

EUROPAN 15 HALMSTAD

PRODUCTIVE CITIES - SWEDEN

"Halmstad central station area - a new
connective hub for people and transport that
ties the city together as a whole"

Europan is a biennial
competition for young
architects under 40
years of age.



Europan SE

HALMSTAD ■



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GENERAL INFORMATION

Site Representative

Emeli Cornelius
Municipality of Halmstad

Actors involved

Trafikverket (Swedish Transport Administration), Municipality of Halmstad, Region Halland

Team representative

Urban planner, landscaper or architect

Expected skills regarding the site's issues and characteristics

Architecture, landscape architecture, urban planning, social anthropology

Communication

Anonymous local exhibition after the 1st jury round.

After the competition there will be a public prize ceremony, a catalogue of results will be printed, and the winners will be published on the website of Architects Sweden.

Jury evaluation

With the participation of the site representative.

Post-competition intermediate procedure

Meeting and workshop with the municipality and the prize winning team(s).

The ambition of the municipality is to involve the prize winning team(s) in an implementation process.

PARTICIPATE IN EUROPAN 15!



INTRO

The Municipality of Halmstad and European Sweden would like to thank you for choosing to participate in European 15. The competition brief provides information about the character of the site and plot, and includes a list of references with links to supplementary information. In addition to this material, you can download high-resolution images and drawings from the project database. Please read the condensed "Short Site File" brief parallel to this unabridged competition brief. The theme of European 15 is "The Productive City". As an extension of the theme of European 14, this edition of the competition applies a broader perspective in exploring a city with natural modes of production. Central thematic concepts are: resources, mobility and equity. For questions and answers regarding the brief or competition rules, please consult the forum on European Europe's official website.

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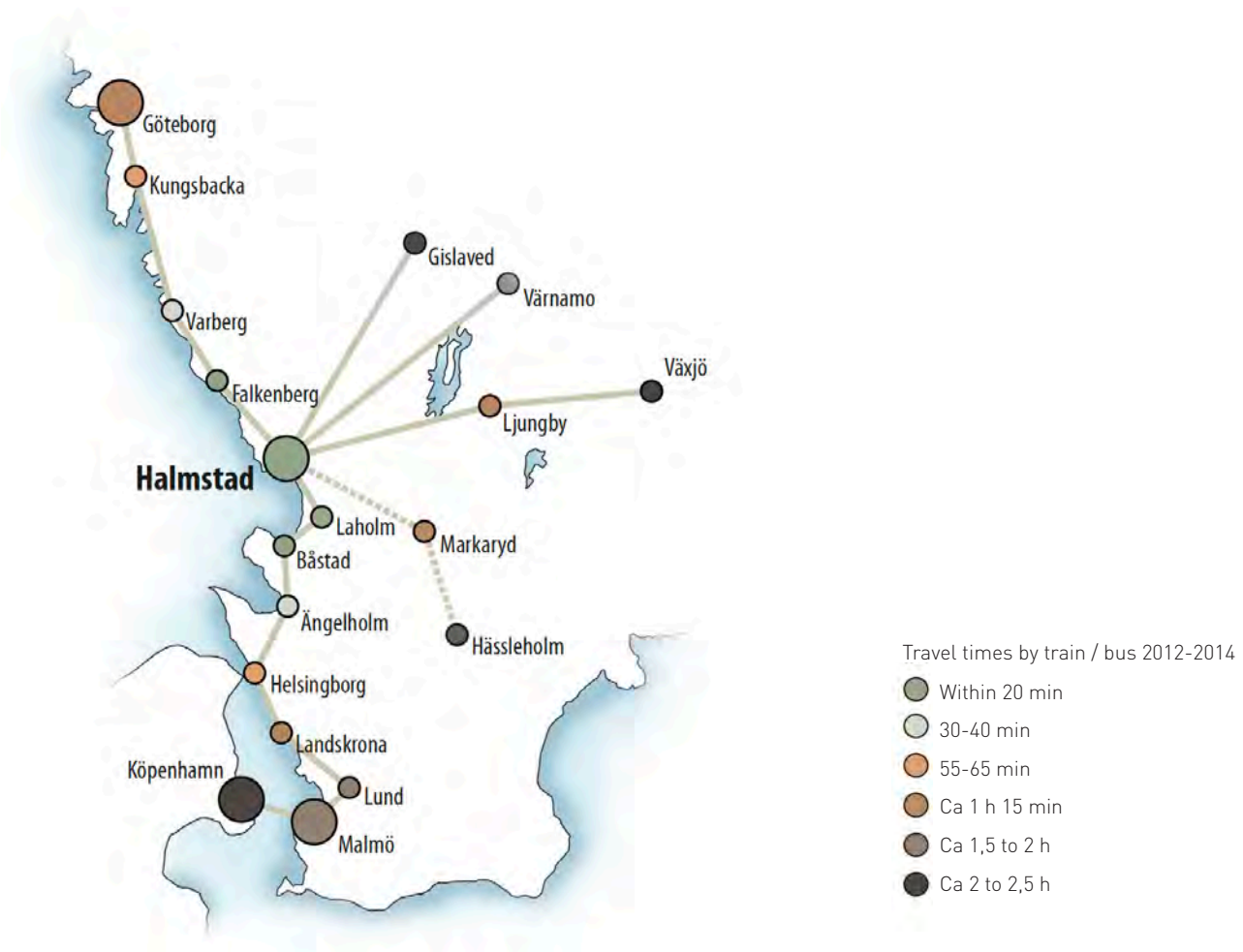
HALMSTAD

The Municipality of Halmstad is growing at a rapid pace from being a large town to becoming a small city, with a forecast population of 150,000 by 2050. Halmstad is strategically situated in the stretch between Oslo and Hamburg, the most populous region of the Nordics. Despite this fact, the city remains outside of the regional nodes and therefore carries little weight relative to the Öresund region or Gothenburg. Development is underway for Halmstad to find and strengthen its role as a regional centre between the metropolitan regions. The competition task — to develop Halmstad's railway area into a new transport hub (Halmstad's Travel Centre, or "Resecentrum" in Swedish) — will serve to strengthen the municipality's external identity to the many travellers passing by along Väst kustbanan ('West Coast Line'). It will also serve to make the place safer and more attractive to daily commuters who change modes of transport at the Halmstad station hub. The main question of the task is how the station area can contribute to expanding the city centre eastwards toward to this new converging node of people and traffic, while bridging the barriers within the area through new links that tie the city together as a whole.



Competition brief

Halmstad



URBAN CONTEXT

Regional Description

Halmstad is the main city of the west coast province of Halland, which has historically alternated between belonging to Danish or Swedish territory. Halmstad was definitely Swedish during the mid-seventeenth century, in light of the Treaty of Roskilde. Halmstad recently celebrated its 700th anniversary in observance of the day it received its town privileges on May 31, 1307.

Halmstad is — together with Gothenburg, Malmö and Copenhagen — located in the middle of one of northern Europe's main arteries between Oslo and Hamburg. The same region is home to six million

inhabitants and a third of Scandinavia's industrial production. Halmstad, with over 100,000 inhabitants, constitutes an important hub: the E6 motorway and the West Coast Line run through in north-south direction and there is a convergence of national roads and railways that connect Halmstad with cities such as Växjö, Kalmar, Jönköping and Hässleholm. Halmstad is not only a focal point in itself but also an interchange station for continued regional and/or interregional travel. A large part of the travel in Halmstad and the wider region occurs by car. In order to reduce the proportion of car travel, alternative options need to be made more attractive.

Halland is bounded in the south by Hallandsåsen, through which Sweden's longest railway tunnel runs. Halmstad is located on both sides of River Nissan, which characterises the city. At Nissan's outlet, Halmstad hamn (harbour) operates a significant business in Laholmsbukten (Bay of Laholm). Ferries are planned to start operating from here to Grenå in Denmark, from the autumn of 2019. The ferries will offer day trips for tourists planning to visit Legoland for example, as well as truck transports over the Kattegat.

The province of Halland has an extensive coastline along the Kattegat and is characterised by long sandy beaches. Many classic seaside resorts have long attracted bathers. Famous beaches near Halmstad include Tylösand and Östra Stranden, the latter being more peri-urban.

Due to its coastal location, Halland has a mild climate for Sweden, especially in wintertime. In the autumn and winter, the landscape is characterised by many harsh storms that reach Sweden from the Kattegat. Halmstad is a popular tourist destination in the summer, during which its population size more than doubles.

The municipality strives to bring the city alive with various events for residents and visitors throughout the year but especially wintertime when streets, due to climate, are less crowded than in summer.



The river Nissan running through Halmstad



Tylösand beach



Halmstads hamn ('Halmstad's harbour')

Description of the city

The original town of Halmstad was situated a few kilometres north along the Nissan, in its present location was a town called Brokthorp. In the 1320s, the two cities were merged under the name Halmstad. During the Middle Ages, Halmstad was the west coast's largest city with a population of 600. The city provided good communications, via both land and sea. In the beginning of the seventeenth century, Halmstad was hit by a large city fire and the whole medieval town burned down with the exception of a few stone houses, the church of St. Nicolai and the then newly built fortification. After the fire, the then king commissioned a new city plan to more modern and practical patterns, with straight and wide streets. This city plan remains almost identical to today's streets, squares and site layout plan.

Today, the city centre largely consists of brick and half-timbered houses. It shows traces from the old fortification system from the seventeenth century in the form of the centre's semi-circular shape, the city gate Norre Port and the old castle with four houses around a courtyard. Stora Torg is a central point of the city, home to the town hall built in the 1930s; the first county hospital Tre Hjärtan ('Three hearts') dating back to 1784 (in 1836 it became a beer storehouse and tavern); and Saint Nikolai church.

