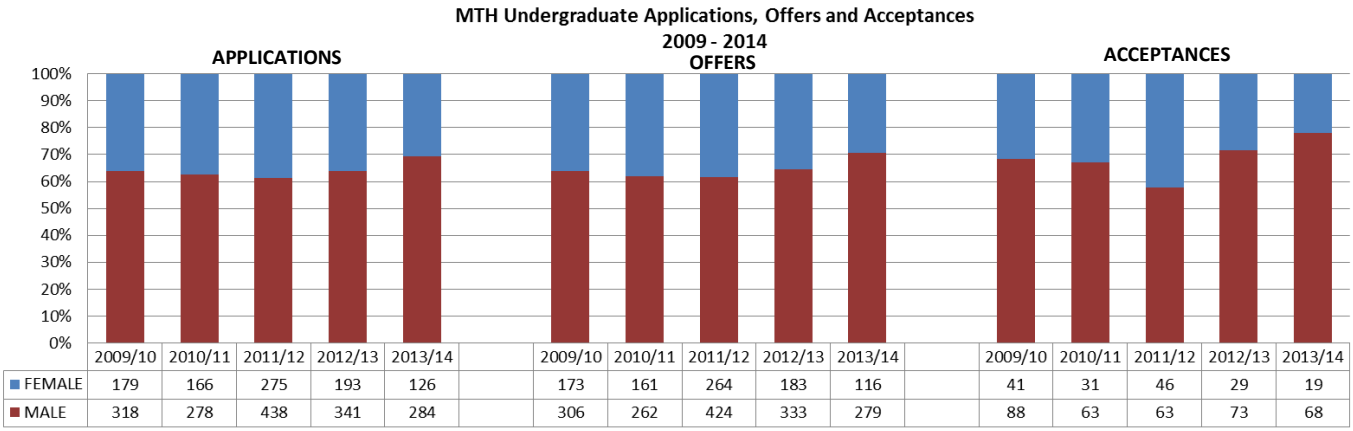
	MTH					SECTOR				
	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	0	0	0	1	1	35	30	30	30	25
MALE	1	1	1	0	2	85	95	95	95	110

Figure 8

The proportion of female PhD students has been consistently around 20%, again significantly below the national average at around 28%. Even though the number of students concerned is small enough that a single extra female student would make a significant difference, the fact that this trend is ongoing indicates that we have work to do. Since the problem is, again, already at the application stage, we discuss it further below.

(v) Ratio of Course Applications to Offers and Acceptances by Gender

Figure 9 show numbers of applications, offers and acceptances for undergraduate students by gender, over the last five years.



	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	179	166	275	193	126	173	161	264	183	116	41	31	46	29	19
MALE	318	278	438	341	284	306	262	424	333	279	88	63	63	73	68

Figure 9

While the fact that the proportions of offers to female undergraduate applicants closely matches the proportion of applications reassures us that we are not systemically biased, it is concerning that, in four of the last five years, the proportion of acceptances has been substantially lower. Indeed while, over the last five years, 22% of offers to male applicants have ended with admission, this has been only 18.5% for female applicants, and only 16% over the last two years. Moreover, in the last two years especially, the proportion of female applicants has also been low (31% in 2013/14). Following discussions in ASSG and consultation via the undergraduate survey, we have been led to the following action points, to help us understand why we are not attracting female applicants, and to increase their numbers and acceptance rates.

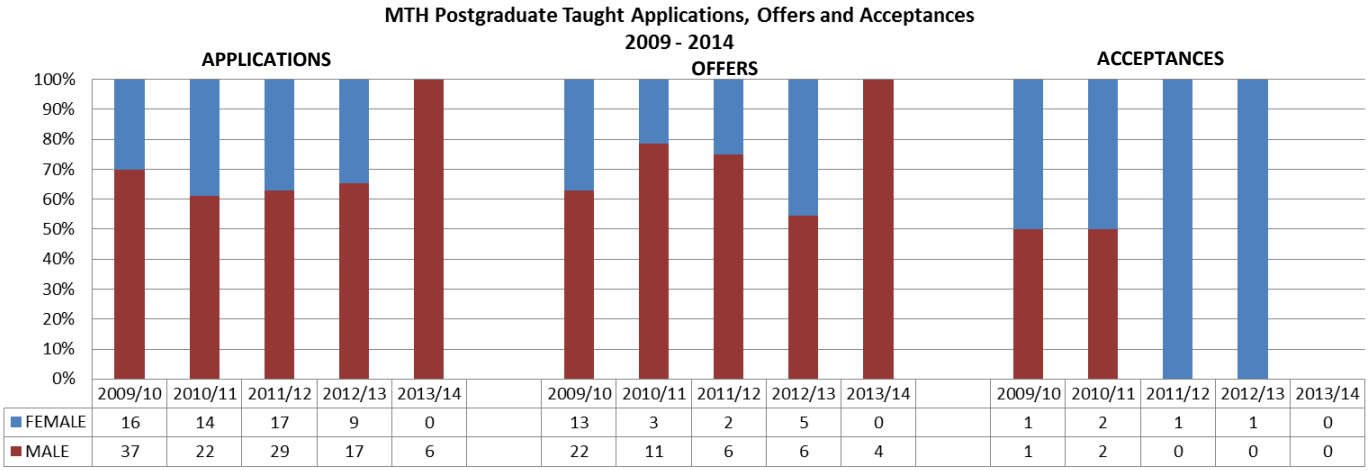
2.1 Review student recruitment and advertising material (web, prospectuses, flyers, screens) to ensure a gender balance is presented at all levels, and family-friendly policies/facilities and support are promoted.

1.3 Monitor and interpret undergraduate recruitment data, including numbers of female students attending Open/Applicant Days and accepting our offer as Firm/Insurance, and gender balance of staff/students involved in recruitment.

1.4 Monitor gender ratio of students by module, to understand whether our module provision may be putting off female students.

5.4 Increase the visibility of women in MTH, physically within the School and on the web.

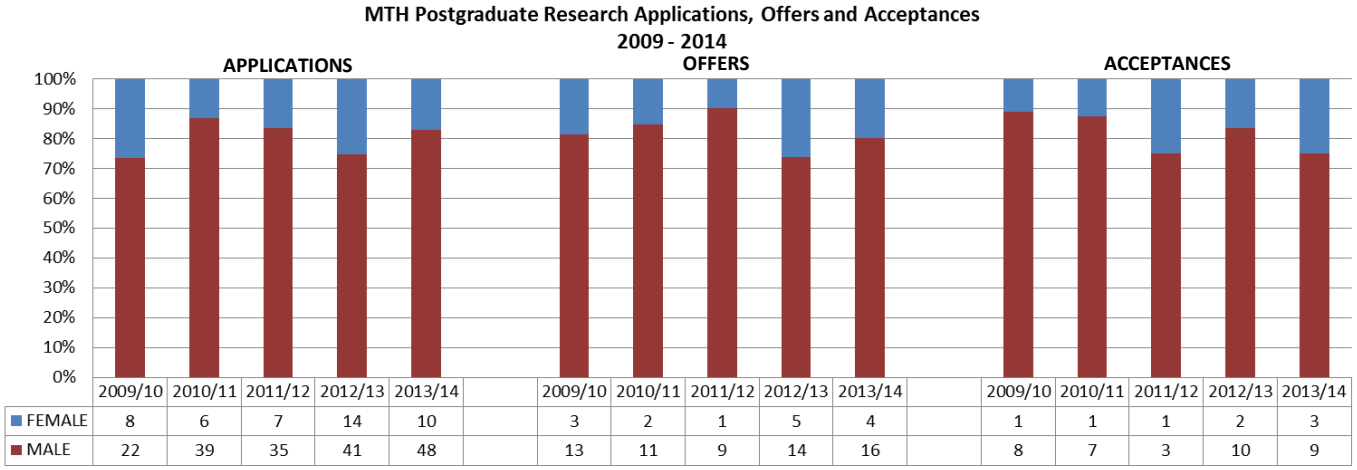
Figure 10 gives the numbers of applications, offers and acceptances for Mathematics PGT students by gender, over the last five years. As the MSc was discontinued in 2013, we make no comment.



	APPLICATIONS					OFFERS					ACCEPTANCES				
	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	16	14	17	9	0	13	3	2	5	0	1	2	1	1	0
MALE	37	22	29	17	6	22	11	6	6	4	1	2	0	0	0

Figure 10

Figure 11 gives the numbers of applications, offers and acceptances for Mathematics PGR students by gender, over the last five years.



	APPLICATIONS					OFFERS					ACCEPTANCES				
	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	8	6	7	14	10	3	2	1	5	4	1	1	1	2	3
MALE	22	39	35	41	48	13	11	9	14	16	8	7	3	10	9

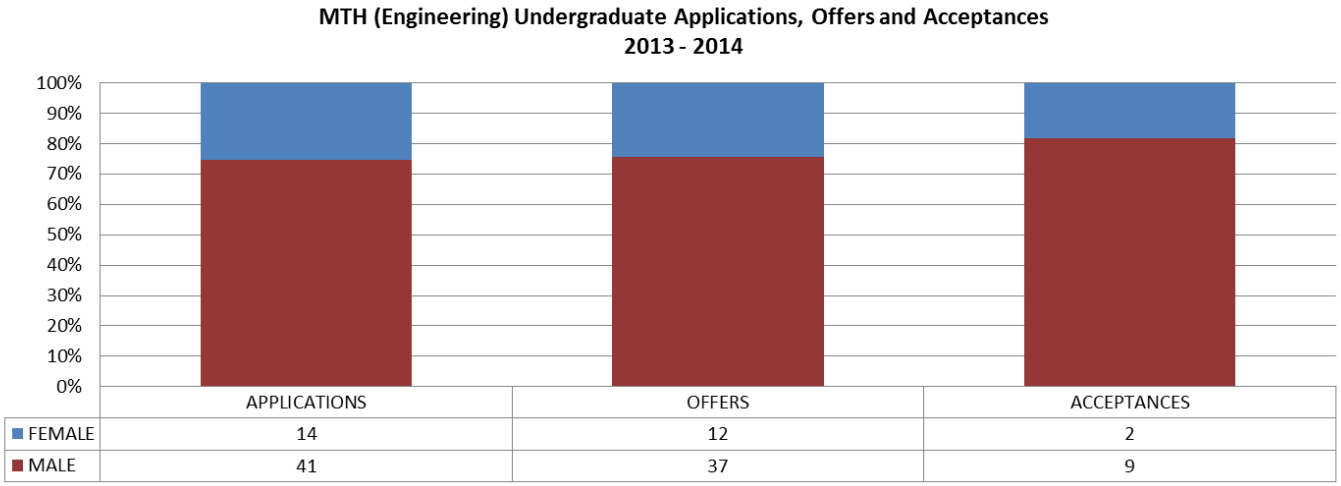
Figure 11

As with undergraduate students, the initial problem is in attracting female PhD applicants. We are addressing this: indeed, we already added a statement to the UEA PhD advertisement this year to emphatically encourage female applicants. Feedback from student surveys and discussion in ASSG led to the following action points, in addition to those above on undergraduate recruitment (**AP 2.1, 5.4**), which are also relevant here.

1.5 Monitor gender balance of lecturers by module: The undergraduate survey identified the gender balance of lecturers on core modules as a possible reason why fewer women stay on to MMath and PhD.

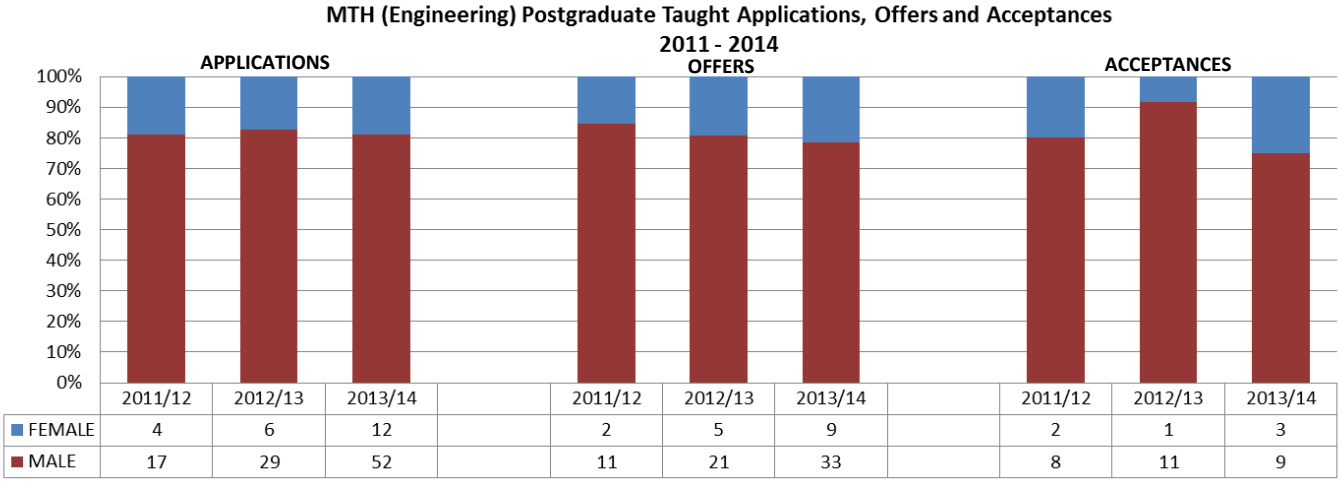
5.3 Advertise success stories: Promote role models by advertising career success stories of recent female PhD students and current female staff on the web.

