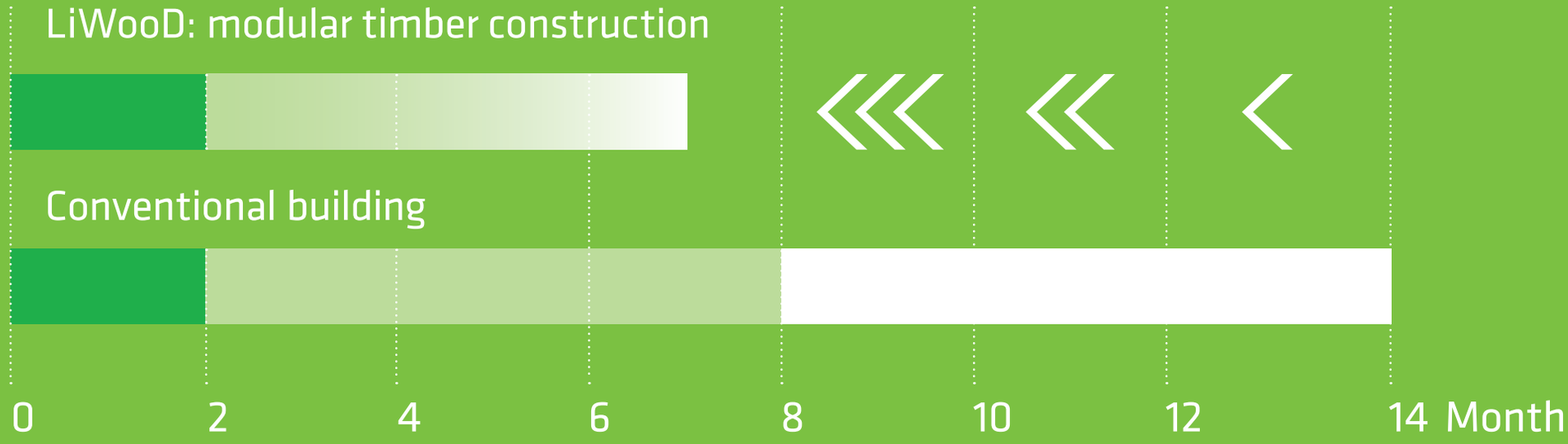
MUNICH SOCIAL HOUSING

LiWooD

LIVING IN WOOD

Faster progress with LiWooD

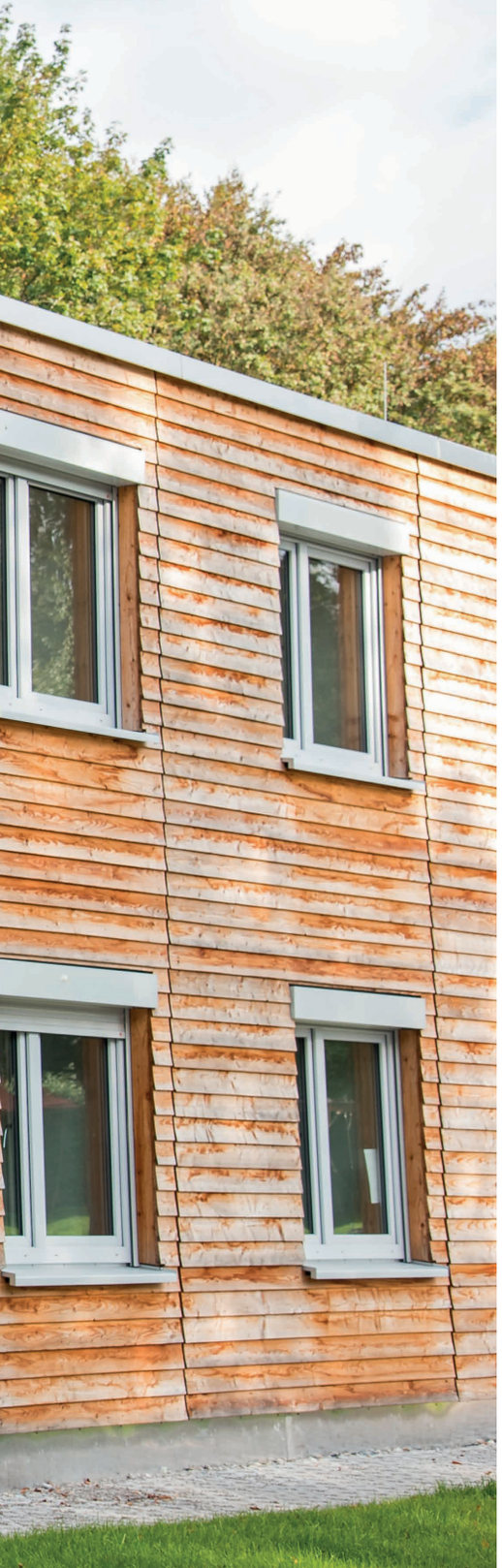


Installation of Construction Site / Foundation Shell Construction Completion

LiWooD

Living in WooD

Immigration in recent years has forced cities and municipalities to create new housing as fast as possible, especially in conurbations. In 2016 - within the framework of an emergency refugee relief programme initiated by the City of Munich - we were assigned the task of building housing for young people and asylum seekers at four locations within Munich. The enormous time savings combined with the high construction