



05.13 TIMBER

Simon Gill Architects

Hewitt Studios

Fraser Brown MacKenna

K2S Architects

Overview: Home-grown timber

Preview: Housing 2013

Product matrix:

Modified wood products



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Timber is the most unforgiving of materials. Exposed untreated softwood can languish and rot; unengineered timber used for long cantilevers and spans demands hefty, even crude, proportions. Ignore timber's sensitivity to humidity and temperature and it distorts into a mangled wreck. The architects of this month's case studies show the benefits of a sympathetic, even indulgent, and well-researched approach to timber design and specification.

Simon Gill Architects' Fishing Lodge in Bulgaria is clad with local spruce, charred with a blowtorch and treated with a semi-translucent stain and seal, helping it to harmonise with the surrounding forest's colours. Hewitt Studios' innovative Arts Space for Hereford College of Arts has sawn and planed untreated English cedar external timber slats, while its interior has sanded English ash and Scandinavian birch-faced plywood. Its twisted trestle frame comprises cross-laminated timber decking and glulam columns, with visual grade spruce.

Following this technological showcase, Fraser Brown MacKenna's residential development in London is clad with V-jointed vertical softwood boarding and has pressure-treated softwood vertical slat privacy screens. K2S Architects' Kamppi Chapel in Helsinki is also spruce-clad, with sawn-to-order horizontal finger-jointed planks treated with a pigmented transparent nanotech wax. It has oiled alder plank internal walls and a CNC-cut glulam frame; it's said the length of the exquisitely crafted curved planks can be measured in kilometres.

Assistant technical editor Laura Mark's Overview looks at changes to the EU Timber Regulation, impending Construction Products Regulation amendments, incentives to use home-grown timber and recent products that have emerged in response to this.

Felix Mara

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Cover image Fishing Lodge, Batak, Bulgaria, by Simon Gill Architects. Photographer: Mike Daines

FISHING LODGE, BATAK, BULGARIA SIMON GILL ARCHITECTS

Specified products

External timber cladding

Local spruce, charred with blowtorch, followed by
by application of Milesi semi-translucent stain
and seal

www.milesi.com

Timber windows, doors and internal paneling

Local spruce with application of Milesi stain
and seal

Timber floor

Local pine with application of Milesi stain and seal

Timber cupboards

Local pine with application of Milesi stain
and seal

Bathroom wall tiles

TED Keramika Alaplana Ceramica Elegance Azul

Bathroom floor tiles

TED Summit colour B/O3 C1

Master Shower mosaic

TED glass mosaic MCWE Silver Rete

Flat roof

Slaifana terrazzo – black white and cream stones

External ground surfaces and vertical plinths

Mita terrazzo – black white and cream stones

Vanity tops and splashback

Back-painted glass

Door handle

Lira by Technicon

www.praktiker.bg

Kitchen worktop

Italian black granite from local mason

Pergola cables, light-switch cables, pendant light cables

3mm steel cable

Norfolk Marine

www.norfolkmarine.co.uk



View of entrance
and bay window
from south

ALL PHOTOGRAPHS BY MIKE DAINES



Project data

Start on site June 2009

Completion July 2012

Gross internal floor area 280m²

Contract/procurement Bespoke

Construction cost £152,000

Construction cost per m² £524

Architect Simon Gill Architects

Executive architect RT Consult

Client The Gill and Petkov families

Structural engineer RT Consult

M&E consultant None

Quantity surveyor None

Project manager Evgeni Petkov

Main contractor Evgeni Petkov

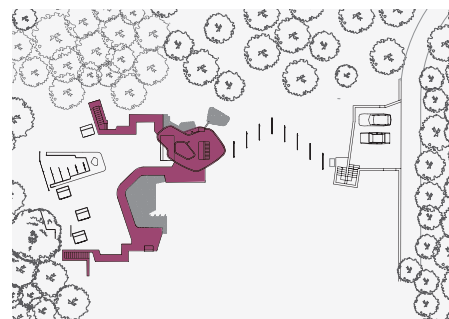
Cad software used AutoCAD LT 2008

Estimated annual CO₂ emissions 8.1kg/m²

Overlooking Lake Batak in the Rhodope Mountains of Bulgaria, the house addresses the challenging physical and climatic geography of the site. The ground slopes away down to the lake at a 1:5 gradient but also up behind, being forested with very tall trees. Except in high summer, very little sun falls on the site for most of the day. Being at an altitude of 1,400m, the temperature can fall to -20°C on a winter night, and a metre of snow is quite typical; in summer, temperatures can reach 40°C.

