This submission relates solely to the Department of Architecture, one of four departments within the School of Architecture and Built Environment (SABE) at Westminster. There was no submission by the Department of Architecture for RAE2001; instead, two members of staff (one now retired) were entered under another UoA. Since then, significant achievements have been recorded in terms of the RAE2008 submission, with 16 members of staff being returned. This was achieved by developing seven existing staff who held the potential to become researchers and by recruiting eight new research-active staff. During the period, members of this UoA have published 12 books, 14 chapters in books, 16 refereed journal articles and 6 research reports for external bodies, as well as designing 16 award-winning projects, being featured in numerous exhibitions and catalogues, and securing total research income from all sources of over £350,000. Research outputs have earned international recognition for their quality, being welcomed for their contribution to design culture and the architectural humanities. Hence this RAE2008 submission represents a transitional point in the growth of research activity within the Department of Architecture.

Strategic advice on the development of research subjects and policies at an international level has been provided by Professor Leon van Schaik in the role of Visiting Professor; as the research director at Royal Melbourne Institute of Technology (RMIT), he led the establishment of a globally recognised research culture there during the 1990s. Furthermore, a post was created in June 2003 to coordinate research and postgraduate studies in the Department of Architecture, with the staff member **(Professor Murray Fraser)** appointed at professorial level. University support for research projects by the new and existing staff have included:

- Provision of funded research time within full-time and fractional contracts to offer relief from teaching;
- Establishment of Reader-level posts to drive research activity;
- Appointment of temporary researchers who have specific skills, such as in digital archiving, to help with projects;

- Allocation of School-level funds for staff to increase their research time or bring in assistants to help on outputs;

- Moves towards collaborative research projects between departmental staff, as well as forming interdisciplinary projects with external researchers;

- Establishment of a coherent PhD programme in key research areas;

- Increased connection of research activities to taught programmes.

Thus there are now two appointed Readers **(Dr Tanis Hinchcliffe and Dr Kester Rattenbury),** along with a Research Fellow **(Samantha Hardingham)** and Post-Doctoral Fellow **(Dr Davide Deriu)** – with the aim being to augment these positions in future. None of these incentives existed previously, and so taken together it signifies a step-change in the Department of Architecture's research culture at Westminster. Linked initiatives have been to set up new postgraduate courses to feed into research activity and attract PhD students to a department with few doctoral candidates in the past. Other proactive tactics regarding PhD students include identifying targeted projects and offering institutionally-funded bursaries, as well as helping candidates win externally-funded scholarships.

i. Research Groupings and Achievements

Meetings were organised to agree on strategy and to encourage staff to become more interlinked in their research interests; from this, a research map was drawn up for the Department of Architecture. The initial stage involved analysing the department's traditional academic strengths, which were identified as follows:

- Creating innovative architectural design;

- Encouraging new approaches to architectural history and theory;

☐ Developing technologies of digital design and fabrication.

Three research clusters were established as a result as the means to coordinate and promote activity:

1. <u>Centre for Experimental Practice</u> – based on the study and development of experimental design methodologies, and linked to the highly-rated Graduate Diploma in Architecture (RIBA Part 2) course;

2. <u>Historical and Cultural Studies</u> – based on innovative approaches in the architectural humanities, and linked to two new postgraduate courses, the MA Architecture, Cultural Identity & Globalisation and MA London Architecture;

3. <u>The Polytechnic</u> – based on new techniques of digital design and fabrication, and linked to the Graduate Diploma in Architecture and the existing MA Architecture and Digital Media.