quality and the use of timber as a construction material gave us the decisive competitive edge here.



LiWooD - Living in Wood - As simple as it is ingenious

We think modular for buildings

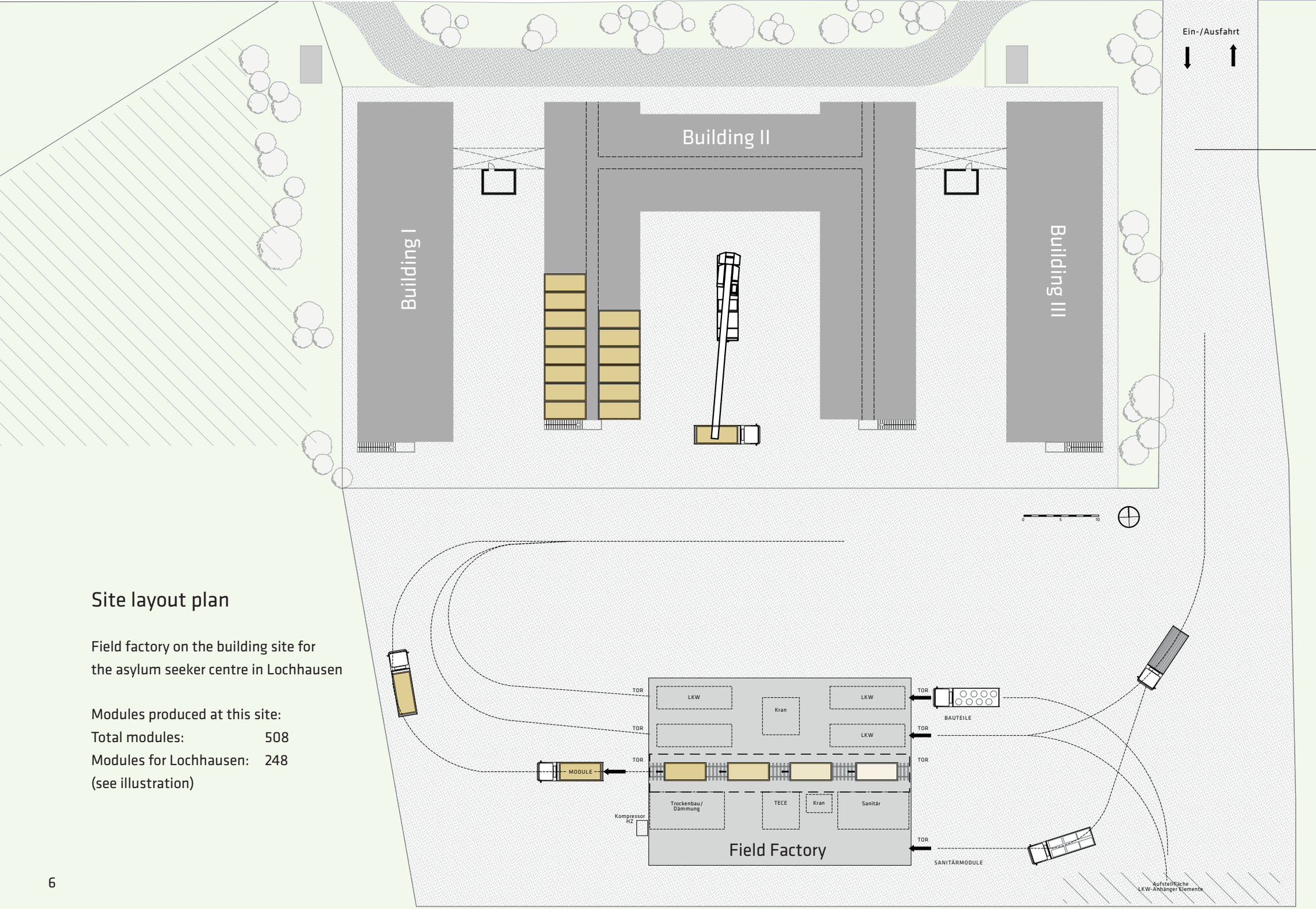
Since 2006 we have been planning and developing modular multi-storey buildings as diverse as student apartments, retirement homes, apartment hotels and social housing schemes. Increasingly private and public clients are demanding solutions which consistently put the principles of sustainability into practice. We have specifically set out to create sustainable building projects with the highest quality standards at an affordable price.

