

Living Steel 2nd architectural competition for sustainable housing

Jury Report – Sao Paulo, Brazil, 12th June 2007

The following Jury met on 11-12th June 2007 to judge the 18 entries to the 2nd Living Steel architectural competition for sustainable housing.

James Berry

Cui Kai

Jaime Lerner

Roberto Loeb

Nicholas de Monchaux (Union of International Architects, UIA)

Glenn Murcutt

Andrew Ogorzalek.

Andrew Ogorzalek was duly elected as the Chairman of the Jury by his fellow jurors.

Charles Correa, who was due to serve on the Jury, was unable to travel on medical grounds and was replaced by Nicholas de Monchaux.

The Competition Professional and Technical Adviser was present during the Jury meeting and a report of the Technical Committee was presented to the Jury. Minor issues of non-compliance were brought to the attention of the Jury but were not considered by the Jury to warrant disqualification.

Following a detailed review of all entries, the Jury unanimously selected the following three winners of the competition:

For Brazil: Andrade Morettin Arquitetos Associados Ltda, Brazil.

For China: David Knafo Tagit Klimor, Architects and Town Planners, Israel.

For the United Kingdom: Cartwright Pickard Architects, United Kingdom.

Jury Comments on the winning entries

The Jury gave the following comments on the winning entry for Brazil submitted by Andrade Morettin Arquitetos Associados Ltda.

Overall, the Jury was impressed and encouraged by the simplicity and elegance of the scheme and its appropriateness to the culture and place. The scheme has the following strengths:

- Clear plans allowing flexibility of internal arrangements with clear reference to Brazilian housing.
- Open, shaded platforms provide a good response to local climatic conditions.
- Sustainable, natural ventilation system integral to the architectural concept.
- Verandas and balconies provide good space for social interaction.
- Good use of the proposed steel structure to create a flexible, open lightweight character.
- Scheme appears to be both realistic and deliverable.

In taking forward this winning design the Jury made the following recommendations:

- More thought should be given to the design of spaces around the building. High quality landscaping must become an integral part of the scheme.
- Consideration should be given to locating two staircases at the ends of the balconies to avoid loss of privacy, improve circulation and meet likely fire escape requirements.
- The Jury suggests that the architect work closely with the developer to ensure that this winning design concept is not diminished.
- Careful attention needs to be given to the treatment of the residual space underneath the building.

The Jury gave the following comments on the winning entry for China submitted by David Knafo Tagit Klimor, Architects and Town Planners:

The design was appreciated by the Jury for introducing valuable greenhouse space as an integral part of the high-rise/high density development. The greenhouse space provides communal food for the inhabitants and adapts traditional models of communal space to a high rise topology.

The Jury felt the scheme could provide an exemplar building demonstrating how traditional sustainable communities could be created within the high density urban environment. The scheme is taking full advantage of rational steel frame structure providing open plan for flexible use of the space. The Jury looks forward to the idea being extended in its realisation. However, considering the innovative nature of the project, the cost may exceed expectations. The architect will have to work closely with the developer to address commercial requirements while maintaining integrity of the concept.

The Jury recommends that in the development of the scheme each apartment benefits from solar access. It is also recommended that the role of the greenhouse in the building be further enhanced by locating the primary circulation within or adjacent to the greenhouse. This project represents a potential new model for dense urban living, appropriate to the cultural and climatic conditions for urban environments in China. This project is presenting a gifting of something beyond that for which the brief called.

The Jury gave the following comments on the winning entry for the United Kingdom submitted by Cartwright Pickard Architects.

The Jury was disappointed with the submissions for the UK and the lack of innovation. The winning scheme represents the best entry available but requires development of the design in key areas to ensure a successful project.

The Jury appreciated the concentrated effort to design a comprehensive family of dwellings suitable using offsite modular construction. The proposed concept incorporates apartment blocks, two, three and four-storey town houses in a staggered terrace arrangement. Narrow-fronted, high density housing with balconies and roof gardens need to be carefully designed to compensate for the limited amenity space on the ground floor.

The Jury strongly recommends the following:

- The layout, legibility of the urban spaces, arrangement of the landscape gardens in relation to orientation require attention.

- The staggered arrangement compromises exposure to solar access to habitable spaces. Alternative layout arrangements should be considered.
- The Jury has serious concerns regarding the proposed split of living accommodation between the ground and roof levels. The four-storey town house concept must be tested against the market acceptability and internal access to the top floor living accommodation is likely to be regarded as essential.
- The extensive use of steel cladding could prove over-powering and difficult to detail, with particular reference to the junction of some of the proposed materials. It may also prove unaffordable.
- The architect would need to work closely with a specialist fabricator to verify the proposal against the specific manufacturing criteria and delivery requirements.
- The Jury encourages the flexibility and further development of the ventilation and light systems in external walls as an integral part of the walling system.

