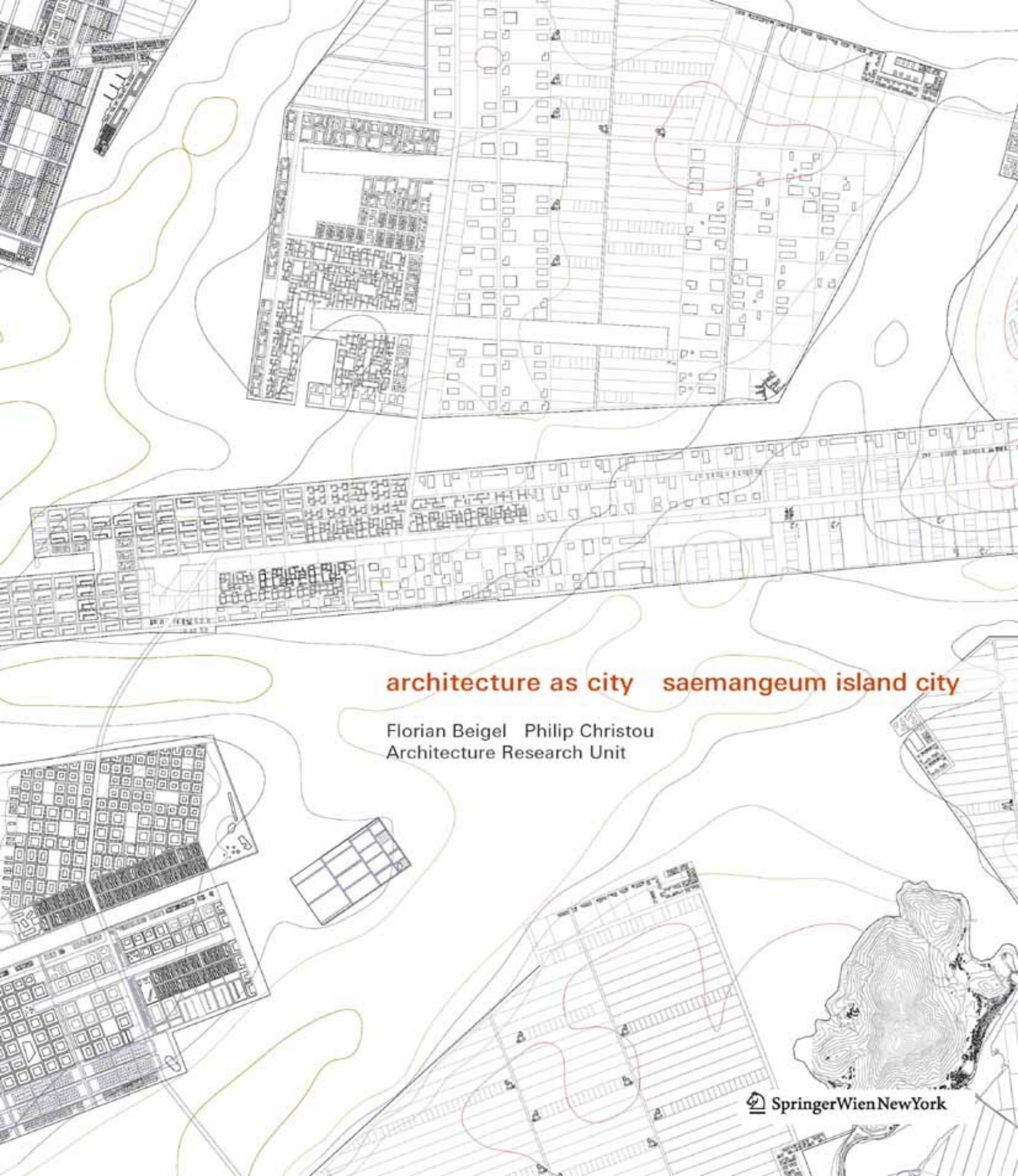

architecture as city saemangeum island city

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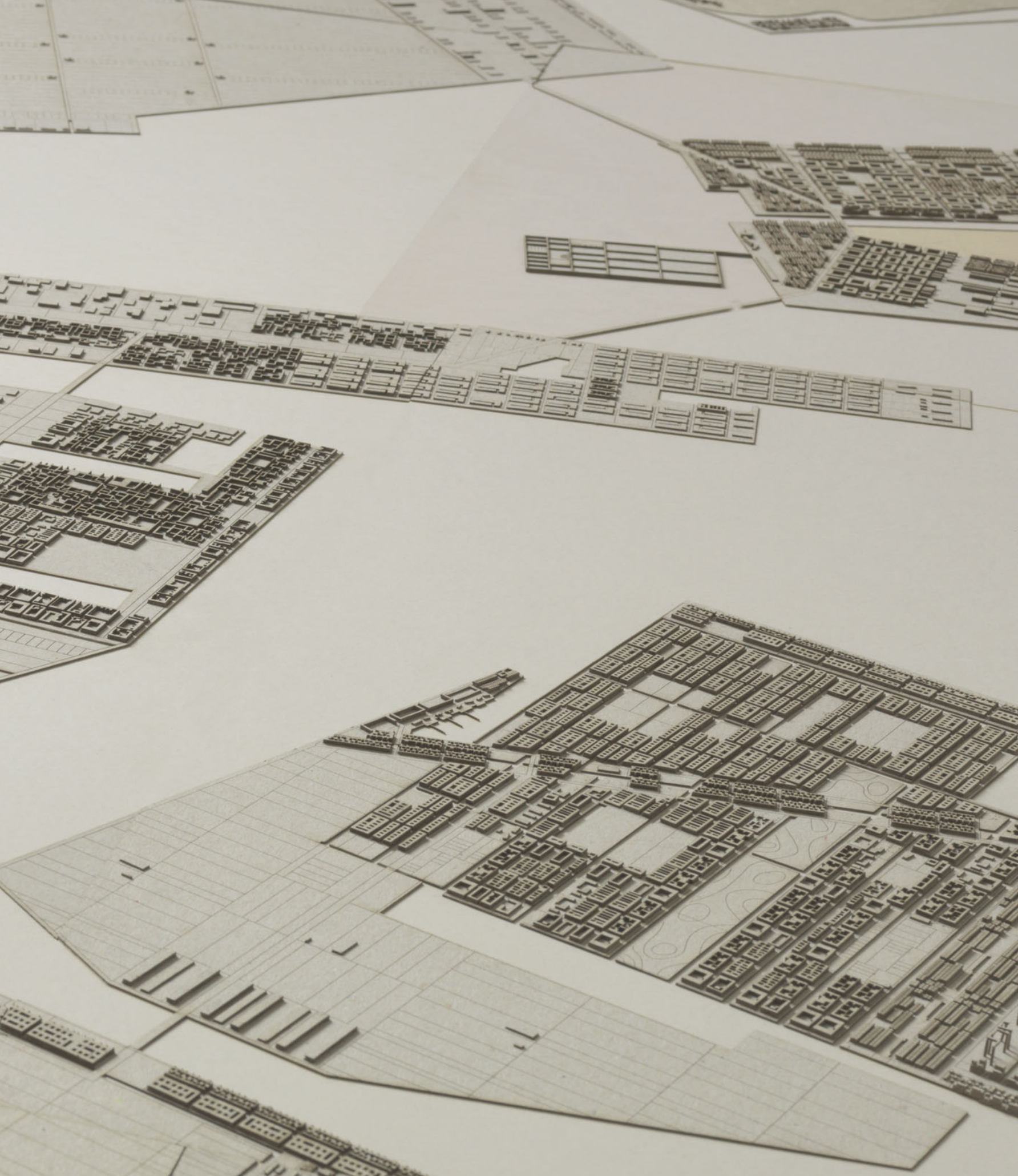

Previous page: Saemangeum Island City, design model, scale 1:10,000. *Photo: Steve Blunt, July 2010*

architecture as city saemangeum island city

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1. Giovanni Mansueti 'Miracle of the Relic of the Holy Cross in Campo San Lio', 1494.
Gallerie dell'Accademia, Venice

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ARCHITECTURE AS CITY

This book is intended to set out an architectural approach to the design of the city. This spatial approach is tested in the design of the Architecture Research Unit (ARU) Saemangeum Island City project in South Korea. ARU began working on the Saemangeum project in January 2008, as one of seven international architectural teams participating in an invited design competition / workshop. In our minds, city does not only exist at this large urban scale. We think it exists at many scales.

In some ways, this book is a reassessment of the ideas of continuity and memory in architectural culture that Aldo Rossi wrote about more than 40 years ago: an invitation for further research about the city. *'For I am convinced that progress concerning knowledge of the city can be real and efficacious only if we do not try to reduce the city to any one of its partial aspects, thereby losing sight of its broader significance. My outline for the establishment of an urban theory should be evaluated within this framework. It is the result of this long research and is intended to initiate a discourse on its own development and research rather than simply to act as a confirmation of results.'*[1]

Over the past few years when the bizarre in architecture is beginning to show signs of exhaustion, we have tried to maintain our passion for Architecture as City. This idea carries the potential for generosity of architecture. We feel relaxed with this as a starting point for design. The experience of the city exists at many scales: as a city archaeology, a city origin or a city fragment. Even the smallest urbanism, such as the bottles and tea caddies

1. Aldo Rossi, The Architecture of the City, The MIT Press, 1982, p. 27.

on the table that form the horizon in a painting by the Italian painter, Giorgio Morandi are part of this concept of architecture as city. We sometimes also think of furniture as city. Our projects are rarely stand-alone objects. There are often at least two buildings in a project. We like the expression 'architectural ensemble' and we ask the question, *'What can the ensemble of buildings do for the city?'* Can the ensemble be a gift to the city? Can it reveal special qualities of the city or the landscape? When one designs ensembles of buildings, one is designing the city in microcosm.

The spaces of the city in these ensemble projects are architectural and rich in spatial relationships. These relationships are about in-betweeness, generosity and an awareness of time. In this work, continuity of architectonic language is pursued by making contemporary translations of architectures of the past with a sense of unexpectedness and awkwardness.[2] This is design as research.

The way Koreans think about space generally, and how Koreans use spaces in the city is different from the way we understand and use space in Europe. We have now worked in Korea for over ten years, and we have learned some wonderful things from the Koreans about space. For example, in Korea there is a Confucianist idea called 'emptiness'. The Korean word for space, 'Kong-gan' directly translated into English is 'emptiness'. This is a Far Eastern concept about nature that was taught by the 6th

2. *See: Y.Z Chang, 'A Note on Sharawadji', Modern Language Notes, 1930, p. 221. See also: The Architectural Review, issue no.95, (1944).*

Century BC Taoist philosopher, Lao-Tse. For example, when we discuss the positive qualities of the in-between spaces represented in the paintings of Giorgio Morandi with Korean colleagues, this idea is immediately understood. The courtyard-like space in a traditional Korean house called 'madang' is more than a courtyard. It is a positively-charged void. This sense of the in-between or void is deeply embedded in Korean culture, even today. In the Phase 01 of the YoulHwaDang building at Paju Book City, we have designed an interpretation of this in-between space in the small courtyards.

We are looking for traces of the origins of the city from various times. This research into origins might reveal an open ground such as a public common that later becomes more urbanized. Central Park in New York was conceived by its designer Frederick Law Olmstead as a memory to the ancient landscape of that place. The urban landscape of Clerkenwell Green in London is still characterized by its natural slope towards the Fleet River. These time travels into city origins equip us with a sensitive design instrumentarium to make interventions that make sense of a particular place in the city.

A city is a place of cultural coexistence where there is a rubbing up of different aspirations and inspirations. It is a place of vitality and communication. We are attempting to design buildings that make a strong contribution to the quality of the public realm. These buildings enhance the civility of the place. This is a gentle civility that can be adapted to embrace the everyday and the special occasion of a particular context.

THE PHOTOGRAPHS OF KANG WOON-GU

In the time that has passed since Kang Woon-gu's photographs of rural Korea were taken, Korea's landscape has gone through a period of accelerated and dramatic change[3]. This shift from a largely agricultural existence to an increasingly urban industrial economy makes these photographs even more powerful today. Kang Woon-gu has documented ordinary moments of Korean agricultural life, and one can see in the photographs the intimate relationship that the people have with the ancient Korean landscape. They make one acutely aware of how the people co-exist with and have a deep respect for the land where they live. The mountains seem like guardians watching over the Korean people- time witnesses to the life that has been played out in front of them for thousands of years.

Although the everyday life of Korean people has now almost completely shifted from a rural existence to a much more urban way of life, Kang Woon-gu's photographs remind us of the importance that the landscape still has in the culture and customs of the Korean people, both in the rural mountain villages seen in his photographs and in the new cities that characterise contemporary Korea. Cho Se-hui, the Korean novelist and contemporary of the photographer has written, 'For Kang Woon-gu, going out to take photos is to get closer to himself, the things he loves, the people who have helped him grow, and their lives, labour, and even their souls.'[4]

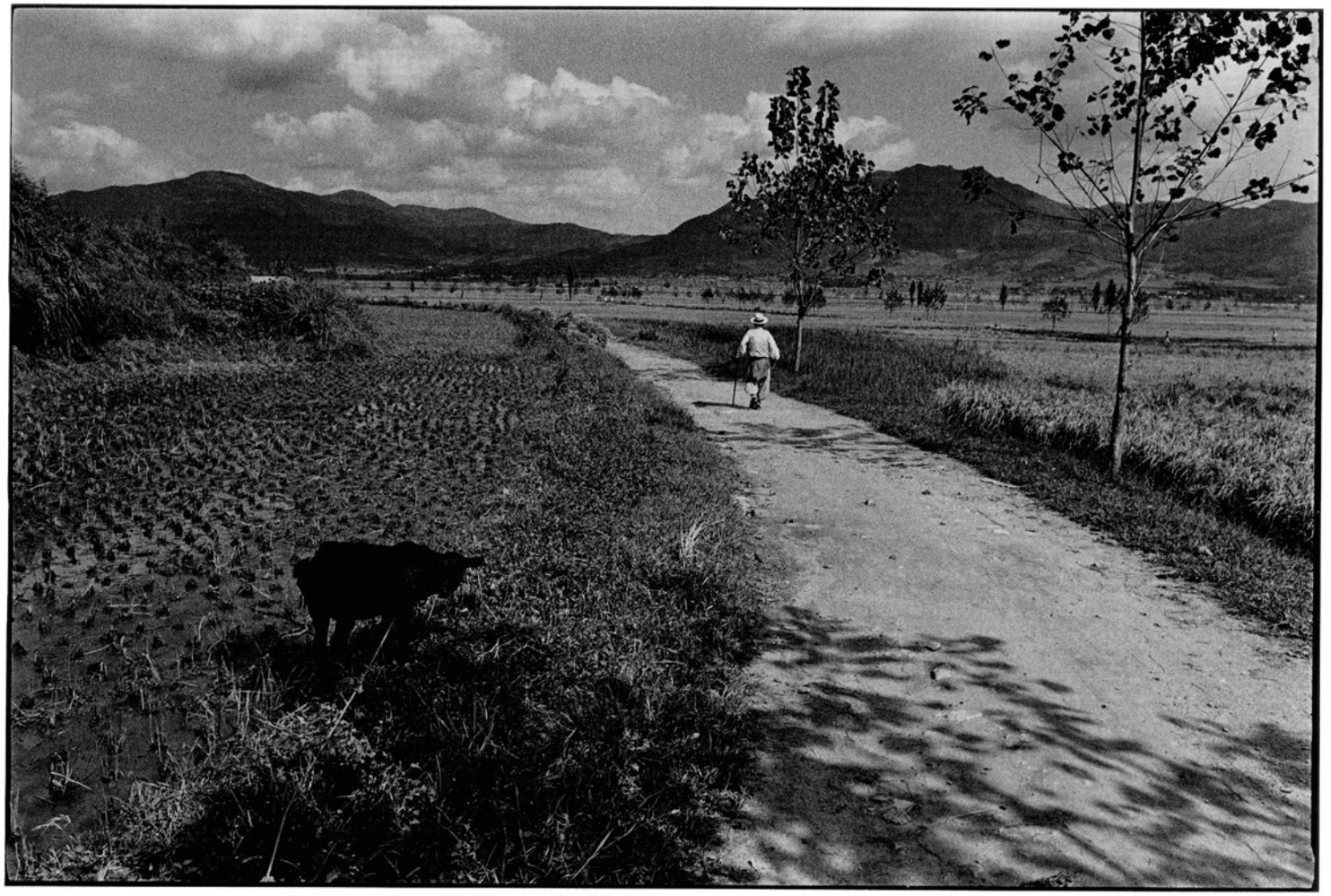
These photographs can offer insights about where to begin when thinking about the design of a new city in Korea. An appreciation of the beauty of the mountains, river valleys and sea coast landscapes is a good starting point. For example, when looking at the photograph of an old man walking down a country road towards a horizon of small mountains, so characteristic of the Korean peninsula, with a young man further ahead on a bicycle, one can see that any proposal for a future inhabitation of this place must first consider the haunting beauty of the mountains at the edge of the flat plain. By beginning with a deep understanding of the meanings that these characteristic land forms have always had in people's lives it becomes possible that one could also make a strong connection to the natural beauty of the land when designing the contemporary city.

3. *Luck or Destiny, Youl Hwa Dang Publishers, Seoul, 1994, ISBN 978-89-301-0300-8. This is a unique and very special collection of photographs by Kang Woon-gu made between 1970 and 1983, documenting the life of ordinary people in rural and urban situations in South Korea.*

4. *Luck or Destiny, 'The Heart of the Soul, and the Revival of Home', by Cho Se-hui, p. 253-259.*

Ulleungdo, Gyeongsangbuk-do , Korea, 1973. *Kang Woon-gu*

Pungcheon, Andong-gun, Gyeongsangbuk-do Korea, 1984. *Kang Woon-gu*



Beolgyo, Boseong-gun, Jeollanam-do , Korea, 1983. *Kang Woon-gu*

Beolgyo, Boseong-gun, Jeollanam-do , Korea, 1983. *Kang Woon-gu*

Contemporary urbanity in Korea, North Seoul. *Philip Christou, Jan 2008*

SAEMANGEUM ISLAND CITY – A CITY CLOSE TO LIFE
INTRODUCTION TO DESIGN CONCEPTS

1. Design concept drawing for Saemangeum Island City. The simple geometric edges of the new islands create a dialectical relationship between the wild estuary and the man-made landscape.

THE POETRY OF THE NATURAL AND THE ARTIFICIAL

The play between the natural and the artificial - the mountains, the former seashore of the river estuary and the islands of the Gogunsan Archipelago, with the artificiality of the proposed new islands will generate a poetic landscape of a unique water city.

The awareness of both the natural and the artificial is heightened by the presence of both. To distinguish between the two, we are proposing that the reclaimed land and the land-filled islands have simple geometric edges. This would create a dialectical relationship between the wild estuary and the man-made landscape. A good example of this phenomenon already exists in the site where the 33km angled line of the sea wall is juxtaposed with the wild geological formations of the Gogunsan Archipelago in the open waters of the Yellow Sea.

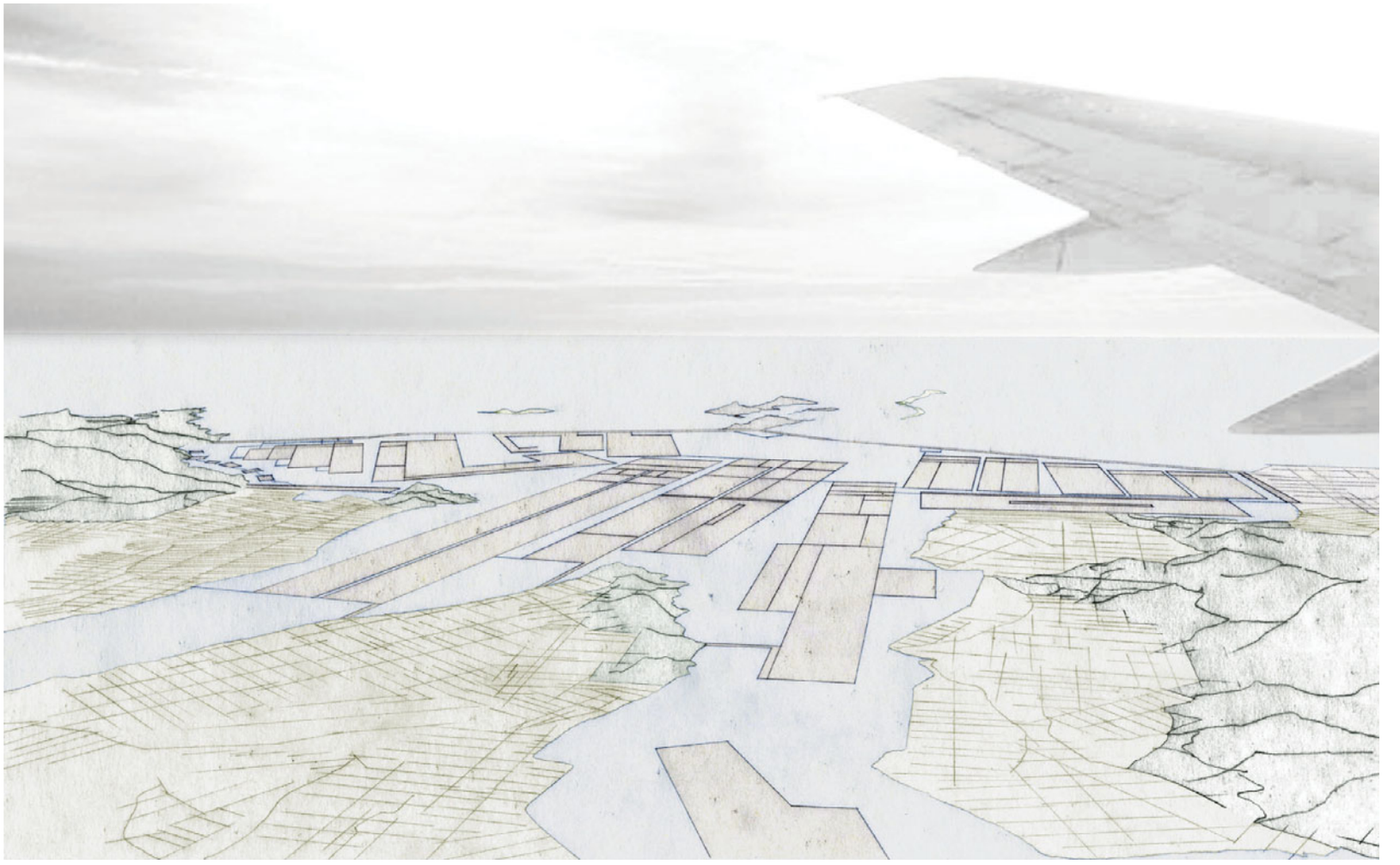
ISLAND EXPERIENCE

The experience of being close to the water and the experience of being on an island is at the heart of the urban design. The frequency of coming next to water frontages and water bodies needs to be judged. Initially we thought it would be pleasant if a person could walk from one water edge to the other on an island in approximately 25-40 minutes. Walking down from Archway, at the north end of Holloway Road in London, to where our office is near the south end of Holloway Road, by Highbury Corner is a 25 minute walk. Applying such a day-to-day experience of scale and distance to our initial layout of islands generated a pattern of long and thin islands with a combined overall length of lake edge water frontages of 250km. When reconsidering the high cost of flood protection embankments that are necessary along the edges of the islands, we ended up designing more compactly shaped islands that also have internal water bodies, (inner lakes and canals). Ultimately we came to an overall length of island perimeters totalling 217km. The cost of this has been carefully calculated.

The islands have been located and shaped to take advantage of the lakebed topography. In the interest of the feasibility of land reclamation we propose to build in relatively shallow waters of the lake. We don't feel restricted by this— it is a reality that grounds our imagination. The design balances maximum water frontage, (good land value) against the cost of building lake embankments.

As an important part of the design process, when deciding on the position, shape and size of the islands, we were making careful judgements about the experience that one would have when looking across the water from one island to another. So as to correctly judge the views that one might have of the water bodies between islands, we have photographed and scaled water bodies in the cities of Cadiz in southern Spain, the archipelago city of Stockholm in Sweden, and the islands within the lagoon in Venice, Italy. These are cities that we are familiar with and cities that we admire. These studies about scale have been very helpful in giving us confidence about the sizing of the water bodies between islands, particularly the water spaces in the Jin Bong Lagoon City, and the width variations of the two rivers.

The island city is designed to enhance waterscapes. The largest



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and most densely populated 'City Magnets' (see page 124), built on four of the six new islands form a kind of large segmented amphitheatre in the part of the lake focused on the midpoint of the seawall where it adjoins the Gogansan Archipelago. In Saemangeum, the civility of the city is not only dependent on the quality of public spaces within the city fabric but also on the quality of the water spaces. The city amphitheatre is the most grand of the water spaces.

As a method of design research we have intensively sketched the water frontages in the whole city: local harbours, lake harbours, sea port, canal spaces, water parks and water gardens. We have designed an 'Image Island' for Saemangeum. It is a water garden. It would tell people the story of how the island city came into being. The garden is a network of embankments enclosing a variety of ponds and canals. No cars are envisaged here. It has the feel of the former peat excavation landscapes that can be found near Amsterdam in the Netherlands, now existing as inhabited networks of earth embankments and waterways.

The process of design of the Island City by the ARU team followed the following design methodology. To begin with, a landscape infrastructure of artificial islands and estuary land reclamations was designed. This landscape infrastructure is the shared realm of the citizens; it is the glue between diversity in the city. Then we made a research portfolio of well- proven city structures that exist in different metropolitan conditions in the world, each with a different history. This became a catalogue of pieces of city that could be collaged on to the islands (in the sense of Colin Rowe). The landscape infrastructure design and the city structure collage design was made before specific functions and programmes were sited in the city.

2. Eating clam soup in a fishing village near to Gimje. The river estuaries of the Man-Gyeong and the Dong-Jin Rivers of Saemangeum are rich in delicious seafood. *Alex Bank, April 2008*

3. Photograph of the wetland site next to the Han River in 1999, before construction at Paju Book City began. *Philip Christou, 1999*

4. An urban wetland, Paju Book City. *Jonathan Lovekin, August 2007*

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COEXISTENCE:
A STRATEGY FOR A SUSTAINABLE NEW CITY

The idea of coexistence, bringing different functions and programmes in close proximity to each other is guiding us towards a sustainable city. The aim is an integrated city full of vitality and liveliness. We have tried to reduce the need for single functional zones in the city such as bed-towns, business parks or large self-contained tourist resorts. Individual islands are not seen as single - use geographies. Each island has all of the lead programmes: food processing clusters, farming practices, tourism, high tech industries, urban infrastructure and service industries. A city of integrated functions has city space that is adaptable and ready to respond to the constant economical flux in the life of the city. This reduces the wasteful practice of daily commuting that is caused by single functional zones in the city. Citizens of the new city will be able to walk or cycle to their workplace because they can choose to live in the same district where they work. A good public bus network (water and road), together with an integrated train network along the sea wall connecting island to island will help to reduce the use of automobiles. Koreans are increasingly experiencing heavy traffic congestion in their cities. This is a very wasteful use of people's time and is consuming vast amounts of fuel resources.

It is becoming increasingly clear that those cities where different uses exist in close proximity tend to be more vital cities. Different uses are allowed to rub up against each other in the city, stretching the concept of compatibility. We are exploring and testing all sorts of coexistences and proximities in the city: residential buildings with clean industry; agriculture and tourism (agri-tourism), port facilities within the city; wetland and city.

As an example of an integrated city, we have studied the urban mix that exists at Schipol Airport near Amsterdam. Tulips grow in high density greenhouse clusters next to the runway and amongst high technology industrial sheds. We have also visited on several occasions the Poblenou District in Barcelona. Its urban grain is part of the urban block city designed by Ildefons Cerdà where many citizens of Barcelona live. It is somewhat surprising that in the Poblenou District, the Cerdà block is used increasingly by service industries. A large number of people are employed there in knowledge based jobs and in the creative industries. This is the kind of coexistence of programme that we are thinking of, and it is a good example of a sustainable city. This is what we are still learning from the historical European city.

The built up areas of city where people live and work would coexist in close proximity with the beauty of the open landscape of farm fields, lakes and mountains. Urban development should not be spread evenly across the land. The intention is to concentrate urban fabric in localities of density, rather than allowing a dispersed and undifferentiated sprawl. The localities of densities are placed in close proximity to places of exceptional beauty in the island and estuary landscape. People will have the opportunity to live near to where they work, and share the beauty of their surroundings with tourists and natural wildlife.

One of the primary coexistences of the proposal is the idea of urban wetlands - areas of wilderness within the city. We have

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realised this idea of an urban wetland at Paju Book City over the last 10 years. These areas of wetland are useful for water purification, and they provide habitats for migrating birds and other wildlife. They can also be used for recreational purposes, energy agriculture such as willow coppices and other biomass agriculture. These biotopes would further protect the larger estuary. With sensitive management these areas can be accessible and enjoyable to city dwellers and tourists.

We have brought together a research network of renewable energy experts. This could bring new high technology industries, such as marine energy turbine testing and manufacture and hydrogen production from photovoltaic collectors to Saemangeum. This research network could also make another type of marriage with farming practices - bio-fuel and bio-mass farming, such as greenhouse algae production— without adversely affecting the food economy.

Historically, the Province of Jeollabukdo has been the food basket of Korea. With recent changes in the world economy, food production has gained a new urgency. It is therefore reasonable to build a large part of the economy of the new city on food programmes: the formation of food clusters— food research, processing, packaging, eating culture and most importantly food production. ARU, with the advice of its team of economists Fran Tonkiss and Athar Hussain, propose a large range of farming practices. We also intend to strengthen the agricultural sector, by marrying it with tourism. This agri-tourism is successfully being practiced in regions of Italy, France, Denmark and Canada. The Mayor of the local agricultural town of Gimje whom we met, supports this holiday on the farm idea. This was very encouraging, and could particularly be attractive in bringing young farmers back to the land.

In an island city, the harbour can be hugely beneficial to the vitality of the city. Many options for where the harbour could be located in Saemangeum have been explored. Initially, we wondered if the port could be located close to the heart of the new city within the sea wall. We were looking at the harbours in Rotterdam, Hamburg, Cadiz, Venice and Dieppe. These city harbours are very lively. In the end, the idea was found to be too extravagant. It would have required an enormous detour of the seawall around a large sea level tidal harbour basin.

We have proposed a sea port on the outside of the sea wall, in the neighbourhood of the city harbours along the inside of the sea wall. The city harbour is the hub of the lake network of public water buses. A fishing harbour and several leisure harbours form part of this harbour city. City programmes are also located in the harbour city, such as accommodation for the tourist population and for the citizens of Saemangeum. Urban infrastructures, culture, shopping, fish market, financial centre all co-exist to make a good mix of city activities in the harbour city. Potentially, the harbour city could be the liveliest city magnet of the Island City.

5. Youl Hwa Dang Publishing House, Paju Book City, designed by ARU in collaboration with Kim Jong Kyu, MARU, Seoul. Left: Front elevation showing two city strata levels. Right: View of the horizon of the Han River at motorway level. *Jonathan Lovekin, April 2004*

A CITY WITHOUT SPRAWL

Urban Sprawl is destroying landscapes and cities in many places of the world. The distinction between the city and the countryside has become blurred. One can't talk easily today about landscape and city. The term 'Citylandscape' has been created to describe the phenomena. Citylandscape developments are often out of place, creating a characterless soup with an absence of public space and civility. They frequently have no sense of time and of place. Ever more and more tourist destinations have lost their former splendour due to overdevelopment. Seaside towers in Majorca, Spain have been pulled down as the tourists did not come back in ever greater numbers. In the Provence region in Southern France, so that such a thing does not happen there, a policy preserving farmlands and forests protects the open space between towns.

Some urban theorists and urban designers in Europe, particularly in Spain, have been trying in the last decade or two to find new design expressions for 'citylandscapes'. They have been thinking about landscapes as infrastructures for developments. They are designing the site first. It is like designing the rug first and then the picnic. It could also be described as designing the glue between development - a notion of a new shared space. The methodology often involves studying the history of the site. The approach relies on unravelling the history of the site, the geological as well as the cultural one. A set of specific characteristics of the site/landscape are identified that the new development has to honour and respect. In this way the development can be made to be more site-specific, more grounded in a place, more cultured and more civic.

In Paju Book City, Korea the landscape infrastructure that everybody shares is the city of strata. The idea of a strata city is generated by the epic landscape of the Han River. The lowest stratum is the drainage canal with its shores of wetland at the level of the river shore that is subject to controlled flooding. This canal snakes through the whole length of the 3km long Paju site parallel to the Han River. The wetland shores of the canal have been saved from being covered with fill material by Mr. Yi Ki Ung, (Chairman of the Association of Publishers). Building sites along the wild wetland shores on both sides are popular. The canal shores, the shores of the large water storage basin to the north, and the wetlands surrounding the new book distribution centre are all reserved as natural wetland habitats. All the other land in Paju is covered with 1.5m of fill material to facilitate dry building conditions. Simhak Mountain is the 'guardian' of Paju overlooking the 3km long site. The 8m high flood embankment along the shore of the Han River protects the book city from flooding.

The majority of the buildings have a stepped section and are arranged perpendicular to the river. Almost all of the buildings have been given views of the river and of the mountains. The lower 2-storey parts of the buildings coinciding with the 8 meter height of the flood protection river embankment generate a city strata of street spaces, public and private courtyard spaces and yards. The higher 4-storey parts of the buildings generate

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5b

a city strata of pavilions of the horizon, facilitating the views to the mountain and to the epic Han River landscape. The strategy of river and mountain views carries almost spiritual power in Korean culture. We have seen this in the way that traditional hillside villages in Korea are arranged, each house having a unique view of the mountain and the valley.

In Seamangeum we have traced the history of land reclamation in the estuary and the sad story of the environmental problems that have been incurred. We have also been given a topographical map of the lakebed. Furthermore we understand that the water level in the lake is being lowered by 1.5metres. This research has enabled us to design a landscape infrastructure of islands and land reclamations revealing large areas of the lakebed. This is a new estuary landscape of historical sea shore dams and new shore embankments for the new city. Existing rock formations will be stranded on reclaimed lake bed areas. We call these rocks 'time witnesses', giving a sense of time to the new landscape. Six landfill islands are proposed, emerging from the lake. New water bodies and canals will separate the new emerging land from the former estuary boundary. These canals have roughly the length of the perimeter of the former estuary and offer plenty of valuable waterfront and island awareness.

A landscape of islands has a finite size and therefore does not easily develop into a sprawl situation. Other factors that will inhibit sprawl are: during the early phases of development there would be 60% to 70% farmland. The policy is not to land fill farmland to the island perimeter dyke level and allow the farmland (not the farmer's accommodation land) to flood within reasonable limits. This will discourage development in farmland and protect much of the landscape even during a later phase of development. The forecast for later stages is for 30-40% farmland.

We propose that urban infrastructure is generally concentrated in low-rise, high-density localities with good transport infrastructures. These localities include the Gogunsan Harbour City, Jin-Bong Lagoon City, Farm City, Airport City, Man-Gyeong lake City and Dong-jin Lake City. These high density localities could be seen as cities within the city, or 'City Magnets' (see page 124). They are composed of existing city structures as built in different parts of the world that are well proven to have popular public spaces with character, and they are flexible in use. The urban densities of these City Structures generally have a floor / space index ratio in the range between 3 and 3.7.

At all scales, from the scale of the islands, to the scale of streets, to the scale of space between buildings, we are trying to give these spaces a sense of time. We are thinking about the development of the design concept in the short, medium and longer term. The longer term propositions are more open-ended and the shorter term propositions are more specific. In this way the urban design concepts can easily be adjusted to changes that will occur in time. The design procedure described above offers adaptability and responsiveness to change that more fixed and deterministic master-planning approaches cannot provide.

