

Institution: Edinburgh Napier University
Unit of Assessment: Unit of Assessment 33 – Music, Drama, Dance, Performing Arts, Film and Screen Studies
<p>1. Unit context and structure, research and impact strategy</p> <p>Unit Context and Structure UoA 33 comprises 7 FTE submitted staff, all of whom sit within the School of Arts and Creative Industries (SACI). All staff are members of the Humanities and Cultures subject area, one of three subject areas within the School. This subject area incorporates staff from the fields of English, publishing, acting, and music and includes staff submitted to three Units of Assessment (27, 33, 34). All submitted UoA 33 staff are members of the Applied Music Research Centre (AMRC), one of five research centres in the School, which also includes a researcher who although not significantly responsible for research, contributes to the research culture of the centre (Dempster). Until his retirement in June 2020, Paul Ferguson, was a significant figure within the Centre, and his contributions are mentioned in this narrative.</p> <p>The Head of Subject Area (Medbøe, UoA 34) and the Centre Director (Hails) work together to provide leadership to the AMRC. They balance the priorities of the School and researchers, and oversee strategic support for individual projects and staff. Responsibilities include; the allocation of appropriate research time for agreed objectives, financial support for conference attendance and training, alignment of teaching and research, and an integrated approach to line management.</p> <p>Music research is carried out by a focused group of staff and students in AMRC. The principal strands of the grouping are in composition and in popular music education, but technology, performance, and community building are also important areas. Most researchers are active as performers, and come from industry rather than from traditional academic routes. As such, the emphasis tends to be on applied and practical research.</p> <p>Unit Strategy 2014-2021 Edinburgh Napier University (ENU) did not submit staff to UoA 35 in REF 2014. As a result, this period has been one where the primary focus has been building critical mass and areas of research excellence. Since 2014, the broad focus has been to invest in developmental support and time allowances for staff to enable them to undertake high quality research, publish high quality outputs, build networks and collaborations in their fields, and improve their research toolkits.</p> <p>Existing strengths in composition have been consolidated through peer-sharing of practice and engagement with wider networks. For example, members (Hails, Moir) have participated in the RMA Music and/as Process study group (2018 annual conference held at ENU), and the 21st Century Music Practice Research Network.</p> <p>This engagement with external audiences has been nurtured for composers and creatives through strategic partnerships. Researchers have been supported to build new, and contribute to existing, communities of audiences and communities of practice. This reflects an emerging theme across SACI, and in the emerging Communities and Culture research theme of the University.</p> <p>Partners have included; the Scottish Book Trust, the Doors Open Edinburgh festival, the Scottish Book Festival, Diabetes UK, and the Alba New Music festival. A key partnership in the period has emerged via the establishment of a concert series titled <i>Old Town/New Music</i> (Harris, Hails, Moir, Medbøe). This concert series is one element of a sustained engagement with the Culture and Heritage department of St Giles' Cathedral Edinburgh, to bring new music into the building of the High Kirk.</p>

Popular music pedagogy has been a vital emerging theme in the period, and as a result the Unit recruited a researcher with both the drive and the experience to lead this forward (**Moir**). The growth of this areas has led to a number of collaborations and networking opportunities which have resulted in a close working relationship with the APME (Association for Popular Music Education). The APME have scheduled their 2021(rescheduled from 2020) international conference at our Merchiston campus.

To improve the quality of research outputs in the period, experienced senior researchers in SACI have mentored members of the Unit in the development of publications and conference papers. To support this aim, staff were encouraged and empowered to present their research in a series of internal seminars which were then shared in video form on our website.

The Unit has built capacity for postgraduate supervision by strategic management of supervisory teams, collaboration across HEIs, and strategic recruitment. In 2014 only one staff member in AMRC had the necessary experience to act as director of studies. In 2020, six out of seven members of staff submitted in this unit are engaged in supervising research degree students. This increased capacity has been enhanced with the announcement of the first Ian Tomlin PhD Scholarship in October 2020, which will be an annual fee waiver awarded to a student for the duration of their studies. AMRC staff are currently supervising three MRes students, and seven PhD students, which demonstrates a significant growth in PGR supervision from 2014.

Technical support has been provided to researchers by a team of experienced specialist staff, who assist and inform engagement with resources for installations, live performance, and media dissemination. The implementation of multi-site telematic performance and rehearsal software and hardware has been developed by close collaboration between academic and technical staff. This has resulted in a range of applications for research, including the outputs linked to the LoLa impact case study, and the Making Connections project involving **Burton** and **Dempster**.

