

**Institution: University of York**

**Unit of assessment: 33 - Music, Drama, Dance, Performing Arts, Film and Screen Studies (A – Music)**

## **Section 1. Unit context and structure, research and impact strategy**

### **1.1 Research vision, context and structure**

Research in Music at York is predicated on an **ethos of cross-fertilization between composition, performance, music technologies, musicology, and music psychology**. In 2015-16 we carried out a substantial review of our research, envisioning an enhanced focus on creativity that incorporates strategic diversification into new areas. 21 research-active staff are returned in REF2021, compared to 17 in REF2014. This has also increased capacity for research-student supervision, with growth in PGR numbers to an average of 54 p.a., compared to 40 for REF2014.

Our research addresses **creativity** – one of the University's seven overarching research themes (Institutional Environment Statement (IES), §4) – from three perspectives: creativity in contemporary music, in music technologies, and in context across time and place. This is embedded in a tripartite structure: the **Contemporary Music Research Cluster**, the **Music, Science and Technology Research Cluster**, and the **Musical Cultures and Communities cluster**. The integration of theory and practice spans all clusters. We have particular strengths in practice research, especially composition (acoustic and electronic), contemporary performance practices (often including intermedial collaboration), early vocal performance, and new technologies for performance, composition, and recording practices (including networked practice, virtual acoustics, live coding, and reverb modelling). Much of our practice-oriented and musicological expertise is mutually complementary; musicological research enriches our compositional and performance perspectives, with particular analytical and cultural-historical expertise in: i) music of the 20th and 21st centuries, including in relation to space, place, and identity; ii) editing and archival studies (from early music, through South African jazz, to early twentieth-century popular song); iii) research in voice, text, and embodiment (including opera and music theatre). The focus on creativity has led to extensive research into the practices of music pedagogy – our work in this field has developed significantly this REF cycle. We have strategically diversified into aspects of music psychology, music cognition, and musicians' health and well-being directly relevant to extant research, expanding our range of intradisciplinary collaboration. While interdisciplinarity has long been embedded in our culture, especially through extensive work with researchers in other arts, humanities, and audio engineering, this recent diversification has facilitated exciting new collaborations with psychologists, health scientists, and computer scientists (section 4).

### **1.2 Research strategy**

#### **1.2.1 Strategic review, 2015-16**

In the 2008-14 REF period the Department's overarching strategy involved: 1) maintaining a position at the forefront of international musical scholarship in both practice research and musicology, and enhancing identified strengths; 2) increasing impact by developing current external partnerships and forging new collaborations; 3) extending the laboratory potential of the Department's studios and auditoria for audio-technology development, recording/production, intermedial performance, and experimental studies of audience responses.

In 2015-16 we reconsidered our work in the context of the changing and diverse field of music research. An **extensive, future-oriented review**, led by the Department Research Committee (DRC: 3.2.1), took in all aspects of research: what we were doing, how, and why. All departmental researchers (staff and students) participated, alongside reviewers from other York departments and external critical friends. We reconfirmed our commitment to York as a vibrant centre for research into musical creativity and its significance, but initiated substantial change,

with an overarching strategy of **consolidating and enhancing** key strengths while **diversifying** into complementary new areas.

### 1.2.2 Strategic outcomes of the review

1. Structuring research into three clusters: the Contemporary Music Research Cluster (cmrc), the Music, Science and Technology Research Cluster (MSTRC), and Musical Cultures and Communities (MCC). This was aimed at:
  - i) articulating more explicitly our research strands and enhancing our research profile;
  - ii) identifying areas of excellent research but also innovation and potential, to: focus our work; define priorities for strategic investment; and attract exceptional new researchers;
  - iii) facilitating exchange and collaboration internally and externally, to extend our current research and provide a better basis for securing funding.
2. A plan for strategic diversification to bring expertise in creative practice into collaboration with complementary research in music psychology, well-being, and pedagogy: see staffing strategy (2.2).
3. Explicitly underpinning the above with a commitment to **four operational principles (OPs)**:
  - 1) researchers should benefit from a supportive environment, enabling research and impact to flourish;
  - 2) new collaborations should be fostered within the Department and beyond;
  - 3) we should attract new, outstanding researchers, including PGR students, who share our ethos and will develop new initiatives;
  - 4) investment should be directly focused to enable OPs 1-3.

These outcomes led to the following **benefits**:

- better representation and sharing of our research. New external collaborators (4.1; 4.2) and many potential PGRs have made contact on the basis of our research-cluster profiles. The extant, lively programme of twice-weekly research seminars and cmrc seminars continues, with home and external presenters. However, additional cluster-specific seminars, meetings of research groups, termly all-staff research fora, bi-annual PGR Fora, and symposia with external participants have been established. Clusters have hosted conferences of international research organizations, e.g. Audio Engineering Society 2019; SysMus (International Conference of Students of Systematic Musicology) 2020: **OPs 2-3**;
- attracting 8 excellent new staff to diversify and consolidate research fields (2.2), alongside a 20% increase in (already excellent) PGR numbers this REF cycle (2.6: **OP3**);
- new collaborative relationships with other York departments and centres, plus new external collaborations (4.1; 4.2: **OP2**);
- establishing a Department Research Mentoring Scheme (2.3) to support researcher development (**OP1**);
- developing additional support for research-funding applications, especially through leverage of priming funds (3.2.3), leave to develop applications, mentoring, peer review of all applications, and a stronger relationship with the support team of the Humanities Research Centre (3.2.2: **OPs 1 and 4**);
- considerable work on impact development across the Department (1.3; **OPs 1-4**);
- establishing Department Research Performance Expectations (2.3; **OP1**);
- an explicit strategy for equality and diversity (2.5; **OP3**);
- the DRC (3.2.1) taking a much more active and strategic role overseeing departmental research (**OPs 1-4**).

The cluster structure has helped us to articulate the core strands of our research. Importantly, given our ethos of integration and focus on creativity, each cluster includes both theoretical and practice research. Internal collaboration across clusters is common, especially between composers and performers, musicologists/music psychologists and practice researchers, and audio technologists and creative practitioners (4.1). In summary, the 'enhance and diversify' strategy has expanded the range of our research, increased vibrancy in the research environment, and increased funding (3.1).