Figures 12 and 13 gives the numbers of applications, offers and acceptances for Engineering UG and PGT degrees respectively.



	APPLICATIONS	OFFERS	ACCEPTANCES
FEMALE	14	12	2
MALE	41	37	9

Figure 12



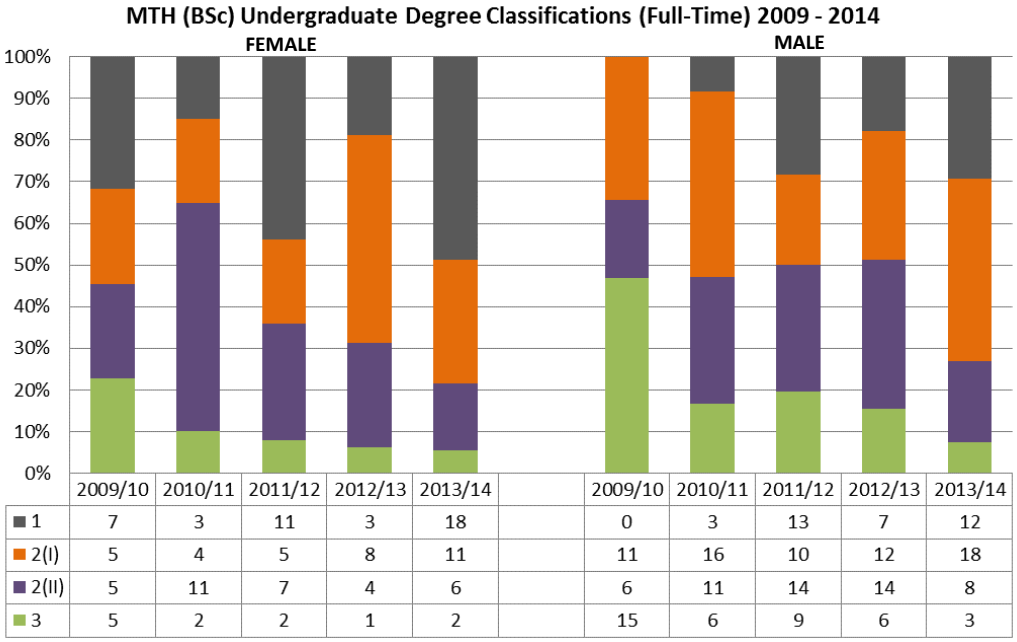
	2011/12	2012/13	2013/14	2011/12	2012/13	2013/14	2011/12	2012/13	2013/14
FEMALE	4	6	12	2	5	9	2	1	3
MALE	17	29	52	11	21	33	8	11	9

Figure 13

Action Points for PGT Engineering were discussed in (iii) above; the review of promotional material will also include UG Engineering (**AP: 2.1**).

(vi) Awards Data by Gender

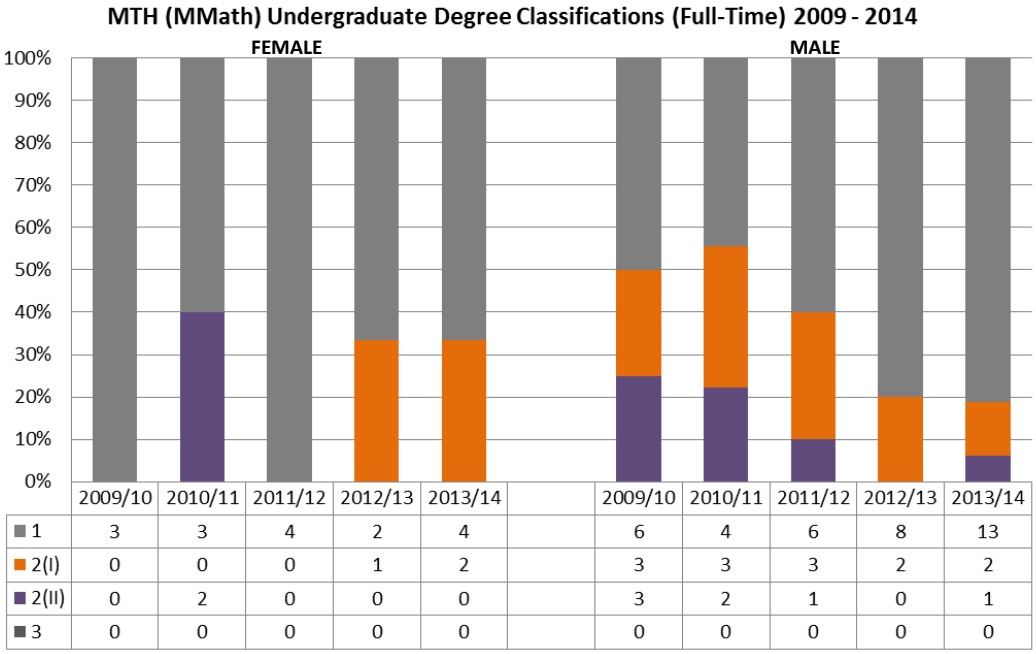
Figure 14 and Table 4a give degree classifications by gender for BSc degrees, while Figure 15 and Table 4b give the same information for MMath degrees.



	FEMALE						MALE				
	2009/10	2010/11	2011/12	2012/13	2013/14		2009/10	2010/11	2011/12	2012/13	2013/14
1	7	3	11	3	18		0	3	13	7	12
2(I)	5	4	5	8	11		11	16	10	12	18
2(II)	5	11	7	4	6		6	11	14	14	8
3	5	2	2	1	2		15	6	9	6	3

Figure 14

TABLE 4a: BSc Attainment by Gender based on Gender Pool						
%		2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	1	32	15	44	19	49
	2(I)	23	20	20	50	30
	2(II)	23	55	28	25	16
	3	23	10	8	6	5
MALE	1	0	8	28	18	29
	2(I)	34	44	22	31	44
	2(II)	19	31	30	36	20
	3	47	17	20	15	7



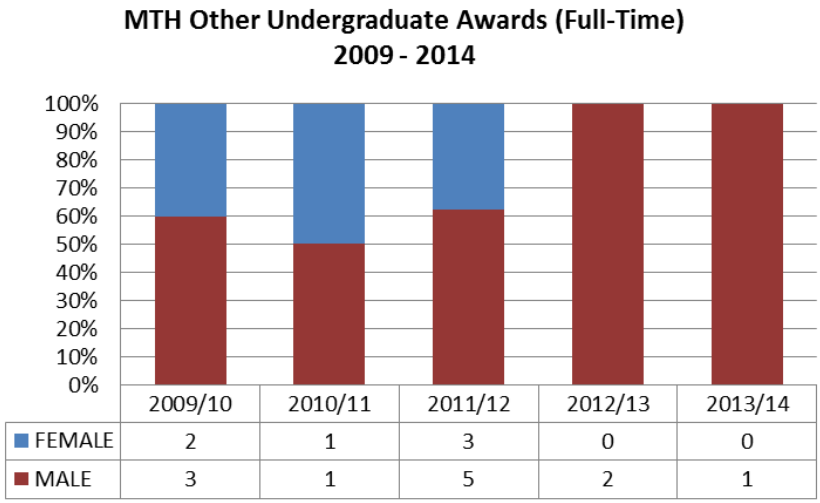
	2009/10	2010/11	2011/12	2012/13	2013/14		2009/10	2010/11	2011/12	2012/13	2013/14
1	3	3	4	2	4		6	4	6	8	13
2(I)	0	0	0	1	2		3	3	3	2	2
2(II)	0	2	0	0	0		3	2	1	0	1
3	0	0	0	0	0		0	0	0	0	0

Figure 15

TABLE 4b: MMath Attainment by Gender based on Gender Pool						
%		**2009/10**	**2010/11**	**2011/12**	**2012/13**	**2013/14**
FEMALE	**1**	100	60	100	67	67
	2(I)	0	0	0	33	33
	2(II)	0	40	0	0	0
	3	0	0	0	0	0
MALE	**1**	50	44	60	80	81
	2(I)	25	33	30	20	13
	2(II)	25	22	10	0	6
	3	0	0	0	0	0

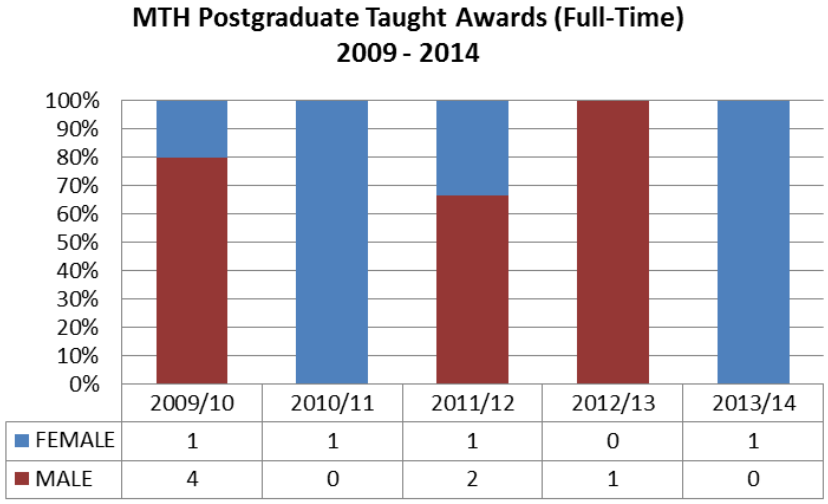
There do not appear to be any major discrepancies, except that the proportion of 1st class BSc degrees among female students is substantially higher than among male students in several years, while the proportion of female students staying on to MMath (18%) is somewhat lower than for male students (23%). This adversely affects the numbers of female students able to go on to PhD. To address this, we will ensure that advisers discuss staying on to MMath with suitable students, particularly women, at the beginning of both 2nd and 3rd year (**AP: 2.3**). (Students can opt to transfer between the BSc and the MMath at any time, and this option is widely publicised at Open and Applicant Days.) The School will include the high attainment of its female students in its review of promotional material and draw upon success stories. It will also analyse available data on career destinations of its alumni by gender, to determine why its female mathematicians made their career choices and whether this can help the School create course choices/options that are more attractive to talented women (**AP: 2.6**).

Figures 16-20 give the numbers of awards of other undergraduate (Certificate/Diploma exit awards), PGT Mathematics, PGT Engineering (full-time), PGT Engineering (part-time) and PGR Mathematics degrees respectively. In each case the numbers are small, and in line with admissions figures.



	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	2	1	3	0	0
MALE	3	1	5	2	1

Figure 16



	2009/10	2010/11	2011/12	2012/13	2013/14
FEMALE	1	1	1	0	1
MALE	4	0	2	1	0

Figure 17

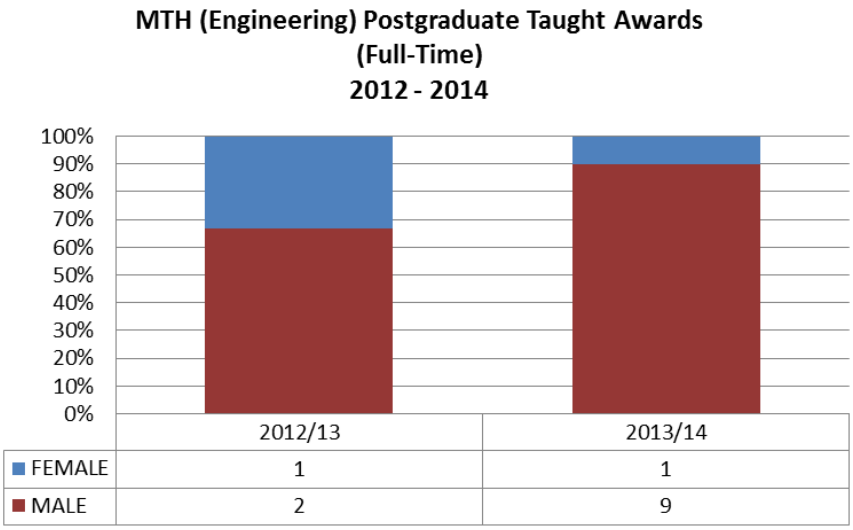


Figure 18

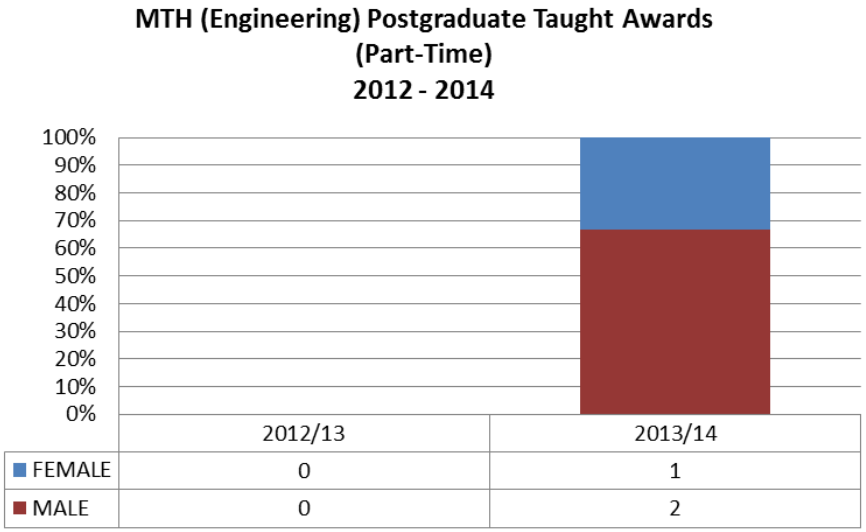


Figure 19

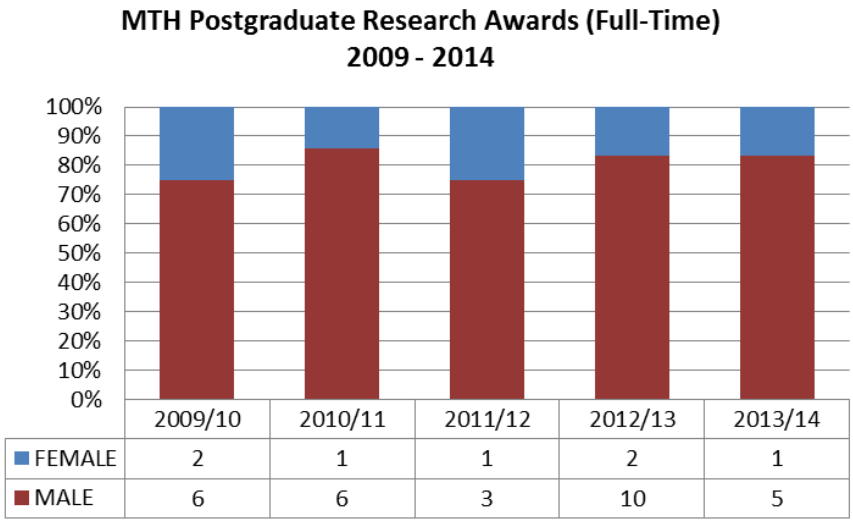


Figure 20

STAFF DATA (2009-2014)

Table 5 shows the numbers of staff by grade and gender in Mathematics.

