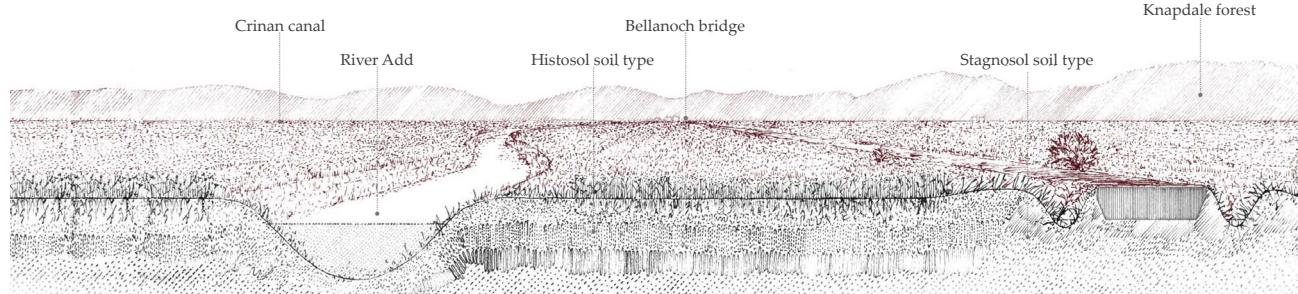




Aerial view of scheme

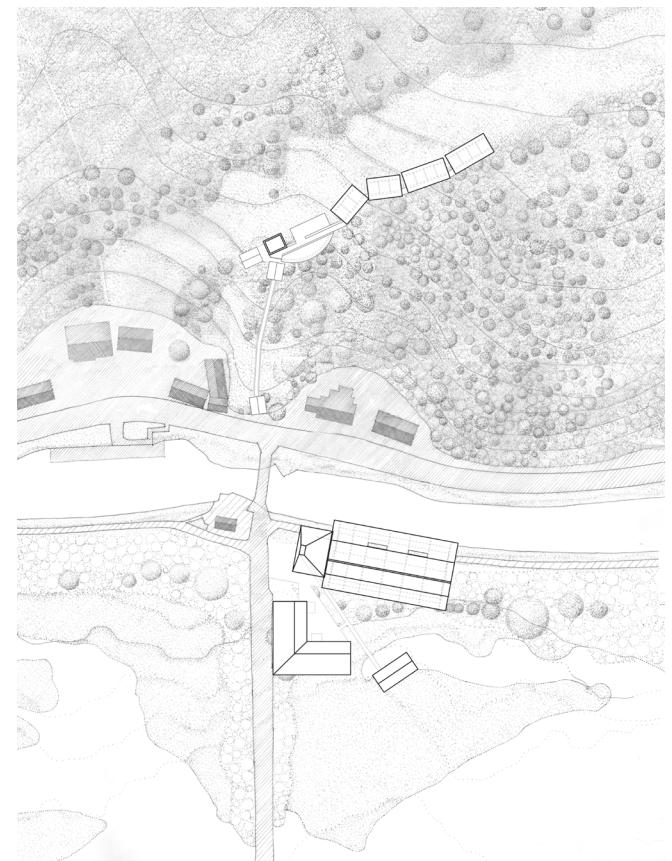


Ecological analysis of site section



Site and scheme

This project intends to create a symbiosis between people, landscape and building, through exploring how a building can promote healthy landscapes as well as healthy people, drawing on Modernist sanatoriums and various examples of preventive health centre typologies. Based in western Scotland, the scheme is spread between an ancient oak woodland and a peat bog habitat, informing a construction approach based on natural materials which embody the context, maximise user comfort and create varying atmospheres.



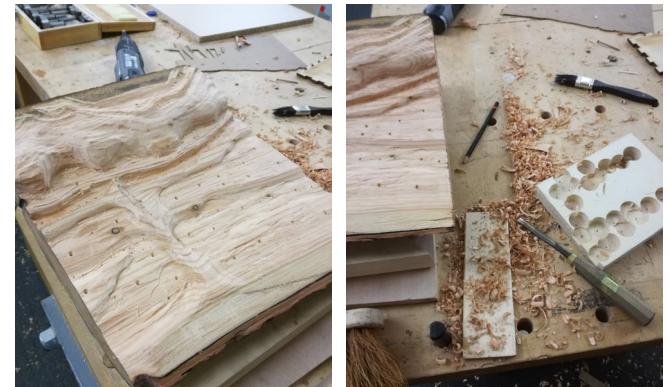
Roof plan showing lower building on peatland and upper building in woodland



400 x 450mm hand-carved larch model @ 1:1250



Cardboard, wood and clay sketch models



Site model and sketch models

The site's two habitats are separated by a crossroads of existing infrastructure: a canal, a road, and several cottages. The scheme's fragmented massing is like an expansion of the existing village, with different functions placed towards particular frontages. The chosen architectural language is evolved from the local style of white rendered brick and slate roofs: the thick wall and pitched roof elements have been reduced and pushed, creating a series of enclosed rooms surrounded by light and open spaces.

