

HookePark

Visitor Guide

CONTENT

4	CAMPUS MAP
5	BIG SHED ASSEMBLY WORKSHOP
6	TIMBER SEASONING SHELTER
7	NORTH LODGE
8	SOUTH LODGE
9	CARETAKER'S HOUSE
10	WAKEFORD HALL LIBRARY SKELETON
11	REFECTORY / PROTOTYPE HOUSE
12	BIOMASS BOILER HOUSE
13	WORKSHOP
14	WESTMINSTER LODGE
15	DARKROOM
16	WOODLAND CABIN
17	FIELD STATION
18	THE SAWMILL SHELTER

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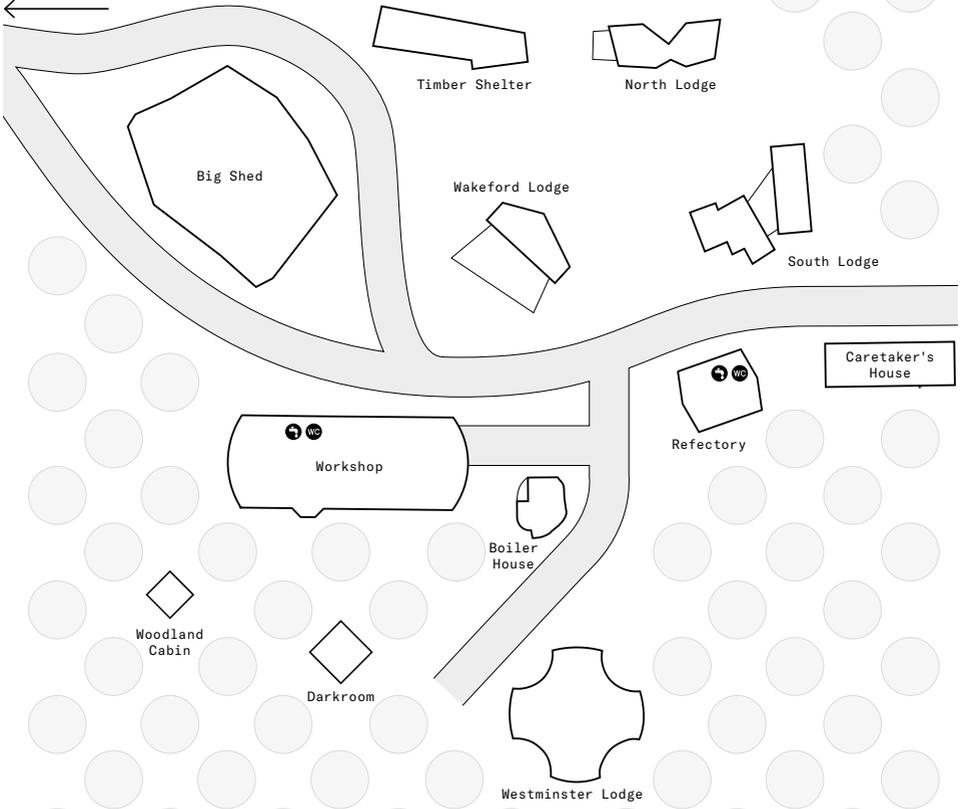
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Hooke Park is a woodland laboratory where physical and speculative work collide. Owned by the Architectural Association (AA) School of Architecture, this 150-hectare working forest contains a growing educational facility for design, construction and landscape-focused activities. Hooke Park operates at the intersection of craft knowledge, technological innovation and natural material. Underlying this work is the drive to develop new rural architectures and an ethic of material self-sufficiency.

Hooke Park is used year-round by the AA as the main site of the taught postgraduate Design and Make programme (MArch/MSc), for visits by the AA's London-based teaching units, and for short courses and residential workshops as part of the AA Visiting School. Hooke Park is also part of the wider cultural community of west Dorset through its public programme of lectures and open days.

Today, the campus represents a 40-year history of experimental timber architecture. Under the previous ownership of the Parnham Trust, three remarkable demonstrations of roundwood construction were built: the Prototype House (1986), the Workshop (1990) and Westminster Lodge (1996), which still offer a valuable legacy and point of reference for today's students. Following the transition of ownership to the AA in 2002, the campus at Hooke Park continues to develop, with new buildings designed and built by students of the AA's Design and Make programme.

Sawmill Shelter,
Wood Chip Barn





The Assembly Workshop was designed by students on the AA Design and Make postgraduate programme and from AA Diploma Unit 19, with support from engineers Atelier One and architects Mitchell Taylor Workshop. It provides a large, enclosed workspace for fabrication, assembly and prototyping activities. The building is constructed from larch sourced from Hooke Park and local woodlands, and uses innovative screw connections to form its roundwood trusses.

