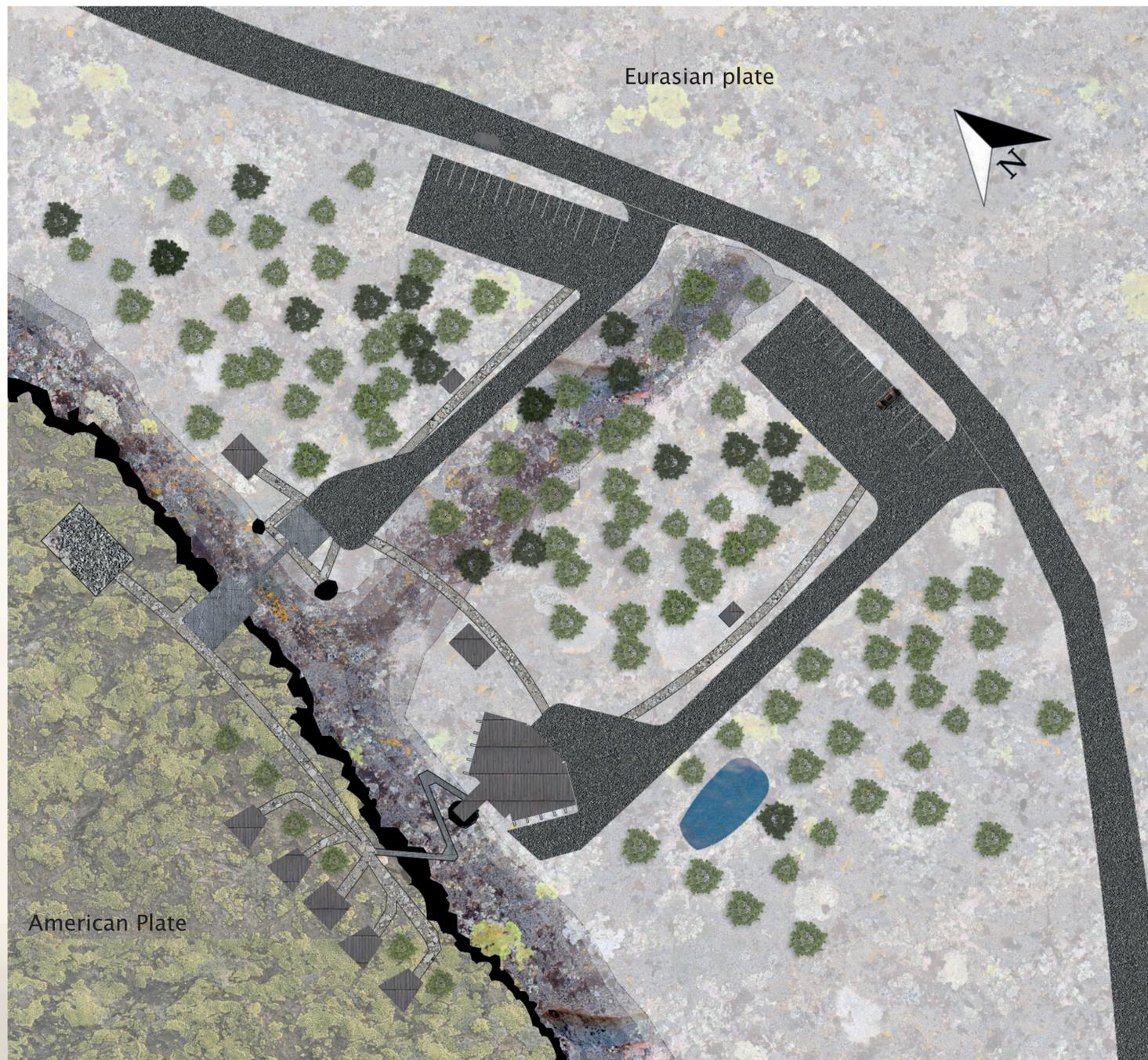


Hámarki Hotel

Project Brief

We were tasked with creating a design for a luxurious, high-end hotel for visitors before exploring the caves and bathing in the geothermal hot spring pools. The tutor was looking for designs for a hotel which caters to adults only and has five double bed studios. The hotel should be able to accommodate a small reception area, a one-person office and a small restaurant with changing facilities. We were free to propose any additional functions and could include everything in one building or separate structures. We are to also include walking paths to better preserve the natural surroundings and it is vital all solutions be eco-friendly in construction and operation. Although the setting is in Iceland, we are to design a proposal according to the UK Approved Building Regulations and Legislation.

