

Bumpers Oast

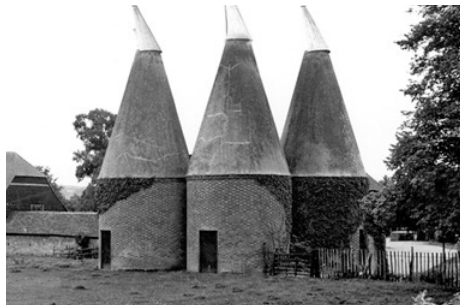


acme

The traditional oast house form has been reimagined by ACME to create a new home within the rolling landscape and apple orchards of Kent.

Bumpers Oast is a 21st century house closely based on the local vernacular houses used to dry hops as part of the beer-brewing process. Five shingle-clad towers rise up a former apple orchard, creating an extremely low-energy contemporary home.

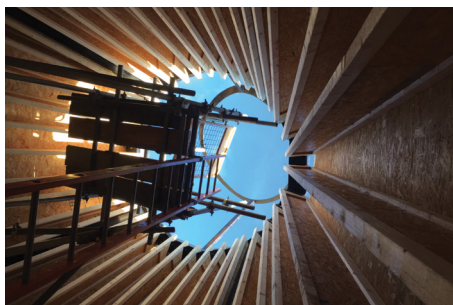
Bumpers Oast



Historic Kentish oast houses



Assembly of ground floor timber frame



Construction of central cone



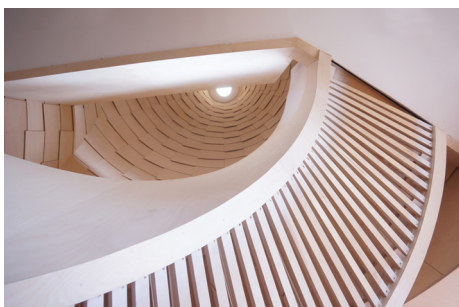
Clay tile façade assembly



View through roof cones



Roof apex



Birch ply shingle lining

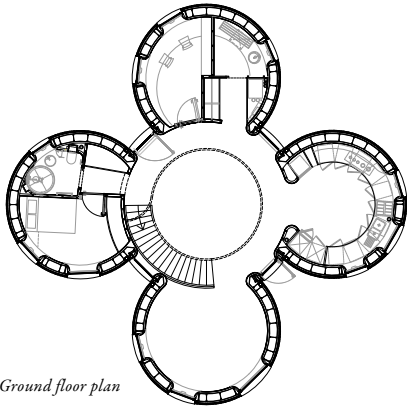
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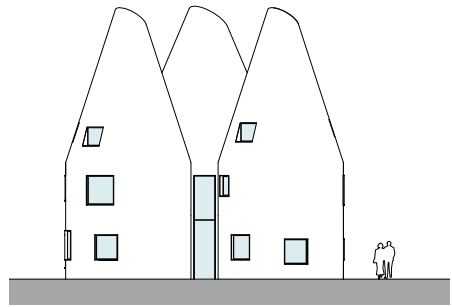


The property has been created for a family that moved to Kent ten years ago and fell in love with the intimacy and idiosyncrasies of living in circular spaces over time.

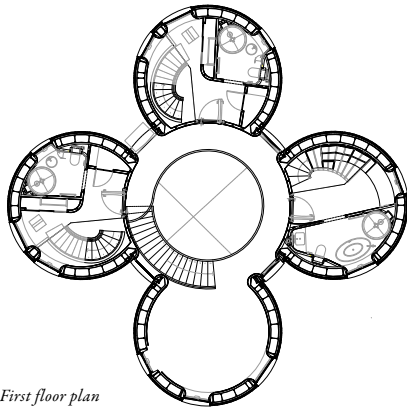
The proportions of the tower roundels were based on traditional oast geometries, but stand slightly apart from one another; creating views inwards and outwards. Each of the oasts house the more private functions of a home such as bedrooms and bathrooms. The towers between them form a triple-height central space that opens out to the orchard and forms the heart of the house.