6. Civility in traditional Korean villas: A view of Sangyojang, Kangnung. *Philip Christou, August 2007*

7. Civility in traditional Korean villas: A complete view of Sungyojang. Gangneung Gangwon-do, Korea, founded in 1815. *Joo Myung Duck, 1981*

8. A public realm of streets and squares: Detail from the Nolli map of Rome, 1748.

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CITY OF CIVILITY: THE CONCEPT OF CITY STRUCTURES

We are designing with a meaningful city language of well proven and adaptable city structures from many places in the world. Generally they are 6-7 storeys high, not too far from the ground. High rise tower clusters are rare exceptions along the sea wall (threshold city). The city structures are flexible in use. They all have a history. City structures frequently used in the ARU design are the Cerda block in Barcelona, Weymouth Mews block in London, Cambridge Quadrangle, Oido city block near Incheon, Korea etc. These city structures are often referred to by urban designers in discussions about civility. They are often associated with safe and pleasant public spaces, such as the Italian campos, Georgian squares, mews and courtyards of many city block structures. Members of the design team have personal experience of most of the city structures used. We have an emotional relationship with them. Other city structures include hybrid structures of towers and city blocks. Some are city edge structures. They could be called 'urban windows' looking out into the openness of sea and land. In less dense areas, we have city structures that could be called urban villages, often situated on the river shores. For two or three land bridges to the sea wall and new city islands we have proposed high density tower clusters. It is important to recognise that these city structures cannot be transplanted directly and reproduced as carbon copies from one part of the world to another. They have been reinterpreted and adapted to the local climate and culture. They have been adjusted and arranged in response to local topographical conditions in Saemangeum, and to take advantage of particular special views. A certain translation of the city structure as a basic typology is required. The meaning and significance of the mountains and the river landscape is also somewhat different in Korean culture to the way Europeans see these things. The urban plan of Paju is a direct response to this sense of shared spatial meaning. In the layout of traditional Korean villages, each house has a unique and special view of the mountain and the valley. Views of the landscape are of course important in European cultures, but the ways that views of the landscape are articulated are different than in Korea. We have different traditions in Europe that are part of our culture. The English picturesque idea of landscape design is a case in point. It is much more about the way one sees the space of the landscape as one moves through the landscape. Another example of this is the importance given in Paju to the natural wetland. The sense of ecology or nature in East Asia seems to be deeper and more profound than in Europe. The preciousness of the reeds and the birds is not seen only of scientific concern, it has a more philosophical and cultural dimension. With this in mind, the various city structures have been collaged as local densifications into the infrastructure of islands and land extensions to form a varied and rich city fabric. It is multifunctional and can easily accommodate and adapt to

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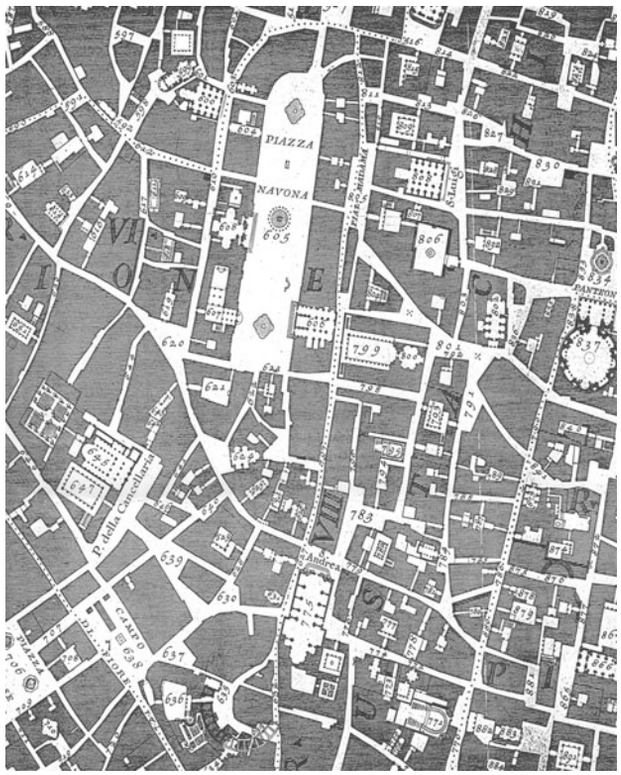
changes in programme in the future. The aim is to design rich and robust public spaces embedded in city structures, high quality land spaces and water spaces. This required intensive sketching and design research of spaces between buildings and water frontage spaces, harbours and port spaces, canal spaces, water gardens. It is the high quality of the public spaces that will be critical for attracting people to work in and visit Saemangeum. The quality of the public realm of the city sets the standard of civility of the city. High quality public spaces and high standards of public realm will raise the design ambition of the citizens. ARU prefers to think about the citizens making gifts to the city in the form of private/public spaces such as a garden in a square. The idea is to integrate the new civility into the city. We are thinking of the high quality public realm which grows with the city. The civility has to be present at every stage of the development. The idea is that the everydayness of the city carries civility and culture. The city as a whole should be attractive.



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THE SAEMANGEUM PROJECT

1. View from a helicopter looking over the sea wall, Saemangeum. *Philip Christou, January 2008*

A BRIEF HISTORY

Saemangeum is located on the south-west coastline of the Korean peninsula facing the Yellow Sea. The longest sea wall in the world (34 km long) was built in the hope of reclaiming a large area of new land from the sea. The construction of the sea wall began in 1991 and was completed in 2006. The former tidal mud flats within the estuaries of the Man-Gyeong and Dong-Jin Rivers have been enclosed by the new sea wall and flooded to create a fresh water lake covering more than 400 square kilometres.

The Saemangeum project has had a traumatic and politically turbulent recent history[5] . The idea to build a sea wall in this region began in 1971. The then Ministry of Agriculture, Forestry, and Fisheries drafted the 'Okseo District Agricultural Development Plan', setting out the reclamation of the estuarine tidal flats of the Geum River, the Mangyeong River, and the Dongjin River in Okseo-myeon, Okgu-gun, Jeollabukdo as part of the land reclamation projects of the south-western coastlines of Korea being discussed at that time. The purpose was to provide more productive agricultural land in Korea, as it was estimated that there would be a food shortage in the future, and the costs of importing food for an increasing population would become too high. The Korean peninsula is mostly covered in mountains and forests, and the amount of flat arable land is relatively small.

In May 1987 the project was renamed the 'West Coast Reclamation Project', and in July 1987 renamed again as the 'Saemangeum Reclamation Development Project'. On 10 December 1987, six days before the first direct presidential election in Korea, the presidential candidate Roh Tae-woo declared the implementation of the Saemangeum project at a press conference in the city of Jeonju, the capital city of the province of Jeollabukdo. Based on this pledge, Kim Dae-jung, then president of the Party for Peace and Democracy based in the Jeolla region called for the implementation of the Saemangeum project as a presidential election pledge, and the ruling government of Roh Tae-woo officially commenced construction of the sea wall in 1991.

With increasing public awareness of the potential environmental damage that projects like this might cause, an intensive national and international discourse began by the mid 1990's. Another land reclamation project along the west coast of Korea, closer to Seoul called the Sihwa Lake caused public outrage when it became known that the water within the artificial lake had become highly polluted. In 1996 public environmental groups called for the suspension of the Saemangeum project. Construction was stopped for several years until the Supreme Court ruled that it should again commence. It took until April 2006 to complete the construction of the sea wall.

Lee Myung-bak was elected as President of the National Government of South Korea in December 2007. Early in

5. *See: Kim Seong-hwan, 'Saemangeum - The Crystalization of Social Desires', SPACE, issue 493, Dec. 2008, p. 55-57. The source of historical information on the political background of the Saemangeum sea wall project is from the above essay.*

1

2008 he pledged that he would transform the Saemangeum area into a 'global economic free zone'[6] where domestic and international enterprises can freely engage in business activities such as tourism, service industries, advanced food production and manufacturing. Economic and political conditions had changed since the early 1990's when the project began as a way of increasing agricultural land. In 2007 the provincial Government had made initial land use proposals that assumed a ratio of 70% agricultural land and 30% industrial land. Soon after being elected, President Lee Myung-bak reversed this ratio asking for 30% agricultural land and 70% industrial land. The recent rapid economic and industrial expansion of the cities along the north-east coast of China, on the opposite side of the Yellow Sea from Korea, have given a new sense of competition and a potential growing market for Korean enterprise. Although the prediction of a world food shortage has actually come to be true, and the cost of rice in early 2008 tripled compared to previous years, the lure of industrial and international investment has become greater. Both the Provincial Government of Jeollabukdo and the National Government have stated that they intend Saemangeum to become a new economic engine for Korea based on the urban models of Dubai and

6. *Han Myeong-gyu, (Deputy Governor of Jeollabukdo for Provincial Affairs), 'New Challenges and Hopes for the Saemangeum Project', SPACE, issue 493, Dec. 2008, p. 83-84.*

2. Rich farmland surrounds Saemangeum's coastline.
Philip Christou, Jan 2008

3. Located on the Yellow Sea Rim, Saemangeum is well connected to the major industrial cities in North-East China, such as Shanghai, Qingdao and Beijing.

4. Saemangeum is located on the south-west coastline of the Korean peninsula facing, with the Byeonsanbando National Park to the south, the city of Gunsan to the north and Gimje to the east.

2

Singapore. The ambition is that it will become a sustainable and vital new city in the expanding economy of the Yellow Sea Rim. They intend that the investment will help to reverse the declining economy and population that the region has experienced during the past decade. By 2020 an estimated initial population of approximately 750,000 is planned. This is part of a South Korean National Government policy to decentralize industry and population to other regions of Korea as a way of easing congestion in the capital city of Seoul.

In the autumn of 2007 the Architecture Research Unit was invited to participate in an urban design concept competition / workshop as one of seven invited international teams. [7] Each of the teams selected are led by practicing architects who also run a design research institute within a university. ARU is well known in Korea for their recent track record and experience designing the urban landscape of Paju Book City near Seoul.

BROAD-BRUSH ECONOMIC PICTURE

BY ATHAR HUSSAIN, URBAN ECONOMIST

Saemangeum is located on the south-eastern quadrant of the C-shaped Yellow Sea Rim bordered by the Korean peninsula on the east, four Chinese provinces and the city of Tianjin. The 150-200 km wide strip along the rim houses one of the most dynamic regions in the world with a population of approximately 200 to 250 million. Between 20 - 25% of the population enjoys a middle to high income level and would be the principal source of tourists for Saemangeum. The region is well served by sea and air transport and there is scope for further development, in particular for cruises.

Saemangeum is located in the middle of a prime farming area in the Republic of Korea, which provides a solid base for developing a food industry cluster. It is served by a well-developed infrastructure of transport and public utilities. Nearby is a national university that can serve as a source of highly qualified manpower and as a resource for Research and Development.

On a micro level, Saemangeum benefits from an attractive combination of a long and varied sea shore, a fresh water mass in addition to the sea expanse and a constellation of islands close to the shore, a combination that lends itself to the development of a centre appealing to a diverse range of tourists.

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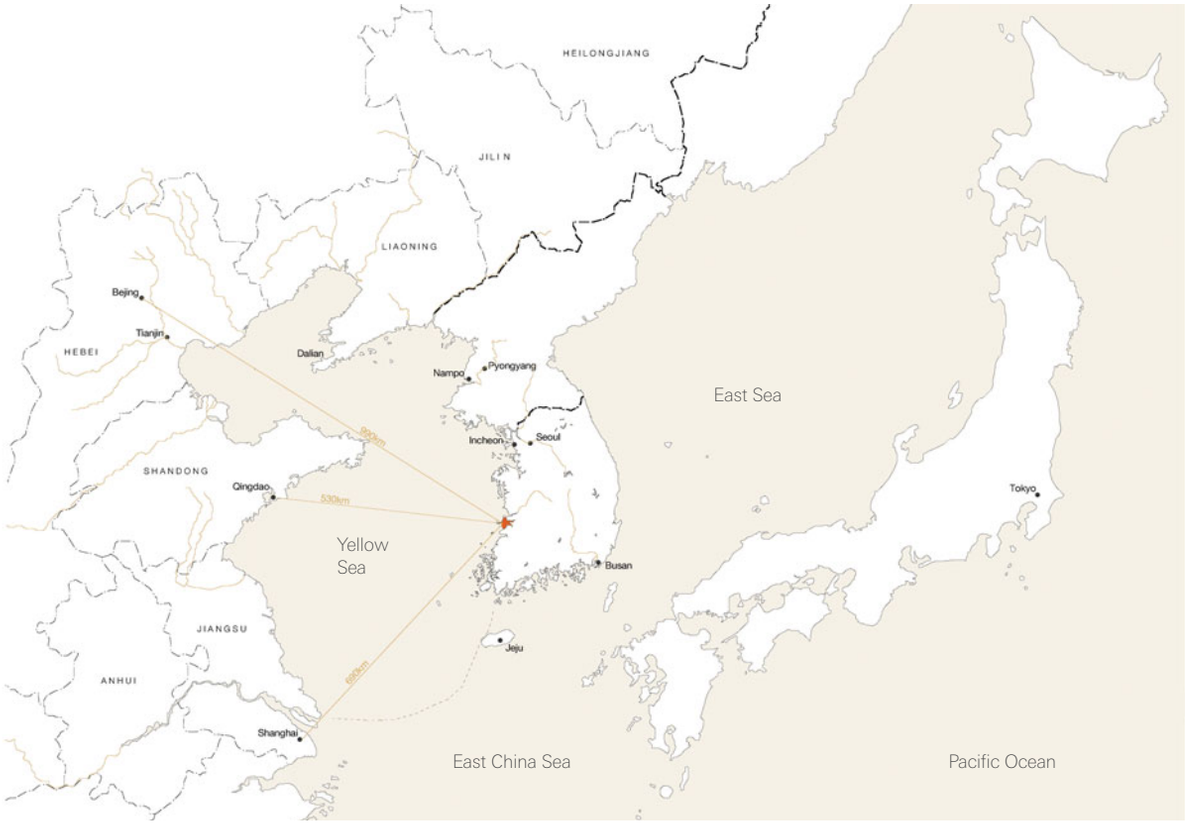
7. The 'Saemangeum International Comprehensive Urban Design Concept Competition, South Korea', was organised by the Urban Design Institute of Korea under the direction of the Provincial Government of Jeollabukdo.
In January 2008 the following seven international teams of architects were invited to visit the site in Korea, and to begin working on a design proposal for a new city:
***Berlage Institute, Rotterdam,** Branimir Medic and Daniel Valle; **Columbia University,** New York, Jeffrey Inaba; **European University of Madrid,** Jose Luis Esteban Penelas; **London Metropolitan University,** Florian Beigel and Philip Christou; **Massachusetts Institute of Technology, Cambridge, Mass.,** Nadir Tehrani, Alexander D'Hooghe; **Tokyo Institute of Technology,** Yoshihara Tsukamoto and Akira Soshiroda; **Yonsei University, Seoul**, Moon Gyu Choi.*
Three teams were selected in August 2008 as joint winners of the competition: London Metropolitan University, Columbia University, Massachusetts Institute of Technology. They made a presentation at the end of August to public meeting in Seoul attended by the former Prime Minister of South Korea and potential private and public inves tors. In October 2008 these three teams each submitted a revised design report in response to the comments and criticisms made in August by the competition jury.



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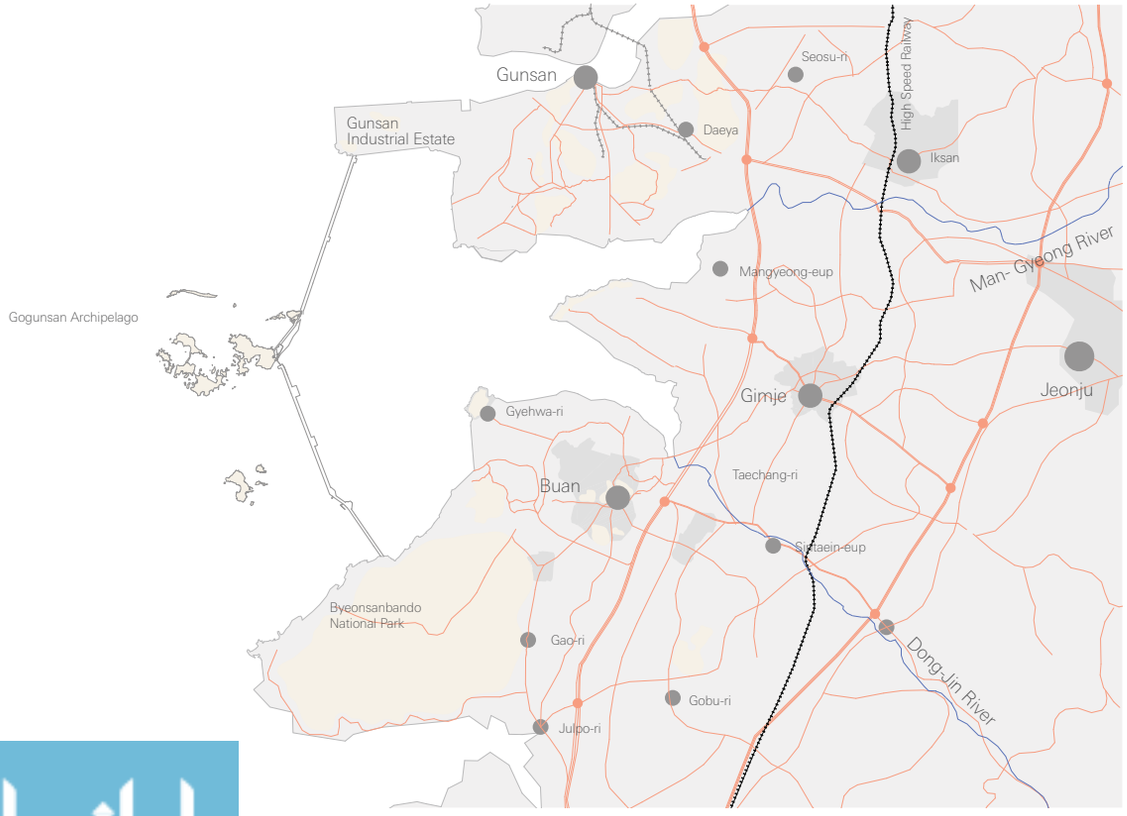

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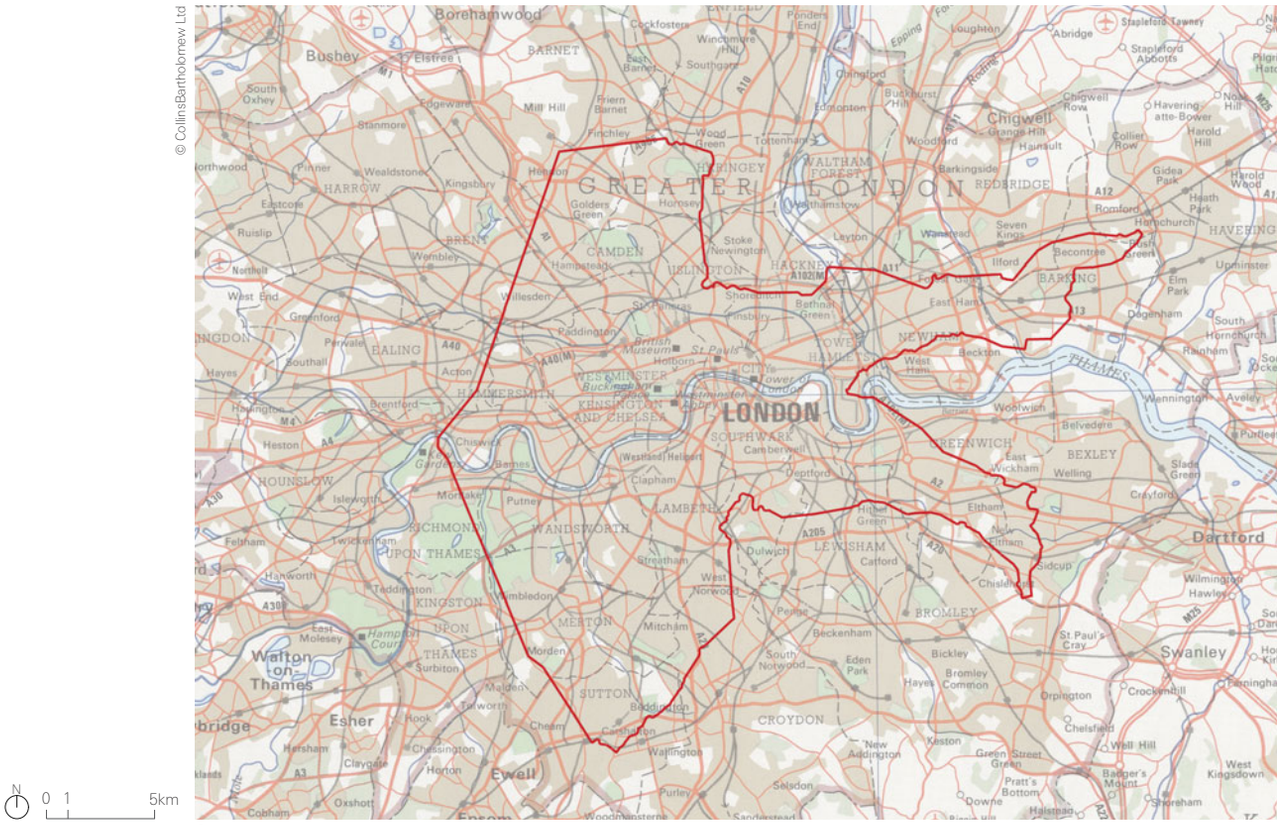
5. Satellite image of Saemangeum and the 34km Sea Wall.

6. Saemangeum site boundary overlaid onto a map of London at the same scale.

7. Saemangeum site boundary overlaid onto a map of Paris at the same scale.

8. Saemangeum site boundary overlaid onto a map of Seoul at the same scale.



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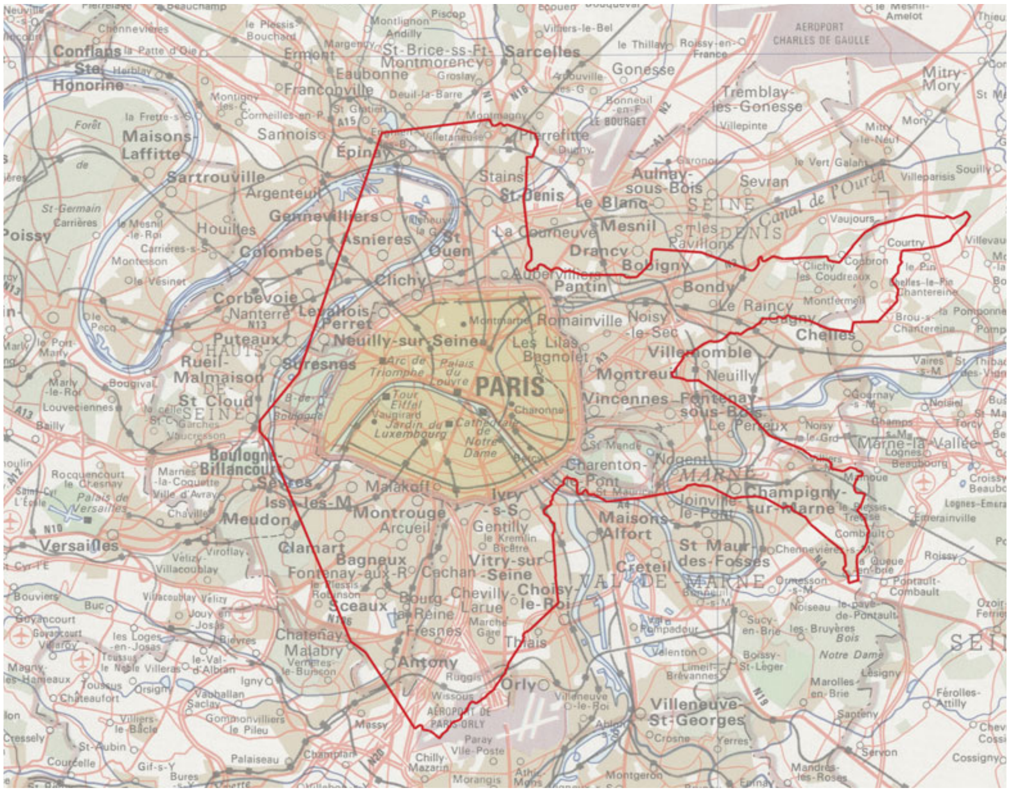

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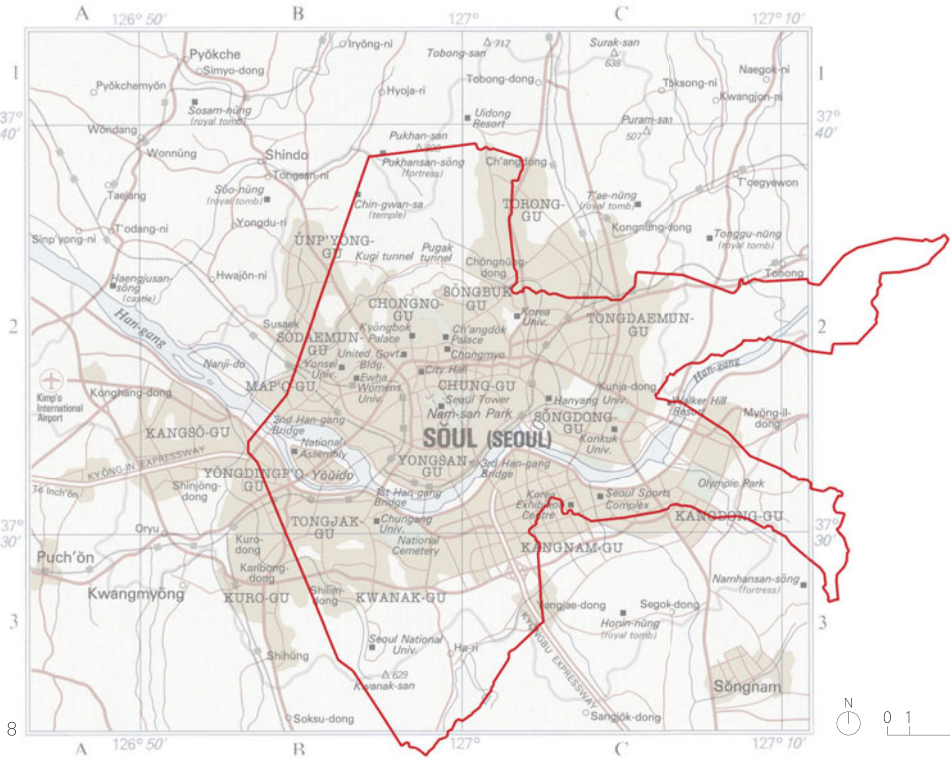

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9. The ARU team and Korean television journalists explore the sea wall. *Alex Bank, April 2008*

10. The Mang Hae Buddist Temple is situated at the western tip of a string of wooded hills where the Man-Gyeong and the Dong-Jin Rivers meet, with a view westward towards the horizon. *Alex Bank, April 2008*

11. Looking west from the former sea defence of the estuary coastline out towards the newly emerging dry land. *Alex Bank, April 2008*

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10

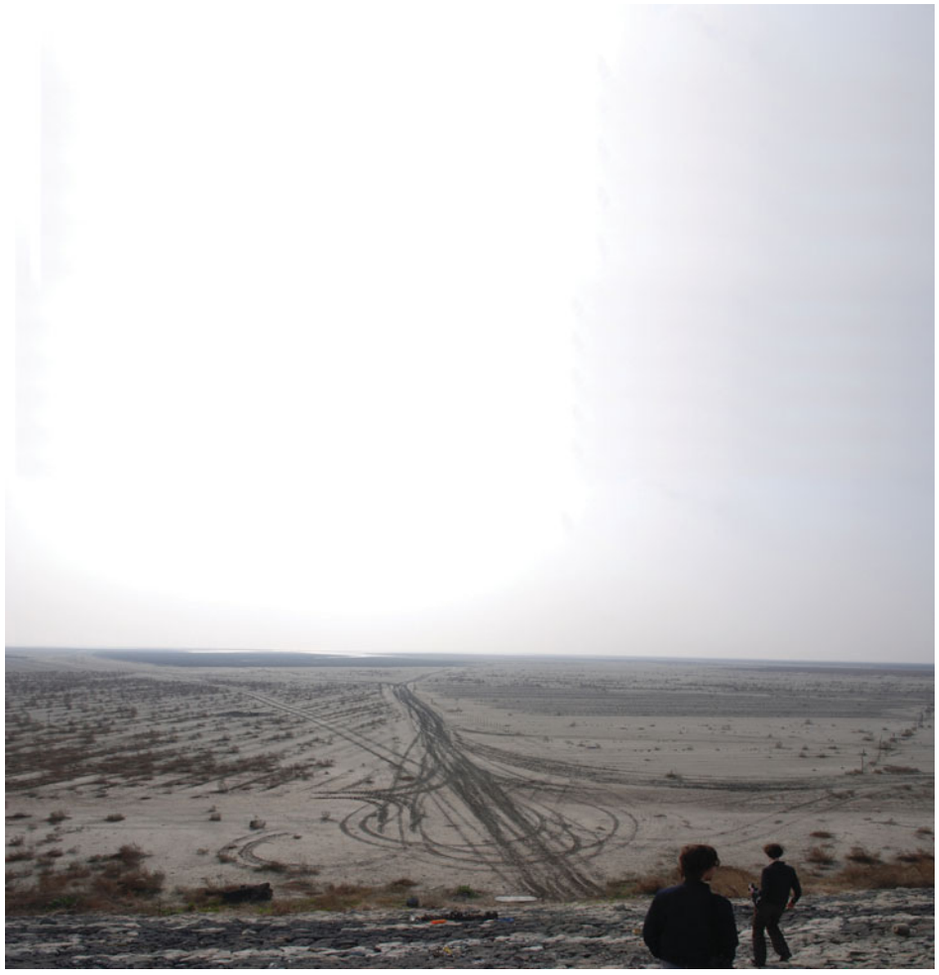
VISITING THE SITE

Each time we have had the opportunity to visit Saemangeum we have been overwhelmed by the experience of the site. The immensity of the scale and ambition of the sea wall is extremely impressive when one is there. In January, 2008 we made our first visit of the site along with representatives of the other invited teams, as part of the initial briefing and introduction to the project by the competition organisers. We were taken on a 20 minute helicopter ride, flying down the length of the 34 km sea wall and back and we were taken by bus along the sea wall and the surrounding landscape. During this tour Korean television journalists were interviewing the foreign architects about the competition and their initial impressions. We told them that the sea wall is like the Great Wall of China built in the sea. It is evidence of a strong and ambitious society. Land filling operations were being carried out while we were there to widen the embankment of the sea wall and build roads on it.

From the air it was difficult to distinguish which side of the wall was facing the Yellow Sea and which side was facing the new fresh water lake. The lake is so immense that one could not see across to the edge on the other side. Somewhere about mid-way along the wall is the most beautiful archipelago of small islands. One island is attached to the wall and the others seem to magically appear and disappear beyond the wall as one looks west towards the Yellow Sea horizon. We were told that one or two of the small islands had been flattened during the construction of the wall, but the main intention is to save these islands for their natural beauty and attractiveness. At the southern end of the sea wall the coastline is formed by a steep slope that rises to a region of mountains that have been set aside as the Byeonsanbando National Park. These mountains have a strong presence on the southern horizon of the new Saemangeum Lake.

When driving along the former sea coastline that is now the edge of the new lake, one finds small outcrops of rock and little mountains that were in a former time islands in the sea. They are now land islands that are marooned in the flat landscape of farm fields and canals. Some of these rock outcroppings are covered with forests. All of these natural features give the site a very special sense of time and character. One is immediately aware that this landscape has been altered and transformed by land reclamation and farming practices throughout its long history. The farmlands along the water edges are all part of a sequence of land reclamation projects during the 19th Century and in the 1930's. A series of small wooded hills run along the southern edge of the Man-Gyeong River (the northern most of the two rivers) forming the promontory between the two rivers as they empty into the new lake. An active fishing community is located along this beautiful coastline. The Mang Hae Buddist Temple is situated at the western tip of this string of wooded hills with a view westward towards the horizon of the setting sun over the water.

At the northern end of the lake we visited the newly reclaimed lands of the Gunsan Industrial Area. We could see the land



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reclamation process under construction when we flew over this area by helicopter. The first industrial buildings were beginning to be built on this new land already when we visited in January 2008. In early April 2008 a design workshop was held in the City of Jeonju, the capital city of the Province of Jeollabuk Do. It was an opportunity for each of the 7 design teams to come to Korea with their whole working team, students and professional consultants such as urban economists and environmental experts. This workshop was a wonderful way for the foreign teams to get a glimpse of contemporary Korean culture and lifestyles. The ARU team took the opportunity to visit the various landscape conditions of the site. We hired a mini-bus, and when the other teams were working on their design project presentations in the city, we made more than 5 visits to photograph and speak with local people in Saemangeum. When each of the various teams were asked to make a statement about their general approach to the project at the end of the workshop, the ARU team showed the photographs they had taken of the beauty of the ancient river estuaries that give character and identity to the existing site. We spoke about our enjoyment eating clams in fishing villages along the river banks and finding the new horticultural test fields of trees and vegetables that have been planted on the salty soil of the recently exposed land at the edge of the new lake that was the former tidal sea bed. The team from Tokyo groaned and screamed with envy and disappointment that they had spent the whole time drawing on their computers. The Columbia University team spoke about the site as a 'tabula rasa' condition, a blank piece of paper where anything is possible. The London and the New York teams' approach to the site were worlds apart from each other.

View looking towards the Gogunsan Archipelago from the south end of the sea wall. *Alex Bank, April 2008*

The landscape infrastructure of new islands.

A vision plan for the Island City in approximately 25-30 years.

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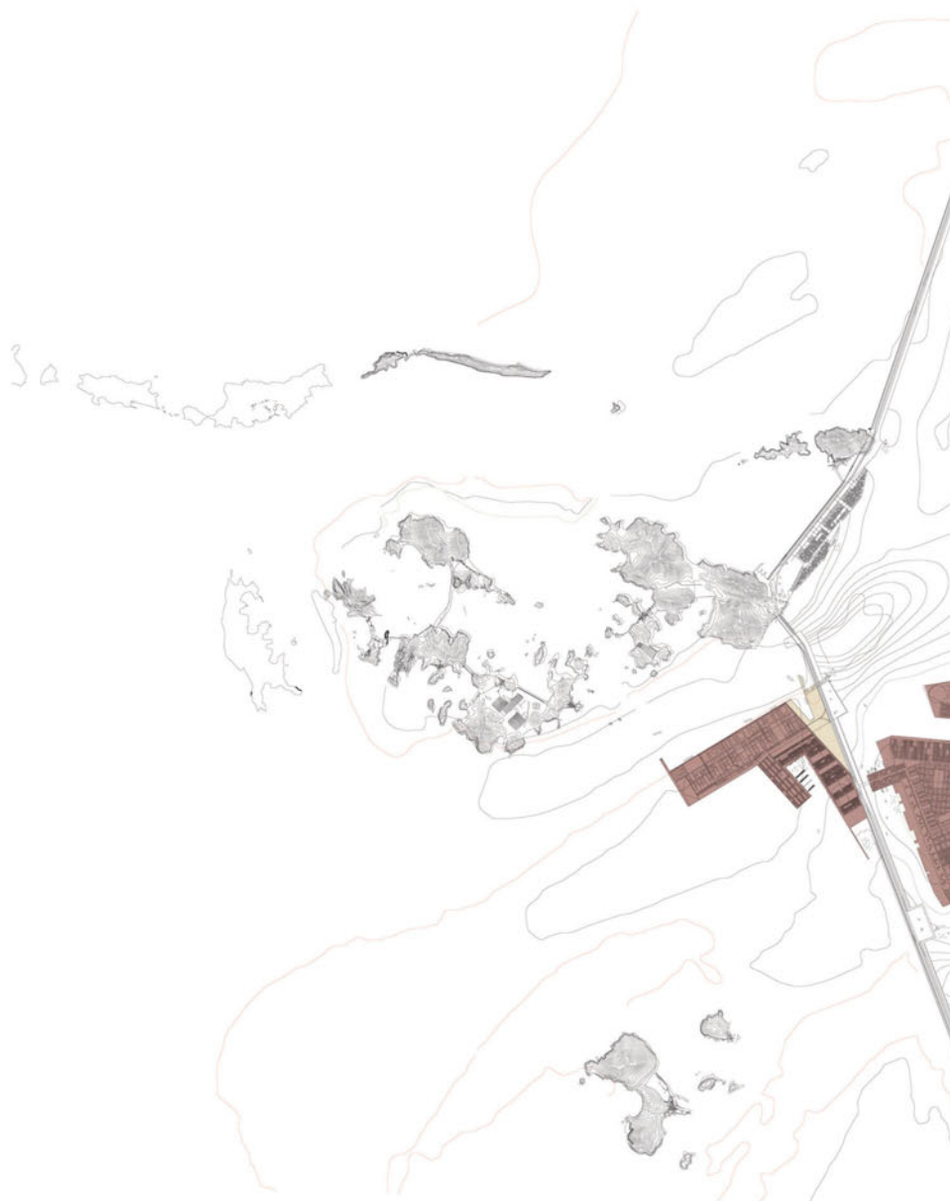
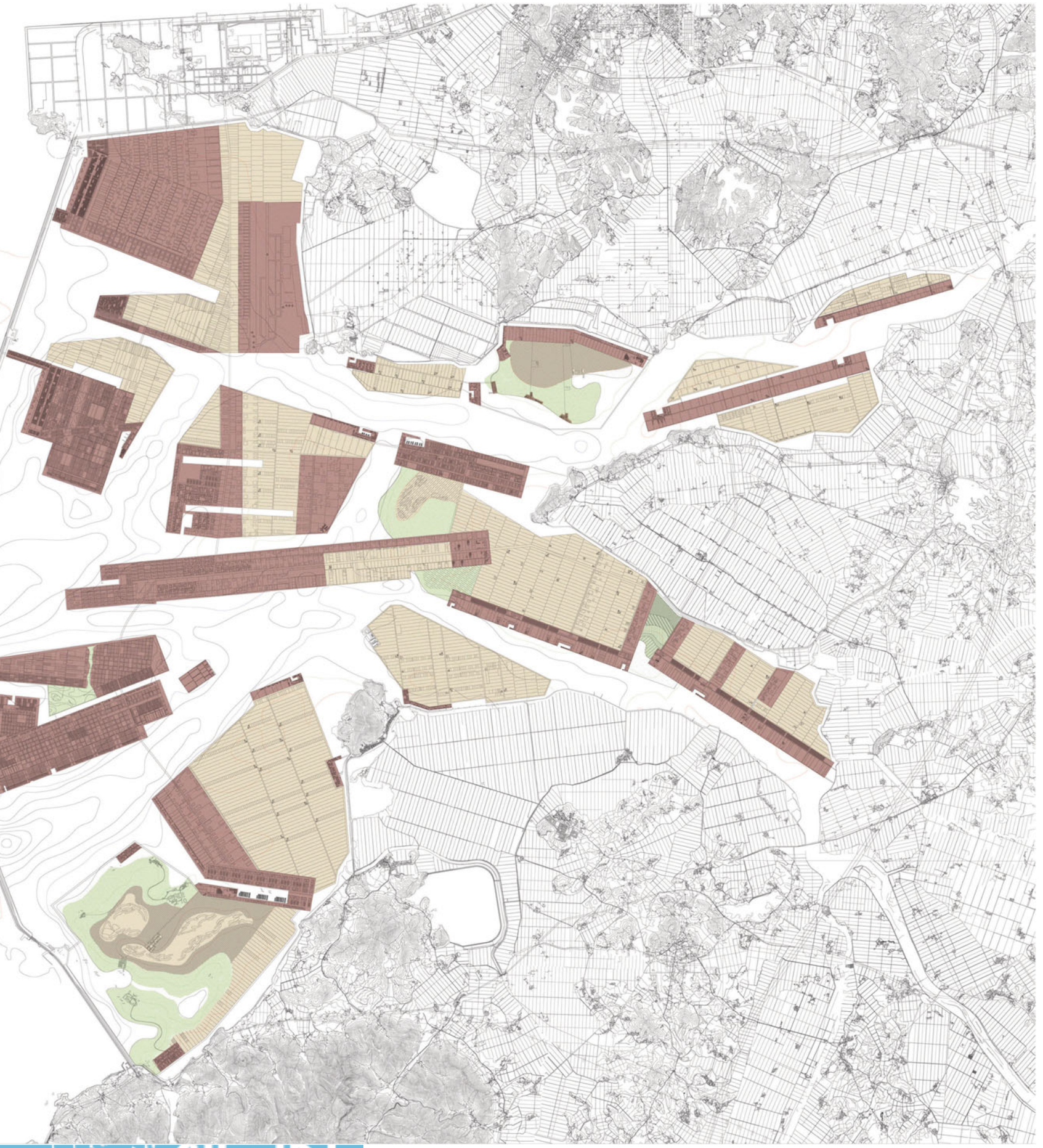


High and low land reclamation diagram.



