

hinge

ARCHITECTURE
INTERIOR DESIGN

STAY HOME Houses 2021

Reading in Osaka
Steeping in Fuzhou
Moisturizing in Beijing

www.hinge.hk

ISSN 1561-781-5



9 771561 781004

HK\$80
RMB80
US\$11



Subscribe online or send your subscription to hinge

Please tick the appropriate option in the boxes provided

Name (Mr/Ms): _____

Title: _____

Company name: _____

Email (required): _____

Address: _____

Telephone no: _____ Fax no: _____

Business: Architectural firm Interior design firm

Other (please specify) _____

Signature: _____ Date: _____

Hong Kong and Macau subscribers only

HKD960 for 12 issues

HKD1,920 for 24 issues

Overseas subscribers only

USD170 for 12 issues, including postage

Payment methods: Enclosed a cheque for HKD _____ (payable to 'Hinge Marketing Ltd')

Direct deposit (Hong Kong subscribers only)

Hang Seng Bank Account name: Hinge Marketing Ltd Account no: 289-7-121030

*please attach deposit receipt by mail or email

American Express Card no: _____ Expiry: _____

Visa / Master card via PayPal

You will be notified by email with instructions for payment options.

Please send by mail to:

Hinge Marketing Ltd., Room A, 15/F., Yam Tze Commercial Building, 23 Thomson Road, Wanchai, Hong Kong

For enquiries, please call (852) 2520-2468 or email: hinge@hinge.hk

China subscribers 中國訂閱代理處：

Metto Books Trade Co.

深圳市創福美圖文化發展有限公司 - 中國深圳市南山區華僑城創意文化園東F-1棟104#

Tel/電話: 0755-86106036, 86106870 Fax/傳真: 0755-86106036 E-mail/電郵: sevice@metto.net website/網址: <http://www.metto.cn>

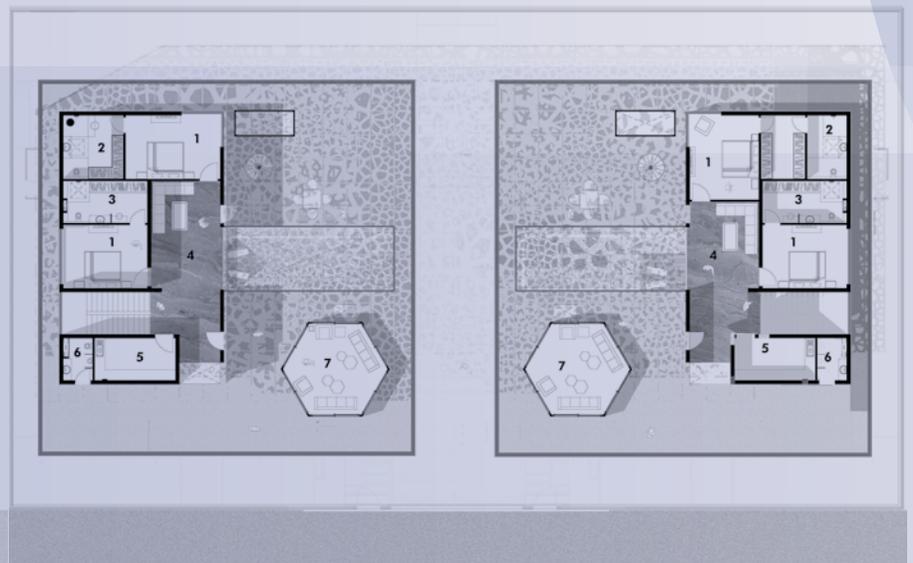
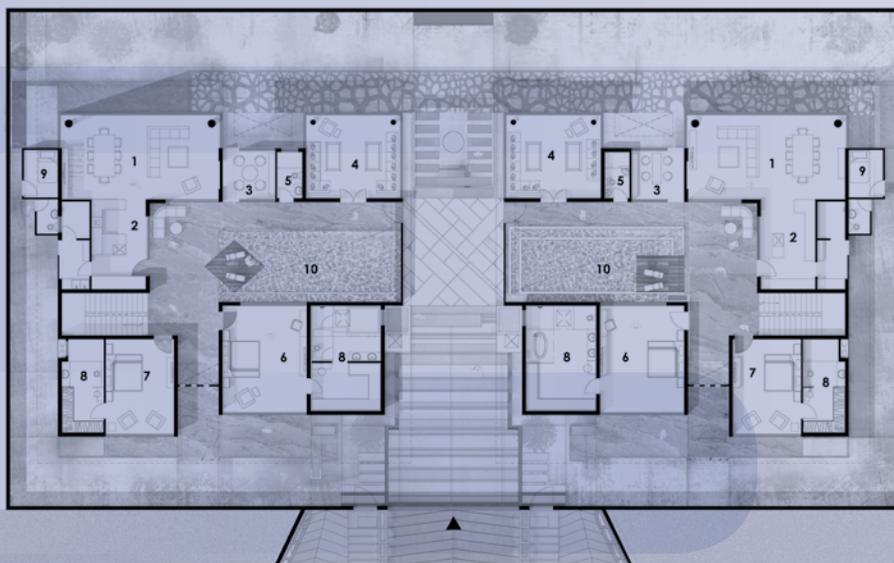


