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CEMBRIT DESIGN COMPETITION

HELSINKI 2012

COMPETITION BRIEF

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CEMBRIT DESIGN COMPETITION
HELSINKI 2012

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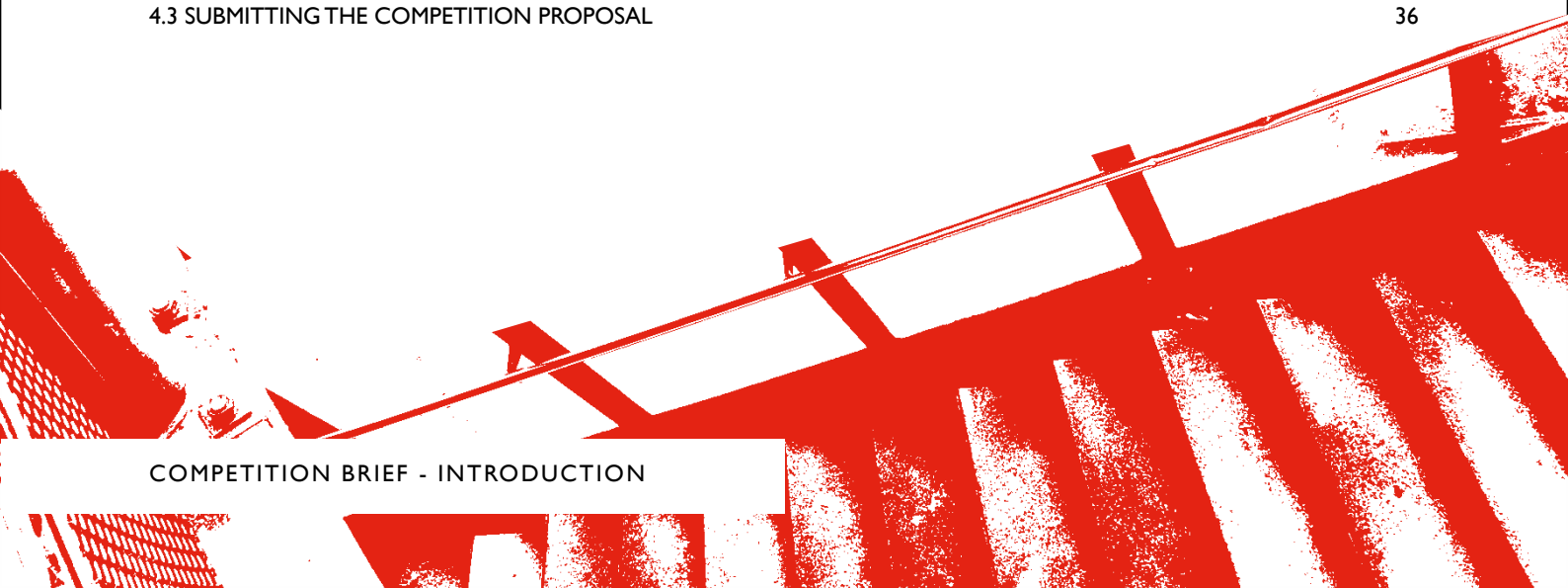


INTRODUCTION

Architects and designers are invited to participate in an open international design competition to reinvent the use of fibre-cement as a material in urban environments. The competition brief is related to transit areas and the station area of Malmi in Helsinki is the location where the competition proposals are to be placed.

Entrants are asked to think about the "Arrival to Malmi" by 5 different means: train, bus, car, bicycle and walking. Each of the means of arrival has specific areas to be addressed. However the concept should also address the challenge on a general level, in which the emphasis should be placed on the overall concept. Fibre cement should have a major role in the proposal; although other complementing materials and solutions can also be used.

The organizers warmly invite ideas-level proposals to be submitted in the competition to be evaluated by a distinguished international jury. The jury will select the top 3 proposals to be further developed into prototypes, to be re-assessed before the final order is decided. The winning proposals will be realized in an exhibition as prototypes during the World Design Capital Helsinki 2012 (WDC Helsinki 2012) in May 2012.

The competition is part of the WDC Helsinki 2012 official programme. The organizers include Cembrit, and Pentagon Design in cooperation with Helsinki City Planning Department. The competition is arranged according to the competition rules of the Finnish Association of Architects (SAFA) and the Finnish Association of Designers (ORNAMO).

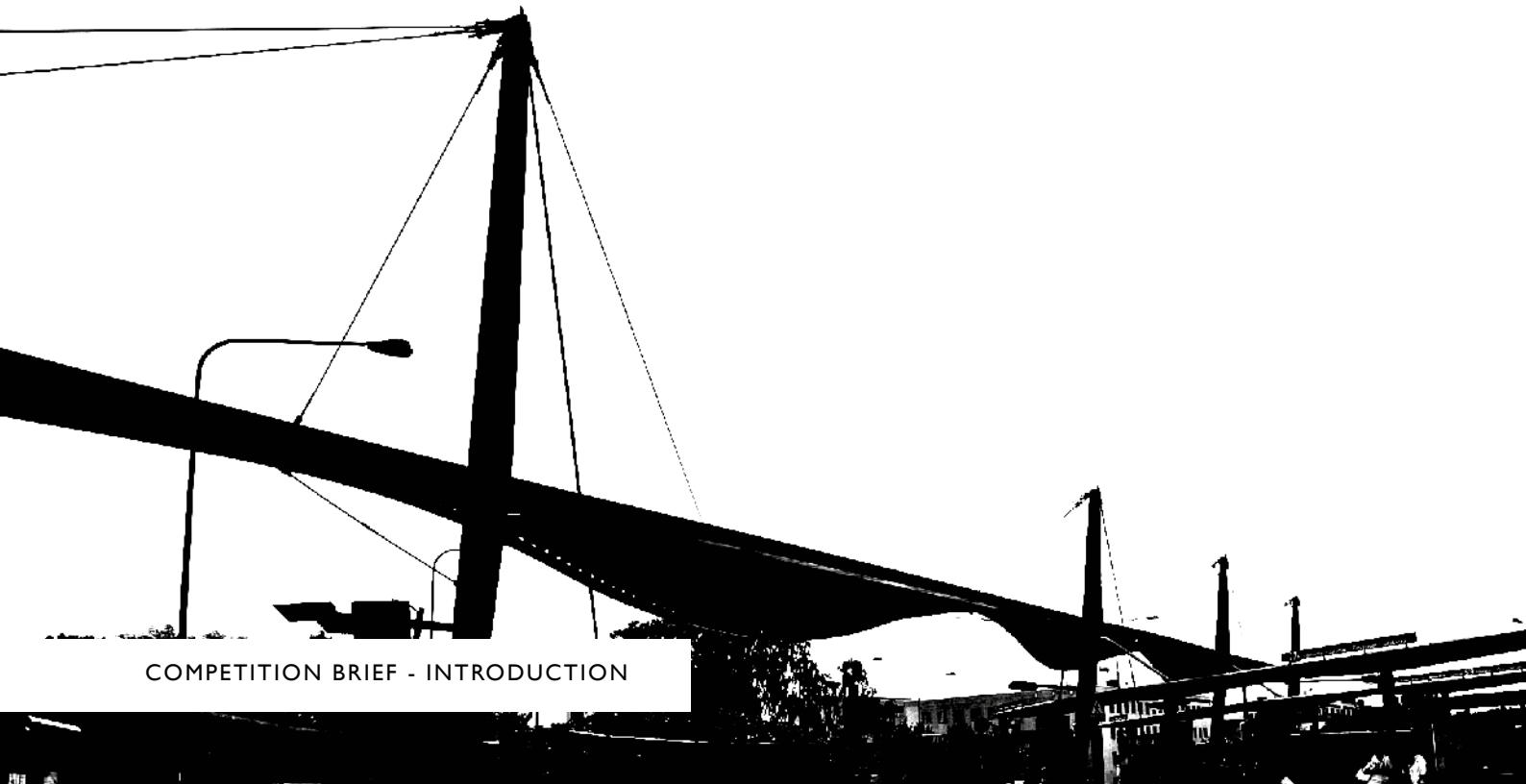
FIBRE CEMENT AS A MATERIAL

Fibre cement is used as a material in the building industry as exterior cladding and interior cladding as well as for roofing. In the manufacturing process, laminates of fibre-cement sheets are layered and compressed under tremendous pressure before undergoing a slow curing process. Reinforced by specially selected fibres, the many thin layers give fibre cement a strength with few equals in the world of building materials.

Fibre cement is made from natural materials: cement (i.e. a mixture of chalk and clay), sand, and water, supplemented by non-toxic organic fibres. The material is fully reusable.

A major advantage of fibre-cement is its ability to resist weather of all kinds, including freeze/thaw cycles, intense heat and drenching. Fibre cement objects retain their shape at all times, and their ability to resist rot and fungal infection is good. This implies durable products and minimal or no maintenance. At the end of the product's lifecycle, the non-toxic panels can be reused or crushed for their raw material.

The qualities and nature of fibre cement are described under the six sub-headings: creative, versatile, distinct, efficient, authentic, tough.



FIBRE CEMENT AS A MATERIAL

CREATIVE

The ability to use a wide variety of colours and to play with scale and shape. Fibre cement can be formed in to different shapes before the curing phase. The surface of fibre cement can be patterned during the production process. Cured fibre cement can be tooled with different kinds of CNC cuttings.

Versatile
Fibre cement can be combined with other contemporary building materials, complementing them: e.g., steel, glass, brick, stone, and wood.

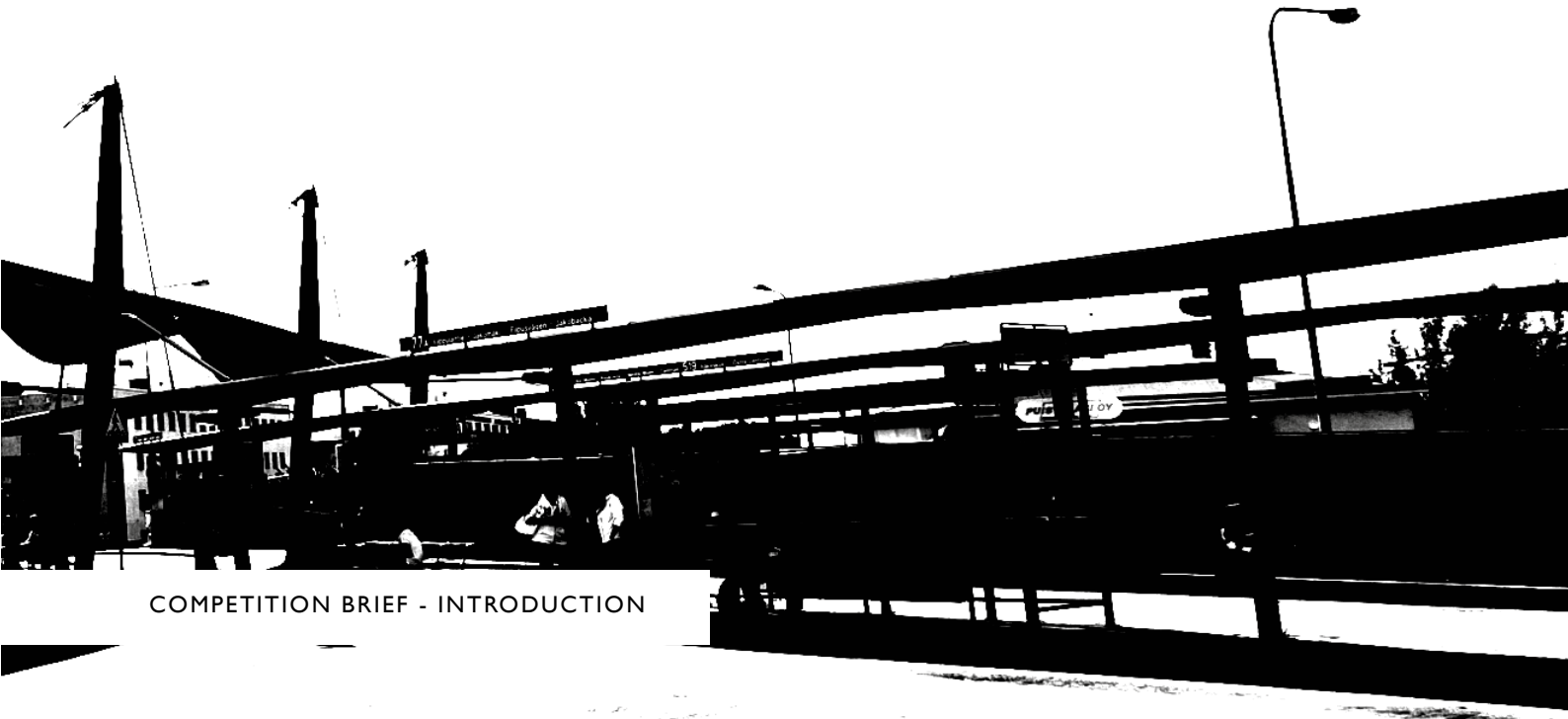
Distinct
The ability to use a wide colour palette, from soft neutrals to vibrant brights. Fibre cement can be through-coloured, with transparent protective coatings generating variations in surface tone, or have uniformly painted surfaces. The fixing mechanism can be concealed or exposed as part of the overall appearance.

