

Institution: University of Reading
Unit of Assessment: 17A Geography, Environmental Studies and Archaeology: Archaeology
a. Overview

Archaeology at Reading has an outstanding reputation for world-leading research, formally recognised by the award of the Queen's Anniversary Prize in 2009 for "excellence in research, enterprise and teaching." Archaeology accompanies Geography and Environmental Science in the School of Archaeology, Geography and Environmental Science (SAGES). Archaeology's research strategy is developed by the Archaeology Research Planning Group and the Departmental Director of Research (DoR). Individual staff and Research Group plans are integrated within the School's Three-Year Research Plans. Archaeology research is managed through two Research Groups, Scientific Archaeology and Social Archaeology, which provide an interdisciplinary environment for engagement across themes, projects and regional studies, as well as overseeing allocation of resource. Both Research Groups receive funding support from SAGES, which also provides seed-corn funding through SAGES Research Committee as well as funds to support study leave and Internationalisation.

b. Research strategy

Since RAE 2008, Archaeology has significantly enhanced its research profile, integrating social and scientific approaches and addressing real world issues including climate change and social diversity and inclusivity. We have developed two major new areas during the REF period through the appointment of chairs in Palaeoclimatology and Near Eastern Archaeology, together with investment in associated infrastructure. Research strategy has focused on the development of innovative collaborative and individual projects. Enhancement of research has been effected through: i) identification of research areas for investment of individual and collaborative talents; ii) developing institutional support for preparing proposals and funding bids; iii) improving research communication within and beyond Archaeology and; iv) maximising opportunities for national and international collaboration. Key performance indicators include: i) a high proportion of staff with major (>£100k) grant awards (15 out of 21 in the REF period); ii) increased interdisciplinary national and international collaboration on Reading Archaeology projects, and; iii) enhanced research profiles in outputs and esteem indicators of academic staff, research staff and PGR students.

Research strategy and research themes

While supporting individual research, our strategy stresses the investigation of major themes comprising: human-environment interactions, human responses to climate change; cultural diversity, identity and material culture; agricultural development, diet and food supply; disease, ageing and death, and; landscapes of cult and devotion. Research within these themes is guided through both our Research Groups, maximising the strengths of social and scientific approaches that are special to the discipline of Archaeology. The themes intersect with the University-wide research strengths of Health, Food Security, and Climate, with Archaeology research into diet, health, agriculture, food storage, and palaeoclimate contributing to the University of Reading's world-leading research on these themes.

Human-environment interactions, and human responses to climate change

Reading has made a major strategic investment in palaeoclimatology and palaeoecology during the REF period, as part of its Academic Investment Project of £50m in over 50 new academic posts. Three of these posts have been dedicated to palaeoclimate appointments in SAGES (and others in Meteorology); these include Fleitmann (Archaeology Chair in Palaeoclimatology and Archaeology), Harrison (Geography and Environmental Sciences Chair in Global Palaeoclimates) and Mayle (Geography and Environmental Sciences Reader in Ecosystems Ecology). Their outstanding strengths in complementary strands of palaeoclimatology contribute to an emerging Centre for Past Climate Change engaging multiple staff in Archaeology (Bell, Black, Branch, Fleitmann) and Geography and Environmental Science (Harrison, Mayle), as well as more broadly with Reading's Walker Institute for Climate System Research and the internationally renowned

Department of Meteorology. Fleitmann and colleagues enhance existing research such as Branch and Black's investigation of climate proxies and social change in diverse regions of the world, including Scotland, Corsica, Liguria, Peru, Jordan, Turkey, Oman and Yemen, as well as R. and W. Matthews' and Mithen's research into Neolithic transitions in Southwest Asia.