### 1.3 Impact strategy and support

Our research has **cultural, social, and economic impacts** for audiences, arts practitioners, arts organisations, and educators, locally, nationally, and internationally. This REF cycle has seen a more strategic focus on impact, developed in relation to University policy and support (IES §§12-13; §§49-50). Our 2015-16 review initiated a proactive strategy to more fully: embed impact in our research; realise its potential; increase the range and extent of activities; and support this with better infrastructure. This is exemplified by the submitted ICSs, with their significant range of impact activities and beneficiaries enabled by the supportive infrastructure and funding described below.

We appointed a Department **Impact Lead**, with time allocated within the Department workload model (2.4). The Impact Lead serves on DRC, works with staff to identify possible impacts and funding, oversees the development of potential impact case studies, and shares good practice drawn from external events, University impact fora, and the Faculty Impact and External Engagement Group. The Lead liaises with the Humanities Research Centre (HRC) Impact Managers (3.2.2), who also directly support impact development, tracking, evaluation, and documentation (including for ICSs). In 2016-17 the Impact Lead and DRC ran an impact-scoping exercise, involving targeted staff workshops, with input from HRC Impact Managers, to examine current and planned staff research and knowledge exchange, consider possibilities for impact activities, and identify key areas for development. The 2015-16 review also led to the inclusion of impact in Departmental Research Performance Expectations, with staff reflecting on impact in their annual research reports and formal Performance and Development Review (2.3). Discussion of impact was also included in guidance for the new Research Mentoring Scheme (2.3). Strategic planning to optimize impact has been a core part of the development process for recent research-funding bids, with input from HRC Impact Managers and the Impact Lead, and with review of impact proposals from DRC members.

Impact is now included in the criteria for application to the Research Leave Scheme (2.4) and Research Budget (3.2.1). Music's public engagement, knowledge transfer, and impact work has been supported by internally competitive, dedicated University support totaling £212,022 (3.2.3) in addition to external income for impact (3.1).

This strategic impact development led to a rise in the range and depth of activity. **Beneficiaries** include: amateur musicians and audiences; professional arts practitioners, producers/programmers, and venues; broadcasters and journalists; educators; the heritage sector; and the audio-technology industry. These categories are all represented across our ICSs, 'South African Jazz Cultures' and 'Moving Audiences'. Both are international, cross-generational, and intermedial. They typify the departmental integration of practice and technological/musicological research. Further examples of impact from REF2021 outputs confirm the range across industry, heritage, practice, and audiences: i) Wells's work on convolution reverberation modelling (4.2.2); ii) Brooks's US public-library sector work (4.1.1.v); iii) Suckling's collaboration with practitioners, schools, and communities (4.2.1). Overall, we work directly with over 40 regional, national, and international partners in arts, heritage, media, and technology.

### 1.4 The Open Research Environment

The Department provides **open access to research wherever possible**, and this is supported institutionally (IES §§15-17). Textual publications (including pre-prints) can be deposited in White Rose Research Online, a repository of the Universities of York, Leeds, and Sheffield.

Many projects start from an ethos of providing the widest possible access to research materials and their scholarly mediation: for example, Brooks's extensive work producing web-archived critical editions of WW1 American music has made 2650 songs available as scores with scholarly notes and relational links. Other researchers have dedicated websites enabling access to the outputs, including open-access repositories linked to certain publications (e.g. artistic outputs by Laws, Brooks, and Wells, linked to the book *Voices, Bodies, Practices*, at <https://orpheusinstituut.be/en/voices-bodies-practices-media-repository>). Wherever possible the artistic outputs of practice research are freely available online on our own and/or third-party sites (Vimeo, YouTube, audio-streaming).

### 1.5 Research Integrity

**Research integrity is explicitly integrated into our research expectations** for staff and PGRs, supported by the institutional framework (IES §14; §32). PhD supervisors ensure that students understand appropriate practice. Institutionally, all 1<sup>st</sup>-year PGRs complete a compulsory 'Research Integrity Tutorial'. The Arts and Humanities Ethics Committee (AHEC) oversees research ethics for staff and students; Music has a representative on it. AHEC provides detailed ethics guidelines for humanities staff and students. Additional Music-specific guidelines are available on Music's intranet. Some of our research requires particular attention to ethics of practice, data storage, and publication: examples include ethnographic approaches in pedagogy research and collecting audience-response data in music psychology projects.

### 1.6 Strategy for the Future

Underpinning our strategy is the drive to maintain the quality and scale of our recent research and further its development. Specific aims are to:

- **widen the diversity (EDI)** of our researchers and partners (2.5);
- **extend the internationalism** of our research (building from the examples in 4.1.1);
- **continue to foster a wide range of partnerships and collaborations.** Diversification has enabled a stronger focus on digital creativity in music, complementing research in York's Department of Theatre, Film, Television and Interactive Media (TFTI: 3.2.3, 4.1.2), and facilitating new non-HEI partnerships (4.2). Cowgill's recent appointment to the institutional, outward-facing role of 'Champion' for the University Research Theme, 'Creativity' (3.2.3), will support this aim. Significantly, our strategies have achieved £321k in new external awards since the REF census, for projects in digital humanities, creativity and mental health, and music education and inclusion, with both non-HEI and international HEI partners;
- **continue embedding impact across the full range of research**, identifying and supporting new opportunities. A new departmental scoping exercise will run in 2021;
- to maintain our **large postgraduate cohort**, support new PGR initiatives, and establish **additional opportunities for postdoctoral research.**

## Section 2: People

### 2.1 People

The Department of Music has **21 research-active staff** (18.2 FTE, with open contracts accounting for 17.7 FTE): a headcount increase of 24% over last REF cycle. In addition, the research community currently includes **two postdoctoral researchers and 59 postgraduate research students**. Our **14 emeritus and visiting staff** participate in the research life of the Department, attending research events and offering mentoring to doctoral and postdoctoral researchers. **Three Associate Researchers** currently work with us on: music and well-being (Bakari-Singer, with Waddington-Jones); music heritage in Country Houses (Troughton, with Wainwright: 4.1.2); industry-partnered audio modelling (Brown, with Wells). We regularly host international visiting researchers, most recently from the US (Fulbright Fellow), China, and Sweden.