1. Saemangeum Island City, Phase 1: Gogunsan Harbour City, Bridge Island, Airport City and the Sea Harbour are the first Islands to be built (5-7 years).

2. Saemangeum Island City, Phase 2: Dong-Jin Lake City in the south, Jin-Bong Lagoon City and Farm City at the confluence of the two rivers are built (7-15 years).

3. Saemangeum Island City, Phase 3: The high density Man- Gyeong Lake City and the series of small islands along the Man- Gyeong River are built (15-30 years).

4. Looking west towards the Sea Wall, the Gogunsan Archipelago and the Yellow Sea horizon.

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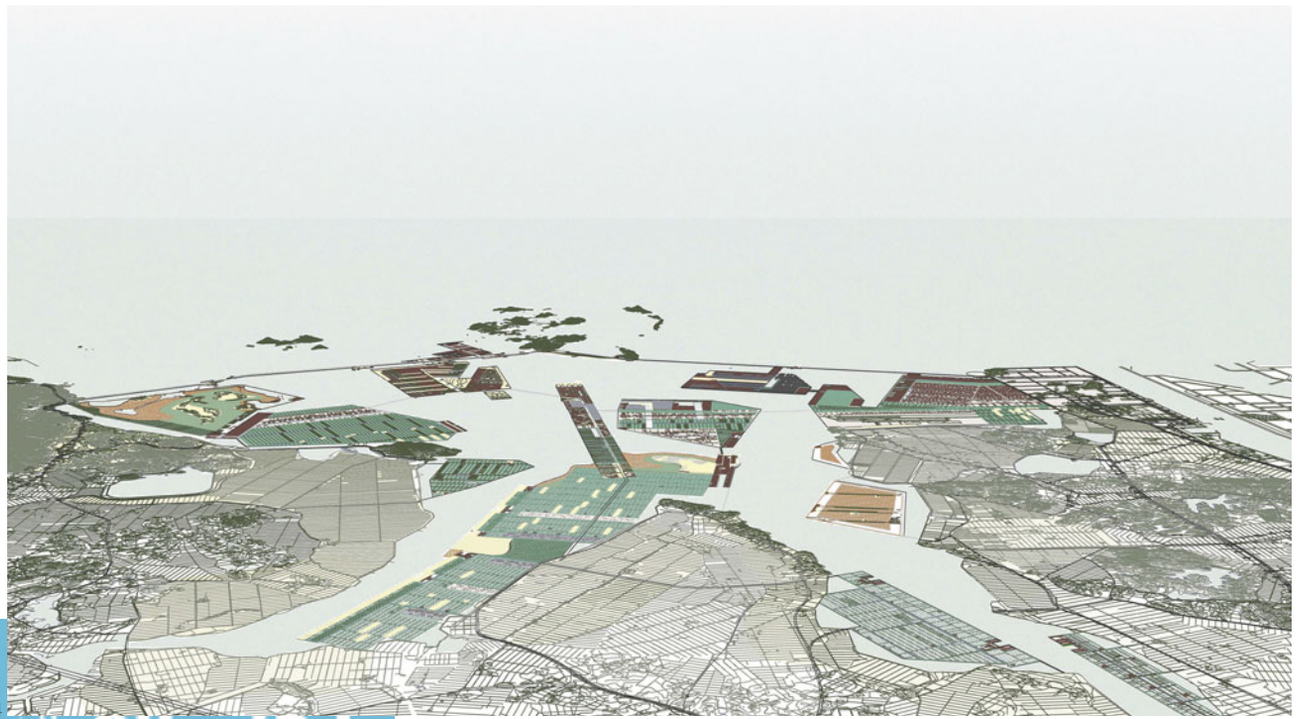

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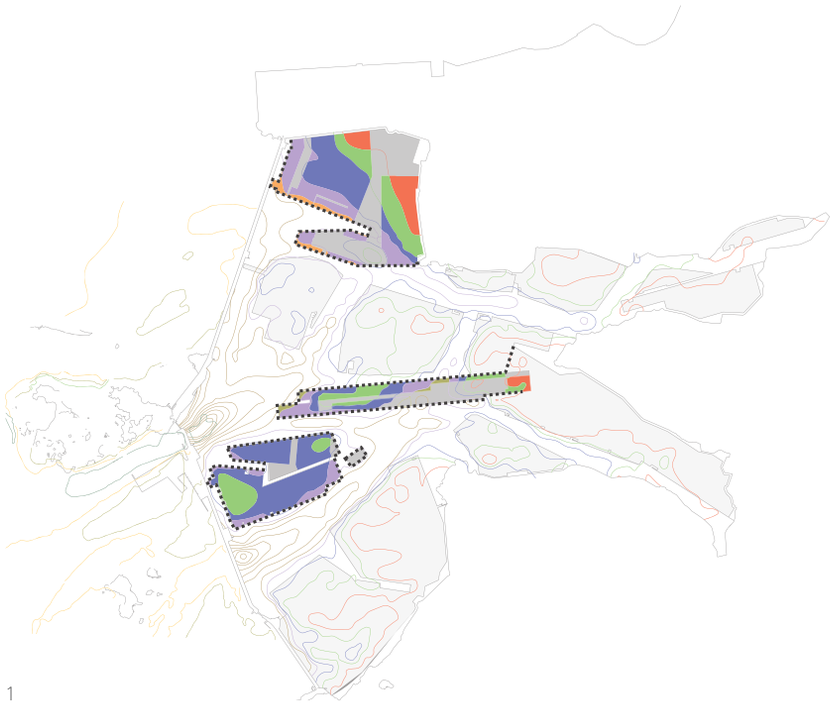
Phase 1: Gogunsan Harbour City, Bridge Island, Airport City and the Sea Harbour are the first islands to be built (5-7 years).



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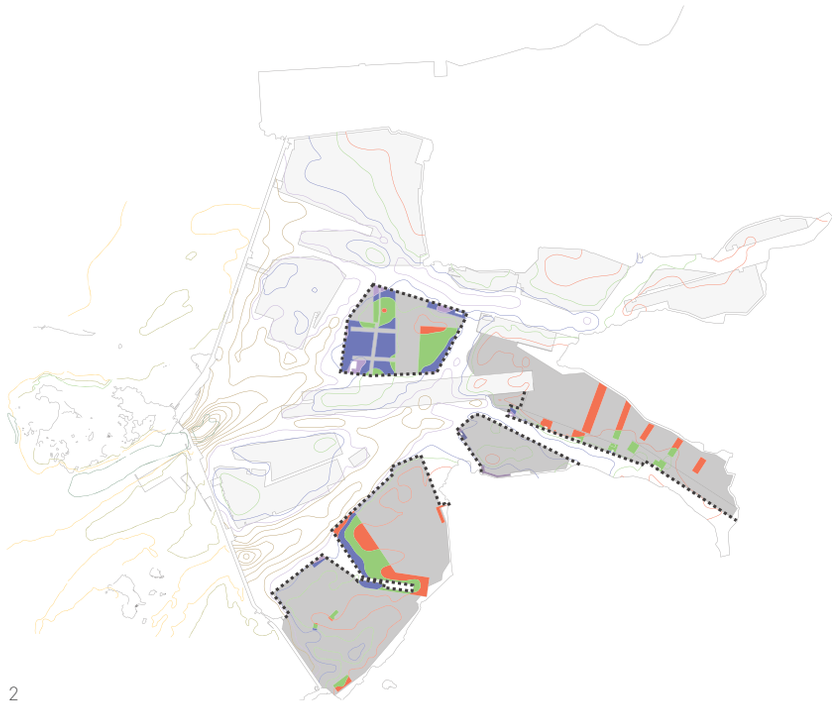
Phase 2: Dong-Jin Lake City in the south, Jin-Bong Lagoon City and Farm City at the confluence of the two rivers are built (7-15 years).



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Phase 1: Land Fill

height (m)*	area (m2)	volume (m3)
2.5	3,980,106	9,950, 263
4.0	10,151,258	40,605,030
5.5	20,692,586	112,809,219
7.0	10, 846,748	75,927,199
7.5	2, 076, 254	15,571,905
Volume (total)		254, 863, 616
Unit price/ m3 KRW**		21, 007
Subtotal (KRW)		**5,353,920,000,000**
(GBP)		**2,971,023,386**

Phase 2: Land Fill

height (m)*	area (m2)	volume (m3)
2.5	5,597,184	13,992,962
4.0	32,956,818	32,435,591
5.5	7,569,934	41,634,634
7.0	1,396,435	9,775,046
7.5	37,378	280,332
Volume (total)		98,118, 565
Unit price/ m3 KRW**		21, 007
Subtotal (KRW)		**2,061,117,670,000**
(GBP)		**1,143,765,465**

Phase 1: Embankment

height (m)*	area (m2)	volume (m3)
3.5	814	2848
5.0	7,960	39797
6.5	17,851	116027
8.0	30,691	245526
8.5	21,787	185191
Volume (total)		589,389
Unit price/ m3 KRW**		55,000
Subtotal (KRW)		**32,416,395,000**
(GBP)		**17,988,663**

Phase 2: Embankment

height (m)*	area (m2)	volume (m3)
3.5	6, 281	21,985
5.0	15,790	78,952
6.5	27796	170,033
8.0	21,962	126,180
8.5	2,197	18,874
Volume (total)		415, 824
Unit price/ m3 KRW**		55,000
Subtotal (KRW)		**22,870,320,000**
(GBP)		**12,691,309**

Phase 3: The high density Man-Gyeong Lake City and the series of small islands along the Man-Gyeong River are built (15-30 years).

3

Phase 3: Land Fill

height (m)*	area (m2)	volume (m3)
2.5	2,497,991	6,244,979
4.0	3,193,961	12,775,842
5.5	2,723,510	14,979,304
7.0	4,676,332	32,734,323
7.5	644,241	4,831,804
Volume (total)		71,566,252
Unit price/ m3 KRW**		21, 007
Subtotal (KRW)		**1,503,392,300,000**
(GBP)		**834,269,784**

Phase 3: Embankment

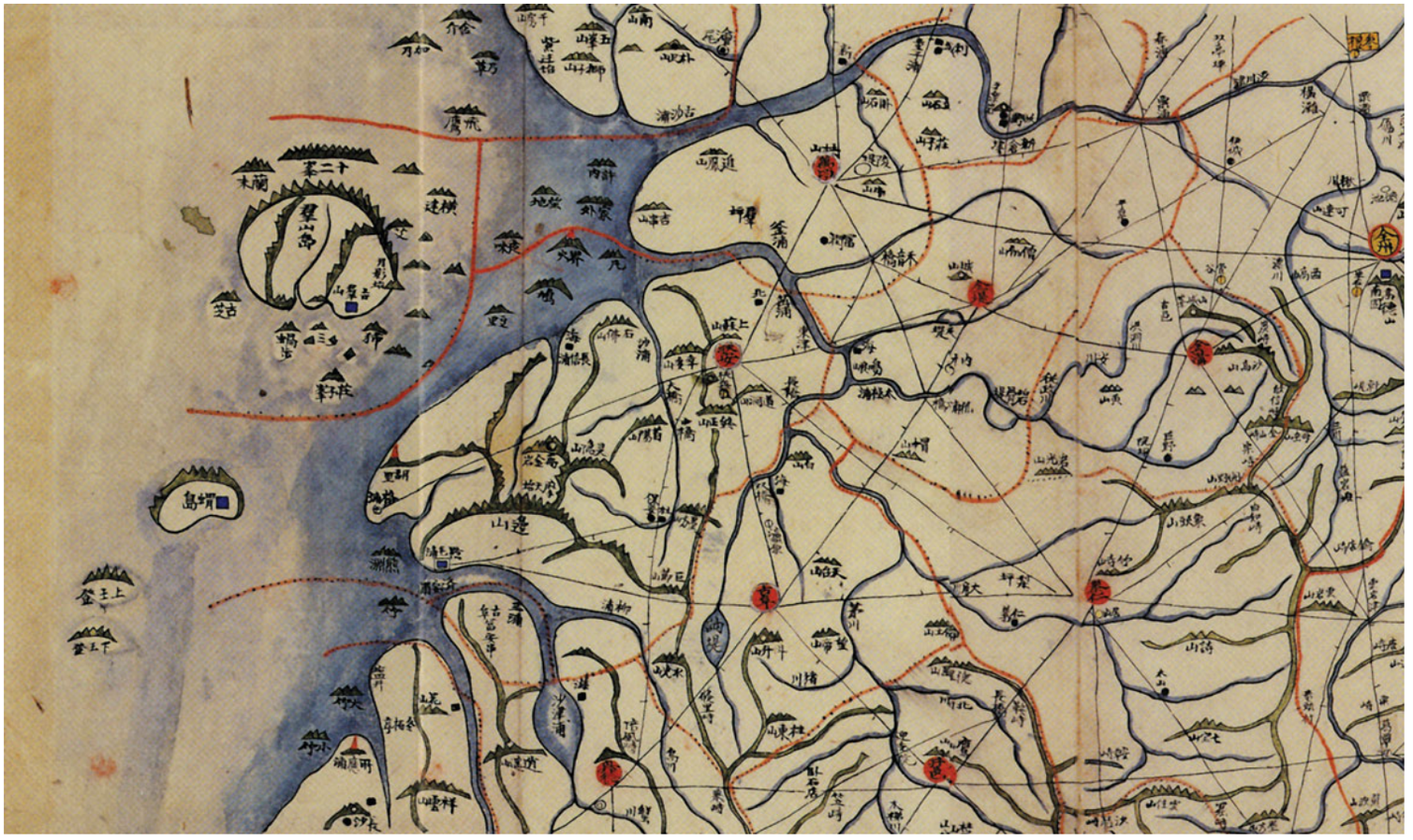
height (m)*	area (m2)	volume (m3)
3.5	12,030	42,105
5.0	11,115	55,577
6.5	14,866	96,630
8.0	16,959	135,676
8.5	8,616	73,232
Volume (total)		403,220
Unit price/ m3 KRW**		55,000
Subtotal (KRW)		**22,177,100,000**
(GBP)		**12,306,624**

*
The land-fill height is calculated to be on average 1m lower than the height of embankment. This is based on ARU assumption of the average reclaimed land level, EL +2.5M.

**
The unit rate of 21,007 KRW per cubic metre is ARU's assumption which is based on the estimated reclamation construction unit rates by Davis Langdon and Seah Korea.

***
The average elevated earth level height of embankment is EL +3.5m.

1. Map of Saemangeum by Kim Jung Ho, 1861.
Young Nam University Library Collection



1

DESIGN CONCEPTS

A Sense of Time

The Poetry of the Natural and the Artificial

Island Experience

A City of Civility

A City of Co-existence

A City Without Sprawl

A SENSE OF TIME

1

The presence of the former river estuary is very powerful. Geological time in this epic landscape is juxtaposed with a long history of land being reclaimed from the sea for agriculture. Rocks that were once surrounded by the sea are now wooded islands in the flat farmland. These enigmatic islands are valuable time witnesses. The old tidal sea shores can be made visible as edges to new water bodies.

The design of a new city can enhance and reveal many of the latent layers of time that are embedded in the landscape whilst creating new layers of inhabitation. One must always think about cultural time and the challenge of reconciling Korea's long and sophisticated history with contemporary Korean civilisation and lifestyles.

All scales of design, from the scale of the islands, to the scale of streets, to the scale of space between buildings are conditioned by a sense of time. The design concept is developed in the short, medium and longer term. The longer term propositions are more open ended and the shorter term propositions are more specific. In this way the urban design concepts can easily be adjusted to changes that will occur in time. This design procedure offers adaptability and responsiveness to change that more fixed and deterministic masterplanning approaches cannot provide.

2

1. A small knoll of land that was once surrounded by the Yellow Sea, now sits within relaimed farmland near Jeonju. *Philip Christou, April 2008*

2. Land reclamation along the Sea Wall, Saemangeum. *Philip Christou, April 2008*

3. Looking along the redundant flood defence embankment. It is a time witness in the landscape that gives us a sense of the different times of the site. *Alex Bank, April 2008*

4. A history of land reclamation in Saemangeum, going back to the 1920's.

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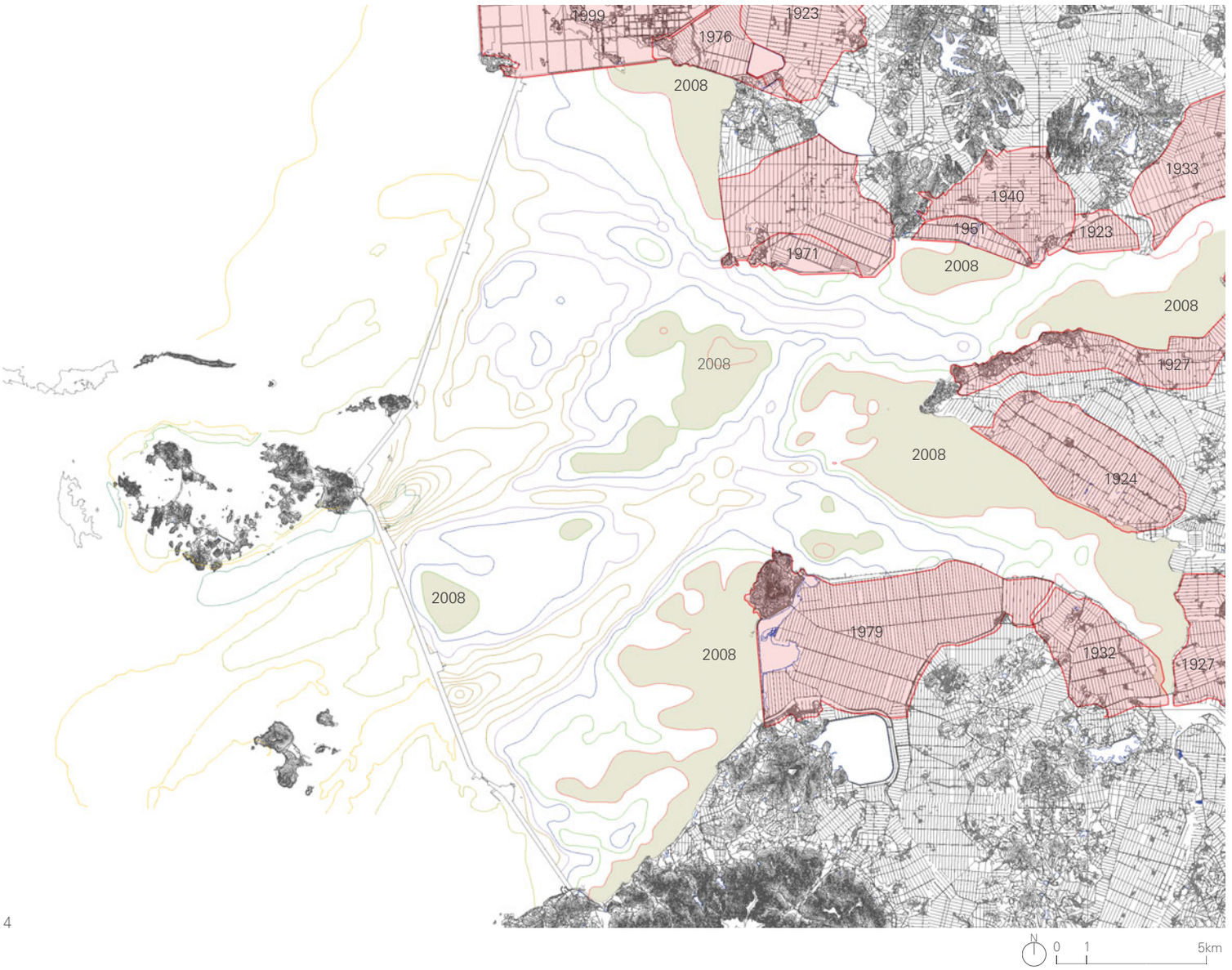

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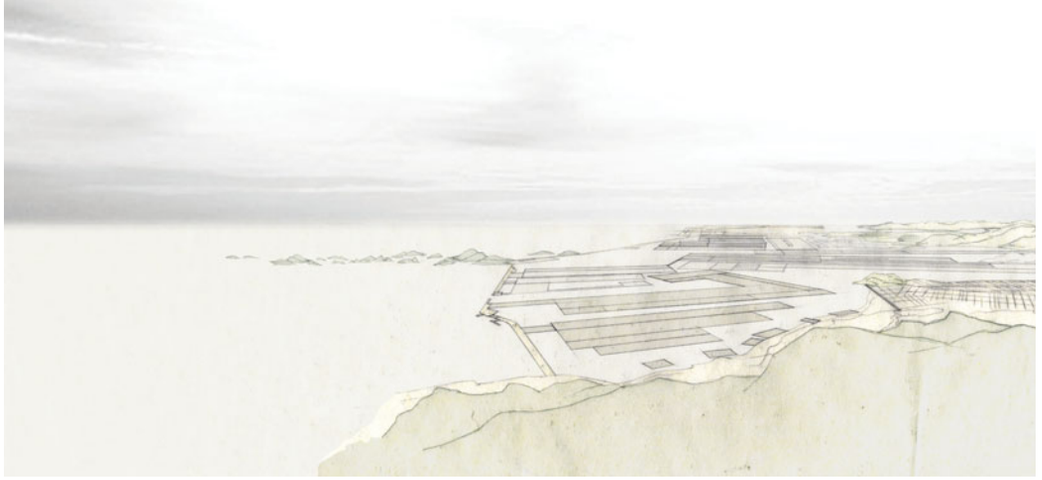
THE POETRY OF THE NATURAL AND THE ARTIFICIAL



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The landscape scenery of Saemangeum will become an epic theatre of urbanised land promontories, water bodies, and islands. It will have a memory of what it always was in the past. It was a beautiful estuary. This will be carefully framed and theatrically put into scene by the new artificiality of the regained landscape playing with the natural landscape. This theatre will give Saemangeum a new picturesque dimension.

We think there should be clarity about what is natural and what is artificial. Long straight edges in the new land will lead and frame the views of the outcrops and promontories of rocks. Therein lays some of the poetic potential of the landscape infrastructure design of the water city.

The rocky outcrops that are now marooned on the reclaimed land like small land islands and the rocks that are small islands in the lake carry important memories of former islands in the estuary. They must be protected as natural monuments. The play between the natural mountains, the former seashore of the river estuary, and the islands of the Gogunsan Archipelago, with the artificiality of the proposed new islands will generate a poetic landscape of a unique water city. The beauty of the different qualities of the various bodies of water is fundamental to the attractiveness of the Island City.

The new river embankments will be built as segments of straight edges, fairly long, gently weaving in and out, giving the rivers good opportunities for flow. The idea is to give the new river shores an urban feel and not to attempt to mimic the natural river scenery. New islands are being built in places of shallow water depths. In this way the general shapes and sizes of the islands are generated by the specific lakebed topography. However, the outline of the new islands is not organic. The islands have simple geometrical shapes. They have long straight edges so that city structures can inhabit them readily. The island edges are not necessarily orthogonal. The lead edges of the islands deflect the water flow.

Alvaro Siza's unrealised design for the extension of the island city of Macau (1983-84), is a good example of this approach. Rather than attaching the newly reclaimed lands directly onto the natural sea edges of the old island of the city, Siza designed a series of new islands that are separated from the old island with bodies of water. The new islands can be clearly understood as artificial, with their strict rectilinear forms generated by the dimensions of the city blocks that will be built on them, and the geometry of land bridge connections. The spatial composition of the new and the old islands that are carefully separated by water spaces is very enjoyable.

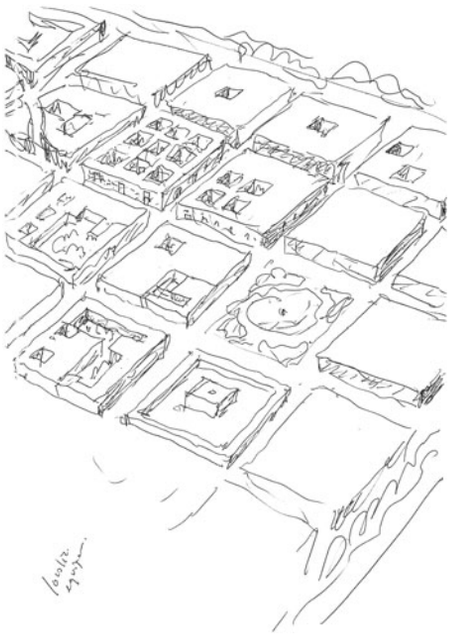
2

1. Initial design proposal with long thin islands. Design sketch view looking north. *Bumsuk Chung, April 2008*

2. Paper relief design model of the landscape infrastructure of islands,in Saemangeum. *Photo: Philip Christou, July 2008*

3. Álvaro Siza Vieira tests possible urban block structures for the extension of Macau, China,1983-84. *Álvaro Siza Vieira, 1983*

4. Artificial islands meeting the natural island of Macau: Álvaro Siza Vieira, competition design plan for the extension of Macau, China, 1983-84. *Álvaro Siza Vieira, 1983*



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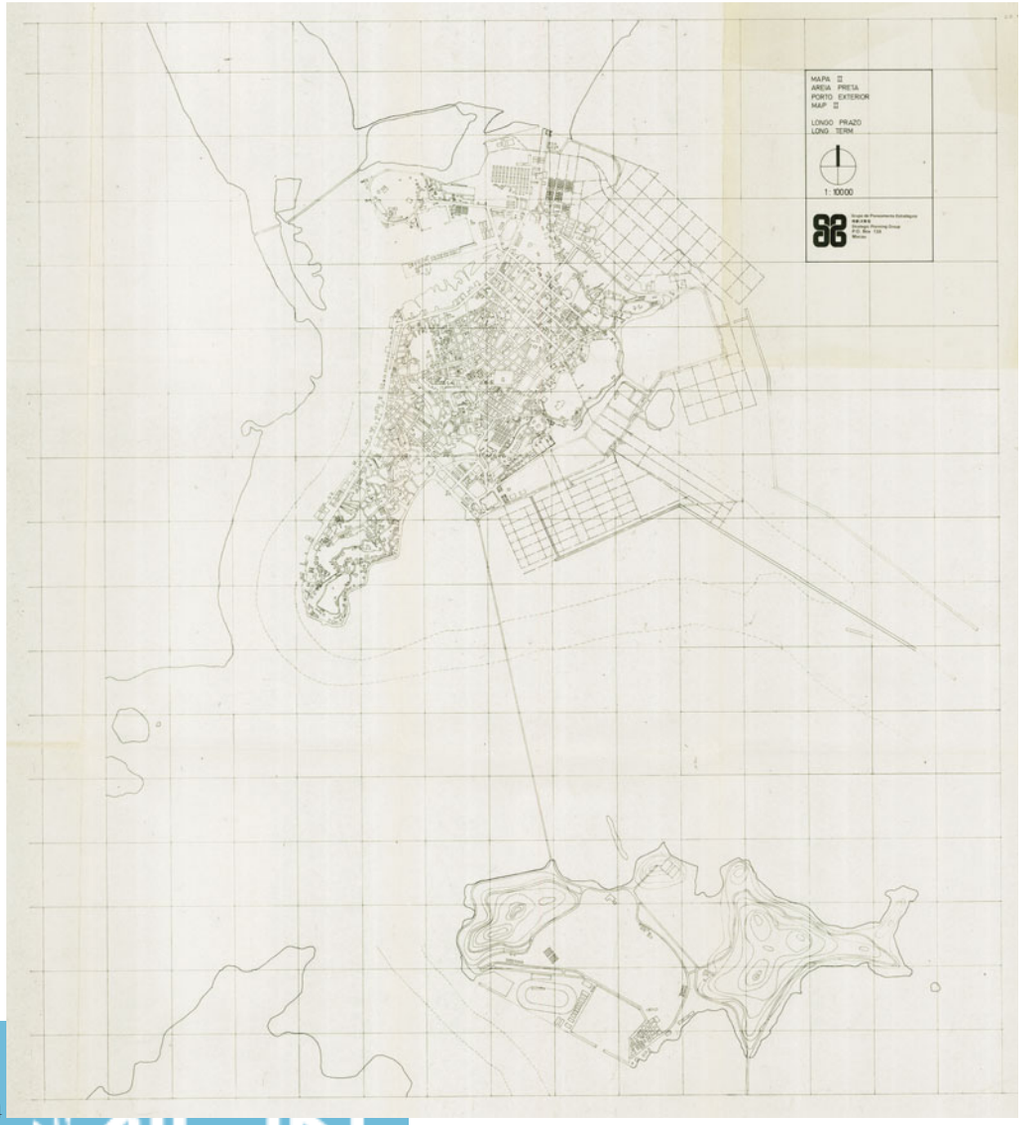


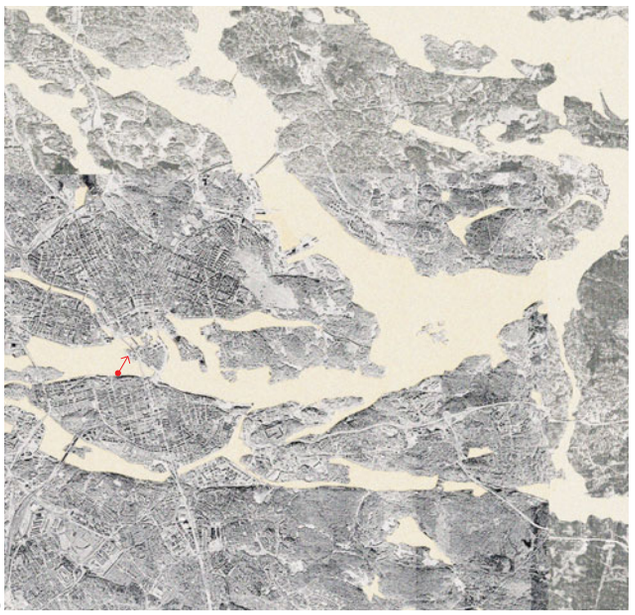
4

ISLAND EXPERIENCE

2a

The Island City could be thought of as a series of water gardens. The beauty of the different qualities of the various bodies of water is fundamental to the attractiveness of the City. In Saemangeum Island City it takes 25 to 40 minutes to walk across an island or from an island edge to the edge of an island internal basin, dock or canal. This gives a good island experience. Good island experience and waterfront experience is important to attract tourists. It is of course also pleasant for the good citizens of Saemangeum. There is an economical perspective to this. Lake and river waterfronts tend to raise the plot value.

Besides considering the forms of islands and river shore extensions, it is important to give the citizens and visitors of Saemangeum a rich and interesting formal language for the water bodies of the new city. Water bodies include: island internal canal networks and basins; the large Man-Gyeong Lake; docks; river branches; river confluences; the Dong-Jin Lake; transitional lands between high and low seasonal water levels; island harbours. This should make Saemangeum a water paradise for excursions by boats, bicycle, waterbus, car and for walks and hikes. This all adds up to a unique theatre of water. It will be just as attractive for all sorts of water sports.



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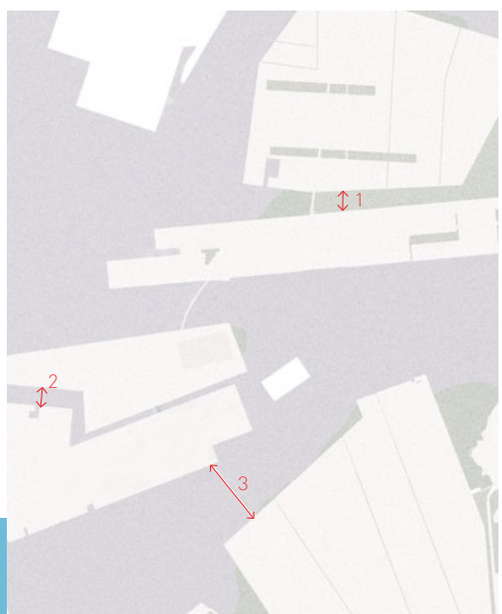

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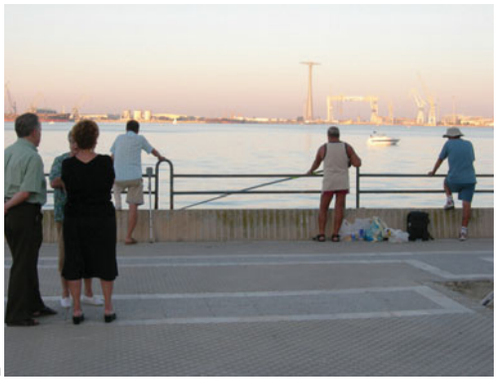
Viewing Distances:
1. Stockholm, 0.4km
2. Venice, 0.45km
3. Cadiz, 1.4km

3a



4a

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N 0 1 3km

4b

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1. Measured studies of the water bodies in the cities of Stockholm, Venice and Cadiz mapped onto the island plan for Saemangeum.

