ELITE HOTEL MARINA TOWER

”SQ Spa” Concept design



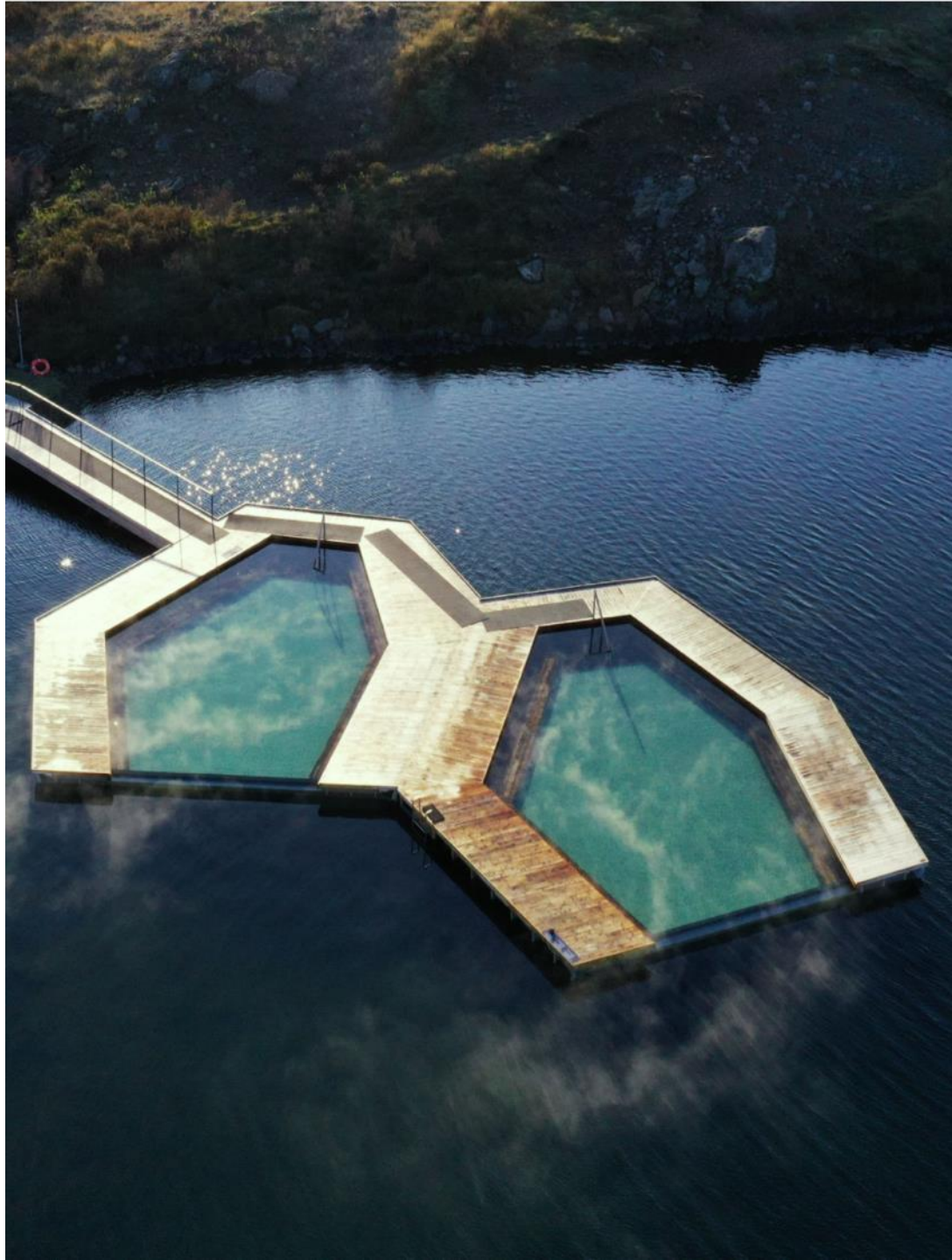
PANKO CONCEPT

ELITE HOTELS OF SWEDEN

BLUET

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1. THE PROJECT & PROJECT SITE

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FLOATING SOLUTIONS

TECHNICAL CONCEPT DESIGN BY BLUET & PANKO

Bluet work scope included the initial technical analyzes, as well as cost estimation of the floating infrastructure and the overall design of the floating site and buildings in collaboration with Panko. During the works, Bluet was also asked to design the overall facility so, that it can be deconstructed and moved to another destination, if needed.

