

<b>Institution: Anglia Ruskin University</b>
<b>Unit of Assessment: 4 (Psychology, Psychiatry, and Neuroscience)</b>
<p><b>a. Overview</b></p> <p>The Department of Psychology, located in the Faculty of Science and Technology, was established in 1998 and was first returned to the RAE in 2008. Since then, it has more than doubled in size, from 9.8 to 23.7 FTE members of academic staff, in addition to growth in research, technical and administrative staff and research students. The Department aims to create a supportive environment that fosters world-leading research. This activity is organised via two groups: Brain &amp; Cognition and Applied, Social &amp; Health Psychology. The function of these groups is to nurture collaborative research and improve communication between researchers as well as support cross-departmental and external collaborations. This submission covers staff from both research groups. Due to the interdisciplinary nature of the research conducted within the Department, some of the academic staff are submitted to UoA22 which better fits the remit of their work.</p>
<p><b>b. Research strategy</b></p> <p>In 2008, the Department was in the early stages of development as a research-active unit. This is reflected in the aims we set out in the RAE 2008 documentation which were concerned with building increased capacity for research. We therefore had ambitious aims for growth and planned to:</p> <ul style="list-style-type: none"> <li>• Increase the number of research active staff (by recruiting researchers capable of world-class research);</li> <li>• Increase the number of research grants (by providing sabbatical support to assist staff to make collaborative bids, and by providing academic leadership and advice from world class researchers through key academic appointments);</li> <li>• Increase the number of research studentships in the Department, by focusing on using obtained external funding to support both Research Assistants and studentships. A key goal will be obtaining eligibility for ESRC CASE studentship funding.</li> </ul> <p>Over the REF period, the Department has performed well against these targets and we have achieved the majority of our goals. In summary, we have increased the number of staff being returned to the REF from 4.0 to 16.7 FTEs (three of whom are returned to other UoAs); increased the number of grants applied for and awarded over the review period, resulting in increased income from £38,000 in the RAE 2008 period to £222,233 in the REF 2014 period; and increased the number of research students in the Department, from 2 to 12. We have also developed training for postgraduate students to meet the requirements of the ESRC and are awaiting University approval of a decision to seek ESRC accreditation as a doctoral training centre at the next opportunity. We now have an excellent foundation for our future strategy and associated plans, designed to build on our success to date. The core elements of our strategy are:</p> <ol style="list-style-type: none"> <li>1. To maintain and enhance a research environment which promotes and enables world-class research       <ol style="list-style-type: none"> <li>a. Create within the overarching research groups (described above), specialist research interest groups to further support collaborative research activity and income-generation activity, as well as fostering our research assistants and research students</li> <li>b. Equip and support state-of-the-art research laboratories</li> <li>c. Further invest in research support staff (pre- and post-doctoral research assistants, graduate teaching assistants and technicians) to support academic activity</li> <li>d. Increase number and success rate of research funding applications</li> </ol> </li> <li>2. Participate fully in the international psychology research community and build upon existing collaborations to increase research capacity       <ol style="list-style-type: none"> <li>a. Facilitate collaboration through directed Department funding</li> <li>b. Facilitate income generation via use of the work balance model to direct activities</li> </ol> </li> <li>3. Recruit researchers capable of world class research and invest in their development       <ol style="list-style-type: none"> <li>a. Maintain recruitment of staff with strong record of research and high potential for significant impact, including professorial appointments.</li> </ol> </li> </ol>

**Environment template (REF5)**

- b. Develop current staff via the promotions process to enhance capacity for academic leadership within the department
4. Develop increased capacity for public engagement, knowledge transfer and other impact from research
  - a. Ensure that public engagement and impact are considered as part of annual plans for review of research and scholarly activity
  - b. Provide directed support at department (as well as faculty and University) level for public engagement and knowledge transfer activities.

