

ILULISSAT

GOVERNMENT OF GREENLAND

QAASUITSUP MUNICIPALITY

REALDANIA

INTERNATIONAL **DESIGN COMPETITION**

ICEFJORD

ILULISSAT ICEFJORD CENTRE

GREENLAND

**ASSESSMENT
PANEL REPORT**

2016



**... a small building
in a magnificent landscape...**

**... featuring attractive and
sustainable architecture
of international standing ...**

FROM THE COMPETITION BRIEF

INTERNATIONAL
DESIGN COMPETITION
2016

ILULISSAT
ICEFJORD CENTRE
GREENLAND

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THE TEAMS AT WORKSHOP IN ILULISSAT



THE WINNING ENTRY



The assessment panel was enthusiastic about **THE UNIQUELY SIMPLE AND AESTHETICALLY PLEASING BUILDING** proposed in entry 6 and was therefore unanimous in selecting this entry as the winner of the competition.

ASSESSMENT PANEL REPORT

JUNE 2016

THANK YOU FOR THE ENTRIES

THE GOVERNMENT OF GREENLAND, QAASUITSUP MUNICIPALITY and **REALDANIA** launched a restricted international design competition in October 2015 followed by a negotiated procedure for the design of the Icefjord Centre in Ilulissat on the west coast of Greenland.

Three teams were preselected and three teams were selected via a prequalification, where 26 teams from Japan, Sweden, Norwegian, Ireland, Island, Finland, Greenland and Denmark were interested. They were all highly competent teams and we were very proud of and pleased about their interest.

After the assessment of the six entries submitted in Stage 1, a unanimous assessment panel agreed on selecting three entries as equal winners. The three teams behind the entries were subsequently invited to participate in a negotiated procedure (Stage 2). The entries are characterised by high architectural qualities, and they all developed favourably during the interesting and constructive negotiation procedure.

After completion of the negotiated procedure, Entry 6 was selected as the final winner of the competition. The entry was prepared by **TEAM DORTE MANDRUP ARKITEKTER, DENMARK.**

The assessment panel would like to thank all six teams for their entries, each of which has provided valuable input to the process and the final outcome.

We look forward to realising the attractive winning design for the Icefjord Centre.



GOVERNMENT OF GREENLAND

QAASUITSUP MUNICIPALITY

REALDANIA

COMPETITION FACTS

THE COMPETITION

The competition was launched on 9 October 2015 by:
The Government of Greenland
The Municipality of Qaasuitsup
Realdania.

Competition type

The competition was a restricted international design competition with six participants followed by a negotiated procedure.

Client

Realdania

Competition adviser

Arkitektkonkurrencerdk ApS

COMPETITION PARTICIPANTS

The following teams were selected for participation in the competition (in alphabetical order):

Team ARKÍS ARKITEKTAR, Iceland
Team DORTE MANDRUP ARKITEKTER, Denmark
Team KENGO KUMA AND ASSOCIATES, Japan
Team RINTALA EGGERTSSON ARCHITECTS, Norway
Team SNØHETTA, Norway
Team STUDIO OTHER SPACES, Germany

ASSESSMENT PANEL

Lars Autrup, head of project, Realdania, chair of the jury
Thue Christiansen, artist, representative of the Government of Greenland
Ono Fleischer, Municipality of Qaasuitsup, Greenland
Hans Peter Svendler, special adviser
Design professionals:
Jan Søndergaard, professor, partner, KHR Arkitekter, architect
Torben Schønherr, senior partner, Schønherr A/S, landscape architect
Carsten Rode, professor, DTU Byg, engineer

Advisers to the assessment panel

Jørn Skov Nielsen, deputy minister, Government of Greenland
Tina Jensen, head of department, Government of Greenland
Jens Mikkelsen, head of Construction and Environment, Municipality of Qaasuitsup, Greenland
Lars Peder Pedersen, senior project director, Rambøll Denmark
Jørn Hansen, head of office, Sisimiut, Rambøll Greenland
Peter Fangel Poulsen, head of project department, Realdania By og Byg
Frants Frandsen, project manager, Realdania By og Byg
Johan Carlsson, exhibition adviser, JAC Studios

Secretary to the assessment panel

Anne-Mette Bølling, Arkitektkonkurrencerdk ApS

FEE, STAGES 1 AND 2

All participating teams received a fee of EUR 50,000 exclusive of VAT after the announcement of the result of Stage 1.

All participants in Stage 2 submitting a scheme adjusted as requested will receive a fee of EUR 50,000 exclusive of VAT after announcement of the result of Stage 2. The fees will be paid after the official announcement of the competition result.

ASSESSMENT CRITERIA, STAGE 1

Entries were assessed on the basis of their overall ability to meet the vision defined, as well as the wishes and requirements set out in the competition brief.

Entries were especially assessed on their ability to

- optimally realise the overall vision of presenting and interpreting the unique icefjord and its natural surroundings
- create a unique icefjord centre that is worth a journey in its own right
- create a building that is sustainable and adapted to the harsh, dramatic nature of the site



THE TEAMS ON SITE VISIT TO ILIMANAQ

JOINT WINNERS STAGE 1

Entry 3: Team KENGO KUMA AND ASSOCIATES, Japan

Entry 4: Team STUDIO OTHER SPACES, Germany

Entry 6: Team DORTE MANDRUP ARKITEKTER, Denmark

NEGOTIATED PROCEDURE

The negotiated procedure had four primary objectives:

1. Upgrading and development of the schemes proposed by the selected entrants based on the remarks and wishes expressed by the assessment panel and further integration of the exhibition concept and the individual competition entry.
2. Determination of the entries' financial robustness in terms of realising them within the budget set aside for the project, including ensuring their technical quality and achieving the desired sustainability profile.

3. Identification of the project organisation offered by each individual entrant in order to ensure that the organisation would be sufficiently competent to manage the subsequent development and implementation process.
4. Negotiation of contractual matters, including consultants' fees.

ASSESSMENT CRITERIA, STAGE 2

The award criterion applied after the negotiated procedure was the most advantageous offer in terms of price and quality.

WINNER STAGE 2 - FINAL WINNER

Entry 6: Team DORTE MANDRUP ARKITEKTER, Denmark.

ANNOUNCEMENT OF THE RESULT

21 June 2016.

COMPETITION OVERVIEW

STAGE 1

ENTRY 1: TEAM RINTALA EGGERTSSON ARCHITECTS



ENTRY 2: TEAM SNØHETTA



ENTRY 3: TEAM KENGO KUMA AND ASSOCIATES



ENTRY 4: TEAM STUDIO OTHER SPACES



ENTRY 5: TEAM ARKÍŚ ARKITEKTAR



ENTRY 6: TEAM DORTE MANDRUP ARKITEKTER



STAGE 2

WINNER

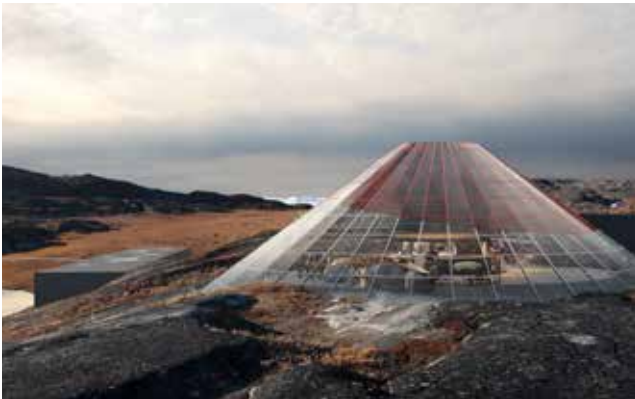
ENTRY 3: TEAM **KENGO KUMA AND ASSOCIATES**



ENTRY 6: TEAM **DORTE MANDRUP ARKITEKTER**



ENTRY 4: TEAM **STUDIO OTHER SPACES**



ENTRY 6: TEAM **DORTE MANDRUP ARKITEKTER**



COMPETITION ASSIGNMENT

ILULISSAT ICEFJORD CENTRE

– A UNIQUE PLACE ON OUR PLANET

Ilulissat Icefjord is located at Disko Bay on the west coast of Greenland, 250 kilometres north of the Arctic Circle. The icefjord is an area of outstanding natural beauty where visitors can see one of the world's most active calving glaciers at close quarters, and where global climate change is spectacularly evident right in front of their eyes. In 2004 the icefjord at Ilulissat was included in the UNESCO World Heritage List because of the area's unique natural scenery and outstanding glaciological features.

This unique place in the magnificent Greenland landscape attracts great attention and interest from people all over the world, and the Government of Greenland keenly wishes to be able to protect the site while at the same time presenting it to visitors.

The Icefjord Centre will provide visitors with an engaging exhibition that communicates knowledge, facts and experiences relating to the Ilulissat Icefjord. Through the common theme of ice, the exhibition will explore how ice conditions in Greenland and Ilulissat are intrinsically linked with geoscience and climate change. The centre will also focus on Greenland and the cultural history of its people.

COMPETITION ASSIGNMENT

Entrants were to present proposals for a new Ilulissat Icefjord Centre that can serve as a framework for research, communication and interpretation.

- Entrants were to prepare a **SITE PLAN** for the competition area, showing the location of the Icefjord Centre as well as outdoor areas adjacent to the centre.
- Entrants were to design a **BUILDING** with a total gross floor area of approximately **900 M2** and illustrate how its rooms were to be organised.
- The construction budget set aside for the realisation of the competition scheme, including consultants' fees, is **EUR 7.7 MILLION**. The total budget for the Icefjord Centre is **EUR 15 MILLION**.

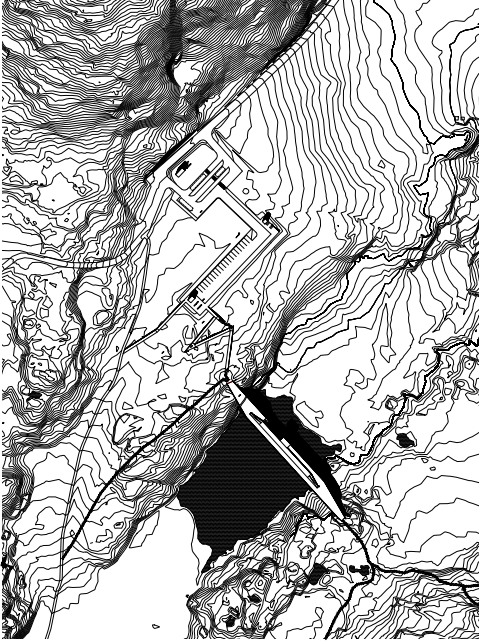


GENERAL REMARKS

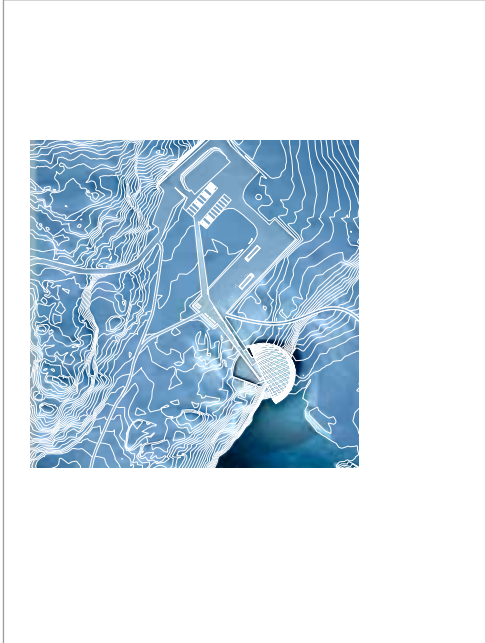


The combination of the competition brief's openness to interpretation and the complexity of the assignment has resulted in **GREAT DIVERSITY** between the individual entries.

ENTRY 1



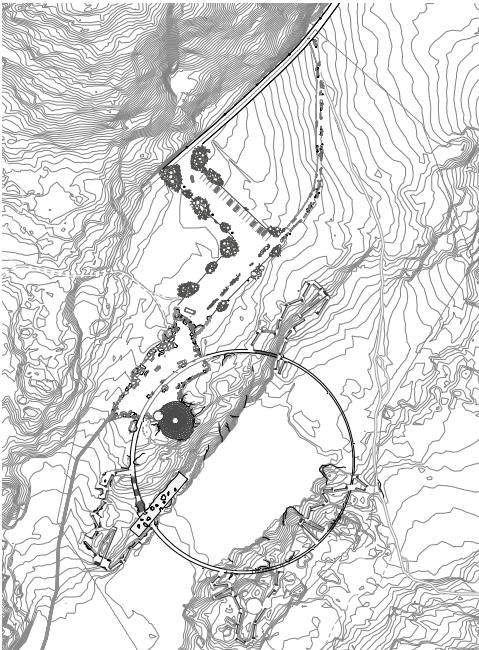
ENTRY 2



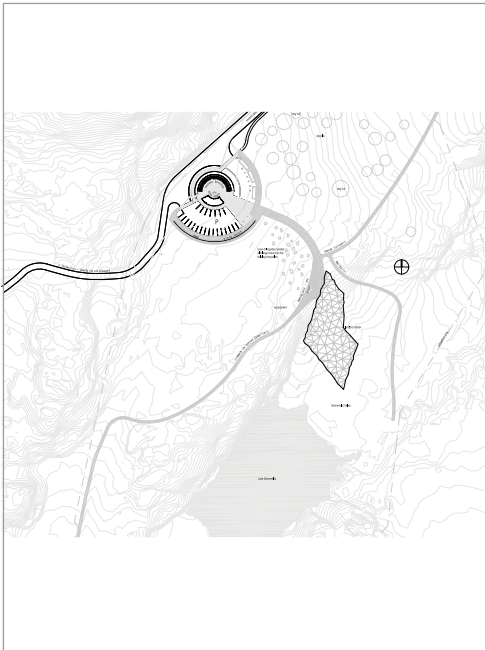
ENTRY 3



ENTRY 4



ENTRY 5



ENTRY 6



ASSESSMENT PANEL

GENERAL REMARKS

GENERAL REMARKS – STAGE 1

In its review of the entries submitted in the competition, the assessment panel greatly appreciated both the quality and the diversity presented. The combination of the competition brief's openness to interpretation and the complexity of the assignment has resulted in great diversity between the individual entries.

Before it began its assessment, the panel expected the entrants to display different approaches to the overall criteria set out in the Ilulissat Icefjord Centre competition brief. During its actual assessment, the panel attached particular importance to the entrants' ability to fulfil the vision of creating a unique building whose architecture combines contextual adaptation to the surrounding landscape with dynamic presentation of the global relationships of the icefjord.

This special focus guided the assessment procedure. At first, the focus was on the obvious diversity of the entries submitted, the objective being to decode the schemes and thus identify the many complex contexts involved in the assignment.

Despite the different interpretations of the brief presented by the entrants, it turned out that there was a certain overlap with regard to the overall contextual ideas illustrated in the entries. The entries can be divided into three thematic categories that can briefly be described as follows:



The entries can be divided into **THREE THEMATIC CATEGORIES**: 'Building in the Landscape', 'Building on the Landscape' and 'Objects in the Landscape'.

Entry 1 and **Entry 3** fall under the category termed 'Building in the Landscape', while **Entry 2**, **Entry 5** and **Entry 6** can be defined as 'Building on the Landscape' and **Entry 4** can be categorised as 'Objects in the Landscape'.

The various categories helped the panel make its assessment procedure more specific. The panel's discussions focused on identifying the strengths and weaknesses of the various landscape connections proposed and on identifying contextual experiences, including architectural adaptation and the potential for communicating and presenting content.

Having identified the various aspects, the panel looked at how the various entries met the predefined assessment criteria in order to enhance the assessment of each entry, individually, in relation to its category and – perhaps most importantly – in terms of the perceived qualities of all the entries.

Entry 1 and **Entry 3** are designed as structures in the landscape. In both entries, the proposed location of the centre is at Sermermiut Lake at the northern end of the Sermermiut Valley. **Entry 1** is designed as a bridge that spans the northern end of the lake. The scheme fits into the existing system of paths and the current infrastructure. It deserves special mention for the extent to which it takes account of the landscape. However, it is the opinion of the panel that this results in unfortunate anonymity, failing to enter into a dialogue with the unique context. This consideration is transposed to the proposed architectural design, where it also results in anonymity, without the required identity that would make the centre worth a journey in its own right. The spatial organisation of the scheme provides good, flexible exhibition spaces but, as is the case for the exterior of the building, the spatial perception does not match the dramatic character of the natural scenery at the site.

Entry 3 is located to the north of Sermermiut Lake across Sermermiut Valley, where the centre is laid out as a loop in the existing system of trails and paths. The entry deserves special



The panel's discussions focused on identifying **THE STRENGTHS AND WEAKNESSES** of the various landscape connections proposed and on identifying contextual experiences, including architectural adaptation and the potential for communicating and presenting content.

mention for its architectural concept, which combines architecture and functionality in a compelling whole. The building is literally shaped out of the landscape, and a walk through the building will therefore feel like walking in a continuation of the landscape. The rooms in the building, including rooms for exhibitions, are organised on the basis of a concept of creating landscape-like movement. The entry deserves particular mention for its fine qualitative aspects in terms of the combination of flows, spaces, exhibition and landscape. The entrant's interpretations of how the potential of the surrounding landscape can be communicated contains the germ for creating an architectural ambience that will appeal to people all over the world as a destination. Unlike **Entry 2**, **Entry 3** manages to become part of and interpret the potential of the site.

ENTRY 2, **ENTRY 5** and **Entry 6** feature buildings 'on' the landscape.

ENTRY 2 is situated on the rock at the north-western end of Sermermiut Valley. The entrant adopts a pragmatic approach to the existing infrastructure, albeit without giving any detailed explanation of the building's adaptation to its immediate context. It is an unresolved approach to the opportunities offered by the brief, which the assessment panel believes has rubbed off on the architectural design. It is the opinion of the assessment panel that the proposed scheme is unnecessarily conceptual. Its overall concept is based on a specific thermal technology that rejects real contextual inspiration. The building's interior also seems to lack insight, which is reflected in the failure to provide sufficient variation in exhibition design options. The proposed building is unnecessarily closed to the outside and will be perceived as an alien element both at the site itself and in the greater context. The scheme thus does not succeed in communicating any contextual ambience that would be worth a journey in its own right.

Entry 5 situates the centre on the rock at the north-western end of Sermermiut Valley, like **Entry 2**, and likewise does not

provide any explanation of its contextual location. However, this entry is clearly based on metaphors referring to historically related contextual elements. Like **Entry 2**, **Entry 5** bases its overall architectural design on conceptual considerations and reflections. The architecture proposed is an empathetic verbalisation emanating from the entrant's aspirational interpretation of the complexities of the competition brief. It results in a design that both in its exterior appearance and its interiors, and also in its suggestions for exhibition principles, is seen to lack the necessary architectural prioritisation. In the same way as **Entry 2**, this entry seems contextually unresolved and also without the architectural stringency that a tourist attraction requires.

Entry 6 is situated on the rock as a link between the town of Ilulissat and the Icefjord. The entrant has selected a location on the bedrock in Sermermiut Valley where the fjord and the landscape are experienced as a combination. The entry deserves special mention for its deep empathy with the landscape. The architecture creates a particularly poetically harmonised and unified entity that taps the site's potential and manages to make building, exhibition and landscape merge. This entry brings forth a unique ambience that in a compelling way displays the options offered by a combination of place, architecture and communication into an attractive architectural whole that will help make the centre an attractive destination.

Entry 4 stands out from all the other entries because it proposes several buildings, all of which feature a unique design and are part of a coherent, serial building complex. The design illustrated is guided by the entrant's questioning of the brief's general understanding of the centre as a single building. The entrant has also broken with traditional ideas relative to conventional perceptions of having a spatial exhibition setting to communicate, educate and interpret. Instead, the entrant lets visitor observations form part of the whole as a factor that links together the place and the universe around it. In addition to the large ring of landscape, the entrant suggests four unique architectural in-

ASSESSMENT PANEL

GENERAL REMARKS

terventions that highlight, measure, frame and include the context as universal relics in time and space.

The entry deserves special mention because of its unpredictable and unique response to the brief. The communication and interpretation approach illustrated differs from that of the other entries. The context is experienced through a number of elements, all of which are part of a greater narrative that reaches out into the universal context. It is an architectural composition of analogue and technological traditions that focus on the context and on the importance of the place to our existence. It is an entry whose architectural idiom and presentation, it may be assumed, people would travel far to experience.

Costs

All entrants have submitted cost calculations that show the construction cost budget. The budgets presented in **Entry 1** and **Entry 2** are below the budgetary framework. The budgets set out in the other entries appear to have difficulty staying within the available budget, but it is the opinion of the assessment panel that all entries can be modified and thus stay on budget.

A unanimous assessment panel decided to select **Entry 3**, **Entry 4** and **Entry 6** as joint winners of Stage 1 of the design competition.



All three entries in Stage 2 deserve plaudits for their **ABILITY TO ADAPT** to the challenges posed by the sensitive landscape

GENERAL REMARKS – STAGE 2

Entries 3, 4 and **6** were selected for participation in the second stage of the competition. For use in the entrants' work in this stage, the jury, assisted by the competition advisers, prepared a 'work-on note' with general suggestions for clarification of certain aspects or requests for further documentation of compliance with the brief. The intention was to let entrants benefit from the discussions that took place at the assessment meetings so that the work performed in Stage 2 could contribute as well as possible to each individual team's design in the final stage of the competition.

All three entries deserve plaudits for their ability to adapt to the challenges posed by the sensitive landscape, which each entrant interprets and illustrates individually in the material presented in Stage 2.

Entry 4 does so by putting a distinctive human stamp on the site that serves as a universal comment on the place and the planet.

Entry 3 and **Entry 6** take due account of the site by keeping interventions to a minimum, thus showing great respect for the landscape. In Stage 2, the team behind **Entry 3** was asked to work on further development of the scheme's architectural and functional robustness and to simplify the tectonic design of the facades in the process, including reducing the glazed areas with a view to optimising operations and maintenance.

The entrant behind **Entry 4** was asked to specify and document the buildability of the scheme proposed. The obvious artistic qualities of the scheme posed a challenge to functionality, for example with regard to the location of clearly defined rooms. Given this, the assessment panel asked the entrant to illustrate the location of such spaces in the building complex as a whole.

As regards **Entry 6**, the entrant was asked to supplement the simple overall concept illustrated with general documentation

ASSESSMENT PANEL

GENERAL REMARKS

of the functionality of the scheme, in particular the principles governing the layout of spaces including the cores, the actual exhibition area and, in that connection, the relationship between indoors and outdoors. The entrant was asked to specify the spatial approach to the building more sharply, focusing on outdoor exhibition features. For reasons of operations and maintenance, the assessment panel also asked the entrant to reduce both the size and the format of the large glass facades.

COST

Thorough calculations have been made relative to all three schemes that were further developed. **Entry 3** is judged to be about 30% above budget, while **Entry 4** is judged to be at least 45% above budget and **Entry 6** is judged to stay within budget.

CONCLUSION

In conclusion, it is worth noting that both **Entry 4** and **Entry 6** provided inspiration for the further process because of their surprisingly poetic approach to the assignment. **Entry 4** also surprised the assessment panel with its unique interpretation of the brief, which made it stand out conceptually from the other entries.

However, in Stage 2 **Entry 4** did not maintain or develop the conceptual robustness needed for further elaboration of the scheme and was therefore seen as being in worrying conflict with the otherwise inspirational approach illustrated in Stage 1. The situation is very different as far as **Entry 3** is concerned. Like **Entry 4** and **Entry 6**, this entry stood out in Stage 1, but this scheme proved to have the required architectural robustness and potential, which in Stage 2 was developed very well in all respects. Despite this, **Entry 3** gave rise to major concern in the assessment panel, since it still failed to present compelling tectonic solutions that substantiated the likelihood of financial and logistic feasibility.