## 2.2 Staffing profile and recruitment strategy

Our strategy is to enhance core strengths in staffing while diversifying into new but complementary fields (1.2.1).

Our staff expertise has been recognized in numerous promotions this cycle: five to Senior Lecturer, one to Reader, five to Professor. Three professors were in position at the start of the REF cycle, and one (Cowgill) was employed from 2019, consolidating expertise and experience in core areas. Excellent international recruitment to new PGT courses that were developed alongside the 2015-16 strategic research review provided revenue for additional junior posts to foster dynamic new research. We have a distinguished history of research into music technology and creative practice and have invested to develop the MSTRC into a substantial entity with significant impact. Two appointments expanded extant work in this field by Field, Wells, and Eato: Reuben (SL, 2015), with specialisms in composition, live electronics, and coding; and Collins (L, 2019), with research on music AI. The appointments of Egermann (L, 2016) and Waddington-Jones (L, 2019) brought expansion into music psychology and well-being, again providing expertise complementary to established strengths and facilitating collaboration: with these posts we envisioned links to ongoing research in creative applications of music-science relationships (Reuben), embodiment (Laws, Brooks, and Haddon), pedagogy (Haddon, Field, and March), and music and empathy (Haddon and Hutchinson). The success of this strategy is evidenced in collaborations outlined in section 4.

Retirements led to three further appointments, each position reconceived in line with our 'enhance and diversify' policy (1.2). Conner (January 2020) is an exciting early career appointment, underlining the Departmental ethos: her research combines composition, performance, and scholarship on word-music relationships in ancient poetry. March (2017) and Hutchinson (2019) enhance our profile in 20<sup>th</sup>/21<sup>st</sup>-century music theory and analysis, but also word-and-music studies, complementing the research of Howell, Brooks, Laws, and Sheil across two clusters: cmrc and MCC. Field's appointment as Faculty Dean (2018) and Sheil's as Head of Department (2018) led to Cowgill's appointment (2019), extending our research in opera history, culture, and politics (Sheil), and digital musicologies (Brooks).

## 2.3 Staff development

Our staff-development processes flow from our vision and strategy (1.1, 1.2). We have developed departmental **Research Performance Expectations (RPEs)**, differentiated by career stage and produced in line with institutional guidelines (IES §22). The process was led by DRC with all-staff input, ensuring shared understanding of expectations, support available, and underlying strategy. Formally, the Expectations provide a framework for the Head of Department to discuss research performance and development needs in annual individual Performance and Development Reviews (PDR). Additional researcher-development measures are designed to realise **OP1** (1.2.2) and the principles of the institutional Researcher Development Concordat (IES §§27-8; Cowgill is a member of the University's Concordat Implementation Group):

1. The **departmental mentoring scheme** is mandatory but informal and supportive; it is separate from the PDR process. Guidance is provided on roles of mentors and mentees. Staff choose their mentors, with oversight by the DRC Chair. Meetings, usually biannual, help researchers to: refine ideas for projects; articulate research aims; identify possible funding sources and collaborators; and identify potential impacts.
2. Further **informal peer support** operates within clusters. Cluster meetings and seminars provide opportunities for staff to experience different models of research planning, exchange ideas, confront research challenges, discuss possible external partners, receive initial feedback on applications prior to formal DRC review, and clarify practical support for staff with protected characteristics.
3. **All staff report annually to DRC**, detailing progress, funding bids, and providing a five-year plan for research and impact activities. DRC responds with feedback. The reports facilitate forward planning for research leave and financial support, but the primary aim is to identify strengths, research potential, and other specific concerns, such as EDI issues.

DRC then acts supportively, deploying resources, providing additional mentoring, or relaying needs to the PDR process.

All new research-active staff have a 25-30% **reduced teaching load during probation**. They are inducted into University research processes by the DRC Chair, and are quickly integrated into the research culture through the clusters, seminars, and research fora. **Early career staff are offered focused training** by the HRC and University Research Theme Champions. The mandatory Postgraduate Certificate in Academic Practice (IES §29) includes researcher-training modules. Postdoctoral research staff are offered tailored support within the York Research Fellowship Scheme (IES §20). All staff benefit from the HRC's lively programme of workshops to support the development of researchers; the University's Researcher Excellence Training Team (IES §32); and the University's research mentorship, coaching, and leadership programmes (IES §22).

## 2.4 Support for staff

In line with **OPS 1** and **4** (1.2.2), the Department substantially increased investment in research this cycle, providing staff with additional funding opportunities (details in 3.2.1) and research time.

The Departmental **workload model**, developed after the review, protects 40% of staff time for research. The model responds flexibly to needs such as additional time for developing impact activities. The Department manages its own **research leave scheme** (IES §23) for leave additional to the 40% allowance. Staff are encouraged to apply every three years, with guidance setting out criteria: leave is usually for intensive research and/or impact development (including funding bids) or finalisation of outputs. It is typically for one term, but DRC approves different periods flexibly according to strategic priorities, in consultation with the Department Management Team (DMT). Applications are considered by the DRC, with the presence of the EDI Chair ensuring fairness. Staff submit post-leave reports to the DRC.

## 2.5 Equality and Diversity

Historically, the staff profile of the Department has lacked diversity and concerns were formally noted in the 2015 research review. Some progress has been made, but there is still much to do: less than a quarter of staff researchers are female, compared to over 60% of recent PGR cohorts; additionally, only one staff researcher is a person of colour, compared to just under 20% of PGRs. Music observes the University's EDI policy on under-represented groups and abides by good practice. Departmental EDI and Athena SWAN committees (chair: Cowgill) monitor, promote, and embed equality and diversity, including in research (IES §36; §37); an AS submission (Bronze) taking an **intersectional approach to inclusion** is in preparation for November 2022. EDI is now a standing item on all departmental committee agendas and all committee decisions are assessed for their impact on EDI. This includes our selection of outputs for REF, which was informed by the University's equality impact assessment.

