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| Institution: Queen Mary University of London |
| Unit of Assessment: 14 Geography and Environmental Studies |
| <p>1. Unit context and structure, research and impact strategy</p> <p>The School of Geography at Queen Mary University of London provides an intellectually vibrant research environment for undertaking and disseminating research of the highest standard across the science, social science and humanities strands of the discipline. It combines its contribution to advancing knowledge and understanding with a commitment to fostering a supportive, collegial and inclusive research environment based on mutual respect and concern for the welfare of all staff and students. Our research environment is underpinned by an ethos that upholds the value of knowledge and understanding to society in the widest sense, thus both valuing all forms of research, from individual scholarship to large interdisciplinary collaborations, and pursuing meaningful and effective collaboration and public engagement, local, nationally and internationally.</p> <p>Our research is pursued within and across four research themes (<i>Earth Surface Science; Culture, Space and Power; Economy, Development, Social Justice; Knowledge, Interventions and Networks in Health</i>); and three affiliated research centres (<i>The Centre for Studies of Home; The Centre on Labour and Global Production; The Centre for the Study of Migration</i>). The research themes are intellectual homes, fostering debate, discussion and collaboration amongst academic staff, research staff and postgraduate research students with related interests; and facilitating interactions with academic visitors, external research groups and non-academic partners. Their focus and activities are regularly reviewed to refresh and reinvigorate them and ensure that meaningful collaboration and sharing of ideas takes place. Research centres are intellectual meeting places whose members are drawn from across Geography, as well as from other Schools and Faculties and, in some cases, external organisations.</p> <p>Research theme convenors, research centre directors, and PGR and PDRA representatives and the School's Research Manager work with the Director of Graduate Studies (DGS) and Director of Research (DoR) on the School's Research and Graduate Studies Committee (RGSC) in supporting research activity, developing research strategy, achieving external research funding, supporting impact activities and cultivating a vibrant research community and strong Graduate School. The RGSC reports to the School Management Group and the School Board (Chair: Head of School). The School contributes to the cross disciplinary networks and discussions facilitated through the Institute for The Humanities and Social Sciences (IHSS, directed by Reid-Henry). It benefits from the guidance and support of the Faculty of Humanities and Social Sciences (HSS) Dean for Research who meets regularly with School Directors of Research on cross-Faculty research issues and strategic priorities, the faculty Research Manager, and from HSS research and impact support funding (see REF5a).</p> <p>The key strategic aims of our Research Strategy, which is part of the School's wider Strategy 2019-24, are to create original knowledge that is internationally excellent and world-leading; to support the next generation of researchers, and to increase research impact within and beyond the academy. These aims reflect and extend those set out in REF2014 which were to: 1. continue setting international research agendas within and beyond Geography in the areas identified by each research theme; 2. increase external research grant income and funding for PGRs through strategic collaborations; 3. further develop the quality of research outputs through enhanced mentoring and peer review; 4. build and consolidate our external research</p> |

partnerships; **5.** continue to implement our impact strategy; and **6.** ensure that all UKRI funded research is compliant with its Open Access policy.

Key achievements against these aims, include:

- 1.** Major outputs (**448** major outputs, including 14 books) showcasing our research of international standing (compared to 200 outputs and 7 monographs in REF2014)
- 2.** Continuing the grant income trajectory established in REF2014 by achieving a total income of **£7.34m** over the REF2021 period (an increase of 59% on £4.61m in REF2014) and the introduction of a research mentoring scheme and peer review process for all funding applications over £10k in order to draw on existing research funding application experience and increase the likelihood of applications being funded;
- 3.** Successful involvement with PGR funding partnerships including the ESRC London Interdisciplinary Social Sciences DTP (9 studentships), the AHRC London Arts and Humanities DTP (directed by Blunt) (8 studentships), the NERC London DTP (5 studentships) and as part of QMUL's successful Leverhulme DTP on Mobile People (4 studentships). These partnerships have contributed to a 25% increase in PGR numbers (58 FTE PGRs in 2020 compared to 46.5 in 2014) and **83.34** PhDs have been awarded in the REF2021 (an increase of 94% on 42.97 in REF2014).
- 4.** Significant impact across the range of research in Geography: on river and canal surveying and restoration (Gurnell, Wharton, Harvey), museums (Blunt, Owens), landfill sites and sediment transport (Spencer), and the extent to which EU trade agreements enhance working conditions around the world (Smith), with stakeholders including the Museum of Home, Ragged School Museum and V&A Museum of Childhood, the Environment Agency, The Canal and River Trust, HR Wallingford, the International Labour Organisation, and the EU Parliament, underpinned by significant support for impact in the School (workshops, Research Manager and Academic Impact Lead support) and Faculty (Deputy Dean for Impact, strategic impact funds).
- 5.** We are embracing an **open research environment**, placing the Concordat on Open Research Data at the heart of our research efforts with a focus on the FAIR principles for all appropriate future research outputs, in line with wider QMUL open research policy (see REF5a). 91% of our research outputs are compliant with UKRI OA policies, with an increasing number of research outputs being published in gold and diamond open access venues. The creation, archiving and re-use of open data is an integral part of research in the School and we are working to strengthen existing collaborations with the Alan Turing Institute, the QMUL Institute for Applied Data Science and the QMUL IT Research team to deepen our expertise in these areas. This has led to high impact publications (e.g. Grieve with Chen et al *Nature* 2019) and the creation and publication of new datasets which are being adopted by the wider academic community. Furthermore, we have been active in developing and implementing policy on effective sharing and management of research data beyond academia including the collaborative development of an agreed protocol on the archiving of academic research material with the Museum of The Home. This attention to both the digital and physical archiving of data is a distinctive feature of the School. Staff have led the way in developing open source software (Grieve is a Fellow of the Software Sustainability Institute in recognition for his on-going development of open source software) and in advising UKRI about policies on open research.

Building on our long-term commitment to **socially engaged research** we have embedded **impact** more fully within the School's research culture and research strategies. Our strategic aims in relation to impact are to:

- inspire and inform the public about the School's research;

- disseminate research findings proactively to academics and research users;
- enhance the influence of School research on decisions or behaviours in appropriate spheres (e.g. economic, social, public policy and services, health, cultural, quality of life, international, environmental);
- demonstrate and evidence the public benefit of the School's research.