Halmstad's city centre ("centrum") has long been located on the western side of Nissan and has expanded over time. Between the railway and River Nissan, next to the present station house, lies Östra Förstaden ('the Eastern Suburb') which was built during a period of expansion at the end of the nineteenth century according to a grid plan from 1884. It is one of Halmstad's older neighbourhoods consisting of urban stone-built structures, the current railway station and adjacent park. The buildings of higher standard in the area are primarily five-storey stone houses built in brick and plaster.

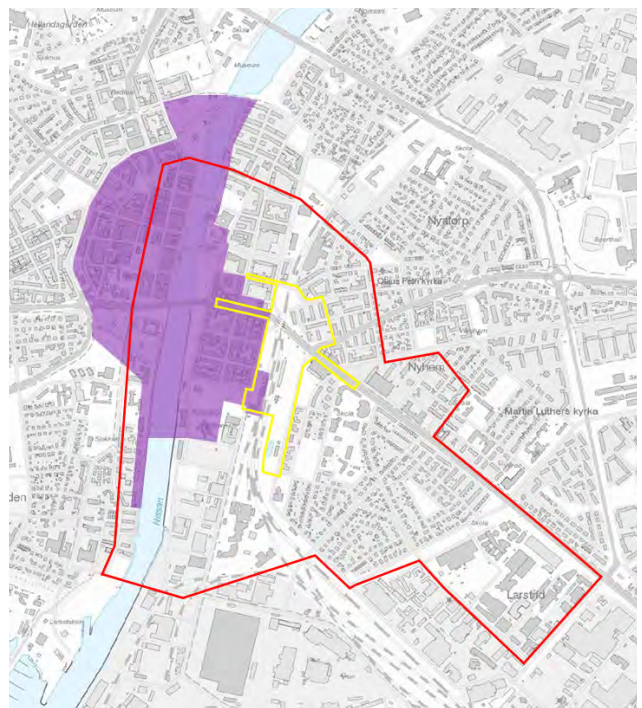
Halmstad's urban centre and Östra Förstaden constitute areas of national interest for cultural heritage management. Designations include the traces of the medieval fortification system; buildings of brick and timber construction; stone house elements dating from the end of the nineteenth century; characteristic county seat buildings; as well as quays and harbour facilities in the city's central zone. The grid plan structure of Östra Förstaden, the existing railway station, and its adjacent park are all included.



Slottet ('The Castle')



Östra Förstaden ('the Eastern Suburb')



Cultural heritage areas of national interest, purple area

During the first decades of the twentieth century, urban architect Sven Gratz was active in Halmstad (approx. 1890–1930) and he has clearly left his mark on the city centre with large, grand buildings. This has resulted in a somewhat variegated built-up area where the former low-rise development (ca two-storey high) is mixed with larger, circa five-story, brick buildings. Examples are found at Storgatan 42 and 48.

In the 1970s, large parts of the city centre were demolished. Older areas were revamped to accommodate larger retail outlets at the two northern corners of Stora Torg (currently department store Åhléns and shopping mall Gallerian) — as well as car parks and residential buildings.

On Nissan's eastern shore lies the new library from 2006 which partly extends over the river. North of the library is Nissastrand, a residential area that was built between 2006–2018.

Farther east of the railway, Halmstad University College is located with its 22-storey Trade Center and the corporate incubator High Five. The university plays a significant role in Halmstad as a knowledge city and as a regional centre.



Stora Torg



Halmstad University College and Trade Center, photo: Anders Andersson



Halmstad Library

City development

Halmstad's population is expected to grow from the current 100,000 to 150,000 residents by 2050. Today, the city remains in many respects a large town with a relatively modest city centre, small-scale in character. To become a regional centre in the future, Halmstad needs to develop its urban qualities, not least as a destination for knowledge and experience. The rapid growth places great demands on the municipality's planning of services, housing and workplaces, but also on how people get around. Sole reliance on car travel should be reduced and other forms of transportation — such as public transport, car pools and bicycle communications — should be promoted.

The railway through Halmstad is part of the West Coast Line. The opening of the tunnel through Hallandsåsen in 2015 makes it possible to operate more and faster trains, which provides an opportunity to create a common labour market and study region between Skåne and Halland. Travel demand between Gothenburg and Halmstad is constantly increasing, hence the need to improve the frequency of train services. Consequently, both north- and southbound train traffic on the West Coast Line are expanding.

Despite Halmstad's strategic location in a large growth zone and region, the city is clearly situated outside of the nodes; it carries little weight relative to the Öresund region or Gothenburg and needs to find its role in development. One way forward is to develop Halmstad as a regional centre between the metropolitan regions. Good, urban environments attract new residents and companies. Developing the urban character of Halmstad's densely built-up areas strengthens the city's opportunities to become a regional centre. Innovative architecture based on social awareness should be part of creating an attractive and experiential city.

The city's development will concentrate on the five leading public transport routes that extend towards the west, north, north-east and south-east, and which all converge at the site of the new Travel Centre. The city is to be densified in connection to these transport corridors — with housing, mixed-use urban developments and business units. The main network of public transport, which includes bus services operating in these development corridors, is integral to planning the city. Even the main bike paths, so-called super-bike paths ('supercykelstråk'), will run parallel to the designated urban corridor developments, contributing a concentration of movement.



A regional centre requires good links to the rest of the world. Access to public transport and good infrastructure is essential to commuting, but also for leisure travel; a regional centre implies a city with an urban pulse which attracts experience-tourists throughout the year. One of the biggest shortcomings in Halmstad's transport system has been the lack of a collective interchange for local, regional and national public transport. Therefore, in 2010, work began on re-locating and bringing together the various modes of transport in the vicinity of the railway.

The transformation of the area is planned in three phases, of which the first two have already been completed — these involved a new regional bus terminal; new stops for local buses; a footbridge over the railway; as well one for both pedestrians and cyclists over Laholmsvägen.

In the final phase, a transport hub is planned to facilitate bus and train transfers — the development of Halmstad Travel Centre as a node for the city's collective modes of transport is of great importance from a logistical as well as an identity-building aspect. It will serve as an interchange for city and regional public transit passengers, as well as an important transfer station for domestic travellers. The Travel Centre should facilitate practical travel, promote public transport, and serve as a landmark for the city. The municipality welcomes new functions and mobility solutions linked to this node.

What is today dubbed the "stadscentrum" or "centrum" (city centre) will in the long run be expanded to designate a larger area. The river Nissan's barrier effect currently divides the city, with the centre concentrated to the western side of the river. Historically, this barrier effect has led to the eastern and western sides of the city being socially and economically segregated, with the exception of the Östra Förstaden which lies on the east side but is included in what is referred to as the "stadskärnan" (urban centre). These divides are still visible today. The development of the library and the residential area Nissan Strand has eroded the barrier effect somewhat. To further strengthen the east side, the city is now developing eastwards with a number of development projects that are connected to the area of the future Travel Centre:

IN PROGRESS

Kilot

100 housing units, and hotels

Lundgrens trädgårdar

450 housing units

PLANNED

Nyhems centrum

Densification and auxiliary services, public areas and housing units

Halmstad Högskola

400 housing units, conversion of industrial premises to school facilities and offices

Österskans

Hotel, conference, public areas and market hall

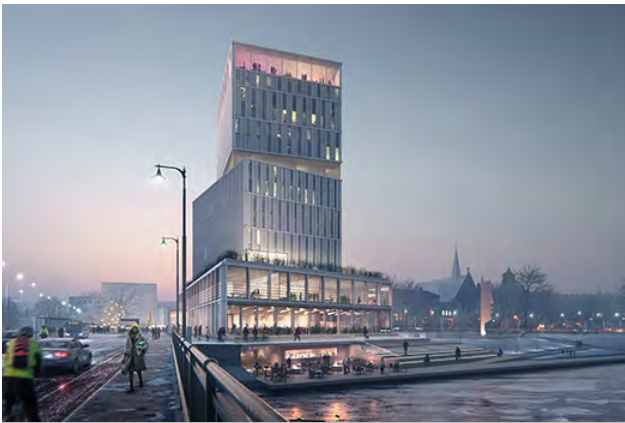
Tullkammarkajen ('Customs Chamber Quay')

at least 600 housing units, businesses, public and cultural spaces

At Österskans, a new cultural hub is being developed, where the municipality is investigating the possibility of constructing a 16-storey hotel that will include a market hall, restaurant, and a sky bar overlooking the sea. East of the railway, the Kilot property is being developed to feature housing units, hotel and city centre-purposed premises. Here, both the site and buildings will be designed to strengthen the central node and high demands are placed on its design. South of the existing station building, the "Tullkammarkajen" development is to become a vibrant neighbourhood with a diverse and mixed neighbourhood that faces River Nissan, and where culture will play an important role. At the Lundgren's gardens — a former foundry adjacent to the railway and north of the Travel Centre — approximately 450 rental apartments are under construction and several older buildings are being preserved. The housing units will be ready for occupancy during 2019.

As housing units and other functions are being built, additional bridges will traverse River Nissan. Parallel to the Travel Centre is a vision of a new pedestrian and cycle bridge, with parklets, over the river. Halmstad municipality has also assessed how a coherent culture trail can be developed along Nissan. The trail extends from the harbour in the south to Slottsmöllan in the north, and here the arts should be integral to making the area along Nissan in Halmstad more vibrant and accessible.