The architectural robustness of **Entry 6** was also put seriously to the test in connection with the development of the design in

Stage 2. It is the opinion of the assessment panel that the design resulting from the work carried out in Stage 2 is not consistent with the strength of the simple architectural configuration presented in Stage 1. However, unlike **Entry 4**, the architectural challenges are such that the overall architectural concept remains intact, and further development of **Entry 6** can rectify such flaws. For this reason, the assessment panel agreed to select this unique proposal for an Icefjord Centre as the winner of the competition and is convinced that the building itself will be worth the journey.



The assessment panel agreed to select entry 6 with the unique proposal for an Icefjord Centre as the winner of the competition and is convinced that the building itself **WILL BE WORTH THE JOURNEY.**

WINNING ENTRY

STAGE 1 AND STAGE 2
ENTRY 6 UPPIK
FINAL WINNER



TEAM
DORTE MANDRUP ARKITEKTER
DENMARK



DORTE MANDRUP ARKITEKTER A/S

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Architect maa Dorte Mandrup Poulsen / architect march Sonia Cohan / architect maa Johan Jeppesen / architect maa Kasper Pilemand / architect maa Rodrigo Rieiro / stud. arch. Guillem Bargues / stud. arch. Marco Ferrari / stud. arch. Gabrel Gonzalez

ARKITEKT KRISTINE JENSENS TEGNESTUE

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Architect Phd, maa, mdl Kristine Jensen / architect maa Birthe Urup Nygaard

NØHR & SIGSGAARD ARKITEKTER A/S

Palle Lindgaard

MASANTI ARKITEKTER OG INGENIØRER

Anders Dyrhave / Bjarne Munch Johansen

SØREN JENSEN RÅDGIVENDE INGENIØRFIRMA

Duncan Horswill / Andreas Bak / Jon Wedersøe Strunge

PLANNING CONSULTANT

Niels Bennetzen

CONSULTANT

Minik Thorleif Rosing

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

This entry begins with a thorough analysis of the landscape, in which the Sermermiut Valley is pointed out as an important link between Ilulissat and the Icefjord. The building is located where this link can be sensed and experienced.

The entry describes the overall connections between the town hall in Ilulissat and the new Icefjord Centre and, from there, further out on the yellow, red and green trails along which the icefjord can be experienced in different ways. A new arrival route to the centre is proposed for pedestrians and cyclists, which means separation of these road users from routes for motor vehicles. The new route follows the movements of the landscape, and a link is created immediately in front of the entrance to the centre

where visitors can choose between the different trails further into the landscape or decide to visit the centre.

A new car park is established opposite the granite wall at the former heliport. The car park and the turning area for buses and coaches are laid out within a circular shape with a diameter of approximately 40 metres. Its boundaries against the open landscape are marked by a low stone wall. To the northwest, five granite monoliths serve as information stands. The materials used are wood, stone and gravel.

ARCHITECTURE

The entry begins with a poetic metaphor that refers to the design of the building as a physical visualisation of the flight of a snowy owl across the landscape. This metaphor results in a coherent building volume designed as a twisted cross-section of a coiled plan reminiscent of a large wingspan in the landscape. A basically simple approach is applied, with the two opposite corners of the roof folding down to terrain level to be in physical contact with the landscape and the overall system of paths and trails at both short facades. Combined with a distinctive cantilevered element protruding from the rock, the twisted volume facilitates a dramatic lift out of the landscape that creates visual contact to the Sermermiut settlement to the southwest and the view of Kangia Icefjord to the south. The entrant seeks to combine the experience of indoors and outdoors with optimal flexibility in the building interiors.

Against this backdrop, the entrant proposes a free-span framework structure whose geometry follows the variations in the cross-section of the twisted building volume. The framework is kept free of fittings both on the outside and the inside. The short facades are recessed to allow natural transition to the outdoors in and at arrival areas. The longitudinal facades are illustrated as large bar-free glazed elements running from the ground to the handrail at the roof slab.

The 'free' floor level inside the building is to serve as inspiration for free flows of spaces laid out alternatively as exhibition spaces, education areas, shop, café, offices and research facilities. The spatial layout is illustrated as available exhibition areas

and recreational areas between two free-standing cores at the ends of the building. The cores are used for research, administration, service functions, etc. The predominant material in the building is wood. Seen from the outside, the building's interior is to be perceived as its facade.

EXHIBITION

Communication and interpretation begin where people arrive at the Icefjord Centre car park, from where they are led through the landscape along a system of paths and trails. At the entrance, visitors are met by an Ice Wall, which is a display wall with information about the UNESCO site and the area in general. The interior exhibition area has a central location in the building between the shop and the information desk. It invites people to follow a free flow between exhibition islands. In continuation of this flow, visitors are invited to walk to a hands-on exhibition area on an outdoor terrace. From the exhibition area, there is close visual contact with the surrounding landscape along both facades, the landscape being where visitors meet each other and where visitors meet the natural environment. The exhibition is thus part of a flow that connects exterior and interior spaces.

The scheme is based on a flow that runs across a large 'floor plan' where the exhibits and other items are to be seen as free-standing furniture. This provides great flexibility, but also leads to reconsideration of the programmatic organisation shown in this entry.

The location of the exhibition spaces between the information desk and the café should be reconsidered relative to flows and dialogue. The open facades relate excellently to the landscape but also make heavy demands on the desired open dialogue between transparency and exhibits. The entry is seen as a proposal for a sensory visitor centre in which the exhibition is a halt along the road from civilisation to icefjord.

ENGINEERING ASPECTS

The roof and floor structures are also of wood at the ends of the building, but there is no insulation between the frames and the beams. The entire roof of the building features a surface of 'pseudo-acacia', while floor surfaces are oak or bamboo. Part of the roof structure rests on bedrock, but some parts are exposed to outdoor climate conditions, as the building is suspended on the slope leading down to the lake. According to the entrant's description, the building rests on four concrete foundations at the ends of the two living and function boxes located by and large at the centre of the cross-section where the interior facilities of the building begin and end.



The twisted volume facilitates a dramatic lift out of the landscape that creates **VISUAL CONTACT** to the Sermermiut settlement to the southwest and the view of Kangia Icefjord to the south.



The panel has also noted the **ATTRACTIVE TECTONIC DESIGN** of the interface between dynamics and simplicity.

It is the opinion of the assessment panel that the windows, some of which are inclined and thus additionally exposed to weather conditions, are not optimal in terms of durability.

The entrant does not explain how snow will settle around the building, and there is no description of the discharge of precipitation or melting water close to the building envelope and its water-repellent details. Likewise, there is no information as to whether melting water may freeze and thus create dangerous situations for pedestrians walking on or around the building. At the open/partially covered elements there is a risk of snow accumulating in some places, but the entry includes no description of such a scenario and its consequences.

OVERALL ASSESSMENT

This entry testifies to good understanding of the structures of the landscape, and it uses them in the location of the centre at the edge of the Sermermiut Valley and in the design of excellent arrival routes to the centre both from the town and the landscape. The link between paths immediately in front of the centre deserves special mention in this respect, since it leads visitors into the centre and further out into the landscape in a natural way.

The car park is toned down in an attractive manner and, with its stone wall, it stands out as a special place rather than just a car park. However, the assessment panel is somewhat concerned that the wall may cause banks of snow to form, and another way of marking the boundaries of the car park should therefore be considered. Likewise, the assessment panel is concerned that the five granite monoliths that are to serve as information stands may become too dominant and monumental in the sensitive landscape.

In addition, it must be made clear that the materials proposed for hard surfacing will ensure accessibility for everyone.

The members of the assessment panel agree on the qualities of the simple architectural design illustrated in this entry. It is a holistic response to the brief which shows a compelling combination of form and content. The panel has also noted the attractive tectonic design of the interface between dynamics and simplicity. The assessment panel sees this entry's focus on porosity as being based on the conventional perception of transparency as extreme use of glass. The extent of glass elements will probably have to be reduced in the further detailing of the scheme.

The interior organisation of the building was discussed by the panel, in particular the proposed design of the two permanent cores. The panel is particularly concerned that the proposed solution is counterproductive relative to the entrant's intention of giving visitors a dynamic experience of spaces in combination with the surrounding landscape.

For these reasons, the assessment panel has selected this entry as a joint winner of Stage 1 of the design competition.

ASSESSMENT PANEL REMARKS – STAGE 2 LANDSCAPE

This entry describes the route from the town hall in Ilulissat to the visitor centre. All paths and trails meet in front of the centre and, after having obtained information at the centre, visitors will be able to move onward into the landscape. In the main arrival zone, visitors will be met with a rock wall into which the story of the UNESCO world heritage site is engraved next to a bronze sign. This zone, which is laid out as an imperfect circle with a diameter of around 40 metres, is intended to serve as a meeting and information point. From this arrival zone, visitors will follow a ramp with a gradient of 1:20 down to the centre. At the actual centre, the landscape under the building is sloping so that meltwater can pass unobstructed, and there are also basins intended to delay melting water. Vegetation around the centre will be re-established, as the entrant wishes the centre to be perceived as a building volume in a pristine landscape. Various plant species to be used are described in the entry. The materials in the arrival area are wood, stone and gravel. Wooden plinths serving as seating are installed at selected places. Toilets and a waste depot are not established at the car park, as they are located close to the centre building.

The scheme proposed in this entry is simple and clear in its overall concept, details and choice of materials. The entrant displays great understanding of the inherent strengths of the site and of the interventions needed to ensure that, after completion, the building will be minimally obtrusive in the landscape. The approach to the meeting of the path from Ilulissat and the trails leading into the wider landscape right in front of the centre is good, although the passage between the path from Ilulissat and the wooden UNESCO walkway towards the centre seems too narrow.

The 1:20 gradient from the arrival zone needs further development, as it is too steep to be negotiated by wheelchair users over such a long stretch. The assessment panel was also concerned that the materials illustrated may be too uneven for wheelchair users and others with impaired physical mobility.

The proposed big signs engraved into the granite wall to highlight the UNESCO world heritage site seems wrong because of the classic European background, and the assessment panel would have preferred a more unobtrusive welcome that would let the place speak for itself.

ARCHITECTURE

In Stage 1, the obvious architectural quality of this entry was the relationship between the exterior and interior design. The great strength of the entry was rooted in a clear perception of a twisted plan at landscape level, which in Stage 1 was kept free of disturbing tectonic connections. The load-bearing frame structure and the roof created a single attractive, coherent and unique movement that appealed to the assessment panel. The building design was natural and effortless and featured great architectural strength because it created both positive and negative spatial perceptions in the landscape and the interiors respectively. However, the Stage 2 scheme endeavours to achieve a higher level of functionality, and a clearly defined design of elements between open and closed facades, including cladding, have resulted in radical solutions, for example in the form of 'traditional' partition walls that are now fill-ins and combination elements as opposed to the previous distinctive free-frame structures. These new 'inventions' result in close-fitting amorphous wall surfaces that span the entire height of the cross-section. This new design creates an inexplicable alienation in the manifestation of the space. The introduction of room-size wall surfaces results in a highly unfortunate spatial design that also changes the architectural point of departure of the scheme radically.

To this should be added a number of unfortunate architectural elements that have been added in the process. All of these elements have a worrying impact on the overall proportions and architectural appearance of the building, both on the inside and on the outside. This is true of several aspects, ranging from the rhythm of the structural frames to the actual design of these frames, not least as regards the structural cross-section, which is unnecessarily heavy from a visual point of view. The subdivision of the facades illustrated in the new design also seems

heavy and seems to compete with the distinctive frames. The introduction of metal cross elements between the large distinctive wooden structures is also unfortunate and seems not to have been carefully considered in architectural terms. The same applies to the new design with recessed, free-standing metal railings.

The assessment panel's overall opinion is that it is essential to bring this scheme back to its original architectural design, and in that connection to rethink spatial perceptions. The scheme's evident holistic and architectural strength will be conducive to such a process. The attractive tones in the poetic resonance of the scheme are still manifest in the compelling overall concept that characterises the building design.

EXHIBITION

An exhibition approach named the Story of Ice is used to invite visitors to embark upon a route between civilisation and landscape. Where the route changes direction, the core of the exhibition – the meeting of ice and man – is located. Flows through, under and above the building offer narratives of varying format: the intimate space, the grand view and the staged narrative. The covered space is laid out as a large floor, a shift in the landscape surfacing that provides a 'free' flow. In the further development of this scheme great emphasis should be placed on the interiors so as to create a coherent flow that combines the exhibition and other interior elements in a single sweep.

The scheme proposed is seen as an invitation to enter a sensual, down-to-earth interpretation centre in which the exhibition is a pit stop on the route from civilisation to icefjord. It is a dynamic centre so adaptable that it will be able to accommodate exhibitions that reflect constantly evolving climate change. The assessment panel is of the opinion that the exhibition concept can be elaborated in this scheme and contribute to an intense experience as well as dialogue between architecture and interpretation.

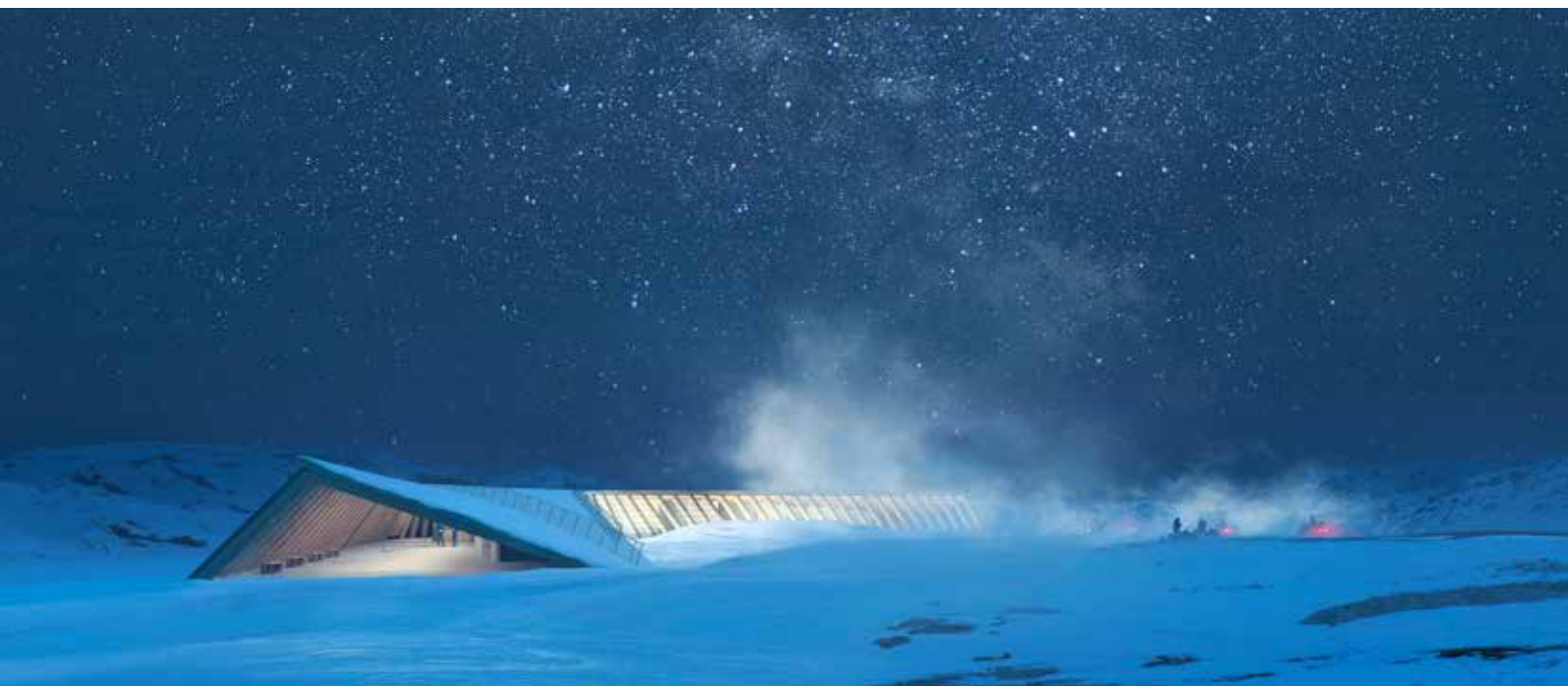
SUSTAINABILITY

The entry seems to be governed by an integrated, iterative design process with a focus on sustainability. Using calculations and simulations, the entrant presents 'evidence' in support of all design elements proposed and does so in a clever and compelling way, thus giving the design validity and adding strength to the reasons given for it.

One of the fundamental ideas behind this entry is to design a building with minimal impact on the vulnerable landscape around it. The entrant consistently takes the site into consideration and has made an effort to understand site conditions



The panel therefore recommends that the design **BE BROUGHT BACK** to its spatial point of departure and that the various exhibition and ancillary functions be reconsidered in that connection.



through studies, illustrations, calculations and simulations. The entry testifies to good understanding of the movement of the sun in the sky, the unpredictable weather conditions and the resources available on the site.

STRUCTURAL DESIGN PRINCIPLES

The structural design principles proposed are well chosen for this project and particularly well suited for prefabrication and speedy assembly on site. It will be possible to carry out the work using local labour.

The cantilevered part of the building is a relatively complex but also technically elegant solution, with diagonal trusses in the facade combined with disc effects in the wooden floor and roof elements supporting the building between the anchor points resting on the bedrock. This approach represents the greatest challenge in this entry, as the part of the building that protrudes above the water will not be stable until completed and may also be challenged by the dimensions of laminated wood elements and the diagonal trusses in terms of ensuring sufficient rigidity of the facade structure and glazed elements.

PRODUCTION AND CONSTRUCTION METHODS

The assembly of prefabricated structural elements above the lake, where no supporting scaffolding can be used, will undoubtedly present the greatest challenges. In principle, all the structural elements illustrated are different, which will call for careful numbering of elements and detailed building site logistics with regard to materials supplied to the site.

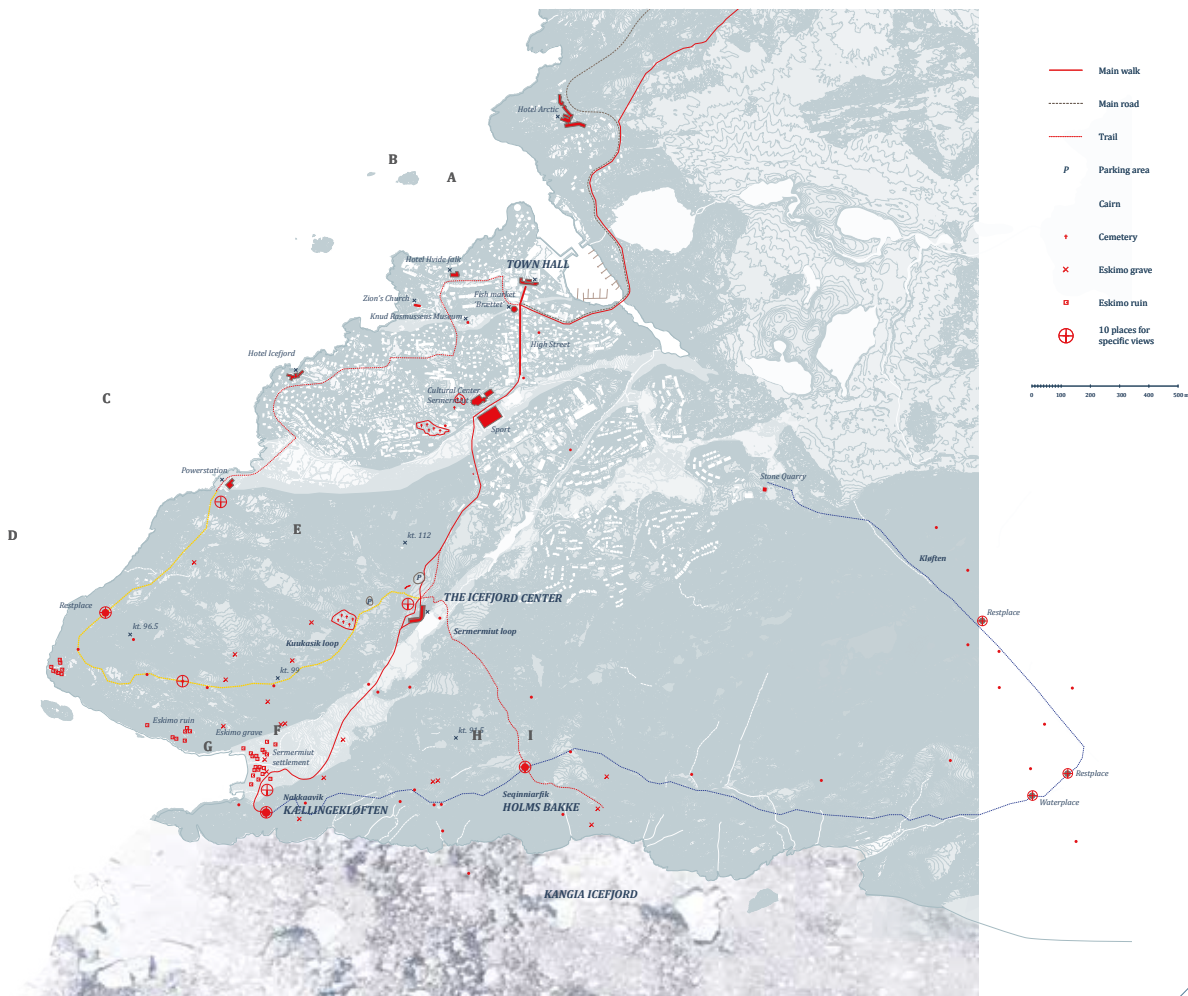
The other elements, all of which are to be hinged to or placed on the outside of the framework elements, are relatively ordinary, but call for rolling scaffolding and level manoeuvring areas, which has in fact also been the case with previous construction projects in Greenland.

OVERALL ASSESSMENT

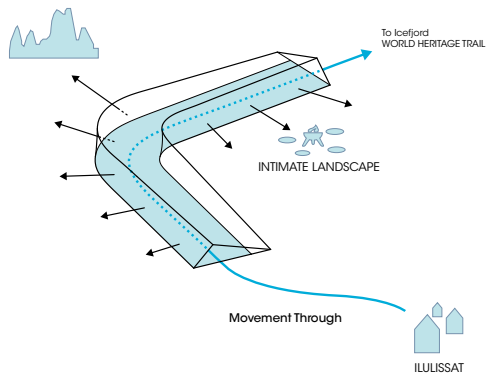
In conclusion, the assessment panel considers it essential that this scheme be brought back to its architectural starting point so as to allow further strengthening of the original sympathetic and simple architectural concept.

The panel therefore recommends that the design be brought back to its spatial point of departure and that the various exhibition and ancillary functions be reconsidered in that connection. In other words, the panel encourages the entrant to prepare the further design with due respect of the architectural qualities of the spaces and to present solutions that support and strengthen the movements and extruded character of the overall space. The design should thus be brought back to the holistic architectural strength on which it was originally based. In that connection it should be considered whether the required railing and the beams above the cantilevered building volume could form a whole together with the roof.

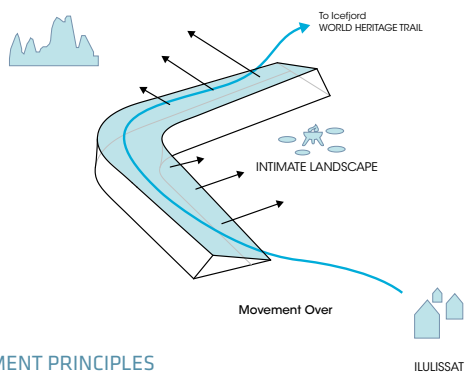
The assessment panel was enthusiastic about the uniquely simple and aesthetically pleasing building proposed in this scheme and was therefore unanimous in selecting this entry as the winner of the competition.



