

House of Peace / Kasmoli, Uttarakhand

FABITAT

STEEL BUILDING SYSTEMS

Pre-Fab Cottages & Residences

ARCHITECTURE. ENGINEERING. BUILT EXPERIENCE.

A GUIDE FOR ARCHITECTS

Inside Fabitat

Architect-developed prefab homes and hospitality spaces, with a particular focus on mountain construction.

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RAHUL SPALL / ARCHITECT & FOUNDER

An architect's belief in a better way to build.



Rahul Spall

Architect & Founder, Fabitat
Over 25 years of architectural practice

My journey with prefabricated construction began as an architect working with some of India's leading prefab vendors. I loved the possibilities: the speed, the accuracy and the freedom to build differently.

Working closely with these systems also revealed shortcomings. I could see details that needed further development if these buildings were to deliver the lasting quality I expected as an architect.

Then came the COVID lockdown. We used that time, and the space in our warehouse, to build our first prototype. That hands-on research and development became the foundation of Fabitat.

> Every project has added to our experience and helped us refine how we build.

THE FIRST PROTOTYPE

It started in a warehouse.







Built during the COVID lockdown, our Type-1 prototype gave us a place to explore the system, work through its weaknesses and refine the details. That process continues through the experience of each completed building.

TWO REASONS TO BUILD DIFFERENTLY

Choice. Or site constraints.

01 Prefab by choice

Choose a lighter building system, slimmer walls and a shorter construction programme. The value comes from more usable space, coordinated execution and earlier occupation.

02 Prefab driven by the site

Mountain access, difficult logistics and limited spare load capacity on existing buildings can change what is practical to build. A carefully engineered prefab solution can help address these constraints.

Why can the cost be comparable to RCC?

A finished prefab building still needs engineering, foundations, insulation, weather protection, finishes and services. Compare equal scope and quality, then consider time, access and usable space.

Rooftop additions require structural assessment. Temporary or demountable construction remains subject to site-specific permissions.

DESIGNED AROUND REAL BUILDING NEEDS

More space. Less weight. Earlier use.

01 Slimmer walls

Gain usable floor area within the same external footprint; the benefit depends on the selected assembly.

02 An insulated envelope

Rockwool and coordinated wall and roof layers help limit heat transfer and support indoor comfort.

03 Lower dead load

A lightweight superstructure can be useful on rooftops and difficult sites, subject to engineering.

04 Shorter construction time

Fabrication and site preparation can overlap, reducing the overall programme.

05 Protection in the details

Moisture management, termite-resistant materials and protective steel coatings support durability.

06 Relocation potential

Where planned from the outset, demountable connections allow dismantling and reassembly to be considered.

HOMES & RESORTS IN THE HILLS

Begin with the site.



House of Peace / Kasmoli, Uttarakhand

01 Access & assembly

Review the approach road, unloading space, component sizes and erection sequence before fabrication.

02 Ground & water

Coordinate levels, foundations, retaining works and drainage around the site and its engineering requirements.

03 Comfort & outlook

Develop insulation, weather protection, openings and sheltered outdoor spaces as one architectural response.

LEAD PROJECT / KASMOLI, UTTARAKHAND

House of Peace



Architectural visualisation

A mountain home with room to look out.

House of Peace brings together split levels, double-height interiors and a long covered verandah facing the mountain landscape. It is the clearest expression of Fabitat's focus on homes and hospitality in the hills.

VILLA / KASMOLI, UTTARAKHAND

SPATIAL CHARACTER

Light across levels.





The stair becomes part of the living experience: an open connection between levels, framed by tall windows, pale panelling and suspended lights.

Completed interior photographs supplied by Fabitat.

A PLACE TO RETREAT

Rooms open to the view.





Large openings connect the bedrooms to the verandah and the landscape beyond. Sloping ceilings and continuous interior finishes give the rooms their residential character.

MOUNTAIN LIVING

The verandah is a room.





A sheltered edge for sitting, gathering and watching the mountains.

For mountain homes and resorts, the transition between inside and outside deserves as much care as the rooms themselves.