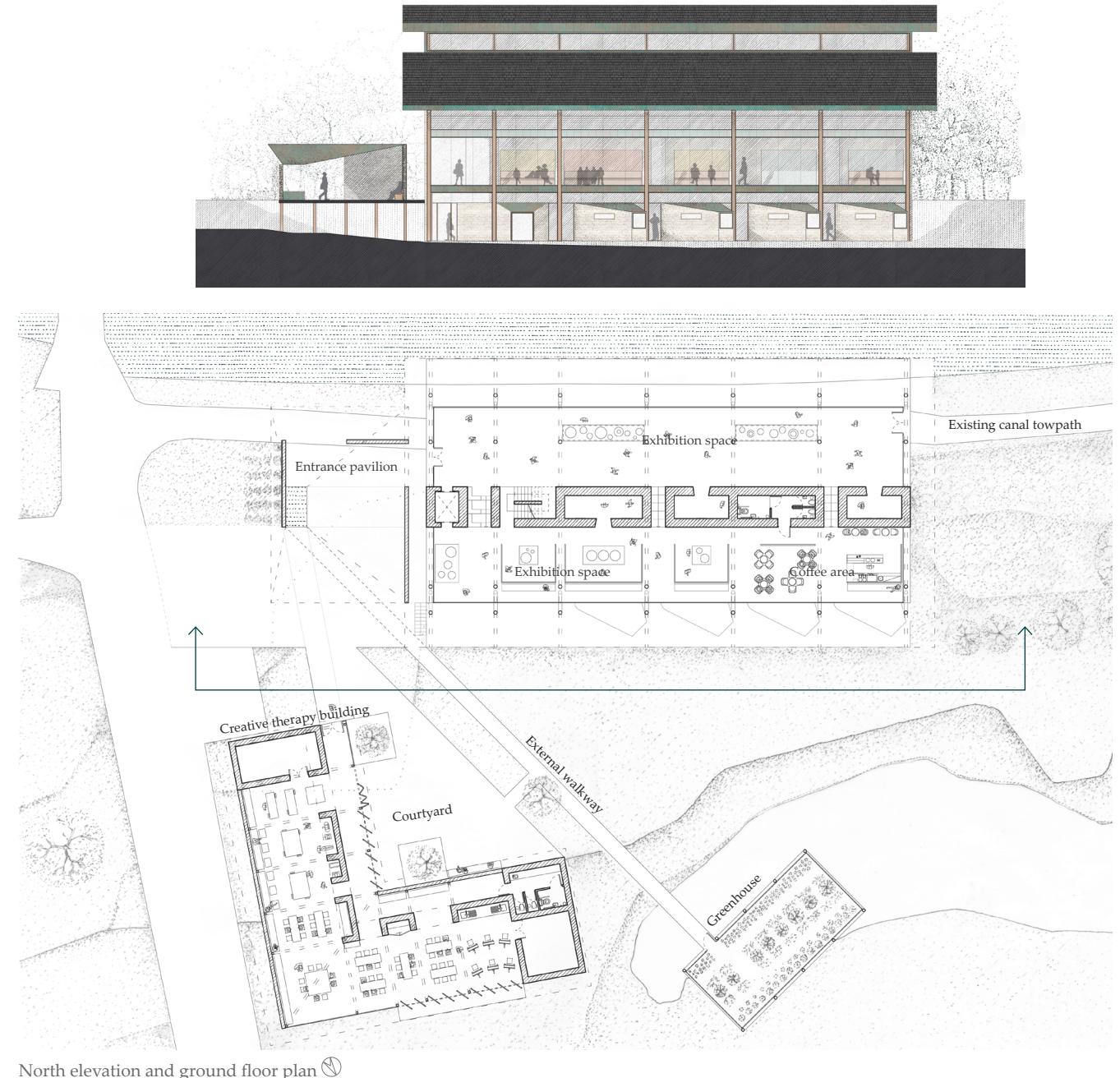


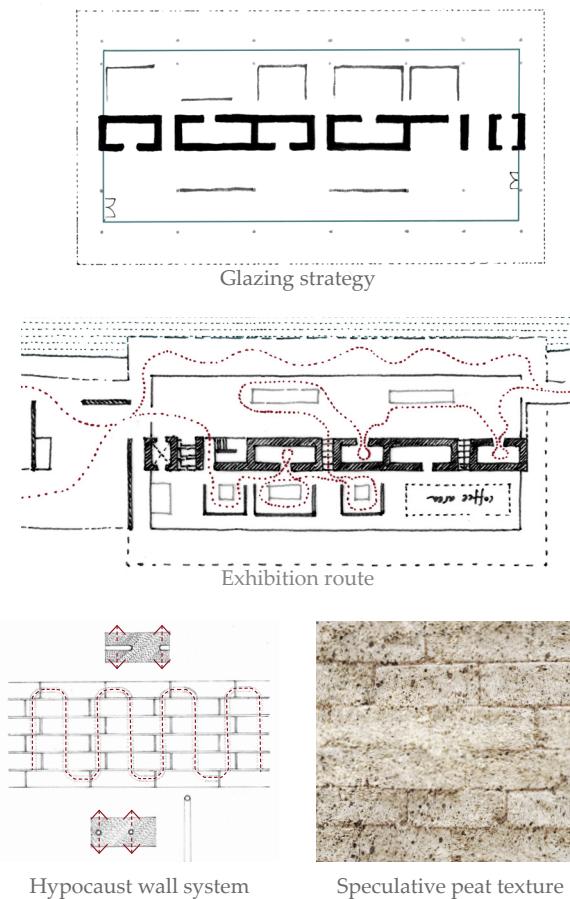


Exhibition space interior and view from external walkway

Peatland site

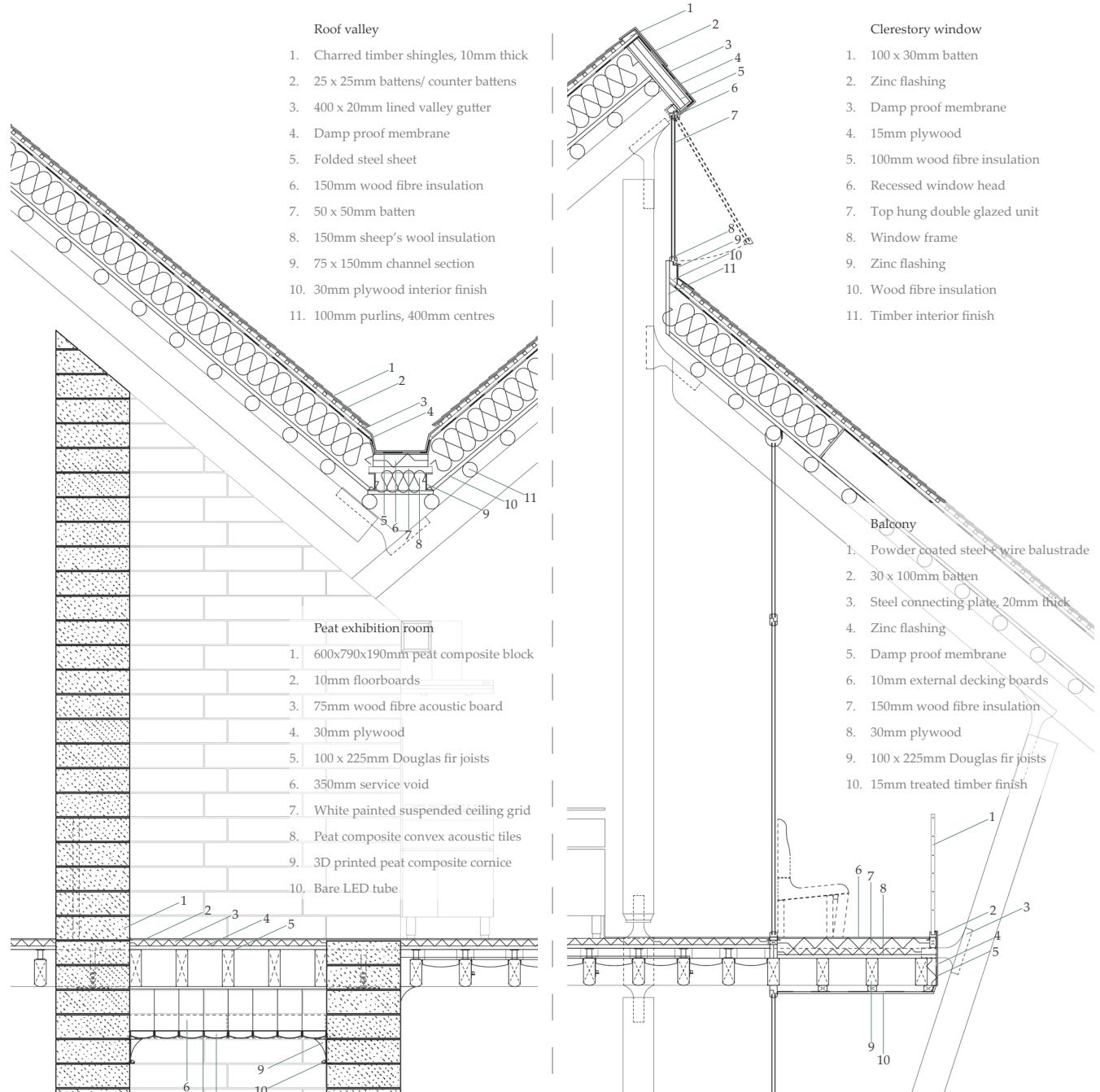
The scheme is defined by a thick masonry spine which contains services, circulation and intimate spaces, with the main rooms built alongside in timber frame. The building on the lower peatland site contains facilities for creative therapies with views over the peatland, and an exhibition building showcasing the objects created in the adjacent therapy building. Offset pitched roofs with clerestory windows are used in both buildings, creating moving bars of light that give a sense of time while also facilitating ventilation. Overhangs control daylighting and solar gains as well as offering protection from rain.