Mithen's completed Water, Life and Civilisation project, involving S. and E. Black and Müldner as well as multiple colleagues across SAGES and Meteorology, employed interdisciplinary approaches to the study of relationships between past and present human societies and their environments in Jordan, with an emphasis on water supply and consumption. Within Britain, Mithen's exploration of the Mesolithic-Transition in Scotland and Bell's research into the prehistoric archaeology of inter-tidal zones in SW Britain explore issues of resource availability and environmental change. Hosfield's research includes analysis of the climatic and environmental contexts of the early human occupation of Britain. Pluskowski's collaborative Ecology of Crusading project uniquely combines approaches of archaeobotany, archaeozoology, geoarchaeology and historical studies in investigation of environmental impacts of colonising crusaders in the eastern Baltic.

Cultural diversity, identity and material culture

In prehistory, social identity in Britain and Europe are examined by Bradley's work on art, artefacts and architecture and Garrow's innovative research into Celtic art and Iron Age material culture. Reading makes a singular contribution to the study of material culture, identity and ethnicity in Roman Britain. Fulford's excavations at Silchester provide an arena for research into issues of late Iron Age and Roman identity in early Roman Britain. These themes are also explored through Eckardt's artefact studies, and Fulford's contextual analysis of the production and consumption of Samian pottery. The highly innovative Roman Diaspora project of Eckardt, Lewis and Müldner combines social and scientific approaches to elucidate the significance of foreign immigrants in the population of Roman Britain.

Reading has further developed its world-leading status in the archaeological investigation of identity in medieval Britain and Europe. Gilchrist's study of the human life-course in medieval Britain innovatively engages with gender, age and identity through analysis of multiple forms of material and historical culture, enriched by Lewis' bioarchaeological studies of medieval childhood and menial labour and Thomas' approaches to the material culture of early medieval masculinity. Pluskowski's pioneering ecological approach to the medieval Crusades of the eastern Baltic casts a completely new light on Christian-pagan identities and relations.

Agricultural development, diet, and food supply

The origins of sedentism, agricultural production and plant and animal domestication are investigated in ambitious Reading projects. At one end of the Fertile Crescent, in Jordan, Mithen's excavations at the Early Neolithic site of Wadi Faynan track social and economic developments from the end of the Younger Dryas into the Early Holocene. At the other end of the Fertile Crescent, in Iran and Iraq, the large-scale collaborative Central Zagros Archaeological Project of R. and W. Matthews applies interdisciplinary approaches to the study of Early Neolithic transitions from mobile hunter-foraging to settled villager-farming. W. Matthews' micro-archaeological researches at the Neolithic sites of Çatalhöyük and Boncuklu in central Turkey underline Reading's prominence in the study of early agricultural development and its social contexts, uniquely spanning the Neolithic Fertile Crescent.

Mithen's investigations of the Mesolithic-Neolithic transition in the Outer Hebrides explore the transition to farming in northern Britain, complemented by Garrow and Leary's research into farming transitions across Britain and NW Europe. Müldner and Lewis' research on isotopes and osteoarchaeology analyses diet, mobility and access to food supply in multiple periods and places. Experimental archaeology by Bell, Hosfield and W. Matthews investigates material culture in food procurement as well as modes of storage. Fulford's research sheds light on diet and food practices in the context of urbanisation and Romanisation.

Disease, ageing and death

Reading has long maintained a prominence in the archaeology of burial (Bradley, Chapman, Gilchrist) and of ageing and disease. Lewis' project 'Adolescence, Migration and Health in Medieval England' examines the evidence for the impact of menial labour on demography and

child health before the Industrial Revolution. Bell's study of adult and child footprints in inter-tidal zones of Britain informs us on prehistoric community composition. Garrow is conducting the first major radiocarbon dating programme on an Early Bronze Age barrow cemetery.

Astill and Thomas approach the issue of human burial in medieval Britain and Europe through contextual approaches, including settlement and cemetery relationships in Thomas' excavations at Bishopstone and Lyminge. Gilchrist situates attitudes to death and burial in medieval Britain within a rich theoretical framework of the life-course. Müldner's pioneering application of isotopic analysis to human burials as diverse as the bishops of Whithorn and 'the headless Romans' of York demonstrates the value of integrated scientific applications in exploring dietary and ethnic issues. Eckardt's study of the Roman barrows at Bartlow makes innovative use of GIS and landscape studies in order to situate them within ancient contexts.