RISHIKESH, UTTARAKHAND / 2024

Mountain Mama Resorts







Five cottages, individual character.

A mountain hospitality project combining private cottage accommodation, verandahs and interiors with distinct identities.

DESIGNED FOR STAYS

Comfort inside the cottage.







Colour, ceiling volume and thoughtfully placed openings give each cottage its own atmosphere. These interiors demonstrate the finish quality and character achievable within the prefab system.

CHATTARPUR, NEW DELHI / 2022

T-Series Private Farm







Private cottages with a generous residential language: verandahs, large openings and finished interiors set within a landscaped property.

GURUGRAM / COTTAGE

Meethi Blu Farmstay

2023



A pitched-roof cottage with a deep front verandah. The relationship between the opening, sheltered deck and garden gives a compact building a generous outdoor extension.



Project detail

GURUGRAM / COTTAGE

Cocoa Farmstay

2022



A garden cottage with a covered verandah and warm, fully finished interiors. A distinct architectural character developed around a compact living programme.



Project detail

CHATTARPUR, NEW DELHI / 2018

A farmhouse in the garden







A long, low building opening onto its landscape. Large glazed openings and continuous interior spaces illustrate the breadth of architectural expression in the portfolio.

MANSAROVAR GARDEN, NEW DELHI

The Greenhouse Effect



4

STOREYS

From prototype to residence.

A four-storey home with a distinctive interior: green steel stairwork and glass-block surfaces bring texture and transparency to the circulation spaces.

Each level is part of one coordinated architectural and structural design.

DEHRADUN, UTTARAKHAND

Berry House



White boarding, sheltered balconies and warm lantern light.

Completion visualisation based on a work-in-progress photograph.

FARIDABAD / 2021

A rooftop gym







An enclosed fitness space connected to an open terrace. Rooftop projects begin with assessment of the existing structure, access and service connections.

JOR BAGH, NEW DELHI / 2023

A lounge above the city







A glazed rooftop lounge opening onto the terrace, with a comfortable domestic interior and a strong connection to outdoor space.

NEETI BAGH, NEW DELHI / 2023

An elevated garden room







A long glazed frontage, generous roof projection and warm interior finishes shape this rooftop lounge in Neeti Bagh.

SUNDER NURSERY, NEW DELHI / 2025

A small building. A public role.







Ticket kiosk at Sunder Nursery, for the Aga Khan Foundation. Compact planning and a pitched-roof form bring the prefab system to a public-facing setting.

BEHIND THE FINISHED BUILDING

Work in progress










Foundations, anchorage, steel erection, boarding and roofing. Selected construction photographs from the Fabitat portfolio; images show different projects.

STRUCTURE & PROTECTION

Engineered to recognised standards.

INDIAN STEEL DESIGN

IS 800:2007

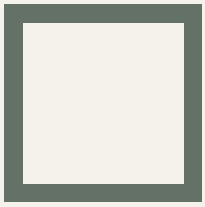
General construction in steel
Code of practice

AMERICAN STEEL DESIGN

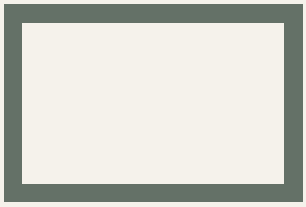
AISC

Structural steel specifications
Edition to project design basis

Mild-steel SHS and RHS sections



SHS



RHS

Square and rectangular hollow sections configured around the layout, spans and loads of each building.

Earthquake-resistant design

Site-specific seismic actions, bracing, connections and foundation anchorage are coordinated by the structural engineer. Applicable seismic and loading standards form part of the project design basis.