The Department's Research Executive, made up of senior staff in the Department, will implement this strategy; we will recruit a Professor who will have a specific remit to develop research capacity and capability around our current strengths. Specifically, our plan will involve three areas of focus: increasing capacity, supporting culture and enhancing outreach and impact. To increase capacity, we propose to allocate funding to create a layer of research support for academic staff, via employment of research assistants; to increase numbers, and to invest in training, of technical staff; to invest in administrative support; to continue to support and develop our successful summer vacation research studentship scheme; and to purchase essential equipment. We will also continue our successful track record of making two successful applications for University sabbaticals in the Department each year.

To develop a supporting culture for research, we will strive for further curriculum efficiency at undergraduate level; continue to develop our postgraduate taught portfolio in our areas of research strength to enable recruitment of postgraduate research students; and support postgraduate research students in the pursuit of an academic career via the provision of graduate teaching assistant posts and other opportunities.

To enhance outreach and impact, we will continue to develop collaborative teaching and research opportunities with local charities and businesses; develop our newly-established lived experience group which provides opportunities for active input from service users in teaching, the development of research projects and output dissemination; publicise and disseminate research findings locally, nationally and internationally via our departmental media relations champion (Aspell); and work with our University's Research Institutes to further our clinical and applied work as outlined below.

There have been a number of significant transformations to the research environment over the assessment period stemming from infrastructure changes and policy changes. Our office and teaching facilities have been updated and improved. We have enhanced our EEG laboratory facilities through the acquisition of additional state-of-the-art neurostimulation equipment including Transcranial Magnetic Stimulation (TMS) and transcranial Direct Current Stimulation (tDCS) equipment; we have enhanced our Psychoneuroimmunology laboratory by the purchase of a new auto-analyser and specialised equipment to increase the range of analyses we can perform; we have expanded our eye-tracking laboratory to house an increased range of eye-tracking systems; and we have created additional space to enable the work of research students and new staff.

University-wide infrastructure changes that have improved the research environment include the development and creation of the Postgraduate Medical Institute (PMI) and the Global Sustainability Institute (GSI). These umbrella organisations enable enhanced co-ordination between constituent departments and a greater range of interdisciplinary research. For example, via the PMI we have conducted research with clinical vision scientists in the Vision and Eye Research Unit (VERU). Together with the GSI we are working with Skanska, a Scandinavian construction company, to test British attitudes towards lower-energy housing. The institutes run weekly research seminars and sessions that enhance collaboration through local dissemination. In addition, staff development and training has become a key priority for our University, with an increasing range of internal training events and additional funding opportunities for networking and development activities.

Our University's Corporate Plan includes strategies to increase staff engagement in research and increase the number of research students by providing support such as a new initiative for early career researchers and increased funding for undergraduate research summer placements to

**Environment template (REF5)**

encourage students to consider research careers. Our Faculty has hired funding managers and dedicated grant bid reviewers in order to improve the success rates for winning bids. Our University has also employed an EU Funding Manager whose responsibilities include identifying appropriate European funding streams and initiatives and alerting relevant academic staff. Additional support for EU funding applications is provided via monthly Faculty meetings with the Dean, the Director of Research Development and Commercial Services (RDCS), the International Research Funding Manager, and Department Heads. Information is disseminated via departments to allow us to engage with EU priorities.

Training for postgraduate research student supervisors has been increased and policies have been introduced which have improved the successful and timely completion of research degrees as well as the employability of postgraduate students. Our University has offered financial support for research staff to attend writing retreats where they can solely focus on writing research papers and grant applications. Successful achievement of these aims will be evidenced by an increased number of PGR students, increased income from grant awarding bodies, consultancy and industrial partnerships, and increased numbers of research-active staff.

**c. People, including:****i. Staffing strategy and staff development**

The Department's strategy to increase the number of research-capable staff, all of whom have doctorates, is reflected in the submission of 13.7 Category A FTE staff in the submitting Unit (plus 3 under UoA 22) in REF 2014, compared with 4 in the RAE 2008, reflecting substantial growth in the size and scope of our research activities. The Department provides a supportive and collaborative environment that facilitates high-quality research enabling us to attract and retain high-quality internationally-recognised staff. Departmental policies enable researchers to engage in both short-term and sustained long-term projects. To facilitate the growth, retention and development of staff, the Department of Psychology:

- provides ready access to laboratory and IT resources for all staff within the University wishing to undertake psychological research, regardless of departmental affiliation;
- ensures that staff are aware of University initiatives to promote research (such as pump priming schemes, studentships and sabbaticals) and external research funding opportunities, and arranges bid writing support through Research, Development & Commercial Services (RDCS) and our Faculty Research Bid Manager;
- facilitates interdisciplinary collaboration through regular meetings and seminars with prestigious external speakers;
- supports continuing professional development and extensive training opportunities including research methods, knowledge transfer, scholarly writing and grant preparation.