To ensure the vitality and sustainability of the unit's impact in the future we have addressed and continue to address these aims by:

- supporting the *integration of impact activities into our research* by using the School mentoring programme and targeted workshops to increase staff awareness and understanding of impact and public engagement; integrating impact and public engagement routinely into applications for UKRI-funded research; increasing the number of research grant applications, where appropriate, with named involvement of research users e.g. Project Partners;
- effectively disseminating our research* by using the School's Marketing and Communications Officer, the Faculty's Public Relations Manager, and the university's Centre for Public Engagement to support dissemination activities; encouraging staff to undertake university and externally provided courses on media and public engagement; the increased use of social media to report on School research activity and events; encouraging academic staff, where appropriate, to apply for externally funded Knowledge Exchange Fellowships;
- fostering collaborative research and non-HEI partnerships* by using the Business Development Office to support development and implementation of knowledge exchange activities with non-HEI organisations in industry, government, and the third sector with support from the HSS Collaboration Fund (see REF5a); pursuing and securing collaborative PhD studentships in partnership with external organisations; using the Research Centres to add value to research impact through collaboration, external partnerships and interdisciplinary collaborations; engaging with significant research partnerships and initiatives beyond the School, doctoral training arrangements, and UKRI and other research priorities; increasing links with non-academic stakeholders in industry, NGOs, government, think tanks to facilitate research collaborations and, where possible, co-funded projects. QMUL's Centre for Public Engagement provides generous funds for work arising from research that includes participation from external public-facing organisations. Geography has secured over £92k for projects related to public engagement since 2014. In addition, the School has benefited from over £163k in funding from the HSS Collaboration Award. Recent awards have supported a project with Film Pill (a local Bengali production company) and Tower Hamlets Local History Library and Archives to produce a 20-minute documentary film that will explore the 1970s east London Bengali squatters' movement, and a research partnership with Knepp Wildland, to quantify the change in landscape-scale vegetation since the inception of a pioneering rewilding project in West Sussex.
- identifying the most promising impact-relevant research and expanding its reach and scope* by targeted investment in influence activities; establishing and maintaining information systems for tracking impact activity; identifying and implementing techniques for measuring or evidencing public benefit. Our impact activities have been supported by the QMUL Centre for Public Engagement and Faculty impact funding. For example, this has support work with The Audience Agency to develop an evaluation framework to capture audience responses to exhibitions, thereby increasing our understanding of how impact can be captured and understood. The selected impact case studies reflect the School's commitment to pursuing research that is of public value in the widest sense, from the direct application of research-

based methodologies (Gurnell and Wharton) or influence on labour regulations and environmental policy (Smith, Spencer) to the broader ways in which cultural institutions (Blunt), and the public more widely, benefit from academic scholarship.

Our work in advancing knowledge and understanding takes place within a long-established and highly-valued **research culture** for staff, PDRAs and PGRs which is intellectually stimulating, supportive, inclusive and collegial. This is cultivated by innovative strategies to encourage mutual understanding, support and research synergies in the School. They include two annual **Research Sharing** events (at the beginnings of Semester A and B) in which all staff and postgraduate students present their research. First year PhD students present at the annual Postgraduate Conference, attended by all staff. The School dedicates every second Wednesday afternoon of the teaching semesters as **Research Afternoons** (open to all Masters students, PGRs and academic staff and kept clear of teaching and admin meetings to allow full participation) which include the School's seminar series, research theme meetings and cross-cutting research events and activities organised by staff, researchers and postgraduates (e.g. paper and grant writing workshops, peer review discussions, reading meetings). Our seminar series focuses on presentations by new academic and research staff, staff returning from sabbatical leave and academic visitors. These initiatives reflect and enhance the sense of mutual interest, understanding and intellectual exchange in the School. Furthermore, two seminars per semester are reserved for discussions of EDI issues and initiatives, including research undertaken by members of the School (Ford, Johnson).

Our research culture is enhanced by external guests, the annual David M. Smith lecture (Pulido, Sagan, Valentine, Mitchell, Slater, Robinson), visiting scholar initiatives, and a distinguished international scholar programme (Saldanha, Cronin, Sidaway). The School hosts leading scholars through the IHSS Distinguished Visiting Fellows programme (Maier, Lake, Levitt).

This ethos of our research culture is reflected in the equitable provision of research support funds. The HoS, DoR and DGS manage funds for academic staff and PG research activity (£1200pa for early career academic staff and £900pa for academic staff SL and above); £6k pa shared among PGRs, funds for research visitors and events (£5.5k) and School funds for Research Theme activities (£5k).

The School views interdisciplinarity as integral to the vitality and sustainability of the research environment and supports **interdisciplinary research** through the research centres (see below) and considerable success in pursuing funding for interdisciplinary PhD studentships (including collaborative doctoral awards). The School is an active member of the HSS Institute for the Humanities and Social Sciences (directed by Reid-Henry) (REF5a). Geographers (Datta, Monteith, and Reid-Henry) are leading on the Institute's thematic interdisciplinary programmes on Democracy, Mobility, and Work. Staff in the School contribute to QMUL's cross-disciplinary programmes by leading the IHSS's South Asia Forum and Resilient Futures India Initiative (Williams) with the Oxford India Centre for Sustainable Development, the British Council, and the Commonwealth Secretary General. The School has benefited from the appointment of two ECRs (Bourne and Calkin) funded through IHSS with dedicated time and resource to develop interdisciplinary research. Significant multidisciplinary research, facilitated by our specialist laboratory facilities, is undertaken by staff in the Earth Surface Science theme (Beylea, Heppell, Spencer) in collaborative relationships with colleagues in the Schools of Engineering and Material Science and Biological and Chemical Sciences at QMUL.

Research Integrity: The School is committed to upholding the core principles of honesty, rigour, transparency and open communication, care and respect, and accountability in all our research in accordance with the UKROI Concordat to Support Research Integrity (2019). These principles are embedded in our collective research culture and inform our mutual support for each other (e.g. in research grant application peer reviewing, research supervision, mentoring and in research sharing events). All social research is subject to QMUL ethical review and all research is undertaken in compliance with relevant ethical, legal and professional frameworks, obligations and standards.

The four **research themes** lead international research agendas and define future research priorities. They operate as open constellations of interest rather than rigid groupings, and some staff are aligned with more than one theme. They are co-ordinated by a staff member with a PGR co-lead, and bring together senior, mid- and early- career staff, PDRAs, research fellows, and PGRs, to foster mutual intellectual support and stimulus, develop collaborative research, and apply for School funding of £5k pa to develop research initiatives and enhance the impact of research. We also host or co-host three **research centres** that foster cross-theme, multidisciplinary and outward-facing research agendas and programmes through their resources, physical space, conceptual networks and the leadership of Human Geography staff.