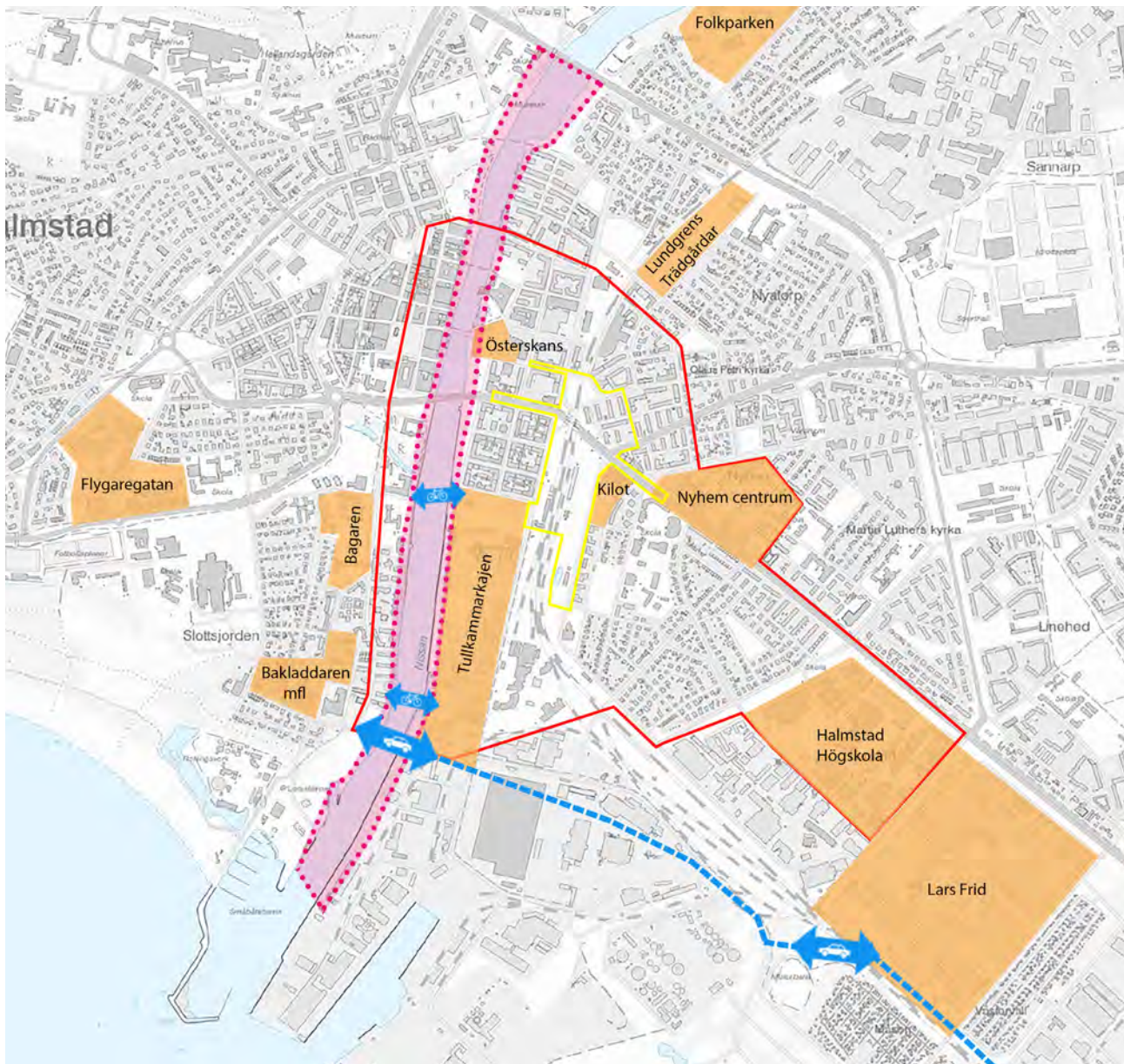
A new approach route from the south, "Södra infarten", is planned from the E6 to connect the motorway with the harbour. The approach route will provide improvements for residents in the eastern neighbourhoods. The new approach route will also enable the harbour's emergence as a focal point for workers, travellers and transports. By extension, a bridge over Nissan will be built to relieve the traffic situation on Laholmsvägen.



Österskans, illustration: White arkitekter



Culture Trail Nissan ("Kulturstråk Nissan")
"The Picasso Park", photo: Patrik Leonardsson.



- A Project site
- B Study site
- Development areas
- New links
- ... Culture trail Nissan

THE PRODUCTIVE CITY

The preceding competition edition, Europan 14, was also themed “the productive city”. The central question was how a multi-faceted city could interweave productive elements — cultural, commercial and knowledge-based activities — beyond housing to include workplaces, industry and other places of production as important components. Europan 14 thus studied the link between production, housing and urban life.

A mixed city that provides job opportunities has many positive outcomes. Reducing the distance between housing, production and commercial opportunities thereby reduces transport requirements, as well as strengthening local conditions. When elements find their functional contexts in greater proximity to one other, it affects the urban life and culture. A mixed urban environment can potentialise a socially diverse city, counter-acting segregation.

The current competition edition of Europan 15 will continue to explore “the productive city” as an important feature of the city’s development, while seeking to delve deeper into the issue and broaden its perspective. What types of synergies can be created, or are deemed necessary, for a city featuring natural modes of production? Broadly speaking, what are the types of infrastructure or interfaces needed to facilitate and optimise the city’s productive features?

Europan has identified three core concepts: resources, mobility and equity. These constitute important aspects of holistic and sustainable thinking, and serve as an interface for the discussion and actualisation of productivity in the city. All three concepts can be divided into a variety of special cases and factors, which of course are not all relevant to each individual plot. Still, an overview of these can prove valuable in a thorough consideration of all possible opportunities within the project.

Resources

How do we best utilise the city’s land? This may involve renewing or broadening the areas of use for plots that have been unilaterally developed, or for unused industrial land. This would include the re-purposing of older buildings, as well as the restoration of developments and places at the site. Another issue is the management and possible accentuation of stormwater, water and sewage issues; the activation of natural resources on the plot or nearby areas; as well as the realisation of energy production opportunities.

Mobility

How do we best design city nexuses? Are there more, new or untapped forms of transport communications via which the city can be reached? How can communications be planned in networks? How can city communication systems become more ‘urban’ so that traffic routes and tracks facilitate transfers, decreased speeding, and become bridges rather than barriers, creating continuous areas? The design of street sections needs studying. Meeting points — such as stations, bus stops, commuter parking and parking lots — also need designing. The same thing applies on a different scale to pedestrian and park trails, passages and meeting points.

Equity

How can everyone participate in the city on equal terms, and how can this lead to positive benefits for all? The idea that spatial equity leads to social equity can be instrumental in counteracting segregation and furthering the city’s economic development. With regard to such spatial measures, revitalisation of peripheral or segregated areas could be considered, for example by facilitating new residents of a broader demographic, motivated by a range of workplaces, community services, production and transport options. It may involve opening up segregated areas to the surrounding city and other economies. Or it could involve promoting diversity in an area by expanding the range of businesses so as to provide proximity between housing and work, expanding such options to include a broader demographic. Another aspect to consider is how the function of public places become accessible for all and how such “micro-urban” places or environments can be generated.



Winning proposal “Water walk with me” by Cyril Pavlu and Katerina Vondrova, for Trelleborg, Europan 14, themed “The Productive City”

THE PRODUCTIVE HALMSTAD

The creation of new urban hubs can contribute to improving Halmstad's mobility infrastructure. It also affects logistics, trade and other services and facilitates production. In regard to the Halmstad Travel Centre, it will facilitate transfers between means of transport and the transit between transport modes to the city doorstep. Reducing barriers facilitates greater access to different destinations in the city. Public areas should be safe places for all to use. The interlinking of the region can also provide new connections between the urban and the rural, housing and food production, harbour operations and centre, visitors and students. It will create a constant dialogue between the functions and its users, the various dimensions of the city and the region.

In Halmstad there is a mixed business community that attracts people with different skills. More companies are relocating to the municipality and there is a well-functioning collaboration between municipality, region, business sector, and higher education. Halmstad University College and the adjacent High Five corporate incubator play important roles for Halmstad as a knowledge city and as a regional centre.

Halmstad harbour is close to the Kattegat, European roads and rail connections, including railway tracks to all quays. This has paved the way for a rich and varied harbour life. Among other things, there are full service ports that cater to handling most types of cargo such as containers, bulk, cars, paper, sawn timber, timber, liquid bulk, ro-ro (wheeled cargo) and more. There are also marinas run by either the municipality, associations or private entities.

The municipality and its inhabitants largely meet their energy needs through renewable energy, but fossil fuels still account for about half of the energy consumption. The municipality is working actively to reduce the environmental impact of energy use and to increase the local production of renewable energy. The municipality's goal is to be a fossil-free municipality by 2030. This is mainly done by making changes in the municipal group of enterprises, thus leading by example and indirectly affecting the business community and local residents. The municipal group will also stimulate and facilitate for authorities, companies, organisations and residents to reduce negative environmental impact and contribute to a better environment.

The rate of growth and occupancy has put high pressure on Halmstad's land resources. Upon exploitation, particular attention is paid to the agricultural landscape and the value of the farmland for biological and food production.



Trade Center with corporate incubator High Five



Electric car charging station at the car park 'Stationen'



Halmstad Harbour, photo: Anders Andersson

STUDY SITE (MARKED IN RED)

Site description

Currently, River Nissan, the railway and road Laholmsvägen act as barriers that obstruct links between various areas, resulting in the city being perceived as divided and socially segregated. In order to reduce the social gaps and strengthen the eastern side of Nissan, work is underway to expand the city eastwards through the aforementioned development projects (see The city's development p. 9–11). The new Travel Centre and the development of the station area are strategically important investments for generating a shift in the city's attractive force. The eastward expansion means that the new Travel Centre and the eastern parts of Nissan's riverbank will become part of the city centre. The Nissan will no longer be situated to one edge, but will run through the centre and the new Travel Centre becomes a node connecting the city's various focal points and neighbourhoods.

The future Travel Centre will be located at the junction of two of the city's main routes for various traffic modes meet, where road Laholmsvägen intersects the railway. Along Laholmsvägen runs the local public transport's main route, it is also an important stretch for pedestrians, cyclists and motorists. Compared to today's railway station, the future Travel Centre will be more clearly linked link to the city centre. Other focal points, such as Halmstad University and the square Nyhem's Torg, will also be more clearly linked to the Travel Centre. Larger workplaces such as The Swedish Air Transport Agency (LFV), Halland's hospital and the harbour area, as well as recreation areas such as

the beach Östra Stranden, green space Galgberget and Tylösand are also important destinations. The increased stream of people to and from the Travel Centre could, in the long run, provide a basis for retail operations along these routes.