In this *Technical Concept presentation* Bluet gives options, design ideas and needs for the technical feasibility as well as the next steps of the project proceedings for project realization.

The presentation includes the concept design of the overall project and initial analyses of chosen floating infrastructures and pool types.

The initial analyses shows, that the project is feasible and with chosen floating foundation solutions the floating area should be able to be built without a breakwater. Final conclusion of this will although need more site analyses and data about the water site conditions. All final design and structural solutions with more detailed transferability study will be done during further design and engineering works.

The project will continue following the initial schedule on page 35. Before moving forwards to deeper studies and design works, it is important to handle the initial temporary building permit for 10 years period to assure, that the municipality is behind the project. It is estimated, that the municipality would give their initial answer during September 2022.



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CURRENT STATUS



ELITE HOTEL, NACKA SWEDEN

Site

- Open, ferry traffic passing by, might need additional protection
- Commuter ferry line (pendelbåt linje 80-82) next to the site, needs to be taken into consideration and might need additional protection and permitting from Trafikverket
- Site study essential (wave, wind, soil, depth, tidal swings, current and ice conditions), can be done in phases

Permitting process, initial building permit process and water area permit

- 1st phase, Nacka kommun, bygglovenheten
  - Initial building permit, temporary building permit for 10 years
- 1st phase Länsstyrelsen
  - *Samrådsunderlag, undersöknings-* and/or *avgränsningssamråd*, *samrådsredogörelse*
  - Decision from Länsstyrelsen, *betydande* or *icke betydande* environmental affect
- 2nd phase, Mark- och Miljödomstolen
  - *Miljökonsekvensbeskrivning* based on the decision from Länsstyrelsen
  - Decision, *tillstånd för vattenverksamhet*





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PROJECT SITE REQUIREMENTS & BREAKWATER OPTIONS IF NEEDED

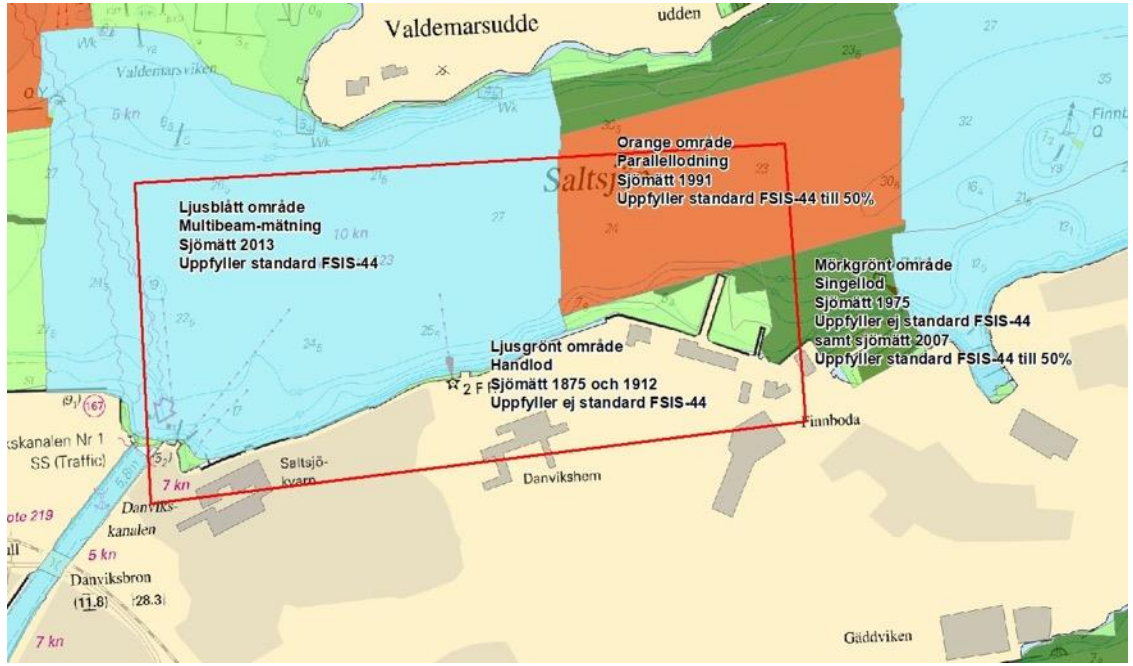
The project site must be compatible for floating construction. Site requirements for floating solutions are quite accurate and area must be sheltered and well protected from waves and wind and have suitable depth.