Site plan



Scale 1:500

Project solution

My solution to the brief is the Hámarki Hotel, this is a mix of modern architecture with aspects of ancient Nordic design. It accommodates all aspects of the brief with a main build consisting of all the main functions including the addition of an addition of an expedition space to improve the experience of adults. Five private double bed studios are located across the crevice giving a luxury experience facing the northern lights. Walking paths are located across the site through forested areas to help visitors traverse the site without damaging it. The Hotel has been designed in a way where the construction can take place in various temperatures with all outer buildings being constructed off-site and uses local materials to do so. The hotel will be heated by hot geothermal water pumped from the caves through the building whilst also creating electricity along with a small windfarm located to the top left of the site.

Inspiration Images

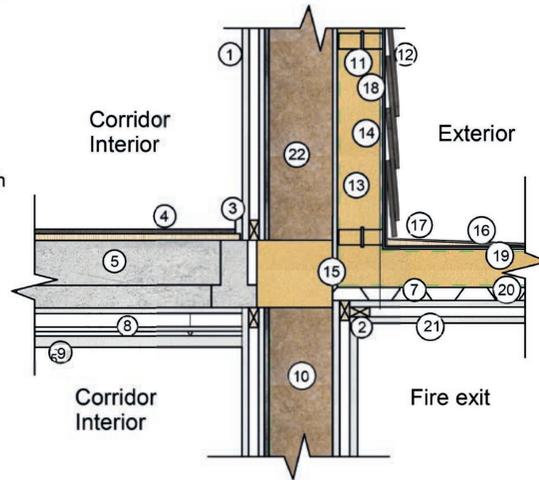


Renderd Image



Internal External First Floor
Fire Exit Detail 1

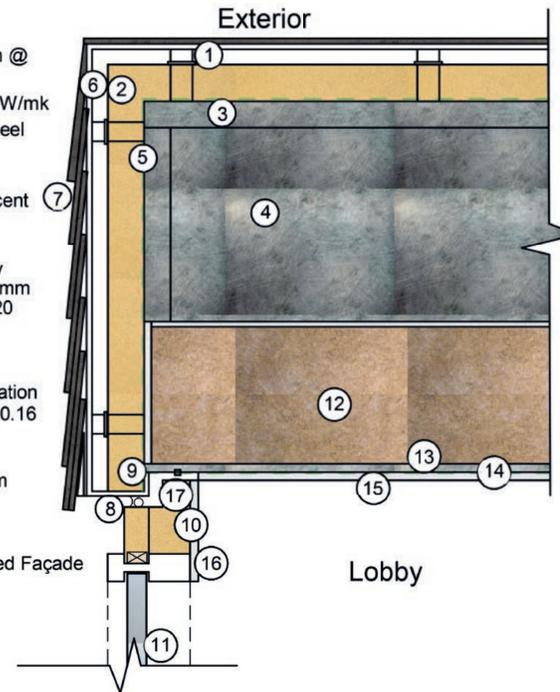
- 1 15mm Fire line Gypsum board
- 30 mins of fire protection
- 2 Wall Batten 22 x 44mm @ every 450mm
- 3 Skirting board Wood 50x15mm
- 4 Plywood Floor finish 15mm with 60x60x10mm black tile finish
- 5 Beam and block flooring 440 x215x 100
- 6 150x160mm Fire stopper 2 hours fire protection
- 7 Corrugated steel for flat roof
- 8 Ceiling furring section MF5
- 9 Insulated ceiling tile 600x600x25
- 10 C stud 250mm
- 11 Helping hand bracket @ every 400mm
- 12 Timber cladding 10 x 250 with charcoal finish
- 13 50mm rigid Insulation 0.55 W/mk
- 14 DPC
- 15 Cement fibre board 10mm
- 16 PVC roofing membrane
- 17 Timber packing
- 18 Roof underlay
- 19 Vapour control layer
- 20 Breathable membrane
- 21 2No 15mm Fire line board to achieve 1 hour fire
- 22 Glass wool insulation 150mm 0.21 W/km
- 23 Rigid insulation 70mm 0.077 W/mk