The area around the railway is characterised by three- to seven-storey developments. To the west of the railway lies Östra Förstaden's grid plan (2), from the early 1900s, with five-storey high-rise stone houses with brick and plastered façades. North of Laholmsvägen and east of the railway, are three-storey high apartment buildings from the 1960s. On the western side of the tracks, north of the eastern suburb, the settlement follows the grid plan's structure with buildings four to five storeys high, also erected in the 1960s. South-east of the area, the buildings are three and four storeys high and east of them begins a built-up area of single-family detached homes. Taller buildings in the immediate area include the 16-storey residential building Giganten (3) which was inaugurated in 2016, and the 22-storey Trade Center (4), adjacent to the university, that is home to the High Five corporate incubator for instance.

In Nyhem, northeast of Laholmsvägen, new houses have been added since the early decades of the twentieth century. In the 1960s, most of the buildings were demolished to provide space for multi-dwelling units, department stores, with shopping centres and a supermarket around Nyhem's Torg (5). A few buildings from the turn of the century are preserved.



Competition site seen from east with local bus stop to the right, and regional bus terminal to the left



A Project site
B Study site

1. Stora Torg
2. Östra Förstaden
3. Giganten
4. University College, Trade Center

5. Nyhems torg ['Nyhem's Square']
6. Halmstad bibliotek (library)
7. Halmstads teater (theatre)
8. Kv. Kilot

The area around Kvarter Kilot is being transformed. The ongoing development of a future Travel Centre changes the current conditions of the area, which through increased vibrancy and bus traffic will become more urban in character. There are plans for building a 13-storey hotel in the area, that would face the future Travel Centre. Within the neighborhood, the façades along Bolmensgatan will form a city front that connects to the residential quarters on the other side of the railway. Beyond this front, buildings rapidly drop in scale as the built-up areas become increasingly residential, with single-family detached neighbourhoods. A new, cone-shaped square forms an opening in the city front that conjoins city life and the single-family detached neighbourhoods. Currently, there is a lack of pedestrian crossings that connect Bolmensgatan to Kvarter Kilot. Buses destined for the new hotel in Kvarter Kilot will park at the new regional bus terminal. There is also a drop-off point outside the hotel entrance.

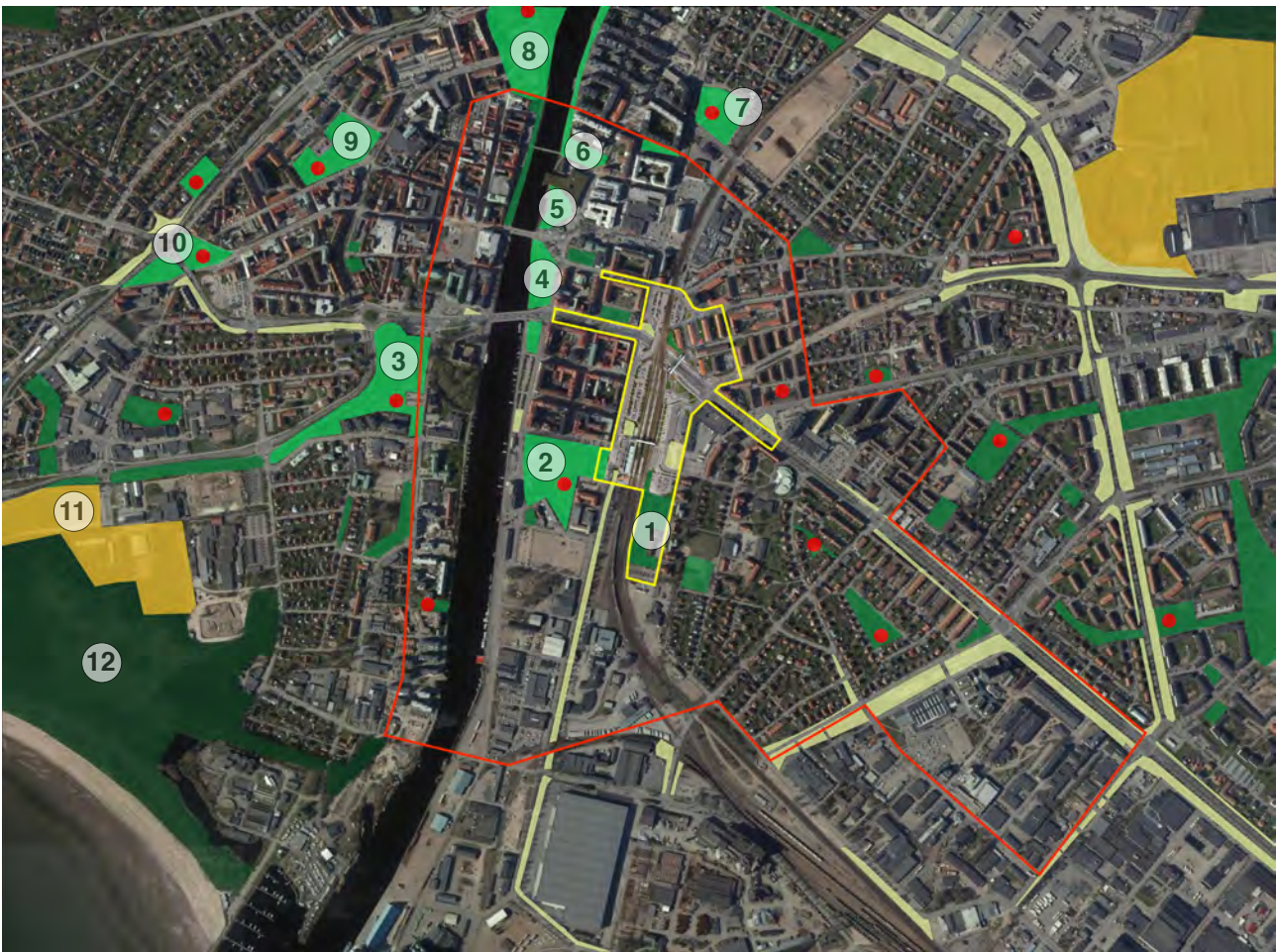
The existing railway station needs to better connect to the city centre, and the main bus, bike and car routes. It is difficult to navigate to the center when you alight at the station, it is difficult to cross the railway to effectively transfer between modes of transport. It is currently difficult to meet travellers'



Site layout plan for Kvarter Kilot



Visualisation of Kvarter Kilot, illustration: White Arkitekter



- A** Park - high maintenance
- B** Park - low maintenance
- C** Other green areas
- Playground

- 1. Studentparken
- 2. Stationsparken
- 3. Slottsparken
- 4. Picassoparken

- 5. Kapsylparken
- 6. Filtparken
- 7. Linehedsparken
- 8. Norre Katts park

- 9. Gunillaparken
- 10. Fridhemsparken
- 11. Ale-vallen
- 12. Alets naturreservat, nature reserve

demands for proximity. Since the platforms are currently too narrow to enable stairs or lift access, platform connection is currently taking place via gated level crossings. On a daily basis, travellers take a shortcut by running across the tracks, which poses a safety risk. Today, the existing station house houses the customer service and ticket sales desks of the local transit authority (Hallandstrafik), convenience store Pressbyrå, luggage lockers, a café, waiting room and WC. Office tenants occupy the upper floors, which can be accessed via a separate outside entrance. The station house holds significant value to the milieu which it shapes. The building is also of great symbolic value for Halmstad's history, both societally and architecturally. The property is owned by Jernhusen Stationer AB.

Green structure

The project site is located in the city, with a lack of natural green areas in the vicinity, only landscaped

areas exist here. There are several well-kept, high-quality parks with varying greenery and recreational opportunities such as playgrounds, boules courts, fenced-in dog parks, outdoor gyms, as well as sports grounds including basketball courts and a BMX bicycle track. Almost the entire route along Laholmsvägen / Victoriagatan is lined with planted trees, giving it an avenue-type of feel. Small patches of grass are found along several of the slightly larger roads.

Along River Nissan, from the harbour to the castle alley in the north, 'Culture Trail Nissan' ('Kulturstråk Nissan') is under development, which includes measures to strengthening the water's presence in the urban spaces and green trails, with focus on play and cultivation.

Within the project site lies Studentparken with stormwater ponds, and adjoining the site to the south-west is Stationsparken, featuring large green areas, a smaller playground and avenues.

PROJECT SITE (MARKED IN YELLOW)

Site description

The project site is being developed to become a hub for the city-wide modes of transportation (regional and local bus, train, pedestrian, bike and motor traffic). The transformation of the area occurs in three stages, of which the first two have been completed. By completing the final stage of Halmstad's Travel Centre, public transport will be coordinated, and the hub becomes a distinct node for the sustainable city.

The area around the station will be developed to become a strong focal point in Halmstad, whose historic centre lies a small distance from the station. The new station area will contribute to widening the city centre eastwards so that the station ends up in the middle of the city and links the city's eastern and western parts. The station area will also link different focal points in the city, such as the historic centre in the west to the college area in the east. As a hub, the station area will increase the city's appeal as a whole. New functions will be added to the station area. For many travellers simply passing by, the project site will be the only thing they see of Halmstad. There are high demands on the design of new buildings and their functionality. With innovative and sustainable architecture, Halmstad will project a memorable new image to the surrounding world.

In phase one, completed in 2012, a new regional bus terminal (1) was built on site. Regional buses from Norra Station ('North Station') were relocated to the current railway station location in order to facilitate for transfers between different modes of transportation. In connection to this, a movable footbridge (2) over the tracks to the station house was built.

The second phase was inaugurated in 2017 and saw new stops for city buses (3) established along

Laholmsvägen to strengthen the link between the railway station and regional buses — as well as the construction of a pedestrian and cycle bridge (4) over Laholmsvägen, accessible via stairs or lifts. This bridge, unlike the one over the railway, is permanent.