2a+b. View from a moored boat looking north, across the water towards Birger Jarls Torg public square on Riddarholmen, Stockholm (0.4km).
Philip Christou, June 2006

3a+b Looking south from the cemetery island of San Michele, across the lagoon towards the Church of Santa Maria Assunta Isola, Venice (0.45km).
Philip Christou, Nov 2008

4a+b Looking east towards the industrial harbour from the city of Cadiz, Spain (1.4km).
Philip Christou, Aug 2006

A CITY OF CIVILITY

1. Bedford Square, London. *Philip Christou, Nov 2007*

2. The delicate relief of the Youl Hwa Dang Book Hall facade and the adjacent Artyard bring a sense of civility to Bookmaker Street, Paju Book City, Korea. *Jonathan Lovekin, July 2009*

3. Venice: A Regatta on the Grand Canal. about 1735, oil on canvas, London, The National gallery. *Giovanni Antonio Canal (Canaletto).*

The construction of the sea wall in Saemangeum is an achievement that is made by a strong civilisation. The high ambition of the sea wall sets a clear and strong standard for building a civilized city. Every proposal for a public space in Saemangeum, from the design of a lake bus jetty to a public garden on the sea wall, to the design of the harbour city must measure itself against the ambition and achievement in civility of the sea wall. The degree of civility in Saemangeum is directly proportional to the quality of the public realm of Saemangeum.

As part of the visit of the Jeollabukdo delegation that visited London on 27 / 28 May 2008, we tried to give the visitors a glimpse of the 18th Century Georgian London, a historical example for bringing civility to the city. The Georgian squares in London that we visited, (Bedford Square and Canonbury Square) are good examples to demonstrate how private citizens of the city can make a gift to the public life of the city. In these examples, the gift is formed by the citizens' residences making public squares. The good proportions, elegant simplicity and public decorum of these houses give the square a civility. They are very beautiful, even today. We believe that this sense of civility can be achieved when designing a new city in the 21st Century.

We find it helpful when thinking about the boundaries between public and private space in the city to refer to the 18th century maps that the Italian architect and surveyor Giovanni Battista Nolli drew of Rome. His etchings show the public realm of the squares and street going inside buildings accessible to the public. The private parts of the city are hatched out, in the shadows. The pronounced, well proportioned rooms or piano nobile on the first floor of the buildings that front London's Georgian squares have this spirit of public decorum and generosity. These good rooms in Georgian houses relate directly to the public space they help demarcate. Conversely, we also feel that open spaces in the city should have the qualities of a good room in a building. In this way, one can think about city squares as city rooms. A Georgian square usually has a garden at its centre that is open to the use of the public at certain times of the day. It is looked after by the residents of the square. The Economist Plaza in St. James, London designed by Allison and Peter Smithson is a beautiful example of a contemporary gift by a private owner to the public realm of the city.

3

A CITY OF CO-EXISTENCE

1

From the time we were first introduced to the project of designing a new city at Saemangeum, one of our fundamental aims was to find a way of generating the urban conditions for a city of co-existence. We are looking for an integrated city full of vitality and liveliness. In this way we have tried to reduce the need for single functional zones in the city such as bed-towns, business parks or large self-contained tourist resorts. Our experience working on the design of the new industrial publishing estate Paju Bookcity has shown that Korean planning legislation and practice is based on the old modernist principles of a zoned city. It has been almost impossible to bring residential functions to the Paju project because it is zoned as industrial. Next to Paju there are single-function residential districts of high rise towers under construction. Neither the industrial book publishing zone nor the residential zone can be described as a city of vitality and liveliness. We have worked with the idea of a city without single function zones, knowing that the proposal would be contrary to accepted practice and it might be seen as radical or even unworkable. In Saemangeum we attempted to bring diverse functions within close proximity of each other, compatibility permitting. This is to ensure a measure of hustle and bustle in the life of the city, a degree of programmes rubbing against each other, allowing a sense of conviviality.

Economic and political conditions are in constant flux, and this change is happening at ever – increasing rates. The unpredicted changes currently being experienced world-wide in energy and food prices are an inescapable reminder of this flux.

The harbour cluster in the centre of Saemangeum (described in more detail later as the Harbour City) is designed with the idea of vitality and coexistence as a starting point. The large industrial sea port on the outside of the sea wall will accommodate large container ships and international cruise liners for tourists. It is located in the neighbourhood of several other city harbours that are both outside and inside of the sea wall.

2

1. Wetland coexisting with the urbanity of Paju Book City, Korea. Designed by ARU. *Philip Christou Feb 2008*

2. The Mosque-Cathedral of Cordoba in Spain illustrates the idea of coexistence. It has within its city walls two different worlds of experience, two different spirits of time, and two very different conceptions of space: the infinite horizontal, non hierarchical space of the mosque and the focused, directional vertical space of the cathedral. One does not dominate the other.

3. Agriculture in the city. Tourists visiting the tulip farms, Saemangeum Island City.

A CITY WITHOUT SPRAWL

1. Aerial photograph of Monpazier, France . *Editions Rene, France*
2. View from Monpazier, out to the Dordogne landscape, South West France. *Philip Christou, Nov 2009*
3. Densely inhabited Baside towns, such as Monpazier are scattered across the Dordogne landscape, South West France. *Drawn by Alessandra Greggio*
4. View from a narrow Monpazier street, out to the landscape beyond. *Alessandra Greggio, Nov 2008*

The built up areas of city where people live and work will coexist with the beauty of the open landscape of farm fields, lakes and mountains. Urban development should not be spread evenly across the land. The intention is to concentrate urban fabric in localities of density, rather than allowing a dispersed undifferentiated sprawl. The localities of densities are placed in relation to spots of exceptional beauty in the island landscape. People will have the opportunity to live near to where they work, and share the beauty of their surroundings with tourists and wildlife.

The localities of density that we are proposing are contemporary versions of dense towns, such as Monpazier, that one finds in the Dordogne region of France, where the space of the agricultural land between these towns is kept free of urban development. They are lively centres of population that are well serviced with schools, hospitals, markets and shops. In Southern France, urban sprawl is controlled as a means of attracting tourists who enjoy the beautiful interplay between town and landscape.

Monpazier, is one of nearly 700 Bastide towns in South West France founded by the British between the 13th and 15th Century. Bastide towns are densely inhabited settlements sat within agricultural landscapes. The towns were originally established to colonize the forested region of Southwest France. Concentrating the population of the region into Bastide towns was a method for landowners and sovereign powers to increase trade and prosperity in this relatively poor, and at the time, remote part of France.

Serfs were encouraged to move to the new Bastide towns. They were offered a plot to build a house, a garden plot, and a larger cultivation plot within the surrounding Bastide landscape on which they could farm. With people living and working in close proximity to one another and with a market place at the centre of each Bastide where one could trade, a new model town was established. This new model for rural living benefitted everybody involved – the king, the landowner and townspeople.

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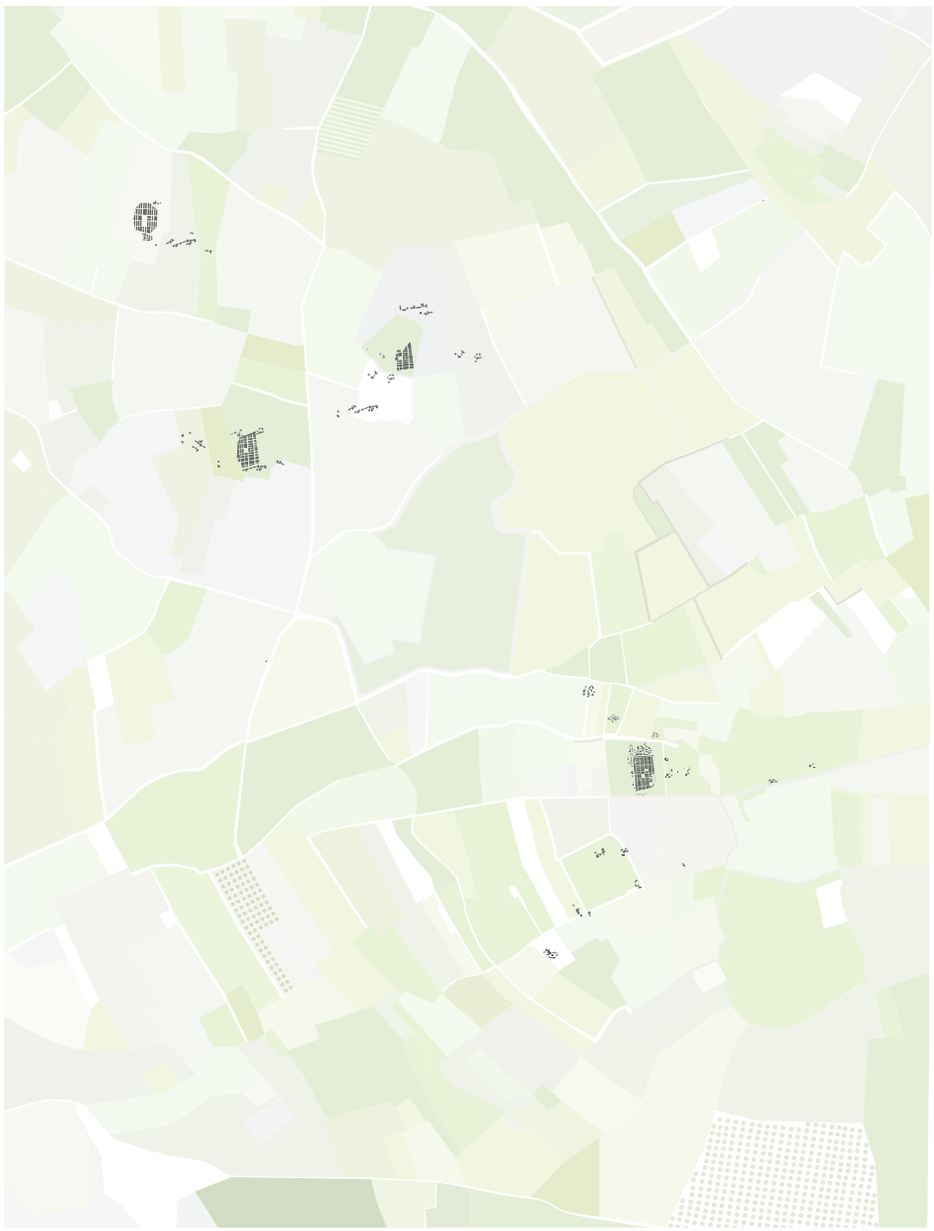

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1. Island making, Saemangeum, *Philip Christou, Jan 2008*

1

DESIGNING THE CITY

A Landscape Infrastructure of Islands

Island Making: A Sketch Book

City Structures

Locating Programmes Within the City Structures

City Magnets

A LANDSCAPE INFRASTRUCTURE OF ISLANDS

1

The ARU ensemble of islands is a landscape infrastructure on which the new city will be built. This landscape infrastructure is characterised by the specificity of its context, place and materials, and at the same time it is adaptable with regard to a predetermined set of uses. It will be able to tolerate unknown future uses that might occur in this place.

The landscape infrastructure is a canvas for city life, specific in determining the spatial quality of the city and its relationship to its surroundings, yet adaptable in the manner in which it is inhabited. The specificity of the design of this landscape infrastructure is important. Without this, these islands are in danger of being out-of-place, characterless places. Specificity ensures that the city will form meaningful connections with the surrounding landscape and be a stimulating place to spend time. This specificity might encourage one to walk along the island water front, enjoy a rich variety of water bodies, draw one's attention to the hills in the distance, or simply make one aware of the surrounding farm and wetlands. These islands ensure the new city spaces have a good connection to the landscape and give a memory of the landscape in the city.

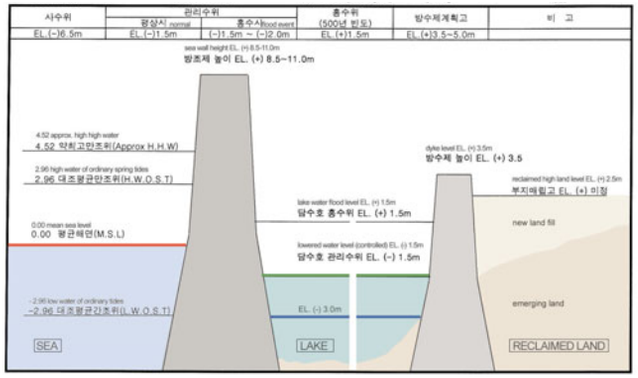
Many scenarios can take place on these islands in the future. The landscape infrastructure is like a theatrical stage on which the activities of the city can take place. Many different scenes are acted out on a stage. A theatre stage can accommodate many different plays over time.

The landscape infrastructure of islands provide the glue between diversity. The beauty of these islands can be shared by a diversity of people from different cultures with different aspirations and lifestyles. The islands give a sense of place, which people can share and feel proud.

We are proposing 6 new islands to be built within the fresh water lake that now exists behind the Saemangeum Sea Wall. In the interest of feasibility of reclamation, the islands have been located and shaped to take advantage of the existing lakebed topography. We like to be real when designing the city and to use what already exists in imaginative ways. For this reason we are building in shallow water. Land reclamation will mostly be achieved by using the -1.5 meter contour as a guide for shaping the islands/ river shore extensions. This will come about when the lake water level has been lowered to -1.5 meter below sea level. Islands and river shore extensions will be protected by perimeter dykes with roads, sometimes with wider raised perimeter territories for development. Approximately 30% of the large central island and the new lands in the north near the airport will need to be built up from the - 3.0 m contour level.

This process generated three geographies of regained land behind the sea wall: the north-west geography, the central geography and the southern geography. Generally these geographies are in line with the Jeollabukdo Land-use Plan produced in 2007. The differences lay in the differentiation of these geographies. The geographies consist of river shore, newly revealed land and artificial islands.

2



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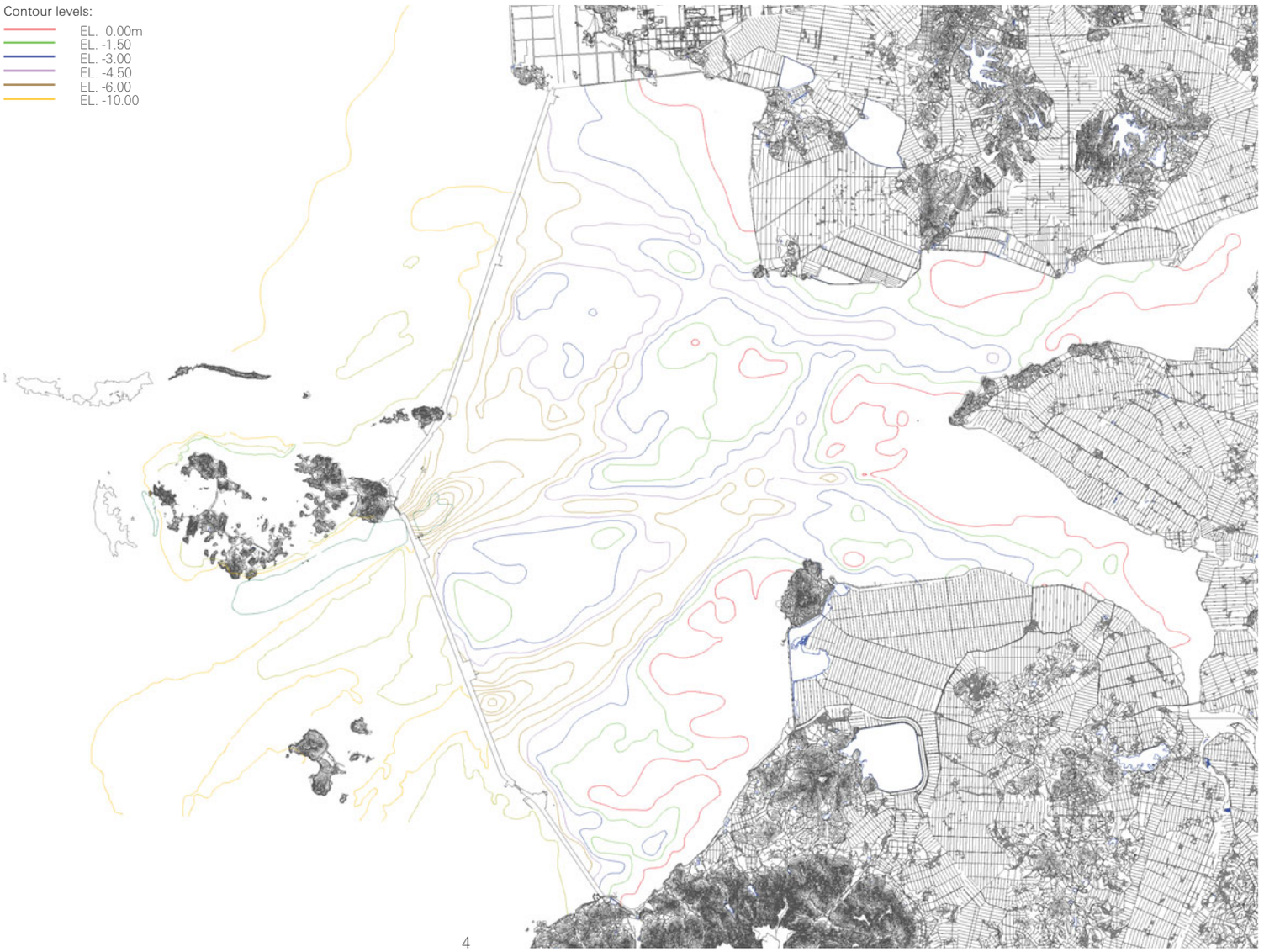

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1. Small rocky outcrops are revealed as the lake level in Saemangeum is lowered. *Philip Christou, Feb 2008.*

2. The process of land reclamation, Gunsan Peninsula. *Philip Christou, Jan 2008*

3. Diagrammatic section showing the sea wall, reclaimed land level, mean tide level and proposed lake level.

4. A topographical survey of the lakebed. This information helps to position and size of the new islands.

URBAN BLOCK ISLANDS

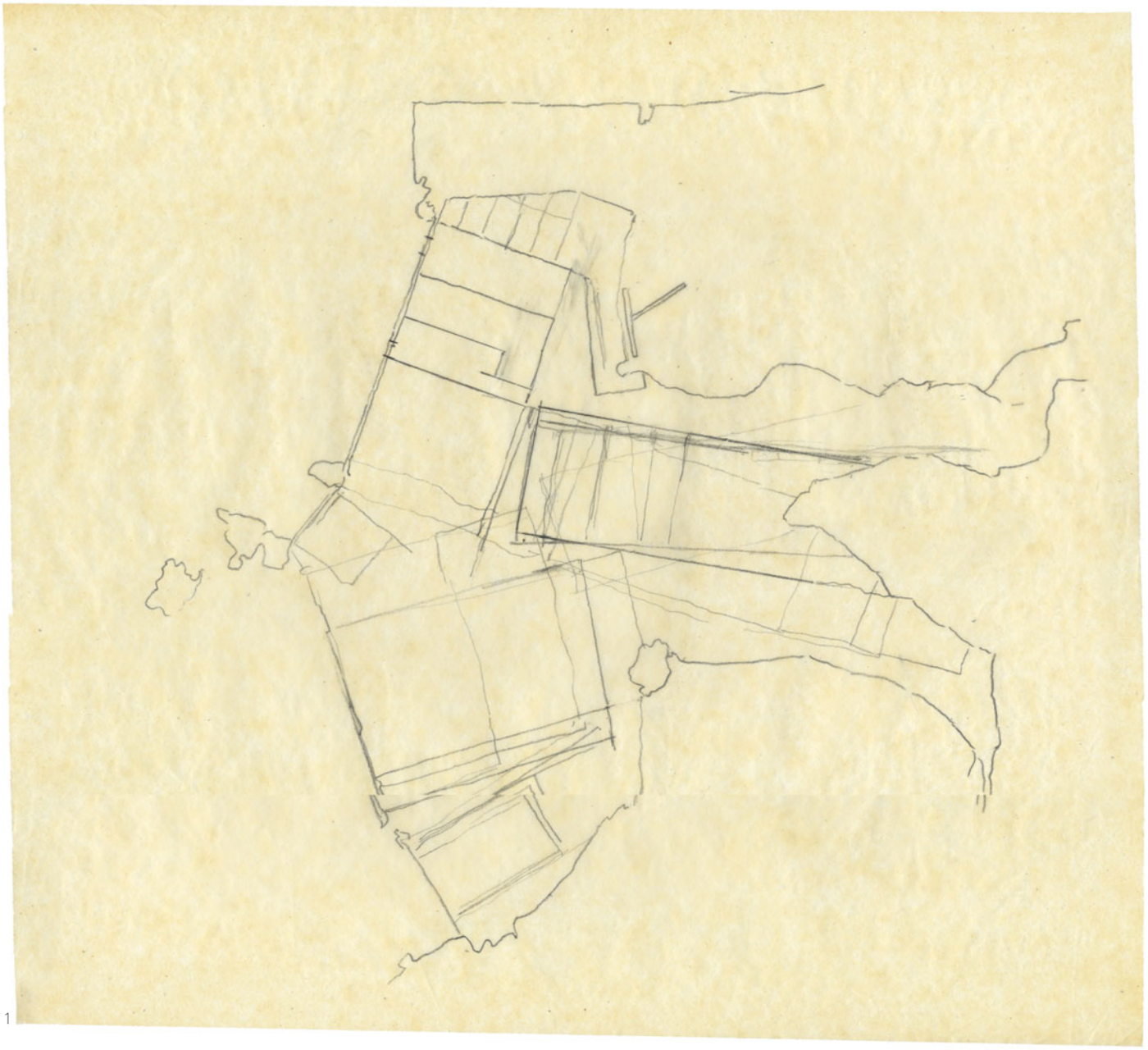
The process of giving form and composition to the islands began by thinking of the future pieces of reclaimed land as large urban block plates arranged perpendicular to the sea wall. To begin with they were relatively few, but large islands. The shapes of the islands are intended to be distinctively different from the natural formation of the existing coastline.

LONG AND NARROW ISLANDS

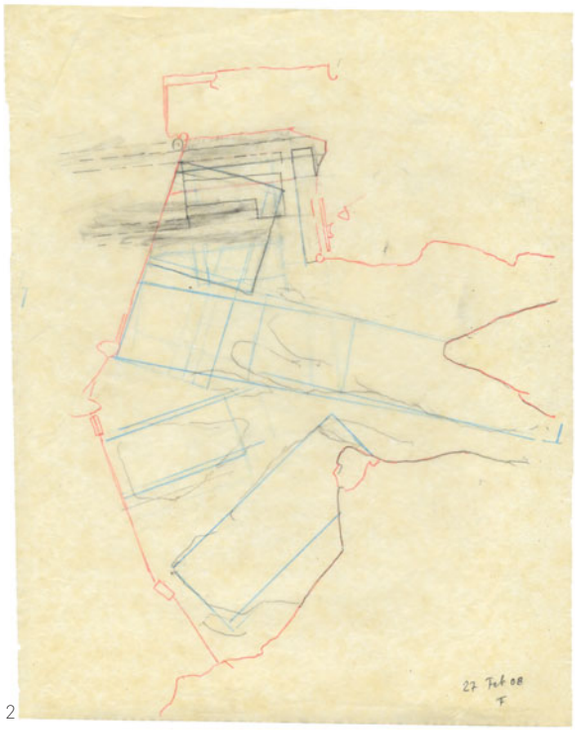
The long and narrow island design is an attempt to maintain an island experience and to enhance the value of the land by increasing the length of lake frontage properties. We think it should be possible to walk from water edge to water edge across the short dimension of an island in approximately 25 to 40 minutes. One will therefore always have an awareness of the water in every part of the new city. The various long and thin island options could offer up to 200km of water frontage. The increased land value of water frontage sites needs to be balanced with the high cost of building embankments along the edges of the new islands.

ISLANDS DESIGNED IN RESPONSE TO THE LAKEBED TOPOGRAPHY

With more precise topographical maps of the lakebed and water depth data, the size, location and shapes of the islands were re-assessed. We have retained the strong figures of island and the river shore extensions. In the interest of feasibility of reclamation, the islands have been located in relatively shallow waters. The islands have become more compact. The design continues to balance maximum water frontage (good land value), against the cost of building embankments. We have also placed long and thin internal water bodies within the islands to compensate for the loss of island water frontage. The free-flowing flood run-off of the two rivers has also been discussed when re-designing the landscape infrastructure of islands.



1. Exploring the form of the new island plates. *Philip Christou, Feb 2008*



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2 & 3. Exploring the form of the new island plates. *Florian Beigel, Feb 2008*

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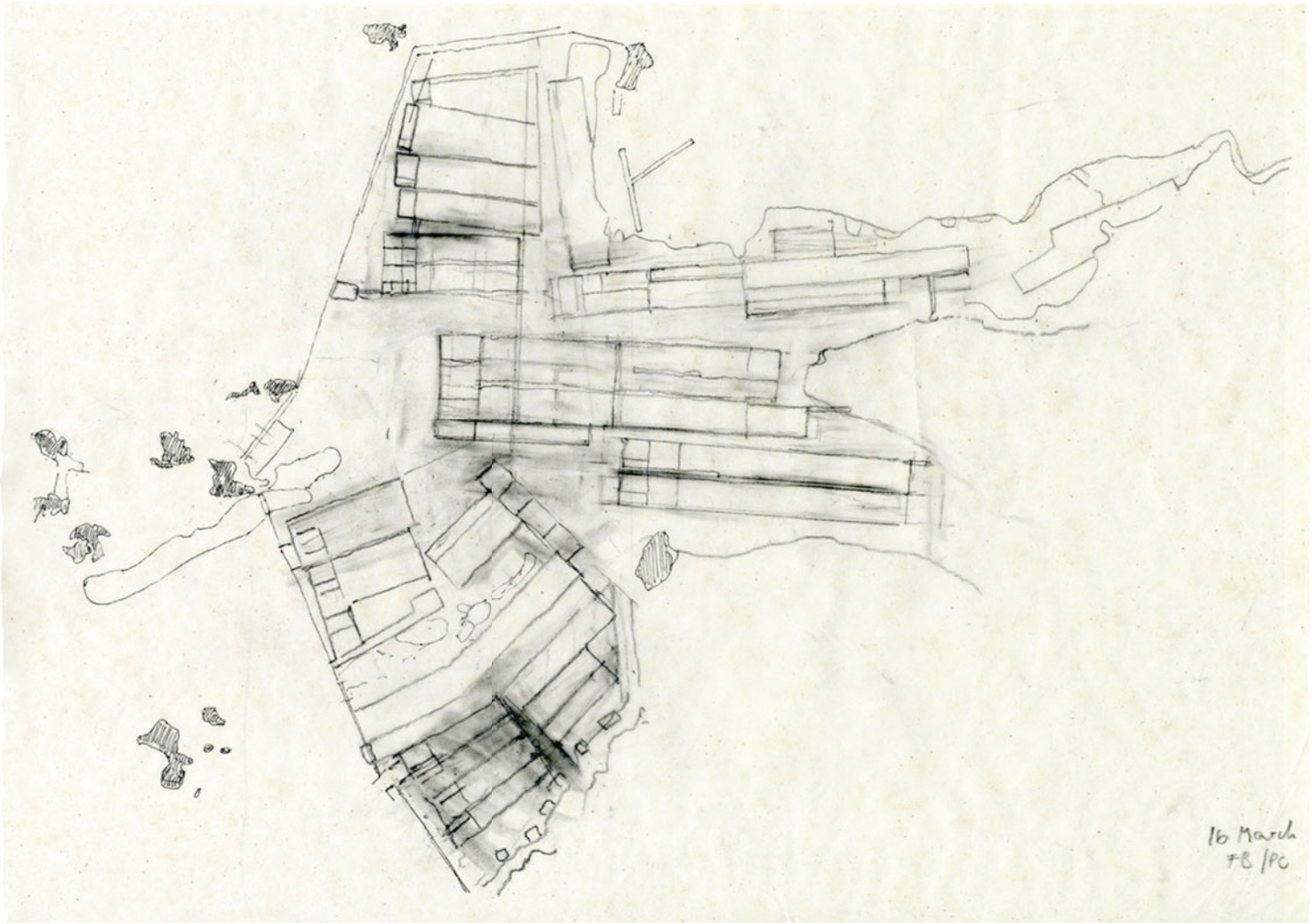

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4. Longer and narrower islands maintain an island experience, where one is always relatively close to a waterbody. *Florian Beigel/ Philip Christou, March 2008*

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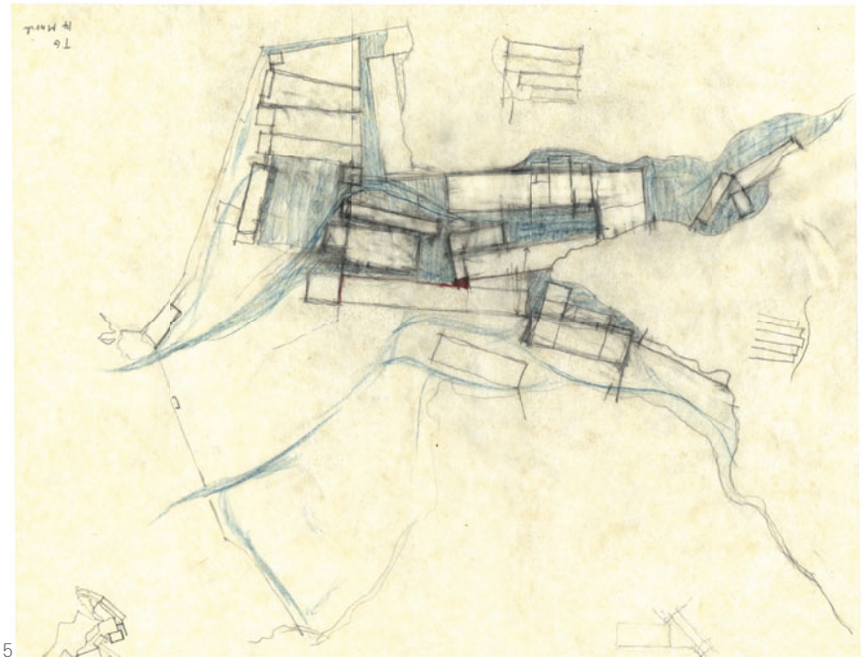

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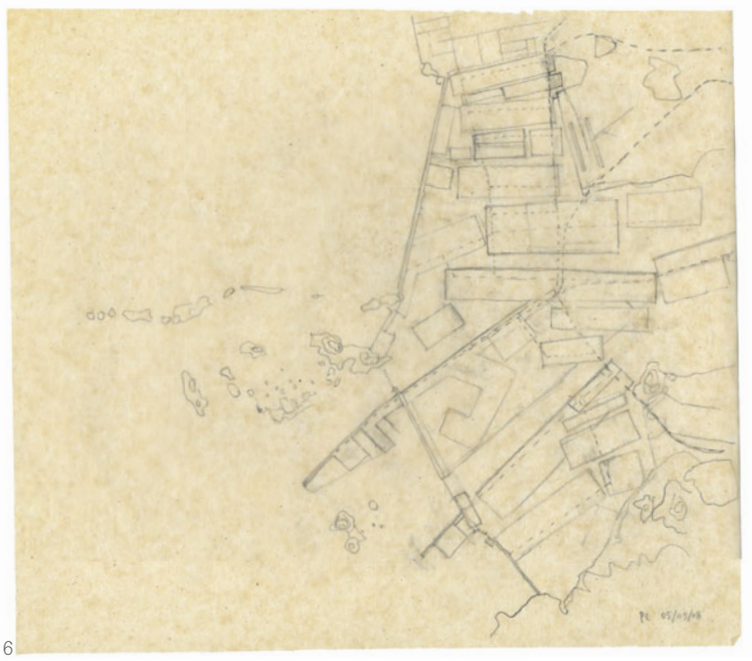

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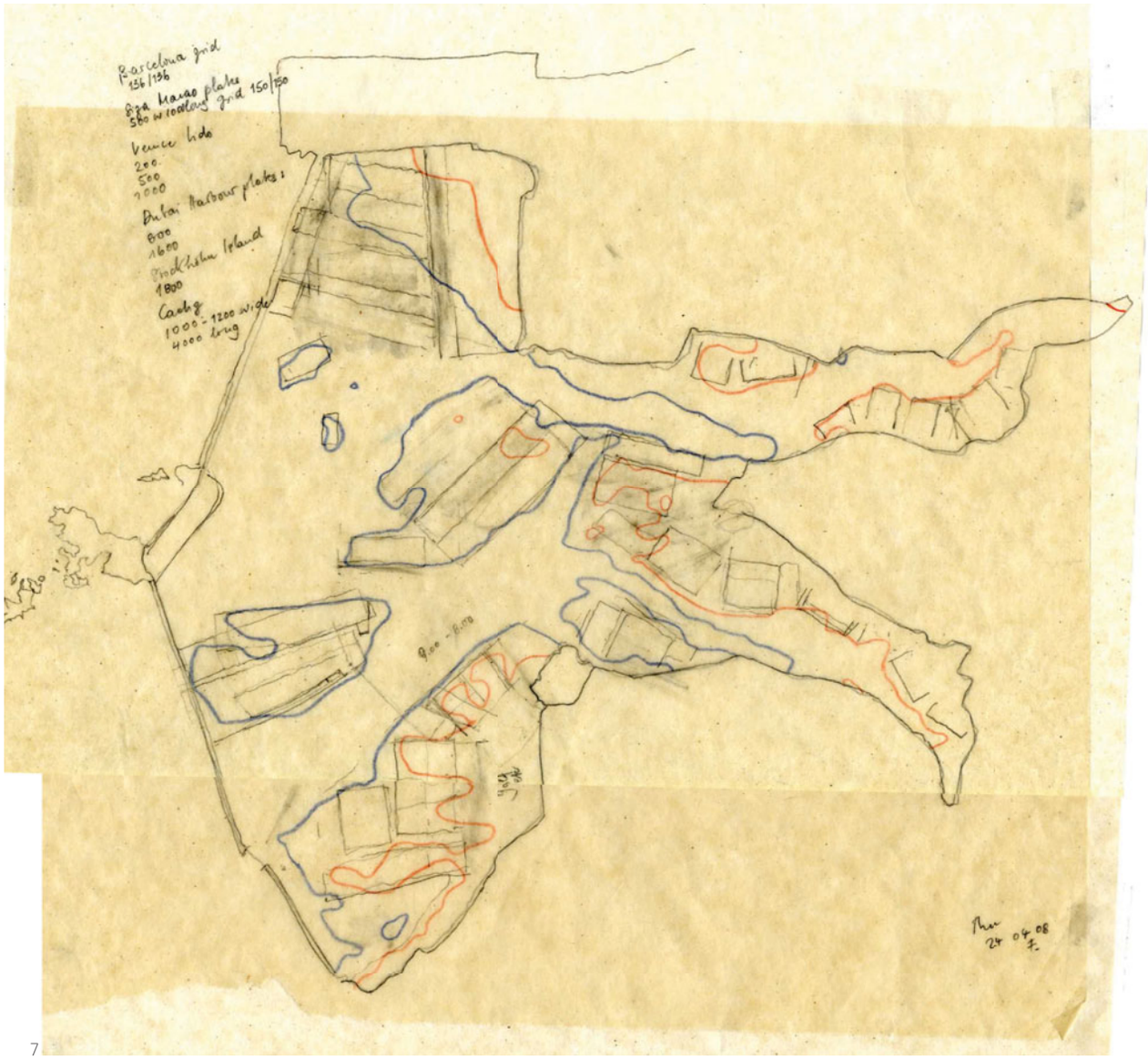
5. Exploring island positions with a highly controlled series of dams and flood gates.
Thomas Gantner, March 2008

6. Testing the potential for much longer and fewer islands within the lake.
Florian Beigel/ Philip Christou, March 2008

0 1 5km N



7. Thinking about the water depths within the lake and potential island positions. *Florian Beigel, April 2008*

8

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8. Thinking about connections between islands and how the island city is connected to the sea wall. *Florian Beigel, May 2008*

9. Overlaying island positions the blue contour line (-3m) of the lakebed topography, and a relatively straight flow path for the rivers. *Florian Beigel, April 2008*

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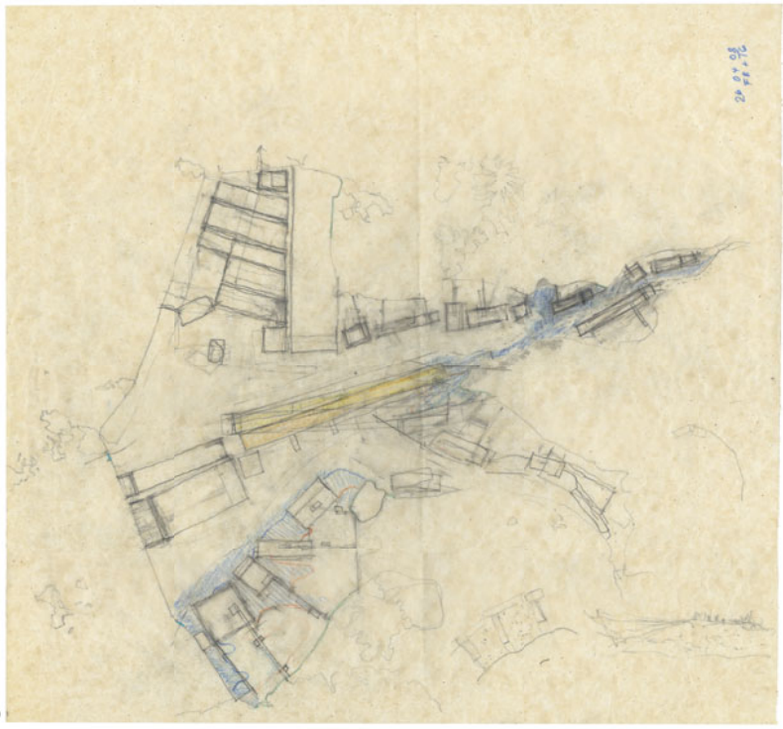

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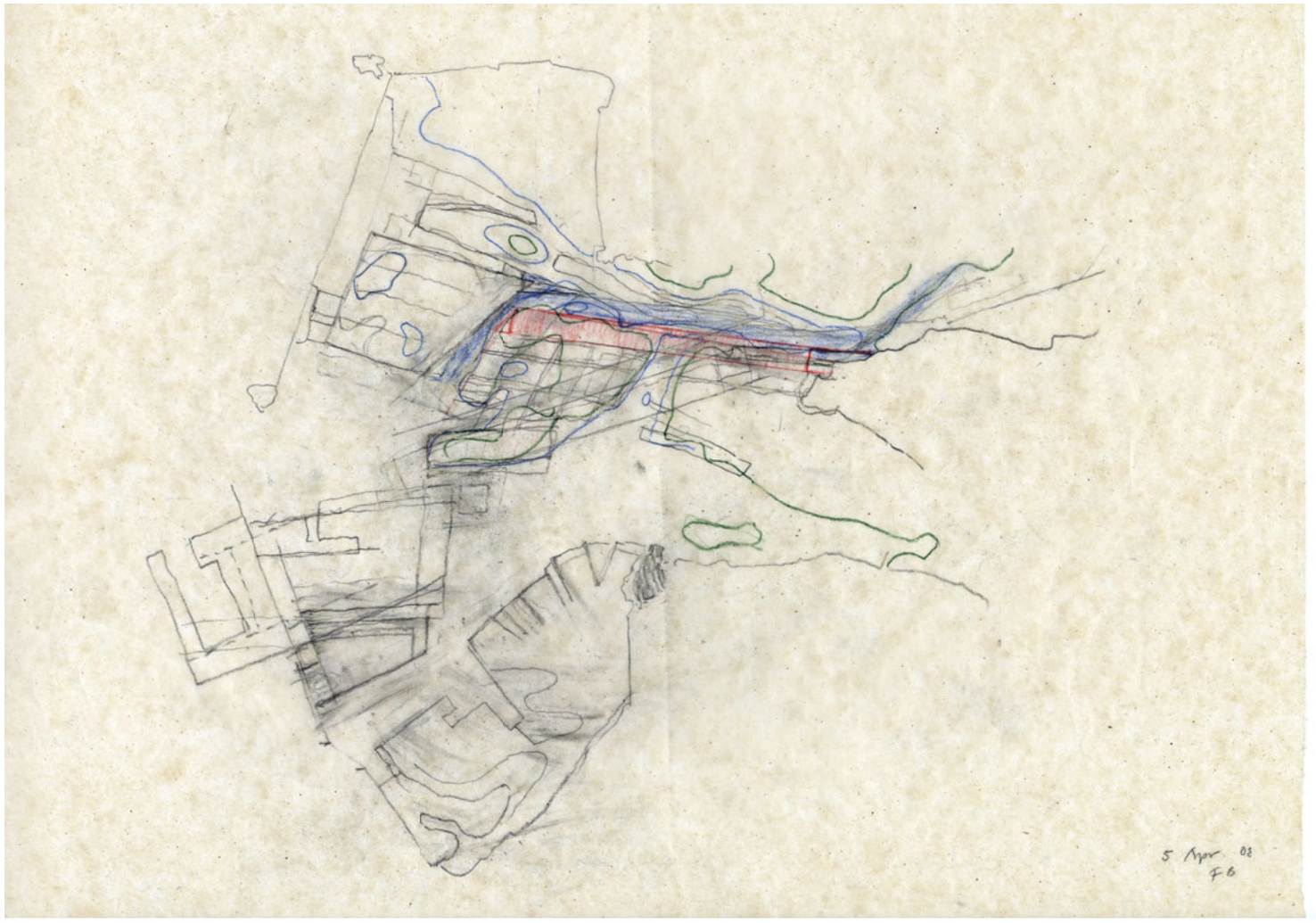
10. Investigating the position of the bridge island and the form of the southern geography. *Florian Beigel/ Thomas Gantner, April 2008*

11. A possible strategy for the formation of new land that will emerge as a result of lowering the lake level in the southern part of the site. *Thomas Gantner, June 2008*

0 1 5km N



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12. Island positions in relation to the water flow of the north river.
Florian Beigel, April 2008

0 1 3km N

1. An ‘image island’ at the heart of Saemangeum makes visible to the visitors arriving by boat, the beautiful processes of building islands. It is an island parkland where the construction process of island making is left unfinished. The ‘image island’ captures the architectural poetry of the artificial meeting the natural in the former estuary and makes one think about time.

