

## **REF ENVIRONMENT TEMPLATE**

### **Institution: Royal College of Art - Unit of assessment 34: Art and Design: History, Practice and Theory**

#### **A. Overview:**

The Royal College of Art (RCA) is the world's only specialist, research-intensive postgraduate university of art and design, and was the top-ranked specialist UK HEI for Art and Design in RAE2008. Since 2008, the RCA has built on the strengths of this position to fulfil its strategic aim to be a recognised world leader in research in architecture, design, fine art and humanities, and related specialist sub-disciplines and, increasingly, interdisciplinary research. The RCA is structured around six academic Schools, each led by a Dean of international standing: Architecture (Professor Alex **de Rijke**); Communication (Professor Neville **Brody**); Design (Professor Dale **Harrow**); Fine Art (tba Dec 2013, Professor Ute Meta **Bauer** to July 2013); Humanities (Professor Jane **Pavitt**); and Material (Professor Wendy **Dagworthy**). Each of the six Schools has a distinct research culture, identity and areas of expertise, and they are complemented by the Helen Hamlyn Centre for Design (Professor Jeremy **Myerson**) which is recognised globally as a pioneering centre for multi-disciplinary inclusive design. This comprehensive art and design research environment is underpinned and supported by the cross-RCA Research Office (Professor Jeremy **Aynsley**) which provides leadership, infrastructure, and training development in research and knowledge exchange (KE) for academic staff and a community of 1380 students, of whom more than 180 are registered for a research degree.

The College leads, or is partner in, several strategic research and KE collaborations with other world-leading institutions and industrial partners; and works systematically to ensure that the advancement and co-creation of knowledge enhances learning, teaching and scholarship across all levels and disciplines. Four College-wide research themes provide a framework for trans-, multi- and interdisciplinary research: (1) Cultures of Curating; (2) Design, Innovation and Society; (3) Dialogues of Form and Surface; and (4) Image and Language. Over 70% of the College's research is practice-led or related, resulting in outcomes that contribute to cultural wealth, industry and commerce, health and social well-being, and the digital economy, with direct impact on society. As an international university, the College community is represented by more than 70 nationalities among its students. Its 171 academic/research and 72 technical staff are augmented by 18 appointed Visiting Professors, as well as Visiting Research Fellows and Visiting Scholars, who contribute to an intensely focused, distinctively postgraduate and research environment in art and design.

#### **B. Research strategy:**

**B1. Achievement of strategic aims for research during the assessment period:** The RCA Research and Knowledge Exchange Strategy 2011-2016 (RKE Strategy) commits significant investment to realise the strategic aim to 'position the Royal College of Art as the world's leading university devoted exclusively to postgraduate art and design education, research and knowledge exchange' (RCA Strategic Plan 2011-2016).

As a research-led university in the specialist art and design sector, with seamless integration of faculty research, PGR and PGT, endorsed by Council (the RCA governing body), the RKE Strategy and the Research and Knowledge Exchange Committee (RKE Committee), the College supports investment in and development of a well-resourced and sustainable research infrastructure that provides the environment and conditions for the production of research that is competitive externally and has impact world-wide. The RKE Strategy identifies and prioritises scholarly, practice-led and applied research, integrated with KE, which contribute to the advancement of human knowledge, understanding, creativity and professional practice, and have significant impact upon culture, society and the economy.

To ensure these strategic aims are realised, from a strong base since RAE2008, infrastructure and individuals have been put in place to provide strategic and disciplinary leadership, expert knowledge in research development and funding, and impact through innovation, KE and external collaboration. In addition to the strategic deployment of QR funding resulting from RAE2008, the RCA has invested significant resources in the research infrastructure: the cross-RCA Research Office has been expanded with the addition of a Senior Research Manager (Dr Jamie **Gilham**), and the appointment of a Head of Knowledge Exchange (Christina **Schoenleber**) and support

staff; and the infrastructure network has been extended into the College's Schools with the appointment of six School Research Leaders, each of whom is an experienced researcher and manager: Professor Susannah **Hagan** (Architecture); Tom **Simmons** (Communication); Dr Stephen **Boyd Davis** (Design); Dr Patricia **Lyons** (Fine Art); Dr Marquard **Smith** (Humanities, November 2013); and Dr Peter **Oakley** (Material). This infrastructure provides a comprehensive matrix of cross-RCA and Schools-based leadership to realise the College's strategic aims, and supports researchers with an environment to increase the quality and volume of research collaborations, projects, externally generated income, fellowships and studentships. A significant development resulting from this strategic leadership since 2008 has been an increase in external research partnerships, and diversification of the research income base to include a higher level of commercial research activity.

**From 2008 to 2013**, the RCA has realised its strategic aims for research by:

- Aligning research objectives to national and international priorities to deliver research that has demonstrable impact on public policy (eg membership of Parliamentary Committees), economic prosperity, culture and the quality of life (eg redesign of the NHS Emergency Ambulance)
- Developing and formalising international research partnerships with organisations identified in the College's Strategic Plan and beyond (see **Internationalisation**)
- Securing project and fellowship funding from four of the seven UK Research Councils (AHRC; EPSRC; ESRC; MRC) and the British Academy (£3.78M), charitable trusts and foundations (eg Arts Council, Clore Duffield Foundation, Design Council, Leverhulme Trust, Wellcome Trust, £3.18M); EU government bodies (£211k), UK industry, commerce and public corporations (eg Blackberry, Intel, Karsan, Kinnarps, Microsoft, Philips - £2.54M)
- Increasing international funding from the EU (FP7) and trusts and foundations (eg Leverhulme); a core partner for four major EU projects (three ongoing) involving 44 other collaborators in 19 countries, which has increased EU funding from £36,000 in RAE2008 to £210,000 in REF2014
- Winning major business and industry research projects, eg redesign of the NHS Emergency Ambulance by HHCD and RCA Vehicle Design with Imperial College Healthcare NHS Trust and other partners (£250,000), funded by NHS London's Innovation Fund
- Creating the new post of Head of Knowledge Exchange
- Growing the College's incubation activities by merging InnovationRCA and HEFCE/NESTA-funded Design London into a single interdisciplinary incubator in purpose-built space and launching the new academic programme in Service Design
- Embarking on the major AHRC-funded hub, The Creative Exchange (CX, £4M across three partners), which critically investigates digital public space in collaboration with universities of Lancaster and Newcastle, and commercial and public organisation partners
- Marking the twentieth anniversary of the world-leading HHCD in 2011 by expanding its research programmes into three labs: Health & Patient Safety, Work & City, and Age & Ability
- Increasing PGR student numbers across all Schools and the HHCD from 96 in 2008 to 181 in 2013
- Securing PGR-funded studentships for 67 MPhil/PhDs from public and private sponsors
- Leading the AHRC-funded 'Skills Development for Researchers in Design Practice' (SKIP) programme (£60k)
- Identifying strategic need and successfully bidding for AHRC BGP2 to lead the London Centre for Doctoral Design Training (LDOC, £2.35M) and partnered the RHUL-led London and South-East Doctoral Training Partnership (TECHNE, £13.55M).