Phase three will see the railway platforms extended to the south — from 180-270 metres to a length of between 350-400 metres — to meet future demand. A new platform is being added (on the eastern side facing the regional bus terminal) — augmenting the number of tracks to five in total. The platforms will also be broadened in order to enable a split-level connection for travellers. A new pathway providing connections to the middle platforms is to be created as an under- or overpass to the track area and will link to the Travel Centre and the regional bus terminal. The new pathway will result in travellers no longer having to cross the tracks. There are discussions underway concerning the possibility of creating two points of access to these elongated platforms. A first implementation report has been conducted, which deems that a 14-metre long tunnel below the tracks would be feasible between Laholmsvägen / Victoriagatan and the regional bus terminal. The choice of solution and its placement are not fully assessed, and it is up to competition entrants to come up with proposals for the best solution based on the requirements set in the competition brief.

Four parking areas exist within the project site. To the north, on both sides of the track area lie the 'quarters' Kvarter Jäntan and Kvarter Kruset (A). The off-street parking in these neighbourhoods are largely used by commuters, but also by people heading to nearby offices and homes. The car parks are also in the vicinity of some of the city's cultural focal points such as Halmstad Teater and the local library. Just west along the railway line, in an area



Regional bus terminal



Pedestrian and cycle bridge over Laholmsvägen



Functions

- 1 Regional bus terminal
- 2 Mobile footbridge
- 3 Local bus stop, city buses
- 4 Pedestrian and cycle bridge
- 5 Existing electrical substation
- 6 Studentparken
- 7 Existing station house
- 8 Single-storey building, owned by the Swedish Transport Administration ('trafikverket')

Car parks

- A Jäntan+Kruset 155 spaces
 B Stationen 200 spaces
 C Resenären 80 spaces

Total 435 spaces

Bicycle parking

- D 8 spaces
 E 100 spaces
 F 320 spaces (of which 160 under canopy)
 G 125 spaces
 H 115 spaces
 I 370 spaces

Total 1 038 spaces

parallel to the regional bus terminal, the parking lot Stationen (B) features a smaller electric car and electric bicycle pool. Its proximal location to the station makes it attractive for 'park-and-ride' commuters, but the parking spaces are also used by residents of the eastern suburb. The parking lot is not accessed directly from the Laholmsvägen but via the local block's street network.

South-east of the new regional bus terminal lies Resenären (C), Swedish for 'The Traveller'. Today it is the least occupied parking lot at the project site. The large, hard-surface areas of the off-street parking lots place high demands on stormwater management in the area.

Today's bicycle parking lacks roofing and is underdimensioned. With the implementation of the first

two stages of development, two bicycle parking spaces east of the railway (E and F) have been added, but the need for additional bicycle parking remains.

Within the project site are a number of low-rise apartment buildings, north of Laholmsvägen. The area is included in the project site because the road Hammarsgatan, which runs between two of the apartment buildings, links Fredsgatan to the pedestrian and cycle bridge over Laholmsvägen that connects to the Travel Centre. Hammarsgatan's character is to a certain extent perceived to be part of the residential courtyard.

North of the low-rise apartment buildings, the railway divides the site, which in other, visual respects, can still be considered as one. Fredsgatan crosses the railway in a level crossing that is

PROJECT SITE

demarcated only by a boom, which poses a safety risk. The railway crossing point will therefore be closed off to car traffic with access restricted to pedestrians and cyclists, either above or below the railway. Fredsgatan is lined with shops and is important for the linking of the eastern parts of the city to the main centre and Österskans.

Today, Laholmsvägen constitutes a barrier with lots of traffic and a high level of noise. It is the dominant access route to Halmstad, linking the city's eastern and western parts together, from the city centre to the university via Nyhemscentrum. Farther on, Laholmsvägen also links Söndrum and Tylösand to Andersberg, Fyllinge and the shopping centre Hallarna. The road runs through an underpass below the railway tracks, lined on both sides with walking and cycling paths.

It's been proven difficult for pedestrians to cross the road from north to south; the road currently acts as barrier between the north and south side. At the Östra Förstaden, Laholmsvägen transitions to Viktoriagatan, which has more of an urban street character. A development of Laholmsvägen and Viktoriagatan is already underway east of the viaduct, with new local bus stops to facilitate train and bus transfers. Laholmsvägen and Viktoriagatan are to be prioritised for pedestrian and bicycle traffic, and the municipality strives for a street design more accommodating to public transport and the individual citizen than it is to the car.

Stationsgatan, extending alongside the railway from the existing station house, is currently perceived as a car route, not as a street. The street needs to be developed to give higher priority to pedestrians and cyclists, especially at street crossings where the flows may increase in the future.

Next to the existing station house lies an electrical substation (5) to the railway, in a bunker-like building that is partly hidden under an earth mound. This substation will be shut down and replaced elsewhere. To the north of the substation is a small patch of greenery. Apart from that, the area is mostly comprised of hard surfaces with limited greenery. Next to the park at the substation is a fast-food grill.

In the southern part of the project site is Studentparken (6) with ponds that collect stormwater from the larger impervious surfaces within the project site. The park area is widely used by local student residents.

Halmstad Airport lies in the vicinity of the project site, which means a limit exists on the height of buildings in the area. The maximum ridge height is +75.8 metres above sea level.



Underpass seen from Viktoriagatan



Current railway station



Current electrical substation



Studentparken

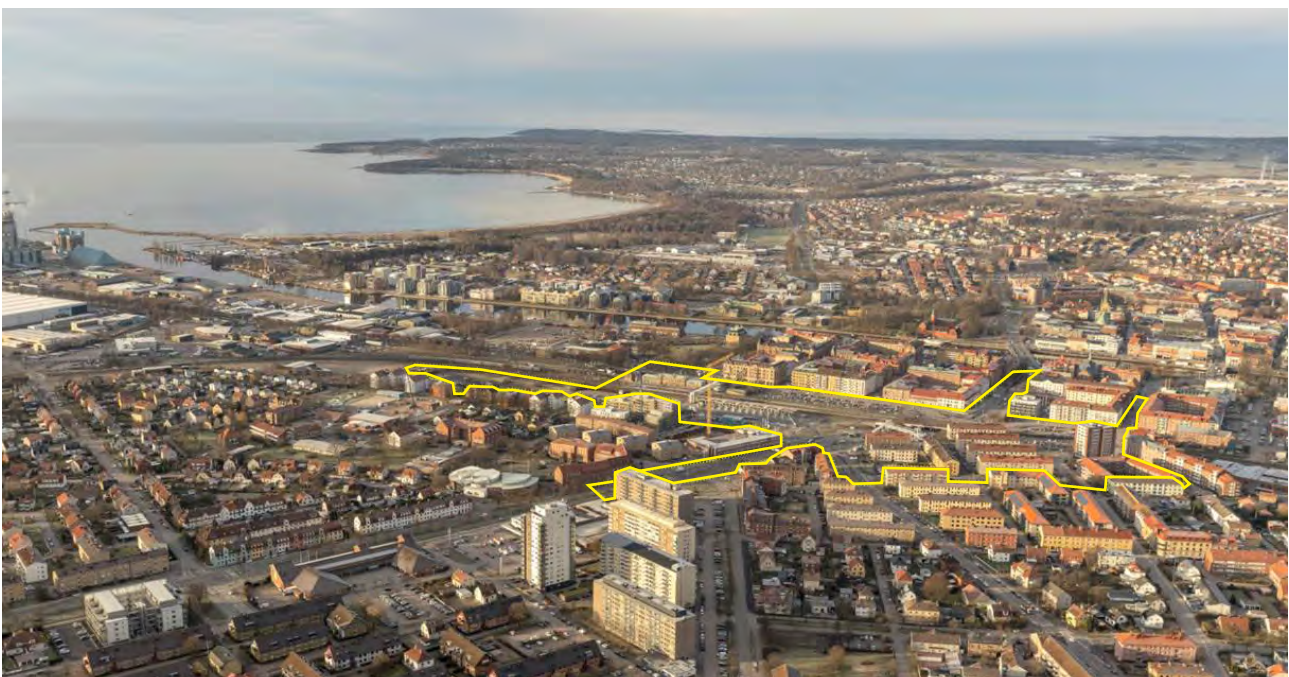
SAFETY

The site is to develop into a safe place for all residents and visitors. A neighbourhood security survey conducted in the area concludes that most of it is perceived as safe during the daytime (8:00-18:00), whilst during the evenings and nights, many places are felt to be unsafe. At present, few people express an interest in visiting the station house and attached restaurant. Despite this, the restaurant is considered important — without it, the place would be perceived as dark and deserted. The off-street parking lots are considered uncared-for. The Laholmsvägen railway underpass is perceived as worn, dark, dull and unpleasant. Some avoid walking here alone. Laholmsvägen is a road busy with cars. It is perceived as noisy and difficult to pass. Walking and cycling paths in the area are perceived to be too narrow, leading to a fear of accidents. The junction between the railway and Fredsgatan is perceived as safe; there are always a lot of people in motion and the existence of several stores serve to create a "centre" feel. The new regional bus terminal is perceived as unkempt and poorly maintained, which results in a sense of insecurity. With the exception of bus passengers, there are few people who frequent the spot. At times, groups of youth occupy the seating areas, which adds to a perception of insecurity. The narrow alley by the grill, north of the existing station house and adjacent to the footbridge over the railway, is a place that is generally avoided. The station park is also perceived as unsafe, especially in the evening, due to poor lighting, unkempt shrubs and many dark nooks.