Development of exhibition space

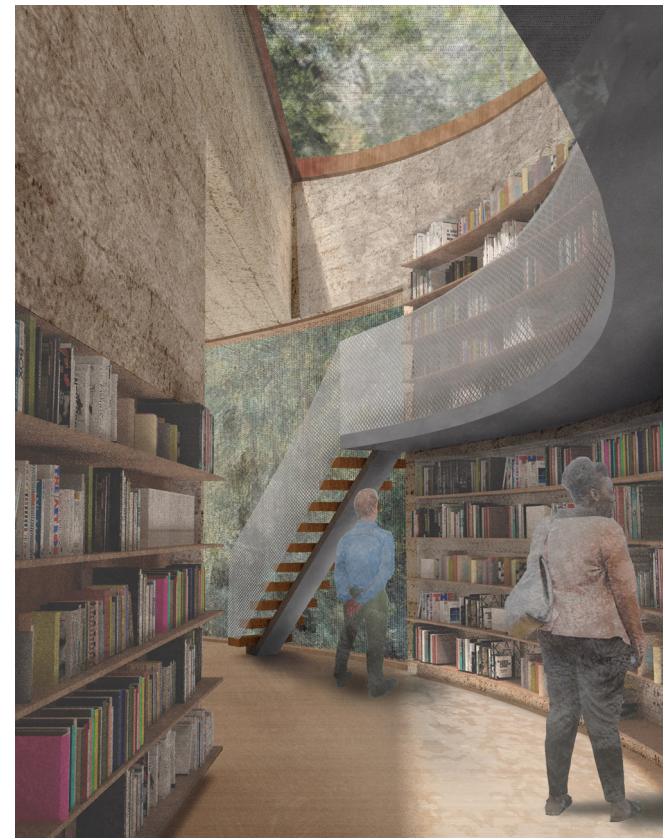
The exhibition building is fully glazed with objects on display placed in bays where lighting can be controlled better. The exhibition inhabits the towpath through visual connection to the canal and varying routes that act as an extension to the existing path. The masonry spine running throughout the scheme is constructed using an innovative peat composite material with excellent thermal performance, breathing construction and carbon capture properties. This peat is borrowed and will return to the land once the building is obsolete. The peat is textural and creates a comforting atmosphere.



Detailed section through exhibition hall showing interaction between peat masonry and timber frame. Drawing originally 1:20 @ A1.



