

Institution: Robert Gordon University

Unit of Assessment: 17 - Business and Management Studies

1. Unit context and structure, research and impact strategy

1.1 Context and Structure

The mission of Aberdeen Business School (ABS) at Robert Gordon University (RGU) is to develop professional thinkers and innovative contributors through business connected teaching, learning and impactful research. ABS is a small Business School (52 (47.8 FTE) academic staff) with ambitions to perform at the highest level across its research, teaching, consultancy and outreach activities. In the last three years, it has been accredited by AACSB, was the first business school in the world (2019) to achieve the combined AMBA and BGA accreditation, and won the Times Higher Education Business School of the Year in 2020 (shortlisted 2019). Situated on a riverside campus in Aberdeen city, ABS benefits from close links with its surrounding business community which features multinational energy companies, food producers and technical start-ups.

In 2014, Aberdeen Business School was a much larger organisation with five departments. Staff returned to REF 2014 UoA19 were drawn from three departments: Accounting & Finance; Management; and Communication, Marketing & Media. In October 2016, RGU underwent a significant reorganisation and the new ABS now consists of the departments of i) Accounting & Finance, ii) Management (including Entrepreneurship) and iii) People, Organisations & Practice (e.g. Human Resource Management, Project Management and includes several staff who were formerly in Management).

The School engages in applied research across selected business and management disciplines. Our principal research themes broadly correspond to the departmental structure: Accounting & Finance (accounting education (**Gammie, Douglas**)), transparency (Crawford, Gordon), finance (Weir, Hassan); Management (entrepreneurship (**Fulford, Xiong, Anderson, Cunningham**)), energy transitions (**Strachan**), sustainability (**Morrison, McDonald, Jones**), and Professional Practice (project management, safety management (**Flin**)). Particular strengths are: a) entrepreneurship, especially small and family businesses and b) energy sector research which encompasses interests in policy, innovation adoption, decarbonisation and industrial risk management. In each department, a Research Lead is appointed. The Director of Research (Flin) leads the implementation of the School's research strategy, reports to the Head of School (Gammie) and is a member of the University's Research Committee. The postgraduate research students (PGR), managed by the RGU Graduate School, are supported within ABS by two Postgraduate Research Coordinators (PGRC) for PhD (Hassan) and DBA (Fulford) students.

The University's Code of Practice (CoP) for REF 2021 deemed that only researchers who had held external research funding, in the assessment period were eligible for inclusion. This has significantly impacted on the number of staff submitted from the School as staff publishing work that has not required external funding (e.g. secondary analyses) were excluded. Hence only 8 (7.4 FTE) of our staff were eligible for submission.

The COVID-19 pandemic and national lockdown from mid-March 2020 have significantly affected staff recruitment due to concerns about the financial impact of the pandemic and time available for research as our socially-distanced bi-modal delivery significantly increased the resource requirements for teaching and assessment.

1.2 Research Strategy

The research strategy for ABS focuses on strengthening the research culture within a supportive environment which enables faculty to attain and maintain research excellence by producing rigorous, ambitious, significant and impactful intellectual output. The strategic aims are to:

- Develop a stimulating, safe research culture to provide a harmonious and fulfilling research environment underpinning the production of high quality and impactful research.
- Increase the proportion of research active faculty within the School.

- Support active researchers by enabling the fulfilment of research ambitions through constructive and enabling staff management and career development practices.
- Provide a foundation for the effective growth of ECR through training, mentoring and team working with more experienced colleagues.
- Create a stimulating, challenging and nurturing research environment for research students.
- Communicate research outputs through high-ranked academic and business publications, conferences, public engagement, social and conventional media.
- Engage with the academic, professional and business communities to raise our external profile and leverage the impact of our research.

Research infrastructure within ABS has been strengthened by the introduction of a Research Committee (established 2018), chaired by the Research Director (with secretarial support) and members include the PGRCs, the Research Leads, an Early Career Researcher (ECR) and the Chair of the Ethics Committee. The governance objectives are to develop and implement policy, ensure support mechanisms for research active staff, benchmark progress on research excellence standards, oversee School PGR activities, and organise research events.

Research performance metrics include the proportion of research active staff, research funding awards, publication rates, doctoral completions, knowledge exchange and impact. The employee performance review (EPR) process, which is linked to the School's workload model, has facilitated monitoring and mentoring of faculty. The introduction of the School's Research Committee and an Ethics Committee, as well as the appointment of Research Leads in each department have reinforced research management and improved communication. A programme of ABS research seminars was instigated in 2018 with external and internal speakers. During lockdown, a Zoom format has allowed more invitations to overseas researchers, including Carroll (MIT Sloan), Hofmann (Keenan-Flagler, UNC), Jacobson (Stanford). Given the success of this medium, a hybrid delivery version will be maintained. Research briefing sessions are delivered by ABS experts or specialists from support departments (e.g. impact, tools (Worktribe, NVivo), grant funding, strategic reviews, social media for research). We have 'Research Snapshot' seminars with shorter presentations for ECR/ staff with new projects. 'Let's Write' workshops for staff offer protected writing time with expert guidance.

When the new ABS was established in 2016, there were 60 faculty (43% with doctorates); currently we have 52 faculty (53% with doctorates), plus one post-doctoral research fellow (PDRF). Thus, in the assessment period, while there has been a significant reduction in staffing, with 14 departures (including three research professors), the proportion of research active staff has increased. The tactic of recruiting faculty with doctorates is ongoing, with recent appointments of a senior researcher (Morrison) and six ECR. Incoming faculty from professional backgrounds are encouraged to undertake doctoral training and thus research capacity has been enhanced by 5 staff obtaining doctorates, and 7 approaching completion. There is an active informal mentoring programme for ECR within the School and they can participate in the University's ECR Network.

