

Athena Swan renewal application form for departments

Applicant information

Name of institution	Queen Mary University of London
Name of department	School of Engineering and Materials Science
Date of current application	29 September 2023
Level of previous award	Bronze Award 2010 Bronze Renewal 2013
Date of previous award	November 2018
Contact name	
Contact email	
Contact telephone	

Section	Words used
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An evaluation of the department's progress and issues	2838
Future action plan*	
Appendix 1: Culture survey data*	
Appendix 2: Data tables*	
Appendix 3: Glossary*	
Overall word count	5049

*These sections and appendices should not contain any commentary contributing to the overall word limit

Overall word limit: 5500 words

Table of Contents

Applicant information	1
Section 1: An overview of the department and its approach to gender equality 3	
1. Letter of endorsement from the head of the department	3
2. Description of the department and its context	5
3. Athena Swan self-assessment process	8
Section 2: An evaluation of the department's progress and issues	13
1. Evaluating progress against the previous action plan	13
2. Key priorities for future action	35
Section 3: Future action plan	34
1. Action plan	34
Appendix 1: Culture survey data	42
Appendix 2: Data tables	46
Appendix 3: Glossary	57

Section 1: An overview of the department and its approach to gender equality

1. Letter of endorsement from the Head of Department

Athena SWAN Charter
Advance HE, 24 High Holborn
London, WC1V 6AT

25 Sept 2023

Dear Head of Athena SWAN,

As Head of School of Engineering and Materials Science (SEMS), it is my pleasure to endorse our application for an Athena Swan Bronze strengthened since 2018. **I am the first female Head of SEMS** appointed in 2020. A primary aim of my tenure is to create a truly inclusive environment, enabling equality in engineering and increasing social capita. I am committed to strengthening our community in East London, in line with the goal of addressing Queen Mary's mission to be "*the most inclusive university of its kind, anywhere*", delivering **Queen Mary's 2030 Strategy** and creating an environment in SEMS where all staff and students feel respected and supported members of the community.

QMUL is a Russell Group research-intensive university ranked joint 7th in the UK for the quality of its research in the 2021 Research Excellence Framework. In the subject engineering, SEMS came second in research outputs out of 89 universities. This excellence in the 2021 REF is at the core of the School's engineering curriculum.

I am extremely pleased that since our last Athena Swan award was conferred, our action plan shows progress has been made against 67% of our agreed actions (detailed in Section 2). I would like to take this opportunity to highlight our achievements since the 2018 award.

- We created **5 EDI leadership** roles to provide support and direction for EDI challenges and initiatives across all School committee structures and operations for Athena Swan.
- The School has seen an increase in the number of female academic staff which has grown from 14% in 2018/19 (14 out of 71) to 20% 2022/23 (18 out of 90) at Lecturer (7), Senior Lecturer (3), Reader (3) and Professor level (5).
- In SEMS, 2 female Lecturers (T&R) received UKRI Future Leaders Awards, actively recruited using the action plan.
- This year we had **12 successful promotion applications** in the School of which a **third were from female members of staff (4)**. We now have 2 female Professors and 2 female Readers (1 T&S; 3 T&R). All of the women I encouraged to apply were promoted.
- In 2022, I interviewed 75 candidates of which 17 were female. I made 30 offers of jobs and 12 were to women. At the strategic hiring round, I interviewed 44 people, of which 12 were female. **I made 18 offers of which 10 were to women**, demonstrating the recruitment strategy is working.
- Since 2018, the total School's student population has increased by 64% (2,065 in 2018/19 to 3,240 in 2022/23). The proportion of individuals who are female has remained consistent (26%) with this growth.
- The proportion of female who study a PhD programme has increased from **18% in 2018/19 to 40% in 2022/23**, demonstrating the action plan of attracting and supporting female students is working.

- We are proud the School received 4 awards. has been awarded two Ingenious awards from the Royal Academy of Engineering (2018, 2021) and the StoryFutures Academy (2022), to inspire “**Women in Engineering**” and the “**Engineers of Tomorrow**”. This work is in partnership with the Ideas Foundation and integrates storytelling techniques with STEMM education, outreach and public engagement (**Picture an Engineer, Engineer Your Story**). In 2023, the School received a **third Ingenious RAEng** award for **Proud Engineer** to showcase stories from engineers underrepresented in industry from LGBTQ+ or with a disability.
- Since 2018, the School has successfully ran over **100 EDI related education, engagement and research events**, with around **20 workshops each year** to support students, raise profiles and connect communities. Examples include the School’s Skills & Employability Week (biannual), Queen Mary’s **Festival of Communities** (annual) and **Industry Liaison Forum** (biannual). The outcomes of the EDI events are showcased on the School’s EDI webpages.

I am committed to supporting continuing progress in the School and I wholeheartedly support this work and commit to providing the resources to implement the SEMS action plan.

Looking ahead, we have prioritised four areas driving forward an ambitious action plan detailed in Section 2.2 with **two primary goals**:

1. Improve staff gender balance: We will work towards recruiting a further 10 female academic staff at junior and middle levels by 2030, continuing our activities in supporting and encouraging female staff to apply for promotion
2. In particular, increase awareness and discussions to promote fairness and equality, with gender and other protected characteristics.
3. Address the major challenges informed by the university culture surveys, to set targets and milestones, ensuring a shared vision of gender equality, transparency and culture, establishing policy and enabling quantification of success.

We are ready for this challenge and are excited to continuously develop our action plan as a route to close the gender gap. Working together, our EDI Steering Group, with input from the EDI Committee and working groups will enhance workplace culture collaboratively, benefitting staff, students with the goal of addressing Queen Mary’s long-term ambition to be the most inclusive university.

Professor Hazel Screen

2. Description of the department and its context

SEMS is one of five schools in the Faculty of Science and Engineering at Queen Mary University of London. The School is on the Mile End campus, in one building which combines state of the art laboratory, workshop and group study places to support teaching and research with offices for academic, professional services and support staff. **In the 2021 Research**

Excellence Framework, Engineering at QMUL was ranked 7th out of 89 universities with “research outputs” notably racking second in the UK.

SEMS provides 9 outstanding UG and 13 PGT degree programmes taught by internationally leading academic staff from 4 research centres, each with a Director, Education Lead and an Industrial Engagement Lead. These Centres cover broad activity in 1. Bioengineering 2. Intelligent Transport 3. Sustainable Engineering and 4. Research in Engineering and Materials Education. Some of our academic staff are affiliated to the Queen Mary Engineering School (QMES), a Joint Education Institute offering an UG engineering materials degree programme in English to students at Northwestern Polytechnical University (NPU). Since we have no influence or responsibility regarding EDI, we have excluded student data who study this joint programme in SEMS and China (704 headcount).

We are a **research-intensive** School and have 90 academic staff (**18% female academic**) who teach 3,240 students (**26% female students**) with the support of 41 professional services, technical and support staff (56% female). The Head of School is the line manager for all academic staff devolving day-to-day line management responsibilities to Centre Directors. The Senior Management Team allocate teaching and administration duties to each Centre member of academic staff using a transparent **workload model to ensure staff can maintain a good life-work balance when conducting research or scholarship.**

We presented a picture of the School by detailing the 2022/23 headcount of staff and students with gender. Table 1 recognises our thriving environment and community .

Table 1: Members of the School by position and gender in 2022/23

Position in the School	Total	Male	Female	Female (%)
Academic staff	90	74	16	20
Academic staff in teaching & research	65	57	9	14
Academic staff in teaching & scholarship	21	15	6	29
*Research only	55	37	18	32
**Professional services, support staff	41	18	23	56
Postgraduate research	224	134	90	40
Postgraduate taught	146	101	45	31
Undergraduate	2464	1862	602	24
Foundation	406	310	96	23
<i>Values are staff and student headcounts, where “*Research only” = Postdoctoral Research Assistant, Fellow or Senior Research Fellow **Including administrative staff, technical staff, demonstrators and TATF. More detailed information in Figure A1-A4.</i>				

A summary of the organisational structure with strategic operations and management mapped to each committee within SEMS is shown in Figure 1.

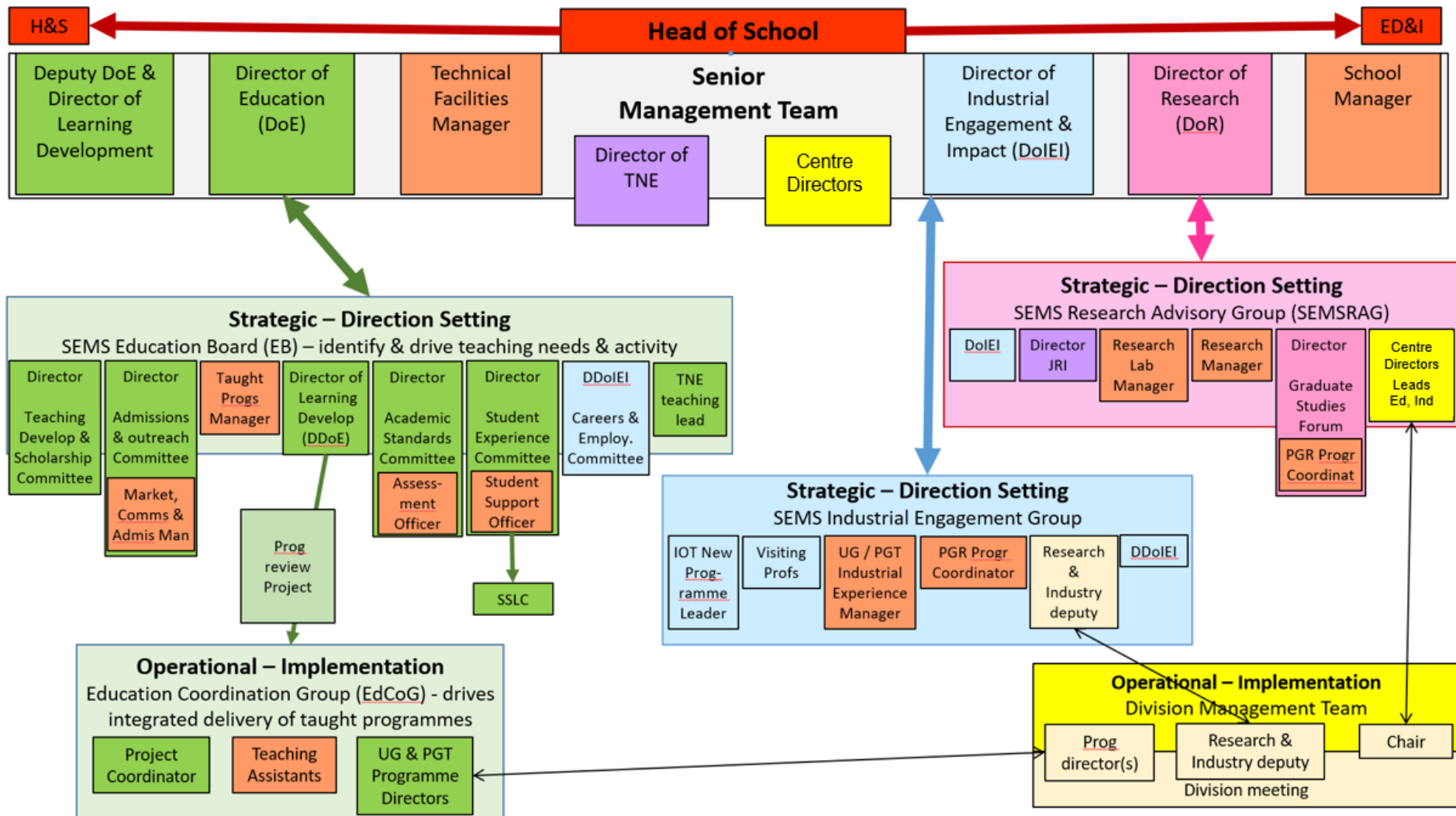


Figure 1. Operational structure, management and strategic mapping of the Senior Management Team and committees in education, research, industry and administration within the School of Engineering and Materials Science at Queen Mary University of London.