**B2. 2014 – 19 Plans and aspirations for developing research:** The College's plans to 2020 are based on a realistic assessment of the external context, including both risks and opportunities, taking account of global political, economic, social, technological and cultural trends as well as international and domestic policy frameworks. At the same time as seeking to be influential in policy development and at the heart of global research in art and design, the RCA engages in scenario planning beyond 2020 and strategising to operate within an increasingly interdisciplinary and globalised context, with recognised world-leading academic and industrial partners, to deliver research with impact in key areas of strength in architecture, design, fine art and humanities. To

support these plans and ensure sustainability as a world-class research intensive university, the RCA will pursue continued growth of the high-quality research and learning environment through the policy of recruiting high-performing academic staff of PI or Co-I status, both to meet the requirements of planned institutional expansion and academic replenishment; and institutional expansion through the estates master-plan. By 2020, it is planned that the proportion of PGR to PGT will grow from the current 1:7 to 1:5, and that all academic staff at the level of Senior Tutor or above will be research active at international levels of excellence.

**Research identity:** The College's research identity is defined by its subject-specialist nature and a high concentration of research expertise in art, design and the humanities. We continue to build on the proven record of research excellence that meets strategic national and international priorities, ensuring that research is disseminated and exploited for the benefit of the economy and society. The RKE Strategy recognises the value of initiatives with partners from disciplinary fields beyond art and design including the medical and engineering sciences, 'big' data, computer science, social sciences, business and industry (eg Imperial College London; University of Cambridge; Tsinghua University, Beijing; Microsoft Research; Intel; NHS; Tata and Sons Limited).

Through its strategic development of research and engagement with industry, the College will:

- Continue to recruit research students and faculty, internationally, of the highest calibre around identified research strengths, themes, and capacity
- Ensure critical mass and sustainability in priority areas of the four identified cross-College research themes, attracting national and international partners and funders
- Continue to build its reputation as an internationally pre-eminent centre for excellence in Inclusive Design through collaboration between HHCD and the other RCA Schools on design research projects with industry. HHCD will advance its three labs, thus addressing the social challenges of an ageing society, rising healthcare costs and rapid urbanisation.
- Build on the College's strategic alliance in the CX Research Hub to found a Digital Media Lab with a focus on the cognitive and socio-cultural dimensions of how people create, share and receive information, and construct knowledge
- Lead the HEFCE-funded Healthcare Innovation Exchange (HELIX) Centre with the Institute of Global Health Innovation, Imperial College London and St. Mary's Hospital London for multi-disciplinary approaches to design-led innovation embedded in a clinical environment. Recruit five Research Associates and one Post-Doctoral Research Fellow to HELIX, funded by the Lord Leonard and Lady Estelle Wolfson Foundation (£325,000) and the HEFCE Catalyst Fund (£2.8M)
- SustainRCA will continue to develop and be established as a research centre with emphasis on innovation and application of new and traditional materials
- Centres of Expertise will be consolidated as practical KE hubs and aligned to strategic research priorities in the areas of (1) 3D design and additive manufacturing (with particular relevance for rapid prototyping (RapidForm), Vehicle Design, Architecture, Design and Jewellery); (2) 2D visualisation and motion graphics (with particular relevance for Communication, HHCD and HELIX Centre); (3) 'High-end' digital image generation and printing (with particular relevance for Printmaking and Photography).

**Income:** Since RAE2008 the RCA has built on a strong research performance and upward trajectory to invest in infrastructure and expertise, resulting in planned diversification in external funding streams, and access to a wider range of non-public research income to achieve a total of £8.72M. The College's strategic aim is to increase further the number of non-public sources and income levels through continuing to develop KE partnerships with international and UK industry (IDEO, USA, and Tata and Sons Limited, India), and non-RCUK sources, to strengthen the culture of design innovation and entrepreneurialism, protect IP and maximise commercialisation opportunities for research.

**Research staff:** The RKE Strategy aims to provide an effective environment in which to support world-leading researchers, and to support and develop next-generation researchers with learning, training and mentoring opportunities, developing them at all stages of their career in accordance with the Researcher Development Framework (Vitae, 2011) and Concordat to Support the Career

Development of Researchers (Vitae, 2012). As part of the academic strategy to support contracted academic research, the College will develop a postgraduate academic award in Research Supervision (2014-) for all contracted academic staff at the College, which will also be made available to strategic partners internationally.

**Research students:** The College will increase recruitment of students in areas of strategic importance, through its leadership of the AHRC Centre for Doctoral Training, 'London Doctoral Design Consortium' (LDOC) and membership of the AHRC Doctoral Training Partnership, 'London and South-East Doctoral Research Consortium' (TECHNE); secure funding to support students of highest calibre; and, expand its research training and professional development of PGT and PGR students through continuous enhancement of the Research Methods Course, and introduction of research Master's programmes (MRes, 2015-) and develop an industry-facing Doctoral programme (2016-).

**Preparedness for Open Access:** The RCA is committed to the principle that research outputs be available for peer review and dissemination to the widest possible audiences and publics through Open Access appropriate to the creative arts and design. It will continue to make substantial investment in developing the recording, evaluating, storage and communication of research outputs through the RCA Research Repository, itself based upon the widely used ePrints open source software for Open Access. The College will also position this opportunity for capturing practice-led research in art and design at the centre of its intellectual vision through developing innovative collaborations with galleries, museums, publishers and the cultural sector.