The Department ensures that its academics have effective staff development opportunities. National and international collaborations and conference presentations are strongly encouraged. We allocate specific funds to ensure all academic staff and their research students can attend international conferences on a regular basis; since the RAE 2008, staff have attended over 160 conferences. Annual staff appraisals facilitate staff development via the setting of individual research targets aligned with Departmental priorities and the identification of development needs. Eight well-funded six-month periods of sabbatical leave have been provided to Departmental staff in the review period, supporting ongoing research and staff development.

In 2013, our University achieved the European Commission HR Excellence in Research Award, demonstrating that we have a robust strategy for implementing the *Concordat to Support the Career Development of Researchers*. Further information about the Concordat and our gap analysis and action plan to implement the Principles in the Concordat may be found on the University website. Professional development is achieved through frequent training, including extensive research ethics and equality and diversity training, with additional training for those responsible for interviewing prospective staff and research students. There is a formal requirement

for academic staff to attend many of the internal training sessions (unit staff have been partly or fully funded to attend 208 training events since RAE 2008). A series of mentoring schemes have been introduced by the University including mentoring for probationary staff (including Early Career Researchers (ECRs)), those seeking promotion to the role of professor or reader, and those on sabbatical; a work shadowing scheme (for those considering a specific academic role), and a "Develop Your Career" scheme for professional development. Additionally, the Faculty arranges bid-writing retreats for staff to dedicate a substantial amount of time to writing a grant bid. ECRs benefit from a grant scheme enabling them to conduct a small-scale research project. The work-balance model is used to ensure that clinically-trained academic staff can effectively manage their academic, NHS-related work time, and professional development.

The University competitively funds 8-week undergraduate summer research placements with the dual aims of providing students with research experience and supporting staff research. In addition, the Department funds its own summer research studentship scheme which is open to all our academic staff. Since 2008, we have been able to provide funds for all staff who applied for a placement, enabling 23 undergraduate students to carry out research alongside an experienced academic. The Department has also obtained a number of externally funded, competitive undergraduate summer studentships from the Nuffield Foundation in 2011 (value £1,440), from the Wellcome Trust in 2011, 2012 (two), and 2013 (value £1,600 each), and from the Experimental Psychology Society in 2011 (value £1,200). The University offers a centrally funded sabbatical scheme which enables academic staff the opportunity to suspend teaching and administrative duties for a period of up to 6 months. The Department has received financial support for 8 of these since RAE 2008. Our University also offers annual promotion opportunities, with no limit on the number of staff who may apply or be successful. Associated annual workshops are held to assist staff considering an application at which they can receive individualised advice from Human Resources and senior academic staff. Feedback from staff who participated in the Careers in Research Online Survey (CROS) 2013 showed that Anglia Ruskin staff feel their contribution to a variety of research activities is more highly valued and recognised than the sector average, and that they were better integrated into their research community. Similarly, Anglia staff feel better informed about key research strategy and policy in the national environment, such as the REF, the RCUK's 'Pathways to Impact' expectations, the three Concordats on Research Integrity, Public Engagement and Research Careers, as well as the HR Excellence in Research Award.

## **ii. Research students**

Consistent with our research strategy, we have increased the number of research students in the submitting Unit since the RAE 2008. During the REF census period, 2 of our PhD students graduated successfully and we have 10 additional current PhD students. PhD students are supervised by a team of two or three research-active academic staff in order to draw upon a range of relevant expertise.