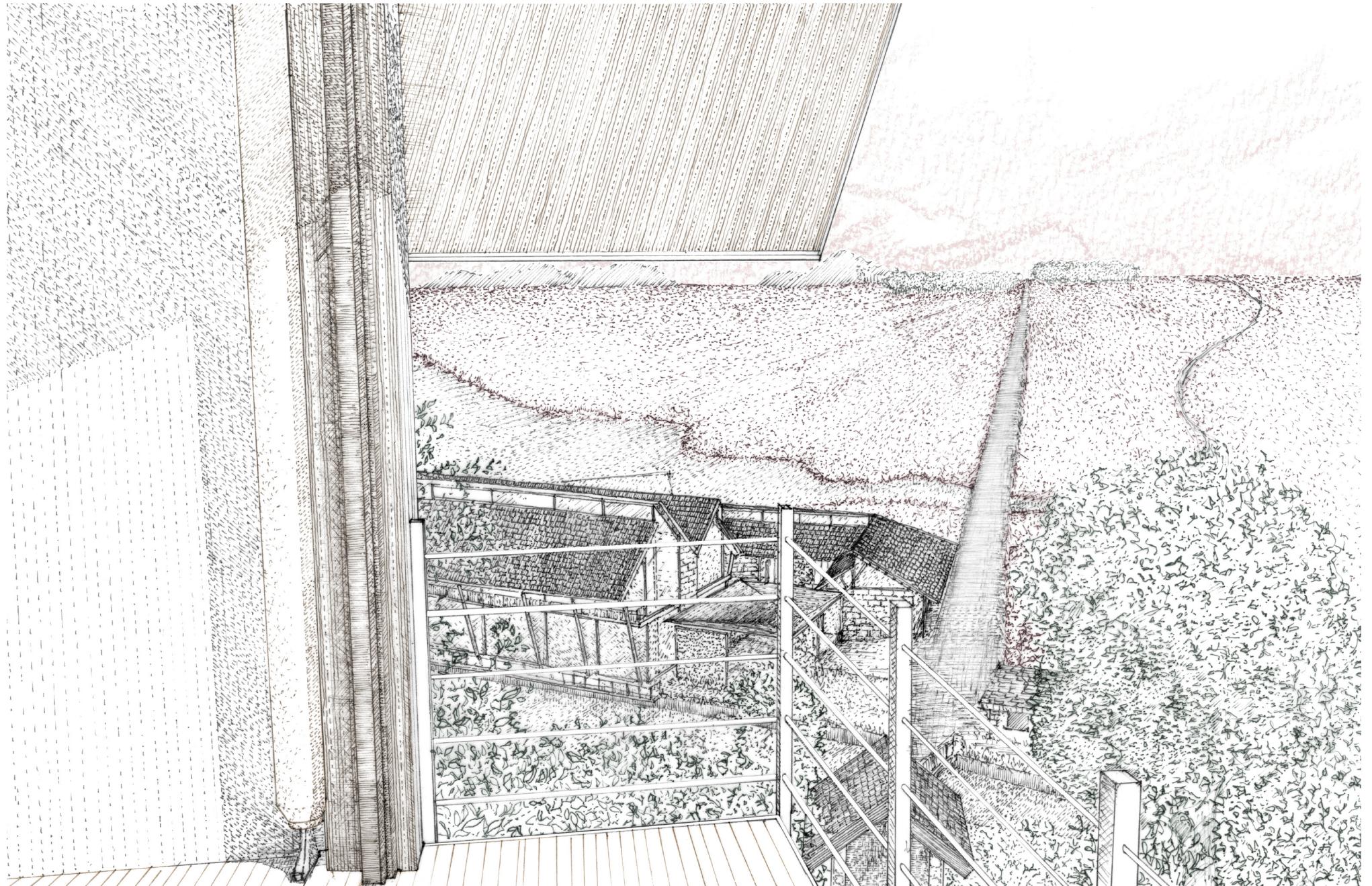
South elevation and ground floor plan Ⓛ



Library interior

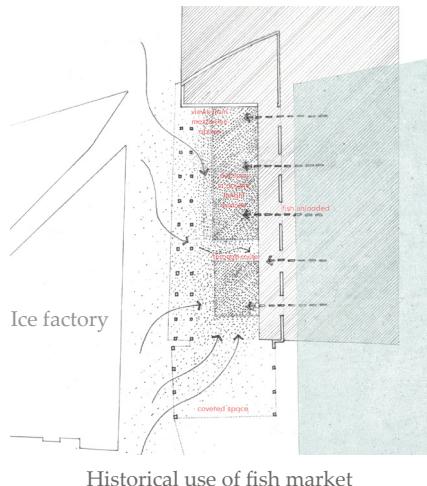
Woodland site

The two sites are connected by a funicular railway culminating in a teahouse with views back over the peatland. The rest of the woodland building contains accommodation and a quiet community library. Its linear geometry is informed by the existing clearing while the curved form of the opposite facade avoids the need to remove any of the site's oak trees. Peat construction and frame elements are used throughout, with peat being most prominent on the lower levels. The bedrooms on the levels above are timber framed, built along a peat wall that runs along the varying topography as a constant intermediate between the frame elements and the ground.