Unit Strategy 2021-2026

The School and Unit are committed to the University's overarching research strategy as outlined in the REF5a. Future school strategies are informed by the institutions five-year focus on staff development, increasing innovation, and developing international research partnerships, and aim to feed into the broad strategic aims of the University.

In the next five years, we aim to significantly improve the quality and number of our outputs. The 2021 APME conference at ENU will help to cement the Unit's role in leading popular music pedagogy in the UK and internationally. In alignment with the Internationalisation pillar of the University research strategy, we will also establish at least one strategic international partnership to ensure that future work is truly global in its outlook and impact.

Under the new University theme of Culture and Communities, Unit staff will support the academic discourse around non-commercial and experimental composition and creativity with the launch of a hybrid journal and record label called Unpopular Music. This will be available as online content and print dissemination. Proposals for online seminars to supplement existing conference activities will be submitted to practice-based networks starting with those with whom staff already have existing links. Reciprocal relationships with other experimental practitioners in academic institutions will be formalised to engender an active year-round programme of activities in multiple sites. Again, in alignment with the REF5a strategy, at least one strategic international partnership will be formed to ensure that dissemination and future collaborations can embrace global narratives and discourse around creative practice in music.

External relationships and collaborations have been key to many projects in the period. Where possible, these relationships will be furthered through joint funding applications in the next five years, to foster closer connectivity and a collaborative approach to reaching relevant stakeholders. Exciting work in partnership with the Scottish Book Trust and the Edinburgh Book Festival, which has taken one of our researchers into schools and prisons, will be further

supported by bringing together strands of interdisciplinary research across the School in more informal research units.

During the 2014-2020 period, significant innovation and testing in low latency connectivity for music performance using LoLa and Visimeet, in collaboration with twelve UK and international Universities and Conservatoires, has resulted in a specialist research infrastructure that provides high performance unrestricted access to worldwide research and education networks. Staff will be supported and encouraged to make use of this infrastructure to extend the reach and significance of activity, particularly in a post-pandemic environment in which the drive to reduce academics' carbon footprints remains as vital as ever. The Unit will seek to utilise the new University Innovation Hub for opportunities to increase external engagement with collaborating partners.

In alignment with the University commitment to supporting people, continuing to build the AMRC research population will remain high on the agenda. Colleagues will be encouraged to include support for new PhD students, postdoctoral students, and research assistants in funding applications wherever possible, to both build critical mass and to embed collaboration and connectivity at the heart of all research projects. This is supported by the SACI plan to build postgraduate research numbers. The new MA Music, launched in September 2020, will also act as an important feeder for PGR admissions.

Enabling Impact

Engaging a wider public and engaging with partners beyond the academy is a significant part of much of the research that is carried out in the Centre. Partnerships with the Cockburn Trust's Edinburgh and East Lothian Doors Open Days, the Heritage and Culture department of St Giles' Cathedral Edinburgh, the Alba New Music Festival, Diabetes UK, and Unique Event's Burns & Beyond festival have allowed researchers to bring compositions and installations to a public far beyond the confines of the University.

Research around access to music education and the gap between high school and university (**Stillie**) has been underpinned by a close relationship with high school educators. This has been enabled through the development of research, public engagement, and CPD projects with schools, local educational authorities, the National Museum of Scotland, and Newbattle Abbey College. These projects have formed a part of staff development and objective setting, and will continue to form an important part of our remit in the years to come. Moving forward, we aim to extend our range of connections to include English schools and LEAs, and to use our technical resources to further explore the potential for educational research by using video and audio low latency connections.

Close professional ties with industry leaders in the world of software and hardware such as Avid and Roland are integrated into both our teaching and learning and research strategies. This ensures that our facilities and staff are prepared in the latest versions of industry-standard production and performance equipment, and enables our staff to input into the R&D process for these firms. All staff are also encouraged and supported to make use of low latency video and audio software such as Visimeet and LoLa, and to engage with existing communities as well as developing frameworks for new ones.

Both submitted impact case studies are a direct result of the Unit's approach to supporting impact. **Harris'** Church Music case study has arisen from a close collaboration with St Giles' Cathedral Edinburgh, made possible by a long-standing partnership with the Church of Scotland. As well as leading to financial, reputational and commercial benefit to the Cathedral and Church, this relationship has also enabled us to develop a number of the relationships mentioned above.

The second impact case study grows directly out of **Ferguson's** industry experience in sound production and networked audio. Through collaboration with other users of LOLA and industry partners, **Ferguson** has been able to improve the use of the software for a number of high-profile virtual live music events, particularly relevant in the COVID-19 crisis.