Research students benefit from a suite of formal training programmes organised by RDCS. Key training programmes relate to each stage of their research, and include guidance on constructing a research proposal, research ethics, academic writing, statistics and preparation for the viva. Access is also provided to the Epigeum suite of online skills training modules. Our University has robust quality assurance and enhancement procedures to support and monitor students at University and Faculty levels, including an annual monitoring scheme, along with a confirmation of candidature examination completed at the end of year 2 of a 3-year PhD. Our Research Degrees Regulations and Equality Policy Framework reflect the QAA Quality Code. Research degrees are monitored and regulated by the Research Degrees Committee and its Faculty Sub-committees consistent with the Research Concordat. At Faculty level, the Director of Research is responsible for the implementation of all research strategies and policies, and the Director of Research Students is responsible for student welfare. At a Department level, a specific member of academic staff (Manning) provides regular support meetings for research students. Feedback from students participating in the Postgraduate Research Experience Survey (PRES) 2009, 2011, 2013 has shown that the student experience has improved significantly from 2008 - 2013. Specifically, in both PRES 2011 and in 2013 our respondents rated their overall experience of their research

programme at Anglia Ruskin more highly than the sector average.

We benefit from and contribute to the vibrant Cambridge research community. This enables our staff and research students to attend talks by world-class scientists working in psychology, neuroscience and closely allied areas at Craik Club, Zangwill Club, and MRC Cognition & Brain Sciences Unit's Chaucer Club and Wednesday lunchtime seminars. In addition, research students attend and present their research at weekly seminars hosted by our Department's research groups. Psychology postgraduates regularly present at the Faculty- and University-wide research conferences. Additionally, psychology postgraduate students present at national (e.g., the BPS Developmental Section, Jones) and international (e.g., Cognitive Neuroscience Society, Carroll) conferences.

#### **d. Income, infrastructure and facilities**

Since RAE 2008, we have substantially increased financial support for research in our Department. This has enabled an investment of £1,315,000 in the research infrastructure via internal capital grants, supplemented by externally generated income. Externally generated research income has grown nearly six-fold from RAE 2008. External funding sources include: Bial Foundation; British Academy; British Psychological Society; Experimental Psychology Society; The Harpur Trust; the Home Office; The Leverhulme Trust; Meniere's Society; and The Wellcome Trust, in addition to industry and commercial work with Skanska, councils and charities. Funding applications to a wide range of sources is encouraged and these include research councils, charitable organisations, government, and industry.

The Department has benefitted from considerable investment through internal capital grants, enabling it to develop state-of-the-art research facilities and purchase modern research equipment. We have dedicated research laboratories and testing suites in addition to office space and meeting rooms for staff and postgraduate students. Specific laboratories include:

*EEG Laboratory.* Our EEG laboratory houses one of the highest resolution EEG systems currently available in the UK. The system is based in an electrically shielded, air-conditioned and soundproofed booth, and uses a 128 channel Brainamps EEG amplifier system. We recently updated this equipment to employ the ActiCap (BrainProducts) system.

Our *Neurostimulation Laboratory* is a sound-proofed and fully air-conditioned space housing a TMS device and a tDCS device with a preparation area for participants. Our TMS is a Magstim Rapid2 biphasic stimulator with a 70mm Air-cooled Double coil. Our equipment allows for single pulse, repetitive protocols, or theta-burst between 1-10Hz, and can be used in conjunction with a motor evoked potential pod to capture EMG signals. The air-cooled coil allows for extended periods of stimulation to be run without overheating. Additionally we have two BrainStim transcranial stimulators. These stimulators are multifunctional devices designed for use by clinicians and researchers. These stimulators are capable of delivering a uni- or bi-directional current in a continuous or pulse protocol that can be tailored to each patient/subject. Protocols are programmed via computer software and then transferred wirelessly to the device; these can then be triggered by external computer programmes in research settings. The device is licenced and produced by EMS medical and has been widely used across Europe by clinicians and researchers studying cognitive performance and patients with brain injuries.