Technical Details

The building structure pioneered the use of high-capacity screwed connections within large roundwood trusses. Developed through an experimental testing collaboration with the University of Bath, this approach allows trees to be used in complex structures without the need for major engineering processing. The trusses were fabricated by a team of AA Design and Make students and volunteers participating in the AA Visiting School's Summer Build programme at Hooke Park, who worked alongside experienced timber framers. Un-regularised larch roundwood was used for the primary structure - chosen for its durability and availability, due to recent surgical felling to prevent the spread of phytophthora in southwest England. The wall panels are clad using western red cedar planking, sawn from approximately 30 trees felled at Hooke Park.

TIMBER SEASONING SHELTER [2014]



The Timber Seasoning Shelter provides a canopy for air-drying timber felled from the surrounding woodland for future student-designed buildings on site. Built from Hooke Park's beech trees, the project was created by AA Design and Make students to test the innovative use of steam-bent timber elements in a reciprocal grid structure. The canopy is constructed from steam-bent beech lamellas.

Technical Details

Students began by investigating the potential for forestry activities at Hooke Park to provide construction material. The annual thinning of beech trees here creates large volumes of timber with value only as firewood, despite the fact that beech is one of the strongest and hardest tree species grown in England. Referencing this timber's traditional use in steam-bent furniture, the students designed an adjustable pneumatic steam-bending jig to bend relatively short beech planks into unique shapes within the shelter's hexagonal reciprocal structure. The University of Bath's engineering department carried out mechanical testing on the timber to determine how the act of steam bending affects the structural behaviour of the wood. Beech timber is strong but rarely used in construction due to concerns over its durability. Here, it is treated with boron, an inert deterrent to fungal and insect attack, and is protected from rain but exposed visually to allow ongoing inspection of the material.

NORTH LODGE [2013]



North Lodge was designed and built by AA Design and Make students to provide additional accommodation on site. Located at the northern corner of the main clearing within the Hooke Park masterplan, the Lodge aims to provide both privacy and a strong visual connection to the surrounding landscape.

Technical Details

The building has a primary structural frame of spruce sourced from Hooke Park that was fabricated and assembled using traditional pegged timber-framing techniques. The envelope is insulated with blown-in wood fibre and heated by the campus's woodchip-fuelled heating system. The cladding is of blacked timber slats.

SOUTH LODGE [2014]



South Lodge is a two-bedroom accommodation building with a shared kitchen and social space. The project, which was designed and built by AA Design and Make students, has a timber frame clad in western red cedar and reclaimed glass. As well as using timber harvested from the Hooke Park woodland, a high proportion of the building is constructed from reclaimed and recycled materials.

Technical Details

The design of South Lodge is the result of two key processes: full-scale prototyping and the use of reclaimed materials. Full-scale prototypes allowed the project team to inhabit their design intentions and to understand the outcome and consequences of their drawings. The team also gathered reused, recycled and reclaimed materials locally, developing ties with the local community. Aluminium, galvanised steel, double and triple glazing, slates, floorboards and other unique items were all inventoried to assess their usage possibilities. These materials were used within wall cladding systems, windows, structural members and in furniture.

CARETAKER'S HOUSE [2012]



The Caretaker's House at Hooke Park is based on a schematic design by students of the AA's Intermediate Unit 2 in 2009-10, which was later developed for construction by Invisible Studio. It is a prototypical low-cost exemplar building constructed from timber grown and felled on site, used in its 'green' state, and is the first green timber building in the world to achieve Passivhaus standards for insulation and airtightness. The building is home to the Caretaker and his family.

Technical Details

The building uses unseasoned larch, cedar, poplar, Douglas fir and spruce in its construction, as well as using wood for heating and insulation. A key element of the building is the 'heavy' north wall which provides privacy and insulation, while the structure is very open to the south with a large, inhabited veranda that acts as an extension to the living space. The roof form is generated by the need to allow sunlight into the master bedroom at one end of the building and to create a living space with a clear view over the campus at the other. Joinery for the building was manufactured on site; the kitchen features timber worktops and the stairs use an innovative dry joint system that gains strength as the timber dries.



Wakeford Hall is a multi-layered project at the heart of the Hooke Park campus. In 2017, AA Design and Make students produced its first component, the structural frame for the Library. Developed iteratively through drawing, modelling and prototyping, the Library skeleton acts as a scaffold upon which a bespoke inhabitable skin has been grafted.

Technical Details

Wakeford Hall Library skeleton investigates how industrial timber lamination processes might be applied within Hooke Park's ongoing built research. Innovative methodologies were developed to produce its interlocking glue-laminated timber frames; these were sculpted using a hijacked bandsaw reinvented as a robotic end-effector. This tooling allowed room-sized planar components to be brought together three-dimensionally at complex angles, cultivating a language for wood construction that does not defer to the tectonic conventions of steel or concrete structures. Marks of both the processes and tools that produced the Library skeleton remain present in its finished structure.