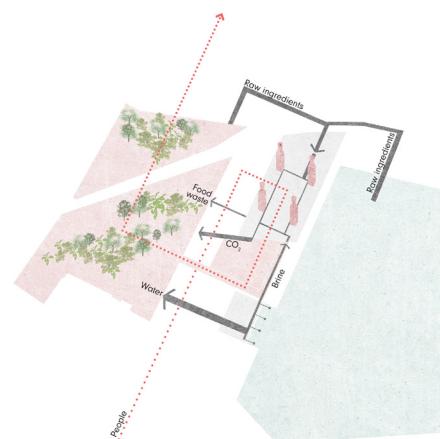
View from teahouse balcony

**Smokehouse, Grimsby | Studio project, Y5 MArch
2019**

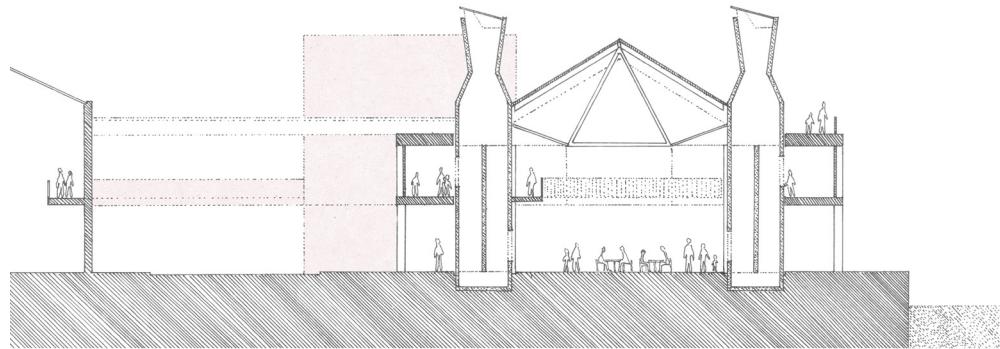


Ice factory

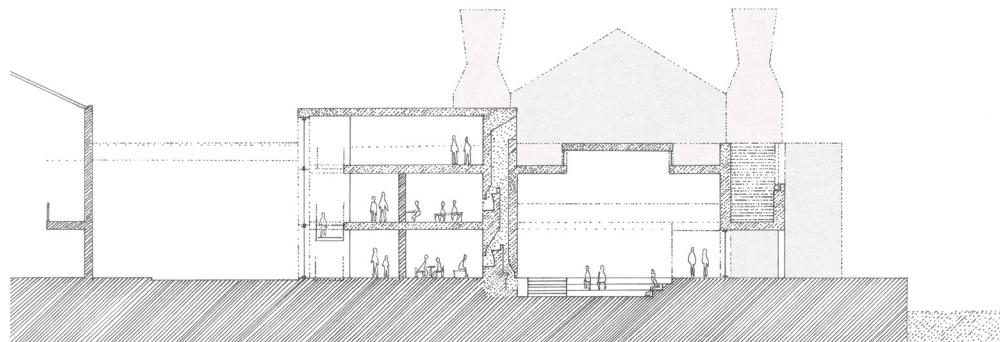
Historical use of fish market



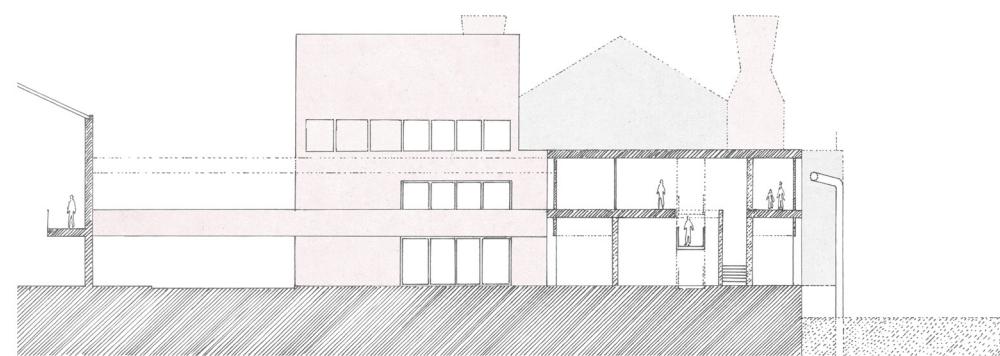
Conversion to smokehouse + winter garden