The sleeping areas are dug into the site to stabilise the internal environment while living and dining areas are above in a tall, slim, massively insulated volume, atop of which lie solar panels, above the shadows of the trees. The house thus also has a reduced visual impact on the landscape, with timber cladding allowing it to blend into the forest behind.

Simon Gill, director, Simon Gill Architects



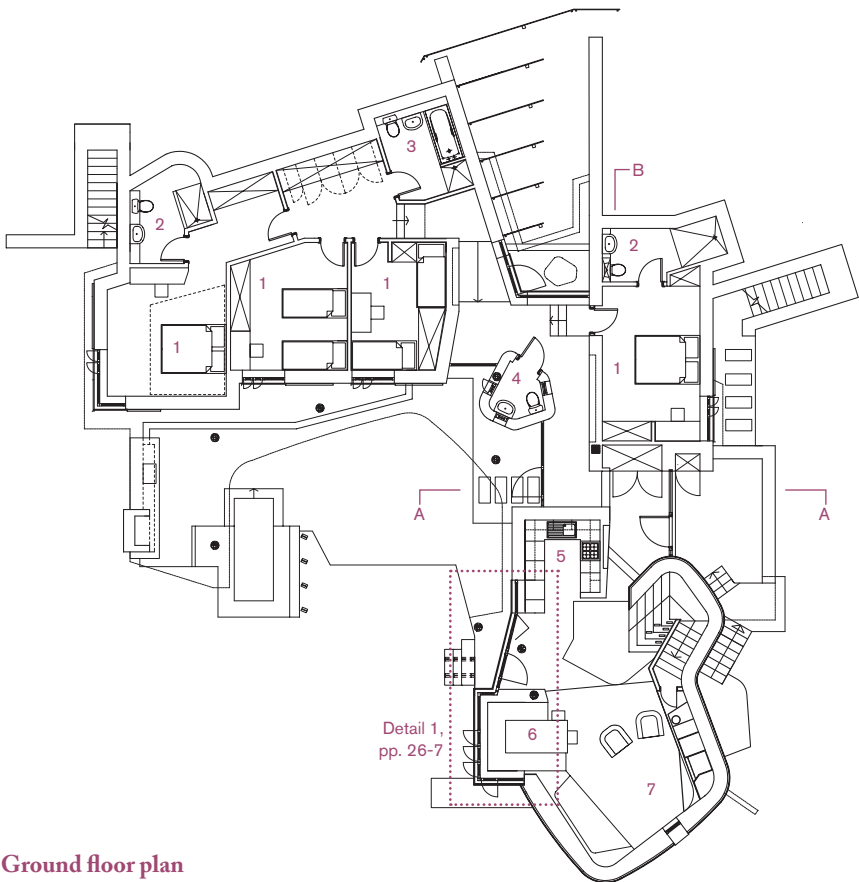
Site plan

FISHING LODGE, BATAK, BULGARIA SIMON GILL ARCHITECTS

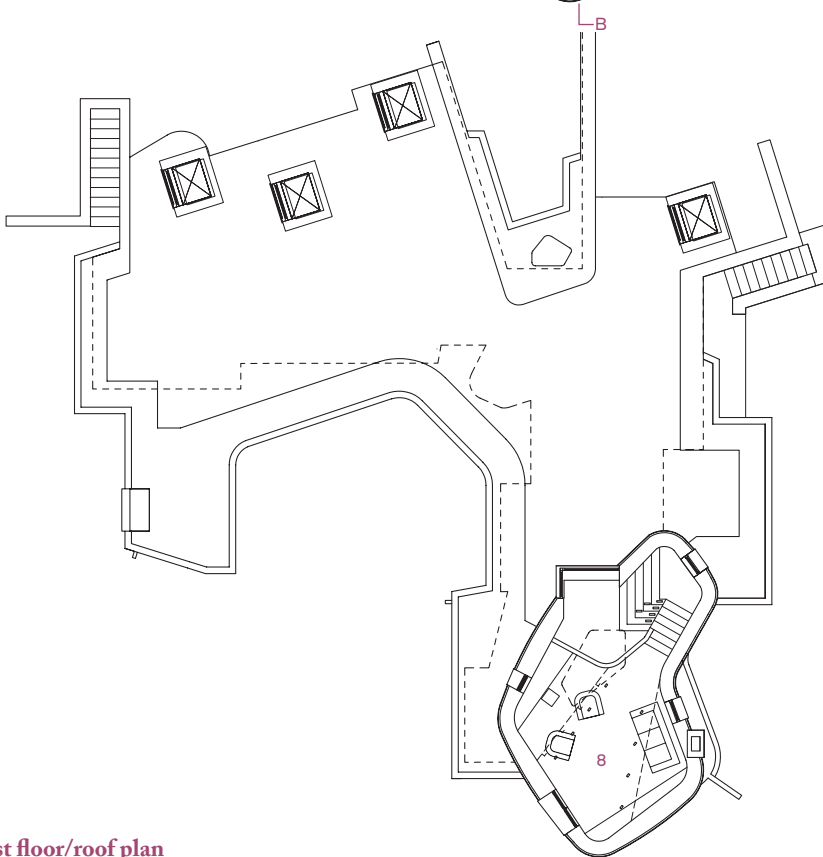


Above View of
Lake Batak to
south from roof

- 1. Bedroom
- 2. En-suite shower room
- 3. Bathroom
- 4. WC
- 5. Kitchen
- 6. Dining area
- 7. Snug
- 8. Living area