Our modules are assembled on site in a field-factory specially developed for this purpose. Supported on rails in the field-factory, the individual components, i.e. cross laminated timber boards, which have been carefully selected according to our exacting sustainable criteria, are transferred to the processing point for assemble. After assembly, the completed modules are taken to the site and put in place. The modules will already have been fitted with the necessary conduits and utility pipework during assembly in the field-factory. Our process allows for the production of up to ten modules a day. Our field factory production is not weather dependent and its use reduces site contamination and keeps environmental pollution to a minimum.

LiWooD - The Film

The film was produced in the summer of 2016 during the realization of the four Munich projects. In the field factory located directly on the building site, the individual components are assembled to almost finished modules. Immediately afterwards, the modules are then linked together to form a complete building.

Scan QR code or
click on this link:
www.liwood.com/derfilm



Site layout plan

Field factory on the building site for
the asylum seeker centre in Lochhausen

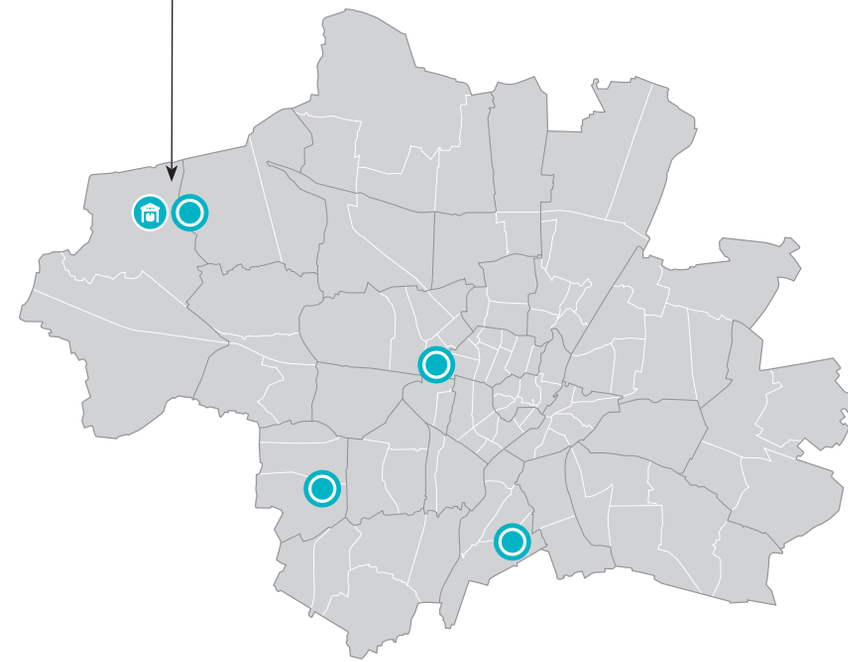
Modules produced at this site:

Total modules:	508
Modules for Lochhausen:	248

(see illustration)

Munich Social Housing

The City of Munich commissioned the construction of four temporary residences as part of an emergency programme to help refugees. These were distributed over the entire city area and supplied from the largest one of the four construction sites in Lochhausen, which was also the location of the field factory. The inner-city construction sites were located in backyards and gardens. In view of the densification of the cityscape, wood was the construction material of choice. Building with wood supports short construction times, thus reducing any inconvenience caused to residents by noise and dirt. Moreover, this construction material is perceived in a more positive way than steel or concrete and thus creates a better quality of life for its users. Furthermore, the modular design also makes it easier to dismantle the buildings so that these can be taken apart after their planned period of use and reassembled elsewhere for a new purpose. This plays a central role especially in the acute temporary need for refugee shelters.



