Athena SWAN Silver Department award renewal application

Name of institution: University of Nottingham
Date of application: 28/11/2014

Department: Faculty of Engineering

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Date of previous award: November 2011

Date of university Silver SWAN award: November 2012

Level of award applied for: Silver

1. **Letter of endorsement from the Executive Dean of the Faculty**

The University of Nottingham

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Dean of Engineering:
Professor Andrew Long BSc MSc PhD FIMechE FIMMM CEng

Athena SWAN Charter
Equality Challenge Unit

28th November 2014

To whom it may concern,

This letter offers my strongest support for the application for renewal of the Silver SWAN award held by the University of Nottingham's Faculty of Engineering.

I have been personally deeply involved in developing this application. This self-assessment process has provided an exceptional opportunity for the Faculty as a community to shape its policies and reflect on its values. As Executive Dean, the Athena Working Group has challenged me to explore the implications of my decisions and critique my strategy as I try to embed a culture where excellence can thrive.

Since we achieved silver SWAN status in 2011, the Faculty has continued to develop. Over this period we have maintained student numbers whilst significantly increasing quality, and have seen our research income more than double in terms of new research awards. The Engineering & Physical Sciences Foundation Year programme is now a Department in its own right and growing. The Faculty has also developed several initiatives aimed at supporting early career academics. I am particularly proud of our Future Leaders Programme, which has so far supported 24 academic staff including 9 women.

Two senior female Professors have relatively recently moved to prestigious posts in other institutions. We miss their valuable contribution to our Faculty, but we are nevertheless pleased to have been part of their careers and to have been able to support them in finding their niches. Since 2011, a relatively new professor Sarah Sharples, as Associate Dean for the Graduate School, has been instrumental in reshaping our postgraduate research students' experience. I am also delighted to have been able to present the promotion applications of seven outstanding women researchers and teachers to the University promotions panel over the last 2 years. My job was very easy, and the applications sailed through.

There are numerous examples of achievement from outstanding women in the Faculty. However if I were to highlight one, it would be Dr Barbara Turnbull who has led the development of this submission. Whilst raising a young family, Barbara has excelled in both research and teaching and was promoted to Associate Professor in 2014. She is a current member of our Future Leaders Programme, and recently took on the role of Deputy Head of Department of Civil Engineering. Over the same period, she secured a highly prestigious EPSRC Research Fellowship. As Chair of our Self Assessment Team, she has shown outstanding leadership and has proved an invaluable advisor in the development of the Faculty.

For our original submission I said that I was happy to be part of a family-friendly Faculty that encourages flexible working patterns and helps employees find the support they need throughout their careers. This remains the case. And I remain committed to the belief that such a culture is essential if we are to attract the very best academics and students to join our Faculty.

Professor Andy Long
Dean, Faculty of Engineering
University of Nottingham

Glossary

ABE	**Department of Architecture & the Built Environment**
AWG	Athena Working Group
APM	Administrative, Professional & Managerial job family
APPLE	**A**cademics' & **A**dministrators **P**rofessional **P**ersonal and **L**eadership **E**xperience: A University professional development course for grades 4 & 5 research, teaching and managerial staff
CEE	Department of **C**hemical & **E**nvironmental **E**ngineering
CIV	Department of **Civ**il Engineering
EEE	Department of **E**lectrical & **E**lectronic **E**ngineering
EGC	**E**ngineering **G**raduate **C**entre
FEPS	**F**oundation Year (**E**ngineering & **P**hysical **S**ciences)
HESA	**H**igher **E**ducation **S**tatistics **A**uthority
M3	Department of **M**echanical, **M**aterials & **M**anufacturing Engineering
PD	University **P**rofessional **D**evelopment service
PDPR	**P**ersonal **D**evelopment and **P**erformance **R**eview
PEAR	**P**rofessional & **P**ersonal **E**xcellence for **A**dministrative **R**oles: A University professional development course for grades 1 to 3 administrative, professional & managerial staff
PG(R/T)	**Pg**raduate (**R**esearch/**T**aught)
PGCHE	**Pg**raduate **C**ertificate in **H**igher **E**ducation: Compulsory course in teaching and supervision methods and theory for all new lecturers
R&T	**R**esearch **& T**eaching job family
SAT	The Athena **S**elf **A**ssessment **T**eam
T&L	**T**eaching **& L**earning (e.g. committee)
TS	**T**echnical **S**ervices job family
UG	Undergraduate

UoN	**U**niversity **o**f **N**ottingham
WAND	**W**omen's **A**dvancement **N**etworking & **D**evelopment: A University professional development course for grades 6 & 7 research, teaching and managerial staff
WinSET	The Nottingham University **W**omen **in S**cience **E**ngineering & **T**echnology group

2. The self-assessment process

a) The self-assessment team

The Faculty of Engineering comprises 6 Departments, responsible for the delivery of teaching, and 5 cross-cutting Divisions responsible for research, described in §3. Academics active in both research & teaching will typically belong to both a department and a division. The self-assessment team (SAT) comprises representatives from across the Faculty's academic staff, as well as its operational units and student bodies. The Faculty Athena Working Group (AWG) is a wider group, who meet quarterly and oversee the general running of our Athena programmes (membership given in Table 2). Anyone is welcome to join that group – and we actively seek members where there is a shortage of representation in any particular operational area. The SAT is a subset of the group with two external contributors, for the assessment process to remain focussed and tractable.

The SAT is formed of:
Dr Barbara Turnbull (chair), has been recently promoted to Associate Professor in Civil Engineering, which has seen her take on Senior Tutor and Deputy Head of Department roles. Barbara has returned from two recent periods of maternity leave, with her youngest child in the University of Nottingham Day Nursery. Barbara benefits from flexible working patterns (through timetable consideration) and she has recently published work from her PGCHE 'Role models in gender-skewed disciplines' – a multivariate statistical analysis of the response of gender minority students to the gender of academics.
Professor Andrew Long, Executive Dean of the Faculty of Engineering, regularly drops-off and picks-up his children from school. He has been committed to AWG since before his appointment as Dean, and his support is vital to ensuring Athena policy is equalised across the Faculty.
Julia Cousens-Smith, Faculty Manager, has previously worked part-time, and currently works flexibly to accommodate childcare responsibilities. Julia oversees locally held data (e.g. committee data) and represents AWG on Faculty management boards.

Each Department within the Faculty is represented by
Dr Patrizia Riganti (ABE), **Dr Anca Pordea** (CEE), **Dr David Hargreaves** (CIV) – see case study, §10, **Dr Noah Russell** (EEE), **Dr Leah Ridgway** (FEPS), **Dr Joel Segal** (M3).

Non research & teaching (R&T) job families have representation through **Dr Mark Worall**, as chair of the Faculty Researchers Group, **Charlotte Lush**, representing APM personnel working in the student support office – Charlotte has recently returned from maternity leave and her son is at the on-campus UoN Day Nursery. **Jane England**, is the Faculty Human Resources contact responsible for researcher recruitment and induction processes, and also represents APM staff with in Faculty Research Support Office. **Kelly Vere**, **Katharina Gabrecht**, **Lilly Dawson** represent our technical staff, PGR and UG students respectively.

Support for the submission has been provided by **Christopher Sprange**, the Faculty Strategic Data Analyst, who has liaised with HR to collate and present the Athena data sets, and **Laura Conkey**, who has provided administrative support in organising and taking minutes of AWG and SAT meetings and proof reading documentation.

External consultation is provided by **Shaun Beebe**, who is Manager of the School of Physics – which has an excellent recent record of staff and student satisfaction and performance. **Elizabeth Davey**, who represents the University's Women in Science, Engineering & Technology committee and is the University Athena SWAN Research Policy Officer.

Table 2: *Job family and title of the Faculty of Engineering AWG and SAT group members, indicating gender and whether each is new since the 2011 original submission.*

Member	Job family	New to AWG	Gender	Role / Job title
Arrand, Helena	APM	✓	F	Research and Business Development Manager, Faculty of Engineering
Beebe, Shaun	Ext.	✓	M	School of Physics & Astronomy, Manager
Brown, Dr Louise	R	✓	F	Women Researchers Network, Research Fellow
Conkey, Laura	APM	✓	F	Administrative support AWG, Teaching administration CIV
Cousens-Smith, Julia	APM		F	Faculty Manager
Davey, Elizabeth	Ext.	✓	F	University Athena Coordinator
Dawson, Lilly	N/A	✓	F	Undergraduate student, M3
England, Jane	APM		F	HR/Research Administrator, Faculty of Engineering
Gabrecht, Katharina	N/A	✓	F	Postgraduate Research student, Infrastructure, Geomatics & Architecture
Gomes, Dr Rachel	R&T		F	Former Anne McLaren Fellow, Assistant Professor CEE
Greedy, Dr Stephen	R&T	✓	M	IT systems expert, former Senior Experimental Officer and Hall Warden

Hargreaves, Dr David	R&T		M	CIV Departmental representative, Associate Professor
Harrison, Julie	APM		F	Faculty Research Manager
Langley, Dr Alyson	R	✓	F	Research Fellow
Long, Prof. Andrew	R&T		M	Executive Dean of the Faculty of Engineering
Lush, Charlotte	APM	✓	F	Student Support Office Representative
Maskery, Dr Ian	R	✓	M	Research Fellow
Pordea, Dr Anca	R&T	✓	F	CEE Departmental representative, Assistant Professor
Riganti, Dr Patrizia	R&T		F	ABE Departmental representative, Assistant Professor
Ridgway, Dr Leah	R&T	✓	F	FEPS Departmental representative, Foundation Year Lecturer
Russell, Dr Noah	R&T	✓	M	EEE Departmental representative, Associate Professor
Segal, Dr Joel	R&T		M	M3 Departmental representative, Assistant Professor
Sharples, Prof. Sarah	R&T		F	Professor of Human Factors, M3. Former Associate Dean for the Postgraduate School
Slater, Alex	APM	✓	F	Faculty Teaching & Learning Manager
Sprange, Christopher	APM	✓	M	Faculty Data Analyst
Turnbull, Dr Barbara	R&T		F	Chair of AWG, Associate Professor in Environmental Fluid Mechanics, Deputy Head of Department and Senior Tutor, CIV
Vere, Kelly	Tech	✓	F	Technical Services representative, Senior Technician
Vukovic, Dr Ana	R&T		F	Associate Professor, EEE
Worall, Dr Mark	R	✓	M	Chair of the Faculty Researchers Group, Senior Research Fellow

b) An account of the self assessment process

AWG have met quarterly since the 2011 award with the objectives of:

- Monitoring and reporting key data (e.g. staff, student, recruitment, meeting times) for Faculty and Departments, to ensure Action Plan targets were being met.
- Developing policy recommendations, such as a new staff recruitment strategy, for consideration by Faculty Executive Board.
- Developing methods for embedding equality and healthy culture within the Faculty, such as the SPARKS informal mentoring website (described fully in §8), and transparency in the workload model.

Staff satisfaction has been monitored since 2011 by 1) a 2012 University Staff Satisfaction Survey, 2) a 2013 survey by Loughborough University sponsored by ECU on perceptions of career progression, 3) a recent 2014 Faculty staff satisfaction survey, that had 37% response rate evidencing the desire staff have to continually improve their working environment.

The self-assessment process was 're-launched' at a Faculty community event celebrating UK Women in Engineering Day, June 23rd 2014, with circa 70 people attending. The entire Faculty staff was invited to a Keynote lecture from Dr June McCombie MBE, `Making the Invisible Visible' – discussing concepts for improving equality within Universities. This event also presented `Engineering Portraits: Staff Profiles 2014', a booklet of 10 staff members nominated by their managers and peers for their remarkable contribution to the Faculty community. Two of these are included in Figure 2. Key data sets for the Faculty were displayed together with comments boards inviting suggestions, recommendations and observations.

The SAT has met every 3 weeks in preparation for this renewal. At these meetings we have had breakout groups discussing what the Faculty does well or where improvements could be made; allocated sections of this renewal to individuals; held detailed Department and Faculty reviews of the data sets; and held break-out groups to develop the renewal action plan. Thus the SAT has had opportunity to reflect on our past performance, develop concepts for actions to address areas of weakness, and review the text commentary of the submission. Apart from the external representation on the SAT, the submission has been reviewed by two further members of the University WinSET committee. Barbara Turnbull also sits on the University WinSET committee, and at least one other AWG member also attends each WinSET meeting.

c) Plans for the future of the self assessment team

The Faculty has circa 470 R&T and research staff, and the AWG is one of the few open-membership groups within it. AWG is thus important in terms of networking opportunities, but also as a mechanism for cross-departmental communication.

The AWG format has been efficient and effective in its monitoring and development objectives. We will continue to meet quarterly with the minutes posted onto the Faculty Athena website. These meetings will see reporting on Action Plan progress (by the Athena Co-ordinator), analysis from Department representatives and planning for future actions. One key aim is to open our monitoring and policy development remits to other job families, thus clear reporting lines between APM and technical representatives will be established, action plan point 0.1 (**AP0.1**). The University has developed a reporting mechanism and action plan implementation programme, which the Faculty will use.

1000 words + 31

Fig. 2: *Two pages from the first `Engineering Portraits: Staff Profiles' celebration booklet. These featured Marion Unwin, who has made an outstanding contribution to teaching & learning; and Nick Thom, who was a part-time academic, highly active in creative outreach projects.*

3. A picture of the Faculty

a) A pen-picture of the Faculty

The Faculty of Engineering constitutes five Departments responsible for teaching (Architecture & Built Environment – ABE, Chemical & Environmental Engineering – CEE, Civil Engineering- CIV, Electrical & Electronic Engineering – EEE, Mechanical, Materials & Manufacturing Engineering, M3), together with the Engineering & Physical Sciences Foundation Year – FEPS. There are five cross-disciplinary Divisions responsible for research management (Electrical Systems & Optics; Energy & Sustainability; Infrastructure, Geomatics & Architecture; Manufacturing & Process Technologies; Materials, Mechanics & Structures). The Faculty operates under a single budget, controlled by the Executive Dean, and a single set of procedures and policies apply to all staff within the Faculty.