The Senior Management Team meet weekly to report updates and strategy for each respective area and include the Head of School, Deputy, School Manager, Director for Industrial Engagement & Impact (DoIEI), Director of Education (DoE), Technical Facilities Manager, Director of Research (DoR). The Centre Directors and Deputies (x8) join meetings monthly. The School has a team of 41 Professional Services staff managed by the School Manager and includes support for research HR, admissions, student recruitment and outreach, student support, finance, IT business, marketing and communications, careers, laboratory and workshop technicians. The SEMS EDI Committee is at the top of the organisational chart, alongside Health and Safety as core committees of importance to all elements of School business and directly overseen by the Head of School (Figure 1).

At UG level, the School offers BEng/MEng programmes in 8 disciplines of engineering and materials 1. aerospace 2. mechanical 3. chemical, 4. biomedical 5. robotics 6. materials science 7. sustainable energy and 8. design, innovation and creative engineering. At PGT level, we offer 13 MSc programmes. We also offer a small number of medical students the opportunity to intercalate with the School for one academic year and study a research intensive BSc programme in Biomedical Engineering and Clinical Materials.

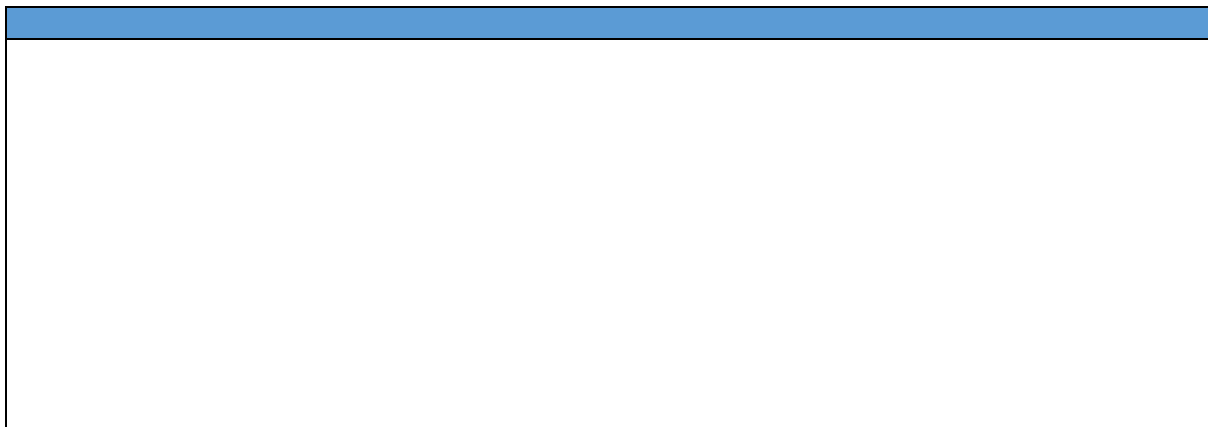


Figure 2. Examples of the female diversity of UG, PGT and PGR level where students work collaboratively in the SEMS teaching laboratories learning technical and professional skills that combine inter-disciplinary disciplines in STEMM.

The four research Centres form an exciting inter-disciplinary community supporting UG, Intercalated, PGT and PGR students with inter-disciplinary research teams in STEMM, enabling committee participation and engagement with the School and at university community events (Figure 2).

We are **proud** that the School is the Russell Group university with the highest recruitment of engineers from Black, Asian and Minority Ethnic (BAME) groups (86%) with around 70% female UG from a BAME background (Figure A1i) and over one third (36%) who live locally in East London.

3. Athena Swan self-assessment process

Between 2018 and 2021, the Chair of the Athena Swan Committee and Self-Assessment Team changed leadership three times due to significant changes in operations to overcome the challenges during the Covid-19 pandemic. After a decade as SAT Chair, handed over the role to . In 2021, it was decided to merge the Athena Swan Committee, working groups and SAT to form the SEMS EDI Committee chaired by , mirroring significant changes in leadership for all committees across SEMS. In

Sept 2022 following the appointment of the new School Manager and EDI Officer, we created a new structure and Terms of Reference that led to the advertising of 5 new EDI roles with a transparent **workload model** just over one day a week. In Dec 2022, the 2 Co-Leads formed the SEMS EDI Steering Group with members of the EDI Committee (Figure 3). The roles provide support and direction for EDI challenges and initiatives across all School committee structures and operations for Athena Swan self-assessment. Collectively, the EDI Steering Group enables co-leadership to drive activities supported by the EDI Committee and to work on issues and initiatives that help progress EDI actions within the School. The SEMS EDI Steering Group is responsible to the Head of School and reports progress quarterly to the Faculty of Science & Engineering Committee and every two years to the Vice Principal for People, Culture and Inclusion.



Figure 3. Governance structure of the 2022 EDI Steering Group with details of the members and key roles. Prof Hazel Screen is the Head of School [1]. The EDI Steering Group members [2-6] have specific EDI roles to lead professional services [2], outreach and widening participation [3], culture and policies [4] and data analysis [5]. All members of the EDI Steering Group are responsible for leading the Athena Swan self-assessment process.

In 2022, the EDI Steering Group met monthly and achieved the following actions:

- Updated the Terms of Reference for the EDI Steering Group and EDI Committee
- Invited more students and staff to join the EDI Committee
- Appointed new members of the EDI Steering Group
- Assessed progress of the 2018 action plan
- Discussed how best to interpret data from Power BI dashboards, HR spreadsheets, culture surveys and focus groups in order to inform the future action plan

The EDI Steering Group is responsible for leadership and delivery of the action plan so it has been important for this team to meet more often, sometimes a few times a week, in order to maintain progress for writing and drafting the Athena Swan application, analysing and drafting the data and collecting feedback on previous and future action plans. After the Co-Leads had written and shared three drafts of the Athena Swan application with the EDI Steering Group and Senior Executive Team, the drafts were reviewed by internal critical colleagues, including the institutional EDI Team before final submission.

Members of the SEMS EDI Committee

() indicates members of the EDI Steering Group (1-9) supported by the EDI Committee. (+) indicates members who have caring responsibilities.*

Importantly, the EDI Steering Group discussed the feedback from the Bronze and Silver applications carefully which highlighted the need for Athena Swan resource commitment. **Within the School, all EDI work for staff is rewarded through appraisals, promotions, salary bonus and as part of the annual Science & Engineering Awards Celebration.**

To help raise the visibility of EDI work and **celebrate student's achievements**, we created an EDI calendar of "events" on the School's webpages to **promote** our exciting EDI related activities in education, outreach, research and public engagement.

The SEMS EDI events webpage links with the SEMS EDI **news** highlighting the School's achievements since 2021. For example, SEMS launched "**Proud to be an Engineer**" showcasing stories from LGBTQ+ communities funded by the 2023 Royal Academy of Engineering Ingenious Award.

Currently, the EDI Steering Group has a balance of different pay grades as represented by the job title. Members of the SEMS EDI Committee have a variety of different backgrounds, family status and caring responsibilities. We expect the Co-Leads of the EDI Steering Group to rotate in autumn 2024, with a handover period, where the outgoing Co-Leads work alongside the incoming Co-Leads for at least two meetings, to ensure continuity. The Co-Leads will remain a member of the SEMS EDI Committee for at least one year.

The current gender balance of the EDI Committee is variable since we have an open invitation policy enabling any staff or student to participate, engage and champion a strategic area or propose a new area.

In the past, the self-assessment team consisted of 65% female (11 female, 7 male) in 2018 and 71% female in 2014 (10 female, 4 male). Although female representation is still high in 2022/23, there is a need to gradually increase the number of men on the panel while not losing female members who are strong advocates for the Athena Swan agenda. We now also include representatives from students, Early Career Researchers with a view to keep channels dynamic as the School needs and policies change.

The SEMS policies introduced since 2018 are on the webpages.

School of Engineering and Materials Science | Equality, Diversity and Inclusion | Athena SWAN |

- Equality, Diversity and Inclusion
- EDI Committee
- News
- Events
- Athena Swan
- See also
- Equality, Diversity and Inclusion in Queen Mary


Athena SWAN

SEMS promotes equality and fairness in all aspects of school life. Athena SWAN is specifically aimed at advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) employment in higher education and research. While the School is committed to this agenda, the action plan devised by our self-assessment team (SAT) aims to improve fairness, support the career progression and ensure a good work-life balance for all staff and students, female and male. Here are some of the key policies introduced over the last few years:

- A mentoring scheme for postdocs was launched in 2014.
- A part time working guarantee for academic staff was introduced by which a member of staff who decides to work part-time can come back to her/his previous maximum FTE at any time.
- Substantial support for staff returning from maternity leave or long-term illness is provided. The nature of the support is tailored to the individual's needs.
- A professorial advisory group who mentors and advises academic staff on career progression was formed.
- Improved first year tutorial support to ease the transition from school to university and raise the career aspirations of students was introduced.
- Staff meetings and the school forum now include all staff. The meetings are held in core hours and on alternating days to allow all staff to attend most of them.
- SEMS Core Hours are defined as 10.00 -16.00. All meetings are advised to be arranged within the Core Hours.

SEMS was awarded an Athena Swan Bronze award in November 2012. Since then, a lot of positive changes to the School's culture have been made including the ones listed above. In April 2015 the School applied for an Athena Swan Silver Award. Here is the [submission document](#) (PDF). The School's Bronze award was renewed in December 2015, and the award was presented to the Dr Lei Su from the School by Professor Dame Julia Higgins in Oxford (right).

[The action plan](#) (Word) is continually reviewed and updated; your comments and suggestions are very welcome.



The sources of data used to inform this application:

- Staff and student demographic data (Figures A1-A9, Appendix 3)

- Cultures survey (Table 4)
- University-wide staff engagement survey (Appendix 1)
- Feedback from SEMS drop-in sessions and focus groups

To maintain gender equality activity over the coming 5-year period, the SEMS EDI Committee will:

- Set-up and maintain the annual Athena Swan review and planning cycles and include a review of updated quantitative and qualitative staff and student data sets, for which there is now a rolling five-year data repository (1.1)
- Meet quarterly to implement and review current and planned actions, to identify new actions and to monitor the implementation of the action plan (1.1).
- Identify any additional data requirements and conduct surveys and focus groups to provide data to develop our plan, including a repeat of the culture survey in 2024, ensuring 75% participation rates for all staff to assess progress at the midpoint of the Athena Swan cycle (1.1)
- Ensure EDI remains a standing item on School staff meeting agendas (1.2)
- Review membership annually to ensure that it reflects our community and to encourage new insights and approaches (1.2)
- Consider the gender balance of the EDI Committee, particularly with regards to student and early career representatives, who are currently all female. There is a need to increase gender diversity without losing our female champions who are strong advocates for Athena Swan (1.2)
- Review BAME representation on the EDI Committee and invite members from all disciplines of engineering to join the committee to inform future work on race equality (1.2)
- Continue to publish our work on EDI news and events webpages and seek feedback at staff meetings working to improve communication of Athena Swan within the School (1.3)
- Broaden our committee beyond issues of gender equality and begin addressing issues around ethnicity, disability, sexual orientation and the intersections of these (1.4)

Section 2: An evaluation of the department’s progress and issues

1. Evaluating progress against the previous action plan

In this section, we demonstrate the 2018 Bronze action plan is underway by reflecting on the progress against the red and yellow RAG assessment scores indicated as **red**, **yellow** and **green** in Table 2 (Page 24). Out of 70 actions, we made no **(13/70)**, partial **(16/70)** and good progress **(31/70)**. 10 out of 70 actions are considered no longer relevant **(10/70)**.