(vii) Ratio of Academic Staff and Research Staff by Gender

TABLE 5: MTH Ratio of Academic Staff and Research Staff by Gender and Staff Category													
Headcount		FEMALE						MALE					
		2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Professor		**0**	**1**	**1**	**1**	**1**	**1**	**5**	**5**	**5**	**5**	**4**	**4**
	ATR	0	1	1	1	1	1	5	5	5	5	4	4
	ATS	0	0	0	0	0	0	0	0	0	0	0	0
Reader		**1**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	**3**	**3**	**3**	**3**
	ATR	1	0	0	0	0	0	3	3	3	3	3	3
	ATS	0	0	0	0	0	0	0	0	0	0	0	0
Senior Lecturer		**0**	**0**	**0**	**1**	**1**	**1**	**3**	**2**	**2**	**3**	**4**	**5**
	ATR	0	0	0	1	1	1	3	2	2	3	4	5
	ATS	0	0	0	0	0	0	0	0	0	0	0	0
Lecturer		**3**	**4**	**4**	**3**	**2**	**2**	**6**	**12**	**13**	**10**	**10**	**12**
	ATR	1	3	3	2	2	2	4	5	6	7	8	7
	ATS	2	1	1	1	0	0	2	7	7	3	2	5
Researcher		**1**	**1**	**2**	**1**	**0**	**1**	**6**	**6**	**9**	**5**	**5**	**8**
	RA	1	1	2	1	0	1	6	6	9	5	5	8
OVERALL TOTAL		**5**	**6**	**7**	**6**	**4**	**5**	**23**	**28**	**32**	**26**	**26**	**32**

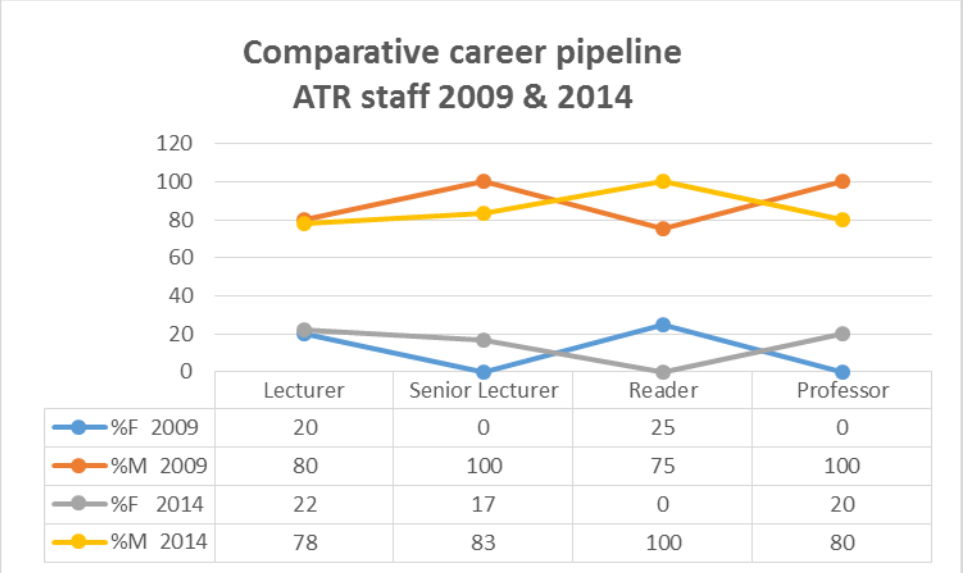
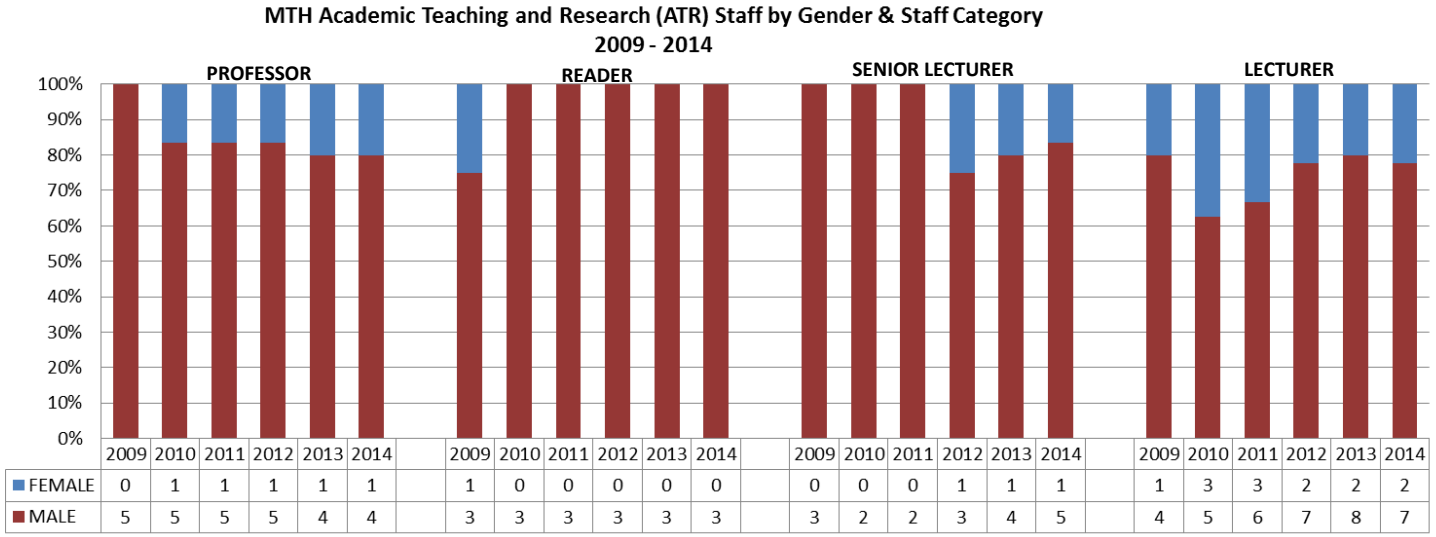


Figure 21a

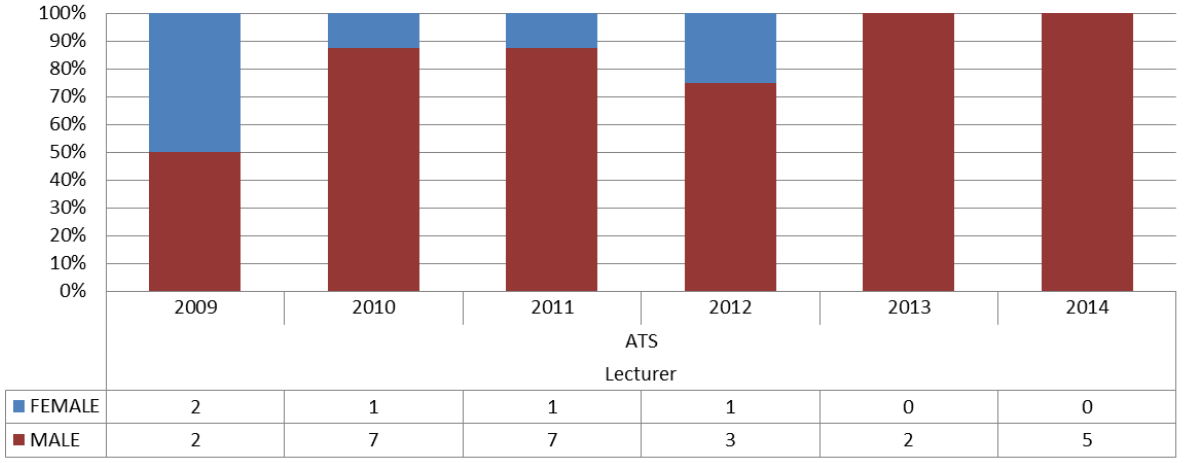
Figure 21a illustrates that the 2014 pipelines for both men and women are relatively flat overall, i.e proportions of staff are retained almost throughout the career structure. It is also pleasing to note that the pipeline does progress to Professor in 2014, an improvement from 2009. The graph helps illustrate that initially attracting more women into MTH is a key issue.

Figures 21b and 22 present the same data for Academic Teaching and Research (ATR) staff and for Academic Teaching and Scholarship (ATS) staff respectively.



	PROFESSOR						READER						SENIOR LECTURER						LECTURER					
	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
FEMALE	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	3	3	2	2	2
MALE	5	5	5	5	4	4	3	3	3	3	3	3	3	2	2	3	4	5	4	5	6	7	8	7

Figure 21b



	2009	2010	2011	2012	2013	2014
FEMALE	2	1	1	1	0	0
MALE	2	7	7	3	2	5

Figure 22

The number of female Mathematics ATR staff has been slowly increasing (2 of 17 in 2009 to 4 of 23 in 2014). The proportion remains low (17%): it is not out of line with national figures (source: ECU) but more must be done to increase it (**AP: 1.1**).

The raw data on ATS posts is somewhat misleading: in 2009-12 most ATS lecturers were on full-time fixed-term contracts (1-3 years). Since then we have had 2 male ATS part-time lecturers on indefinite contracts (0.3FTE and 0.32FTE). In 2014 we were given 3 three-month ATS posts which were advertised to all current/finishing PhD students of both genders. Whilst the posts were all filled by men, this was due to there being no female applicants. For 2014/15 we also have one female ATS tutor on a fixed-term part time variable contract.

Figure 23 presents data for Research Associates (RA) in Mathematics.

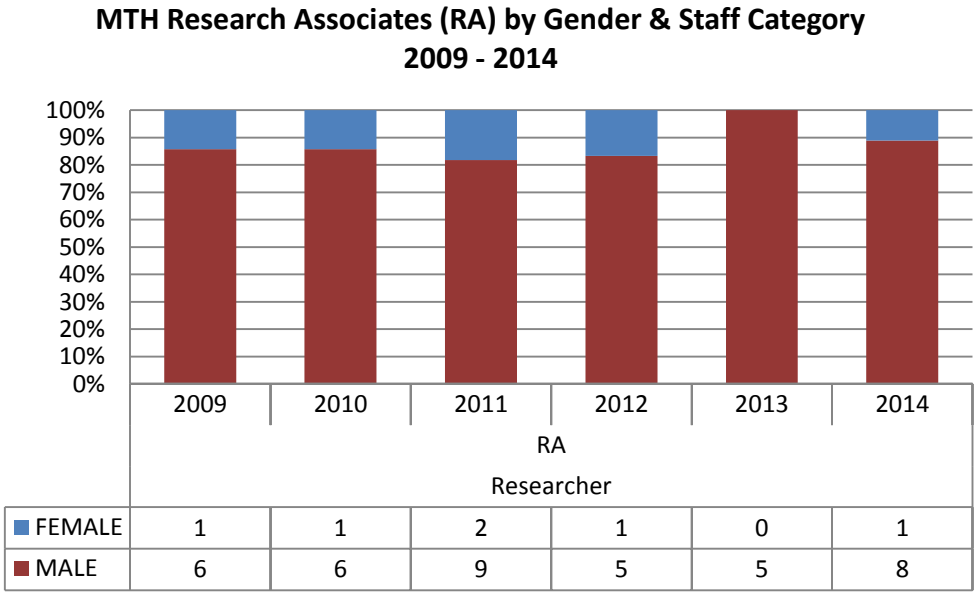


Figure 23

The numbers are small and contracts are invariably fixed-term, with durations typically between 1 and 3 years, though sometimes shorter. The proportion of female RAs is consistently small, though a single extra female RA would dramatically affect this.