Ground floor plan



First floor/roof plan

0 2m

FISHING LODGE, BATAK, BULGARIA SIMON GILL ARCHITECTS

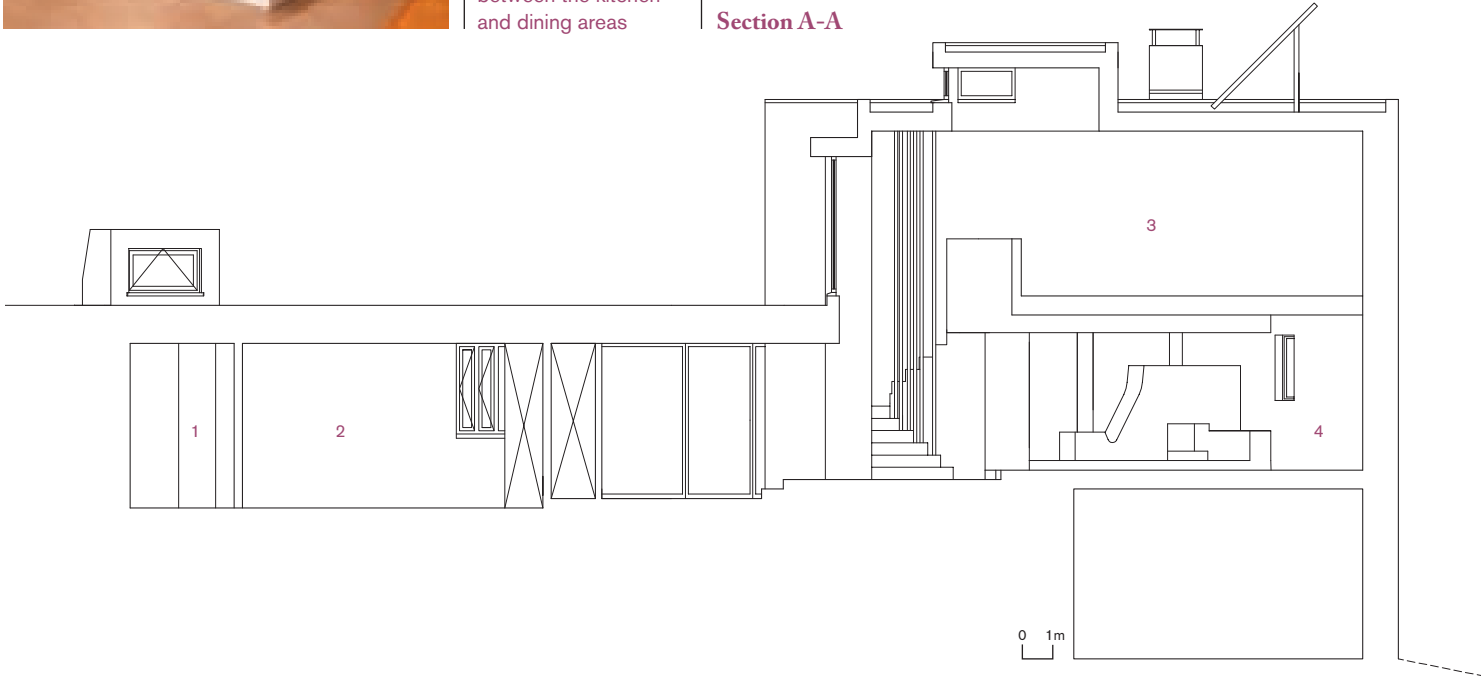


- 1. WC
- 2. Bedroom
- 3. Living area
- 4. Snug

Left The staircase rises to the first floor from the space between the kitchen and dining areas

