

Jo da Silva



Profession

Civil/Structural Engineer

Current Position

Director, Arup International Development

Joined Arup

1984

Years of Experience

25 years

Nationality

British

Qualifications

MA Engineering, Cambridge
Chartered Engineer

Professional Associations

Fellow Royal Academy of Engineers
Member Institute Civil Engineers
Member Institute Structural Engineers
Member RedR

Committees

Visiting Senior Research Fellow:
Centre for Sustainable Development, Cambridge Univ.
Institute Civil Engineers:
International Development Policy and Practice Group
International faculty of the Prince of Wales' Business & the Environment Programme, run by the University of Cambridge Programme for Sustainability Leadership

Publications

Transitional Shelters: Eight Designs (IFRC/Arup 2011)
Characteristics of a Safe and Resilient Community (IFRC/Arup 2011)
Lessons from Aceh: Key Considerations in Post-Disaster Reconstruction, contributing author (Practical Action Publishing 2010)
Indonesia: Understanding agency

Jo da Silva is a Director at Arup where she leads Arup International Development, a specialist team focussing on addressing the challenges to achieving sustainable and resilient communities – primarily S/SE Asia and sub-Saharan Africa. Having studied engineering at the University of Cambridge, she began her career working in central India before joining Arup as a graduate engineer in 1989. Her subsequent experience as both a chartered civil and structural engineer includes the design and delivery of a wide range of buildings, infrastructure and urban regeneration projects, in both the developed and developing world.

Jo's interest in post-disaster contexts began in 1991. She has subsequently provided expertise including after the Rwandan genocide and the 2004 Indian Ocean tsunami, and has authored various publications on post-disaster shelter and reconstruction emphasising the need for participatory processes, and the role of the private sector. Her recent work has focussed on resilience, at both a community and urban scale, and the contribution of housing, education and access to services to sustainable development.

Jo currently sits on the Grants Panel of the Humanitarian Innovation Fund, and the International Development Policy and Practice Panel at the Institute of Civil Engineers. She also lectures at the Centre for Sustainable Development at the University of Cambridge. In 2009, she was elected a Fellow of the Royal Academy of Engineering and last year became an Officer of the British Empire (OBE) for services to engineering and to humanitarian relief.

Jo's is committed to delivering outcome-focussed projects and research which informs future development practice.

Selected Projects

Asian Cities Climate Change Resilience Network (Rockefeller Foundation)

Advice on the development of a best-practice approach for the delivery of the Rockefeller Foundation's Asian Cities Climate Change Resilience Network in Vietnam, Thailand, India and Indonesia. Technical assistance in programme management, knowledge management, technical expertise and capacity building.

Community Based Disaster Risk Reduction (IFRC)

Research to determine the 'characteristics of a safe and resilient

policy in a national context in Lyons and Schilderman eds. (2010) *Building Back Better: Delivering people-centred housing reconstruction at scale* (Practical Action Publishing, 2010)

Coping with man-made and natural disasters. *The Structural Engineer* 21 July Centenary Issue

Engineering resilience: disaster risk reduction in the developing world: *Engineering Change*: October 2008

Quality and Standards in Post-Disaster Shelter: *Structural Engineer* July 2007

Engineers in Disaster Relief: *Ingenia* Issue 6, November 2000

RedR Assignment in Tanzania: *Structural Engineer* Volume 73/23&24 5

Review of Reconstruction in Aceh following the 2004 Boxing Day Tsunami for the 14th World Conference on Earthquake Engineering 12-17 October 2008, Beijing, China

community' and the impact of Community-Based Disaster Risk Reduction (CBDRR) programmes completed by the Red Cross Red Crescent Movement after the Indian Ocean Tsunami, resulting in a Lessons Learned to guide future policy and programs.

IFRC Transitional Shelter Book

This detailed structural review of a range of transitional shelters previously constructed by a number of Red Cross Red Crescent National Societies has been documented in an IFRC publication, '*Transitional shelters: Eight designs*'.