Details

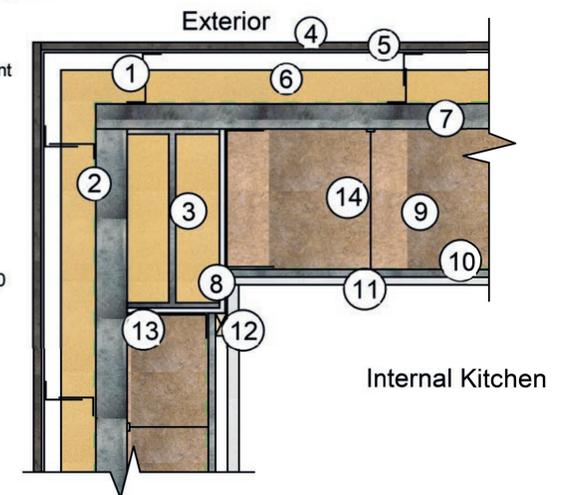
Top of Roof Detail 2

- 1 Helping hand bracket 100mm @ every 450mm
- 2 60mm Rigid insulation 0.066 W/mk
- 3 48mm Steel railing fixed to steel beam
- 4 Steel to structural engineers calculations coated in Intumescent paint
- 5 Breather membrane
- 6 Waterproof cladding underlay
- 7 Timber Cladding 10x270 270mm
- 8 Gasket and backing rod 30x20
- 9 eDPM
- 10 Mineral wool 85x120mm
- 11 Curtain wall system
- 12 2 Layers of glass wool insulation 150mm and 100mm achieving 0.16 W/mk
- 13 Horizontal metal frame
- 13 Horizontal steel beam 15mm
- 14 Vapour control layer
- 15 15mm Gypsum board
- 16 Cavity closer 15x185mm
- 17 AA@110 65mm Zone Drained Façade Kawneer

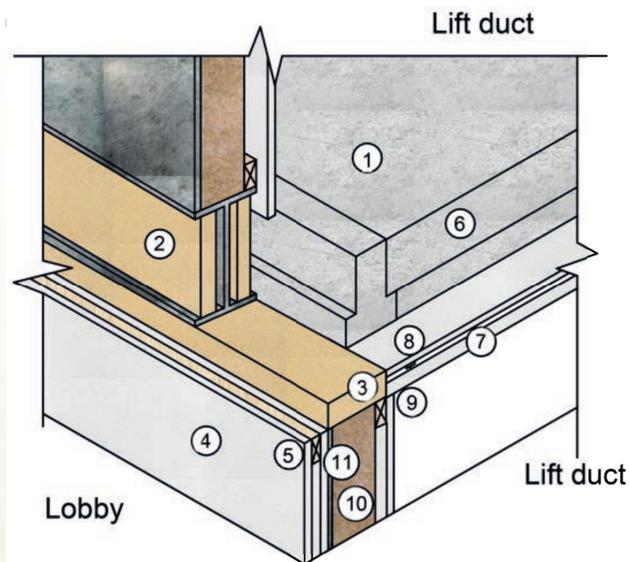


Plan View External Roof and
Wall Detail 3

- 1 Heaping hand bracket 100mm @ ever 500mm
- 2 Breather membrane
- 3 Steel to structural engenders calculations coated in Intumescent paint
- 4 Timber Cladding 10 x 250 charcoal finish
- 5 Waterproof cladding underlay
- 6 60 mm Rigid Insulation 0.066 W/mk
- 7 Steel railing 48mm
- 8 Cement particle board 10mm
- 9 2 Layers insulation 100 and 150 0.16 W/mk
- 10 Vapour control layer
- 11 15mm Fire line plaster board 30 mins fire protection
- 12 Timber batten ac grade 44 x 22
- 13 C stud 250mm
- 14 Wall ties 250 and 150



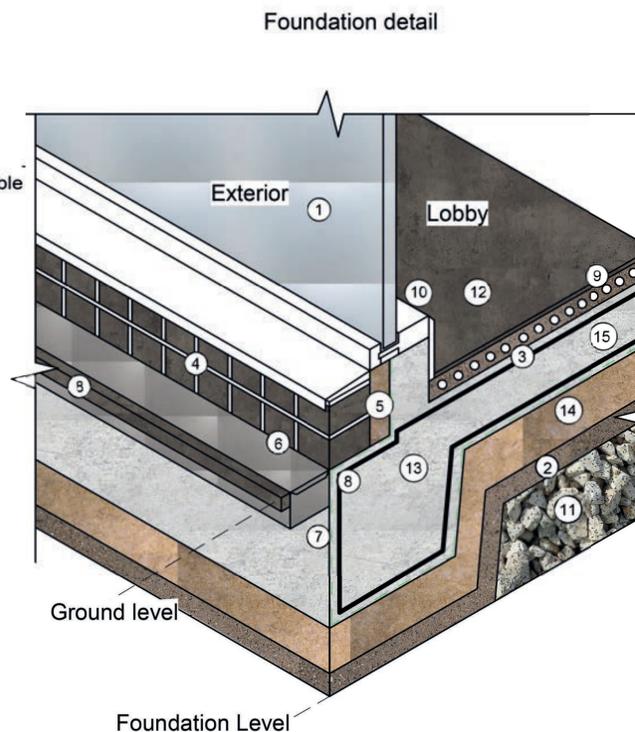
3D First Floor Detail 4



- 1 Steel to structural engineers calculations coated in Intumescent paint
- 2 Acoustic polyurethane insulation 185x25mm x2
- 3 Fire cavity barrier 35x120mm 1 hour fire protection
- 4 2No 15m fire line plasterboard 1 hour fire protection
- 5 Timber batten grade c3 44 x 22mm
- 6 beam and block flooring 440 x 215 x 100mm
- 7 Insulated ceiling tile 600x600x25
- 8 Ceiling Furring section MF5
- 9 Deflection head
- 10 Rigid insulation 70mm 0.050 W/mk
- 11 C Stud 75mm @ every 450mm