	RAG score			
	No longer relevant	No progress	Partial Progress	Good progress
Priority Area 1	2	2	3	7
Priority Area 2	1	9	2	5
Priority Area 3	7	1	8	15
Priority Area 4	0	1	3	4
Total	10	13	16	31
%	14.3	18.6	22.9	44.3

Priority Area 1: Governance

Actions **1.3i**, **1.3ii**, **1.3iii**, **1.3iv**, **1.3v**

- The School’s staff survey ran in April 2020 and June 2022. Whilst the target completion rate across the School in 2022 was 75% **(1.3i)**, we achieved this goal for professional (75%) staff but not academic staff (72%), technical (68%) and researchers (21%). In December 2022, the EDI Steering Group recommended actions for research staff who are on fixed term contracts to be modified and included in the action plan **(1.3ii)**. Actions identified include:
 - Carrying out PDRA focus groups to better understand lack of engagement and their EDI concerns
 - Reviewing our new policies on engaging staff in planning rounds and strategic objective setting
 - Implementing new policies for EDI to visibly increase the benefits package for working in SEMS

The organisation of staff lunches for raising EDI concerns was implemented pre-pandemic but not performed after 2020. We changed our approach to capture EDI related data by improving accessibility (Figure 4).



Figure 4. EDI Steering Group holds weekly, informal, drop-in sessions. Each EDI member rotates “on call” enabling staff to raise their concerns every month. In 2023, we received 6 visits and have received over 1,500 comments since 2021.

- We also created an anonymous on-line suggestion box via School’s intranet which is reviewed by the EDI Steering Group. We believe these changes will be more inclusive

long-term with greater options for how staff engage with the EDI Steering Group and EDI Committee (1.3iii).

- It has not been possible to create and implement an Athena Swan survey for UG and PGT students post-pandemic (1.3v).

Actions 1.4i, 1.4ii

- We have modified the SEMS EDI website and created sections for the action plan and minutes internally with SharePoint, but it is not clear who is familiar with how to access minutes and action plans (1.4i). We did not publish a newsletter to members of the School and there are no plans for future editions since EDI related news is promoted via SEMS news webpage (1.4ii).

Priority Area 2: Attracting & supporting female students

Actions 2.1i, 2.1ii

- To improve the integration of Athena Swan into the student experience (2.1i), we developed 2 workshops in storytelling and reflection to highlight the national skills crisis of women in engineering and to promote the International “Women In Engineering” campaign (Figure 5).



Figure 5. Empowering an engineering community through storytelling techniques to promote women during National Engineering Week and support the “**This is Engineering**” campaign. We ran six workshops with [redacted] and 6 SEMS female academic staff. Our work was funded by Royal Academy of Engineering (Ingenious Award 2019, 2021) and Story Futures Academy (2022). We received impressive feedback from engineering students (1,954) who learnt how stories can improve their careers. 100% of female students said “*they found storytelling a great way for developing confidence and communication skills*”. LinkedIn photo stories of one group were used to inspire others in the aerospace and mechanical engineering sector who after attending the “**Engineer your Story**” workshop, had a greater enthusiasm in engineering careers.

- Accordingly, action plans were modified (2.1i) using Mentimeter evaluation where 100% students after attending the workshops “*feel that stories can be used to show the roles of **women as engineers in all kinds of careers***”.



- A report on student-focused support measures was not created (2.1ii). To improve mechanisms to support students and improve attainment, we developed the SEMS Graduate Attributes Framework embedding 5 areas of Resilience, Creativity, Communication, Professional Practice and Technical Skills into the engineering programme. We also created the “Engineers for Skills” modules EMS499 and EMS599, where students learn how to reflect and appreciate EDI values by creating stories with inspiring female role models. Examples of work (Figure 5).

Actions 2.2iii

- The School established the highly successful Skills & Employability Week in 2021 with a programme of 20 workshops exploring careers, “Skills for Engineers”, CV/interview training, enterprise, “*how to build a personal profile*”, and the prestigious SEMS Industry Liaison Forum biannual event shown in Figure 6. Number of female alumni who participated at the 2023 Industry Liaison Forum event increased to 35%.

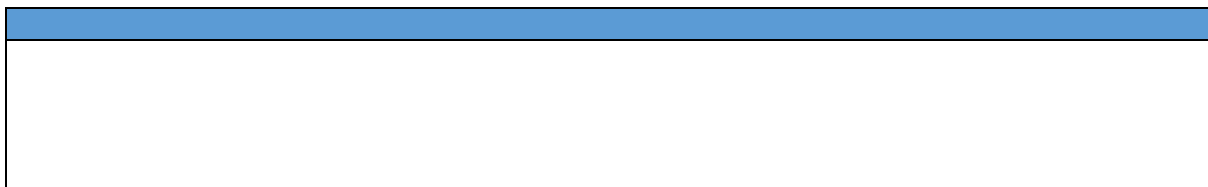


Figure 6. A programme of 20 workshops delivered to 3,000 students in five days with the aim of **creating communities** and **increasing the visibility of women** in engineering.

A few of the **highlights** in **attracting** and **supporting women** are as follows. The current distribution of UG students and the gender balance since 2018/19 is presented in Figure 2.

Since 2018:

- UG student numbers in the School has grown significantly from 1,918 in 2018/2019 to 2,974 in 2022/23, representing a 64% increase (Figure A1)
- The number of female UG students has increased by 35% from 567 in 2018/19 to 768 in 2022/23 (Figure A1)
- The proportion of female UG students has remained consistent at 26% (Figure A1)
- Since 2020/21, this consistency is reflected in the gender differences for the mechanical (96 females out of 469; 20.5%) and aerospace engineering programmes (89 female out of 517; 14.7%) which have the highest intake of UG students and the lowest proportion of female students when combined (14.3%, Figure A1).



Figure 2. Headcount changes in numbers of males and females on foundation, UG, PGT and PGR programmes from 2018 to 2023. The total student population at all levels (left, black bar) and the % of male and female students (right). Detailed analysis in Figure A1-A2.

In 2021/22, 55 female UG students out of 188 (75%) were awarded a first-class degree and has been consistently higher than male since 2019 (red arrows; Figure A1). 66% of UG students with a BAME background achieved a first-class award which is similar to white students (67%).

Since 2020, the proportion of females who were awarded a first-class degree is greater than male at UG (75%, Figure 2Ai). Since 2019, there has been no attainment gap between BAME and white female students at UG level (Figure A2i).

In the last five years:

- The proportion of female PGT students has not changed (26% in 2018/19 and 31% in 2022/23) despite a larger female intake (Figure A2ii).
- There is an attainment gap between BAME (48%, 2021/22) and white female (69%) at PGT level (Figure A2ii).
- In 2021/22, 19 female MSc students out of 50 were awarded a distinction (82%) and this was significantly higher than men (44%). Nearly half of the School's PGT students who were awarded a distinction are from a BAME background and this has been consistent post-pandemic (Figure A2ii).

Whilst females makeup around 40% of the current PGR population, we have seen a substantial increase in PGR male and female student numbers increasing from 73 in 2018/19 to 146 in 2022/23. In particular, the number of female students increasing from 19 to 45, respectively in the last five years.

- Over a ten year period, 85% of female completed a PhD (<5 years; Figure A2iii).
- 72% who completed were from a BAME background (Figure A2iii).
- The number of PGR female students have fluctuated mirroring the timings of Covid-19 from 207 in 2018/19 to 173 in 2020/21 and 222 in 2022/23 (Figure A2iii).
- Whilst the proportion of BAME at PGR level is 70%, the number of Black female PhD students is 9%.

In 2021, the Faculty supported 2 BAME PhD scholarship and 4 summer UG internships. In the 2022/23 round, two out of six projects (all female) were awarded 1st prize and runner-up by the Institution of Mechanical Engineers for Vicon Best Oral presentation (Figure 7).

This outcome led to one female winning a BAME PhD scholarship.



Figure 7. Winners of the 2021 and 2023 Women in Engineering BAME UG internships. News story on next page.

- Student led activities to celebrate for example International Women in Engineering Day, This is Engineering or National Engineering Week have been highly successful with many showcase examples by students (Figure 8) inspired by role models in Figure 6.



Figure 8. Inspiring posters created by SEMS female students to support the national campaign for Tomorrows Engineers. Mentimeter results showed that students (396 out of 485) could “see how by working as a community, they could broaden their perspectives and skills of what engineers could do at work”.

One engineer who was the only female on the aerospace engineering programme, said *“that through the networking and community events, she felt pride and a sense of heroism about her situation”*. Other students said *“they gained a huge amount of confidence through attending the workshops and interviewing engineers from different backgrounds”*.

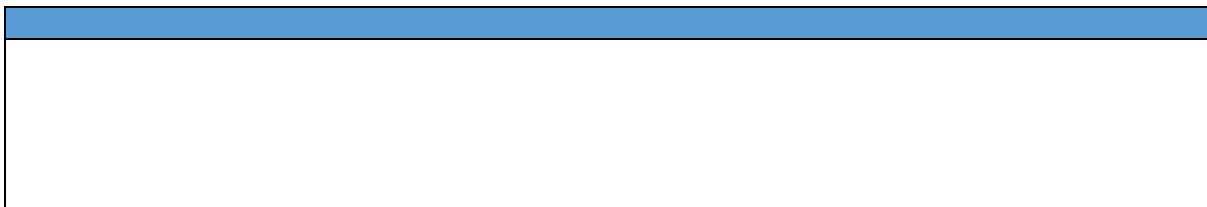


Figure 9. Showcase examples of academics, researchers, students and Year 12 inspiring each other’s worlds on International Women in Engineering Day. Activities involved setting up experiments in mechanical testing, fabrication or design and **“Picture an Engineer”**.

- Queen Mary’s Centre for Academic Inclusion in Science and Engineering (CAISE) led by _____, recently appointed a Professor of Science and Engineering Education will support training and development of staff to improve *“inclusivity in the engineering curriculum”*.

Actions 2.3i, 2.3iv

- The five case studies of female students starting in foundation year and remaining in the relevant field was not achieved (2.3i).
- We do not collect gender for outreach events (2.3iv) since this is impractical and difficult to implement. For example, when we visit schools or attend an externally organised event, gender data of participants is not available. We do obtain gender breakdown at recruitment taster days. Since 2018, 100% Year 11 students who attended a three day Inspire STEM programme were female or non-binary (40). In 2022/23, 63% of year 12 students who attended the QMFutures programme were female. We also host the annual Women in Engineering Taster Day which is 100% female or non-binary.

