

#### SINGAPORE

# RED HOUSE AT THE QUAYSIDE



#### PROJECT BACKGROUND

This project is located at Robertson Quay facing the Singapore River and consists of the remodelling of an interior space and external façade of two existing tenancies combined into one large restaurant. Design commenced in May 2007 with the restaurant completed and opening in late December of the same year.

The client is a well-known family-run traditional Singapore Chinese seafood restaurant establishment who saw the opportunity to break into a new area along the Singapore River catering to the diverse mix of locals and expatriates with a space catering for approximately 500 diners.

In approaching this design, the architects originally considered many options, each with a strong architectural theme, but common to all were the following fundamental principles of the dining experience:

- 1. Reinterpreting traditional Chinese elements as contemporary architecture
- 2. Expression of the client's dedication to serving the freshest seafood
- 3. Establishing a new identity for the client and the restaurant in the new
- context
- 4. Flexibility and versatility in the spatial planning
- 5. Cosmopolitan restaurant concept

In addition, they proposed an environmentally sustainable design approach to the client, who was supportive even though it was new to them and unusual for their restaurant type. This consisted of:

- 1. Natural or part natural ventilation to the dining spaces
- 2. Use of low energy and outdoor space to extend the dining experience
- 3. Use of recycled, recyclable and natural low energy materials in the built fabric
- 4. Minimising material use where possible and expressing materials in an honest way
- 5. Use of low energy light fixtures

### SPATIAL CONSTRAINTS

Challenges initially came out of the available two-tenancy space that is very deep and irregular in layout. With back-of-house servicing only available from

#### Principal Architect Li Sau Kei

Main Contractor LAK Construction Pte Ltd Mechanical & Electrical Engineer Lincolne Scott Ng Images/Photos Patrick Bingham-Hall

Project Name

Location

Completion

Site Area 846 m<sup>2</sup> (shell area) Gross Floor Area

846 m<sup>2</sup> (fitout)

Red House

Number of Rooms

**Building Height** Single storev Client/Owner

Architecture Firm

Greenhill i Pte I td

December 2007

Red House at The Quayside

60 Robertson Quay, Singapore

1 Interior view 2 Spatial planning diagrams



Bamboo floor finish -- certified renewable source - recyclable / biodegradable



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the rear, it was evident from the onset that the kitchen should be located at the rear of the tenancy to reduce the depth of the dining space and maximise the interior connection and frontage to the exterior. This was contrary to the client's geomancer's stipulation and the project kick-started on the right note when common sense and appropriate response to the site prevailed. Once this was established, the irregularity of the space was used to its best advantage to define various areas.

#### SPATIAL ARRANGEMENT

The dining hall is defined and separated from the kitchen at the rear by the backdrop of a long sushi display bar. Wet areas, stores, offices and staff amenities behind a perforated masonry wall also define one side while the bar and private dining areas through screen doors define the other. An open corner bar serving the interior and exterior bar spaces forms the transition between the two as well. The external facade is almost entirely made up of large full-height perforated sliding screens with full flexibility to moderate the openness of the relationship between the interior spaces and the external. All the perforated screens, walls and doors also serve to maximise air flow through them and are essential to the success of the ventilation strategy.

#### VENTILATION STRATEGY

The central dining hall is ventilated both naturally and mechanically. Spot cooling is provided from the deep edges of the space along the back and side defining walls. This is then circulated by two very large 'industrial' fans, in the central dining hall and within the bar area. These fans, which are almost airplane propeller in size, were selected for their highly efficient, aerodynamic and low energy performance qualities. Aided by the openness of the spaces, they circulate the cooled interior air and breezes from the outside, to substantially improve the indoor ambient temperature. This situation is very unusual for a Chinese restaurant as the norm is a sealed air-conditioned box. This solution in contrast offers a new dining experience, appropriate for and responsive to the tropical climate of Singapore.

#### LIGHTING STRATEGY

A series of dramatic custom-made light fixtures not only provide the interior dining and bar lighting, but contributes significantly to the design concept of the restaurant through reinterpretation of the traditional Chinese paper lantern. Constructed from a lightweight aluminium frame draped in a proprietary vinyl stretch fabric, the 'lanterns' are simply hung from the existing concrete soffit. These are lit by utilitarian energy-efficient T5 fluorescent tubes concealed and supported within. The 'lanterns' are designed in three different complementary forms and located in the different restaurant spaces, dramatically defining a different quality to each of them.

### SUSTAINABLE MATERIALS

The dining and bar spaces are defined by a series of screens, doors and walls that are mostly perforated and constructed from natural 'honest' materials without any applied decoration. These are constructed from masonry, sustainable timber, and metalwork panels, which are designed to provide for a full range of flexible use to spaces. To significantly reduce material use, there are no ceilings at all, and building services routed through the restaurant are purposefully coordinated and arranged under the simply painted concrete soffit.

The floor of the dining hall is mainly bamboo. From a fast-growing and replenishable source, the proprietary bamboo 'tongue and groove' plank flooring carries a Singapore Green Label certificate, and is robust and suited for this hardwearing use. The floor is broken up into manageable zones for movement by use of perimeter pebble washed concrete bands with stainless steel floor inserts between materials.

The sliding screens at the restaurant frontage are made of replenishable timber slats within a steel frame. Recyclable red timber and silver aluminium doors screen the private dining and bar areas from the central dining space. The 'lantern' light fixtures are fully recyclable, made entirely of an aluminium frame in a natural milled finish and a vinyl stretch fabric cover. Influenced by the use of sustainable building materials, the client also selected sustainable rubber wood for the main furniture of the restaurant.

## PROJECTS



The ablution areas are located behind a rough split-face red concrete block wall in natural finish. This is perforated to cross-ventilate the common wash area and wraps around sans perforation to form part of the defining 'Red House' restaurant frontage. The common wash area acting as the lobby to the male and female toilets contains a large hand washing 'trough' with multiple faucets. This is made from concrete and recycled glass aggregate (used bottles from the client's existing restaurant)

Similar use of concrete can be found in the two bar areas to form the walls of the counters for the sushi bar and drinks bar. These are off-form in-situ concrete walls using reusable metal corrugated sheet cladding as formwork. The result is an honest, raw, struck textured finish without any applied colour or render, left sealed in its natural state, thereby minimising superfluous material usage. The two bars are differentiated by the sushi bar corrugation running horizontally, consistent with its linear long form; and the drinks bar corrugation running vertically, and expressing a fluted appearance consistent with the rounded form of the bar.

### FLEXIBILITY AND ADAPTATION

An important aspect of sustainability is designing for a long life and a loose fit. The spatial arrangement and architectural elements are designed to provide for flexibility of use and different spatial/dining experiences, which is a very important consideration for a restaurant of this size with a seating capacity of over 500. The restaurant internal areas are arranged in four zones-the main dining, private dining, sushi bar and drinks bar. The external areas consist mainly of the courtyard bar and the alfresco dining adjacent to the river. Through the use of screens and doors, all areas can be separated from each other or connected to form different spatial arrangements. This has enabled the restaurant to separate spaces for different uses at different times, including catering for private functions, thus maximising space usage and revenue.

3 & 5 Sustainable materials 4 Off-form corrugated concrete sashimi counter 6 Off-form corrugated concrete corner bar 7 Open doors allow for natural ventilation