Peer-reviewed journal papers per annum increased from 16 (2016/17) to 21 (2019/ 2020), despite reduced staff numbers. Other output includes peer-reviewed commissioned reports, e.g. work undertaken for and published by two accounting related bodies has had important impact on the future of accounting practice (Gammie, Impact case 1). There has been success in securing research grants (e.g. ESRC, MRC, NASEM) and contracts, several involving international collaboration. The appointment of Postgraduate Research Coordinators (PGRC) has improved internal monitoring and support for ABS doctoral students. Research degree student numbers are stable (usually c. 34 PhD and 6 DBA registered per annum), with typically 7 awards per annum, since 2016.

External benchmarking assessments, (e.g. AACSB accreditation), provide additional peer-review of progress. Networking on research management with UK Business Schools now includes participation in BAM's Research Directors' meetings and CABS' briefings for Research Directors and research conferences.

1.3 Impact strategy and enabling mechanisms

Fostering excellent research and facilitating its transfer into policy and practice is central to our strategic priorities. In relation to impact, our strategic aims are to:

- Extend researchers' knowledge of impact mechanisms and pathways
- Foster interaction and collaboration with key stakeholders
- Increase the level and range of target audiences and public engagement
- Ensure our research culture values impact-related activities and successes

We employ the following methods to leverage impact:

i) Extending researchers' knowledge of impact mechanisms and pathways. Staff with expertise in commercialisation, consultancy and influencing policy makers act as internal advisors for colleagues. Several ABS staff attended the University workshop on research impact (Reed, Newcastle), then shared information with colleagues at an impact briefing session. Training on enabling impact is provided by the School (e.g. social media pathways, KTP) and new sessions are being developed (e.g. joint industry projects; building an impact portfolio; reaching influencers).

For research findings with commercial potential, Innovation@RGU and business development experts advise on knowledge transfer and commercialisation. The RGU Accelerator Programme offers funding (£10,000 per business), plus support. The Knowledge Transfer Partnership office provides guidance on applications (four KTP bids in progress). Recently two Interface Workforce Innovation Vouchers were awarded which match companies with our academic expertise (Wasim, Sutherland). Morrison was a team finalist in NRG COSIA Carbon XPRize (2017) receiving a \$500,000 award to commercialise their technology as one of three Co-Founders/ Directors of Carbon Capture Machine Ltd.

ii) Interaction and collaboration with key stakeholders. Research active staff are encouraged to establish relationships with potential partners and users of their work. Their frequent participation in professional, industry and government events and committees is described in section 4, along with examples of co-designed research projects. The School has an extensive network of contacts and alumni who provide advice and enable us to amplify our influence within their sectors.

iii) Communications and public engagement with target audiences. Research publications are available on RGU OpenAir/ Worktribe, and increasingly, on journal open/gold access. The RGU Press Office provides advice, training, and links ABS researchers with the media. Faculty regularly contribute to or have their research reported, including *BBC*, *Bloomberg*, *Washington Post*, *Houston Chronicle*, *Ecologist*, *Conversation*, *Energy Voice*, *Scotsman*, *Herald*, *Press & Journal*, *EnergyPost.EU*. We also use social media to communicate research findings, e.g. *Facebook*, *Twitter* and *LinkedIn*. Strachan was ranked in the top 100 world-wide social media influencers on the "Future of Energy" (Onalytica). The University website showcases research projects and 'Business Knowledge Bites' webinars with ABS speakers. RGU Professorial Public Lectures have featured Crawford, Fulford and Flin. Faculty are active in organising industry events (e.g. Cunningham's workshops for ISBE (Aberdeen 2018/19)); Greenwood's accountability event (Brussels, 2016) with the Transparency International EU Liaison Office; Flin with the NASEM Gulf Research organising group for their industry workshop on safety empowerment (Houston, 2018)). Research presentations at industry sites, professional events and government briefings are an essential part of our knowledge exchange. The University's participation in the Knowledge Exchange Concordat will add impetus to these activities.

Our research influences business and the professions, especially as evidenced by its utilisation in policy development. The two selected impact cases illustrate not only excellent underpinning research, but also how the mechanisms described above were utilised to disseminate findings to key policy maker audiences. The researchers' relationships with potential users fostered transitional pathways that led to adoption and implementation of changes resulting from research evidence.

1.4 Research plans 2020-2025

The principal component of our research plan is to establish two new research groups designed to address major societal and business challenges, namely the energy transition to net zero and the global rise of entrepreneurship. The development of a critical mass of research expertise within the School has enabled the creation of these interdisciplinary groupings which span our existing thematic areas.

Energy, Sustainability and Society (led by Morrison (Co-I on an EC Horizon 2020 grant on decarbonisation) and Strachan (former ESRC grant on energy policy; Horizon project on offshore wind) will address corporate, social and sustainability implications of the rapidly changing energy sector. The group on Entrepreneurship (incoming professorial appointment) will build on an experienced cohort of researchers focussed on small businesses, enterprise education, microfinance and psychological barriers to innovation adoption.