Infrastructure

Faculty Arts and Sciences, Arusha, Tanzania (Aga Khan University)

Site development, infrastructure and sustainability services in relation to the development of 3500 acres to include a new university campus, and associated facilities: hospital, schools, university village.

Review of Aga Khan Development Network Construction Portfolio (AKDN)

Global analysis to evaluate AKDN's construction portfolio and delivery agencies in order to assess the strengths and weaknesses of the current approach in view of an expanding portfolio in Africa, Central Asia, S/SE Asia and the Middle East.

Kindergarten Complex Programme, Ghana (Sabre Trust)

Development of design and construction approach for a model sustainable kindergarten complex comprising classrooms, toilets, kitchen, office and outdoor spaces in response to GoG requirements for educational facilities. The design used local materials and community labor and has been successfully replicated.

Sustainable Services at Scale (International Water and Sanitation Centre)

Development of a strategic plan for the project and facilitate and guide the transition from the existing project management framework towards a more strategic and coherent management of the Triple-S programme in Ghana and Uganda based on the perceived outcomes.

South-Eastern University, SEUSL (MoE GoSL)

Development of a vision, road map, and phased masterplan in collaboration with Academic planners, to respond to local and regional educational needs, and mitigate floodrisk, intended as a catalyst for socio-economic development in the area and exemplar of environmental design.

Sustainable settlements, Ecuador Housing (Holcim)

Technical and programme management expertise to Holcim for a pilot housing programme to accommodate 500 families.

Just Energy, S Africa (Oxfam/Just Energy)

Advice to social enterprise on development methodology for wind farms to comply with local legislation: development of a detailed road map from initial site identification to project development stage; advice on business plan.

Garden of Forgiveness, Beirut (Solidere)

Advice on design and construction for structures within a significant landscape project in the centre of Beirut intended as a focal point in the post-war situation. Current.

Post-disaster response, recovery and reconstruction

16/6, Haiti (UNOPS)

Strategic and technical advice on reconstruction of Port-au-Prince to re-settle communities from 6 camps, and re-construct 16 urban settlements including: housing repair and retro-fitting; infrastructure upgrading; community engagement; programme management.

Post-Disaster Shelter, Haiti (Habitat for Humanity)

Strategic programme planning as well as technical advice on transitional shelter and core house designs. Seismic design, site appraisal guidance, settlement evaluation, and value chain analysis.

Post-tsunami Shelter, Sri Lanka (UNHCR)

Coordinating 100 NGO's to provide 53,000 shelters in 7 months: liaison with local and national government, funding bodies and key stakeholders. Design and construction of 4,400 UNHCR shelters, project/programme monitoring review, stakeholder consultation, assessment, evaluation and reporting.

Post-tsunami reconstruction, Aceh (DEC)

Assurance mission to review construction of schools, health centres and houses by 11 UK NGO's with respect to quality, seismic performance, construction management, beneficiary accountability and partnerships. Identification of best practice case studies and distillation of lessons learned into the publication *Lessons from Aceh: key considerations in post-disaster reconstruction*.

Rubble Strategy, Haiti (UNOPS)

Field work in Haiti to assess current provision and to assist UNOPS to refine and develop their strategy for dealing with the earthquake derived rubble and develop an operational strategy for

the removal and management of the debris.

Damage Assessment, Haiti (Oxfam)

Structural assessment of the earthquake affected damaged to Oxfam's main office and recommendations on safe demolition and rubble removal. Review of GoH assessment process, classification of building typologies.

Sustainability assessments, SE Asia (Habitat for Humanity International)

Sustainability assessment of Habitat for Humanity's tsunami-response shelter programmes – over 16,000 houses in Sri Lanka, India, Thailand and Indonesia – using ASPIRE.

Post-tsunami Reconstruction, Aceh (Muslim Aid, Care International, Canadian Red Cross)

Technical advice on geo-hazards, seismic design, programme management (Muslim Aid). Review of alternative construction methods (CRC), Development of a “safe exit strategy” (CARE)

Hurricane Mitch, Monserrat (GOAL)

Advice on hurricane resistant design of housing.