Efficient
Lighter than stone and fast to install, requiring no on-site finishing: once the panels are attached, the surface is ready for use.

Authentic
Fibre cement is one of the few building materials that both meet the demand of thermal insulation in the contemporary built environment and has an outer surface that demonstrates material honesty.

Tough
Fibre cement is extremely durable and shock- and stain-resistant, requiring virtually no maintenance. The material is moisture-resistant and non-combustible, with good sound insulation qualities. Long-lasting inorganic pigments, many of them from natural sources, minimise fading over the years.

For more information on fibre cement and the production process, see Attachment A.



ATTENTION TO THE SUBURBS

The City of Helsinki is revitalizing its suburbs through the Neighbourhood Project (2008-2011). The vision of the project is being adopted in the present competition, describing the global need for developing the suburbs in addition to city centres.

The areas outside the Helsinki city centre hold numerous attractive districts, diverse residential and commercial areas, and a vibrant urban culture. Characteristic of these city districts is that all essential services are only a short distance away. The appealing features and strengths of the various city districts have been emphasized in the Neighbourhood Project, promoting the construction of versatile housing, striving to maintain services in these areas and helping to bring about new ones, and providing opportunities for city residents to engage more in the improvement of their residential areas.

Neighbourhood Project, 2008-2011 - Areas of Focus

- Densification and diversification of the urban structure
- Improving the current quality of the environment
- Image facelifts

For more information about the Neighbourhood Project, see Attachment B.

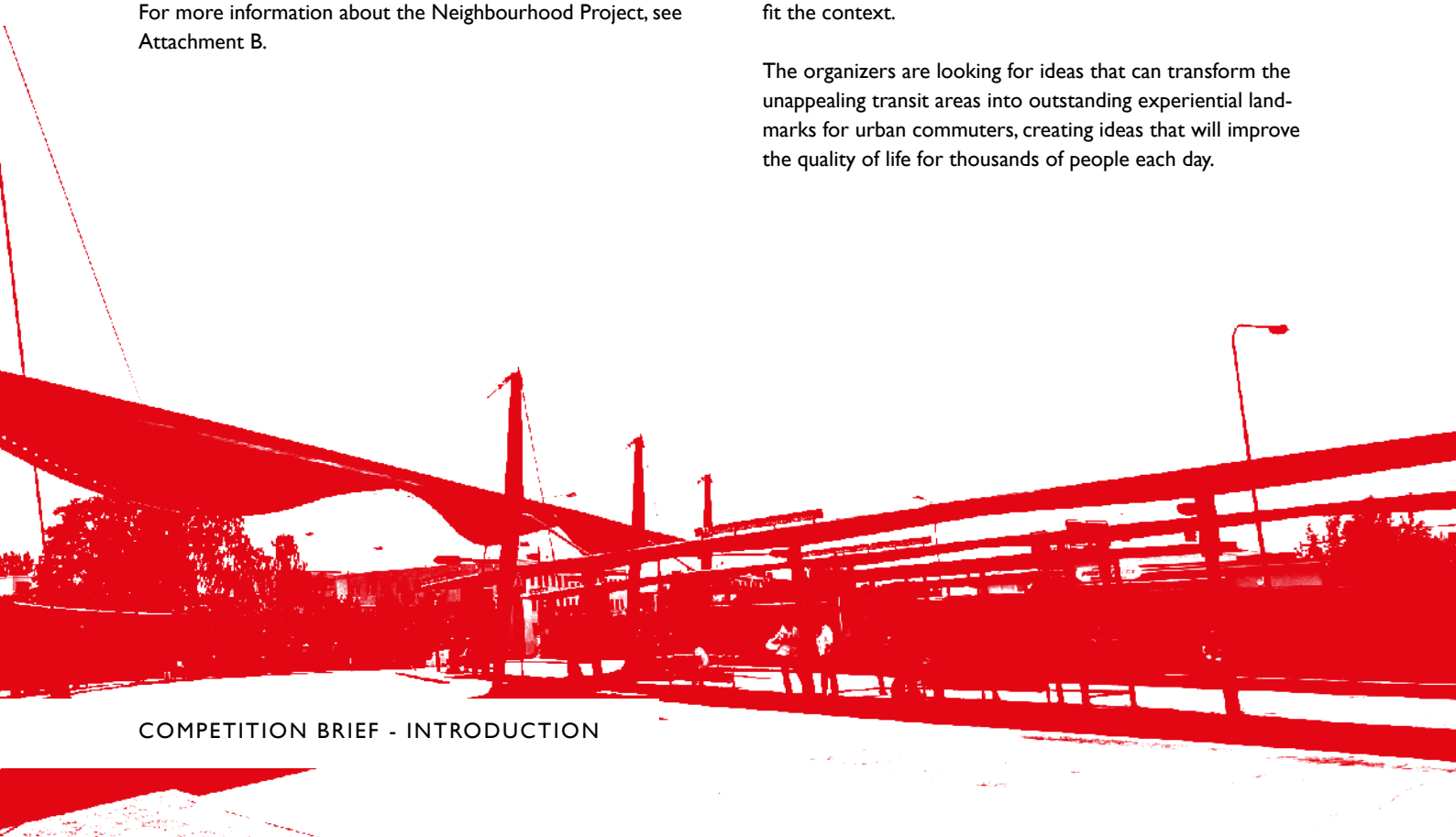
TRANSIT AREAS AS 'VISITING CARDS' IN THE SUBURBS

Stations and transit hubs are important both functionally and as identity-building elements in suburbs. The city dwellers' daily routes and a significant part of their day are spent connected to various transit hubs, stations and infrastructure. Amid the complexity of users, owners and other stakeholders, there is a tendency for transit areas to become unappealing non-places.

The Malmi station area is a typical example of a busy transit hub that has become worn out and where the overall appearance and functionality need improvement. The decline is evident when looking at the empty lots and offices in the area. The Malmi station area is one of the major transit hubs in Helsinki. Over 6 million people each year use the railway that passes through Malmi, and almost 4 million people each year step in and out of trains at the Malmi station.

The long history and importance of the area have resulted in attention being given to the area: several plans in the past decades have been realized to vitalize the area. However, maintaining the environment would require a shared vision of the Malmi area and relevant and cost-efficient solutions that fit the context.

The organizers are looking for ideas that can transform the unappealing transit areas into outstanding experiential landmarks for urban commuters, creating ideas that will improve the quality of life for thousands of people each day.



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1 COMPETITION ASSIGNMENT

Arrival to Malmi
Urban Transit Area Solutions Utilizing Fibre Cement

1.1 BACKGROUND TO THE ASSIGNMENT

Transit areas are becoming important identity-building elements in urban environments. The city dwellers' daily routes and a significant part of their day are spent connected to various transit hubs, stations and infrastructure. Confining the areas and buildings related to them can be difficult, and they tend to merge with the surrounding elements. The anonymous, standard solutions may result in so-called "non-places", i.e. airport-like environments, which have little to do with the local character of the areas, and are unlikely to surprise or delight passers-by.

Malmi has been selected as the location where the conceptual ideas must be placed. The context could be any that the city faces, such as the challenges of the declining attractiveness of the suburbs, combined with a need to offer the users better transit solutions. The station areas are complex organisms, with various tenants – public and private – heavy usage and a tendency to be exposed to vandalism. The role of private businesses should also be considered in offering yet another perspective to the development of the station area.

Supporting Business Activity in Transit Areas [1]

A central issue in developing the station area is the ability to support various activities and to concentrate the functions within the close vicinity of the station. It is crucial for commercial activity that public services are intertwined with commercial services. This would allow the station areas to become local "village centres", which are passed through on a daily basis while commuting, but in which many services are found and where daily groceries can be purchased.

The quality of the city space [2]

The quality of the environment has a substantial role in the perceived attractiveness of the area in considering the location of businesses. Companies compare their own image with the location brand, the accessibility, and the profile of the area as a place to live and work in. Another issue of attractiveness is the perceived cleanliness of the urban area and the surrounding environment.

Attention should be paid to the direction in which the facades of the commercial buildings in the station area are faced; areas in which facades face the pedestrian routes are generally perceived as more attractive. For the shops the pedestrian routes and their quality are of utmost importance. The attractiveness prolongs the time people spend in the station area beyond the basic time spent in transit. Additional benefits, such as easier and more efficient cleaning, can be achieved by densification of the services for pedestrian access.

The station area itself is rarely attractive. The railway platforms and structures surrounding them are prone vandalism and the cleaning and maintenance require additional input by the city and those responsible for the upkeep of the station. The responsibility for maintenance is often shared between several actors. The elements influencing the quality of the station area include lighting, accessibility, and the organization of bicycle parking.

Close distance to the station area has a negative influence on the prices of apartments. The price level of immediately next to the station is lower than apartments 500-600 metres away. The immediate vicinity to the station is perceived as unpleasant and unsafe, whereas apartments situated within walking distance from the station benefit from the good connections without the negative image of the station area.

The Malmi area and its history are presented in Attachment C.

[1] *Suburban Renaissance Project, Helsinki City Planning Department, 2009.*
[2] *Suburban Renaissance Project, Helsinki City Planning Department, 2009.*

1.2 COMPETITION ASSIGNMENT

BULLHORN - Cembrit Design Competition
- Helsinki 2012 theme:

Arrival to Malmi - Transit Area Solutions Utilizing
Fibre Cement

The organizers invite participants to think about transit areas and the challenges they provide. The Malmi station area in Helsinki has been selected to represent transit areas as the context for generating ideas. The station areas and their surroundings are a mixture of different residential, commercial and public uses. The entries should create something unique and experiential that addresses the problems of urban transit areas. The competition entry should be a concept level idea that is applied to predefined areas within the Malmi station area and its immediate surroundings.

Participants should think about the arrival to Malmi as a functional (transit and commuting), mental (orientation and identity of the area) and visual experience. How could fibre cement be used to improve the quality of the environment? The concept level idea should be explained on a general level and the applications should provide an example of the flexibility of the concept.

The entrants should select at least three of the following application areas to implement their concept:
- Arrival by train
- Arrival by bus
- Arrival by car
- Arrival by bicycle
- Arrival by foot

Arrival by train
Focus on: concrete surfaces, 'the underworld'; i.e. spaces that are covered by passages or structures.
The number of train passengers passing through the Malmi station is over 6 million annually – thus giving an indication of the importance of the station as the suburb's 'visiting card'.