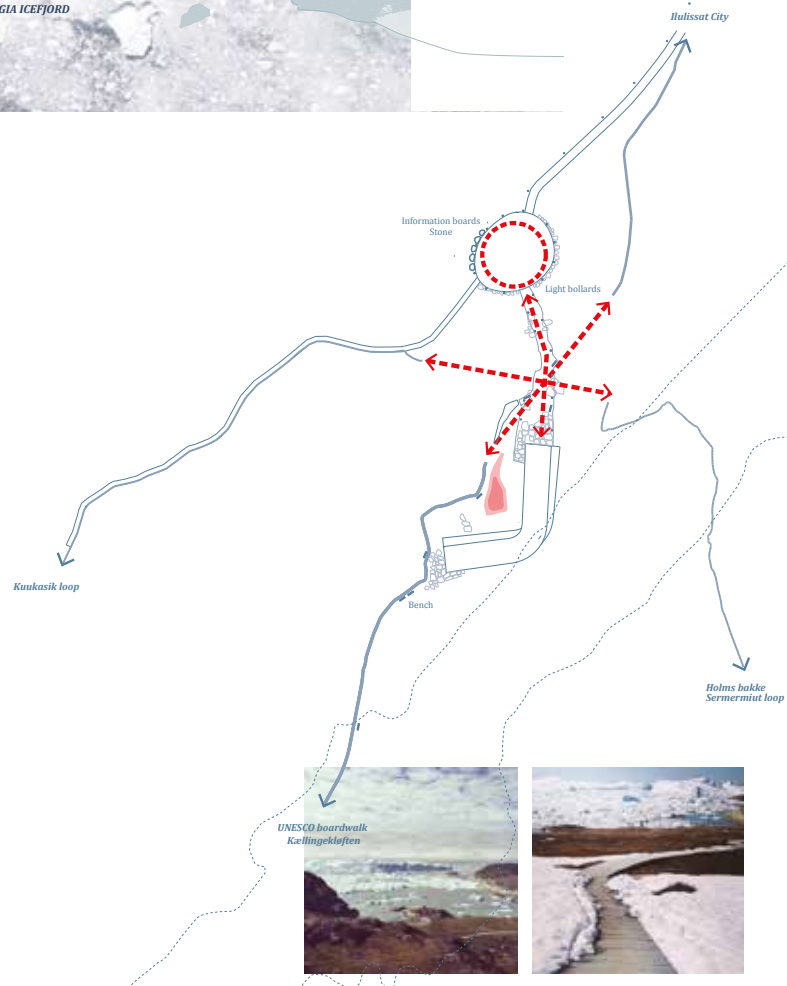
EXPANSIVE VIEW TO ICEFJORD



EXPANSIVE VIEW TO ICEFJORD



MOVEMENT PRINCIPLES





SITE PLAN

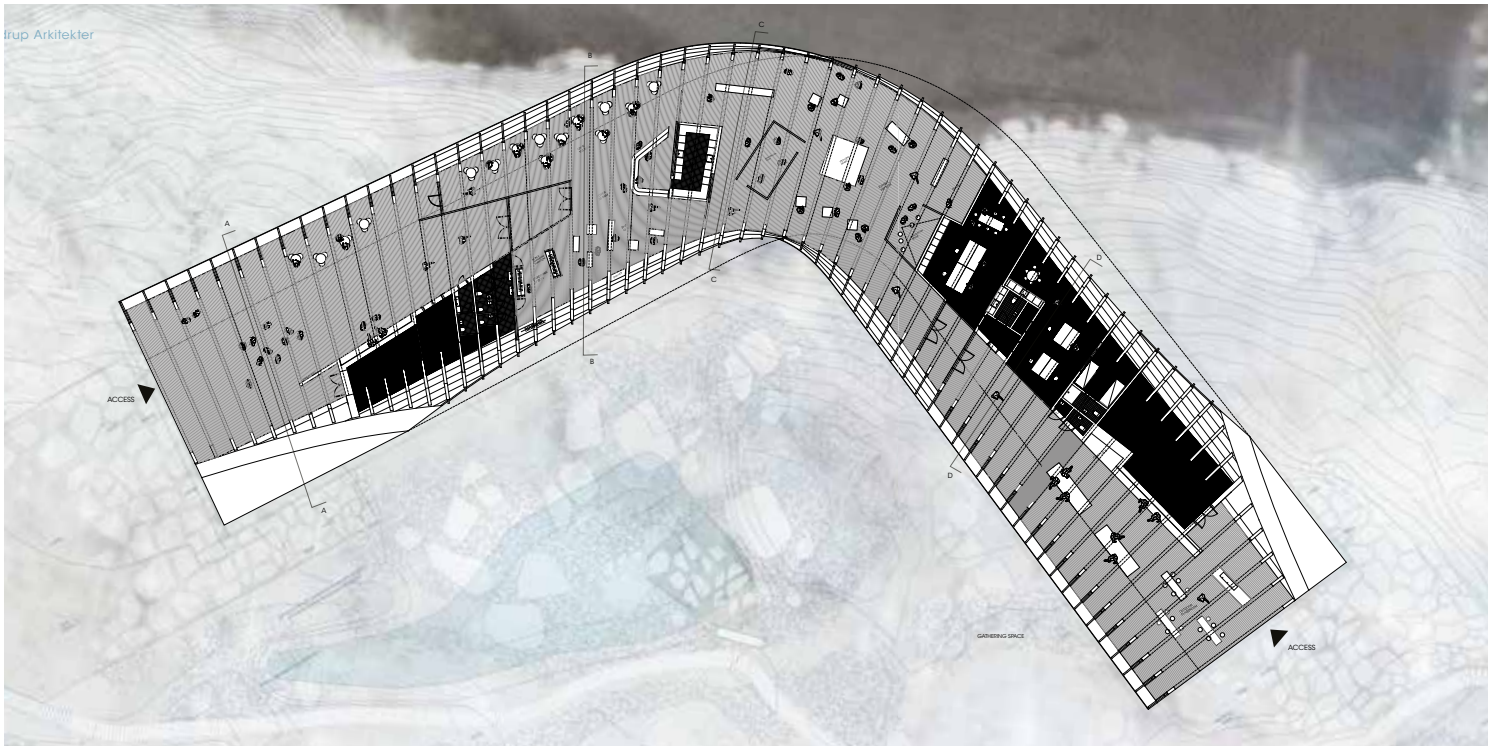


ARRIVAL ZONE



THE BIG UNESCO SIGNS





FLOOR PLAN



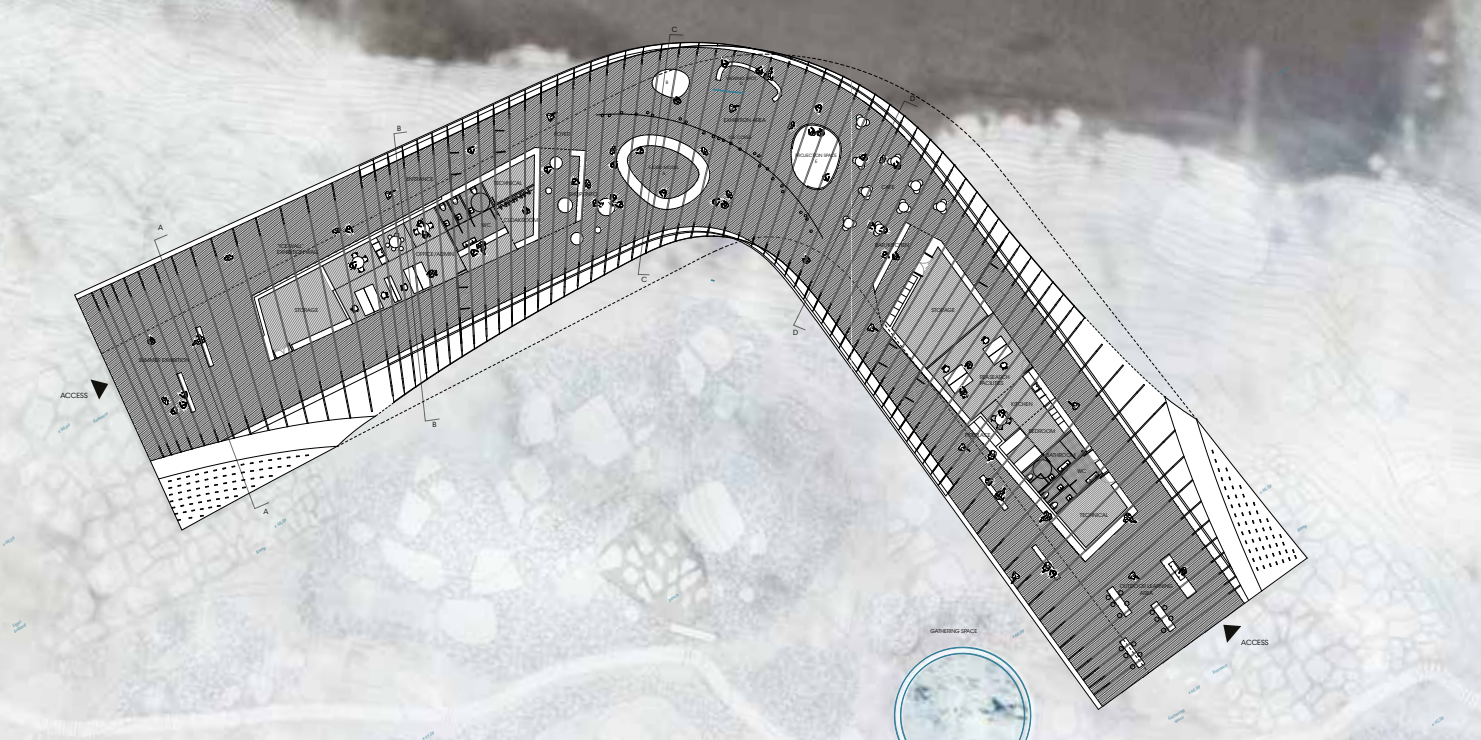


SECTIONS





ENTRY 6 STAGE 1



FLOOR PLAN



OTHER ENTRIES

STAGE 1 AND STAGE 2
ENTRY 3 THE LINK



TEAM
KENGO KUMA AND ASSOCIATES
JAPAN

KENGO KUMA AND ASSOCIATES

DESIGN ARCHITECT

Kengo Kuma / Yuki Ikeguchi / Marc Moukarzel / Hannah Appelgren
/ Michael McDowell / Aigerim Syzdykova / Mate Meszaros

CORNELIUS + VÖGE ApS

ASSOCIATE ARCHITECT

Dan Cornelius

MASU PLANNING

LANDSCAPE DESIGNER

Malin Blomqvist

MANNVIT

ENGINEERING

Tryggvi Jónsson / Fridberg Stefánsson
/ Brynjar Jónsson

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

The overall concept of this entry is to treat the centre as a link between culture and nature, and a link between different routes. It is also a link between past and present that points towards the future. These links are created through the establishment of new routes for pedestrians and cyclists from Ilulissat, all of which are kept free of motor vehicles, and by making the centre the point of convergence of all trails in the landscape.

The centre is placed across the Sermermiut Valley and is seen as an integral part of the system of paths and trails.

A new, subdued car park is laid out as a turning area with adjacent parking spaces. The entrant also suggests a bicycle parking area and a waste transfer station.

ARCHITECTURE

This scheme is conceived as a landscaped juxtaposition of culture and nature, resulting in a landscape loop at the lower end of the Sermermiut Valley close to the northern end of the lake. The entrant highlights the force of the place as a mediator between past, present and future. The main potential of this meeting of culture and landscape lies in the recreational opportunities it offers.



The main concept is based on the potential of turning paths and trails that already exist in the landscape into spaces that create movement that involves visitors in a controlled process that captures the contextual attunements of the place and focuses on them.

The location of the building along an axis running from north-east to southwest highlights the Sermerimiut settlement to the south and Ilullissat to the north, thus emphasising the scheme's role as a historic link.

The building is nestled in the landscape, taking its shape from a large system of ramps that interweave movements and views on both the outside and the inside of an imaginary median.

Visitors are drawn towards a large ramp plateau that defines the extensive landscape as a remote time warp against the backdrop of the icefjord. From this plateau, a lower ramp leads visitors from the landscape into a foyer area. The foyer is the top landing in an interior system of ramps that combines landscape with exhibitions inside the building. An open ramp leads to a number of lower plateaus laid out as lounging and relaxation areas in contact with the surrounding landscape and an intermediary plateau that is part of an amphitheatrical layout connected with an underlying exhibition area. The ramp passes through two exhibition walls in a closed cross-section and ends as a ninety-degree movement in an open exhibition space at the lowest level. The space is open and features a high degree of flexibility between café, conference, meeting and other facilities. The entrant shows areas where it will be possible to create closed spaces for conferences, special presentations, offices, etc. Those spaces are in optimal contact with the surrounding landscape.

The building is to be a transparent element in the landscape, and the longitudinal facades are therefore composed of glass. The building's primary structures are described as in-situ concrete structures clad with local granite.

The cladding on the large exterior ramps is to be seen in the context of existing landscape elements and the material suggested is therefore wood. The entrant suggests the use of driftwood for interior elements.



The proposal submitted by the entrant addresses all the challenges presented by the brief in terms of creating **A UNIQUE BUILDING** in which the architectural experience is generated by means of a combination of spaces, flows of spaces.

EXHIBITION

The exhibition areas in this scheme are part of an overall flow of spaces: a landscape alternating between being open and closed to its surroundings. The exhibition spaces are spread out on three areas: a high, open space, a platform and break area, and an intimate space. In general, this scheme features diversity in terms of spatial qualities and methods of communicating.

The main space of the scheme is a high room suitable for large installations that can be seen both from the floor and from a platform running along the length of the room. In continuation of this space there are steps that can be used for programme activities and events, as well as by groups of visitors. As a whole, the spatial presentation in this scheme includes both horizontal and vertical elements and allows experience of both the horizon and mountains.

The assessment panel appreciates the spatial diversity that reflects a compelling awareness of the complexity of exhibitions. The exhibition spaces offer scenarios created by a both natural and artificial light, and the scheme includes spaces for light-sensitive and cinematic presentations. A section through the scheme shows layers of commitment, above and below, at wide angles and close up, as well as room for reflection.

ENGINEERING DESIGN

The entry features tall windows, described as suspended windows. According to the explanatory text, large eaves above the windows provide some degree of protection against intensive sunlight, and it is also possible to pull down roller blinds from the ceiling.

The concrete interior walls are clad with natural stone and driftwood. Driftwood will also be used as exterior cladding, but there is no indication of where such cladding will be used.

The building has underfloor heating, which may be supplemented by means of the ventilation system that can introduce air through grilles in the floor under windows. The entrant does not specify how heating is supplied. Likewise, the entry contains no description of the structure and insulation of exterior walls where the walls are not glass.

The heavy materials used for slabs and inner walls can keep temperature increases low, which is an excellent feature.

The assessment panel is of the opinion that it is unfortunate that the entry contains no information about the deposition of snow and discharge of melting water and precipitation, apart from the fact that it can run under the building. Precipitation and melting water may run down the facades and along access routes, where it may freeze and cause problems. In addition, icicles may form along the margins of the roof.

The panel finds that the structure of the building envelope is only loosely described, without any specific indication of materials, the order of layers and details. As the structure is currently described, thermal bridges may occur at the foundation and at the beam above windows.

OVERALL ASSESSMENT

This entry deserves special mention for its good overall description, understanding of the assignment and its simple, straightforward approach to access conditions. In this entry, the access routes are made unobtrusive relative to the centre itself, which is appropriate.

The entry also deserves praise for its generally good understanding of the landscape and the variety of landscape experiences it offers to people arriving at the centre on foot or by bicycle. However, the assessment panel would like to have seen a more detailed description of the materials proposed for hard surfacing. In addition, the entry does not illustrate toilet facilities or resting areas for visitors, nor is it clear whether the access routes are accessible to everyone.

The panel sees the robustness sought in this entry as being uniquely synonymous with the place and its natural environment. However, the robustness could be clearer in the tectonic facade design. The assessment panel questions the necessity of such extreme glass elements in the long facades. However, the panel members agree on the architectural qualities of this entry – not least as regards the spatial organisation proposed – which in a very compelling way present the opportunities provided by uniting landscape, building and exhibition in a holistic entity.

For these reasons, the assessment panel selected this entry as a joint winner of Stage 1 of the design competition.

ASSESSMENT PANEL REMARKS – STAGE 2 LANDSCAPE

The developed scheme is based on the overall concept presented in Stage 1. The alternative arrival route from Ilulissat has been further elaborated, with rest areas being incorporated into the design. The car park has also been treated in further detail and now appears to be an integral part of the landscape, which has been achieved by the creation of a landscape composed of rocks blasted away in connection with the construction of the new centre.

The intention is that as many materials and rocks and as much gravel and vegetation as possible be reused on the site, and the entrant works with a ten-year time frame for the establishment

of the desired vegetation. The entrant also states the types of vegetation to be used at the car park and around the centre. A waste depot, a bicycle shed and toilet facilities are incorporated into the landscape design. In terms of possible extensions of the centre, the entrant describes three wooden formations in the Sermermiut Valley.

In this stage too, the entry testifies to great understanding of the landscape and the special conditions associated with it. The development of the alternative route from Ilulissat with incorporated resting places seems to be a good alternative to arrival by car. The car park and the turning area for buses and coaches have been developed in a very attractive way, and the idea of reusing surplus materials from the construction of the centre to shape a landscape that accommodates a waste depot, bicycles and toilets is very compelling.

The study of the types of vegetation that can be used at the centre and in its surroundings seems well thought out, and the time frame indicated for the establishment of the vegetation seems realistic. In contrast, the proposed extension options in the Sermermiut Valley seem alien and devoid of any relationship with the centre. They are also characterised by lack of understanding of the sensitive landscape.

ARCHITECTURE

The compelling overall architectural concept presented by this entrant in Stage 1 was detailed and enhanced in Stage 2, where the architectural and functional strengths of the scheme were developed further. The new design substantiates and documents the great holistic qualities of the scheme, which presents itself as an attractive, pragmatic and well-considered composition of simple architectural elements and functionalities. The proposal submitted by the entrant in Stage 2 addresses all the challenges presented by the brief in terms of creating a unique building in which the architectural experience is generated by means of a combination of spaces, flows of spaces, exhibition areas and landscape.

The holistic idea underlying this scheme was further enhanced in the design material submitted in Stage 2. The spatial perception and the attractive illustrations compellingly document the optimal options provided by the building in terms of forming a framework for aesthetically pleasing presentations that interpret the contextual narrative of the site in the captivating and enthralling interface between indoors and outdoors: an architectural borderland between the varied spatial intimate sphere and a movement that is in variable contact with the landscape. This approach adopted in Stage 2 contributes to cementing the superior design presented in this entry.

However, the great aspirations reflected in this scheme indirectly become a problem, since the entrant does not manage to adequately substantiate and document the financial and physical feasibility of the scheme.

EXHIBITION

The spatial diversity and architectural staging illustrated in this entry invite visitors to the centre on a journey through the landscape that testifies to the significance of the site. Along the route, visitors are introduced to a coherent flow of experiences in a landscape that alternates between being open and closed to the surroundings and in which the interpretative elements are woven into the immediate context. Architecturally, visitors meet both horizontal and vertical elements, experiencing both the horizon and the mountainsides.

The flow through the exhibition follows a linear trajectory where the exhibition begins immediately after the entrance. This is both the strength and the weakness of the scheme, since it suggests a flow that provides ease of overview and a linear narrative while at the same time being controlling and failing to provide much flexibility.

As a whole, the entry testifies to a compelling insight into the complexity of exhibitions with regard to technical installations and spatial requirements.

SUSTAINABILITY

The entry has a separate section on sustainable building design, which is unfortunate since it creates an impression of sustainability not having been a decisive, integrated design parameter in the creative process. The lack of understanding of the context is seen in the high south-western glass facade with a cantilevered roof, which according to the entrant will screen direct sunlight. However, the entrant does not seem to have taken the angle of the sun and changing seasons into account, as the sun is likely to be so low in the sky most of the time that the protruding elements will not be able to block the sunlight. Instead, a vertical sun screening solution could be used, but such screening would probably run counter to the architectural vision of transparency and a close relationship between indoors and outdoors.



The entrant presents itself as an attractive, pragmatic and **WELL-CONSIDERED** composition of simple architectural elements and functionalities.

To this should be added the great risk of glare, especially in exhibition spaces, resulting from the high glass facade and caused by sunlight and areas covered with snow or water.

The entrant presents a list of materials to be used. The assessment panel noted that several of the materials will have to be imported from suppliers located far away from Ilulissat.

In addition, the materials proposed for the building are heavy materials: concrete, steel and glass. Concrete and steel are low-maintenance materials, but the glass facade will require extensive maintenance if it is to remain transparent.

STRUCTURAL DESIGN PRINCIPLES

The structural principle has been simplified and is now exclusively based on traditional column-beam steel systems and concrete elements. The structural principle is well chosen for the scheme proposed and would make it possible to use local labour for the execution of the work. However, it would be necessary to import the concrete elements.

The facade system remains relatively complex with its jointed window panes kept in place by a system of vertical wires. This solution may prove technically unsuitable for the location because of the extreme weather conditions and the strong winds in the area. The assessment panel is far from sure that the roof beams illustrated will be able to transfer the tensile loads from the wire structure when there is wind pressure on the facade. It is likely that additional supporting columns will have to be installed. The facade contract involves the supply of special elements that will probably have to be installed by non-local facade contractors specialising in such elements.

There will probably be fairly substantial thermal bridges where the railing is attached to the load-bearing structure through the roof. There are relatively strong horizontal forces to be taken into account, which may have the unfortunate consequence that melting snow on its way towards the edge of the roof may freeze to ice around the feet of the columns. Cold downdraughts from the tall windows will be avoided by means of convection heaters at floor level.

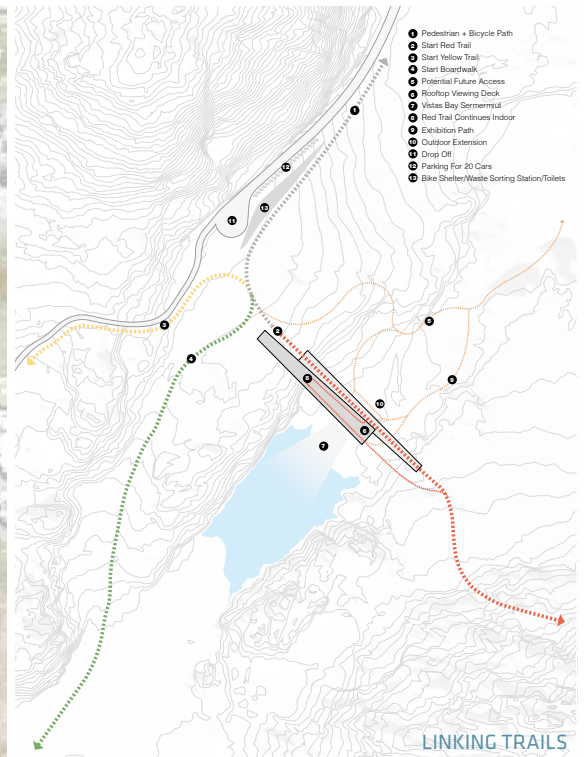
Establishment and operation of the building site are likely to be fairly demanding because of the need for roads for heavy lifting equipment.