Suitable and recommended minimum water levels are -2m. Maximum water level is not that critical, and limitations comes from the used anchoring methods, the deeper, more costs and at certain level floating solutions are not cost-effective anymore.

The significant wave height must remain under 0,3m in all conditions to be able to install floating platforms steadily and user-friendly way. The known current situation is that the project site has waves especially from the passing ferries and taxi boats.

Following the initial studies and analyses by Bluet, it is concluded that with the massive foundation structure, the need of breakwater could be avoided.

Full wave study has not yet been conducted, full site study (waves, wind, soil, depth, tide, current, ice conditions) are all needed to study during the next work phase.



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2. ELITE HOTEL
FLOATING SQ SPA CONCEPT

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FLOATING SOLUTIONS

LAYOUT



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SQ Sauna & Spa

ELITE HOTEL MARINA TOWER

SITE

- Total platform area ca. 1850m²
- Terrace deck area ca. 920m²
- Rooftop terrace area ca. 490m²
- Biofiltering field on park

AMENITIES

Main Sauna Building ca. 400m²

- Panorama Sauna x 2 (30+10 persons)
- Sauna Bar & Lounge
- Inside Pool
- Dressing Room x 2 (48+48 lockers)
- Showers x 10
- Toilet 6+1 disabled
- Rooftop Terrace
- Sunset Stairs

Private Sauna Building ca. 85m²

- Panorama Sauna (12 persons)
- Lockers
- Showers x 2
- Toilet x 2
- Private Lounge

Pools

- Heated Pool (10x20m)
- Natural Pool (7,5x10m)
- Hot Pool (5x10m)
- Inside Water Couch (10x1,8m)

Access Bridges

- Main Access
- Service/Disabled Access
- Rooftop Access

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FACILITIES & DIMENSIONS



TOTAL PLATFORM AREA ca. 1850m2

TERRACE DECK AREA ca. 920m2

MAIN SAUNA BUILDING ca. 400m²

- Panorama Sauna x 2 (30+10 persons)
- Sauna Bar & Lounge
- Inside Pool
- Dressing Room x 2 (48+48 lockers)
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PRIVATE SAUNA BUILDING ca. 85m²

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- Hot Pool (5x10m)
- Inside Water Coach (10x1,8m)

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INSPIRATION OF ARCHITECTURAL ELEMENTS



















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INSPIRATION OF INTERIOR

















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VISUALIZATION



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3. PANKO SERVICES & BUILDINGS

BLUET®
FLOATING SOLUTIONS

PANKO
CONCEPT

Timber Products with a Service Concept

Panko Concept® offers sustainable and modular timber buildings, high-end architecture, Scandinavian design and innovative solutions with a ready-made service concept. Panko products - different Saunas, Kitchen-Restaurant and Bar & Lounge - enable a holistic customer experience and various business opportunities. Each product is functional and a complete concept by itself, and several products can also be combined together to create different complexes.

With our operating model, all stages of the project from architecture to technical solutions and experiential customer experience has been designed with finishing touches. Due to the modular structure of Panko products and seamlessly combined areas of design, our projects are premium quality and cost-efficient.

The projects are always customized according to the needs of a purchaser. What is even more, we bring unlimited possibilities for floating construction solutions together with our experienced partner.











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PANKO
CONCEPT

Let's Create a Greener Legacy Together

Panko green buildings are prefabricated, modular and ready-made with architecture and high-end design. These solutions, together with rapid and efficient manufacture and assembly, also contribute to more responsible products and processes. Biophilic design in our products helps to restore the connection with nature and increase overall well-being.