RESEARCH THEMES AND CENTRES

1. The **EARTH SURFACE SCIENCE** theme comprises four interacting sub-themes: **Past climates and environments**, which uses multiple approaches to infer environmental change and ancient human history on time scales up to millions of years; **Landscape and ecosystem dynamics**, which investigates how and why landscapes and ecosystems change, providing a robust science base for quantifying resilience to environmental change and assessing hazard risk; **River science**, which contributes to building the fundamental foundations of a quantitative river science whilst also enhancing the scientific basis for sustainable river and catchment management; and **Carbon, nutrients and contaminants**, which examines the processes and dynamics of biogeochemical cycles, as well as their biological, physical and anthropogenic controls. The appointment of five new staff (Bourne, Bradley, Ford, Grieve, Lines, Trinci) since REF2014, to cover departures of three staff (Brasington, Carr, Lukas) has expanded our research strengths to encompass terrestrial, freshwater, glacial and marine environments, and consolidated and diversified our expertise in palaeo-environments and environmental data science and modelling. Research across the sub-themes is strongly interdisciplinary, and employs cutting-edge, multi-method approaches to address fundamental and applied issues at nano- to global scales. Key achievements and contributions include:

- Developing and using spatially-distributed palaeo-records to discover and understand past climates and environments, including: i. reconstructing the strength, depth and tilt of the equatorial Pacific thermocline, providing new insight on past climate variability on a range on time scales with the potential to improve climate models' ability to predict future tropical Pacific behaviour, including El Niño–Southern Oscillation (ENSO) (Ford); ii. advancing frameworks for volcanic ash stratigraphy of marine and ice core records, enabling the timing of rapid environmental changes to be established on centennial and sub-centennial timescales and revealing previously-underestimated risks of long-range volcanic ash dispersal along flightpaths (Bourne); iii. exploring and mapping the environmental context, migration pathways and timing of ancient humans, including discovery of the oldest

hominin footprints outside of Africa (Lewis, Leverhulme funded, including interdisciplinary collaboration with archaeologists).

- Investigating how ecosystem engineers (both plants and animals) and biological-physical feedbacks either regulate or promote change in Earth surface systems, including: i. developing a unifying conceptual framework that explains the world-wide biogeomorphic similarity of fluvial and coastal ecosystems through the two-way relationships between plant traits and their geomorphic environment (Gurnell, international and interdisciplinary collaboration); ii. providing novel conceptual frameworks and the first field data to reveal how invasive crayfish drive erosion and fine sediment dynamics and aquatic systems, exposing the potential for globally-relevant catchment-scale effects (Harvey, international and inter-disciplinary collaboration); iii. providing the conceptual foundations required to reveal the genomic basis for trade-offs in functional traits of the peat-forming ecosystem engineer, Sphagnum, with the potential for fundamental ecological and evolutionary insights and globally-important implications for carbon sequestration (Belyea, part NERC-funded, with international and interdisciplinary collaborations in multiple countries); (iv) showing how self-organized patchiness in aquatic macrophytes promotes species coexistence by creating a landscape of facilitation, where new niches and facilitative effects arise in different stream locations (Wharton, funded by HYTECH Marie Curie ITN, with collaboration with Dutch ecologists).
- Developing and applying innovative methods and data analysis frameworks to exploit new streams of remotely sensed data, including: i. development of physically-meaningful remote river reach classification, automated quantification of sedimentary bar and channel morphodynamics and graph theoretical insights into braided river structure and behaviour (Henshaw, with international, Erasmus-Mundus funded collaboration with engineers at Trento University, Italy); ii. development of high performance geocomputational algorithms which allow the analysis of river morphology at an unprecedented, global scale and identify a topographic signature of climate within river networks to show water availability is a first order control on river evolution (Grieve, NERC funded, with international collaboration at University of Potsdam, Germany); iii. the first quantified analysis of structure-from-motion photogrammetry applied to the complex terrain of a braided river, with results suggesting that this logistically simple, low-cost method can deliver high-quality terrain datasets suitable for change detection and hydrodynamic modelling (Brasington).
- Using cutting-edge approaches and community resources to create new insights on sediment and biogeochemical cycles, including i. revealing how geology and hydrology can control the relative importance of different nitrate cycling pathways in rivers, with some of the first direct measurements to demonstrate the important contribution of anaerobic ammonium oxidation to nitrate removal in rivers (Heppell, interdisciplinary collaboration funded by NERC Macronutrients thematic programme); ii. developing novel numerical models to reveal the role of energy in shaping microbial communities and the associated degradation of organic carbon in the marine subsurface and Arctic soils including their role in organic carbon degradation and greenhouse gas production (Bradley); iii. showing how large, old trees actively fix large amounts of carbon by increases in total leaf area outpacing declines in leaf area-specific productivity, thus resolving conflicting assumptions about individual vs stand- and leaf-level carbon dynamics in forests (Lines); iv. translating 3D-microscopy techniques typically used in the biomedical sciences to quantify the geometric properties of fragile, naturally-flocculated suspended particulates ('flocs'), providing

knowledge for more accurate hydrodynamic models and opening up new opportunities to study floc associations with pathogens and pollutants (Spencer, NERC funded with interdisciplinary collaboration with material scientists).

2. The **CULTURE, SPACE AND POWER** research theme critically examines the geographies of cultural practices, forms and knowledges. Its members inform and shape debates and new directions in cultural and historical geography through theoretically innovative and critically engaged research that has strong interdisciplinary links with humanities subjects and involves external collaboration with organizations beyond the academy, including museums and arts organizations. It has three main strands:

Global geographies of knowledge and practice: research exploring the geographies of global connections and knowledge-making at a planetary scale has explicated the significance of globalising practices and planetary ways of knowing: for imperial political and economic orders (Ogborn); historical geographies of development (Reid-Henry); the production, organisation and translation of scientific knowledge past and present (Holden, Nash, Reid-Henry); and the political aesthetics of environmental and climatic change (Yusoff). Miles Ogborn has established a new basis for examining the relationships between practice, representation and power through his work on the multiple uses of talk in Anglo-Caribbean slavery. Kerry Holden's National Science Foundation funded research with computer science communities in East Africa has revealed the tensions between the universal language of computer science and the realities of applying algorithmic models in African cities, and has initiated new approaches in the geographies of science that take account of African forms of knowledge production. Other major contributions include research on the geographical assumptions of claims to global justice (Reid-Henry) and Kathryn Yusoff's retheorising of human subjectivity and human-earth relations through the inhuman and nonorganic dimensions of 'Geologic Life' in the Anthropocene.

The interrelated themes of **home, identity and relatedness** have been addressed in innovative research demonstrating the cultural and political significance of ideas and practices of belonging, origins and movement for urban diasporas (Blunt), transnational experiences of institutional childcare (Soares, Brown, Owens), and performances of identity and racialisation (Johnson). Understandings of the intimate geographies of home have been enhanced by AHRC funded research on the home as a site of historical knowledge and practice (Nash, Blunt, Owens), and by explorations of home-work and home-religion relationships in London from the 17th century to the present day (Blunt, Owens). Alison Blunt's research continues to shape the field of home studies, notably by developing ideas about home-city geographies and through her work as founding co-director of the Centre for Studies of Home (see below). Her expertise informs her new UKRI/AHRC funded (£500k, with £393k to QMUL) research on understandings and experience of domestic homes in the Covid-19 pandemic. Catherine Nash has made a distinctive contribution to geographical and wider scholarship through her original critical engagement with the science and culture of ancestry, origins and genealogical relatedness and is extending this focus on relatedness to animal breeds and interspecies kinship.