Supporting Interdisciplinarity

SACI's five research centres are situated on the same (Merchiston) campus, which has allowed for close dialogues between staff across arts disciplines. Staff are supported to develop projects with colleagues in areas including; design, film, acting, and lighting. These projects have resulted in exciting public engagement events and artefacts, and collaborative funding bids to extend these relationships to create tangible research outputs are underway. In 2018, **Dempster** led a small group of musicians as part of an AHRC-funded research project entitled '*A Night at Stobs*' to recreate a First World War *Lustspielabend* held in 1918 at the internment camp in Hawick. This was a collaboration with colleagues in our Centre for Literature and Writing (UoA 27) and Aston University. **Burton's** collaboration with staff from the Art and Design Research Centre (UoA 32) in 2018 resulted in limited edition 3D printed models and digitally printed badges incorporating elements of the composition written for St Gabriel's Chapel, Edinburgh. **Hails** is currently working on a collaboration with **Holmes** (UoA32) that will result in a sound/film installation.

Restructuring of subject areas within the School will enable and empower staff to engage in new partnerships which will enliven and inspire our research and teaching experiences. The new subject area of Screen and Performing Arts will no doubt shape our submissions to any future research framework, as well as informing the directions that our interdisciplinary and collaborative research will take. Research infrastructure is periodically reviewed within the School and University structures, and we are currently developing proposals that enhance research collaborations and the sharing of good practice.

The establishment of small research groups within the School research infrastructure to enable interdisciplinary work will be especially valuable. This will support the existing collaborations with our computing colleagues around the LoLa project, and allow researchers to develop work with colleagues in English, in particular around poetry composition and analysis within the context of hip-hop performance and production, and creative engagements with prison inmates. These new structures will support these interdisciplinary collaborations in a more dynamic and agile fashion than is currently possible.

The campus is also the home of the School of Computing (SoC), and Unit staff are encouraged and supported to collaborate with colleagues in the School. The Creative Informatics centre resides in SACI, and is a space for collaboration between the two disciplines. A result of such collaborations was the AHRC funded project '*ENSEMBLE Performing Together Apart: Enhancing Immersive Multi-Location Co-Performance in Real Time*' in 2018 (**Ferguson, Hook, and Mival, Helgason from UoA11**).

Supporting an Open Research Environment

Much of the research in the last seven years has culminated in chapters within edited volumes, which makes open access particularly difficult without circumventing contracts with publishers. Staff have been encouraged to write up conference papers and make them available for public access wherever possible, to ensure that research findings are accessible.

Other research outputs involve performances of music that either depend upon commercial sales or upon professional non-academic performers. This restricts the open dissemination of such outputs due to intellectual property (IP) rights, but staff in the Unit have made composed scores available using the University repository, and have recently been moving towards open access of the underpinning research and sketch material using the Mahara e-portfolio platform.

Value is added to conference papers by the incorporation of supporting research, plans, and multimedia. This process of archiving a developing research narrative through successive conference presentations, and their role in leading to a final published book chapter, may result in these two modes of dissemination coming together. In the next five years, we will aim to adopt this as common practice for all music academic staff, and to integrate this into our research

management system, allowing us to share this good practice across the sector through our existing networks.

Supporting Research Integrity

The School Research Integrity committee considers and advises on specific ethical frameworks, obligations, and standards as they apply to research within the Unit. The School lead for Research Integrity frequently supplements the University Research Innovation and Enterprise team's training and support. Important developments within the field are also cascaded down through the School Research and Innovation Committee.

Within music, research integrity has become a fundamental aspect of much undergraduate teaching. It is a core aspect of a compulsory module at an early stage, ensuring that staff and students are all fully familiar with the importance of consent, discrimination, and accessibility. This is reinforced throughout undergraduate programmes up to and including the final major project module, and is a fundamental principle of the MA Music programme launched in September 2020. The centrality of research integrity and ethics to our taught provision underpins the unit's application of these tenets and values to our research supervision and activities.

Legal ramifications of IP and licensing are discussed in industry-centred teaching to train undergraduate students to responsibly and entrepreneurially negotiate professional careers after graduation. The professional experience of Unit staff also forms a core framework of knowledge and advice which is shared in peer-to-peer review and support.

2. People

Staffing Strategy

All Category A eligible staff in the unit are permanent staff members, and they come from two different disciplinary teams; music and acting. Eight staff members are at grade 6 (lecturer role; 67% of population), and four staff members are at grade 7 (senior lecturer/associate professor role; 33% of population). Two members of staff fall into the definition of early career researchers as defined by the REF (17% of population).