Executive committees are at Faculty-level, with representation from teaching Departments and research Divisions. Line management for research or teaching staff passes through Heads of Division or Heads of Department respectively. The majority of APM and technical staff are not directly connected with a single Department or Division, but carry out cross-Faculty operations.

The Faculty has been an operational unit since 2008. This has led to challenges in keeping a healthy environment and culture, as people's roles and management experiences have changed. However, dialogue between units is increasing and best-practice policies are now effectively distributed. Other strengths of this Faculty structure lie in the reduced dependence on a single Head of Department as line manager, and the presence of a critical mass of female staff. This has helped with initiatives such as the Faculty of Engineering Research Network (which supports the personal and professional development of researchers, especially women) and the Faculty Leadership Programme (developing staff at grade 5 -- 6) and provides statistically more robust data sets.

Since the original award submission in 2011 there has been some restructuring of the research divisions (August 2013). The Foundation Year is also now recognised as a Department in its own right, as it continues to grow in both student and staff numbers. Some University support teams including marketing and careers & employability services, now have a major Faculty presence, with the needs of Engineering met more specifically than they were at the point of the last submission. This has been beneficial in helping promotion of Athena within Engineering, developing marketing materials for external view, and enabling more targeted careers advice options for students and researchers. In terms of culture, a major step has been taken through the launch of SPARKS (see §8), an informal advice and mentoring network to help link staff across the Faculty.

b) Analysis of data from the past five years

Student data

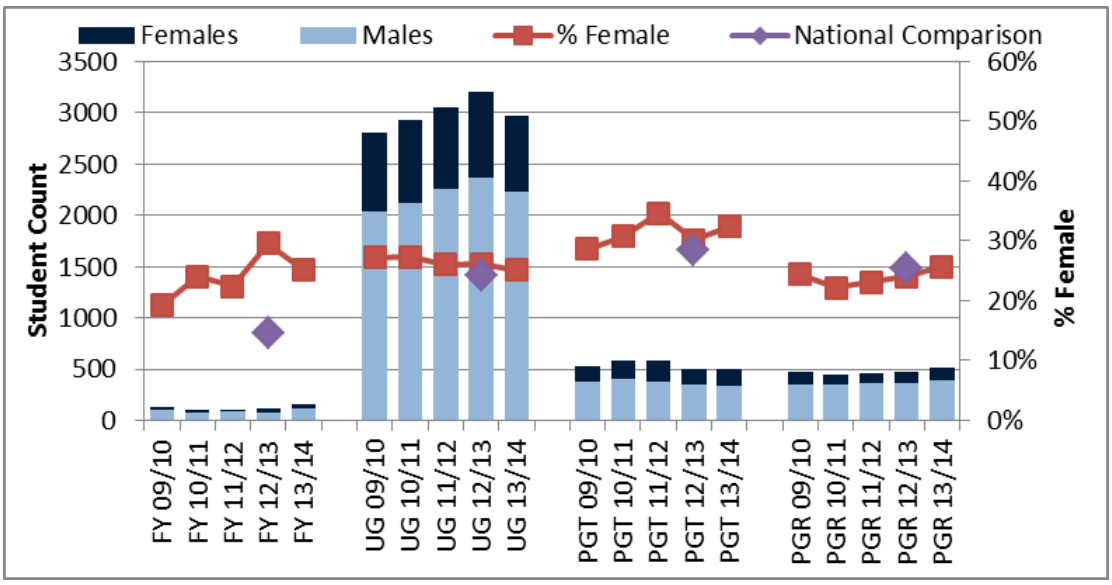

***Fig 3**: Faculty of Engineering, total number of students and percentage female students for Foundation Year (FEPS), Undergraduate (UG), Postgraduate Taught (PGT) and Postgraduate Research (PGR), 2009-2014. Benchmarking data (% female students) from HESA, Engineering and Architecture disciplines.*

***Table 3**: Total UG students and % female by Department, data source UoN performance team. National comparison is first year undergraduates, data source HESA.*

		2009/10	2010/11	2011/12	2012/13	2013/14
Foundation Year	Total Students	125	104	108	116	162
	% Female	19.2%	24.0%	22.2%	29.3%	25.3%
Architecture and Built Environment	Total Students	980	1018	922	907	633
	% Female	44.4%	43.3%	44.1%	47.9%	47.6%
Civil	Total Students	455	498	555	521	418
	% Female	16.3%	17.5%	18.6%	18.0%	17.5%
Chemical and Environmental	Total Students	286	288	328	389	394
	% Female	35.0%	33.7%	30.2%	29.3%	26.1%
Electrical and Electronic	Total Students	269	295	330	370	375
	% Female	13.0%	13.2%	11.8%	13.0%	13.3%
Mechanical, Materials and Manufacturing	Total Students	777	825	958	1022	995
	% Female	15.6%	16.4%	15.1%	14.6%	13.9%
National - Architecture	Total Students				13435	
	% Female				38.7%	
National - Engineering & Technology	Total Students				36311	
	% Female				18.9%	

(i) Access and foundation male and female numbers

	Female	Male	Total number	Females (%)	Males (%)
2009/10	24	101	125	19%	81%
2010/11	25	79	104	24%	76%
2011/12	24	84	108	22%	78%
2012/13	34	82	116	29%	71%
2013/14	41	122	163	25%	75%
2014/15	22	70	92	31%	69%
National Engineering & Technology 12/13	314	1853	2167	14.5%	85.5%

***Table 3(i)**: Faculty of Engineering foundation year student (**FEPS**) student numbers by gender, 2009—15, and national comparison (HESA).*

The University provides an on-site `Foundation Engineering & Physical Sciences Programme' that has shown a steady increase in the percentage of female students over the last 6 years (see Figure 3 & Table 3(i)). Note that only full time courses are offered. The year 2013/14 was an unusual year in that the number of students dramatically increased (most of these male) which reduced the percentage of women on the course. The majority of students graduating from the foundation programme feed into the Faculty of Engineering undergraduate courses, however around 15% of students (of whom ~25% are women) will instead opt to study Physics, Mathematics or Computer Science (**AP1.2**).

The percentage of female students compares favourably to the HESA benchmarking data of 14.5% women on Engineering and Technology access/foundation courses in 2012/13.

Since 2013, FEPS has been an independent Department within the Faculty of Engineering. The percentage of female students in the FEPS Department is around the average for the Faculty. FEPS outperforms CIV, EEE and M3 in the percentage of female students and is roughly equal to CEE. As an independent Department there is more scope for acting to improve the recruitment of female students into the courses (**AP2.3**). For example, 2 of the 5 academic staff members in the Department are women, providing a strong set of role models to the students.

The challenge for the FEPS is to build upon the absolute numbers of women admitted, and to monitor this in comparison with the absolute numbers of men admitted. The Programme website and brochure feature a mixture of men and women in images, however the only student profile is of a male student, so this aspect will be changed to reflect a more diverse student group (**AP2.3**). Currently FEPS has an FAQ section to their brochure that features questions about being a woman in engineering. These have been successful at provoking conversation at open days and offer holders events that could be beneficial also to other Departments in the Faculty.

(ii) **Undergraduate male and female numbers**.

	Female	Male	Total number	Females (%)	Males (%)
2009/10	765	2002	2767	28%	72%
2010/11	799	2125	2924	27%	73%
2011/12	793	2300	3093	26%	74%
2012/13	839	2370	3209	26%	74%
2013/14	665	2150	2815	24%	76%
National Engineering & Technology 12/13	12046	37700	49746	24%	76%

***Table 3(ii)**: Faculty of Engineering undergraduate (**UG**) student numbers by gender, and national comparison (HESA).*

Roughly a quarter (24%--28%) of undergraduate engineers at Nottingham are female, slightly higher than the national average of 24% female (Figure 3 and Tables 3 & 3(ii)). Note that the given national figures include all students on engineering, technology, architecture, building and planning degrees, reflecting the courses offered within the Faculty of Engineering at UoN. Note also that only full time courses are offered.

The proportion of female undergraduates is dependent upon course with ratios varying from circa 12%--18% female undergraduates within CIV, M3 and EEE disciplines, typically better than national average for these disciplines. For example our M3 Department has circa 15% female UG students, compared with 7% reported for mechanical engineering disciplines in the 2014 Engineering UK report. The ~45% female undergraduates within ABE (much higher than the national average of 39%) continues to increase.

The Faculty of Engineering aims to attract outstanding candidates of both genders by ensuring good visibility of female staff and undergraduates in undergraduate recruitment literature and at open days and UCAS events, and providing a named female undergraduate tutor (**AP2.1,2.3**).

The Faculty has success in female undergraduates occupying prominent positions. Imogen Graves is a final year undergraduate and the current head of CivSoc, and student society linked to the Institute of Civil Engineers professional body. This society organises seminars and events concerning current engineering issues. Amy Wright was awarded a prestigious 2013 New of Civil Engineer magazine prize for her work as an undergraduate delivering a local hydroelectric power project in Malawi. She also received a UoN Alumni Laureate Award described in detail at various University news websites. Julia Cole received the Salters' graduate prize, awarded to final year UK undergraduates in Chemistry or Chemical Engineering for their leadership potential in the Chemical and related industries (up to 10 prizes / year).

(iii) **Postgraduate male and female numbers on and completing taught courses**.

	Female	Male	Total number	Females (%)	Males (%)
2009/10	162	376	538	30.1%	69.9%
2010/11	182	415	597	30.5%	69.5%
2011/12	203	403	606	33.5%	66.5%
2012/13	162	366	528	30.7%	69.3%
2013/14	176	360	536	32.8%	67.2%
National Engineering & Technology 12/13	5643	14257	19900	28.4%	71.6%

***Table 3(iii)a**: Faculty of Engineering taught postgraduate (**PGT**) (full- and part-time) student numbers by gender, 2009—14, and national comparison (HESA).*

		2009/10	2010/11	2011/12	2012/13	2013/14
Architecture and Built Environment	Total St'nts	200	230	242	174	185
	% Female	39.5%	41.7%	43.4%	44.3%	43.2%
Civil	Total St'nts	91	90	84	92	69
	% Female	24.2%	27.8%	15.5%	22.8%	29.0%
Chemical and Environmental	Total St'nts	48	24	37	21	39
	% Female	54.2%	25.0%	40.5%	33.3%	33.3%
Electrical and Electronic	Total St'nts	118	147	114	118	146
	% Female	9.3%	18.4%	25.4%	22.0%	19.9%
Mechanical, Materials and Manufacturing	Total St'nts	81	95	95	96	67
	% Female	29.6%	27.4%	30.5%	20.8%	32.8%
National - Architecture	Total St'nts				5260	
	% Female				42.9%	
National - Engineering & Technology	Total St'nts				14640	
	% Female				23.1%	

***Table 3(iii)b**: Total PGT students and % female by Department data source UoN performance team. National comparison is first year undergraduates data source HESA.*

Circa 30% of PGT engineering students at Nottingham are female, above the national average of 27% - weighted for our mix of Architecture and Engineering disciplines (Figure 3 and Tables 3(iii)a,b), and this proportion appears to be steadily climbing. Note that only full time courses were offered until very recently.

At Department-level, ABE has circa 43% PGT females, similar to the national average. Traditionally male-dominated disciplines of M3 and CIV have on average 25%--30% female representation among PGT students, also comparable with the engineering and technology national average. EEE is behind Faculty average in this area, though improving. The steady increase in proportion of female PGT students appears to correlate with the number of 'non-traditional' courses on offer – also true of UG courses. M3 now offer `Product Design and Manufacture', and `Bio-Engineering' courses that are still

small but with high proportions of female students. Understanding these dynamics and disseminating best practice through the Faculty comprise **AP2.2**.

The majority of taught postgraduate students are international, and thus the Faculty's web presence is particularly important for attracting student applications, since this is the portal through which the majority of international students make their course choice. The Faculty marketing team has reviewed the brand image of the Faculty since 2011, and the proportion of female students in the PGT cohort remains the highest among our UG and PG courses **AP2.2**. Katharina Gabrecht features on a video promoting the Human Factors MSc course, and has personally noted the levels of interest expressed by new students who recognize her from the material.

(iv) **Postgraduate male and female numbers on research degrees and completion times**.

	Female	Male	Total number	Females (%)	Males (%)
2009/10	108	358	466	23.2%	76.8%
2010/11	102	356	458	22.3%	77.7%
2011/12	116	362	478	24.3%	75.7%
2012/13	119	372	491	24.2%	75.8%
2013/14	131	389	520	25.2%	74.8%
National Engineering & Technology 12/13	3661	10681	14342	25.5%	74.5%

***Table 3(iv)a**: Faculty of Engineering postgraduate research (**PGR**) student numbers by gender, 2009—14, and national comparison (HESA).*

		2009/10	2010/11	2011/12	2012/13	2013/14
Architecture and Built Environment	Total Students	69	65	68	76	84
	% Female	37.7%	30.8%	27.9%	31.6%	33.3%
Civil	Total Students	80	82	82	80	79
	% Female	25.0%	23.2%	24.4%	23.8%	25.3%
Chemical and Environmental	Total Students	90	87	91	83	74
	% Female	23.3%	25.3%	29.7%	33.7%	33.8%
Electrical and Electronic	Total Students	92	89	94	92	89
	% Female	17.4%	15.7%	17.0%	16.3%	16.9%
Mechanical, Materials and Manufacturing	Total Students	135	129	130	143	172
	% Female	18.5%	19.4%	23.8%	19.6%	19.8%
National - Architecture	Total Students				1756	
	% Female				40.3%	
National - Engineering & Technology	Total Students				12586	
	% Female				23.5%	

***Table 3(iv)b**: Total PGR students and % female by Department data source UoN performance team. National comparison is first year undergraduates data source HESA.*

The Faculty of Engineering has steadily grown the proportion of female PGR students to reach 25% (Figure 3 and Tables 3(vi)a,b) in 2013/14, meeting the

target set in the 2011 Athena submission and matching national average. This increase has been since the review of PGR recruitment material at the time of the 2011 Athena submission, and extends over the period where we had a female Associate Dean for the Graduate School – who oversaw a significant improvement in formal provision of training to PGR students.