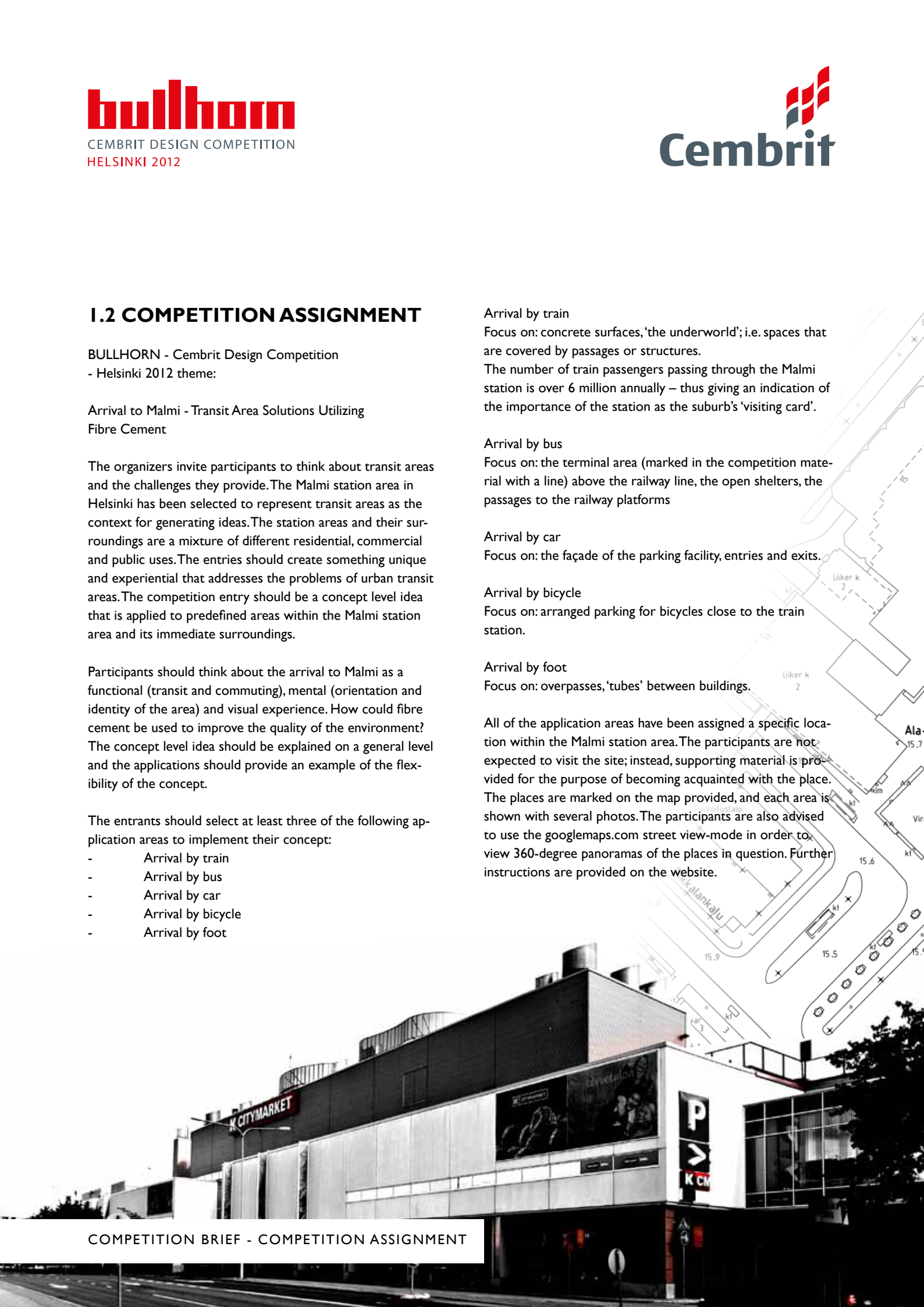
Arrival by bus
Focus on: the terminal area (marked in the competition material with a line) above the railway line, the open shelters, the passages to the railway platforms

Arrival by car
Focus on: the façade of the parking facility, entries and exits.

Arrival by bicycle
Focus on: arranged parking for bicycles close to the train station.

Arrival by foot
Focus on: overpasses, 'tubes' between buildings.

All of the application areas have been assigned a specific location within the Malmi station area. The participants are not expected to visit the site; instead, supporting material is provided for the purpose of becoming acquainted with the place. The places are marked on the map provided, and each area is shown with several photos. The participants are also advised to use the googlemaps.com street view-mode in order to view 360-degree panoramas of the places in question. Further instructions are provided on the website.



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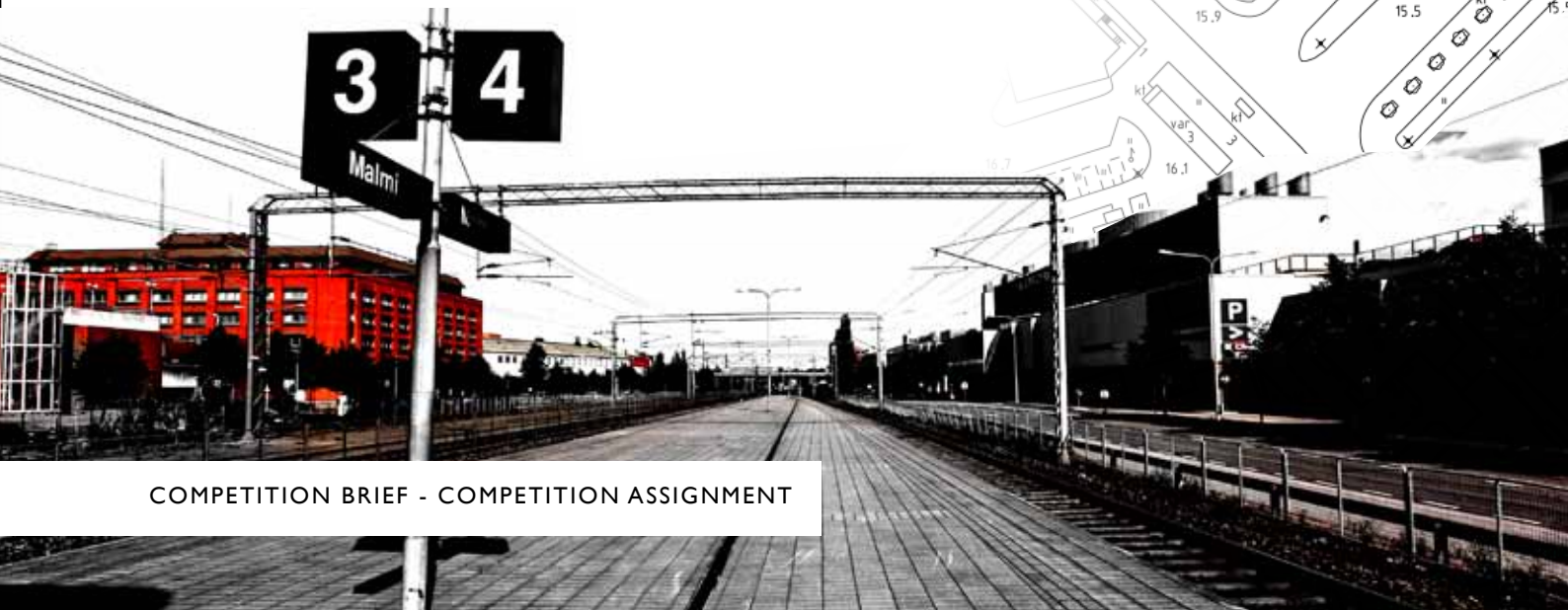
ARRIVAL BY TRAIN

Focus on: the terminal area (marked in the competition material with a line) above the railway line, the open shelters, the passages to the railway platforms



COMPETITION BRIEF - COMPETITION ASSIGNMENT

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CEMBRIT DESIGN COMPETITION
HELSINKI 2012

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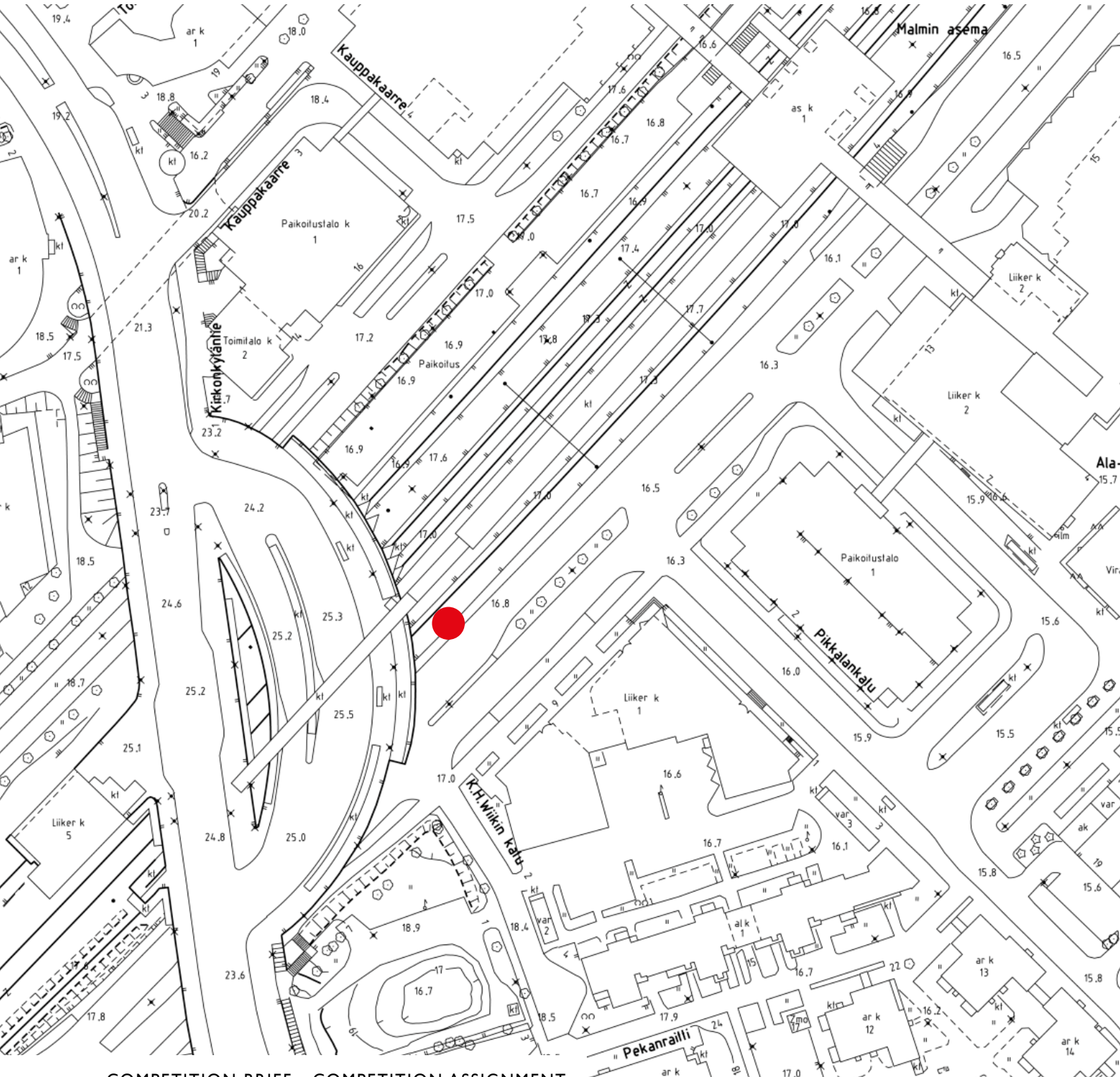
ARRIVAL BY TRAIN



COMPETITION BRIEF - COMPETITION ASSIGNMENT

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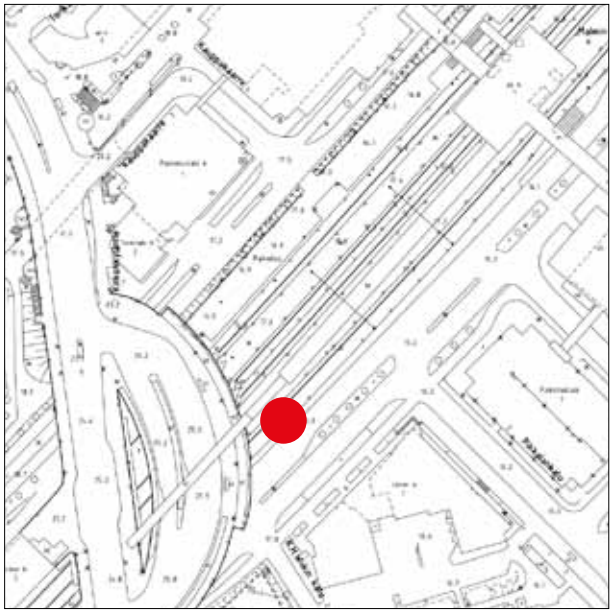
ARRIVAL BY TRAIN