WHY TO CHOOSE PANKO

- Innovative, rapid and cost-effective construction project
- Sustainable and durable modular timber buildings
- Ready-made solutions with high-end architecture and design
- Premium products with a complete service concept
- Floating solutions with unlimited possibilities



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4. BLUET® FLOATING POOLS

BLUET®
FLOATING SOLUTIONS

BLUET® FLOATING SWIMMING POOLS

SQ Elite floating spa concept consists four pools

Three Outdoor pools:

2 * Bluet® Heated pools
- Bluet barge pools with underwater technical containers
- Heated infinity edge pool 10*20m in the main barge
- Heated, Hot spa pool 5*10m, separate small barge next to private sauna

Bluet® Natural water pool
- In the main barge and modified from Bluet Barge pool with optional biofiltering system

Inside the sauna building:
Heated ”couch pool” with a view
- Modified from Bluet® multiuse pool



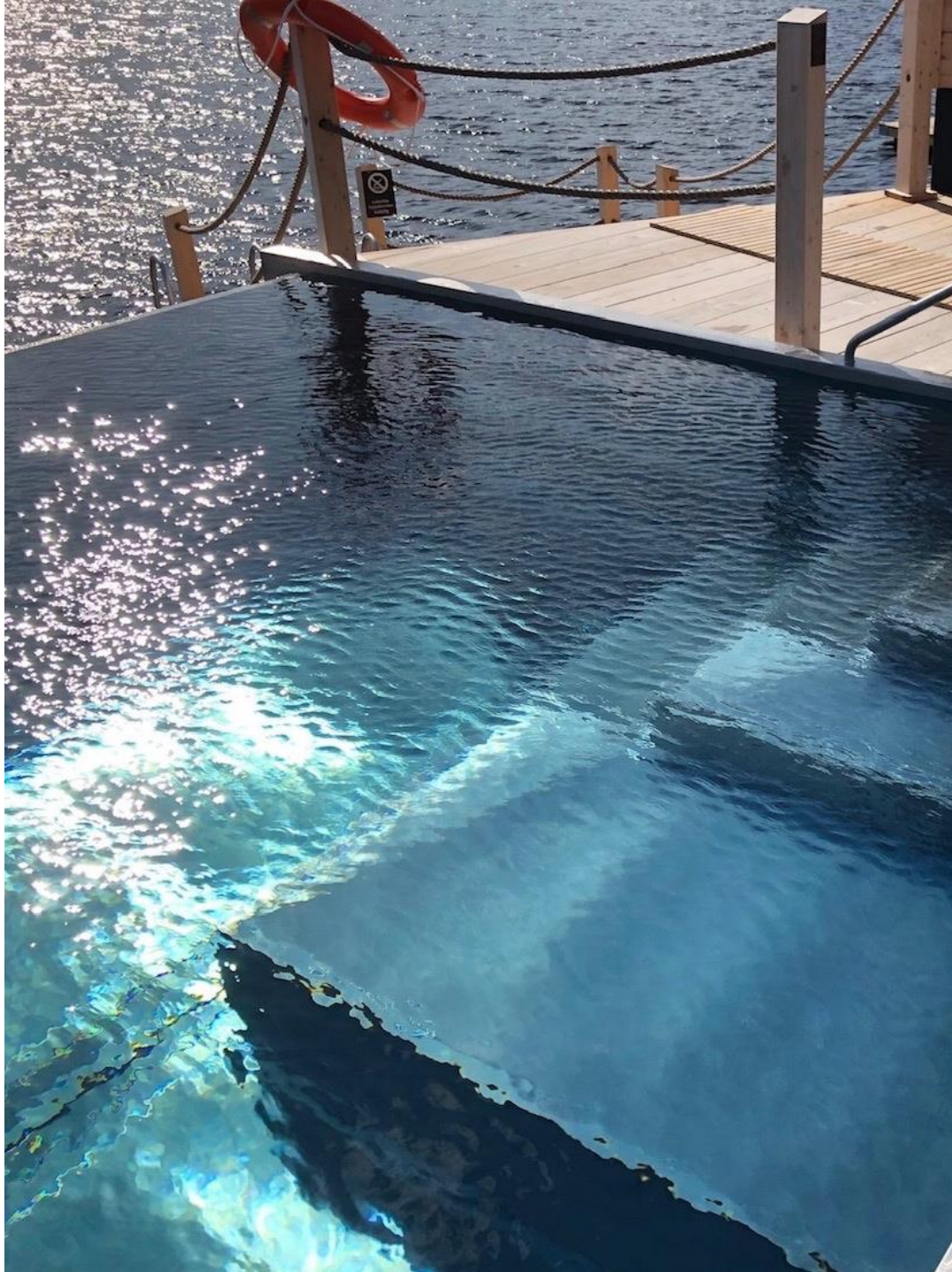


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BLUET® FLOATING SWIMMING POOLS

- The pool in the steel barge foundation is made during the pontoon manufacturing phase. There will be underwater technical spaces (technical container) inside the barge (main barge and smaller barge next to the private sauna) where the pumps and filtering systems will be located.
- The pump of the pool is in the technical room. This makes the maintenance easier, as all the technical equipment are in the same place and can be easily accessed.
- The pools can be coated with clients' selected material e.g., ceramic tiles, liner bag etc.



