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Architectural Knowledge and Complex Urban Space

Analysis of Five Proposals for Slussen in Stockholm¹

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Abstract

This paper presents, compares and evaluates five design proposals for remodelling the famous, or as some would say infamous, Slussen transport interchange in the Swedish capital, Stockholm. Slussen is strategically located where the locks between Lake Mälaren and the Baltic Sea meet the land bridge between northern and southern Sweden. It is now a major hub for Stockholm's road, bus, boat, rail and underground transport systems, which in 1935 was redesigned as integrated transport node in the modernist style. This has now become so physically deteriorated and obsolete that a series of proposals were put forward during the opening years of the new millennium for its complete remodelling. As a contribution to that exercise, the urban design practice Spacescape was commissioned to analyse and evaluate the likely performance of the various regeneration proposals for Slussen, using methodologies based on space syntax theory and other methods, in order to predict the likely outcome of each proposal on Stockholm's urban life. In what follows, projects by Atelier Nouvel and Habiter Autrement, Big, Foster and Partners and Berg, Nyréns and finally Wingårdh and Tema have been compared and evaluated in the light of the goals set out in Stockholm's comprehensive city plan.

Keywords: Slussen, competition design, urban design strategy, evaluation, sustainability, urban life

1. Background

Slussen, Swedish for "the lock", is situated at the crossing between the waterways of Lake Mälaren and the "Sea" Östersjön and the land route connecting southern and northern Sweden. It is said to be the starting point of the urban development of Stockholm, where Stockholm city was first situated. Slussen was a strategic crossing for trade and transportation on water and land, since this was the only passage of Lake Mälaren for miles. Anyone going from south to north on land or east to west on water in the middle of Sweden before 20th century had to pass this point. Up until the 18th century Slussen basically consisted of a bridge connecting the central City island of Gamla stan and the southern island Södermalm. During the 18th and 19th century Slussen continuously was expanded as a wide urban bridge turning into a square in the middle of the two islands Gamla stan and Södermalm, but also a heavy traffic junction. In 1935 Swedish architect Tage William-Ohlsson created a modernist traffic complex which solved all increasing car and public transport needs. The modernist piece was highly appreciated at the time for its futurist design and greeted by Le Corbusier himself.



Figure 1: Map of Central Stockholm.



Figure 2: (a) Aerial photo of the area Slussen today from 1935, (b) Integration Radius-3 of the current situation.

After nearly 70 years in service, the traffic node in the Slussen district in central Stockholm is largely worn out and obsolete from a technical standpoint and, therefore, must be replaced. Lack of pedestrian safety and comfort has also been highlighted by politicians and planners in the City of Stockholm. In light of this problem, a competition that solicited designs for the renovation and re-designing of Slussen was held during 2003. On 29 March 2004, the jury named architectural firm Nyréns arkitektkontor as the competition winner for its proposal entitled "Nya Slussen" (translation: New Slussen). Given that there were a number of people who continued to suggest that Slussen be preserved in its existing form, the architectural firm White arkitekter was invited to draw up a proposal based on the development of the existing solution. As a part of this exercise, Spacescape was hired in March 2006 and tasked with helping investigate the major questions concerning the effect on urban life of the two proposals - Nyréns' "Nya Slussen" and White's alternative "Nybyggd bevarande" (translation: New but Preserved). Spacescape's findings were detailed in the report "Slussens betydelse för stadslivet" (translation: Slussen's Impact on Urban Life) (Spacescape 2007), which was used as the basis for the now-completed competition. Spacescape's investigation clearly showed the advantages of pursuing a solution not based on the existing Slussen installation. A political decision regarding Slussen was made in December 2007, in which it was confirmed that the traffic solutions currently in use will not be preserved in its renovation, but that a new design would be sought. In addition to Nyréns, which won the competition in 2004, four additional architectural groups were contracted to examine different alternatives for development. These were: Foster+Partners and Berg

Arkitektkontor, Wingårdh Arkitektkontor, BIG, Atelier Jean Nouvel and Habiter Autrement. These five groups each produced their own proposal for a new design based on the traffic structure that Nyréns drew up in the earlier competition. Similar to 2006, Spacescape was again contracted during the autumn of 2008 to analyse and evaluate the five proposals based on their impact on urban life. As previously, the basis for this analysis was the City's own goals for urban life at Slussen, as formulated in various tender documents and planning documents drawn up for Slussen and Stockholm as a whole.