The forward research strategy remains as above (1.3) with additional actions:

- It is anticipated that in the post COVID-19/ Brexit period and resulting threats to government funding of universities, that external research funding is likely to be even more competitive than it has been to date. While securing research grants remains a priority target, alternative sources (e.g. Innovation Vouchers, Management KTP, industry research contracts) will need to be pursued more effectively.
- The number of professorial staff to be increased by promotions and recruitment.
- Additional research methods training will be provided within ABS on grant applications, research contracts, fellowships, and open research management.
- A School ECR group will be organised to provide peer support and more formal mentoring by senior faculty.
- An Impact Champion role for the School will be instigated.
- A research culture survey instrument (approved by the ABS research committee pre-pandemic) will be updated (e.g. Wellcome, 2020) and administered on a two-yearly basis.
- The transition to open research data and the introduction of the knowledge exchange framework will be monitored and managed at the School level by the Research Committee.

1.4 Open Research Environment

The importance of adopting an open research data position (UKRI; Concordat on Open Research Data, 2016) is recognised (e.g. RGU Research Data Management Policy). The School is working towards an implementation strategy (e.g. the CARDIO assessment/ benchmarking tool). Staff training is provided on the 'FAIR' principles of open research data and residual risks/ contractual considerations (e.g. of open repositories). The reproducibility crisis has featured in seminar discussions, with remedies (e.g. protocol pre-registration). Research projects have data management plans, with software (e.g. DMP online) and related guidance (UKDS, JISC, ESRC). The Library provides advice on open access (e.g. embargo periods). While some funding is available for Gold Access, faculty are advised to build open access costs into grant bids.

1.5 Integrity

Research at ABS is ethically developed, conducted and disseminated in line with RGU research ethics policies, the Concordat to Support Research Integrity (2019), plus ESRC/ BPS/ ALLEA guidelines. The School Ethics Committee's (established 2019) remit includes overseeing ethical aspects of ABS research activities and reviewing staff projects and any proposed student project raising concerns with supervisors. PGR projects receive ethical scrutiny via supervisors, ABS and then Graduate School procedures. Membership consists of the Research Ethics Lead (Strachan)

as Chair, Research Director, PGRs, MBA Director, Undergraduate project lead and an ECR. Secretarial support is provided. ABS staff project approval precedes university approval. JISC Online Surveys (GDPR compliant) is used across the School. Transcription agencies must be approved providers. Research ethics seminars for ABS staff and PGR review research integrity issues and practices.

1.6 Interdisciplinary Research

Characteristic of problem-driven research, our work involves interdisciplinary collaboration which stimulates intellectual fusion and amplification of impact. Within RGU, the Research Directors Group facilitates opportunities for cross-School cooperation. Multiple disciplines across the University interact in themed networks (e.g. energy transitions, subsea enterprises, ageing research, Orkney). Recent interdisciplinary projects in ABS relate to our priorities in entrepreneurship and energy. Fulford's project on social enterprises and public health (ESRC/MRC), included health economists, historians and health scientists. Morrison works with chemists on energy technologies and with health care professionals. Flin collaborates with engineers and data scientists on safety and new technology projects. Lawani partners with oil industry engineers to examine decision making in the front-end loading stage of project management. Strachan's energy policy investigations are co-designed with engineers and geographers. Cunningham and Air are research partners with arts sector entrepreneurs.

2. People

2.1 Staffing strategy

In ABS, 31 of the academic staff (Table 1) are active researchers, 16 are ECR (of whom 8 are studying part time for PhD/ DBA). The principal recruitment tactic is to hire high quality junior faculty with PhDs (or close to completion) and to provide support for existing staff on doctoral programmes. All full-time faculty positions advertised (except Accounting) require appointees to hold a doctorate or be within six months of their viva. For Accounting positions, where the primary consideration is a professional qualification, an appointee on a full-time contract is required to undertake a PhD on completion of the teaching qualification. Only research staff are hired on short-term contracts.

Table 1. Academic staff profile for Aberdeen Business School (31 July 2000)

	Staff on full-time contracts				Staff on part-time contracts			
	<i>% of staff who are male</i>	<i>% of staff who are female</i>	<i>% of staff who are BAME</i>	<i>Number of staff</i>	<i>% of staff who are male</i>	<i>% of staff who are female</i>	<i>% of staff who are BAME</i>	<i>Number of staff</i>
Grade 7 and 8	53.8	46.2	46.2	26	12.5	87.5	-	8 (4.4 FTE)
Grade 9	60.0	40.0	30.0	10				
Grade 10	-	100	-	3				
Profs	33.3	67.6	-	3	-	100	-	1 (0.4 FTE)
H of S	-	100	-	1				
Total	48.8	51.2	34.9	43	11.1	88.9		9 (4.8 FTE)

The result of this strategy is the high proportion (52%) of ECR and doctoral registrations among our research active staff, and as shown above, 65% of ABS staff are in lecturer Grades 7 and 8. Consequently, during this transitional phase, we have been working with an imbalance of expertise

namely, the limited numbers of experienced researchers (e.g. only 3.4 FTE at professorial level, one of whom is Head of School) to provide doctoral supervision and ECR mentoring. Since 2016, two professors moved to Russell Group universities (Anderson, Crawford), another professor left and now holds an emeritus position (Greenwood). The replacements for these research-based professorial posts were put on hold at the outset of the pandemic. One of these has subsequently been advertised, with the others pending.

The imbalance of research expertise will become more favourable as our ECRs gain experience and staff complete doctoral training. As we continue to home grow our research active staff to promoted positions, we will be able to further build our research capability. Succession planning for key research management positions will be achieved by a mix of recruitment and promotion, with appointments to the Research and Ethics Committees and PGRC positions providing developmental experience. Relevant training, such as the CABS Development Programme for Directors of Research, and internal leadership training, will be provided as required.