3D Foundation Detail 5

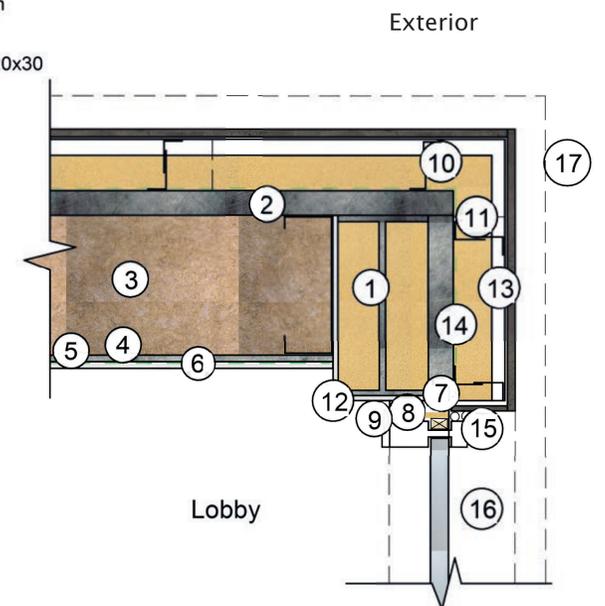
- 1 Front entrance curtain wall system 35mm double glazing
- 2 Sand blinding 50mm
- 3 Underfloor heating pipes 12mm
- 4 Bricks 215 x 102.5 x 65mm Flashed black SAB1548
- 5 PPC coated insulation panel 175x55mm
- 6 Aco drain 100x80mm
- 7 DPM
- 8 Bitumen tarmac 30mm
- 9 40mm sand blinding
- 10 Transom
- 11 Hard core 200mm
- 12 Polished concrete slab flooring 300x300x10mm
- 13 Concrete slab poured in situ 18m2
- 14 100mm Rigid insulation 0.11 W/mk



Ground level
Foundation Level

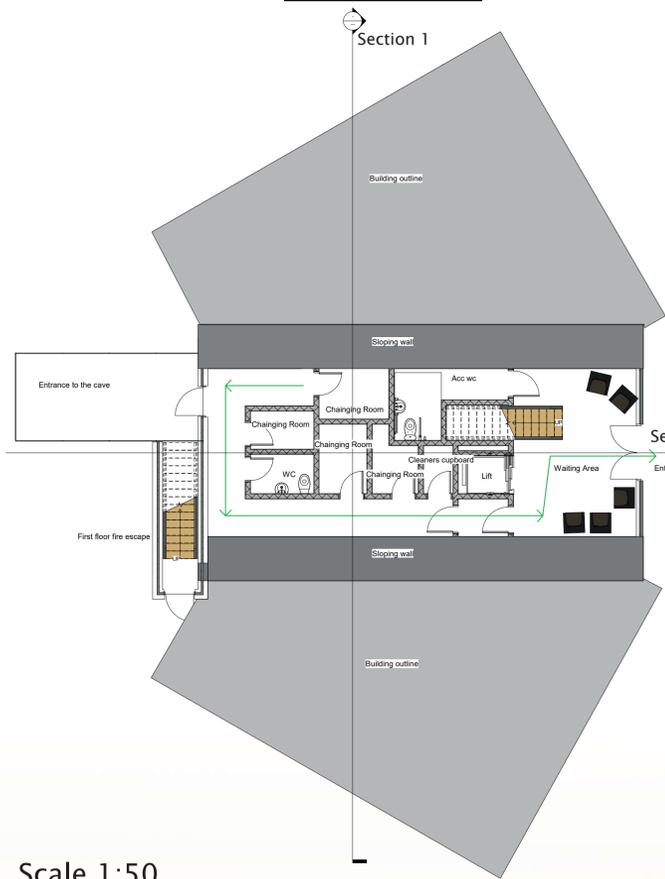
- 1 Steel to structural engineers calculations coated in Intumescent paint
- 2 Steel railing 48mm
- 3 2 Layers of glass insulation 150mm 100mm 0.16 W/mk
- 4 Horizontal metal frame 15mm
- 5 Vapour control layer
- 6 2 layers 15mm Gypsum board
- 7 eDPM
- 8 Loose-laid mineral wool 115x40
- 9 Cavity Closer 15x90
- 10 Helping hand bracket 100m @ every 400mm
- 11 60mm rigid Insulation 0.066 W/mk
- 12 Cement fibre board 10mm
- 13 Roof underlay
- 14 Breather membrane
- 15 Gasket and backing rod 20x30
- 16 Curtain wall system
- 17 Aco drain

