

Institution: The University of Huddersfield
Unit of Assessment: 35 Music, Drama, Dance and Performing Arts
<p>Context: Overview: The impact of the Music Department's research is channelled through our established research centres and develops from specific academic projects within them. As such, the types of impact are necessarily diverse and represent the range of activities extant within the department in performance, composition, music technology and musicology. The department has delivered demonstrable impact of its research through the development of new commercial software technologies; iPhone applications; practice-led research in composition and performance practice that is disseminated internationally via concerts and broadcasts; musicological research that has been the subject of a History Channel documentary watched by over two million people; the building of new renaissance instruments; and the (re-)discovery of a composer's electronic music archive. The beneficiaries of this impact represent a broad demographic reach, including professional DJs and commercial musicians through HARKER's work with Ableton; 5-to-18-year-olds through education and outreach work via ADKINS' and THOMAS' collaborative projects with the Huddersfield Contemporary Music Festival and the Australian Music Centre's focus on LIM's compositional work within the national curriculum framework in Australia; and performers engaged in authentic performance practice, the wider cultural industries, museums and heritage and arts organisations. Composers and performers within the Centre for Research in New Music (CeReNeM) have premiered 108 compositions, which have been broadcast worldwide and released commercially on 39 CDs on international labels such as ABC Classics, HatArt, Neos, Wergo, Audiobulb and empreintes DIGITALes. TREMBLAY has performed internationally on 70 occasions, both as a soloist and within ensembles, and THOMAS has given 75 concerts at venues including the Purcell Room, Queen Elizabeth Hall, the Barbican, King's Place, the Transit Festival (Leuven) and the Borealis Festival (Bergen), as well performing John Cage's <i>Concert for Piano and Orchestra</i> for the Merce Cunningham Dance Company. ABLINGER's archive has been deposited at the Preussische Akademie der Künste Berlin and opened to the public. Four composers are currently under contract to major publishers: LIM (Ricordi, Munich), ABLINGER (Zeitvertrieb Wien Berlin) and ADKINS and TREMBLAY (empreintes DIGITALes, Canada). The impact and significance of these composers' work has seen LIM invited to become a member of the international think-tank Akademie der Künste der Welt, ADKINS invited on to the Board of Sound and Music and TREMBLAY invited on to the board of the International Society for Contemporary Music.</p> <p><i>Examples of impact:</i> All staff engage in the dissemination and impact of their research. The following specific examples highlight the breadth of work in this area. BRYAN has been involved in historical performance practice for more than 30 years. He has made 28 CD recordings with the Rose Consort of Viols that have necessitated producing editions of unperformed repertoire. Since 2002 he has also been involved in the construction of new viols from iconographic sources, leading to an AHRC-funded research project. This has resulted in the construction of new instruments used not only by the Rose Consort of Viols but by other professional and amateur musicians engaged in such performance-led research. TREMBLAY's research since 2005 into the performance practice of interactive instrumental music resulted in SRIF funding for the Huddersfield Immersive Sound System in 2008. This was followed by University Research Funding to develop the HISSTools in collaboration with HARKER. This research project included the development of the HIRT (Huddersfield Impulse Response Toolkit). The research was presented at the International Computer Music Conference in 2009 and 2012. As a result of the wide dissemination of this research by means of academic papers and over 1,000 downloads of this software and related original Max/MSP external objects, HARKER developed a new convolution reverb for Ableton – one of the six major companies to produce world-leading Digital Audio Workstation software. This has led to the HIRT software being embedded in one of the most successful commercial computer music applications, used by over a million composers and producers and employed on commercial music releases worldwide. TILL's interdisciplinary archaeoacoustics work, particularly the investigation of the acoustics of Stonehenge, was enabled by a successful AHRC/EPSRC bid in 2009-2010. The impact of the research goes beyond this single project and has created research best practice and methodology documents for studying the acoustics of heritage sites that have been widely circulated among archaeologists and deposited</p>

Impact template (REF3a)

with the Archaeological Data Service. The research has resulted in developments in working with phenomenological experiences of archaeological environments where sonic reconstruction of spaces has enriched knowledge of heritage sites. The work resulted in over 25,000 articles in national and international media channels and 38,349 hits on academic websites associated with the project. The research has been presented at symposia at Cambridge's Cavendish Laboratory and Durham and Sheffield Universities. The significance of **TILL's** research lies in its impact within the wider cultural and heritage industries. The profile of his work has increased internationally since English Heritage approached him with a view to helping create an augmented reality Stonehenge Experience iPhone/iPad application, developed and released in collaboration with Ribui. This has been a top-40 travel app on the iTunes store charts in 27 countries, App of the Day on Gizmodo and App of the Week on the iTunes store. In addition, the work was the basis of a History Channel documentary shown worldwide and translated from English into German and Spanish; won a commendation in the Computer Applications and Quantitative Methods in Archaeology International Conference Recycle Award 2012; was featured in an article in the *New Scientist*, and appeared in a BBC Radio documentary, *Hearing the Past*, which won the Association of British Science Writers' Award Royal Society Radio Prize. **ADKINS'** work on the electronic music archive of Roberto Gerhard in 2011 has resulted in unpublished and unknown works reaching the public, as well as an edited book published by Ashgate and conference papers at the Electroacoustic Music Studies Network (Stockholm, 2011) and International Computer Music Conference (Ljubljana, 2012). There is now a gradual revision of our understanding of British electronic music during the period 1945-1970 and its relationship with its European counterparts. These examples demonstrate both the excellent research we engage in and our commitment to disseminating it within and outside the academy. In specific circumstances the benefit and impact on non-academic communities are immediate, such as **HARKER's** collaboration with Ableton and **TILL's** Stonehenge research. However, we also acknowledge that other types of research have a cumulative impact over a longer period, as with **BRYAN's** research. In all instances we aim for sustainable excellence in research and believe that the resulting impact is long-lasting and leads to significant change and enrichment within the communities with which we engage.