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5. BLUET® FLOATING INFRASTRUCTURE

BLUET®
FLOATING SOLUTIONS

BLUET®
FLOATING INFRASTRUCTURE

Bluet® floating infrastructure is more than just a floating pontoon foundation. Bluet infrastructure solution includes a modular and scalable foundation solution with pontoons, technical connections, and an element-deck design.

The final product is delivered as a turnkey solution, customized for the location, purpose of use and requirements of the project, including installation and anchoring, with extra attention paid to buoyancy and stability.

Bluet® floating infrastructure solution planning and product delivery includes:

- Bluet planning and design supervision service
- Delivery of the chosen pontoon structure solution
  - Floating foundations for houses and sundecks (pontoons, steel frame, deck element, railings, safety devices, etc.)
  - Assembling the foundation and adapting for compatibility with prefab installation
  - Towing the floating solution to site and making required municipal connections (water, sewage, electricity, data cables)
  - Anchoring delivery and installation
  - Hand over inspection and maintenance manuals
  - Product warranties (2 yrs)
    - Optional: longer warranty period by a yearly maintenance contract eg. once ice has melted, inspections and required repair works





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PONTOONS & ANCHORING

Bluet infrastructure solution includes a modular and scalable foundation solution with pontoons, technical connections, and an element-deck design (and delivery, if needed).

- The floating foundation to Elite will be created from two **Bluet® concrete Megapontoons** (height 1,5-2m) and **one Steel barge foundation** to secure high comfort and stability and allow underwater technical spaces for needed pool technology and MEP-services

- BLUET® Megapontoon is especially designed to be used in either large projects, where there is a need for vast quantities or due to wave situation, where size matters. Megapontoon is always specifically designed to fit the project needs and manufacturing will happen locally nearby the project site.

- Megapontoon is a large casted piece, being more rigid, and the balancing of the overall floating structure is quicker. The ballasting tanks are in the corners of the pontoon.

- The unit will be anchored in place either with traditional chains or piles. The anchoring will be designed in more detail during the upcoming phases when more information on the location is available

- The initial plan is to install the floating unit approximately 3m from the quay





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6. MEP-SERVICES

BLUET®
FLOATING SOLUTIONS

MEP - TECHNICAL CONNECTIONS AND MAINTENANCE (INITIAL)

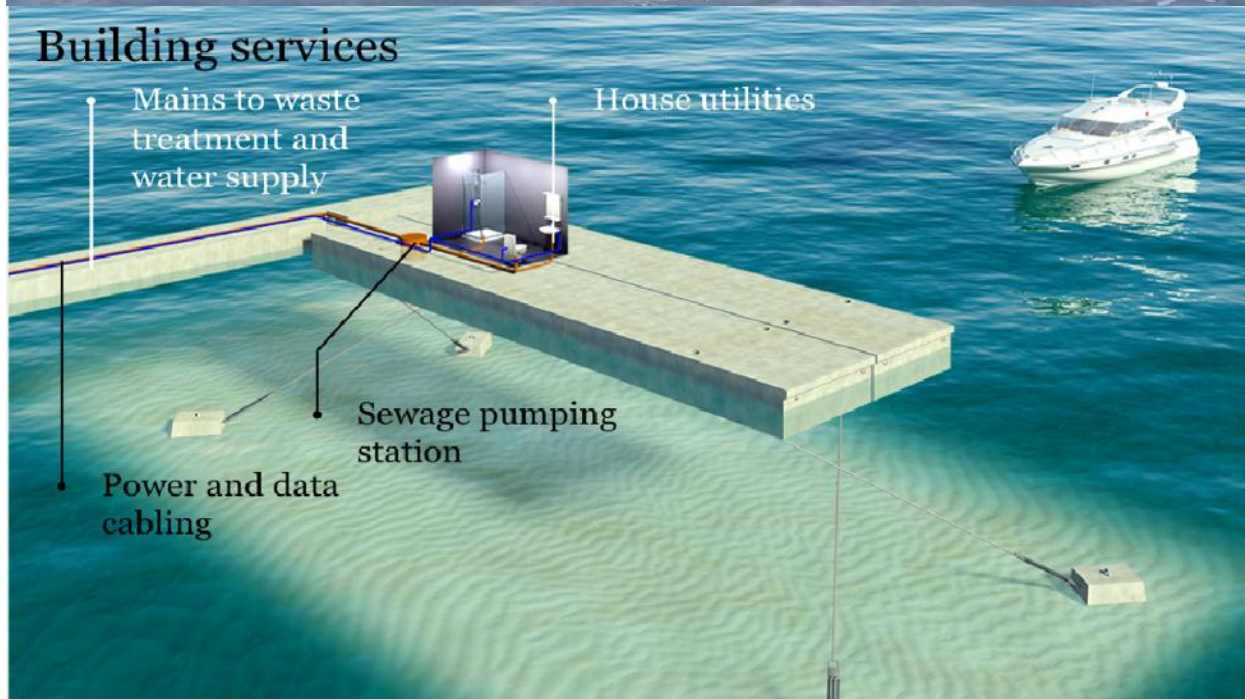
Floating structures are connected to the municipal system: water, sewerage and electricity networks.