Table 6 shows the numbers of staff by grade and gender in Engineering, which are very small: we have one female ATR lecturer (appointed September 2014), two male ATR lecturers (appointed September 2013 and September 2014) and one male ATS Professor (appointed at Senior Lecturer in September 2011). All staff in the table are full-time indefinite, apart from one male ATS Professor (2012-14), who was a part-time visiting professor (20 days per year) and has since left. Female engineering students at PGT stage represent 20% of the headcount so 25% of the engineering staff (1 women) correlates in the overall career pipeline.

TABLE 6: MTH (Engineering) Ratio of Academic Staff and Research Staff by Gender and Staff Category									
Headcount		FEMALE				MALE			
		2011	2012	2013	2014	2011	2012	2013	2014
Professor		0	0	0	0	0	1	1	2
	ATR	0	0	0	0	0	0	0	0
	ATS	0	0	0	0	0	1	1	2
Senior Lecturer		0	0	0	0	1	1	1	0
	ATR	0	0	0	0	0	0	0	0
	ATS	0	0	0	0	1	1	1	0
Lecturer		0	0	0	1	0	0	1	2
	ATR	0	0	0	1	0	0	1	2
	ATS	0	0	0	0	0	0	0	0
OVERALL TOTAL		0	0	0	1	1	2	3	4

(viii) Turnover by Grade and Gender

Tables 7 and 8 give numbers of leavers from Mathematics by gender and grade (2009-14).

TABLE 7: MTH Academic Staff Headcount and Leavers by Gender and Staff Category						
	FEMALE			MALE		
	Employees	Leavers	% Leavers	Employees	Leavers	% Leavers
2009	5	0	0	23	0	0
2010	6	0	0	28	2	7
2011	7	2	29	32	8	25
2012	6	2	33	26	4	15
2013	4	0	0	26	2	8
2014	5	0	0	32	8	25
TOTALS	33	4	12	167	24	14

TABLE 8: MTH Academic Staff Headcount and Leavers by Gender and Staff Category							
		FEMALE			MALE		
		Employees	Leavers	% Leavers	Employees	Leavers	% Leavers
2009	Professor	0	-	-	5	-	-
	Reader	1	-	-	3	-	-
	Senior Lecturer	0	-	-	3	-	-
	Lecturer	3	-	-	6	-	-
	Researcher	1	-	-	6	-	-
	TOTAL	**5**	**0**	**0**	**23**	**0**	**0**
2010	Professor	1	-	-	5	1	20
	Reader	0	-	-	3	-	-
	Senior Lecturer	0	-	-	2	-	-
	Lecturer	4	-	-	12	-	-
	Researcher	1	-	-	6	1	17
	TOTAL	**6**	**0**	**0**	**28**	**2**	**7**
2011	Professor	1	-	-	5	-	-
	Reader	0	-	-	3	-	-
	Senior Lecturer	0	-	-	2	-	-
	Lecturer	4	1	25	13	4	31
	Researcher	2	1	50	9	4	44
	TOTAL	**7**	**2**	**29**	**32**	**8**	**25**
2012	Professor	1	-	-	5	1	20
	Reader	0	-	-	3	-	-
	Senior Lecturer	1	-	-	3	-	-
	Lecturer	3	1	33	10	1	10
	Researcher	1	1	100	5	2	40
	TOTAL	**6**	**2**	**33**	**26**	**4**	**15**
2013	Professor	1	-	-	4	-	-
	Reader	0	-	-	3	-	-
	Senior Lecturer	1	-	-	4	-	-
	Lecturer	2	-	-	10	-	-
	Researcher	0	-	-	5	2	40
	TOTAL	**4**	**0**	**0**	**26**	**2**	**8**
2014	Professor	1	-	-	4	-	-
	Reader	0	-	-	3	-	-
	Senior Lecturer	1	-	-	5	-	-
	Lecturer	2	-	-	12	5	42
	Researcher	1	-	-	8	3	38
	TOTAL	**5**	**0**	**0**	**32**	**8**	**25**

The numbers are small and most staff departures have been due to fixed-term contracts ending, for ATS and Research staff. (Mathematics across the sector typically has many fewer RAs than Science subjects.) The exceptions are: one female lecturer who left after just 1 year to return to an academic post in the US; and two male professors (one early retirement for health reasons, one to a pro-vice chancellor position in Durham) and two male lecturers.

Tables 9 and 10 give numbers of leavers from Engineering by gender and grade (2011-14): none.

TABLE 9: MTH (Engineering) Academic Staff Headcount and Leavers by Gender and Staff Category						
	FEMALE			MALE		
	Employees	Leavers	% Leavers	Employees	Leavers	% Leavers
2011	0	-	-	1	-	-
2012	0	-	-	2	-	-
2013	0	-	-	3	-	-
2014	1	-	-	4	-	-
TOTALS	**1**	**0**	**0**	**10**	**0**	**0**

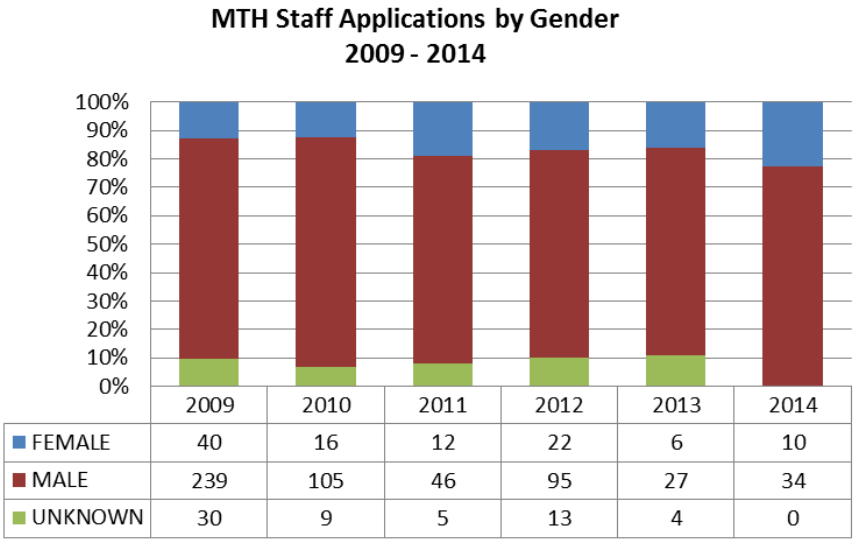
TABLE 10: MTH (Engineering) Academic Staff Headcount and Leavers by Gender and Staff Category							
		FEMALE			MALE		
		Employees	Leavers	% Leavers	Employees	Leavers	% Leavers
2011	Professor	0	-	-	0	-	-
	Senior Lecturer	0	-	-	1	-	-
	Lecturer	0	-	-	0	-	-
	TOTAL	**0**	**0**	**0**	**1**	**0**	**0**
2012	Professor	0	-	-	1	-	-
	Senior Lecturer	0	-	-	1	-	-
	Lecturer	0	-	-	0	-	-
	TOTAL	**0**	**0**	**0**	**2**	**0**	**0**
2013	Professor	0	-	-	1	-	-
	Senior Lecturer	0	-	-	1	-	-
	Lecturer	0	-	-	1	-	-
	TOTAL	**0**	**0**	**0**	**3**	**0**	**0**
2014	Professor	0	-	-	2	-	-
	Senior Lecturer	0	-	-	0	-	-
	Lecturer	1	-	-	2	-	-
	TOTAL	**1**	**0**	**0**	**4**	**0**	**0**

Word Count: 1997

SUPPORTING AND ADVANCING WOMEN'S CAREERS:

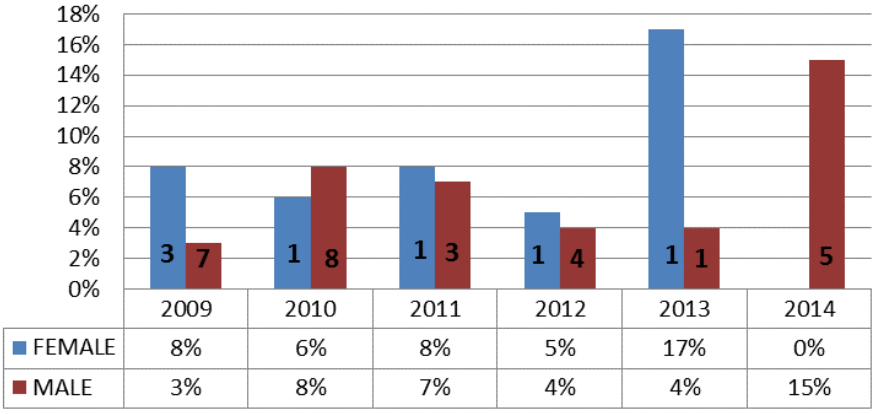
A (i) Job Application and Success Rates by Gender and Grade

Figures 24 and 25 show job application numbers, and success rates, by gender for Mathematics jobs (2009-14), while the subsequent tables (11a-11f) disaggregate these by grade. As mentioned above, the 2014 data is somewhat misleading: we were given, at short notice, 3 three-month ATS posts, which were advertised to all current/finishing PhD students of both genders. Whilst the posts were all filled by men, this was due to there being no female applicants.



	2009	2010	2011	2012	2013	2014
FEMALE	40	16	12	22	6	10
MALE	239	105	46	95	27	34
UNKNOWN	30	9	5	13	4	0

Figure 24



	2009	2010	2011	2012	2013	2014
FEMALE	8%	6%	8%	5%	17%	0%
MALE	3%	8%	7%	4%	4%	15%

Figure 25

TABLE 11a: MTH Job Applications by Gender and Staff Category										
2009	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**31**	**2**	**201**	**3**	**25**	**12**	**6**	**78**	**1**	**10**
Lecturer	31	2	201	3	25	12	6	78	1	10
ATS	**8**	**1**	**33**	**2**	**5**	**17**	**13**	**72**	**6**	**11**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	8	1	33	2	5	17	13	72	6	11
RA	**1**	**0**	**5**	**2**	**0**	**17**	**0**	**83**	**40**	**0**
Grade 7	1	0	5	2	0	17	0	83	40	0
GRAND TOTAL	**40**	**3**	**239**	**7**	**30**	**13**	**8**	**77**	**3**	**10**

TABLE 11b: MTH Job Applications by Gender and Staff Category										
2010	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**3**	**0**	**19**	**0**	**3**	**12**	**0**	**76**	**0**	**12**
Lecturer	3	0	19	0	3	12	0	76	0	12
ATS	**11**	**0**	**61**	**4**	**6**	**14**	**0**	**78**	**7**	**8**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	11	0	61	4	6	14	0	78	7	8
RA	**2**	**1**	**25**	**4**	**0**	**7**	**50**	**93**	**16**	**0**
Grade 7	2	1	25	4	0	7	50	93	16	0
GRAND TOTAL	**16**	**1**	**105**	**8**	**9**	**12**	**6**	**81**	**8**	**7**

TABLE 11c: MTH Job Applications by Gender and Staff Category										
2011	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**11**	**0**	**42**	**1**	**5**	**19**	**0**	**72**	**2**	**9**
Lecturer	11	0	42	1	5	19	0	72	2	9
ATS	**1**	**1**	**2**	**1**	**0**	**33**	**100**	**67**	**50**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	1	1	2	1	0	33	100	67	50	0
RA	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**100**	**50**	**0**
Grade 7	0	0	2	1	0	0	0	100	50	0
GRAND TOTAL	**12**	**1**	**46**	**3**	**5**	**19**	**8**	**73**	**7**	**8**

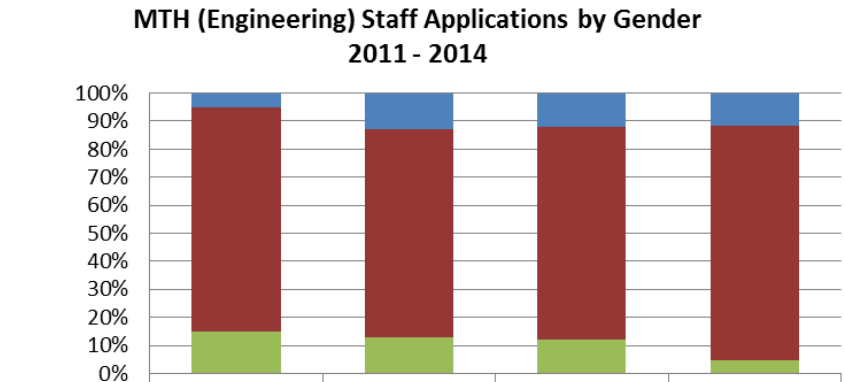
TABLE 11d: MTH Job Applications by Gender and Staff Category										
2012	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**17**	**1**	**89**	**3**	**13**	**12**	**5**	**63**	**3**	**9**
Lecturer	17	1	89	3	13	14	5	75	3	11
ATS	**5**	**0**	**6**	**1**	**0**	**45**	**0**	**55**	**17**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	5	0	6	1	0	45	0	55	17	0
RA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grade 7	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	**22**	**1**	**95**	**4**	**13**	**17**	**5**	**73**	**4**	**10**