1.1. Methodology

Spacescape's study uses the City's goals for urban life at Slussen and in Stockholm in general as its point of departure, and is based on selected location, area and spatial analysis techniques. Spacescape's methodology is based on space syntax research theories and empirical results (e.g. Hillier and Hanson, 1984; Hillier, et al., 1993; Hillier, 1996; Marcus, 2000). There has been close collaboration with Space Syntax Limited for several years, not least of all in regard to this project. Additionally, Spacescape also uses software and empirical data produced at the School of Architecture at the Swedish Royal Institute of Technology (KTH) in Stockholm (www.arch.kth.se/sad). One important program used in this is Place Syntax Tool (PST) and the studies it has made possible (Ståhle et al., 2006). These analyses have also used Stockholm's sociotope map to understand specific qualities of urban life outdoors (Ståhle, 2008). Inspiration has also been drawn from urban public space researcher William Whyte (e.g. Whyte, 2001) and Danish architect Jan Gehl (e.g. Gehl, 1987). One model used is the study that Gehl Architects undertook in Stockholm's inner city in 2005 (Gehl Architects, 2005).

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1.2. Comprehensive goals for urban life

Spacescape's study and evaluation is based on the goals formulated by the City for urban life in Stockholm and at Slussen, in particular. The primary strategic document is the 2006 programme consultation document for Slussen (Stockholm, 2010a). This document contains the statement:

"Slussen is to fulfil its function as a link between city districts and work in harmony with the motion patterns of the inner city. Slussen has the potential to become a fantastic area for residents and visitors located on historic ground and with a unique view out over the water. Both attractions and accessibility are required to entice large numbers of people here. Slussen should be an attractive eye-catcher within the cityscape and should be home to activities that draw people to the area. It should be easy to find your way both through and within Slussen. In order to make Slussen a safe place it is important to create good flows; a feeling of being closed in and dead-end streets should be avoided and thoroughfares between intersections should be open and easily assessed by visitors. As far as is possible, footpaths should have active entryways, preferably also at night."

Various professional evaluations, previous competitions aimed at soliciting a design for Slussen and Stockholm's comprehensive city plan are also important in achieving these goals. For example, one of the comprehensive plan's urban development strategies for achieving sustainable growth is creating: "A dynamic urban environment throughout Stockholm." The most recent government-formulated vision of making Stockholm a "pedestrian city" (Stockholm, 2010b) is a clear vision that directly addresses Spacescape's study and what we call "the urban life perspective".

The goals have been assembled under the following five themes:

I. Pedestrian accessibility and wayfinding

Slussen should be populated, easy to find and easy to navigate through.

II. Meeting places and events

Slussen should be both a local and regional meeting place.

III. Safety and the public

Slussen should be a safe place and open to the public.

IV. Recreation and panoramas

Slussen should be a place for recreation and offer attractive panoramas.

V. Attractions and diversity

Slussen should be an urban place with a large number of attractions.

This relates in particular to the way Slussen is to accommodate pedestrians, but from a broader perspective also to what type of new, urban place Slussen will become.

1.3. Technical analyses: location, area and spatial analyses

Based on Stockholm City's goals for urban life, a number of strategic spatial analyses that highlight different aspects of urban life have been selected. These have then served as data from which the qualitative evaluation and assessment of the five proposals was created.

A. Location analysis

A1. Spatial integration

A2. Spatial linkage

A3. Location density

B. Area analysis

B1. Spatial control and intelligibility

B2. Entrance zones and edges

B3. Spatial positioning

C. Space analysis

C1. Recreational open space

C2. Density and land use mix

C3. Compactness and spaciousness

2. Evaluation of proposals

2.1 Goals and strategic questions

This evaluation is based on the municipal government's goals for urban life at Slussen, such as they have been expressed in various municipal programmes and planning documents. Through consultation between the municipal government and Spacescape, these goals have been summarised under five separate themes. Within each individual theme, each proposal is evaluated based on a number of strategic questions.

The evaluation is performed on the basis of the municipality's goals for urban life qualities for the Slussen area, set by planners and politicians in different programmes and plans. Working collaboratively, the municipal government and Spacescape have summarised these into five themes. Each proposal is evaluated according to a number of strategic questions connected to each theme.

I. Pedestrian accessibility and wayfinding

People "on the move" are the lifeblood of a city. They contribute to populating the city, provide a greater basis for service and, more than any other factor, are responsible for the special attraction we feel for cities. In order to make the city accessible and well patronised by as many people as possible, one basic precondition is that it must be easy for people to orient themselves there.

Strategic questions:

- a) How are major pedestrian routes in the city connected at Slussen and are they easy to find?
- b) In what locations are Slussen populated?
- c) Are the vertical connections easy to find and navigate through?
- d) Are the routes to and between transport modes easy to find and navigate through?