Seven members (58%) of the Category A pool of staff are submitted to the Unit. Four members of staff are at grade 6 (lecturer role; 57% of submitted staff) and three members of staff are at grade 7 (senior lecturer/associate professor role; 43% of submitted staff).

Staff turn-over in UoA33 is relatively modest and only one staff appointment was made during the census period. Research was a key part of this appointment (**Moir**), and expertise in the developing theme of popular music pedagogy was identified as a key requirement. Since his appointment, he has co-authored book chapters and journal articles with a significant number of his Centre colleagues, many of which are submitted as part of this Unit's submission.

Short-term appointments within the Unit tend to be teaching-only roles due to the necessity of covering particular areas of teaching specialism, or unexpected staff illness or secondment. Where these roles are taken up by staff developing as researchers, the opportunity is taken (as noted above) to mentor and develop them as part of the line management process. Research is very firmly linked to teaching in the Unit, and a recent review and rewrite of undergraduate provision for Music has resulted in even tighter links, as has the launch of a Master's programme.

Staff Development

Within the Unit there is a range of experience, encompassing staff members with strong teaching careers, and strong careers as creative practitioners. The increasing focus on research in the last seven years means many have engaged with research for the first time. Centre strategy has supported frameworks and methodologies that reveal the research implied by teaching and creative practice, rather than imposing new angles of activity on staff members.

Career development in the allocation of time, resources, and training for research is regarded as important across all career stages, with different forms of support viewed as critical at different points in each researcher's journey. This has included coaching and mentoring, co-authoring approaches, and targeted support for covering teaching responsibilities in order to free up time for research.

Informal coaching and mentoring relationships have been established to develop research capacity, and to unlock the research potential in staff who considered themselves restricted to teaching alone. One member of staff (**Hails**) has received SEDA accredited mentoring and coaching training, and has worked particularly with line managers to ensure that good practice is cascaded and mirrored wherever possible.

Some of these relationships have been short-term and linked to specific projects, but others have been longer-term and have taken a more holistic view of the researcher. Members of staff on fixed term contracts during the course of the assessment period have benefited from close mentoring relationships, which have led to postdoctoral employment (Orpheus Institute, Ghent) or academic positions (Northumbria University, Royal Conservatoire of Scotland). **Moir** has taken a proactive role in collaborating with colleagues working towards their first publication, and first conference presentations which has led to the strong representation of the Centre at the APME conference in New York, as well as in the *Bloomsbury Handbook of Popular Music Education*. This relationship has also reinforced the establishment of strategic network development for individual members of staff and for the centre as a whole.

The integration of experienced members of the School professoriate into the staff development process has been particularly useful. A very experienced member of the School professoriate has worked closely with individual staff members writing for publication for the first time such as **Hook**, offering advice on methodology, and reviewing successive drafts. Another member of the professoriate offers a regular surgery to discuss publication strategies and career development.

Staff all take part in annual My Contribution progress reviews as outlined in the REF5a, and through these researcher development and funded research time are managed appropriately. All line managers and researchers are also encouraged to engage with the Vitae Concordat to Support the Career Development of Researchers in order to best focus staff development time. Managing research development time is particularly valuable for new researchers, to ensure that protected time is devoted to the development of research skills before committing to objective-linked research time.

Budget for research activity is handled by the AMRC, with a set sum released to the director at the start of each academic year. Conference attendance is prioritised to the most effective sharing of research insights within the academic community, but public engagement and links with industry are also supported. Conference attendance by staff beginning research journeys are particularly targeted with this funding, with emphasis placed on the importance of researchers finding 'their people', and experiencing conferences among peers in their area of expertise.

As with most performance-based disciplines, many of our researchers create outputs that are not usually limited to a strictly academic audience but include engagement with a wider public as part of the dissemination strategy and, in some instances, as part of the research process itself. Concerts, recordings, and video documentation are all supported by the research budget and have led to many of the creative work documented in this submission.

Due to the emerging nature of the Unit, research remains critically led by the interests and passions of the individual researcher. However, this is balanced wherever possible by strategies that support a sustainable culture. Towards the end of the assessment period, **Ferguson** who has developed innovative applications of telematic resources for music, has taken early

retirement, but has spent the last eight years training academic and technical colleagues to ensure that these applications can continue, and that international contacts and partnerships have been firmly established with the institution.

Supporting and Recognising Impactful Research

Staff research achievements are recognised and celebrated in a number of ways. Publications and performances are shared and discussed both informally and more formally at staff meetings. Staff are also encouraged to share ideas and seek feedback, which has led to collaborative projects with colleagues active in other disciplines such as those mentioned above, and with staff not currently significantly responsible for research, such as the involvement of **Dempster** in the 'Making Connections' project with **Burton** and **Ferguson**.