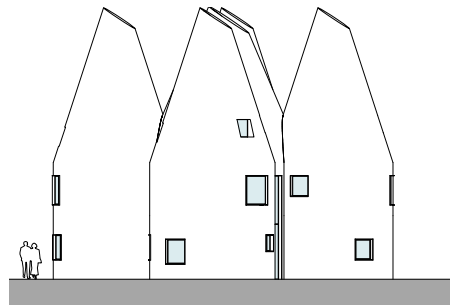
Ground floor plan



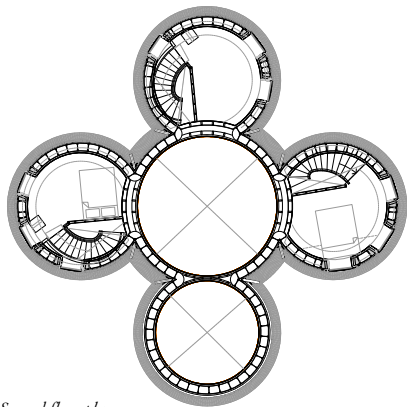
North East Elevation



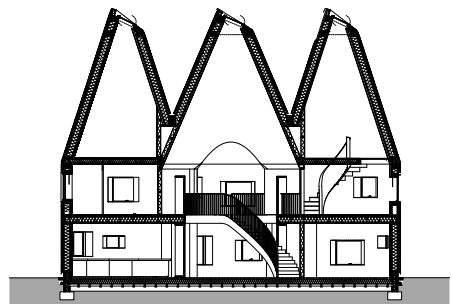
First floor plan



North Elevation



Second floor plan



Section AA





Traditional oast houses are brick turrets with shingle-clad timber roof cones. In order to create a very low energy house, it was decided to construct the entire building as a highly-insulated timber structure.



Existing terracotta tones



Terra Brown (RAL 8028)
5%
30m²



Signal Brown (RAL 8002)
5%
30m²



Beige Brown (RAL 8024)
15%
90m²

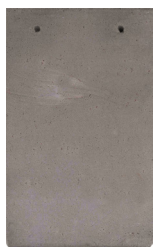


Pale Brown (RAL 8025)
15%
90m²

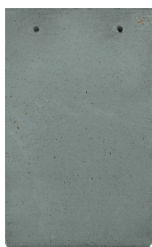
RAL coloured tiles



Iron Grey (RAL 7011)
15%
90m²



Platinum Grey (RAL 7036)
15%
90m²



Mouse Grey (RAL 7005)
15%
90m²



Agate Grey (RAL 7038)
15%
90m²



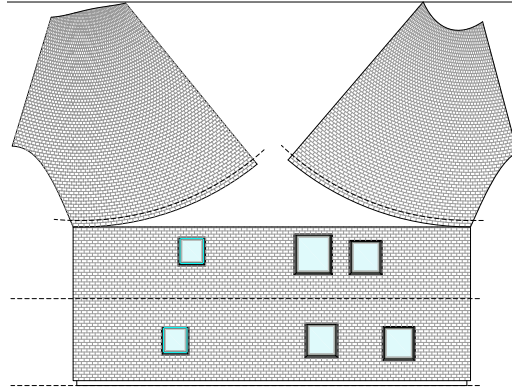




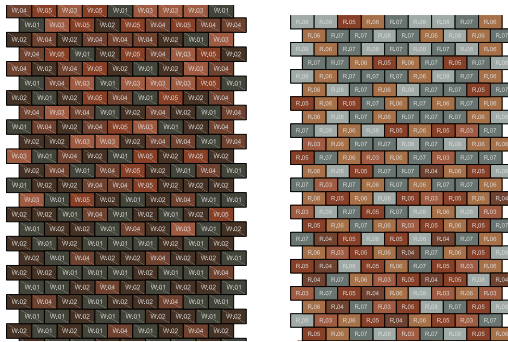


Kent-style tiles in six shades have been used to create the exterior skin, slowly fading from dark red at the base to orange in the centre and blue towards the sky. Laying the tiles relied heavily on local craft skills to create smooth transitions from rectangular tiles for the cylinders to increasingly tapering tiles for the cones.





Unrolled elevation of north roundel



Tile pattern portions

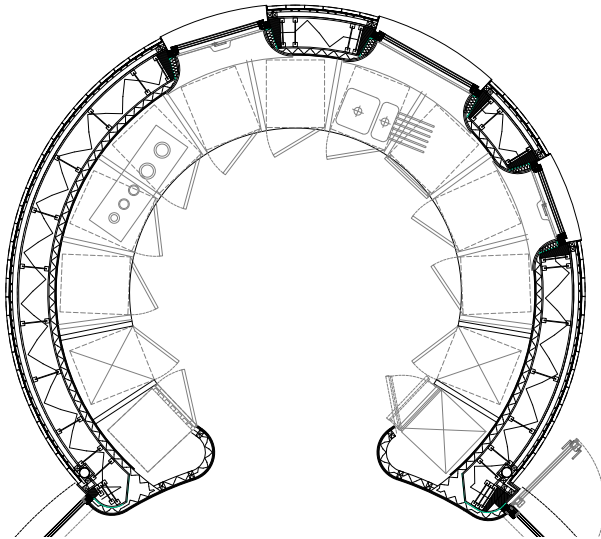
Much of the interior of the roundels is clad in plywood, continuous ply in the cylinders and plywood shingles in the cones. Curved furniture is built into the rooms to make the best use of the space.