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II. Meeting places and events

The city is a venue for meeting and for public activities. It is not so much about actual social interaction as it is about sharing space with others for a time. Not least important in this is the fact that a city's design can play a decisive role in whether or not people from different areas of the city meet.

Strategic questions:

- a) Do local and regional flows mix?
- b) Do strategic junctions and transport nodes provide surveyability and encourage users to stay in the area?
- c) Are there edges along populated spaces from which to observe city life?
- d) Are there good spaces for events and are they located close to Slussen's key routes?

III. Safety and the public

An increasingly important consideration when undertaking urban development projects is that of creating safe areas. This is not so much related to the actual risk that an incident might occur, as to the impression of danger, not least that which is created as a result of the way sites are designed and used. The presence of other people is the most important factor in creating the impression that a certain place is safe.

Strategic questions:

- a) Are key routes activated by entrances both during the day and at night time?
- b) Are dead-end backstreets with a low degree of surveyability created?
- c) Is there car traffic along key routes?
- d) Do commercial and other activities affect public access?

IV. Recreation and panoramas

A city's public spaces are also places in which to pass time. How much time is spent there depends on the attractiveness of the place, which is often linked to its importance as a meeting place. What it offers in terms of recreation and views is also important to its ability to increase its attractiveness. Elements that can be described as "park qualities" are examined under this theme.

Strategic questions:

- a) How much of the open areas are mostly sunny and how much outdoor space is covered?
- b) How much of the open space has a quay?
- c) How much of the open space is peaceful?
- d) How much of the open space has panoramic views?

V. Attractions and diversity

City planning always assigns a location value for streets, areas and properties; which can be referred to as "spatial capital". This value is assigned according to the way a city's streets and thoroughfares link density, attractions and open spaces. In an urban area characterised by the integration, rather than segregation, by a mixture of residential quarters and businesses, and by a high volume of diverse pedestrian and vehicular traffic of the kind that is desired for the Slussen area, the goal is to create a high level of accessibility - not just to buildings and strategic attractions - but also to attractive areas and parks.

Strategic questions:

- a) How high is spatial compactness and spaciousness in terms of density and open space for recreation?
- b) How flexible is the structure in terms of land use mix?
- c) Are there good locations above and below ground for shopping?
- d) Are there good locations for culture?

2.2 Goals and strategic questions

Atelier Nouvel & Habiter Autrement

This proposal would both change Slussen most dramatically of all the proposals but would also most clearly work in harmony with its current spirit. This means that many of the problems Slussen has today will remain, and in certain cases, are even exacerbated, but this also contributes to the emergence of a large number of new benefits and opportunities. One way to describe this dichotomy is to say that this proposal demolishes Slussen in order to rebuild it on a larger scale. This proposal includes and amplifies the typical, characteristic features of Slussen as it stands today - with a multitude of thoroughfares that connect various special departure and destination points, the ambition of characterising these with different content and to do this on many different levels. The problem with this is that many of the existing problems will therefore very likely be re-created, i.e. little-used routes, and thereby difficulty in supporting the activities hoped for, as well as a significant risk of creating both an unsafe feeling and difficulties for visitors to orient themselves in large parts of the system. At the same time, there is something very wise about the proposal when it attempts to expand

on the basic problem of how to link Södermalm to Gamla Stan even farther and onwards; partly along Skeppsbron, but most especially along Centralbron and the underground to Riddarholmen and further on to Tegelbacken and Centralen. In this way, the proposal highlights a problem that has not previously been stressed, i.e. that it is not only the under-patronised Slussen which is currently something of a barrier within the city landscape, but that Gamla Stan also constitutes a part of this barrier. Obviously, both Slussen and Gamla Stan both are and can be very attractive areas, but they suffer from an acute lack of attractions that are of significant importance in the everyday lives of Stockholm's residents. In this sense, the proposal is the most future-oriented of the five, in as much as that it highlights the opportunities to create better and more interesting links for pedestrians, not just between Södermalm and Gamla Stan, but also between Södermalm and Norrmalm, which could be very important in the future.



Figure 3. Illustration of the proposal



Figure 4. Results of the spatial analysis of Nouvel + HA's proposal. The results show Integration radius-3, VGA Control value of the upper "floor", the facade outlines of the buildings, and the open, public space.