Staff are encouraged to share their achievements with the wider University body through School Research Newsletters, by reporting outputs and events to the Communications team through the Research Management System, and by participation in School Research events such as the annual conference. These conversations have frequently led to suggestions not just for future work, but also for opportunities to exploit future potential for impact and public engagement. The strong connections between academics and industry throughout the School makes for a powerful resource for the sharing of research and the engagement of external partners.

In order to capitalise on impact activities, staff are resourced to engage with industry and community contacts with both travel funding and time allocation. Historically this enabled a strong link with Avid, which has led to CPD delivery on our campus as well as development opportunities for staff members. In recent years similar resourcing has resulted in a developing partnership with Abbey Road Studios, London, and a commission for a staff member (**Burton**) to write for the Fondation Le Corbusier which will be completed in 2022.

Research leave is currently administered at a School level. Until recently, this was dependent upon individual centre's budgets, but from academic year 2020/21 onwards the School will consider applications for research leave (more than 0.25 FTE University funded time) in the context of the overall staffing projection for the year. Research leave is intended to support significant projects or development for an individual staff member, and a proposal for how the time will support this will be developed by a researcher in consultation with their line manager.

Supporting Research Students

Postgraduate research student recruitment is an important goal for the unit and a strong driver in the school plan for research. The last two years have seen a significant growth of research student numbers on PhD, MPhil, and MRes programmes. UoA 33 currently has seven research students (two MRes, one MPhil, and four PhD), and four have completed study in the period. Six out of seven submitted staff are engaged in supervision. Compared to 2014 when only one staff member was an active supervisor, this demonstrates a significant growth.

The new MA Music programme will function as a stepping-stone for graduates at the beginning of their research journey, with a part-time PGCert route designed to prepare experienced creative practitioners to enter into a research degree after years in industry or practice. Targeted adverts for research students through findaphd.com have also driven recruitment, with three research students being enrolled in October 2020 as a result.

All staff are encouraged to include provision for PhD funding in significant funding bids wherever possible, and we work with colleagues across the School to prepare collaborative proposals for funding bodies to support PGR provision.

A shared workspace for the school's research students and a collegiate approach adopted between staff and students makes AMRC an increasingly attractive environment in which to study. An annual research student conference is organised by a steering committee made up of PGR students and is chaired by the school programme leader for research degrees. PGR

students are also involved in the annual school research conference, in both steering committee and dedicated sessions. This ensures that students are seen as members of the school research committee, and empowers them to develop their own structures and networks.

Flexible working arrangements, including remote supervision, are supported by the supervisory team, and research students in the last seven years have been based in Malta and Athens with regular visits to the UK for specific workshops and training. Particular care is taken to support students with caring responsibilities and commitments, and the bespoke supervisory agreements made between supervisory team and student help to allow for the individual's requirements to be taken into consideration. Students with disabilities are supported by centralised resources, and in UoA 33 members of staff with particular experience of working with students with autism and hearing loss provide specialised support. An emphasis is always placed on encouraging the student to determine and share their requirements, rather than these being imposed.

Each student is assigned an Independent Panel Chair (IPC), normally from the school, who acts as a non-supervisory contact throughout the course of study, and who usually acts as the exam panel chair. The IPC also oversees the student's training and development programme, and their supports the student in engaging with the Vitae Researcher Development Framework (RDF) and university and school level training. Good practice in this biannual monitoring process and regarding the role of the IPC is shared across the school.

At present, the Unit does not participate in the AHRC Doctoral Training Partnership for Scotland, although the School does benefit from partnership with the Scottish Graduate School of Arts & Humanities (SGSAH). This means the Unit can draw on workshops, the summer school, Discipline+ Catalyst events, Knowledge Exchange Hubs, and internships. The partnership with SGSAH also allows us to participate in quality benchmarking and supervisory workshops, as well as learning from good practice from developments in equality, diversity, and inclusivity.

University mechanisms support monitoring processes for research students, and each student is assigned an Independent Panel Chair (IPC) normally from the School, who acts as a non-supervisory contact throughout the course of study, and who usually acts as the exam panel chair. The IPC also oversees the student's training and development programme and their understanding of how the student's needs interface with the Vitae Researcher Development Framework (RDF), and with both University and School level training is a vital part of their relationship. Good practice in this biannual monitoring process and regarding the role of the IPC is shared across the School.

Career planning for research students is normally led by the director of studies, but this is supported by input from other academics in the Unit, and by the IPC. Whenever possible, our research students are supported in gaining teaching experience through postgraduate student experience contracts. All research students who take on teaching must undertake the University's *'Teaching at University for PGR Students'* course, and their teaching hours are limited to a maximum of six hours of teaching, preparation, and marking per week to balance these commitments with their ongoing programme.