TABLE 11e: MTH Job Applications by Gender and Staff Category										
2013	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Lecturer	0	0	0	0	0	0	0	0	0	0
ATS	**3**	**0**	**22**	**0**	**3**	**11**	**0**	**79**	**0**	**11**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	3	0	22	0	3	11	0	79	0	11
RA	**3**	**1**	**5**	**1**	**1**	**33**	**33**	**56**	**20**	**11**
Grade 7	3	1	5	1	1	33	33	56	20	11
GRAND TOTAL	**6**	**1**	**27**	**1**	**4**	**16**	**17**	**73**	**4**	**11**

TABLE 11f: MTH Job Applications by Gender and Staff Category										
2014	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**6**	**0**	**27**	**1**	**0**	**18**	**0**	**82**	**4**	**0**
Lecturer	6	0	27	1	0	18	0	82	4	0
ATS	**4**	**0**	**7**	**4**	**0**	**36**	**0**	**64**	**57**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	4	0	7	4	0	36	0	64	57	0
RA	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grade 7	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	**10**	**0**	**34**	**5**	**0**	**23**	**0**	**77**	**15**	**0**

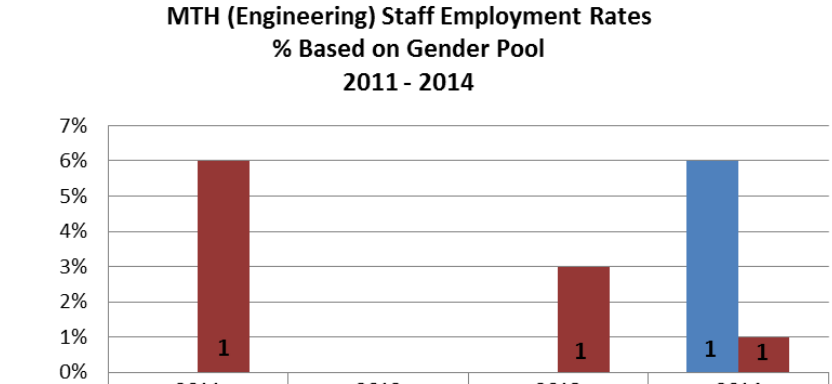
The success rates for male and female applicants are broadly similar (indeed, slightly higher for female applicants with the exception of 2014). Shortlisting data is not available but we plan to record this data in future (**AP: 1.1**). Success rates indicate there is no bias at shortlisting/interview stage; the views of current staff in the survey support this view. On the other hand, our problem with achieving a gender balance in recruitment to Mathematics is in attracting more female applicants (only 16% on average over 2009-14).

Figures 26 and 27 show job application numbers, and success rates, by gender for Engineering jobs (2011-14), while the subsequent tables (11g-11j) disaggregate these by grade. The numbers are very small in total and it is too early to see trends, but again numbers of female applicants are particularly low (although increasing in number). We discuss ways to address this under Recruitment of Staff below.



	2011	2012	2013	2014
FEMALE	1	3	6	17
MALE	16	17	37	122
UNKNOWN	3	3	6	7

Figure 26



	2011	2012	2013	2014
FEMALE	0%	0%	0%	6%
MALE	6%	0%	3%	1%

Figure 27

TABLE 11g: MTH (Engineering) Job Applications by Gender and Staff Category										
2011	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	0	0	0	0	0	0	0	0	0	0
ATS	**1**	**0**	**16**	**1**	**3**	**5**	**0**	**80**	**6**	**15**
Senior Lecturer	1	0	16	1	3	5	0	80	6	15
GRAND TOTAL	**1**	**0**	**16**	**1**	**3**	**5**	**0**	**80**	**6**	**15**

TABLE 11h: MTH (Engineering) Job Applications by Gender and Staff Category										
2012	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**3**	**0**	**17**	**0**	**3**	**13**	**0**	**74**	**0**	**13**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	3	0	17	0	3	13	0	74	0	13
ATS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	**3**	**0**	**17**	**0**	**3**	**13**	**0**	**74**	**0**	**13**

TABLE 11i: MTH (Engineering) Job Applications by Gender and Staff Category										
2013	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**6**	**0**	**37**	**1**	**6**	**12**	**0**	**76**	**3**	**12**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
Lecturer	6	0	37	1	6	12	0	76	3	12
ATS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	**6**	**0**	**37**	**1**	**6**	**12**	**0**	**76**	**3**	**12**

TABLE 11j: MTH (Engineering) Job Applications by Gender and Staff Category										
2014	No.					%				
	FEMALE		MALE		NK	FEMALE		MALE		NK
	Applications	Employed	Applications	Employed	Applications	Applications	Employed	Applications	Employed	Applications
ATR	**17**	**1**	**122**	**1**	**7**	**12**	**6**	**84**	**1**	**5**
Senior Lecturer	3	0	18	0	1	13	0	82	0	5
Lecturer	14	1	104	1	6	11	7	84	1	5
ATS	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Senior Lecturer	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	**17**	**1**	**122**	**1**	**7**	**12**	**6**	**84**	**1**	**5**

A (ii) Applications for Promotion and Success Rates by Grade and Gender

Table 12a shows numbers of applications for promotion in Mathematics by gender and grade, while Table 12b shows numbers of successful applications. The numbers are small but the gender balance of applications is similar to the balance of staff. Most applications have been successful, with just two unsuccessful applications to Professor (1 female, promoted the following year, 1 male).

TABLE 12a: MTH ATR/ATS Promotion Application Rates by Gender and Staff Category													
Promotions into the Grade of:		FEMALE						MALE					
		2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Professor	**Total**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**
	ATR	1	1	0	0	0	0	1	1	0	0	1	1
	ATS	0	0	0	0	0	**0**	0	0	0	0	0	0
Senior Lecturer	**Total**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**1**
	ATR	0	0	0	1	0	0	1	0	0	1	1	1
	ATS	0	0	0	0	0	**0**	0	0	0	0	0	0
GRAND TOTAL		**1**	**1**	**0**	**1**	**0**	**0**	**2**	**1**	**0**	**1**	**2**	**2**

TABLE 12b: MTH ATR/ATS Promotion Success Rates by Gender and Staff Category													
Promotions into the Grade of:		FEMALE						MALE					
		2009	2010	2011	2012	2013	2014	2009	2010	2011	2012	2013	2014
Professor	**Total**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**
	ATR	0	1	0	0	0	0	1	1	0	0	0	1
	ATS	0	0	0	0	0	0	0	0	0	0	0	0
Senior Lecturer	**Total**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**1**	**0**
	ATR	0	0	0	1	0	0	1	0	0	1	1	1
	ATS	0	0	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL		**0**	**1**	**0**	**1**	**0**	**0**	**2**	**1**	**0**	**1**	**1**	**2**

There has been just one application for promotion in Engineering (in 2013, for promotion to ATS Professor), which was successful.

A (iii) Recruitment of Staff

Our recruitment processes, including short-listing, selection processes and criteria, follow UEA's equal opportunities policies. Panels for indefinite ATR posts generally consist of five people, with the chair being the Dean of Science, and with one other member external to MTH. For all staff recruitment, the University requires the majority of each short-listing and interview panel, including the chair, to have undertaken recruitment training within 2 years, and this is monitored by HR; in most cases, all members of the panel have done this training. The University also requires all interview panels to be mixed-gender, and requires *all* its staff to undertake Equality and Diversity training once every two years.

The perception amongst current staff is that the recruitment process is fair (16 of 17 respondents thought this), with a typical comment being: "Advertising is fair, open and inclusive. I have no equality/diversity concerns at the selection stage." Only one person had concerns: "Several of the warning phrases from implicit bias training were used as partial reasons for shortlisting decisions." This is not to be taken lightly and, in any case, we need to be aware of the potential for such unintentional bias **(AP: 2.2)**.

The ASSG has discussed ways to increase the pool of female applicants. The decision has already been taken to form Search Committees for all future recruitments, to ensure that as many potential female applicants as possible are made aware of the opportunities. The wording of the School's commitment to equality and diversity, especially with regard to gender, for the Further Particulars in future recruitment has also been strengthened and the Athena SWAN logo included. Further action planned includes: ensuring that the family-friendly policies, flexible working possibilities, UEA Nursery, Baby Change and Feeding Room and support at UEA are well flagged in the Further Particulars for future recruitment; and unconscious bias training for staff involved in recruitment (**AP: 2.2**), and eventually for all staff (**AP: 5.2**). The actions designed to increase the numbers of female student applications (**AP: 5.3, 5.4**) will hopefully also help in attracting female staff applicants, as will the web presence of our engagement with Athena SWAN (**AP: 5.6**).

A (iv) Support for Staff at Key Career Transition Points

The ASSG considers that the key transition points for MTH are at the passages from school to university, from undergraduate to postgraduate, from PhD to RA and from RA to permanent post.

Admission to university is addressed above, and the actions to increase the proportion of female MMath students (**AP: 2.3**) will contribute to supporting the transition to postgraduate. We run an annual session for final year students considering continuing to PhD in October/November each year, advertised to all students in years 3 and 4 (so that sometimes third year MMath students also come), and the gender breakdown at the 2014 event was 4 female, 6 male, which looks somewhat more optimistic.

The survey of undergraduate students also included questions on career choices and their attitude to a career in academia. While 46% of them have considered staying on to a PhD (the same proportion for female and male students), it was notable in the responses that, of those that have considered staying on, female students were more likely to be unsure what a PhD entails (44% compared to 7% male) and more likely to feel they are not good enough (33% compared to 15% male), despite the evidence of high achievement of undergraduate female students the School. In order to address this, and in order to reach students at a time before they have made career choices, we will enhance the annual PhD session described above, inviting students in year 2 (**AP: 2.4**). The impact of this will be investigated through the annual survey of students.

Support for both PhD students and RAs is generally led by the supervisory team, and this has been reasonably successful. For example, Daniela Amato was an RA from 2009-11, which included a period of maternity leave; when she left, she went to an indefinite academic post at the University of Brasilia, in her home city. The recently finished PhD student Stefanie Zegowitz took up an RA position in Exeter as there were no current opportunities available at UEA on completion of her PhD.

In addition, there is substantial support available through personal and professional development opportunities (including ResNet, a contact and information network promoting gender equality and providing support for female staff at the UEA) but responses to the surveys indicate that many are either not aware of, or have not used, this support. For example, one comment from a PhD student was: "Although I know that the next stage in my career is the post-doc stage, and that I wish to pursue this, I feel I don't know exactly how to go about finding a post-doc, or how grant applications work, for example." This is reflected in the fact that only 26% of PGR students feel able to plan their career development (25% female, 27% male).

We propose several actions to address this. The first is to make better use of induction to ensure that RAs and PhD students are made aware of opportunities as early, and as clearly, as possible (**AP: 4.2, 4.3**). We also plan to have an annual "So you want to be an academic?" information and advice session, aimed principally at PhD students, but also available to RAs, which will include flagging development opportunities which already exist, including ResNet (**AP: 3.2**). More generally, we will seek to promote the support available to staff and students more widely (**AP: 5.6**), for example through the development of "Did You Know?" information slides for display on electronic screens and linking back to our School equality web pages, which have been successful in other Schools at UEA. Examples of slides already developed are shown below.

CAREER DEVELOPMENT

B (i) Promotion and Career Development

The promotions committee in MTH consists of the Head of School, School Directors, one Pure and one Applied Professor, one external member, and two other members of faculty who are elected (for a period of one year) by faculty; currently the two elected members are both lecturers (one male, one female). Procedures are in place to ensure equitability during proceedings. For example, all staff are considered for promotion, not just those who have applied; all staff are expected to provide a short CV for the promotions committee each year in order to ensure that consideration of staff who have not put themselves forward is evidence-based. Verbal feedback is provided to all unsuccessful applicants by the Head of School, with written feedback on request.

The evidence does not suggest there are any gender-biases in the outcomes of the promotions process. However, feedback from the staff survey does indicate that some staff are unclear on what is required for promotion (more precisely, that the University's guidelines leave too much room for interpretation), or feel that only a small part of the job really matters in promotion decisions. The ASSG proposes actions to address this and will work with its HR Manager to create 'local guidance': a set of user-friendly guidelines as a link between the central policy and the School, on how to present a promotions case and the sorts of activities that would indicate performance at a certain level, tailored to Mathematics. This has been shown to be effective in other Schools at UEA, providing benchmarking information at all levels and also helping more junior colleagues understand how to build their own careers effectively (**AP: 5.1**).

Career development is provided for all staff through mentoring (where new staff receive guidance from a senior mentor) and through CSED staff development courses. Mentors for new staff have both an informal support role, and a formal monitoring role through the Certificate for Higher Education Practice; for example, mentors will peer review their mentees' teaching, and must approve their Professional Development Plan within the first few months of arrival. Current arrangements for mentoring beyond probation are informal, with the mentor generally continuing as a source of advice and support. In the longer term, we will explore whether staff feel the need for formal mentoring (via the staff survey) and respond accordingly (**AP: 1.2**).

Career development is supported via annual appraisals: all full-time ATR/ATS staff in post at the time were appraised at the last appraisal round in June/July 2014. The staff survey indicates that most people engage well with the appraisal process but that promotion and career development are rarely discussed in appraisal meetings. The ASSG views this as an opportunity missed and will ensure Appraisers are prompted to do this as a core part of the activity via the development of an appraisal checklist. Moreover, the staff survey showed that few RAs had been appraised (two of six); appraisal for RAs should be arranged as part of induction but we will ensure that RAs are included in future appraisal rounds, in case they have been missed. (**AP: 4.4**).