The Jury looks forward to a collaborative development process with this being the vehicle to both meet the needs of the UK market and advance the proposed modular strategy.

Jury comments on the entries submitted by the other finalists

Brazil

Collins and Turner Architects, Australia (Runner up)

This scheme was appreciated for the overall high quality of the residential environment and high quality of space between buildings. However, the layout of apartments does not respond sufficiently well to the requirements of the tropical climate.

Sebastian Irarrazaval Architects, Chile

The geometric 'Y' Lego system was illustrated in a variety of potential urban patterns. However, the mechanical approach to master planning was not considered appropriate to create a successful, sustainable community. The proposed system of adjustable and movable metal screens is considered to be inappropriate for a tropical environment.

Perkins + Will, USA

Frame structure echoing the tree shapes and tree houses could create attractive and highly individual character for this scheme. However, the distances between dwellings were considered to be narrow with unacceptable loss of privacy. The Jury found the project to be over-structured and over-complex in its architectural expression with resultant difficulties related to cost.

Dubosc and Landowski, France

The Jury appreciated the clear, repetitive layout of clusters of four apartments accessible from the central vertical circulation core. However, the detailing of the suspended structure appeared to be very complex and potentially expensive to construct. The void between roof of each unit and the floors above can create long-term maintenance problems. The architectural expression of the roof is overstated.

Brasil Arquitetura, Brazil

The Jury appreciated the clarity and simplicity of this proposal. However, the Jury felt that it did not advance thinking on steel construction. The scheme appeared too conventional to respond to the tropical climate conditions and the competition's wider goals.

China

Atenastudio+Cityförster, Italy and Netherlands (Runner up)

This is an interesting proposal based on the principal of structural cores from which the building is suspended. The external envelope of the building provides a lively combination of steel mesh to provide a natural base for climbing plants. This would create a 'green building' façade. The size of the atrium was considered too narrow to provide an attractive environment despite the occasional perforations of the façade. The following issues were raised by the judges:

- Large proportion of the building not allowing satisfactory solar access.
- Long perimeter of external walls along the atrium potentially increasing costs.
- Mesh and the vines would reduce ventilation during the summer.
- The Jury questions the appropriateness of locating habitable rooms with lighting and ventilation in the central circulation zone.
- The balance of circulation and voids potentially reduces the economic viability of the scheme.

IAUS School of Architecture, Tsinghua University, China

This scheme re-introduces the maisonette system based on Le Corbusier's concept of central corridor linking vertical cores. The Jury felt that the central corridor does not create a satisfactory quality of internal space and that the outside colourful playful character of elevation does not respond to the cultural contexts.

China Southwest Architectural Design and Research Institute (CSWADI), China

The scheme provided an interesting design proposal for a flexible façade system associated with a steel frame structure. It includes a variety of cladding systems and balconies with potential to create attractive living space. However, it fails to provide the new solutions and ideas expected of such a competition.

Anderson Anderson, USA

Dynamic sculptural shape of the building responds to orientation and would provide an extravagant demonstration of the potential of steel as a structural material. However, due to the complexity of the proposal, it is unlikely that the scheme could meet the construction cost constraints required by the brief.

nArchitects, USA

Interesting proposal for a single-depth building creating green public access decks for social interaction. Unfortunately, the private living and outdoor space faces north, with the south facing part of the building limited to small windows and access. It is unlikely that the proposed reflecting northern screen systems would deliver sufficient light to the living spaces to compensate the selected orientation.

United Kingdom

Feilden Clegg Bradley Architects LLP, United Kingdom (Runner up)

Strong design concept of houses and apartments in a combined high density cluster. Simple planning of courtyard units make for a positive relationship between inside and outside spaces, creating a good model for high-density urban living. However, this combination of high-rise buildings, in direct proximity to houses with private gardens, could create serious overlooking problems, compromising the quality of the residential environment. Narrow pedestrian alleyways could also present problems for safety and security if separated from the local urban network.

Mei Architecten en stedenbouwers BV, Netherlands

This entry provided a valid argument for designing residential buildings addressing potential flooding issues. However, the quality of design did not reflect or implement the quality of the initial research.

HIDETO HORIIKE and URTOPIA INC, Japan

The Jury felt that the combination of a linear residential block with a linear wind farm is not appropriate for a sustainable residential environment. The layout of apartments was unresolved and the scheme presented little economic potential.

ICESA S.A., Costa Rica

FUSE Concept based on internal flexible arrangements of apartments. The Jury felt that this entry lacked an innovative approach to technology and sustainability.

ROCCATELIER ASSOCIATI, Italy

Colourful, playful design approach. The design, although vibrant, has not achieved consistency and coherence. The Jury felt that the proposed construction technology is questionable.

Signed for and on behalf of the Jury by Andrew Ogorzalek (Chairman)

12th June 2007, Sao Paulo