Research on **urban culture and public life** is at the forefront of scholarship addressing cities as spaces of possibility, creativity and identity formation. This has included: investigations of urban public space (Koch); the city as a site of diasporic identity (Blunt); and the relationships between philanthropy, religion and urban change (Brown, Owens). Regan Koch has developed novel perspectives on how convivial, inclusive and democratic forms of collective life might be nurtured. At a transnational scale research in this theme has elucidated the significance of cities as sites of humanitarian engagement (Reid-Henry); the role of space and territoriality in

grassroots social movements (Halvorsen) and histories of democracy and inequality (Reid-Henry).

3. The **ECONOMY, DEVELOPMENT AND SOCIAL JUSTICE** research theme challenges conventional geographical and sub-disciplinary boundaries to produce critical and transformative research within and between spaces of the global south and north. Research in this theme contributes to debates in political economy, social and political geography, and hybrid economic-development geography through three research areas:

Uneven development, production and labour encompasses major ESRC funded interdisciplinary research such as Adrian Smith's project on the impact of legal and institutional mechanisms established by EU Free Trade Agreements on workers' lives and working conditions. This research makes multi-scalar recommendations to improve labour standards within complex corporate governance environments. In addressing policies for reducing regional inequalities Konstantinos Melachroinos has highlighted the role of foreign direct investment in promoting economic development in lagging regions and the territorial effects of the knowledge economy, especially investments in intangibles. Sydney Calkin's work on the emphasis on gender equality in global development policy, specifically the World Bank and its gender-focused corporate partnerships and their policy implications, has made a distinctive critical contribution to feminist political economy in geography.

Research on work, finance, and migration focuses on the relationships and institutions through which people make a living in diverse economies while maintaining connections to places much further afield. Kavita Datta's Leverhulme funded research on the global remittance marketplace provides original insights into regulative frameworks and the everyday negotiation of financialisation by Money Transfer Operators. This will be extended through her ESRC funded project on migrant remittances and care during the Covid-19 crisis. Datta's expertise on migration informs her ESRC-AHRC funded Migration Leadership Team which is building a shared and participatory global strategy for identifying and supporting migration research, and her lead role in the UKRI GCRF funded 'South-South Migration, Inequality and Development Hub'. Through his ethnographically grounded research in diverse economies, which is central to emergent multidisciplinary debates on 'ordinary work', and featured in the African Mobilities exhibition (Munich, 2018), Will Monteith has questioned what it means to 'work' in contexts in which people's labour is unvalued by the state or capitalist economy. Philippa Williams' research on the new service economy, work and agency in India was recognised as the most innovative paper in 2017 by *Environment and Planning A*.

Contested political geographies theme examines how sites and spaces of politics and the political are produced and contested, from the state to grassroots and everyday practices. Jon May's research on the political potential of austerity in the UK through the concept of 'meantime' and the politics of foodbanks, provides new understandings of the shifting relationship between state and voluntary welfare bureaucracies, corporations and subjects. This has informed practical and progressive transformations in food bank actors and UK political debate through the Independent Food Aid Network co-founded by May. Joe Penny interrogates austerity governance through the lens of land and housing to make original arguments concerning the financialisation of the local state. The award of a Philip Leverhulme Prize in 2019 to Philippa Williams, and AAG Political Geography Speciality Group book prize for *Everyday Peace?* in 2016, recognises the disciplinary shaping significance of her innovative focus on the practice and politics of everyday peace. Her ongoing research on policy and non-state activism in relation to domestic violence in India is being supported by British Academy funding (£300K).

Sydney Calkin's work on the availability of safe abortion through pills elucidates how state control over reproduction is being challenged in innovative and potentially transformative ways, as abortion access is decoupled from a woman's place of residence and from national legal frameworks. In his research on grassroots politics in Latin American cities, supported by a Leverhulme Trust Early Career Fellowship, Sam Halvorsen has examined the intersection of social movements, political parties and local governance, and revealed the significance of the overlapping strategies of different political actors at a local, territorial scale in cities for consolidating democracy in the region.

4. The **KNOWLEDGE, INTERVENTIONS AND NETWORKS IN HEALTH** (KIN Health) research theme works across conventional sub-disciplinary boundaries to consider questions of power, distributive justice and inequality in vital systems and biomedical geographies. A shared priority of the theme is to produce rigorous, relevant and conceptually-informed research with a global reach that reframes disciplinary approaches to investigating the uneven geographies of human health. Research has pioneered understandings of health from a geographical perspective along four novel intellectual paths:

Form and function of interventions examines, as well as contributes to, the development of public health and global health interventions, policies and practices. Peter Congdon has pioneered Bayesian and spatial statistical approaches to the analysis and visualization of health data. Involving multiple collaborations (e.g. with public health agencies in northeast London and the US-based National Minority Quality Forum), this research has enhanced practitioners' strategic capacity to identify and mitigate area-based health needs. Brown's collaborative research (MRC; with Kavita Datta and Andrew Prendergast (PI), Blizard Institute) into severe acute malnutrition in Zimbabwe is helping to shape the direction of future nutritional, behavioural and environmental interventions by identifying the importance of mobility within caring networks to children's recovery.

Commensurability and friction in health networks explores the production, politics and governance of vital systems at multiple scales. Working with a range of non-governmental organisations (e.g. INASP in the UK and the Ugandan National Health Research Organisation), Kerry Holden's ESRC Future Research Leader-funded research examined the uses of evidence in the Ugandan parliament. Raising questions about how knowledge practices shape political culture and promote democracy, the research reveals how civil servants and institutions achieve commensurability through the everyday enactment and performance of evidence techniques. Through ongoing collaborations (e.g. Yale University), Simon Reid-Henry's interdisciplinary investigations into vital geographies and 'counter-vitalities' examine how human lives are valued and devalued. Working across sub-disciplines, this research demonstrates how health itself becomes a powerful discursive domain and exposes how tensions in enacting and securing vital systems produce new logics, values, and power relations within 'global health.'

Signification and forms of knowledge concerns the politics of representation and the discriminatory practices of making things, people and knowledges visible and invisible. Stephen Taylor's research, focusing on the political and institutional geographies of mental health knowledges and practices in Kinshasa, has produced recommendations for responding to the pluralising and de-institutionalising landscapes of psychiatric treatment and care in the city. Through a collaborative project with Homerton University Hospital and the Wolfson Institute of Preventive Medicine on efforts to promote breast awareness among black women, Tim Brown has problematized epidemiological constructions of blackness and risky subjectivity and highlighted the importance of accounting for political configurations of identity and self in

attempts to cohere subject-citizens into biosocial communities. In collaboration with public health specialists at Makerere University in Kampala, Kerry Holden explores the historical geographies of health administration in Uganda with the aim of supporting district health management teams to evaluate health interventions.