To increase diversity we have **focused proactively on recruitment, promotion, and other career 'pinchpoints'**. All job adverts include text designed to encourage applications from under-represented groups, using language that is as inclusive as possible. Staff are required to complete unconscious-bias training before shortlisting and interviewing. Promotion applications are now sought proactively from under-represented groups and considered by a departmental panel (IES §21). Following LeFanu's retirement in 2008, there were no female professors in Music until Cowgill's appointment in 2019, but Laws was promoted to professor in 2020, and Sheil's appointment as Head of Department also broadened representation in research leadership. Conner's and Waddington-Jones's appointments have improved diversity in early career research.

The Department actively supports staff where caring responsibilities and health-related circumstances require **flexible working** (IES §24). DRC considers any type of **enabling**

**support**, whether special travel arrangements, childcare, respite care, or special equipment for disabled researchers, on a case-by-case basis.

Our **outward-facing activities promote diversity, accessibility, and representation**. The current Music Research Seminar series – now delivered online – includes presentations on race, gender, transculturalism, and class, with around 75% non-male speakers and 25% non-white speakers. Cowgill's experience as a member of the Steering Group of EDIMS (UK-wide EDI in Music Studies network) and Chair, RMA LGBTQ+ Music Study Group, informs Departmental discussion and strategy.

Outputs produced in this REF period, as well as several current projects and pending funding bids (Cowgill, Waddington-Jones, Collins/Reuben) address and/or have applications in diversity, accessibility, and inclusion. This is also the case with recent PhD topics, including: participatory opera with young people from diverse backgrounds; opera and disability; Western Art Music in Metropolitan India; and African American composer Florence Price.

## 2.6 Research students

Our **large community of PGRs** – currently 59 – is a significant feature of the Department. For REF2014 York had the highest number of PhD awards for Music (64, compared to a Russell Group average of 26.8 for Music-only submissions). **This REF cycle, 63 were awarded**. With higher registrations since 2017 and excellent completion rates – an average of 95% PhDs submitted on time over this REF period, with 100% achieved in 5 of the 7 years – future completions will rise further.

The PGR cohort is hugely dynamic and collegial. **Students are engaged in research across the full range of staff specialisms**, producing practice research submissions as well as theses. PGRs often join collaborative projects with staff and/or other students (4.1). Students are encouraged to share research in seminars, conferences, and cluster meetings, and to help organise events for internal and external communities: recent examples include 3 RMA Study Days, the First International Church Music Conference (2017), and SysMus2020. The Department supports two Postgraduate Fora per year, organized by PGRs, providing experience for external conferences. PGRs lead research-focused reading-and-listening groups and often participate in seminars and conferences of the Interdisciplinary Research Centres of the HRC (3.2.2) and the White Rose College of the Arts and Humanities (WRoCAH: 2.8). New PGR students receive inductions from Music's Chair of Graduate Studies, the Deputy Director of the HRC, and York's Graduate Research School (YGRS: 2.7).

## 2.7 Research student supervision and training

Institutionally, PGR students are supported by YGRS, with records of tutorials, progression meetings, and training kept on the University's 'SkillsForge' system. The departmental Chair of Graduate Studies oversees PGR progression in accordance with YGRS processes (IES §§30-31). In addition to regular supervisory meetings (at least 10 per year), PGRs have an annual progression meeting plus a biannual Thesis Advisory Panel (TAP) with at least one academic in addition to their supervisor, to monitor progress, agree training needs, and confirm research plans. Formal reports are produced, with outcomes agreed by staff and students and monitored by a progression-review board. Our **excellent completion rates** (2.6) demonstrate the effectiveness of these processes.

Research training operates at three levels. Departmentally, students practise presenting work through seminars, workshops, and PG Fora. A weekly, staff-led session focuses on articulating research aims, questions, and methodologies, with group feedback. Specific skill development is provided for small cohorts with common needs (e.g. ethnographic methods; analyzing statistical data; recording and production). The HRC and the University's Research Excellence Training Team (RETT: IES §32) provides a rich PGR training programme on topics of cross-disciplinary relevance. WRoCAH-funded students (2.8) have an annual colloquium and twelve additional

training sessions each year, often open to other students: Music PGRs have particularly benefited from WRoCAH practice research workshops.

## 2.8 Investment in postgraduate research

The Department invests in postgraduate scholarships and seeks additional endowments (3.2.1). PGRs can apply for part-time Department administrative assistantships, separate from paid teaching. In this REF cycle a total of **£424,693 was disbursed in scholarships, bursaries and assistantships (additional to University and AHRC schemes)** – an increase of 37% over the previous cycle – helping us to attract high-quality home and overseas PGRs (**OP3**, 1.2.2). Music has recently achieved success in the University's highly competitive PGR studentship schemes: two full Overseas Research Studentships; one Scholarship for Overseas Students; and three of York's China Scholarship Council full PhD studentships. In addition to DRC budget support (3.2.1), self-funded PGR students can apply for travel expenses from the YGRS Conference Fund and the University's 'Santander International Connections' programme. One-year HRC Doctoral and Postdoctoral Fellowships (one of each p.a. for Music since 2014) provide students with workspace, research support, and a small grant.

York is the lead university in the **White Rose College of the Arts & Humanities (WRoCAH)**, an AHRC Doctoral Training Partnership (IES §34) for York, Leeds, and Sheffield universities: the largest AHRC consortium in the first funding round (2014-18), receiving £19 million. The second round (2019-) comprises £14.2 million, with 50% matched funding from the universities, for five more cohorts. We have been particularly successful, gaining a high proportion of the Music awards granted by WRoCAH's Creative Arts and Media panel: 16 individual studentships since 2014. Additionally, Laws was a co-supervisor in a WRoCAH-funded interdisciplinary research network (2015-18), with PGRs and supervisors in all three institutions. The Department secured a WRoCAH Collaborative Doctoral Award (2019) in partnership with Birmingham Contemporary Music Group and MusikFabrik (Cologne).