Importantly, these three clusters when combined create a distinctive research profile and character compared to other British architectural schools. Once identified, the next stage was to place each research-active member of staff into one of the three clusters, albeit recognizing that certain researchers straddled the groups, and that mechanisms were needed to forge links between the clusters. To give more detail on these groups:

<u>Centre for Experimental Practice (EXP)</u>

This cluster is led by **Rattenbury** and aims to develop initiatives where experimental design and academic practice can overlap. Experimental projects – whether buildings, unbuilt schemes or speculative designs – can be seen as a 'laboratory' for the architectural profession, being exhibited and published as such. EXP thus engages on studies of the leading avant-garde architectural groups over the past 50 years, as well as those with similar aims today. A major AHRC grant of £305,000 was won for the 'Archigram Archival Project', which by mid-2009 will create an online archive and database of

projects by the influential Archigram group. **Professor David Greene** of Archigram, a long-term member of the department, is part of EXP. Alongside **Hardingham**, the Research Fellow appointed to this cluster, **Greene** is undertaking a design-based research project into the 'Invisible University' – conceived as a new type of educational institution for the era of email and text messaging. **Greene** is regarded internationally as an influential voice in architectural theory, a status cemented by the award of the RIBA Gold Medal to Archigram. In addition, EXP organises a series of public events known as 'Supercrits', in which world-leading architects reflect on seminal projects or publications which have had a global impact on architectural thinking. The aim is to give the critical debates which take place in architectural culture a clear academic status. Figures involved so far have included Cedric Price, Robert Venturi, Denise Scott Brown, Richard Rogers, Bernard Tschumi and Rem Koolhaas, with Routledge now publishing these events as a book series. The 'Supercrit' series has received extensive coverage in the international architectural press; more are planned, including one by Zaha Hadid. Other initiatives in EXP are geared more towards current practice. This includes, for instance: **Sean Griffiths** of Fashion-Architecture-Taste (FAT), who was commissioned to write on suburban housing policy by the Commission for Architecture and the Built Environment, and whose designs are exhibited internationally; and **Peter Barber**, whose innovative and award-winning housing projects have elicited invitations to speak at the Labour Party Conference and other prestigious events.

Historical and Cultural Studies (HCS)

This cluster is led by **Fraser**, and covers a diverse range of research. In common with other scholars around the globe, the group merges the benefits of more traditional methods of architectural history with the newer approaches offered by cultural studies, including theories of post-colonialism, cultural identity and gender analysis. This cluster has led directly to establishing the design-based MA Architecture, Cultural Identity & Globalisation, the first course of its kind in the world. Other highly innovative work is being carried out by HCS staff in various fields in the architectural humanities, which is helping in turn to attract more PhD students. The cluster actively promotes the subject area in general, being closely involved in creating the Architectural Humanities Research Association, and hosting that organisation's inaugural research symposium in May 2004. Through his work in archaeology and conservation on the MA London Architecture, **Dr John Bold** is currently

engaged as an expert adviser by the European Commission and Council of Europe in the restitution of war-torn Eastern European states such as Kosovo, as well as framing cultural policies to preserve the architectural heritage of ex-Soviet Bloc countries in that region. **Deriu** has also been appointed as Post-Doctoral Fellow for this group.

The Polytechnic (POL)

This cluster is led by **Jon Goodbun**, an architect and researcher who theorises computer-aided design. The group's emphasis is on exploring innovative techniques for digital design, whether in the virtual realm or in fabricating building components. A network called POD-Net (Post-Digital Research Network) has been formed along with the AVATAR research group at University College London and Spatial Information Architectural Laboratory (SIAL) at RMIT in Australia. An inaugural conference on 'Spatial Interfaces' organised between these three institutions was hosted by the Department of Architecture in 2006. In addition to theoretical research in this area, POL members are instrumental in developing new applications. This covers a spectrum of emerging areas of digital design, including parametric modelling, real-time environments and adjustable concrete formwork. Research is helped by links to the Concrete Centre and companies like Bentley Microstation. **Andrei Martin** and **Andrew Yau**, part-time staff members from Urban Future Organization, have been beta-testing and developing Generative Components software; this uses algorithms and parametric modelling rather than line- or vector-based tools, and is currently being adopted by leading architectural practices as a vital new development. Several workshops – shared with institutions like the Architectural Association – have been held to teach Generative Components, attended also by architectural practitioners and students from other schools. The output of these workshops is now being publicised globally through exhibitions, workshops and journal articles. **Marjan Colletti** and **Marcos Cruz** in their work are pioneering digital fabrication techniques, winning a number of international design competitions as a result.