Durable and flexible cables are used and a centralised sewage pump station will be located in the floating area and connected into the sewage drain

All technical cable are thermally insulated and positioned in such a way that they are resistant and flexible in the movements of the floating structure, e.g. as a result of variation in the height of the water level

Technical connections are brought to the quay wall below the access bridge.





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BLUET® TECHNICAL SPACE

Initial MEP systems description

The technical installations and services are placed inside the technical spaces, which will be fitted inside the barges and the megapontoon structure.

Indoor sewer system and pump is recessed under the storage area. The double pump system (illustrated in the picture) can be accessed through an access hatch in the storage.

The pumping unit has two pumps for reliability, only one pump is used at a certain time. The pump has cutters so that it shreds too big particles. It also hosts an integrated pressure sensor, which adds even more reliability. The water inlet is equipped with a water cut-off valve in case of pump failure

The main switch board, inverters, batteries etc. are also located in the technical space. Water supply and sewage is connected to the infrastructural system. Final options will be decided later according to project details, local requirements and client preferences.



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7. EXAMPLE ACCESSORIES

(more information in initial building specification)

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FLOATING SOLUTIONS

DECKING OPTIONS

OrganoWood®
OrganoWood modified decking timber has been developed to withstand harsh environments with the help of an award winning and patented technology for the modification of biofibres. OrganoWood is modified with silicon that gives a long life and a silver-grey hue. The patented technology give the timber rot protection, creates a water-repellent surface and improves the flame protection. OrganoWood decking timber is an environmentally classified and alternative to traditional pressure impregnated timber. OrganoWood decking timber contains only substances that can be returned to the natural cycle. All substances in the timber are classified as environment-friendly. Warranty for Organowood is 10 years. More information: https://organowood.com/en/

Kebony®
Kebony is sustainable, durable and requires no maintenance beyond normal cleaning. Kebony's performance has been proven in a variety of applications including decking and cladding. Kebony timber is the right choice of material for external, above-ground applications where durability, environmental friendliness and low demands on maintenance are important. Kebony is produced from sustainably sourced lumber and bio-based chemical input. The chemicals are polymerized to a stable solid inside the wood fibers, yielding a stable, hard and durable wood material. The wooden boards can be processed with normal hardwood tools and machinery. Warranty for Kebony is 50 years. More information: https://kebony.com/en/content/technology

Accoya®
Accoya is modified timber in which a process called acetylation, a patented technology, enables it to resist rot, defy the elements and stay strong for decades. Guaranteed for 50 years above ground and 25 years in ground or freshwater, its performance and properties are remarkable. Accoya wood is proven to deliver outstanding results as timber for decking in a wide range of decking projects from around the world. It can be machine profiled to suit the project specifications and comes with a 50-year warranty against rot and decay. This wood is ideal for the design of durable and stable decking, where the highest performance of wood is required. More information about Accoya https://www.accoya.com/uk/products/decking/

Lunawood®
Lunawood Thermowood Composite is a beautiful, high-quality composite material for all outdoor applications in which a long service life, easy maintenance and a modern appearance are required.This material is the only composite board designed and manufactured in Finland. It is also a truly wood-based material, which is evident from its fragrance. Lunawood Thermowood Composite contains 65 % of Thermowood fibre which brings with it all of the special properties of Thermowood, including improved dimensional stability and non-toxicity. These features also make Lunawood Thermowood Composite an ecological choice. More information: https://lunawood.com

Options to be decided later according to local possibilities and client preferences. Local wood can also be used.