Although supervisor is determined by research topic, the growth in the proportion of female PGR students has been supported by the student-facing Departmental Postgraduate Research Administrators (75% female) and the Engineering Graduate Centre (EGC), managed by a female Nottingham engineering graduate. However, the application system is often criticised by new PGR students for its complexity. Reviewing this application system to remove redundancy and ingraining gender equality into it will form **AP2.2.**

Figure & Table 3(iv)c show completion times for PGR students, comparable for female and male students. The Faculty is currently reviewing processes to improve submission rates within 4 years for all PGR students.

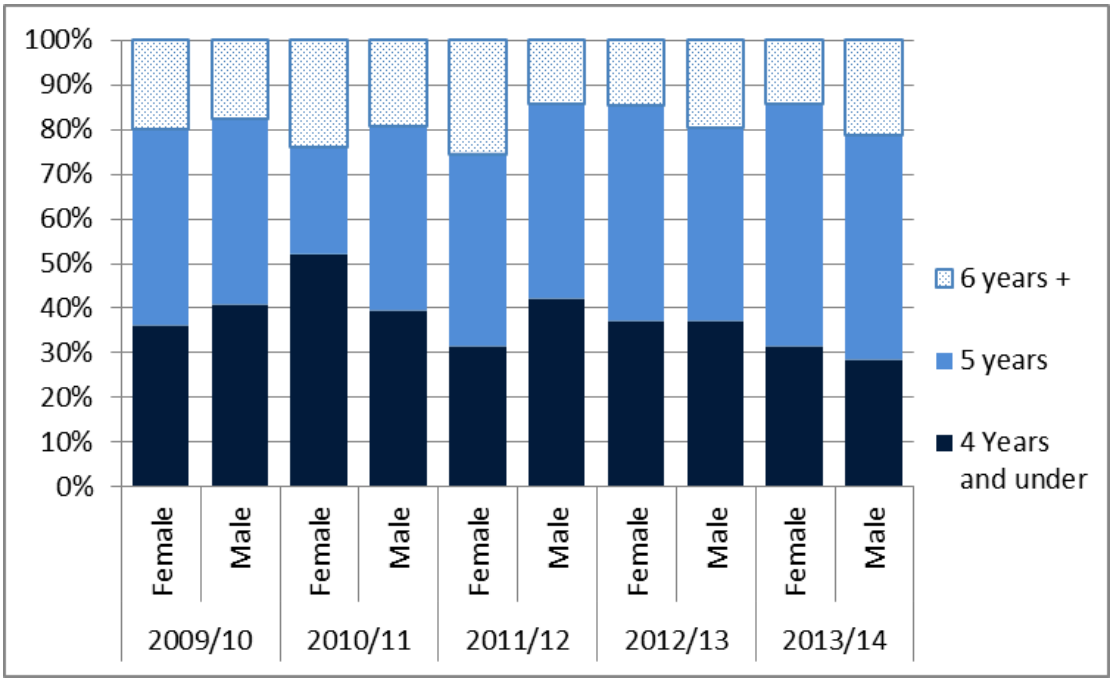

***Fig. & Table 3(iv)c**: Faculty of Engineering postgraduate research (**PGR**) student completion times by gender, 2009--14.*

		4 Years and under	5 years	6 years +
2009/10	**Female**	36%	44%	20%
	Male	41%	42%	18%
2010/11	**Female**	52%	24%	24%
	Male	39%	41%	19%
2011/12	**Female**	31%	43%	26%
	Male	42%	44%	14%
2012/13	**Female**	37%	48%	15%
	Male	37%	43%	20%
2013/14	**Female**	31%	54%	14%
	Male	28%	50%	21%

(v) Ratio of course applications to offers and acceptances by gender for undergraduate, postgraduate taught and postgraduate research degrees

	Undergraduate		PG Taught		PG Research	
	Apps	% Female	Apps	% Female	Apps	% Female
2009/10	5222	24%	2828	25%	965	20%
2010/11	6074	25%	3243	26%	1006	20%
2011/12	5761	23%	2619	31%	1151	23%
2012/13	6690	23%	2669	33%	1185	22%
2013/14	6829	24%	2664	32%	1001	21%

***Table 3(v)a**: Faculty of Engineering, number of student applications and percentage of those from females, 2009--14.*

	Undergraduate		PG Taught		PG Research	
	% Female	% Male	% Female	% Male	% Female	% Male
2009/10	62%	64%	75%	72%	55%	52%
2010/11	56%	55%	79%	73%	54%	47%
2011/12	79%	79%	79%	78%	58%	44%
2012/13	78%	76%	75%	73%	56%	43%
2013/14	74%	74%	73%	69%	59%	48%

***Table 3(v)b**: Faculty of Engineering, percentage of offers made to student applications by gender, 2009--14.*

	Undergraduate		PG Taught		PG Research	
	% Female	% Male	% Female	% Male	% Female	% Male
2009/10	20%	16%	35%	35%	32%	30%
2010/11	19%	17%	36%	36%	24%	24%
2011/12	18%	18%	50%	50%	46%	55%
2012/13	27%	21%	47%	52%	51%	51%
2013/14	22%	20%	49%	51%	50%	58%

***Table 3(v)c**: Faculty of Engineering, percentage of acceptances to student offers made by gender, 2009--14.*

For UG courses, circa 25% applications are from female students. Fewer (circa 20%) women apply for PGR studies (Table 3(v)a). The proportion of female applicants to PGT is showing an increasing trend to circa 32%.

The ratio of offers to applications is similar for both male and female applicants to undergraduate courses, but for postgraduate studies female applicants are slightly more likely to be offered a place (Table 3(v)b). The Faculty has no specific policy to preferentially offer places to female students, so these data would suggest that female applicants for postgraduate places tend to be better qualified than their male counterparts. Table 3(v)c shows that applications from female students are more likely to result in an accepted place at UG level, but not for PGT or PGR courses. This trend maps across all of the Departments. This indicates that female students feel comfortable through the application process and welcomed into the Faculty for UG but not PG courses. This accentuates the need to review the gender implications of

the PG application process (**AP2.2**). The 2014 initiative of offering highly qualified UG applicants unconditional offers appeared to have a beneficial effect in attracting female acceptances, which will inform changes to the way we use this `high achievers' offer (**AP2.3**).

Staff data

(vi) Female:male ratio of academic staff and research staff

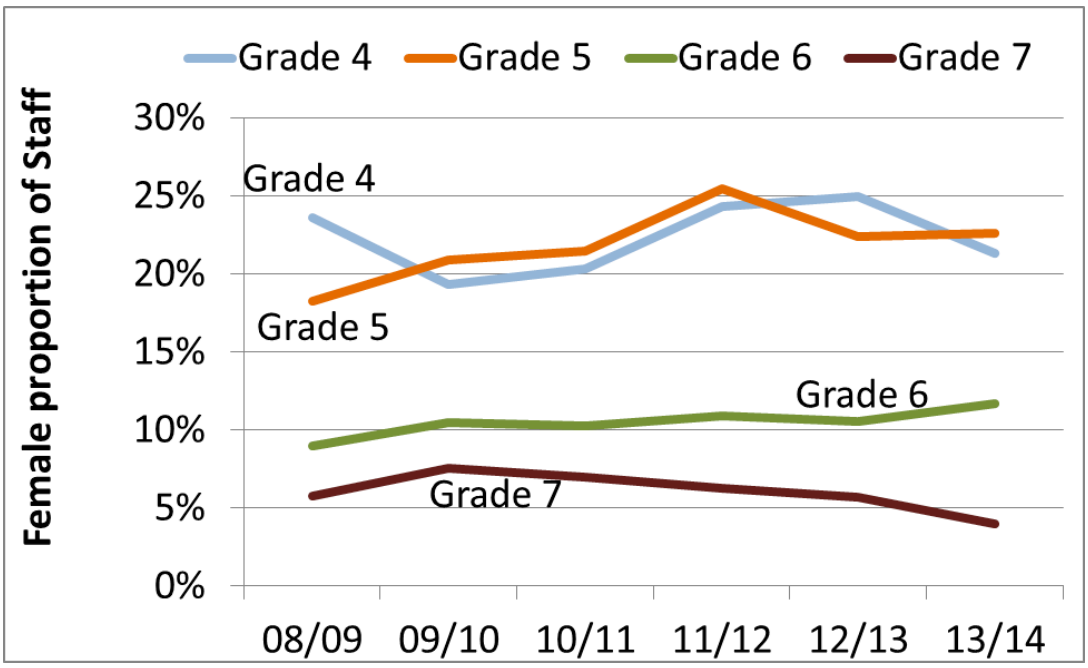

***Fig. & Table 3(vi)a**: Faculty of Engineering, proportion of female academic and research staff, 2008--14. Grade 4 – Research Fellow/Associate; Grade 5 – Assistant Professor; Grade 6 – Associate Professor / Reader; Grade 7 – Professor.*

	Grade 4		Grade 5		Grade 6		Grade 7	
		% Fem.		% Fem.		% Fem.		% Fem.
2008/09	182	24%	104	18%	67	9%	52	6%
2009/10	181	19%	110	21%	86	10%	53	8%
2010/11	182	20%	121	21%	78	10%	57	7%
2011/12	152	24%	110	25%	55	11%	64	6%
2012/13	184	25%	116	22%	57	11%	70	6%
2013/14	220	21%	115	23%	60	12%	75	4%

***Table 3(vi)b**: National academic staff by field and gender 2011—12 (Equality in Higher Education: Statistical Report, 2013).*

	Female		Male	
	No.	%	No.	%
National academic staff	80775	44.5	100610	55.5
SET academic staff	39220	40.4	57950	59.6
Architecture, built environment and planning	1180	30.7	2665	69.3
Chemical engineering	225	26.6	615	73.4
Civil engineering	360	20.1	1435	79.9
Electrical engineering	560	13.8	3480	86.2
Mechanical engineering	620	15.7	3305	84.3

The percentage of female academic and research staff is shown by grade, for the previous 5 years in Figure & Table 3(vi)a. At grade 4, 5 and 6 the

proportion of female staff shows a steady increase, achieving the 25% female target set for grade 5 staff in the 2011 submission. These data are indicative that a strategy combining recruitment, promotions and career support can lead to an increase in female staff. This rebalance is significant in the self-fulfilling circle for supporting female staff and students. With increasing numbers of female staff in visible roles, the Faculty will be able to attract increasing numbers of high-quality female staff and student candidates. At grade 7 there has been a slight decrease in the proportion of female staff – departing female staff at this grade have been replaced, but there has been no increase in female professorial post holders where there has been an overall increase in the number of those posts (**AP3.7**).

(vii) Turnover by grade and gender

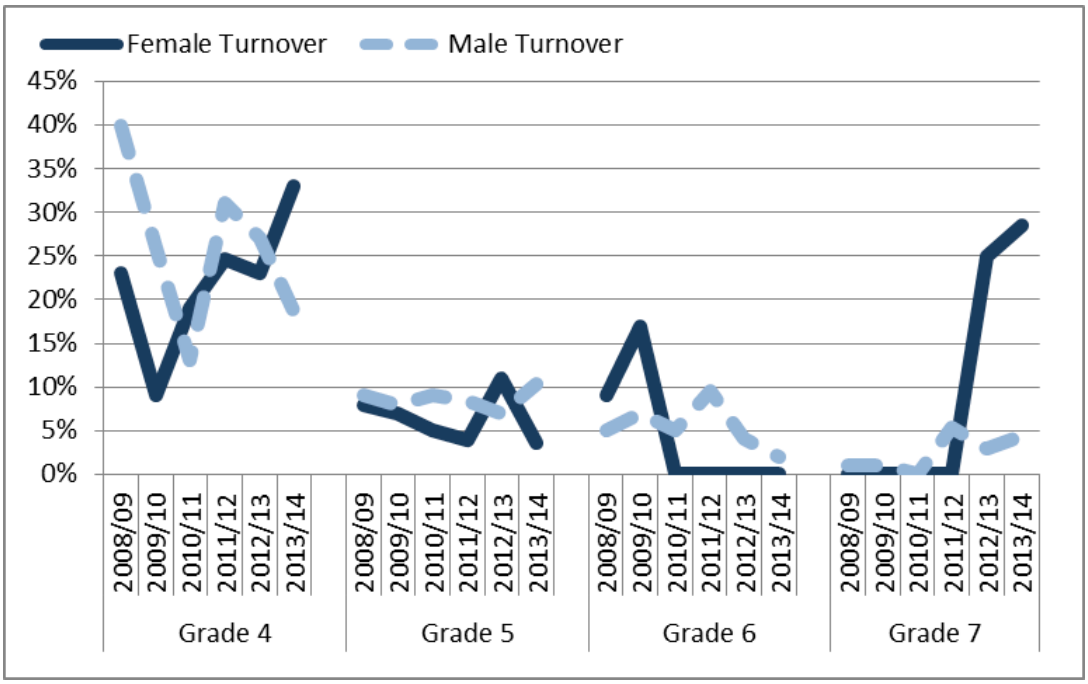

***Fig. and Table 3(vii)**: Faculty of Engineering academic staff annual turnover, by gender and by grade (4-7), 2008--2014. Sub-table, 2013-14 raw data – average headcount, leavers and turnover by gender and grade.*

	Grade 4		Grade 5		Grade 6		Grade 7	
	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male
2008/09	23%	40%	8%	9%	9%	5%	0%	1%
2009/10	9%	26%	7%	8%	17%	7%	0%	1%
2010/11	19%	13%	5%	9%	0%	5%	0%	0%
2011/12	25%	31%	4%	8%	0%	10%	0%	5%
2012/13	23%	27%	11%	7%	0%	4%	25%	3%
2013/14	33%	21%	4%	9%	0%	2%	29%	4%

	Grade 4		Grade 5		Grade 6		Grade 7	
2013/14	Fem.	Male	Fem.	Male	Fem.	Male	Fem.	Male
Av. head	45.5	154.5	27	89	6.5	52	3.5	69
Leavers	15	32	1	8	0	1	1	3
Turnover	33%	21%	4%	9%	0%	2%	29%	4%

Academic and research staff turnover is shown by gender and by grade in Figure & Table 3(vii). At grade 4 there are some significant spikes in the data, with nearly 40% male grade 4 staff leaving. This is an artifact of the contracts these staff are often on that are linked to short-term projects or grant income. At grades 5 and 6, the turnover of female and male staff is similar. There have been 2 female professors leaving the Faculty since 2012 – both left for a combination of personal and academic reasons, both going on to prestigious research-led posts (UCL and Heriot-Watt). There have been 2 female professors appointed or promoted over the same period. In general, turnover appears to be decreasing over time.