Section through smokehouse / food hall

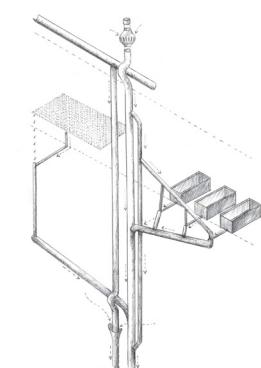


Section through coffeehouse

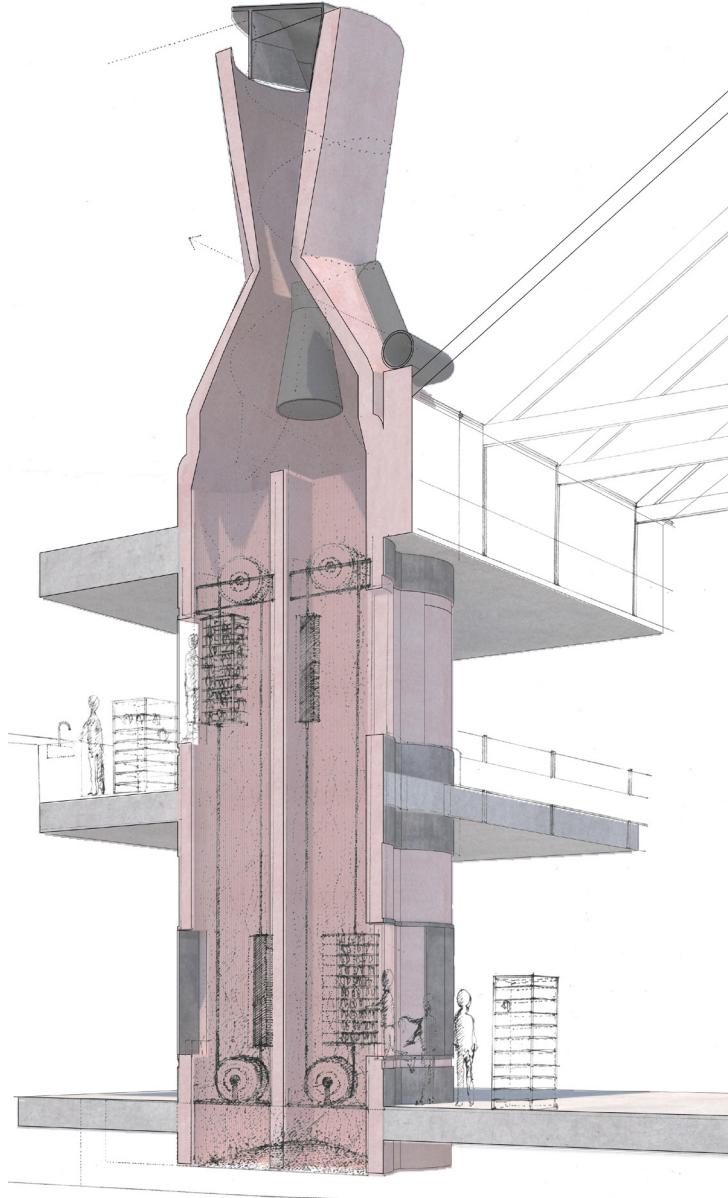


Section through brine refinery

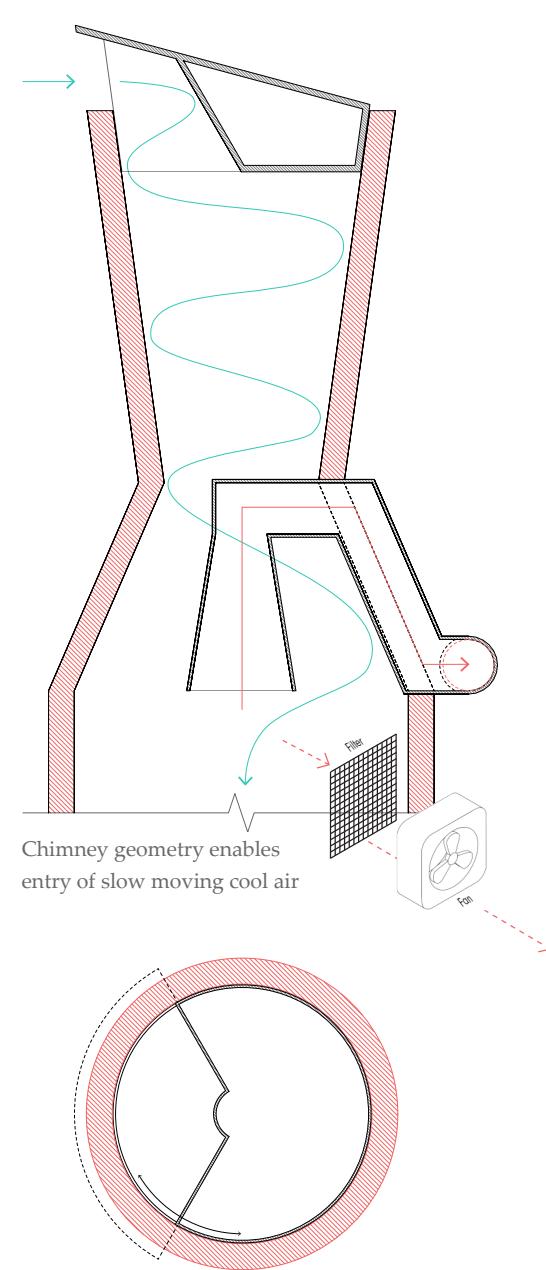
Grimsby Smokehouse addresses local issues of under-representation and lack of social interaction through communal eating and celebration of Grimsby's traditional food-smoking. The programme consists of a smokehouse, which inhabits an abandoned fish market, and a coffeehouse, a new volume evolved from historical coffeehouses - which were places for discussion and progress. The plan is constructed by placement of chimneys (either smoke cores or hearths), around which food stalls, work areas and gathering places are arranged. Across the street, Grimsby's derelict ice factory is transformed into a winter garden, which resolves by-products of the smoking process and produces raw ingredients and fuel.



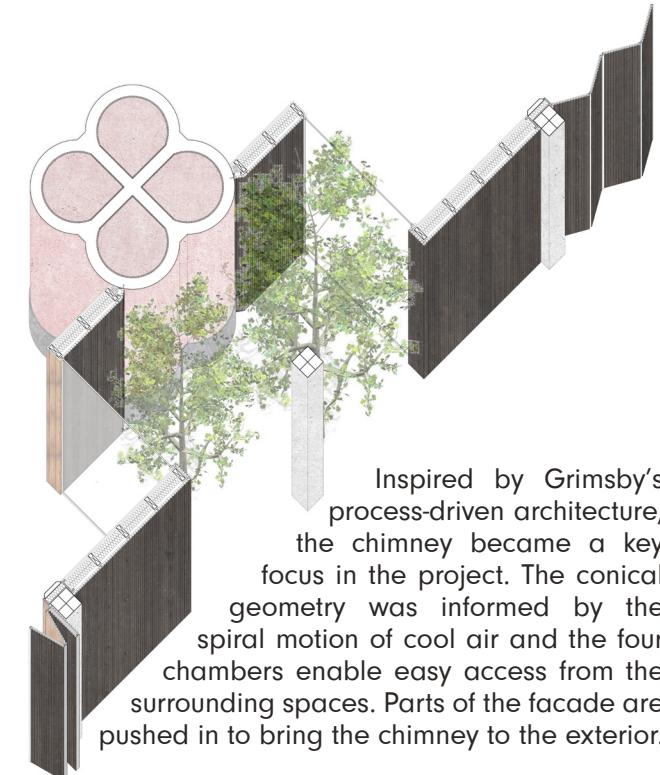
Grimsby's process-driven architecture



Section through smokehouse chimney



Rotateable chimney top to catch wind



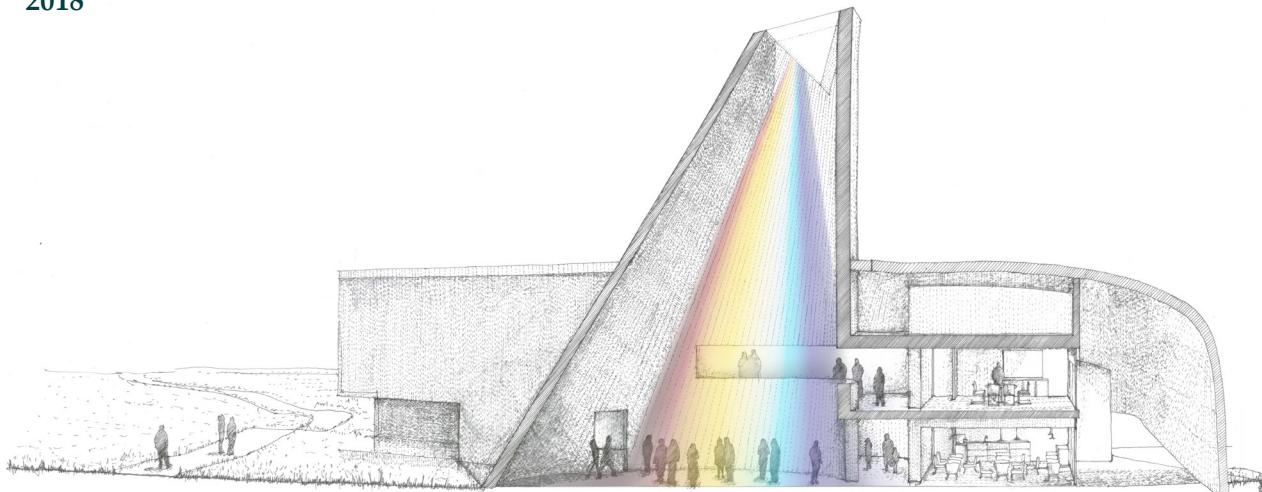
Inspired by Grimsby's process-driven architecture, the chimney became a key focus in the project. The conical geometry was informed by the spiral motion of cool air and the four chambers enable easy access from the surrounding spaces. Parts of the facade are pushed in to bring the chimney to the exterior.