2.2. Staff development

On appointment, academic staff have a 12-month probation period and all staff appointed in this REF period have successfully completed this requirement. New staff who will be research active are invited to meet with the Research Director, after University and School inductions, to discuss their research interests, support requirements, and to introduce them to the range of research activities and researcher development opportunities. The development strategy for staff pursuing a career as an active researcher is operationalised through the annual employee performance review (EPR). This process facilitates agreement of objectives, including research targets in consultation with the Research Director (publications, research applications/ awards, and doctoral supervision (all recorded on Worktribe)) and it includes an interim meeting six months after the EPR to discuss progress. A wide range of research methods training for staff is available from the University, and specialist external courses can be attended as appropriate. A new Qualitative Research Methods Network is well attended by ABS faculty. Incoming professional staff without PhDs, are encouraged to register for part-time doctoral training, normally with fee-waiver (8 at present).

A workload model was introduced during 2017/18 as a mechanism to ensure equitable distribution of workload and to ensure that research active staff have protected time for their research activities. Faculty who are classified as research active or undertaking doctoral training are given 20% time for research, in addition to 20% allocated if they require teacher training. Where possible, staff who are undertaking PhDs are given additional time allowances in the final writing up stage to expediate their completion. Mentoring responsibilities are recognised and those staff publishing at 3* and 4* level, may be given an additional allowance of time to maintain the quality of their research. Any further research time can be bought out from externally funded research project budgets where this is permitted.

Research achievements are recorded through the EPR system and this could be rewarded by the allocation of additional research time and/or research support, e.g. for research visits or conference attendance. Recognition of grant awards, high-ranked journal publications, evidence of impact and other examples of successful research performance is made through the communication of a School-wide congratulatory acknowledgement by the Head of School or Research Director. In some cases, the press office will be involved in a media release. Whilst the University has a sabbaticals policy, the School staffing level and teaching loads have made full sabbaticals difficult to organise. As this situation is being rectified with new appointments, the opportunity for staff to apply for research leave will be introduced.

In terms of career progression, the relevant route for research active staff is career path 'A' whereby a faculty member can progress from a grade 7 (lecturer) to 8 (lecturer) to an enhanced grade (Senior lecturer A) post. The progression from grade 7 to 8 is based through the provision of sustained evidence (usually at least 24 months) relating to teaching, research and leadership, management and accountability. The promotion from grade 8 to SLA is through the demonstration of sustained excellence which is evidence-based in one or more of three areas, e.g. research

Unit-level environment template (REF5b)

(including knowledge generation, original contributions, publications, external funding and revenue generation, impact). This newly created senior post is an excellent stepping-stone to one of the more specialised titular research roles, such as Reader.

In terms of transfers between academia and other sectors, we have been recruiting staff with doctorates from business and industry (e.g. Singh, Breedon-Turner) and professionals who then complete PhDs (e.g. Air, Douglas, McWhirr). Cunningham has been seconded part-time (2019/20) to the operations team of a Scottish Funding Council initiative to develop an educational outreach programme for Scottish Scale-Up companies. Some of our part-time PGR are senior industry professionals (e.g. Aldersey-Williams, McDonald, Brooks; one choosing to study with us after his company, Sea Energy, was in a KTP with Strachan) and this has proved very beneficial in extending our active business collaborations.

2.2.1 Development of Early Career Researchers

More experienced researchers informally mentor ECR with a view to developing their research capability and PGR supervision skills, such as the mentorship of Xiong by Anderson (who continues to provide support from Lancaster, joint research bid), Gammie with Rey-Marmonier on female leadership, resulting in research funding from the University Forum for Human Resource Development; Flin (with Lawani resulting in a research contract (ECITB)), and Morrison (with Gordon and Breedon-Turner) on a research contract bid. The University's ECR network was established in 2018, and ABS staff are encouraged to attend its programme of training and support sessions. School funding is generally available for conference attendance when staff have a paper accepted for presentation.

2.2.2 Development of Staff on Research Contracts

During the assessment period, the School has employed two grant-funded research assistants and one PDRF. The importance of PDRF in the formation of a strong research culture is recognised and this will be facilitated by applications for independent fellowships and for larger research funding awards. Induction and training for PDRF are provided at both a team and University level, following the principles of the Researcher Development Concordat (2019) and they are included in the appraisal system (EPR). Depending on funder conditions, part-time contracts can be offered and flexible working arrangements (e.g. working remotely) have been allowed, depending on personal needs. For the recommended ten days per annum of professional development training, a range of courses, career development, research networking and knowledge exchange activities are available, selected in consultation with the line manager. Support systems (e.g. Vitae RDF planner; Research Professional, Employability Hub) are recommended for career planning, plus the University's online Researcher Development Programme offering workshops and advice. The Aurora female leadership programme is open to PDRF. They join the University ECR Network, attend staff training programmes and can obtain entrepreneurial guidance from Innovation@RGU. Our PDRF give seminars and participate in Business Knowledge Bites webinars. They can access conference funding (from grants or School resources) and recently have presented papers at Human Factors (Seattle, 2018); BAM (2020); International Drillers (Amsterdam, 2020). Research staff approaching the end of fixed contracts are supported to work on funding applications. They are eligible for internal redeployment and/or enter a redundancy process.

2.3 Research Students

The School offers MRes, PhD and DBA programmes which aim to produce excellent researchers who will have successful careers in academia or business. The PhD and DBA student numbers registered per annum are typically 33 and 6 respectively (c. 50% part-time). The numbers of awards per annum, by degree type, are shown in Table 2.

Table 2 Numbers of research student awards per cohort.