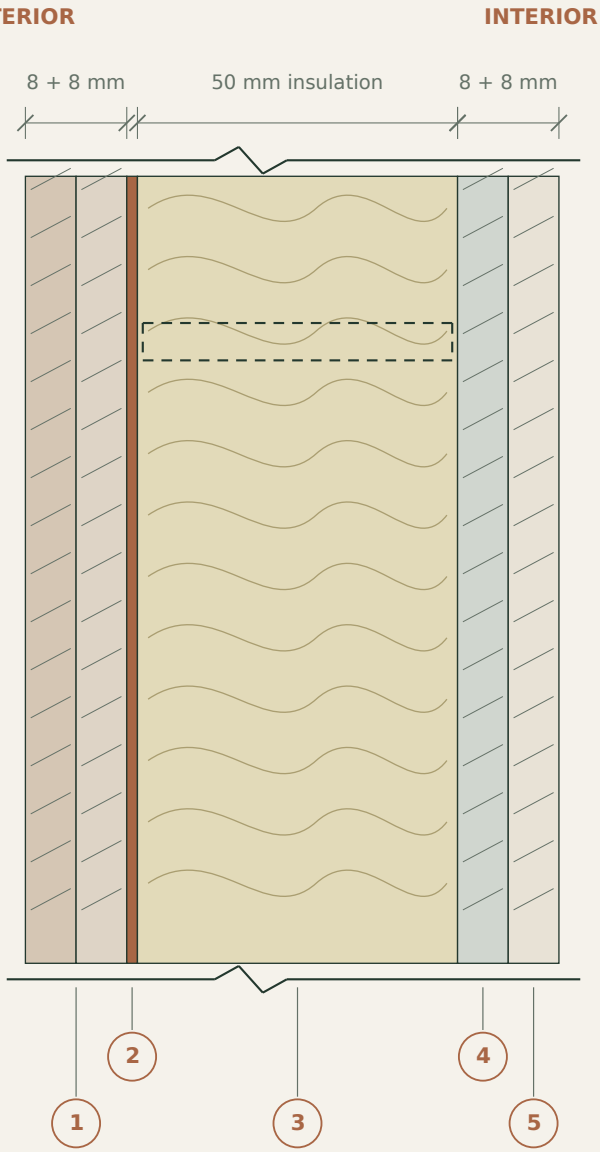
Corrosion protection

Zinc chromate primer forms part of the protective coating system, with specified surface preparation, coating thickness, compatible finishing coats and site touch-ups.

AISC: American Institute of Steel Construction. ANSI/AISC 360 is the structural steel building specification; the applicable edition and design method are confirmed by the engineer.

ARCHITECTURAL DETAIL / W01

The wall, layer by layer.



1 External boarding

Two 8 mm cement boards in this example.

2 Protective membrane

Weather barrier; vapour control coordinated for climate.

3 Insulated steel frame

50 mm rockwool. Frame depth and spacing to engineering.

4 Internal liner

8 mm base board in this example.

5 Finish boarding

8 mm board with the selected decorative finish.

Typical insulated bay / indicative assembly

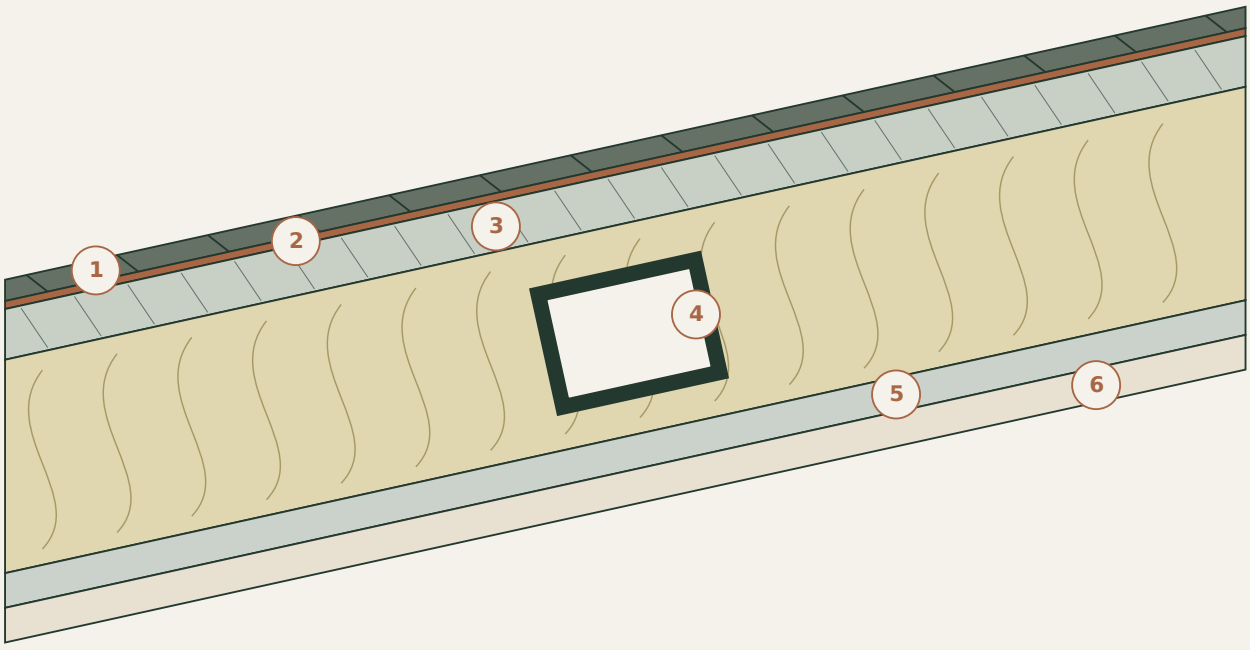
Dashed outline indicates framing beyond the section. Fixings, joints, membrane laps and final frame depth are resolved in project shop drawings.