Looking beyond traditional academic careers is probably more relevant than ever, so preparing research students to be flexible is crucial. The Student Futures team at the University are a valuable resource for the supervisory teams and supervisory teams signpost students to use their resources throughout the process of career development, as well as ensuring that they are aware of the training resources they have access to through our partnership in SGSAH.

Equality and Diversity

In the Category A pool of staff 17% identify as female and 83% as male. 92% identify as white, and 8% as unknown ethnicity. 25% identify as having a disability, 58% identify as having no disability, 17% are unknown.

Of submitted staff, 29% identify as female, and 71% as male. 100% identify as white. 43% identify as having a disability, 43% identify as having no disability, and 14% are unknown. 100% of our staff members who are female, have registered a disability, and who are early career researchers are submitted.

No staff have been awarded internally funded research leave during the assessment period due to budgetary restrictions, however **Hook** was funded to undertake a substantial project by the University of the West of Scotland, which has resulted in him conducting writing workshops in prisons and acting as a consultant to the Vox Liminis project team.

Staff wellbeing is particularly important and colleagues are encouraged and empowered to work with our occupational health partners in order to discuss reasonable adjustments that will facilitate research activities. Recently, AMRC assigned funding to support a colleague to video a conference presentation where a pre-existing condition would have otherwise made participation in the conference impossible. Individual difference is celebrated and researchers frequently discuss the interaction between disability and their creative practice (for example this includes hearing loss and diabetes), with autoethnographic methods forming a significant part of at least one researcher's work (**Hook**).

Most importantly, support for the submission of funding applications, use of internal funds, staff development plans, training, and conference attendance are all regarded as individual to each member of staff, with particular attention paid to protected characteristics. Line managers are supported to understand and mitigate against constraining factors that might prevent researchers from accessing the appropriate level of research, and this is monitored by the Centre Director (**Hails**). The School's Inclusion Monitoring Group is charged with reporting to the School Leadership Team on a range of equality and diversity issues including workloads, school promotion processes, and sabbaticals. Equality impact assessments are commissioned and scrutinised by this group, and reports from this group are also received by the University's Research, Innovation, and Enterprise office.

Phased returns for staff members after periods of leave are carefully considered in plans for research. In one instance, a colleague returning from a short period of sick leave was supported in reducing their research commitments in order to focus on teaching because they felt this was the most appropriate use of their time. In another instance, the phased return of another colleague from parental leave incorporated clear plans for a return to work on publishing research, which was tied into mentoring support. Although staff are supported and encouraged to carry out research, we are committed to supporting our colleagues to follow the career paths that are most appropriate for their skill set and desired outcomes, which do not always include research.

Staff are encouraged to explore different flexible and remote working patterns to best support their research in both ad hoc and permanent arrangements. This is usually handled through line management relationships, but is strongly encouraged by the Research Centre Director (**Hails**) and within the research culture as a whole. The necessity for alternative work spaces is particularly valued by colleagues engaging in creative work, but there is also an important link to staff with caring responsibilities and disabilities. As an example, the Unit leader has an agreement to work from home for three mornings a week as a reasonable adjustment. The establishment of office hours for student enquiries and the inclusion of research time into the timetabling process has enabled staff to ring-fence their time and to feel supported in their efforts in what is often a lonely aspect of academic life.

3. Income, infrastructure and facilities

Income

In the period the unit has brought in £85,550. Annual average income is £12,221. Average annual income by funder is 77% from BEIS Research Councils, The Royal Society, British Academy and The Royal Society of Edinburgh, and 23% from EU sources.

Funding has largely been awarded for activities involving the LoLa project (**Burton, Ferguson, Hook, Moir**), in collaboration with SoC, with John Moores University Liverpool, and with Nova Southeastern University Florida. Collaborative work on applications across disciplines (e.g. the AHRC funded project '*ENSEMBLE Performing Together Apart: Enhancing Immersive Multi-Location Co-Performance in Real Time*', which was written in collaboration with SoC) and across HEIs (e.g. the JANET-funded project '*Making Connections Through the Fifth Wall: A New Creative Place for Performing Arts and Pedagogy in Higher Education*' in collaboration with Dance departments at Liverpool John Moores University and Nova Southeastern University, Fort Lauderdale, Florida). Centre and School strategy have facilitated strong central support from the University's Research, Innovation, and Enterprise office, which has enabled smooth collaborations but has also empowered academics to submit stronger funding applications.