Actions 2.4 and 2.5

- We aimed to understand why female UG were less likely than men to study at MSc level, and why attainment of higher grades were achieved by women than men, and to rectify these inequalities. However, due to staff shortages, the discussions and qualitative data has not been analysed.

Priority Area 3: Facilitating gender balance at all academic levels

Actions 3.1

- We did have a formal system of exit interviews outside of the line management process. However, the mechanism was not implemented between the exiting School Managers (3.1). Whilst the HoS, School Manager and EDI Steering Group performed this informally with four exit-interviews in 2023, we are looking into re-establishing this process enabling leavers to report back outside of the line-management process. It is unknown whether 90% of leavers would take part in a more formalised process.

Actions 3.2i, 3.2ii, 3.2iii

- New starters have been assigned a mentor and “probation buddy” for their probation term mentor (3.2ii). This is promising since 7 new starters agreed they found this process useful.
- External shadowing opportunities for professional services staff have been advertised and at least two professional services staff have undertaken shadowing opportunities (3.2i).
- All professional services jobs at QMUL are graded in accordance with the Higher Education Role Analysis scheme. This is designed to ensure transparency and consistency in the way that jobs are evaluated and rewarded. At SEMS, the line manager will discuss the opportunities for regrading with the School Manager, work with the HR business partner on the grading assessment and then this is presented to the Senior Management Team for final approval. Staff may also apply for “accelerated increments” or “contribution points”, which provide a salary increment in recognition of particular contributions that exceed expectations. Final decisions are made by Faculty/University panel but data has not been recorded (3.2iii). PS and technical staff advance their careers by applying for secondments within QMUL to gain experience in new roles, following which they are better equipped to apply for a post at a higher grade. This is generally on an ad-hoc basis when roles come up and there is currently no formalised method for doing this (3.2iii).

Highlights for promotion include:

- A female School Manager arranged for the existing female HR Officer to be regraded with line management responsibilities to allow for career growth.
- A female Finance Assistant was also regraded and has taken on more interesting finance work. The Taught Programme Manager (female) previously covered the

School Manager role which has provided them with further career development opportunities and the Student Support officer (female) covered the taught programme manager role during this period.

- On the technical side to allow for promotion opportunity a more senior role was advertised within the team only and a female technician was successful and has more management and line management responsibility.
- Due to the retirement of a male technical facilities manager, the School looked at the role and was successful in getting this regraded and have encouraged existing technical staff to apply for this role (3.2iii).

Action 3.2iv

- A half day training workshop for PS has not been organised (3.2iv).

Actions 3.5i, 3.5ii, 3.5iii

- We did not develop female specific focus groups to target female academics (3.5i) on the difficulties of managing research activities.
- It is mandatory for any draft grant submissions to be presented at Centre meetings and peer-reviewed by at least two senior academics, one month before submission. These two pre-requisites are recorded on Queen Mary's Worktribe research management system before approval by the DoR, Faculty of Science and Engineering Dean for Research and the Joint Management Research Office (3.5ii).
- It was not possible for the School to use dry run data as decided by the Queen Mary Senate, who in their code of practice decided that *"the dry run assessments for staff will be shared only with those directly involved in the REF planning processes involving those attending formal central REF planning meetings and will not be shared more widely."* (3.5iii) This initiative has been dropped.

Actions 3.7

- We did not run focus groups to get feedback from those with caring responsibilities. The researchers organised a one-hour meeting on single or co-parenting issues. However, the feedback was not implemented into the action plan (3.7). An extended maternity leave policy providing additional leave equivalent to the number of weeks after an unplanned preterm birth has now been implemented at University level with focus groups for staff with caring responsibilities (Figure 10).

Staff with caring responsibilities

At Queen Mary we are committed to supporting our staff with caring responsibilities and have recently undertaken a survey to understand the experience of these staff.

To improve our understanding of the experience of carers the EDI Team will be running three focus group sessions in September.

A carer is anyone, including children and adults who looks after a family member, partner or friend who needs help because of their illness, frailty, disability, a mental health problem or an addiction and cannot cope without their support. The care they give is unpaid. (NHS Definition)

Focus groups will take place at the following dates and times:

- Wednesday 8th September 11-12am
- Monday 13th September 2-3pm
- Thursday 16th September 10-11am

The focus groups will be open to all staff who identify as carers and will explore your experience working as Queen Mary, support available and develop our understanding of what further resources we can put in place to support our carers.

How will my information be used?

The focus groups will take place on MS Teams. All information shared in the focus group will be anonymised and any reports will not contain personal information. The insight from the focus groups will be used to inform provision of support offered to carers and will be included in our institutional Athena Swan application.

How can you get involved?

Register to take part in the focus group by completing this [short form](#). A member of the EDI Team will contact you to confirm dates and details of the focus group.

School held a workshop on co-parenting in academia

Feedback from workshop:-

"I'm juggling work with being a single mum. When my children sleep, I work intensively in order to meet grant deadlines. The UKRI system is unfair. In one year, I submitted 5 applications, worth £2.5M, all rejected, and this is dampening my spirit"

"I would like to see a flexible policy to support working carers who can't make arrangements around the 10-4 flexible work policy when teaching students in China".

"My view is there is not enough support for women who care for their families in a care home, hospice or hospital. When the phone rings, I have to answer the call immediately. It could be the doctor, nurse or social worker."

Figure 10. One member of the SEMS EDI Steering Group has taken part in the university focus group to understand the experience of carers. This experience led to the evolution of the SEMS co-parenting in academia workshop organised by SEMS researchers.

Priority Area 4: Building an inclusive working and studying environment

Actions 4.2, 4.3, 4.4

- We formalised a flexible working policy (4.2). After the pandemic it became clear that many staff can work at home more regularly and the School is more flexible on this now. We are now re-evaluating the need for a formal policy post-pandemic. This will be conducted with focus groups and line managers of different levels of staff. For example, a technician or a member of professional services may not be able to work remotely as frequently as an academic outside of term time (to be determined)
- We increased the number of female represented on the Industrial Advisory Board from 14% in 2018 to 24% female in 2023, demonstrating progress (4.3).
- Culture surveys from 2023 (Table 4) suggested that improvements could be made to improve the appraisal experience for PS and TS staff by including one to one meetings every quarter for academic staff, but we have not monitored its success (4.4)
- It has not been possible to include the number of applications and success rates for PTO progression. A small proportion of Professional Services staff in Figure A8 include staff on short-term, temporary part-time contracts who are primarily PhD students facilitating work to support the School with specific short-term research projects. All other substantive PS positions in the School are typically permanent staff. As such, data is not broken down further by contract type.
- Career progression for PS staff on substantive contracts (Figure A5) is different to the framework for academic staff. Whilst academics are able to seek promotion within their role, this is generally not the case for professional services staff, who normally apply for a new role to secure promotion or progression. This emanates from many professional services roles being specialised and within small teams. However, the School Manager actively encourages staff to consider their career paths and their own development more broadly through seeking relevant training or by utilising opportunities for shadowing or secondments. The team is also supported in pursuing options across the wider University such as membership of cross-Faculty or central committees and process review working groups. There are several examples of staff who have been supported in development who have progressed to higher level roles either within the University or other HEIs.

Table 2: SEMS Athena Swan action plan 2018-2022 Extended to Sept 2023							
Ref	Objective	Rationale	Specific Actions and Implementation	Responsibility	Timescale	Success criteria / outcome measures	RAG
1 Governance							
1.1	Set up a school annual EDI & Athena Swan review and planning cycle	It is important to ensure mechanisms to update, monitor and progress the action plan in a timely manner	Create a School EDI & SWAN (Annual) planning cycle which comprises a clear annual timetable and checklist of scheduled monitoring activities and resulting response rates	School AS chair/ School Administrator	From May 2018 to end June 2018	An EDI calendar of events on SharePoint and webpages maps out the planning cycle, with key dates and achievements	
1.2	Review SAT membership	It is important to rotate SAT membership, to ensure members remain representative of department, whilst maintaining continuity and ensuring knowledge retention	(i) Establish an annual review of SAT membership to ensure responsibility is shared with new members each year, and a SAT that comprises individuals from all different grades and staff/student groupings within the department	HoS, School Manager and School AS chair	From May 2018 to end October 2018	SAT replaced by SEMS EDI Steering Group and maintains the balance with 5 women and 4 men. EDI Committee is a 15 member team having 50% male to female. However, representation on the EDI Committee changes annually since ongoing open-invitation for students and staff	
			(ii) Formalise handover procedure for the new SAT Chair. New chair will work alongside the outgoing Chair for at least two meetings. The outgoing Chair will remain a member of the SAT for at least one year	School AS chair	From May 2018 to end September 2018	Membership is reviewed annually, enabling advertising, training and smooth handovers for each member of the EDI Steering Group	
			(iii) Review BAME representation on the SAT and invite members from a BAME background to join the SAT to inform future work on race equality	HoS, School Manager and School AS chair	From May 2018 to end October 2018	BAME representation of EDI Steering Group and EDI Committee is 20% and 40%, respectively. Criterion has been incorporated into annual review of membership for all working groups	
			(iv) Ensure clearly defined roles for all SAT members	School AS chair	From May 2018 to end	All jobs within the EDI Steering Group have clearly defined roles with a Terms of Reference for each role. 4 members of the EDI Steering Group receive 0.5 days FTE	

					October 2018	from the workload allocation model to co-lead each role with members of the EDI Committee	
			(v) Develop SAT to focus more fully on equality and inclusion also, with champions for each area	School AS chair	From Oct 2018 to end May 2019	Roles for the EDI committee members are advertised annually to the School as champions, with the caveat that applicants could also suggest new roles unlisted by the EDI Steering Group. This includes working groups for other protected characteristics e.g. disability	
1.3	Improve staff and student data collection	It is important to monitor progress by consulting staff and students, allowing us to identify areas of improvement and adapt to changing trends or requirements	(i) Review and improve staff survey and establish as a biennial process, incorporated into SAT and School planning	HoS, School AS chair	From Sept to Dec 2019	Staff survey reviewed and modified (Table 4). Survey ran in 2020 and 2022. Target completion rate was 75% across the School but was low for researchers (21%, Figure 11)	
			(ii) Survey analysis to be presented to SAT and key issues arising discussed, leading to appropriate amendment of the Action plan	School AS chair	From May 2020 to June 2020	Survey analysis completed and compared with Action Plan success measures. New issues identified (Table 4), and 2023 Action plan modified to tackle these issues	
			(iii) Establish and hold two or three informal, themed lunch discussions for staff annually. Captured any issues raised for follow up with SAT. Amend Action plan as appropriate	School Administrator	Sept 2018 to Aug 2019	We have had to change our approach to capture EDI related data, but we believe the changes have been successful and have become more inclusive with more options for how staff engage with the EDI committee	
			(iv) Work together with QMUL to establish a mechanism for collating shortlisting data associated with recruitment opportunities	School Administrator	From May 2018 to Oct 2018	We now have an institutional system in place to reliably collate staff shortlisting data (Figure A7-A8). Applications and success rates of academic promotions demonstrate that 3 out of 4 women were promoted in 2021 (75%, Figure A9) than 5 out of 9 men (55%, Figure A9).	
			(v) Work with QMUL to establish an annual UG and PG survey to be incorporated into SAT and School planning	School Administrator	From May 2019 to by May 2020	We did not establish annual Athena Swan surveys for undergraduate and postgraduate students	