Power, distributive justice and health inequalities are a core focus of the group, complemented by both political- and moral-economy investigations of justice and power. Stephen Taylor highlights the spatially differentiated ways in which the global goal of eradication has emerged, transformed, and become institutionalised through an examination of the Global Polio Eradication Initiative in Pakistan and Nigeria (funded by British Academy and Rockefeller Foundation). Simon Reid-Henry has identified how competing accounts of global health justice produce political philosophical problems. Through an analysis of the impact of financialisation on the careers of biomedical scientists Kerry Holden has investigated the moral and political economies of science in UK universities. Research on this subtheme will be extended by Philippa Williams' Philip Leverhulme Prize (2019) funded research on the technological and political agendas that are driving India's digital health ecosystem, the value of healthcare data, and the implications of digital health for ordinary citizens. Questions of power, inequality and justice are also central to Sydney Calkin's Leverhulme Early Career Fellowship funded research which explicates how political, technological, and medical changes at the state and global levels are currently transforming the ways that women can access abortion in states with restrictive laws.

The Human Geography research themes pursue elements of their agendas via three Research Centres:

The Centre for Studies of Home is a formal partnership between QMUL and the Museum of the Home. It is an international hub of research, knowledge exchange and public engagement activities on past and present homes. The Centre has co-curated five exhibitions at the Museum; hosted two AHRC Collaborative Doctoral Award programmes on Home and Religion and Homework; a Leverhulme Artist-in-Residence (Janetka Platun, 2015); two Leverhulme Early-Career Fellowships on Home and Inhabitation (Baxter, 2013-16) and Luminous Verticality (Laing Ebbensgaard, 2018-2021) and networks focussed on home and migration (Home for Refugee Children, Home, City and Migration (see also, impact case study). The centre works actively with academic staff across the HSS faculty, including History and English and Drama, including the co-hosting of PhD students and an interdisciplinary seminar programme at the Institute of Historical Research.

The Centre on Labour and Global Production (CLGP) draws upon a critical mass of researchers across different disciplinary areas at QMUL who are engaged in research on the changing position of workers, labour and regulation in the world economy. Significant work through the centre has stemmed from Adrian Smith's ESRC-funded project, Working Beyond the Border, which has examined and engaged with the EU's approach to trade and sustainable development in 'third countries' (see also, impact case study). In addition, the centre (Smith) has worked with an NGO, Electronics Watch, on the role that public procurement regulations can have in improving regulations for workers within the global electronics industry. Two PhD students, funded through ESRC CASE Studentships are being undertaken in collaboration with Electronics Watch and the International Transport Workers Federation.

The Centre for the Study of Migration facilitates, promotes and develops interdisciplinary work on migration at QMUL. The Centre is a focal point in London for research related to

migration and to offer opportunities to scholars of migration within and beyond QMUL to share and develop their work through participation in the Centre's events and publications. Achievements in the current REF period include the award of a cross-disciplinary Leverhulme Doctoral Scholarships programme on Mobile People; and the AHRC-ESRC Migration Leadership Team (Datta, Col) with SOAS and the London International Development Centre, work to improve collaboration on migration studies between the social sciences, the arts, and the humanities, having significant impact not only on UKRI practice, but on non-academic communities and stakeholders, nationally and globally.

2. People

Our **staffing strategy** has been to consolidate existing strengths and provide a balance across the range of academic posts in recognition that we were heavily weighted towards senior roles in the last REF period. Replacements for senior staff who have left (McIlwaine to KCL, Wills to Exeter, Brasington to Waikato, NZ, and Pinder to Roskilde, DN) have thus been made at Lecturer or Senior Lecturer level. New permanent posts have included Bradley (from University of Southern California); Calkin (from Durham and Leverhulme Early Career Fellowship transferred to QMUL); Ford (from Cambs and NERC Independent Research Fellow award transferred to QMUL), Grieve (from UCL), Halvorsen (from Cambs and Leverhulme Early Career Fellowship transferred to QMUL), Holden (from KCL and ESRC Future Leader award held at QMUL), Koch (from UCL), Monteith (from UEA). All are early career researchers with outstanding potential in their respective fields. Promotions so far have included: Datta, Lewis, Heppell, Owens, Reid-Henry, Spencer, Wharton and Yusoff to Chair; Brown, Harvey and Williams to Reader; Henshaw and Taylor to Senior Lecturer. Five of these eight promotions to Chair are to women which is important to note given the under-representation of women at senior levels in UK geography. 56% of the professorial staff in the School are women.

We have sought to recruit and support more **early-career researchers** through bespoke support for individual applicants from supervisors and our Research Manager as well as targeted advertising, and improved website information. As a result, the School has secured fifteen independently funded ECR fellowships (BA: Guillen, Inverardi-Ferri, Soares Speer; Leverhulme: Johnson, Kumar, Laing Ebbensgaard, Materka; ESRC: Clarke, Johnson, Ghoddousi, Schling, Stansfeld), compared to only one during the entire REF2014 census period. This has meant significant funding success for ECRs, an enhanced and more balanced academic community, and clearer identification of career paths for PGRs and ECRs. We encourage our ECRs to lead in the development of new research and networking initiatives (e.g. QMUL Latin American Network established by Halvorsen), through the democratic nature of our research culture, and by supporting their applications for institutional support for ECRs (e.g. Monteith on re-theorising work, Halvorsen on urban political party activism in Latin America).

Research students are central to the School's vibrant research culture. They are integrated into the research community through research theme and cross theme activities and make important contributions through participation in research events and postgraduate-led initiatives. They are represented on the RGSC and School Board and each research theme has a postgraduate co-leader. They benefit from initial induction into the School and Faculty and subsequent training and support opportunities within the School, in QMUL's Centre for Academic and Professional Development, and through the QMUL Doctoral College. They can undertake the QMUL PhD Researcher Development Programme and work towards a QMUL Diploma of Researcher Development. Research students are required to complete a PhD skills Points log to record their progress in meeting training goals set in discussion with their

supervisor. They can avail of support for academic writing through the QMUL Thinking-Writing programme and personal support from the Advice and Counselling Service. Specialist training is also provided by collaborative partners. PGRs receive a personal Research Training Support Grant, and draw on the School's PG Training Events Fund and QMUL's PGR Research Fund. All PGRs have desk/computing space in dedicated offices and full access to School research facilities.