Architectural schematic / not to scale / not for construction. Board sizes illustrate the thermal-comparison assembly, not every finish option.

ARCHITECTURAL DETAIL / R01

A roof built in layers.

EXTERIOR / ROOF



INTERIOR / CEILING

1 **Shingle roofing**

Shingle cement at required fixing details.

2 **Waterproof underlay**

Membrane and laps to the roofing system.

3 **12 mm cement board**

Decking fixed to engineered supports.

4 **Rockwool + steel frame**

Insulation thickness to project specification.

5 **Internal liner**

Base ceiling boarding.

6 **Final ceiling finish**

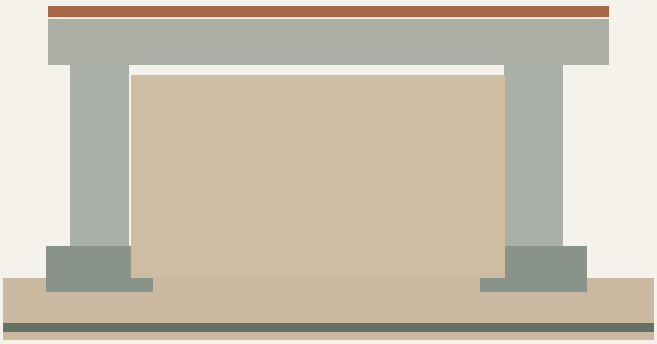
Selected finish board, paint or panelling.

Architectural schematic / not to scale / not for construction. Slope, steel member, insulation thickness and fixings are illustrative. Vapour-control position requires climate-specific coordination.

TWO FOUNDATION-TO-FLOOR APPROACHES

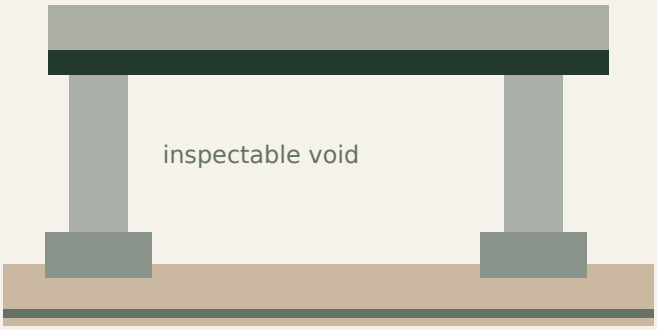
Protection starts at ground level.

SOLID PLINTH



Ground line

RAISED / SUSPENDED



Ground line

Solid plinth

A floor supported on a prepared, filled plinth, with coordinated damp-proofing, drainage and termite-protection measures.

Raised ground floor

A suspended floor separates the assembly from soil moisture. An accessible void can make potential termite routes easier to inspect.