PRODUCTION AND CONSTRUCTION METHODS

The construction method proposed is generally well known in Greenland, and the use of concrete, steel, wood, etc is also familiar. The building is designed to go through the wetland area to the north of the lake, which means that there may be some elements of risk that have not yet been sufficiently well ad-



SITE PLAN



LINKING TRAILS



dressed: ingress of water from the lake and the surrounding landscape into the construction pit and silt-containing materials that must be replaced and cannot be reused as backfilling below the ground slab and differences in the levels of the bedrock where foundations are to be installed. The differences in level may be large and very steep.

OVERALL ASSESSMENT

The assessment panel was generally favourable to the entrant's ambition of enhancing the tectonic design in all respects, but also considered it impossible to achieve that ambition in connection with the realisation of the project.

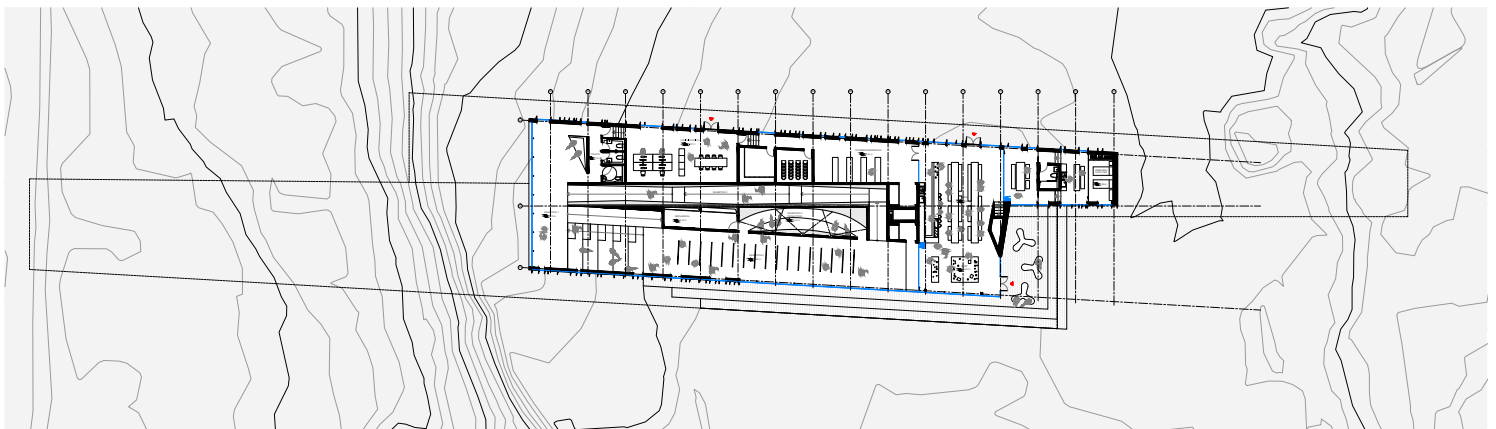
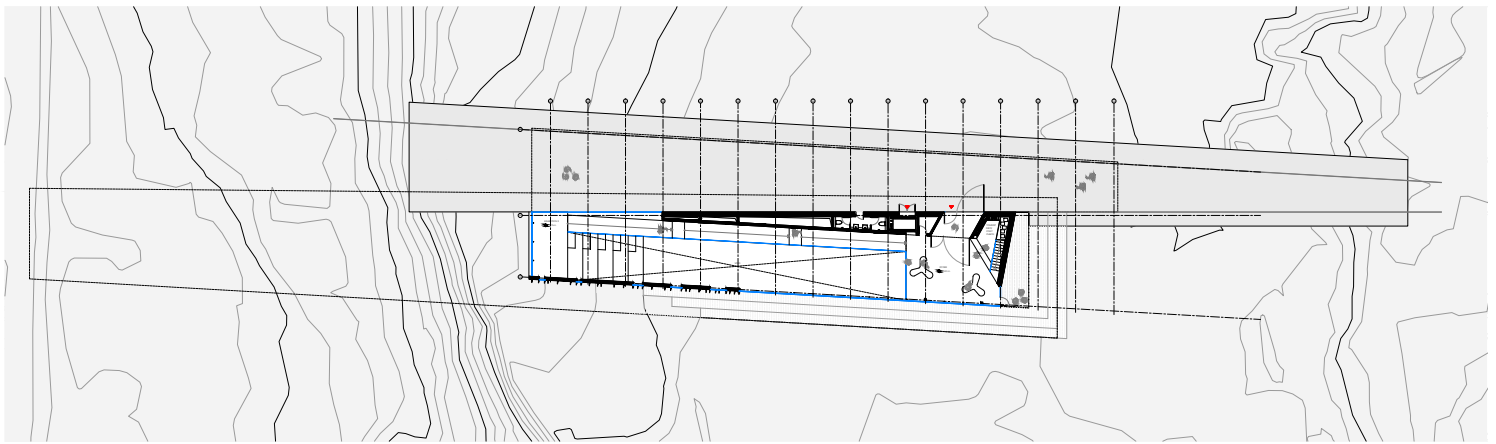


The assessment panel was generally favourable to the entrant's ambition of enhancing the tectonic design in all respects, but also considered it **IMPOSSIBLE TO ACHIEVE** that ambition in connection with the realisation of the project.

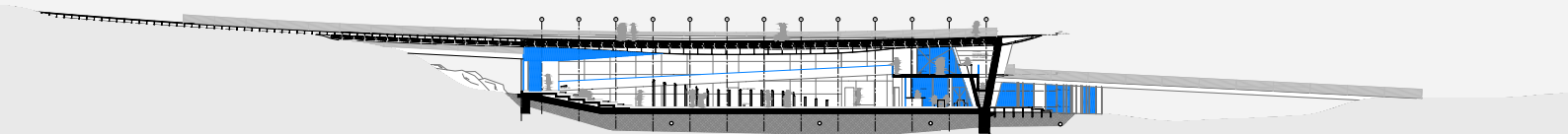
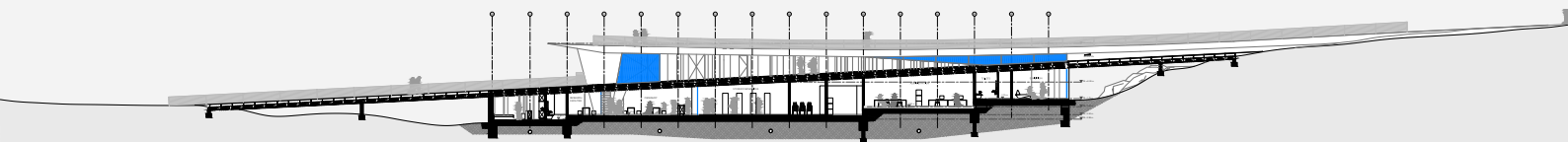
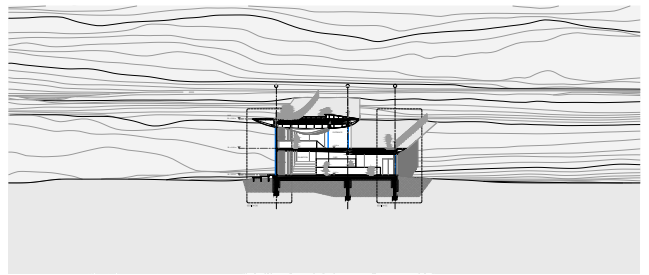


VIEW FROM THE ICEFJORD

GROUND LEVEL PLAN



LOWER LEVEL PLAN



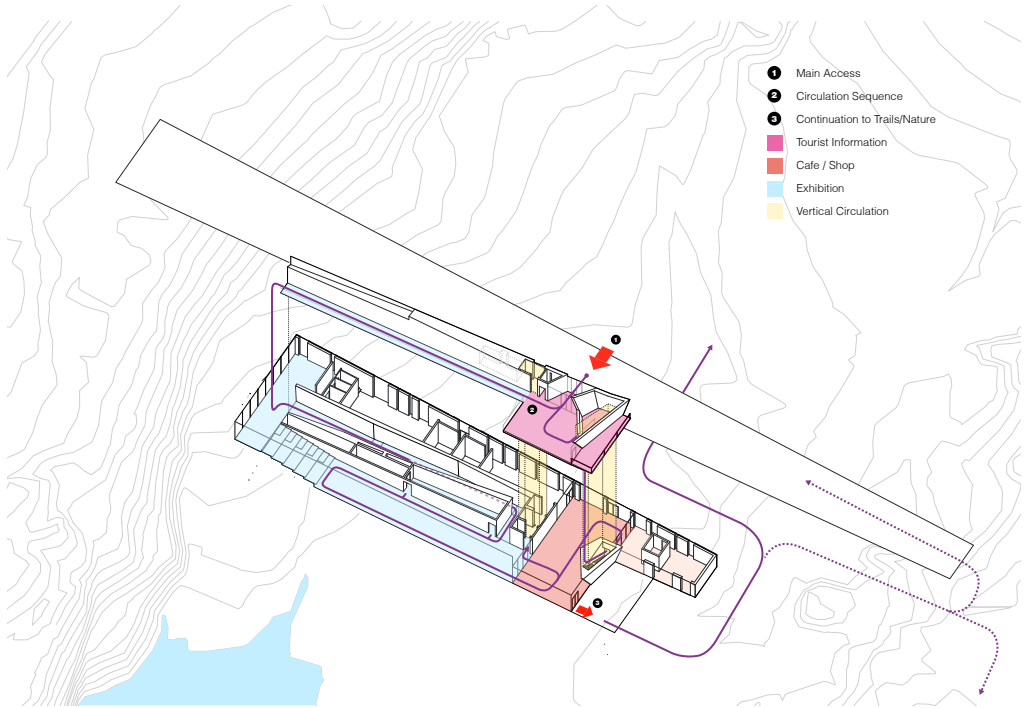
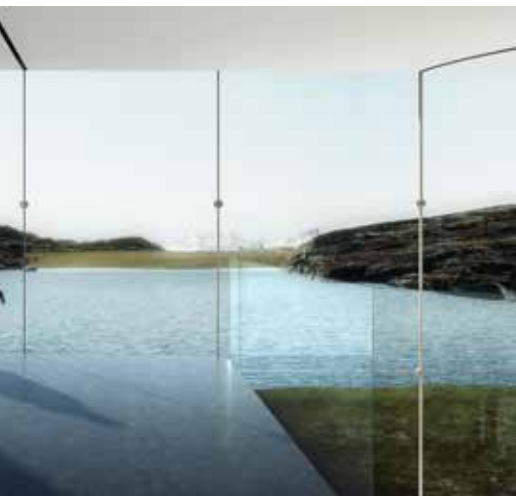
SECTIONS



NORTH ELEVATION

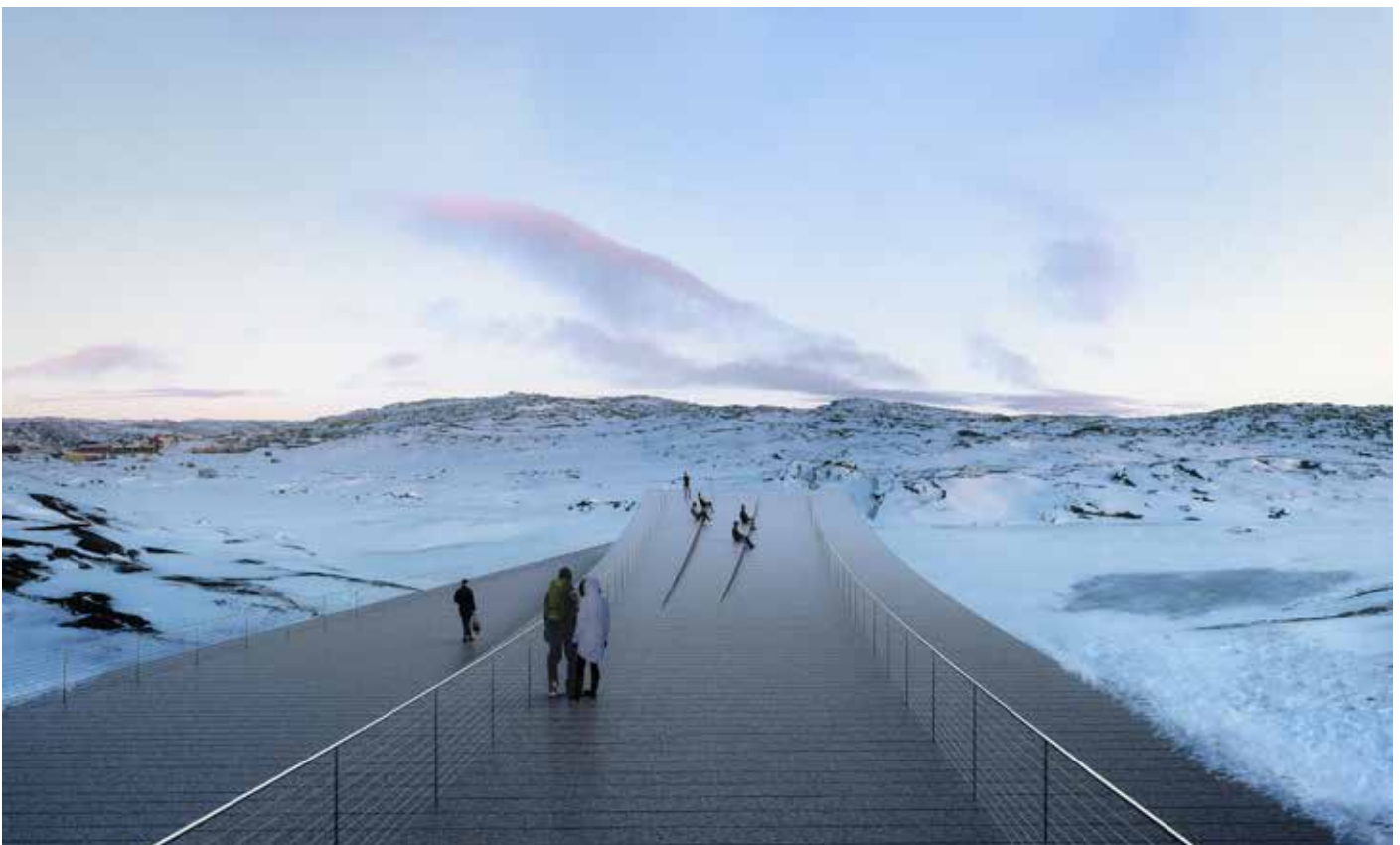


SOUTH ELEVATION



CIRCULATION

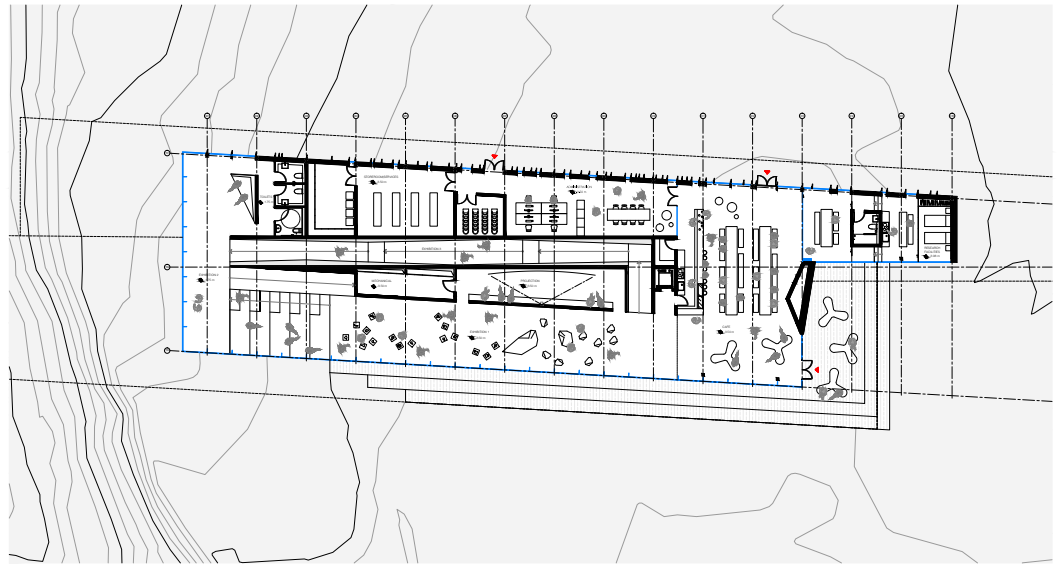




ENTRY 3 STAGE 1



LOWER LEVEL PLAN



STAGE 1 AND STAGE 2

ENTRY 4 ILULISSAT ICEFJORD PARK



TEAM
STUDIO OTHER SPACES
GERMANY



STUDIO OTHER SPACES

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DESIGN: Olafur Eliasson and Sebastian Behmann / Taylor Dover, project leader
/ Saida Brückner, Niël Meyer, Rhea D'Silva, Jennifer Hauger, Meng Li,
Niël Meyer, Marie Ramsing, Linda Zhang

FABRICATION: Ilja Leda, Daniel Mock

TEXT: Sebastian Behmann, Anna Engberg-Pedersen, Taylor Dover,
Geoffrey Garrison, Jennifer Hauger, Vajra Spook

B+G INGENIEURE BOLLINGER UND GROHMANN GMBH

CONSULTANT

TRANSOLAR KLIMAENGINEERING GMBH

CONSULTANT

TNT NUUK A/S

CONSULTANT

TOMORROW AB, VISUALISATIONS

CONSULTANT

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

The main concept proposed in this entry is a circular system of paths with a diameter of 148 metres, stretching across the Semermiut Valley and inscribing the lake. The paths follow the contours of the valley sides by cutting their way into the terrain and stretching across the bottom of the valley by means of white steel bridges.

The circular system of paths links the arrival areas at the car park with four elements in the landscape: the Ice Void, the Sun Cone, the Ring and the Northern Lights Pavilion. The Ice Void and the Sun Cone are the buildings that are to house the icefjord centre. The Ring is a large steel ring that the sun passes on 13 January each year when the sun returns after the winter darkness. The Northern Lights Pavilion is a shelter for people

during the winter darkness, where the northern lights can be seen without interference from the lights in the town of Ilulissat.

The route of arrival to the centre from Ilulissat is divided at a relatively great distance from the centre so that both pedestrians and cyclists arrive through the landscape and all routes further out into the landscape from the centre begin at the circular system of paths.

ARCHITECTURE

The entrant begins by asking questions concerning the feasibility of incorporating the complexity of the brief into a single building in the conventional sense. The questions lead to the idea of a number of interlinked, unique relics laid out as several impacts in the landscape.

These impacts – the ‘new settlements’ – are part of the circular shape and encompass Lake Sermermiut in a way that creates links to already existing trails and paths in the landscape.

The identity of the individual impact points is evident from their names: the Ice Void, the Sun Cone, the Ring and the Northern Light Pavilion. Each of these points has an individual design, but they are all important elements in the overall narrative. The Ice Void represents the sensation of emptiness after the ice has disappeared; the Sun Cone represents the experience of the place and its immediate context inscribed in a greater universal context; and the Ice Void and the Sun Cone together are the physical architectural response to the competition brief. As indicated by its name, the Ring is designed as a large steel ring where centre visitors and local residents can go on 13 January, which is the day when the sun returns to Ilulissat. The Northern Light Pavilion is – again as indicated by its name – a shape that screens off light from the town of Ilulissat in order to frame the sky and allow focus on the northern lights.

Together, all these impact points present the narrative of the place as a venue of a universal journey in time and space.

The Ice Void reminds visitors of the presence of ice and is designed as a long tube with an orthogonal section. The shape of the space is a physical representation based on the narrative of ice that has melted away. The inner space is laid out as serial ‘casts’ of melted ice.

The structural design is based on techniques known from high-strength concrete and fibre-reinforced concrete. Large blocks of ice are placed in moulds of fibre-reinforced concrete. The ‘icebergs’ melt, leaving negative impressions that shape a series of spaces that tell the story of their previous existence. The entrant suggests that the Ice Void be ‘glazed in’, which means that windows will be placed in the apertures that appear, and that it



The circular system of paths proposed in this entry testifies to great understanding of the unique site and the desire to create **SOMETHING EXTRAORDINARY** by simple means.

be provided with underfloor heating in a concrete floor.

The Sun Cone is described as the guiding star and observatory of the site. It is part of the overall building facilities of the park and is designed as a climate-controlled area in which people can stay for a while. Contrary to the analogous philosophy behind the design of the Ice Void, the design of the Sun Cone is described as being ultimately high-tech. The space is laid out in direct contact with the landscape. The floor is shaped on the existing bedrock, and separate plateaus provide opportunity to spend time inside the rock. Several areas feature concrete seating designed as continuations of the concrete surfaces into which underfloor heating is incorporated. Above the plateaus and in direct contact with the bedrock, a glass cone composed of lightweight minimal steel profiles and cables is installed where it is in full contact with the surrounding landscape.

A circular steel column raises from a central position in this space. In addition to serving as an open fireplace it is a convector in a heating system based on natural ventilation and heat recovery. The inside of the closed tube contains wet areas and toilets. The outside of the cone features a permanent solar screening system adapted to the movement of the sun. The movement of the sun is reflected in the space and the intake of sunlight is an important element in the space and its indoor environment.

EXHIBITION

This entry introduces a park concept and thus also a design in which the border between outside and inside is left open for interpretation. Along the circular route illustrated, a number of pavilions are located. They are used actively and poetically as mediating elements in the landscape, relating to the themes of sun, ice and landscape. An interior exhibition space is incorporated into the Ice Void volume. It is a long, irregular space in which the actual construction process is part of the communication and interpretation. A number of research facilities are located in continuation of the Ice Void, encouraging close dialogue between science and exhibition.

The entry allows new interpretations of the visitor centre concept and refers to a park and an experience for visitors, who will be met by place-specific communicative interventions along a

defined route. The assessment panel is of the opinion that this kind of communication and interpretation, as well as the very poetic approach featured in this entry, is in line with the ambition of creating a visitor centre that reaches out beyond its own boundaries. The communication and interpretation features of this entry are at a very high artistic level in terms of sensory experience, but it is necessary to consider where and how factual information of the icefjord can be provided without jeopardising the concept of creating a void.

ENGINEERING ASPECTS

The Ice Void is a massive concrete building cast in situ around large ice blocks the size of a room. These ice blocks will be brought in from the sea, covered with shotcrete and subsequently by light fibre-reinforced concrete with aerogel aggregates that make it light and insulating. When the ice has melted at the end of the summer period, the building mass will remain as a long concrete box on and in the terrain, featuring a concrete slab with underfloor heating supplied by a heat pump that uses the lake as a source of heating, but also uses the town's district heating system as a back-up system. The design also features a heat recovery ventilation system that can use surplus heat from the Sun Cone. The Ice Void will be used for exhibitions and also contain rooms for research activities.

The Sun Cone is a tipi-like circular glass building situated on a hill above the hollow at the lake where the Ice Void is located. High-performance insulating glass is used. The division between the two parts follow the orbit of the sun at summer solstice. The glass is framed by steel beams that rest on the terrain and by a large circular steel core at the centre of the building. The core is surrounded by a fireplace. The core contains toilets and technical installations for ventilation and hot water. The building contains a café, offices, a shop, conference rooms and a lounge that offers views of the icefjord. The floor of the Sun Cone is a combination of original bedrock and an insulated concrete floor with underfloor heating. As in the Ice Void, curtains are used to protect the interiors against excessive sunlight (and

thus excessive heat), and natural ventilation can furthermore be used to reduce the risk of overheating in the building, which also features a heat recovery ventilation system.