	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
<i>PhD</i>	9	7	4	7	7	1	6
<i>DBA</i>	2	1	0	3	0	1	1

Most students are supported by government grants (e.g. Petroleum Technology Development Fund, Nigeria) or are self-funded. Each student has a bursary of £1,000 provided by the School for research support (e.g. data collection, software, conferences). The School's recruitment strategy is to select high quality students, where supervisor expertise is available. A recent reduction in experienced researchers has temporarily hampered supervisory capacity but this is being remedied by staff appointments. All PGR have at least two supervisors. Staff members with significant numbers of doctoral completions are mentoring less experienced staff to build supervisory capacity. The Graduate School provides initial compulsory training for supervisors, and an ongoing CPD programme.

The Graduate School coordinates all postgraduate research activities from recruitment, admission (retaining confidential or protected information in applications), progress monitoring and examinations. In addition to specific skills development provided by supervisory teams, the Graduate School training consists of two compulsory modules of core method skills and personal development training, including career preparation (based on the RDF) leading to the PG Certificate in Researcher Development. PGR students can attend the ESRC/SFC Scottish Graduate School of Social Science research training events, including the summer school and become involved in its other activities. Two ABS students have been student representatives for this programme. PGR present their work during the University's Research Week, at competitive Elevator Pitch/ 'Three Minute Thesis' sessions, and at an annual residential conference.

Within ABS, developmental activities for doctoral students include a programme of peer-review student-led seminars attended by staff members. These are currently on Zoom which has proved beneficial in terms of online presentation skills, feedback, and participation by part-time and remote students. They are encouraged to present their research at academic and professional conferences. Student-led activities involve delivering training to peers on their areas of expertise. Opportunities for external collaboration are organised by the supervisory teams, where the students benefit from the relationships ABS staff have with academic, business, industry and third sector contacts.

There is an annual and interim progress review process for research students coordinated by the Graduate School, with at least Ten Expected Instances of Contact per annum between students and their supervisors. Within ABS, admissions to the School and other aspects of the research degree programmes are led by the PGRC for the PhD and the DBA cohorts. They also provide ongoing support and guidance and are assisted by an administrator who also manages the doctoral Moodle page. Two PGR reps in the School liaise with the PGRC. For student wellbeing, supervisor training includes advice on support systems. The PGRC have dedicated office hours and for pressing concerns, they can be contacted outside of these hours. In addition, research students can access RGU online and telephone support services.

The research students are important members of the School's research community, making a significant contribution to our research activities and culture. Full-time PGR have dedicated desks, storage and computing facilities within the ABS building. They participate in the School's research events programme, such as the seminars, where final stage students can present their work. They can join specialist networks within the University, such as the qualitative research group or the energy transitions lunch and learn sessions. On the ABS Doctoral Community Moodle page, the PGRC share relevant information and resources, have online discussion forums, dedicated sessions linked to research methods, and regular Zoom Rooms where students meet the PGRC online. Doctoral students who wish to gain teaching experience shadow and tutor alongside our teaching staff who provide the necessary coaching. PGR can undertake the training provided by the University's Department of Learning, Teaching and Access to achieve fellowship of the Higher Education Academy, and undertake remunerated teaching and assessment duties within the School.

2.4 Equality and Diversity

RGU operates an Equality and Diversity policy and a Dignity at Work and Study policy to which the School adheres. ABS has a sustained record of commitment to equality and diversity in hiring

and promotion practices, resulting in a multinational profile (Table 1). Of 30 promotions since 2016, 67% were female and 20% BAME. For the most recent fractional appointments (<1 FTE) 100% were female, 17% BAME. Since the new staff grading scheme was introduced in 2017, the length of appointment from grade 7 (first lecturer grade) to 8 was 22 months which is slightly less than the expected minimum time of 24 months. With research performance part of the criteria, the successful transition of staff from grade 7 to 8 clearly demonstrates that staff were supported to progress. All staff, irrespective of their contract, are given the same opportunities for development and support and whilst promoted positions are usually full-time roles, the School has promoted two female staff with caring responsibilities to a promoted post on a job sharing arrangement and other promoted posts have been undertaken by staff on fractional contracts including Head of Department. Staff can be employed on a fractional basis and at the census date, nine out of 52 staff were employed in this manner. Most of these appointments are female and several staff in this category have changed their fraction over time to accommodate their changing home life.

This adaptable approach has encouraged women to return to work or the workforce after career breaks or having family. The School operates a flexible working policy which enables staff with caring responsibilities to fit these commitments into their working week. This is usually formalised by a signed agreement with the Head of School where the requirement is of an ongoing nature or by an informal agreement through the line manager if the request is of a one-off nature. Staff returning from parental leave have the opportunity of teaching or research-related 'keeping in touch' days. Staff who are returning from a period of ill health or a long-term illness are referred to occupational health for management advice to ensure appropriate adjustments are made to support their return to work, e.g. a phased entry with ongoing support. Research grant and contract funders are normally accommodating (e.g. no cost extensions) in these circumstances. There have been no active researchers with declared disabilities on the staff during the assessment period but the University's support systems for staff with protected characteristics would be employed in this case to facilitate their research activities. The School operates an open door policy and the wellbeing of staff and students is of utmost importance. Whilst staff have two formal meetings with their line manager per year as part of the EPR process, there are regular informal meetings. If there are any concerns about a member of staff, then they are invited to meet their line manager or the Head of School and appropriate support is put in place.

Senior staff from a range of backgrounds lead the School research events and whilst they act as informal research mentors, they also act as role models to junior staff who aspire to senior positions. One of the senior team is the champion for Equality and Diversity (with experience of applying Athena Swan principles) and she is supported by two School Inclusion Officers to represent our bi-modal course delivery and student demographic. Two staff members completed the University's Aurora Women in Leadership programme, which, with the appointment of mentors, is designed to enhance personal development, build confidence, networks and career satisfaction. Senior staff have also acted as Aurora role models and mentors.