1.4	Further engage all members of school with Athena SWAN agenda	It is important to ensure all staff are aware of the support mechanisms in place through the Athena SWAN agenda and understand the importance and benefit of engaging with Athena SWAN	(i) Improve visibility and usability of Athena SWAN webpages, ensuring all SAT minutes and action plan progress are also fully available and site is readily available to all school members	School Administrator	From May 2018 to end July 2018	SEMS EDI website has been modified and sections created for Action Plan and minutes using SharePoint, but not easily accessible. We do not know how many staff and students are familiar with how to access minutes and Action Plans	
			(ii) Establish an annual newsletter to ensure outcomes of the SAT annual review are communicated to all	School AS chair/School Administrator	May 2019	We did not publish a newsletter to members of the School. Using SEMS EDI webpages to share news and events	
			(iii) Improve communication of Athena SWAN amongst student groups, integrating with the student WES. Ensure information is always included in induction information	Student SAT Rep	June 2018 to May 2020	Information about Athena Swan has been included during student induction and participation at showcase events at ILF, Skills & Employability Week or the Festival of Communities	
2. Attracting & Supporting Female Students							
2.1	Improve the integration of Athena SWAN within the student experience	It is crucial that initiatives are understood and best utilised by those they are designed to benefit	(i) Set up focus groups with UG, PGT and PGR students to ascertain their knowledge of Athena SWAN, establish the strengths and weaknesses of our support measures for them as individuals and consider how best we can support them	Student SAT Rep/ School Administrator	Start October 2019 to May 2020.	We changed our approach to improve integration of the Athena Swan into the student experience by creating the SEMS Graduate Attributes Framework and "Skills for Engineers" programme	
			(ii) Review the impact of each student-focused support measure in place, specifically looking at impact on female, ethnic minority or disabled student groupings	School Administrator	Start October 2019 to May 2020.	We did not produce a report on student focused support measures	
			(iii) Establish support and guidelines for writing student letters of recommendation, noting and looking to mitigate unconscious bias associated with framing letters	School Administrator	Start October 2018 to May 2019.	We established an online system that automatically generates student letters of recommendation as a starting point, with guidelines in place. In order to mitigate unconscious bias, four mandatory online training resources were developed 1. Enhancing inclusion, 2. Challenging Unconscious Bias and 3.	

						Equality and Diversity Briefing and 4. well as Recruitment and Interview Selection. In 2023, 90% of all staff completed the mandatory online training courses compared to 55% in June 2021	
2.2	Improve promotion of female careers	Ensuring appropriate role models and mentoring is important for supporting all students and helping them reach their potential	(i) Establish systems for monitoring and recording the success of initiatives to integrate Athena SWAN across the research groupings, and developing yearly presentation schedules	School Administrator	Start October 2018 to April 2019	A system is in place for monitor and record the success of initiatives to integrate Athena Swan across the 4 Centres	
			(ii) Establish the practice of working with the teams developing annual careers events, to ensure appropriate female representation from alumni and strong role models.	Support Staff SAT Rep	From Sept 2018 to Sept 2019	School has established Skills & Employability Week career events with at least 35% of speaker at events are female alumni and role models	
			(iii) Integrate school presentation schedules with student-led WES events	School Administrator	By Sept 2018	We are integrating school presentation schedules with student-led WES or WISE at ILF events	
2.3	Ensure gender specific recruitment is considered for all programmes of study	Ensure recruitment activities do not solely focus on medically orientated courses, and that we are promoting more 'traditional' engineering equally.	(i) Undertake case studies of female students who have progressed from the foundation programme and remained in a relevant field (either industry or academia) to use as marketing for the programme	Support Staff SAT Rep	From Sept 2018 to May 2019	We did not publish five case studies on website	
			(ii) Review marketing activities to ensure marketing to females is not focused on medically orientated courses, and that we are promoting more 'traditional' engineering equally	Support Staff SAT Rep	From Sept 2018 to May 2019	All of our current marketing activities consider the breadth of the School's programme Marketing literature is considered for a diverse audience The photography is balanced across all channels to include male and female role models aiming for 50% balance	

						<p>We utilise at least 50% female ambassadors for each event where more than 1 ambassador is required</p> <p>We utilise visible female role models across all subject disciplines, especially in mechanical, aerospace and robotics as these are the areas that have the least representation</p> <p>The offer holder booklet includes a welcome from the Head of School who is a female role model and a 50% female representation.</p>	
			(iii) We will review the communications provided to students who have received offers in Aerospace Engineering, to see if there are steps that can be made to improve the language or gender representation used in these materials	Support Staff SAT Rep	From Sept 2018 to Aug 2019	We utilise visible female role models across all subject disciplines, especially in mechanical, aerospace and robotics as these are the areas that have the least representation	
			(iv) Develop mechanisms to analyse the gender of individuals participating in outreach activities, so determine any bias	Support Staff SAT Rep	By Sept 2018	We do not collect gender for most of our outreach events, but we are changing this for the 2023/24 academic year	
		Sept 2019			Analysis of data carried out and results fed back to outreach organisers.		
		Oct 2019 to May 2020			Organisers to act on results of analysis, if necessary to increase the participation of female to at least 40% of all school-level participants – this is not practical since difficult to implement with schools etc		
2.4	Study the motivations of second year students	During their study, women are less likely than men to transfer to the MEng/MSc courses	Investigate this with focus groups with both female and male students in their second-year factors affecting decision whether	Student SAT Rep/ Support Staff SAT Rep	Dec 2018 to Feb 2019	We did not hold focus groups and a report to highlight factors affecting decision whether or not to transfer to MEng/MSc programmes	

	regarding MEng/MSc courses		or not to transfer to MEng/MSc courses		Mar 2019 to Sept 2020	Takes steps to mitigate negative factors such that proportions of women and men transferring to MEng/MSc courses are within 5%.	
2.5	Ensure gender parity in achievements on engineering programmes.	In UG engineering courses, women are significantly more likely than men to gain first class degrees. At PGT level women are significantly more likely to gain distinctions.	Work toward gender parity in terms of achievement on engineering courses and in particular investigating ways to support male students to achieve first-class degrees at UG level and distinctions at PGT level	Support Staff SAT Rep	June 2018 to Dec 2018	Report with proposals for improving support for male students	
					Jan 2019 to Sept 2020	Implement support mechanisms	
					Oct 2020 to April 2022	Proportion of men gaining first class degrees within 5% of the proportion of women gaining first class degrees (Table A2i-iii).	
3. Facilitating Gender balance at all Academic levels							
3.1	Design and implement an exit interview process	QMUL does not currently have a policy of conducting exit interviews, although SEMS encourages informal discussion between line managers and departing staff members	Design and implement an exit interview process which will be conducted outside of the line management relationship	Academic Staff SAT Rep	From Sept 2019 to May 2020	No system in place	
					June 2020 to April 2022	90% of all leavers did not have exit interviews	
3.2	Support staff to actively engage in professional development and ensuring support through probation and promotion	Identifying and targeting gender issues associated with promotion will support female staff to apply for and achieve promotion in a timely and appropriate manner	(i) Develop framework for professional services or technical services staff to more effectively identify development needs and set up a work shadowing scheme to assist in their achieving experience in these areas	School Manager/ PS staff SAT Rep/ TS Staff/ SAT Rep	Sept 2018 to Sept 2019	Framework developed and introduced, and work shadowing scheme established.	
					Oct 2019 to Sept 2020	At least four members of professional services or technical staff have taken up work shadowing opportunities. Discussion group help with professional services or technical staff demonstrates confirms that new framework is welcomed, and also any teething problems are identified and acted upon.	

			(ii) Establish a scheme whereby 'probation buddies' are Identified, for new PS staff, looking if possible to identify someone in a similar field elsewhere in the Faculty to offer support through this process	PS staff SAT Rep/ School Manager	Sept 2018 to Sept 2019	Scheme in place. All new PS staff are assigned buddies. Feedback collected form new PS staff shows that at least 75% of new starters find the scheme helpful.	
			(iii) Work with the SEMS laboratories manager to identify clearer criteria of what the School considers to demonstrate excellence by technical staff, and use these criteria to encourage technical staff nominations for the staff bonus scheme	TS Staff SAT Rep/ School Manager	Sept 2018 to Sept 2019	Criteria identified, and new guidance produced and circulate to technical staff and their managers.	
					Oct 2019 to Sept 2021	The proportion of technical staff submitted for staff bonus scheme awards is within 5% of the proportion of PS staff.	
			(iv) Work with professional services to provide a half-day training workshop to help staff identify development needs and an appropriate plan to realise these	PS staff SAT Rep	Sept 2019 to Sept 2020	Discussion group of PS staff held, and outline of training workshop developed. Workshop held: 75% of attendees agree that they are clearer of their development needs.	
					Oct 2020 to Sept 2021	Feedback from workshop used to amend workshop content, and pans in place to run workshop annually.	
3.3	Develop approaches to actively encourage females to apply for jobs and promotions within the school	By encouraging all appropriately qualified individuals to apply for jobs and promotions across the school, we maximise opportunities to bring in the best staff and contribute towards our goals of gender balance	(i) Encourage staff to spot talent early career researchers and invite them to the School to give seminars	HoS/ AS Chair	June 2018 to Sept 2018.	All academic staff were encouraged to talent spot early career researchers	
					Oct 2018 to Sept 2020	Each Centre invited at least 5 talents who are early career researchers to give seminars	
			(ii) When posts are subsequently advertised, encourage those ECRs to apply	HoS/ Academic Staff SAT Rep	Oct 2018 to April 2022	The early career researchers were told that there were upcoming posts to be advertised and encouraged to apply	
			(iii) Staff will be encouraged to use their networks when posts are on offer, to identify potential candidates from underrepresented	Academic Staff SAT Rep/ HoS/ AS Chair	Sept 2019 to Sept 2020	All academic staff were briefed on need to use their networks when posts are on offer.	

			groups, who for the most part will be women			Evidence show that staff have been using their networks to identify individuals from underrepresented groups, predominately women.	
			(iv) Set scheme to identify female staff at lecturer/senior lecturer level who would be suitable for promotion and pair them with a member of staff who has been recently promoted to discuss the process, and where possible, provide insight into their own application	HoS	Sept 2019 to Sept 2020	<p>A scheme to improve guidance developed for mentors is place</p> <p>Appraisal documentation modified to prompt appraisers to identify candidates in need of "pairing."</p> <p>Five pairs in place</p> <p>A handbook for new starters was written in 2021, which is handed out in the first few days of employment</p> <p>The academic careers framework was updated and formalised in 2022 making the promotion criteria explicitly clear</p>	
					Oct 2020 to Sept 2022	At least two third of the first wave of mentees promoted (4 out of 9)	
					Oct 2021	Feedback from first wave of pairs collected. All mentees agree that the scheme has been helpful in supporting them. Guidance for mentors modified in light of feedback.	
			(v) Put together small focus groups with staff who we judge to be ready for promotion well in advance of the next round to discuss what would help make the criteria clearer	Academic Staff SAT Rep	June 2018 to Sept 2018	Two focus groups held and updated criteria for promotion promoted via SEMS News	
					April 2020	80% of staff survey respondents agree that promotion criteria are clear.	
			(vi) Proactively publicise the Aurora leadership Programme, and identify female staff to encourage to apply to the next round	SAT Chair/ HoS	June 2018 to May 2019	4 academics (not 5) applied for and attended the Aurora scheme	