Designed for the site

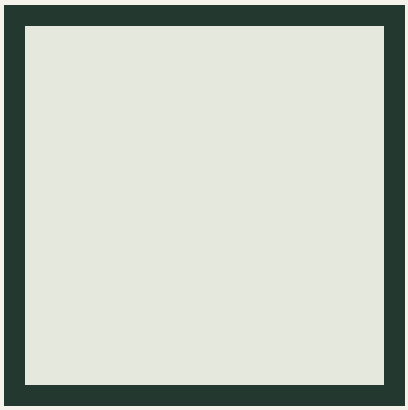
Foundations depend on soil conditions, levels, loads and drainage. Supports, service penetrations and junctions still require protective detailing.

Concept sections / not to scale. No standard footing dimensions are implied.

A COMPARISON ARCHITECTS CAN USE

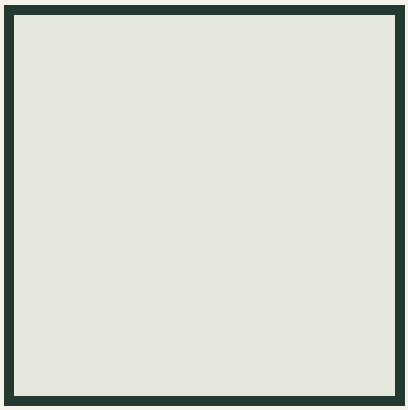
Slimmer walls. An insulated envelope.

More usable area within the same footprint



260 mm finished masonry

20.07 m2 inside



120 mm example prefab wall

22.66 m2 inside

Illustration: 5 m x 5 m external footprint, no partitions. A 120 mm wall yields 2.59 m2 more internal area than a 260 mm wall. Actual gain depends on the assembly.

Preliminary U-value comparison

16 mm board + 50 mm rockwool + 16 mm board	**0.61**
230 mm brick + 15 mm plaster each side	**2.24**

U-value in W/m2.K / lower is better

Calculated through the insulated section only; steel-frame thermal bridges are excluded. This is not a certified whole-wall value or an AC-energy saving claim.

Basis: conductivity (W/m.K): fibre cement 0.39; rockwool 0.036; brick 0.98; plaster 0.721. Surface resistances 0.13 + 0.04 m2.K/W. References: BEE Eco-Niwas Samhita 2018, Annex 5; ROCKWOOL Thermalrock S; EQUITONE technical data. Confirm actual products and frame before publication.

ARCHITECTURAL FREEDOM

Choose the expression.







EXTERNAL WALLS

Cement board + paint

HPL cladding

WPC cladding

Metal panels

INTERNAL WALLS

Gypsum board + paint

Wall panelling

Wooden panelling

OSB board panelling

Birch plywood cladding

ROOFING

PUFF panels

Shingle panels

Shingle tiles

Onduline roofing

Your design intent, carried through.

Cladding, linings and roofing are selected with the architect, then coordinated with the underlying structure, membranes, insulation and junctions.

Photographs illustrate built character; they are not a product sample catalogue.

THREE LEVELS / PROJECT-SPECIFIC SELECTION

One system.
A choice of specifications.

ESSENTIAL	PREMIUM	SIGNATURE
ROOF		
Metal sheet with flashings	Insulated PUFF panel	Shingles over deck and underlay
INSULATION		
Rockwool wall and ceiling insulation	Rockwool walls; insulated panel roof	Insulation tailored to the selected roof and wall build-up
INTERIOR CHARACTER		
Simple painted finishes; practical ceiling options	Upgraded painted boards and finishes	Decorative panelling and selected premium finishes
DOORS & WINDOWS		
uPVC glazing; laminated internal doors	Upgraded uPVC system and hardware	Selected aluminium system and painted internal doors
SERVICES & FIXTURES		
Coordinated services; essential fixture selection	Upgraded switchgear and sanitary fittings	Premium fixture and hardware selection

Structural safety and essential weather protection are maintained across the range. Finishes and assemblies can be customised to the design, climate and budget.

Working specification framework. Final materials and build-ups are confirmed in the project proposal. No prices shown.

FROM DRAWINGS TO HANDOVER

A partner in delivery.