The task of overseeing all three research clusters is undertaken by **Fraser** in liaison with the Head of Department and SABE Research Director. There exists a school-wide Graduate Centre with four Research Coordinators (Architecture; Property and Construction; Transport Studies; Urban Development and Regeneration) which meets regularly to decide and implement SABE research strategy, monitor research activities, allocate

resources, and review the progress of research students. SABE has undertaken as a whole to increase its research-active staff by 50% and to secure more external research funds – with this transformation being especially noticeable in the Department of Architecture. It is then **Fraser's** task to meet with researchers in the three research clusters to set agendas and targets. Another vital role is to attract new researchers with the aim of them being integrated into postgraduate teaching.

ii. Research Strategy Post-2007

The strategy from 2008 will be to strengthen the three identified research clusters, and to use these to attract staff and greater funding. Another underlying goal is to continue to incorporate more of the department's existing members of staff into research, as well as employing young research-active staff – thereby stepping up the volume of research outputs and ensuring that the achievements of more staff can be recorded in future monitoring exercises.

Also to expand research culture, a fourth research cluster has been identified for development. This is the Centre for Reflective Practice, led by **Kate Heron**, with the aim of building upon the Department of Architecture's close links to London's booming architectural profession. It will link in-house researchers with architectural practitioners who in their daily work are already engaged in research, yet do not have a chance to formalize it academically. Again the idea is informed by experience at RMIT, where a successful model of practice-based research was developed that since then has influenced built projects in Melbourne. The emphasis of interest for the Centre of Reflective Practice will be on issues like creative company structures, practice-based learning, etc. International research symposia have been held at the RIBA in 2006 and 2007 to foreground this initiative. The plan is to capitalise on the department's large and much-respected RIBA Part 3 Professional course. The Gateway to the Professions project, sponsored by DIUS with £79k in 2007-2008, is being delivered collaboratively with the University's Centre for Excellence in Professional Learning from the Workplace.

Another target for post-2007 activity is to expand design-based research within the Department of Architecture, which will involve focussing more on the reputation of practitioners and part-time tutors such as **Griffiths** and **Barber**. This will also involve studies into aspects such as aesthetics, digital design, and rapid prototyping; indeed a first phase of internal research funds

has recently been awarded for this purpose. This aim is directly connected to the supervision by **Fraser** and **Rattenbury** (along with other staff) of the first group of PhD by Design students. An increased focus on inter-disciplinary links with other Schools and departments within the University of Westminster is also underway. Currently, one PhD by Design student is being jointly supervised with a staff member from the English Department, with others to follow. Closer ties have also been formed with the School of Media, Art & Design, with a major new exhibition venue (P3) now established on the Architecture campus to showcase interdisciplinary research outputs through exhibitions and linked events, winning critical acclaim.

B. Research Culture and Vitality

i. Staffing Policy:

The Department of Architecture is committed to recruiting and retaining high-quality research-active staff through two principal strategies for staff research development. As noted, the first involves seven current members of staff not previously perceived as research-active. Furthermore, 6 members of staff are now being sponsored to undertake PhDs, both inside the department or at other institutions, and are beginning to publish their research findings. Another group of four staff members has been identified as those to encourage towards PhD studies in the near future. Essential to the department's policy of inclusion is the support given to part-time staff to participate in research activity, as is reflected by the unusually high proportion of part-timers included in this RAE2008 submission.

