Wiesbaden, November 2017

PRESS RELEASE

A structural engineer is providing not one, but two lightweight Hamburg projects

The product series Slim-Line by Cobiax is providing constructional load relief for two Hamburg structural engineering projects.

Not one but two modern Hamburg structural engineering projects are to be built in a more lightweight and efficient manner using the void flat plate slab technology by Cobiax.
The WKC Hamburg GmbH is responsible, amongst other things, for the structural engineering in both projects. The company, which goes by the name WK-Consult, has already obtained comprehensive experience in the application of Cobiax void formers during the inspection of the Elbphilharmonie, and participated in the “Consent in individual cases”, which was still required at the time. In the meantime, a building approval has been issued (Eco-Line 2010/Slim-Line 2013), meaning that no “Consent in individual cases” is now required.
For the benefit of the investors and the construction companies, WKC also included plastic void formers from the Slim-Line product series for the two Hamburg projects.
This is because the structural engineers are aware of the numerous advantages of the Cobiax voided flat plate slab technology, such as the generation of a stable load-bearing effect in the slab levels with substantial savings in slab weight.

Significant effects for the investors: Slim flat slabs (without joists) in spite of large span widths are what characterise the Cobiax voided flat plate slab technology
This produces highly flexible floor layouts, which is of particular importance for commercially used projects, as, over the course of the building utilisation, the requirements on both the floor layout design and the utilisation of the building will change. Therefore, investors are increasingly placing importance on this option, which has a positive influence on the market value of buildings over the decades.

Continuous load reduction
The total load reduction continues over all load-carrying components per storey, right down to the foundation constructions. In this way, less concrete is required and therefore less journeys and reduced freight quantities of the ready mix concrete vehicles. In the case of the two Hamburg projects, this is of particular significance for those involved in the construction because it has a positive influence on the respective pile foundations.
Dr. Meisel, Project Manager for WKC HAMBURG GmbH, provides more details with reference to the "Brückenquartier" (bridge quarter) project: "By using the Cobiax voided flat plate slab technology, it was possible, due to the large span widths, to limit the load to be transferred at foundation level to 14 MN per pillar. This would not have been possible without the application of the Cobiax technology".

Overall consideration of the two lightweight Hamburg projects – the "Brückenquartier" project on the Veritaskai (quay) and the "Alte Holstenstraße 59" project.
For both projects, the reinforced concrete areas in which Cobiax void formers were and shall be used total approximately 14,000 m².
In computational terms, this results in concrete savings of 640 m³ and a total weight reduction of 1,600 t.

Structural engineering project Brückenquartier (bridge quarter) on the Veritaskai (quay)

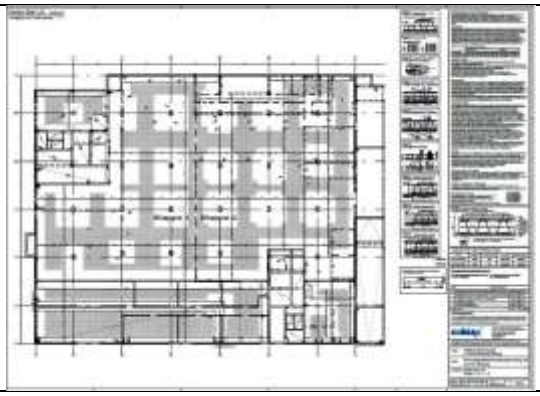
Visualisation Brückenquartier Nord-Ost (North-east bridge quarter)

File name: 734BB61EdekaBr++cke
Source: Lorenz Gruppe GmbH

The "Brückenquartier" on the Veritaskai is being developed in combination with the new development at the "Harburger Binnenhafen" (Harburg inland harbour), which consists of several individual projects including parking constructions and open spaces. The Lorenz Gruppe GmbH, together with the Willi Meyer Bauunternehmen GmbH, are the project

team responsible for the overall “Brückenquartier” project, including the open spaces and recreation areas.

After completion, four full storeys above ground and 2 penthouse storeys are to rest on the basement floor of the office and business building, which acts as an underground garage.
In all reinforced concrete ceilings, starting with the slab over the basement storey and up to the complete slab over the third floor which acts as an attic slab for the area not built over, right up to the attic slab over the fifth floor, Cobiax void formers of the type Slim-Line S180-200c2 are uniformly installed.



The Technical Support Department at Heinze Cobiax GmbH creates detailed installation and layout plans for each project and at each installation level.

*File name: 3701i HH **Brückenquartier** slab and basement floor Source: Heinze Cobiax Deutschland GmbH*

At the time of completion of the shell construction in 2018, the void formers produced from recycled plastic will total approx. 45,000 pieces with a reinforced concrete slab area of approximately 10,000 m².

Those involved in the construction
Project team: The construction company Willi Meyer and the Lorenz Gruppe are the project developers.