Now used as the campus Refectory, the Prototype House was the first building to be realised at Hooke Park under the stewardship of John Makepeace and the Parnham Trust in the 1980s. Designed by Ahrends, Burton and Koralek (ABK), Frei Otto and Buro Happold, it was initially designed as accommodation for the School for New Woodland Industries that Makepeace established at Hooke Park. The building is supported by a series of four Corsican pine roundwood A-frames, holding up a ridge cable from which slim roundwood rafters made from Norway spruce thinnings are hung.

Technical Details

From its frame to its cladding, the Prototype House is built of fresh 'green' Norway spruce, Corsican pine and western red cedar harvested from the Hooke Park forest and processed on-site - most of which would otherwise have been pulped or burned. The building is the result of a pioneering research programme undertaken by Buro Happold and the University of Bath, which resulted in new jointing technologies being developed to harness the significant strength of small-diameter roundwood in tension.



The Biomass Boiler House was designed by AA Design and Make students. The building contains the biomass boiler, chip-store and buffer tank for the district heating system that now provides heat energy to the entire Hooke Park campus. Naturally curved Douglas fir tree trunks were each 3D-scanned to form a database of geometries from which a smoothly flowing sinuous curved wall was composed from stacking timbers.

Technical Details

The design intent was for the building to read as a continuation of the topological contours of Hooke Park. To achieve this, around 250 curved trees at Hooke Park were scanned to determine the optimum position of each log in the Boiler House wall, creating smooth continuous curvatures. These form part of an architectural landscape strategy and also contribute to the structural stability of the wall. The building is nested into an existing slope on site, allowing woodchip to be delivered through a hatch at roof level.



Designed by Ahrends, Burton and Koralek (ABK) and Frei Otto with engineers Buro Happold, the Workshop uses Norway spruce thinnings to form a vaulted roof from a series of compression arches. The result is a remarkable long-span enclosure built using low-value roundwood harvested from the surrounding forest. Two of the three bays of the structure accommodate a fully equipped timber workshop while the third contains studio space, a mezzanine office and a small library.

Technical Details

The 600m² Workshop building consists of three timber shells covered in an insulated double-skin PVC membrane. The arches that form each bay each comprise two Norway spruce thinnings 100-150mm diameter, bent into shape in situ while still green and joined at the top by a laminated timber crown member. A longitudinal rooflight of Makrolon panels runs along the spine of the building, with a tubing-based ventilation system aided by low-level soffit window panels along the lower edges. The Workshop's foundations and slab are of reinforced concrete, which incorporates underfloor heating.

WESTMINSTER LODGE [1996]



Designed by Edward Cullinan Architects with engineers Buro Happold, the Lodge provides eight student bedrooms around a central communal space. A timber lattice of spruce thinnings carries a planted turf roof. The building was conceived as the first in a series of five accommodation buildings, each serving a different social purpose. The roof is formed of a bent greenwood lattice grid with novel timber joints designed by Buro Happold and was developed and tested at the University of Bath with funding from a Department of the Environment (DoE) research grant. This supports a turf roof.

DARKROOM [2018]



This fully enclosed Darkroom was developed by AA Design and Make students. Sited between the Workshop and the enveloping fabric of the forest, this small building is a meditation on the act of imagemaking. Students began their work from an inherited primary structure: a full-scale laminated timber model of Le Corbusier's Dom-Ino House (1914-15) commissioned by the AA for the 2014 Venice Biennale and subsequently donated to Hooke Park. Within a condensed timeframe, a large oversailing roof plane was constructed to offer protection for work on-site while the design of an insert was resolved.

WOODLAND CABIN [2018]



The Cabin is a small structure which explores how demountability and reversible joinery can be used to harness the inherent properties of timber. Its primary structure touches down on a series of concrete pads already present on the site; for the building itself, AA Design and Make students employed novel techniques in roundwood carpentry and robotic fabrication to articulate a series of timber-to-timber connections that fit digitally fabricated joints with those made by hand. Four openings in the envelope orient the building to its site, providing a dynamic point of entry and a layered arrangement of views that expand the internal space into external vistas of landscape and sky.



This structure activates areas deeper in the forest and serves as a focal point for field research, outdoor teaching and community engagement. Created by AA Design and Make students, the structure was developed using robotics, 3D scanning and CNC. The design features very small diameter beechwood crown timbers used in their original form, which would otherwise be left as waste on the forest floor. All the parts of the building were flat-packed and delivered to its woodland site off Hooke Park's lower track for rapid assembly. The project received a 2023 Wood Award for Research and Innovation.

THE SAWMILL SHELTER [2017]



AA Design and Make students developed the Sawmill Shelter roof canopy to test an experimental structural system on a small scale. The project investigates the limits of timber in tension, by fabricating a light-weight anticlastic timber net of 38x38mm timber laths which spans almost 11 metres. Each lath carries up to two tonnes of tension, demonstrating the remarkable strength of wood in this context. The Sawmill Shelter was shortlisted for the 2017 Wood Awards.

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