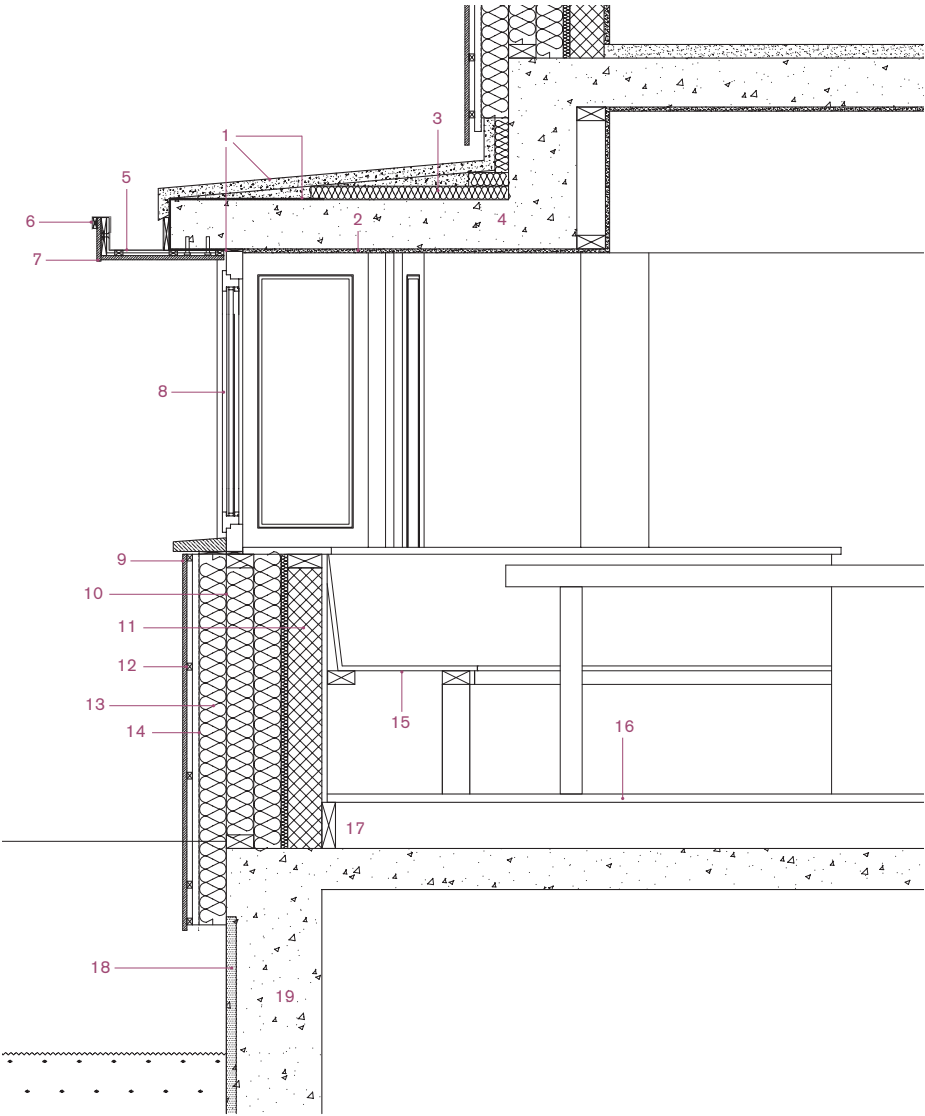


Section A-A

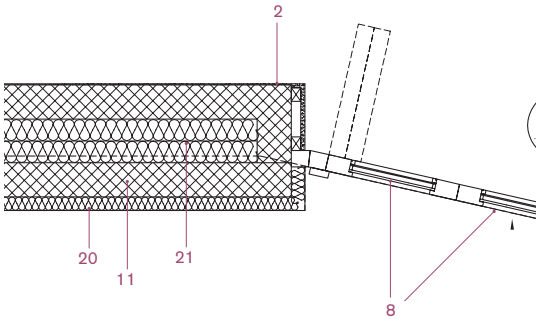


Section B-B

FISHING LODGE,
BATAK,
BULGARIA
SIMON GILL
ARCHITECTS



Detail 1: dining bay



Plan

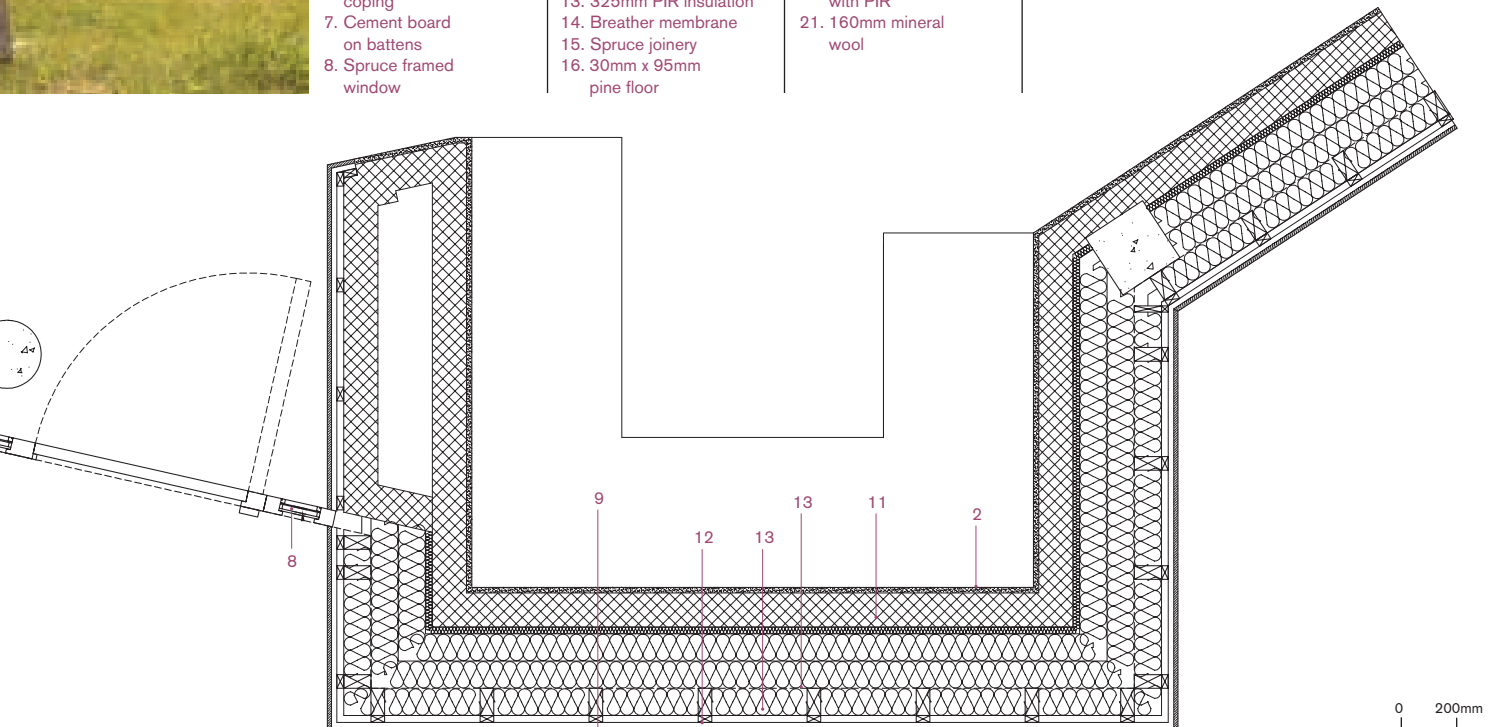


1. 5mm PIR insulation
2. 20mm plaster
3. 50mm PIR insulation
4. 180mm concrete roof slab