1976 words

4. Key career transition points

(i) Job application and success rates by gender and grade

***Table 4(i)a**: Faculty of Engineering, number of applications for academic and research positions and percentage of those from females, by grade, 2008--14.*

	Grade 4		Grade 5		Grade 6		Grade 7	
	Total	% Fem.	Total	% Fem.	Total	% Fem.	Total	% Fem.
2008/09	11	27%	503	15%	58	7%	65	8%
2009/10	0		882	18%	50	8%	42	10%
2010/11	0		657	16%	126	17%	12	17%
2011/12	1208	20%	513	17%	50	6%	51	6%
2012/13	1394	15%	441	10%	4	50%	36	8%
2013/14	1230	15%	341	18%	27	26%	0	

***Table 4(i)b**: Faculty of Engineering, proportion of applicants for academics and research positions shortlisted, by gender, 2008--14.*

	Grade 4		Grade 5		Grade 6		Grade 7	
	Female	Male	Female	Male	Female	Male	Female	Male
2008/09	33%	13%	19%	13%	25%	11%	0%	17%
2009/10			15%	8%	0%	17%	50%	11%
2010/11			19%	13%	14%	28%	0%	0%
2011/12	21%	20%	13%	16%	0%	28%	0%	17%
2012/13	18%	14%	69%	15%	100%	50%	0%	27%
2013/14	21%	16%	13%	21%	0%	0%		

***Table 4(i)c**: Faculty of Engineering, proportion of applicants for academics and research positions appointed, by gender, 2008--14.*

	Grade 4		Grade 5		Grade 6		Grade 7	
	Female	Male	Female	Male	Female	Male	Female	Male
2008/09	0%	0%	4%	2%	0%	0%	0%	5%
2009/10			4%	1%	0%	4%	25%	3%
2010/11			5%	3%	0%	5%	0%	0%
2011/12	8%	5%	2%	4%	0%	4%	0%	4%
2012/13	5%	4%	2%	5%	50%	0%	0%	6%
2013/14	7%	4%	5%	6%	0%	0%		

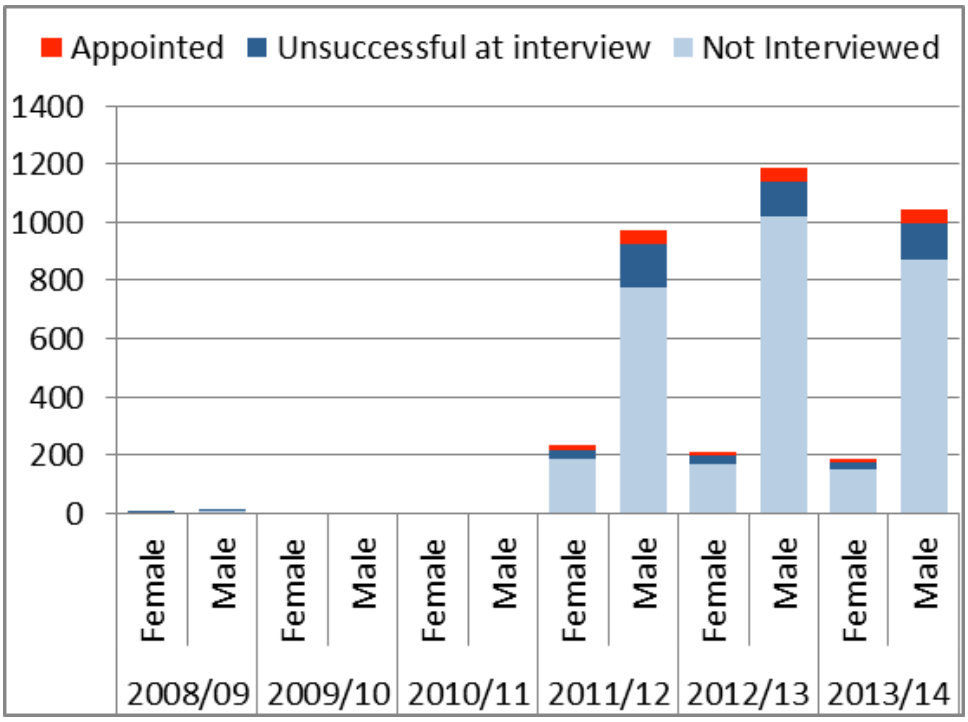

***Fig. 4(i)a**: Total numbers of applicants at Grade 4 to the Faculty of Engineering not interviewed, unsuccessful and successful at interview, by gender, 2008-14.*

***Fig. 4(i)b**: Total numbers of applicants at Grade 5 to the Faculty of Engineering not interviewed, unsuccessful and successful at interview, by gender, 2008-14.*

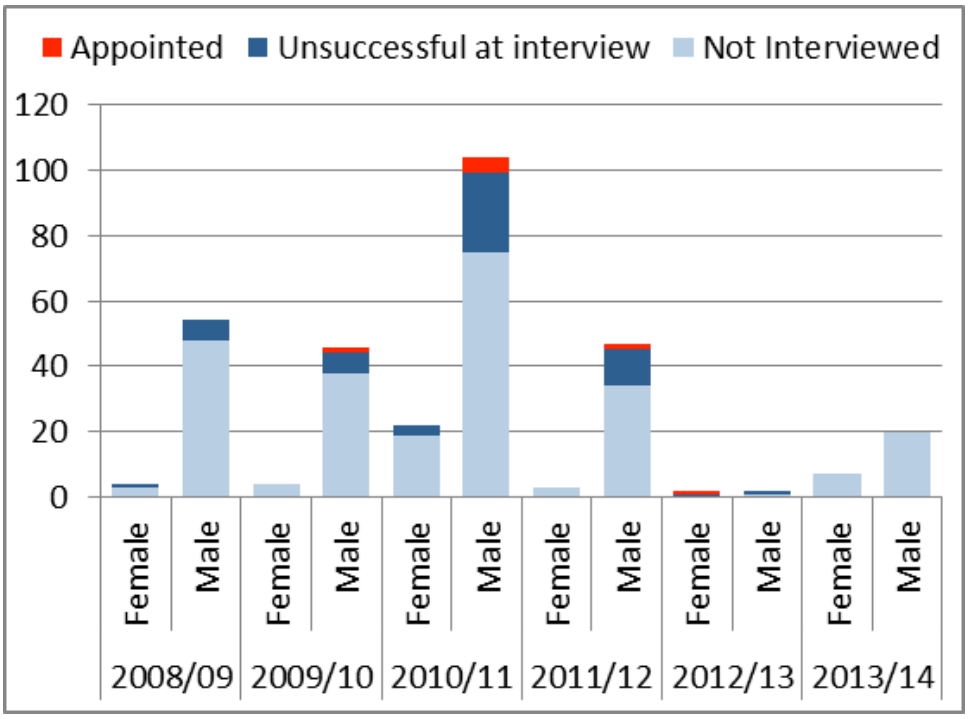

***Fig. 4(i)c**: Total numbers of applicants at Grade 6 to the Faculty of Engineering not interviewed, unsuccessful and successful at interview, by gender, 2008-14.*

***Fig. 4(i)d**: Total numbers of applicants at Grade 7 to the Faculty of Engineering not interviewed, unsuccessful and successful at interview, by gender, 2008-14.*

Job application rates are summarised in Tables 4(i)a-c (graphically in Figures 4(i)a-d), giving a total number of applications and the percentage of those from female applicants. The proportion of female applicants appears steady at grade 5 until a substantial dip to 10% in 2012/13. This triggered a review of Faculty recruitment described in §4iii.

The data shows there were zero applications to grade 4 in 2009—11. This is not actually the case, but arises from the Faculty restructure at when the appointment process and the classification of applicants changed.

These data show largely similar interview and appointment rates for men and women (Table 4(i)b,c, Figures 4(i)a-d). The numbers of posts are often small, except at grade 5 where the female interview rate is higher than that for male candidates (Table 4(i)b). At this grade, the female appointment rate was above that of male candidates but has recently reduced. The small number of available posts underlines the value in collating statistics at Faculty-level, where some analysis is possible, rather than at Department-level where figures are too small for valid conclusions.

(ii) Applications for promotion and success rates by gender and grade

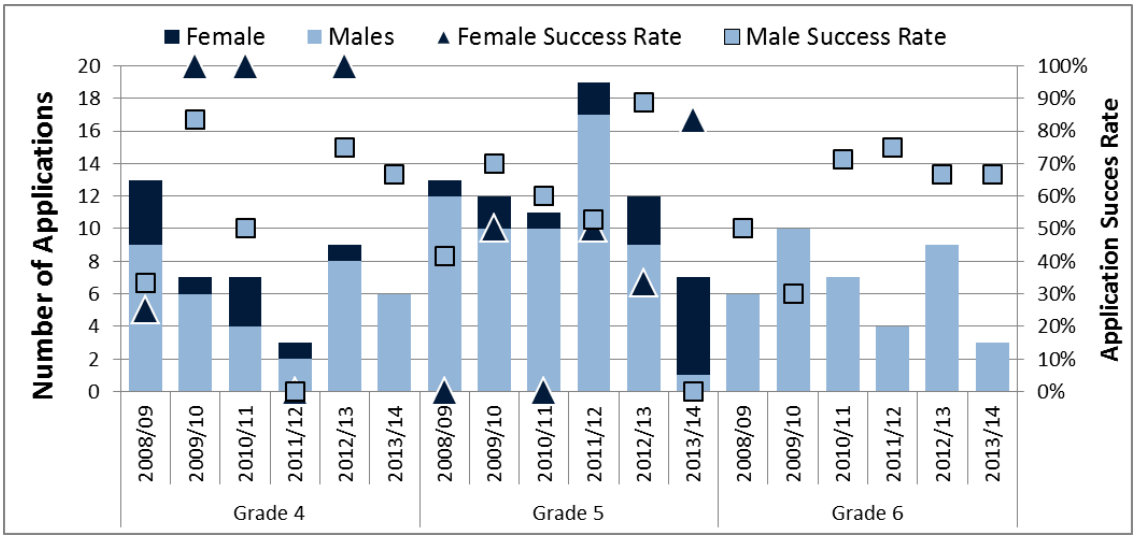

***Fig. 4(ii)**: Faculty of Engineering applications for promotion and application success rate from each grade by gender, 2008-14.*

***Table 4(ii)a**: Faculty of Engineering applications for promotion from each grade and the proportion of female applicants, 2008-14.*

	Grade 4		Grade 5		Grade 6	
	Total	% Fem.	Total	% Fem.	Total	% Fem.
2008/09	13	31%	13	8%	6	0%
2009/10	7	14%	12	17%	10	0%
2010/11	7	43%	11	9%	7	0%
2011/12	3	33%	19	11%	5	20%
2012/13	9	11%	12	25%	9	0%
2013/14	6	0%	7	86%	3	0%

***Table 4(ii)b**: Faculty of Engineering success rates of applications for promotion from each grade, by gender and grade, 2008-14.*

	Grade 4		Grade 5		Grade 6	
	Fem.	Male	Fem.	Male	Fem.	Male
2008/09	25%	33%	0%	42%		50%
2009/10	100%	83%	50%	70%		30%
2010/11	100%	50%	0%	60%		71%
2011/12	0%	0%	50%	53%	100%	75%
2012/13	100%	75%	33%	89%		67%
2013/14		67%	83%	0%		67%

Promotion application and success rates from a grade are broken down by gender in Tables 4(ii)a,b and graphically in Figure 4(ii). The number of female applicants is typically small (i.e. 1 or 2 people) and so percentages can vary dramatically, however the data shows some encouraging trends that must be continued (**AP3.1,5.4**). From grade 4, there was a peak in application rate from females around 2011/12, which also saw strong success rates. This may reflect the strength of support available at this transition point (§4iv), which will see renewed vigour through the new Faculty Researchers Network (**AP3.5**). In 2013/14 we also saw the promotion of 5 female academics to grade 6. Although somewhat anomalous with prior years' trends, this could be an indication that recent changes to the promotion policy, which now accentuates academic service and teaching equally with research, is having a beneficial effect. However, prior to this, success rates from grade 5 were generally lower for female applicants compared with their male peers and application rate from this grade is also typically below the proportion of female staff in the grade 5 workforce (§3vii). These data underline the need for continual, positive encouragement for women to apply for promotions through effective mentoring and PDPR. There are actions planned targeting enhanced promotion applications, particularly aimed at grade 4 research Fellows with academic posts built into their contracts (**AP3.5,3.7,4.2**). This strategy includes disseminating the positive practice in encouraging and supporting promotions, career progression mentoring and the Engineering Profiles case studies, facilitated by the new Athena Engineering website.

At grade 7, where high recent turnover has significantly reduced our pool of female Professorial talent, we will implement targeted action (**AP3.8**) to reverse this trend. This will include focus groups to try and identify the key barriers to current female employees applying for promotion, and actively seeking external female candidates for any open Professorial posts.

All R&T staff are invited annually to apply for promotion. Line managers are also contacted with details of staff at the top of their pay scale. Guidance through training is provided to managers on considerations for part-time staff, those with caring responsibilities and those who have taken career breaks. This process has not changed since the 2011 submission, however, the Dean now sends women in the Faculty a tailored message outlining the interpretation of KPIs and the accounting for career breaks. Staff are

encouraged to meet with their line managers to discuss their potential for promotion, however an individual may apply for promotion without direct line manager support. Departmental (academic) and Divisional (research staff) sub-committees consider applications, offering feedback to candidates and providing supporting comments to the Dean (with the Faculty-level promotions committee) who presents all cases to the University promotions committees.