All music staff are empowered to include at least one funding application in their MyContribution objectives for each year. Applications by individuals as practitioners have resulted in Creative Scotland funding for collaborative performances (with the Lung Ha's Theatre Company) (**Dempster**), a CD recording (*All of these people are me*) and a Scottish Book Trust funded tour (*The Odd Story*) (**Hook**). Funding of composition, performance, and recordings is seen as vital to the professional development of our researchers and we have encouraged a strong practice of peer-to-peer support for applications.

In the period, researchers in the Unit have been supported in seeking funding via collaboration with industry and charity partners. For example, AMRC has a strong collaborative relationship with St. Giles' Cathedral Edinburgh. Fundraising by the Friends of the Music of St Giles' Cathedral has raised £15,100 for **Harris** to commission work and recordings, and an additional £1,500 was raised by the Friends and the Edinburgh Society of Organists for a new work for solo organ. This has led to excellent musical outputs, which have in turn greatly benefitted the Church of Scotland, as outlined in one of the Unit's impact case studies.

Internal distribution of REG funding is targeted to support conference attendance, particularly for ECRs, the purchase of equipment (to support projects such as research using LoLa and the Old Town/New Music concert series), and towards engaging professional musicians as consultants and collaborators in compositional work (including the ensemble apartment house, the trumpeter Stephen Altoft, and the cellist Justyna Jablonska). Strategic allotments of funding have included providing support for three members of the unit (**Moir, Stefanie, Stillie**) to attend the Association for Popular Music Education (APME) conference in New York City in June 2019 which resulted in them presenting eight different sessions, including the launch of the *Bloomsbury Handbook of Popular Music Education*, edited by **Moir** and including submissions by a number of the Unit team (**Hails, Moir, Stefanie, Stillie**).

An annual bequest (£40,000 per year) by Dr Ian Tomlin provided significant additional support for music activities, until his death in 2016, which included specific research projects where this was appropriate such as supporting an annual residency by the Edinburgh Quartet (which supported the development of research students), and the purchase of instruments used in the performance of staff work (**Burton, Hails**). From October 2020, an annual scholarship in his name was awarded for the first time covering fees for PhD students at the University, funded by a significant bequest made in his will.

Where members of the team have required additional funding for support due to disability, this has been facilitated to ensure that they have equal access to the opportunity to carry out

research. This is carried out primarily through confidential discussions with the Research Centre Director (**Hails**) and the School Head of Research (**Dryden**, UoA 27).

Infrastructure and Facilities

Music at ENU is supported by a dedicated technical team comprising a 1FTE senior technician and a 0.5FTE technician. Under the guidance of **Ferguson** (until June 2020) and **Hook** (2020 onwards), and leadership at School level, this team ensures that the studio facilities are functioning efficiently and according to industry benchmarks, and that the technological needs of the team are met. This ensures that off-site performances such as installations by **Hails** and **Moir**, and concerts in the **Old Town/New Music** series (**Hails, Moir, Burton**) are thoroughly supported. Close collaboration between this team and the University's IT department has enabled the smooth running of the tests, demonstrations, and concerts that have formed the elements presented in the LoLa impact case study.

We maintain a professional-level recording studio which has played a fundamental role in the research and development process underpinning compositional work (**Burton, Hails, Hook**) and fulfilled the role of the technical hub of our low latency audio-visual collaborations (**Hook, Stillie, Moir, Ferguson**). Strategic funding to maintain and enhance these facilities has remained a School priority throughout the 2014-2020 period in order to support the integrated teaching-research-CPD approach. We are Scotland's largest AVID Learning Partner with instructors qualified to deliver professional training. In addition to commercial training we provide support for the recording industry in return for in-kind student placements and masterclasses.

In the seven years since we began our research into the use of high-speed academic and research networks, we have set up a specialist research infrastructure that provides high performance unrestricted access to the worldwide research and education networks. During this time, we have become a testbed for manufacturers of real-time audio and video technologies for music and dance performance. As an established research group in this field we have been able to use this infrastructure to allow twelve UK and international universities and conservatoires to do their initial tests in this field, and continue to support the continued spread of telematic rehearsal, pedagogy, and performance (see impact case study).

We are working with regional internet infrastructure providers to stimulate the use of 'Gigabit City' fibre-optic for real-time performance. This is for educational and commercial applications with ENU's network research infrastructure acting as a bridge between the city-wide and global networks.

Through the AHRC-funded collaboration with SoC, we are able to add a strong User Experience (UX) component to our research environment. As an outcome of this, we have the ability to act as an "always on" remote site for conferences taking place elsewhere in the world. For example, delegates were able to present and perform in the 2019 NowNet Arts New York conference from our real-time remote conference site in ENU.