The University has recently articulated the following values: ambition, approachability, authenticity, collaboration, innovation and respectfulness and within the School we have driven a major change initiative aimed at increasing levels of collaboration, consultation and peer support. We have achieved this by establishing a framework of shared behavioural expectations based on the values. This has allowed us to sustain and improve our student satisfaction and staff engagement, as evidenced by our research student feedback and HR indicators. All staff who are engaged in the recruitment or selection of staff undertake inclusion, diversity and unconscious bias training before joining a selection panel. Staff involved in the preparation of REF submissions were also provided with Equality and Diversity training. The University's Code of Practice governing staff classification as category A for REF paid particular attention to equality and diversity considerations. Confidential systems were put in place for staff circumstances, protected characteristics and factors that may have affected research performance in the assessment period. The eight category A staff submitted for this School are 87% female and include one BAME staff member.

3. Income, infrastructure and facilities**3.1 Research Funding**

The total grant award (since the new ABS was established in 2016) is £655k, approx. £165k per annum, which equates to £88k per FTE submitted. Our research funding is comparable with other Business Schools in Scotland (8/14) and the UK (36/68 non-affiliated universities) (CABS 2020). Research funding mainly consists of Research Council grants, e.g. Xiong's project on the peer-to-peer lending market in China with researchers at Swansea and Heriot-Watt Universities (2017-2019, ESRC/ National Natural Science Foundation of China) (<http://lendp2p.net/>) ; Fulford's (2016-2019) (MRC & ESRC) Commonhealth Research Programme (with Glasgow Caledonian University); Greenwood with researchers at Universities of Utrecht, Bamberg and Southern Denmark - ESRC, Open Research Council study (2016-2019) on trilogues in decision making. Flin is co-investigator on a National Academy of Sciences Engineering and Medicine, Gulf Research project (2019-2021, University of Houston) on mindfulness and offshore safety. Research contracts include the Oil and Gas Technology Centre (2019-2021) for a study (Flin) of the psychological factors influencing the adoption of new technology. Smaller awards have provided pump-priming, e.g. Honoraria from the University Forum for Human Resource Development funded Cunningham's project on minority-ethnic family-run firms (2016) and Rey-Marmonier and Gammie women's networks award (2017).

The external research funding landscape is highly competitive (CABS reports only 1% increase in research income for UK Business Schools 17/18 to 18/19). While our rates of research funding have been maintained, our aim is to improve this and to increase the number of faculty holding grants and contracts. This remains a priority area for support and development. The University organises training workshops on Research Professional, grant writing, and talks from grant providers. Sessions on identifying and securing research funding are included in the School's seminar programme. The high number of ECR within our research base equates to a high level of inexperience in grant bidding and in the last year, more experienced staff have been working with ECR to help them identify funding sources and develop applications. Consequently, the number of staff applying for research grants and contracts (including Knowledge Transfer Projects) has increased (bid rate has risen from 2 to 8 per annum since 2016), with recent successes in smaller funding awards to ECR (e.g. ECITB contract to Lawani).

3.2 Organisational infrastructure

The School is based in a purpose-built, modern building which houses staff offices, open plan dedicated working spaces (also for staff on fractional contracts), collaborative areas and project rooms for interviewing and other research activities. There is a wide range of digital facilities and software packages to support research, including the Worktribe system. The Library provides a dedicated Research Librarian giving individual advice to staff and PGRs. It offers specialist training and manages the OpenAir repository. An industry standard television studio with production facilities, including green screen and autocue, is used for video/ podcast production (e.g. Cunningham - small business research podcast 2019). Integrated within the University's research community is the Energy Transitions Institute (which has a high fidelity drilling simulator) and ABS staff attend its Lunch and Learn sessions. The University's research administration and management services which support ABS faculty are described in section 5a.

4. Collaboration and contribution to the research base, economy and society**4.1 Collaborative research**

The School's research profile is characterised by collaborative research with internal and external partners. The level of encouragement and support for this approach reflects its strategic importance. Within Accounting and Finance, Gammie cooperated on an international audit skills project (FRC/ICAS) with researchers from the Universities of Pretoria, South Africa and Adelaide (Impact case 1). Gordon and Crawford's project on transparency is with Sheffield Hallam University researchers. (Impact case 2). Hassan has regular co-authors from Brunel, Dundee and Liverpool Universities on studies of analyst coverage and corporate financial disclosure.

In Entrepreneurship, Xiong's project on Chinese lending to small business has partners from Swansea and Heriot Watt universities. They have briefed key users, such as the regulator in China, on their published findings. Fulford was a partner in the MRC & ESRC: Commonwealth Research Programme (with Universities of Glasgow, Glasgow Caledonian, UHI, Stirling). She now collaborates with health scientists (evaluating the ARMED Service Call – funded by Digital Health and Care Innovation Centre). Cunningham works with researchers at Glasgow Caledonian and Queen Margaret universities on family businesses resulting in papers and briefings to SME events.

In the Energy sector, Morrison has been collaborating on a bid for EU Horizon 2020 funding on carbon capture, with partners from the Universities of Rijks, Technical Denmark, Calgary and Zhejiang [now awarded]. Strachan is an expert on energy policy and was involved in an earlier H2020 on offshore renewables. He collaborates with researchers from Cardiff, Queens Belfast, and Exeter resulting in papers and policy briefings. He is co-editing a special issue of *Energies* on energy transition post major world events with Danish (Aalborg) and Finnish (LUT) collaborators. Flin is Co-I with safety scientists (Houston University) on a NASEM project (2019-2021) on mindfulness and offshore safety. In a study of decision making, Greenwood has worked with Universities of Utrecht, Bamberg and Southern Denmark researchers on an ESRC, Open Research Council international collaboration (2016-2019) on trilogues (articles and policy briefings).