Rwandan Emergency, Tanzania (Concern/RedR)

Planning and construction of refugee camps; food storage, distribution centres, and sanitation; road repairs; scoping further road upgrading required to service camps.

Research/Guidance

Sustainable Visions (Sustainable Development Commission)

Research into visions for sustainable futures being proposed by major international organisations, NGOs, business, civil society, major countries and major world cities.

ASPIRE, Sustainable Project Model (Engineers Against Poverty/Institute Civil Engineers)

Research and development of ASPIRE – a software based tool to facilitate decision making, monitoring and evaluation of infrastructure, building and planning projects in developing countries. www.oasys-software/aspire

Disaster Resource Partnership (World Economic Forum)

Research and development of a global tri- partnership of engineering and construction members of the WEF Forum, humanitarian and development organisations, national governments and donors to enable the core strengths and existing capacities of engineering and construction companies to be mobilised post-disaster.

Disaster Risk Reduction training resources (DFID)

Guidance and training resources for DFID Infrastructure and Livelihood Advisors.

Codes and Standards in DDR (World Bank)

Research into availability and application of codes and standards as a tool for mitigation of natural hazard risk in infrastructure projects.

Buildings

Maritime Museum, Osaka, Japan

Concept engineer for a £80m landmark museum in Osaka Bay.

Chek Lap Kok Airport, Hong Kong

Scheme design of concourse, detailed design of facade and column-roof interaction analysis.

Wembley Park London Underground Station, London

Demolition and re-development of Wembley Park London Underground Station, including new stations, platforms, overbridges and 65m span roof, with the station to remain operational throughout.

Heathrow Express, London

Investigation into collapse of NATM tunnels at Heathrow Airport. Detailed technical review of proposal for 60m diameter circular cofferdam to recover the collapsed site.

Linz Opera House, Austria

Scheme design of new opera house and concert hall in town centre.

Kingston University, Middlesex

Strategic development framework to provide an integrated campus.

Harris City Academy, Croydon

£30m project which forms part of DfES initiative to replace failing secondary schools.

Potters Field, Southwark, London

Design and procurement of temporary structures to create a public facility on a derelict site.

Exhibition Rd, London

Urban re-generation of London's museum district to enhance pedestrian access and public ownership.

Royal Geographical Society, London

Heritage Lottery funded development to improve public access to and conservation of map/book/photographic collection. BCIA Award 2005.

National Portrait Gallery, London

Major extension and re-furbishment of Grade 2 listed gallery funded by Heritage Lottery

Welsh College of Music & Drama, Cardiff

Masterplan to expand the College's on-site activities including offices, theatre+flytower, recital hall, drama studios, rehearsal rooms, workshops.

Corpus Christi College, Cambridge

Detailed design of a new archives, library and visitor's centre.

Trellick Tower, London

Feasibility study to identify re-development proposals for Trellick Tower housing including sustainability assessment.

Idea Stores, Tower Hamlets, London

Design and construction of three public library/learning facilities in deprived E London borough.

Surestart Nursery, Merton, London

Design of community centre providing nursery and early learning facilities.

Walnut Tree Farm, Suffolk

Design of a timber frame pavilion and indoor swimming pool for a private client.

Image Bank, London

Detail design of exposed steel frame to create two additional office floors and glazed roof within an existing internal courtyard.

Westminster School Boathouse, Putney

Project engineer for refurbishment and redevelopment of an existing 19th century boathouse on the river Thames.

Öko Zentrum, Hamme, Germany

Project Engineer for an ecological adult education centre providing classrooms and workshops.

Öakhill House, Kent

Project Engineer for extension to a listed building as headquarters office for Fidelity.

Goodwood Sculpture Park

Design of visitor's centre in sculpture park which is also a site of special scientific interest. Completed 1994