(iii) **Recruitment of staff**

In 2012, the Faculty made a strategic decision, co-ordinated with a University review, to reduce absolute numbers of applicants and target particular research or teaching specialisms when recruiting. This resulted in a significant reduction (circa 50% in some job levels) in external applications to posts, but also resulted in a concerning decrease in the proportion of female applicants between 2010 and 2013. Encouragingly, the reduced pool of female applicants did not appear to diminish female appointment rate. In response, AWG launched a 2013 review of the procedure and it was concluded that practices were restrictive and did not align fully with accepted good practice in encouraging applications from women. AWG made a recommendation to the Dean for the Faculty to develop its own recruitment policy that would allow broader adverts to be issued with less prescribed role profiles to encourage a wider pool. A reminder of the importance of including text in advertisements, encouraging applications from under-represented groups, was also made. Our most recent data is showing female application rates returning to original levels. The Dean is currently negotiating this position with University HR. The AWG further recommended a review of starting salary practices, since there was some (limited) indication of inequitable distribution as a result of current University regulations. Typically the argument offered for offering starting salaries above the lowest spine level is based on previous salary. If women are known to receive generally lower salaries elsewhere, then this inequality would feed into the new starting salary.

Interview and selection panels are chosen according to University criteria, which include out-of-department representation, with members trained by the University. The Faculty has a role advertisement template that provides clear indication of flexible working contract and childcare possibilities within the post advertisement, along with our Athena SWAN status. Equality data are collected by University HR at every stage, although there is currently no differentiation between staff in research-only and R&T job families (**AP1.1,3.7,3.8**).

(iv) **Support of staff at key career transition points**

The Faculty actively encourages participation in University-provided courses in professional and career development, with all performance reviewers requested to discuss this provision with female staff. The schemes are APPLE (Academics' and Administrators' Professional and Personal Leadership Experience, for grades 4 and 5 academic and APM staff), WAND (Women's

Advancement Networking and Development, for grades 6 and 7 academic and APM staff) and PEAR (Professional and Personal Excellence for Administrative Roles, for APM staff). Since 2011, 31 women from the Faculty of Engineering have attended the APPLE course, with 10 and 1 attending PEAR and WAND respectively.

Transition from post-doctoral researcher to academic is usually through externally advertised posts, however, the University has a policy of advertising all posts internally in a redeployment pool in which researchers approaching the end of a fixed-term contract (3-4 months) may apply before the post is advertised externally. If the individual meets the minimum selection criteria then they are offered an interview for the post.

As a result of the 2011 Athena submission we now survey all leavers from Postdoctoral positions and we are steadily building a picture of what timely support could be offered to researchers. From this information it was decided to initiate a network. In 2014, Louise Brown, with support from the AWG and the Faculty, started a Faculty of Engineering Research Network (FERN). This network is concerned with personal and professional development with the aim of supporting women researchers, and those with non-classical track records, in making the transition to an academic post. The first meeting was attended by 21 researchers and resulted in a detailed plan for structuring future meetings and support systems (**AP3.5**).

The Anne McLaren Fellowship is a University-funded scheme for three years of funding to support at least two female applicants per year to establish a research career in STEM subjects. It has been successful in attracting outstanding engineering staff and aiding transition to a permanent academic post, including AWG member Rachel Gomes. Since 2014, the scheme has linked the research fellowship directly with an academic post. The Faculty of Engineering has a lower success rate than Departments in the Faculty of Science in appointing Anne McLaren Fellows, and we aim to raise this rate by more actively seeking candidates will be an action point here (**AP3.7**).

The Faculty offers mentoring at various stages. New academics are provided both research and teaching mentors as part of their induction. Since the last submission this process has become more integrated with induction and the 2014 SPARKS network is designed to support informal needs and discussion. Staff may request a change in mentor at any point via their line manager. Grant proposal mentoring is offered through research divisions, with all research council proposals subject to an internal peer review process prior to submission. This review process is also optional for proposals to other funders. Research funding activities are supported by our Research & Business Development team, who offer advice on funding opportunities, proposal preparation, knowledge transfer and intellectual property activities.

The Faculty launched a Developing Future Leaders programme in 2013 targeted towards earlier career staff at mid grade 5 – early grade 6 grades (14 participants, 4 female). Focused initially on research, the programme has

developed to incorporate leadership in teaching in 2014 (10 participants, 5 female). A talent management programme is being planned and piloted for APM staff in 2015 with the aim to roll out a similar development programme to remaining staff groups in due course (**AP3.3,3.4**).

5. Career development

(i) Promotion and career development

The Faculty of Engineering encourages promotion applications from all staff groups and recommendations are managed through individual Departments and Faculty promotions groups for research staff. Motivated by the 2011 submission, outputs and other KPIs for part-time (pro-rata) or those staff who have had a career-break are fully considered. In the past 3 years (2011-2014) four female staff have achieved promotion with such a break over the period of time leading up to their promotion; one, undertaking a career break; two having periods of maternity leave and one a part-time staff member promoted through the teaching route. Over the past 5 years the ratio of female to male promotions has been consistent with that of the overall staff population, in 2014 it markedly improved with 5 female staff of the 7 applications successfully promoted to grade 6 Associate Professor.

AP3.8 outlines how we will encourage applications for promotion to grade 7 from female staff through more overt invitations within PDPR and the identification of female talent for nurturing through professional development plans.

The recently published Faculty Research Strategy 2014-2020 has specific stated objectives to `Retain and reward high quality researchers delivering excellent outputs through both team and individual endeavours' and to `Recruit and support future international research leaders'. The Future Leaders Programme (§4iv) underpins this and aims for `participants to assess strategic leadership capability, and work to develop it so that they can lead and grow teams'.

All staff undertake the Personal Development and Performance Review (PDPR) Framework, which has been developed and refined for different job families and grades with clear expectations being set as a minimum for delivery. The aim is to assist and support staff with their career path and to help maximize their development and achieve promotion where applicable. However, the 2014 staff survey suggested that staff have some concerns with the current PDPR system, the metrics that underpin it, and its suitability for different types of jobs. Just over half of respondents felt that the PDPR is not effective in developing staff. Reviewing and developing the process such that staff have full faith in it is essential to its success at identifying and rewarding good performance or providing appropriate support where there are problems (**AP5.5**).

(ii) Induction and training

Professional Development invites all new members of staff to a Welcome Event, held 6 times per year. When a new academic arrives, they receive an induction handbook from the Department's administrative assistant on their

first day, which includes an induction timetable and the allocation of research and teaching mentors. New academics have in place a support package that typically includes one fully-funded PhD studentship, reduced teaching and administration load and matched funding for start-up research projects.

Researchers receive a new starter e-mail containing the induction handbook before they arrive. A hyperlink within the induction handbook encourages research staff to sign up for a ½ day central short course run by the University. Twice a year, the Associate Dean for Research and a representative of the Engineering Research Staff Group hold a welcome presentation for new researchers.

The Faculty organises a workshop `Contemporary Issues in Supervising Research Students', in April each year for staff involved in PGR supervision. Other workshops are available through the PGCHE programme, which all new R&T personnel must take. These workshops are wide-ranging, including training in assessment, curriculum design, teaching philosophy.

Several people found particularly insightful the `assessment' workshop, which included a section on how different assessment methods affect different students. One participant noted, 'We were shown how to evidence the impact of our assessments on students to understand how we could ensure our assessments are fair'. As noted above, since 2013 the Faculty has run a Future Leaders Programme that offers training in leadership skills and career development support through an external mentor.

The Research and Business Development team coordinate the Enhancing your Research in Engineering (E3R) programme, a series of seminars, workshops and training sessions about a wide range of activities spanning the research excellence to impact continuum. Sessions include accessing funding from various streams, proposal writing skills, impact, intellectual property and a very popular and successful `mock panel' – simulating a typical research council panel meeting to help prospective applicants gain insight into the process. The University's Business Engagement and Innovation Service is an organisation that train and support academics in intellectual property and external consultation endeavours.

(iii) **Support for female students**

Since our 2011 Athena submission, all Departments have a named tutor for female students, who can be approached if a female UG student is uncomfortable having pastoral discussions with their own tutor. The Faculty has recently reviewed provision for female UG students, developing a policy to maximise the number of female graduates continuing into engineering careers. As a result, we will hold in February 2015 our first Girls in Engineering Careers Event (**AP2.1**) – which will combine a traditional careers fair with a debate led by two women leaders in engineering (from GlaxoSmithKline and BP). We are currently reviewing the possibility of holding female-only offer holders days (**AP2.3**) and `skills workshops' led by industry

to help provide minority students with leadership skills. The Faculty Student Experience Group will oversee a new budget for departmental social activities or inter-Department competitions, to promote belonging and collegiate culture (**AP2.1**).

Postgraduate students are supported through the engineering and science graduate centre (ESGC), which is a purpose-built local facility available exclusively to postgraduate students and research staff in the engineering and science faculties. The ESGC was created to promote networking across discipline boundaries and to provide a supportive environment for postgraduate students and researchers. The University graduate school provides professional and personal development training for both postgraduate students and research staff. The Associate Dean for the Graduate School from 2012—14 has been Prof Sarah Sharples (AWG member), who has implemented a series of measures to improve the research environment and the integrity of the supervision process as well as being a visible female leadership role model for PGR students.

The University offers the prestigious Anne McLaren Fellowship for women. This is widely advertised amongst graduate students through the careers service and ESGC. Engineering has had 1 Anne McLaren fellow in the last 3 years. **AP3.7** commits to targeting suitable candidates to draw increased numbers of Anne McLaren fellows into Engineering.

PGR students have a representative for each research division tasked with supporting their peers and gathering course-related feedback. They attend regular meetings of the Faculty's PGR Engineering Community Forum where they are able to raise matters to do with PGR training, supervision and support. Four of the twelve representatives are female, providing a healthy body of peer role models for other female PGR students. This community will be developed socially within **AP2.2**.

6. Organisation and culture

(i) Male and female representation on committees

Committee	Type	Chair	Men	Women	Budget?
Faculty Executive Board	Strategic	M	7	4	Yes
Faculty Board	Consultative	M	17	4	No
Faculty Administrative Board	Operational	F	2	4	Yes
Faculty Research Board	Strategic	M	11	3	Yes
Faculty Research Operations Group	Operational	M	9	3	Yes
Faculty Teaching & Learning Board	Strategic	M	8	4	Yes
Faculty Infrastructure & Technical Services Board	Strategic	M	16	1	Yes
Faculty Safety Committee	Strategic	M	15	4	Yes
Faculty IT Users Group	Operational/ Consultative	M	8	3	No
Promotions (Research)	Consultative	M	6	3	No
Department Promotions Groups	Operational				No
ABE	Advisory	M	5	0	
CEE	Advisory	M	3	0	
CIV	Advisory	M	5	0	
EEE	Advisory	M	7	0	
FEPS	Advisory	M	5	0	
M3	Advisory	M	10	1	

Table 6(i): *Faculty of Engineering committee representation by gender, 2014.*

Key Faculty and Department-level committees have been identified and their gender makeup provided in 2014 provided in Table 6(i). There has been a substantial reconfiguration of the decision-making committees in the last 2 years and tracking makeup prior to the current year is difficult. Although many committees have female representation in line with the proportion of female academic staff there are several concerns. 1) The roles of some committees appear to be opaque to staff members (as indicated by the recent staff survey); 2) Many of the female members are senior APM staff rather than academics; 3) Although the culture of the Faculty is healthy at the academic day-to-day operational level, as discussed elsewhere, decision-making and strategy have a lack of female academic representation. Furthermore, despite efforts instigated by the 2011 Athena submission suggesting a review of committee function and makeup, there was still only 1 female in all Department promotions groups this year (note that the Faculty and

Department promotions groups act in advisory capacity to make recommendations and provide feedback to candidates, it is only the University committee that makes a decision on promotions). However, as evidenced by the staff survey, there is a disconnect between some senior decision-making and the day-to-day functioning of the Faculty. This needs to be addressed (**AP0.4,3.1,5.1,5.2,5.3**).

(ii) Female:male ratio of academic and research staff on fixed-term contracts and open-ended (permanent) contracts

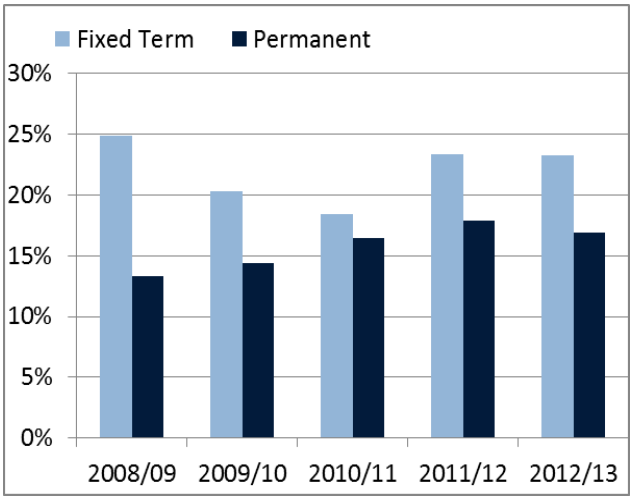

***Fig 6ii**: Faculty of Engineering academic and research staff on fixed term and permanent contract, percentage female contract holders by type, 2008--2013.*

	Fixed Term	Permanent
2008/09	25%	13%
2009/10	20%	14%
2010/11	18%	16%
2011/12	23%	18%
2012/13	23%	17%

Data show that the proportion of staff on fixed-term contracts that are female is higher than the proportion on permanent contracts (Figure 6ii). This is influenced by the larger proportion of female staff at grade 4, where the majority of contracts are fixed term. The percentage of fixed term staff that are female is comparable to the proportion of female staff at grade 4 (§3vi) – in the range 19%–25%, 2008–2013.

The new (since 2013), Anne McLaren Fellowship regulations, that link a research Fellowship with a permanent academic post, will help more women researchers into a permanent contract. However, it is essential that the Faculty makes full use of this opportunity by becoming more proactive in identifying and supporting candidates (**AP3.7**). Our new Researchers Network is also aimed at helping researchers make this transition into permanent positions (**AP3.5**).