Landscapes of cult and devotion

Reading hosts the strongest cohort of medieval archaeologists anywhere in the world researching the theme of religious landscapes of conversion, colonisation, magic and monasticism. Key projects here include Gilchrist's investigations at the iconic site of Glastonbury Abbey, pushing its origins back into the 6th AD. Thomas' excavations at the monastery of Lyminge in Kent explore the impact of early Christian ideology on diet, burial of the dead and social display. Astill combines fieldwork, documentary and numismatic sources to reconstruct medieval monastic economies and early urbanisation of Europe. Pluskowski has pioneered an ecological framework for investigating the impact of crusading colonists of the eastern Baltic. In British prehistory, Leary's important work at Silbury Hill and Marden Henge integrates social and scientific approaches to these enigmatic monuments. Bradley explores cult and society through his research on the henges and stone circles of prehistoric Scotland.

In Neolithic Southwest Asia, R. and W. Matthews' Central Zagros Archaeological Project generates new evidence in the form of shrines, cultic paraphernalia and red-ochre burials, illuminating the role of cult in early settlements in Iran and Iraq. Mithen's excavations at Wadi Faynan 16 of an extraordinary communal building indicate new forms of social engagement.

Strategy for next five years and priority development areas

Our strategic aims from 2014 onwards comprise: i) the continuing development of large-scale, interdisciplinary investigation of issues in the human past that speak to current social and environmental concerns; ii) the support of innovative research within and beyond the research themes, and; iii) the facilitation and support of impact and outreach components for all research. In pursuit of these aims, the following measurable outcomes will be evaluated: i) increased success in obtaining major research awards from a broad range of sources (RCUK, ERC, Leverhulme Trust; private sources); ii) increased collaborative interaction across and beyond the University, and; iii) increased scope and depth of public engagement.

We aim to make Reading the leading centre for palaeoclimate research, through integration of Fleitmann's world-leading palaeoclimate approaches, along with new and existing climate expertise in the Department (Black, Branch), School (White, Harrison, Mayle) and University (Walker Institute, Meteorology), into social and environmental agendas of Archaeology research, supported by a dedicated PDRA and PGR student. A major focus will be on maximising the opportunities provided by recent chair appointments in palaeoclimatology (Fleitmann) and Near Eastern archaeology (R. Matthews), as well as by existing staff (W. Matthews, Mithen, Bell, Black, Branch). We will explore the rich evidential bases provided by ancient Southwest Asia and North Africa in addressing social interactions with climate and environment, including the 8.2ky event and the impact of climate change on early farming societies in the Neolithic Fertile Crescent, enhancing an already strong research theme.

A significant development for the next five years centres on a new phase of research within the departmental training excavation, since 1997 at the Roman town of Silchester, a major research arena for staff and students. Silchester receives funding and infrastructure support from SAGES and the University, and is regarded as a gold standard by external assessors. The current field programme at Silchester ends in 2014 and the Department plans a successor project with a Project Research Director appointed from 2014. This project will engage the research energies of a significant proportion of staff and PGR community. There will be a major focus on publication by 2020 of previous work at Silchester.

An area of research engagement for the period 2012-15 is Fulford's project, The Rural Settlement of Roman Britain, with J. Richards of York as Co-I, in collaboration with Cotswold Archaeology. Three PDRAs are employed at Reading on this flagship project, augmented by English Heritage's commitment to collect and collate the relevant grey literature and to fund and publish a conference in Reading. This study complements recent and current work by Bradley (with Leicester University) that incorporates grey literature for the prehistoric archaeology of Britain, Ireland and northern Europe into a coherent academic narrative.