4.2 Relationships key research users/ wider contributions to the economy and society

ABS research addresses current issues in business and management: in line with our impact strategy and thematic priorities, it is developed in conjunction with practitioners and policy makers and reported back to these audiences. For example, Morrison has been advising the British Science Museum on the 2021 Carbon Capture Exhibition and was a panel member at the 2020 Financial Times Energy Transitions Strategies Summit. She has been an adviser to BEIS in workshops at the Canadian and American Embassies (London) and spoke on gender diversity in science for the Climate Change Maker series (2017). She was in a delegation to a bipartisan meeting on carbon capture and utilisation in Washington (2018), meeting Senators including Bernie Sanders and was in the UK delegation to the SelectUSA Investment Summit (Washington, 2019), meeting Senator Manchin to discuss decarbonisation. During the UK State Visit of the President of Mexico, Strachan was an expert contributor to the Carbon Trust's session on 'Building a Sustainable Energy Economy in the UK and in Mexico', held in conjunction with the Department of Energy and Climate Change and the Foreign and Commonwealth Office. A high-level collaboration agreement between both countries was subsequently signed (2015).

Cunningham organised Institute for Small Business and Entrepreneurship funded events to disseminate research findings to small business owners (2019 - 'Employment issues in small business'), with a second on 'Entrepreneurial Collaboration' forthcoming with online delivery. In 2019, Xiong visited the National Internet Finance Association of China (NIFA), a regulatory organisation, to discuss her research findings on the scale of discouraged borrowers in the Chinese online lending market. Workshops also held (UK, China) on FinTech & Shadow Banking in China (2019) and at Sino-British Conference on Shadow Banking and Financial Stability (Shenzhen, China 2018). In healthcare, Morrison (working on electronic health records) was an advisor to NHS England Safer Hospitals Safer Wards Fund (2014). Flin is a member of an expert group (Royal College of Anaesthetists) on human factors standards for difficult airway management (2019-date). She was a member of an expert group advising on selection methods for astronauts on long distance missions (NASA, Johnston Space Centre, 2017).

Faculty also serve on a number of professional and industry boards. For example, Gammie was an Academic Member of the International Accounting Education Standards Board (2015 – 2019), a Member of the Institute of Chartered Accountants Scotland Council (2009 to 2015) and Vice-President, Education - International Association for Accounting Education and Research (IAAER), 2020 to date, with responsibility for the education portfolio within their Executive Committee. Flin is on the Society of Petroleum Engineers, Human Factors Technical Section Board, is a Board Member of Step Change in Safety and served on the Safety Advisory Committee, Military Aviation

Authority (MOD) (2010-2016). Similarly, Morrison conducts research into military staffing issues and is an Academic Advisor to the Ministry of Defence.

4.3 Engaging with diverse communities and publics through our research

Our impact strategy recognises that evidence-based change requires a commitment to public and business engagement. ABS faculty liaise with a broad range of communities in the development and dissemination of research. On entrepreneurial issues, Xiong, Cunningham, Fulford and Air participated in the Sustainable Social Entrepreneurship in Pakistan workshop (British Council, Dubai, 2017). Xiong and Cunningham joined the Entrepreneurship 2020, Qatar-UK researchers' workshop (British Council, Doha, 2016). Cunningham presented his research on collaboration for family businesses at the Craft Beer Research and Enterprise Symposium (2019) and at the Family Business United Industry conference (2016), additionally delivering training on rural business at the Swedish Agricultural University (Uppsala, 2019). His research with Berlin artists (as unconventional entrepreneurial actors) was shortlisted for Best Paper at the Interdisciplinary European Conference on Entrepreneurship Research conference (2018, Germany) now published (IJESB).

Morrison participates in the Women's Enterprise Scotland Network, recently briefing Martin, MSP (2020) on investment challenges for female entrepreneurs. Fulford collaborates with Aberdeen Foyer (Social Enterprise) and the Third Sector Research Forum (Scotland), participating in the Social Enterprise World Forum (2018) and the Third Sector organisations and major funders event (2018). Greenwood was a trainer on the International Labour Organisation/ Business Europe 'European Young Professionals Academy' (2016-2020) and on the Final Awards Panel, UK Trade Association Forum (2014-2020). He presented findings on trilogues at the Brussels regional office (Bavaria, 2019) to an audience from EU institutions and civil society organisations.

Gammie was an invited speaker at the AXIS network (2018), at a Royal Bank of Scotland event (2018) and an independent schools' event on women in leadership (2019). Rey-Marmonier presented to GE Oil and Gas conference (2016) and shared her research on women's networks to the University Forum for Human Resource Development (2018) and on women in technology to the Fairness at Work conference (2018). Flin discussed her research on pilots' non-technical skills at a Royal Society of Edinburgh 'Tea and Talk' for the public (Edinburgh Festival, 2019) and in a TEDx talk (Den Helder, 2017). She gives invited corporate lectures (e.g. Shell, Babcock, Concawe) and acts as an expert academic witness (HSE & legal firms) on safety issues.