Project developer:

Lorenz Gruppe GmbH, 22761 Hamburg,
www. lorenz.hamburg.de

Willi Meyer Bauunternehmen GmbH, 29525 Uelzen, www.willimeyerbau.de
Structural engineer:

CONSULT
Structural planning WKC HAMBURG GMBH CONSTRUCTION PLANNING, 21079 Hamburg, www.wk-consult.com, Dr. Meisel, Project Manager

Structural engineering project "Alte Holstenstraße 59"

Visualisation "Alte Holstenstraße 59". The Initiator and building owner is Niels Bon from Bergedorf.

File name: 576_Perspetive Front Nue1

Source: GÖSSLER KINZ KERBER KREIENBAUM ARCHITEKTEN BDA

The project "Alte Holstenstraße 59" is an office and residential building with 2 basement storeys, 5 storeys above ground and a converted attic storey.
The tower-style projection in the attic storey also provides the office and residential building with a striking, continuous building corner.
The two-storey underground garage with 19 parking spaces and some service and technical rooms on the second basement floor is accessed via a ramp.

The two levels in the two-storey basement floor are connected with each other via a vehicle elevator. The further utilisation concept, for which a flexible floor layout design is exceptionally important, has been planned for approx. 300 m² of retail trade area on the ground floor. In the 4 storeys above this, areas for offices and doctors' surgeries have been planned. In the attic storey, 2 penthouse apartments measuring approx. 125 and 140 m² with roof terraces have been realised, so that in total approx. 2,200 m² are generated.
It is possible to access the first basement storey via a ramp, and then the second basement storey can be reached from the first basement storey via a vehicle elevator.
Approx. 400 m² effective area per storey can thus be realised on the approx. 500 m²-large construction property.

SlimLine in 6 storey slabs (ground floor/1st-4th storey/attic storey)
From the slab over the ground floor up to the slab over the attic storey, the plastic void formers by Cobiax with the product designation Slim-Line S160-180c2 ensure reduced slab depth, more generously-sized interiors and larger clearance heights. Approximately 10,000 void formers were installed in the 2,600 m² of slab area.

Industrial customised production

For the "**Alte Holstenstraße 59" project,** Heinze Cobiax Deutschland GmbH delivered fixing elements which have been increased in height by 2.0 cm, so that the prefabricated void former modules were adapted to the specified slab depth.

File name:
Source: Heinze Cobiax, Germany

Particularly worthy of emphasis in this application of the plastic void formers made from recycled plastic is the stipulation made at the building site for an upward height adjustment of the fixing elements by 2.0 cm.
Therefore, due to the required slab construction, Heinze Cobiax Deutschland GmbH supplied void

former modules adapted at their works ready for installation to the construction site.

Technical and practical support during every project, from the planning to the execution.
During both Hamburg projects, the engineers from Cobiax assisted in advance with the detailed structural calculations through their technical consultation.

Supplementary to the respective engineering services through the planning engineer's office, Heinze Cobiax Deutschland GmbH created layout plans for WKC Hamburg GmbH per installation level. The executing construction company received, amongst other things, support through the instruction provided with regard to the handling of the modules from the Cobiax sales engineers present on site.

Those involved in the construction
Client/building owner:
BONNIMO Bille KG, 21029 Hamburg,
www.bonnimo-bille.de

Architect:
GÖSSLER
KINZ
KERBER
KREIENBAUM
ARCHITEKTEN BDA
Gössler Kinz Kerber Kreienbaum Architekten GbR, Hamburg, Berlin, www@gkkk.de

Structural engineers
WK
CONSULT
Structural planning WKC HAMBURG GMBH CONSTRUCTION PLANNING, 21079 Hamburg, www.wk-consult.com, Dr. Meisel, Project Manager

Construction company
Zechbau
Zechbau GmbH,22045 Hamburg,
www.zechbau.de

Graphics, image captions:

DSC_0035.JPG

Cobiax void formers from the Slim-Line series S180 200c are laid on the basement floor slab for the **Brücken-quartier (bridge quarter)** project.

File name:
Source: Heinze Cobiax, Germany

IMG_0210.JPG

The concrete installation and compression basically works for the concrete workers from the Willi Meyer Bauunternehmen GmbH at the **Brückenquartier (bridge quarter)** in the same way as all other slab concreting processes. The reduced quantities of concrete are installed and compressed in two working steps.

File name:
Source: Heinze Cobiax, Germany

DSC_0761.JPG

Ready installed void formers in the Slim-Line series S160 180c prior to concreting of the ground floor slab in the **Alten Holstenstraße.**

File name:
Source: Heinze Cobiax, Germany

Key words
Heinze Cobiax, Slim-Line, Hamburg structural planning projects, structural engineer, load-bearing effect, slab level, slab weight-savings, load reduction, foundation constructions, Dr. Meisel, Project Manager, WKC HAMBURG GmbH, Brückenquartier, Veritaskai, Holstenstraße 59, recycled plastic, construction company, Willi Meyer, Architect, Lorenz Gruppe GmbH, BONNIMO Bille KG, Gössler Kinz Kerber Kreienbaum Architekten BDA GbR

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