PhD completions in the REF2021 period have been 83.34 compared to 42.97 in REF2014 (an increase of 94%). Since 2014 our PhD studentships comprise: UKRI: 9 LISS DTP (including 4 CASE awards), 9 ESRC DTC (including 3 CASE awards; 8 AHRC (6 CDA awards); 5 NERC (including 1 with CASE partner); 1 EPSRC; Leverhulme Trust: 4 QMUL-LTDS; QMUL Principal's Studentships: 17 and 1 HSS faculty award; Non-UK funding: 1 SMART EMJD; 2 CONACyT (Mexico); Lloyds Register Foundation International Consortium of Nanotechnology (1), Chinese Scholarship Council (1). The School has had a key role in developing and directing the ESRC London Interdisciplinary Social Science DTP (LISS) with Imperial and KCL (Thematic Pathway Leads: Brown, Datta, Koch), and was formerly part of the London Social Science DTP with Goldsmiths. The School is a partner in the London NERC DTP with UCL, KCL, Birkbeck, Brunel and RHUL and part of the AHRC London Arts and Humanities Partnership (LAHP) directed by Blunt. With other QMUL departments, the School is part of a Leverhulme-funded Doctoral Scholarships Centre, Mobile people: mobility as a way of life, which welcomed its first cohort in September 2018. The School has been awarded four ESRC LISS collaborative studentships (3 began in September 2018, 1 in September 2020). The Erasmus Mundus SMART PhD programme with Trento and FU Berlin continued during this REF period, with the final cohort starting in 2015.

PGR research excellence is evident in the number and destinations of appointments to academic posts and professional roles. Six have moved to lectureships (at UCL, RHUL, Exeter, Goldsmiths, QMUL, London School of Hygiene and Tropical Medicine), and seven to postdoctoral research positions (including at the National Maritime Museum, Goethe University Frankfurt, University of Antwerp, Leibniz-Institute of Freshwater Ecology and Inland Fisheries, and HSE St. Petersburg). Others have been appointed to significant professional roles in major environmental, cultural and public organisations (including the Royal Horticultural Society; The Environment Agency; Health and Safety Executive, Department of Business, Energy and Industrial Strategy; Natural Resources Conservation Service, USA; Civil Service; Royal College of Surgeons). A considerable number of our PhD students succeed to museum and art gallery curator roles (Metropolitan Museum of Art and Africa Centre, Jane Austen House Museum, Science Museum, the Hunterian Museum, National Maritime Museum) reflecting our strong partnerships with this sector in postgraduate training and our research.

Staff development

The School is committed to the career development and welfare of its staff. This is pursued through annual appraisal and research mentoring schemes within the School and centralised training and support services. Support for career development and skills training is provided by the Organisational and Professional Development support and the Researcher Development Team, reflecting QMUL's commitment to the Concordat to Support the Career Development of Researchers (see REF5a). Early career researchers are supported by the HSS Early Career Researchers Network and Early Career Workshop funding scheme (which has supported pilot research by Monteith and Halvorsen). QMUL operates a full sabbatical scheme (one term or year in seven) open to all by application. Early career staff are supported through a probation scheme that sets achievable and appropriate research objectives in discussion with senior staff

mentors. Administrative and teaching workloads are agreed between HoS, mentors and ECRs to support their research strategy. In addition, postdoctoral research staff are supported through the QMUL Postdoctoral mentoring programme.

Equality and Diversity

The School is a diverse student and staff community with a long standing and genuine commitment to equality and diversity. This is explicitly stated as one of the core values and fundamental commitments of the School's Strategy (2015-19 & 2019-24) and our Key Principles document. The School is committed to inclusiveness, transparency, non-hierarchical management structures, collegial working relationships and research integrity and supports and promotes equality, diversity and inclusion in a range of ways. EDI issues are standing items on all School committees and addressed by a dedicated EDI committee. Academic staff (Ford, Johnson) have undertaken research on EDI in academic cultures and institutions and we have drawn on their work in our dedicated EDI slots in our seminar series. The School was awarded an Athena Swan Bronze award in 2016 and has implemented the subsequent action plan. All staff have undertaken unconscious bias training and all staff involved in appraisal and appointments have undertaken EDI training.

The School's research mentoring scheme is both a career development and EDI initiative. Research mentoring is available to all staff at all career stages, but has been particularly promoted to ECRs (including lecturers and researchers on fixed-term contracts). The scheme provides informal support and career development guidance beyond the university's formal probation and appraisal structures. Its inception has coincided with QMUL's wider EDI initiatives, including the introduction of mentoring schemes for women and for postdoctoral researchers. The School has long been well-known for its overall gender balance and the proportion of senior women academic staff (comparing very favourably to national and sector averages e.g. 56% female professors in 2019-20, compared to 25% nationally in HE). The School's academic and professional services staff, postdoctoral and postgraduate community have become more ethnically diverse since 2014 and BME staff are supported through B-MEntor: a cross-institutional London-wide mentoring scheme for academic and research staff from BME backgrounds.

EDI concerns are integral to our approach to **staff welfare**. The School is committed to enhancing the work-life balance of staff through: the careful management of workloads; HoS consideration of all requests to work on a part-time or flexible basis; support for staff in taking their full annual and other leave entitlement; and support for academic staff in working away from the office when not required to teach or attend meetings. Administrative meetings and teaching are only scheduled within normal working hours to allow full staff participation and the School's collective expectation is that emails will only be answered during working hours. These strategies are important to staff welfare in general but are particularly important in relation to caring responsibilities, family circumstances, gender, health and disability.

Support for **fixed-term academic and research staff** is a key element of the School's EDI agenda. The School has a policy of not offering fixed-term academic contracts of less than 12 months. Fixed-term staff are inducted and supported to ensure their full integration into the School and are encouraged to avail of training, mentoring, staff development and funding opportunities.

Our REF preparation and submission processes have been conducted in accordance with these values and commitments. This includes our nominations for external assessors and our internal

reviewing process which involved a wide range of academic staff rather than a few senior staff. Internal reviewers were also nominated so that their diversity reflected the diversity of the School as a whole in terms of gender and ethnicity. Those involved who had oversight of REF processes and decision making have undertaken EDI training (unconscious bias training) and all the staff involved in the internal review process also had this training as part of our Athena Swan action plan. In accordance with QMUL's REF 2021 Code of Practice, we adopted a consistent approach to reviewing outputs and impact case studies to ensure equitable treatment of all individuals. Decisions on outputs and impact case studies to review and submit were made in consultation with the staff involved and all decisions and preliminary reviewing scores remain confidential. Our staff mentoring and appraisal processes offer support for individuals whose circumstances have constrained their ability to produce outputs or work productively throughout the assessment period.