4.4. Responsiveness to national priorities

In relation to international priorities for HRM resulting from the pandemic, Morrison collaborates with Oxford Brookes and King's College London investigating factors influencing teamwork and leadership in acute care for COVID-19 affected patients. This will inform health and social care management strategies for staff affected by provision of care during the pandemic [now ESRC funded]. Flin collaborated with UH Energy (Krishnamoorti) on studies (March, May 2020) of energy sector employees on two studies: (i) job insecurity due to the energy price fall/ pandemic; (ii) willingness to return to work post COVID-19 lockdown (energy sector White Papers, article *JOEM*, 2020). She presented the findings to the Society of Petroleum Engineers, HSE conference (July 2020, panel on industry management of the pandemic).

In the Accountancy group, Gammie was Chair of the IAESB IES1 Taskforce (2016-18) tasked with providing implementation guidance for IES1. She is also a member of ICAS Corporate Auditor Working Group formed (2020) to respond to the independent review by Sir Donald Brydon into the quality and effectiveness of audit. In the energy sector, Strachan gave an expert contribution to the All Parliamentary Group on Unconventional Oil and Gas, (Westminster, 2016) and provided policy advice on energy transitions to Scottish Government (Minister for Energy; First Minister, 2015). His evidence to the Devolution (Further Powers) Scottish Parliament Committee focused on energy markets and the oil and gas fiscal regime. He recently took part in a panel on climate action and EU green recovery at the Reuters Virtual Responsible Business Week (2020). Morrison advised the Defence Science and Technology Laboratories Research Procurement Reconfiguration (2016), Army Equality and Diversity (2016), Army and Society (2017), MoD

Strategic Workforce Analysis (2019-20), and the Joint Services Accommodation Review Project (2019-22). In 2018, she gave evidence to the Reserves Executive Committee (UK) on the Future Reserves Research Programme.

4.5 Indicators of wider influence/ Contributions to/recognition by the Research Base.

Anderson is Editor of the *J. of Small Business and Entrepreneurship*. Faculty are members of editorial boards, including: *Accounting Education, Journal of Accounting Education, Business Strategy and the Environment, Corporate Social Responsibility and Environmental Management, Energies, Smart Energy, International Journal of Innovation and Regional Development, Safety Science, Journal of Cognitive Engineering & Decision Making; Risk Research, Interest Groups and Advocacy, Journal of Public Affairs*. They review for journals, such as: *Business Ethics, Journal of Applied Psychology, Human Factors, Journal of Occupational and Organisational Psychology, Public Administration, Business & Politics, American Journal of Political Science, BMJ Quality and Safety, Managerial Accounting Journal, International Journal of Entrepreneurial Behavior & Research, Entrepreneurship & Regional Development, Poverty & Public Policy, Journal of Social Service Research, SAGE Open*. Cunningham is currently co-editing a special issue (*J. of Enterprising Communities*) on family entrepreneurship in communities.

Grants reviewing/ committees.

McDonald and Morrison have been members of the ESRC Peer Review College. Morrison was a member of the Scotland-A Medical Research Ethics Committee (2013-2018). Greenwood, a Visiting Professor at the College of Europe, is a member of the European Science Foundation's College of Expert Reviewers and reviews for the ESRC, the ERC, the Flemish and Dutch research councils. He was an Expert Evaluator on EU Horizon 2020. Flin reviews for EPSRC, ESRC, NIHR, the research councils of Norway, Australia and Switzerland, and was on EPSRC review panels (2018/9) for cybersecurity grants and centres. She is a member of the Fellowships (Cognitive and Biomedical Science) Committee of the Royal Society of Edinburgh (which she previously chaired). Anderson reviews internationally (ESF College of Expert Reviewers) and nationally (Nuffield, British Academy, Leverhulme International). Faculty also review for Carnegie Trust (Xiong), Leverhulme (Hassan) and Israel Science Foundation (Strachan).

Fellowships/ prizes

Flin was awarded (ad hom.) Fellowships by the Royal College of Surgeons Edinburgh (2015) and Royal College of Physicians and Surgeons Glasgow (2017) for her research on non-technical skills in healthcare teams.

BAM, Best Developmental Paper, Gender in Management (2018) - Riley & Rey-Marmonier.

Emerald Literati Award (2019) – Ukanwa, Xiong & Anderson

ISBE conference Best Paper (2019) – Hashim, Xiong & Cunningham.

ECIE Best Paper award (2014) - Dakup, Fulford & Sutherland.

Invited keynotes/ lectures/ conference chair

Strachan - keynote at the Centre for Energy Policy, (Strathclyde 2018), CIMA conference (2019) and panel member Eco-Connect Forum (2015) and was conference organiser for 'The Future of Energy in Scotland After the Referendum' (2014). He was a committee member for the International Conference on Sustainability, Technology and Education (2012-2019).

Flin - keynotes include Offshore Energy Safety Institute (Houston, 2018), Submarine Safety (2019), American Association of Thoracic Surgeons (Boston, 2016), Royal Netherlands Navy (Den Helder, 2017); British Columbia Healthcare (Vancouver, 2018), Asian Police Psychology (Singapore, 2019).

Cunningham - keynote at Entrepreneurship and Family Enterprise Research (2018). He was invited as a specialist to a SAMS funded workshop at Queen's University, Belfast (2015) to discuss his research on leadership approaches in family firms.

Fulford is a committee member for the International Conference on Entrepreneurship, Innovation and Regional Development and the European Conference on Innovation and Entrepreneurship.

Morrison - plenary speaker at the British Army National Engagement Conference (2018), RAF Leadership Conference, (2014) and organiser/speaker of Future Reserves Research Programme Conference, 2018, MOD

Greenwood - plenary at Contemporary European Studies (Bilbao, 2015), Nordic Summer University, (Wroclaw, 2020), EU Center of Excellence, FIU (Florida 2015), Danish Society Europeanists (Aarhus, 2014).