Approach to impact: Overview. The department's approach to impact during 2008-2013 is a development of a core research ethos, stemming back to 1992 (when Huddersfield was granted University status), that music should enrich our culture and demonstrate imagination, aspiration and originality; and that our research should communicate these beliefs as widely as possible. The most visible public face of this ethos is the annual Huddersfield Contemporary Music Festival (hcmf//), established in 1978 by Emeritus Professor Richard Steinitz OBE. We have continued to develop significant impact in collaboration with hcmf// through the work of the composers and performers within CeReNeM.

Identifying and supporting impact. Impact develops out of specific research projects from within the department's research centres and is supported centrally by the Research and Knowledge Transfer (RKT) team through preparing grant proposals and identifying and establishing pathways to impact plans. The centres hold termly meetings to appraise the development of projects, allowing impact to be identified at an early stage and for other staff to contribute where appropriate. Focusing impact development within the centres enables capacity building from within and forges impact collaborations through the formation of smaller research clusters (as in the case of **TREMBLAY** and **HARKER**). We acknowledge that, due to the experimental nature that is the core of all research, not all projects will have immediate impact. However, where specific projects are identified that have a clear potential for targeting and benefiting a specific end-user group, additional funds are provided from the Music Research Budget to facilitate the development of this collaboration with the identified external partner(s).

Developing strategic partners through differing pathways to impact. Within the department our practice-led research often results in impact that benefits a wider cultural community and, within Music Technology, has resulted in cultural and economic impact through the development of iPhone apps and software. We are therefore engaged in two differing strategies to support and develop impact partnerships: (a) academic-led research that engages and raises awareness within the identified user community once the research is predominantly completed; and (b) user-led research where the impact of already established research results in commercial exploitation and further development of the research. Infrastructural support is provided in a number of stages: (a) seed-funding is given to engage with external partners to develop the collaborative relationship; (b)

once the relationship is established, further funding is available to develop the impact of the research in a significant manner; (c) once an area of impact has been identified, time is allocated within staff workloads to further such partnerships; and (d) where impact is developed from research by an individual academic, this is further supported and mentored by the UoA co-ordinator and monitored through an annual Personal Development Review. In the cases of **LIM, TILL, HARKER, BRYAN** and **ADKINS** the development of research impact has resulted in external partners bringing public or private funding into the project to develop the impact further.

c. Strategy and plans: *Overview:* The department's strategic plan for impact exists alongside its plan for research but necessarily remains separate. Just as they are expected to engage with research and scholarship, so all staff are expected to engage with and be aware of their research's potential impact. While our research strategy encourages staff to engage in the pursuit of pure academic knowledge that may have significance primarily within the academic community, our impact strategy acknowledges that, as a predominantly practice-led department, we have established a research culture that recognises the value and importance of impact and that impact can take many different forms.

Impact Statement: We strongly believe impact arises from excellent research. Our research and impact strategies are designed to encourage staff to produce world-leading research and, from this original work, to contribute significantly to both the academic and wider communities. Developing impact is not a separate goal in itself but arises from core research projects within the department.

Impact Strategic Plan: All the department's research centres share the following impact strategy: to continue to develop and embed impact; to further the relationship with our existing partners, (e.g. hcmf//, Ableton, NoTAM, Stonehenge, the National Centre for Early Music) and new partners (e.g. Sound and Music); to involve the central RKT team in developing of research impact identifying impact partners and end-users and maximising reach and benefit; to acknowledge that all research projects do not necessarily yield immediate impact but should nevertheless be financially supported and encouraged for their long-term impact; to assign more financial support from the research budget for seed-funding future impact case studies; to conduct an annual review of research dissemination and impact within the Music Department with the Directors of each of the research centres, the Head of Research for the School and the UoA co-ordinator.

d. Relationship to case studies: *Overview:* The impact case studies submitted relate to the work of **LIM, BRYAN, HARKER** and **TREMBLAY**. They demonstrate long-term impact engagement with strategic partners in order to embed research into those targeted user-groups and cultural communities. These case studies build on research and partnerships that are over a decade old. As such, they demonstrate the long-term collaborations the department seeks to engender. They were identified within each of the research centres and were then given further funding to develop further the impact of the research and the relationship with the external partner(s). They represent only a selection of the department's ongoing impact partnerships.

Summary of case studies presented: **LIM's** case study relates to her research on musical intertextuality and the formation of cultural identity through her compositional practice. Her research has led to cultural impact through her membership of the Akademie der Künste der Welt and educational impact through the Australian Music Centre's creation of educational resource kits for composition based on her work, thus integrating her ideas and creative process into the school music curriculum. **BRYAN's** case study is underpinned by his performance-led research investigating the cultural contexts and performance strategies appropriate to renaissance music for viols and voices. The dissemination of his work through commercial CDs, radio broadcasts, concerts and international talks has had impact on instrument makers and performers. **HARKER** and **TREMBLAY's** case study has developed in response to the practical issues composers of concert works using electronics face in the performance of their work. The development of modular open-source software, the HISSTools Impulse Response Toolbox, offers creative practitioners and technical end-users a level of flexibility unparalleled in existing commercial software applications. This work has been taken up Ableton as part of its Live digital workstation.

How the case studies reflect our impact strategy: The case studies demonstrate the diversity of impact the department seeks to foster. Although all the chosen case studies are examples of practice-led research, their impact and beneficiaries, as discussed in section a, represent a broad cross-section of communities.