Interaction between chimney and facade

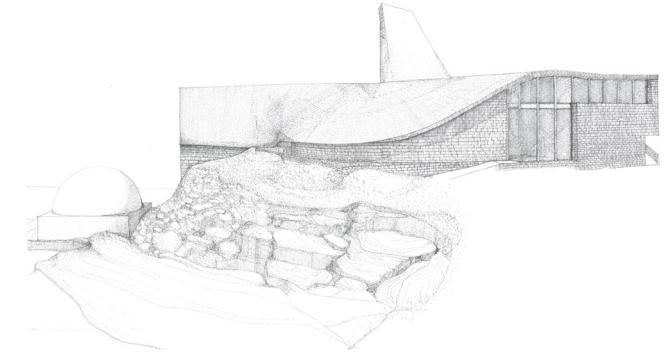


1:500 concrete site model

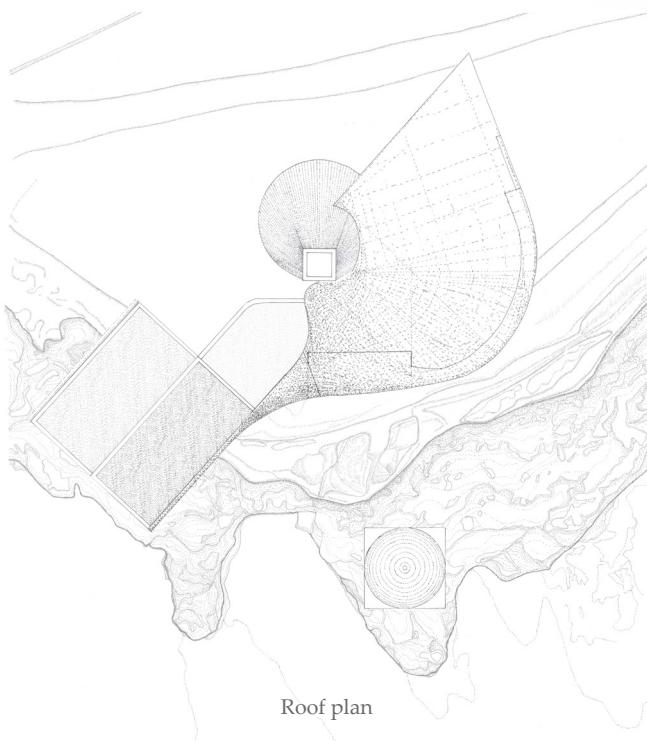
**Solarscape, Isle of Portland | Final project, Y4 BSc
2018**



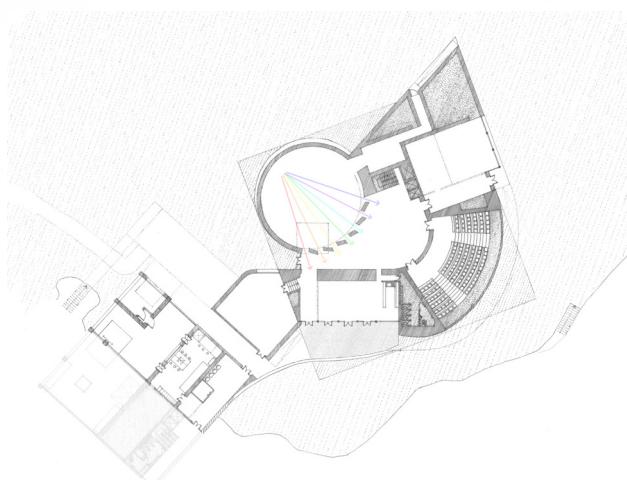
Section through prism tower



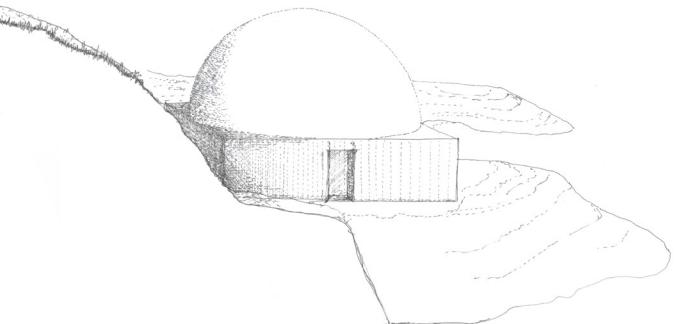
Exterior view looking west



Roof plan



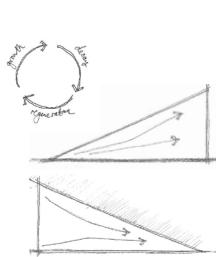
Ground floor plan



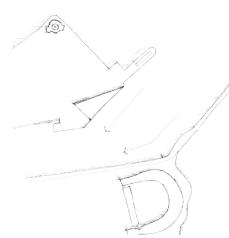
Solarscape is a solar-powered solar power research facility, open to the public, where photovoltaic technologies are developed, tested and manufactured. It is a celebration of the theme of mathematics and its role in the celestial order. In many ways, it is a temple to the sun, using an interplay of rigorous geometry and poche space to organise the plan, and featuring a prism to light the foyer to create a unique entrance atmosphere. The different volumes are linked by a lightweight, sculptural roof designed in response to the solar conditions of the site.