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RAILING OPTIONS





Steel Web net

The web net creates an elegant pool fence. The highly defined intersections of lock crimp is unique among other weavers and has always been a favorite for railing infill panels as well as fence material. The lock crimp weave style is highly versatile with wire diameter, spacing, and alloy all design characteristics that can be changed to suit the project.

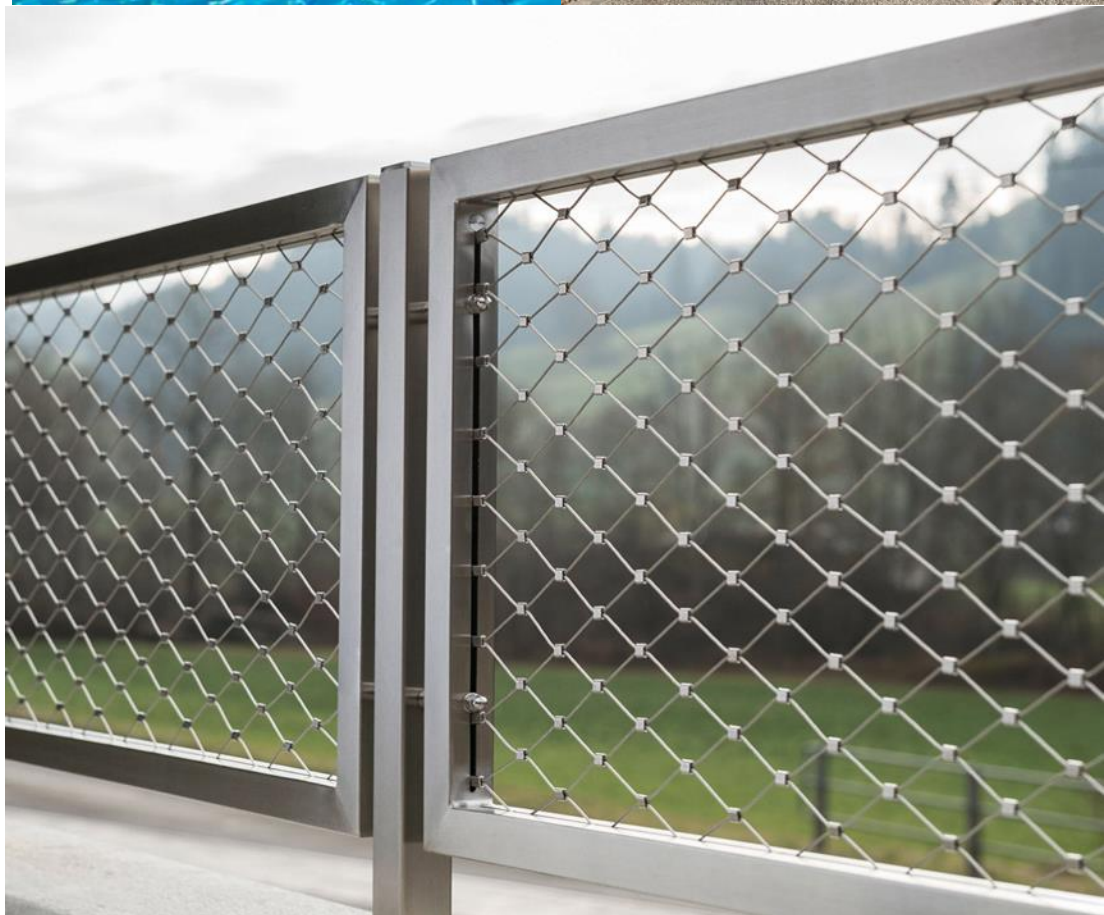
Vertical steel slat railing

Vertical steel slat railing is a safe and durable option and thus recommended in our design to be used especially on the access piers. The steel slats need to be in vertical position to avoid climbing over the rails.