3. Income, infrastructure and facilities

Over this REF period, the School's has fulfilled its **strategic aims** to increase its research income, to achieve a more even spread of research income among staff; to prioritise research council funding; and to increase ECR and PGR funding. The total grant income of **£7.33m** is an increase of **59%** on the £4.61m in REF2014. Major research projects are: ESRC 'Migrant remittances and Covid-19: Practices of care during crisis' (Datta, 407k); NERC-NSF 'Sensors Under Snow–Seasonal Processes In The Evolution Of Arctic Soils' (Bradley, £511k); GCRF 'Building Trans-disciplinary Partnerships For Exploring The Impact Of Population Displacement On Nutrition Interventions In Rural Zimbabwe' (Brown and Datta Col, £193k); UKRI GCRF South-South Migration, Inequality and Development Hub (Datta, £190k); NERC 'Response of Ecologically-mediated Shallow Intertidal Shores and their Transitions to Extreme Hydrodynamic Forcing in UK Settings (RESIST-UK) (Spencer as Col with Cambridge, £328k); NERC '3D Floc Dynamics' (Spencer, £530k); ESRC 'Working Beyond the Border' (Smith, £500k); Leverhulme Trust 'Making Speech' (Ogborn, £140k); Leverhulme Trust: 'The Political Anatomy Of Digital Healthcare In India (Williams, £99k); British Academy: 'Surviving Violence: Everyday Resilience and Gender Justice in Rural-Urban India (Williams, £282k) 'Disciplining the Remittance Marketplace' (Datta, £92k) and 'The Breckland Project' (Lewis, £255k); four Leverhulme Fellowships (Ebbensgaard, Kumar, Johnson, Materka, £309k total); four British Academy Post-Doctoral Fellowships: Speer (£100k), Guillen (£372k), Inverardi-Ferri (£302k), Soares, (£240k); five ESRC LISS DTP Post-Doctoral Fellowships (£490k); partner in four doctoral training partnerships – ESRC LISS DTP with Imperial and KCL, AHRC LAHP2, NERC London DTP2, Leverhulme Doctoral Studentships on Mobile People (£1m) with other QMUL Schools.

Operational Infrastructure: Research and impact have been supported by a full-time Research Manager from August 2014 who has responsibility for pre- and post-award management of all research grants, as well as responsibility for overseeing impact arrangements in the School. Oversight of research continues to be undertaken by the DoR and the RGSC which is an inclusive forum whose membership includes academic and PGR research theme co-leads; Academic Lead for Impact; Graduate School Directors, PGR and postdoctoral representatives; Laboratory and Facilities Manager, and the Research Manager. The School's research and impact activities are also actively supported by the HSS Dean for Research and the faculty Research Manager (see REF5a).

Technical Infrastructure: Physical Geography and Environmental Science research is supported by extensive laboratory facilities and 3.0FTE technical staff, with additional staff hired during periods of high demand. Investment in equipment since 2014 has emphasised

improvements in facilities that enable new interdisciplinary collaborations and consolidating existing world-leading activities. Our **micromorphology suite** (supported by £130k of QMUL infrastructure funding) has enhanced capabilities for the 3D characterisation of nano to microscale sediment structure. Use of this equipment has generated new understanding of structure-function relationships in depositional coastal environments; enabled new interdisciplinary collaborations with material scientists (QMUL, School of Engineering and Material Science), national and international engineer end-users (HR Wallingford UK, Deltares NI); and supported publications in journals such as *Science of the Total Environment* and *Environmental Science and Technology*. Our **Geospatial and Numerical Modelling Facility** (£124k), equipped with high-performance workstations and specialist software for remote sensing, geomatics and hydro/morphodynamic modelling applications, has facilitated computationally-intensive Erasmus-Mundus and NERC-funded research by 12 PDRAs and PhD students (published in *Water Resources Research*, *Earth Science Reviews*, *WIREs Water*, *Environmental Modelling and Software*) and included the development of a novel toolbox for understanding braided river morphodynamics. The **analytical suite** for chemical analysis of water, gases, soils and sediments (including ICP-OES, ICP-MS, GC-ECD/FID, ion exchange chromatography, PSA and TOC/DOC analysers) and for characterising organic matter (£200k) has supported NERC and Defra-funded collaborations (e.g. CEH Bangor, Essex and Leeds University) examining transformations of nutrients across land-water-atmospheric interfaces; underpinning research to demonstrate the importance of ebullition as a methane transport pathway in lowland peatlands, and providing data to parameterise models of catchment-scale nitrogen cycling and transport published in journals such as *Nature Geoscience*, *Hydrological and Earth System Sciences*, *JGR Biogeosciences* and *Water Resources Research* and *Science of the Total Environment*.

Our **state-of-the-art field equipment** includes terrestrial laser scanning and differential GPS surveying equipment, DGI Phantom drones and Acoustic Doppler Velocimeters for high frequency flow measurements. Investment in innovative high resolution scanning and surveying techniques are enabling NERC-funded research to investigate forest health, legacy impacts of drought and the impacts of disease on forest structure in Mediterranean ecosystems. High frequency aquatic measurements of flow and turbulence are enabling collaboration with European partners (Trento, Berlin, Florence) to assess fish habitat and inform restoration practice in alpine and temperate river systems. The Laboratory Facilities also comprise a **river laboratory** for small-scale physical modelling experiments relating to hydraulics, sediment transport and morphodynamics; and a palaeoenvironmental suite to help reconstruct past environments.

Equipment within the School has directly benefited impact work, particularly the analytical work that underpinned the findings on *Historic Coastal Landfill and Legacy Waste*. As part of Spencer's contribution to a BBC4 documentary, *The Secret Life of Landfill: A Rubbish History*, samples were collected at sites near London by our technicians and Spencer with the documentary team; these were analysed in our laboratories and the results used in the final documentary. Impact has been further supported through workshops run by the Academic Lead for Impact and Research Manager on approaches to impact, using case studies from the School. Funding has been secured through QMUL internal funds to support new and ongoing impact, including: work on invasive crayfish species and their effects on river bank erosion, evidence-informed policymaking in Uganda, the implications of demonetisation on the Indian real estate market, as well as supporting impact activities for two of our four submitted case studies: (dissemination research on the toxic legacy of landfill sites and assisting with the running of training courses related the *Modular River Survey*).

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

Driven by our strategic aim 'to maintain and further enhance a stimulating, outward-looking and sustainable research environment' the School has encouraged **collaborations** with academic colleagues at the local, national and international level. Formal collaborations through funded research projects have been: UKRI/AHRC Covid-19 project with The Museum of the Home and The Royal Geographical Society (with IBG) (Blunt, £393k to Geography, £500k total); UKRI Covid-19 bid with UCL and SOAS (Datta, £334k to Geography, £407k total); NERC RESIST (UK) with Cambridge (Spencer, £328,927 to Geography, total £724k); ESRC Working Beyond the Border with Warwick (Smith, £295,486 to Geography, total £500k); and Leverhulme Trust The Breckland Project with The British Museum (£244,792 to Geography, total £256k).