**Internationalisation:** With a student and staff community that has risen to more than 70 nationalities, and research impact and partnerships with global reach including via the British Council, the RCA is committed to the principles of internationalisation in teaching and research, to ensure that the College is well placed with respect to international developments, intercultural education and creative exchange. Recognising that research quality transcends national boundaries, and that the best researchers and postgraduate students will exercise mobility and judgment in seeking to work in the most challenging research intensive environments, the RCA has established an Internationalisation Strategy Group, in order to: nurture strategic research partnerships with selected leading global institutions and industries; support high value / high impact collaborative research projects; develop a more strategic approach to international faculty and student exchanges; diversify and internationalise the staff and student bodies, research themes, and taught curricula; establish a global, and country-specific alumni networks; and demonstrate the RCA's commitment to mutual benefit derived from cultural exchange. In addition to the conduct and dissemination of research by RCA staff world-wide, since RAE2008 the College has established and developed numerous projects and formal partnerships internationally including: Pratt Institute (US) and Keio University (Japan) (Global Innovation Design); Stanford University (US) and Singapore University of Technology and Design (HELIX); Hong Kong Polytechnic University (IncludeAsia/HHCD); Tsinghua University, Beijing (MoU and GoGlobal); Central Academy of Fine Arts, Beijing; Luxun Academy of Fine Arts, Shenyang and Dalian (MoU established 2012); China Academy of Art, Hangzhou (MoU established 2012); São Paulo University (Architecture). In tandem with the strategic aim to maintain a diversified income base for research, the RCA is in preparation for accessing Horizon 2020 from January 2014.

### **C People:**

**C(i) Staff Strategy and Development:** The RCA recognises that the most important dimension in research is its staff. Whether as individual scholars or in groups, hubs, networks or centres, the College ensures that opportunities and support are widely available for researchers, and that staff are helped to attain internationally excellent and world-leading standards of research performance which are monitored and reviewed annually through appraisal and the RKE Committee. To enable this, in 2011, alongside the introduction of the College's new six-School academic structure and the appointment of Deans and School Research Leaders, the expanded and enhanced Research Office, with the new Pro-Rector (Academic) (Professor Naren **Barfield**) introduced and operationalised the RKE Strategy (2011-2016) with annual research income targets, minimum

standards, and key performance indicators for each School: these have supported an objectively measured rising trajectory in terms of staffing, capacity, outputs, quality, income, and support.

**Recruitment:** An established track record in research at international level is a primary criterion for appointment to all academic posts at the level of Senior Tutor or above, with PI or Co-I status normally expected; at levels of seniority below this, a rising trajectory of personal research, or potential to develop as an early career researcher, is expected. The RCA only appoints to academic posts where research is an expectation. Professorial appointments made on the strength of research excellence during the census period include **Brody**, Professor Peter **Buckle**, Professor David **Crowley**, **Hagan**, **Pavitt** and Professor Teal **Triggs**. In 2012/13 the College introduced a new criterion-based annual call for applications to the promotion to Readership and Professorship, leading to the appointment of eight Readers, all recognised for their individual contribution and research leadership. Early and mid-career academic appointments include Jordan **Baseman**, Matteo **Conti**, Dr Nicky **Coutts**, Dr Brock **Craft**, Dr Jasper **Joseph-Lester**, Dr Ian **Kiaer**, Dr Tim **O'Riley**, Tom **Simmons**, Dr Marquard **Smith**, Dr Qian **Sun**, Dr Kevin **Walker** and Gareth **Williams**. Post-doctoral researchers have been appointed in line with the College's research priorities, including Patrick **Keiller** (2005-11), Dr Charlotte **Ashby** (2006-09), Deborah **Levy** (2006-09), Robert **Thompson** (2007-10), Dr Chris **McGinley** (2011-), Dr Steve **Brown** (2013-) and Dr Dan **Lockton** (2013-).

**Support:** The College continuously benchmarks research support against national indicators, eg the Researcher Development Framework (Vitae, 2011) and Concordat to Support the Career Development of Researchers (Vitae, 2012). A significant part of QR funding is directed towards research-active staff through the **Research Remission Scheme** which invests dedicated time to an annual average of 45 researchers of the highest quality. Staff are expected to secure match-funding (eg Professor Joan **Ashworth**, **Aynsley**, **Brody**, Dr Sarah **Cheang**, Stuart **Croft**, Dr Sarah **Teasley** and Noam **Toran**). Additional research support is provided by the **Research Development Fund** (RDF), a funding scheme with both a strategic and responsive funding open to all research staff with ring-fenced funding for ECRs. The RK Committee distributes the RDF according to the quality of the application and strategic fit with institutional priorities, using RCUK style assessment models to encourage good practice in researcher development. Emphasis is given to seed- or match-fund research project initiatives, provide short-term research leave and realise research outcomes, including conferences, symposia, exhibitions and publications. Larger scale strategic initiatives requiring significant investment will also be forwarded for consideration to the Rector, Pro-Rector (Academic) and Director of Research.

**Probation and Appraisal:** In addition to standard university induction, probation and appraisal procedures, all academic staff are supported through individual research plans and objectives, and performance reviews, at least annually. This includes a review of the completion and dissemination of outputs and future plans for research, as well as individuals' records of grant applications, supervision and completion rates of research students. Training needs are identified through appraisal, with re-grading possible for high-performing staff.

**Mentoring:** Through annual appraisal, the balance of teaching and research can be adjusted to support research projects and their integration into the research culture of a programme or School, providing particular support to ECRs and staff successful with funded research. The College's framework to increase professional researchers provides mentoring for new and early career researchers in the areas of grant application, research student supervision and research project management eg **Ashby** ECR, RCUK-funded project, subsequently appointed to Lecturership at Birkbeck (Humanities); **Brown** PhD, Tutor and ECR (Material) and Dr Julie **Behetsa** AHRC-funded Post-doctoral Researcher (Material); HHCD staff and career progression, eg Jo-Anne **Bichard**, promoted to Senior Research Fellow and Lab Leader, and Catherine **Greene**, Col on RCUK-funded project.