Bring your design intent. We work with you to coordinate the prefab system, engineering, fabrication and execution, with responsibilities agreed at the outset.

01 Feasibility

Review site access, levels, existing structures where relevant, brief and proposed scope.

02 Design coordination

Resolve structure, envelope, services and critical interfaces with the architect and engineers.

03 Specification & proposal

Agree materials, samples, scope, programme and project-specific commercial terms.

04 Shop drawings & preparation

Coordinate fabrication drawings while foundations and site readiness progress.

05 Assembly & finishing

Erect the frame, complete boarding, roofing and services, then execute approved finishes.

06 Review & handover

Inspect the completed work and agree handover documentation and maintenance requirements.

Clear commitments before work begins.

Workmanship warranty: Coverage, duration, exclusions and the claims process agreed in writing for each project.
Architect support: Request a wall/roof detail pack and material samples to support your specification.
Start with your site: Share a concept plan for a project-specific feasibility review.

BUILT EXPERIENCE ACROSS FOUR CATEGORIES

Our project footprint

VILLAS & RESIDENCES / 4

The Greenhouse Effect
Mansarovar Garden, New Delhi

House of Peace
Kasmoli, Uttarakhand

Berry House
Dehradun, Uttarakhand

Fursatganj
Manesar, Haryana

ROOFTOPS & EXTENSIONS / 12

Noida	**2**
Faridabad	**1**
New Delhi*	**4**
Gurugram	**5**

COTTAGES & LEISURE UNITS / 25

Chilka Lake, Odisha	**7**
Nayagarh, Odisha	**4**
Pool Lounge, Goa	**1**
Mountain Mama, Uttarakhand	**5**
Gairatpur Bas, Haryana	**3**
T-Series Private Farm, Chattarpur	**3**
Ashoka Drive, DLF Chattarpur	**1**
Ansal Aravalli Retreat	**1**

KIOSKS

Sunder Nursery Ticket Kiosk
New Delhi

* Neeti Bagh, CR Park, Jor Bagh and East of Kailash.

Category totals count individual villas, cottages/leisure units and rooftop additions, rather than separate client commissions. Selected photography elsewhere in this brochure may show additional portfolio work.

DESIGN STUDIO / SITE EXECUTION / FACTORY

The team behind Fabitat

Coordinating design, procurement, fabrication and site delivery.

DESIGN STUDIO

Haardik Parhee
Project Architect

Bhawna Chauhan
Interior Designer

Chanchal Gupta
Interior Designer

Parul Tanwar
Interior Designer

Vijay Lamba
3D Visualizer

Hari Singh
Draughtsman

Harshit Saini
Graphic Designer

Swadesh Samanta
Accounts

Madhu
Accounts

Vishnu
Procurement

SITE EXECUTION

Rajan Jangra
Senior Project Manager

Kanhaiya Prasad
Site Supervisor

Pradeep Bisht
Site Supervisor

Sanjay Singh
Site Supervisor

Mubarak Khan
Site Supervisor

Aditya Patel
Site Supervisor

Vishal Patel
Site Supervisor

Vikas
Site Supervisor

FACTORY

Chetan Spall
Director

Balram
Technician

Ramjeevan
Carpenter

Omkar
Carpenter

Pramod
Carpenter

Roshan
Carpenter

Ankit
Carpenter

Shaqib
Carpenter

Farmaan
Carpenter

A USEFUL STARTING POINT

Bring your idea. Let us work through it.

Share what you have. A site pin, a few photographs and a concept plan give us a practical starting point for discussion.

01 The site

Location, photographs, access, levels and available survey information.

02 The programme

Villa, cottage, resort, rooftop or kiosk; approximate area and number of units.

03 The design

Concept plans, preferred materials, reference images and the architect coordinating the project.

04 The constraints

Target programme, budget range, permissions and any existing-building or ground information.