HOUSE UNDER SHADOWS

Karnai, Haryana, India

Zero Energy Design Lab

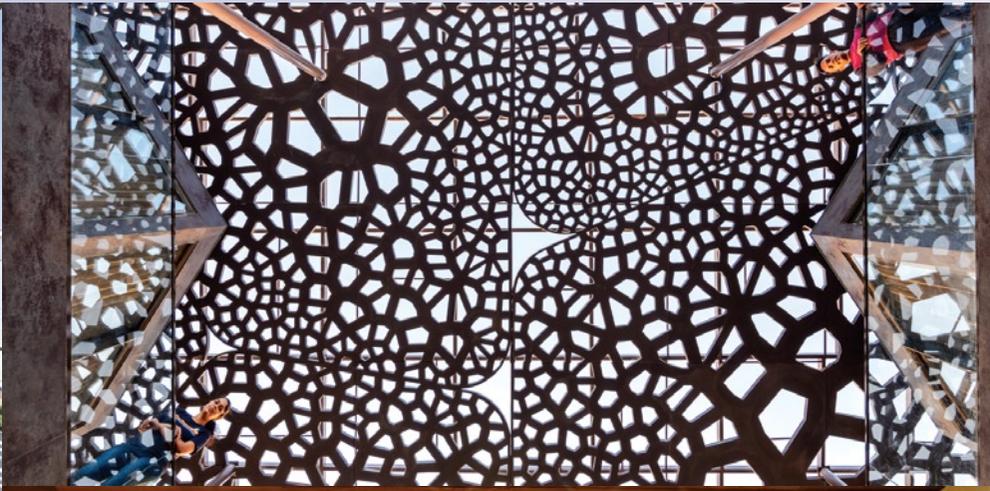
Photography by Noughts and Crosses / Andre J Fanthome



This enormous house in historic Karnai is the residence of two families, and seeks near-net-zero sustainability status through a variety of means. The south-facing building groups two brothers and their families on a mostly single-storey layout, and takes inspiration from nearby architectural monuments and landmarks. From the entrance the double-nature of the scheme is marked out with two volumes representing the paired families. A series of courtyards influenced by local 'chowks' lead through the plan. Water pools in these spaces act as passive heat sinks, whilst overhanging eaves shade most walls from direct sun absorption. This means that inhabitants may also move through much of the building under cover from sun and rain. Cross-ventilation also had a significant role in the planning of the building, as well as access to natural light, leading to locating the sleeping rooms toward southwest and the living spaces facing northeast.

It is through a combination of methods that the architects achieve their environmental goals for House Under Shadows. A double roof does its work to minimize solar heat gain during daytime, and natural insulation during night or winter. Thickened stone walls appear aesthetically beneficial, but contribute to passive insulation of the interior rooms as well. Ample inclusion of greenery provides visual and literal cooling as well. The roof alone results in a 50% reduction in radiant heat absorption, and consequently lower need for mechanical cooling of up to 20% per annum. Materials throughout were selected for their local sources, neutral tones and low embodied carbon. Natural timber ceilings warm the character of many rooms.

The plan is symmetrical, providing each family branch an identical layout and programme. One can imagine the liveliness of the central axis



where the two come together. This is a classical approach to domestic architecture, and you can sense the echoes of historic places running through it. Yet House Under Shadows is undoubtedly a contemporary piece of design. From outside, its sharp angles and razor thin cantilevers strike a potent pose. The floating nature of the perforated outer roof, as it shelters the liberated pavilions below it provides the principal drama of the building. Much of the interior design is perhaps less original, but there's no denying the force of that central axis, which cuts its void through the heart of the plan and section. And the house is certainly more alive on the upper floor level, under that patterned lattice of a lower roof. But hats off to the environmental ambitions of this one, it proves that even enormous buildings can act like adults.