Big

Of the five, this proposal is the one that most greatly retains the typical character of today's Slussen as a place of wide-open spaces and a sloping, connecting level, rather than bridges and buildings that are shaped by the flow that is central to the site. At the same time, this proposal makes a clear departure from the current Slussen, principally in two aspects: The first is that the flow that is respected and that shapes the design of the buildings is pedestrian traffic, not vehicular traffic. The second is that the pedestrian flow through Slussen that currently has a great number of different routes from which to choose - where each route connects certain departure and destination points - has been corralled into one main thoroughfare. This main thoroughfare is also lined with buildings and important places. On the other hand, this proposal re-creates the kind of ramp system that can be found at Slussen today. Some of these are set in quite peripheral locations, which gives rise to the possible risk of re-creating an excess of passages and routes with low levels of use. To a certain extent, these ramps can be developed into attractions and features in themselves, especially during certain times of the year. This requires a well thought-out design with regard to creating opportunities for people to stop and remain for a time, and to the placement of entrances to the surrounding buildings. In this sense, this proposal is very much a kind of "urban park" that must be given characteristics that encourage people to stay rather than simply pass through, by means of good landscape architecture, in order for it not to become overly uniform and deserted. It is not certain that all roofspace should be made public areas if the surveyability and security that is required in an urban location like this cannot be assured. In an overall sense, this proposal offers an original and clever way to build on the existing characteristics of the current Slussen area, at the same time as it rectifies many of its shortcomings.



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Figure 5. Illustration of the proposal



Figure 6. Results of the spatial analysis of BIG's proposal. The results show Integration radius-3, VGA Control value of the upper "floor", the facade outlines of the buildings, and the open, public space.

Foster & Partners + Berg

This proposal makes a clear departure from Slussen's current design, reverting instead to an older tradition of dense urban development at Slussen, all the way to the waterfront. The area over the water itself is left undeveloped, however, which creates a clear demarcation between the two main levels that comprise the Slussen area. This design creates definite and concentrated groups of routes and areas lined with buildings; both on the square level and on the southern quay level. The links between both these two levels are strong, as they are also between Södermalm and Gamla Stan. However, this proposal belongs to the bridge category in as much as it opts to make the main connections between Gamla Stan and Södermalm bridges and thus, like the current Slussen area, creates several levels already at Gamla Stan. In spite of the fact that there are plenty of vertical connections between these levels included in the proposal, there is still a risk that the design will recreate one of the major problems that plagues Slussen today. The proposal in question suggests a comprehensive new development and reduces both the number of different levels and possible thoroughfares, but the notion of linkage using bridges is still critical to the proposal. Overall, this proposal presents an innovative solution for Slussen's renovation that includes historical routes that contribute to the creation of a completely new and distinct urban development, but that still fails to solve a number of the problems that exist with the Slussen area today.



Figure 7. Illustration of the proposal



Figure 8. Results of the spatial analysis of Foster + Berg's proposal. The results show Integration radius-3, VGA Control value of the upper "floor", the facade outlines of the buildings, and the open, public space.

Nyréns

Nyréns' proposal combines some of the same design elements found in other proposals, but in a less refined form. It contains an element of the corralling, sloping level with large open spaces, though at the same time, retains the different levels and variety of alternative thoroughfares. Here we find obvious bridges that create differences in level, but also several strong links between main thoroughfares on the square level down to the quay level. The final evaluation, however, is that the proposal, as a whole, fails in its aim to do both, and instead, becomes locked in a certain indistinctness that perpetuates some of the basic problems Slussen suffers from today, even if it significantly reduces their negative impact. The proposal retains a large number of alternative routes over Slussen, often without the support of surrounding buildings, which can lead to both low levels of patronage and a lack of security; as well as very large public spaces that can be very attractive drawcards at certain times of the year, but that otherwise risk being most often deserted. This proposal adds relatively few new buildings, a factor which means the current low density of development in the Slussen area is sustained. On the whole, this proposal presents as something of a "promising compromise".



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Figure 9. Illustration of the proposal