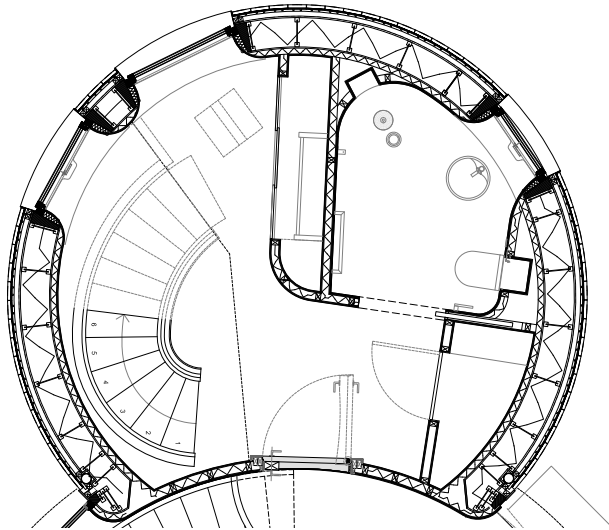
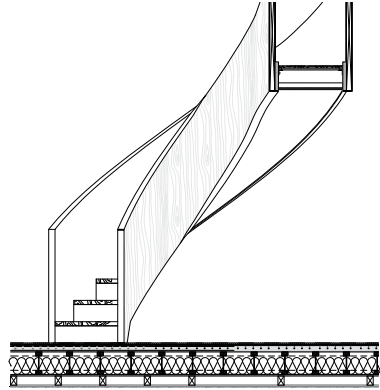




The building has a finely-layered transition from open to private. The oasts form open pockets of communal space on the ground floor, shared spaces on the first floor, and secluded treehouse-like retreats on the second floor.



Kitchen plan



Masterbedroom plan







Each of the bedroom spaces are located in a roof cone and arranged over two levels. In the children's rooms, this creates a play space on the lower level that can later be adapted for study, while the master bedroom is designed with a walk-in wardrobe and en suite bathroom.

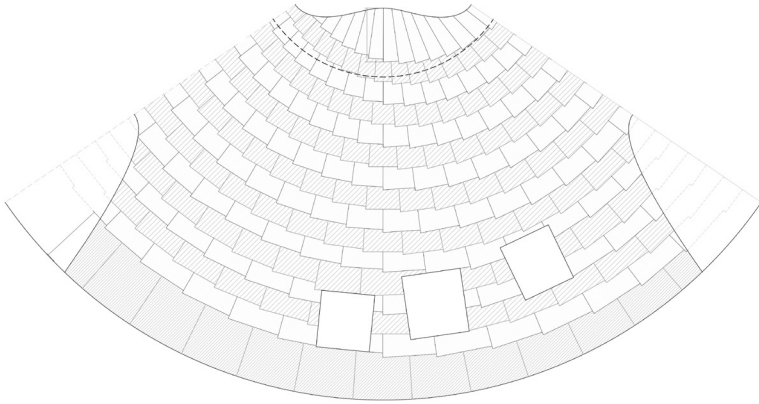








The building is highly insulated, and designed to passive-house standards of air-tightness, with the oast cones used to encourage slow air movement and purge ventilation from high level openings during the summer.









The curvatures of each room have necessitated the use of finishes able to deal with that. Plywood has been used extensively as it is easy to curve, while in the bathrooms, mosaic tiles and microcement have been used to accommodate the geometry.

LOCATION: Kent, United Kingdom

CLIENT: Private

DATE: 2012-2018

STATUS: Completed

SIZE: 230m²

CONSTRUCTION COST: £900,000

ARCHITECT: ACME (Alia Centofanti, Nicholas Channon, Deena Fakhro, Catherine Hennessy, Katrina Hollis, Kevin Leung, Friedrich Ludewig, Lucy Moroney, Heidrun Schuhmann, Penny Sperbund)

CONSULTANTS:

STRUCTURAL ENGINEER: AKT

PLANNING CONSULTANTS: Barton Willmore

MEP: Furness Green Partnership

BUILDING CONTROL: Wilkinson Construction Consultants

ENVIRONMENTAL CONSULTANT: Etude

CONTRACTOR: Harry Barnes

41,000 tiles used across the whole facade

290 customised eaves tile installed to transition between the upright and pitched facade

70 curved junctions connect the 5 roundels

2 intersecting cones with triple height space 12 meters high

6 meter tall conical spaces within the bedroom galleries

6.6 meter is the diameter central roundel atrium

4.9 meter in diameter is the perimeter of the four roundels

Image credits: Jim Stephenson 2019; ACME 2019.

Drawing credits: ACME 2019

All drawings and images are available upon request.

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