**Training:** Researchers participate in the College's staff development programme, which includes tailored modules and, additionally, the Research Office runs an annual **Research Student Supervisor** induction, termly **Supervisor Fora** and an annual **Supervisor Training Day** with

Vitae representation. Staff undertake external courses and qualifications, including research student supervisor training, eg Centre for Learning and Teaching in Art and Design (CLTAD) and Missenden Centre. Completion of the CLTAD Postgraduate Certificate is mandatory for all new supervisors. Academic staff are trained to use the **Research Professional** funding database, and participate in grant writing and research impact workshops. Internal peer review of external grant applications is conducted in line with RCUK practice. Significant numbers of staff are members of the RCUK and other national and international peer review panels (see Section E) and through this bring their engagement with external policies and developments into the institutional environment.

**Progression:** As a policy, the College employs a high proportion of part-time academic staff who enrich their contribution to the RCA through advanced professional practice and engagement with industry. The dual careers of many staff as academics and practitioners lead to a significant number of projects sponsored by external clients. In 2012/13, the College introduced a new criterion-based Readership and Professorial appointments scheme to demonstrate commitment to recognising sustained achievements in academic leadership, research and scholarship, and learning and teaching. As part of the College's commitment to increasing diversity and promoting equality, in 2012 the College was awarded the quality kitemark 'Positive about Disability Two Ticks' by Jobcentre Plus and became a member of Stonewall's Diversity Champions programme. The College has implemented Unconscious Bias training for all staff involved in selection interviews for staff and students. It is in preparation to join the Arts and Humanities equivalent of Athena SWAN Charter for Women in Science on its introduction, and is enrolled in the Aurora programme to promote women in leadership in higher education. The HHCD is a world-leader in Inclusive Design research which encourages participation from a wide cross-section of society, and raises awareness of issues of equality through collaboration with all of the College's academic programmes and its Research Associates programme, and related events, conferences, exhibitions and publications.

**C (ii) Research students:** The College offers a highly concentrated, subject-specialist community of postgraduate research students. The environment for PGRs guarantees access to excellence in research supervision, high-level resources including specialist workshops with technical and digital provision and facilities (eg scanning, rapid-prototyping, foundry, Moving Image Studio), as well as subject-specific and generic research and KE training and career development. The College has established an enhanced PGR culture by introducing the following new initiatives during the period 2008-2013:

- Increasing annual research student intake in line with the College's Strategic Plan and new academic structure from 20 (2008) to 56 (2013), to a total cohort of 181 PGR (2013)
- Providing excellence in academic and professional training through a PGR and ECR programme including the expansion of the College-wide Research Methods Course delivered by at least 20 RCA academic staff and 29 visiting lecturers annually, and specialist training and supervision within programmes, schools and College-wide themes.
- Delivering a student-led biennial research conference (New Knowledge, 2011; Disruption, 2013) and research exhibition (The Edge of our Thinking, 2012) to build student professional practice and dissemination of research knowledge, and understanding of impact
- Establishing research fora, led by a senior academic in each School, as reading groups, theoretical workshops and platforms for peer exchange
- Providing advanced research training through the AHRC-funded 'Skills Development for Researchers in Design Practice' (SKIP) programme (2012-2013) led by RCA in partnership with Kingston University and the University of the Arts London
- Leading one successful AHRC Centre for Doctoral Training (LDOC) and joining a Royal Holloway-led Consortium for a successful AHRC Doctoral Training Partnership (TECHNE), both to commence in 2014
- Securing external PGR funding (£3.5M) in the areas of the College's strategic priorities including recruiting PhD students to the HHCD and the Creative Exchange (CX) KE hub in partnership with Lancaster and Newcastle Universities

- Expanding research student bursary provision for doctoral programmes through competitive AHRC PhD studentships including: 13 PhDs in the BGP1 Capacity Building (2011-14); 4 PhD project studentships; 6 PhDs attached to the Creative Exchange
- Continuing to strategically partner institutions (HEIs and museums and galleries) participating in the AHRC Collaborative Doctoral Awards and Collaborative Doctoral Partnerships schemes. The College secured 10 CDAs with partners (Tate; Victoria & Albert Museum (V&A); Science Museum; British Postal Museum and Archive), and 2 CDPs (Tate and V&A) in their first year of operation (2013/14) (£780k)
- Securing funding from business and industry to support doctoral students, eg Aedas, Barclays, Microsoft, Systems Simulation/EPSRC, Ted Powers Foundation (£325k)
- Supporting PhD completion through the introduction of a funding pool for a Completion Award and final year Continuation Status
- Proceed with the launch of an MRes and industry-facing Professional Doctorate degree to commence in 2015/16 to provide new modes of research opportunity for prospective research students.

In the period 2014 to 2019, the College will prioritise:

- Strengthening the research intensive ethos of the College and the culture of knowledge generation and exchange in all academic programmes
- Continue to increase PGR both in real terms and as a proportion of the College student population from 1:7 to 1:5 (PGR: PGT) to achieve an optimum balance as a research-led postgraduate university
- Continue to move from response-mode PGR applications to strategic alignment of PGR students with RCA research themes, initiatives and funded projects
- Leading ECR career development by further creating opportunities for post-doctoral researchers to contribute to major research project initiatives
- Expanding the research training and professional development for a growing student population of MRes, MPhil, PhD and Professional Doctorates
- Securing external PGR funding in the areas of the College's strategic priorities, particularly in areas of national and EU themes, and industry engagement
- Establishing centres for doctoral training in specialist areas of art, design and humanities through the AHRC Centre for Doctoral Training, 'LDOC' and the AHRC Doctoral Training Partnership, 'TECHNE', and developing sustainability strategies for both.

The College delivers its commitment to provide first-class development for research students with reference to the seven principles of the Concordat to Support the Career Development of Researchers (Vitae 2008), the Researcher Development Framework (RDF) (Vitae 2011) and the QAA Quality Code Chapter 11 (2012). The College's Equal Opportunities, Race Equality, Gender Equality Policies, membership of Stonewall's Diversity Champions and Disability Equality Support Scheme ensure proactively that the research environment for students is inclusive and supportive. The College supports students and staff with dyslexia in accordance with the Special Education Needs and Disability Act 2001 (SENDA).