(iii) Representation on decision-making committees

The Faculty is managed through a range of committees that cover research, teaching and other key business activities and outputs. Faculty Executive Board, led by the Dean, set out the strategic direction, planning and management decision-making and comprise of the most senior staff (Associate Deans and Faculty Managers) responsible for key portfolio areas: research; teaching and learning; infrastructure and information technology; support services. Decisions within these portfolio areas are reviewed and conducted by committees chaired by the relevant Associate Dean (§6(i)). Each committee has agreed terms of reference, meeting frequency and

membership that is drawn from across relevant staff groups and units within and external to the Faculty (Table 6(i)).

Female staff with relevant roles, experience and interests, are encouraged to participate in both Faculty committees and when nominees are requested for University-wide committee or task group membership. Good progress has been made in the Faculty Executive and Teaching & Learning Board membership since the 2011 Athena submission, however the Department promotions groups, who are the first advisory stage of promotion applications, show a notable lack of female representation (**AP3.1,5.1**). For most other decision-making bodies, despite smaller percentages of female staff employed in Engineering, there are sufficient numbers to ensure representation is distributed as evenly as practicable to avoid over-loading.

Teaching Departments and Research Divisions, the units that comprise the Faculty, have management committees to formally conduct their business outputs. Membership of these is comprised in a similar way to that within the Faculty.

(iv) **Workload model**

The Faculty workload model has seen relatively few changes since the 2011 submission. Crucially the model is now fully transparent.

The model contains information regarding teaching duties and five different elements of administration (course support, student support, departmental administration, Faculty-level activities and admissions, recruitment and outreach). It is expected that all academic staff contribute to teaching and administrative duties. There are administrative allowances for those with leadership roles (e.g. Dean, Head of Department, PVC), reflecting the time taken to complete these roles effectively. Additionally, newly appointed staff (up to three years in post) have a reduced expectation for teaching and administration and there are increased weightings for new module preparation or delivery of a module for the first time. Case-by-case considerations are made by Heads of Department for those with particular requirements (e.g. staff with high research loads in a particular academic year).

Explicit advice to performance Reviewers states, `Reviewers are encouraged to use the PDPR meetings to allow those staff with teaching roles to discuss their workload, and the data within the workload model could be used as a basis for these discussions.'

There are still challenges with the workload model – for example, certain module types appear to get unrealistically high allowances, and there is still no effective way of allocating hours to good citizenship. However, these types of problems are under continual review by the Faculty Teaching & Learning Board and Noah Russell from AWG. Further, the University will be launching a workload model in 2015 that will replace the one we currently have in place. Thus, further developments of our local model will be limited.

(v) **Timing of departmental meetings and social gatherings**

The Faculty considers 09:30—15:00 core hours and advises that key (i.e. decision-making) meetings should be held within these hours. The final decision lies with meeting chairs, and there has to be some flexibility to permit video-linkage with our Asian campuses. However, the policy is frequently underlined at Faculty Board Meetings and compliance is monitored via a calendar that automatically logs key meetings (see §6(iii) for committee list, **AP1.5**) viewable by the Athena coordinator. Compliance with core hours has been between 85% and 90% since the 2011 submission.

(vi) **Culture**

The Dean actively champions the AWG and since he has juggled childcare responsibilities with his career he empathises with the many members of staff that are raising children. The Faculty Manager has worked flexible hours for many years and the Faculty is attuned to accommodating staff as they try to manage their work-life balance. Keeping meetings and lectures to core hours is just one of the ways in which this approach manifests itself. Although the Faculty supports these policies, there are obstacles such as timetabling pressures, problems with parking on the main University campus and interaction with the overseas campuses that can hinder their practical implementation. The AWG has provided an effective forum for voicing concern over these problems – as evidenced by the very high response rate to the recent Staff Satisfaction Survey. Several AWG members also contribute to the University WinSET group, demonstrating our commitment to asserting pressure at Faculty and University level to ensure the working environment and support for flexible working take higher priority in the University's strategy.

The Dean is personally very approachable, and he will openly discuss policy, strategy or an individual's career path. There are regular open `Faculty Forums', as well as a forum aimed at teaching-oriented staff. Students get numerous opportunities to communicate issues to staff at Learning Community Forums. The routes for communication are therefore good, though the recent staff satisfaction survey strongly indicated that there is a need to improve sense of value (34% of survey respondents did not feel valued by the Faculty). Some staff feel that they are not listened to - 33% did not feel that Faculty management understood their role - so a culture of consultation between job types needs to be nurtured (**AP0.3,0.4,5.4**). However, 56% of respondents said they felt happy working in the Faculty of Engineering and some comments in the survey included `It's a great place to work…the best job I have ever had' and `I enjoy my job very much, it's challenging and diverse and I feel valued by the people I work for…however, I don't feel valued by my managers and their managers'. 80% feel they know what is expected of them and 41% feel supported in doing their job to the best of their ability.

A polite, open culture pervades the Faculty with many close friendships crossing the traditional technician-administrator-academic boundaries. The Faculty now has an annual Christmas dinner and there are numerous

common rooms around the Faculty in which a varied cross-section of staff can be seen each day. While the cricket may still be discussed, so are the various words our children use for bras!

The latest generations of students are more acclimatised to multicultural and mixed-sex environments when they arrive at university and this clearly influences and is influenced by the welcoming and tolerant staff of the Faculty. There is simply no space for intolerance of any flavour – the modern British university is as diverse an environment as you could imagine and the Faculty demonstrates that it is possible to thrive on such diversity.

(vii) **Outreach activities**

The Faculty of Engineering has an outreach coordinator, Lucy Rose, who arranges events such as the annual Christmas lecture for local school children, workshops, summer schools and demonstrations. Outreach is recognised within the Workload Model, and also forms a compulsory section within R&T promotion application documentation. Outreach forms part of the Engineering Doctorate (EngD) programme, with students delivering public presentations and demonstrations at open days.

As examples of some of the larger events with school-aged girls that the Faculty has been involved with, we have held a 'First Edition Dragonfly Event' designed to encourage Year 8 girls into STEM subjects. The event is run in conjunction with the Engineering Development Trust and is sponsored and attended by the RAF. 60 girls attended from 4 local schools (The Manor Academy, Ellis Guildford School and Sports College, Nottingham Girls Academy & Kirk Hallam Community Technology and Sports College). The programme of events included an Introduction to engineering from Dr James Bonnyman (EEE); 2 interactive workshops where each of the girls built a simple motor and soldered a simple electronic circuit; and a final competition where the girls worked in teams to build a K'nex Crane Arm. There was also a careers presentation by the RAF.

Lucy is currently working with STEMNET to deliver a supported workshop for any girls who sign up to the 3D printing project as part of the Talent 2030 competition. Our Faculty is home to a leading research centre on 3D printing, which will provide support to the teams of girls with their design and potentially produce some prototypes of their projects to present at a `Big Bang Fair'. Three taster days with Caterpillar (heavy plant designers and manufacturers), one of which will be specifically for girls, are scheduled for the coming weeks.

PGR students in the Human Factors group gave a presentation at Nottingham Girls High School as part of their 'Science is the Future' day, which involved an interactive workshop and a 'speed dating' style information session. As an example of international outreach work, UG students from CIV, led by Amy Wright – who has won awards for her work, have designed and built a hydroelectric power system in Malawi over the last 3 years.

The Faculty is lively in outreach, and much of this is targeted at school-aged girls. Lucy has provided a focal point for this work. The Faculty is becoming more involved with outreach activities aimed at primary school children to raise aspirations from a younger age. **AP6.1** describes how these outreach activities will be better promoted throughout the Faculty, and participation encouraged.

7. Flexibility and managing career breaks

(i) Maternity return rate

Maternity leave return rate has been 100% in the 5-year period 2008—2013, with between 4 and 8 leaves annually. Clear dialogue between employee and line manager before leave, the use of Keeping in Touch Days and the promotion of flexible- and part-time working may all be playing a part in the strong return rates and should continue to be supported.

(ii) Paternity, adoption and parental leave uptake

	All	R&T
2008/09	8	5
2009/10	8	4
2010/11	11	10
2011/12	3	3
2012/13	5	5

***Table 7(ii)**: Faculty of Engineering paternity, adoption and parental leave uptake for all staff and R&T staff only, 2008--2013.*

Since our original 2011 submission, the records for paternity leave have been formalised, and the Faculty Manager has a high level of confidence that we now have a complete data set. The Faculty culture in taking paternity leave is good, with a clear expectation that a new father will take their full entitlement. Staff are happy to support colleagues in R&T, and the major challenge now is to ensure that staff within other job families enjoy the same support (**AP6.3**).

There has only been one case of adoption leave in the last 5 years (in 2009), and a single example of parental leave.

(iii) Numbers of applications and success rates for flexible working by gender and grade

***Table 7(ii)**: Faculty of Engineering paternity, adoption and parental leave uptake for all staff and R&T staff only, 2008--2013.*

	R&T	% Female
2008/09	1	100%
2009/10	1	0%
2010/11	1	100%
2011/12	0	
2012/13	2	50%

***Table 7(iii)**: Faculty of Engineering formal requests for flexible working patterns and proportion of those from female staff, R&T staff only, 2008--2013. **All requests for formal flexible working were approved**.*

(iv) Flexible working

The Faculty offers a range of formal flexible and part-time working arrangements such as extended lunch breaks, to enable care of dependents, variable hours to allow staff to complete school pick-up, and a gradual change in hours to facilitate the return to full-time working for parents with young children. In addition, it is possible to request changes to part-time working

hours to accommodate changes to personal circumstances, for example reducing hours from 80% to 70% as a result of a change of school. Staff may also request term-time only working patterns to mirror children's schooling patterns.

Staff may formally request the timetabling of teaching commitments to account for part-time or flexible working hours, and childcare commitments. For example, a parent with a child at nursery can request that they do not teach between 5 and 6 in the evening, where the nursery closes at 6. This timetabling consideration is agreed with a staff member's Head of Department, so although it may not constitute formal flexible working hours, this consideration implies that there is an ongoing discussion. For the current 2014-15 academic year 23 members of staff from across the Faculty have timetabled childcare consideration.

Beyond this timetable consideration, several members of R&T staff operate an informal flexible working pattern, locally agreed with their line-manager. Informal advice in requesting these arrangements can be found through SPARKS (see §8) or more formally in consultation with an employee's line manager. This accentuates a key strength in the Faculty structure that there are now more channels through which such requests can be initiated, removing the dependence on a single relationship for considerate management. Additionally, there are examples of team teaching, where colleagues can organise teaching to allow each other flexibility in managing care responsibilities and research opportunities (see case study §10).

Uptake of informal flexible working, and timetable requests to accommodate childcare is very high amongst academics, and (apart from current parking problems being tackled at a University level) this appears to promote a healthy working culture. However, the recent staff survey indicated that staff from other job families do not feel they have the same opportunities for flexibility, and this will be tackled within **AP3.3**.

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

Although there is no formal policy beyond University policy on maternity and adoption leave support, the Faculty continues to have an excellent track record. There is an open culture amongst colleagues that ensures that future and returning parents feel welcome, valued and supported. AWG through its website encourages returning carers to seek advice regarding positively representing career breaks in promotion applications, this will also be featured in an upcoming Researchers Network event. The Faculty Research and Business Development team have expertise in grants available for returners from career breaks, such as the Daphne Jackson Fellowship. AWG have been distributing (at open days, seminars, staff events) fliers since 2012 advertising Fellowships aimed at women and those with flexible working needs.

The Faculty Health & Safety Executive undertakes detailed hazard assessments to protect pregnant and breast feeding mothers from risks. The Faculty has recently replaced all office doors, so that there are now windows

in each, to promote staff accessibility and openness. A curtain is available for breast-feeding and expressing mothers. Informal advice and support is available through the SPARKS network, which allows staff seeking support to connect with others who can offer it. SPARKS will help to promote good practice across the Faculty, as staff can discover from peers with similar experiences what is possible and desirable.

Work cover during absence and a Keeping in Touch timetable are arranged with an employee's line-manager before leave commences. Both are taken on a case-by-case basis with employment-type, length of leave, and the timing relative to the academic year important factors in determining the details of the necessary arrangements. The Faculty senior management team encourages a policy of discussing the flexible working possibilities before leave commences.