CITY STRUCTURES

1. Hadrain's Villa, Tivoli, Italy, circa 120 AD, composed as various 'city pieces' placed together to form the villa ensemble of buildings and gardens. *Drawn by Dingle Price*

2. The new urban blocks in Ypenburg designed by Rapp & Rapp Architects form a strong figure in the landscape. *Alexander Thomas, Nov 2008*

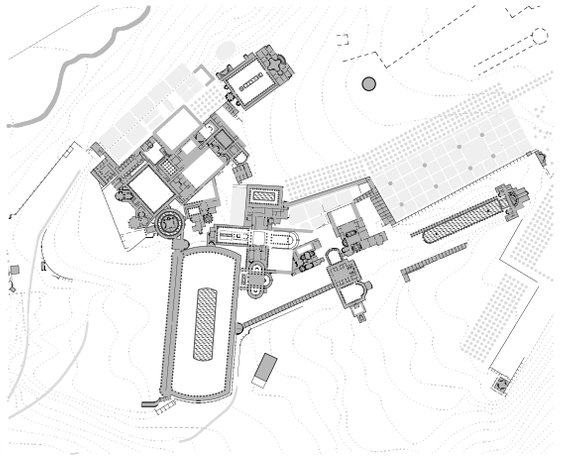
The City Structures chosen are 'city pieces' that are well proven over the course of time, coming from various places in the world. These City Structures are characterised by their strong public realm. They provide gifts to the city in the form of squares, gardens, streetscapes and skylines. These defined public spaces bring a sense of civility to the city.

A city structure is usually made up of a number of buildings of a similar type. They give architectural form to the landscape and the city. The views that one has from inside the buildings give shape to the form and location of the city structure. They are place-specific. Proximity to topographical features such as mountains or rivers gives shape and form to a city structure. City structures are flexible in use, they are not use-specific. They are designed to be capable of accommodating multiple use scenarios. Uses can be assigned to them, and often this can change according to future needs. It is within these urban blocks that the city structures begin to deal with the uncertain future and evolving nature of the city. Like the landscape infrastructure, the urban block is adaptable in the way it is inhabited. The city blocks have the capacity to tolerate a number of different uses, densification and change of use. Diversity is enjoyed and celebrated within these urban blocks. This is very important to us. The proximity of different activities gives vitality and a welcome tension to the city. Constantly in transit and redefining themselves, these city blocks give character and charm to the city. We think the following three city structures are particularly good examples of their adaptability to change.

YPENBURG, THE NETHERLANDS

A series of new urban blocks were built in 2006 in Ypenburg, a new town between Delft and the Hague in the Netherlands. A new urban centre in Ypenburg, designed by Rapp & Rapp Architects consists of nine closed perimeter blocks that form a strong figure in the landscape. These urban blocks create well-measured public spaces and streetscapes that draw life into this new city structure. Shops, social and cultural facilities line the streets whilst small public spaces give room for the hustle and bustle of a weekly market. These spaces open out to the waterfront, reminding one of their proximity to the landscape beyond. This hybrid city structure with its loose scattering of towers growing out of the block structures, offers a picturesque skyline to the city.

The coexistence of shops, markets and social and cultural facilities mixed between residential blocks, urban gardens and connects with the waterfront provides a rich urban setting on which this place can grow. The vitality of its public spaces, strong urban block –form and figurative quality of the towers brings civility and life to this piece of city.



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DOCKLAND CITY BLOCK, HAMBURG, GERMANY

Constructed between 1885-1913 the Speeicherstrat warehouse district of Hamburg was the centrepiece to the city's new harbour. This new district replaced the storage facilities in the city centre and was part of a new 'free-port', liberating the city's trade from newly imposed duty taxes. This 19th century harbour had a huge impact of the city, redefining its urban structure and disengaging city life from its waterfront. The Speeicherstrat warehouses thrived until the 1960's when the advent of the container ship reshaped the manner in which goods were traded. This left many of the warehouses void of their former uses when the cargo industries were relocated to more modern facilities south of the River Elbe. Many of the Speeicherstrat warehouses were subsequently used for storage before new urban programs began to re-inhabit the old city fabric, bringing the hustle and bustle of city life to the waterfront again. A coexistence of apartments, city museums and galleries, has given new life to these 19th century city structures and this has laid the seeds for urban growth. New urban blocks are being built, similar in size and form to the Speeicherstrat warehouses. They rubbing up against this district of warehouses, giving further vitality to this piece of city and life to the river Elbe. There is sense of civility to this place, a rich and diverse mix of uses that has rekindled the city's relationship with this industrial district and reconnected Hamburg to the River Elbe. The close proximity of the warehouses to the heart of the city makes the re-inhabitation of these former industrial buildings viable. This is reaffirmed by the architectural vocabulary and materiality of the warehouses. When conceived in the early 19th Century, these warehouses were designed to sit harmoniously with the city, borrowing the architectural language and materiality of the Hamburg city building facades and subsequently stitching the warehouses to the existing fabric of the city. Seen from the river, the city and warehouses are seen as one. This coexistence of differing programmes and the care taken in the language and materiality of the Speeicherstrat warehouses has allowed the city to reinvent itself over the course of time.

CERDÀ CITY BLOCK, BARCELONA, SPAIN

Barcelona's Cerdà grid is a good example of the open-ended and changeable qualities of the city structures that we propose. Designed in the 1850's by Ildefons Cerdà, the grid laid out a network of city-blocks as an extension to the north and east areas of Barcelona. The size and form of these city blocks allow for a varied, non-deterministic inhabitation. Residential buildings rub up against industrial buildings, shops, markets and restaurants and schools, all of which sit within the urban infrastructure of the city block. These blocks grow and redefine themselves organically, in a relaxed and charming manner. City blocks have been 'in-filled' where required. The heights of the city blocks have risen to eight storeys to increase density and buildings have been reinvented, with new uses and programmes, leaving an architecturally charged cityscape. This is particularly evident within the district of Poblenou in Barcelona. At its centre there are a number of out-of-use manufacturing factories surrounded by residential areas of the city. The close proximity of the vacant industrial buildings to the residential areas have allowed these buildings to be inventively adapted for new uses. Transitional or short-term re-inhabitation of these spaces has occurred. They have been used as art spaces, galleries and live/work spaces before more extensive, permanent re-inhabitation of these spaces had taken place. These warehouses have now become the centre of a new digital village. The university's communications campus is situated here providing research for the creative industries that surrounds it. This campus brings together education, research and production, giving a renewed life to this district of the city. The coexistence of innovative and dynamic companies, within the existing fabric of shops, small workshops and galleries and recent new industries, configures a rich productive fabric to the city. It is these creative and characterful parts of the city that attract new entrepreneurial and creative people to the city. Many people enjoy this dynamic mix of uses and the colourful blend of lifestyles and activities. According to recent economic and sociological research, this dynamic urban mix is particularly appealing to the 'creative classes' (those based in knowledge-orientated jobs such as graphic and fashion designers, computer experts and software developers, musicians, scientists journalists and engineers), who thrive in these areas of co-existence and diversity. Urban researcher Richard Florida[1] argues that it is this group of people that are critical to the future success of the city. It is the 'creative classes' and its diverse and rich mix of people, unique in their ability to create ideas, that can bring new industries and jobs to the city. Other, related industries like to surround themselves with these people, feeding off the ideas of the 'creative classes'. Scientific centres and high-tech industries spring up where these people are, bringing new life to the city. Florida points out that the economic importance of the creative industries, providing over 20million jobs in the USA (nearly half of all wages and salaries paid in the USA). Barcelona and in particular Poblenou's talent index (people in knowledge-

3. Corner block of the Cerdà grid, Barcelona, Spain.
Andrea Obiol, Nov 2008

based jobs) is one of the highest in Europe and, according to Florida, it is these people that are increasing the number of new jobs in the city and in turn the influx of people to the city.

3

1. Richard Florida is a leading Urban Researcher and author of "The Rise of the Creative Classes". Notes taken from the article 'An inside look at Europe's Coolest Cities', by Erich Follath and Gerhard Sporl, Spiegel Online Magazine, 08.28.2007


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Inhabiting the islands with City Structures :

1. L'Eixample City Block, Barcelona, Spain
2. Mews Block, London, England
3. La Barceloneta, Barcelona, Spain
4. Canal City Block, Malmo, Sweden
5 Hornbækhus City Block, Copenhagen, Denmark
6. Oido City Block, Gyeonggi-do, Korea
7. Canal Block, Hamburg, Germany
8. Cambridge University Quadrangle, Cambridge
9. Farm and Guesthouse Ensemble
10. Bedford Square, London, England
11. Place des Vosges, Paris, France
12. Urban Woodland (Central Park, Manhattan Island, New York City)

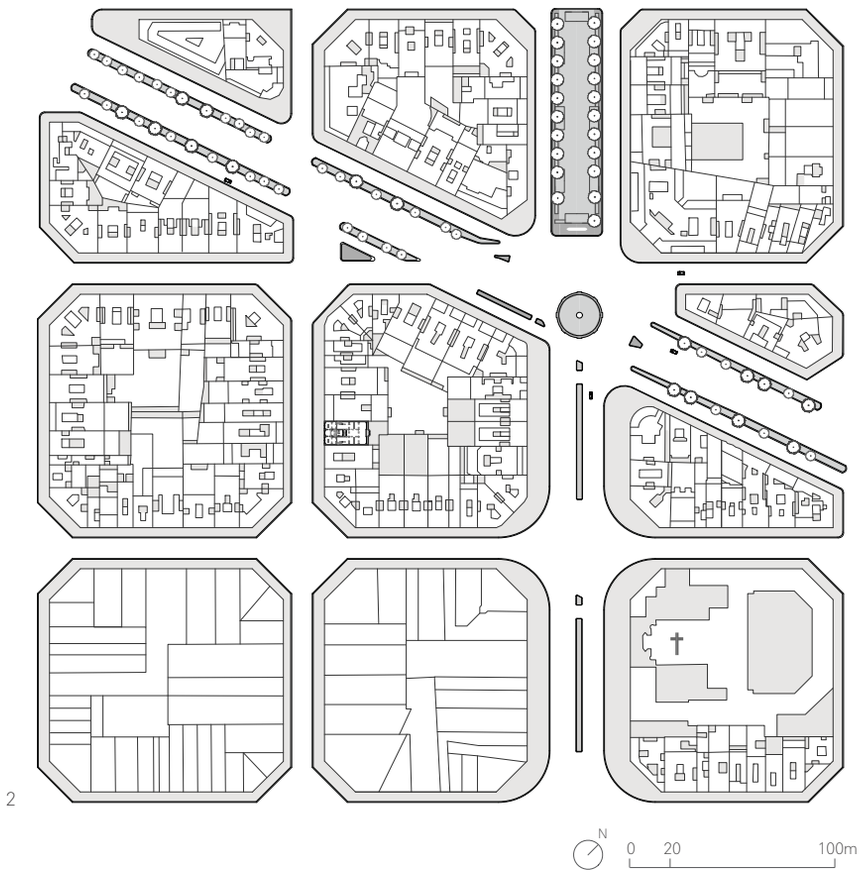
L'EIXAMPLE CITY BLOCK, BARCELONA, SPAIN, 1859

Designed by Ildefons Cerdà

1

In 1850 a vast extension to the medieval city of Barcelona was initiated by the Spanish Engineer Ildefons Cerdà. Cerdà proposed a new 9x3km extension to increase the size of Barcelona tenfold. The project aimed to ease the flow of transport through the city and improve hygiene within the city. This was reflected within the generosity of Cerdà's proposed plan. An orthogonal grid of 133 x 133m was laid out onto the large sloping land form of Barcelona with 20m wide streets laid along the centre lines of the grid. The corner of each city block has a chamfer of 45° forming large street spaces at the moment where streets meet. Cerdà conceived the project with large communal gardens that extended from one street to the other, across most of the blocks.

Over time, these gardens have been built over. The blocks now have continuous perimeter façades to the street and the buildings are approximately 23m in height rather than the suggested height of 16m. However, it is the generosity and open-endedness of Cerda's original plan which has allowed this city structure to grow in an organic manner, as the needs of the city change.



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1. Aerial photograph showing the dense fabric of Ildefons Cerdà's grid in Barcelona. *Kali Valderrama Lara, June 2007*

2. Plan of Avinguda Diagonal and Passeig de Sant Joan corner. The adaptability of the built block to the road layout, plot division and built footprint is clear. *Drawn by Andrea Obiol*

3. Typical sections through the Cerdà city blocks. *Drawn by Andrea Obiol*.

4. Saemangeum design sketch: An adaptation of the Cerdà grid in Harbour City. *Thomas Gantner, May 2008*

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4

MEWS BLOCK, LONDON, ENGLAND, 1715 -

Weymouth Mews between Portland Place and Harley Street

1

Weymouth Mews, originally built (1715-1720) is a typical example of a Georgian London mews block structure. The city block is made up of two building types, large terraces of 4 to 6 storey townhouses facing the main streets and 2-storey mews houses inside the city block. The townhouses that form the outer perimeter of the block structure are grand in their character. Their slender and elegant proportions address the city and the generous, civic streets that they form. The mews houses are of a very different character. They are a more intimate in scale, like a small village within the block structure. They are often modest two storey, pitched roof houses that face onto narrow lanes without footpaths.

The mews houses, originally built as stables for horses and carts with a small servant's house above, have since been adapted into small houses. The town houses have largely changed in their use too, with schools, offices, embassies and surgeries inhabiting the buildings. This adaptability of function is evidence of a city structure that offers spatial variety, intimacy and privacy within a dense city centre situation.

2

1. Weymouth Mews, interior of the block.
Philip Christou, May 2008

2. Plan drawing of Portland Place and Weymouth Mews, London.
Drawn by Theodoros Thysiades

3. Sketch of Weymouth Mews showing the 4 or 5 storey houses that form the main streets and the 2-storey mews houses inside the city block.
Dingle Price, Oct 2007

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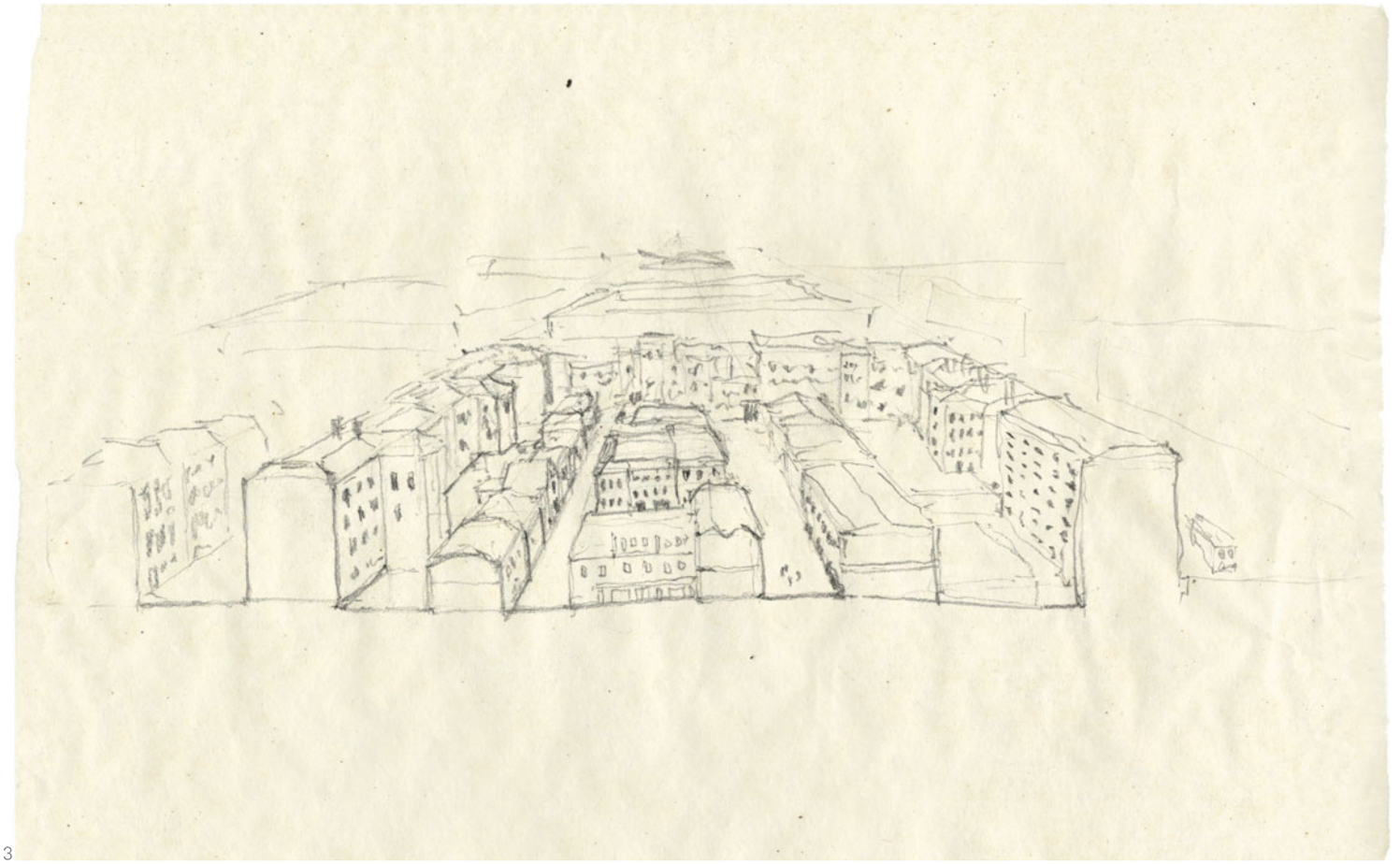

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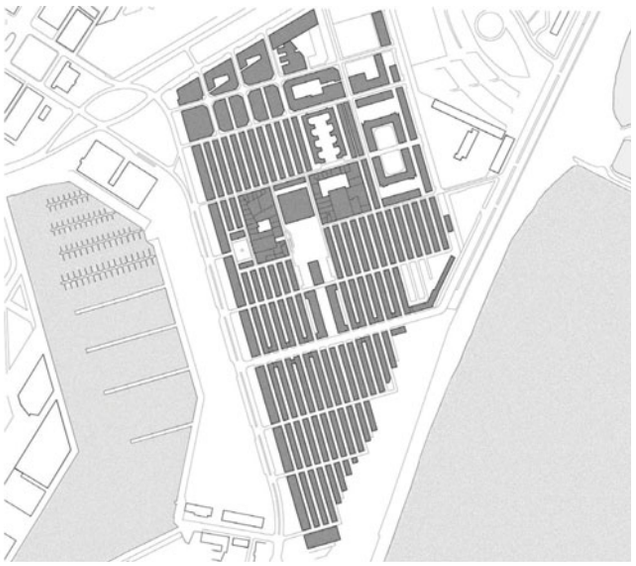
LA BARCELONETA, BARCELONA, SPAIN, 1749

Designed by Juan Martin Cermeño

1. A long view, down the streetspace, to the Mediterranean Sea in the distance. *Julie Moss, Oct 2008*
2. Street plan of the dense urban fabric and narrow streets of La Barceloneta city quarter. *Drawn by Julie Moss*
3. La Barceloneta, characterised by its narrow streets. *Conxita Balcells, May 2008*
4. La Barceloneta city structure blocks on the 'promontory' island near Gimje. *Thomas Gantner, May 2008*

1

Barceloneta is a dense city structure built on a western peninsula in Barcelona, overlooking the Mediterranean Sea. The city structure was designed by Juan Martin Cermeño in 1749 and built on reclaimed land to accommodate the community of La Ribera displaced by the building of La Ciutadella garrison fort (now Parc de la Ciutadella). The city quarter is made up of 15 extremely narrow streets (6.5m wide) running parallel to each other in a north-south orientation. The streets are formed by 6-8 storey terraces of apartment buildings that are only 8.4 meters deep from street to street. The narrow, linear terraces of houses (measuring 8.4m x 8.4m each) and the extremely narrow street spaces give the city structure an unusual and distinctive character. The repetitive nature of this rectangular grid of long narrow terraces is relieved by a series of well defined public open spaces such as the Plaza Barceloneta and a large vibrant market square at the heart of the city quarter. At the end of the streets along the southern edge of Barceloneta one experiences open views out towards the Mediterranean horizon.



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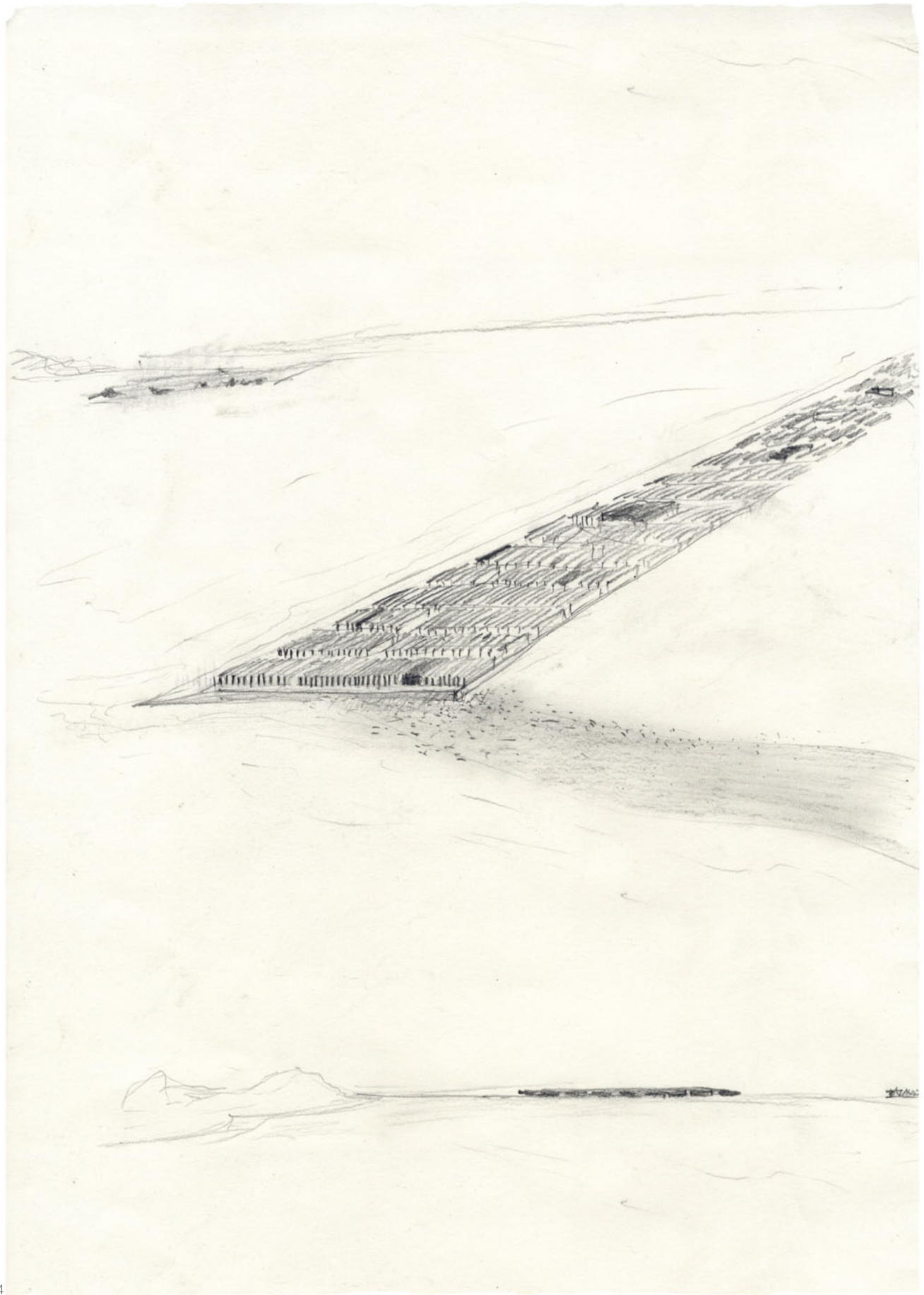


CANAL CITY BLOCK, MALMO, SWEDEN, LATE 19TH CENTURY

1

The construction of a new harbour in Malmo in the late 18th Century and later construction of the Swedish southern railway line in the mid 19th century established Malmo as one of Sweden's most important industrial cities. During this swath of growth, new city blocks were built to the south of the old city, along the streets of Drottninggatan and Regementsgatan. These 4-5 storey city blocks, with charming internal courtyards, line the edge of Malmo's southern canal. The individual buildings that form the city block have particularly elegant individual facades where they front the large canal. The elegance of these facades brings a gravitas to the space of the waterfront. The ground floors of the buildings are inhabited by restaurants, cafes and offices with apartments above. This forms an impressive streetspace along the length of the canal front. The intimate courtyards inside the block structures provide more private external spaces for residents.

2

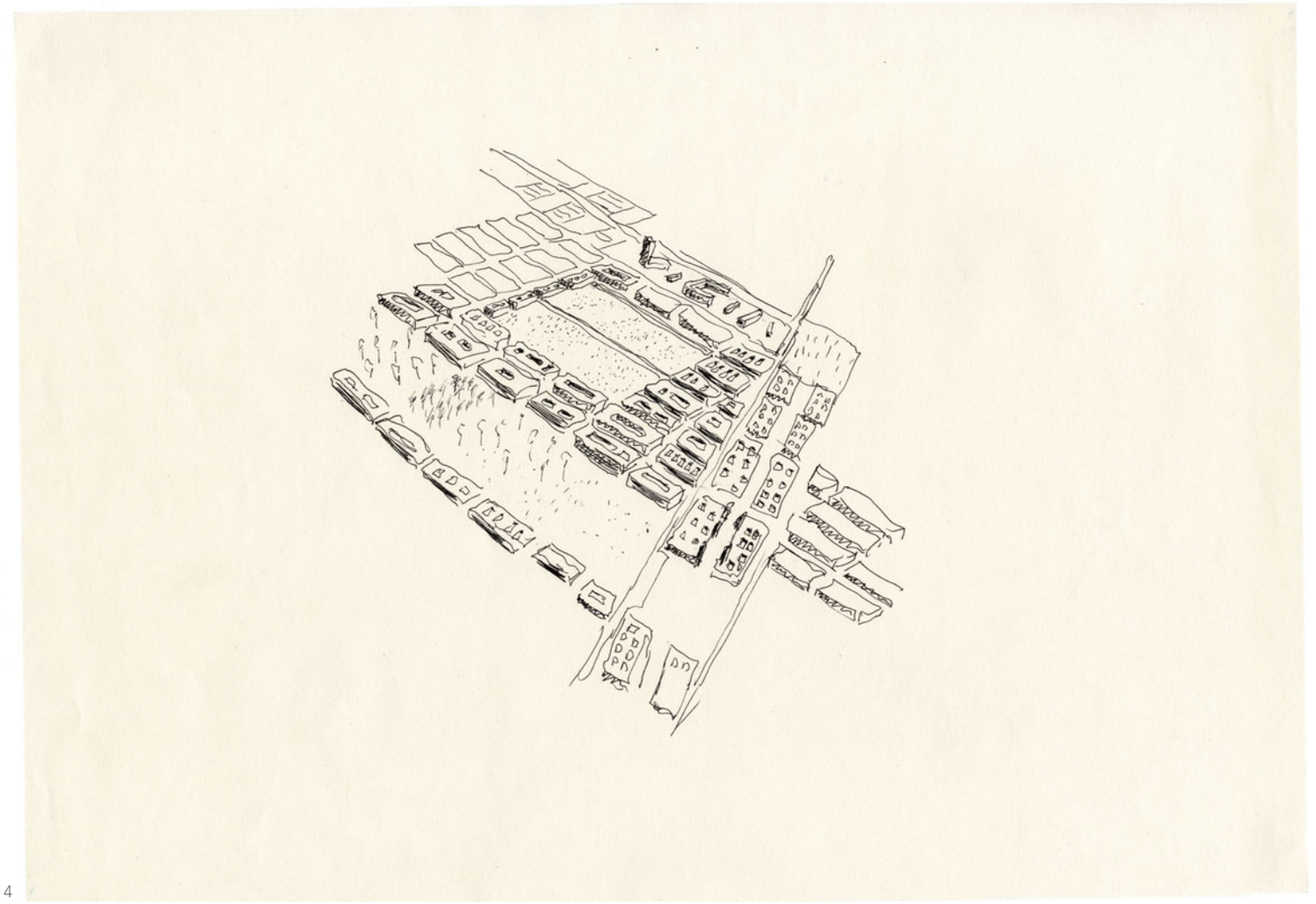
3

1. Malmo figure-ground analysis.
Drawn by Mayuko Kanasugi and Matthew Whittaker

2. View of the Malmo Block Structure from the north side of the of the canal looking along Drottninggatan.
Mayuko Kanasugi, Oct 2008

3. Elevation of the Malmo Canal City Blocks that front onto the canal. *Drawn by Mayuko Kanasugi and Matthew Whittaker.*

4. Testing the Malmo Block Structure in Jin-Bong Lagoon City, Saemangeum.
Alex Gore, July 2008



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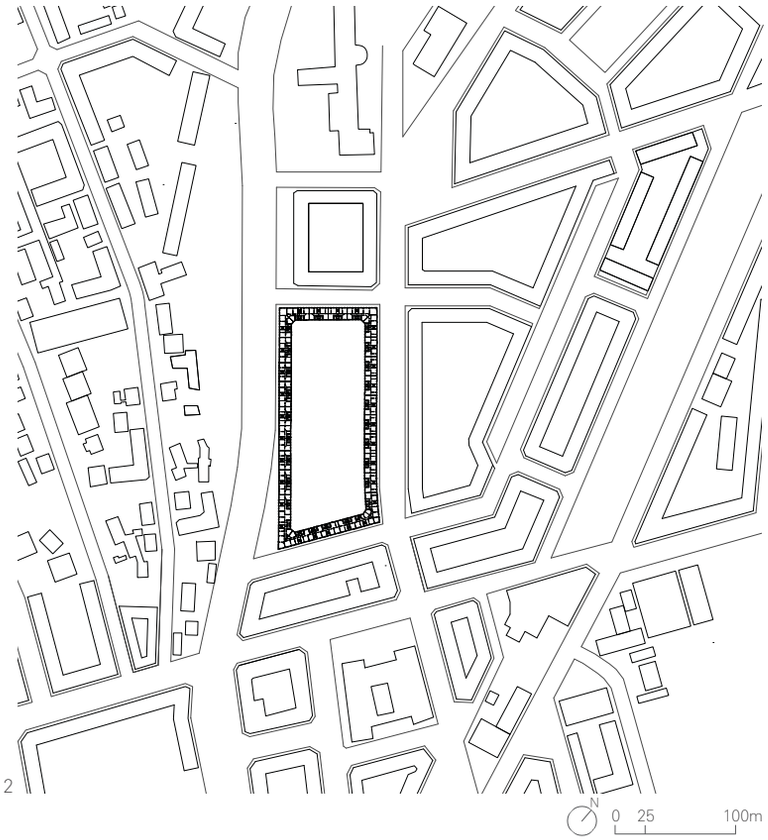
HORNBÆKHUS CITY BLOCK,
COPENHAGEN, DENMARK, 1922-23
Designed by Kay Fisker


1

The Hornbækhus block structure, situated in north west Copenhagen is an extremely large 5 storey residential block structure with a large internal landscaped 'park' in its centre. Built in 1922-3, the Hornbækhus City Block Structure has a long, repetitive classical facade approximately 200m in length. The facades that face the streets mark this as an extremely unique urban design proposal. When one looks more carefully at the articulation of the façade, subtle irregularities in the rhythm of the fenestration and downpipes give a gentle relief to one's initial impression of a monotonous facade. This subtlety in the design can also be seen in the footprint of the building. A slight inflection of the shape of the block as it adjusts itself to the irregular grid of streets gives the building a sense of place.