Glass

Railings around the platform are designed with glass. Glass is a stylish and timeless option that highlights the feeling of floating and closeness of water.
This is although more expensive solution and is more difficult to be kept clean in salty sea conditions.

Options to be decided later according to client preferences.



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LIGHTING OPTIONS







Standard deck lights, top left
Light pole, top middle

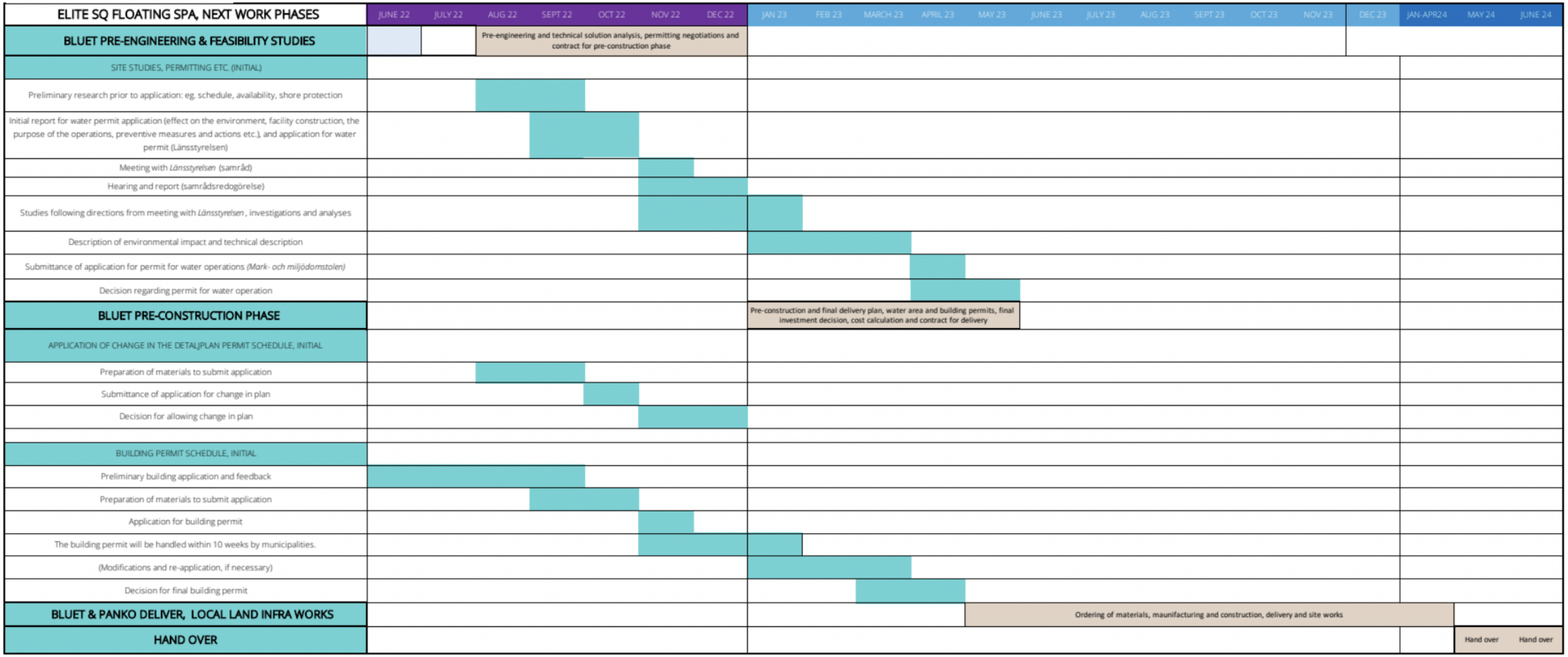
Standard pool lights, left
RGB-Pool lights, right

The lights can be any model, because same lights made for outdoor use work also in Floating Construction
Example options and other accessories listed in the concept design and building descriptions, all to be decided later according to client preferences.



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INITIAL SCHEDULE



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PANKO
CONCEPT

Aleksi Sievänen
Designer, Panko Concept
aleksi@pankoconceot.com

Johan Sund
Hotel Director

BLUET

Tytti Sirola
CEO, Co-Founder, Bluet Ltd
+358 44 5181058 / tytti@bluet.fi