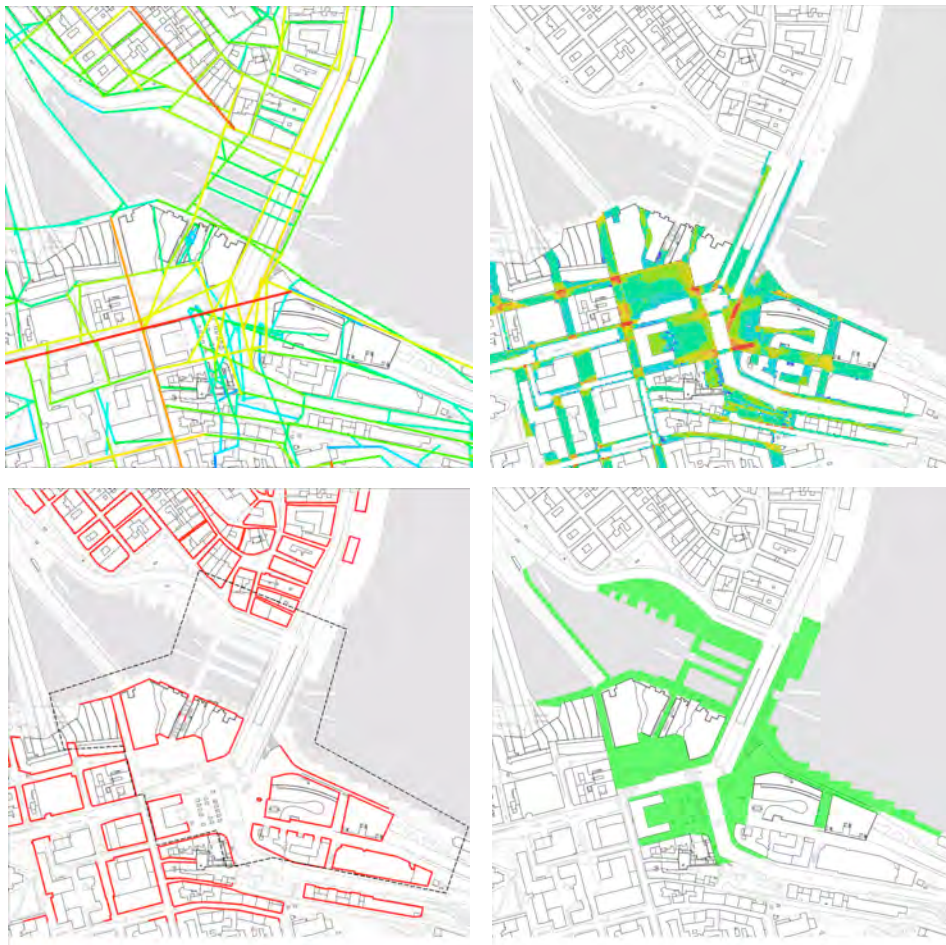


Figure 10. Results of the spatial analysis of Nyren's proposal. The results show Integration radius-3, VGA Control value of the upper "floor", the facade outlines of the buildings, and the open, public space.

Wingårdh + Tema

This proposal makes a clear break with Slussen's current design, returning instead to the older tradition of an advanced line of buildings. Less obvious is the fact that the proposal also goes against the current design in as much as that it almost completely abandons the approach based on bridges or sloping levels between Gamla Stan and Södermalm. Instead, it links the islands exclusively at the quay level after which, under the auspices of a development initiative known as "Söderlyftet" on the Södermalm side, it redresses the large disparity in levels by means of a flight of stairs. The exception here is, obviously, the bridge that extends Skeppsbron quay. This is a highly original and interesting approach; something hidden that solves many of the problems Slussen faces today by concentrating the many routes and levels. This is a concept that could be considered in the extension of both Götgatan Street and Hornsgatan Street, given that a flaw in this proposal is the southern quay level's inadequate connection with its surroundings. This lack of connection is further exacerbated by the fact that the front line of buildings has been moved so far forward that it interrupts the continuity of the southern quay level's east-west flow, something which may have a significant impact on future projects at Stadsgården and Söder Mälarstrand. Overall, this proposal is both original and a solid example of how traditional solutions can create innovative results.



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Figure 11. Illustration of the proposal



Figure 12. Results of the spatial analysis of Nyrens's proposal. The results show Integration radius-3, VGA Control value of the upper "floor", the facade outlines of the buildings, and the open, public space.

3. Conclusions

The competition submissions evaluated here reveal varying abilities to fulfil the aims the City has established for the Slussen of the future. There is no single proposal that can immediately be said to have solved the difficult task in all its elements, though each of them has identified and revealed important and developable possibilities that will help to fulfil various aspects of these goals. We have listed the most important of these in point form below. Further, we believe that these should be integrated into the City's continuing work to develop the Slussen area.