The size of communal garden at the centre of the block is such that it could be described as a city park. This extensive landscaped shared garden provides residents with a large open space within this densely built district of Copenhagen.



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5

1. Sketch showing the communal ‘park’ at the centre of the Hornbækhus City Block Plan. *Mayuko Kanasugi, Oct 2008*

2. Hornbækhus City Block Plan. *Drawn by Mayuko Kanasugi.*

3. Hornbækhus City Block, West Elevation. *Photomotage by Mayuko Kanasugi.*

4. View of the southwest corner of the city block. *Mayuko Kanasugi, Oct 2008*

5. A large landscaped ‘park’ is found at the centre of each city block. *Mayuko Kanasugi, Oct 2008*

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OIDO CITY BLOCK,
GYEONGGI-DO PROVINCE, KOREA

1

The fishing town of Oido was originally an island 4km from the city of Siheung in Gyeonggi-do province, Korea. In 1932 dykes were constructed between the island and the mainland, utilising the tidal flats as salt fields. More recently, large areas of the reclaimed land have been developed to form the Sihwa Industrial Complex and in the early 1990's a new residential district surrounding the fishing port was built. This densely inhabited district provided a new centre to Oido, bringing new life to the fishing harbour. The district is characterised by narrow streets that are formed by 5-6 storey apartment buildings with small footprints. These apartment buildings create vibrant street spaces that offer glimpses to the sea at the end of each city block. Relief to the dense city structure is provided by a series of public spaces that are lined with lively restaurants and cafes specialising in the local seafood.

2

1. Oido's dense urban fabric faces the waterfront.
   Marie McClellan, May 2009

2. Oido Plan: Relief to the dense city block structure
   is provided with a series of large public spaces.

3. Oido City Block in Naepo Airport City.
   Bumsuk Chung, April 2008

3

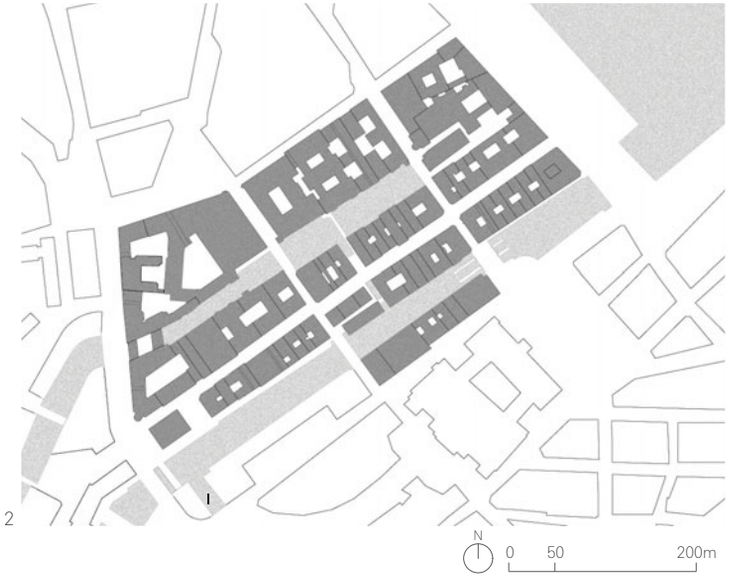
CANAL BLOCK, HAMBURG, GERMANY, 19TH CENTURY ONWARDS

Between the Jungfernsteig and the Stadhausbrucke S Bahn Stations.

1. View along the Neuer Wall Canal.
   Giovanni Iasevoli, Nov 2008
2. Plan of the Neuer Wall city quarter in central Hamburg.
   Drawn by Giovanni Iasevoli
3. Design sketch for an adapted version of the Hamburg City block with thin towers facing the canal side.
   Alex Bank, April 2008

The urban district in central Hamburg known as the Neuer Wall is a particularly interesting example of a very dense city structure built in close proximity to bodies of water. Street access is sometimes from one side only, with building facades fronting directly onto the canal on the other side. 60% of the total area of the district is covered with buildings, 15% canal space and 25% open space. With its reused industrial warehouse buildings up to 8-10 floors high, the floor space index of the area is 3.5, higher than the Broadgate development in London (Floor Space Index 3.16). In Saemangeum, we were interested in adapting the city structure, adding tall thin towers to mark the water fronts (see sketch on opposite page).

1



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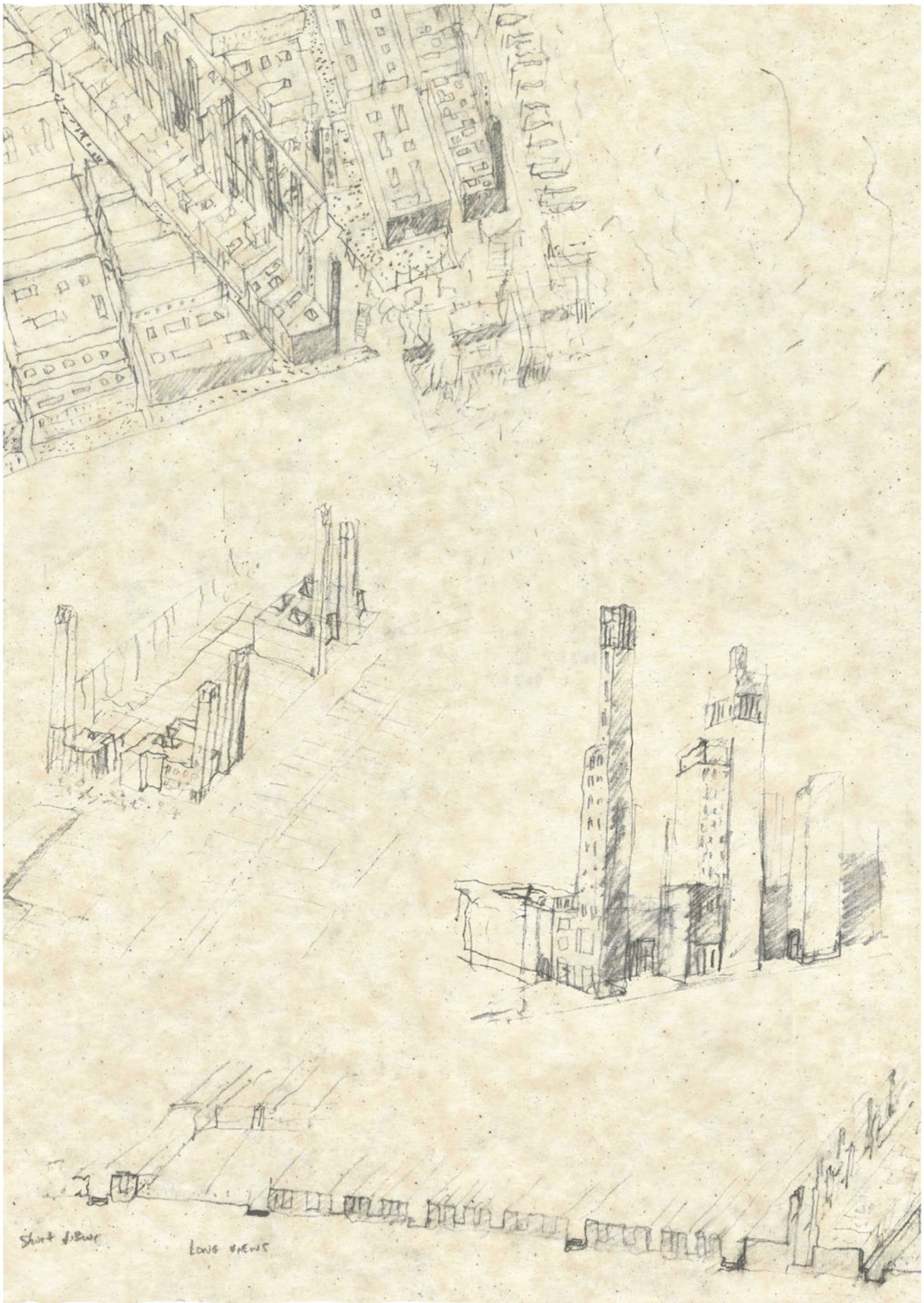

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CAMBRIDGE UNIVERSITY QUADRANGLE, CAMBRIDGE, ENGLAND, 13TH-18TH CENTURY

1

1. A necklace of quadrangles sit along the bank of the river Cam, Cambridge. *Drawn by Awot Kibrom*

2. A number of the Cambridge University quadrangles turn to face the river, giving views to the water and making connections with the life on the River Cam. *Bumsuk Chung, Sept 2009*

3. Cambridge quadrangles on the Central Island, Saemangeum. *Tom Bates, July 2008*

The series of historic quadrangles in Cambridge were built between the 13th and 18th centuries. They seem to meander down the length of the River Cam, sensitively adjusting their orientation with the changing direction of the river. The quadrangles form a strong edge to the river, bringing life and vitality to the water. As one moves through the sequence of quadrangles, the scale and character of the spaces change. Each side of the quadrangle is formed by buildings of varied size, shape and height. Some quadrangles are of an intimate scale, almost like external rooms, whilst others are more expansive, civic spaces. At points these quadrangles turn to face the river, giving views to the water and the quadrangles to the landscape beyond.

2

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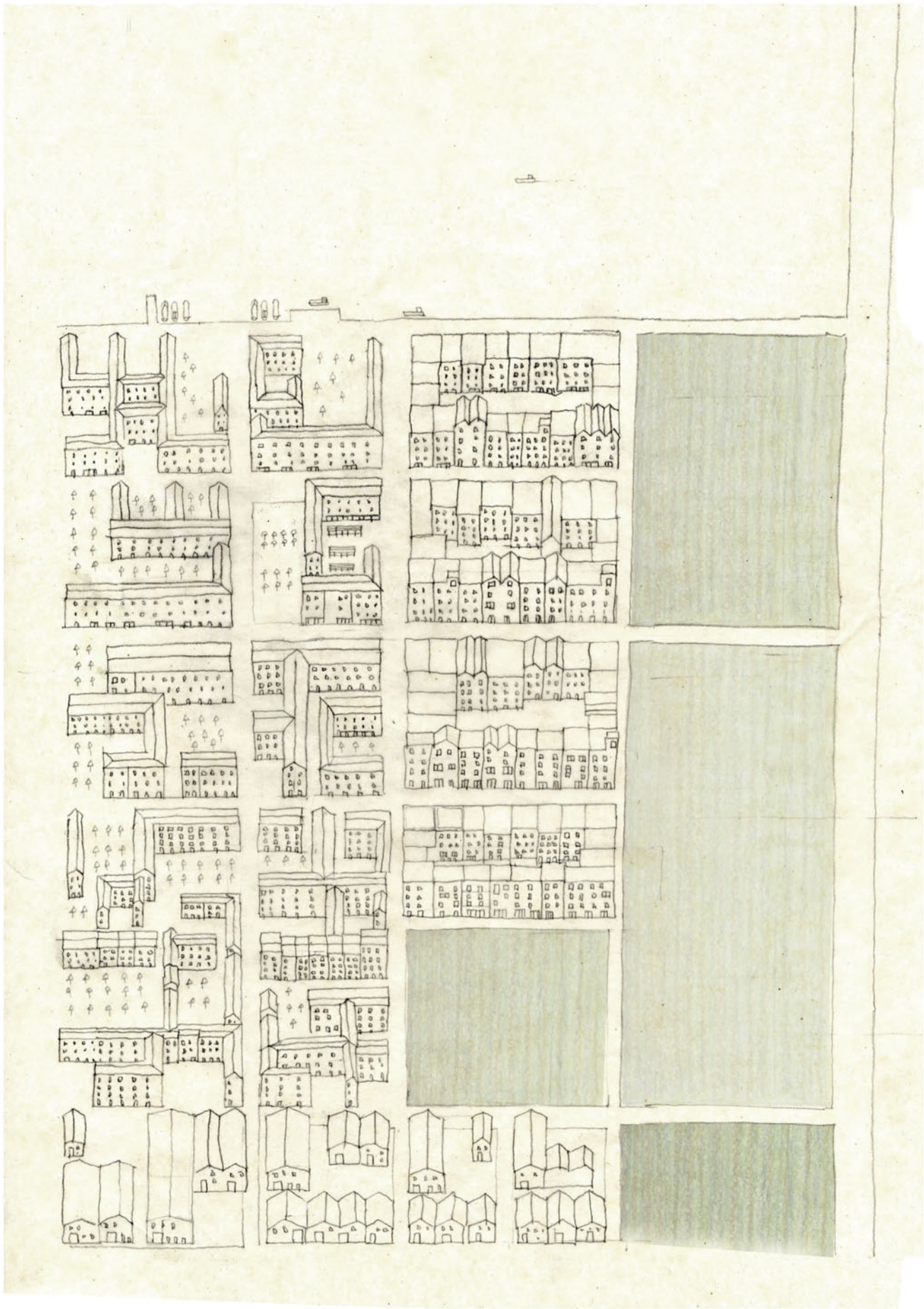

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FARM AND GUESTHOUSE ENSEMBLE

1

The farm ensemble is a cluster of buildings with a central farmyard typical of those found in France and the Netherlands. They vary in size and shape, but common to all is the central farmyard surrounded by a collection of buildings of different scale and use. The central space provides the public realm of the farm cluster and is the common ground between the different building types and activities on the farm. One could imagine a number of different activities co-existing in this space. It could quite easily be occupied by tractors and tourists alike. This central space could be seen as a small urbanism in the landscape.

2

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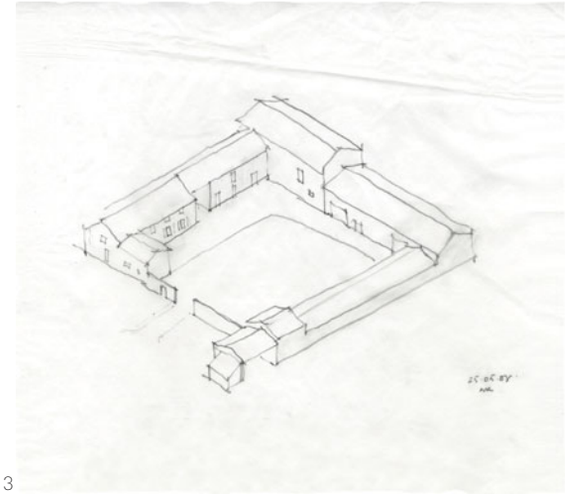

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1. The generous shared space of a traditional French Winery: la Grange Charreton, Régnié- Durette, Beaujolais, France.
Claude Royer, 1979

1. La Grange Charreton farm ensemble forms a strong figure in the surrounding Beaujolais landscape.

3. The barn buildings, farmhouse and outbuildings are arranged to form a central yard space. *Nicola Read, May 2008*

3. A collection of farm buildings, centred around a public farmyard, sit within agricultural fields in Saemangeum.
Tom Bates, April 2010

4

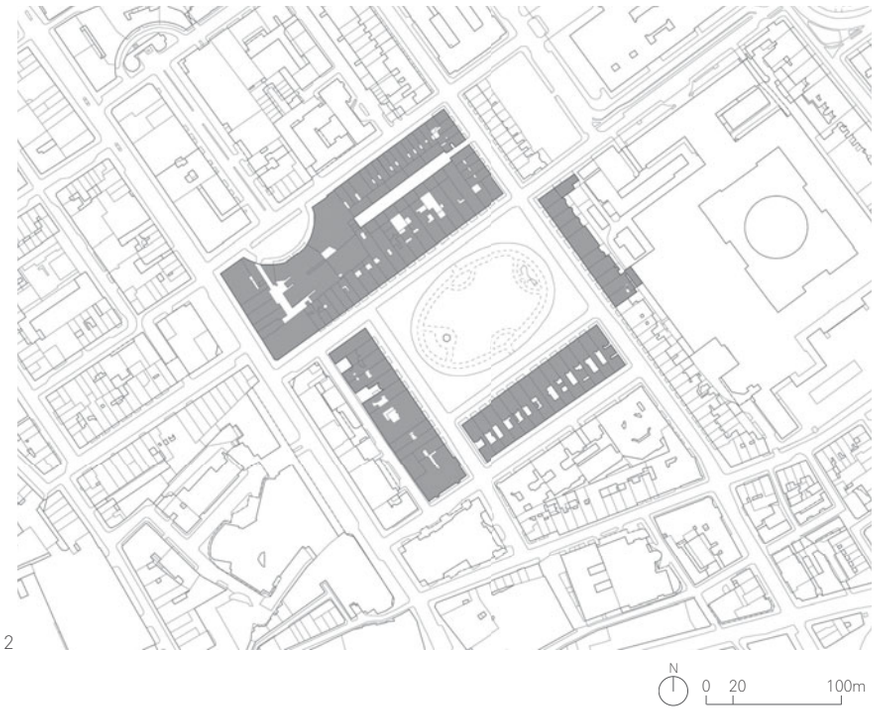
BEDFORD SQUARE, LONDON, ENGLAND, 1775-1783

Designed by Thomas Leverton

1. Bedford Square's Georgian town houses have adapted over time, tailoring themselves to a variety of different uses. *Philip Christou, Nov 2008*
2. Plan drawing of Bedford Square.
3. Section through Bedford Square's Georgian houses and garden. *Drawn by Jong Hwan Ahn*
4. Elevation of No. 34 Bedford Square. *Drawn by Jong Hwan Ahn*

Built between 1775 and 1783 as an upper middle-class residential square, Bedford Square over the course of its life has redefined itself and its role with the changing fabric of the city. These Georgian town houses have adapted themselves over time, tailoring themselves to a variety of different uses over their life span.

Bedford Square is now a vibrant city structure, with a wide range of programmes, including art and architecture schools, university departments and small businesses, surrounding a large urban garden. The life span and adaptability of these buildings is a reflection on the spatial quality of the original Georgian houses, the elegance of their facades and the public/private garden that they form. They make a gift of civility to the city.



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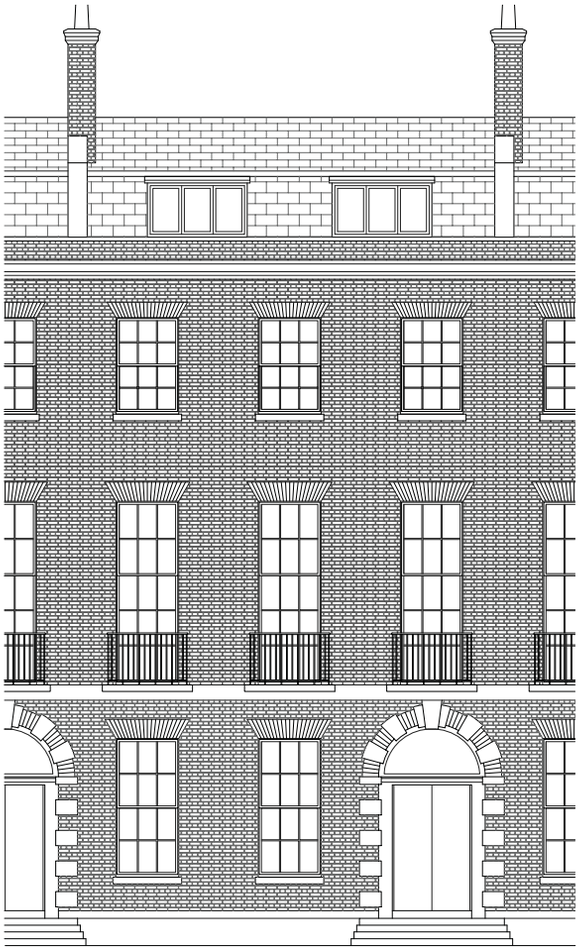

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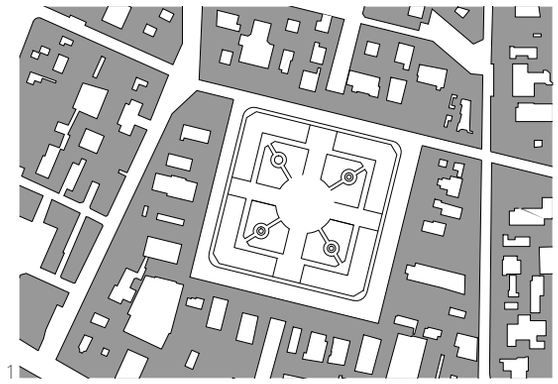
PLACE DES VOSGES, PARIS, FRANCE, 17TH CENTURY



1. Plan drawing of Place des Vosges. *Drawn by Axel Freij*
2. Place des Vosges, photograph taken from Victor Hugo's flat. *Alex Bank, June 2007*
3. Section facing the West Elevation. *Drawn by Axel Freij*
4. Garden plan and elvatations. *Drawn by Axel Freij*

At the time of its construction, Place des Vosges was the largest uniform and architecturally defined square in Paris (142x142m). The square appears with its quadratic form as an isolated figure when compared to the irregularity of the medieval structure of the Marais district. Originally built to house silk workers and then becoming the residency of the noble classes, Place des Vosges has over time, tailored itself to the needs of the city. Today, Place des Vosges is a vibrant city structure inhabited by a wide range of activities. The arcades that line the square at street level are now restaurants and art galleries, with a mixture of apartments, small businesses and studios above. Like, Bedford Square in London, this city structure is not defined by its original function but by the quality of its internal and external spaces. The adaptability of these spaces has allowed the use of this city structure to change over the course of time.

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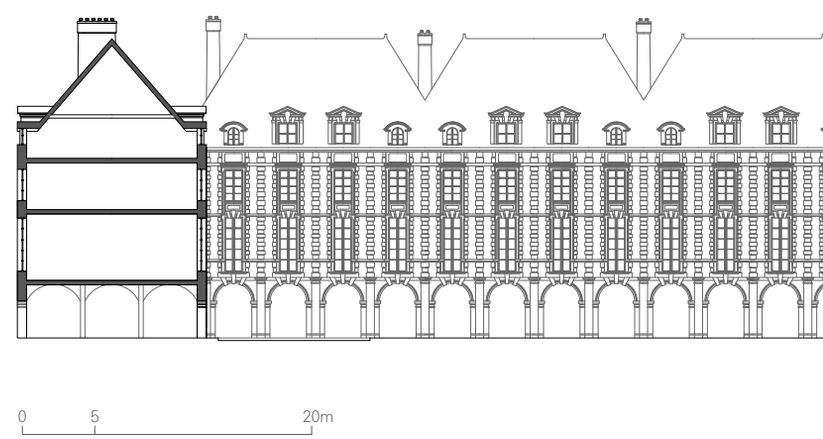

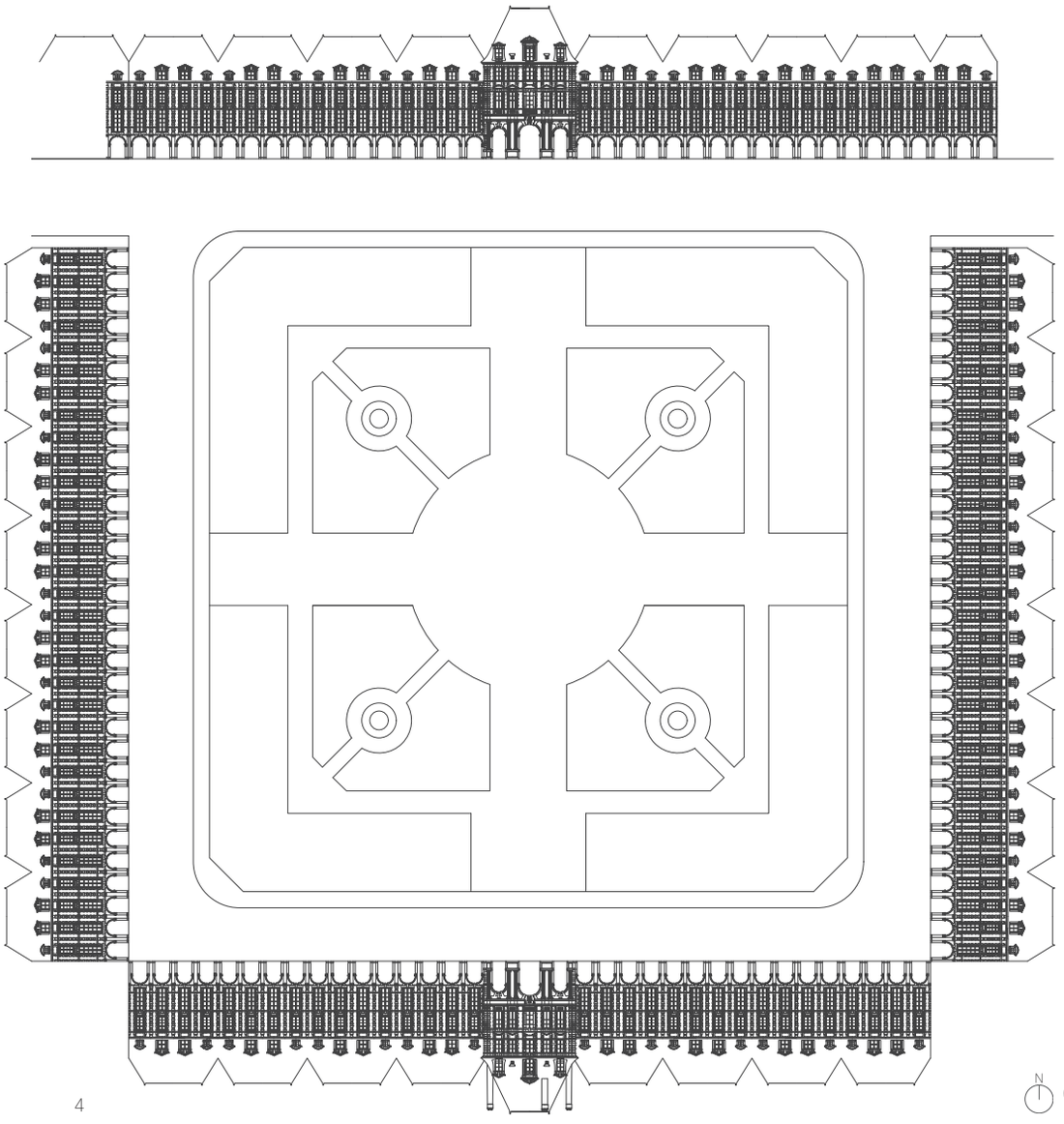

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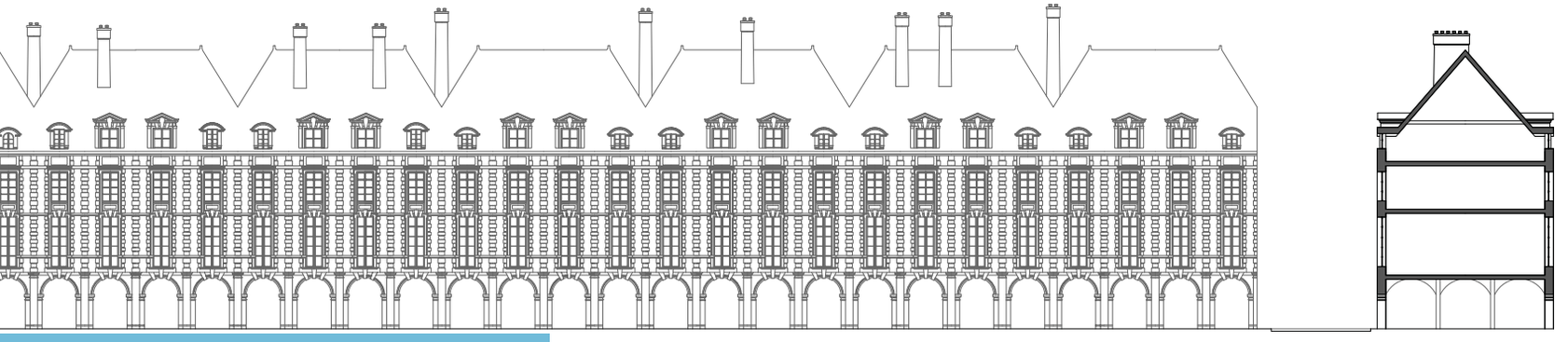

CENTRAL PARK, NEW YORK CITY

Designed by Fredrick Law Olmsted
and Calvert Vaux, 1857-1870

Central Park on Manhattan Island in New York City was designed by Fredrick Law Olmsted and Calvert Vaux. The 840 acre rectangular park runs from 59th-110th Street, adopting New York's orderly urban grid. The park was conceived as a wilderness at the heart of New York City, a memory of the farmland, woods and pastures that existed in Manhattan prior to its dense inhabitation during 19th Century.

A variety of geographies were designed in the park, with a large reservoir loosely dividing the park into two territories. Rocky, wooded parklands and meadows inhabit the north geography whilst smaller lakes ponds and parklands are found in the south. Roads that pass through the park are screened in sunken passages and are largely unseen from the park. One can see Central Park as a large 'landroom' at the heart of Manhattan Island, providing a relief to the densely built surrounding city. The park is an important part of New York's urban structure.

1

1. ‘The Original Topography of Manhattan Island: From Batttery to 155th Street, 1886’ is a survey illustrating the topography of the Manhattan Island, the grid of city blocks and Central Park. *University of Texas Libraries*

2. Sketch of the an urban woodland proposed in Jin-Bong Lagoon City, Saemangeum. *Joshua Williams, May 2008*

3. Large city parks and wetlands characterise High Density Man-Gyeong Lake City. *Photograph: Steve Blunt, July 2010*

4. Central Park can be described as a vast ‘landroom’ at the heart of densely built Manhattan Island, New York. *Ian Wilson, April 2007*

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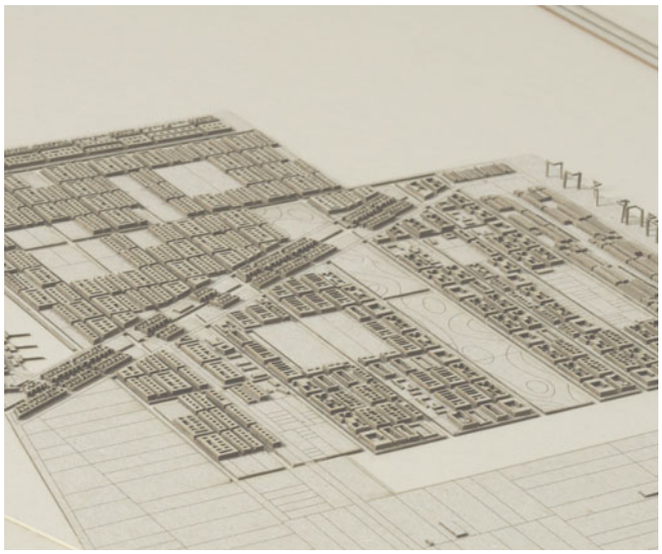

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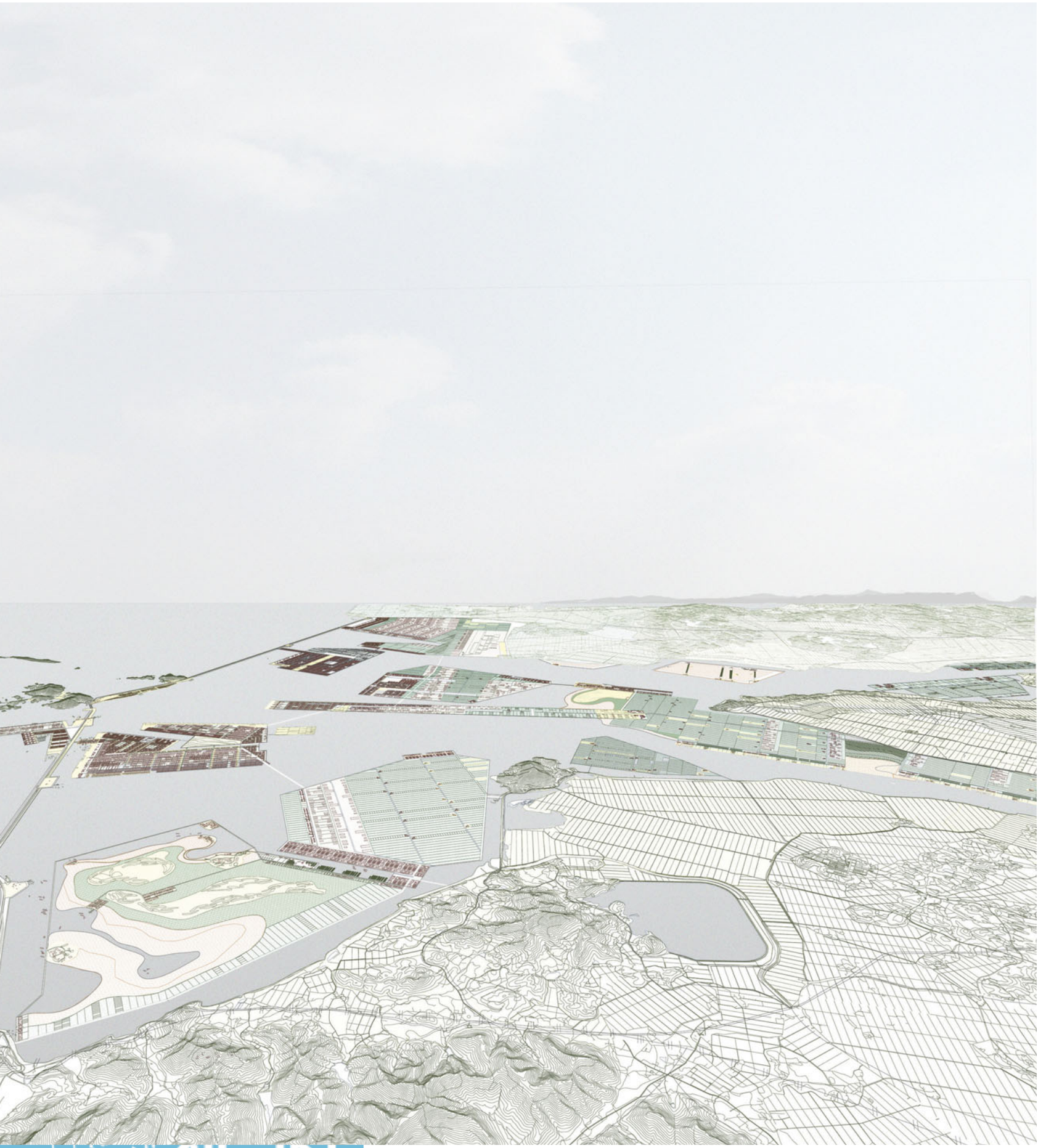
View of Saemangeum Island City from the hills of the Byeonsanbando National Park, looking north towards the horizon.



LOCATING PROGRAMMES WITHIN THE CITY STRUCTURES

The urban landscape strategy for the Saemangeum Island City Project is based on mixed, rather than strictly zoned uses and programmes. Within this framework, and in order to maximise the potential of the development and its future sustainability, six lead programmes are envisaged. Following the guiding principle of a city of coexistence, these lead programmes will be located in close urban proximity to each other and to other compatible programmes. This proximity and co-existence of programmes will equip Saemangeum with economical flexibility essential for its sustainability.

These lead programmes will be complemented by a mix of financial and business activities, providing support services for the industries (financial and accounting, legal, management and consultancy, etc), contributing directly to the city's income and generating employment. The economic development of Saemangeum up to 2020 will be structured around the following five lead programmes:

Food industries cluster:
food preparation and packaging backed up by advanced R&D. The bywords of the cluster will be "fresh,tasty and safe".

Farming practices:
30% of the land (unfilled) in the final stages of the development and linked with food and tourism industries.

Tourist infrastructure

High-tech industries:
comprising aerospace, materials and components, renewable energy industries.

Urban infrastructure:
residences, and services for a growing residential and working population.

FOOD INDUSTRIES CLUSTER

Saemangeum is well-placed to become a leading hub of farming and food industries in the Yellow Sea Rim region, supported by an advanced R&D and distribution network. This lead programme will build on the existing strong and productive farming sector of the area and will rely on the new harbour and airport facilities to develop a distribution network serving the whole region, including the Chinese side of the Yellow Sea Rim. Sometimes the term 'food cluster' is used to define a network of relationships between related companies and institutions that are not located in the same place. In many places, food clusters consist of university campuses and industrial parks that are scattered throughout a region.

The urban design of the existing food cluster examples is usually the result of an ad hoc additive development, resembling a dispersed out-of-town industrial park. The university campus where these food clusters have been built usually conform to the typical model of an American university campus where a series of administrative and laboratory buildings are arranged freely

1. Farm fields near Jeonju, immediately east of Saemangeum.
Philip Christou, April 2008

within a large parkland, separate from the city centre. This means that students and people who work in the food cluster need to commute from their home to the university, and there is a separation between the life of the city and the food cluster. We intend to bring these two things together. At Saemangeum there is an opportunity to design the food cluster in a much more integrated and unique way, learning from the strengths of these examples, and avoiding the disadvantages.