Our new Lecturer in Later Prehistory (Garrow) will develop research activities that exploit the potential for trans-regional comparative studies across the UK and Europe, in issues such as the Mesolithic-Neolithic transition and human-environment interactions. Garrow will contribute to the development and application of archaeological theory throughout our research agenda and to the recruitment of PGR students in European prehistory, traditionally strong in numbers and achievement at Reading (15 PGR students over the past 10 years, their theses largely published as books and major papers). Our new ECR Senior Research Fellow, Leary, will integrate social and scientific approaches to the study of monumentality in British prehistory, enhancing Reading's strong tradition in this field.

Excavations at the Anglo-Saxon monastery of Lyminge (Thomas) will be a focus of research for at least the next three years, enhancing capability in the archaeology of medieval Britain and Europe. The Lyminge Project was highly commended in the British Archaeological Awards 2012 in the category Best Archaeological Project. Following completion of the Glastonbury Abbey project (Gilchrist) early in the next REF phase, focus will shift to implementation of the project's impact strategies. The Central Zagros Archaeological Project (R. and W. Matthews) will reach the end of its current phase in 2015, Sedentism and Resource Management in the Neolithic, and in consultation with colleagues in Iraq and Iran plans are being developed for a further phase of the project which will address issues of the rise of literate urban societies of the Zagros region and beyond. Further phases of the Roman Diasporas (Eckardt) and Northern Crusades (Pluskowski) projects are also planned from 2014.

Continuing increased recruitment of PGR students is a strategic aim, with a target cohort of 50 FTE PGR students by the end of 2015 (current total: 43 FTE, increased from 29.4 FTE annual average during RAE 2008). As part of our Internationalisation strategy, we plan for an increased proportion of PGRs from overseas. Reading's recent success in the AHRC DTP programme, as a partner in the South, West and Wales Consortium, ensures continued commitment to funding for UK/EU Archaeology PGR students over the next 5 years.

c. People, including:

i. Staffing strategy and staff development

Our strategy is to appoint the very best people and to enhance research capability, individually and collaboratively, in areas of global concern, expanding the strategy articulated for RAE 2008. Four staff submitted for RAE 2008 have been promoted and one ECR completed probation. The REF period has seen the departure of Dark and Härke (2008), Chapman (2012) and Boozer (2013), and Bradley will retire from 2014, allowing a refocus of research priorities for the post-REF period. Chapman and Bradley are being replaced by Garrow (Later British and European Prehistory) and Leary (ECR, Senior Research Fellow) from September 2013, sustaining and rejuvenating our world-leading research in UK and European prehistory. Two new chair appointments further the strategic aim of research enhancement: R. Matthews (2011) as Professor of Near Eastern Archaeology, and Fleitmann (2012) as Professor of Palaeoclimatology and Archaeology. Both incoming chairs bring a wealth of internationally-renowned research experience and success in obtaining major grants from UK and EU sources, and in directing large-scale collaborative projects and supervising PGR students to completion. Supporting Fleitmann is a University-funded PDRAs assisting with the integration of palaeoclimate research into archaeological agendas. The appointment of Branch as Senior Lecturer in Palaeoecology (2008; joint with Geography and Environmental Science) enhanced Archaeology's research strengths in human-environment interactions. Branch significantly develops our capability in enterprise and Knowledge Transfer through his role as School Director of Enterprise and Director of Quaternary Scientific (Quest), a

commercial enterprise providing a range of scientific services in archaeology, geography and geosciences. Gilchrist held a Leverhulme Major Research Fellowship, 2007-2010, a significant research achievement manifest in the innovative study *Medieval Life: Archaeology and the Life Course* (2012) and in her public lectures in Glasgow as Dalrymple Lecturer (2011). She has provided leadership as Head of School since 2012.