The *Psychoneuroimmunology (PNI) laboratory* is arguably the most sophisticated laboratory of its type based in a Psychology Department in the UK. It is a Class II microbiology laboratory and has recently been further enhanced by the installation of a TECAN auto-analyser at a cost of just under £130,000. The laboratory can run ELISA assays to quantify endocrine and immune markers, though additional procedures can also be run.

*Eye-tracking Laboratory.* The eye-tracking laboratory is a sound-attenuated, air-conditioned room containing a ViSaGe stimulus generator, an infra-red video eye-tracking system, supported by Video Eyetracker Toolbox software in addition to a Tobii 1750 eyetracker running Tobii Studio. We

**Environment template (REF5)**

have also recently invested in a portable Tobii eyetracking system (X50) and Tobii IR Glasses for eyetracking work outside the laboratory.

The *Behavioural Analysis Laboratory* is a sound-attenuated, air-conditioned environment equipped with touch-sensitive screens (including CogLab), physiological recording devices (PowerLab), and stimulators.

In addition, we have a consumer laboratory and a neuro-rehabilitation laboratory and 10 sound-attenuated air-conditioned laboratories equipped with a research computer for experimentation.

Researchers in the Department of Psychology also have access to facilities in other departments and research institutes through extensive research collaborations. These include an ultra-high resolution eye-tracking system (SR Research) housed in the Vision and Eye Research Unit and the Virtual Reality Suite in the Department of Engineering & the Built Environment. Staff in the Department also have access (following protocol approval) to fMRI facilities at Cambridge University (Wolfson Brain Imaging Centre) and the MRC Cognition and Brain Sciences Unit (CBU). Departmental staff can also access the patient database at the CBU in order to conduct neuropsychological investigations.

**e. Collaboration and contribution to the discipline or research base**

The staff in the Department of Psychology have published a total of 160 peer-reviewed articles over the census period in addition to 21 published books or book chapters. Of the 35 articles submitted to the census for REF 2014, 34 of these involved collaboration with individuals outside the Department (of which 10 were international). These collaborations are with world-leading researchers in other departments within the University and with external researchers during the assessment period (e.g., J Driver (UCL) - Cardini; J Duncan (CBU), L K Tyler (University of Cambridge) and M D Kopelman (KCL) - Bright; E Palluel - Aspell; C Price – Filippi and Richardson). Many of these collaborations are on-going and highlight the outward-looking nature of the research profile within the Department.

Our University has developed a strategy to promote research excellence and to raise the profile of its research both internally and externally, as well as increase the range of interdisciplinary research within the institution. This involved creating five flagship research institutes whose mission it is to foster and facilitate collaborative projects between academic staff from different departments, facilities, and disciplines. Staff in our Department subscribe to this philosophy with members having links with the GSI, VERU, and the Childhood & Youth Research Institute (CYRI). Through such collaborations we are developing research studies of potentially high impact. Examples of these collaborations include research into saccadic curvature (with VERU and the Department of Computing and Engineering), face perception (with VERU), visual impairments (with the Department of Vision and Hearing Sciences), learning difficulties (with VERU), oculomotor control in Ménière's disease (with VERU), and sustainability research (with GSI).

In addition to these internal projects, Departmental staff are actively involved in external collaborations. Researchers collaborate with NHS R & D to develop better information services regarding AIDS treatment and to develop an early indicator for psychosis. Several staff also engage in collaborative research with clinicians. For example, we are undertaking projects in collaboration with the South Essex Partnership University NHS Foundation Trust (SEPT) (McDermott & Rohleder) and Broomfield Hospital, Chelmsford (Lambie). Rohleder is a Registered and Chartered Clinical Psychologist and works with East London NHS Foundation Trust in the Newham Talking Therapies Services. Researchers have worked with the Home Office Scientific Development Branch on a method for improving face recognition at identity checkpoints. Academic staff within the Department also collaborate with industry on salivary analysis (with Salimetrics), consumer behaviour (with Skanska) and environmental psychology (with Cambridgeshire County Council). Staff often retain close links with their previous institutions: Bright is a Principal Investigator in the Cambridge Neuroscience initiative; Rohleder is an honorary senior lecturer at the Department of Psychology, Stellenbosch University, South Africa; Luyt is Visiting Scholar at the

## Environment template (REF5)

Behavioural Studies Sociology and Gender Studies Programme Monash University.