Plan Roof Curtain
Wall Detail 6



Floor Plans

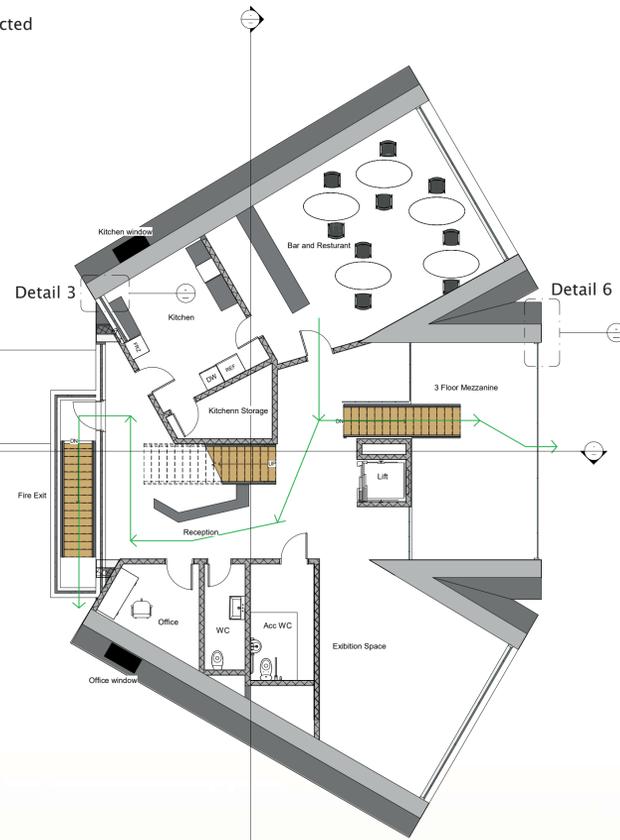
Ground floor



Scale 1:50

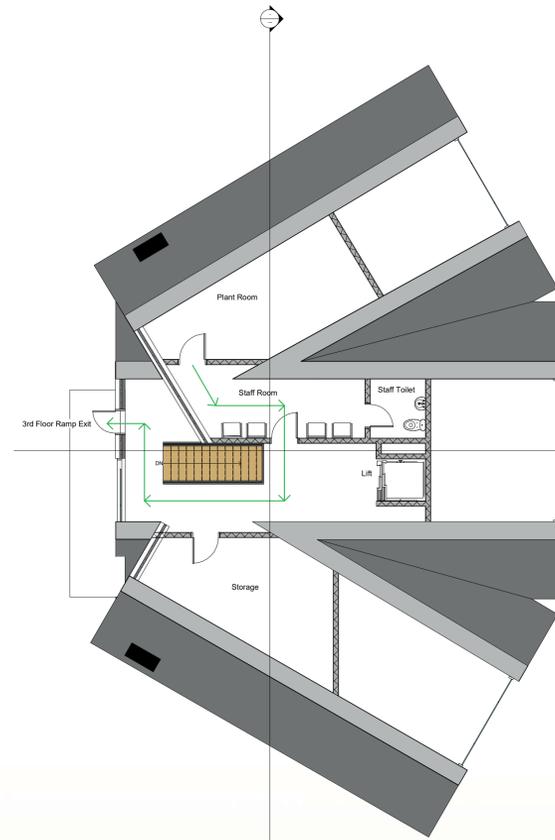
First floor

Fire Route is depicted with green line.