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CEMBRIT DESIGN COMPETITION
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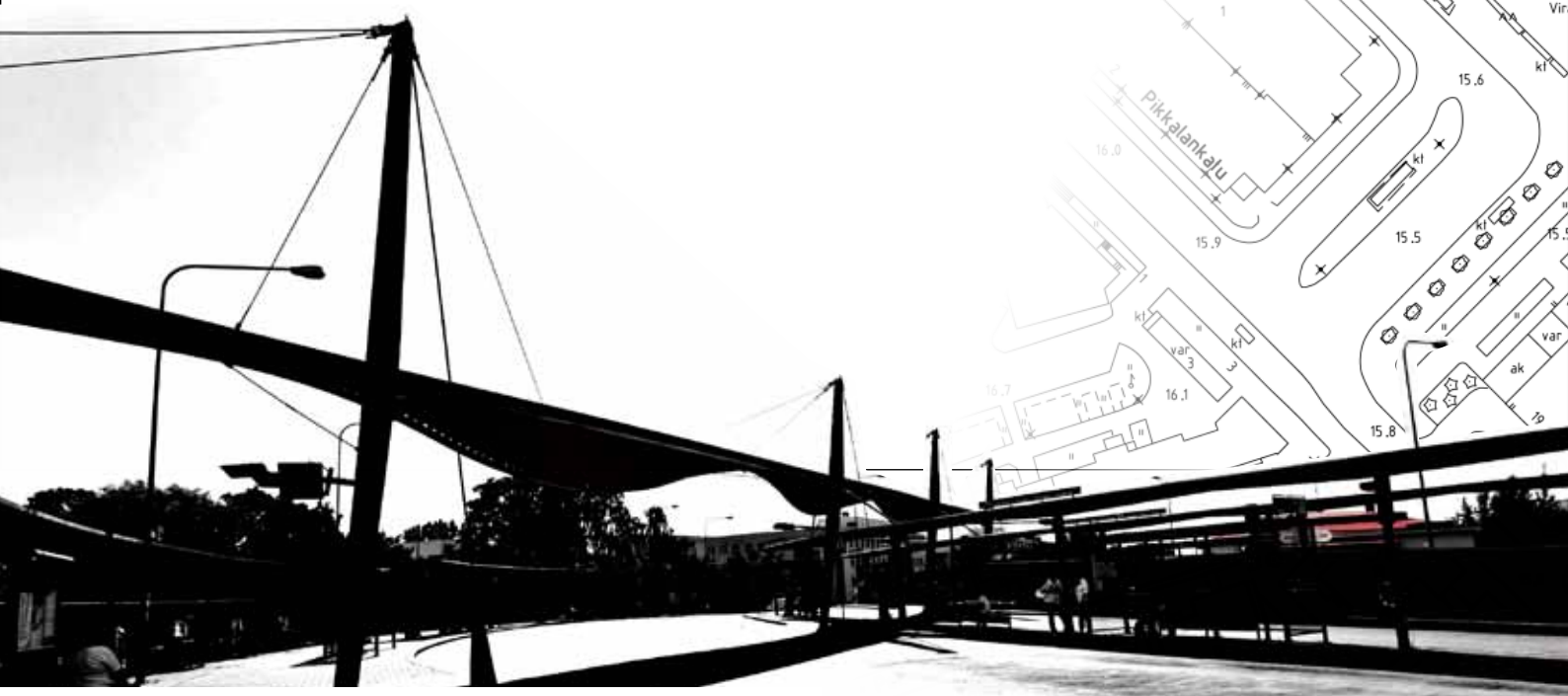
ARRIVAL BY BUS

Focus on: the terminal area (marked in the competition material with a line) above the railway line, the open shelters, the passages to the railway platforms



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CEMBRIT DESIGN COMPETITION
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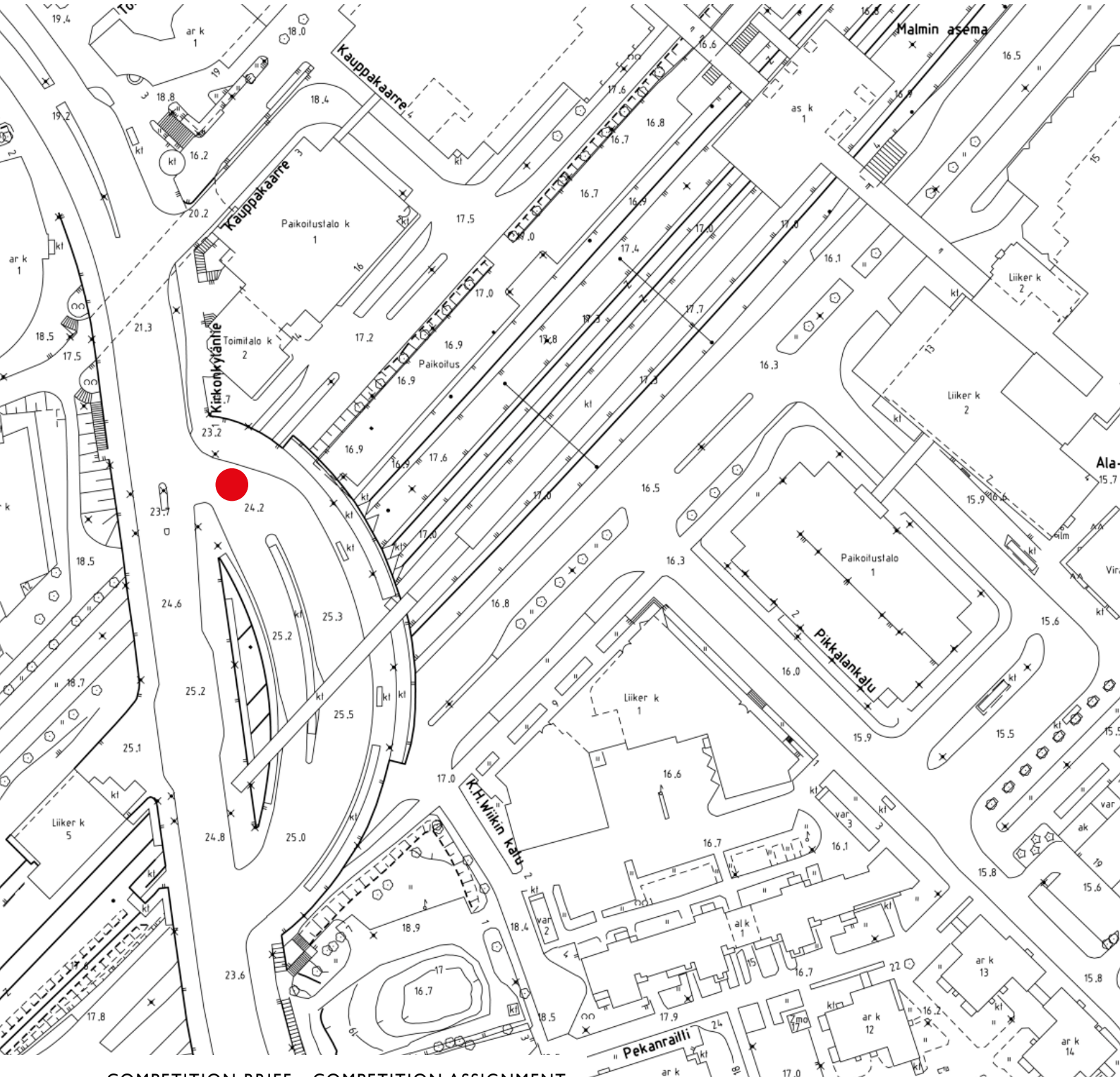
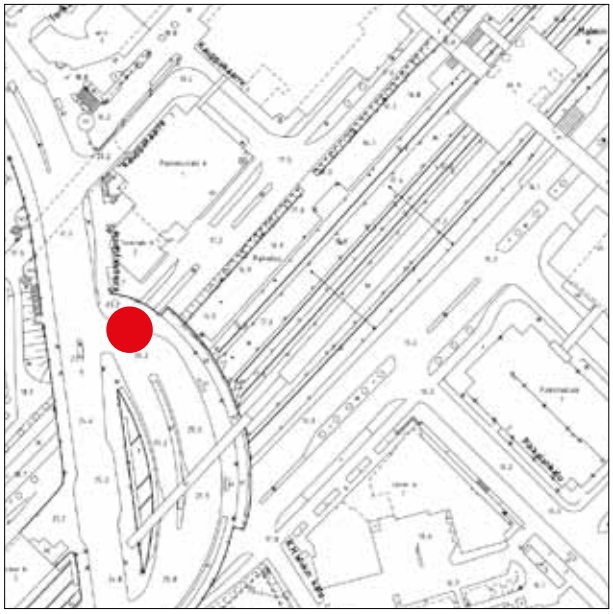
ARRIVAL BY BUS



COMPETITION BRIEF - COMPETITION ASSIGNMENT

ARRIVAL BY BUS



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ARRIVAL BY CAR

Focus on: the façade of the parking facility, entries and exits.

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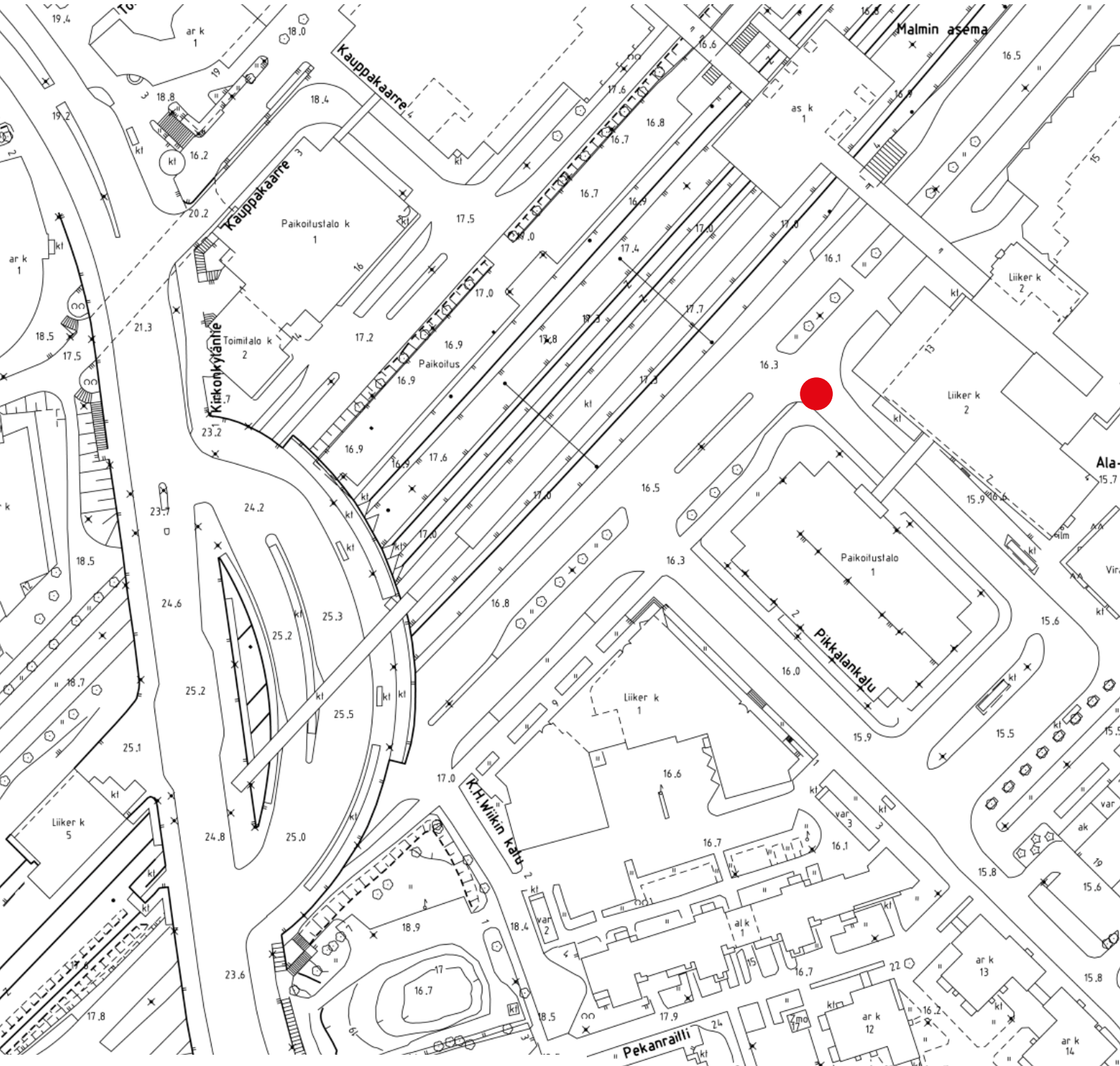
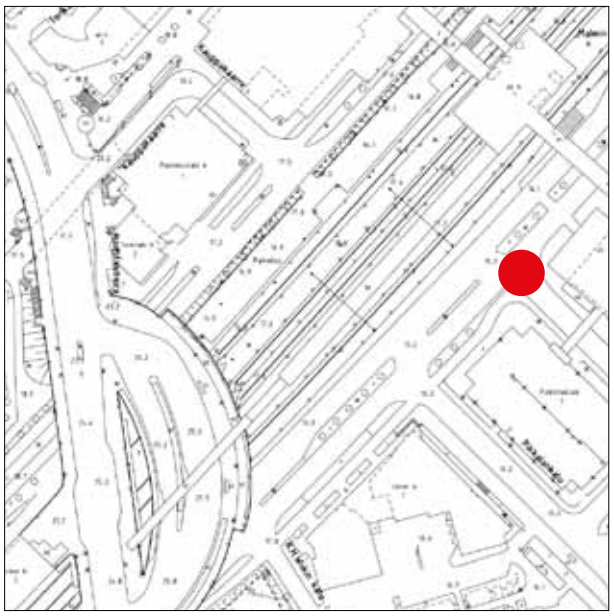
ARRIVAL BY CAR