To ensure equal opportunities in recruitment, Chairs of Admissions Boards undertake an approved training programme in selection interviewing; the composition of interview panels meets criteria for Equal Opportunities and includes representation of a research student. Staff involved in student selection are trained in Fairness in Selecting Students to ensure compliance with the QAA Quality Code (Chapter B11, Indicator 5) and the 2010 Equality Act.

The formal stages of monitoring and assessment of research students begin with the interview when an offer of place is made based on academic merit and the quality of the research proposal: as a selecting (as opposed to recruiting) university, RCA staff are aware of standards required for admission to a research programme.

The appointment of supervisors is based on subject knowledge and expertise, and supervisory experience among the team. A **Training Needs Analysis (TNA)**, used to identify initial individual training requirements, is monitored and updated annually. Students undertake a self-evaluation audit of skills and competences. Student performance is assessed through regular tutorial supervision and by seminars, crits and exhibitions. In addition to regular tutorial support, three formal tutorials per year are reported through the use of a **Personal Development Plan (PDP)**

based on the principle of student self-evaluation. Student progression at the end of each academic year is based on an **Interim Examination** at which point a formal review of the research project is undertaken by an examination board. Rarely, students who are unable to progress satisfactorily are set a body of referral work as a condition for moving onto the next stage of the research degree. Results of entry, interim and final examinations are reported to the College's **Academic Standards Committee** (ASC) which has oversight of standards and quality in all programmes. A student appeal and complaints process is available, as is representation from the **Student Union**, whose President is a member of ASC. The RCA **Research Student Handbook** and **Regulations** describe in detail the mechanisms for monitoring and supporting research student progression. The Research Methods Course (RMC) provides **Professional Practice** seminars, and the College offers a **Preparing to Teach** course to all of its research students. **FUEL RCA** provides a dedicated programme of expert professional development including transferable skills, career development, entrepreneurship, freelancing, starting and running a creative venture, planning, marketing and selling, presentation skills, promotion, copyright and patents, finance, teamwork, negotiating, time management. Additionally, FUEL RCA also run prestigious mentoring programmes with **PricewaterhouseCoopers** and **Royal Designers for Industry**. Student projects with commercial potential are protected and developed through the RCA's innovation and business incubation centres. Business and 'non academic' partners benefit from exposure and KE with students and supervisors through residency and placement schemes, as well as joining and contributing to Research events. Projects explore new and emerging technologies, as well as innovative methodologies, forms of communication and working practices, providing benefit to partners and other research users.

#### **D. Income, infrastructure and facilities:**

**Income:** As discussed in Section B, research income figures in REF4b shows that the College has continued to grow income and diversify sources since 2008. The College achieved its RAE2008 ambition to grow international funding from the EU: from a total of £36k for the period 2000-2007 in RAE2008 to £210,000 in the shorter census period of 2008-2013, with ongoing participation in four major EU collaborative research projects. Income from RCUK and the British Academy has also exceeded the RAE2008 census period total, from £3M (RAE2008) to £3.7M in 2008-2013 (an increase in average annualised income of 43% over the period). Funding from UK-based **charities** has exceeded £2.1M and from **UK industry** £2.5M between 2008 and 2013. The **HHCD Research Associates** programme has generated a combined research income of £1,698,890 since 2008. As is indicative for this sector, research-active staff also receive significant research and KE funding from sources not reported in the College's annual HESA returns, most notably Arts Council England and both cash and in-kind funding direct to individuals from various sources to support commissions (eg £21,578 for Felicity **Ayllieff**, 'Out of China', from Arts Council England, 2008).

**Scholarly Infrastructure:** The College's scholarly infrastructure has been enhanced over the census period both by investment in expert researchers and School Research Leaders, and a strategic review resulting in significant new investment in **Information, Learning and Technical Services** (ILTS) facilities and senior management. The RCA provides extensive digital infrastructure, technologies and support for staff and student research. Moreover, several dimensions of the College's research are at the leading edge of digital developments in art and design, augmented by new appointments including **Brody** (digital typography and communications), Tom **Simmons** (digital sound art), **O'Riley** (digital print) and K. **Walker** (information experience design). Since RAE2008, the ICT Strategy has evolved significantly resulting in new systems to support information access and communication, rich digital environments for online research and distance-based collaboration, and enhanced online learning facilities to support the Research Methods Course.

The RCA sustains and improves the technical research environment through strategic investment aligned to the development of Centres of Expertise. A team of 22 expert staff under the direction of the new post of Head of ICT support digital research activities in: 2D and 3D graphical software; high end specialist scanning and image capture; large-format digital printing; rapid prototyping; laser-cutting; 5-axis milling; 3D scanning; and advanced digital still photography and moving image. **RapidformRCA** is a leading rapid prototyping centre with Z Corp 3D Printer, Stereolithography, Objet 'Polymerjet' resin modelling, SolidScape Wax Printer and MCor 3D Paper Printer).



Since 2008, the **Special Collections** division of the RCA Library has acquired new collections and further developed those already in its holdings. Recent acquisitions include the archive of Bruce Archer, Professor of Design Research (RCA) and the papers of Madge Garland, the College's first Professor of Fashion. New and updated descriptions of key collections have been uploaded to the Archives Hub and AIM25 online finding aids. The **Colour Reference Library**, a self-contained collection of over 1,600 books, and one of the most comprehensive resources of its kind in the world, has grown in profile, scope and use, supporting numerous practice-led research projects and publications.

In 2012, the management of unique collections across the College, including the Printmaking departmental archive of c.14,000 prints produced by staff and students over the past century, and the College art collection of c.1,200 artworks, was centralised and brought within the Library's Special Collections division. This enhancement has supported, for example, the Tate research project 'Art School Educated: Curriculum Development and Institutional Change in UK Art Schools 1960-2000'.