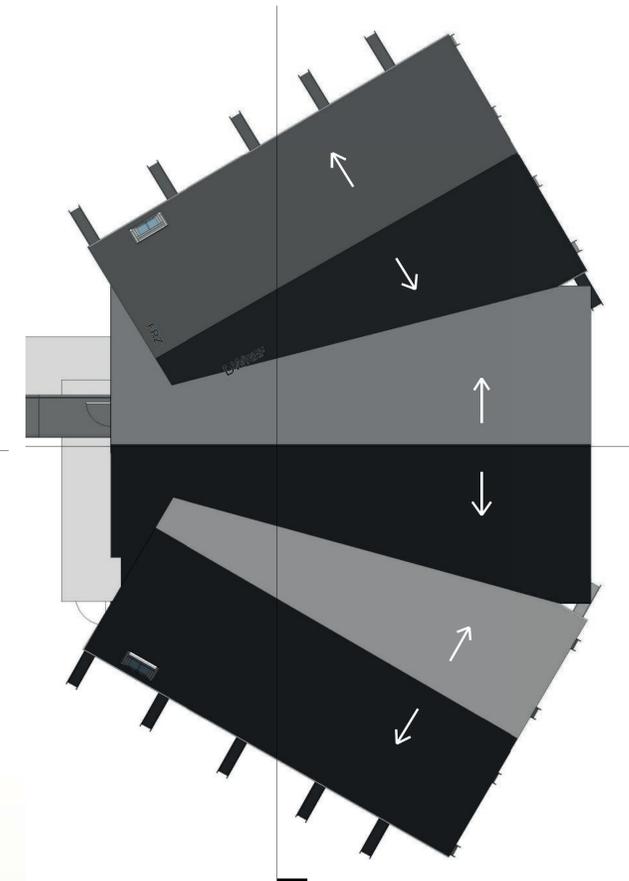
Scale 1:50

Second Floor

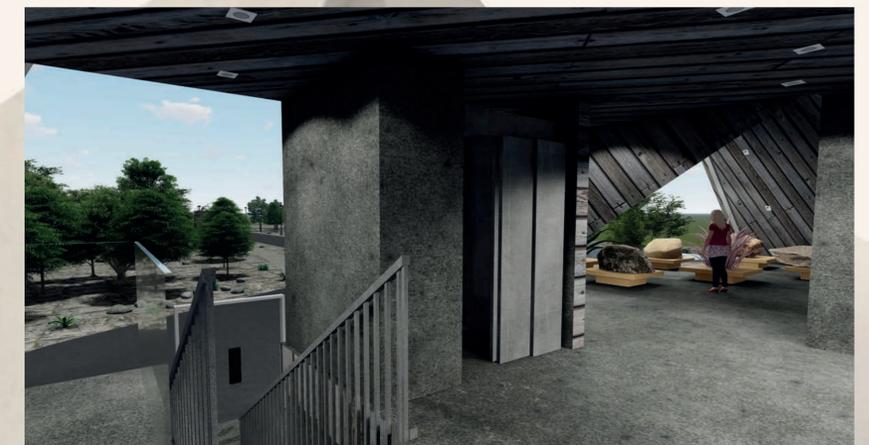


Scale 1:50

Roof Plan

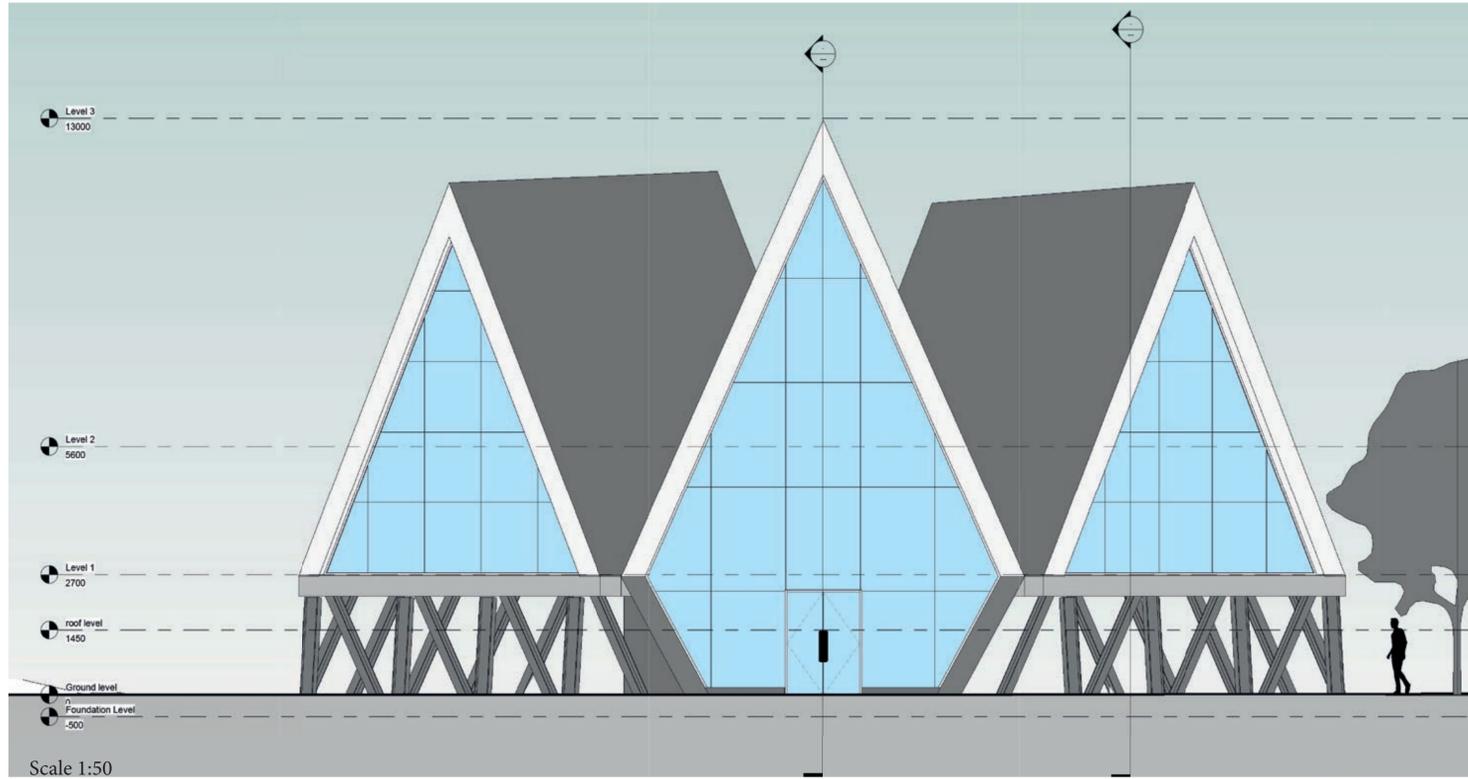


External and Internal rendered Views

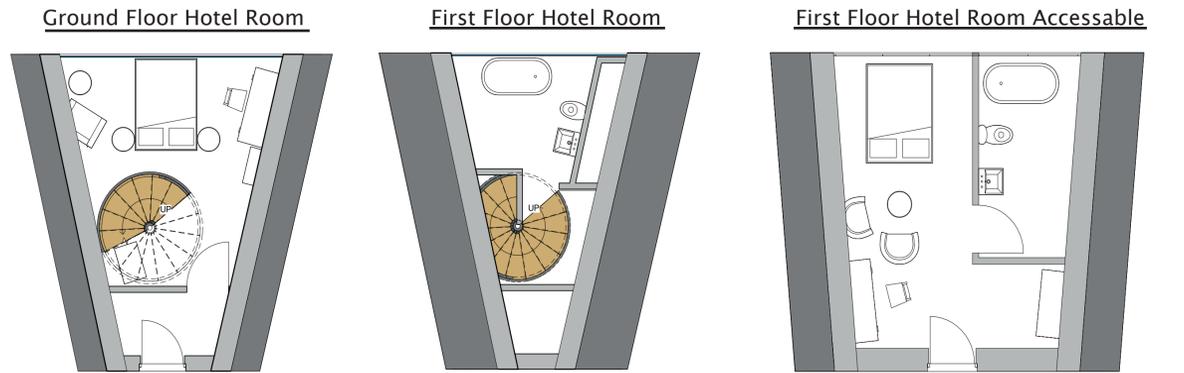


Elevations and Sections

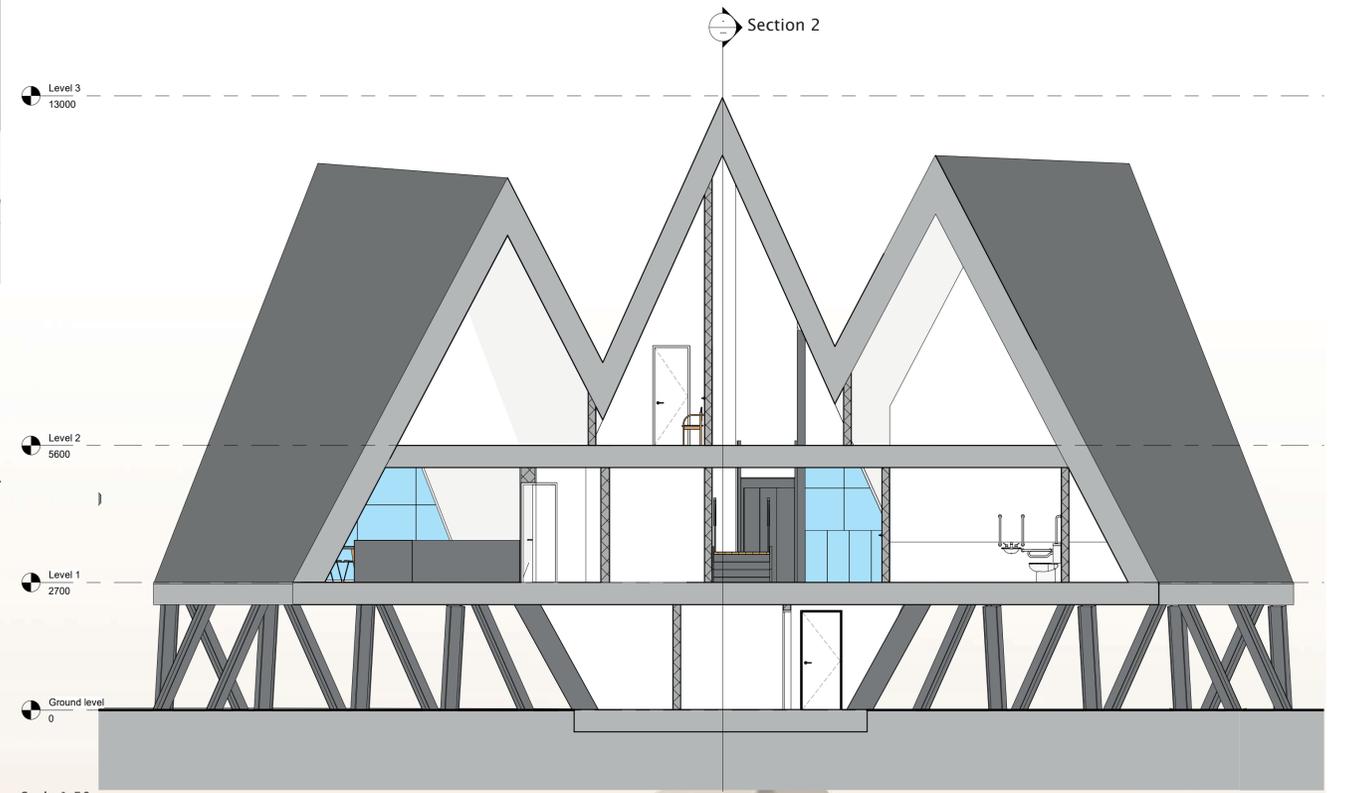