The young demographic profile of Reading Archaeology staff allows long-term continuity in staffing and research activity. Mentoring of junior staff by senior staff has proven effective in integrating newcomers into Departmental and School life. We have been successful at converting fixed term appointments into permanent positions (Pluskowski), indicating the importance of Archaeology to the University more broadly. Both ECRs from RAE 2008 (Pluskowski, Thomas) have developed into world-leading researchers within the REF period, directing major funded projects. Our current ECR (Leary) shows high promise for professional development over the next 5 years. The SAGES Committee for Staff Well-being, unique in the University, ensures new staff receive a comprehensive induction and are supported by a buddy for practical matters and a mentor for professional and career development issues. Mentoring also supports key career transitions such as promotion and return from maternity leave. New staff receive funding in their Staff Development Accounts, dedicated library funding, and priority access to Departmental and SAGES research funds for project development.

We aim to increase our already large cohort of Research Staff (RS). The Department hosts 13 PDRAs or Research Fellows, all attached to major projects, and funded by Leverhulme (x 5), AHRC (x 3), ERC (x 2) and other sources (x 3). We aim to improve success in obtaining British Academy PDRA Awards, Leverhulme Early Career Fellowships and Marie Curie Training Programmes, and are implementing new modes of monitoring of applications to ensure that only the highest quality are submitted, involving systematic internal peer review.

Equality of opportunity for Category A and RS is implemented through a range of Departmental, School and University mechanisms. The Archaeology DoR ensures awareness of the Local Concordat for Research Staff, to embed them in research culture, and of the University's Code of Good Practice in Research, and Researcher Development Programme. The latter stresses the role of induction, mentoring, skills enhancement and full participation in the research, enabling and teaching activities of the Department and School (http://www.reading.ac.uk/web/FILES/researchstaff/Local_Concordat_09_Final.pdf; <http://www.reading.ac.uk/qar/QAR%20documents/UCOGPRreprintJan2011.pdf>). RS are engaged in the University's RS development programme. The University was one of the first ten UK HEIs to win the HR Excellence in Research award, demonstrating its commitment to the Concordat to Support the Career Development of Researchers. In 2012 SAGES was awarded a Bronze Athena SWAN Department award for good employment practice for women working in science, engineering and technology in higher education and research.

All Category A staff produce Individual Research Plans annually for the Archaeology Research Planning Group. Research plans are also discussed at annual Staff Development Reviews (SDR). Training is provided by the Centre for Quality Support and Development (CQSD) to enable senior staff to conduct SDRs. All PIs attend a CQSD Concordat Briefing to enhance awareness of career development for RS and their effective management. All Archaeology research is subject to review for ethics implications and where necessary PIs must apply to SAGES Ethics Committee for clearance on issues such as conducting interviews or using sensitive sources. All PIs complete detailed Risk Assessments for all field activity.

The Department operates a scheme of study leave, managed by the DoR and Archaeology Research Planning Group, which provides one term in eight as research leave. Staff are encouraged to apply for funding to facilitate longer spells of research leave. Internal SAGES sources include a Research Support Scheme, a Research Fund and an Internationalisation Fund, and Archaeology research regularly benefits from the University's Research Endowment Trust Fund. We hold a termly Archaeology Research Forum, open to all staff and PGRs, for discussion of research issues, funding opportunities, including regular input from University Research and Enterprise, and to provide a space for research networking and information sharing. All staff have Staff Development Accounts which receive a proportion of grant overheads for individual use on approved research support and activity.

ii. Research students

As future research leaders, PGR students are fundamental to the research environment, and many of them are attached to major funded projects including CZAP, Silchester, Lyminge, and Wadi Faynan 16, as well as collaborative PhDs (Trustees of Glastonbury Abbey, British Museum). A total of 38.4 FTE PGR students were awarded Archaeology PhDs in 2008-2013, well up from 28.5 in RAE 2008. The Department currently hosts 43 PGR students with the aim to increase to 50 by the end of 2015 (i.e. 2.5 per FTE staff), with an increasingly balanced intake across staff. SAGES annually half-funds PGR studentships with Faculty support. PGR students are monitored by an Advisory Panel, comprising two supervisors plus a Chair. The Panel meets every six months to review progress, in addition to supervisory meetings. In the second year, full-time, a PhD confirmation is held, with a substantial piece of written work and a presentation with discussion. Equal provision is made for part-time PGR students.