**Organisational Infrastructure:** The College has invested significantly in its organisational infrastructure for research since 2008. Research strategy and funding is led through the **Research Office**, directed by **Aynsley**. In 2009, a full-time **Senior Research Manager** (Dr Jamie **Gilham**) was appointed to support major growth in research and external funding initiatives. A full-time **Research Administrator** was appointed to support the rapidly expanding PGR community, managed by a **Senior Research Tutor** (Martina **Margetts**). Dedicated **School Research Leaders** (SRLs) were introduced in 2011 as part of the new academic infrastructure.

The RCA **Council**, comprising lay members with considerable business, publishing, cultural, educational and research expertise, takes a strong interest in, and supports, the College's position as a research-led postgraduate international university of art and design; and is engaged in long-term strategic and scenario planning including positioning for the College's research and internationalisation.

Academic policy and strategies are overseen by **Senate**, to which both the **Research and Knowledge Exchange Committee**, and the **Academic Standards Committee** report. Executive leadership is provided by the **Rectorate** comprising the Rector (Dr Paul **Thompson**), Pro-Rector Academic (**Barfield**) and Pro-Rector Operations (Jane **Alexander**); and the Senior Management Team (SMT) comprising the Rectorate, Deans, Academic Registrar, and Directors of Development; Estates; Finance; HHCD; Information, Learning and Technical Services; and Research and KE.

#### **E. Collaboration and contribution to the discipline or research base:**

**Collaborative arrangements, partnerships, networks and joint research projects with academic colleagues in other institutions:** A high percentage of RCA research derives considerable benefit from collaboration through partnerships, networks and joint projects. The most significant of these in the census period with **London** partners were: Imperial College London (eg **Myerson**, Designing Out Medical Error, DOME, 2008-11; Dr Nick **Leon**, Design London, 2007-11; **Myerson** and **Thompson**, Healthcare Innovation Exchange HELIX Centre, HEFCE Catalyst Fund, 2013-16); Birkbeck (eg **Aynsley**, The Viennese Café, 2006-09); and London School of Hygiene and Tropical Medicine (eg **Ashworth**, CHILDren's Health State Preferences Learnt from Animation - CHILDSPLA, 2012-14); V&A (eg **Crowley** and **Pavitt**, Cold War Modern, 2005-08); Institute of Education (eg K. **Walker**, Border-Crossing Digital Arts and Social Science: New Methodological Approaches to Embodiment, 2013-14). **Nationally:** Cambridge and Loughborough (eg **Myerson**, i-design3: Extending Active Living through more Effective Inclusive Design, 2006-10); Lancaster (eg **Brody** and **Myerson**, The Creative Exchange, 2012-16); Newcastle (eg **Richard**, Family Rituals 2.0, 2013-15); Cardiff (eg **Greene**, Media, Community & the Creative Citizen, 2012-14); OU and Nottingham Trent (eg **Keiller**, The Future of Landscape and the Moving Image, 2007-10).

**Internationally:** Trinity College Dublin (eg Professor Anthony **Dunne**, StudioLab: A New European Platform for creative Interactions between Art and Science, 2011-14); Politecnico di Milano (eg MeLa: European Museums in an Age of Migrations, 2011-14); Hexagon/Karsan, Turkey (eg **Harrow** and Rama **Gheerawo**, Future London Taxi and Inclusive Vehicle, 2013-15); Tsinghua University, China (eg Bronac **Ferran**, Design Age Research Environment, 2009-10); TU Delft (eg **Gheerawo**, SusLabNWE, 2012-15). Individual researchers participate in over 30 networks, including Université Paris 1, Sorbonne, Paris, Fictions et Interactions research group (Professor

Olivier **Richon**); Slade School of Fine Art, The Diagram Research Use and Generation Group (Margarita **Gluzberg**); RCA/V&A and University of Warwick, Global Design History (Dr Glenn **Adamson**, Dr Christine **Guth, Teasley**), Imperial College London, Digital Economy Sustainable Society Network+ (K. **Walker**). Collaborations with public organisations and businesses internationally have developed research partnerships, projects and outcomes, including the Decibel Festival Seattle, Adam Mickiewicz Institute, National Museum Poznan, Polish Cultural Institute, UnBox Festival, Spike Island, Gimpel Fils, St Bride Library, Tate, BFI, Taschen, Centre Pompidou, MoMA.

**Organisation of conferences and scholarly encounters:** As an international site for production and public dissemination of research, the RCA has hosted numerous interdisciplinary research events during the census period, including: the AHRC-funded 'The Viennese Café as an Urban Site of Cultural Exchange' (**Aynsley**, 2008); 'Include' (**Myerson**, 2009 and 2011); 'The Shadow of Language' in collaboration with the Centre for Chinese Visual Arts, University of Birmingham (**Richon**, 2012); 'Design That Makes a Difference' symposium and exhibition (**Gheerawo**, 2013). The HHCD organises an annual Helen Hamlyn Research Associates Programme dissemination event as part of the **London Design Festival** (six since 2008). Staff lead or co-organise research events nationally and internationally, eg 'EBID European Business Conference on Inclusive Design', Oslo (**Gheerawo**, with the Norwegian Design Council, 2008, 2010, 2012); 'The Contingency of Curation', Tate Britain (**Walsh**, 2010); 'Monuments to Historical Change', L40, Rosa Luxemburg Platz, Berlin (**Joseph-Lester**, 2011); 'Sex and Shame in the Visual Arts', Tate Modern (Dr Claire **Pajaczkowska**, 2011); 'Digital Reflexes', V&A Museum (Jo **Stockham and O'Riley**, 2012); 'Inspiring Matter' (Professor Clare **Johnston**, 2012); 'Out of Kuwait' and 'The Expanded Landscape', Out of Britain British Council art residency workshops (**Rayson**, 2012 & 2013); 'Ageing and Design: Global Business Perspectives', Hong Kong (**Gheerawo**, 2012); 'Architecture&' series of themed public debates, V&A (**Hagan**, 2012-13); 'Global Pop', Tate Modern (**Crowley**, 2013); 'Sustainable Construction: What are the opportunities UK/Argentina?', Argentine Embassy, London (**Hagan**, 2013); Centre for Creative Collaboration, 'BRUTE' symposium (**Joseph-Lester**, 2013); Making Futures 3, Plymouth College of Art (**Oakley**, 2013); 'Include Asia', Hong Kong Design Centre (**HHCD**, 2013).