3.1 Promising Solutions

- o A direct link between Järntorget and the intersection of Götgatan Street and Hornsgatan Street creates the strongest and most uncomplicated passageway between Södermalm and Gamla Stan-Norrmalm. (W, F)

- o The likelihood of the quay level becoming a true thoroughfare and thereby, increasing in significance as a meeting place, is improved if the "lift" from the quay level to the square level occurs within the front line of the buildings. If the lift occurs earlier at Munkbron, then the southern quay risks becoming isolated. An isolated southern quay creates even less favourable conditions for future plans to use Söder Mälarstrand and Stadsgården for new urban development projects. (W, No)

- o The southern quay can be integrated locally by moving the front line of buildings forward with a large number of local connections to the square level and underground to the quay level. (F, No)

- o A direct extension of Götgatan Street and Hornsgatan Street down to the quay level will integrate the quays with the rest of Södermalm. (Ny)

- o A direct route from Skeppsbron quay straight into the underground station/bus terminal and a stairway leading down to the underground station/bus terminal at the intersection of Hornsgatan Street/Katarinavägen Street will create proximity both to and between public transport nodes. (B, F, No, Ny, W)

- o The middle level and levels above the square level are difficult to integrate into the city's natural movement patterns and are perhaps not critical in creating good urban life in the Slussen area. (F)

- o Moving the front of the city forward from Södermalm means fewer gaps between buildings, with continual entry zones and thereby a more activated public space. Moving the front of the city forward also means greater local density, but it requires that new buildings be constructed within a street network that is integrated with the surroundings. (B, F, W)

- o A direct connection either alongside or above the bridge to the underground station, preferably in the extension of Katarinavägen Street, would mean a new and potentially strong connection to Tegelbacken and Centralstationen station. (No)
- o An open valley would create peaceful recreation areas on the quay level with good access to the water and a panoramic view. (F, No, W)
- o Terraces or ramps leading out towards the water would create very good views, but may possibly be difficult to integrate with the city's street network in the slope down towards Saltsjön. (B, Ny)

3.2 Summarising discussion

The analysis of these various proposals can also be summarised in more general strategies, which have become more clear and defined as the analysis has progressed. These strategies can also be evaluated in light of the City's established goals and, as such, form the groundwork on which to base further work by the City. It has also become obvious that, at a basic level, these strategies amount to different approaches to overcome the original natural conditions at Slussen and in doing so, can be traced back through the entire history of the city. Stockholm's inner city is unusual in that it has been shaped to such a large extent by natural conditions. In truth, it is not a particularly suitable place on which to build a city at all, and a constant battle with bare cliffs, steep hillsides and large bodies of water have dogged the expansion of Stockholm throughout its history. Perhaps nowhere else in Stockholm are these natural conditions so obvious and present such a difficult obstacle to urban development as they do at Slussen. The majority of Slussen's assets and characteristics, as well as its shortcomings and problems, are a result of these circumstances. At the heart of it, Slussen is an isthmus between an island and a fault scarp that divides two large bodies of water. This circumstance creates some of the most breathtaking views in Stockholm, and also imbues the location with strategic importance as a transportation hub where, of necessity, many people need to pass today, just as was the case 700 years ago. This is perhaps the most important element of what is usually considered as the advantages of the site.

Less obvious, perhaps, are the problems that this situation brings with it for an expanding city. We believe that these can be summarised in three main points: Firstly, the isthmus naturally limits the amount of land available at Slussen and thereby limits the number of people who can live and work in the area. This stands in drastic contrast to the way the isthmus, by the same token, makes the site a node that must be passed by a large number of people. Secondly, the fault scarp both hinders access to the land beyond it and, most importantly, creates major differences in level that must be overcome in one way or another. Various different strategies have been employed to try to achieve this over time: slopes, bridges, staircases and even lifts. Thirdly, the island (Gamla Stan), which quickly became too small to accommodate the city. The city moved up onto the nearby areas and this

created a central thoroughfare in the form of Riddarfjärden-Gamla Stan-Saltsjön that was less heavily trafficked than the rest of the city. Today few residents have daily errands that take them to the Gamla Stan island in the same way they have errands in other parts of the city. This contributes to the further weakening of the area around Slussen.

The many proposals presented for the redevelopment of Slussen over the years and the facility that currently stands there today are united in one aspect - their attempt to overcome the site's natural limitations in order to make it more inhabitable and a part of the life of the city. In this study, we have had the opportunity to more closely examine the five new proposals that attempt to achieve this aim. All have been shaped by guidelines specified by the City for the aims of this project, and they also have certain basic conditions in common, such as particular traffic solutions. It is striking, however, to note how the various groups select strategies that differ from one another at the basic level. We can separate those who work with bridges from those who work with stair cases and slopes; we can separate those who attempt to join the gap created by the isthmus with buildings from those who attempt to do so by creating open spaces; we can separate those who view the development at Slussen as an independent complex, from those who see it as part of the city; we can separate those who see the isthmus as a low shore from those who see it as a continuing ridge; we can separate those who view the distance between Gamla Stan and Södermalm as something to be closed, from those who wish to connect Gamla Stan with a more distant point.