PGR induction and research training in generic and specific skills are overseen by the Archaeology Director of PGR Studies (W. Matthews) in consultation with supervisors and Advisory Panel Chairs, and aligned with the University Code of Practice on Research Students. PGR students participate as full members of Archaeology Research Groups and make a significant contribution to research life through organisation of seminars and workshops, and by participation in field projects, as well as conduct of their own research. At the University level, considerable support is provided by the Graduate School which supports the planning and promotion of personal and professional development among doctoral researchers with reference to the Reading Researcher Development Programme (RRDP) (<http://www.reading.ac.uk/graduateschool/gshome.aspx>). RRDP is based on the Researcher Development Programme devised by Vitae and supported by RCUK. It is concerned with enhancing knowledge and intellectual abilities, personal effectiveness, research governance and organisation, and engagement, influence and impact.

Reading is a key partner in the South, West and Wales Consortium with Cardiff, Exeter, Bristol and Southampton in the AHRC DTP scheme (from 2014), which includes the development of collaborative PGR training across the consortium as well as the articulation of shared research agendas across the Arts and Humanities, including Archaeology. Partners in this consortium include the National Trust and English Heritage.

d. Income, infrastructure and facilities

Archaeology strategy aims to secure research income from an increasingly diverse range of sources. Total research income for Archaeology in the REF period is £4.21m, more than doubling the RAE 2008 total of £1.97m. There has been a strong representation of major successes with RCUK, with AHRC providing one of its largest ever archaeological grants (CZAP) as well as seven other major awards (Silchester, Diaspora, Mesolithic Middens, Glastonbury Abbey, Wadi Faynan 16, Samian Potteries, Lyminge). There have also been major successes with the Leverhulme Trust (Water, Life, Civilisation, Medieval Lives, British/Irish Prehistory, Epipalaeolithic North Africa, Migration in Medieval England, Roman Settlement of Rural Britain) and a very large-scale success with the ERC (Ecology of Crusading) as well as a major EU Marie Curie award (Ancient Iran) and British Academy major grants (CZAP). All staff members have recurrent success with smaller-scale research funding.

We provide support at Research Group, Departmental and School levels, augmented by input from Research and Enterprise Development, in critical evaluation of draft grant applications to ensure that only high quality submissions are made. The Department will conduct a major drive for large-scale EU funding under the Horizon 2020 scheme (2014-2020), as several major projects enter new phases (CZAP, Silchester, Northern Crusades, Roman Diasporas, Wadi Faynan 16).

The University invests heavily in infrastructure for supporting research on a University- and School-wide basis. University-wide initiatives include a suite of Shared Platforms to enhance the multi-disciplinary focus of the University's approach. The Shared Platforms investment (ca. £10m in the last 5 years) includes the Chemical Analysis Facility (CAF; <http://www.reading.ac.uk/caf/>) with instruments for NMR Spectroscopy, Mass Spectrometry, X-Ray Diffraction and Scattering, Optical Spectroscopy and Thermal Analysis. CAF has been extensively involved in archaeological

analyses on a wide range of projects, including micromorphology (W. Matthews), isotopic studies on diet, mobility and ethnicity (Müldner, Eckardt, Pluskowski), and will increasingly feature in SAGES palaeoclimate research. NERC currently supports research projects in this field by Black, Branch and Fleitmann. Fleitmann also utilises facilities at Diamond through collaboration with the Diamond Fellow in Chemistry.