Jeollabukdo National University in the city of Jeonju and the Jeollabukdo region have an unquestioned high reputation in farming and the food industries. It would be advantageous for some departments of agricultural sciences in Jeonju to locate themselves in Saemangeum within the centre of the food cluster. The university campus model that began in medieval times in Europe, such as at the University of Cambridge has been a useful design precedent.

FARMING PRACTICES

Rice and barley farming are particularly suited to the site because their roots stay close to the surface and these plants can therefore grow early in the desalination process of the soil (after 3-5 years). Barley is the most successful and can be sown after 3-5 years depending on the soil salinity, which will need to be monitored. Other crops can be introduced in time, initially other grain crops and vegetables, and ultimately leguminous crops (towards 10 years after reclamation) which should be included in crop rotations to improve soil fertility.

Farming will mostly take place on reclaimed land where raising the land fill to the height of the river embankments is not required. We propose to assign farming practices to emerging land north and south of the Gimje peninsula, to the emerging land to the west of Buan, and to some fields in the central island south of the airport to support the Food Cluster. We anticipate a symbiotic relationship developing betweeen farming sectors and the R+D departments of the food clusters.

The large-scale production of plant material to provide energy in the form of fuel (biofuel) or heat/power (biomass) is proving controversial at present as these crops frequently displace food crops, driving up food prices. However the use of newly reclaimed land for energy crops would not affect the existing levels of Korean food production. Certain crops, such as rape (for biofuel) and willow (for biomass) can tolerate infrequent inundation and therefore are well suited to the transitional land areas of Saemangeum.

It is acknowledged that very large land areas are required for biomass and biofuels – larger than is available at Saemangeum. However the growing of these crops will make an important contribution to the overall energy mix. Just as importantly, these crops, by taking up carbon from the atmosphere during their growth, can significantly reduce the carbon footprint of the new city.

The main biofuel crop proposed is oil-seed rape (aka Canola). It is proposed to plant the rape within the potentially floodable land. To avoid exhausting the soil, rape should be planted in a crop rotation with other crops – for example, leguminous crops (clover, peas) to improve the

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2. The region of Jeollabukdo in south-west Korea is well known for its highly sophisticated cuisine. *Alex Bank April 2008*

3. The many lakeshores and wetland areas could provide delightful places of national beauty for the citizens of Saemangeum as well as tourists.

4. The ARU team visit floral test beds on newly reclaimed land near Gimje. *Philip Christou, April 2008*

soil, and rice in the wet season. The production of biodiesel from algae potentially far outweighs that from field crops in terms of productivity and land efficiency. Production of algae is also highly efficient in terms of carbon sequestration, meaning that the process can be carbon neutral.

The cultivation of willow (generally varieties of the osier, salix viminalis) on a 3-year short-rotation-coppice cycle produces a large amount of easily grown biomass. Willow is ideally suited to transitional land as it can withstand temporary inundation. The willow woodlands also form a valuable wildlife habitat and can be grown alongside and surrounding other land uses such as recreational areas.

Further away from the regularly flooded areas, other types of woodland include shelter of pine to provide shelter from the sea winds. Black Pines (Pinus densiflora) are one of the first trees that can be planted following land reclamation, some 5-10 years after the land is revealed. Subsequently, once soil salinity has been reduced to safe levels, other tree crops can be planted.

TOURIST INFRASTRUCTURE

The sea wall is a tourist attraction and destination in itself. It will be enhanced with tourist facilities at key points along the sea wall, with a necklace of restaurants and other food outlets, public gardens, aquarium, public bath houses, casinos, public beaches and marinas located at threshold cities linking the sea wall with new city islands.

There is significant potential in Saemangeum to develop a number of lakeside and seaside resorts along the many coastal areas within the site. In order to do this we analyse the characteristics of each specific place. One might divide the types of tourist developments into three categories: suburban areas; small harbour villages; and inland island locations, and arrange these according to their development phases and the distances from nearby larger population centres in Saemangeum.

In Italy, Agri Tourism has taken off in quite a major way in the last five years or so. It is an alternative to the usual beach resort holiday. It is a form of tourism that is closer to the local culture, socially, in terms of cuisine, in terms of accommodation and architecture, and the experience is closer to nature. It is more homely. It can be very affordable and very attractive. At Saemangeum, the combination of the attractive location of the agricultural territories among water and wetland edges and the cultural importance of food to the regional economy generates significant potential for this type of agri-tourism. The many lakeshores and wetland areas could provide delightful places of natural beauty to visit, both for the citizens of Saemangeum and as well as tourists.

Agri - tourism also has a number of benefits for the farmer. It makes the farming practice more sustainable; it enables the farmer to respond more flexibly to changes in local and national economy; The holiday on the farm might also include active farming where the guests can help on the farm for the duration of their stay.

3

HIGH-TECH INDUSTRIES

The Saemangeum site has substantial potential to develop lead programmes in high technology and value-adding industries, networked into the Korean economy.

High-tech industry, including aerospace, materials and components, and processing and packaging functions. Aerospace activities will be located adjacent to the new airport runway. The country has a growing aviation market, ranking 13th globally for passenger traffic and 6th globally for freight traffic. More than 40 Korean companies, employing more than 7,000 employees, are engaged in the production of aircraft and aerospace components.

The Saemangeum high-tech cluster could focus on component and materials development to promote the competitiveness of the Korean aerospace industry. It might also act as a hub within the North-East Asian region, both through international collaboration and joint developments, and through commercial business and exports. There is potential for a similar high-tech cluster concentrating on the emerging renewable energy industry.

URBAN INFRASTRUCTURE

These leading tourist and industry programmes, and associated financial, business and consumer services and infrastructure, mean the development will act as significant generator of employment and economic activity in Saemangeum. Saemangeum's proximity to industrial centres in Gunjang and Iksan, as well as to local population centres in Gunsan, Iksan, Jeonju and Gimjae, means that the development might be viewed as part of an emerging urban region or city-region.

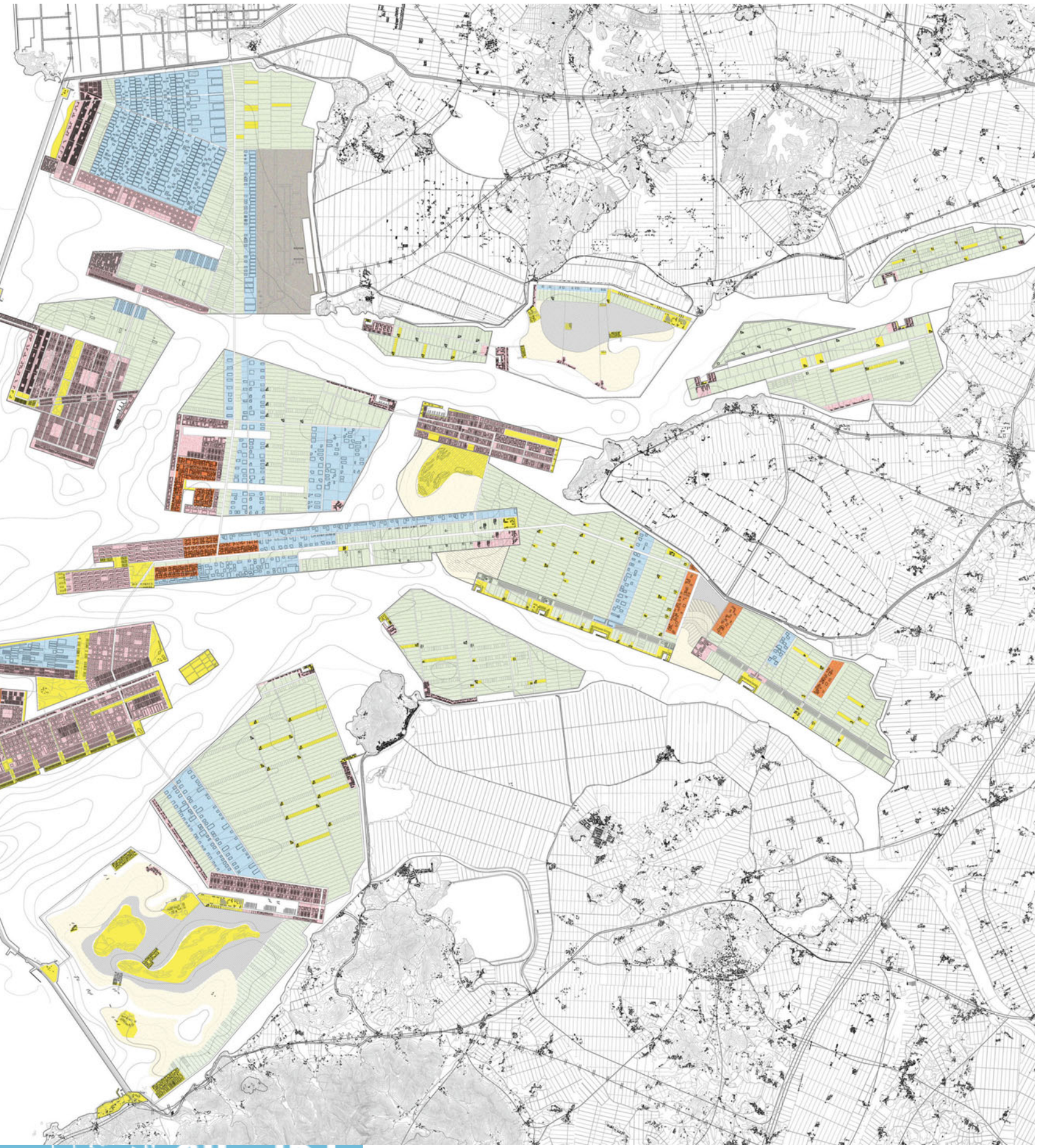
We expect Saemangeum by 2020 to support a population in the region of 630,000, living at higher densities of up to 60 dwellings per hectare near transport nodes, with more moderate densities along transport lines. Supporting the major transport infrastructure associated with the port, airport and main connections to the Korean rail and road networks, an urban transport system combining road, light rail/tram/bus networks, ferries and water-taxis will facilitate the efficient transit of tourists, residents, workers and visitors throughout Saemangeum.

4

1. Food Industries Cluster
2. Farming Practices
3. Tourism
4. High- Tech Industries
5. Urban Infrastructure and Service Industries
6. Airport, Sea Port and Railway Networks
7. Wetland

0 1 5km

Programme drawing: lead industries co-existing together on the islands. Note: This map is very diagrammatic, and the various colours should really be overlapping each other, as several programmes often exist within the same building.



CITY MAGNETS

1. Saemangeum Island City, view of the Harbour City towards the New Sea Port and the Gogunsan Archipelago of islands beyond. *Photograph: Philip Christou, July 2008*

2. Design sketch of Threshold City, linking the Sea Wall and Man- Gyeong Lake City. *Alex Bank, May 2008*

When looking at the design of the city in more detail we have come up with the concept of City Magnets. Magnets are placed in locations that have special infrastructural significance. They have a special and sensitive relationship with places of landscape beauty. They are capable of drawing activities together. They can make a place lively.

City Magnets are densifications in the dispersed city. These densifications make landscape voids between them, either in the form of water bodies, or agricultural space or areas of wilderness. They are composed of a number of City Structures. City Magnets are well connected within and between each other, and to the outside world. We have made 'moment drawings' of the City Magnets with sketches representing the way people might experience places within the city. There are seven City Magnets within the Saemangeum Island City:

Gogunsan Harbour City

with transit interchange (the most lively city magnet)

Jin-Bong Lagoon City

with Food Cluster City on the Central and Bridge Islands (the economical heart of Saemangeum)

Farm City

along the shores of the Donjin River

Airport City

with tulip fields and high tech industries

Man-Gueong Lake City

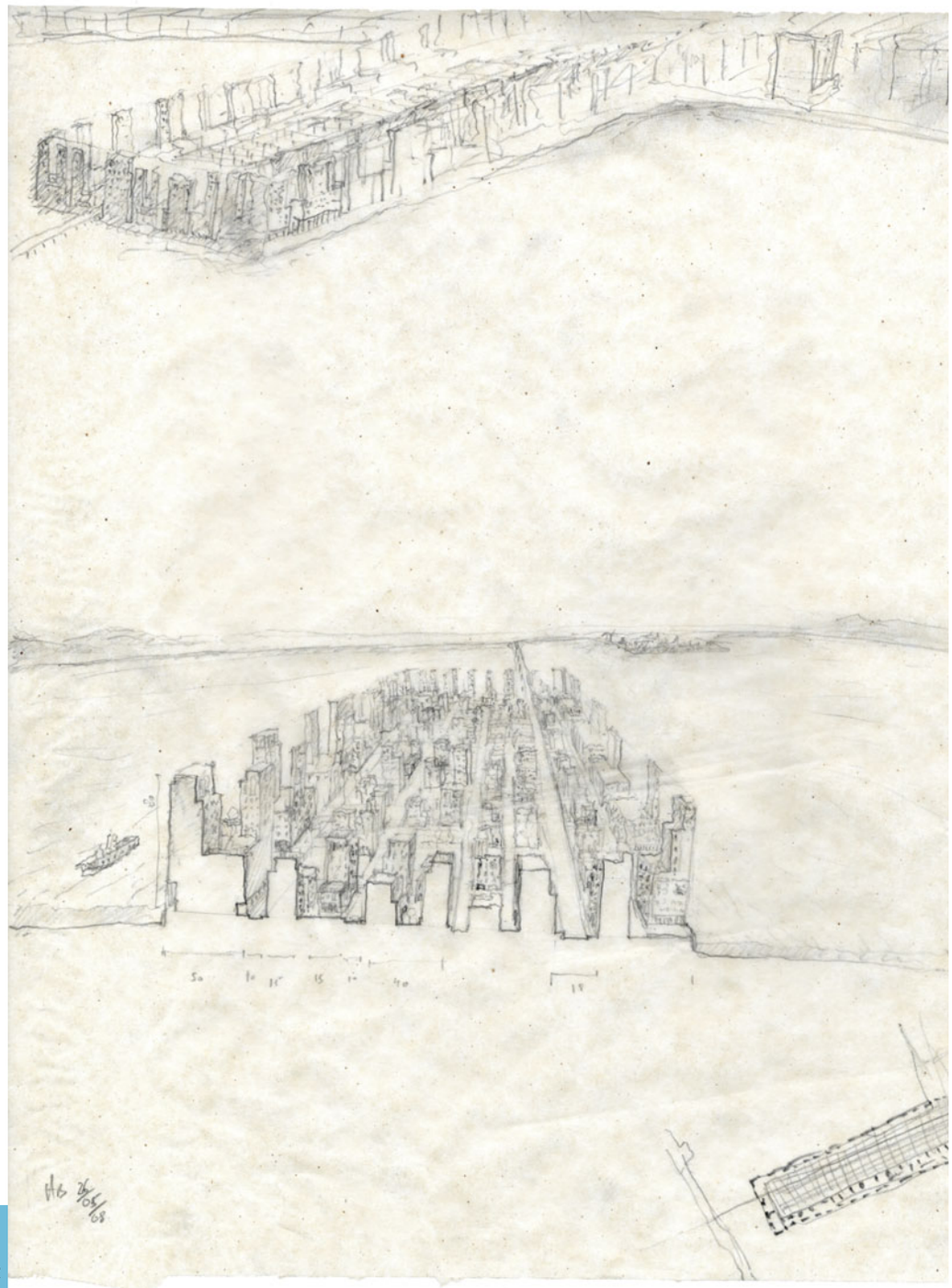
the highest density area in Saemangeun, to be built in the final phase of the development

Dongjin Lake City

in the south, next to the mountains of the Byeonsanbando National Park

Sea Wall,

with its high density Threshold Cities.



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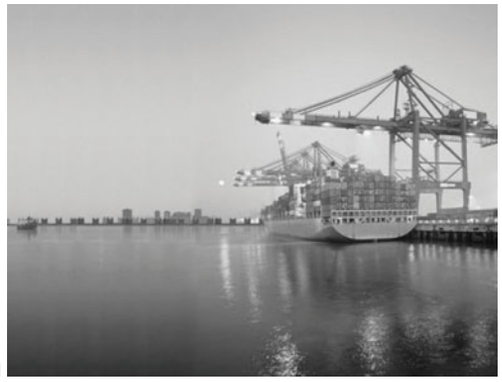

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At the centre of Saemangeum is a cluster of marine and lake ports. Collectively called the Harbour City, this district straddles both sides of the sea wall. It is thought of as a large public space inhabited by city structures of differing characters supporting a diverse range of programmes. We see it as a generator of city life and an integral part of Saemangeum.

The industrial seaport city sits outside the sea wall, sympathetically inflected away from the coastline of Shinsi Island opposite. Strategically positioned along an existing channel of deep water, the long industrial port edge serves feeder ships used for transporting goods containers. The landscape of large storage sheds and shipyards behind this edge connect back to the city via road and an elevated railway.

These industrial programmes coexist beside a sheltered city sea harbour next to the sea wall. This harbour provides seaside docking for yachts and smaller ships. A mixture of city structures cater for the many tourists and local residents. Large Fisker type city blocks with their sheltered internal landscapes meet the fine grain of the Oido city blocks separated by narrow gardens running perpendicular to the harbour edge. See previous chapter on City Structures: Hornbækhus City Block (pages 100-101) and Oido City Block (pages 102-103). The sea harbour city is adjacent to a sandy public beach exposed at low tide along the edge of the sea wall.

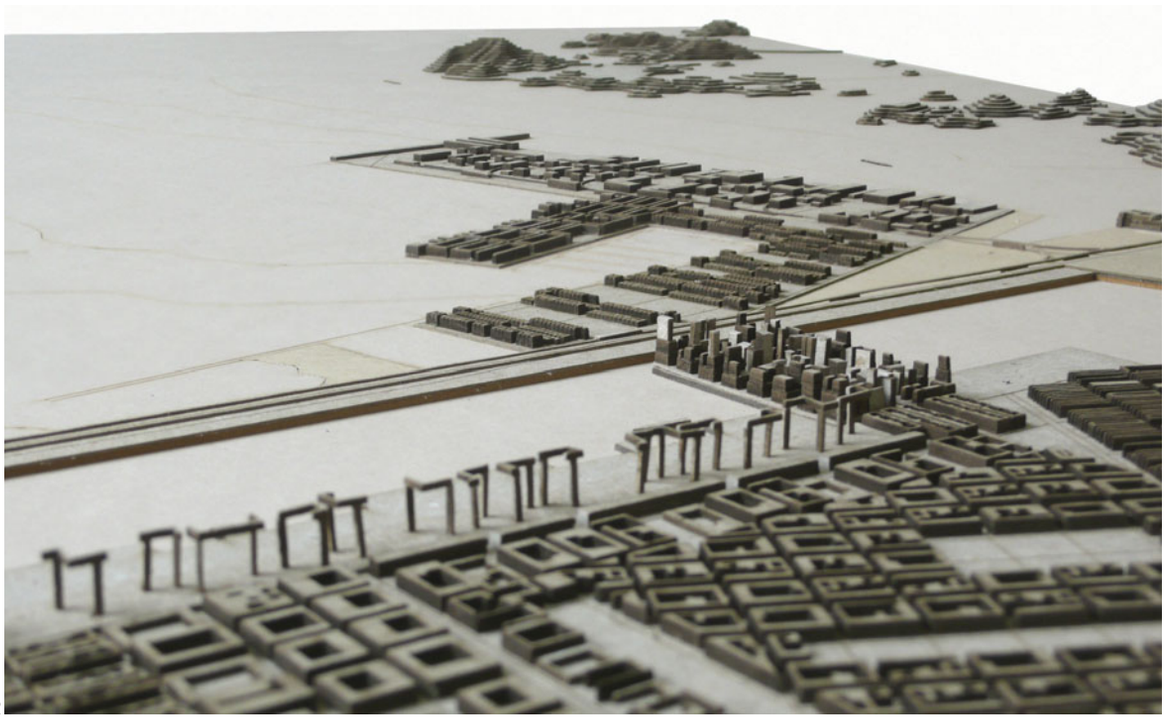
Cruise ships follow the same existing deep-water channel as the shipping vessels approaching the sea wall between the natural mountains of the archipelago and the artificiality of the straight seaport edge. They will arrive at an international port terminal where a large gateway building acts as an interchange between cruise ships, trains and road vehicles. It is situated at the end of a tidal saltwater wetland garden that hugs the sea wall connecting port level with the ridge of the sea wall and the public spaces of the Harbour City.

Inside the sea wall are many lake marinas, harbours and water taxi ports. The seafood port is the focus of the Saemangeum marine food cluster. Its quayside is lined with Barceloneta-type City Blocks. Nestled into the heart of the city, this vibrant industry creates jobs and brings vitality to the public realm. The Barcelona Cerdà City Block structure is filled with public spaces, shops, offices, apartments, studio spaces. Here seafood restaurants offer tourists the chance to sample the excellent fresh seafood that Saemangeum has to offer while the high, slender frame-like city edge buildings act as windows at the scale of the horizon – to the Gogunsan Archipelago and sea beyond.

1. Large ships are accommodated in Saemangeum's seaport, adjacent to Harbour City and Gogunsan Archipelago.

2. Gogunsan Harbour City is a cluster of marine and lake ports that straddles both sides of the sea wall.

3. Plan of Gogunsan Harbour City.



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1. Charming narrow streets open on courtyards and quadrangles in Food Cluster City. *Tom Bates, July 2008*

2. A view from Central Island looking east across the lake and wetands to River Confluence City. *Alex Gore, July 2008*

3. Jin-Bong Lagoon City and Food Cluster City on Central Island is the economical heart of Saemangeum.

The Jin-Bong Lagoon City is an extension of the Jin-Bong Peninsula situated on the eastern side of Saemangeum Island City near the confluence of the two rivers. The mountain rock to the east is the background and landscape context of this city. A reservoir is placed between the city and the mountain to make a generous landscape space. A dense urban area occupies a narrow piece of land facing the lagoon to the south and the Man-Gyeong River to the north. A long water body is let into the city fabric. The Malmo City Block Structure is used here making an elegant urban edge along the waterfronts of the island. The north edge to the Man-Gyeong River has a wide street and promenade while the southern edge, facing the lagoon city landscape, is a smaller pedestrian promenade where the buildings approach the edge of the island – making a more intimate relationship. There are two central streets, one is small and has a quiet city quality, with the buildings close together, balconies, shutters, awnings and street-front cafes making a vibrant scene. The other street is large enough to be a main city thoroughfare with four lanes of traffic and a pedestrian pavement wide enough for street markets to happen. The island and its main streets are oriented with views towards the mountain. At the western end, a dam crosses to the Central Island. At this western end of the confluence promontory city there is a generous public space facing across to the Central Island.

The Food Cluster Island is located at the centre of the Man-Gyeong lake and is one of the key city magnets for Saemangeum . Its proximity to the airport in the north and its position at the mouth of the Man-Gyeung River gives the island geographical presence. The Food Cluster City is composed of two local densifications, one in the north-east corner of the island and the other at the southern-west tip. Both city pieces are anchored around small harbours and offer their services for food research, food industry and agriculture.

Food cluster city is composed of courtyards and quadrangles, similar to those found in university towns and cities such as Cambridge and Oxford. As one moves through the sequence of quadrangles, the scale and character of the courtyards change, encouraging one to continue walking from court to court. In a similar manner to Cambridge, the quadrangles sit along the edge of the internal water bodies. They turn to face the water body, forming strong relationships with the activities and life on the water. Restaurants, food markets and shops inhabit these public spaces, bringing in the vitality of the city.

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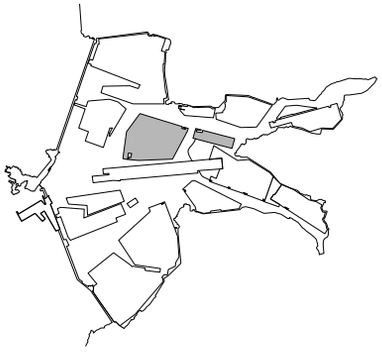

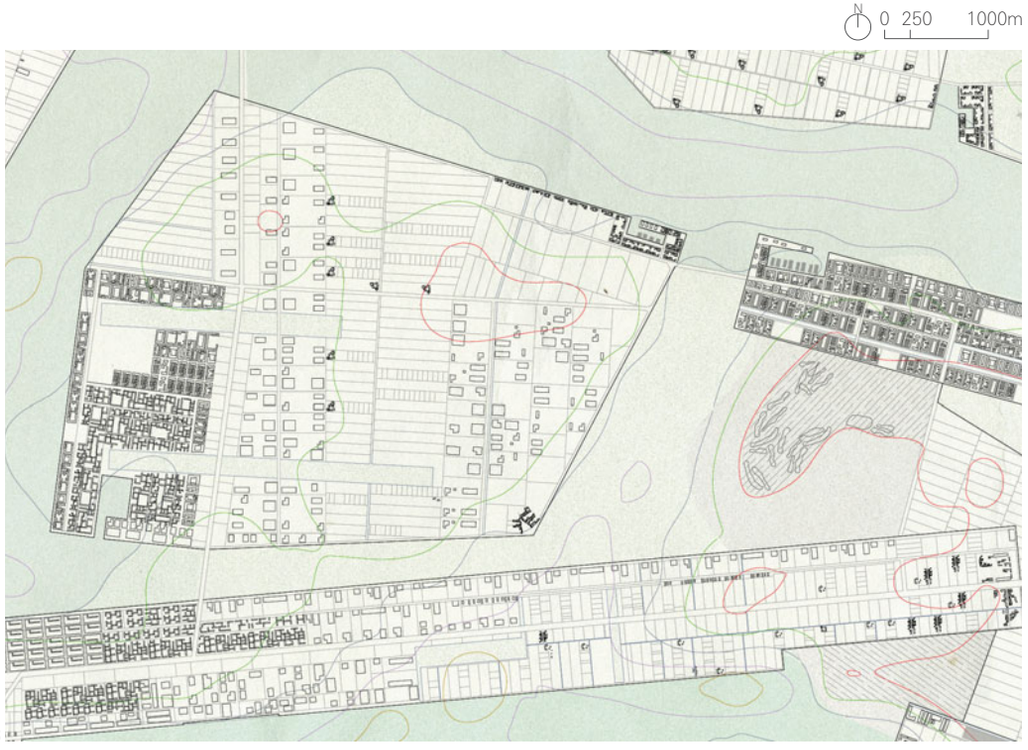

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1. Sketch looking west, along the Dongjin River towards Fram City. *Alex Gore, July 2008*

2a+b . Along the northern edge of Dongjin River sit a number of 'Urban Villages'. Each village has a small harbour and a public space, attracting restaurants, local produce shops and eco/bio/organic education centres, to these 'Urban Villages'. *Nicola Read, July 2008*

3. Plan of Farm City, located on the northern shoreline of the Dongjin River.

The Farm City is located on the northern shoreline of the Dongjin River connecting the existing Gimje farmland peninsula to the new Island City. Here, land is revealed by lowering of the lake level to create farmland. This territory is protected from flooding by a new embankment edge that circumnavigates the natural topography of the revealed land. On the riverside of the embankment a series of natural wetland fringes subtly delineate the edge between the water and the emerging land, providing an attractive destination for tourists. This can be instigated early in the city's phasing.

Along the length of the northern edge of the Donjin River sit two slender 'Village Islands' each 400m wide and over 3.5km long. These islands house 'Urban Village' and 'Farm Cluster' city structures, and a ribbon of greenhouses for biofuel production.

The islands are arranged into two long ribbons of land separated by an east-west distribution road. The strip facing the Dongjin River houses a small amount of farmland, largely dedicated to orchards, ginseng, vineyards and other specialist crops. Within these are nestled a handful of 'Farm Clusters' seated at the river's edge to provide an ideal location for agri-tourism and farm-stay holidays. The second ribbon of land is occupied by a landscape of greenhouses, in close proximity but separated from farm activities. The greenhouses could be used for growing algae for biofuel production, a profitable, emerging industry that could easily co-exist with general farming activities.

A symbiosis of tourism and agricultural production exists in the Farm City. Agri-tourism is accommodated here at two scales. The larger scale is the Urban Village with its harbour, restaurants, local produce shops, eco/bio/organic education centres, festivals and entertainment. It is a vital and attractive environment for holidaymakers to stay and farm workers or urban professionals to live. At the more intimate scale, the Farm Cluster acts like a miniature city. Here farming activities will sustain and support agri-tourism and farm-stays for families and school parties. The clusters vary in size and shape, but common to all is a central farmyard, surrounded by a collection of buildings often varied in size and use. This central space provides the vital public realm of the farm cluster, occupied by tractors and tourists alike. Immediately outside the courtyard are participatory kitchen gardens, allotments and orchards.

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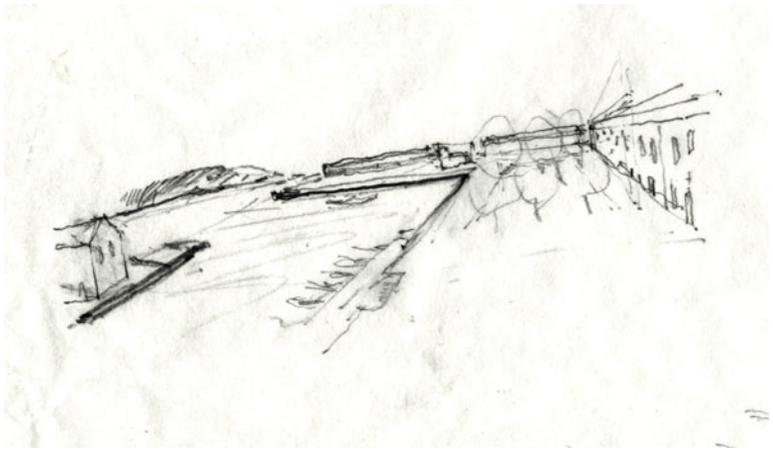

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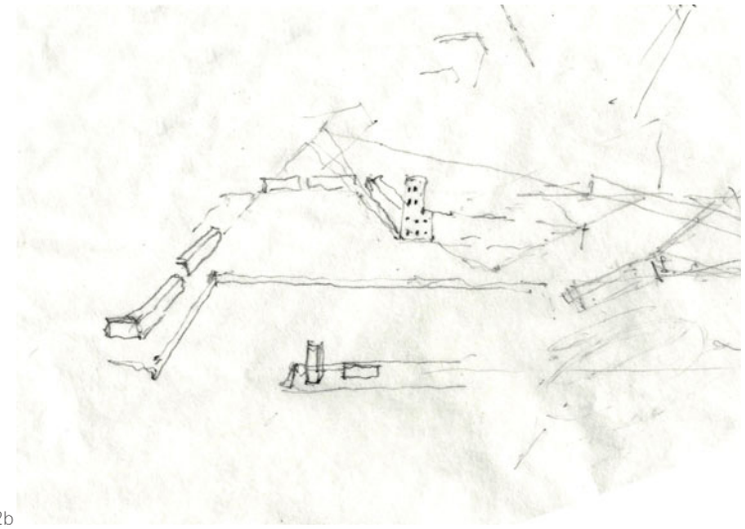

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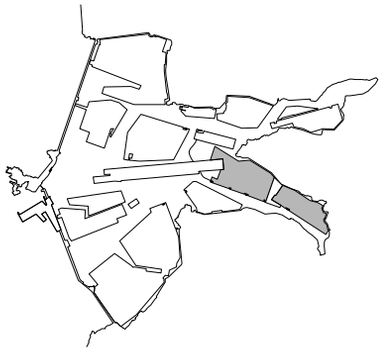

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1. Looking out over the dense Naepo Airport City from a high tower building. *Alex Gore, July 2008*

2. High tech industrial programmes are located along the west edge of the airport plate. The airport will be surrounded by a colorful landscape of flower fields, similar to the Amsterdam Schipol Airport. *Tom Bates, April 2010*

3. Naepo Airport City is sited alongside the existing Gunsan airport in the north of Saemangeum.

The Airport City will be the first experience of the city that people will experience when arriving from other parts of Korea and the world. The landscape of runways at the airport and the associated aerospace industries will be surrounded by fields of flori-culture plantations. This will be a colorful landscape of flower fields, similar to the region surrounding Amsterdam Schipol Airport. The lead programmes of this city support many festival and exhibition events. One could imagine visiting an air show, a walking tour among the many varieties of tulips, or attending a trade exhibition of high tech industrial components. We have located the high tech industrial programmes along the west edge of the airport plate, parallel to the main north-south highway. In this way we can shorten the plate and avoid having to build up the south edge of the airport plate from a depth of EL - 4.5 m. Basically we would like to avoid crossing the deeper parts of the Man-Gyeong River with the airport plate. The main food cluster is located within 10 minutes drive on the main north-south city highway. The newly reclaimed land where the airport will be built has linear edge embankments. They are intended to be seen in contrast to the natural geography of the old river edge. A water reservoir separates the airport city from the mountain to the north-east making a generous landscape space and providing a good source of irrigation water. A transport interchange provides excellent links into the heart of Saemangeum, and to other major destinations in Jeollabukdo Province, by road, rail or passenger ferry on the Man-Gyeong Lake. The ferry terminal will be within a pleasant little harbour town with a small marina, markets, restaurants, and bistros. One could also imagine places here to have a bath and massage after a long flight. This little harbour town is at the south-east corner of the island airport, on the river edge with a garden that offers a wonderful view across the water to a natural rock outcrop. The south-west edges of airport city are lakeside city edges with Oido, Hamburg, Barcelona Cerdà and Barceloneta City Structures, providing a vibrant urban experience. One would find a business centre here, with a tourist bureau and local residents getting on with their daily lives. The decibel contour diagram of airport noise shows that people in these parts of the city will not be disturbed by loud airport noise. High-tech industries are located in large industrial shed city structures to the west of the airport. The phases of city growth are visible in the change of orientation in the city. Along the western edge, City Edge Towers with a strong figurative character look out over a narrow body of water towards the seawall and Yellow Sea beyond.

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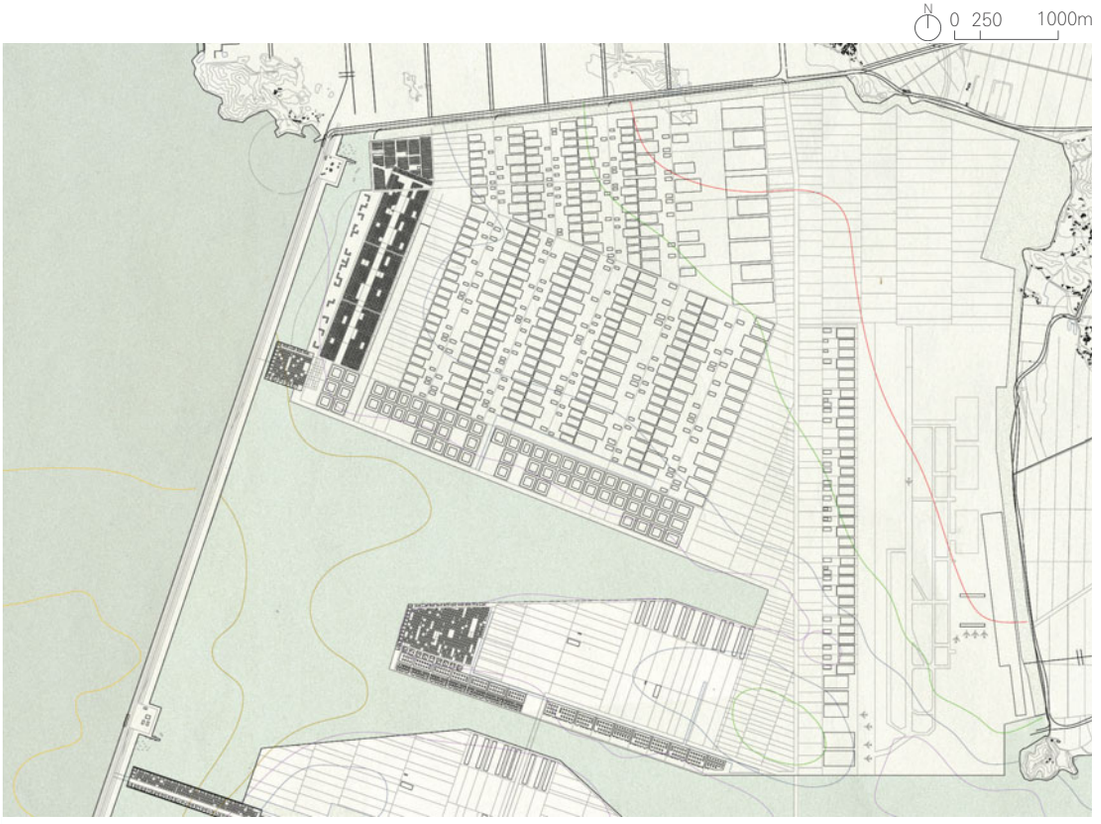

In the later phases of the development of Saemangeum, if there is a growing population, a dense piece of island city can be built. It would occupy an important place in the composition of islands within the Island City. Situated close to the northern arm of the seawall, it has three urban waterfronts to the Man-Gyeong Lake. On the northern edge it is adjacent to the industrial areas and the new airport. The island will have many canals and a dense urbanity composed of the Hamburg City Structure. Along the canal fronts, making an elegant urban edge are Malmo City Block Structures. There are many city parks within the urban grain of the High Density Man-Gyeong Lake City. Each of these city parks will have a distinct proportion, size and character. The largest of these is long, narrow urban woodland park running in the north-south direction, at the centre of the dense city. Other large public parks are found within the diagonal strip of buildings cutting across the dominant grain of the city. In addition to these large parks, there are smaller public spaces such as model agricultural fields for growing biofuel crops, and natural landscape parks with reeds and wetland on the former riverbed that will give one a sense of memory of the original river estuary landscape in Saemangeum.

