FABRICATION dRMM: pioneers of timber architecture

27 SEPTEMBER 2019 - 29 FEBRUARY 2020

Visitors are invited to sit at dRMM's *Table Turned* (2014) and enjoy a selection of titles available for reading. The laminated tulipwood table was designed by Alex de Rijke with Barnby & Day and originally produced for the American Hardwood Export Council's (AHEC) 'Wish List' exhibition at the V&A, London.

Gallery One Rundeskogen 1:25 13 Kingsdale School 1:1/1:30 TimberTower 1:100 15 Woodblock House 1:1 16 Maggie's Oldham 1:50 17 MK40 Tower 1:50 18 MK Gallery 1:50 19 Floatopolis 1:1000 20 de Ark 1:100 Homerton College 1:200 21 Walliscote Place 1:200 Naked House 1:25 Alconbury Civic Hub 1:500

23

18

11

6

20

15

2

2

24

13

12

19

14

7

13 Hastings Pier 1:100
14 Endless Stair 1:20
15 Health & Fitness Centre 1:50
16 Factory Prototype 1:100
17 WorkStack 1:100
18 Wintringham Primary Academy 1:150
19 Timber Stadium 1:200
20 Bat & Ball 1:100
21 de Ark 1:100
22 Parabolica 1:100
23 Sliding House 1:100
24 Market Lands 1:100

Numbers indicate the scale of the model.

22

17

10

5

////

21

16

4

1

2

3

4

5

6

7

8

9

10

11

12

About the Exhibition

RIBA North, the Building Centre and dRMM Architects present 'Forest of Fabrication,' an exhibition celebrating the possibilities and significance of modern timber architecture.

During its life cycle a tree makes oxygen, eats carbon, produces food, shade, habitat, colour and character, Trees also control wind, water levels, soil erosion, pollution and temperature while endlessly renewing themselves. Not only do trees make cities more possible and desirable when alive, they then provide future fuel, construction materials and compost for new trees after death. Trees and the timber products created from them are an exemplar of Cradle to Cradle* design, an approach that considers whole life cycles as a means of designing with minimal impact on our planet.

RIBA chartered architects dRMM. led by Professor Alex de Riike, Philip Marsh, Professor Sadie Morgan and Jonas Lencer, are pioneers in the use and development of engineered timber. They carry out extensive research into new approaches to building design by considering experimental structure, composition and placemaking; addressing both social and environmental sustainability through thoughtful interiors and an understanding of how people move through, use and experience spaces. dRMM believes outstanding architecture solves problems and transforms lives. A belief which is shared by many and which will be put to the test over the coming decade as our global community faces unprecedented challenges.

The built environment contributes to almost 40% of the UK's total carbon emissions. Since it provides our shelter, our homes, our spaces of play, work and leisure the built environment is an industry we cannot do without. It makes sense that as humans we create the best spaces and places we can; spaces that support our wellbeing and enhance our existence with minimal impact on the finite resources of the planet. The industry needs to make use of architects' unique skills sets to innovatively address a rapidly changing climate, and shifts in political and social requirements. dRMM's approach to materials, their team's ideology and their ongoing research and innovation is a good start, which many of us could learn from. dRMM is also a founding signatory of Architects Declare - a collective of architectural studios who have laid out and committed to a set of sustainable principles by which they, and they hope others, will work from.

This exhibition features 24 concept models across 24 years from this RIBA Stirling Prize winning practice. Each project explores the challenges and opportunities of timber design and collectively they show the outcome of dRMM's approach to continued renewal through knowledge, innovation and a compassion for our planet.

*Cradle to Cradle® is a design concept that was developed in the 1990s by Professor Dr. Michael Braungart, William McDonough and the scientists of EPEA.

Events

A series of events and public tours will accompany this exhibition.

Visit architecture.com/riba-north for more information.