5000 words + 337

8. Any other comments

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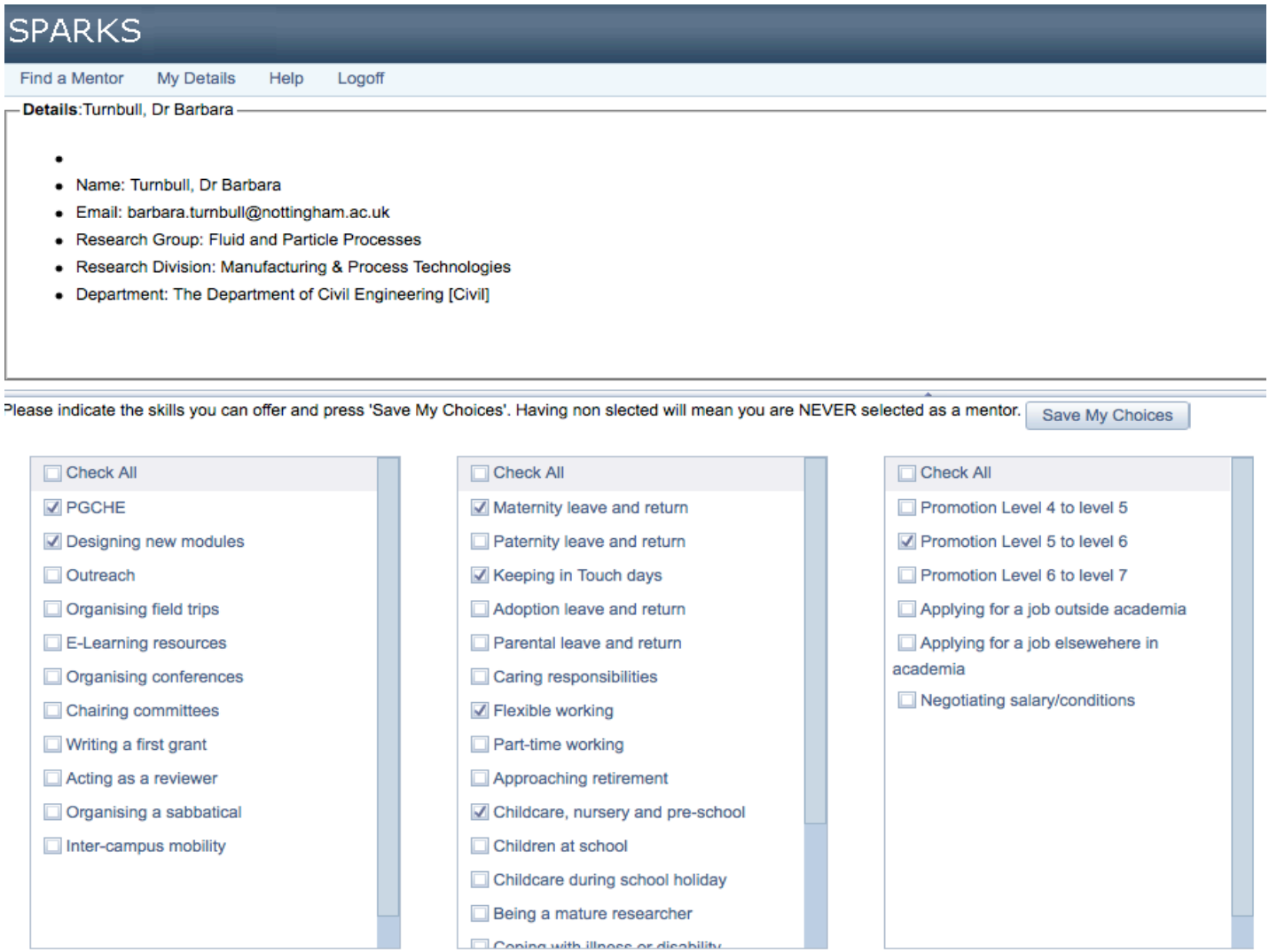
The following describes SPARKS, which is our new (launched in Spring 2014) online informal mentoring system, sparks.engineering.nottingham.ac.uk.

This is a website designed to help staff find informal advice from colleagues across the Faculty. You may be wondering how to finish your PGCHE, starting to think about retirement, concerned about returning from parental leave or confused about where to find childcare for the school holidays. You can use SPARKS to find people in the Faculty who have been through it and can offer support.

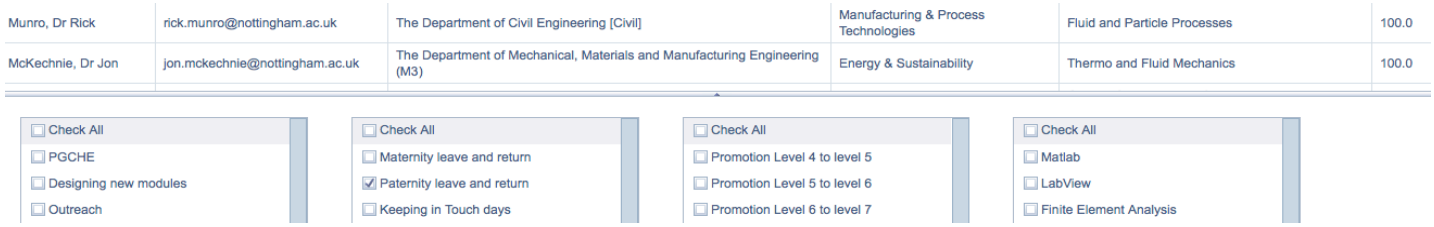
To access SPARKS, a person goes to the webpage and completes a profile. The first page that opens is for you to input your profile: Select the boxes against things that you would feel happy to chat to someone about (e.g Figure 8a). When someone else searches for a `mentor' in a particular area, they will see a list of people who have selected those boxes in their own profile (e.g. Figure 8b). If you are seeking advice, go to the 'Find a mentor' tab, and select the area in which you are looking for it. A list will be displayed of those who are happy to be contacted.

Within a week of its launch, over 90 staff members within the Faculty completed their SPARKS profile to register as informal mentors.

115 words



***Figs. 8**: a) Above, the personal profile page of SPARKS networking site. A person checks the fields where they would be happy to informally advise colleagues. B) Below, two people returned by a search for those happy to discuss their experiences of paternity leave and return.*



9. Action plan

Action Plan - Athena SWAN Silver Renewal, November 2014
Faculty of Engineering, University of Nottingham

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
0	**Action implementation devices**							
0.1	AWG recruitment drive and operational review	29 members across the Faculty	Continue free entry policy to AWG with invites to target groups Recruit AWG member from Faculty marketing team, with responsibility for web presence and advertising Recruit an Admissions representative	Athena Co-ordinator	Permanent	Ongoing	High	Increase Athena Working Group membership to >30 AWG to include >10 PGR, PGT, UG and Postdoctoral members
0.2	Athena presence on Faculty intranet	Webpages allocated and designed	Write news article on Athena self-assessment process Publish award submission Annual update of `Engineering Profiles'	Marketing AWG representative	Permanent	AT2014	Medium	Increased awareness of the Athena Charter, and its influence on Faculty culture and policy. As evidenced by question in AP1.4
0.3	Faculty Athena Working Group meetings	Quarterly meetings prior to University WinSET meetings for report preparation and discussion	Continuation of quarterly meetings Publish minutes and reports to intranet (AP0.2)	Athena Co-ordinator and administrator	Quarterly	AT2014	Medium	>60% attendance at all Faculty Athena meetings
0.4	Annual AWG Event	UK Women in Engineering Day 2014 as renewal launch	Annual Ada Lovelace day celebration for full Faculty	Athena Co-ordinator Marketing AWG representative	Annual	AT2015	High	>200 students and staff participating in a community celebration

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
1	**Baseline data and supporting evidence**							
1.1	Faculty data	Review and departmental reports to AWG Reporting to Executive and University WinSET group Publication of data through AWG web-pages	Disaggregate academic staff data by research only, teaching only and R&T contract types Collect data for APM and TS job families	Department Athena Representatives Faculty Manager Faculty Data Analyst	6 monthly	Ongoing AT2015	High	Fully disaggregated data by contract type by 2016 Log of TS external accreditation
1.2	Monitor UG and PGT/R student intake by gender and record national benchmark figures	UoN data collected by registry Faculty hold UG recruitment data and review best-practice	Recruit admissions representative to AWG, to influence Faculty recruitment decisions with Athena policy (AP0.1) Collect and analyse FY destination data	Athena Co-ordinator Faculty Data Analyst	Annual	Ongoing	Medium	>28% Faculty average UG females by 2017, with an increase from 2014 levels in ALL departments
1.3	Track grade 4 to 5 career transition	Grade 4 departure questionnaire distributed since 2013	Continuation of survey. Annual review of results and identification of actions	Faculty Researchers HR Representative	Permanent	Ongoing	Medium	>28% permanently contracted, grade 5 female academic staff by 2017
1.4	Workplace satisfaction survey	1st Faculty survey in 2014	Biannual surveys to monitor cultural progress	Faculty Data Analyst	Biannual	SU2016	Low	Increased feeling of value among staff
1.5	Monitor meeting times	AWG calendar automatically logs key meetings	Review meetings for logging, and report on meeting times to AWG, Dean and dept. heads	Department Athena Representatives	6 monthly	Ongoing	Medium	>80% major meetings taking place within core hours

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
2	**Undergraduate and postgraduate students**							
2.1	Support for UG students	Female tutor in all Departments University widening participation actions	Girls in Engineering Careers Event Skills workshops for minority students Department `culture' funding via SEG	Careers & Employability Associate Dean for Teaching & Learning Outreach Officer	Variable	SP2015 SP2016 WI2015	High	Increasing proportion of female UG students going into engineering careers
2.2	PGR/PGT recruitment/provision	PGR provision review 2012--13	PGR application process review PGR social network PGT Course review and dissemination of best practice Analyse best practice use of videos in advertising, improving quality and female visibility	Associate Dean for the Graduate School Faculty Research Office Katharina Gabrecht Amy Tang AWG Marketing Representative	Variable	WI2016	High	>25% female PGR applications by 2017. Sustain PGT course proportions at 2014 levels
2.3	UG recruitment		Diversified FY recruitment material. Women in Engineering presentation at Open Days – advertising AP2.1 `High-Achievers' unconditional offer to AAB female applicants. Review for possible trial in M3 in 2015. Progress report in Feb 2016 for possible roll out	FY representative AWG Admissions Representative Outreach Officer Associate Dean for Teaching & Learning		SU2015 AT2015	High	>28% Faculty average UG females by 2017, with an increase from 2014 levels in ALL departments 2017

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
3	**Key career transition points, appointments and promotions**							
3.1	Review promotion procedure	Faculty promotion group formed of given role holders	Review panel membership to ensure representation of women (AP5.1) Include an explicit promotion recommendation section (tbc line manager) in PDPR paperwork	Faculty Manager in consultation with the Dean	3 months for permanent implementation	AT2014 SP2016	High	Equal likelihood of promotion application from female and male staff by 2017
3.2	APM and TS regrading	Faculty Administrative Board reviews and provides feedback to support all applications	Team leaders to provide stronger support for regrading discussions and share best practice. Review success rate	Senior APM and TS Managers Faculty Administrative Board	Quarterly	AT2014	High	>90% success rate for FAB approved submissions annually
3.3	APM and TS staff	Faculty has HR commitment to support a pilot for a Talent Management programme	Launch Talent Management programme for APM staff (TS to follow) Review of APM Governance Structure	Faculty Administrative Board Senior APM and TS Managers HR Representatives Faculty Executive Board	Annually	SU2015 WI2014	High	100% completion of programme
3.4	Technical staff	External review of TS; management structures and reporting lines defined and communicated	Provision of leadership training to Technical Team Leaders Engage in UoN	Technical Managers TS PD staff	3 months for permanent implementation	AT2014	High	Uptake of training opportunities amongst TS staff

		Professional Registration workshop for Technical Team Leaders	support staff Leadership Programme & HEFCE Catalyst project on career pathways for TS Professional Registration workshops for all TS staff Map Professional Registration to trainee scheme					
3.5	Researchers Network	Faculty Researchers Network established, meeting termly	Review uptake and remit Develop input from senior staff	Athena Co-ordinator Network Facilitator	3 months	SU2015	High	>28% female R&T at grade 5 by 2017
3.6	Induction		Review induction materials to include SPARKS, APPLE, WAND and PEAR, training opportunities, leave and flexible working policies Develop an induction checklist	AWG Faculty Researchers HR Representative	3 months	SP2015	Medium	Increased uptake of PD opportunities Consistent induction experience for staff
3.7	Staff Recruitment	Recruitment recommendations made to Faculty	Review of recruitment policy and scrutiny of applications Increase activity to attract Anne McLaren applicants	AWG	3 months	AT2015	High	>22% applications to grade 5 posts from females by 2017 1 Anne McLaren Fellow in Engineering annually
3.8	Level 7		Identify level 6 females for nurture to	Faculty Executive Board	3 months	SP2015	High	Reversal of declining

			promotion within 4 years Focus group of female academics to identify barriers to level 7 Actively seek female external candidates and encourage application to level 7 R&T posts					proportion of females at Professorial level

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
4	**Career advice and support**							
4.1	SPARKS	Web-based mentor matchmaker website	Develop international options Review the uptake of SPARKS	Athena Co-ordinator Steve Greedy	Permanent	SP2016	High	>50% UK based R&T staff using SPARKS to access advice
4.2	Record of women achievers	`Engineering Profiles' booklet and poster display at the AWG renewal launch	Continuation of Engineering Profiles, and review of nomination process	Athena Co-ordinator AWG Marketing Representative	Annual	AT2015	Medium	Increased awareness of female success as indicated by a 5% increase in uptake of part-time, flexible working and extended leave options
4.3	Promotion of APPLE, WAND and PEAR courses	Included in PDPR recommendations	Review uptake of PD courses	Athena Co-ordinator	Permanent	SU2016	Low	Staff targeting a minimum of 1 PD activity in their PDPR
4.4	Faculty financial support for care costs incurred through work travel	Limited support available through the University	Provide funding and guidance to help those with care responsibilities find some cover for work travel. This will help returners to play a full part in the Faculty and improve confidence in applying for promotion	Faculty Research Manager	Permanent	SU2016	Medium	Increase in promotion applications following a career break

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
5	**Culture, communications and School organisation**							
5.1	Committee gender representation	Light touch review of promotion panel selection by Faculty Manager and Dean	Full review of committee structure and selection (AP3.1)	Prof. Sarah Sharples Faculty Manager Dean Athena Co-ordinator	6 months	WT2014	High	Female representation in ALL strategic and decision-making committees Committees with unique and clear remits
5.2	Equality & Diversity agenda		Include Equality & Diversity agenda point in all strategic Faculty meetings	Faculty Manager	Permanent	SU2016	High	All published strategy documents to include Equality and Diversity analysis
5.3	Faculty Vision		Develop a Faculty Vision and Values statement with explicit Equality component	Dean Faculty Manager				Equality as a driving component of Faculty decisions
5.4	Social Interactions	Faculty social occasions: Christmas dinner, PGR graduation celebration	Interdepartmental competitions to promote departmental cohesion and Faculty belonging	Athena Co-ordinator	Permanent	AT2016	Medium	At least 1 competition per year with representation from all departments
5.5	PDPR	University PDPR system adopted in 2012	Review of KPIs and equality of experience	Faculty Executive Board		AT2014	High	>70% confidence in PDPR, as indicated by survey AP1.4 in 2016

Action number	Action description	Actions already taken place (November 2014)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
6	**Career breaks/flexible working**							
6.1	Promoting and disseminating outreach activities	A wide programme of activities, many of which target girls in schools Outreach fliers and web presence	A register of activities linked through the Athena website Inclusion of outreach within PDPR	Outreach Officer AWG marketing representative Faculty Executive Board	Permanent	SP2016	Low	Increased participation of staff in outreach activities
6.2	Sabbatical Facilitation		Review Extended Leave (sabbatical) policy criteria, implementation and uptake. Develop actions to enable R&T staff with care responsibilities to be able to take research sabbaticals: e.g. team teaching, funds for care	Athena Co-ordinator	6 months	SP2016	High	>10% R&T staff taking sabbatical
6.3	Promotion of parental/carers leave policies	Review of methods for increasing awareness of leave policies	Develop links to key HR information sites through the Faculty pages Advertise opportunity for additional paternity leave	AWG	3 months	AT2016	Medium	See some uptake of additional paternity leave by 2017

Abbreviation

SP/SU/AT/WI Spring/Summer/Autumn/Winter

Appendix 1 Action Plan - Athena SWAN Silver Award, November 2011
Faculty of Engineering, University of Nottingham

Progress key	Completed	Excellent	Limted	Zero

Progress	Action number	Action description	Actions already taken place (November 2011)	Further planned actions	Responsibility	Timescale	Start date	Outcome value	Outcome measurement
	0	**Action implementation devices**							
Excellent 29 members 6 UG/PGR/R New PDRA network	0.1	Athena working group recruitment drive and operational review.	23 members across the Faculty (see appendix 3).	Make personal requests through Athena Working Group. Advertise Athena activity through Faculty intranet, e-mail and graduate school. Consider alternative discussion platforms.	Athena Co-ordinator	2 months	SP2012	High	Increase Athena Working Group membership to 30, including 10 PGR and Postdoctoral members.
Excellent Website relocation and redesign by marketing team	0.2	Athena presence on Faculty intranet.	Webpages allocated AGWP document linked	Write news article on Athena self-assessment process for posting on the intranet portal. Publish award submission.	Faculty Internet Administrator Athena Co-ordinator	Permanent	WI2011	Medium	Increased awareness of the Athena Charter, and its influence on Faculty culture and policy.
Excellent Average 55% attendance	0.3	Faculty Athena Working Group meetings.		Quarterly meetings prior to University WinSET meetings for report preparation and discussion.	Athena Co-ordinator	Permanent	AT2011	Medium	>60% attendance at all Faculty Athena meetings.