ARRIVAL BY CAR



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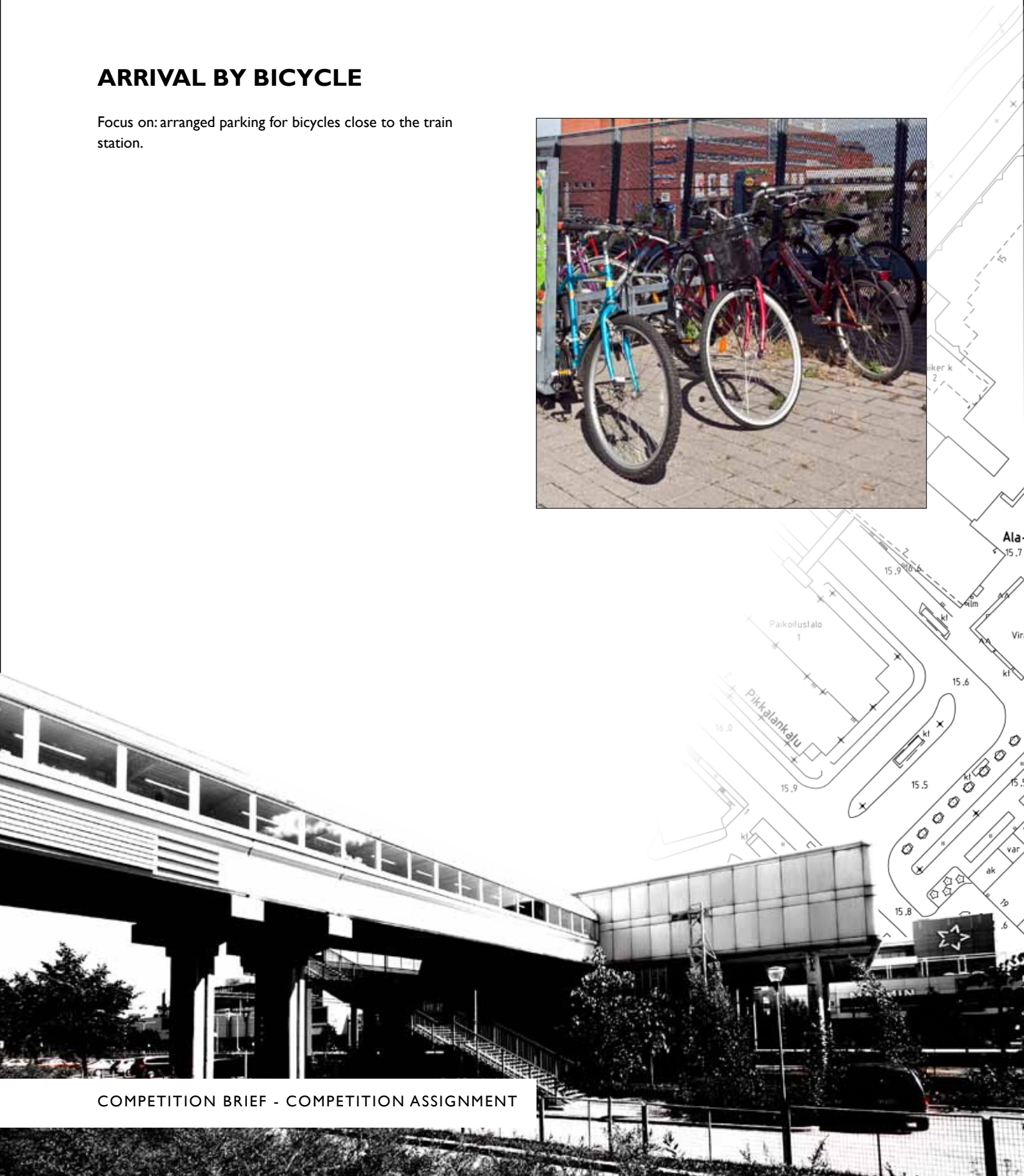
ARRIVAL BY BICYCLE

Focus on: arranged parking for bicycles close to the train station.



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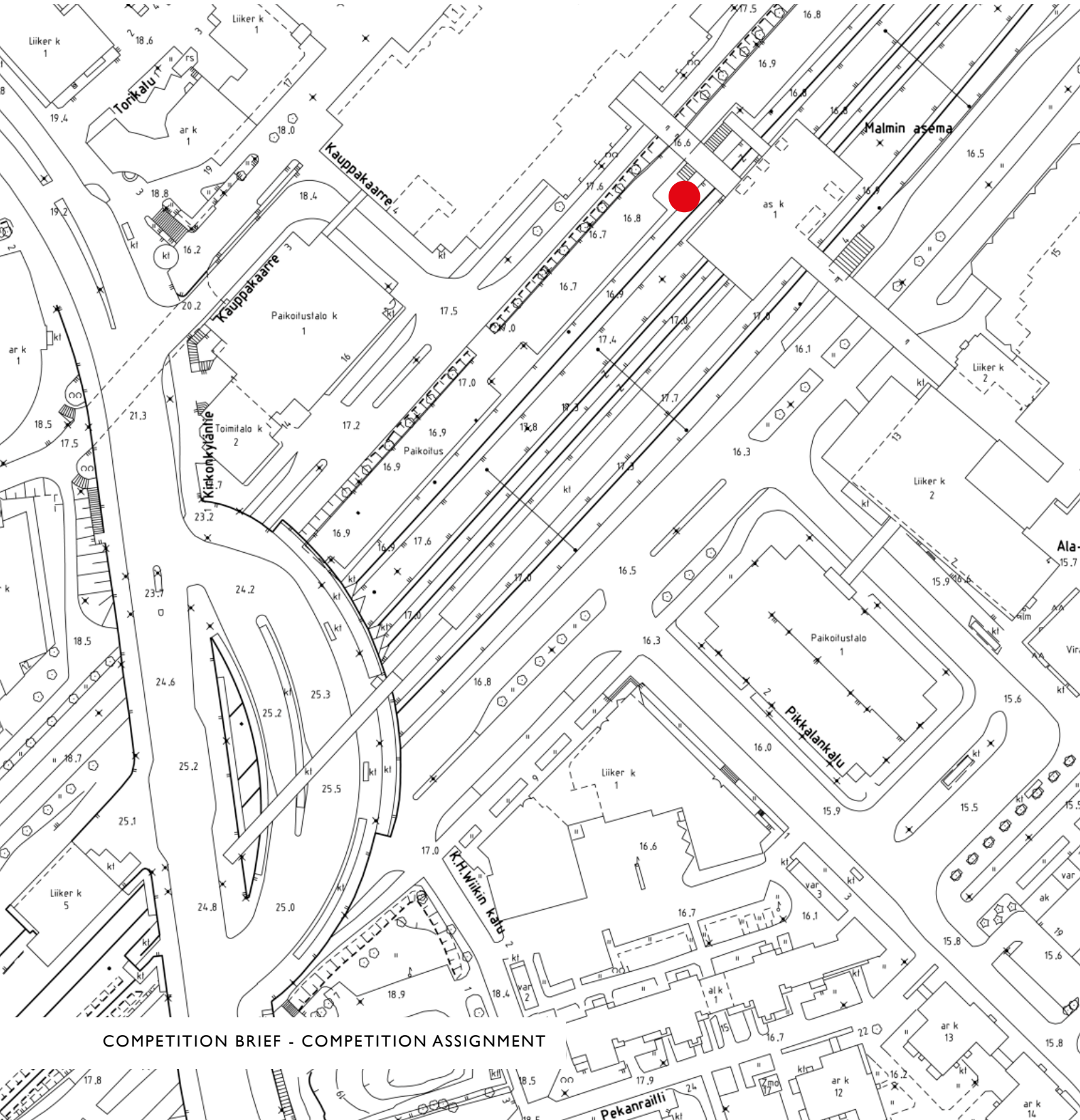
ARRIVAL BY BICYCLE



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ARRIVAL BY BICYCLE

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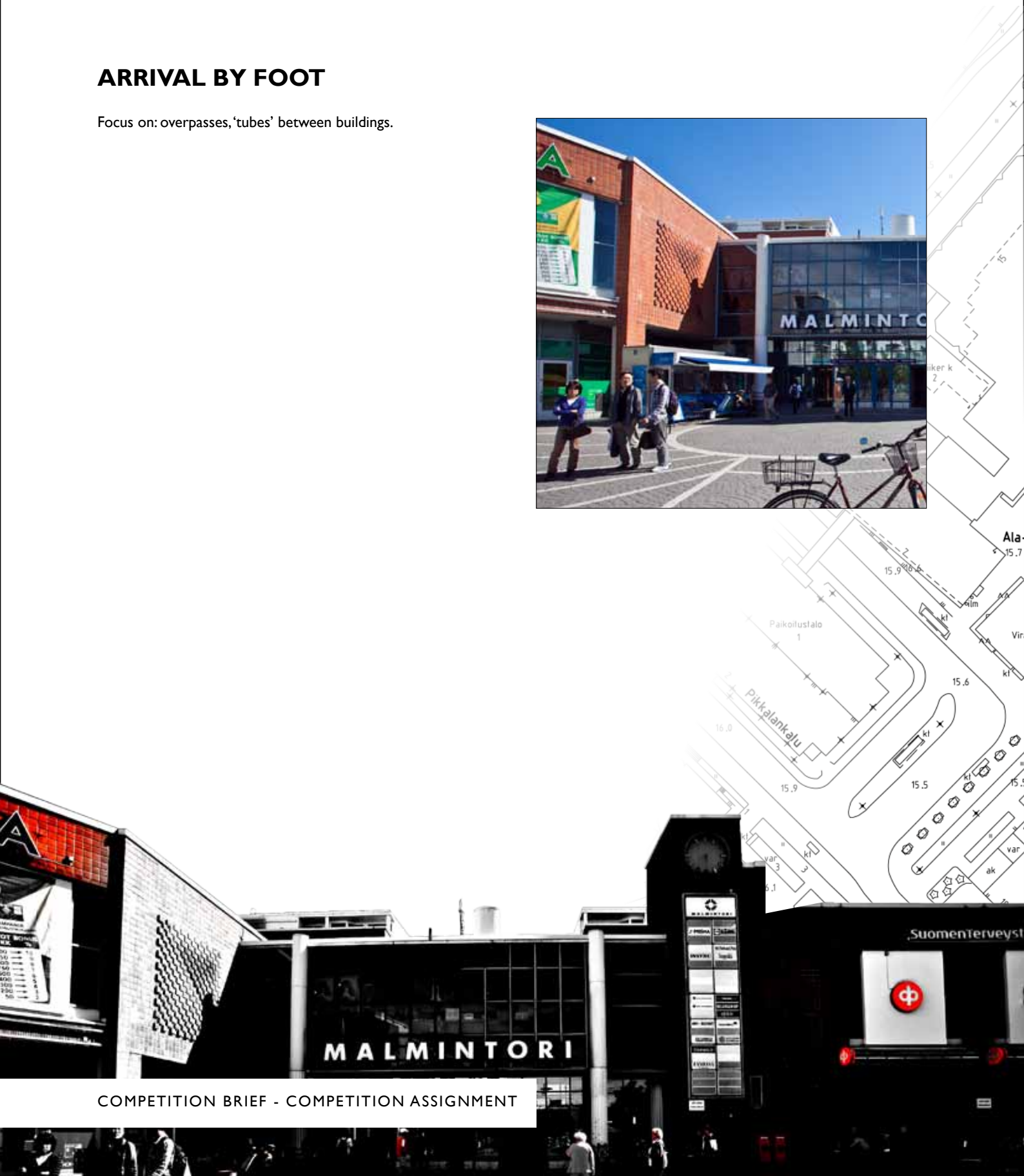
ARRIVAL BY FOOT

Focus on: overpasses, 'tubes' between buildings.



