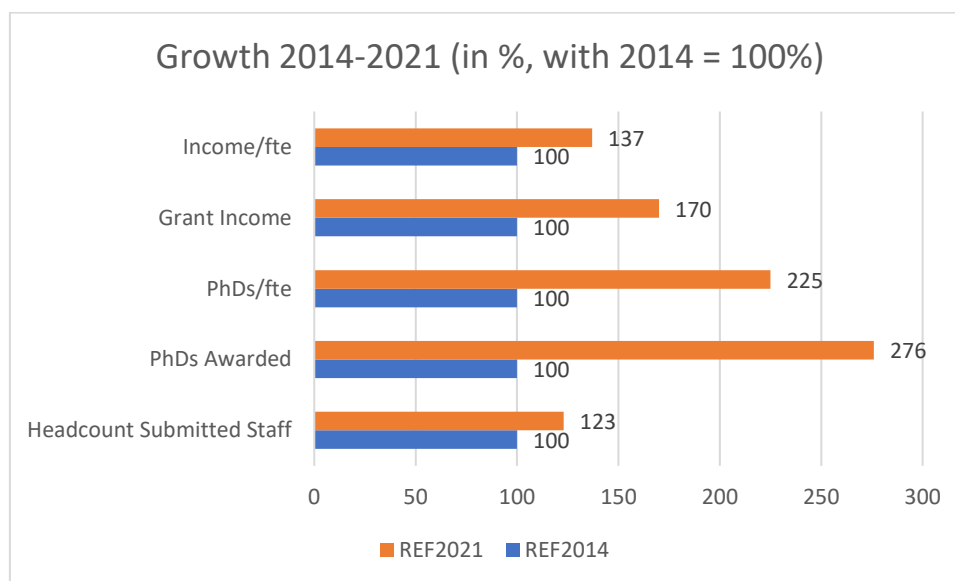


Institution: University of Glasgow
Unit of Assessment: 14, Human Geography
1. Unit context and structure, research and impact strategy

Context and structure

We open by repeating words from our REF2014 submission about “our vision [being] constantly to surprise the wider (inter)disciplinary community with what our relatively small research cluster can accomplish at the cutting-edge of contemporary human geography.” These sentiments continue perfectly to capture what Human Geography at the University of Glasgow (UofG) is all about and what we wish to contribute. The graph below outlines the unit’s growing research environment from REF2014 to REF2021.



This submission is one component of a two-part REF return from the **School of Geographical and Earth Sciences (GES)**, UofG. GES’s research interests straddle UoAs7 and 14. Continuing our approach in RAE2008 and REF2014, we return our Earth Systems Research Group (ESRG) to UoA7 and our Human Geography Research Group (HGRG) to UoA14. The School is institutionally located within the College of Science and Engineering (CoSE), but HGRG also possesses interdisciplinary links with staff/initiatives in the three other UofG Colleges: Arts (CoA); Social Sciences (CoSS); and Medical, Veterinary and Life Sciences (MVLS).

HGRG undertakes high-quality research, scholarship and publication at the intersections of political, cultural, health, historical and environmental geographies, with interdisciplinary dimensions, consistently working between the challenges of advanced theory, the rigours of deep-empirical encounter and the possibilities for engagement beyond the academy. In particular, we make leading contributions to geographical work on mental ill-health, cultural practices, political solidarities, feminist materialisms and more-than-human ontologies. Equality and diversity (E&D) principles and support for early career staff set the compass for our internal staffing/structures and for what and how we research, write, teach and outreach.

Research focuses around three intersecting themes (**Ts**), strategically reworked from REF2014. All HGRG researchers engage with at least one theme and each involves different combinations of researchers. Researchers in **bold** below are the 16 Category A staff reported in REF1; those in *italics* are individuals leaving HGRG during the REF assessment period; and those in plain are colleagues external to HGRG or joining after the REF2021 Census date.

T1 Spatial politics and practices (SPP): T1 examines space-politics relations and explores the practices, processes and contestations shaping them, past and present, in both Global North and South. Pioneering contributions by **Featherstone**, conceptualising ‘spatial politics’, are

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complemented by work on: labour struggles, racialised internationalisms and subaltern solidarities (**Featherstone, Kelliher, Sharp**); public spaces and ‘the post-political’ (**Karaliotas**); public architecture, ruination and rehabilitation (**Arboleda, Olden**); migrant and other communities pressed by austerity/Brexit (**Botterill**); ‘the right to the city’ for missing people (**Parr**); ‘post-secularisation’, ‘acid communism’ and new urban activisms (**Sutherland**); and the ‘quiet politics’ of ‘being-together’ and ‘emotional citizenry’ (*Askins*). Further contributions arise as spatial politics meets geopolitics, where the more-than-human geographies of earth, bodies and machines become centralised: notably in landmark statements about feminist-materialist geopolitics (**Dixon**) and the ‘dronification’ of surveillance and governance (**Shaw**), linked to claims about the progressive ‘enclosures’ of atmospheric and marine ‘commons’ (**Cardwell, Shaw**). **T1** is informed by post/decolonial theory, subaltern studies and ‘New Left’ social history (**Featherstone, Kelliher**), Rancière’s radical political theory (**Karaliotas**), ‘Frankfurt’ critical theory (**Philo**), poststructural feminism (**Dixon**), poststructural-speculative realism (**Shaw**), and more.

T2 Creative geohumanities (CG): **T2** examines how worlds, from the personal to the planetary, are imagined and represented, fashioning new forms of geographical knowledge through creative practice. Inspired by **Dixon** on arts-science collaborations and *Lorimer’s* narration of place and essaying of science, nature-writing and domesticity (also **Naylor**), **T2** initiates diverse geohumanistic interventions. Methodologies employed include site-specific studies, creative storying, audio-drifts, film-making, visual arts, object-handling and digital technologies. New appointment **Callard**, previously Director of ‘Hubbub’ at the Wellcome Collection, leads innovative re-presentations and exhibitions of interdisciplinary inquiries between neurosciences, social sciences and humanities into ‘wandering minds’ and ‘resting states’; **McGeachan** offers careful inspection of *Art Extraordinary* produced by mentally unwell occupants of asylums/mental hospitals/secure units, linking into creative workshops with vulnerable people in the present; **Parr** ‘stories’ how returned missing people have deployed space as cover and resource, alongside sensitively recovering the emotional ‘grief’ felt by families of still-missing people; and **Arboleda** and **Olden** rework the aesthetics of ruination, providing creative interventions that reconvene the affective sensibilities of redundant places. Archival inquiry discloses how instruments and technologies become embodied within ‘weather worlds’ at sea, up hills, in gardens and across imperial networks (**Naylor**), while interview and participative inquiry discloses fluid topographies of ‘the fisherly imagination’ (**Cardwell**).