5. Pressed metal gutter
6. Pressed metal coping
7. Cement board on battens
8. Spruce framed window

9. Charred spruce cladding
10. 100mm softwood carcass
11. 125mm Ytong thermal block
12. 25mm x 38mm softwood battens
13. 325mm PIR insulation
14. Breather membrane
15. Spruce joinery
16. 30mm x 95mm pine floor

17. 170mm x 50mm softwood joists
18. 30mm Mita terrazzo
19. Reinforced concrete
20. 50mm render insulated with PIR
21. 160mm mineral wool

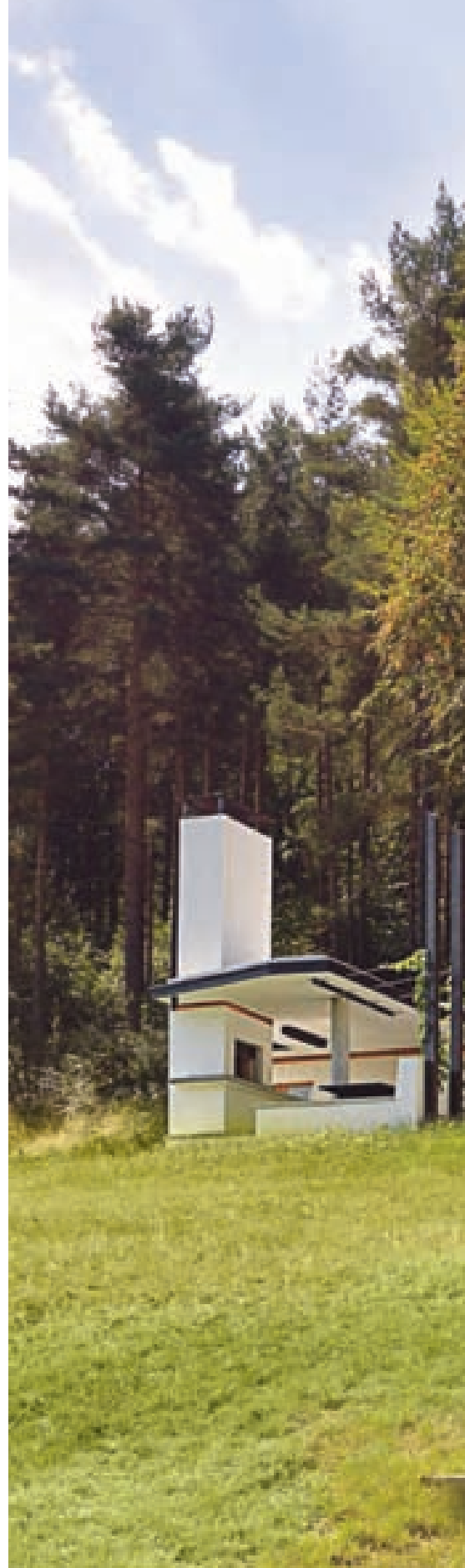
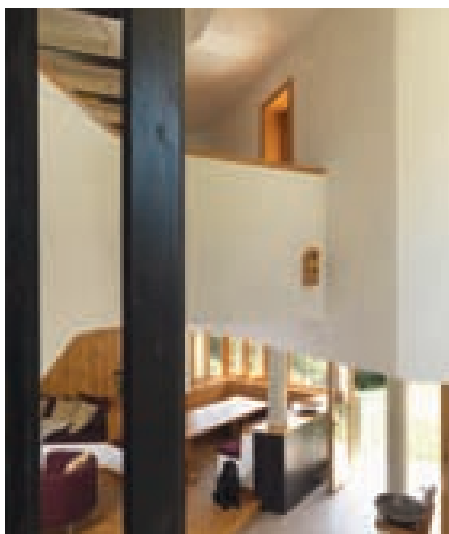
Left View looking east beyond entrance and bay window Above
Bay window to ground floor dining area