In connection with the further detailing of the scheme, the strength of the concrete must be documented, as the concrete will have to be able to withstand exposure to the local climate, including snow, ice, thaw and frost. The Sun Cone is a true textbook example of balance between extreme energy impacts. Even though high-performance glass is used, the glass surface is large and will not be as well insulated as a conventional outer wall, which may result in low temperatures and draught. On the other hand, the transparent/translucent facade will provide a considerable heat gain when the sun is up. In addition, heat is generated by the fireplace and the underfloor heating system. The entrant has not explained how smoke from the fireplace leaves the building. The Sun Cone may also be susceptible to external climate impacts. For example, the entry contains no description of how precipitation and melting water landing on the top of the core will be discharged in a way that does not cause disruption. There may also be some durability challenges associated with the glass of the Cone, and a realistic plan should be prepared for replacement of glass when needed.

OVERALL ASSESSMENT

The circular system of paths proposed in this entry testifies to great understanding of the unique site and the desire to create something extraordinary by simple means. An infinite walk in an infinite place. A story of the necessity of everything being able to return to its origin and being in balance. The nature of the site is captured in the return of the sun through the circle and in the darkness of the place where northern lights can be observed, which adds a dimension that goes beyond the purely functional and architectural dimensions.

The route of arrival from Ilulissat and its connection with the system of paths and trails leading further out into the landscape seem to work well. However, the arrival route from the town and the parking areas seem to be insufficiently well treated and will require further consideration to ensure the same good understanding of the place in all aspects of the scheme.

The assessment panel is concerned that the requirement of the centre (the Ice Void and the Sun Core) being accessible to everyone is not met, although this is an indispensable requirement. The panel is also uncertain as to whether the northern light facility can be used as intended without being covered with snow, which would actually make it superfluous.

The assessment panel is in agreement about the qualities of the artistic design of this entry. An original idea that represents

”

... which **ADDS A DIMENSION** that goes beyond the purely functional and architectural dimensions.

an unpredictable unique contextual response to the complexity of the competition brief. Although the panel is concerned about some of the structural solutions proposed it is confident that the originality displayed by the entrant in Stage 1 will have the necessary spillover effect on the further design and will therefore ensure the required cohesion between idea and realisation. For these reasons, the assessment panel has selected this entry as a joint winner of Stage 1 of the design competition.

ASSESSMENT PANEL REMARKS – STAGE 2 LANDSCAPE

The entry maintains the overall path laid out as a circle with a diameter of 148 metres, but in the developed design the Ring and the Northern Light have been left out. The circular path assembles the arrival routes from Ilulissat and brings visitors to the centre out into the landscape. The Circle Walk is also to link any future extensions to the centre and is accessible to everyone. In addition, the entrant describes an alternative access route to the Ice Void for people with reduced mobility. This alternative route will also serve as an outdoor exhibition area. The design of the parking areas and the arrival area at the Sun Cone remain unchanged from Stage 1. No waste handling facilities at the parking areas are illustrated.

The entrant has generally listened to the assessment panel's remarks in the work-on note in a positive way. The centre stands out as a simple and strong element in the landscape, and the connection of the various paths from Ilulissat is done in a compelling way. The entry now features proposals for arrival routes to the Ice Void and to future extensions, and there could thus be justification for the Circle Walk as an element in the scheme. However, it is as if the scheme has not been able to cope without the Ring and the Northern Light Pavilion, and the assessment panel was not convinced by the proposal to introduce alternative routes for people with reduced mobility to 'assist' the Circle Walk in order to make it function. The conditions of arrival



The scheme as designed in Stage 2 is characterised by a number of **UNRESOLVED STATEMENTS** that clearly run counter to the attractively simple poetic point of departure that reflected bravery in eschewing pragmatic responses.

at the Ice Void would be highly discriminatory against people with reduced mobility despite the link to the outdoor exhibition. Because of these points of criticism, the overall concept of this entry fails to succeed. The parking and arrival areas seem unresolved, and the entrant does not indicate any waste handling areas.

ARCHITECTURE

The entry's main quality in Stage 1 was its surprising interpretation of the brief and its unique response to it. The Stage 1 design presented a seductive shape and form inspired by a contextually universal idea based on a combination of a settlement and the universe around it. The entry attached importance to the emotional ambience into which the centre's activities were to be incorporated. It featured an inherent force that inspired a kind of 'innocent' approach to the conventional manifestation of a brief. However, the job of making this in many ways inspirational and free interpretation of the brief match the necessary implementation of the tectonic solutions needed to realise the design has proved to be too much of a challenge in terms of maintaining the architectural qualities in the Stage 2 design.

In Stage 2, the entrant prioritised radical adjustments in the form of a design reminiscent of more conventional museums both in terms of space design and the fitting-out of rooms. However, these new additions that are intended to activate and objectify the previously unique architectural expressions result in several architectural ambiguities of both a spatial and a tectonic nature. The communication and interpretation that were previously linked to the spatial perceptions within the objects themselves and their interrelationship with the universe reflected an attractive idea without precedent, based on a clearly contextual understanding. A great focus on radicalising the abstraction and creating a much more conventional layout of both the Sun Core and the Ice Void has deprived the scheme of its captivating 'innocence' and undertone of emotional seduction.

EXHIBITION

The entry introduces the concept of 'park' and hence a presentation in which the borderline between landscape and interiors is made open to interpretation. Pavilions and platforms along the circular route are used actively as mitigating elements in the landscape and relate to the themes of sun, ice and landscape. The communication and interpretation approach must therefore take both indoors and outdoors into account, with the emphasis being on external communication. This will require the communication and interpretation devices chosen being robust and accessible at all times of the year.

An indoor exhibition space is illustrated in the Ice Void volume: a long, irregular room, the construction of which is part of the exhibition narrative. The assessment panel would generally like to have seen a sharper concept characterised by a bolder stance in the meeting between exhibition and architecture. The entry illustrates some very traditional exhibition principles that the panel does not see as part of a dialogue with the Ice Void. The intensely poetic concept and the great aspirations that apply to a visitor centre that goes beyond itself challenge and inspire site-specific and sensual communication and interpretation at a very high artistic level.

SUSTAINABILITY

The idea of separating the building volumes is not a particularly sustainable solution, nor is it optimal from a point of view of energy consumption and indoor environment. To this should be added the impact on the landscape that would result from erecting several buildings in an area where vegetation struggles to survive.

In terms of energy and indoor environment, this entry seems to miss the point. Creating a glass igloo is tantamount to creating all the energy and indoor environment challenges that can be imagined. For example, temperatures fluctuate by up to 15 degrees. The building is in fact an art-inspired pavilion rather than a functional, architecturally pleasing and not least sustainable centre, which is contrary to the original intention of the assignment.

STRUCTURAL DESIGN PRINCIPLES

Both the Ice Cone and the Ice Void became smaller in Stage 2, and the concrete technology proposed was described in greater detail. The scheme remains a fairly avant-garde concrete structure, but the concrete features built-in heating hoses that serve a function while the ice is melting/the concrete is curing and also as a built-in heating and cooling system when the Ice Void building is in operation. The entrant states that the blocks of ice are to be placed on a concrete deck supported by trench foundations, but fails to describe any thermal insulation of this floor structure.

The windows to be installed in the Ice Void are to have the random shapes of the apertures, and will thus be both horizontal and vertical, but the entry does not contain any details or considerations about their installation, frames and durability, nor any reflections on thermal bridges at the window joints, which would probably be made of concrete/lightweight concrete. There is still a fireplace in the Ice Cone, but no description is given of any smoke outlet or chimney connected with the fire-

place. Likewise, there is no description of how to handle snow banks and melting water at the top of the Ice Cone. Calculations of energy consumption and the time it takes for the ice to melt have been made, and it appears that there will be evacuated tube solar collectors on the Ice Void. Heating in the building will be provided by a heat pump that uses the lake as a heat reservoir and Ilulissat's district heating system as a back-up. This back-up solution seems cumbersome and expensive, given the distance to the town. The entrant has produced calculations that indicate that the buildings meet the energy requirements set out in the Greenland Building Regulations. Altogether this is a technically adventurous scheme that still poses several challenges despite the fact that more analyses have been made.

PRODUCTION AND CONSTRUCTION METHODS

The structure proposed is probably the only one of its kind and, if it is at all feasible, calls for careful, focused planning and execution of various activities. Reference is still made to the situation that occurred in Nuuk in the past, requiring the procurement of special large lifting equipment. Such lifting equipment is not available in Ilulissat.

The entrant fails to state how heavy the icebergs will be and how they are to be transported to the building site on a (drawbar) lorry. According to the illustrations, a total of 543 m³ of ice is to be used, and it will be more than 5 metres high in some places. This means that the largest lumps will weigh 75-100 tonnes, which it will not be possible to move without the use of highly specialised and very large lifting equipment.

Even the small elements shown in the visualisations, which are from Nuuk, gave rise to major concerns. Lorry transport will be the greatest constraint, and the positioning on the ground slab will also present challenges. It is likely that ice blocks of more than 5-10 m³ will be impossible to move around, and reaching the building height illustrated therefore seems problematic.

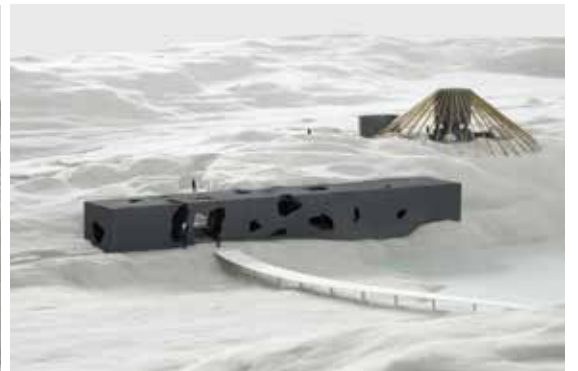
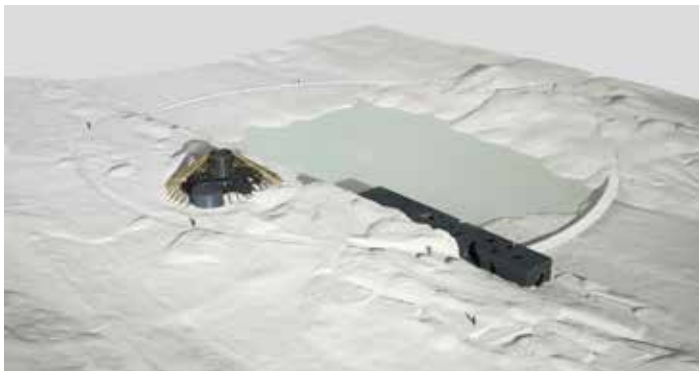
It will also be difficult to control shapes, as the concrete casting height shown will result in very high pressure during casting which cannot, as would normally be the case, be solved by means of tension rods going from casting side to casting side. Instead it would probably be necessary to use some very heavy steel structures to retain the physical shape of the mould during casting. This would add to costs.

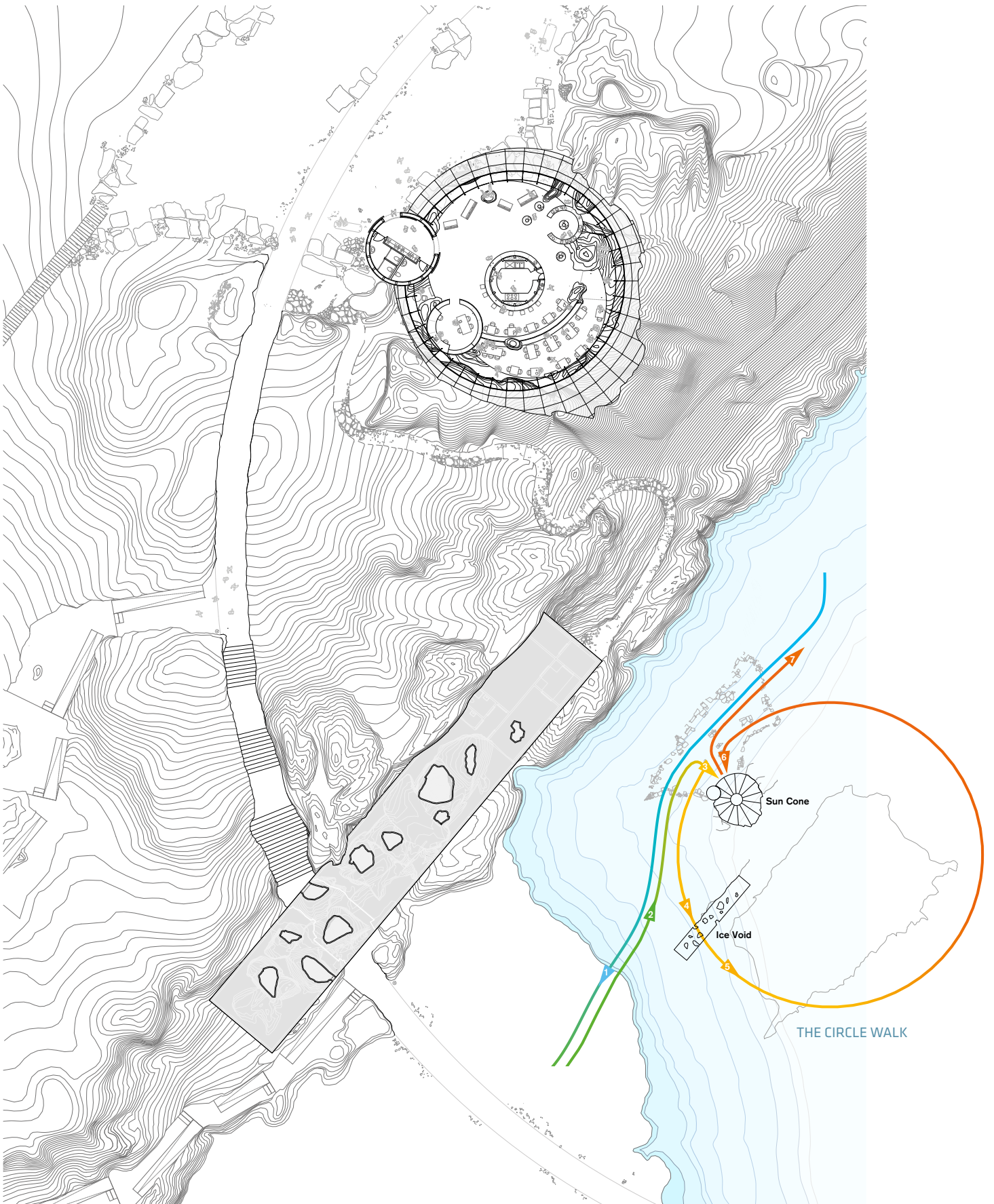
OVERALL ASSESSMENT

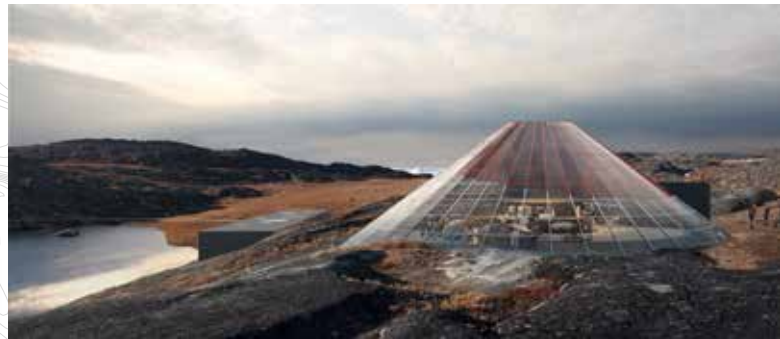
The scheme as designed in Stage 2 is characterised by a number of unresolved statements that clearly run counter to the attractively simple poetic point of departure that reflected bravery in eschewing pragmatic responses.