T3 Stressed environments and communities (SEC): **T3** examines how environments and communities become stressed. ‘Stress’ – a concept central to HGRG interests in mental ill-health (**Callard, McGeachan, Parr, Philo**) – is often discussed in connection with human and ecosystem health, referring to mental or physical pressure upon person or environment. It informs our work across human and more-than-human communities, encompassing diverse geochemical, biological, economic, cultural and emotional effects on communities and their home-places. It arises from climate/environmental change, but also from unemployment, austerity, new right populisms and other trajectories of demographic, political, economic and technological restructuring (**Botterill, Callard, Featherstone, Karaliotas, Sharp, Shaw, Sutherland**). **T3** asks about ‘violent conditions’ leading stress to be disproportionality materialised, experienced and resisted across multiple life-worlds, such that certain lives in certain times/places become demeaned, diminished and devalued (**Laurie, Shaw**), often with dire consequences for ‘marginal’ human groupings (**Botterill, Parr, Philo**). **T3** is concerned not only with contemporary threats posed to skies and seas (**Cardwell, Shaw**), infrastructures and architectures (**Arboleda, Karaliotas**), but also with how a distinctively geographical approach to studying such stresses can help in fostering new spaces, impacts and modes of being-in-common (*Askins*, **Sutherland**) that are less stressed, less fractured, more caring.

Governance: HGRG has a democratic organisational structure, with all members able to influence strategy and practice, although regular ‘business meetings’ are held by the core staff (R&T) and independent postdoctoral researchers (PDRs) to discuss – and decide upon – high-level issues regarding research strategy, group finances and relations with other bodies (in GES, CoSE, UofG and beyond). HGRG’s Convener (currently **Naylor**) oversees governance of the group and formally represents HGRG at GES Research Planning and Strategy Committee (RPSC), itself chaired for

Unit-level environment template (REF5b)

much of the assessment period by *Lorimer*. The business of the RPSC addresses overall research strategy, ‘blue skies’ thinking and routine business (e.g. allocation/monitoring of research leave, ‘seed-corn’ funding, etc.). REF preparation is the responsibility of HGRG REF Research and Impact Champions (**Philo, Parr**), with substantial input from other HGRG members. Annual Performance and Development Reviews (P&DRs) with core staff and PDRs are conducted by the Head of School (HoS) or his/her delegates, addressing achievements against strategic aims in research performance (including ‘targets’ from GES/CoSE/UofG strategic plans).

Culture: We foster an inclusive ethos encouraging collaborations between varying cohorts of staff, leading to shared paper-writing, grant applications, co-supervision, conference organisation and running of workshops/exhibitions. Intellectual and strategic engagement between all HGRG members (professors to postgraduates) occurs in fortnightly meetings during semesters, called TESTING GROUNDS, which include: multi-media introductions to current research by HGRG and external scholars; round-table discussions of writing plans and grant proposals; sessions on how to recycle and rethink ‘failures’; workshops based on ‘data’ from ongoing studies; and presentations by PhD (PGR [research postgraduate]) and MRes (PGT [taught postgraduate]) students. Matters of research integrity, including ethical research procedure and practice, referencing UofG/funder protocols, are foregrounded. E&D principles embedded in our reflexive, evolving research culture have guided the establishment of a new interdisciplinary reading group for indigenous philosophy.

Research strategy

Delivering research strategy, past to present: Our REF2014 headline aim was to be “demonstrating (inter)disciplinary leadership across all themes, through publication, research activities, sustained theoretical development, [and] innovating methodologically and presentationally,” thereby securing the vitality of HGRG’s intellectual, scholarly and ‘applied’ accomplishments. This aim has been achieved, evidenced in the thematic account of our work given above and elaborated further, explaining our substantial ‘contribution to the research base’, in **Section 4**.

One subsidiary aim was to continue a process began in RAE2008 of facilitating collaborations between different pairs/groupings of HGRG members, notably senior/mid-career staff with early-career staff thereby enhancing group cohesion, capacity-building and, overall, securing the longer-term sustainability of HGRG. Again, this aim has been achieved, with collaborations ongoing – leading to publications, grant activity and impact initiatives – between **Featherstone** and **Karaliotas** (spatial politics of austerity), **Featherstone** and **Kelliher** (solidarities between unions, social movements and the Labour Left), *Lorimer* and **Olden** (the arts in healthy place-marking), **Parr, Philo** (and now **Callard**) and **McGeachan** (rethinking/representing mental ill-health geographies), *Sharp* and **Laurie** (on Global South healthcare), and **Shaw** and **Laurie** (on geographies of violence). **Botterill** and **Cardwell**, with advice from senior colleagues, secured ESRC-SGSSS funding for a collaborative PhD on geographies of fisheries and migrant labour.

A second subsidiary aim was to author more monographs, also achieved, and we are returning four in REF2: two substantial single-authored monographs on feminist-materialist geopolitics (**Dixon**) and the ‘dronification’ of aerial governance-surveillance (**Shaw**); one experimental investigation of interdisciplinarity between arts, neurosciences and social sciences (**Callard**); and one co-authored inquiry into the multiple geographies of ‘post-secularisation’ (**Sutherland**). Three books designed for readerships beyond the academy have also been produced: see below under ‘open access’.

An internal UofG post-REF2014 review generated further strategic aims. We decided to reorganise our research themes, given changes in staffing, UofG research ‘Beacons’ and wider research funding scenarios. All HGRG staff participated in this reorientation, reducing our themes from four to three. We reformulated our previous theme ‘Subaltern Globalisations’ into a tighter focus on spatial politics (**T1**), and our previous theme ‘Knowing, Creativity and Experiment’ into a deepened encounter between human geography and the humanities (**T2**). Our previous themes ‘Vital Geographies’ and ‘Stressed Environments and Communities’ were combined, keeping the latter nomenclature (**T3**). The theme of stress was initially suggested in our REF2008 submission and reflects long-standing mental ill-health geographies research by **McGeachan, Parr, Philo** (and now **Callard**) and

Unit-level environment template (REF5b)

PDR/PGR/PGT researchers (<http://asylumspaces.wordpress.com>). ‘Less-than-human geographies’, a widely-cited idea from **Philo**, becomes a frame here for thinking how climate change, neoliberalism and other pressures circumscribe the places for the living of flourishing, dignified human lives.

Our staffing strategy since REF2014 has centred on staff and PDR appointments fitting with the new themes through their own research foci, publications and grant activity, as elaborated in **Section 2**. Notably, we have foregrounded SEC for appointments (e.g. **Callard, Cardwell**), alongside developing it as a ‘bridge’ to ESRG for forging new shared initiatives (e.g. **Dixon** working with a remote sensor in Global Challenges Research Fund (GCRF) projects; **Dixon, Naylor** and **Parr** co-supervising PGRs with ESRG members). Subsidiary aims from our post-REF2014 review called for growing PGR recruitment and research income generation, and our progress on these counts is detailed in **Sections 2** and **3**.

Future research strategy: Our headline research aim remains the same as stated above from REF2014, “demonstrating (inter)disciplinary leadership across all ... themes.” More practically, we will continue ensuring that this aim – informed by E&D principles (**Section 2**) – allies with future appointments. The SEC emphasis will continue in much of our strategising: we are seeking to put this theme on the wider map of CoSE/UofG, including proposals for coordinating new interdisciplinary agendas, and – with GES Director of Research and Professor of Earth Sciences, Toney – we are placing a concern for Anthropocenic stress, including the psychological dimensions of climate change, at the heart of how UofG will in future respond to ‘climate emergency’ (**Section 4**). We will explore possibilities for new and alternative forms of computational human geography with Basiri, very recent ESRG professorial appointment and UKRI ‘Future Leader’ in geospatial analysis.