FISHING LODGE, BATAK, BULGARIA SIMON GILL ARCHITECTS

Below Ground floor snug space
Bottom left The stairwell opens up connections between the entrance area and the first floor living room

Bottom right Stairs to basement
Right View from garden to the south





FISHING LODGE, BATAK, BULGARIA SIMON GILL ARCHITECTS

01. External timber cladding

Local spruce, charred with blowtorch, prior to application of Milesi semi-translucent stain and seal. The colours allow the cladding to blend into the forest backdrop

www.milesi.com

02. Timber-framed windows, doors and internal paneling

Local spruce with Milesi stain and seal. The colour of the windows and doors provides contrast to the darker cladding; internally, the light brown gives visual warmth

03. Timber floor

Local pine, with Milesi stain and seal. The colour provides visual warmth and practicality

04. Timber cupboards

Local pine, with Milesi stain and seal. The deep claret complements the light brown of the other internal timber finishes

05. Bathroom wall tiles

TED Keramika Alaplana Ceramica Elegance Azul
All bathrooms are underground and top-lit by dormer windows. The bluish-green colour bounces light around, giving a subaqueous ambience

06. Bathroom floor tiles

TED Keramika Summit colour B/O3 C1
The shiny greenish-grey reflects light brightly onto the white walls

07. Master Shower mosaic

TED Keramika Glass mosaic MCWE Silver Rete
As the master shower is curved it required mosaic on the wall. The silver complements the greenish-grey on the floors

08. Flat roof

Slaifana terrazzo - black white and cream stones
Terrazzo is the standard solution for flat roofs in Bulgaria. The stones' colour can be varied to give differing overall hues; these give a colour that complements the dark and light timber. The surface is polished to aid water run-off

09. External ground surfaces and vertical plinths

Mita terrazzo - black white and cream stones
Similar to the flat roof but rough to give grip

10. Vanity tops and splashback

Back-painted glass
A simple, cost-effective and easy-to-clean solution

11. Door handle

Lira by Technicon
www.praktiker.bg

12. Kitchen worktop

Italian black granite from local mason
The robust, fairly inexpensive worktop, complements the magenta-stained kitchen cupboards

13. Pergola cables, light-switch cables, pendant light cables

3mm steel cable
Norfolk Marine
www.norfolkmarine.co.uk

Architect's choices

Materials were chosen for their availability and cost effectiveness. The choice of timber was straightforward. It comes from a lumber town 10km from the site, which sells timber felled in the local forest. Pine was selected for the floor as it is denser than the spruce used for the cladding; the latter was charred to close up the grain and give a pronounced texture and a rich, dark colour. Many materials came from nearby DIY warehouse stores for cost effectiveness and convenience. Yachting cables were used for the pergola for climbing plants, the timber-handled light pulls and to suspend pendant lights.

Simon Gill, director, Simon Gill Architects