B (ii) Induction and Training

A thorough induction process is delivered to staff, RAs and PhD students when they begin. CSED provides an introductory conference for new staff and a range of other study days and short courses. All new faculty members are allocated a mentor and have an individual structured School/University induction programme overseen by the Head of School. New staff take a Postgraduate Certificate in Higher Education Practice, which begins with a self-assessment of training/development/working requirements, discussed and agreed with mentor and HoS; this will usually lead to attendance at further training sessions provided by CSED, for example on research supervision, advising students, or responding to students with special

circumstances. All staff (in particular, new staff) are required to undertake an online equality and diversity training module.

For RAs, the induction process is led by the line manager (generally the Principal Investigator on the grant providing the funding for the RA), who also acts as their mentor. The induction checklist includes: an introduction to the School's Research Staff Coordinator, giving another source of support; and information about the Athena SWAN charter, the appraisal process, the mandatory equality and diversity module and CSED courses available.

For PhD students, induction is coordinated by the School's PGR Director. It begins with a day of induction provided centrally to all Science students, followed by induction at the School level, and finally initial meetings with the supervisory team to arrange for any specific induction required and to assess training/development/working requirements.

The ASSG considers that the lack of awareness of support opportunities mentioned above (for PGR students and RAs) indicates that either the induction process needs revising or that it is not being properly implemented. The School is committed to review this: there is now an Induction checklist for RAs, which is automatically passed to the line manager by the School's local support office, in advance of the arrival of the RA; for PhD students, a similar checklist, based on one successfully introduced in other Science Schools which includes the Athena SWAN Charter and other support available, will be ready for the arrival of the new cohort of students in October (**AP: 4.2, 4.3**).

In the longer term, we will also review the induction process for new faculty appointments and revise the staff handbook, to ensure that all the support available is properly signposted (**AP: 4.1**).

B (iii) Support for Female Students

Support is available to female students through the student advisory system (for UG students) and supervisory teams (for PhD students). For UG students, there are also a Senior Adviser and Deputy Senior Adviser, who are always of opposite genders so that female students always have access to a female staff member for advice and support; we will extend these roles, to provide similar support for PhD students (**AP: 4.5**). Significant support is also provided by the Dean of Students office and, for PhD students, by the Science Graduate School, while the University also provides a nursery and baby change/feeding room, available to all staff and students. Lecturers welcome children to their lectures or seminars, when required. The School is also keen to support female students' attendance at external events such as the annual London Mathematical Society 'Women in Mathematics' meeting (three PhD students will attend this year). All staff and research students are able to apply for funding to attend conferences; in the past, this has not explicitly included the possibility of covering childcare costs but we will ensure that it does so in the future (along the lines of the London Mathematical Society's oversubscribed "Childcare Supplementary Grants"), and advertise this to staff and students. (**AP: 4.6**)

The ASSG believes that the presence of women at all levels is an important signal to students about career paths, and this has been a weakness. For example, over 2013-4, the proportion of female speakers at our two seminar series has been 14% (6 of 43) for Pure Mathematics, and 12% (5 of 41) for Applied Mathematics. We will ensure seminar organisers have at least 20% female speakers in each seminar series (**AP: 5.5**).

ORGANISATION AND CULTURE

C (i) Male and Female Representation on Committees

Tables 13a and 13b give the gender breakdown of MTH committees by number and percentage respectively.

TABLE 13a: MTH Committees by Gender												
No.	FEMALE						MALE					
COMMITTEE	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive			1	1	1	1			5	5	5	7
Promotions	2	3	2	3	4	3	5	7	6	5	5	7
Staff Student Liaison (MTH)*	1	1	1	1	1	1	1	2	1	1	1	1
Examinations Board (MTH)		1	1	1	1	2		8	8	9	8	8
Research Executive	1	1	1	1	1	2	4	7	5	5	5	4
Athena SWAN (ASSG)*					4	4					5	5
Extenuating Circumstances					1	2					4	3
Admissions Executive						0						5
Teaching Advisory	0	1	1	1			5	6	7	7		
Staff Student Liaison (ENG)				0	0	0				1	1	1
Examinations Board (ENG)				0	0	1				1	2	5
TOTAL	**4**	**7**	**7**	**8**	**13**	**16**	**15**	**30**	**32**	**34**	**36**	**46**

TABLE 13b: MTH Committees by Gender												
%	FEMALE						MALE					
COMMITTEE	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Executive			17	17	17	13			83	83	83	87
Promotions	29	30	25	38	44	30	71	70	75	63	56	70
Staff Student Liaison (MTH)*	50	33	50	50	50	50	50	67	50	50	50	50
Examinations Board (MTH)		11	11	10	11	20		89	89	90	89	80
Research Executive	20	13	17	17	17	33	80	87	83	83	83	67
Athena SWAN (ASSG)*					44	44					56	56
Extenuating Circumstances					20	40					80	60
Admissions Executive						0						100
Teaching Advisory	0	14	13	13			100	86	87	87		
Staff Student Liaison (ENG)				0	0	0				100	100	100
Examinations Board (ENG)				0	0	17				100	100	83
TOTAL	**21**	**19**	**18**	**19**	**22**	**26**	**79**	**81**	**82**	**81**	**78**	**74**

***** For these committees, the numbers refer to MTH staff numbers; for Staff Student Liaison, all students are members; for ASSG, please see the full list on page 6.

Although women are in a minority on MTH Committees, as just 13% of our staff are women, the proportions are representative, even at the lowest level. The key issue, as already stated, remains attracting more women to MTH. Many of the committees in the School consist of certain role holders together with members who have been co-opted. Role holders, such as Director of Teaching, Chair of Examiners or Director of Research are appointed by the Head of School and are usually senior members of staff (senior lecturer or above). Co-opted members are selected by the Head of School and the committee chair in order to achieve some measure of gender balance and balance of expertise. It is also an important mechanism for career development. Two members of the School's promotions committee are chosen by election; of the other members (including one external representative) at least one is female.

The major administrative role-holders within the School are usually senior members of staff. The intention is that this allows more junior staff to develop their research and teaching. Some of the imbalance in committee membership is therefore a result of imbalances in seniority profiles as well as staffing levels. This will adjust as more female members of staff are appointed and promoted. The use of co-opted members on committees is one mechanism by which the imbalance can be, and is, addressed. (For

example, this was done in 2014/15 for the School Executive, since both our senior female staff are on leave – one on maternity leave, the other on a Leverhulme research fellowship – so that all major role-holders have been male.) (**AP: 3.4**) Another mechanism is the use of email consultations across all staff before decisions on teaching or research matters are taken. For example, there was an extensive email discussion about detailed content of modules following the decision at a School away-day to reorganize the first-year teaching.

C (ii) Academic and Research staff on Fixed Term and Indefinite Contracts by Gender

Table 14 gives the numbers and proportions of Mathematics staff on fixed term/indefinite contracts by gender, which is broken down further by grade in Table 15; the divide is roughly the same as the divide between ATR staff and other groups, which has been discussed above. It is difficult to detect any statistically significant pattern in the data. Apart from for RAs, whose contracts come from fixed-term research grants, it is the School's preference to appoint to indefinite contracts where possible; given that, apart from RAs, there is only one member of staff (an associate tutor) currently on a fixed-term contract, the ASSG sees no need for action in the short term.

TABLE 14: Ratio of Academic and Research Staff on Fixed Term and Indefinite Contracts by Gender

Headcount	No.				%			
	Fixed Term		Indefinite		Fixed Term		Indefinite	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
2009	3	8	2	15	60	35	40	65
2010	2	11	4	17	33	39	67	61
2011	3	14	4	18	43	44	57	56
2012	2	6	4	20	33	23	67	77
2013	0	5	4	21	0	19	100	81
2014	1	11	4	21	20	34	80	66

TABLE 15: Ratio of Academic and Research Staff on Fixed Term and Indefinite Contracts by Gender and Staff Category						
2009	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	0	**0**	0	5	**5**
Reader	0	1	**1**	0	3	**3**
Senior Lecturer	0	0	**0**	0	3	**3**
Lecturer	2	1	**3**	2	4	**6**
Researcher	1	0	**1**	6	0	**6**
Total	**3**	**2**	**5**	**8**	**15**	**23**
% Total	**60**	**40**	**100**	**35**	**65**	**100**
2010	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	1	**1**	0	5	**5**
Reader	0	0	**0**	0	3	**3**
Senior Lecturer	0	0	**0**	0	2	**2**
Lecturer	1	3	**4**	5	7	**12**
Researcher	1	0	**1**	6	0	**6**
Total	**2**	**4**	**6**	**11**	**17**	**28**
% Total	**33**	**67**	**100**	**39**	**61**	**100**
2011	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	1	**1**	0	5	**5**
Reader	0	0	**0**	0	3	**3**
Senior Lecturer	0	0	**0**	0	2	**2**
Lecturer	1	3	**4**	5	8	**13**
Researcher	2	0	**2**	9	0	**9**
Total	**3**	**4**	**7**	**14**	**18**	**32**
% Total	**43**	**57**	**100**	**44**	**56**	**100**
2012	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	1	**1**	0	5	**5**
Reader	0	0	**0**	0	3	**3**
Senior Lecturer	0	1	**1**	0	3	**3**
Lecturer	1	2	**3**	1	9	**10**
Researcher	1	0	**1**	5	0	**5**
Total	**2**	**4**	**6**	**6**	**20**	**26**
% Total	**33**	**67**	**100**	**23**	**77**	**100**

2013	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	1	**1**	0	4	**4**
Reader	0	0	**0**	0	3	**3**
Senior Lecturer	0	1	**1**	0	4	**4**
Lecturer	0	2	**2**	0	10	**10**
Researcher	0	0	**0**	5	0	**5**
Total	**0**	**4**	**4**	**5**	**21**	**26**
% Total	**0**	**100**	**100**	**19**	**81**	**100**
2014	**FEMALE**			**MALE**		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	1	**1**	0	4	**4**
Reader	0	0	**0**	0	3	**3**
Senior Lecturer	0	1	**1**	0	5	**5**
Lecturer	0	2	**2**	3	9	**12**
Researcher	1	0	**1**	8	0	**8**
Total	**1**	**4**	**5**	**11**	**21**	**32**
% Total	**20**	**80**	**100**	**34**	**66**	**100**

Tables 16 and 17 give the same data for Engineering staff, where the numbers are even smaller.

TABLE 16: Ratio of Academic and Research Staff on Fixed Term and Indefinite Contracts by Gender								
Headcount	No.				%			
	Fixed Term		Indefinite		Fixed Term		Indefinite	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
2011	0	0	0	1	0	0	0	100
2012	0	1	0	1	0	50	0	50
2013	0	1	0	2	0	33	0	67
2014	0	1	1	3	0	25	100	75

TABLE 17: Ratio of Academic and Research Staff on Fixed Term and Indefinite						
2011	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	0	**0**	0	0	**0**
Senior Lecturer	0	0	**0**	0	1	**1**
Lecturer	0	0	**0**	0	0	**0**
Total	**0**	**0**	**0**	**0**	**1**	**1**
% Total	**0**	**0**	**0**	**0**	**100**	**100**
2012	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	0	**0**	1	0	**1**
Senior Lecturer	0	0	**0**	0	1	**1**
Lecturer	0	0	**0**	0	0	**0**
Total	**0**	**0**	**0**	**1**	**1**	**2**
% Total	**0**	**0**	**0**	**50**	**50**	**100**
2013	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	0	**0**	1	0	**1**
Senior Lecturer	0	0	**0**	0	1	**1**
Lecturer	0	0	**0**	0	1	**1**
Total	**0**	**0**	**0**	**1**	**2**	**3**
% Total	**0**	**0**	**0**	**33**	**67**	**100**
2014	FEMALE			MALE		
	Fixed Term	Indefinite	Total	Fixed Term	Indefinite	Total
Professor	0	0	**0**	1	1	**2**
Senior Lecturer	0	0	**0**	0	0	**0**
Lecturer	0	1	**1**	0	2	**2**
Total	**0**	**1**	**1**	**1**	**3**	**4**
% Total	**0**	**100**	**100**	**25**	**75**	**100**

C (iii) Representation on Decision-Making Committees

As discussed above (see p.38), many of the School's committees are composed of role-holders and this is true to an even greater extent at Faculty and University level. The issue of "committee overload" is recognized as being a particular problem for female members of staff and is taken into account by the Head of School when co-opting people onto committees. It can also arise for role-holders, and the School has responded to this issue by introducing deputies for the major role holders who can act as substitutes on School and Faculty committees. For example, there was a heavy committee workload for the Director of Research during the preparations for REF2014, which sometimes interfered with her family commitments; the appointment of a deputy able to attend meetings in her place eased some of this pressure. Committee overload will be now more proactively monitored, as well as the overall levels of women on each Committee (**AP: 3.4**).

C (iv) Workload Model

The School operates a simple workload allocation model published to all staff, which has evolved from a prototype first introduced in the School over 30 years ago. The model is operated by the Director of Teaching in consultation with the Head of School and consists of various allowances for different types of activities within each academic year. Allowances are made for teaching, administrative duties and outreach, as well as for PhD and RA supervision. Activities in which all staff are expected to be involved are not included in the model. (For example, equal numbers of student advisees are allocated to all staff, apart from the Head of School, those on study leave, and new staff who are building up their advisee numbers; thus this is not included in the model.) The net effect of the model should be to obtain an equal number of hours of allowance per member of Faculty, whilst allowing for some variation between years. Deviations above and below the average are carried forward. There is a significant allowance for new junior members of staff during their first 3 years.