#ForestofFabrication



Rundeskogen, Sandnes, Norway (2012)

Three tree-like residential towers co-designed with Helen & Hard. Initially proposed as CLT, but built as hybrid. Concrete core 'trunk' and floors carry timber walls and a building envelope of timber frame 'branches,' with a 'foliage' of coloured recycled wood/resin façade panels.

Kingsdale School, London (2004)

A school with many design firsts, including the first public use of CLT in the UK, a variable skin ETFE roof and a plywood auditorium. Cleverly connected larch poles form an asymmetric geodesic dome frame, with CNC plywood panels as secondary skin and finish.

Timber Tower, International Sites (2018)

A future, mixed-use 161m tower proposal as timber homage to Marina City, Chicago. Workplace, leisure and apartments are identified by varying floor-to-floor heights, connected by hardwood CLT panels that form a loadbearing perimeter structure.

Woodblock House, London (2013)

A timber urban workplace/family house, featuring three-storey CLT wall panels. External wood insulation is clad with the client artist, Richard Woods' signature painted plywood. The first 100% timber house built in central London since the Great Fire of 1666.

Maggie's, Oldham (2017)

A cancer care centre poised above a garden with a tree passing through the interior; the world's first cross-laminated hardwood building. The fine tulipwood structure is exposed internally; externally clad with thermally modified profiled tulipwood – another first.

MK40 Tower, Milton Keynes (2007)

A seven-storey timber tower as a sculpture installation, constructed in three days. The structure is a free-standing vertical cantilever, demonstrating future possibilities for CLT to form building cores. The lookout tower commemorated Milton Keynes' 40 years of the city.





MK Gallery, Milton Keynes (2008)

Proposed extension to existing gallery, marking a new main entrance. Education, meeting and café spaces are cantilevered, perforated boxes balanced on top of each other. The CLT forms are sustainable and structural and express the benefits of engineered timber as 'useful art.'

Floatopolis, Royal Docks, London (2014)

Research for the UK's first floating development. 'Floatopolis' comprises CLT housing with integrated commercial, sport and healthcare; connected by serviced floating 'streets.' A masterplan without fixed foundations offering phasing and flexibility.

Homerton College, Cambridge (2017)

A dining hall competition, proposing engineered timber prowess alongside an Arts & Crafts set-piece. The 100 m span 'folded' roof with tulipwood coffered soffit provides students and staff the satisfaction of dining in a spectacular column-free space.

Walliscote Place, Weston-super-Mare (2016)

A regeneration proposal for a 10-storey residential CLT tower as an extension to the former Magistrates' Court. The 'jenga' composition comprises 47 modular apartments manufactured offsite. The spaces between flats provide glazed winter gardens with sea views.

Naked House, Anywhere (2006)

A flatpack 'jigsaw' CLT low cost house prototype. Designed with no waste, the window cut-outs form the furniture. The timber panels are delivered to site in a shipping container, which then becomes foundations and workshop, raising the house above floodplains.

Alconbury Civic Hub, Cambridge (2018)

Cambridgeshire's civic offices are inspired by RAF Alconbury hangar's flexibility. Floors arranged around a central atrium can be removed or added. The folded CLT and glass structure house communal areas, offices and Council Chamber.



Hastings Pier, Hastings & St Leonards (2016)

A reinvention of the 19th century pier with a large, open, sustainable timber platform for staging events. The visitor centre/belvedere combines Glulam roof deck with CLT walls, clad in hardwood decking that survived the 2010 fire. Winner of the 2017 RIBA Stirling Prize.

Endless Stair, London & Milan (2013)

Not a stair without end, but a stair for endless reconfiguration; originally designed for the London Design Festival. With AHEC and ARUP, dRMM developed a new material: cross-laminated tulipwood. It is beautiful, sustainable and offers high strength with low weight.