In addition, it is now a key criterion for all departmental appointments – even hourly-paid design posts – that candidates should be potentially active researchers in one of the three established clusters or the planned Centre for Reflective Practice. The first four Post-Doctoral Fellowships were appointed by SABE in mid-2007, with the idea of increasing such posts in future. The fellowships offer a substantial amount of research time - up to 66% - coupled with some teaching, with the express intention of generating research outputs and preparing future funding applications.

ii. Support for researchers and research students:

SABE is committed to developing a vibrant research culture for its academic staff, researchers and research students. To assist staff members researching

within the Department of Architecture – as in SABE's other departments – a Research Support Network was established in 2005; it runs monthly workshops primarily targeted at new researchers. Help provided is both intellectual and financial, with a small sum of money being given annually to young research-active staff and doctoral students to cover fieldwork costs and/or allow them to present papers at international conferences. The Research Support Network offers advice and help from all research-active staff in SABE, as well as organising specialised research skills events with lectures and workshop sessions covering subjects such as methodology, dissemination, grant applications, writing up theses, etc. This series is attended also by the Department of Architecture's growing cohort of PhD students, who have on top their own dedicated sequence of lectures and workshops on research issues especially pertinent to them. Furthermore, research students benefit from a comprehensive University-wide research degree training programme, which organises annual seminars and workshops on useful topics. Annual training is also provided across the University for research supervisors, especially those who are new to the process.

iii. Research students and research studentships

From a situation with almost no doctoral research students, there are now a total of 10 PhD students in the Department of Architecture, full-time and part-time. Current doctoral students have been helped financially by winning funding like the RIBA Ozolins Studentship or from overseas governments, or by University of Westminster initiatives (supplemented by SABE funds) to advertise a number of PhD bursaries and other incentives each year. As a consequence, for the first time the department has attracted three externally-funded and four internally-supported PhD students.

Close attention is paid to ensuring that research students are fully integrated into their research clusters, and SABE in general. Each PhD student has a Director of Studies and a Second Supervisor, with tutorials on a regular basis. A written log is kept of every tutorial session and is signed by the supervisor and student. These then form the basis of an annual report on each PhD student's progress to SABE's Research Director and the central administration; other prescribed procedures approve the transfer from MPhil to PhD and arrangement for the final examination. If any problems arise in terms of progress, a system exists to investigate and recommend necessary action.

A vital factor in staff and student development is to provide help to PhD students to find outlets for their research. Doctoral candidates in the department have recently presented their work at several international conferences, including those in New York, Istanbul, Tehran, Leeds, Newcastle, Edinburgh, plus an Oxford event in November 2006 organised partly by the Architectural Humanities Research Association. The latter paper has been subsequently included in a Routledge book on the conference proceedings. One of the PhD students has recently made a BBC Wales television programme on his research topic. Yet another has just been given £2,000 towards fieldwork costs by the Paul Mellon Centre for Studies in British Art.

C. Research Infrastructure and Income

Since 2001 SABE as a whole has generated research income in excess of £5m from research and consultancy sources, with around £350,000 of this being provided by the Department of Architecture. As noted, by far the department's main success is the AHRC award for the 'Archigram Archival Project', although there have been also smaller grants from the RIBA and other organisations. Approximately 20% of the overheads earned on external income are retained by SABE to promote new research. Out of this and other internal university sources, the department has been able to acquire a further £200,000 funding to help generate and sustain research activity. A key element in this process is now a dedicated research fund set up for research-active staff across the whole of SABE, to which they can bid annually for specified projects. Two sums of £60,000 each were earmarked, first in 2006 and again in 2007. Staff in the Department of Architecture won around £30,000 for their projects in both of these bidding rounds, half the available budget. This funding has been instrumental in buying out staff teaching time or for bringing in temporary research assistants to facilitate RAE2008 outputs.

The SABE research reserves for the first time in 2007 included money to create the aforementioned Post-Doctoral Fellowships, with recently completed PhD students being particularly encouraged to apply for these posts. Such positions are seen as essential for career development, both to give PhD students a clear employment path and for the department to ensure it looks after its intellectual assets – thereby ensuring a flow of young researchers who can then contribute to a lively research culture in future. The Post-

Doctoral Fellow now appointed to the Department of Architecture, **Deriu**, is already a member of this RAE2008 submission.