The School Executive is reviewing the model (**AP: 3.3**). Issues for consideration include the need to incorporate more recent activities (including the role of Director of Equality and Diversity) into the model and ensure that the model better reflects the actual amount of time spent on various activities. As part of the review we will pay particular attention to whether any aspects of the model are adversely affecting female members of staff. For example the model does not currently include allowances for co-option onto committees and appointment panels. Staff perception deemed the model as fair (65% or 11/17) based on the staff survey, though the need to revise the model is reflected in two comments ("Some people seem to do more than others, particularly where duties depend on individuals volunteering").

Administrative responsibilities form part of the University's promotions criteria. The Head of School needs to consider what is desirable for career progression when allocating duties and a discussion of administrative roles forms part of the appraisal process. The main administrative roles (including Head of School) are typically held for 3 years, but this can be varied, for example to accommodate a period of study or maternity leave.

C (v) Timing of Departmental Meetings and Social Gatherings

Most of the teaching in the School is done 9am to 5pm on Mondays to Fridays, though timetabling constraints mean that there are a few 5-6pm lectures. School Board meetings are scheduled to start at 2pm and other meetings are usually between 10am and 4pm. Where staff are unable to attend a meeting (due to family or other commitments), usually a substitute staff member volunteers to stand in. For events running on Saturdays – notably Open Days – there has been a long-standing policy to avoid asking people with family responsibilities, as far as is possible. Informal meetings (such as a regular monthly meeting to

discuss University news items and School issues) are held at lunchtimes. Email discussions and a weekly newsletter are used to ensure inclusivity.

There have been many recent social events organised by members of the mathematics department where postgraduates and faculty have been encouraged to bring their partners and children. The Christmas party in 2014 was held in the Mathematics common room from 16:00, which enabled children of mathematicians to attend, and working partners of mathematicians to arrive when they were able. In the past year, staff and postgraduates, and their families, have also been invited to a summer BBQ by the lake at UEA and a croquet tournament.

C (vi) Culture

The Mathematics department is relatively small, which ensures that faculty all know each other and also enables members of faculty to get to know the students. Both genders are proactively considered in our provision and decision making as clarified throughout this submission. All faculty have offices on a single floor and are able to bring children to work when this is necessary. PhD students share one large open plan office and there are two further large offices for RAs and visitors. All of the above have access to a common room, which also houses the internal Maths library, and has a microwave and facilities for hot and cold drinks. Faculty and postgraduate students often meet there for lunch or coffee, and it is also used for undergraduate events such as the Staff-Student Liaison Committee meeting where a committee meeting room would be excessively formal. On Mondays the Pure research group and the Applied research group each go to lunch with their specific seminar speaker; on the other days of the week there is usually a large, mixed, group, comprised of people from both research areas, who go to lunch together.

All undergraduates have an adviser, who they will get to know well during their degree, and all faculty have advertised office hours when they will be available. The UEA society MathSoc organises an annual "Meet the Lecturers" event, attended by academics from both genders, as well as a popular annual quiz to which staff are also invited. In 2013, the society arranged a Saturday trip to Bletchley Park for faculty and students. In addition, the university organises an interdepartmental sporting challenge; although most of the participants are undergraduates, in 2013 and 2014 the title of "Most Sporting Head of School" was won by the Head of Mathematics.

C (vii) Outreach Activities

Many staff and PhD students are involved in outreach activities of some sort, and this is monitored through an annual survey by the School's Outreach Coordinator. These include events organised on campus – notably, one day events aimed at year 10 and year 12 students, and a year 8 school quiz – as well as talks in schools. Gender balance data of attendees has not been gathered for these but both male and female staff and PhD students have been involved in delivering it. (11 men and 6 women were involved in some outreach activity in 2013/14.)

One recurring theme from the student survey was that encouraging women to study mathematics needed to start early, by encouraging girls to be involved in our outreach activities. We will seek to maximize the number of girls attending by being explicit about our commitment to gender equality in invitations to schools, and we will also investigate the possibility of monitoring the gender-balance of attendees at outreach events, consider if any elements of outreach are more likely to engage girls and include these in the design of events, and explore further possible actions (**AP: 2.5**).

FLEXIBILITY AND MANAGING CAREER BREAKS

Table 18 gives data on Maternity and Paternity leave numbers (2009-14), including Maternity return rate. Given the small numbers concerned, it is difficult to see any patterns.

TABLE 18: MTH Maternity and Paternity Leave						
	2009	2010	2011	2012	2013	2014
ATS	0	1	0	0	0	0
ATR	0	0	0	0	0	1
RA	0	1	0	0	0	0
Total Maternity	0	2	0	0	0	1
Return rate	0	2	0	0	0	1
% Return	0	100	0	0	0	100
Paternity	0	0	1	1	0	1

D (i) Maternity Return Rate

There were three maternity leave periods taken during the time covered by the data. Both staff taking maternity leave in 2010 returned to work but were on fixed term contracts which have since finished. Only one member of staff has taken maternity leave in the last three years (2014): Sinéad Lyle is currently on maternity leave, and planning to return to work in April 2015.

D (ii) Paternity, Adoption and Parental Leave Uptake

There were two official periods of paternity leave, with one additional in 2014. One further academic staff member was eligible but chose not to take it. There was variation in the period taken with one taking the full 4-week entitlement and others just one week. Those eligible were asked for comments. All respondents commented that it was straightforward to arrange, and had the full support of the Head of School, with the supportive rearrangement of teaching and other responsibilities mentioned. The reason given for not taking up paternity leave was taking annual leave instead due to date of birth being out of teaching time, and to avoid loss of pay. There has also been one eight-week period of parental leave, and again the person concerned comments that they felt UEA/MTH were “supportive and encouraging.” All returning parents/adopters have access to the University’s well-equipped Baby Room which is a short walk from the School and provides appropriate space for feeding/storing milk, changing or just resting.

D (iii) Numbers of Applications and Success Rates for Flexible Working by Grade and Gender

There have been no formal applications for flexible working.

D (iv) Flexible Working

While there have been no formal requests, individuals have made informal arrangements, and flexible working is seen as normal. This includes keeping certain days free from teaching to fit better with family arrangements. There is also long-standing freedom for working from home. Current guidance, regularly updated and reiterated, is that working at home is encouraged and supported as long as staff are contactable during the day.

There are a number of examples where the School has been flexible in arranging teaching commitments to accommodate family responsibilities. For example, Helen King, a part-time associate tutor, has all her teaching organized on one day to suit her child-care arrangements; and Mirna Džamonja, a full-time ATR

Professor, has had those administrative and teaching responsibilities which require her to be at UEA grouped in one part of the week, to accommodate complicated family circumstances.

The ASSG recognises that, while it is well-understood within the School that flexible working is available and supported, it is perhaps not always so apparent exactly what this means in practice. The ASSG does not think it appropriate to have a formal policy on flexible working, since it would be impossible to foresee every set of individual circumstances, but plans instead to create a "Database of experience" (**AP: 3.1**), to include the flexible working and support patterns of staff in the School (anonymised if necessary). This will be widely promoted to staff, along with guidance on the sorts of flexible working that may be requested, making clear that these should be regarded as examples rather than an exhaustive list of possibilities. The success of this approach will be monitored through the annual staff survey, and DEq will review the need for a formal policy in the light of this feedback.

D (v) Cover for maternity and adoption leave and support on return

Support for maternity/adoption leave and supported programmes for return to work is achieved in conjunction with HR, while maternity leave cover is provided by other existing faculty members. The evidence suggests that this has been successful, with a 100% return rate. Sinéad Lyle, who is currently on maternity leave, makes the following comments:

"My first child was born in October 2014 and I am currently on maternity leave. After talking through my options with my Head of School and with Human Resources at UEA, I decided to take six months maternity leave. After customary and statutory days have been taken into account, this means that I will return to work at the end of April 2015. From then until the start of the semester in September, I have agreed with the Head of School that I may use my annual leave in whatever way is most convenient for childcare purposes. My appraiser and I also talked about the impact of maternity leave during my appraisal in June 2014.

"Throughout my leave, the department has been supportive. I have kept in touch with the department via email and I have been consulted about any matters that will concern me after my return. In particular, I have discussed my teaching duties for September 2015 and I have been able to consider PhD applicants who have applied for my project. Although I was on leave when the Promotions Committee met in December 2014 to consideration individual promotions, I was able to discuss my case with the Head of School in advance of the meeting.

"Since January, I have been making use of my Keeping in Touch days. My Head of School has encouraged me to use these days and, moreover, is happy for me to bring my daughter into the department. (Indeed, she has now attended research seminars, PhD progress meetings and an Athena SWAN meeting!) I am confident that I will return to the department in April."

Support on return has, so far, been on an ad hoc basis, since numbers have been so small. The formation of the "Database of Experience" (**AP: 3.1**), which will include support patterns for staff on, or returning from, leave, will promote, support and help staff understand the help available. The DEq, in conjunction with ASSG, will also review whether a formal policy is needed.

Word Count: 5000

5. ANY OTHER COMMENTS

The DEq and the ASSG recognise that we, as a School, have just started down a process and that we have much to learn from others who have begun before us. In order to ensure that we move as quickly as possible, the DEq has already been involved in meetings with other Athena SWAN directors in UEA, both through the UEA Athena SWAN steering group and less formal meetings of Science directors. We will continue with these, as well as exploring further possibilities for sharing best practice, including workshops run though the London Mathematical Society Good Practice Scheme, of which we are a Supporter (**AP: 6.3**). Hopefully, as well as learning from these interactions, we will also have something to contribute.

Finally, once we are successfully up and running with Athena SWAN, we will also turn to wider equality issues (including applying for appropriate Charter Marks).

Word count: 146

6. ACTION PLAN: UEA SCHOOL OF MATHEMATICS – Athena SWAN Action Plan - April 2015

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
1. **BASELINE DATA AND SUPPORTING EVIDENCE**						
1.1 p.8 p.10 p.13 p.24 p.31	Continue to monitor data as provided in this submission.	Five years' data gathered for this submission. In particular, identification of low proportion of female applications and admissions at both UG and PGR level, and of the best female undergraduates staying on to MMath.	Annual data gathering, for analysis at ASSG. Particular attention to be paid to UG and PGR numbers, and MMath progression especially by women. Record shortlisting data for all Academic and Research recruitment to compare against applications and appointments.	Data provided by E&D, HR and LSO, maintained by LSO.	Annually	Data readily available for Athena SWAN, analysed, and factored into decision making in the School as a whole. Data used at ASSG and actions to improve ratio of women identified and implemented where trend indicates necessity.
1.2 p.8 p.36	Conduct and refine annual staff and student surveys.	One survey undertaken, for academic staff, research staff, postgraduate students and (2nd year) undergraduates, with the results used as part of this submission.	Annual survey, with results to be analysed at ASSG. Key points to be presented to School Board with opportunity for discussion/identification of action where needed.	Director of Equality and ASSG.	Annually, ongoing.	Survey results used to identify new positive actions aimed at improving the quality of the workplace for staff and students, with a particular emphasis on supporting women throughout the study/career pipeline and facilitating an improved work-life balance/gender balance throughout