3.4	Improve the fair evaluation of female academic teaching	With unconscious bias known to negatively affect student evaluation of female and BME teaching, mechanisms to take this into account during promotion and evaluation are needed	Develop strategies to evaluate teaching with less emphasis on student evaluation in isolation	Academic Staff SAT Rep	Sept 2018 to Aug 2019	Proposals published by the Education Director for revised teaching evaluation	
					Sept 2019 to Aug 2020.	New scheme introduced Workload model data show that there are no significant differences in the teaching assessments of men and women	
3.5	Establish how to focus academic research support initiatives to best support female academics	A series of initiatives to support SEMs academics in their research activity have been successful, but do not consider specific difficulties for female academics and how best to target activities towards females	(i) Hold focus groups with female academics and early career researchers to explore the challenges they perceive in managing research activity, and develop initiatives targeted towards these challenges	Academic Staff SAT Rep/ ECR SAT Rep	Sept 2019 to Dec 2019	Four focus groups were held and data analysed. Report produced proposing initiatives aimed at helping female academics and early career researchers to overcome the challenges of managing to stay research active.	
					Jan 2020 to Jan 2022	75% of participants agree that the initiatives have helped them meet the challenges they face.	
			(ii) Develop grant writing support initiative specifically targeted towards supporting junior academics in applying for grants and fellowships	Academic Staff SAT Rep	Sept 2019 to Sept 2020	Consult supporting junior academic and develop initiative to support them in applying for grants and fellowships. Develop and deliver intervention. Not known whether 75% of participants agree that the Initiative has helped them improve their knowledge of how to apply for funding and that they feel more confident of their chances of success.	
			(iii) Analyse results from REF dry runs to ascertain whether there are any apparent imbalances between the proportion of men and women who need additional support	Academic Staff SAT Rep/ Support Staff SAT Rep	May 2018 to Sept 2018	Analysis was not carried out to ascertain if there are any gender differences.	
3.6	Address the issues of intersectionality at a	The pipeline for students are positive in respect of the proportion who are	(i) Establish the regular examination of the data for the progression of female and male students from UK domiciled	Support Staff SAT Rep	Sept 2018 to Oct 2019	Examination of data for the progression of female and male students from UK domiciled students alone, and for difference ethnic groups, focusing on UK domiciled	

	postgraduate research level (PhD)	female. However, the number of overseas students increases with increasing level.	students alone, and for difference ethnic groups, focusing on UK domiciled students			students in place and included in Annual SWAN Planning Cycle.	
		The proportion of Asian students undertaking research studies in SEMS is substantially lower than that at UG level	(ii) Run focus groups to examine why Asian students are less inclined to progress to PGR study in the School and reflect data to establish an appropriate response. Based on the conclusions, implement initiatives to encourage underrepresented groups to take up student at PGT level	Student SAT Rep/ School Administrator	Sept 2019 to Sept 2020	Baseline data collected on proportion of Asian students progressing to PGR study. Focus groups help with student from each year of UG study looking at factors affecting decision to progress to PGR study. Report produced putting forward factors, and suggesting measure that can be implemented to encourage UK Asian student to progress to PGR study.	
					Oct 2020 to April 2022	Changes implemented. Data show that 70% of BAME students are at PGR level (Figure A2iii)	
3.7	Establish a focus group to look at issues around maternity leave and return to work	Evaluate the benefit of the maternity support schemes offered by the school and to consider the best approach to targeting support to individuals returning to work	Run focus groups and/or individual discussions with staff who have recently returned from maternity leave to examine how support can be improved	AS Chair/ Support Staff SAT Rep	Sept 2018 to Jan 2019	Focus Groups/discussions held. Report produced outlining how support for those preparing for, taking and returning from maternity leave might be improved.	
					Feb 2019 to June 2022	Changes made to support for maternity leave in line with recommendations.	
					July 2022 to April 2022	Focus Groups/discussions held with staff who have recently returned from maternity leave show that changes have been effective in tackling issues previously identified.	
4. Building an inclusive working and studying environment							
4.1	Build on the use and effectiveness of university-wide and school	Induction events offer key opportunities to tell staff about the Athena SWAN agenda and ensure they are well	(i) Do a gap analysis to ensure that critical information is not being delivered only at the university inductions, and encourage our academic staff to attend these events	School Administrator/ Academic Staff SAT Rep	Sept 2018 to Dec 2019	A gap analysis was completed at School level which resulted in changes to induction procedures, including information on the EDI Committee and contact details, coupled with introductions to the EDI Steering Group.	

	specific induction events and develop activities to ensure information is more widely available	placed to best benefit from the opportunities	(ii) Hold brief discussions with staff who have joined SEMs to ascertain whether there are any elements that they feel were lacking, and to identify the parts of induction that they found particularly valuable	School Manager	Sept 2018 to Feb 2019	All new staff attend university induction events. Post-pandemic, the ability to quickly and easily ask questions in a semi-open forum raised the need for inclusivity for new starters	
					March 2019 to Jul 2019	School Induction modified to fill gaps identified	
					Sept 2019 to Feb 2020	Upon discussion with new starters in 2022, EDI Steering Group member started a Microsoft Teams channel for new starters (less than ~5 years) that allowed questions without judgment to staff who understood the systems and culture of SEMs but were not senior enough for it to be intimidating.	
4.2	Set out the type of support that can be offered in terms of flexible working	There is some work to be done in communicating our approach to flexible working and the reasons for this	We will prepare a formal policy which sets out the type of support that can be offered in terms of flexible working and discuss this with all staff, as well as including this in induction paperwork and placing it on the intranet	HoS/ School Manager/ AS Chair	Sept 2018 to Aug 2019	Formal policy produced and distributed to staff and formally presented at a staff meeting. School induction modified to include information on flexible working options. Policy published on intranet.	
					April 2020	Feedback from staff culture survey show that at least 75% of staff agree that they have good understanding of the flexible working options available to them (Table 4)	
4.3	Increase the number of female industrialists in IAB	Currently there is a low percentage of female representation of the IABs (14%)	Increase the female representation on the Industrial Advisory Boards by actively approach female industrialists	Academic staff SAT Rep/ Support staff SAT Rep	Sept 2018 to Oct 2019	At least 33% of the membership of the IABs that should be female.	
4.4	Improve the experience on appraisal	2018 cultural survey suggests that there are still improvement that can be made to improve the experience	We will run a focus group to discuss the appraisal experience at different levels and to make improvements based on the feedbacks	AS Chair/ HoS	September 2020 to September 2021	Feedback from staff culture survey show that at least 65% positive feedbacks on appraisal related questions	

1. Key priorities for future action

The 2023-28 SEMS action plan was reviewed by the Senior Executive Team and by a mock panel assessment process led by EDI Manager [redacted] and EDI Officer [redacted] from the Faculty of Science and Engineering. The 2023 action plan in Table 3 has been developed to address the School's four priority objectives and demonstrates our aspirations for a Silver award application before 2028.

Priority Objective 1

Maintain sustainability of the EDI governance process with balanced representation

The EDI Steering Group will ensure continuity of mechanisms by implementing and reviewing current and planned actions during the Athena Swan planning cycle and to assess progress at the midpoint of the cycle. Currently, the EDI Steering Group meets monthly or more often when required enabling a review of mandatory data requirements, surveys and focus groups to provide data to develop the action plan. Whilst representation in the EDI Steering Group is balanced (5 women and 4 men), there is need to engage representation from every discipline, to ensure the EDI Committee reflects the School community and to encourage new insights and approaches.

Currently, representation in the EDI Committee is largely from the chemical (50%) and bioengineering (50%) disciplines but none from aerospace, mechanical or robotics engineering (0%) and BAME representation is low (20%). In the EDI Committee, the gender balance is leaning more towards female (60%) than male (40%) and there is a need to increase gender diversity without increasing the size of the committee, enabling EDI work to be rewarded fairly through appraisals, promotions, salary bonus and as part of the annual Science & Engineering Awards Celebration.

In order to maintain sustainability of roles during handovers, we expect the Co-Leads of the EDI Steering Group to rotate in the autumn of 2024, with a handover period, where the outgoing Co-Leads work alongside the incoming Co-Leads for at least two meetings to ensure continuity.

These mechanisms outlined in the EDI Terms of Reference will:

- improve the governance process
- maintain continuity of EDI work and
- ensure that responsibility is shared with committee members each year, and that jobs for staff and student working groups are clearly defined, updated and progress monitored, identifying areas of improvement and change.

Priority Objective 2:

Improve School's representation of women in engineering from Lecturer to Professor

Currently, the number of women representing Grade 5 (7/18), Grade 6 (2/18), Grade 7 (4/18) and Grade 8 (5/18) leans towards junior then at middle and senior level with 10 out of 18 women on the T&R route and 8 on T&S (Figures A3-A4). In the 2021/2022 promotion round, no women were promoted from Grade 6 to Grade 7 (Figure A9) and post-pandemic, 4 women on T&R resigned from SEMS to take up senior academic positions at Grade 7-8 elsewhere. Three of these four women had caring responsibilities. Whilst the School has a framework for improving gender equality at each level, the pathways for advancing career development for T&R is dependent on winning substantial UKRI funding as Principal Investigator.

In recruitment, the School has undertaken 3 recruitment cycles in 18 months, hiring 19 academic staff. In 2022, 40% of offers were to female but only 3 females accepted the offer

(15%). This recruitment cycle resulted in an increase of female academics from 14% in 2018 to 18% in 2022 at T&R level (Figure A3).

Whilst the actions for targeting, recruiting and shortlisting female engineers is working, we need a better plan in parallel with managing the offer process, where out of 142 applications, 7 women were appointed in 2022 (24%, Figure A7). The reasons why females do not accept academic posts need to be identified. In one case, we were told by the candidate the commute to QMUL was an issue.

By building a cohort of females appointed within the School, we will be able to support their promotion, aiming to achieve an increase from 20% to 40% gender balance by 2030.

Priority objective 3:

Improve gender balance of the School's UG, PGT and PGR population in engineering

Whilst we have been successful in supporting female students who receive higher awards than men (Table A2i-ii), targeting the leaky pipeline from BEng/MEng to MSc and increasing the proportion of female who study a PhD programme is an issue (Figure A2iii). The female UG population has marginally reduced from 28.7% (2018/19) to 23.6% (2022/23, Figure A1) due to large increases in the aerospace and mechanical engineering programmes whilst women who study at PGT (26-31%, 2018/2023) or PGR (38-40%, 2018/2023) levels has remained consistent. The School needs to address the issue that women are less likely to put themselves forward in aerospace or mechanical engineering, identifying specific issues in gender disparity per discipline and realising how to change this.