Front View Elevation 1



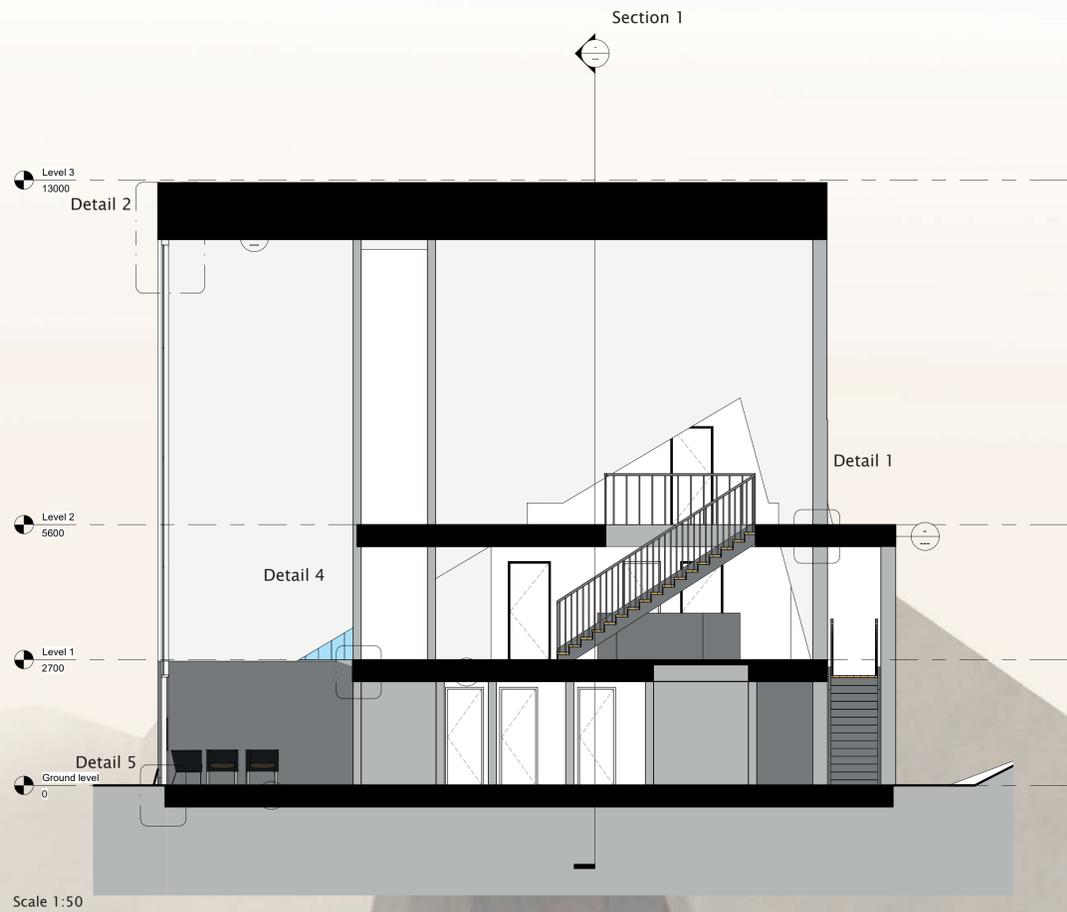
Hotel Room Floor Plans



Section 1



Section 2



The main internal structure and the building is held together with large steel beams protruding from underneath the first floor. These steel beams are held up on a man concrete raft foundation with pads located beneath the separate beams. The First and second floor will be beam and block flooring to reduce the amount of concrete used on site. The external cladding will be treated timber as it is a sustainable material and gives the hotel the right rustic look.

Right Side View Elevation 2