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
1.3 p.15	Monitor and Interpret UG Recruitment Data.	Five years of data gathered for this submission which has identified the need to understand why we have a low proportion of female undergraduate applications and admissions.	In addition to the data currently available, gather data on: • the proportion of female applicants attending an Applicant Day; • the proportion of female applicants accepting our offer as Firm and as Insurance; • the gender balance of staff and students involved in undergraduate recruitment; • the proportion of female attendees at Open Days. Review our Open and Applicant Day programme to ensure it appeals to both genders, particularly women.	Admissions Team, led by Director of Admissions, to provide data to LSO, who will collate it for ASSG.	Annually, starting summer 2015.	The number of female applicants converting to students is increased by at least 5%.
1.4 p.15	Monitor the gender ratio of students on optional undergraduate modules taught by MTH.	ASSG identified the module provision as a possible reason for the lack of female applicants.	ASSG will review the data to be provided by LTS in depth and will seek detailed feedback from current female undergraduates on the current optional modules as the basis for a review of the whole module provision.	LTS and LSO.	Autumn 2015.	Identification of any outlying gender imbalances, and possible implications for recruitment. Further action identified and implemented. Increase in female applicants by at least 5%.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
1.5 p.16	Monitor gender balance of lecturers on year 1 and 2 core modules over last 3 years.	The undergraduate survey identified the gender balance of lecturers on core modules as a possible reason for fewer women in MTH staying on to MMath and PhD.	LTS to provide ASSG with data on the gender balance of lecturers on core modules which will form the basis of a review with positive actions identified.	LTS by LSO.	Summer 2015.	A minimum of 5% increase in female students continuing onto the MMath and PhD.
2. KEY CAREER TRANSITION POINTS						
2.1 p.10 p.13 p.15 p.16 p.17	Review all student recruitment and advertising material.	Identification of the need for the School to appeal more to female potential applicants. Commitment to equality and diversity added to PhD advertisements.	Review all student recruitment and advertising material (web, prospectuses, flyers, screens), to include all levels (Foundation, UG, PGT, PGR) in both MTH and ENG to ensure that a balance of genders is presented (in pictures and words) at all levels of seniority as well as writing "success stories" from recent students (UG and PGR). Information will be included about family friendly policies and facilities (e.g. the Baby Change and Feeding Room), ResNet events and careers support with a particular view to part-time students.	MTH Admissions team, led by Director of Admissions, for undergraduate recruitment. PGR Director for PhD recruitment. ENG Admissions team for ENG courses.	Autumn 2015. Annual monitoring thereafter.	Over the next three years achieve an increase of at least 5% in the proportion of female applicants for undergraduate and PhD programmes in MTH.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
2.2 p.34	Review recruitment procedures within the School to maximise the pool of female applicants.	ASSG has assessed the recruitment data provided for the Athena SWAN application, which highlighted a very low number of female applications. Further Particulars have been revised to highlight the School's commitment to Equality and Diversity particularly in relation to gender but more importantly aimed at female applicants with the inclusion of the Athena SWAN logo.	Unconscious bias training will be added to the existing training for all staff involved in recruitment, monitored by HR/LSO. Ensure that family friendly policies, flexible working possibilities, UEA Nursery, Baby Change and Feeding Room and support are clearly flagged in Further Particulars. Form Search Committees with a clear commitment to mixed gender searches for all future recruitments, to ensure that as many potential female applicants as possible are made aware of recruitment opportunities.	HoS and School Manager.	Ongoing.	All staff involved in recruitment are trained in unconscious bias. Increase in the proportion of women applying for faculty positions by a minimum of 5%.
2.3 p.19 p.34	Maximise the number of female students staying onto MMath.	Data analysis showing that, in many years, only a small proportion of female students stay on to MMath.	Develop guidance to be used by all advisers to ensure consistency is applied to all 2nd and 3rd year students suitable for the MMath course. Ensure all advisers are informed of suitable MMath students after the Summer Exam Board Meeting.	Advisers, with oversight of Senior Adviser.	Annually from September 2015.	Increase to sector level equivalent or more in take-up of MMath by female students over three years.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
2.4 p.34	Maximise the number of female UG students considering PhD.	The student surveys conducted as part of this submission indicated that notably with female students they were unsure of what a PhD entailed.	Advertise annual "Continuing to PhD" session to 2nd year students, giving them an opportunity to understand what PhD study involves and to change to MMath if they are interested. Ensure the promotional advertising has gender balanced images. Review the content of the session to ensure it appeals to both genders but specifically female students.	MTH PGR Director.	Annually.	Student survey showing that students, and female students in particular, understand what a PhD involves and increase the number of female PhD students by a minimum of 5%.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
2.5 p.44	Ensure that girls are well represented among participants at outreach events.	Survey of undergraduates and PhD students conducted as part of this submission indicated that attracting women to Mathematics needs to start early.	Invitations to Schools for outreach events to include our commitment to equality and diversity, and gender balance and Athena SWAN in particular. Ensure where possible that representatives from both genders are involved in the delivery of each outreach event. Monitor gender balance at outreach events and record in a spreadsheet for analysis. Develop evaluation forms for attendees, to capture comments which can be used to review and revise the format of outreach events.	MTH Outreach coordinator, in collaboration with ARM.	April 2015.	The numbers of girls attending outreach events is maximised and evaluations indicate that the outreach events are particularly encouraging girls to consider MTH.
2.6 p.19	Analyse Destination of Female Alumni.	Identification that the alumni data may be able to help us make the course more attractive to women.	Analysis of the data on destinations collected by the Careers' Service, by gender, to determine why its female mathematicians made their career choices to date and whether this can help the School create course choices/higher level study options that are more attractive to talented women.	DEq in collaboration with MTH Director of Employability and Careers' Service.	By September 2016.	Robust data showing career choices of female alumni, and actions to make the course more attractive identified in the light of this.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
3. CAREER DEVELOPMENT						
3.1 p.46	Create, Maintain and Advertise Database of Experience.	Views and experiences of staff taking leave gathered for this submission.	Promote the Database of Experience to staff so that staff feel encouraged to take leave or request flexible working and we can monitor the take up. Review whether a formal policy on returning to work after a period of leave is needed.	Director of Equality; LSO to maintain the database.	Set up by December 2015, then ongoing.	Via questions in next staff survey, determine whether awareness of available policies/support is raised in all staff groups.
3.2 p.35	Academic Career Development for PhD Students.	Issue identified as needing addressing from PhD student survey.	"So you want to be an academic?" information and advice session, aimed principally at PhD students in their 2nd year, but also available to RAs, to include flagging development opportunities which already exist.	MTH PGR Director.	March 2016, and annually thereafter.	Increase in understanding of the academic career path among PhD students, demonstrated by responses to the annual survey.
3.3 p.43	Review Workload Model.	Discussion of workload model at School Executive in autumn 2014 identified areas needing change and roles not fully recognised by the current model.	New workload model to be discussed by School Executive, before consulting with all colleagues. Publish the Workload Model to all staff to demonstrate transparency.	HoS, supported by School Executive.	Completion by end 2016.	Workload balance perceived as fair by staff, as shown by the annual staff survey.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
3.4 p.39 p.43	Monitor Committee Membership.	Head of School annually reviews all committees to ensure a fair gender representation and to prevent committee overload. ASSG has identified it would be useful to be more deliberate in planning the membership of junior staff on committees.	Annual review to ensure fair gender representation and to prevent committee overload, and intervention where necessary, including co-opting junior members as a career development mechanism where appropriate.	HoS.	Annually in July as roles and committee membership are decided.	Committees continue to have a fair proportion of women appropriate to headcount.
4. CAREER ADVICE AND SUPPORT						
4.1 p.37	Revise Academic Staff Induction Process & Staff Handbook.	MTH has an Induction Process for academic staff and Staff Handbook but it was recognised that this had not been revised for some time.	A revised Staff Handbook will be developed in conjunction with other Schools in the Faculty to ensure consistency and transparency. The Induction Programme will be revised and incorporate an Induction Checklist to ensure that the same areas are covered.	HoS and School Manager.	April 2016.	Positive feedback is received within the Staff Survey.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
4.2 p.35 p.37	Revise Research Staff Induction Process.	The staff survey indicated that many research staff are either unaware of the support available or do not use it. In conjunction with a Faculty of Science initiative, new induction procedures including a checklist have been created for research associates.	MTH Research Staff Coordinator to ensure supervisors of new research staff are properly briefed on induction, and that new research staff are required to arrange a formal meeting with Research Staff Coordinator to discuss broader support.	MTH Research Staff Coordinator.	Ongoing.	Increased awareness and use of support available by Research Staff, as demonstrated by annual survey.
4.3 p.35 p.37	Revise PhD Student Induction Process.	Discussion with PhD students, showing that they are not always led to making best use of the Professional Development courses available.	New induction procedures for PhD students developed by the SCI Faculty will be implemented. MTH PGR Director to produce clear induction checklist for supervisory teams, specific to MTH but based on the one recently introduced across Science.	MTH PGR Director.	September 2015 for arrival of new students.	Induction checklist completed and used for all PhD Students and positive feedback received in student survey.
4.4 p.36	Improve effectiveness of Staff Appraisals.	The staff survey indicated that whilst appraisals are taking place for all academic staff, RAs are not currently engaged with this process. Career Development and Promotion have not been discussed in appraisals.	Develop an appraisal checklist which includes career development and promotion which supports the current appraisal form to ensure that appraisers cover the same themes with appraisees during appraisal meetings. Ensure that all RAs are included in the appraisal process.	HoS and School Manager.	June 2015 and at each appraisal round thereafter.	Increase in proportion of staff, particularly women, discussing career development and promotions, demonstrated by responses to the annual survey. All grades of staff appraised annually

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
4.5 p.37	Increase pastoral support for PhD students.	ASSG identified from the student survey that PhD students whilst being offered pastoral support have not had the opportunity to receive support from someone of the same gender.	Enhance the roles of Senior Adviser and Deputy Senior Adviser (who are always one female, one male) to include PhD students, and promote this to PhD students via a Did you Know… Slide.	HoS, Senior Adviser.	April 2015.	PhD students' positive views of support improvements, as demonstrated by responses to survey in spring 2016.
4.6 p.37	Cover Childcare Support for Conference Attendees.	ASSG identified as part of this submission that childcare support costs were not explicitly included as eligible costs to allow staff and PGR students to attend conferences.	Guidelines for eligible costs to be revised, and changes advertised to staff and PGR students via staff and student bulletin and Did you know… slides.	HoS, School Manager.	September 2015.	Successful applications from staff/PGR students to cover childcare costs.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
5. **ORGANISATION, CULTURE AND COMMUNICATION**						
5.1 p.36	Review how promotions process is communicated to staff and staff involvement in it.	Staff survey carried out, revealing that some staff are unsure of the criteria by which promotions are decided.	Email to staff inviting promotion applications to include advice on discussing promotions procedures and opportunities with Head of School. Elected members of Promotions Committee to be members for at most two consecutive years, to ensure expertise and experience is disseminated across the School as widely as possible. "Local guidance" to be produced in conjunction with HR manager.	HoS, School Manager, HR Manager.	Ongoing, starting September 2015. "Local guidance" to be produced for 2015 promotions round, and kept updated as appropriate.	Staff surveys indicate greater understanding of promotion process.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
5.2 p.34	Raise Awareness of Athena SWAN and Equality & Diversity within MTH.	Equality and Diversity is now a standing agenda item for School Board meetings and School Executive meetings. The last two School Boards have included a discussion of our Athena SWAN submission, and the main item on the agenda at the School Executive meeting in March was this Action Plan.	We will ask staff to assess and reflect on their biases by completing an Implicit Association Test https://implicit.harvard.edu/implicit/demo Bespoke training sessions on Understanding Unconscious Bias to be delivered to all staff by Equality and Diversity/CSED . Include Athena SWAN and Equality & Diversity within the School Bulletin. One ASSG per semester will be an Open Meeting. Share Athena SWAN submission within the School and the wider University and externally once results received.	HoS and MTH Executive.	During 2015/16 initially. Training during 2015/16.	Increased awareness and engagement with Athena SWAN, leading to improvement on the Actions described here. Staff and Student surveys acknowledge awareness of Athena SWAN and E&D more generally within MTH.
5.3 p.16 p.34	Advertise career success stories of women in the School on the web.	Staff approached have agreed to have their stories publicised.	We will promote role models via career success stories of recent female PhD students now in academic jobs and current female staff in a profile format suitable for the web.	Director of Equality, or delegated member of ASSG.	Develop first stories during 2015 for posting in early 2016.	Success stories are posted on web and used in outreach/marketing of courses; hits on sites are tracked using Google analytics.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
5.4 p.15 p.16 p.34	Increase the visibility of female mathematicians in the School, both physically and virtually (on the web).	The lack of images of female mathematicians around the walls of the School was identified. This was also identified as possible way to increase the attraction of the School to female UG and PhD applicants.	A small team will identify images and short biographies of a gender-balanced (50/50) mix of mathematicians, suitable for display around the School.	Director of Equality to lead.	Ongoing. Initial refresh by December 2015.	Team to report changes in imagery and short biographies to ASSG and School Board annually from September 2015.
5.5 p.37	Increase the proportion of female speakers in each research seminar series.	The low proportion of female speakers in both research seminar series has been identified and seminar organisers asked to bear this in mind when inviting speakers.	Seminar organisers to ensure that 20% - 50% of speakers in each of the two research seminar series are female, and report actual proportion to LSO for monitoring by ASSG.	Seminar organisers.	Ongoing.	From 2015/6 onwards, both seminar series to have 20% - 50% female speakers.
5.6 p.34 p.35	Develop the School Equality and Diversity webpage, and other electronic media, to promote support available to staff and students.	Webpage created in February 2015, including information on support available for staff and students gathered in a single place. We will work with the other Schools in the Science Faculty who are also developing promotional materials and web pages. A series of Did you know… Slides have been implemented and are shown on the MTH plasma screens.	Develop further "Did you know?" slides for promoting the support available in MTH/UEA, and initiatives related to Athena SWAN. Review and revise annually the MTH equality and diversity webpages to ensure they remain current and up-to-date.	Director of Equality, or delegated member of ASSG.	Ongoing.	Increased volume and quality of E&D promotional materials specific to mathematics; Increased awareness levels of support and family friendly policies and flexible working, demonstrated via student/staff surveys.

Action	Description of action	Action already taken and outcome at April 2015	Further action planned	Responsibility	Timescale	Measure of success
6. ATHENA SWAN						
6.1 p.8	Silver Award Preparation.	Athena SWAN Bronze submission April 2015, and thinking ahead to ways in which to demonstrate distance travelled from current position.	All the activities outlined above, reviewed by regular ASSG meetings, which may reveal the need for additional actions.	Director of Equality to lead, with input from ASSG, HR and E&D.	Ongoing.	Success of Bronze award submission and progression to Athena SWAN Silver submission in November 2016.
6.2 p.8	Refresh ASSG.	ASSG set up and members recruited/co-opted.	Encourage all staff and students to consider serving in the group, to ensure the process is as embedded as possible in the School.	HoS and Director of Equality.	Annually in October.	Continued representation of all groups on ASSG.
6.3 p.8 p.47	Sharing Best Practices.	Meetings of the MTH Director of Equality with those from other Schools, including UEA Athena SWAN steering group.	Continued collaboration with Athena SWAN directors in other Science Schools. Participation in London Mathematical Society Good Practice Scheme workshops.	Director of Equality.	Ongoing.	Innovative positive action fed back to ASSG and implemented, with impact reviewed in minutes from each meeting.