WRoCAH students can apply for additional funding for research costs and for **Researcher Employability Projects** with external partners: recent examples include projects at Opera North, VoiceScienceWorks (Los Angeles), the British Library, the National Trust, and the Creative Music Studio (New York).

The quality of support and training is indicated by **PGR career success**. Graduates this REF cycle have gained postdoctoral appointments (including a Marie Curie Fellowship (Utrecht), Lord Crewe Junior Research Fellowship (Oxford), and a British Library Edison Fellowship), and lectureships in the UK (7), Chile, Malaysia, South Korea (2), Thailand, and Turkey. In addition to numerous commissions and performances, practice research graduates have gained positions on prestigious early career schemes, including: LSO Panufnik Scheme; PRS Accelerate; Hallé Leadership Scheme; Creative Europe's 'Discovering Young Composers of Europe' (1 of only 4 composers selected).

## Section 3. Income, infrastructure and facilities

### 3.1 Research Income Strategy

We have significantly increased our research income through additional support for bids and the infrastructure described below (3.2). The cluster structure, with associated staff development and support (2.3, 2.4), has facilitated a rise in applications, while strategic diversification has extended the range of possible income sources. These measures have enabled better leveraging of University priming and impact-acceleration funds (3.2.3).

**External research funding for Music has increased by over 140%** this REF cycle, to £563k. An additional £27k does not appear in the REF data: a work package of the ERC project 'ABC\_DJ' (Technische Universität Berlin), designed by Egermann, was subcontracted to York. Importantly, embedded in the increase is an upwards trajectory, with annual totals higher in recent years. We have applied to a **diverse range of funders**, with successes including the



AHRC, British Academy, Leverhulme Trust, and European sources in Norway, Belgium, and Germany. Funding has been achieved in each of the three clusters (e.g. cmrc: Brooks and Laws, Belgian funding via Orpheus Institute; MCC: Howell, Nordic Culture Fund; MSTRC: Egermann, Volkswagen Foundation – details of these are given in 4.1.1). Researchers across all clusters have been co-investigators on collaborative projects: cmrc: Field, CI, AHRC Network, 'Composition as Interdisciplinary Practice'; MCC: Wainwright, CI, AHRC Network, 'Sound Heritage'; MSTRC: Egermann for the above ERC project. Our research diversification has involved KTP development, including Wells's Innovate UK partnership with RRPtv (2018-2020, £159,425): 4.2.2.

Small external grants and fellowships have supported many projects, including: Brooks's research on WW1 American song (Newberry and Hampson Fellowships); Wainwright's scholarly editions (St Catherine's College, Oxford; Albi Rosenthal; Bodleian Library); Sheil's Weimar Republic studies (DAAD); and Simaku's composition research (Brown Foundation).

Suckling's prestigious Philip Leverhulme Prize for his composition research was a great achievement. Leveraging external arts funding is also vital: **every practice research output submitted this REF cycle was facilitated by funding not captured in HESA returns.** This includes commissions, performance fees, touring costs, grants for recording, fees for artistic collaborators, etc. Grants from arts-funding bodies (Arts Council England, Creative Scotland, PRSF, Heritage Lottery Fund, charitable trusts) have facilitated outputs but also public-engagement activities leading to impact (including, but not solely, in the ICSSs). Other funds come directly from individual performance companies, arts and media festivals, and venues/producers: output- and impact-related examples, linked to projects cited in 4.2.1, include York Mediale, Hoxton Hall, City of Edinburgh Council, Toronto Symphony Orchestra and the Africa Open Institute.

### 3.2.1 Departmental Research Infrastructure

**Research strategy is developed and implemented by the DRC**, chaired by a senior researcher and including the Head of Department, Chair of the Graduate Student Board, Department Impact Lead, Chair of the EDI Committee (2.5), and staff at different career stages. DRC meets 4 times each year, with subgroup activity as necessary. DRC implements University research policies, including Research Performance Expectations (2.3), Research Ethics procedures (1.5), the Code of Practice on Research Integrity (IES §14), and the Researcher Development Concordat (2.3 and IES §§27-8). As noted in 1.2.2, DRC now takes a stronger role in identifying research priorities and support measures, including in relation to EDI. It acts supportively to develop research and impact potential in a coordinated manner, managing internal review of strategy and planning, the research-leave scheme, the departmental research budget, mentoring, and internal peer-review of grant applications. A termly research forum facilitates discussion of new University research developments or workshops with a thematic focus, e.g. pathways to impact, or funding schemes. DRC reports to the Departmental Management Team and the Head of Department. The Departmental Manager and her assistant provide administrative support for research. The Department's Graduate Chair and Postgraduate Administrator work closely with YGRS and the HRC (3.2.2) on all PGR support and development issues.

**Departmental investment in research** has increased significantly this REF period (**OP4**, 1.2.2). Approximately £100k of Music's annual operating budget is dedicated to research and impact, including: PGR bursaries, studentships and assistantships; support for seminars, PGR fora, and conferences; **Departmental Research Budget**. The latter is administered by DRC and supports staff research projects. It increased by 150% in 2016 (£8k to £20k pa), operating in addition to University Research Priming and Impact schemes (3.2.3). The departmental fund is responsive, with no fixed deadline or allowance, thereby meeting a wide range of needs (conference presentations, fieldwork expenses, recording costs, etc). DRC also provides funding for PGR students to disseminate research. The Department supports the University of York Music Press and York Early Music Press. UYMP's international catalogue includes two York staff composer-

researchers (Simaku and Stringer), alongside significant external names (from Lutyens to Wishart), but investment here also supports early-career composers, especially current and past York PGRs. YEMP's current catalogue includes editions by staff and ex-PGRs (including some of Wainwright's REF2021 outputs).

### 3.2.2 Music in the Faculty of Arts and Humanities

Music sits in the new Faculty of Arts and Humanities (2015: IES §8). The DRC Chair serves on the **Faculty Research Group**, which discusses common research issues, shares good practice, and reports to the **University Research Committee** (URC).