These strategies can be evaluated based on the City's goals, where certain strategies have emerged as significantly more practicable with regard to achieving these goals than others, and these can thereby be recommended as feasible options for the future work. When it comes to bridging the distance between larger land masses that the isthmus requires and access to buildings and people with strong ties to the area, there are two strategies: either create a connection using a large, attractive space, or reduce this distance by moving the front line of the city on the Södermalm side. It is our conviction that the superior strategy in this case, with regard to urban life, is to move the front line of the city forward. There are obvious limitations in practical terms of what is possible in the city, but from the point of view of urban life, the greater the extent to which this can be achieved, the better. The reasons for this are manifold. Primarily, this is about creating routes that are continually lined with departure and destination points in the same way that the rest of the inner city is constructed, which will contribute to populating and activating the routes, but also, in the majority of cases, to reducing the feeling of insecurity and to improving ease of orientation. Moving the front of the city forward need not be negative in terms of the increased use of Slussen for recreational purposes, either. It can open up the opportunity to create urban spaces of varying character; some more insulated by buildings and thereby protected from wind and noise, and others more open, providing views of the fantastic landscape. The built environment can also be used to articulate views and panoramas. Conversely, we believe it would be very difficult to activate a large, public space in this location given that Slussen's basic problem with regard to urban life is its acute lack of integration with its surroundings. Simply put, there just are not very many local residents who would populate this area coinciden-

tally. Anyone who would be here would come specifically for that purpose. There is no doubt that such a large area would periodically be very well patronised, but it would also be very much at the mercy of the weather and seasons, and be highly dependent on events and attractions that would draw people here. We see this plan for a large, open public space as a very risky solution for Slussen, rather than as a sustainable one, which is what the City of Stockholm has established as its aim.

The proposed construction solutions in the submissions are in themselves quite different in nature. There is one strategy for developing Slussen by constructing a large complex, in the same way as Slussen can today be said to comprise a complex, and also there is a strategy that considers the coming construction as a part of the city itself. In practice, it can be said that no matter what is built at Slussen, it will unavoidably be complex-like in nature. One only has to consider the difficulties of construction; the multiple levels and covered platforms, the many connections between the different forms of public transportation that cut across the area and so on. As such, the majority of what is built will be highly dependent on everything else that is built in the way that is characteristic of complexes. This could naturally be more or less emphasised. The downside of complexes is that they often have a homogenising effect in as much as only a small number of entrances are required, the fact that the complex is often owned and operated by just one owner, that one particular tone and style spreads itself over the whole complex, and that its image in the eyes of the public can become indistinct. This is in direct opposition to the City's desire to create diversity at Slussen; with a number of players, a broad and varied content and a strong sense of being a public place. As such, we strongly recommend the strategy that proposes to make the development at Slussen as far as possible a part of the city structure, rather than to create a stand-alone complex. Accordingly, this also applies to the public transport node, which should be well integrated in its parts. The underground station and bus terminal must be closely linked, but at the same time, the entryways to these hubs must be located at strategic, main intersections in the city, e.g. at the intersection of Hornsgatan Street and Katarinavägen Street, along the main thoroughfare between Västerlånggatan Street and Götgatan Street, and at the extension of Skeppsbron.

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As regards the difference in levels, three strategies are found among the proposals: narrow, sloping ramps (which we consider to be bridges), broad, sloping ramps (which we consider to be large slopes) and stairways. While, at first glance, bridges seem to be the obvious solution - not least of all due to their symbolic value in as much as that we often talk about "building bridges" between different things when we want to join them - with time, we have come to realise that this solution also carries with it some of the basic problems that characterise Slussen today. A bridge may join two things together, but it also, by its very nature, always entails the creation of different levels. Simply put, the proposal based on bridges creates a two-level solution over the isthmus that separates the flows, risks reducing the ability of visitors to orient themselves and also obscures the views from the quay level. The bridges that have been characteristic of Slussen for such a long period of time are products of the need to accommodate shipping, which is not at all as important a consideration today as it has been in the past. The separation of urban areas and interruption of flows that the bridges have

created can therefore now be avoided, which in many ways can contribute to achieving the goals the city has for urban life at Slussen. It can create more vibrant routes, increase accessibility to Slussen's many areas, not least its quays, and assist with orientation and reduce feelings of insecurity as it creates fewer areas shielded from public view and little-used areas. The proposal that makes use of stairways to overcome the difference between the levels creates a continuous and common plane over the isthmus, in the same way as the rest of the inner city constitutes one, continuous and common plane for pedestrians. The proposals that suggest slopes or very broad ramps, in general, also manage to avoid creating multiple levels, thereby condensing flows and areas to one and the same plane. For this reason, we recommend the strategy of bridging Slussen's levels using one common walkway on one plane rather than the use of bridges, regardless of how strong the tradition of using bridges at Slussen may be.