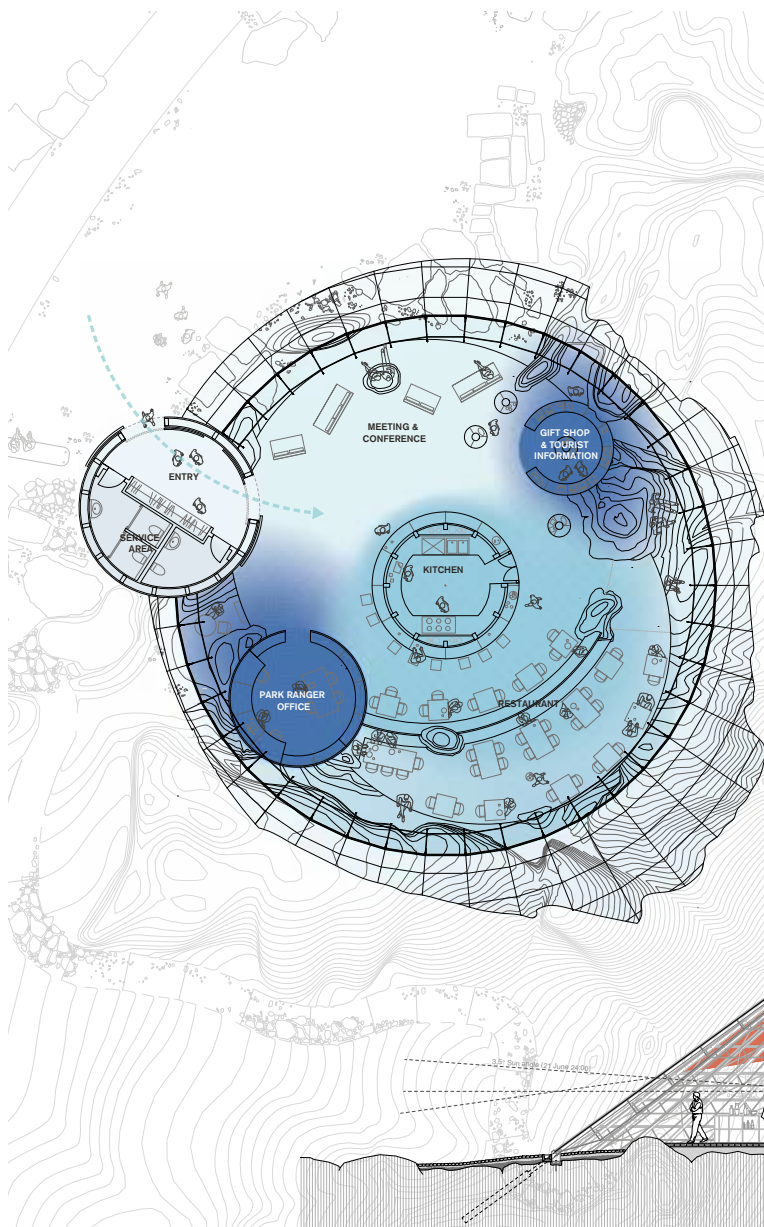
SITE PLAN



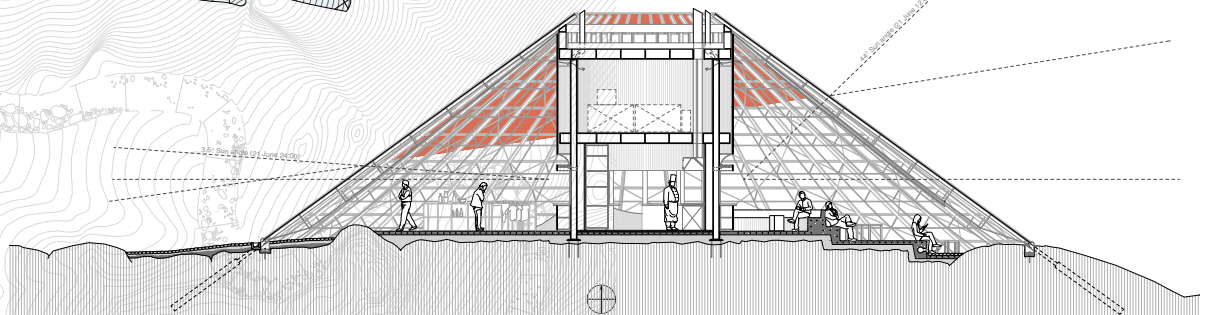




THE SUN CONE



PROGRAMME PLAN SUN CONE



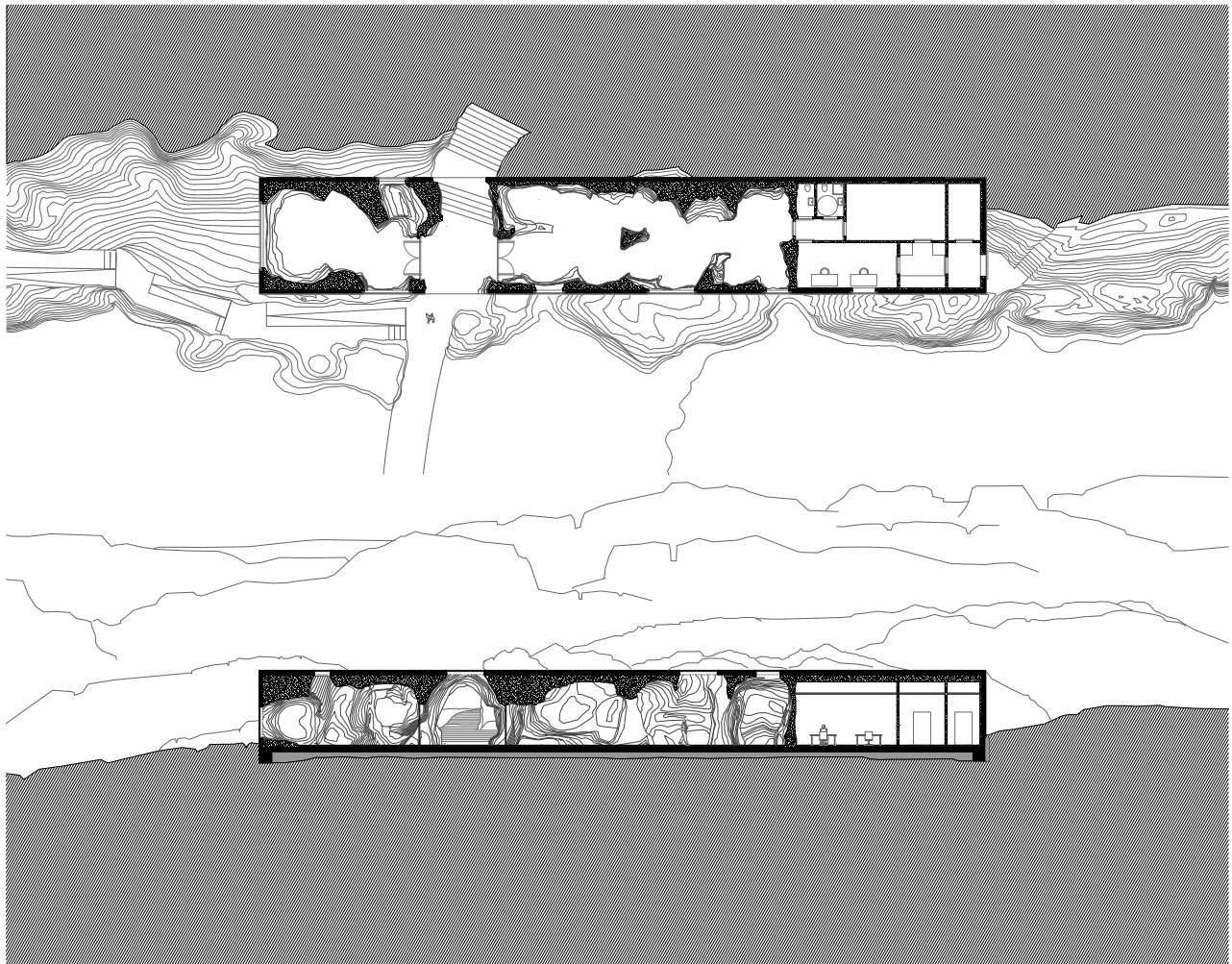
SECTION SUN CONE



THE ICE VOID

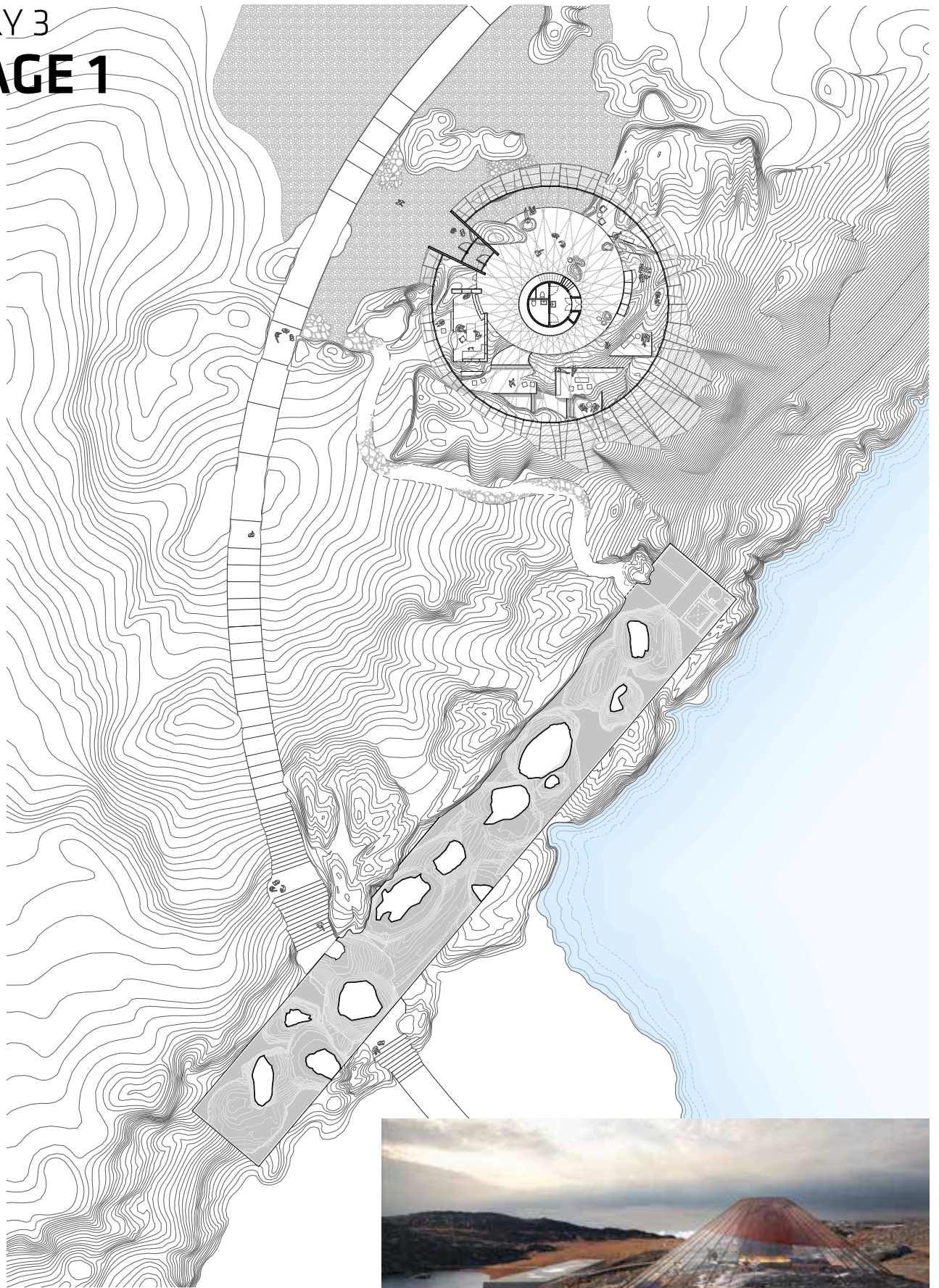


FLOOR PLAN ICE VOID



SECTION ICE VOID

ENTRY 3
STAGE 1



SITE PLAN



STAGE 1

ENTRY 1 ATANEQ



TEAM
RINTALA EGGERTSSON ARCHITECTS
NORWAY



RINTALA EGGERTSSON ARCHITECTS

MAIN CONSULTANTS, COPYRIGHT

Dagur Eggertsson, architect / Sami Rintala, architect / Vibeke Jenssen, architect
/ Thea orderud, stud. arch. architect assistant

ORBICON GRØNLAND A/S, NUUK

ENGINEERING CONSULTANTS

Thore Rasmussen / Michael Mørch / Frederik Sewerin Nicolaisen
/ Jonas Gundtoft

FORBES MASSIE, LONDON

3D VISUALIZATION CONSULTANTS

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

The centre is located above the lake in Sermermiut Valley and can generally be described as a bridge under which the centre facilities are sited. The existing tarmac areas of the former heliport remain unchanged in this entry: the area closest to the access road is used for buses and coaches, and the area closest to the centre is laid out as a car park. A shelter, bicycle parking facilities, a waste recycling shed and some benches are also installed in this area.

Arrival from Ilulissat is along the existing road for motorists, cyclists and pedestrians. People arriving by bus or coach go to the centre on a pavement along the car park and, from there, along a path incorporated into the terrain. From the centre, there is access to the green and red trails, but not to the yellow trail.

ARCHITECTURE

The architectural design is inspired by local building traditions, which are characterised by combinations of different materials and colours. The entrant stresses the importance of considerate contextual adaptation and therefore 'squeezes' the building volume into the landscape. The building thus interacts closely with the water level of the lake only two metres below it. The same considerations result in a building whose architecture is extremely simplified both in its physical manifestation and in its details.

The building is designed as a single large, extruded space suspended from a bridge span that attaches the building volume to the slopes at the sides of the lake. With this design, the entrant wishes to accentuate a physical and visual link between the town to the north and the landscape to the south. The bridge is therefore characterised by a high level of transparency in its cross-section. This attempt to create porosity results in very large light apertures, and the simply designed windows help ensure the identifying simplicity desired by the entrant.

Access to the building is along the bridge span mentioned, which is also the building's roof. Stairs and a lift lead visitors from the bridge span down to the exhibition area, which is laid out as a large space stretching the lower level of the building. It is a voluminous space in which all visitor functions are in close contact with the water surface of the lake.

When going downwards from the bridge deck, visitors pass an inserted level stretching half the length of the long room. The inserted level contains all research and administration facilities. It also creates different room heights in the exhibition space where the area below the inserted level is set aside for visitor facilities such as a café with kitchen, conference rooms, an auditorium and toilets.

Along the entire cross-section of the building, the double-height building volume makes up a coherent and flexible area that can be used for exhibition and other purposes.

The simple building volume is clad with different types of wood, selected on the basis of criteria of spatial perception of both the interior and the exterior of the building.

EXHIBITION

The exhibition area illustrated in this entry is laid out as a separate space kept apart from the café and shop. The exhibition space is flexible and robust, and its large windows towards the lake and the icefjord inspire visitors both to look in and to look out. The interface between outdoor and indoor presentation

and interpretation is accentuated by a terrace laid out as a continuation of the exhibition space. The double-height spaces in this entry are conducive to exhibitions with both large- and small-scale exhibits and installations.

It is the opinion of the assessment panel that this scheme is well organised for the purpose described and that it is characterised by both rational and poetic implementation of the exhibition concept. The rational aspect is seen in the flexibility of the scheme, the materials chosen for interiors, the flexibility provided by movable partition walls, and the possibility of controlling the intake of natural light. The poetic aspect is evident in the close relationship between the exhibition and the water and landscape, as well as in the humble nature of the spaces relative to centre visitors. The route down to the exhibition appears to be somewhat narrow and, although they encourage visitors to look in and out, the large windows on both sides of the exhibition space impose constraints on exhibition design.

ENGINEERING

The long facades feature double-height window openings into which large square window panes are fitted. Transparent/translucent switchable glazing is proposed, and there will be roller blinds on the inside and sliding shutters on the outside of the windows.

Heating in the building is underfloor heating. The heating system is connected to the town's district heating system, and there is a back-up system in the form of an electrically operated heat pump that uses water from the underground. A balanced heat recovery ventilation system will be installed in the building. The large window areas entail a risk of overheating, but the entrant mentions three measures that can be taken to limit the intake of sunlight. One such measure is sliding exterior shutters, but such a solution may be critical in terms of functionality and durability in the Arctic climate. The building structure is light, and the building will be vulnerable to temperature fluctuations. Another risk associated with the large windows is cold draughts and radiation, and glare may be caused by the low sun in Greenland. The large window panes will not be standard products in Ilulissat or even in Greenland, and it should therefore be considered how the window panes can be replaced if needed. The large entrance door in the foyer area will cause cold and draughts in the building, and its rotating function may be obstructed by snow or ice outside the door. In addition, drifting snow may enter the building when the door is open.

Thermal bridges may occur at the steel beams in the basic structure. It is the opinion of the assessment panel that they could be better insulated.



The assessment panel is very favourable to the idea of the centre being **AN INTEGRAL PART** of the general system of paths and trails



OVERALL ASSESSMENT

The assessment panel is very favourable to the idea of the centre being an integral part of the general system of paths and trails, but also finds it unfortunate that the yellow trail is not included in the overall design.

It may also be argued that the location of the coach park at such a great distance from the centre is not an optimal solution. The same is true of the arrival route along the car park, which does not offer much by way of experiences. It is also a drawback that people with reduced mobility will not be able to access the centre in the same way as others but will have to use a lift.

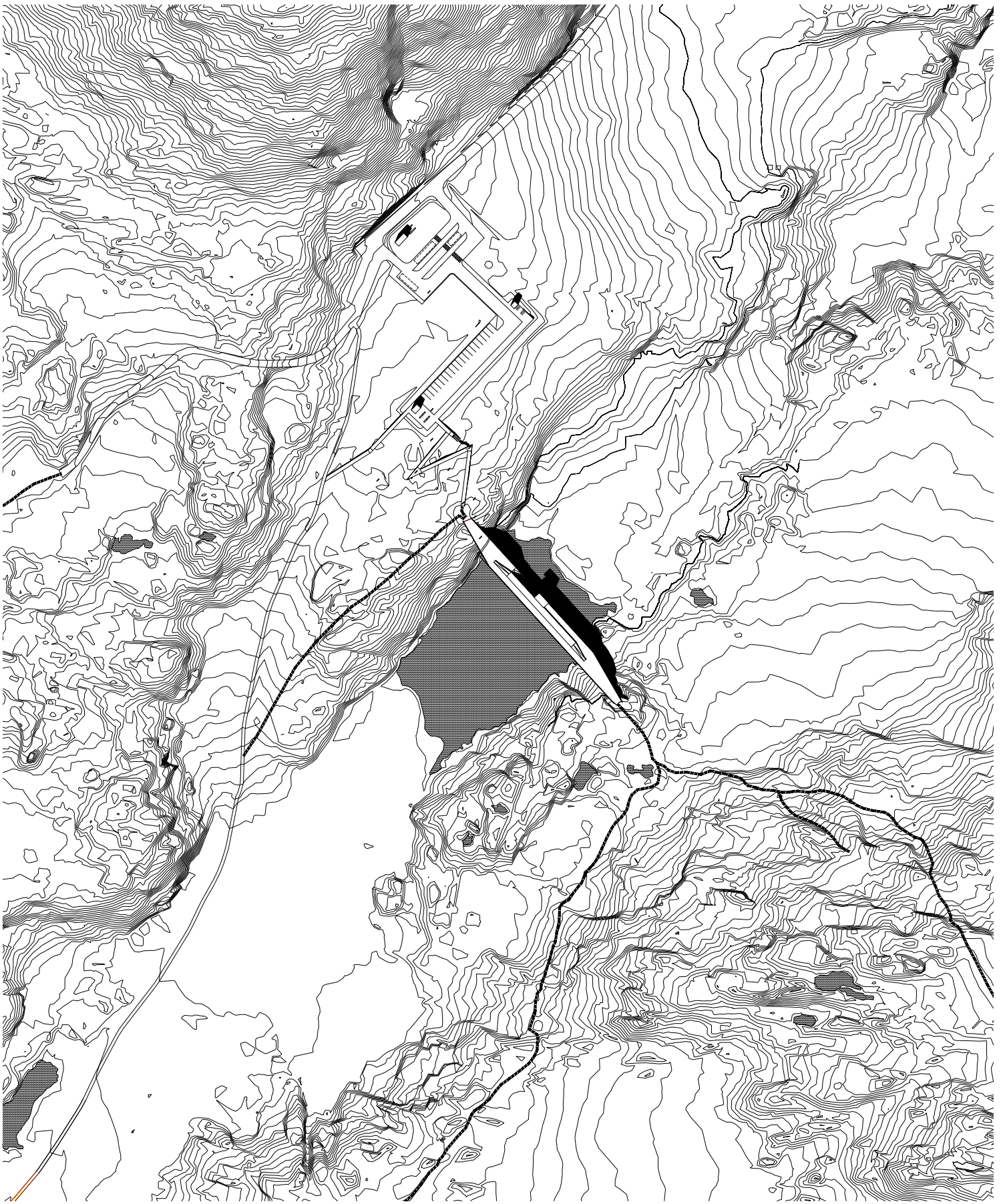


Both facades and interiors are toned down to such a degree that the scheme appears to be **WITHOUT IDENTITY AND JUXTAPOSITION** with the powerful and unique character of their context

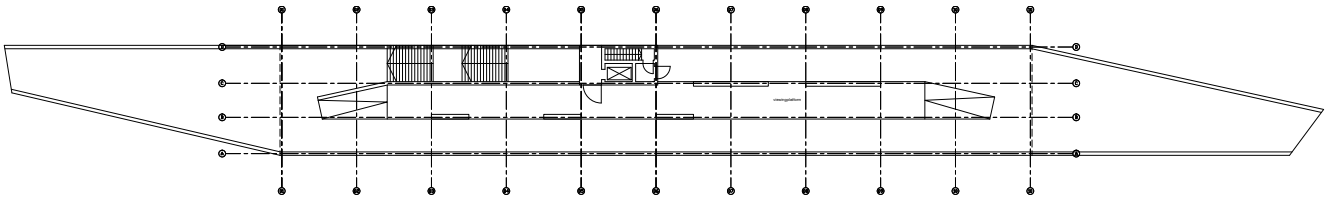
Viewed in isolation, the location of the centre across Sermermit Valley works well as a pathway, but the assessment panel is not convinced by the urban design illustrated and the choice of location for the centre in the grand scale of the distinctive and magnificent surrounding landscape.

This overall layout is somewhat surprising, not least in the light of the entrant's general description and the efforts made to tone down the building. Contrary to the intentions behind the overall layout, these efforts result in an architectural design and tectonic composition of both facades and interiors that are toned down to such a degree that the scheme appears to be without identity and juxtaposition with the powerful and unique character of their context. The architectural design proposed appears to conflict with the overall concept described in the entry, and the assessment panel has difficulty associating it with the 'ruggedness' that is so evident in the context and in the surrounding natural landscape. In both cases, the juxtapositions are 'out of scale'.

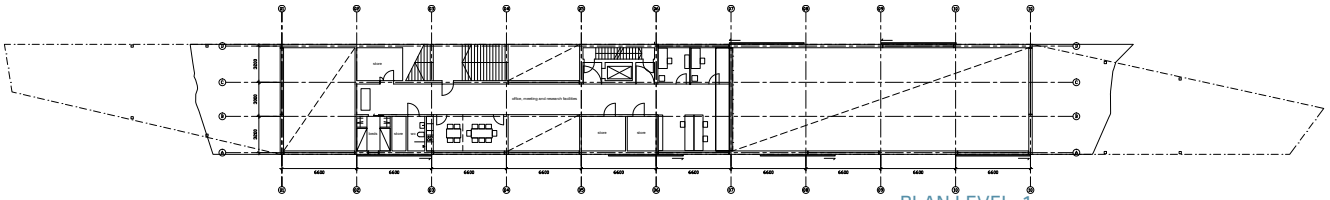
For the reasons stated above, this entry has not been selected for participation in the negotiated procedure.



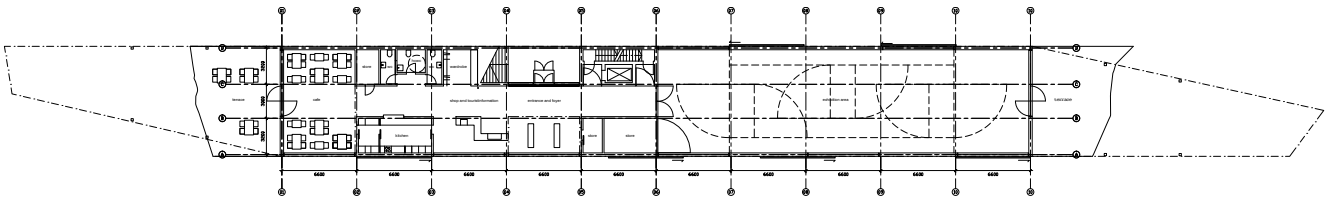
SITE PLAN



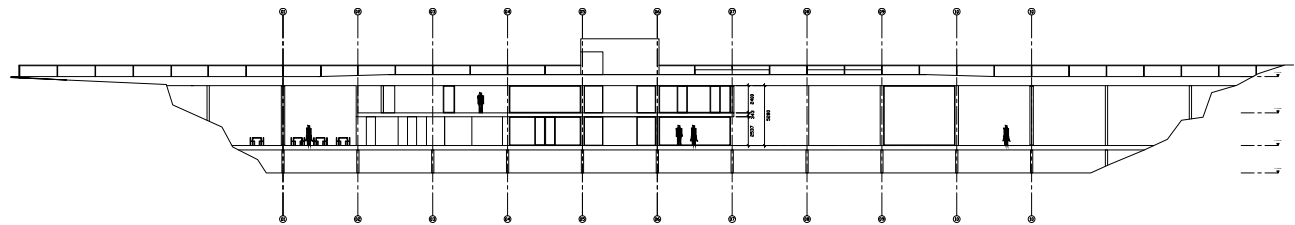
PLAN GROUND LEVEL



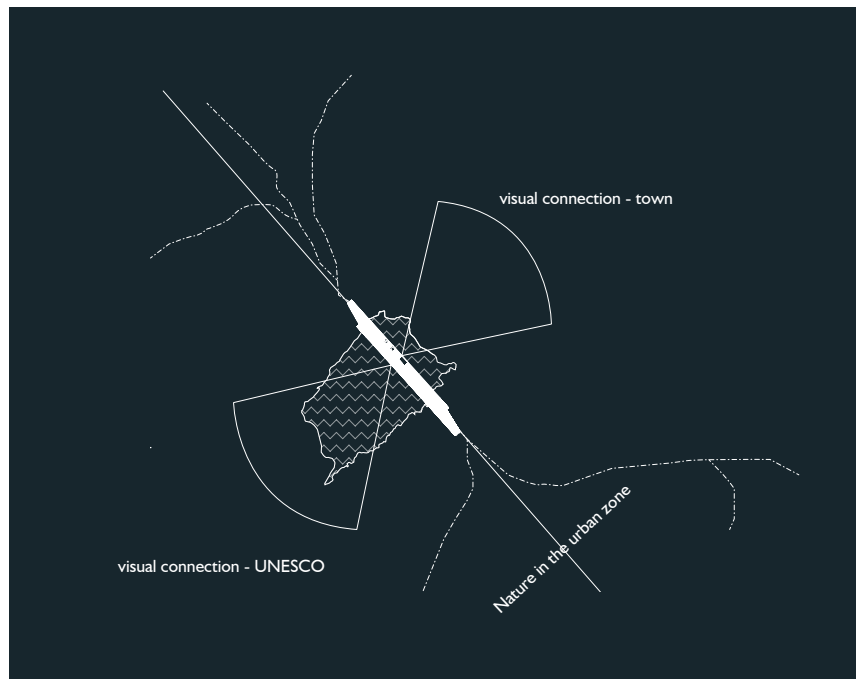
PLAN LEVEL -1

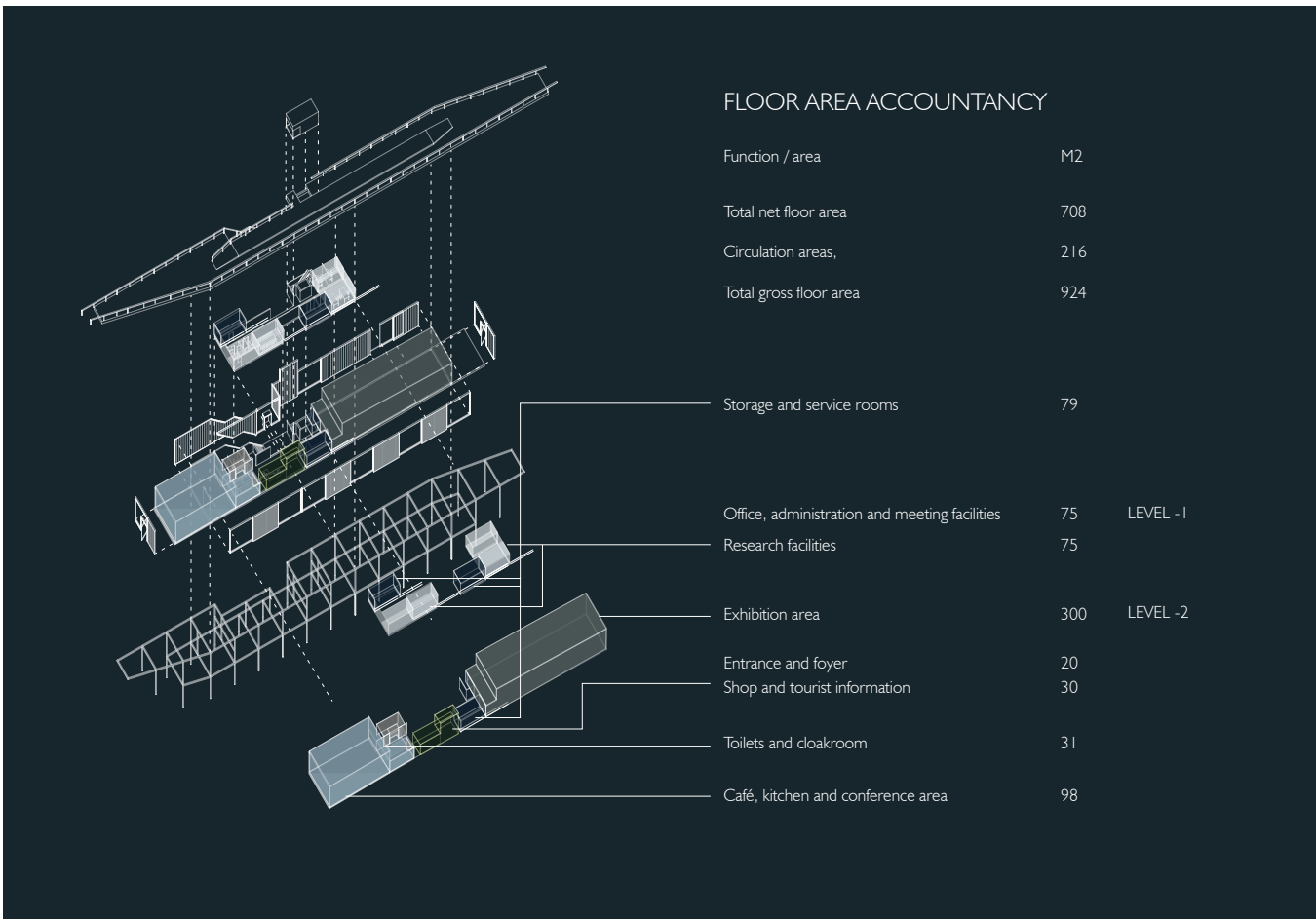


PLAN LEVEL -2



SECTION







STAGE 1

ENTRY 2 ALBEDO



SNØHETTA OSLO A/S

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Kjetil Trædal Thorsen, founding partner, architect / Andreas Joyce Nygaard, project leader, senior architect / Lars Jørstad Nordbye, senior landscape architect / Nicolai Ramm Østgaard, architect / Julia Dorothea Schlegel, research director, architect / Luca Bargagli, structural engineer, architect / Jorunn Sannes, artist / Heidi Pettersvold Nygaard, senior interior architect

COWI DENMARK A/S

MAIN CONSULTANT

Per Stabell Monby, project director / Marianne Fox, chief specialist – sustainability / Svend Erik Mikkelsen, chief specialist – sustainability / Maja Grud Minzari, project manager – sustainability / Claus Steesby, engineer, consultant – construction / Edward-Jozef Przeworski, chief project manager – MEP / Lene Ulriksen, specialist fire / Tim Gutteridge, engineer, consultant – quantity surveyor

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

This entry does not provide any detailed description of the relationship between the centre, Ilulissat and the wider landscape, but focuses on the immediate surroundings. It is proposed that the area of the former heliport be used as an arrival area, car park and bus turning area. Toilets and information stands are also illustrated there.