**Membership of Research Council or similar national and international committees:** RCA researchers are members of HEFCE's REF2014 Sub-Panel 34: Art and Design: History, Practice and Theory (**Barfield, Boyd Davis**); RCUK Lifelong Health and Wellbeing Advisory Group of Experts (**Myerson**); and the EPSRC and AHRC Peer Review Colleges (22 memberships). Since 2008, 17 RCA researchers have been members of the AHRC Peer Review College (**Adamson, Aynsley, Barfield, Bichard, Boyd Davis, Crowley, Hilary French, Hagan, Dr Ashley Hall, Dr David Humphrey, Professor Sandra Kemp, Myerson, Professor Mark Nash, Pajaczkowska, Pavitt, Al Rees, Teasley**). They are also members of the NESTA Advisory Board on Active Ageing (**Myerson**); Hong Kong Universities 2014 REF Built Environment Panel (**Hagan**); Aosdana, Arts Council Ireland (Nigel **Rolfe**). **Barfield** was a member of an invited group to advise the AHRC on arts and humanities impact criteria. Staff represent the College on jury panels, eg Interaction Design for Ars Electronica Linz Austria 2012 (**Raby**).

**Involvement on national/international university research advisory panels and strategy/review boards:** Researchers are members of many advisory, strategy and review groups, including: Automotive Council UK (**Harrow**); Industrial Design Advisory Board, Korean Advanced Institute for Science and Technology (**Myerson** - Member); EIDD – Design for All Europe (**Gheerawo** - Vice-President of Administration); Society of Dyers and Colourists (**Johnston** - Educational Advisor); British Fashion Council (**Dagworthy** - Advisory Board Member); Malmö City Planning Department (**Hagan** – consultant on environmentally-led urban design); Southwark Planning Design Review Panel (**de Rijke** - Architect Advisor); ICSID World Design Capital 2014 Selection Committee (**Myerson**); Home Office Design Out Crime Alliance (**Myerson**); All-Parliamentary Design Commission (**Myerson**). **Myerson** and **Leon** led executive education for the 10 Downing Street Design Summit for Senior Civil Servants.

**Leading positions in professional subject associations and learned societies:** Staff hold

leading positions in more than 40 professional subject associations and societies, including: Chair, Advisory Board, Fabbrica, Italy (Benetton Group) (P. **Thompson**); Trustee, V&A Museum (P. **Thompson**); Board of Visitors, Ashmolean Museum, Oxford (P. **Thompson**), Programme Advisory Committee, Wellcome Collection, Wellcome Trust (P. **Thompson**); Chair D&AD (**Brody**); Board of Directors, Edinburgh Sculpture Workshop (Kate **Davis**); Curatorial Advisory Board for Sheffield Art 2013 (**Joseph-Lester**); Board of Calvert 22 Foundation (**Gluzberg**); Trustee, Design Council and Audi Design Foundation (**Myerson**); Vice-Chair of the CABA Inclusion by Design Group and Steering Group, AgeUK 'Trusted by Engage' accreditation scheme (**Gheerawo**); Member of the International Development Network, RTPi (**Hagan**); UKADIA Board Member (**Barfield**); President and Fellow of the American Society for Cybernetics (Professor Ranulph **Glanville**); Board Member, MaDE Material and Design Exchange (**Johnston**); Member, Royal Mail Stamp Design Advisory Board (**Pavitt**); Trustee, Contemporary Applied Arts (**Aylieff**); Lifetime Friend, ICOGRADA: International Council of Communication Design and Fellow, ISTD: International Society of Typographic Designers (**Triggs**); Fellow, Craft Potters Association (Alison **Britton**); Fellow of the Royal Anthropological Institution (**Oakley**); Fellow RSA (including Dr Nina **Power**, **Triggs**).

**Editorial positions:** An indicative list of editorial positions held by staff includes: editors **Triggs**, *Visual Communication*; publishing editors **Joseph-Lester** (*Transmission Annual*), **Lomax** (Copy Press), **O'Riley** (Ponsonby Press); international journal associate editors **Teasley** (*Design and Culture*); journal editorial/advisory board members **Adamson** (*Journal of Modern Craft*); **Aynsley** and **Crowley** (*Design History Workshop Japan*); **Boyd Davis** (*Creative Industries Journal*), **Margetts** (*Craft Research*), **Millar** (*Afterall*), **Pajaczkowska** (*Textile: the Journal of Cloth*) and **Teasley** (*Design Issues*); journal editorial advisory panel members **Myerson** (*The Design Journal*) and **Matthews** (*Medical Device Technology Journal*); journal guest editors **Bichard** (*The Design Journal*) and **Gheerawo** (*Journal of Design Philosophy Papers*); consulting editors **Blees** Luxemburg (Black Dog Publishing), **Slyce** (Black Dog Publishing); art editors **Slyce** (*Bedeutung Magazine*).

**Refereeing academic publications or research proposals:** Staff peer review for over 30 academic journals within the discipline and beyond, eg *Art Bulletin*, *Design Issues*, *Journal of Contemporary History*, *Journal of Engineering Design*, *Philosophy & Technology*; and publishers worldwide, including Berg, MUP, OUP, Phaidon, Reaktion, Routledge, University of California Press, University of Hawaii Press, Yale University Press. In addition to the 17 members of the AHRC Peer Review College listed above, staff have also peer reviewed for the EPSRC (**Boyd Davis**, **Gheerawo**); ESRC (**Bichard**, **Gheerawo**); and MRC (**Boyd Davis**). **Barfield** was a member of AHRC Research Panel 2: Visual Arts and Media (to 2009 and panel member, 2012); **Clare Brass** was a reviewer for the AHRC UK-India Joint Funding Initiative. Beyond RCUK, researchers have reviewed proposals for other funding including AgeUK (**Myerson**); ACE/NESTA/AHRC Digital R&D Fund for the Arts (**Barfield**, **Boyd Davis**); Czech Republic Science Foundation (**Guth**); European Commission Joint Programming Initiative (JPI) on Cultural Heritage and Global Change (**Hagan**); Grantová Agentura České Republiky (**Crowley**, **Teasley**); Social Sciences and Humanities Research Council of Canada (**Teasley**); Wellcome Trust (**Simmons**). Staff contribute to RCUK interview and application review panels, including **Aynsley** and **Hall** (AHRC CDA); **Bichard** (ESRC New Dynamics of Ageing); **Gheerawo** (EPSRC Research in the Wild); **Hagan** (EPSRC/ESRC/AHRC Design for Wellbeing); Ed **Matthews** (Wellcome Project Applications Panel Advisory Board).