Returned staff are also widely active in the national and international research communities, regularly peer-reviewing articles for high-impact international research journals, reviewing national and international grants, and acting as PhD examiners. Departmental staff are editors for *Neurodisability and Psychotherapy* (Lambie) and *International Journal of Emergency Services* (Manning), and a selection of the academic journals that our staff review for include: *Behavioural and Brain Sciences*; *Brain and Cognition*; *Cognition*; *Cortex*; *Development Psychology*; *Emotion*; *European Journal of Social Psychology*; *Experimental Brain Research*; *Journal of Consumer Psychology*; *Journal of Experimental Psychology: Human Perception and Performance*; *Journal of Experimental Psychology: General*; *Journal of Experimental Social Psychology*; *Journal of Social Psychology*; *NeuroImage*; *Neuropsychologia*; *PLoS One*; *Psychiatric Services*; *Psychological Review*; *Psychology, Crime, and Law*; *Social Cognitive and Affective Neuroscience*; *The Journal of Neuroscience*. Staff also review for more applied and user-focused journals including: *AIDS Care*; *British Journal of Disabilities*; *Disability, Development, and Education*; *Psychiatric Services*.

Staff members have been noted for their contribution to psychology. Ashworth won an award for the greatest contribution to the development of the field of compassion at the Compassion Conference (2012) in addition to winning "authors of the month" from Psychology Press in August 2013 for her book *Life After Brain Injury: Survivors' Stories* with Barbara Wilson and Jill Winegardner. Strain's development of the Learning Needs Profiler in collaboration with Sancton Wood School in Cambridge was the joint winner of the Public Policy and Service Impact Award 2009, sponsored by Research Councils UK. It was also awarded a Lord Stafford Award for 'Impact through Innovation' (2009) and was a shortlisted finalist in the Times Educational Supplement's annual School Awards in the 'Outstanding Special Needs Initiative' category (2009).

A number of staff review grant applications for funding bodies including the ESRC (Bright, Gutierrez, Hills and Lambie); the British Academy (McDermott); the Wellcome Trust (Gutierrez); the Nuffield Foundation (Gutierrez); and the Scottish Government (Hills). Our staff have also engaged in editorial activities. Bright has edited a series of books on Neuroimaging (Methods, Clinical Applications and Cognitive and Clinical Neuroscience). Hills has edited a special issue of *Frontiers in Perception Science* on face aftereffects. This has 12 papers and has already received 863 page visits. Finlay is an editorial consultant for *British Journal of Social Psychology*. Luyt is an editor for the *Journal of Gender Studies, Men and Masculinities*. Jansson-Boyd edited a special issue of *Psychology and Marketing* in 2011 concerning the role of haptics in consumer decision making (Volume 28, page 219-307).

Departmental staff are widely active in national and international organisations that promote psychology. Jansson-Boyd has taken part in a "late" night event at London's Science Museum concerning "shopping on the mind" and has appeared on several national television programmes discussing consumer behaviour. Aspell and Hills regularly present at the Cambridge Festival of Ideas (held annually in November) and the Cambridge Science Festival (held annually in April), promoting science and psychology to the general public. In addition to non-academic promotion of psychology, several members of staff in the Department are active members of organisations that promote understanding of psychology. Aspell is the treasurer of the Consciousness and Experiential Psychology Section of the British Psychological Society. Rohleder is a committee member of the Faculty of HIV and Sexual Health, Division of Clinical Psychology, British Psychological Society. McDermott is a Board member of the Canadian Psychology Association Section on Orientation and Gender Issues.

Staff regularly examine PhD theses both in the UK and overseas (e.g., the School of Biological Sciences, University of Cambridge (Bright), Exeter University and Queens University Belfast (Finlay), Rhodes University and the University of Cape Town (Luyt), Cambridge University (Gutierrez), University of Limerick (Manning); and Maquaire University, Sydney (Lambie), and University of Lancaster (Rohleder)).