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CEMBRIT DESIGN COMPETITION
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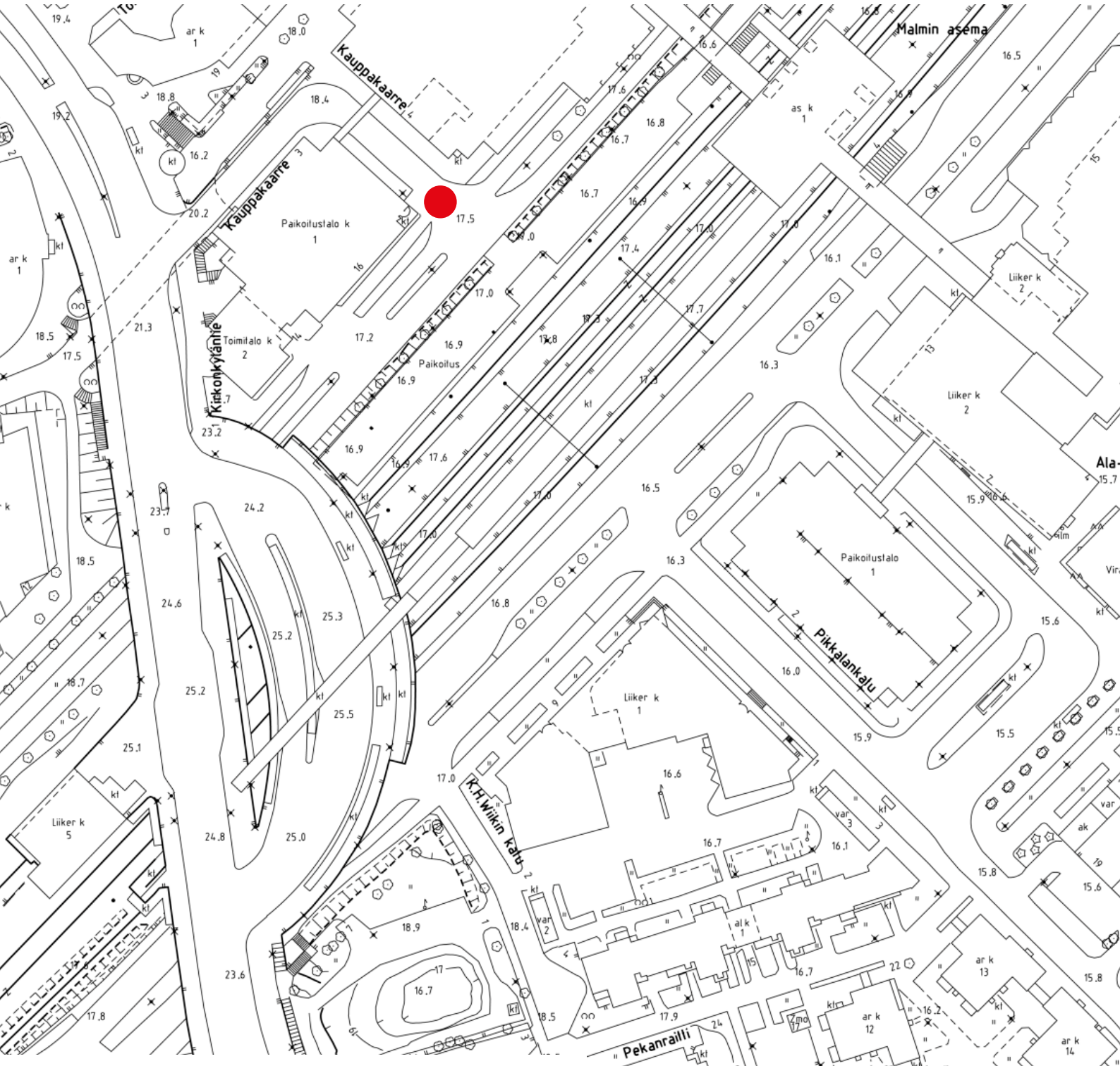
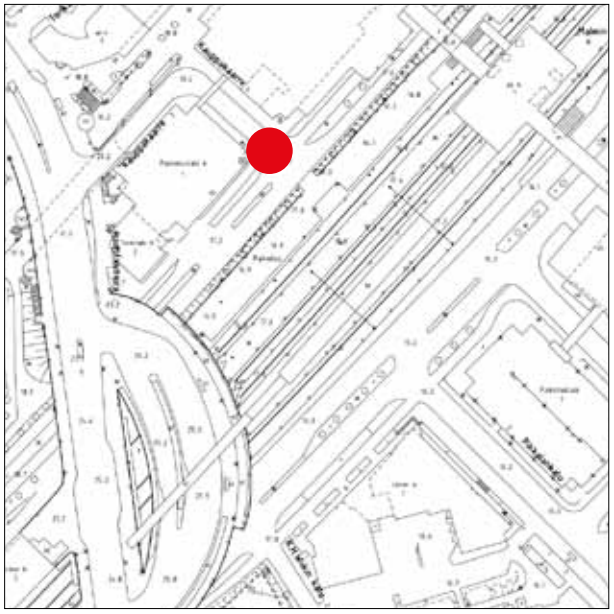
ARRIVAL BY FOOT



COMPETITION BRIEF - COMPETITION ASSIGNMENT

ARRIVAL BY FOOT



1.3 OBJECTIVES OF THE COMPETITION

The objective is to find concept-level solutions for the improvement of the quality of a transit area and its surrounding environment by using fibre cement as a material. Another objective is to find universally applicable ways to improve the attractiveness of suburbs.

The motivations for the design task include the following:

- increasing the attractiveness of the area
- improving the feeling of safety and accessibility
- supporting the identity of the area

1.4 DESIGN INSTRUCTIONS

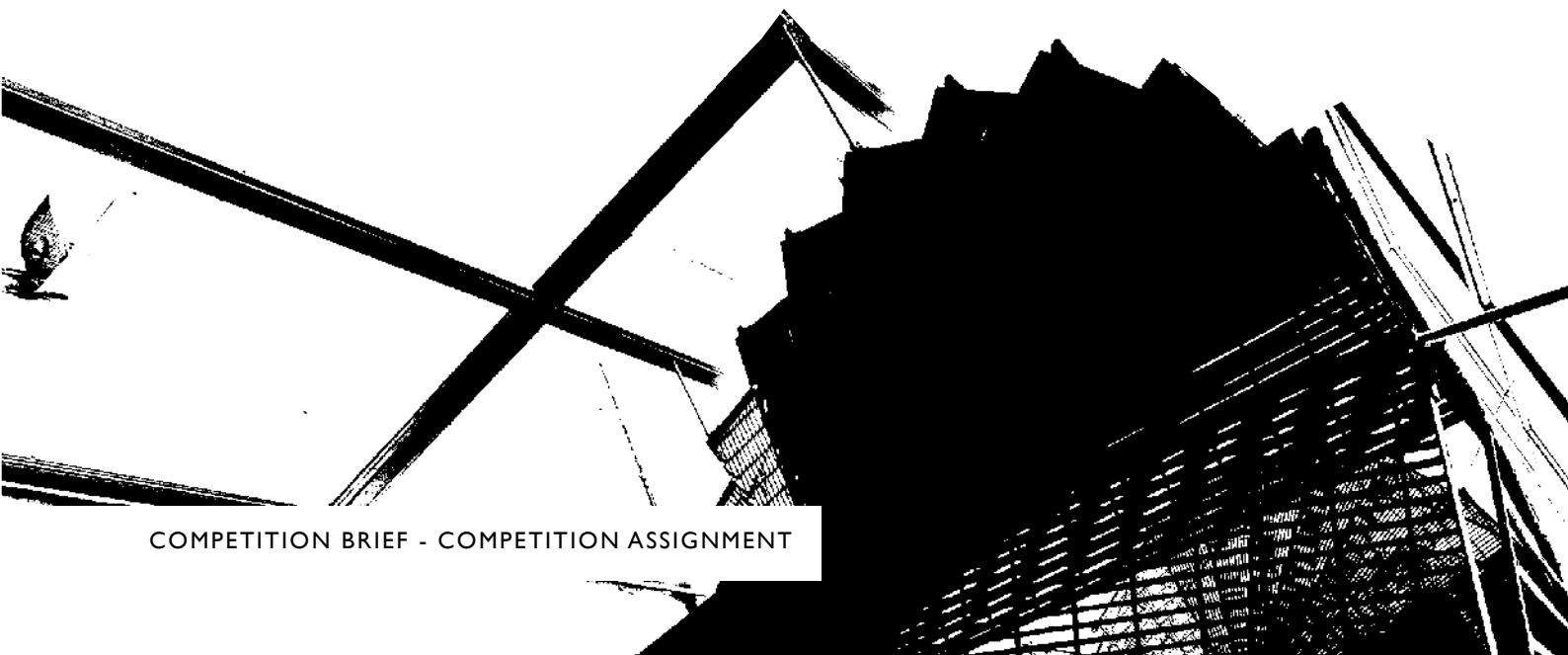
The competition is seeking ideas-level solutions, and hence the participants are not expected to submit detailed structural drawings or solve the final implementability of the proposal. Visualizations of the proposals can be made using the photographs provided by the organizers.

1.5 EVALUATION CRITERIA FOR THE COMPETITION PROPOSALS

The competition entries will be evaluated by the jury in accordance with the following criteria:

- The novelty, element of surprise and artistic impression of the idea.
- Diversity, and the ability to find new applications for fibre cement that are unique and true to the material, both aesthetically and functionally. The possibility to develop the idea further together with Cembrit; the potential for wider applicability within Cembrit.
- Applicability in transit areas in general, and the ability to capture the identity of Malmi in the proposal.

The evaluation will emphasize the general quality of the solution. The functionality of the design as a whole is a more decisive factor than the flawlessness of the details.



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2 COMPETITION INVITATION

Arrival to Malmi
Urban Transit Area Solutions Utilizing Fibre Cement

2.1 ORGANIZERS, AFFILIATIONS, CHARACTER AND PURPOSE OF THE COMPETITION

Cembrit aims to provide inspiration and solutions for people who want outstanding life settings. This means products that enable innovative and insightful solutions in construction, both functionally and visually. Therefore, the company aims to take further the use of fibre cement and to reinvent the material in ways that bring out its best qualities, that would enable unique solutions for built environments; flexibility and potential allow for implementations that yield more interesting end results. In an ideal world the material should not restrain the vision of the architect - on the contrary, it should inspire and allow expression.

The World Design Capital Helsinki 2012 is an excellent venue to launch the ´Cembrit Design Competition´. This international competition is the first of its kind, which will be repeated to establish open and inspiring ways to communicate between architects, designers and Cembrit product development, and to create together better built environments worldwide.

The theme of the WDC 2012, Open Helsinki – Embedding Design in Life, resonates well with Cembrit's ambition of creating solutions for outstanding life settings. One way of doing that is to introduce design in contexts where previously bulk solutions have resulted in monotonous and dull end results. The built environment sets the scene for urban dwellers to live their lives. Offering possibilities for realizing unique and aesthetically higher standard architecture and design influences the quality of life; rather than settling for the most obvious, cheapest and generic options.

The purpose of the competition is also to attract attention to environments that would not typically receive attention in a design or architecture competition. The outcomes of the competition will receive international recognition through the Cembrit international network e.g. winners exhibition in May during WDC Helsinki 2012 year and travelling exhibition in selected countries. More about international recognition in can be found from chapter 2.3 Deciding the winner, publishing the results, and Exhibiting the proposals.

Cembrit operates from Denmark, is represented in more than 16 European countries and has 1200 employees. Situated in Lohja, some 45 km west of Helsinki, is Cembrit's flat board factory, which employs 170 people. Cembrit is part of the FLSmidth A/S conglomerate.

2.2 PARTICIPANT ELIGIBILITY

The competition is aimed at professional architects and designers, or students in these fields. Participant can be individual person or a team. Composition of a team can be freely chosen and pParticipating teams can include other experts if their knowledge is relevant to the proposal.