The Electron Microscopy Laboratory provides state of the art microscopy and electron microscopy facilities which are fully automated and are coupled to the latest elemental detectors. A major development since RAE 2008 is the integration of Quaternary Scientific (Quest) into Archaeology research strategy. Quest is a self-financing enterprise with 5 staff within the Department, which provides expert scientific services to archaeological researchers, private companies and government agencies, with full participation in staff research projects (Bell, Branch, Black, Fleitmann, W. Matthews). Advanced computing facilities in Meteorology are also available for the new Centre for Past Climate Change.

SAGES has supported key initiatives to fund infrastructure since the RAE. We have obtained external and University funding for the following: a new Total Organic Carbon analyser (£30k), PanAnalytical X-Ray Fluorescence Spectrometer (£100k), Picarro CRDS Stable Isotope Analyser (£35k), Particle Size, Laser Granulometer (£30k), Inductively Coupled Plasma Mass Spectrometer (£103k), Skalar Auto Analyser (£55k), Portable X-Ray Fluorescence Spectrometer (£32k), Leica Differential Global Positioning System (£35k), Inductively Coupled Plasma Optical Emission Spectrometer (£55k), Fluorescent Spectrophotometer (£22k), Digital X-Radiograph (£18k), Portable Spectroradiometer (£71k) and Ground Penetrating Radar cart (£7k).

SAGES has a large laboratory space provision (1987m²) and has the generous support of 16 FTE technical staff. We have dedicated laboratory space for academic and PGR students for: pollen, plant macro-fossils, tephrochronology, x-ray analysis, stable isotope, trace element and radiogenic isotope analysis, soil analysis, low concentration water analysis, microbiology, organic chemistry, radioactive isotope preparation, micromorphology, particle size analysis, microscopy, palaeopathology and zooarchaeology laboratory facilities. These are in addition to general preparation facilities, grinding, sieving and all-purpose laboratories. A recently appointed full-time graphics technician (Lucas) assists with illustrations and mapping for all Archaeology projects and publications. IT support is provided at School and University level, with one Archaeology staff member as liaison.

Library support is provided by an annual allocation of University funds, with an increase of 58% to £31k pa from 2012-13. Library purchases were augmented by a V-C's grant of £6k to accompany the appointment of R. Matthews and by the donation of the personal library of Rachel Maxwell-Hyslop FBA, more than 1000 volumes relating to ancient Southwest Asia and early technology. Further book purchases and journal subscriptions will build on this platform while also improving resources in palaeoclimatology.

e. Collaboration or contribution to the discipline or research base

Reading Archaeology's achievement of "excellence in research, enterprise and teaching" was formally recognised by the award of the Queen's Anniversary Prize in 2009. Archaeology Staff participate in a wide range of research collaborations – academic, commercial, national and international. Staff act as peer reviewers in the AHRC College (Astill, Chapman, Fulford, Garrow [noted as a 'future research leader' by AHRC], R. Matthews), the ESRC College (R. Matthews), the ESF (Garrow), and the NERC College (Black), serving prominent roles in the British Academy (Fulford, Mithen, Gilchrist) and the Society of Antiquaries (Creighton, Gilchrist), as reviewers and on editorial boards for book proposals and journals, as academic editors of journals (R. Matthews: *Anatolian Studies*; Hosfield: *Lithics*) and member of editorial boards (Gilchrist: *Social Archaeology*, *Current Swedish Archaeology*), as members of council and chairs of research active charities and funding bodies (Bradley: Leverhulme Trust Panel; Creighton: Royal Archaeological Institute, Society for Promotion of Roman Studies; Garrow: Prehistoric Society; Hosfield: Prehistoric Society, Lithic Studies Society; Leary: Prehistoric Society; R. Matthews: British Institute for the Study of Iraq, British Academy Middle East and North Africa Panel, Council for Assisting Refugee Academics; W. Matthews: International Congress on the Archaeology of the Ancient Near East,

Environment template (REF5)

Gerald Averay Wainwright Fund).