RISKS

The Railway Line Väst kustbanan ('West Coast Line') passes through the site, along one of Sweden's major freight routes, between Lund and Gothenburg. Train traffic is generally very safe, with little risks to passenger and surroundings. Still, rail traffic involves large quantities of goods (even dangerous goods) being transported together, which can have major consequences in the event of accidents or disturbances. In Halmstad, the railway runs straight through the community, which further contributes to vulnerability. The most common accidents involve collisions with people treading the tracks. In cases where derailments occur in Sweden, these are minor incidents for the most part where the train ends up very close to the track. It does also happen that trains collide with other trains or objects. However, the likelihood of accidents is small due to safeguarding and navigational systems that exist within Swedish rail traffic, and the consequences of an accident are usually small. However, running on railroad tracks and suicides are unfortunately recurring events along the Swedish railways. In order to prevent access to the track area, there is a special law, "stängsellagen"* ('the fence law') that regulates the obligatory design configuration and location of railway fencing. Guidelines are also available concerning appropriate distances to the track area for each specific function and content located in its vicinity. The site's proximity to the tracks means that it is not possible to create meeting places in the vicinity of the railway, due to the risk of explosion and fire posed by the transport of dangerous goods. See Appendix 1 for more information.

*Swedish Code of Statutes [SFS 1945: 119]



Aerial view of the project site

COMPETITION TASK

Paths of movement and spatial connections

The area is to be developed as a new focal point that helps expand the centre eastwards towards this city node. Existing traffic barriers should be bridged and the paths of movement improved and developed to allow pedestrians and cyclists to easily move between the city's new and existing destinations in a safe, efficient and appealing manner.

The task also includes creating and strengthening the area's urban qualities with places and functions which promote meetings and creativity. In addition to the Travel Centre function, entrants are free to propose additional programme content that puts the citizen in focus; increases the attractiveness of the sites as public spaces; and strengthens the quality of the urban space as part of an expanded city centre.

The area's development should help reduce the social segregation between the east and west sides of the city, and create a cohesive centre. The urban space will help to erase the lower status of the eastern side and create an urban space that stands out without overshadowing the original city centre.

Halmstad Travel Centre ("Resecentrum")

The area should be developed into a new transport hub and centre for travellers, contributing to broadening the city centre. Through the addition of novel functions and buildings the site will become an effective and appealing point of transfer between modes of transport, and contribute to boosting the appeal of Halmstad as a city and municipality. The transformation should promote travel by public transport by keeping the passenger experience at heart. The task is to strengthen the area's urban qualities with urban spaces, spots and functions that promote meetings and creativity throughout most of the day. The overall pattern of movement of pedestrians and cyclists passing through the Travel Centre on route to other destinations, requires analysis to ensure it synchronises with the space, and creates a well-functioning network.

A major question is how the area can be made safer and more accessible? The site should be perceived as safe and easily navigable for all people to get to and move through.

The existing station building must be preserved, but its use can be re-purposed. Entrants are free to propose a reprogramming of the building. Consideration should be given to the surface of the square in front of the station, as well as its links to the station park and, beyond that, to the development area Tullkammarmarkajen and a new pedestrian and cycle bridge featuring parklets, over River Nissan.

Among the desired Travel Centre functions — to be housed in one or more buildings within the project site — are waiting rooms, ticket sales, WCs, and

personnel spaces of bus drivers for example. These functions should be placed in connection to points of interchange between trains, regional and local buses — with the main purpose of facilitating for travellers transferring between modes of transport. Beyond these functions, entrants are free to propose additional program content that prioritises the traveller, increases the attractiveness of the site as a public space and boosts the spot as a convening node for the city.

The new buildings proposed should relate to the different modes of transport that converge here and take into account the different height levels that surround the site. The building volumes should form an external, identity-building face of the city, and demonstrate innovative thinking.

The buildings should be flexible for arrivals by foot and bicycle, from both east and west of the railway. It should be easy to set aside and park your bike nearby. The municipality is requesting new service functions that encourage and facilitate cyclists; it is keen on seeing innovative proposals for how cycling can be promoted. The proposal should encourage sustainable travel and new, smart alternatives to journeying by car.

It should be possible to arrive to the transfer station by car, thus requiring room nearby for drop-off and pick-up points, short-term parking and taxis.

There will arise new flows of travellers as well as passers-by, moving through the area. These flows need to be studied to work together with the Travel Centre. The new hotel, with arriving buses that park at the regional bus terminal, will also contribute to an increased number of people on site.

The design of the proposal needs to relate to the steps already taken in the city's work with the establishment of the Travel Centre as a new transport hub, with the exception of the bridge over the railway. There is the possibility to completely remove, or alternatively relocate the mobile bridge elsewhere, based on the new conditions generated.

The municipality is requesting innovative technical solutions for stormwater management and energy production that go hand in hand with the design of the site.

The height of the railway must not be altered as it is assessed as unreasonable to implement. The regional bus terminal must remain in its current location, this includes the surface where the buses arrive for boarding and departure, as well as the roofed waiting area.

Entrance to train platforms

The platforms, which will be extended and widened in the third phase, should be accessible to travellers arriving from both the western and eastern sides of the tracks. The platforms will be lengthened; a single entrance/access point can prove problematic as the distance to the other end of the platform is likely to be too long. Therefore, two points of access to the platforms can be considered. The access point(s) over / under the tracks must be linked to the aforementioned Travel Centre functions. The access point(s) must not be designed as a level crossing gate. The municipality has previously conducted an overarching analysis for the Travel Centre, based on which a political decision was made, advocating a tunnel adjacent to the northern part of the regional bus terminal. Entrants can present another solution as long as its advantages can be motivated.

Laholmsvägen and Viktoriagatan

Currently, Laholmsvägen and Viktoriagatan suffer heavy car traffic, and are experienced by pedestrians and cyclists as a barrier between north and south. The road should be developed and transformed to become part of a common urban space instead of currently separating the space in two. Part of the task involves studying how the city's urban qualities can be strengthened and how connections between the south and the north side of the road can be designed as safe and secure for pedestrians and cyclists to cross. The viaduct under the railway and the expansion of the super-bicycle track has been a part of the development of Laholmsvägen. Beyond the new overpassing bridge, appealing options for crossing the road are lacking.

Fredsgatan

Fredsgatan is a city street with shops, and is currently widely used by cars, pedestrians and cyclists. The street is a link between the city centre, the Travel Centre and the eastern parts of the city. In the future, Fredsgatan will be the quickest path to take between the Travel Centre and the new Österskans. The public crossing will shortly be completely closed off for car traffic and there will be a need for a new pedestrian and cycling option, separated from the railway tracks. A detailed study of a solution is requested, presenting an appropriate location and design for this option. The passage should work together with the new content proposed for the current parking areas in this spot.

Parking

The development of the new railway area is intended to promote sustainable modes of transport such as public transport, pedestrian and bicycle traffic. Strengthening the area as a hub for public transport will shift the focus from motor traffic to more

sustainable travel modes. The development of the area should prioritise pedestrians and cyclists. This applies to those intending to transfer to bus or train, as well as people working and living in the area. Entrants are free to create appealing bicycle solutions.

The project site is home to more than 1,000 bicycle parking spaces, situated adjacent to the station house, the regional bus terminal and the bus stops along Laholmsvägen. This number must not be reduced, rather expanded and the design reworked in a suitable way.

Entrants are free to propose new functions and new programme content within the off-street parking areas. The municipality would like to see creative proposals for new uses. Consideration should be given to the surfaces close to the tracks and the safety risks involved. The parking spaces that are encompassed within new functions need to be redistributed in other ways within the project site. Novel, innovative solutions for travellers are desired, which in the future can serve to reduce the use of one's own car as a means of transport.

There are a total number of 435 car parking spaces in the area that are to be distributed across the parking solutions of the competition proposal.

Studentparken

The function of Studentparken in detaining stormwater, needs to remain within the project site but design and location can be modified if considered more suitable. Connecting to the park is a smaller one-storey building owned by the Swedish Transport Administration. Future demands for this building have not been assessed — the building and its current use can thus be disregarded within the framework of this project, and the plot considered freely disposable.

Other conditions

- The existing electrical substation may be removed and need not be replaced.
- The future demand for the existing grill at the station has not been assessed, the building and its use can be disregarded within the framework of this project, the space can be freely disposed of.
- The three-storey high apartment buildings north of Laholmsvägen must not be demolished.
- Stormwater solutions should be integrated into the public areas and the choice of earthen materials should take stormwater infiltration into account.
- The maximum ridge height is 75.8 metres above sea level.

General

Entrants shall describe how the competition proposal relates to the European 15 theme of "the productive city" and the core concepts: resources, mobility and equality. Also required is a description of how the proposal develops the area's character in these aspects — as well as what elements of the proposal are unique or innovative.

The competition proposal should show the overall design of the area as a whole, and in detail using relevant presentation techniques, in relevant scales. The areas that Halmstad municipality is requesting a more detailed study of are the Travel Centre; access points to train platforms; as well as sectional studies of Laholmsvägen / Viktoriagatan and Fredsgatan including the railway overpass / underpass. A clear presentation, in an appropriate level of detail, of envisaged paths and patterns of movements should be included. The competition proposal should provide for good opportunities of further development, taking economics and implementation into account. Work on a detailed development plan for the implementation of the Travel Centre is set to begin in the spring of 2020.

It is primarily the three submitted A1 panels that will be used in the assessment, both digitally and printed to original size. It is important that the panels have a well-thought-out structure and are easy to read — so as to communicate their content quickly and clearly to the jury.

Suggested materials for the contest proposal: study site plan (site marked out in red); project site plan (site marked out in yellow); view from above based on aerial photo; ground-level perspectives; presentation of plans, sections and facades of the Travel Centre and points of access to railway platforms, as well as a brief presentational text to accompany the panels and a separate, in-depth text submission.

Submission requirements

Below are abridged submission guidelines — please visit European Europe's website to read the submission requirements and competition rules in their entirety.