A&H departments are affiliated to the **Humanities Research Centre** (IES §46), whose commitment to interdisciplinary working as enriching and transformative amplifies the Departmental ethos: Music staff collaborate in the HRC's Interdisciplinary Research Centres. The HRC provides extensive help with funding applications and fosters creative partnerships (including beyond HE) through regular interdisciplinary events, symposia, and meetings. The HRC's Research Development Manager advises on funding opportunities, the Senior Research Coordinator advises on budgets, and the Research Coordinator provides post-award support. Two 0.6 FTE Impact Managers and an Impact Administrator provide expertise on approaches to impact, facilitate impact-activity training, convene the Impact and External Engagement Faculty Group, and support the evidencing of impact and data archiving. Music's strong relationship with the HRC team (1.2.2, bullet 5) has been integral to the increased number and diversity of funding bids and impact activity (**OPs 1-2**).

### 3.2.3 Music and the University Infrastructure

The University Research Committee develops overarching policies and strategies; membership includes the A&H Associate Dean for Research plus three Faculty representatives. URC developed the **University's cross-cutting research themes** (2015: IES §4; §11); Music research contributes significantly to the themes '**Creativity**' and '**Culture and Communication**', including through extensive internal collaboration (4.1).

URC provides **research-priming funds** for collaborative project development and strategic capital investment (IES §10). This REF cycle Music has been awarded £85,402 (up 400% compared to the previous cycle) through competitive application, including for:

- 'Studying the Interaction between Aesthetic Judgement and Emotional Processing of Contemporary Music using an Audience Response System': Egermann and Reuben with McCall (Psychology). Led to substantial, externally funded developments (4.1.1.iii).
- 'Representing Rehearsal: Using Interactive Video to Facilitate and Document Contemporary Collaborative Music and Theatre Practices': Laws with colleagues in TFTI. Workshops with external practitioners; prototype app development; bid preparation.
- 'On and off the page: Reconstructions and reclamations of text, declamation and music in England, America, and Germany at the turn of the twentieth century': Brooks with interdisciplinary collaborators (Switzerland and US). Network events, public seminars, and performances, leading to published outputs.

Additionally, the Department's **external engagement and impact work has been supported by internally competitive funding** totaling £212,022. This includes small awards, two KTP initiation awards with audio-technology companies (one leading to Innovate UK funding: 3.1), plus: £43k from York's GCRF IAA fund, for Eato's ODA-compliant impact work in South Africa; £50k via York's AHRC Cultural Engagement Fund, for 'From Score to Sound: engaging audiences with new music' (Howell and PGR, in partnership with Sound and Music); and £43,600 from York's HEIF funding (IES §50) for Hollingworth's numerous 'Sing the Score' research-informed videos for online public participation during the pandemic.

### 3.3 Facilities

**Extensive Departmental facilities**, across sole occupation of four buildings, support research activities at every level. Two performance auditoria host the Department-run public concert series (4.2.1), facilitating research development and dissemination. **The Sir Jack Lyons Concert Hall** (seating 350) is suitable for solo performance but can accommodate a full orchestra or music theatre/opera productions: it is used for performance and audience research (e.g. Hollingworth's recent I Fagiolini projects; Egermann and Reuben's audience-response studies (3.2.3, 4.1.1.iii), and for composition premieres (recently Stringer and Simaku, both leading to REF outputs). **The Rymer Auditorium** (seating 128) was designed for optimum frequency response for reproduced sound, facilitating research through experimentation and performance, especially in electronic music and sound art. Equipped with surround-sound reproduction in various formats, full-wall HD projection, and a Fazioli grand piano, and connected to a recording-studio control room, it supports extensive staff and PGR research in audio-technology, live electronic performance, electronic composition, intermedial work for sound and screen, audience-response studies, and audio/video recording of artistic outputs for professional release: e.g. Simaku's String Quartet No. 5; several of Laws's piano films.

The Rymer Auditorium is frequently used for research symposia and live-streamed and/or networked research events and performances. Each building has large rooms regularly used for research seminars and practice research development, while designated study spaces support PGR work. University investment in Music facilities since 2014 (discounting ongoing maintenance) has totalled £250k, primarily for instruments and studio upgrades for music technology research.

The University library (IES §39) provides wide-ranging research support, from resources to advice on open access. The **University of York Sound Archives (UYSA)**, a joint initiative of the Music Department and the University's Borthwick Institute for Archives, includes over 30,000 recordings in a variety of media, plus related documents. A 2019 drive to promote awareness of Borthwick holdings led to new projects, including: Wainwright's Elgar research (Wilfrid Mellers Collection, publication pending); Cowgill's 'InterMusE' partnership (2020- ) with the Borthwick, British Library, Swansea University's Computational Foundry, and University of Illinois, focusing on digital scholarship, community, and performance archives.

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

Collaboration is fundamental to Music research at York, underpinning our ethos of cross-fertilization and operating across the Department (between music specialisms), across the University, across the UK and beyond, but also across society. Arts practitioners, educators, businesses, health providers, and audiences are all involved; not simply recipients, they are often co-producers in our research. Our support for interdisciplinarity led to **13 staff and 3 postdocs participating in internal collaborations** this REF cycle, **across all Faculties**, and we have substantially increased the number and diversity of our external HEI and other partnerships (1.2, especially **OP2**): examples in 3.2.3 and below exemplify this.

### 4.1.1 Leadership in international research collaboration: key examples across clusters

- i. Our partnership between **cmrc** and the **Orpheus Institute Research Centre**, Ghent – a hub for international music practice research – places us at the heart of European developments in practice research. Laws and Brooks are two of three UK OI Fellows. Both hold additional OI leadership roles (4.3). Laws is PI of the York-Orpheus project 'Performance, Subjectivity, and Experimentation' (2015-), with five York researchers (including one PGR) contributing alongside external collaborators in Music, Theatre, Film, and Embodied Cognition, from the UK, Sweden, Belgium, South Korea, and Vietnam. This project has delivered £120k external funding to York (European, non-EU) and was supported internally (University Priming Scheme). Laws (2016, 2019) and Brooks (2015, 2020) convened four international symposia as part of this work (with York PGR

participation), and York researchers' outputs include books, articles, and multiple conference/keynote presentations, all with linked artistic outputs. These include the REF outputs *Voices*, *Bodies*, *Practices* and *Performance*, *Subjectivity*, and *Experimentation*.