In terms of research facilities, all departmental staff are allocated shared rooms and have their own individual computers and associated resources. Much of the research by staff takes advantage of London's superb range of libraries and the department's links to the world-leading design culture which exists in the city. Full-time PhD students have a room with their own computers. A full range of IT and library facilities is also available to research students on campus, and supervisors liaise with subject librarians to ensure the appropriate provision of online resources, books and journals.

However, it is obvious the department is still new to the process of winning external funding. This is a crucial area in which substantial improvement is needed, but the aspiration is that growing research activity within the department – plus the completion of projects like the 'Archigram Archival Project' – will stimulate future success in this area.

D. Esteem Indicators

Department of Architecture staff are known globally for their research activities. They lecture internationally on their work, present conference papers, and organise and attend significant symposia. Many review and/or edit for leading international publishers such as for Routledge, Berg, Architectural Press, etc. As noted, **Greene** is a key thinker of his generation, and continues to exercise a worldwide influence via his writings and projects. He is a RIBA Gold Medallist, the highest honour in the profession. Also from EXP, **Rattenbury** is a leading writer on contemporary architecture, frequently cited as one of the world's most significant architectural journalists. **Fraser** has an international reputation for introducing innovative approaches from post-colonial theory and cultural studies into architectural history and theory. He sits on important research monitoring bodies. Also notable is **Hinchcliffe**, who publishes on a broad range of subjects from feminism to London's architectural history. As another eminent London architectural historian, **Bold's** work in developing conservation policy with European agencies places him in the topmost rank in that field. The last four staff all contributed to the prestigious *Oxford Dictionary of National Biography*. Researchers now forging their name in architectural research are **Deriu, Goodbun, Hardingham, Peckham** and **Watson**. Also included in this submission are six architectural practitioners and part-time design tutors – **Barber, Colletti, Cruz, Griffiths,**

Martin and **Yau** – who have won prestigious competitions and international acclaim for their very different research-based approaches.

BARBER, Peter   (Peter Barber Architects)
- Won Circle 33's 'Accommodating Change: Innovation in Housing' competition, 2002;
- Housing Design Awards winner, 2003, 2004, 2005 + 2007;
- RIBA Design Awards winner, 2006 + 2007; On long-list for 2006 Stirling Prize;
- *Building Design*'s Affordable Housing Architect of the Year, 2007.

BOLD, Dr John
- Fellow of the Society of Antiquaries of London;
- Contributor of six articles to *Oxford Dictionary of National Biography*;
- Consultant on historical presentation of Greenwich World Heritage Site for Greenwich Hospital and National Maritime Museum;
- Council of Europe expert on cultural heritage conservation in Balkan countries; European Commission and Council of Europe Leader of Rehabilitation Project for Architectural and Archaeological Heritage in South-East Europe.

COLLETTI, Marjan + CRUZ, Marcos   (marcosandmarjan architects)
- Exhibited at 2004 Venice Biennale;
- Won international competition to design 75th Lisbon Book Fair, 2005;
- Won international competition to extend Yiheyuan Royal Summer Palace in Beijing, 2005.

DERIU, Dr Davide
- Post-Doctoral Fellow at Paul Mellon Centre for Studies in British Art, 2007;
- Visiting Research Fellow at Centre Canadien d'Architecture, Montreal, 2006-07.

FRASER, Professor Murray
- Senior Visiting Professor at Technical University of Malaysia, 2005-08;
- Editor of *The Journal of Architecture*; Member of RIBA Research Awards Committee; Founder-member of Architectural Humanities

Research Association; Contributor to *OxfordDictionary of National Biography*;

- Joint-investigator on AHRC-funded 'Archigram Archival Project';
- Invited speaker at international conference on 'The Americanization of Postwar Architecture', University of Toronto, 2005.