Staff have received distinguished awards for contributions to research (Bradley: British Academy Grahame Clark Medal for Prehistory 2011; Prehistoric Society, Europa Prize 2012; Fulford CBE 2011 for services to scholarship), including election to the Fellowship of the British Academy (Bradley, Fulford, Mithen; and in this REF period, Bell and Gilchrist), giving Reading Archaeology the largest concentration of FBAs in any discipline in any university.

Reading Archaeology has a strong international dimension, supported through Reading International Office, and a dedicated SAGES Internationalisation Fund. MOUs have been agreed with university partners in Sulaimaniyah (Iraq) and Bilkent, Ankara (Turkey). The Department hosts three three-year British Academy International Partnerships. Hosfield and Boozer lead a partnership with the University of Khartoum, Sudan, including study of archives from early excavations at Meroë and Palaeolithic research, and Mithen has commenced a Neolithic collaboration with Shandong University, China. In collaboration with Fazeli Nashli (EU Marie Curie Fellow), R. Matthews leads the British Academy project RADII: Recording Archaeological Data from Iran and Iraq, providing data-base training. This is the first time that archaeologists from the UK, Iran, and Iraq have worked together. Reading's academic relations with Iran are enhanced through hosting for two years of an EU FP7 Marie Curie Incoming International Fellow, Fazeli Nashli of Tehran University, researching ancient Iran.

Collaborations within Reading include strong links with Chemistry (W. Matthews and Almond) and Meteorology (Fleitmann). R. Matthews and W. Matthews' Central Zagros Archaeological Project is a major collaboration with colleagues from universities in Iran and Iraq, as well as with the state antiquities services of those countries. Pluskowski's Ecology of Crusading project (ERC) involves collaboration with multiple colleagues within the EU, including the University of Ca' Foscari Venice, with whom an Erasmus Partnership has been agreed, as well as with the Universities of Tartu, Toruń, Białystok, Gdańsk and Latvia. Fulford's project on Samian pottery industries of Roman Gaul builds on collaborations with Leeds University and the Römisch-Germanisches Zentralmuseum, Mainz, Germany. Fleitmann's research involves collaboration with Universities of Göttingen and Rostock (Germany), Bern and Zurich (Switzerland), Minnesota (USA), Hacettepe (Turkey) and Xi'an Jiatong (China).

A key component is the work of Quest (Quaternary Scientific), which interconnects enterprise and research. Quest supports research excellence and Knowledge Transfer through provision of technical expertise to multiple Reading Archaeology projects, including Ecology of Crusading, Lowland Wetlands in NW Europe, Somerset Mesolithic, and Lyminge.

Archaeology Research Groups co-organise seminar series with internal and external speakers covering current research issues. Speakers from the UK, Europe and the USA participate in these series. Research Groups also organise PGR student-led reading groups, where seminal articles are taken for discussion.

Reading regularly hosts major archaeology conferences, including the UK Archaeological Science Conference (September 2011), the Prehistoric Society Europa and PhD Students' Conference (June 2012), the Association for Environmental Archaeology Conference (November 2012), the Annual Conference of the British Association for Near Eastern Archaeology (January 2014), the International Roman Archaeology Conference and the Theoretical Roman Archaeology Conference (March 2014). R. Matthews was lead organiser for the large-scale 7th International Congress on the Archaeology of the Ancient Near East (London April 2010, ca. 850 delegates) and lead editor of the subsequent publication (2012, 3 volumes, 141 papers). Reading Archaeology co-organised an international conference on Origins of Agriculture held at Nanjing Agricultural University China, December 2012. All staff members contribute consistently at the highest level to national and international conferences and workshops, including delivery of plenary and keynote lectures, as well as peer review of international academic practices (e.g. Fulford/Finland Academy of Science).

Through internal and external collaborations, an active programme of conferences and national and international research partnerships, Reading Archaeology is productively engaged in shaping and delivering contemporary research agendas in world Archaeology.