**HEI advisory roles:** Examples of staff who have consulted on research and academic provision are **Barfield** (for the Universities of Auckland, Hull, Melbourne, Salford and Hong Kong Polytechnic University) and **Rayson** (for Wolverhampton University, Newcastle University, Brighton University and Chelsea College of Art and Design). Staff review applications for Tenured Professorships in the USA (eg **Crowley**, **Dunne**, **Guth**) and sit on Professorial appointment panels external to the RCA (eg **Aynsley**, **Hagan**) and act as Tenure and Professorial referees for universities internationally.

**Examination of research degrees:** RCA staff have externally examined more than 60 PhD and MPhil submissions at institutions in the UK and overseas, including The Architectural Association, London; Central Saint Martins College of Art and Design; City University; Goldsmiths College, University of London; LSE; National College of Art and Design, Dublin; SOAS; University of Arts, Vienna; UCL; University of Edinburgh; University of Melbourne; University of Technology Sydney. Staff are also external examiners and validation panel members for PhD, MRes, MA and MSc programmes, eg Glasgow School of Art; Napier University; LJMU; NID, Ahmadabad; University of Auckland, New Zealand; and University of the Arts London.

**Invited keynotes, lectures and/or performances:** RCA staff regularly give invited keynotes, lectures, talks, speeches and performances both nationally and internationally. Since 2008, these have included over **300 keynotes**, external lectures, participation on discussion panels etc at other HEIs, colleges and research centres internationally; societies; museums, galleries and institutes; conventions and festivals. Venues include: Akademie der Bildenden Künste, Germany (**Stofer**, 2013); Microsoft Research, USA (**Dunne**, 2013); MoMA, USA (**Crowley**, 2013); ICTVC, University of Nicosia, Cyprus (**Brody**, 2013); World Design Policy Forum 2013, South Korea (**Leon**, 2013); MUSAC, Spain (Kit **Hammonds**, 2013); Sociedad Central de Arquitectura/Sociedad de Arquitectura Sustentable, Brazil (**Hagan**, 2012); Tsinghua University, China (**Barfield**, 2012); Pensando Design Automotivo/Thinking Automotive Design, Brazil (**Harrow**, 2011); Parsons the New School for Design, USA (**Teasley**, 2011); Banff Centre, Canada (**Millar**, 2010); UNESCO Design City, Shenzhen, China (**Hall**, 2009); Oslo National Academy of the Arts, Norway (**Rowe**, 2009); St. Petersburg State University, Russia (**Dagworthy**, 2008 and 2010).

**Scholarly awards, fellowships, placements and residencies:** Researchers are recipients of distinguished scholarly awards, fellowships, placements and residencies, including four AHRC Fellowships in the Creative and Performing Arts (**Dillon**, 2008-11; **Levy**, 2006-09; **Millar**, 2007-10; **O'Riley**, 2004-08); Design Management Institute's Muriel Cooper Prize USA Finalist (**Dunne**, 2008); Sir Misha Black Award for Innovation in Design Education UK (**Dunne**, 2009); Iris Award for Outstanding Contribution to the Study of the Decorative Arts by a Mid-Career Scholar, Bard Graduate Center, New York (**Crowley**, 2008); Fellowship of the City and Guilds of London Institute (P. **Thompson**, 2012); Stanley Picker Fellow (**Rogers**, 2009-11). Professional awards include RIBA Award for London Winner (**de Rijke**, 2010) and Grand Designs Awards Winner, Home of the Year (**de Rijke**, 2009). Researchers have also received national and international artist- and/or curator-in-residence positions at, among others: Royal Delft, Ceramic Manufactory, Netherlands (**Aylieff** 2010-11); Shigaraki Ceramic Sculptural Park, Shigaraki, Japan (**Britton**, 2010); Taipei Contemporary Art Centre, Taiwan (**Hammonds**, 2013); Arts Center Pasadena, USA (**Toran**, 2013); Arkitekturmuseet, Sweden (Onkar **Kular**, 2013).

**Visiting and honorary research positions:** Staff hold visiting and honorary positions worldwide, eg Dr James **Auger**, Visiting Professor, Musashino Art University, Japan; **Barfield**, Visiting Professor, Luxun Academy of Fine Arts, China; Dr Chantal **Faust**, Invited Foreign Professor, Department of Art Theory, School of Visual Arts, Korea National University of Arts, South Korea; Professor Ranulph **Glanville**, Professor of Research Design at St Lucas, Belgium and of Design and Research at RMIT, Australia; **Guth**, Research Associate, SOAS, UK; **Hall**, Visiting Research Fellow at National Institute of Design, India; **Oakley**, Honorary Research Fellow, UCL, UK; **Teasley**, Visiting Researcher, Tokyo Zokei University, Japan.

**Public and private collections:** Work has been acquired by over 50 public and private organisations since 2008, including: The Cooper Hewitt, New York, Stedelijk Museum Amsterdam and Philadelphia Museum of Modern Art (**Boontje**); MoMA, New York and Le Fonds national d'art contemporain (FNAC), France (**Dunne & Raby**); Israel Museum Jerusalem (**Toran**); Galleria Civica di Arte Moderna e Contemporanea (GAM), Turin, Italy, Pinakothek der Moderne, Munich, Germany, FRAC Haute-Normandie, France and Saatchi Gallery, London (**Kiaer**); Tate Britain (**Richon**); Tate Modern (Rut **Blees Luxemburg**, **Kiaer**); V&A Museum (**Kennard**, **Stockham**); Government Art Collection, UK (Bob **Matthews**, **Blees Luxemburg**); The Singapore International Foundation, Singapore (**Bob Matthews**); Weltkulturen Museum in Frankfurt (**Richon**).