- ii. Howell secured a **Nordic Culture Fund** grant for ANeMoNE (A New Music of Northern Europe), a network of scholars from Denmark, Finland, Iceland, Norway, Sweden, and York's **cmrc**, including PGRs, researching the characteristics of Nordic Music. Outputs include the REF2-submitted *The Nature of Nordic Music*.
- iii. Egermann is Co-I work-package leader on '**Experimental Concert Research**' ('ECR'), 2019-21: €1.3 million Volkswagen Foundation funding (€131k to York, including a PGR studentship) in collaboration with: Zeppelin University, Germany; Max Planck Institute for Empirical Aesthetics, Frankfurt; University of Bern. With expertise from musicology, sociology, psychology, cultural policy, audio engineering, and IT, the project examines concert experience in the 21<sup>st</sup> century. This developed from the **MSTRC's** priming-funded research noted in 3.2.3 (Egermann, Reuben and McCall). That initial project has also led to Collins, Egermann, Reuben, and Wells working with York's **Digital Creativity Labs** (IES §11a) on predictive modelling of emotional response: 'Musical Creativity and Emotional Content'. DC Labs funding has included a one-year PDRA, developing an algorithmic tool for composers. These projects all include collaboration with non-HEI musicians and audiences (4.2.2).
- iv. Eato's **MCC** project 'South African Jazz Cultures and the Archive', with Muller (Africa Open Institute) and Makhathini (University of Fort Hare), investigates the musicians, musical styles, exile stories, and archival gaps of South African jazz. Part-funded by a BA Newton Advanced Fellowship (including studentships), it involved: interdisciplinary discussion days and concerts in York (involving PGRs), Johannesburg, East London (SA), Durban, and Cape Town; published interviews, recordings, and scholarly texts including Eato's REF output 'A Climbing Vine Through Concrete'; and extensive public engagement and impact (see ICS).
- v. Brooks's **MCC** project 'Popular Music of World War I' (with several REF outputs), in collaboration with Magee and Bashford (University of Illinois) and the University of Illinois Library, included two conferences (Illinois and York, 2015) and a series of co-presented UK and US public lecture-performances (including collaboration with the Pritzker Military Museum and Library and the Chicago Symphony Orchestra), culminating in the annual AMS/Library of Congress lecture and podcast (2017). Support included fellowships (3.1) and grants from the AMS and the Andrew W. Mellon Foundation.

#### 4.1.2 Collaborative networks and recent developments

Two AHRC-funded Col roles exemplify **collaboration with external researchers** in cmrc- and MCC-aligned research, with PGRs involved. Field was Col in the AHRC network 'Composition as Interdisciplinary Practice', with a two-day symposium at York (2016): 5 York staff and 15 PGRs were involved, alongside external participants. Wainwright was Co-Investigator (with Jeanice Brooks, Southampton) on the AHRC Network 'Sound Heritage: Research and Interpretation of Music in Historic Houses', organizing study days (2015-16) on music in 18<sup>th</sup>- and 19<sup>th</sup>-century British country houses.

**New collaborative developments arose from our staffing policy** (1.2; 2.2). Egermann founded the Northern Network for Empirical Music Research (inaugural event, York, 2019). Waddington-Jones's internal collaboration (2020-) with TFTI (Maxwell) and the health and well-being Centre for Reviews and Dissemination (Knowles) established a network exploring creative practice's application to mortality inequalities for the mentally ill. Cowgill's project 'InterMusE' (3.3, end) involves UK-US collaboration, while Collins's AI music projects and outputs involve collaboration with computer scientists and practitioners (e.g. Imogen Heap).



## 4.2 Collaboration with non-academic partners and contribution to the wider economy and society

Our collaboration with non-HEI partners and substantial contribution to society operates primarily in three areas, as follows.

### 4.2.1 Collaboration with external practitioners, institutions, and audiences

**Collaboration with external artists** is crucial for practice research. Key examples of international and national collaborations feeding submitted outputs and ICSs include: Simaku with Quatuor Diotima, Hollingworth with I Fagiolini, and Suckling as Associate Composer of the Scottish Chamber Orchestra; intermedial projects such as Laws and Hollingworth each with theatre- and film-makers, Suckling with sculptor Edmund de Waal and the Scottish Dance Theatre, and Eato with the cross-arts Hannah Bruce & Company (UK and SA, including for 'Moving Audiences' outputs and ICS) and film-maker Aryan Kaganof. Creative projects have been developed with support from national organizations (e.g. ACE, Sound and Music, PRS Resonate), and in specific contexts (e.g. Hoxton Hall, Aldeburgh Music). Extensive international performance/broadcast is noted in 4.3, but practice research has been additionally facilitated by international partnerships with festivals and arts organizations including Infecting the City (Cape Town), Musica viva (Australia), and Malmö's Inter Arts Center.

Our **extensive public University Concert Series** is an important feature of York's cultural scene. Averaging 48 performances p.a. this REF cycle (audience figures regularly reaching 300+), plus related public talks and workshops, it disseminates artistic outputs and facilitates audience studies (3.2.3) but also constitutes a productive site of knowledge exchange. We have fostered **close partnerships with Yorkshire arts organisations** for research development, dissemination, and exchange. Five staff and 21 PGRs presented artistic outputs in the York Late Music series this REF period. Eato, Wells, and PGRs have developed projects with York Mediale; Eato and (separately) PGRs with York Theatre Royal; Field with Screen Yorkshire. Hollingworth and Wainwright work closely with York Early Music Festival and York's National Centre for Early Music (NCEM), presenting performance research and leading regular knowledge exchange workshops and study days/talks (with 5 performance PGRs contributing this REF period). NCEM has also been a partner for other events, including the international conference of the WROCAH network 'Expressive Non-Verbal Communication in Ensemble Performance' ('Together in Music', 2018), and 'Words and Music' knowledge exchange events (Brooks, Laws, Marsh; 2014-15).