Impact strategy

Delivering impact strategy, past to present: Impact – our ‘worldly work’; our academic work *in* the world – has long been central to our research ethos. In RAE2008 we spoke of “moving readily from the conceptual to the substantive to the engaged,” adding that “HGRG is committed to engaging with end-user communities, broadly conceived.” This ethos was elaborated in our REF2014 submission, where we explained how, “for us, impact is not something separate from core research, but rather we endeavour, from the outset ..., to undertake studies of relevance and importance *to* the communities with and on whose behalf we work.” We devise research so that collaborating partners and participating subjects – with whom we conceive research questions/methods *and* who then explicitly participate in our inquiries – are *also* configured as non-academic beneficiaries (users) of outcomes from this research. We treat these partners/subjects/users as co-producers of ‘useful’ knowledge, and we respect and, where possible, enhance *their* capacity to use *our* research creatively, critically and tactically for their own purposes.

We foster enduring relationships with key partners/subjects/users, usually through becoming immersed within the situations under study, striving to build trust with the actors involved. We exemplify this approach through our two impact case studies (**ICSs**) (**McGeachan** and **Parr**), both of which depend upon building trust *simultaneously* with policy and practice communities (Scottish government, Police Training College, national Missing Persons charity, Glasgow Life/Museums, local health/care groups) *and* ground-level peoples, places and life-worlds (mental healthcare professionals, police officers, prison service staff, museum/exhibition curators, returned missing people, families of missing people, people with enduring mental health problems, people in long-term detention).

Immediately post-REF2014, we formalised our HGRG impact governance, creating an HGRG Impact Committee (IC), convened by **Parr**, with a 5-year Impact Action Plan ensuring that HGRG supports world-leading, research-led impact and knowledge-exchange, permeating all research activities, events, communications and business meetings. We consciously build on the work of generations of HGRG academics, producing a ‘geography that matters’ in our ‘worldly work’. All staff contribute to an overall matrix of impactful endeavour beyond our **ICSs** (**Section 4**). We have strengthened HGRG understanding of the wider (UKRI, REF) impact agenda: IC members meet all staff biannually to discuss individual impact activity, with follow-up planning where appropriate; while a targeted

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programme of HGRG events has distributed learning resources and discussed definitions of research impact, knowledge exchange and public engagement. A ‘peer learning’ conference in December 2016 shared progress/evidence of research impact from staff at different stages along impact ‘pipelines’ from conception to enactment, illustrating impact with a variety of non-academic constituencies. We have also collaborated in a ‘whole School approach’ through a GES ‘Research Impact’ event in January 2018 planning how to maximise research impact for REF2021 and visioning longer-term impact development strategies.

We hold internal debates about balancing our HGRG tradition of engaged, often critical ‘worldly work’ with the need for evidenced impact required by sector audits. Such debate shapes our distinctive biennial *How Critical is Research Impact?* national conference for postgraduates (PGR/PGT) and PDRs, with external speakers complementing inputs from HGRG staff and postgraduates. We have run three such ‘training conferences’ – with support from the Scottish Graduate School of Social Sciences (SGSSS) – in December 2015, 2017 and 2019, each time for 30-50 participants from across the UK, ensuring that HGRG performs a distinctive training-translational role within the orbit of UK Geography impact activity.

Future impact strategy: Our impact aim going forward will continue the formalisation of impact governance post-REF2021, while ensuring that spontaneous opportunities arising to be impactful are not neglected. We will emphasise meaningful co-production, collaborating flexibly with diverse partners across government, voluntary and arts sectors, local communities and campaigning, activist and grassroots organisations. We will engage new generations of impactful researchers from undergraduates to PGR/PGT students to PDRs, using our biennial conferences but also with other planned initiatives, always treating impact as much more than just an audit flag. We will lobby at CoSE/UofG levels for strategic investment in ‘nimble’ mechanisms such as teaching relief to realise fast-moving research-impact opportunities. We will provide effective leadership throughout CoSE/UofG to ensure that multiple forms of evidenced impact are understood and strategically supported.

A specific strategy has entailed enrolling regional NGOs to amplify HGRG-NGO research partnerships across academic-community boundaries. In late-2017 an invitation from the HGRG IC to Glasgow’s Social Enterprise Network (linking c.40 NGOs) to discuss sharing PGR-led research resulted in ten organisational responses, three being substantially explored and one securing an ESRC Collaborative PhD award in September 2019. This is a good practice model for the building of co-production opportunities *for and with* the city of Glasgow. A new MSc (‘Earth Futures’), commencing September 2020, includes internships with local organisations beyond the academy, suggesting a complementary route for HGRG/GES impact networking.

Interdisciplinarity

HGRG is inherently and strategically interdisciplinary. All staff are involved in collaborative activity with scholars across a diversity of cognate academic fields, institutionally, nationally and internationally. Interdisciplinary working with colleagues in ESRC and elsewhere in UofG is ‘second nature’, fuelled by both our critical-scholarly values and planned engagement with UofG initiatives (such as the Kelvin-Smith PGR scheme, requiring co-supervision across Schools/Colleges). Recent strategic appointment **Callard** is an acknowledged theorist-practitioner of interdisciplinarity, and her inquiries into the potentials, pitfalls and tactics of interdisciplinarity working will become integral to HGRG’s future planning.

Examples of our interdisciplinarity pervade **Sections 3 and 4** (especially references to contributions by **Dixon** and **Laurie**) and are reflected in: **Callard** as Interdisciplinary Advisor on REF2021 Main Panel C; published outputs spanning disciplinary fields (30+% outputs listed in REF2 are from non-Geography journals/collections); leading interdisciplinary groups, events and symposia (e.g. **Parr**: cross-UofG ‘Climate Change and Mental Health’ group; **Naylor**: SAGES-funded ‘Survey Sciences’ event, 2017; **Featherstone** and **Karaliotas**: ‘After Neoliberalism’ event, 2015); invitations/requests to lead/participate in interdisciplinary research initiatives/networks (e.g. **Philo** invited to lead interdisciplinary workshop for the Royal Society of Edinburgh/Taiwanese Ministry of Science and

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Technology on 'Global Challenges', 2019); and PGR co-supervision with staff across all four UofG colleges.

Opening our research environment

We are committed to creating 'open, accessible geographies', a key dimension of T2. We make pre-publication versions of our academic publications publicly accessible through the UofG Library Enlighten repository, wherein HGRG has a 95+% compliance rate for depositing 'in scope' outputs.