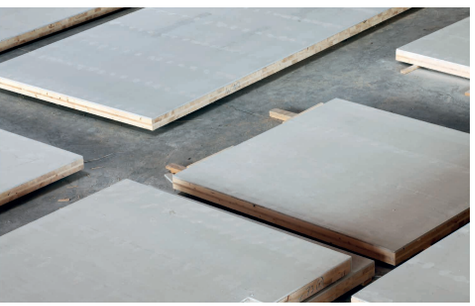
Construction Diary

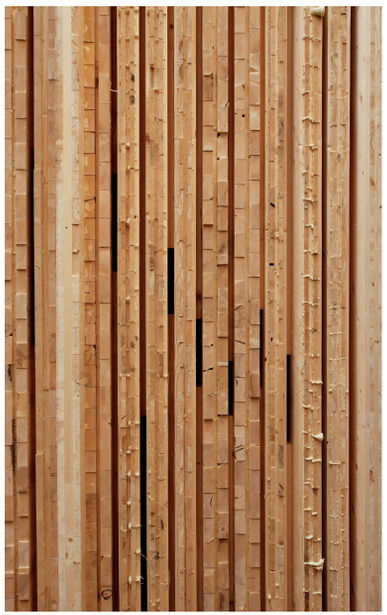
AUGUST - SEPTEMBER

The four residential complexes were planned, developed and built with sustainability in mind. The choice of building materials follows this philosophy. Each building's main constituent is wood; all load-bearing interior and exterior walls are made of solid cross-laminated timber.

OCTOBER - FEBRUARY

The field factory served as a mobile assembly hall, which found its place as a large hall made of solid wood on the construction site in Lochhausen – the largest one of the four construction projects.





MARCH

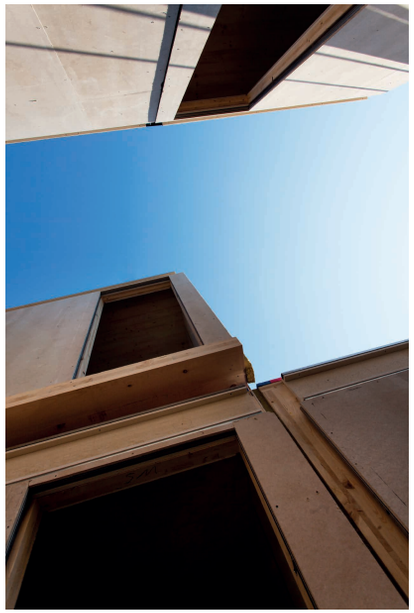
Starting in March, the Lochhausen site also supplied modules for the project in Harlaching. Because of the dimensions of the modules which did not exceed 3 metres in width, they could be transported within the city.

APRIL

The residential complex in Munich's Neuhausen district is identical in construction to that in Harlaching. Both were designed as accommodation for refugee minors as well as their social workers. These construction sites also received their modules from the field factory in Lochhausen.

MAI - JUNE

The last ones of the 508 total modules left the field factory in June and in that same month were used to complete construction of the refugee centre in Munich's Sendling district, which has been designed as accommodation for refugee families.

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Lochhausen

248 modules for
300 residents

Built for refugees

Munich

Neuhausen

64 modules for
48 residents

Built for unaccompanied minors

Harlaching

64 modules for
48 residents

Built for unaccompanied minors

Sendling

132 modules for
150 residents

Temporary residence for asylum seekers

Transport of modules

Outdoor facilities

In the immediate vicinity of the residence, the state capital of Munich created outdoor facilities such as seating sets and stone benches, bike racks and ping-pong tables. The children's playgrounds are also a special highlight, with their timber beams blending in perfectly with their surroundings. The building plot in Sendling – located in a rear courtyard – was even embellished with graffiti on the wall of a neighbouring building. It reads "We are all one" and thus symbolizes cultural diversity in a globalized world.