Participation to this competition is not open to persons mentioned in the SAFA/Ornamo competition rules, Chapter 5. Eligibility:

Architecture competitions are not open to members of the jury panel, advisory experts or the competition secretary. The business associates and the close relations of competition judges are also excluded from the competition. Furthermore, anyone who has been involved in the preparation of the competition conditions to the extent that he or she would have a clear advantage over other competitors is ineligible.

The SAFA competitions committee shall give rulings on eligibility in uncertain cases.

2.3 PRIZES AND REMUNERATION

The jury will select three winning proposals to be exhibited in the Winners' Exhibition in May 2012. The selected winners participating in the exhibition will each receive a monetary prize. The winners will be expected to act as advisors for the exhibition of their proposal and to provide comments for the prototype development (comments to plans to be sent by email). The prototypes will be realized for the purpose of the exhibition and can be built with various techniques, which will be evaluated following the jury evaluation. The jury will decide the final order of the entries after the prototype phase based upon physical prototypes or pictures of them, before the exhibition opening ceremony on 10th May 2012.

Prizes and remuneration

1st prize	10 000 eur
2nd prize	7 500 eur
3rd prize	5 000 eur

Additionally, the jury is able to award honorary mentions to selected competition suggestions.

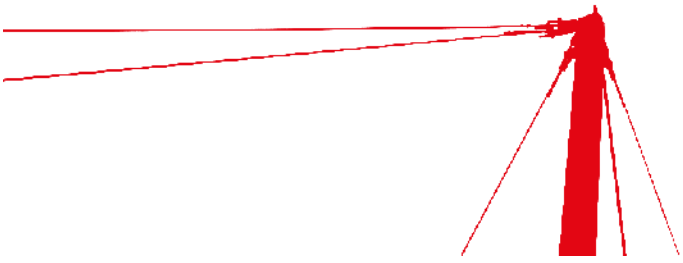
The jury retains the right to adjust the distribution of the prize money if necessary, according to SAFA/Ornamo competition rules, with the minimum prize money being 2.500 eur. The prizes are taxable income for the recipients. The prizes are paid through SAFA/Ornamo and a fee of 7% of the prizes will be deducted, according to SAFA/Ornamo rules.

The payment of the prize money gives the competition organizers an option on the use of the prize-winning designs for one year from the day the jury has agreed on the awards. The reproduction rights are subject to the payment of a fee or royalty to be negotiated with the individual design or design team.

If the competition organizers wish to take a year's option on the use of any design entered in the competition that has not received a prize, they may do so against payment to the competitor of a fee to be agreed between the promoters and the competitor concerned.

The prizes will be paid within a period of one months after the Winners' Exhibition opening ceremony in May 2012. The three winning teams will be invited to the opening ceremony and their travel expenses paid (max. 2500 eur for international teams, 1000 eur for domestic participants).

The competitors are responsible for any taxes that may be applicable in their respective countries.



2.4 JURY

The members of the jury are:

Mr Thomas Carstens,
Architect, Partner, MAA, Arkitema Architects (Denmark)

N.N. Designer – to be confirmed

Mr Arni Aromaa, CEO, Artistic Director,
MA/IDBM, Pentagon Design Oy (Finland)

Mr Jan Deding, President & CEO,
Cembrit Holding A/S (Denmark)

Mr Elias Rainio, Architect,
Helsinki City Planning Department (Finland)

Mr Esa Ruskeepää, Architect SAFA,
Heikkinen-Komonen Architects, appointed by SAFA (Finland)

Mrs Ulla-Kirsti Junttila, Urban Designer,
Senior Adviser, Sito Oy, appointed by ORNAMO (Finland)

Ms Virpi Riekkinen, Cembrit Oy,
Secretary of the Jury

President & CEO of Cembrit Holding A/S
Mr Jan Deding will be acting as a chairman of the jury.

The secretary will not take part in the evaluation of
the entries.

An independent moderator is to be appointed for the competition, acting between the organizer, the jury and the entrants. The moderator is responsible for: 1) receiving all submissions, 2) facilitating the Q&A process on the competition website, 3) opening the submissions after the competition deadline, 4) keeping a register of all submissions, 5) passing all submissions to the jury.






2.5 APPROVAL OF THE COMPETITION PROGRAM

The competition program has been approved by the organisers of the competition as well as the SAFA competition secretary. Appendices have been approved by organizers and the jury of the competition. The SAFA Competition Rules by the Finnish Association of Architects (SAFA) are followed in the competition (see: www.safa.fi).

2.6 SUBMITTING THE COMPETITION DOCUMENTS

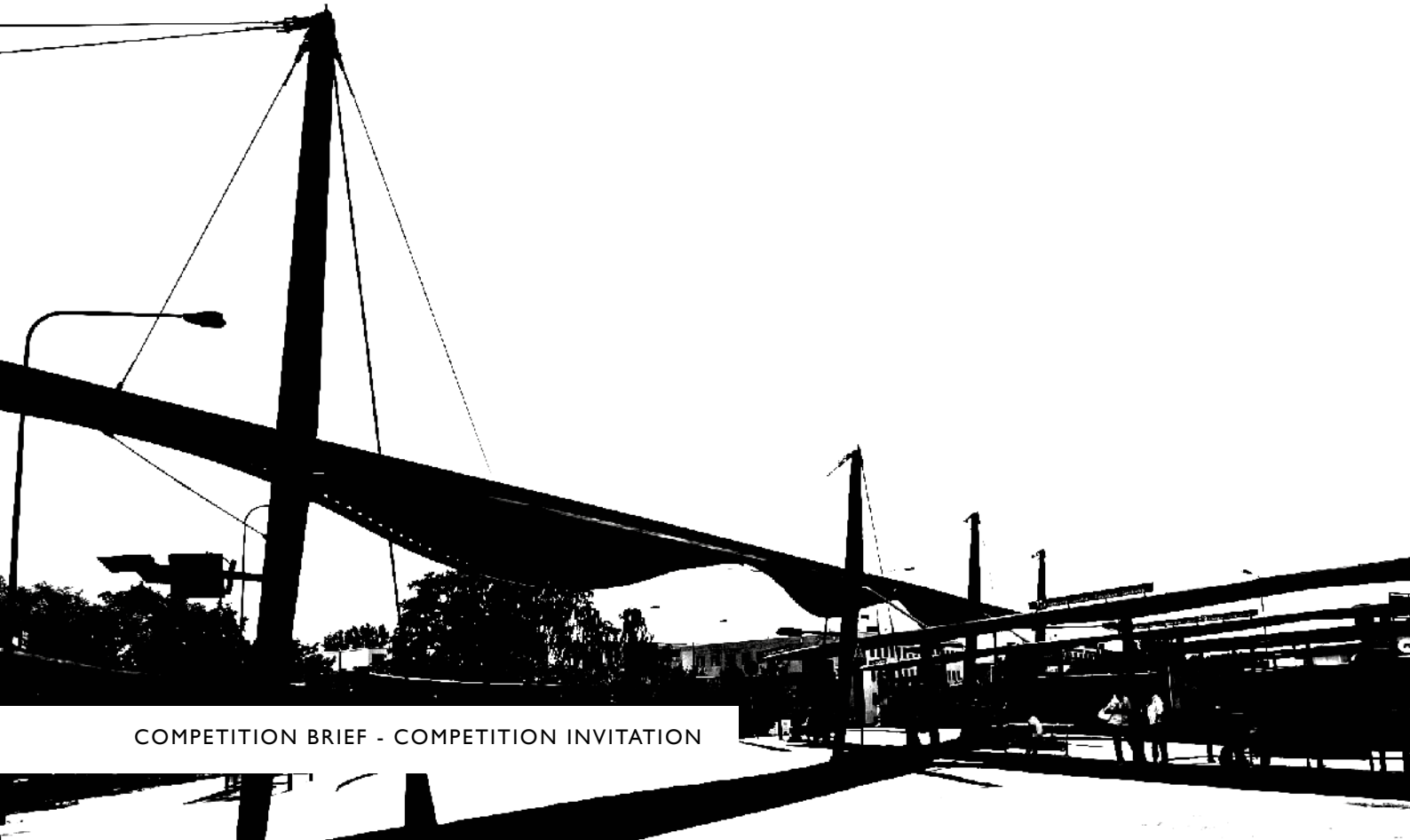
The competition programme and appendices are available for download on the competition website at www.cembrit.com/bullhorn on October 3, 2011.

The participants can register on the website to receive an "inspiration package" with material samples. 200 material sample kits are available, distributed in order of the received request. Receiving an "inspiration package" is not a prerequisite for entering the competition.

2.7 COMPETITION SCHEDULE

Competition schedule:

Competition launch	October 3, 2011
Deadline for questions	November 1, 2011
Answers to questions (published on website)	November 15, 2011
Deadline for entries	January 15, 2012
Results published	May 10, 2012



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HELSINKI 2012

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3 TECHNICAL INFORMATION CONCERNING THE COMPETITION

Arrival to Malmi
Urban Transit Area Solutions Utilizing Fibre Cement

3.1 PROGRAM DOCUMENTS

The competition documents include the following appendices in addition to the competition programme:

- Malmi area city plan (dwg- and pdf-formats)
- aerial photo of the area
- compilation of photographs of the area
- "material inspiration" package (optional, 200 kits available)

The participants can register on the website to receive an "inspiration package" that includes material samples. 200 material sample kits are available, distributed in order of the received request. Receiving an "inspiration package" is not a prerequisite for entering the competition.

3.2 QUESTIONS ABOUT THE COMPETITION

Q&A about the competition is to be arranged on the competition website according to the following schedule:

Deadline for questions	November 1, 2011
Answers to questions (published on the website)	November 15, 2011

The competition language (rules, Q&A, entries) is English. Further information is available on the competition website, to be launched on October 3 2011.

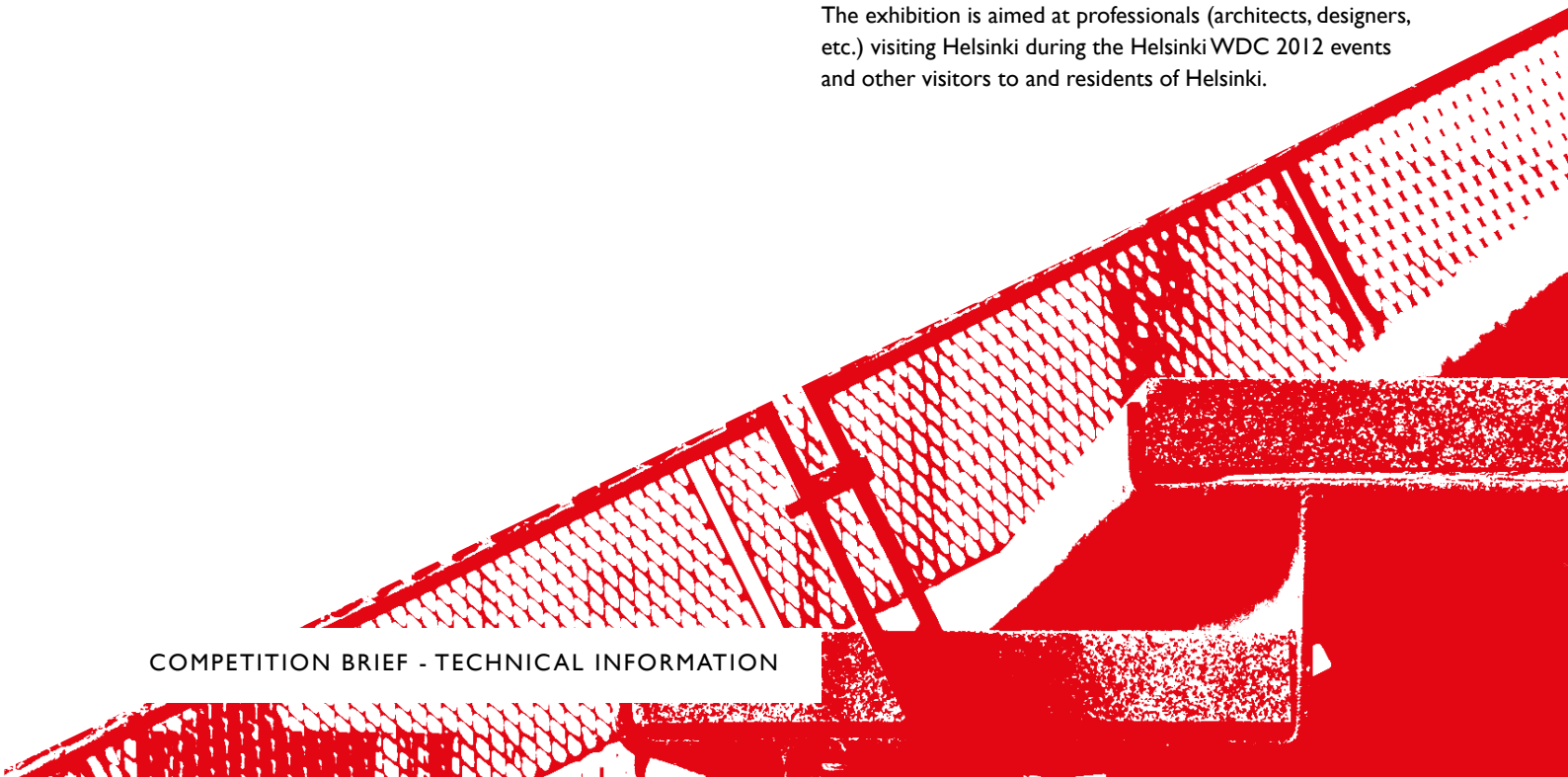
3.3 DECIDING THE WINNER, PUBLISHING THE RESULTS, AND EXHIBITING THE PROPOSALS

The contact persons of the winning proposals as well as any entries awarded an honorary mention will be informed after the jury decision by e-mail at the beginning of February 2012. All the other entrants will be informed by e-mail at the same time about not being selected for the exhibition.