We also reach beyond official requirements and make available research materials through easy-to-access book and/or online mediums: including *Askins's* anti-nuclear war 'spatial fiction' or 'miniature chapbook' *A Nuclear Refrain* (<https://punctumbooks.com/titles/a-nuclear-refrain-emotion-empire-and-the-democratic-potential-of-protest/>); **Featherstone** and **Kelliher's** edited compendium of miners' recollections in *London and the 1984-5 Miners' Strike* (<https://drive.google.com/file/d/1tYvx2hgKMeSkiPeYV-psOXmFR4fHc5QOc/view>); **Parr, Stevenson et al's** 'stories' in *Geographies of Missing People* (<https://geographiesof-missingpeople.org.uk/>); **Philo** and **Högström's** 'living archive' at GART-PSYSPAC: *Psychiatry in Transition* (<https://gart-psyspac.eu/>); and **Shaw** and **Waterstone's** *Wageless Life: A Manifesto for a Future Beyond* (<https://www.upress.umn.edu/bookdivision/books/wageless-life> [cheap e-book]).

2. People

Staffing strategy and staff development

[Text below reflects 'people' returned on Census date, 2020. **Cardwell** and **Shaw** have since departed: replacements are being recruited, alongside a fixed-term lecturer to cover **Kelliher** during his BA Fellowship.]

Core staff: HGRG has a small but dynamic core of 13 R&T staff (**Botterill, Callard, Cardwell, Dixon, Featherstone, Karaliotas, Kelliher, Laurie, McGeachan, Naylor, Parr, Philo, Shaw**) alongside 3 PDRs returned as Category A (**Arboleda, Olden, Sutherland**), reflecting growth since REF2014, when the corresponding figures were 11 and 2. Supplemented by postgraduates and a mix of retired staff, honorary fellows and visiting scholars, HGRG has consistently enjoyed a *total* membership of c.30-40 people, creating a critical mass not immediately apparent from the size of our REF submission. Since REF2014 there has been staff turn-over: early in the assessment period, *Karaman* left for a senior research position, while more recently *Lorimer* and *Sharp* left for Chair positions elsewhere, and *Askins*, employed as fixed-term, externally-funded Senior Researcher 2014-2019, has left academia to pursue participatory practices. These departures, reflecting positive professional and personal choices, opened new opportunities to reframe/rebalance HGRG with a strategic eye to both research themes and E&D agendas.

The gender balance has improved since REF2014 with the appointments or re-gradings of **Botterill, Callard, Cardwell, Laurie** and **McGeachan**, meaning that now more than half of our R&T staff are women (7/13 [53.8%]; cf. equivalent figure 39.3% across UK Geography) as are three-quarters of our professors (3/4; cf. 20.7% across all SET subjects: comparative statistics from *Advance HE: Equality and Higher Education, Staff Statistical Report 2018*). **Parr** was promoted to Chair in 2015, having been part-time following maternity leave 2009-2014. HGRG staff ethnic composition remains exclusively 'white European', an issue that we acknowledge and will address strategically going forward (see below).

To strengthen our sustainability, after REF2014 we set the strategic aim of increasing our R&T staff headcount by two, achieved in 2018 through Lecturer-level appointments of **Botterill** (augmenting T1 and T3 capacities) and **Cardwell** (T1, T2, T3). Previously, the departure of *Karaman* allowed the Lecturer-level appointment of **Karaliotas** (T1, T3), while the departures of *Lorimer* and *Sharp* led in 2020 to Chair appointment of **Callard** (T2, T3) and Lecturer appointment (initially held concurrently with BA Fellowship) of **Kelliher** (T1, T3). On balance, we will have reached our target of 13 R&T staff (+2 from REF2014). That CoSE has sanctioned both 'new' and 'replacement' appointments signals

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internal recognition of, and trust in, HGRG accomplishment and strategic direction. The demographics of HGRG R&T staff are sustainable, with only **Philo** retiring before REF2028. **Arboleda, Cardwell, Laurie, Kelliher, Olden** and **Sutherland** are all ECRs (on REF2021 criteria).

Staff career progression is evidenced by promotions of **Parr** to Chair, **Featherstone** to Reader and **Shaw** to Senior Lecturer, while both **Laurie** and **McGeachan** – reflecting their research trajectories and actively encouraged (and lobbied for) by HGRG – have translated from Teaching-only to Research-and-Teaching (R&T) Lectureships. **McGeachan** held a temporary R&T contract for REF2014, a status then made ‘permanent’ as a further acknowledgement from CoSE of the vitality of HGRG. That **Laurie** and **McGeachan** have progressed from undergraduate to Lectureship status at UofG demonstrates the enabling ethos of HGRG/GES, for which we were explicitly recognised in our Athena SWAN *Silver Award* (see below).

Postdoctoral staff: We are committed to strong mentorship for PDRs who energise HGRG activity and subsequently comprise the human resources of the wider discipline/academia. PDRs funded from external sources have long been central to HGRG, with **Olden** holding an AHRC Collaborative Fellowship (2019-2022) and Boyle just appointed to an SGSSS-ESRC Postdoctoral Fellowship (2020-2021). Two other ex-PDRs have successfully translated into lecturing posts: *Davis* (Sociology, UofG); *Last* (Geography, Leicester).

HGRG has benefitted from a close relationship with the Urban Studies Foundation (USF) and its mission to promote high-quality urban research at UofG and globally. A 5-year USF investment plan in HGRG was agreed in Winter 2012, *prior* to and *independent* of **Philo** becoming USF Chair (**Section 4**), releasing c.£1.0M for (competitive) appointments of both *Askins* (2014-2019) to Senior Researcher and ECRs to PDR positions. Since REF2014 we have hosted 6 exceptional USF PDRs pursuing independent research agendas, collaborating with and mentored by HGRG staff: **Sutherland** (2020-2023) has just commenced; **Arboleda** (2018-2021) is ongoing; **Kelliher** (2017-2020) migrated on to a 3-year BA Fellowship with us from 2020 (as well as being appointed to a Lectureship); **Karaliotas** (2014-2016) took another Fellowship elsewhere before returning to us as Lecturer in 2017; *McLean* (2014-2017) migrated on to a 2-year ESRC ‘New Investigator’ Fellowship with us (2017-2019); and *Lang* (2015-2017) took a Lectureship in North America.

Shaw was a USF PDR with us before becoming an ESRC ‘Future Leader’ Fellow, securing a Lectureship (now Senior Lectureship) with us just before REF2014: his is a further example of successful, strategically-managed career progression within HGRG/GES. The trajectories of both **Karaliotas** and **Kelliher** from USF Fellow to Lecturer (**Karaliotas** with a break elsewhere; **Kelliher** now in tandem with his BA Fellowship) offer similar evidence of strategically enabling career progression for high-quality ECRs aligned with thematic priorities.

Staff development: Mechanisms for staff development are substantial at UofG. Standard mechanisms include: Annual P&DR, combining continuous reporting, monitoring and recalibrating of SMART objectives with in-depth discussion of ambitions and concerns; and the deployment of research leave, conference and equipment support, ‘seed-corn’ research priming and facilitation of impact work (decided by GES RPSC). UofG offers numerous events, workshops and training badged ‘Researcher Development’ (<http://www.gla.ac.uk/myglasgow/research/development>), with annual Research Conferences and the ‘Glasgow Crucible’. Within GES, annual Away Days/Mornings conjoin research visioning with wider staff development content, while events relevant to career development, with a specific but not exclusive E&D emphasis, are run under the auspices of E@D (see below).