Photo: Johannes Brechter, Armin Kiss-Istok

Facade

The facade is made of larch weatherboarding. This accounts for the building's natural charm and sustainable character. The untreated timber shows how alive the façade is in that it turns a silver grey over time. This provides weather protection in a natural way that makes the timber façade as durable as other façade variants.

Kitchen

The communal kitchens are spacious, so large groups can also cook together. The stainless steel countertops are of an easy-care design and can thus be kept clean easily.

Resident’s rooms

In our buildings, each room is 14 square metres in size and designed to accommodate two people. It includes two beds, two wardrobes and a table with two chairs. We have deliberately chosen rather subtle and restrained furnishings so that each resident can personalize their own sleeping area.

Offices

Additional offices were set up for the social workers, the management or the caretaker, for administrative tasks. Especially for young asylum seekers travelling alone, being intensively cared for by social workers, the refugee centre management and specialists from the social services department is an important factor for their successful integration.

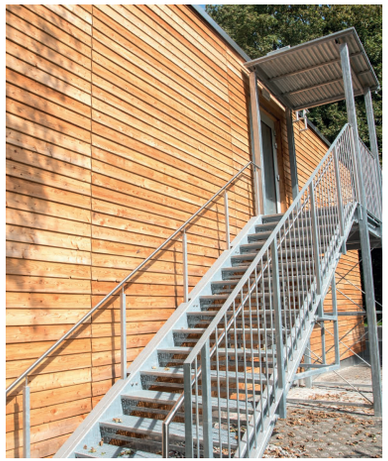
Common rooms

Places have been created here that invite people to eat together, but also to meet and talk, learn and play. To achieve this, we have connected several modules.

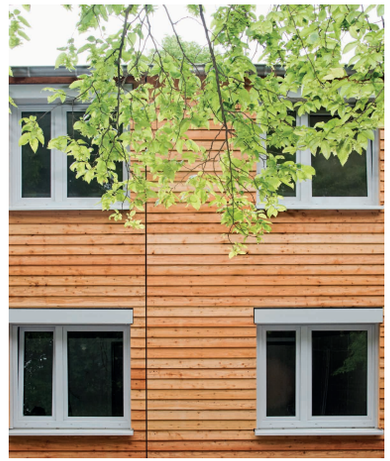
SUSTAINABILITY

The raw materials used for construction were selected with sustainability in mind. Not only the façades, but also the walls and floors are made of wood, because no other building material has such a positive effect on our well-being as this one.

Contact with wood alone is perceived much more positively than with other building materials. When you enter our buildings, you can feel this characteristic and our passion for this natural product.



Sustainable construction can only be realized in practice with this building material and we apply this knowledge in our work consistently and in keeping with the times.



By using wood as a building material, more than one ton of CO2 per cubic metre is stored and the emission of CO2, which occurs during the extraction of other building materials, can be avoided.

LiWooD at the Architectural Biennale 2016 in Venice

The Architecture Biennale 2016 in Venice was entitled „Reporting from the front“. For Germany in particular, this topic had a special significance in 2016 because, like so many other European countries, it had to deal increasingly with issues such as housing shortages and migration. The German Federal Ministry for the Environment, Nature Conservation, Construction and Nuclear Safety entrusted the German Architecture Museum (DAM) with the task of designing the German pavilion.

MAKING HEIMAT. GERMANY, ARRIVAL COUNTRY

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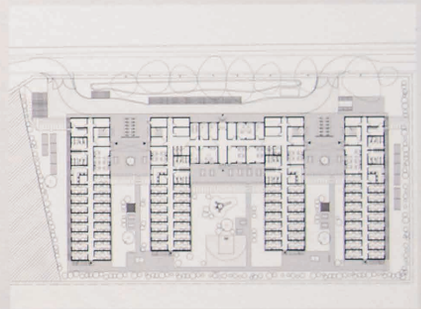
The project „Making Heimat. Germany, Arrival Country“, which included three different subject areas, was to fill the halls of the pavilion built in 1938. Four breakthroughs were made in the outer walls of the pavilion to provide a view of the lagoon, among other things, and thus opened up the pavilion to its visitors as a sign of hospitality. An absolute novelty in the long and eventful history of this building. In a „Call of Projects“, the DAM initially obtained an overview of the current situation of refugee accommodation in Germany in order to summarize it in a database. This was the point where LiWooD and the German Architecture Museum came together. From a multitude of collected projects, our Munich refugee centre in Langwieder Hauptstraße was selected for „Making Heimat. Germany, Arrival Country“ together with ten other projects in the German pavilion.