Priority objective 4:

Building inclusivity – a community of best practise and culture within the School

It has been difficult to analyse the 2023 staff survey data presented in Table 4 due to low participation rates with headcount values ranging from 2 to 51 academic staff who submitted their views before the deadline (Figure 11). The School sent weekly reminders to complete the staff survey and the EDI Steering Group together with the Faculty encouraged participation. On the basis of the data presented in Table 4, the key issues for staff are:

- Contributions valued by male staff (53%) or white staff (42%)
- Leadership to support gender equality by Asian staff (37%)
- Flexible working for TS staff (44%)
- Career development support for TS staff (31%)
- Improved mental health and well-being support for all staff, in particular research (35%) and TS (38%)
- Manager viewpoints for TS (38%)

Before we can improve the quality of the data sets, we will prioritise these areas to develop working groups, reporting and development of policies for all staff. Current and best practice to support the diversity of the rapidly changing culture in Professional Services needs to be addressed. The Co-Leads of the EDI Steering Group will carefully review policies with the institution to ensure mechanisms are in place to support health and well-being, flexible working, inclusivity and working environments.

Section 3: Future action plan

1. Action plan

Table 3: SEMS Athena Swan action plan 2023-2028							
Ref	Rationale	Proposed Action	Details of planned action	Start date	End date	Responsibility	Success measures
Priority Objective 1							
Maintain sustainability of the EDI governance process with balanced representation							
1.1	It is important to ensure mechanisms to update, monitor and progress the action plan in a timely manner	Set-up and maintain an EDI & Athena Swan review and planning cycle, ensuring an agreed timetable and to maintain sustainability of all EDI posts using workload allocation model, updating ToR to ensure knowledge retention and formalised handovers	<ul style="list-style-type: none"> • EDI Steering Group to meet monthly/weekly to implement and review current and planned actions and to identify new actions by updating and reviewing quantitative and qualitative staff and student data sets • EDI Committee to meet quarterly to assess progress and encourage new insights and approaches • Create a shared checklist of scheduled monitoring activities and resulting response rates from surveys or focus groups to inform and alter actions to meet the School's KPIs 	Sept 2023	Annually in Sept as part of SEMS financial planning round	EDISG	<ul style="list-style-type: none"> • Established a clear annual Athena Swan review and planning cycle with mid-term review • Include an annual review of data sets with a 5-year rolling data depository • Attendance at meetings is >90% • Co-Leads remain an EDI Steering Group member for a minimum of 3 years • At least 75% stay in EDI Committee for a minimum of 1 year • Transparent workload allocation model & updated ToR
1.2	There is a need to balance gender diversity (Female 60%), increase	Review membership for EDI Committee and encourage	<ul style="list-style-type: none"> • Ensure that Athena Swan remains a standing item on the School Staff meeting agendas and all committee agendas 	Sept 2023	Annually in Sept as part of SEMS	EDISG	<ul style="list-style-type: none"> • Increase BAME representation from 20% to 25%

	BAME representation (20%) and encourage members from aerospace, mechanical or robotics disciplines to join the EDI Committee	staff/student groups from different disciplines	<ul style="list-style-type: none"> Review EDI membership annually to ensure committee reflects the School community and promote work EDI News webpages Continue to run the 1:1 EDI drop-in sessions Broaden committee beyond gender equality and begin addressing issues around ethnicity to inform future work on race equality 		financial planning round		<ul style="list-style-type: none"> Increase membership from aerospace, mechanical and robotic disciplines from 0% to 20% Membership equal (50% female) Minimum 6 visits per month at weekly EDI 1:1 drop-in sessions Improve staff survey results where at least 75% say <i>"my opinions are heard."</i>
1.3	It is not clear whether staff are aware of the mechanisms for Athena Swan agenda and clearly understand the importance and benefit of engaging with EDI and Athena Swan for promotion and career development	Further engage all members of the School with EDI and Athena Swan agenda	<ul style="list-style-type: none"> Improve visibility of Athena Swan webpages, ensuring all minutes, action plans, progress are available on the School's SharePoint and readily available to all school members Improve news/events communications to promote and celebrate EDI related work in education, research, industry, outreach, public engagement Ensure EDI is a standing item at all committee meetings and School Staff meetings 	Sept 2023	Sept 2025	School Manager, EDISG, EDIC	<ul style="list-style-type: none"> Website and SharePoint modified with sections for Action Plan, Minutes In staff surveys, <i>"60% of staff report good or better familiarity with Athena Swan."</i> At least 12 EDI news items per year All committees report EDI progress against the action plan
1.4	There is a need to focus more fully on equality and inclusion for each area	Consider other protected characteristics and champions appointed	Champions in place for the development of more detailed plans and action plans modified	Sept 2023	Continuous	EDISG	Terms of reference amended to reflect remit and plans for champions

**Priority Objective 2:
Improve School's representation of women in engineering from Lecturer to Professor**

Ref	Rationale	Proposed Action	Details of planned action	Start date	End date	Responsibility	Success measures
2.1	In 2020/21, women accounted for 20% of job applications (Figure A7). By encouraging women to apply for jobs and promotions across the school, we maximise opportunities to recruit the best staff and contribute towards our goals of gender balance	Develop approaches to actively encourage women to apply for jobs, accept offers and promotions within the school	<ul style="list-style-type: none"> Collate and analyse shortlisting data from 2022/23 onwards noting that in 2021, out of 142 applications, we interviewed 22 female resulting in 7 academic appointments (2 lecturer and senior lecturer level out of 14 women, Grade 5-8) Investigate why females are not accepting job offers in East London Encourage invites from underrepresented or ECR groups to participate at Centre seminars or apply for jobs Encourage Aurora applications Pair female staff with promoted senior staff 	Sept 2023	Continuous	School Manager SEMSRAG HR	<ul style="list-style-type: none"> Analyse staff shortlisting data to inform action plan Successful Centre seminar programme Evidence of using social media to promote women. At least 5 women apply for Aurora Develop a 1:1 plan for staff who are not promoted
2.2	Evidence shows that 80% of staff survey respondents agree that promotion criteria are clear but new starters felt they	Put together a new starters mentorship and promotion focus group to discuss what is needed for probation and promotion criteria	Groups to discuss what would help for new starters and update criteria for promotion	Sept 2023	Continuous	EDIC DoR SEMSRAG	<ul style="list-style-type: none"> Hold 2 focus groups, implement issues into action plan "New starter" buddy scheme informs action plan

	needed more support						
2.3	Evidence shows that whilst initiatives to support SEMs academics in their research activity have been successful, they do not consider specific difficulties for female academics and how best to target activities towards females for T&R promotion	Establish how to focus academic research support initiatives to best support female academics for UKRI funding	Ensure all applications for grant writing are reviewed internally by presentations at Centre meetings and completing the SEMS Research Checklist	Sept 2023	Reviewed twice a year in April and September	EDIC DoR SEMSRAG	<ul style="list-style-type: none"> UKRI funding success increased for women by 5% Promotion on T&R scale increased from 30 to 50%
2.4	Implement SEMS policy of exit interviews, but encourages informal discussion between line managers and departing staff	Ensure continuity of exit interview processes between School Managers	<ul style="list-style-type: none"> Design and implement an exit interview process conducted outside of line management New issues identified to inform action plan Ensure School Managers share knowledge to implement continuity of the interview exit process during handovers 	Sept 2023	Annually as part of the staff Power BI data in October	SMT School Manager EDISG SEMSRAG	<ul style="list-style-type: none"> 90% of leavers have exit interviews Action plans modified School managers pass on knowledge during handovers
Priority objective 3: Improve gender balance of the School's UG, PGT and PGR student population							
Ref	Rationale	Proposed Action	Details of planned action	Start date	End date	Responsibility	Success measures
3.1	It is crucial that initiatives to	Improve the integration of EDI	Review support measures and impact of student-focused groups on female,	Sept 2023	Annually as part of	DoE, EdCoG, SSLC, Student	<ul style="list-style-type: none"> Guidelines and on-line training produced

	support UG, PGR and PGT students are understood and driven by student-focused groups, noting and looking to mitigate unconscious bias	within the student experience by mentorship, role models, increasing visibility of role models and participation at EDI events	ethnic minority or disabled groupings, letters of recommendation		the student Power BI data in October	EDIC Reps, DoIEI	<ul style="list-style-type: none"> 100% of academic staff take EDI training course Improved EDIC student representation from aerospace, mechanical and robotic disciplines (25%)
3.2	There is a need to ensure appropriate role models and mentoring to support all students and helping them reach their potential	Improve visibility of female careers with strong role models at School and Queen Mary's events	Establish the practice of developing careers events with student led WES, to ensure appropriate female representation from alumni and role models	Sept 2023	Reviewed April and October of each year	DoE, EdCoG, SSLC Student SAT Rep, DoIEI	<ul style="list-style-type: none"> Set-up a practice of School schedules with WES, INWED, ILF, FoC, WISE on EDI website Monitor participation rates and evaluation of activities using Mentimeter
3.3	Make it clear that gender specific recruitment is considered for all programmes of study	Ensure recruitment activities include policies to recruit and promote mechanical, aerospace and robotics engineering with women representation equal	<ul style="list-style-type: none"> Continue to review marketing and communication activities to ensure targeting to females Develop mechanisms to analyse the gender of individuals participating in outreach activities who join QMUL events 	Sept 2023	Reviewed April and October of each year	DoE, Admission Tutors Outreach & Marketing, SSLC, DoIEI, EdCOG	Show balanced representation of role models in our talks, student ambassadors & alumni

3.4	During student study, female are less likely than men to choose MSc or PhD programme	Investigate the motivations of why female students choose not to study a MSc or PhD programme	<ul style="list-style-type: none"> Set-up student led advisory group at each level, investigate the factors affecting their decision for each pathway Use knowledge from advisory groups to target male and female attainment gap 	Sept 2023	Reviewed April and October of each year	DoE, SSLC School Manager Student EDIC reps, CEC, DoIEI, EdCOG	<ul style="list-style-type: none"> Report with proposals that highlight factors for improving pipeline to enhance female population at PGT/PGR level Reduced attainment gap between male and female <10%
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**Priority objective 4:
Building inclusivity – a community of best practise and culture within the School**

Ref	Rationale	Proposed Action	Details of planned action	Start date	End date	Responsibility	Success measures
4.1	It is important to address the issues of low participation rates in the 2022 staff survey, where temporary staff and researchers was 25% and 39% and academic staff 55%.	Improve participation of staff for culture surveys and identify areas of concern into EDI planning and action plan	<ul style="list-style-type: none"> Make it clear to all staff that monitoring progress through staff surveys is important enabling consultation with staff/students to identify areas of improvement and adapt to the changing environment Survey analysis completed and compared with success measures 	Sept 2023	Annually as part of the Queen Mary's culture staff survey	EDISG EDIC	<ul style="list-style-type: none"> Increase School's target completion rate of staff survey for all family groups to 90% Ensure consistency of participation rates between family groups
4.2	There is a need to understand why only 37% of Asian staff agree that <i>"department leadership actively supports gender equality"</i> compared to	Identify the issues from the staff surveys in Table 4 and compare results carefully to 2024 data when participation rates have improved	<ul style="list-style-type: none"> Set-up focus groups to lead on initiatives to promote culture and community schemes and establish within a new framework that improves working environment within the School Address staff survey results where 37% of Asian than 74% 	Sept 2023	Continuous	SEMSRAG, SMT, School Manager, EDISG, EdCOG, Technical Facilities Manager	<ul style="list-style-type: none"> Issues identified, policies updated and available on websites 100% staff completed mandatory EDI and discrimination courses