P&DR includes an explicit advice-and-guidance role, which is of particular value for ECRs (as defined by REF2021), who also have a dedicated Mentor allocated in consultation with the HoS: a senior academic staff member familiar with the individual’s academic interests, networks and likely career paths. ECRs have a probationary period, within which realistic targets are set and progress towards them managed, and they may be enrolled on the UofG ‘Early Career Development Programme’ (<https://www.gla.ac.uk/myglasgow/humanresources/all/pay/ecdp/>), including training in matters such as impact and research integrity. New lecturing staff, on reduced teaching loads, take a Postgraduate Certificate in Academic Practice, while related (voluntary) UofG provisions include ECR networks,

Unit-level environment template (REF5b)

conferences, and lunches. CoSE runs UKRI grant-writing workshops, while within GES ECRs have a general induction by the HoS, followed by meetings with the GES Director of Research and the relevant Research Group Convener, before scheduling Mentor meetings. HGRG takes seriously its responsibilities to ECR development, with co-supervision of PGRs, deliberately pairing ECRs with senior staff, being one vehicle for on-the-job induction into advanced academic engagement. HGRG TESTING GROUND meetings include presentations and workshops about building research capacity, relevant to all members but particularly ECRs, variously covering: 'Internationalising Research', 'Recycling Unsuccessful Grant Applications', 'Writing High-Quality 4* Publications', and 'Journal Editors meet Article Authors'.

As part of induction and ongoing mentoring, ECRs are encouraged to consider funding schemes for research networking (e.g. Scottish Crucible), pump-priming new research activity (e.g. Carnegie Trust; UofG KEF/GCRF [see below]), research internationalisation (e.g. UofG International Postdoctoral Fellowship [IPDF]; Newton Fund Mobility Grants), and other fellowships/grants with an ECR 'Highlight' notice. Building on an existing track-record of smaller award successes, past HGRG ECRs *McLean* and **Shaw** secured ESRC Fellowships awards and current ECR **Kelliher** a BA Fellowship award (see above).

Postgraduates

PGR: Through a proactive strategy of seeking PGR funding, closely 'reading' shifts in the AHRC/ESRC PGR funding landscape and engaging fully with internal UofG schemes, HGRG has greatly expanded the scale of its PG activity. Over the current assessment period we have graduated 47 PhD students (2 registered part-time), with a further 30 PhD students ongoing. For REF2014 we reported 17 PhD students graduated, meaning an increase between REF periods of 176% (headcount) and c.125% (per submitted staff member), the latter despite an increase in submitted staff (13 to 16). Due to a deliberate strategy of seeking interdisciplinary co-supervision, resulting in nearly half our PGR FTE being shared with non-HGRG units, our FTE figures are rather lower than our headcount figures.

Funding sources for our PGRs (over the period and new starts) include 32 ESRC/SGSSS studentships (including 1 ESRC CASE and 1 ESRC/Scottish Governmental award), 11 AHRC (including 7 AHRC Collaborative awards [CDAs]), 1 MRC, 2 Leverhulme, 6 USF PGR awards (another element of USF investment in HGRG: see above), 7 UofG interdisciplinary Kelvin-Smith PGR awards, 7 College (CoSE) awards, 1 consortium award (SEEDZ: **Section 3**), 1 Commonwealth and 3 international government awards. Of the 77 PGRs completed or ongoing, 54 identify as women and 23 as men, a gender imbalance towards women of which we are aware (addressed in our Athena SWAN Action Plan: see below).

We played a leading role in the Human Geography Subject Pathway of the post-2010 Scottish Doctoral Training Centre (DTC) in the Social Sciences, coordinated through the Scottish Graduate School for Social Sciences (SGSSS), continuing to do so in the enlarged Human Geography, Urban Studies and Environmental Studies Pathway of the DTC-SGSSS as restructured after ESRC Review (2015-2016). **Dixon** was Convenor of this Pathway (2016-2019) and organised the annual 'Kindrogan' residential training workshop for senior human geography PGRs; while **Philo** (2010-2016) ran the annual UofG-based 'Getting Started' event for all Scotland's new-start PGR human geographers.

PGT: We run a successful (ESRC-/AHRC-approved/recognised) MRes in Human Geography, including independent dissertation research. Since inaugurating the MRes in 2002, we have graduated 140 MRes students (65 during the current assessment period), of which 67 (21 this period) have progressed into funded PhDs, reflecting the maturation of a strategy outlined in RAE2008 for creating a high-quality 'feeder' stream to PhD programmes at UofG and elsewhere. Substantial GES investment in part-fees-paid MRes studentships has been more than recouped through PGR fee-income from MRes students for whom we have successfully secured external PhD funding to stay with us.

Unit-level environment template (REF5b)

All postgraduate students, PGR and PGT, are members of HGRG, their regular attendance at meetings expected as part of research training. All PGRs have at least two supervisors and present annually to HGRG as a component of formal monitoring procedures. We have an impressive track record of PGRs (and even PGTs) presenting and organising sessions at major conferences; our PGRs have authored/co-authored 50+ articles/chapters while or soon after completing their PhDs; while others have held office in RGS-IBG Research Groups or run UofG reading groups. PGRs attend training days and residential workshops through the Subject Pathway/SGSSS, becoming networked into pan-Scotland PGR cohorts. They are formally members of the GES Graduate School (convened by **Dixon**) and they receive training in teamwork, presentation, poster design, publications and career development through the CoSE Graduate School (and access specialist training provided by other UofG colleges). Formal annual monitoring of performance for progression purposes is coordinated at HGRG/GES level and overseen by the CoSE Graduate School, which additionally administers admissions, financials, examinations, leaves of absence and extensions.

Equality and diversity

HGRG has been proactive in promoting E&D in its own ranks – see commentary above on staff gender-ratios – and on a wider GES/CoSE/UofG stage. Our research and teaching is fundamentally energised by principles of social justice and critiquing prejudice against ‘marginalised’ or ‘protected’ identities (in terms of gender, race/ethnicity, class, sexuality, [dis]ability, [ill-]health, etc.). We constitute HGRG as welcoming to researchers of diverse backgrounds, partly through the substance of what/how we research. We have fostering strong international relationships (**Section 4**) with numerous scholars via formal and funded Visitor status: examples include Dowler (Penn State, USA), Gibson (UWS, Australia), Gopinath (New Delhi, India), Pratt (UBC, Canada), Simonsen (Roskilde, Denmark) and Subramanian (Calcutta, India). Dowler and Pratt shared with us their feminist and anti-racist HEI working and management strategies.

Strategy for promoting E&D: GES has developed a robust equality and diversity strategy via SWAN@GES (now E@D), a dedicated Committee informed by UK-wide Athena SWAN programmes. Chaired by **Parr** (2012-2018) and now **Botterill**, with notable input from other HGRG members, including PGR/PGTs, HGRG has been pivotal in embedding E&D principles in GES at all levels and beyond. **Parr** represented SWAN@GES nationally, delivering a keynote presentation at an RGS-IBG event in 2016, and was the driving force during 2017 in preparing our GES submission for an Athena SWAN *Silver Award*. This application was successful, and our submission was commended for its national good practice in School-level maternity leave guidance, complementing but extending UofG Maternity Policy (GES specifically enables staff returning from maternity leave to apply for research funding from a CoSE ‘returners’ scheme). Teaching replacement has been negotiated for a staff member taking maternity leave in 2021.