Health & Fitness Centre, London (2015)

A timber and glass stacked gym that combines structural innovation and material delight while fostering employee wellbeing. Glulam paired columns support CLT flat slab 'superbeams' to maximise ceiling height and minimise floor vibration. Structure and services are the finish.

Factory Prototype, Anywhere (2014)

A column-free timber factory prototype. The 20 x 100 m design showcases timber cellular insulated long span panels. Daylight is distributed from interlocking giant roof panels carried on CLT walls. The fast-to-assemble structure is the finish, reducing time and cost.

WorkStack, London (2016-)

A new typology for light-industrial workspace, designed to retain manufacturing in cities. The 'corbelled' CLT system challenges the usual ground floor metal shed by stacking cantilevered timber units, reducing footprint and increasing lettable area.

Wintringham Primary Academy, St Neots (2017-)

A timber primary school built around a central garden court following the principles of a 'forest school.' The two-storey building uses CLT to make construction faster and more efficient, with reduced internal linings and increased health, tactility and delight for children.







A demountable timber stadium prototype. CAD and CNC processes produce an optimised structure with minimum material and waste. The circular folded perimeter structure is CLT, with steel cable/timber net spanning 100m, supporting a 50% plywood 50% ETFE roof.

Bat & Ball, Sevenoaks (2015)

Council offices and community centre competition entry. The building offers multiple uses under a large roof; a pyramid of long-span lightweight timber panels clad in copper. Turned timber columns support roof and create colonnades.









de Ark, Anywhere (2011)

Proposed workspace that travels to work. The 'Kampenaar' Dutch barge is the host for a 5x45m, two-storey prefabricated 'cargo' in the form of a beech LVL box containing studios, café and workshop space. An elegant, removable timber building in a steel ship.

Parabolica, Anywhere (2006)

A swimming pool/sports centre concept, exploring a 'woven' engineered timber structure. Inspired by 20th century concrete and masonry engineers Nervi and Dieste, the proposal exploits the flexibility of laminated timber to create a large, column-free double-curved vault.

Sliding House, Private Location (2009)

A house that moves to vary space, light, shelter and insulation. Three timber-cassette and glass forms are telescopically connected/disconnected using solar-powered motors. The overall composition changes according to weather, use or the desire for open-air living.

Market Lands, Winnipeg, Canada (2018)

A timber and glass market hall proposal with 20x45m skatepark roof, supported by steel staircases. The primary structure is a hyperbolic paraboloid grid of laminated veneered lumber, the curvature of which is generated entirely by straight lengths of timber.

This exhibition comes together as a collaborative endeavour between RIBA North, dRMM and the Building Centre.

dRMM is a London-based, international studio of architects and designers founded in 1995 and led by Alex de Rijke, Philip Marsh, Sadie Morgan and Jonas Lencer. The practice is known for creating architecture that is innovative, high-quality and socially useful. dRMM is a multi-award winning practice, and in 2017 won Britain's top architecture award, the RIBA Stirling Prize, for Hastings Pier. In 2019, the practice was one of 17

founding signatories of the 'UK Architects Declare' initiative.



www.drmm.co.uk

() @drmmarchitects

The Building Centre is owned by the Built Environment Trust, an independent charitable organisation that seeks to inspire and support knowledge and practice in the world of building. **RIBA** North is situated within the **RIBA** award-winning Mann Island development on Liverpool's historic waterfront. The centre contains, among other things, RIBA's first museum standard gallery outside of London. **RIBA North's focus is increasingly** shifting towards the future of the built environment. Our vision is that RIBA North will become home to people and facilities that help turn great ideas into practical innovation. This innovation will help transform the built environment and ensure architecture and architects continue to remain relevant and resilient in a changing world.

www.architecture.com/riba-north

@RIBANorth@RIBANorthNAC

BUILDING CENTRE

HOIME OF THE BUILT ENVIRONMENT SINCE 1931

www.buildingcentre.co.uk

@BuildingCentre@thebuildingcentre

Supported by









booth**king**