Museum of social anthropology, Weymouth | Basil Spence group project, Y4 BSc

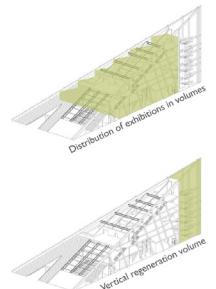
2017



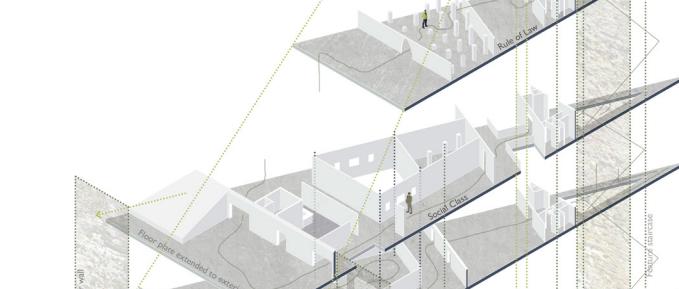
Form evolved from "growth, decay, regeneration" concept



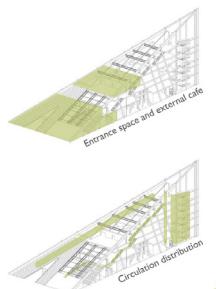
Building proposed as marker to existing harbour entrance



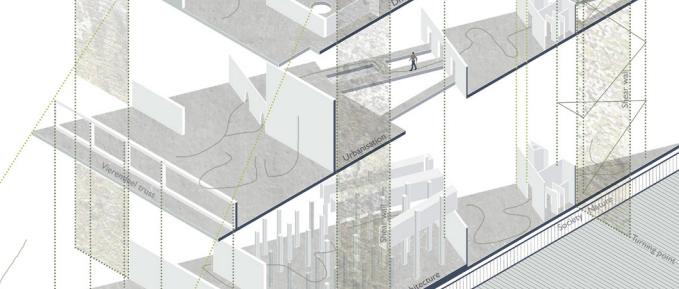
Distribution of exhibitions in volumes



Vertical regeneration volume

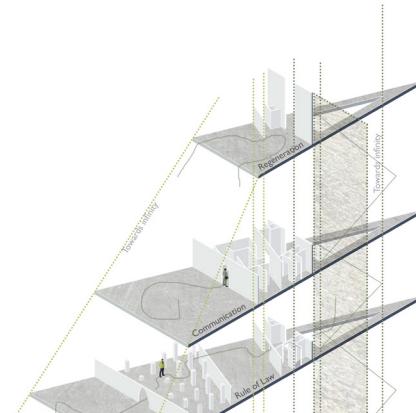


Circulation distribution



Vernacular cross

Exploded isometric showing circulation and primary structure



Stepped roof

Translucent PLY panels

Entrance



Floor plate extended to exterior



Shell wall



Division of labour



Social Class



Urbanisation



Sea level rise



Monumental Architecture



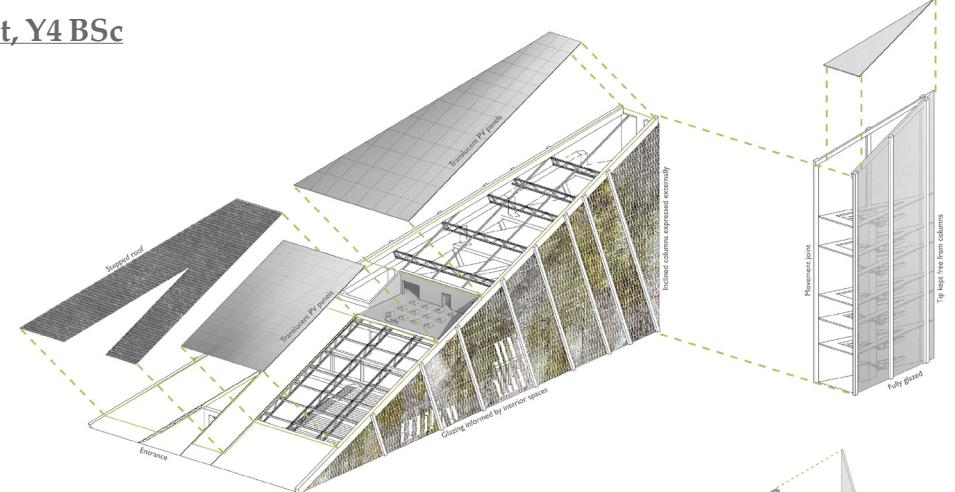
Site context



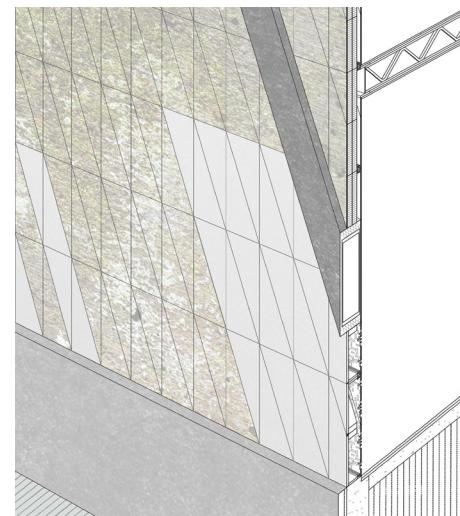
Vernacular



Recycling point



Interaction between primary structure and biological concrete cladding panels



Detailed section through inclined column and surrounding envelope

This project is a proposal for a museum of social anthropology located in the coastal town of Weymouth, designed in response to a brief that asked for a demountable exhibition pavilion showcasing the act of making. My team and I identified making as a continuous process of growth, decay and regeneration, which informed the building's bold form, and we chose to interpret the theme of making in terms of different aspects of anthropology. My role focused on construction details including the structural strategy and devising a demountable cladding system of biological concrete panels.