GOODBUN, Jon

- Joint-convenor for AHRC-funded 'Surrealism and Architecture' conference at Whitworth Art Gallery, Manchester, 2003;
- Awarded £10,000 grant from RIBA Research Awards Committee, 2004;
- Member of Concrete Centre's Education Committee;
- Second prize in international competition for Jewish Holocaust Memorial Centre, Berlin, 2001.

GREENE, Professor David

- Awarded RIBA Gold Medal (with Archigram), 2002;
- Awarded Annie Spink Prize for Excellence in Architectural Education, 2002;
- Drawings collected by Pompidou Centre and other world-leading museums; Invited exhibitor at the London Architectural Biennale (2006); Archigram exhibitions in Los Angeles, Tokyo, Seoul, Vienna, etc., plus Design Museum and ICA in London;
- Ran interdisciplinary design workshop for ESPRC Ideas Factory: Scientific Uncertainty and Decision Making, 2006.

GRIFFITHS, Sean   (Fashion-Architecture-Taste/FAT)

- FAT exhibitions in Lisbon, Tokyo, Los Angeles and Pittsburgh;
- Nominated for Mies van der Rohe / European Union Prize for Architecture, 2003 + 2006; Runner-up in *Building Design* Young Architect of the Year Award, 2003; Winner of RIBA New Islington Housing Competition in Manchester, 2003; Winner of Architecture Foundation's New Generation Award, 2006;
- RIBA European Design Awards winner, 2007; Housing Design Awards winner, 2007;
- Visiting Professor at Yale University, 2007-08.

HARDINGHAM, Sam

- Invited panellist for 'Architecture, Identity & the Nation' at Tate Britain (2005) and 'Audacity International' at Building Centre (2007);
- Judge for RIBA Annie Spink Prize for Excellence in Architectural Education, 2006;
- Invited panellist for 2006 Thames Gateway Forum at Architectural Association; Joint-organiser of interdisciplinary design workshop for ESPRC Ideas Factory, 2006;
- Joint-exhibitor at 2006 London Architectural Biennale.

HINCHCLIFFE, Dr Tanis
- Awarded Senior Annual Meeting Fellowship by Society of Architectural Historians (USA), 2005;
- Contributor to *OxfordDictionary of National Biography*;
- Contributor to UNESCO research project on *Le Tresor de la Mots de la Ville.*

MARTIN, Andrei + YAU, Andrew   (Urban Future Organization)
- Runners-up in *Building Design* Young Architect of the Year Award, 2003; Won international competition for Linguaglossa leisure resort, Amalfi, 2003;
- Exhibited at 2004 Venice Biennale; Selected by Zaha Hadid for *10 x 10_2: 100 Architects, 10 Critics* (2005), a survey of the world's most promising architects;
- HOLCIM Foundation's European Gold Prize (2005) + Global Silver Prize for Sustainability (2006);
- Exhibited at 2006 Beijing Architectural Biennale; Ran digital workshop at Korean National University of Art, Seoul, 2007.

PECKHAM, Andrew
- Invited by Routledge to become joint-editor for *Narrating Architecture* (2006);
- Regular reviewer for *The Journal of Architecture.*

RATTENBURY, Dr Kester
- Awarded RIBA Honorary Fellowship;
- Ranked as third most influential architectural journalist in the world by Key Centre for Architectural Sociology in America;
- Lead investigator for AHRC-funded 'Archigram Archival Project';

- Contributor to *Oxford Dictionary of National Biography* and *Oxford Companion to Architecture*; Assessor for RIBA Regional Awards;Judge for Annie Spink Prize for Excellence in Architectural Education, 2004.

WATSON, Dr Victoria
- Invited speaker at 9th International Bauhaus Conference in Weimar, 2003;
- 'Air Grid' exhibition toured in Germany, Prague and Bratislava, 2004-06;
- PhD by Design work featured in *Architectural Design* (2004);
- Exhibition with Mobile Studio at Hoxton Gallery, 2006.