	White staff (74%) and why 42% of white staff “contributions are valued in my department.”	Consult with the School community and discuss mechanisms to improve culture and inclusion	<p>White agree “<i>department leadership actively supports gender equality.</i>”</p> <ul style="list-style-type: none"> • Ensure all staff have completed mandatory EDI and discrimination courses 				
4.3	There is a need to Identify and target gender issues associated with retention for all staff, in particular retention of female academic and professional services staff	Support staff to actively engage in professional development and ensuring support through probation and promotion	<ul style="list-style-type: none"> • Consult on School policies for 1. Support staff returning from maternity leave (e.g. PDRA cover) with family responsibilities 2. return to work schemes 3. flexible pattern of working 4. flexible teaching 5. core hours 6. Bullying & Harassment • Develop framework for all staff to identify development needs and set up a work shadowing scheme or ‘probation buddies’ or “new starters lead” or to work elsewhere in Faculty • Work with line manager to identify clear criteria of what the School considers to demonstrate excellence and use these criteria to encourage nominations for the staff bonus scheme 	Sept 2023	Annually as part of the staff Power BI data in October	SMT, SEMSRAG, School Manager, EDISG, EdCOG, Technical Facilities Manager	<ul style="list-style-type: none"> • Scheme in place and improved guidance developed for mentors • Appraisal documentation modified to prompt appraisers to identify candidates in need of “pairing.” • At least five pairs of buddies in place • Criteria identified and new guidance produced and circulated to technical staff and their managers
4.4	It is important to address the results from the	Hold three themed research, teaching and PS	<ul style="list-style-type: none"> • Address the issue of why 67% female and <50% of White, Male academic, research and 	Sept 2023	Annually as part of the Queen	Academic staff	<ul style="list-style-type: none"> • 100% staff completed “introducing inclusion training”, “active bystander”

	<p>“bullying & harassment” and “mental health & wellbeing” staff survey with low scores and support staff to engage in professional development to ensure health and well-being and sustainability of a work-life balance culture</p>	<p>away days for staff annually.</p> <p>Capture issues raised for follow up with EDISG. Amend action plan as appropriate</p>	<p>TS staff feel that <i>“my mental health and well-being are supported by the department.”</i></p> <ul style="list-style-type: none"> • Work with themed groups to provide a training workshop to help staff identify development needs and an appropriate plan with scheme to realise these • Consult on policies for 1. Mental Health & Well-being 2. Culture and Community 3. Extended maternity leave to cover time due to preterm birth and 4. Bullying and Harassment 		<p>Mary’s culture staff survey</p>		<p>training and subsequent refresher</p> <ul style="list-style-type: none"> • 100% of staff feel confident in reporting an action from “behaviour” or a <i>“bullying and harassment incident”</i> • Effective monitoring of policies in place with proactive mechanisms for detecting, recording, reporting and dealing with policy breaches • Effective and updated policies shared on webpages • Improved scores for staff survey >70%
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Appendix 1: Culture survey data

The School ran four annual staff surveys between 2019 and 2023. In the most recent culture survey, the questions are identical to Athena Swan requirements and results are disaggregated by gender, ethnicity and role for each question and are presented in Table 4. Each question is linked to a reference number in the future plan.

Table 4: Staff survey results from 2023 comparing favourable responses with gender, ethnicity, role and overall score

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The participation rates for the total respondents in 2023 was 54% (112 out of 207) and includes temporary staff. A breakdown of the participation numbers also expressed as a % per role are shown in Figure 11, with values ranging from 25% (temporary) to professional services (72%).

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Figure 11. Participation rates for staff from each role during the 2023 staff survey. Gender differences investigated in Table 4 with reference to the future action plan.

The 2022 culture survey results comparing SEMS staff with the Faculty of Science and Engineering or results from Queen Mary's 2019 survey is shown in Figure 11. Values in green highlight the substantial progress in EDI, well-being and working relationships comparing 2019 with 2022. There is a need for senior role models, effective policies and better plans for work and personal development goals, as set out in Priority Objective 4.

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Figure 11. Results from 2022 culture survey comparing SEMs scores with the Faculty of Science and Engineering and QMUL. The average UCEA employee engagement score for SEMs is 63% (national 62%). This information is not disaggregated by gender.

Appendix 2: Data tables

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Proportion of female students at UG, PGT and PGR level from 2018/19 to 2022/2023. Headcount values in brackets are expressed as % for either male and female or female only BAME representation. Programmes include foundation, BEng, MEng, Intercolated, MSc and PhD. UG data for 2022/23 has been disaggregated for % female students on the BEng/MEng aerospace and mechanical engineering programme (red).

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Figure A1: Numbers of males and females at foundation, UG, PGT and PGR level from 2018 to 2023. The proportion of students by female (blue) and men (orange) are expressed as headcount or %. All values are derived from Power-Bi with further analysis for the proportion of female students from a BAME background.

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Figure A2i: Degree attainment for males and females at UG level from 2018 to 2022. The proportion of UG students by gender awarded with a first class, 2.1, 2.2 or third BEng, MEng, intercalated BSc or BSc degree are expressed as headcount (top table) or expressed as a % with gender (A) and from BAME background (B). All values for tabulated data and bar plots are derived from the attainment and awards app on Power-bi.



Figure A2ii: Degree attainment for males and females at PGR level from 2018 to 2022. The proportion of PGR students by gender awarded with a distinction, merit or pass MSc degree is shown as headcount (top table) or expressed as a % with gender (A) and from BAME background (B). All values for tabulated data and bar plots are derived from the attainment and awards app on Power-bi.

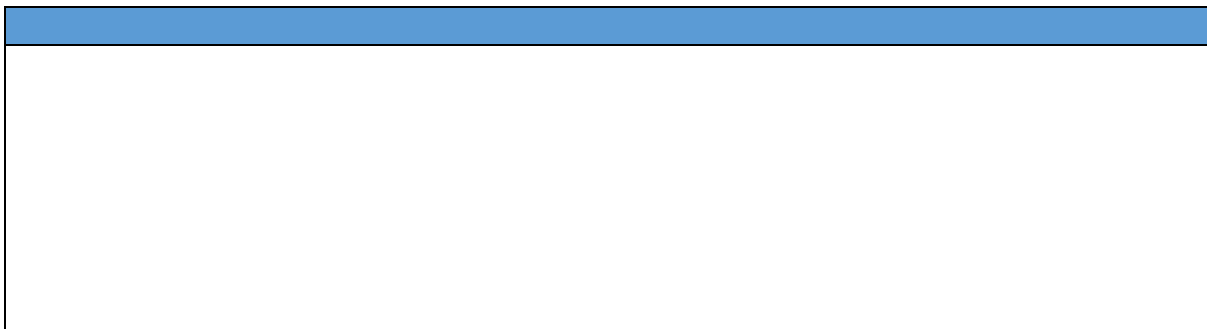


Figure A2iii: Degree attainment for males and females at PGR level from 2016 to 2021. At PhD level, data is shown for completion after 5 years with intended PhD award (B) and by total comparing male and female since 2012 (C). All values are derived from Power-Bi, where green bars = completed, grey continuing and purple exit with no award. All values for tabulated data and bar plots are derived from the attainment and awards app on Power-bi.



Figure A3: The proportion of academic staff by grade (A) and contract function (B) for males and females from 2018 to 2022. Staff aggregated for research, teaching only or teaching & research. The proportion of staff by female (blue) and men (orange) are

expressed as numbers and %. All values are derived from Power-Bi. Red arrow indicates values <15%. Data from HR.



Figure A4: The proportion of academic staff by contract type and gender (A) or academic pipeline (B-F). Male = orange and female = blue. Red lines indicate consistency where values are broadly similar since 2019. Data from HR.

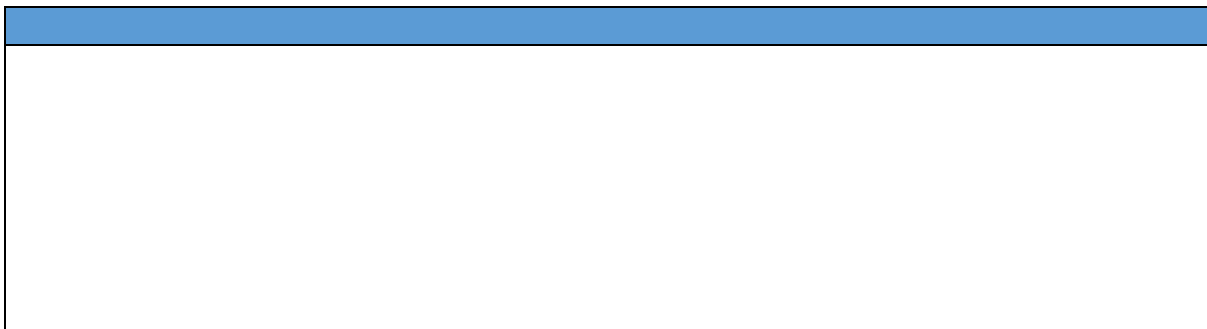


Figure A5: The proportion of PTO staff by job family (A) and gender (B). Values are expressed as a number and %. Data from HR.



Figure A6: The proportion of PTO staff by contract type. Values are expressed as a number and %. Data from HR.



Figure A7: Applications, shortlist and appointments made in recruitment to academic posts by gender. Data from HR.



Figure A8. Applications, shortlist and appointments made in recruitment to PTO posts by gender. Grade 4 (A), 5-6 (B) and 7-8 (C). Data from HR.



Figure A9: Applications and success rates of academic promotions. Data from HR.

Appendix 3: Glossary

Abbreviation	Meaning
BAME¹	Black, Asian & Minority Ethnic groups
CEC	Careers & Employability Committee
EDI Steering Group	School's Equality Diversity & Inclusion Steering Group, Co-Leads Dr Tina Chowdhury and Dr Patrick Cullen
EDI Committee	School's Equality Diversity & Inclusion EDI Committee
DGS	Director of Graduate Studies, Prof Himadri Gupta
DoR	Director of Research, Prof Yi Sui
DoE	Director of Education, Dr Maria Romero-Gonzalez
DoIEI	Director of Industrial Engagement & Impact
EdCoG	Education Coordination Group
FoE	Queen Mary's Festival of Education
FoC	Queen Mary's Festival of Communities
HoS	Head of School, Prof Hazel Screen
IAB	Industry Advisory Board
INWED	International Women in Engineering Day
ILF	School of Engineering and Materials Science Industry Liaison Forum event
SEMS	School of Engineering and Materials Science
PD	Programme Director
PGT	Postgraduate taught
PGR	Postgraduate research
PDRA	Post-doctoral researcher
SEMSRAG	SEMS Research Advisory Group
PS	Professional Services staff
PTO	Professional, technical and operational staff
SSLC	Student Support Liaison Committee
#thisiseng	This is Engineering
TS	Technical Services staff
RAENG	Royal Academy of Engineering
SEMS	School of Engineering and Materials Science
SMT	Senior Management Team
STEMM	Science, Technology, Engineering, Maths & Medicine
ToR	Terms of Reference
UG	Undergraduate
WES	Women in Engineering Society
WISE	Women in Science & Engineering

Language Note

1. Queen Mary currently uses the term 'BAME', as this reflects the way we collect and store staff and student data and it aligns with our reporting obligations and usage within the majority of other Higher Education institutions. However, as we are aware that this term is considered by some to be problematic, we will continue to review our use of language around race and ethnicity, through our Race Equality Action Group.