Access to the centre from the car park and bus turning area is along a wooden deck leading to the centre entrance. The deck is connected with the green trail into the landscape. Another route to the centre is a gravel road that is used for refuse collection. Solid granite benches are used to separate vehicular and pedestrian traffic.

The overall concept illustrated is based on a segment of a circle cut into the rock and a rotation of this segment that creates a sunken rest and relaxation area surrounded by rock walls.



ARCHITECTURE

The entry is based on a wish to combine a unique presence with the prevailing climatic conditions in the immediate context.

The building is laid out in a circular shape at ground level and anchored to the rock in a cut-out area equivalent to a semi-circle. The remaining part of the circular building cantilevers from the rock.

The circular building is situated at the northern banks of Sermermiut Lake and metaphorically represents a rotating pocket of time in the landscape, in which individual parts of the building are in controlled interaction with the surrounding natural scenery. The design incorporates open and closed circle segments that permit light to enter the building or prevent it from doing so, which is in line with the request for differentiated climate protection set out in the brief. The programmatic approaches result in a building shaped as two 'rotated' building sections: one used for outdoor exhibitions, the other for indoor exhibitions.



This entry deserves praise for its suggestion that the icefjord centre should be seen as an element 'inserted' into the landscape like a piece of inlaid wood in **A PIECE OF FURNITURE**.

The exterior of the building features a sharp geometric profile against a smooth, reflecting skin. The geometry is based on theories of sustainable tectonics and the optimisation that can be achieved by applying state-of-the-art knowledge about reflectance values of light reflected back from surfaces. The various angles of the facades are a manifestation of this theory.

The entrant's conceptual considerations lead to a semi-circular building volume rotated by 30 degrees relative to the central axis of the circle segment. The axis is part of the composition as it marks an arrival bridge from the car park to the north. A turn of the outer periphery relative to the central axis reveals a cantilevered area protruding from the inside of the building. It serves as an outdoor rest and relaxation area in connection with the access route to the centre.

Visitors arrive at an inserted balcony, which – in addition to a vestibule and a lobby – contains the cloakroom, café, kitchen and shop, as well as offices for administrative staff. From the inserted balcony, visitors are led down along a 'multipronged' system of ramps laid out as four 'flights' in the exhibition space. The flow of the ramps is combined with rest zones designed as amphitheatre plateaus in the exhibition space.

Unlike the exterior, the interiors in this entry testify to diversity achieved through a combination of materials that also provides acoustic regulation. The materials range from natural stone to man-made products and from natural wood to amorphous wooden panels featuring combinations of clear, bright colours.

EXHIBITION

The exhibition space illustrated in this entry is a double-height room located as a continuation of the café and shop. The exhibition starts at a ramp that leads visitors down to the exhibition space and is part of the display area. From the exhibition space there are direct views of the icefjord and access to a large outdoor plateau, which the entrant suggests be used for communication and interpretation purposes. The interior surfaces create a warm ambience in the space, with references to icebergs and the open sky.

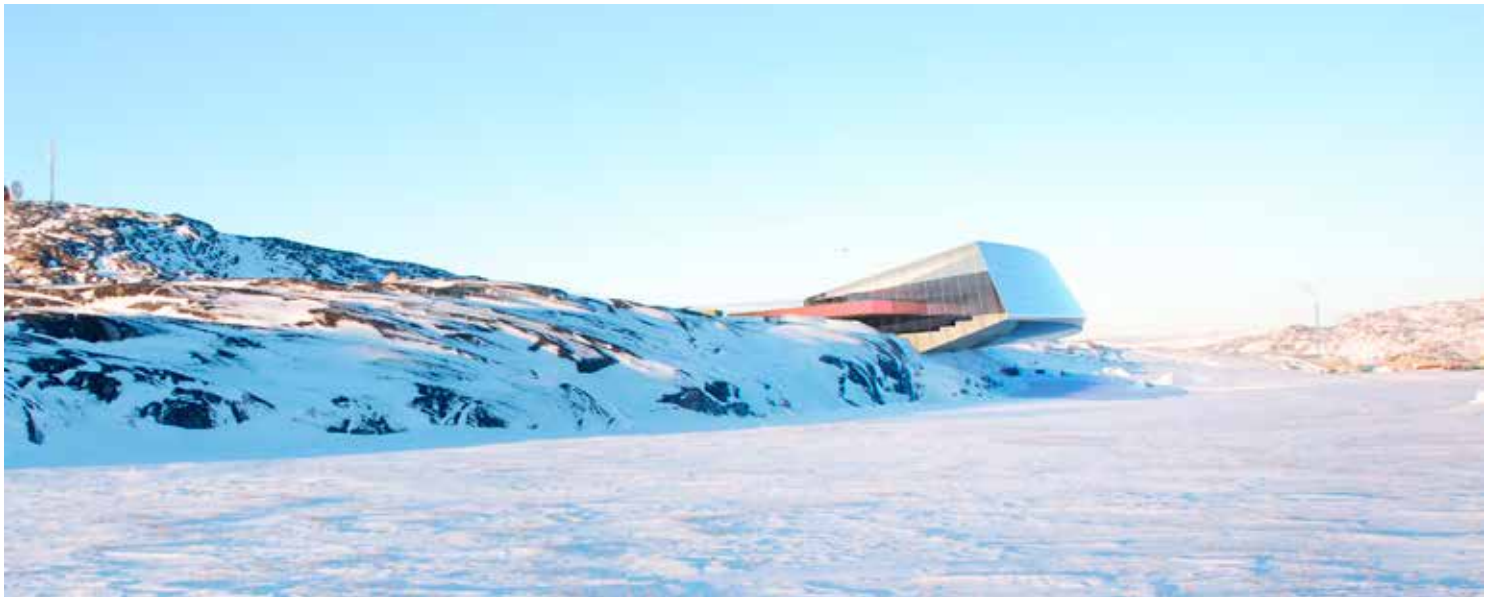
The idea of having a single open space and generous views of the icefjord is both the strength of this entry and its weakness. The open space will have direct views of the exhibition from the café and will also make high acoustic and visual demands on the interface between exhibition, café and shop. It is the opinion of the assessment panel that the inclusion of the ramp in the exhibition area imposes constraints on exhibition activities.

ENGINEERING

The load-bearing structure is a steel structure that spans from the functional spaces to the north across the exhibition hall and further on to the southeast. Interior surfaces are generally clad with wood – mainly plywood – while natural stone is used in special-purpose rooms and at the entrance. The natural stone is the stone from blasting to create the exterior courtyards at the south-western end of the building.

The double-height exhibition space opens up towards the south-west and the courtyard behind a double glass facade. The glass facade lets natural light in, but also insulates against heat from the exterior, provides solar shading and helps preheat ventilation air. The glass facade is inclined towards the exterior and will thus be protected against exposure to the elements.

The building features a large number of technical installations such as a heat recovery ventilation system, which is protected



against icing up by means of 'smart' control and the use of a heat pump in the heating system, which is underfloor heating. The building also produces energy from solar heating and electricity from photovoltaic panels. It also has an air cleaning system that can be used in connection with the smart, demand-driven operation of the ventilation system. An ice store is proposed for seasonal storage of heat, and some system of heat exchange with the lake is part of this. The entrant states that a link-up to the town's district heating system may become relevant.

However, the ice store for seasonal heat storage, the use of many different insulation materials and the suggested connection to the district heating system are examples of technical approaches that do not seem to make sense, or at least require some explanation. The use of photovoltaic panels for the generation of power might have an educational effect for visitors, but the assessment panel wonders whether it would in fact be a financially viable solution and a reasonable idea, given that the town is currently using only 30% of the hydropower that can be generated locally.

The aluminium shell is claimed to provide climate protection, which may be correct if the rest of the building envelope is appropriately composed relative to the anticipated indoor climate.

OVERALL ASSESSMENT

This entry deserves praise for its suggestion that the icefjord centre should be seen as an element 'inserted' into the landscape like a piece of inlaid wood in a piece of furniture. However, this idea is not implemented completely, as the centre is perceived as a building on top of the landscape.

It is the opinion of the assessment panel that the entrant's pragmatic approach to the assignment, with the existing tarmac areas of the former heliport being used for arrival, does not result in the landscape qualities desired in the brief.

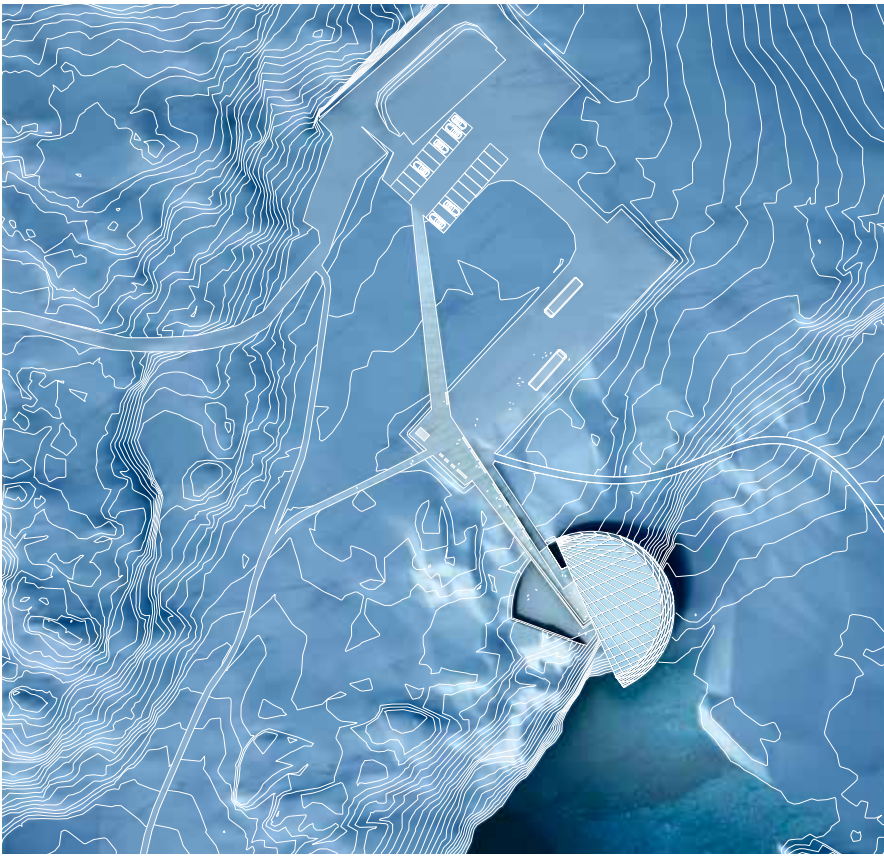
With the exception of the connection to the green trail, the scheme has no proposals for other access routes to the centre. In addition, pedestrians and cyclists have to use the current road to access the centre. The arrival area seems unresolved, and there is no indication of where refuse collection vehicles can turn in front of the centre.

It is the opinion of the assessment panel that, despite the entrant's efforts to anchor the rotating building volume in the bedrock, the incorporation of the scheme into the landscape does not feature the desired contextual cohesion. In fact, the scheme proposed is an unresolved volume that seems alien to its context. This applies both to the appearance of the building and to the tectonic treatment of it. The perception of the interior spaces and the organisation of the spaces are also unnecessarily conceptual without any differentiated intimate sphere.

For the reasons stated above, this entry has not been selected for participation in the negotiated procedure.



In fact, the scheme proposed is an unresolved volume that seems ALIEN TO ITS CONTEXT.

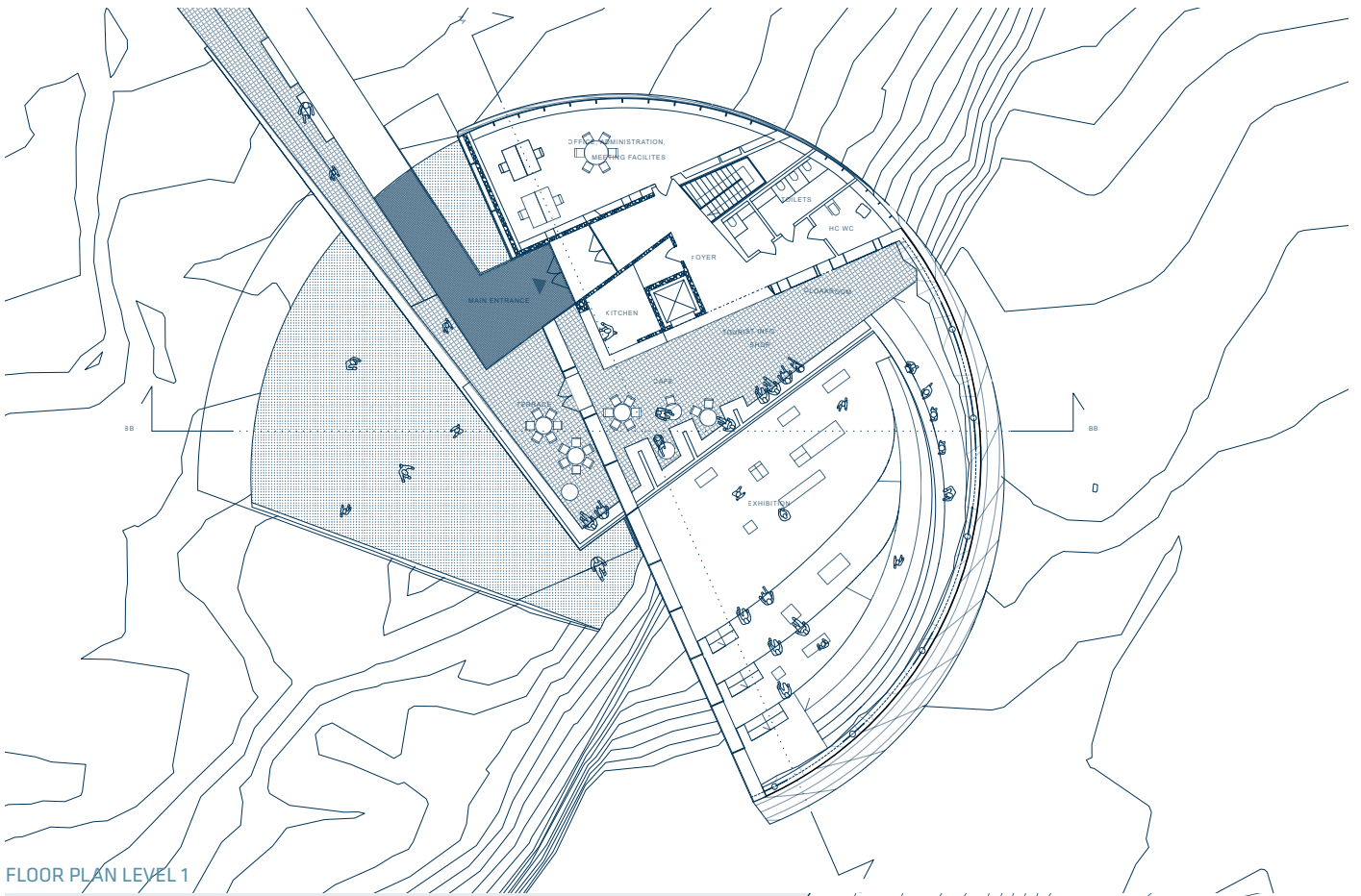


SITE PLAN

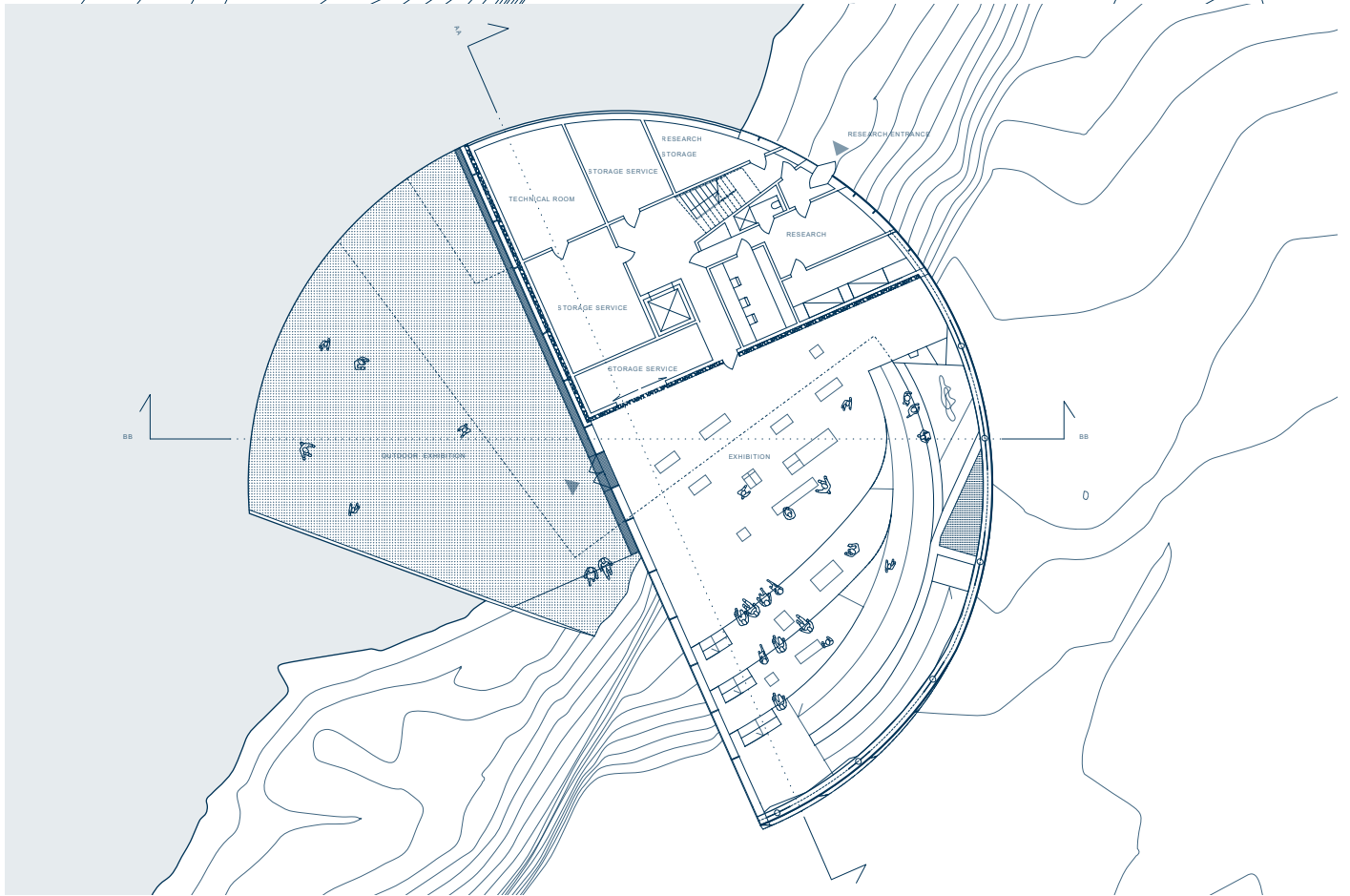


COLORS

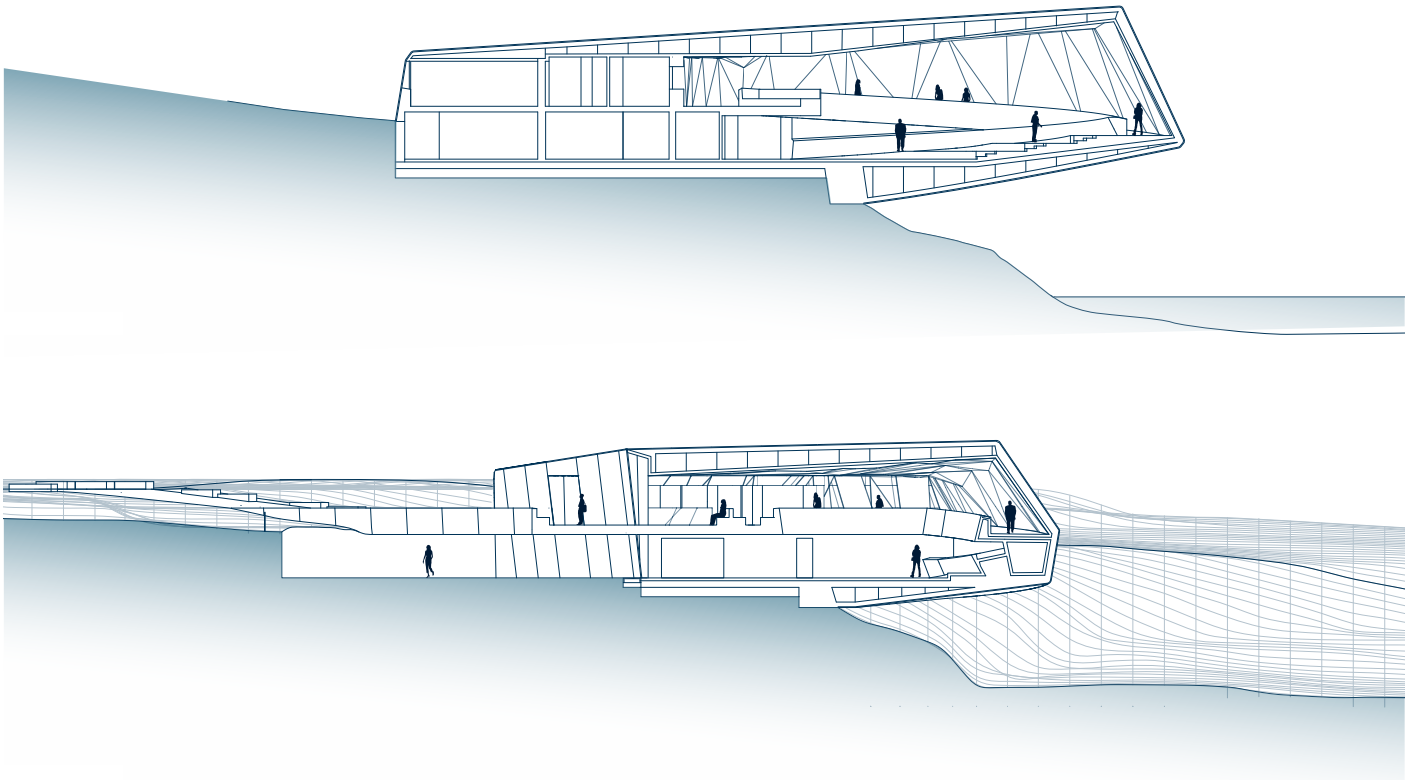
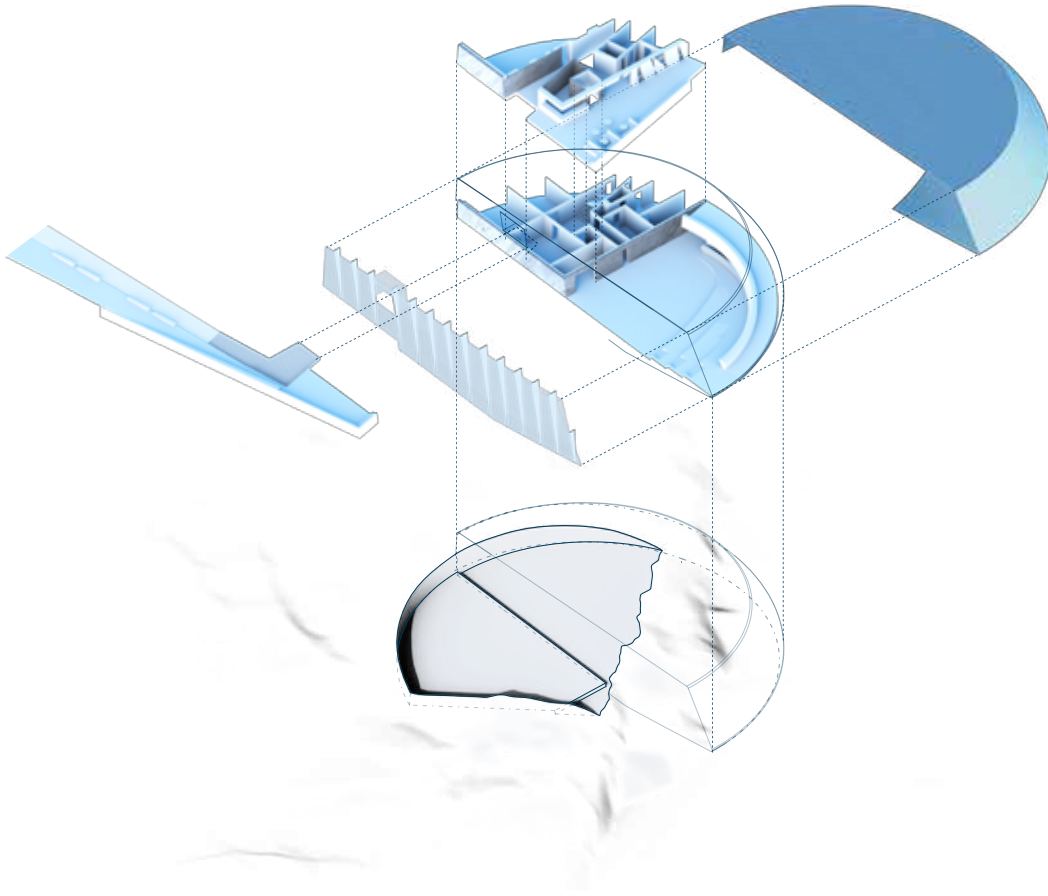