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

Members of the Unit are encouraged to join relevant academic and professional networks, and have forged particularly close links with the Association for Popular Music Education (APME), the Audio Engineering Society (AES), and the Royal Musicological Association's Music and/as Process Study Group. We hosted, delivered, and live-streamed the 2015 AES Scotland Christmas Lecture, and the 2018 annual conference of the Music and/as Process study was hosted by the Centre at our Merchiston campus. The 2020 annual APME conference was postponed due to the Covid-19 pandemic but will be hosted by the Centre as soon as restrictions allow.

As part of our collaborative agreement with St Giles' Cathedral and the Church of Scotland, one of our researchers (**Harris**) is contracted to fill the role of Master of the Music at the High Kirk on a 0.5FTE basis and, as part of this role, engages in practice that fulfils the research needs of his

University and Church of Scotland roles. Through this unique collaboration, **Harris** has commissioned works for solo organ and choir in order to enrich the liturgical repertoire of the Church of Scotland, and has championed music by Scottish composers to ensure that this repertoire is not simply an ephemeral tradition. His extensive touring activities with the choir of the High Kirk and as a solo organist ensure that this influence is extended to an international audience. This has led to a number of beneficial impacts to both the church and the public, as outlined in his submitted impact case study.

As part of our connection to the High Kirk, a series of performances entitled Old Town New Music brings music by the team to the historic environment as part of our commitment to public exposure of our work. This has also included sound-art contributions to the Burns and Beyond festival's activities at the High Kirk in 2019 and 2020 (*clair de lune* and *MANDALA* respectively) that have been mutually beneficial for all parties. The relationship with the Church of Scotland will be maintained through the involvement of Centre composers (**Dempster, Hails, Burton, Hook, Moir**) in the composition of works for choir and for organ, and the ongoing involvement with the Culture and Heritage team in submitting joint funding bids to support ongoing creative activities.

Collaborative practice is strongly supported within and without the Unit. Given that many of our researchers have not been recruited from traditional academic routes, collaboration has enabled a powerful sharing of practice, particularly methodological, and unlocked the potential of colleagues. This experience has prepared staff to collaborate externally and has led to exciting projects with a number of partners including Liverpool John Moores University and Nova Southeastern University, Bergen Community College, Aberdeen University, Durham Brass Festival, the Burns and Beyond Festival, Edinburgh Jazz & Blues Festival, and the Royal Conservatoire of Scotland.

In 2017 and 2018, the Centre supported the Alba New Music Festival which included performances of rarely heard music by internationally renowned performers of contemporary repertoire. This relationship also enabled **Hails** and **Ferguson** to present multi-speaker music in unlikely places in collaboration with the SYN festivals in 2016 and 2017.

Burton established a relationship with the Cockburn Association in 2018 to place new music by Centre composers **Burton, Dempster, and Hails** in the programme of the Doors Open Days run in Edinburgh to celebrate the historic architectural heritage of the city. This has played a strong part in engaging audiences with Burton's site-specific compositions and enhanced the Centre's visibility within the city. When restrictions are eased, this programme will recommence.

Hails is on the steering committee of the Music and/as Process study group of the RMA, and a grant reviewer for the Carnegie Trust. He is a reviewer for the Journal of Arts and Communities. He has chaired sessions at the International Conference on Music Since 1900, the Music and/as Process annual conferences, and at the two Continental Drift conferences. He was keynote speaker at the 2018 Wintersound Festival at Christ Church Canterbury.

Hook's career as hip-hop artist and poet Solareye as both soloist and as the frontman of the group Stanley Odd engages a wide range of audiences including as a regular speaker at the Edinburgh International Book Festival, running writing workshops for the Scottish Book Trust in schools, as well as releasing music for international audiences and performing at major Scottish festivals. In interviews, he introduces the themes of his research into identity and hip-hop culture to a wider audience.

Moir is an editorial board member of the Journal of Popular Music Education, and an elected member of the Board of Directors for the Association for Popular Music Education. He is a reviewer for the Journal of the Art of Record Production, the Journal of Popular Music Education, the Journal of Music, Technology & Education, and Arts and Humanities in Higher Education. He has chaired sessions at the annual Art of Record Production, APME and Continental Drift

conferences. He has been an invited key-note speaker at the University of West of London's research lecture series, and at Ithaca College, NY.

In 2015, joint research by **Ferguson** and Gill Davies (MRes student), was shortlisted in the Times Higher Education Awards in the Outstanding Digital Innovation in Teaching or Research category.