The above description also closely relates to another fundamental question vis-à-vis Slussen and where it is possible to discern different strategies within the proposals. Some proposals view the isthmus at Slussen as something of a low, broad sandbar, while others attempt to build the isthmus up into something like a gradually ascending ridge. The proposals that were identified above as utilising slopes to link the different levels at Slussen belong to this group. However, both of these approaches entail significant consequences for urban life at Slussen, and perhaps in particular with regard to its recreational features. Of necessity, the ridge separates the majority of the new places created from the water, while those that utilise bridges and stairways provide the opportunity to create many more and larger areas close to the water. It is our belief that in this, Slussen represents a completely unique opportunity for Stockholm's inner city to create a large, waterfront public space in a very central location - a southern Kungsträdgården Park - with perhaps even greater recreational opportunities, with access to water, sun, views and large areas for events, sports and spontaneous gatherings. The strategy that involves viewing Slussen as a low, broad sandbank makes best use of the existing possibilities, while strategies that build up the isthmus into a ridge forego them. In this respect, we clearly prefer the former.

Finally, one of the proposals suggests a surprising strategy, but also one that raises questions. All the other proposals have the main task as bridging the gap created by the isthmus between Södermalm and Gamla Stan, which, in all likelihood, is also the issue the City wished to see resolved more than any other. Nonetheless, one proposal suggests that the issue may be larger than that. As was intimated in the beginning of this concluding section, the city of Stockholm quickly grew too large for the island on which it was originally founded and hence, moved into other areas. As such, it has been a long time since Gamla Stan had the active role it once served in the city, and instead of a central hub, has instead become a place for Sunday outings and tourists. However beautiful, valuable and worthy of preservation Gamla Stan is, the fact is that today, it represents something of a barrier in the inner city. This means that the distance that needs to be bridged at Slussen today may not only be the distance between Södermalm and Gamla Stan, but, in effect, the distance between Södermalm and Norrmalm. This does not mean that the shorter distance may also require bridging, but this insight is

important to consider in the continuing work of developing Slussen. At present, the distance between Södermalm and Norrmalm is bridged by buses and underground railway rather than on foot, but this does not necessarily have to be the case. One of the proposals identifies just such a possibility in the form of a number of new connections to Skeppsbron and Munkbron. This proposal has, in our judgement, obvious problems in achieving the expectations vis-à-vis urban life that are placed on it, but all of these highlight a strategy in which, with regard to Slussen, one must think not only about how people will get to Gamla Stan, but also through and beyond it. In this context, the bridges leading to Munkbron are a much more credible idea, and suggest the beginning of a strong connection that bypasses Riddarholmen and carries on towards Tegelbacken and Centralstationen station. Here there are ongoing discussions about major transformations that could very well incorporate just such a route. However, from our perspective, in order to make such a solution feasible, new construction would be required along the connection, and it would also require strategic and well-designed connections to the adjoining areas and routes it passes. It may also need a strong, public programme of some kind, as the proposer suggests. This proposal has helped us to understand that in order to create a new and long-term sustainable Slussen, one of the ideas that must be pursued is that Slussen not only become a link between Södermalm and Gamla Stan, but also a link to the more distant Norrmalm.

Since the evaluation of the five proposals in 2008 the City of Stockholm decided, with support from Spacescape's analysis, to go with the Foster+Partners and Berg proposal. In 2009 the architects continued to work on the proposal in cooperation with the City and with continuous support from Spacescape. In late 2009 the architects presented a slight redesigned proposal in a public exhibition. The major difference from the original proposal was that the bridge system was simplified into two bridges without any other ramps. Since Slussen is in the heart of Stockholm's urban fabric it has since then been heavily debated. The design work continues. In late 2010 a new proposal will be presented for public exhibition and consultation. The reconstruction of the site is planned to start in 2012 and be finalized in 2018.

8. Notes

¹. This article is a shortened translation of the report 'Stadslivsanalys av fem Slussen-förslag', roughly "Urban life analysis of five proposals for Slussen", produced by Spacescape (2008) for the municipality of Stockholm, with some minor updates regarding the development of 'the Slussen question' after its submission.

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