05 The scope

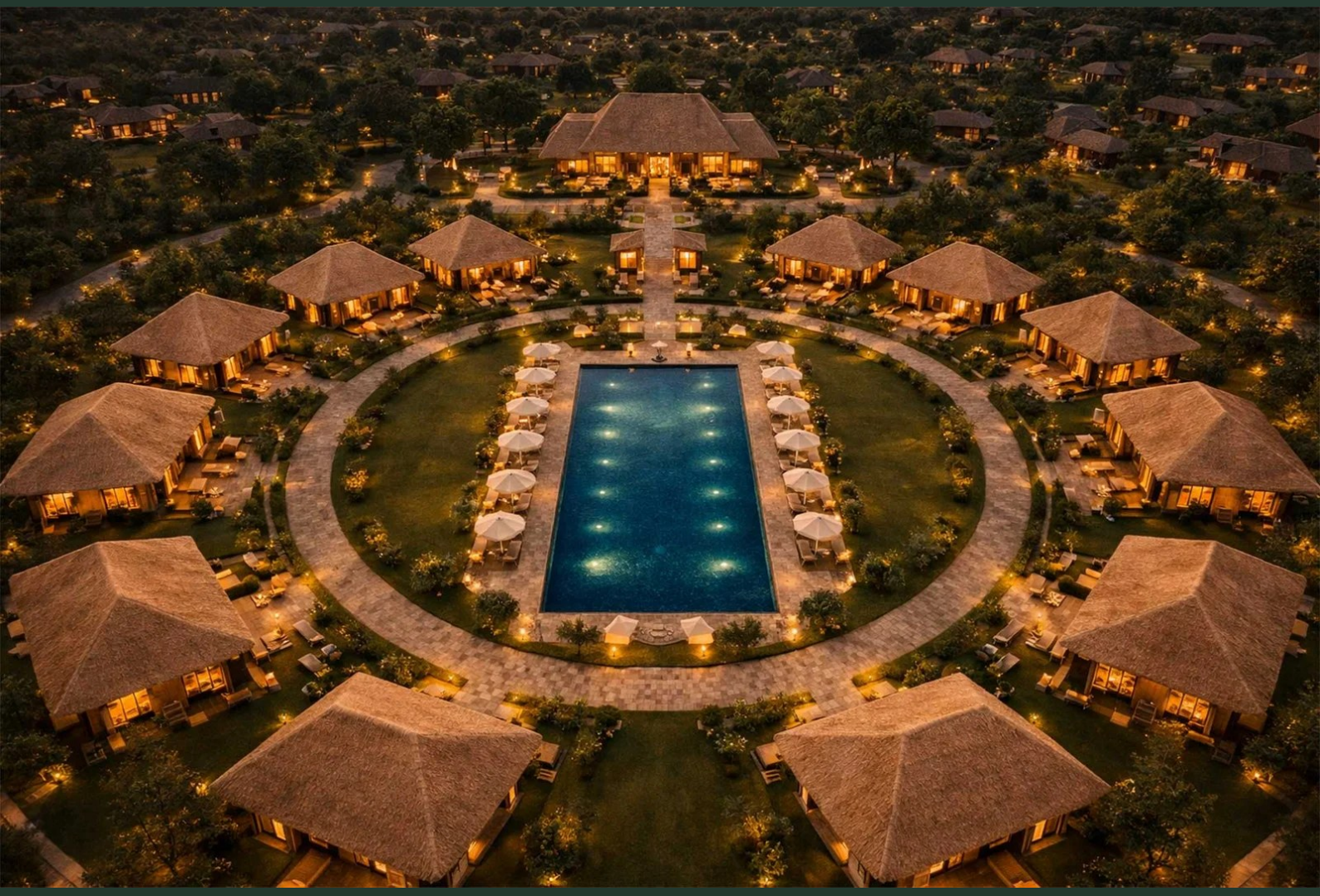
Required engineering, foundations, structure, finishes and services; responsibilities to be agreed.

Request a feasibility discussion, detail pack or material samples.

inquire@fabitat.in | +91 98102 24237 | www.fabitat.in

SARISKA, RAJASTHAN

Imagine the next destination.



UNBUILT RESORT PROPOSAL / ARCHITECTURAL VISUALISATION

Bring us your next site.

Share a site or concept plan for a project-specific feasibility review.

+91 98102 24237

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