Proposals should consist of panels and a text. The panels should be three in A1 (594 x 841 mm) portrait format. The content should — in drawings, images and text — explain how the proposal relates to the site's needs and to the theme of "The Productive City", and how the proposal's architectural values relate to context and surrounding environment. The content should include a three-dimensional representation of the proposal (for example in perspective, photo montage or model photography). The accompanying text should be a maximum of four A4 pages long and present the proposal ideas, as well as a suggested process of implementation (for example, transforming the plot in a certain order).

Competition timeline and dates of importance:

180318 The competition opens. All competition sites are presented. Registration and download of complete competition documents starts.

Launch event, with lectures and presentations. See European Sweden's website.

190429 Site visit with site representatives (pre-registration to info@european.se required).

190614 Last date for competition questions.

190628 Last date for answers to competition questions.

190728 Last day for submitting competition entries.

191202 Competition results and winners are published.

190728 Sista dag för inlämning av tävlingsbidrag.

191202 Resultat och vinnare offentliggörs.

JURY

Jury

Members of the competition jury:



- Karin Ahlzén, SE (chairman of jury)
- Project Director for "Fokus Skärholmen", City of Stockholm
- Stockholm, Sweden



- Jenni Reuter, FI
- Professor at Aalto-university
- Helsinki, Finland



- Christer Larsson, SE
- Director of City Planning, City of Malmö
- Malmö, Sweden



- Erik Wingquist, SE
- 3rd year programme director at KTH
- Stockholm, Sweden



- Helena Tallius Myhrman, SE
- City architect of Gävle
- Gävle, Sweden



- Mia Hägg, SE
- Founding architect of Habiter Autrement
- Ticino, Switzerland



- Dagur Eggertsson, NO
- Founding architect of Rintala Eggertsson
- Oslo, Norway

Substitutes:

- Per Kraft,
- Founding architect of 2BK (Earlier running the secretariat for European Sweden)
- Stockholm, Sweden
- Martin Berg
- Winner E14 i Narvik, NO
- Stockholm, Sweden

REFERENCES

The website of European Europe featuring the competition rules:

– <http://www.european-europe.eu>

European Sweden:

– <http://european.se>

@european_europe — the official Instagram account of European Europe featuring previous winners and exemplary proposals:

– http://www.instagram.com/european_europe

@europansweden — the official Instagram account for European Sweden:

– <http://www.instagram.com/europansweden>

About Halmstad

The Municipality's official website:

– <https://www.halmstad.se>

History:

– <https://www.halmstad.se/kommunpolitik/faktaom-halmstad/halmstadshistoria.807.html>

– <https://www.halmstad.se/kommunpolitik/faktaom-halmstad/halmstadshistoria/historiskaartal.3373.html>

Statistics:

– <https://www.halmstad.se/kommunpolitik/faktaom-halmstad/statistik/befolkning.868.html>

Awards:

– <https://www.halmstad.se/kommunpolitik/faktaom-halmstad/statistik/halmstaditopp.12178.html>

Halmstad Framtidsplan 2030 ('Plan for the Future 2030'):

– https://www.halmstad.se/download/18.69f12f3a-163ee0de8532a7dd/1529997277709/Framtidsplan%25202030%2520Lagakraft_l%25C3%25A5g-uppl%25C3%25B6st.pdf

Parkering Halmstad (Parking in Halmstad):

– <https://www.google.com/maps/d/viewer?mid=1yv-pCGViXajXpuGtjqlhJ53fcdI&ie=UTF8&hl=sv&oe=UTF8&msa=0&ll=56.67427285765823%2C12.861354976383495&spn=0.016504%2C0.03931&z=16&source=embed>

Halmstad Wikipedia article:

– <https://sv.wikipedia.org/wiki/Halmstad>

Halland Wikipedia

– <https://sv.wikipedia.org/wiki/Halland>

Plot boundaries:

– <https://kartor.eniro.se/?c=56.669452,12.864974&z=17&l=historic&q=%22halmstad%22;geo&som=0>

Information regarding transports and the railway

Articles on Halmstad's railroads, historical and current:

– <http://gamlahalmstad.se/en-hotellgata-pa-oster/>

– https://sv.wikipedia.org/wiki/Järnvägslinjen_Halmstad-Nässjö

– https://sv.wikipedia.org/wiki/Halmstad%E2%80%-93Bolmens_J%C3%A4rn%C3%A4g

– <https://www.trafikverket.se/for-dig-i-branschen/Planera-och-utreda/Planer-och-beslutsunderlag/Nationell-planering/nationell-transport-plan-2018-2029/>

Article on the existing station house (Halmstads Centralstation):

– <https://www.dinstation.se/halmstads-centralstation/>

Relevant laws and regulations

Accessibility:

– <https://www.boverket.se/sv/byggande/tillganglighet--bostadsutformning/tillganglighet/>

Noise:

– <https://www.boverket.se/sv/PBL-kunskapsbanken/planering/detaljplan/temadelar-detaljplan/buller-vid-detaljplanering/regler-och-riktvar-den-for-buller/>

BBR, the Swedish National Board of Housing, Building and Planning's building regulations:

– https://www.boverket.se/contentassets/a9a584aa-0e564c8998d079d752f6b76d/konsoliderad_bbr_2011-6.pdf

BBR in English (from 2016, not the latest version):

– <https://www.boverket.se/globalassets/publikationer/dokument/2016/boverkets-building-regulations--mandatory-provisions-and-general-recommendations-bbr-23.pdf>

Swedish - English Glossary

– <https://www.boverket.se/globalassets/publikationer/dokument/2016/ordlista-glossary-pbl-och-pbf.pdf>

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EUROPAN SWEDEN



**The Swedish European Secretariat is
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Carolina Wikström and Frida Öster
through Asante Architecture & Design.
Europan 15 is under the auspices of
Architects Sweden.

asante
ARCHITECTURE & DESIGN

Architects Sweden

APPENDIX 1

Management of risks associated with the railway

Parking and traffic can be permitted in direct proximity to the railway but please note the Swedish Transport Administration's obligatory requirements. See the below extract from a statement to the previously completed detailed planning process, adopted in 2013:

"When it comes to the distance from railroad to unprotected parking spaces, the minimum distance from the centre of the track is 15 metres. However, driving surfaces may be allowed at shorter distances, but normally there must be at least 9 metres from track centre to road edge. Normally, buildings, warehouses and stockpiles may not be located within 5 metres of any part of the railway system that can carry high voltage. The same minimum distance also applies to road and driving surfaces."

Travel Centre functions are considered to be acceptable to locate with a minimum distance of about 5 metres from the nearest centre of track. In the area between 5 and less than 20 metres from the railway, premises deemed suitable include ticket sales, kiosks, flower shops and similar services. Supplementary activities are not allowed within a distance of about 20 metres from the railway tracks. This includes retail spaces, single-storey offices, shopping centres, and cultural activities. For spectator seats, crowds (cinema, theatre, etc.), and multi-storey offices, a distance of 55 metres must be maintained.

The following measures need to be ensured and taken into account in continued work (the "should" and "shall" requirements indicate importance):

- Doors are allowed in direction of the railway, however, public spaces shall be able to be evacuated in a different direction. This means, for example, that storerooms can feature an entrance in the direction of the railway, and that the Travel Centre may also feature one escape route in the direction of the railway, among others in a different direction.
- Entrances (main) should not be placed in the direction of the railway.
- Large glazing in the façade should not be placed towards the railway. This is strongly recommended, but has not been stated as a "shall" requirement.
- Ventilation inlets shall not be placed in the direction of the railway
- Outdoor seating and other similar areas for extended periods of stay shall not be placed in the direction of the railway
- A façade in the direction of rail shall be of non-combustible construction (i.e. minimum class A2-s1,

d0) and shall be fire-resistance rated (Swedish: "brandklassad", minimum EI30). This applies to the area within 35 metres of the railway if no building is obviously protected by another building. This also applies to windows.

- Roofs shall be made so as to impede the spread of fire.

Noise

The competition proposal should take into account the noise generated by traffic and railway. Proposed programme content should be studied in light of the local noise conditions presented in Appendix 4.

According to the Regulation on traffic noise at residential buildings, at least half of residential rooms, in housing units where the noise level from the traffic exceeds 60 dBA equivalent level at the façade, should be placed to face a quieter side where 55 dBA equivalent sound level is not exceeded at the facade; and where 70 dBA maximum sound level is not exceeded at night, e.g. facing a residential courtyard with surrounding structures. For a housing unit of no more than 35 sqm, the equivalent sound level at the façade should not exceed 65 dBA. At a patio adjacent to a building, the sound level should not exceed 50 dBA equivalent level and 70 dBA maximum level, respectively.