SWAN@GES developed a 4-year Action Plan (2017-2021) covering all aspects of academic life for undergraduates, PGRs/PGTs, PDRs, R&T and professional staff in GES, creating mechanisms to intervene when gendered or other identity-centred barriers impede staff/student recruitment or the pursuit of research and teaching. GES-wide workshops have addressed promotions, P&DR and career development, drawing input from senior GES staff and UofG HR. Access was negotiated to Unconscious Bias Training for all GES staff, an action mandated by the HoS as a P&DR requirement. To identify barriers to research for women, GES research grant application rates/successes by gender have been monitored since 2017 (**Section 3**). GES instituted a ‘Women in Geography and Earth Science Annual Lecture’, a high-profile signal encouraging gender diversity.

HGRG/GES now explicitly support different lifestyle choices, with a senior HGRG colleague working part-time and other staff adopting flexible working patterns. GES has an engagement strategy with internal and external audiences in mind, premised on sharing ‘work stories’ and ‘role modelling’ non-linear academic careers. External HGRG-invited School Research Seminar Speakers (of all identities) are asked to participate in ‘Coffee and career stories’ events before seminars, deliberately targeted at PGT/PGR and ECRs. Several HGRG staff have trained in Mental Health First Aid, linking to HGRG’s research on mental ill-health geographies, allowing us actively to support each other in fostering mentally-healthy workplace relationships and intervening if colleagues exhibit worrying

Unit-level environment template (REF5b)

signs of stress. We launched our first Mental Health Committee during COVID-19, with **Parr** as Chair. A School-wide approach to TransAwareness Training has enabled HGRG/GES to become more welcoming to diverse genders, with both undergraduates and PGTs/PGRs undertaking Trans research.

Acknowledging HGRG's 'white' staff profile – and that our PGT/PGR ethnic profile is largely but not entirely 'white' – it is especially important to address matters of race on various fronts. HGRG ex-PDR (*Last*) has been active in the RGS-IBG Race Equalities Working Group; **Featherstone** and *Last* gave GES presentations in 2017 about race in the curriculum; **Featherstone** leads a Staff Working Group on 'decolonising' HGRG/GES curricula and wider academic practices; and an HGRG staffing request for a lectureship in Black geographies has recently been formulated and incorporated in GES's Strategic Plan.

Parr instigated the establishment of a UofG CoSE Athena SWAN Chairs' network, now formally recognised in UofG. She co-authored a report evidencing and critiquing the management of Athena SWAN processes across Scottish HEIs, addressing the workload threat to research activity for Athena SWAN Chairs and others.

3. Income, infrastructure and facilities

Income

Since REF2014, through strategic mechanisms detailed in **Sections 1** and **2**, HGRG has achieved an uplift in grant-seeking activity and success. HGRG has been involved in securing HESA/REF-defined external research income to the *total* value of c.£3.9M, a 70% increase on the equivalent figure for REF2014 (£2.3M). The average income per headcount has increased by 37% from £178k to £243k, even with an increased staff return (16 against 13 for REF2014). Strategically, this income has supported intense research activity mapping directly into the research themes (**T1-T3**) described in **Section 1**, many outputs reported in REF2, and our impactful 'worldly work' amplified in **Section 4**. The distribution of income across HGRG reveals the substantial leadership of women, with c.75% of UofG share income accruing to women researchers **Laurie** and **Olden** (also ECRs) and **Dixon**, **Parr** and **Sharp**.

HGRG's income growth has been strategically driven by: the development of **T3**, addressing the most pressing of current concerns for planetary wellbeing and offering a platform for much of our recent grant activity; relatedly, the sustained engagement with UKRI and national research agendas, particularly around GCRF; and the further embedding of a turn to collaborations with colleagues in other disciplines and/or beyond UofG. These strategic moves will be continued and enhanced post-REF2021, building on new aptitudes brought to HGRG by **Callard**, who is well-versed in grant-seeking, applying critical-scholarly work in 'applied' contexts, and creatively translating between the natural and life sciences, the social sciences and the arts and humanities.

Highlights include funded, interdisciplinary and 'applied' research on health in the Global South, extending an older HGRG focus on 'indigenous knowledges'. **Sharp** (as Co-I) secured funding from diverse funders (AHRC-MRC, BBSRC with ESRC and others, DfID with UKRI) for three interdisciplinary projects conducted with UofG scientists studying bacterial and parasitic zoonoses passing from livestock to humans in regions of Africa, the largest grant being c.£2.26M (c.40% **Sharp**) for the SEEDZ project investigating 'social, economic and environmental drivers of zoonoses in Tanzania'. This orientation continues with **Laurie**, who (as Co-I) secured funding from the MRC, through a pilot and then full grant worth c.£3.1M (c.12% **Laurie**), for the work of an international interdisciplinary consortium feeding into the Tanzanian government's 'Supporting National Action Plan for Antimicrobial Resistance' (SNAP-AMR). She has also been involved (as Co-I) in a project funded by the National Institute of Health worth c.£2.5M (c.9% to **Laurie**) designed to build capacity in Tanzania for meeting the 'global health challenge' of arthritis.

Further funded highlights include: the latter part of **Parr**'s ESRC funding (PI: c.£420k UofG) for 'Geographies of missing people' (see **Parr ICS**); and three years of **Naylor**'s AHRC funding (Co-I:

Unit-level environment template (REF5b)

c.£43k UofG) for ‘Implications of extreme weather events’, now developed into his AHRC funding for ‘Building climate resilience through community, landscapes and cultural heritage’ (Co-I: c.£18.9K UofG), commencing August 2020. Recent grant successes, providing a platform of funded project-work for HGRG research strategy post-REF2021 (**Section 1**), include: **Botterill**, ESRC funding (PI: c.£415k UofG) for ‘Post-migration transition and pathways to citizenship for EU youth under Brexit’; **Karaliotas**, Danish Independent Research Fund (Co-I: c.£76k UofG) for ‘Geographies of Populism in Europe’; and **Philo**, Leverhulme Trust Major Research Fellowship for ‘The Anti-Fascist Geographical Imagination’ (PI: c.£167k UofG). A significant new initiative, with BA funding (c.£38k UofG) supplemented by internal UofG awards, is the ‘International Green Academy’ (<http://internationalgreenacademy.org/>) directed by **Shaw** and **McGeachan** (PI/Co-I), which – collaborating with the University of Arizona and schools in both Glasgow and Arizona – empowers young people to become ‘confident environmental stewards’.