Progress	1	Baseline data and supporting evidence							
Limited Department reporting completed WinSET reporting completed	1.1	Faculty data	Co-ordinated 6-monthly release of data on 01/09 and 01/03	6 monthly review and report from department champions to Faculty working group 6 monthly reporting to Faculty Management Board and WinSET group 6-monthly publication of non-confidential information through Athena web-pages	Faculty Manager Athena Co-ordinator Department Athena Champions HR representative (Graham Parker)	Biannual	SU2011 SP2012	High	Athena reviews as part of "Equality and Diversity" agenda at all strategic Faculty meetings
Limited Monitoring succeeded Excellent progress in FY, PGT and PGR Static UG ratios	1.2	Monitor UG and PGT/R student intake by gender and record national benchmark figures	UoN data collected by registry. Locally for foundation courses	UoN and national data to be annually reviewed by the Faculty Management Board, Teaching & Learning Committee (UG data) and Athena Working Group Review Faculty UG recruitment and marketing policy. Disseminate CEE best-practice across CIV, M3 and EEE	Faculty Manager Department Athena champions reporting to Athena co-ordinator	Annual	SU2011	High	Full data sets, well dispersed through Faculty by 2014 >30% Faculty female UG students by 2014, with CIV, M3 and EEE > 20%
Completed	1.3	Database of full maternity/ paternity/	Incomplete records of leave requests	Co-ordinate with University HR to	Faculty Manager	Permanent	SP2012	Low	Complete statistics for

		adoption/ carer/ parental leave statistics	and uptake.	provide full leave data by gender and grade					Athena award renewal 2014
Completed 25% female grade 5 staff in 2011/12	1.4	Track grade 4 to 5 career transition		2-year survey of destinations for grade 4 R&T personnel	Department Athena Champions reporting to Faculty Manager and Athena co-ordinator	2 years	SU2012	Medium	>25% permanently contracted, grade 5 female academic staff by 2014
Completed	1.5	Monitor department meeting times		Survey sample timetables across job types, grades and season	Department Athena Champions	1 year	AT2012	Low	>80% major meetings taking place within core hours

Progress	2	Undergraduate and postgraduate students							
Completed	2.1	Foundation course recruitment	Review of recruitment and marketing practice		Foundation Course Administration	6 months	WI2011	Medium	Determine actions for attracting more female applicants
Completed Female tutor policy in all handbooks Continuing WP programs	2.2	Support for UG students	Formalise female tutor request policy	Focus group of female UG students to discuss course material, supervision and assessment techniques to ascertain factors leading to gender variance in performance Use outreach channels to boost applications – best practice adoption from Department of Chemical & Environmental Engineering	Course Senior Tutors Athena Co-ordinator Outreach Officer	Variable	AT2012 SP2013	High	All female UG students are aware of their right to request a female tutor Determine actions for improving female student performance Boost application rates from all backgrounds
Excellent Review of PGR components PGR ratios some improvemnt	2.3	PGR recruitment	University-level review of PGR recruitment Institute of Physics and Royal Society of Chemistry reviews of PGR recruitment	Survey of new PGR/T students to ascertain the factors that attracted them to the Faculty. Disseminate best-practice from CIV. Biannual reporting to Associate Dean for the Graduate School	Athena Co-ordinator Associate Dean for the Graduate School Faculty Research Office	Variable	SU2012	High	Identification of actions for improving female application ratio to PGR, based on best-practice dissemination across Faculty

				Promote High Fliers internships to UG students Destination survey of PGR students, with biannual reporting to Associate Dean for the Graduate School Provide information regarding childcare and flexible hours in PGR recruitment material					>25% female PGR applications >70% response rate from surveys
Completed	2.4	T&L committee gender representation		Issue guidance regarding female representation on T&L committee	Faculty Manager in consultation with the Dean	Permanent	WI2011	High	Female representation in T&L decisions
Limited Athena group est. in Malaysia campus. Mei Fong Chong very active in UoN WinSET. Preparing for Athena submission	2.5	Review of the influence of internationalisation		Survey staff and students at the Ningbo and Kuala Lumpur campuses to understand how Athena principles can be translated overseas	Associate Dean for International Campuses	3 months	SU2012	Medium	Actions for implementing Athena policies at overseas campuses A nominated Athena representative at each overseas campus

Progress	3	Key career transition points, appointments and promotions							
Limited Review took place, but rep'n still skewed	3.1	Review promotion panel identification procedure	Advisory group hand-selected by the Dean	Review selection procedure	Faculty Manager in consultation with the Dean	3 months for permanent implementation	WI2011	High	Balanced representation of workforce on key committees
Limited Equality training established, but rates still low	3.2	Extend Activity Reviewers workshop to include gender and equality training		Ensure reviewers are aware of the reduced likelihood of women applying for promotion	Faculty Manager	Annually	SP2013	Medium	Rate of female promotion applications greater than male applications by 2014
Completed	3.3	Pro-rata consideration of output for promotion applications		Audit on an annual basis for confidential reporting	Faculty Manager	Annually	WI2012	High	Increased promotion applications following career break
Limited Occasional good ratios, but poor trend at grade 5	3.4	Identification of non-traditional advertising routes for posts		Discuss advertising practices with marketing and research office. Research practices of other Faculties	Faculty Marketing	3 months	SP2013	Low	>30% female applicants at grade 4, >20% at grade 5, >15% at grades 6 and 7 by 2014
Completed	3.5	Review of research staff mentoring and promotion	Full review of mentor selection process and promotion applications		Engineering Research Staff Group	3 months	WI2011	Medium	Actions to the Faculty Research Committee

Progress	4	Career advice and support							
Completed	4.1	Mentor listing		Create a listing of Faculty mentors and their expertise through the Athena web-pages Cross-check by annual mentor survey	Athena Co-ordinator Athena administrator	Permanent	SP2012	High	All staff have a mentor or their own choosing
Completed	4.2	Mentor gender equality training		This will be delivered through the APR training (action 3.2)	Faculty Manager	Annually	SP2012	Low	Improved support quality from academic mentors
Limited	4.3	Promotion of APPLE, WAND and PEAR courses	Included in APR recommendations.	Create visible links within the Faculty intranet	Athena Co-ordinator	Permanent	AT2011	High	Staff targeting a minimum of 2 PD activities in their APR
Limited Action completed in terms of women achievers and now researchers network. Promotion applications target not achieved	4.4	Record of women achievers		News articles and listing on Athena we-pages Annual focus group of post-doctoral researchers exploring their perception of the Faculty in terms of support, recognition and esteem of women academics	Athena Co-ordinator Athena administrator	Permanent	SP2012	Medium	Increased awareness of female success and 5% increase in promotion applications from grade 4

Progress	5	Culture, communications and School organisation							
Excellent WLAM transparent Algorithm still for review	5.1	Review of workload model performance		Annual review of the workload model outputs and performance by Athena Working Group, as input to Faculty Management Board	Athena Co-ordinator in consultation with Associate Dean for Teaching and Learning	Annually	SP2012	Medium	Faculty-wide transparency and balance in workload model
Completed	5.2	Activity Review as a platform to discuss workload model	Included in APR recommendations		Faculty Manager	Annually	SP2011	Low	Clear route for discussing workload grievances
	6	Career breaks/flexible working							
Completed	6.1	Promoting and disseminating outreach activities		Develop a database of outreach activities including their inclusion in the workload model	Outreach Officer	Permanent	AT2011	Low	Increased outreach activity, with regulated inclusion in workload model
Excellent SPARKS and Faculty profiles	6.2	Promotion of parental leave policies		Review methods for increasing awareness of leave policies	Athena Working Group	3 months	SP2012	Medium	Actions for improving Faculty leave policy awareness

Abbreviation

SP/SU/AT/WI Spring/Summer/Autumn/Winter

10. **Case study: impacting on individuals**

Dr Anna Croft, Associate Professor, Faculty of Engineering – Not a member of AWG

Anna is from a dual academic career family. She was an academic in Bangor for 14 years before coming to Nottingham, and her partner was and continues to be an academic in Cardiff. She wished to move to Nottingham as it offered good research opportunities. She knew several staff in CEE and also in Chemistry and she was aware of the strong research synergies and the support offered to develop those. Prof. Gill Stevens (CEE) made Anna aware of the 2012 R&T job opportunity in Nottingham, for which Anna applied.

At interview, Anna was 7.5 months pregnant and on offering the post, the University of Nottingham delayed the contract start date to allow Anna her full maternity leave entitlement at Bangor. She was then able to transfer annual leave to the end of the maternity leave, to give her 9 months with her baby.

As the February 2013 start date for her job as a Lecturer in Chemical & Environmental Engineering approached, the practicalities of moving to Nottingham with a small baby became more apparent. Anna's Head of Department was extremely supportive in ensuring that the University of Nottingham Day Nursery had space for Anna's son. During the settling in period at nursery, Anna was able to work flexible hours, and the Head of Department was happy for Anna's son to spend time in the office.

Even after settling at nursery was complete, Anna was still the sole local carer of her son. However, when her son has been ill she has been able to work from home, sometimes using Skype for meetings when necessary. Anna leads a bio-engineering laboratory, and she feels comfortable requesting maternal health and safety considerations. Anna continues to breastfeed, with the Department supplying a chiller cabinet for her office to store milk. Overall, Anna feels that the strong support of her Head of Department has helped her to make the most of her career given a tough set of family circumstances. She has felt more widely supported by a culture of trust and openness amongst her colleagues. Anna is travelling to London in December 2014 for a teaching-related workshop. In order to attend the full workshop, Anna has requested and been awarded funding for discretionary childcare cover to pick up her son from Nursery and provide care until she returns. Given its clear value to Anna, this is a practice **AP4.4** aims to make publicized and accessible across the Faculty.

Anna successfully applied for promotion to grade 6, Associate Professor in October 2013. She is currently participating in the Faculty Future Leaders Programme.

Dr David Hargreaves, Associate Professor, Faculty of Engineering – Department of Civil Engineering representative on the SAT

David started in the Department of Civil Engineering in 2004 as a Lecturer

and is now an Associate Professor, having been promoted in 2011. Throughout this time, he has been employed on a full time contract and he lives within 3 miles of the University campus. David epitomizes how the culture of the Faculty supports everyone with flexible working needs, and how this can benefit the employee and family, but also form the basis of a healthy group ethic.

David has two children, aged 9 and 6, and he comes from a dual career family. He took leave when his children were born, they were both born out of term time and so taking leave did not present any particular difficulties. When their children were younger, for a period of two years his wife was commuting to London 3 times a week. During this time, when his wife was working locally she was able to do more of the childcare, leaving David to work longer hours as required. Currently, as she is now working locally in Nottingham full time, they alternate responsibility for the school drop-off and collections.

When his children were at nursery, they attended an on-campus nursery and David benefited from the salary sacrifice scheme, which helped with affordability. David generally did most of the nursery drop-offs and collections when the children were younger (pre-school), helped by nursery opening hours that were matched to typical academic timetables. Once his children had started school, there was a greater need for flexibility and David, with support from his Head of Department, and his partner have worked out a weekly pattern that suits their needs and those of their employers.

To ease his caring responsibilities now that his children are at school, David has specifically requested timetabling of teaching activities to be family friendly (approximately between the hours of 10am and 3pm). To cover the school holidays, David feels that the generous leave entitlement from the University makes life easier during the long vacations. He makes use of additional cover from childcare providers and sports camps etc., the cost of this provision being subsidised through childcare vouchers available from the University.

In February 2014 he had an operation that involved 3 weeks off work and he received strong support from his Head of Department and other colleagues who were able to cover teaching responsibilities. David has always felt that such support would be available to cover eventualities including illness. Regarding potential short trips to the overseas campuses, David has felt comfortable declining these requests based on the logistical difficulties associated with having a young family.

David has responsibility for both Careers and Industrial Relations in the Department of Civil Engineering. He feels that it is important for his colleagues to know that he is a parent with young children and he is proud of his family and comfortable talking about his parental responsibilities at work. Since David has taken paternity leave, all of the other members of his research group have also taken paternity/maternity leave and the group is also exploring ways to enhance team teaching activities.

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