The selected competition entries will be presented in a Winners' Exhibition in May 2012. The awarded ideas will be developed into prototypes to be displayed; the honorary mentions will be presented as printed posters. A number of European architects will be invited to attend the opening ceremony, as well as to visit the exhibition throughout the duration of the WDC year. International PR will be handled through the extensive network of Cembrit Holding A/S.

Cembrit will do their utmost to promote the ideas generated in the competition throughout their international network. This will generate international PR and peer-to-peer recognition throughout Europe for the winning proposals. Among other things, the exhibition will travel to selected countries and the winning teams may be invited to open the exhibitions with a lecture based on their winning proposals. In all promotion activities competition organizers will present the winning teams/persons as property holders of the awarded ideas.

The exhibition is aimed at professionals (architects, designers, etc.) visiting Helsinki during the Helsinki WDC 2012 events and other visitors to and residents of Helsinki.



3.4 FURTHER PROCEDURES FOLLOWING THE COMPETITION

Winners' Exhibition – Helsinki WDC 2012

The jury will select three winners among the entries, which will be further developed for an exhibition, to take place in May 2012. The exhibition is part of the Helsinki World Design Capital 2012 programme. Cembrit and an appointed exhibition team will be responsible for developing the entries as exhibition pieces. The competition winners will act as advisors for the implementation of the exhibition. Possible honorary mentions will be presented in the exhibition as posters.

The exhibition will be arranged in a space specially designed for this purpose. The possibility to arrange the exhibition in the Malmi station area will be looked into after the deadline for the submission of proposals has passed. Helsinki City Planning Department will include in the exhibition information about transit areas in general and also specifically Helsinki and Malmi. The exhibition is aimed at residents of Helsinki, visitors to the city and professionals visiting the Helsinki WDC 2012 events.

Details of the Winners' Exhibition will be sent to the awarded participants and entries awarded an honorary mention in February 2012.

Possibility for product development cooperation with Cembrit

The entries in the competition may be further developed into commercial products, based upon their potential and suitability from Cembrit's perspective. Cembrit will negotiate with the entrants regarding cooperation, compensation and schedules. The full rights of the entries remain with the entrants (except for the use mentioned in section 2.5, Right to Use the Competition Proposals).

3.5 RIGHT TO USE THE COMPETITION PROPOSALS

The payment of the prize money gives the competition organizers an option on the use of the prize-winning designs for one year from the day the jury has agreed on the awards. Organizers have
Cembrit has the right to use the awarded competition entries as part of the competition communications (website, communications material related to the competition and any following similar competitions). The awarded entries may be displayed as part of the Winners' Exhibition; the prototypes are to be developed together with the participants. Any entries awarded an honorary mention may be exhibited as posters, with the permission of the participant. In all promotion activities competition organizers will present the winning teams/persons as property holders of the awarded ideas.

As stated in chapter 2.4 Further procedures following the competition, the entries in the competition may be further developed into commercial products, based upon their potential and suitability from Cembrit's perspective. The production rights are subject to the payment of a fee or royalty to be negotiated with the individual design or design team.

If the successful competitor/team do not have the necessary experience or facilities available for the successful completion or production, or is unable to undertake such work within a reasonable period after the result of the competition has been announced, then a consultant or design organisation may be recommended by the jury to collaborate with the competitor.

2.6 RETURNING THE COMPETITION PROPOSALS

The competition proposals will not be returned.

3.7 INSURING THE COMPETITION PROPOSALS

The organizers do not offer any insurance for the competition proposals.

3.8 RULES OF THE COMPETITION

The competition is an open architecture and design competition. The competition follows the SAFA competition rules, which were approved in May 2008 by SAFA's Delegates Council. See: www.safa.fi

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4 SUBMITTAL AND GENERAL GUIDELINES

Arrival to Malmi
Urban Transit Area Solutions Utilizing Fibre Cement

4.1 REQUIRED DOCUMENTS

- Concept description in writing (max. 1 A4)
- 3D/2D visualizations of the concept
- Projections in scale 1/20
- Structural drawings (principles) in scale 1/20 – not obligatory

The format of the entries is A2. The entries are printed and fixed into hardboard. Maximum number of panels is 3. The entries are mailed to the competition's independent moderator. The entry should also be submitted in a pdf-format on a memory stick or CD.

4.2 CONFIDENTIALITY

All the documents, including the memory stick or CD, should be marked with a pseudonym chosen by the entrant. A sealed, non-see-through envelope should be included with the material and marked with the same pseudonym.

The following information should be included in a document in the envelope:

- the pseudonym.
- the name/s, degree/s and possible company name of the participants and any assisting persons.
- a contact person, address and phone number.
- the person/s owning the copyright of the entry.

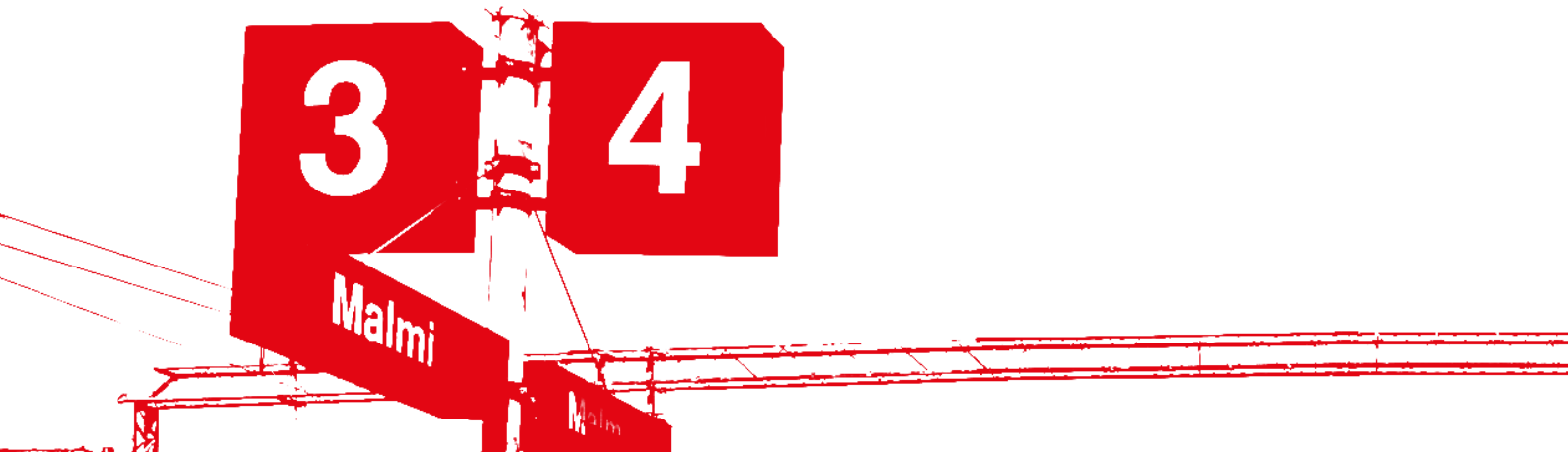
4.3 SUBMITTING THE COMPETITION PROPOSAL

The competition ends on Sunday January 15, 2012, at 16.00 Central European Time. The competition entries marked with "BULLHORN - Cembrit Design Competition - Helsinki 2012" must be submitted to a post office or similar delivery service with verified proof that it was posted no later than that date. Entries must be sent to the following address:

CEMBRIT OY,
Minna Kaipainen / Competition moderator
POB 46,
FIN - 08681 LOHJA,
FINLAND

The competition proposals must arrive to the above address at the latest by Friday January 27, 2012. The pseudonyms of all proposals arrived by that date and marked with "BULLHORN - Cembrit Design Competition - Helsinki 2012" are published on the competition web-page (www.cembrit.com/bullhorn).

Competition entries will not be returned.



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ATTATCHMENT A:
Fibre cement and production process

RAW MATERIALS

Shortly said fibre cement is concrete which is reinforced with short fibres. The fibres give strength and flexibility to the products, which means fibre cement products can be made in thin format i.e. lighter in weight. Fibre cement raw materials are:

Cement
The main ingredient of fibre cement is Ordinary Portland Cement, which is a mixture of burnt limestone and clay that can set and harden when exposed to water.

PVA
Engineered PVA (polyvinyl alcohol) fibres are used for reinforcement and increase product strength, durability and flexibility.

Cellulose
Wood fibres contribute to fibre cement products as reinforcement and giving flexibility.

Fillers
Filler is the common name for mainly passive (i.e. non-binding) raw material that can add desired properties. Examples of fillers are limestone, silica and recycled fibre cement.

Water
Water is needed to get the process started.

None of the raw materials are hazardous to health. Fibre cement can be compared to concrete when health, safety and environmental aspects are evaluated.

PRODUCTION PROCESS

The raw materials are mixed with water to form a fiber cement slurry. It is pumped to a machine which resembles those used in papermaking. The slurry is filtrated on a continuous felt and collected onto a rotating cylinder to achieve fresh fibre cement thick enough. The fibre cement is cut to proper dimensions (wet cutting), compressed in a hydraulic press (in order to smoothen the surfaces and increase the density and strength), and cured in air for two to three weeks. Later on the fibre cement is inspected (control of final product), dried, edges trimmed, labelled and packaged.

Fibre cement can be coloured through with different mineral pigments, which enables the use of variety of colours. In wet form, before the curing phase, fibre cement is flexible and can be moulded into different forms, however reinforcement needs to be taken into account. The surface of fibre cement can be patterned during the production process. Today Cembrit's fibre cement production is built for board type of products i.e. flat, square form products with thickness ranging from 3,2 mm into 18 mm.

Raw materials in stock waiting to be mixed with water to begin the process.

The production line: in the front is the collecting cylinder, behind it the felt with fibre cement slurry, in background the head-box, premixer and in the second floor the mixing plant.

The line manager checks carefully the status of the production machine.

Fibre cement products, in photo's case boards, are stacked between oiled steel plates. These stacks will be immediately pressed. The pressing cycle takes about one hour.

After pressing and 10 hours pre-curing the steel templates will be separated and the fresh fibre cement products are taken to the curing hall in which they stay about 2 to 3 weeks.

At the age of three weeks the fibre cement products come from the curing hall to the dryer where excess water will be evaporated.

After drying fibre cement products are taken to the trimming line.

The edges are trimmed and optional coating for products is applied.

After 3 to 4 weeks from the start of the process the products are packaged and ready to be delivered to customers.

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OPTIONS FOR PROCESSING FIBRE CEMENT AFTER CURING

Cured fibre cement can be tooled with different kinds of CNC cuttings to form a pattern or forms to products surface or through the board.

Colour range for fibre cement is extensive ranging from soft neutrals to vibrant brights. In addition for through colouring the cement slurry, the surface of fibre cement product can be coated with transparent, semitransparent or fully covering coatings.

The fixing mechanism for fibre cement products e.g. to form different surfaces, can be concealed or exposed as part of the overall appearance.

Fibre cement can be combined with other contemporary building materials, complementing them: e.g., steel, glass, brick, stone, and wood.