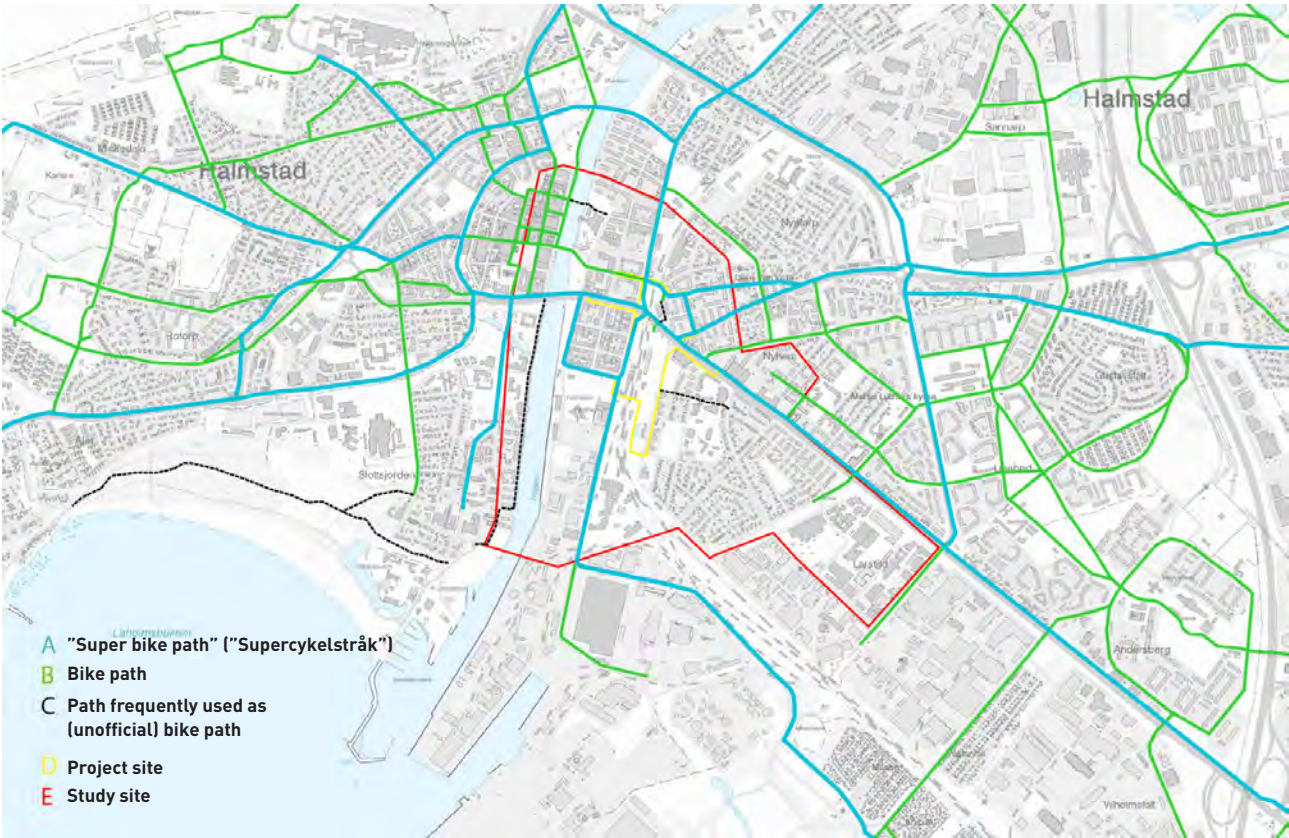
Vibrations

A measuring of vibrations has been carried out north of the project site, in the neighbourhood of Kemisten, by Lundgren's Trädgårdar.

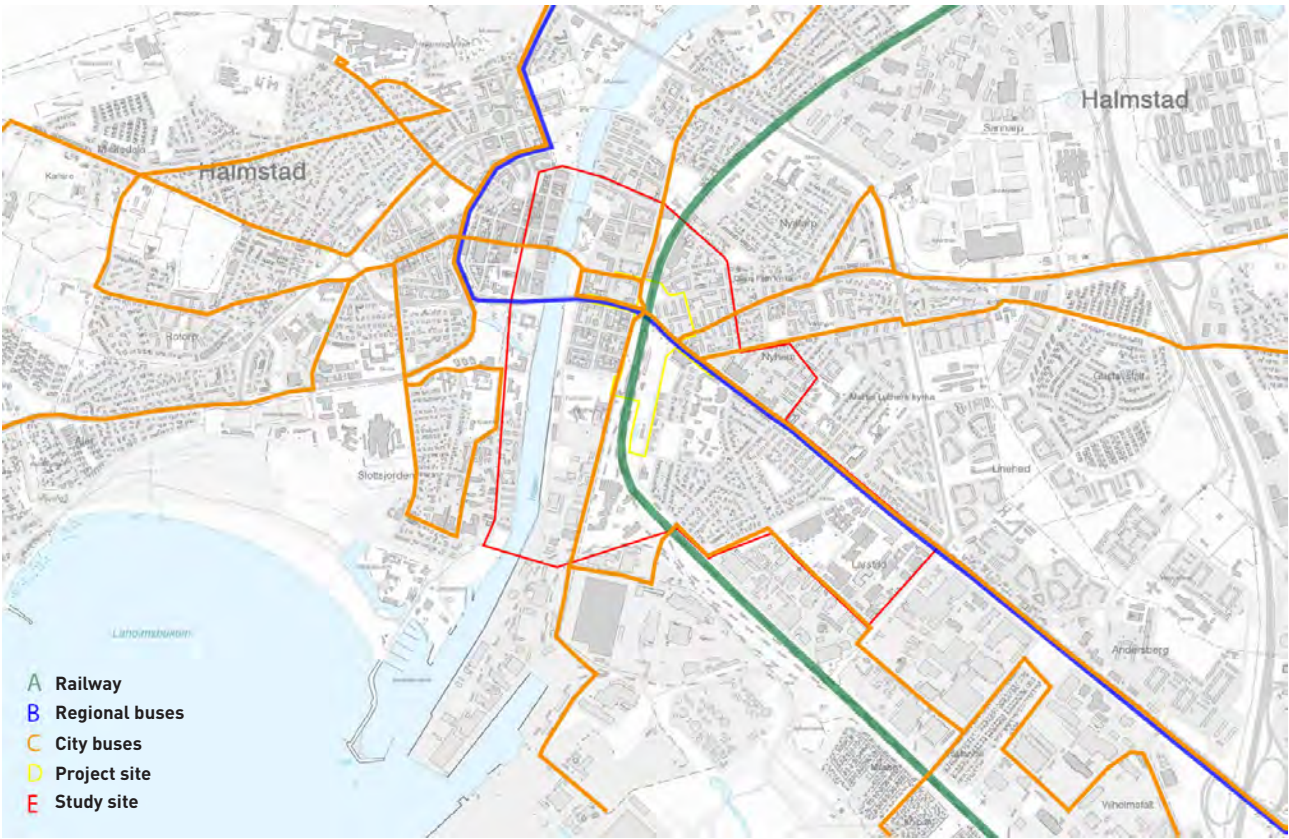
The highest recorded velocity throughout the duration of measurement is 1.55 mm/s (comfort weighted) at 8 metres distance from railway. For on-site construction situated about 30 metres from the nearest track, velocities above 0.4 mm/s have been recorded several times throughout the course of measurement.

The target value for comfort vibrations (during new construction) is 0.4 mm/s RMS on framing of joists in construction. Considering the velocities recorded over the period of measurement, the plan area is not considered unsuitable for the new construction of five-storey multi-dwelling units, but in order to ensure that the guidance value is achieved during construction, further action and detailed studies of the foundation, and the correct choice of frame design are required during project planning.

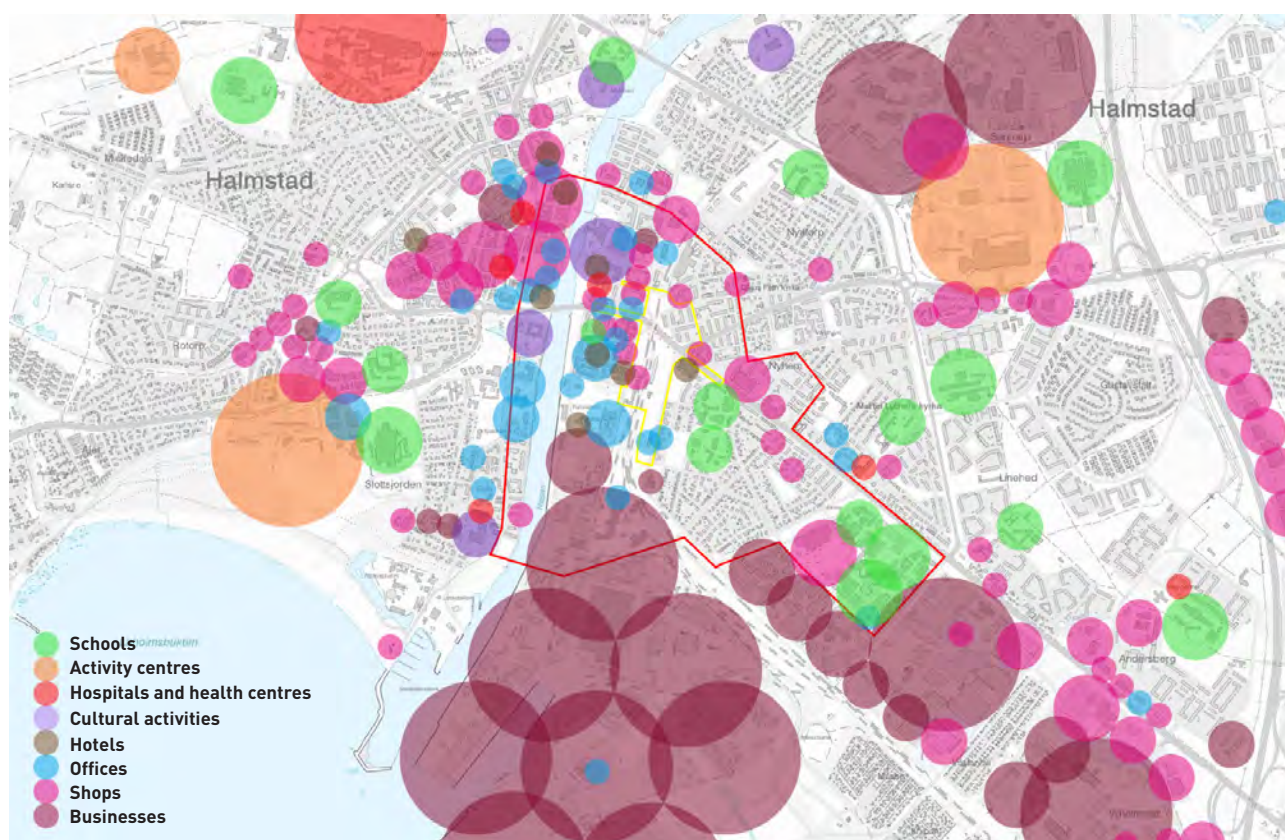
There hasn't been a measuring of vibrations for the project site, but the above mentioned values can provide an indication. The speed of trains affects the actual velocity at the project site.



Bike paths



Public transport



Focal points