Interdisciplinary research is evident through research collaborations with Engineering & Materials Science (NERC funded), Business Management and Law (ESRC funded), English & Drama (ESRC funded research), Biological and Chemical Sciences, and through joint inter-School PhD projects. Support is provided at the university level through the Vice Principal for Research Advisory Group, which facilitates applications to cross-disciplinary funding calls that require a coordinated approach across the University (e.g. Leverhulme Research Centres, Global Challenges Research Fund calls) and through new cross-faculty University Research Institutes (see REF5a). Cross-disciplinary projects have been supported by funding from QMUL's Public Engagement, HSS Collaborative, Life Sciences Institute, and CritiQues funds.

The School's **contributions to the wider research base** include two consecutive Vice-Presidents (Research and HE) of the Royal Geographical Society (with IBG) (Smith, 2015-19; Blunt, 2019-23); founder of the Latin American Geographies Working Group of the RGS (Halvorsen); seven journal editorships (GEO: Geography and Environment, Journal of Historical Geography, European Urban and Regional Studies, Geography and Environment, Geography Compass, Journal of Victorian Culture); twenty-four additional editorial roles, as subject, co-, associate, guest, or advisory editorial board members (Area, Journal of Latin American Geography, Forced Migration Review, Economic Geography, Estuarine and Coastal Shelf Science, Feminist Review, Third World Thematics, River Research & Applications, City, Urban Geography, Health & Place, Social Science and Medicine; Water Resources Research, Soils & Sediments, WIREs Water, Earth Surfaces Processes, Cultural Geographies, Social and Cultural Geography, Media and Environment). Staff have made significant contributions to peer-review and programme development with national and international research funding bodies. They include: Chair (Belyea) and member (Spencer) of NERC Strategic Programme Area scoping groups; programme review panel (Spencer) for UKRI; programme development for AHRC, ESRC and NORDFORSK (Datta); membership of peer review colleges for the major UK research councils (AHRC, ESRC, NERC, UKRI) and of other UK funders (Leverhulme, British Academy, Royal Geographical Society) and internationally including the Academy of Finland (Nash), Russian Science Foundation (Belyea), Canada Research Chairs Program (Belyea), ERSC Open Research Area funding panel with French, Dutch and German Research Councils (Smith).

Peer review of grants has included AHRC, ESRC, NERC, The British Academy, The Leverhulme Trust, Newton Fund in the UK, ISRF, and, internationally, ECR Horizon 2020, Swiss National Science Foundation, Irish Research Council, The Royal Irish Academy, the Austrian Science Fund, Canada Research Chairs Program, Russian Science Foundation, US National Science Foundation and staff have undertaken reviews of articles for over 100 leading international journals. Staff have worked closely with academic colleagues at a wide range of

UK universities, including Cranfield, KCL, Westminster, Centre for Ecology & Hydrology (Gurnell); UCL, University of the West of England (Harvey); Warwick (Smith); Cambridge, Southampton (Spencer); Newcastle, LSE, Cambridge (Williams); Exeter, Cardiff (May); UCL and Birkbeck (Horne). The contribution of staff to the research base is recognised through prestigious research prizes including the Philip Leverhulme Prize and Political Geography book prize to Williams, the European Geosciences Union Alfred Wegener Medal to Gurnell.

PGR Training: Geography at QMUL has been a partner in six research council funded doctoral training programmes during the REF census period – ESRC London Social Science DTP with Goldsmiths (2011-2016); ESRC London Interdisciplinary Social Science DTP with King's College London and Imperial College London (2016-); AHRC London Arts and Humanities Partnership (with eight HEI partners and >300 PhD students and Directed by Blunt, 2019-); NERC London DTP1 and DTP2 with UCL, Birkbeck, Kings College London, Royal Holloway, Brunel, Institute of Zoology, Royal Botanic Gardens (DTP1 only), Natural History Museum (2019-). In addition, the School was instrumental in attracting £1m in funding from the Leverhulme Trust for a Doctoral Scholarship programme on Mobile People. This programme is an interdisciplinary partnership with schools across the Faculty of Humanities & Social Sciences. ERASMUS SMART European Joint Doctorate with Trento and the Freie Universitat Berlin concluded during the census period and accepted its final cohort in 2016.

As stated in REF5b 2014, one of our key aims for this REF period was to embed impact more fully within the School's research culture. The School's strategies for 2015-2019 and 2019-2024 include the specific objectives: to inspire and inform the public about the School's research; to disseminate research findings proactively to academic and research users; to enhance the influence of School research on decision or behaviours in appropriate spheres; and to demonstrate and evidence the public benefit of School research. In practice, these objectives are supported by the School's Research Manager and Academic Lead for Impact: meetings are held with academic staff to discuss their impact plans and activities; impacts are included in annual appraisals and probation meetings; workshops and presentations to the School Board have been made to staff and PGR students to promote impact; internal funding of £30.5k has been secured to support the generation of impact or gather evidence for impact already occurring.

The University is committed to supporting impact through the appointment of impact support officers at University and Faculty level. Support for external collaborations is provided through Research Partnership Managers in QMUL's Business Development Office, and through QMUL Innovation which offers advice on intellectual property and developing ideas for business/industry application. Staff have benefited from support provided by the GCRF research development team at QMUL who assist in developing cross-disciplinary bids for internal and external GCRF funding opportunities (e.g. internal funding of £37.7k to the KIN: Health group).

Individual staff members, or teams of staff, have engaged with a range of external stakeholders to develop impact during the census period in addition to the impact captured in the impact case studies. Examples include, Kerry Holden's ongoing work on the role of evidence in policymaking in Uganda, which has engaged with parliamentarians, the Prime Minister's Office and local UN Development Programme representatives, through a number of engagement, including a series of workshops held in November 2017 that looked at building the research capacities of the Ugandan parliament to address the sustainable development goals; Peter Congdon's long-standing work in public health led to a social fragmentation index he developed in relation to

wellbeing indicators being recommended for use by public agencies through the Public Health England Joint Strategic Need Assessment processes; Jon May's research has increased public and government understanding of the widespread use of foodbanks in Britain under austerity and has shaped progressive practice through the Independent Food Aid Network he co-founded. Further impact work has engaged with the National Trust, the River Restoration Centre and Brazilian NGOs on river management and invasive species (Harvey); water management with Thames Water (Heppell). Other key collaborations non-academic institutions include: The Museum of the Home, V&A Museum of Childhood, Ragged School Museum, Bank of England, British Museum, Natural History Museum, HR Wallingford, Canal & River Trust, Environment Agency, DEFRA, Deltares (Netherlands), National Maritime Museum, the Broads Authority, Friends of the Earth, Citizens UK, Natural England, Runnymede Trust, and the Irish Environmental Protection Agency.

Our impact case studies foreground four exemplary cases within the wide and diverse range of ways that our research contributes to society. They include important contributions to practices of public environmental assessment (Gurnell and Wharton), labour policy (Smith), coastal waste management policy (Spencer) and museum practice (Blunt).