HGRG members have secured GCRF funding, creating new collaborations with colleagues in both HGRG and ESRG and with scholars elsewhere: notable are **Dixon**’s three awards (two SFC-GCRFs, one ESRC-IAA) for ‘building’ connections, communities and sustainability in Africa, advancing the Africa interests of **Sharp** and **Laurie**, one of which fosters ‘Sustainable Futures Africa’ (SFA) as a flexible, networked consortium with the chief goal of producing usefully impactful outcomes when responding to GCRF calls (<http://sustainable-futuresafrica.com/>). **Karaliotas**, with **Botterill** and **Cardwell**, has secured GCRF funding for work on urban ecologies in Malawi. These GCRF grants are deliberately modest given their scoping/priming objectives: larger is **Dixon**’s co-securing of Scottish Funding Council (SFC) funding (c.£51k) for inquiry into how remote sensing and community-behavioural change can combine in aiding mine-risk education in Myanmar.

Callard brings a substantial track record of funded research, notably in the context of her Directorship of ‘Hubbub’ (2014-2016), the first research group to take occupancy at The Hub, Wellcome Trust, with its work on the arts-sciences of ‘rest and its opposites’. This grant-seeking expertise – manifested in a one-year Leverhulme Trust Research Fellowship (2020-2021) on the 2018 strikes in higher education – and in deploying the infrastructure and facilities of the Wellcome Trust significantly enhances HGRG capacity in researching mental ill-health and labour geographies. Relatedly, **Philo** with **Högström** (established Swedish scholar) as the Research Fellow, secured funding worth c.£130k from the EU Horizon2020 Marie Skłodowska-Curie Fellowship programme, for ‘Psychiatric spaces in transition’, deploying grounded ‘spatial stories’ of Gartnavel Royal Hospital, Glasgow, to address the broader problematic of ‘the future of the asylum’; while **McGeachan** secured small BA and Wellcome Trust grants to research the making of art therapy and *Art Extraordinary* in mental hospital settings, linking to her deployment of archival sources (e.g. R.D.Laing’s ‘papers’) as a spur for creative interventions in the present (see **McGeachan ICS**).

Infrastructure and facilities

The *vitality* and *sustainability* of HGRG does not depend greatly on physical infrastructure or facilities: its core ‘resources’ are those of staff and how we enable them to undertake high-quality research and impact activities. As such, claims made in **Sections 1** and **2**, about the ‘soft’ infrastructure of staffing strategy, development and support, as well as about matters of governance (of both research and impact) through committees and related mechanisms, should be taken as relevant to the assessment of **Section 3** here. Through the GES Grant Application Support Panel (GASP), HGRG members gain and contribute expert collegial advice when drafting research grant applications; and through CoSE all GES academic staff have ready access to high-level administrative support in matters of research content, structure, finance, staffing, ethics, intellectual property and integrity.

The soft infrastructure also includes research enabling money and mechanisms for acknowledging outstanding accomplishments. **Botterill** was awarded a CoSE Early Career grant-writing prize (£10k) which aided her securing of the ESRC grant mentioned above. HGRG has drawn upon CoSE/UofG funding sources (the UofG Knowledge Exchange Fund [KEF] and the ESRC Impact Accelerator Fund [IAF]) to support impact work by specific staff members. **Askins**, **Featherstone** (with **Kelliher**), **Lorimer** (with **Olden**), **Philo** (with **Högström**) and **Shaw** (with **McGeachan**) have all benefitted from direct awards; while the UofG Knowledge Exchange and Collaboration Awards 2017 recognised

Unit-level environment template (REF5b)

Parr's work as 'Best Collaboration in Policy and Practice' following a university-wide competition.

In physical terms, HGRG R&T staff occupy well-appointed single-occupancy offices, together with fit-for-purpose meeting (seminar and workshop) space, in the East Quadrangle of the Gilbert Scott Building on the UofG Main Campus. PDRs share sizeable offices, no more than three to a room, while PGRs have dedicated office space and we even provide PGTs with generous hot-desking office space. Everyone has access to good, fully networked IT, both desktop PCs and mobile devices, with relevant applications, and can also draw upon experienced IT technician support and extensive UofG-level audio-visual support and expertise. Going forward, via **Parr's** 'Climate Change and Mental Health' group (**Section 1**), HGRG will have access to space designated for innovative work on Climate Change reserved within the state-of-the-art Research Hub being built as part of the large-scale campus development of UofG Main Campus.

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

Research base

Intellectual work: We have displayed intellectual *leadership* contributing to the advance of the discipline, including through 300+ outputs (200+ journal papers) produced over the assessment period, but also through, and evidenced by, the following:

- **Parr** was the invited/nominated Chair of the RGS-IBG 2019 Annual Conference (AC2019), attended by 2,000+ geographers from across the globe. She set the conference theme, 'Geographies of trouble and hope', running plenary sessions on ecological, neuroscientific and Black geographies in-between 'trouble and hope'. She led on embedding new E&D initiatives into the Conference arrangements. **Philo** was Chair of AC2012: and only Oxford Geography has also furnished *two* human geographers as Chairs since 2000, testimony to the leadership of Glasgow's HGRG in UK Geography.
- Other major academic leadership roles include **Callard's** Directorship of 'Hubbub' at The Hub, Wellcome Trust, and **McGeachan's** recent appointment as Chair of the RGS-IBG Historical Geography Research Group.
- Major editorships during assessment period: *Antipode* (**Featherstone**); *cultural geographies* ('cultural geographies in practice' section, *Lorimer*); *Emotion, Space & Society* (**Askins**); *Environment and Planning A* (**Dixon**); *GeoHumanities* (**Dixon** [also co-founder of journal]); *History of the Human Sciences* (**Callard**); *Journal of Historical Geography* (reviews, **McGeachan**); *Progress in Human Geography* (**Philo**); *Transactions of the Institute of British Geographers* (**Naylor**); and *Urban Studies* (reviews, managing editor for 'Debates' papers, handling editor, **Karaliotas**).
- Major book-related editorial responsibilities during the assessment period: **Featherstone** edited RGS-IBG Wiley-Blackwell Geography book series; **Naylor** edits Routledge Historical Geography book series; *Lorimer* co-edited *Geographers Biobibliographical Studies* (annual book-length periodical).
- Other high-profile editorial work: **Featherstone's** co-edited book *Marxism, Colonialism and Cricket* (2019) and special issue (SI) on 'Maritime networks and transnational spaces' (*Global Networks*, 2019); **Naylor's** co-edited SI on 'The nineteenth-century survey sciences' (*Notes and Records of the Royal Society*, 2018); **Philo's** co-edited SI on 'Histories of asylums, insanity and psychiatry in Scotland' (*History of Psychiatry*, 2017); **McGeachan's** co-edited SI on 'Other psychotherapies' (*Transcultural Psychiatry*, 2020); **Botterill's** co-edited SI on 'Negotiating Brexit' (*Population, Space & Place*, 2019); and **Parr** and **Philo's** co-edited SI on 'Precarious urbanisms' (*Geoforum*, 2019). The first five items underscore our interdisciplinary engagement.
- Major prizes: **Parr**, ESRC Impact Prize 2015 for 'Outstanding Impact in Society' and RGS-

Unit-level environment template (REF5b)

IBG Back Award 2018 for 'Contributions at the Interface of Geographical Research and Policy'; *Sharp*, RGS-IBG Busk Medal 2016 for 'Innovative Field Research and Empowering Others through Fieldwork'; and **Shaw**, Virginie Mamadouh 'Outstanding Research Award' in 2016 from the AAG Political Geography Speciality Group.