Suckling's project 'The Magic of Microtones' (REF output: 'Post-spectrality') is indicative of research with extensive knowledge exchange across a range of non-HEI partners. Suckling worked with the Scottish Chamber Orchestra, schools, and community organizations on public and professional perceptions of microtonal music via: i) creative workshops with amateur and professional composers and conductors, exploring new software Suckling developed in his composition research; a Scottish Chamber Orchestra participatory commission, with Suckling involving the public in composing 'Armistice Bells' for centenary celebrations; iii) workshoping new playing techniques and rehearsal processes for microtonal music with professional performers; iv) performance, broadcast and public talks.

### 4.2.2 Collaboration with business

**Partnership with business** is integral to **MSTRC** research. Wells's work on modal analysis of reverberation (see REF output) was developed through a Government-funded KTP with RPPtv Intelligent Media (3.1), with product development, initially supported by University Priming Funds, leading to licence with Nugen Audio and release as the Paragon plugin. Subsequent partnership with RPPtv has facilitated a proof-of-concept development of faster high-accuracy modal analysis and synthesis. Egermann's 'ECR' project (4.1.1.iii) included a collaboration between York Music Psychology Group and Bang and Olufsen, and has led to an academic-industry network, 'Streaming Classical Music and Opera (SCMO)'. Other collaborations involve digital art and technology enterprises: for example, 'PERSONA' is a research collaboration between Wells, a PGR, external electronic artist Gazelle Twin, and two digital creativity

businesses – Viridian FX and Kit Monkman Associates – with York Mediale as creative producer and funding from ‘XR Stories’, itself a University of York partnership with Yorkshire arts and technology companies, with £5.5 million investment (UKRI, ERDF, and business) (IES §11).

#### 4.2.3 Collaboration with education, health, and well-being organizations

Research in **partnership with external music education organizations** focuses on identifying issues, support, and resources for learners with complex needs and/or disabilities. This includes Waddington-Jones’s ‘Strategies for Musicians and Teachers Working in Learning-Difficulties Education’, with Live Music Now and Youth Music (with PDRA), the latter in collaboration with NCEM’s Learning and Participation programme. Haddon’s work on instrumental pedagogy includes supervising PGRs studying dyslexia in music education. One PGR’s research led to membership of the British Dyslexia Association Music committee.

Waddington-Jones worked with PRSF’s New Music Biennial 2017, Sound and Music, and music educators in Hull, investigating the impact of music listening on primary school children’s well-being, and collaborative composition in diverse communities. This **research into creativity, social connectedness, and well-being** is now extended in collaboration with Hull York Medical School. Egermann was CoI on ‘SINGSVR’, led by Daffern (Audiolab, Electronic Engineering), with the Stockholm Environment Institute and community choirs at The Sage, Gateshead. The project examined the development of VR group-singing for those unable to participate in person.

#### 4.3 Contribution to the Research Base and Indicators of Influence

The following summary indicates the **extent and quality of our contribution to Music research, nationally and internationally**, and notes key examples of influential activity.

**Editorial roles:** Brooks is Chair of the Orpheus Institute’s Editorial Board, for their series with Leuven University Press: he was responsible for 22 publications in the REF period; Cowgill is founding co-editor of the series *Music in Britain 1600-2000* (Boydell & Brewer): 18 volumes since 2014. Seven more staff serve on editorial boards and/or held editing roles in the period: Egermann (2), Field, Howell (2), Laws (2), Sheil, Waddington-Jones (3), Wainwright.

Nine staff have acted as **external assessors for grant/fellowship proposals**: Cowgill and Field have been AHRC Peer Review College members this REF cycle; others have reviewed proposals, including for the Austrian Science Fund, German Academic Exchange Service, Volkswagen Foundation, Royal Academy of Engineering, British Federation of Women Graduates, and Society for American Music. **All staff have reviewed** books and articles for journals and international publishers, and/or composition/performance for external awards, prizes, grants or fellowships.

Fourteen staff have been involved in **organizing international research conferences or symposia** over the cycle, at York and externally. **All staff** have given **invited lectures or keynote addresses**, in 26 countries collectively: 18 EU countries (including the UK), plus Albania, Australia, China, Russia, South Africa, Turkey, UAE, and US. Significant examples of keynotes include: Brooks, AMS Lecture (with Magee and Bashford, University of Illinois), Library of Congress, Washington (2017), and his keynote at ElectroFest, New York University at Abu Dhabi, (2020); Egermann, ISMIR conference, IRCAM Paris (2019); Haddon, ‘Piano Four Hands’ symposium, Graz (2019); Howell, 150<sup>th</sup>-anniversary International Jean Sibelius Conference, Hämeenlinna (2015); Laws, Society for Artistic Research conference, Helsinki (2017), ‘Performing Indeterminacy’ conference, Leeds (2017), and ‘Hidden Archives, Hidden Practices’, Aveiro (2019).

Cowgill serves as Chair, Royal Musical Association LGBTQ+ Music Study Group (2019- ) and Board Member, North American British Music Studies Association (2019- ). Laws is the only UK member of the Orpheus Institute Steering Committee.

**Seven fellowships** (UK, Belgium, France, US) supported staff research this REF cycle. Since 2014, **compositions by staff and PGR students have been performed extensively across the UK, in 14 other EU countries and in Canada, China, Japan, South Korea, and the US**, including by major orchestras and prestigious ensembles such as Klangforum Wien and Ensemble Modern. Compositions have been broadcast on national radio in Austria, Chile, Estonia, Finland, Germany, Portugal, Spain, and the UK. Staff and PGR performance research has been presented across the UK, in 11 other EU countries, and in Australia, Mexico, Russia, Serbia, South Korea, and the US.

**PGR students have been honoured** through selection for prestigious composers' schemes, fellowships, international residencies (e.g. Banff), and awards, including 3 RPS prizes (2015 x2; 2019), 2 Britten Sinfonia prizes (OPUS2014; OPUS2018), a YAMaward for Best Children's Opera 2018, an Ivor Novello Award (2020), a TaPRA Postgraduate Essay Prize (2018), a Performing Arts Medicine Association Young Investigator Award (2020), and the SOCAN Foundation/MUSCAN (Canadian University Music Society) Award (2015).