Photos: Jürgen Braun

Photos: © Michael Heinrich



MUNICH

– Refugee accommodation
– New buildings / Completed

The shared accommodation employs wooden room modules that are assembled in a field factory on site using prefabricated parts.

FACTS AND FIGURES:

NUMBER OF RESIDENTS, MODULAR UNITS: 300 Residents, 4 lines of buildings
RESIDENTS: Asylum seekers
DATE OF COMPLETION, LIFESPAN, CONSTRUCTION TIME: March 2016, 5–10 years, 5 months
COMMISSIONED BY: State Capital of Munich, Municipal Department, Buildings and Construction Department (Project Management)
ARCHITECT: Gerstberger Architekten GmbH, Munich
CONSTRUCTION FIRM: LiWood, Munich
BUILDING METHOD: Prefabricated wooden room modules (solid wood panels, assembling on site)
CONSTRUCTION COSTS: –
LIVING SPACE PER PERSON: 9.8 m^2 gross internal area (including washroom, kitchen, recreation room, resident's room, storage, laundry room, etc.)

MÜNCHEN

– Flüchtlingsunterkunft
– Neubau / Fertiggestellt

Für die Gemeinschaftsunterkunft werden Raummodule aus Holz verwendet, die direkt vor Ort in einer Feldfabrik aus Fertigteilen montiert werden.

FAKTEN UND ZAHLEN:

ANZAHL DER BEWOHNER, MODULEINHEITEN: 300 Bewohner, 4 Wohnzeilen
BEWOHNER: Asylbewerber
FERTIGSTELLUNG, EXISTENZDAUER, BAUZEIT: März 2016, 5–10 Jahre, 5 Monate
AUFTRAGGEBER: Landeshauptstadt München, Kommunalreferat, Baureferat Hochbau (Projektleitung)
ARCHITEKT: Gerstberger Architekten GmbH, München
AUSFÜHRENDE FIRMA: LiWood, München
BAUVERFAHREN: Vorgefertigte Raummodule aus Holz (Brettsperrholz, Montage vor Ort)
BAUKOSTEN: –
WOHNFLÄCHE PRO PERSON: 9,8 m^2 netto Wohnfläche (inkl. Sanitär, Küche, Aufenthaltsraum, Bewohnerzimmer, Lager, Waschraum etc.)

Technical Data

Lochhausen

Builder-owner	City of Munich
Architect	Gerstberger Architekten GmbH
Work performed	Turnkey building
Building class	3
Construction period	10 months after foundation
Completion	September 2016
Gross floor space	4,850 square metres
Number of storeys	2
Number of modules	248
Energy generation	Gas boiler
Energy standard	ENEV

Neuhausen

Builder-owner	City of Munich
Architect	k.u.g.-architekten
Work performed	Turnkey building
Building class	3
Construction period	4 months from foundation slab
Completion	September 2016
Gross floor space	1,254 square metres
Number of storeys	2
Number of modules	64
Energy generation	Gas boiler
Energy standard	ENEV

Sendling

Builder-owner	City of Munich
Architect	k.u.g.-architekten
Work performed	Turnkey building
Building class	3
Construction period	6 months after foundation
Completion	November 2016
Gross floor space	2,620 square metres
Number of storeys	2
Number of modules	132
Energy generation	Gas boiler
Energy standard	ENEV

Harlaching

Builder-owner	City of Munich
Architect	k.u.g.-architekten
Work performed	Turnkey building
Building class	3
Construction period	4 months from foundation slab
Completion	October 2016
Gross floor space	1,254 square metres
Number of storeys	2
Number of modules	64
Energy generation	Gas boiler
Energy standard	ENEV

Picture left: Our contribution to the German Pavilion at the Architectural Biennale 2016 in Venice (Photo: DAM / Michael Heinrich)

We are your partner

Describe your building project, and we will show you how it can be implemented in an ecological, economical and elegant manner. Benefit from our experience to find the best way of implementing your project, no matter whether on your premises or at our Munich offices.

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LiWooD
Living in WooD

We would like to thank our customers, builders, business partners and employees who have actively supported us in all projects. Special thanks go to Jürgen Braun who provided the beautiful photos of our projects.

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