- **Philo** was elected Chair of the USF 2014-2018, overseeing a comprehensive investment programme in interdisciplinary urban studies globally (through Fellowships, mobility schemes and seminar series) and architecting major transformations in the charity's governance, composition and operations.

Intellectual collaborations: Locally, HGRG has growing research links across GES to ESRG, particularly via our **T3** 'bridge': for instance, **Dixon**'s approach to science-arts collaborations enlists earth scientists/physical geographers (Barrett, Williams) in GCRF activity. Elsewhere in UofG, HGRG connects with: MVLS, notably epidemiology and veterinary researchers (*Sharp*, **Laurie**) and health researchers (**Parr**, **Philo**); CoSS, notably critical scholars in business and urban studies (where ex-HGRG member Cumbers is based: **Featherstone**, **Karaliotas**); and CoA, notably theatre, performance and visual arts scholars (**Dixon**, *Lorimer*, **Naylor**, **Parr**) and also medical humanities scholars (**McGeachan**, **Parr**, **Philo**: members of the UofG Medical Humanities Research Centre; project-supervising for Intercalated BSc in Medical Humanities).

More widely, HGRG members have research links, many entailing active leadership, throughout the UK and globally, reflected in REF2-listed outputs (c.25% co-authored with non-UofG scholars) and grant activity (**Section 3**). **Botterill** assisted in securing an EEGA Workshop Grant for a research network exploring migration from/to Central/Eastern Europe; **Featherstone** secured a BA International Partnership grant to work with Subramanian (Kolkata, India), producing the *Global Networks* SI referenced above; **Featherstone** and **Karaliotas** assisted in securing an 'International Networking Grant' from *Fonds Wetenschappelijk Onderzoek* (Netherlands) for a 'scientific research community' promoting solidarity, community and place-making; **Naylor** is International Collaborator on a Canadian SSHRC Partnership Development Grant ('Reparation through university-museum-indigenous partnerships') with Nipissing University, Canada. More generally, staff play leading roles in international research networks and GCRF-driven interdisciplinary initiatives in Africa (Tanzania, Kenya, Malawi, Botswana), and run existing or developing international-institutional links in Brazil (UFMG, Belo Horizonte), Sweden (KTH Stockholm, Linköping), Switzerland (Université de Neuchâtel) and India (Jawaharlal Nehru University, New Delhi; Centre for Studies in Social Sciences, Kolkata), among others. **Callard** will immediately begin extending the interdisciplinary reach of our collaborations.

Economy and society

Impact work: Our two ICSs (**McGeachan**, **Parr**) sit within an overall matrix of 'worldly work' to which *all* HGRG members contribute and which **Callard** will be particularly well-positioned to enrich. Strategic principles driving our impactful activity, alongside indications of how we have developed – and will further develop – collaborative relationships beyond the academy, have been described in **Section 1**.

We stretch our impact across space (seeking national and international reach) while delving deeply into place (drawing upon and nurturing local practices, resources and sensibilities), alongside spanning sectorally from the governmental to the activist. **Table 1** locates an indicative selection of our 'worldly work' across a scalar-sectoral grid linked to named HGRG staff, giving short titles for activities mentioned previously and summary descriptions for ones *only* mentioned here.

Impact collaborations: Non-academic partners strategically engaged for co-supervision on collaborative AHRC/ESRC projects, past and ongoing, include: The Royal Society and RGS-IBG (AHRC 'Science Museums and Archives Consortium'); Historic Environment Scotland (AHRC 'Scottish Cultural Heritage Consortium'); the Forestry Commission (Scotland), Galloway Forest Dark Sky Park, and the Scottish Allotments and Gardens Society (all AHRC); and Epilepsy Scotland, diabetologists from NHS GG&C and a Glasgow medical cosmetics company (all ESRC). Non-

Unit-level environment template (REF5b)

academic consortia/networks are also being fostered: **Dixon's** SFA network and **Laurie's** Tanzania SNAP-AMR consortium roles (**Section 3**); **Arbodela** administers Facebook Group *Amigos del Tordo Verde*, dedicated to urban-periphery building styles; and **Cardwell** participates in an International Fisheries network of academics and practitioners inaugurated at a Denmark symposium in 2010 (leading to multiple-authored *PNAS* 2019 output); and **Kelliher** participated in the Applied History Network, running free public events in London on racism, housing and education.

Table 1: 'Matrix' of socio-economic contribution

	<i>International (reaching beyond UK)</i>	<i>National (UK/Scotland)</i>	<i>Local (Glasgow/elsewhere)</i>
<i>Governmental/ policy-facing</i>	Laurie (SNAP-AMR: Section 3)	Botterill (UK/Scottish Parliaments: advice/evidence to Committees on citizenship/human rights/youth/Islamophobia); Callard (Labour Party Shadow Health Team: Covid-19 long-term health impacts); Cardwell (Marine Scotland: advice on Scottish fisheries policy post-Brexit); Parr (Missing People ICS)	Featherstone/Kelliher (materials cited in Scottish Government, 2020, <i>Independent Report</i> on community impacts of policing miners' strike, 1984-1985)
<i>Professional/ NGOs</i>	Laurie (SNAP-AMR, Arthritis: Section 3); McGeachan/Shaw ('International Green Academy': Section 3); Sharp (SEEDZ, etc.: training health care professionals: Section 3)	Parr (Missing People ICS)	Philo (Gartnavel: Section 1)
<i>Media/public engagement</i>	Askins (<i>Nuclear Refrain</i> , Section 1); Shaw (<i>Wageless Life</i> : Section 1)	Lorimer ('Landscaped Estates': Section 3 ; scripting BBC Radio 4 documentaries; Radio 3 panel discussant on landscapes); Naylor (academic adviser BB2 documentary series 'Icons of the Twentieth Century')	
<i>Museums/ exhibitions</i>	Naylor (University-museums-indigenous partnerships: Section 4)	Featherstone/Kelliher (TUC Library Collections: Section 1)	Featherstone (Glasgow Life/Museums: trade

	<i>International (reaching beyond UK)</i>	<i>National (UK/Scotland)</i>	<i>Local (Glasgow/elsewhere)</i>
			unions 'Banner Tales', community/activism); McGeachan (<i>Art Extraordinary</i> and community engagement ICS)
<i>Community/activism</i>	Arboleda (<i>Incompiutio Sciliano</i> , Italy: artistic-architectural alternative creativities); Karaliotas (Social Solidarity Health Clinic/self-managed radio service, Thessaloniki, Greece: enhancing grassroots capacity)	<i>Askins</i> (Red Cross UK: critical appraisal of internal working practices)	<i>Askins</i> (Gorbals community groups: training members to be their 'own' researcher-advocates); McGeachan/Shaw ('International Green Academy': Section 3); Olden (Galgael Trust, Glasgow: rewilding riverside industrial landscape)