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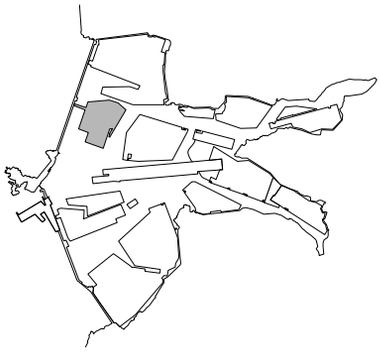

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1. The canal network in Man-Gyeong Lake City is a vital infrastructure for local business.

2. High Density Man-Gyeong Lake City is sited to the east of the sea wall. The island has many canals and a dense urban fabric including the Hamburg City Structure.

3. A leisure port on the eastern edge of Man-Gyeong Lake City.

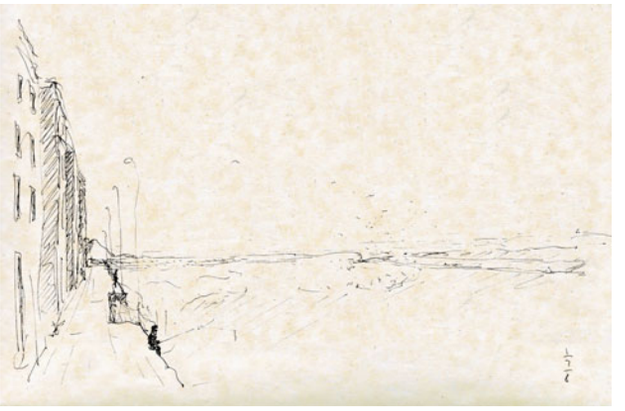
1. The eco villages overlook large bodies of water and lakes. *Alex Gore, July 2008*

2. Model photograph of Dong-Jin Lake City, located to the south of Gogunsan Harbour City. *Photograph: Steve Blunt, July 2010*

3. Eco villages built on stilts on the edge of wetland areas at the foot of the mountains of Byeonsanbando National Park. These eco villages will encourage touristic uses of the wetland including a variety of water sports as well as golf, hiking, camping, and fishing.

4. Plan of Dong-Jin Lake City with its unique natural lake edge condition.

The Dong-Jin Lake City is a City Magnet composed of two island land masses situated in the southern part of Saemangeum between the Dong-Jin Lake and the mountains of the Byeonsanbando National Park. A small river divides the north-east island and the south-west island. This land is reclaimed by lowering the lake level by 1.5 meters. In early phases no land-filling will be necessary. The Dong-Jin Lake City will all be used as low land. The north-east island is designated for biofuel farming mostly, and the south-west island, situated at the foot of the Byeonsanbando National Park is primarily a wilderness area with close-to-nature tourism programmes. The natural outline of the lake edge is maintained with a fringe of wetland, and an urban wetland at higher levels. This will be achieved by building a dyke following the current EL -3.0m water level contour line, and controlling the lake water level inside the dyke to gain wonderful new beaches and wetland lake edges. This will encourage touristic uses including a variety of water sports such as sailing, wind surfing, water skiing, and marinas as well as golf, hiking, camping, fishing, moorings for houseboats and bicycle tours. The waterfront between the two islands is lined with an urban infrastructure on filled land to form a harbour for the City Magnet. In later phases the north-east island could also attract some industrial uses along the inter island highway that will pass through the north-east island and cross a bridge to Harbour City Island. Along the northern edge of the north-east island another small urban village is situated, taking advantage of the location facing north towards the Dong-Jin Lake. Water reservoirs are located at the foot of the mountains between the foot of the Byeonsanbando National Park, revealing the former tidal seaside coastline, and revealing the rock promontory that was in former times an island in the Dong-Jin River estuary. Both this rock promontory and the former tidal seaside coastline are 'time witnesses' in the greater order of the place.



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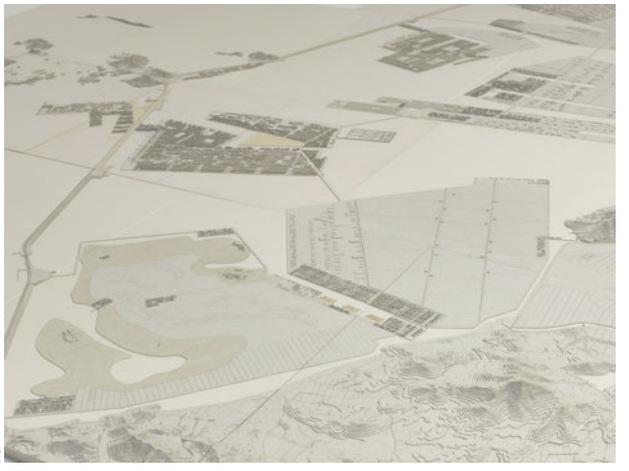

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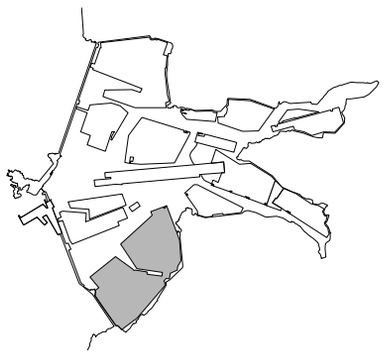


1. A necklace of gardens inhabit the length of the sea wall.
Alex Bank, July 2008

2. Looking north along the length of the sea wall towards Gogunsan Archipelago and Harbour City.
Photograph: Steve Blunt, July 2010

3. A Korean traditional garden is one of series of public gardens on the east side of the Sea Wall.

4. The Sea Wall is a privileged space affording expansive views of the Yellow Sea, Gogunsan Archipelago and the Island City.
Florian Beigel, June 2008

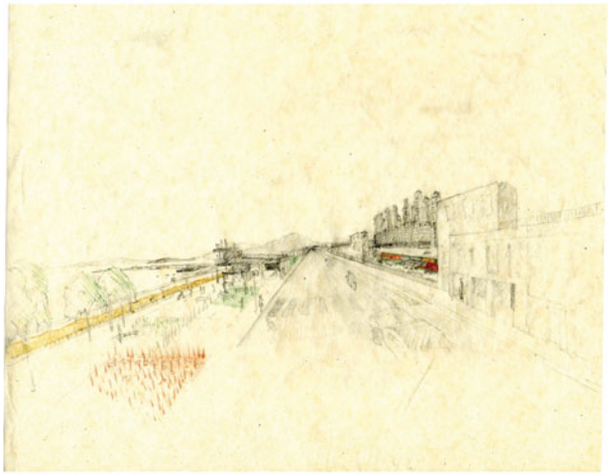
The Sea wall is a major tourist draw to the area - Korea's 21st Century version of the Great Wall of China. A design strategy that preserves and enhances the experience of being on a delicate line in the sea is crucial for the future development of Saemangeum.

We agree with the existing Jeollabukdo Provincial Government proposal for 'a necklace of gardens' as a way of increasing the attractiveness of the sea wall. It is imperative that these public spaces are distinct from one another and they display exemplary contemporary or traditional garden design. Botanical gardens with Korean plant varieties, an aquarium with Yellow Sea fish and underwater plant life, and possibly a planetarium could be built within these beautiful gardens. Strategically located, the necklace of gardens will be key attractions on a journey along the sea wall.

Along the top of the seawall is a two-lane coastal road for sight seeing, with a generous space on the side facing the sea for people to walk and bicycle. A dual four-lane carriageway for larger vehicles transporting goods to and from the harbour and for rapid city traffic will run along the foot of the east side sea wall embankment facing the large inland lake.

A light railway traverses the length of the dam with stations located at the sea wall gardens, the sea harbour and places of population. Elevated on elegant columns, the railway stands on the first plateau (just above high tide level) on the seaside of the sea wall embankment. In order to ensure that this thin horizontal line does not interfere with the view of the sea horizon, the height of the rail remains beneath the level of the sea wall promenade. The rail can also be used to transport goods between the seaport and the Gunsan Harbour/ industrial quarter in the north.

A high-density settlement could potentially be built on the stretch of dam between the Shinsi and Yami Islands. This sea wall community could connect the Harbour City and archipelago. With small harbours to both the sea and lake waters, we imagine it to be a place where people who are visiting the archipelago on day trips will be able to stay.



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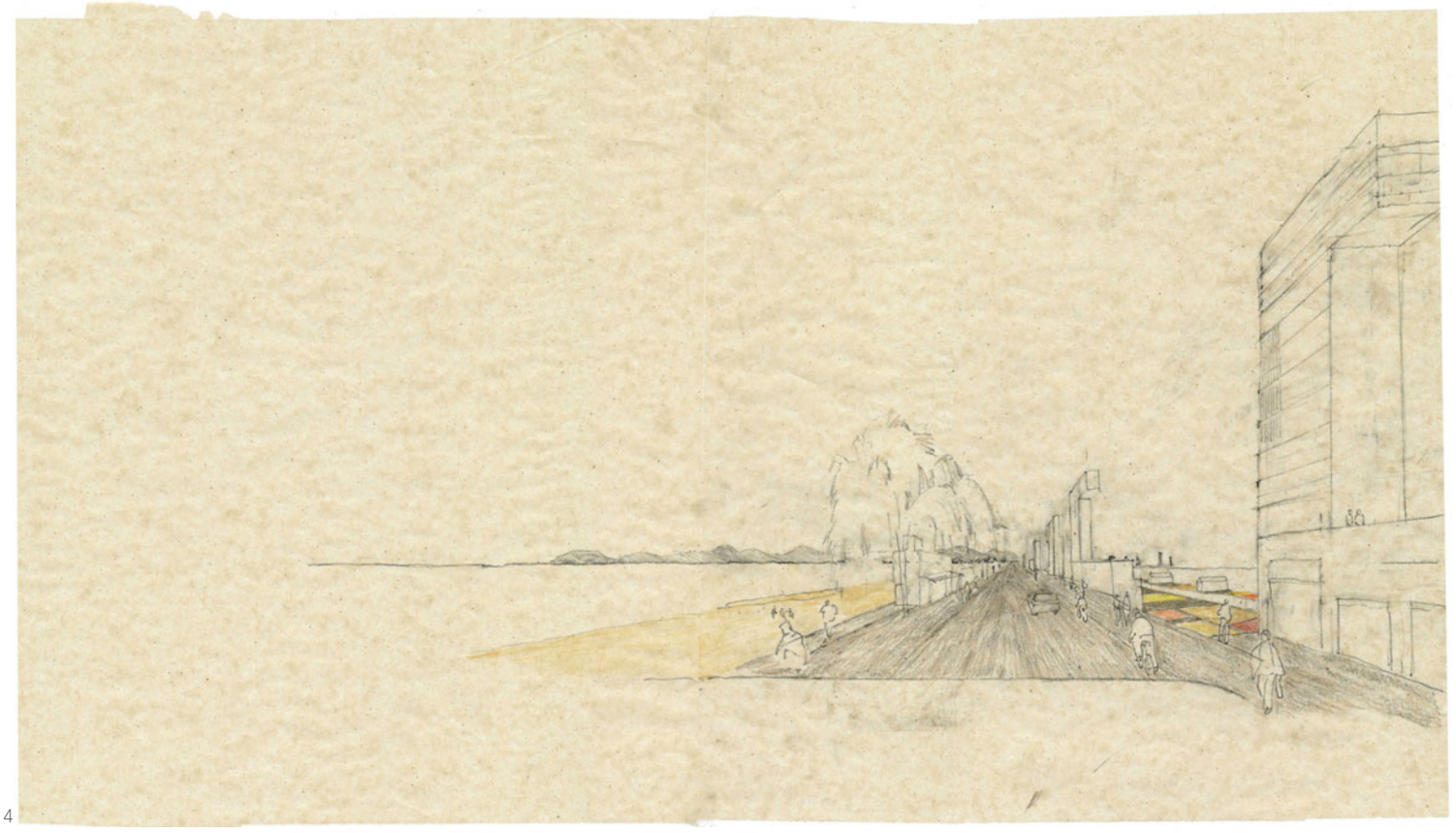

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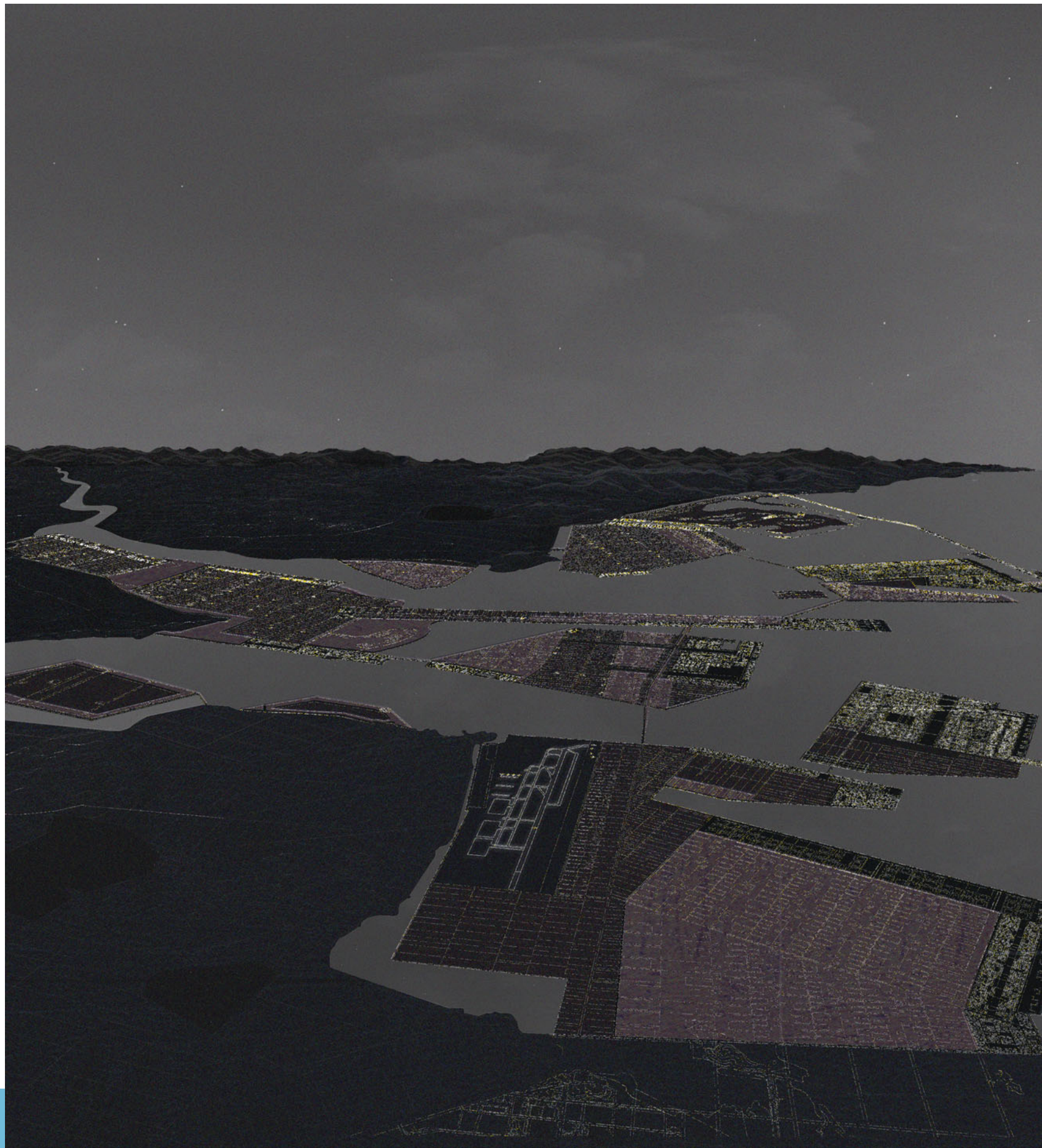
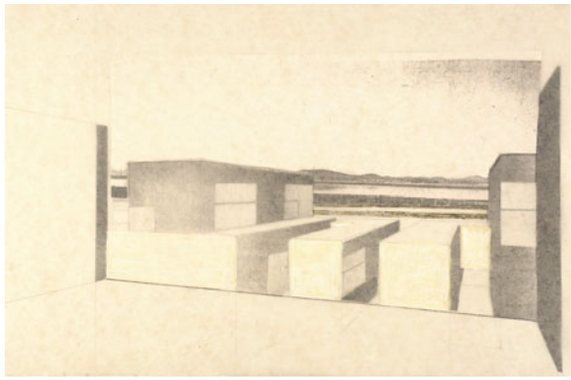


A prospect looking west across the new Island City at night from above Airport City.

A CONVERSATION WITH FLORIAN BEIGEL AND PHILIP CHRISTOU

ELLIS WOODMAN, LONDON, APRIL 2010



1

EW: I would like to begin by quoting from a statement that Rem Koolhaas made in 1987 in relation to OMA's entry in the competition for the French new town of Melun-Sénart. It reads as follows:

'The site of this last Parisian Ville Nouvelle of Melun-Sénart is too beautiful to conceive just as another Ville Nouvelle with innocence and impunity. A second type of innocence is required to believe at the end of this century that urban development and built areas can be projected and then reasonably controlled. The built, 'the full', is incontrollable – subjected to the maelstrom of political, financial and cultural forces – in a perpetual transformation. Of the void the same is not true; maybe the void is the subject where architectural certitudes are still convincing.'[1]

Your large scale proposals also seem to be predicated on a recognition that the urbanist's capacity for shaping the world has been much diminished. One can no longer make grand masterplans in the way that one might have done in the years when Florian was a student and the balance of power between the public and private sectors was weighted so differently from today.

FB: We don't like masterplanning because we don't like the definitiveness of the masterplan. It has nothing to do with time. To fix every nook and cranny and every street corner into a masterplan form, I think often doesn't bear fruit, because the masterplan is overtaken by time and circumstance. A masterplan is out of date usually by the time you start doing something. So, rather than masterplan, we have proposed a new design tool which is more accommodating of time, and we call it a landscape infrastructure. What we are trying to do is design the site before the development but not necessarily the development itself. It is about designing the rug but not the picnic. To make a landscape infrastructure requires that you read the history of the site - its geological history, its agricultural history and its history of urban development. All of these histories will have left physical traces and by reading them you are learning to understand the site so that what you propose can be specific to this place. It is a good tool in a situation where there is a risk of urban sprawl, and this is everywhere now. Urban sprawl is the end of urbanism really. It is a kind of soup with no place, no identity. This idea of a landscape infrastructure can hold the sprawl at bay.

EW: A recognition of the organising potential of the urban void is also something that you seem to share with Koolhaas and is nowhere more strongly evidenced than in the Saemangeum project. There the void is unusually tangible for the simple reason that it is defined by water.

PC: The OMA scheme has always been something that we have shown students and has been a touchstone for a lot of our own work, because of this idea of the urban void. It has always been clear that the void is important at the architectural scale and at the mini-urban scale between buildings. But at the scale of a large suburban extension to Paris, or a whole new city like Saemangeum – thinking about the void in urban terms, that is a big shift. It represents a kind of conceptual reversal. The first image that Koolhaas shows in presenting the Melun-Sénart project is the virgin landscape of agricultural fields; it is completely open and very beautiful, and he begins by asking: how can you do anything here? So he doesn't start with a tablula rasa. He's acknowledging that, yes you are going to put a new city here, but how can you do that without destroying the beauty that is

1. Design sketch of the bookshelf buildings at Paju Book City. The Bookshelf buildings offer views out to the mountain and river landscape. *Florian Beigel, 1999*

2. Welcomm City in Seoul, Korea, designed by Seung H-sang and IROJE Seoul, Florian Beigel and ARU. *Bae Sang Soo, March 2005*

2

already there? This idea of where not to build is for us, a very powerful way of thinking about this.

EW: I would like to come back to this image of the rug and the picnic and to the question of how much control you want to have over your urban strategies' architectural realisation. In some respects your schemes make highly imposing architectural demands. You may not be saying that all the buildings should be built of brick or the windows should be a certain format but you do have highly prescriptive ideas about their morphology. Is that a restriction that you have found the different stakeholders involved in any urban development are always prepared to support?

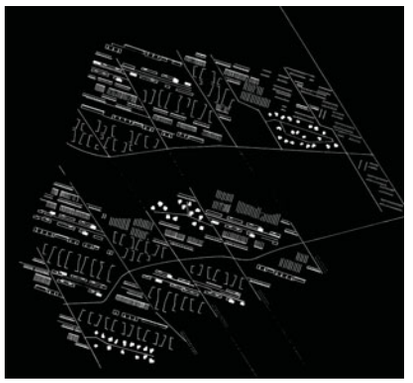
FB: Yes, as long as there is something that people can share together. On the Bookmaker's Street at Paju Book City, it turned out that if everybody could look out to some part of the mountain, and some part of the river landscape they were prepared to share this idea that their building should be built in two levels, two strata. I think when you are proposing this in a Korean cultural situation, the connection to the landscape is very important. So the buildings have an 8m high base – which corresponds to the height of the motorway embankment and defines the street spaces and courtyard spaces and yard spaces of city – and above that they have pavilions which give the big views. There were five or six ideas about the strata, about the views, about the proximity of the wetland and the wilderness and nobody had a problem with them. But beyond this, if we had started laying down rules about the buildings' architectural language we would have been on our own.

EW: That is interesting because one would think that not only from a perspective of urban legibility but also from a perspective of economy one could make a strong case for saying that all the buildings at Paju should be of a common language, employing a shared palette of materials.

PC: After we had made the plan and had most of the ideas formulated, we had a meeting in London with Mr. Seung, Mr. Min, Jong Kyu Kim and Young Joon Kim to develop the Paju design guide. And we discussed whether we should restrict the materials of the buildings. We talked about everything being in brick and Seung was thinking that after the success of the Welcomm building in Seoul, it might be a good idea for them all to use corten steel. We decided against that. Seung did design a number of the infrastructural elements, like bridges and lamp posts, in corten, which helps give some cohesion. In the end we reached a view that we could specify a series of materials that people could choose from, so as to restrict some things that we really didn't want. For example glass – we didn't really want all glass buildings – but in the end we have glass buildings in Paju. There is no limit really, to what you can use as a material.

EW: Visiting a great many contemporary urban developments, one is confronted by a startlingly high level of formal variety that has often been not so much tolerated as positively encouraged. The recent redevelopments of the centres of Almere or Liverpool or of the former docks in Hamburg, for example, all place great importance on the value of mixed architectural expression. The work of many different architects, employing different materials and pursuing quite different stylistic preoccupations, they each appear to be seeking to emulate the organic complexity of a settlement that has developed over centuries rather than in a single moment. It seems that the idea of building Edinburgh New Town is today an anathema. Is that a source of regret or is the level of architectural variety that urban strategies are asked to negotiate today a demand that you welcome?

3a



3b

PC: What we had learned on projects in Germany such as the Berlin Lichterfelde project, was important in this regard. That was the first time that we had been presented with the task of thinking about such a large site. At 1km x 1km it was really a suburban extension of Berlin. We took as a starting point the assumption that it was not all going to be built at one time. In fact it was unclear if it was going to be built at all - and of course it hasn't been. The economy hasn't been there for a new residential quarter like that. We knew that it would be built in phases over a long period of time, to designs by different architects working with different developers on different parts of the site. And with that in mind we thought, how do you make a scheme that has spatial integrity and identity as a place, while allowing for all the myriad of architectural styles, desires, lifestyles – all the things that will come in the future? How do you make this diversity a pleasure?

So we laid down a field structure, finding field boundary conditions that drew on the history of how that site had been built and rebuilt at different times. These fields were agricultural in scale, but we conceived of them as building fields. We came up with a 'wohn menu' (house menu) of eight different house types. In Litcherfelde this was a way of making a neighbourhood of places to live. Each neighbourhood could have a distinct architectural identity and we were trying to ensure that it also responded to the conditions of its particular field.

At Paju you can see how that idea works in practice. You have what you might call city structures which are ensembles of buildings that are conceived in response to their immediate site conditions. The buildings on Bookmaker's Street with their two strata and linear distribution, we invented in response to the presence of the motorway embankment. For the Urban Island, we reinvented Barceloneta using similar dimensions to the narrow streets and thin buildings that you find there. The whole scheme is conceived in terms of these different building types, or rather urban types.

FB: Urban types, it is an urban typology not a building typology. Paju was the first time we had this idea of city structures, which are pieces of city that are often coming from other places, and that have demonstrated a good track record for urban life.[2] At Saemangeum, one of the most successful ones – you can't really say successful, because nothing has been done yet, but we found it very useful to work with - was the urban block structure of Weymouth Mews in London. It has both an external and internal distinctiveness: outside it is five storeys high, while inside it is a sort of village. We showed this to the Koreans when they came to London, and they liked this idea of inside is this village and outside is the urban block. It supports pleasant and safe public spaces, people are living quite close to the ground. You can put it in many different situations. All these things were for them quite easily understandable. When we take things like that we are becoming a little bit more propositional and are not relying so much on the forces from the site.

EW: At Saemangeum many of the city structures make very explicit reference to European models: Barceloneta, Weymouth Mews, the kilometre-style perimeter blocks that Kay Fisker built in Copenhagen. Were you concerned that they might be viewed as alien to an East Asian culture?

FB: I don't think they are as alien as the American skyscrapers standing around everywhere. There

3a+3b An landscape infrastrucutre inhabited by a 'menu' of eight different building field types, Lichterfelde Süd, Berlin, 1998.

4. Arthur Segal, Apfelsinen.*1936, 37.5 x 45cm, private collection*.

4

seems to be no hostility, no worry about this.

EW: So is that not an issue for them - the idea that there might be such a thing as an Asian city as distinguishable from a Western one?

PC: That's difficult to know. There will be some people that will agree and others that will not agree with this. The way that South Koreans have been building housing in the last 20-30 years is a bit like East German or Chinese models. They are repetitious, engineer designed slab blocks that are continuing to be built in bigger and bigger sizes. That is the Korean city actually – an urban identity that Koreans are making for themselves.

However, given the opportunity to take Saemangeum forward, I would be very interested to study some more traditional Asian examples like the courtyard houses in Beijing. But I also like the idea that the city structures don't have to be culturally specific. Inigo Jones' client told him at Covent Garden: I want to have something as grand as Place des Vosges in Paris; I want a square like that. And Jones takes that model and translates it and ultimately builds something very different from the original.

FB: We have now been working in Korea for 10 years, and have quite a few good friends there. One thing that we have learned from them is this idea of 'emptiness' – a Taoist idea about the space between these two cups and the space inside the cups. This is a 6th century BC idea of space. The Koreans also talk about the 'madang', the empty space within the historical Korean courtyard house, as an important example of emptiness. So this idea about the space in between – which is also a city idea and not only an architectural idea – this is something very close to Korean culture. At Saemangeum, there are a group of very densely built-up islands, which we call City Magnets. We tested the size and proportion of the lake spaces between them against spaces that we know in Barcelona, and Cadiz. It is like Siza's scheme, where he puts big plates of new city blocks into the sea around the Macao Island, judging their relationship with each other and the surrounding wild geography - this is all in-betweeness. The Koreans understood all this.

EW: One senses with all ARU plans – and Saemangeum is no different – a certain reluctance to impose an urban hierarchy. The different territories of the city are always distinguished vividly from one another, but the structure is always a polycentric one and there is certainly never an axial route that cuts through the fabric with the town hall at the far end.

PC: After the architect Walter Segal died, we made an exhibition about his work and came across ideas that he had about non-hierarchical structures. Walter had a painting by his father, Arthur Segal. It is a still life with fruits scattered on a table. It's a beautiful painting. He had it in his own home, and each piece of fruit had its own identity but didn't have any special position on the table, more than any other piece of fruit. They were somehow equal, like equal individuals. Walter liked this because there was no hierarchy in the painting. Every part of the grid was an equal part of the story. That idea of the egalitarian quality of a grid is very interesting.[3]

EW: Egalitarian in a social sense, too. Robert Venturi and Denise Scott Brown have written about the Philadelphia grid as a plan 'where across the street from the mayor's house one can buy lunch in a delicatessen.'[4]

PC: In the Saemangeum project, however when we bring a grid with the dimensions of Cerdà's Barcelona block next to a smaller grid such as that of the London mews block, there is a point where you have to cut or overlap one with the other, as in a collage. And inevitably there are hierarchies that emerge, axial lines and so on. The same thing happens when the grid encounters topographic features. It becomes compositional and you have to control how much importance there is to this part and how much to that, how much closeness and tension, intensity here and how much regularity over there.

EW: So the places where one pattern meets another become developed as points where you can introduce significant civic buildings or shared spaces such as a market?

FB: Yes, this is always the interesting part, because you have to relax and adapt the orders.

EW: Usually, when you encounter those hard edits in a city they correspond to a programmatic change. However, your city structures are not wedded to individual functions. Your plan is not a zoning diagram. Presumably, however, some of these city forms would be more attractive to certain functions than others?

PC: And some locations would be too. But for us it is almost a kind of dogma, not to start with function. It is the same when we design buildings. Rossi is really very good on this. In *A Scientific Autobiography* he says that the dimension of a table or a house is important for the architect not for a specific function, i.e. that you have to make a table to seat 8 people for example, but so it can permit other functions, more than one just one specific function. I find that really wonderful. That's an interesting position on architecture, not form follows function, not designing a machine that can do one thing only. [4]

EW: Saemangeum is the first and presumably the only city that you will be designing in the course of your careers, but there is a sense that whether you are designing a house, or even a piece of furniture you are always thinking of it in terms of a city in miniature. It relates to your perennial impulse – which is evident as far back as the Half Moon Theatre – to make an ensemble rather than a singular object.

FB: Exactly.

EW: All your projects are aspiring towards a city scale.

FB: Yes, we call it 'architecture as city'.

EW: Whereas, an ensemble of objects set in relation to one another necessarily convey a more open-ended, negotiated set of values?

PC: I think so. And what does it mean, a city, really? What is the difference between something that is a city and something that is not? It is to do with the relationship between people, their agreements to live close by, and in the old days within a wall to protect each other, to share laws and institutions, to become citizens, to have a civilized life. That is what a city is – a social agreement among people to live together.

EW: If we come back, though, to the Koolhaas quote with which we began, we are confronted by the difficulty of making any kind of social agreement in a post-consumer culture world where individual identities are much more forcefully communicated than collective ones. Florian's education really coincided with that moment of change.

FB: Yes, this was the anti-authoritarian society that we had on our banners. This was the Rudi Dutschke phenomenon. The idea of someone telling you what to do – even your parents – all that was questioned.

5. Snow on the Simhak Mountain, Paju Book City, Korea.
Florian Beigel, Feb 2001

EW: The work of a figure like Cedric Price exemplifies that cultural moment particularly vividly and has always been an important reference point for you. However, I think in ARU's work one does sense a more measured embrace of the freedoms that were being pursued at that time. You accept the fact that every occupant at Paju is going to want their building to look as different from its neighbours as it possibly can but at the same time you are searching for the collective values that can bring a sense of civility to that picture.

PC: And then the question is: what can be collective? Well, the landscape is collective. Already the mountain that stands next to the site is shared and is embedded in the culture of the place, especially in Korean culture. There is a deep understanding in Eastern culture about what the meaning of that mountain is.

FB: It has a spiritual power.

PC It is not a religious thing, but it does have a deep cultural meaning. Culture is something that is shared and whether you are an urbanist or an architect, it is your responsibility to protect it. Without being moralistic, it is just one of our tasks – how to bring people together.

1. *Rem Koolhaas: Urban Projects (1985- 1990), 'Project for a "Ville Nouvelle", Melun-Senart, 1987', Monografies Quaderns d'Arquitectura i Urbanisme, Barcelona, 1990, p.44.*

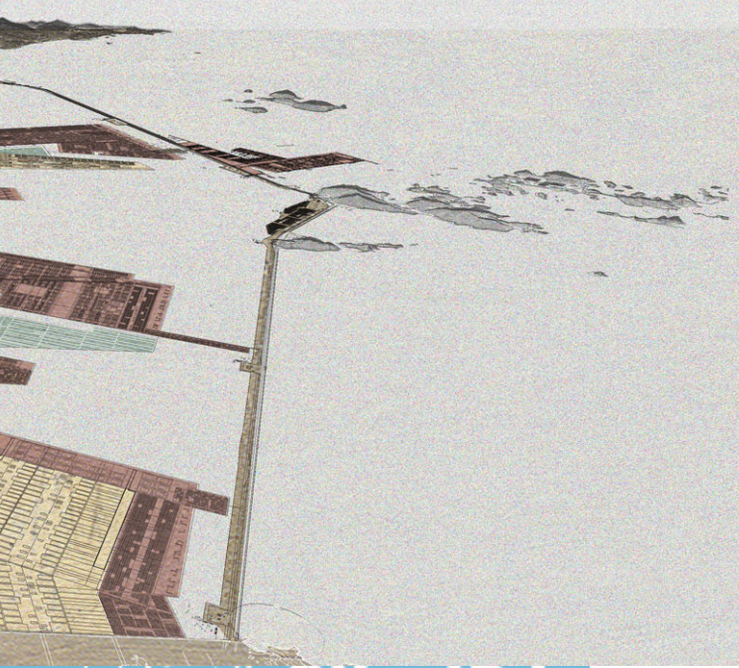
2. *City Structures, edited by Xenia Adjoubei, Alessandra Greggio, Mayuko Kanasugi, Lucy Pritchard, Alex Thomas, 'City Blocks between Portland Place and Harley Street, London', by Theodoros Thysiades, Architecture Research Unit, London, 2009, p.65-68.*

3. *Architects' Journal, Special issue on Walter Segal published to coincide with the exhibition opening, 4 May 1988 including:*
'Memories of Segal" by Julius Posener, p. 38-41;
'The Path to Lewisham', by Peter Blundell Jones, p. 42-54;
'Pragmatic Approach', by Florian Beigel, p. 56-69;
'Beyond Utility', reprinted article (edited), by Walter Segal, p.78-80;
'Segal's Legacy', by Graham Vickers, p. 81-91;
a biography, buildings and projects list, selected bibliography, exib. credits all compiled by Philip Christou, p. 86 - 91.

4. *Robert Venturi and Denise Scott Brown, Architecture as Signs and Systems, The Belknap Press, 2004, p. 11*

5. *Aldo Rossi, A Scientific Autobiography, MIT Press, 1981, p. 3. 'Architecture becomes the vehicle for an event we desire, whether or not it actually occurs; and in our desiring it, the event becomes something 'progressive' in the Hegelian sense… it is for this reason that the dimensions of a table or a house are very important – not, as the functionalists thought, because they carry out a deter mined function, but because they permit other functions'.*

Looking south across Saemangeum Island City from above airport City.



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During the design process, many friends were active in debating and offering their ideas and knowledge in a constructive and inspiring way. Ellis Woodman gave us wonderful hints at key moments, such as alerting us to the unique example of Kay Fisker's designs for the Hornbaekhus housing blocks in Copenhagen as a possible City Structure to look at. Niall Hobhouse was of constant inspiration. Peter Markli on his visits to London always had constructive and incredibly incisive comments and encouragements to offer.

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Through the years, students of architecture that we have taught at the London Metropolitan University have been making surveys and critical studies of architectural and urban design precedent projects. A number of drawings and photographs made by these students have been selected and used in the City Structures section of this book, and we would like to thank the following for their efforts and permission to print this work: Jong Hwan Ahn, Axel Freij, Alessandra Greggio, Giovanni Iasevoli, Mayuko Kanasugi, Awot Kibrom, Julie Moss, Andrea Obiol, Dingle Price, Alexander Thomas, Theodoros Thysaides, and Matthew Whittaker.

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Florian Beigel and Philip Christou, July 2010