FLOOR PLAN LEVEL 1



FLOOR PLAN LEVEL 0



SECTIONS



STAGE 1

ENTRY 5 THE STORY OF ICE



ARKÍS ARKITEKTAR EHF

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Birgir Teitsson, architect FAÍ, partner / Arnar Thor Jónsson, architect FAÍ, partner
/ Hulda Guðjónsdóttir, architect / Rebekka Jónsdóttir, architect

LANDFORM EHF

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Oddur Hermannsson, landscape architect FILA / Gunnar Kári Oddsson,
BS landscape planning and architecture

VERKÍS

CONSULTING ENGINEERS

LIGHTNING DESIGN

Guðjón L. Sigurdsson, lightning designer IALD

ASSESSMENT PANEL REMARKS – STAGE 1

LANDSCAPE

Arrival at the centre is along a route for pedestrians and cyclists that is not illustrated in detail, and from a new car park. Its shape inspired by the circular areas where sled dogs curl up to sleep, the car park is laid out as a semi-circular area that is intended to be a contrast to the straight lines of the centre building.

At the centre of the car park there is a rest area, which to the north is delimited by a semi-circular wall featuring a cross of solid glass. Together with a 12-metre-high mast, the wall makes up a sundial that shows the time of the day and the year. Wooden benches are placed in front of the wall, and to the south there are granite benches.

The area between the car park and the centre features a number of deliberately positioned rocks that are to form snow drifts and tell stories about the weather.

The surfacing materials proposed are granite, wood, gravel and asphalt. The entry does not show the location of toilets or areas for refuse storage.

ARCHITECTURE

The building is located at the north-eastern end of the valley and linked to the red and green trails. The entrant does not explain the exact contextual relationships, but focuses on analysing the complexity of the contents of the competition brief. The analysis is then correlated to metaphorical interpretations of the history and ambience of



the place, which forms the basis of the actual characteristics of the scheme.

The building design is thus the outcome of a way of thinking that combines historic construction principles and references to igloos and turf huts with new sustainable technologies that serve as common identifiers of architectural choices.

The exterior appearance of the building is dominated by an amorphous surface with sharp edges designed as a skin of woven metal mounted on metal tubes that protrude from the primary building. The entrant refers to the skin as a mantle which, in the summer season, is to make people think of traditional turf huts. In the winter season, the apertures in the perforated surface are to gather ice and snow, thus camouflaging the building optimally. The philosophy behind this design is that, in the wintertime, the building will relate to the icebergs in the icefjord behind it. Rock will be placed in the landscape around the building to ensure that additional snow will gather, thus accentuating the reference to floating icebergs, as the foundations of the building will be concealed.



It is a focused approach to a manifestation of the centre as metaphorical compositions of contextual narratives combined with **FORWARD-LOOKING SUSTAINABLE TECHNOLOGIES.**

The overall floor plan of the building is laid out as a parallelogram in which several landscape impacts metaphorically deform the exterior periphery of the building volume. The metaphorical impact of the landscape results in an intentional diversity in the form of an organisation of spaces that is, in principle, based on a single coherent space. The facades are designed as variations of translucent and open facades, which is intended to add to the diversity of the space. The interior of the building reflects the exterior movement of the building shape. The organisation of the floor plan is very simple: staff facilities to the east and visitor facilities to the west. The two interior building volumes are combined in a symmetric pattern that serves as an introduction to the building interior, and the space then unfolds into a large flexible single-level area.

EXHIBITION

The entrant uses the ice metaphor as a general reference in the centre's exhibition facilities. The exhibition area is located adjacent to the café and shop, and light mobile partition walls are used to vary flows and views in the area. The exhibition space features a generous volume, and the entrant states that the natural light in the room will be filtered and diffuse, thus creating a mellow ambience. The entrant provides a detailed description of how exhibition technology and artificial lighting are integrated into the architectural design as a separate layer that does not impinge on the interior space.

The translucent facades that surround the exhibition space add character and atmosphere to the interior, but also prevent visual contact between the exhibition area and the outside

landscape. The entry testifies to great understanding of the complex combination of architecture and exhibition set design. The great flexibility illustrated in the interfaces between exhibition, shop and café results in an open space, but also calls for some kind of delimitation between the exhibition area and the other facilities for reasons of acoustics and direct views into the exhibition from the café.

ENGINEERING

The main source of heating is underfloor heating, combined with heating through the ventilation system. The ventilation system is a demand-driven heat recovery system. Energy is supplied from the town's district heating system, but there are also heat pumps that exchange heat from boreholes drilled in the bedrock and from the outdoor air. The building, as far as possible, is to be self-sufficient in energy, which is to be ensured by means of power generated by a wind turbine beneath the building. The building's own generation of energy is expected to meet 20-80% of requirements, depending on the season. One of the foundations contains a 400-500m³ water tank that is to serve as a buffer for the thermal energy.

The assessment panel fails to understand why the structure is to be wrapped in a complex mesh intended to collect snow and finds this solution inexpedient from a technical point of view. The snow will be a static load on the structures and, in the event of ice formation, it may become very heavy, which may potentially give rise to moisture in the structures. When the snow melts, considerable quantities of water will be formed, which may cause problems if it drips onto people using the building, forms icicles or makes access roads slippery. In the summer, when the building is used most, the snow will be gone anyway and only the steel mesh will be seen. Snow deposits around and on the building should be carefully considered, for example through CFD modelling or wind tunnel tests.

The windows are specially made and probably expensive, and they may be difficult to replace in the event of damage. The good thing that can be said about the milky glass and the steel mesh around the building is that they will probably help mitigate the overheating that may be caused by the large glass

area. It is assumed that the windows are well insulated (although this is not indicated in the entry) so that they will not cause any cold draughts.

The energy system seems not to have been adequately thought out. The town generates so much hydropower that it can only use 30% of it, and it therefore seems odd that the entrant suggests systems of such a complex nature in order to generate and store a little more energy.

The declared wish to use durable and reusable materials does not seem to be consistent with the materials actually chosen.

OVERALL ASSESSMENT

The entry does not illustrate any clear correlation with the surrounding landscape or any links to Ilulissat, but only close connections between the car park, the centre and the places where the trails meet. Arrival for pedestrians and cyclists through the landscape is good, as are the connections to the red and green trails, but there is no connection between the centre and the yellow trails.

The surfacing materials proposed are adequate and simple, but the rocks laid out in the landscape appear unnecessary in natural scenery that needs no additions.

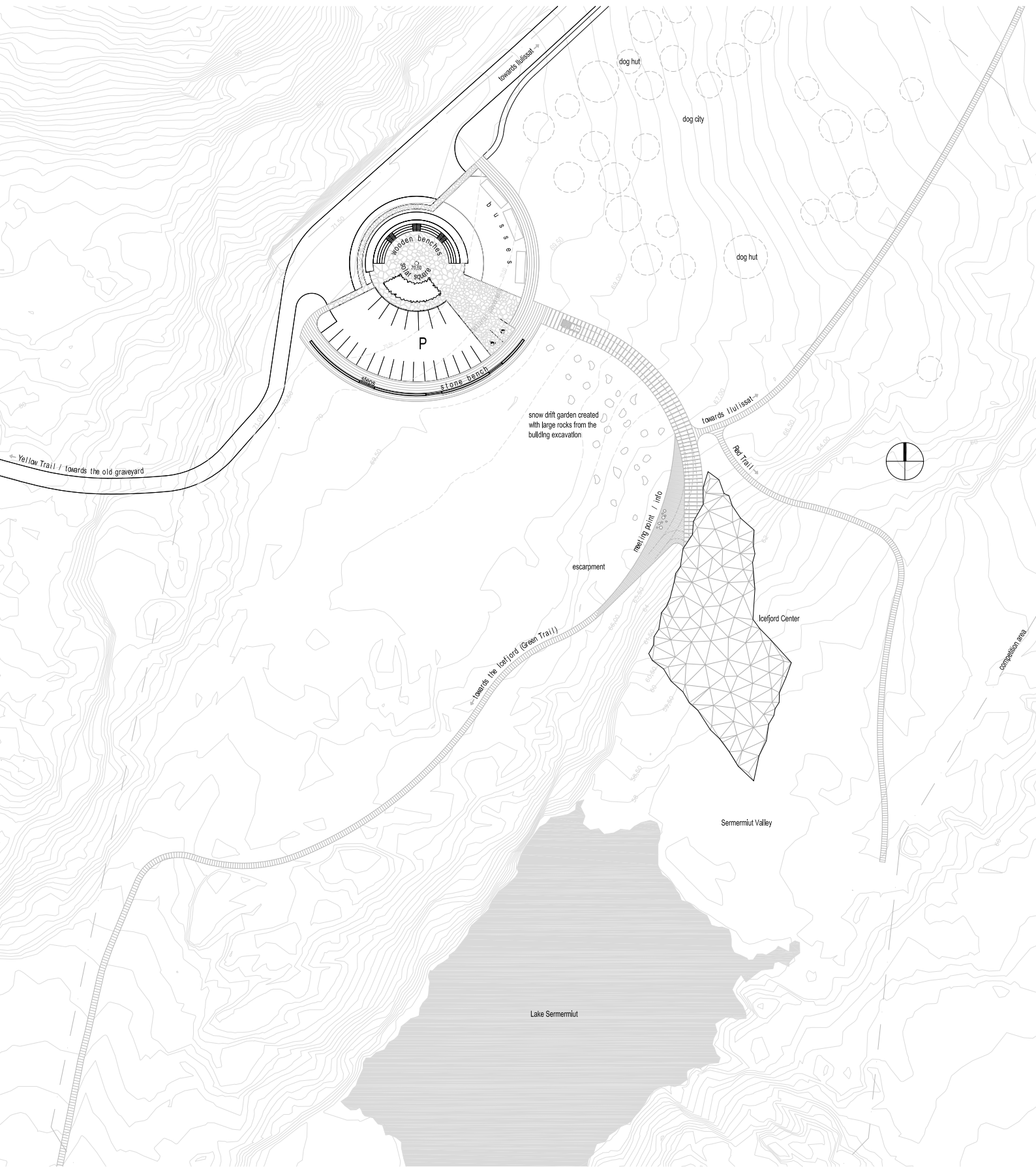
The idea of having a car park that can also be used as a place for rest and relaxation is fundamentally good, but the entry does not utilise the entire potential offered by such a design. Generally, the car park seems to be designed for a larger town and is not suitable for a location in the midst of magnificent natural scenery.

The assessment panel is in broad agreement that the entrant's response to the brief was generally sympathetic. It is a focused approach to a manifestation of the centre as metaphorical compositions of contextual narratives combined with forward-looking sustainable technologies. The entrant's attempt to verbalise the response to the brief has resulted in far too many metaphors and images – and consequently too many concepts, all of which seem unarticulated and presented without any holistic prioritisation and hence without any architectural cohesion in the proposed design. When a metaphor seems architecturally simplistic in its representation of the architectural manifestation, it fails to compel. Likewise, it is unreasonable to combine a metaphor with a real object, for example an artificial floating iceberg with real icebergs as a backdrop. A unanimous assessment panel agrees that the architectural design proposed is devoid of the special edge required by the special nature of the assignment and also requested in the brief.

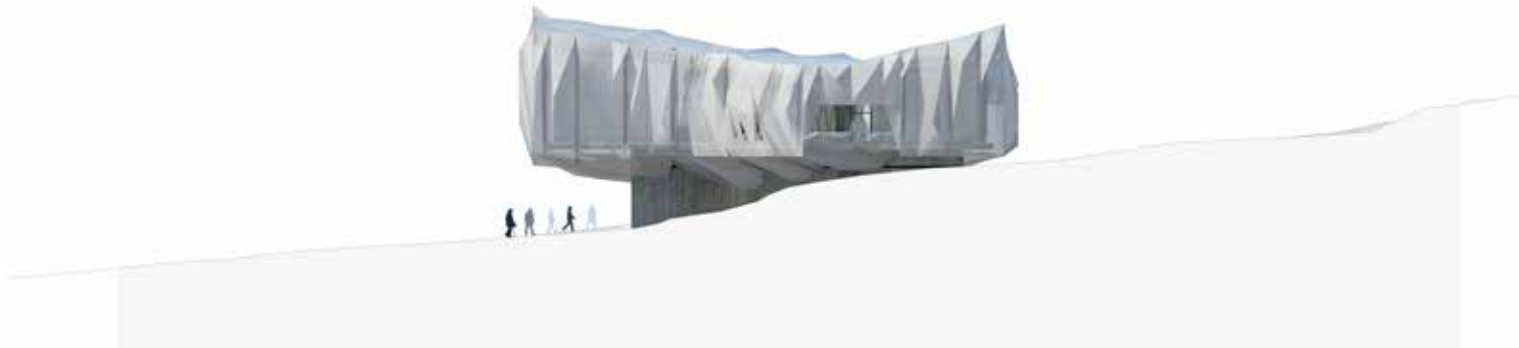
For the reasons stated above, this entry has not been selected for participation in the negotiated procedure.



The entrant's attempt to verbalise the response to the brief has resulted in far **TOO MANY METAPHORS AND IMAGES** – and consequently too many concepts.



SITE PLAN



ELEVATION NORTH



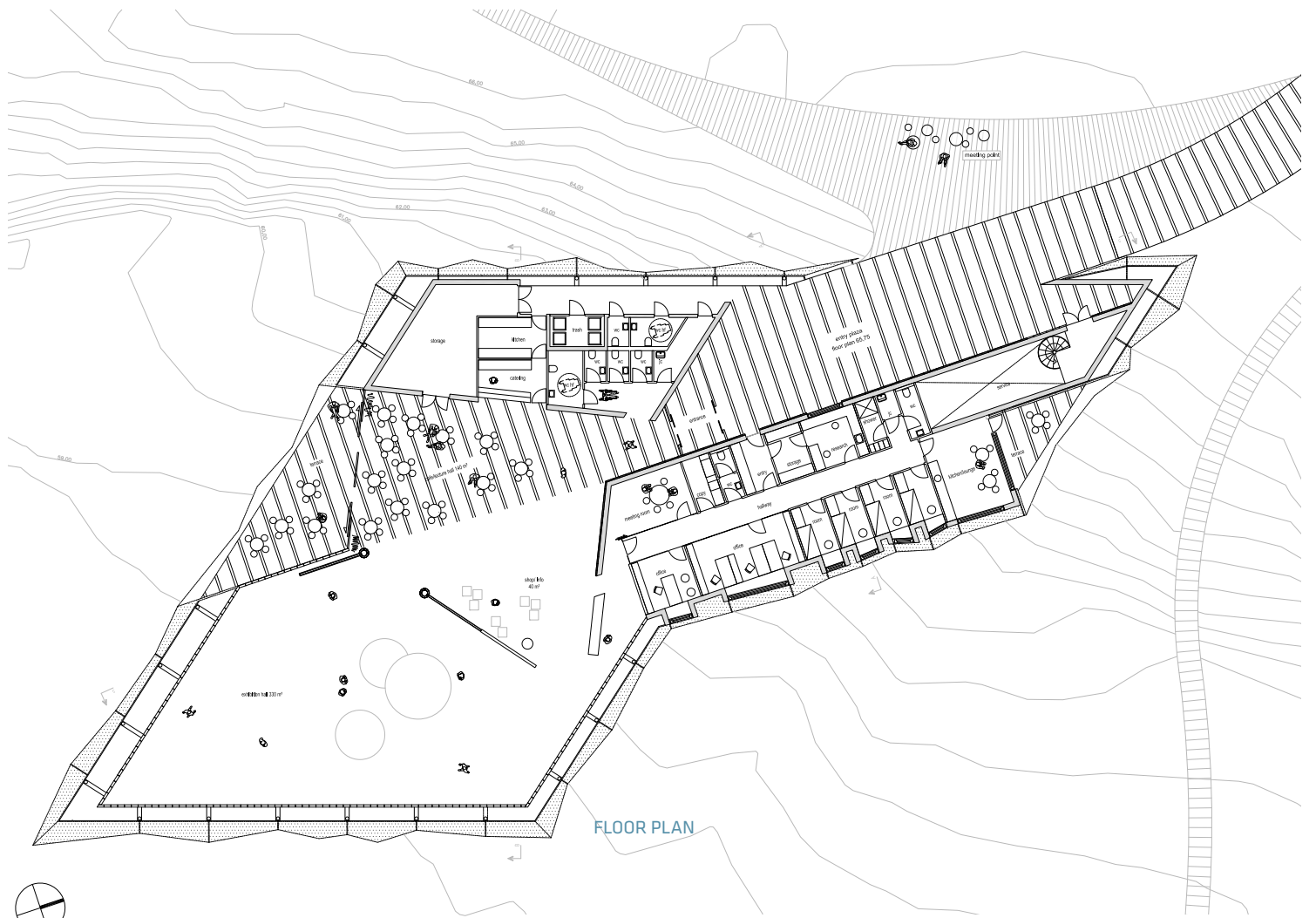
ELEVATION EAST



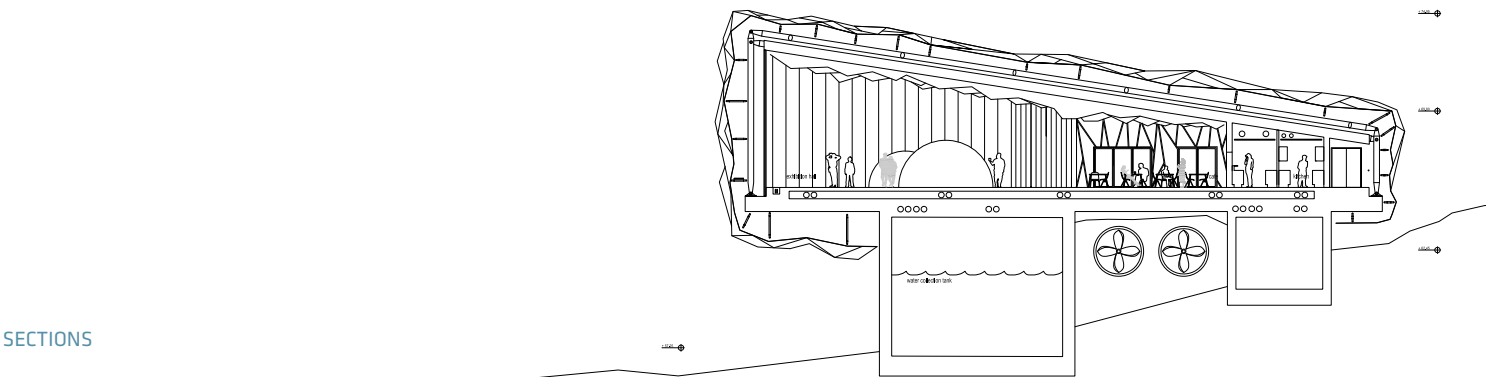
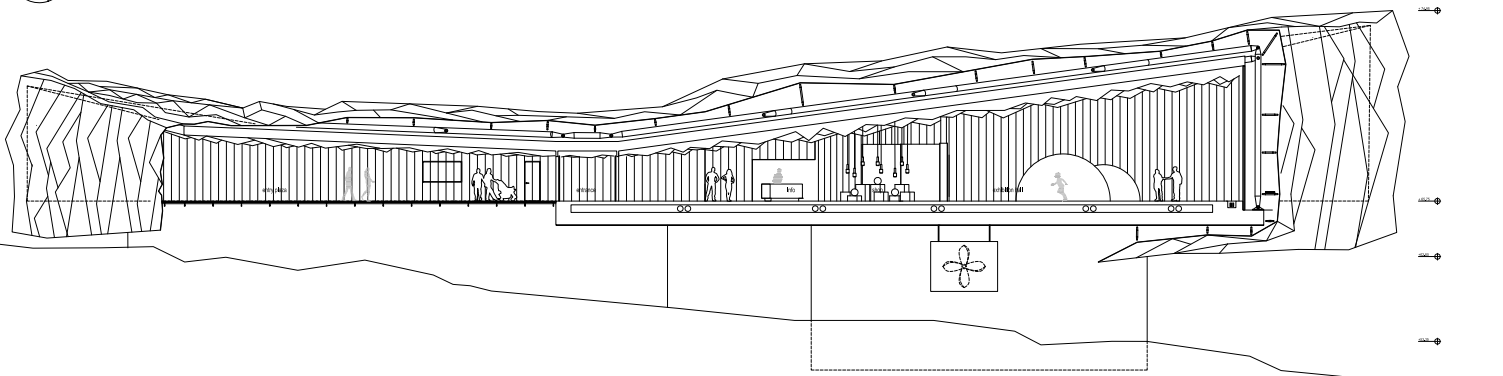
ELEVATION SOUTH



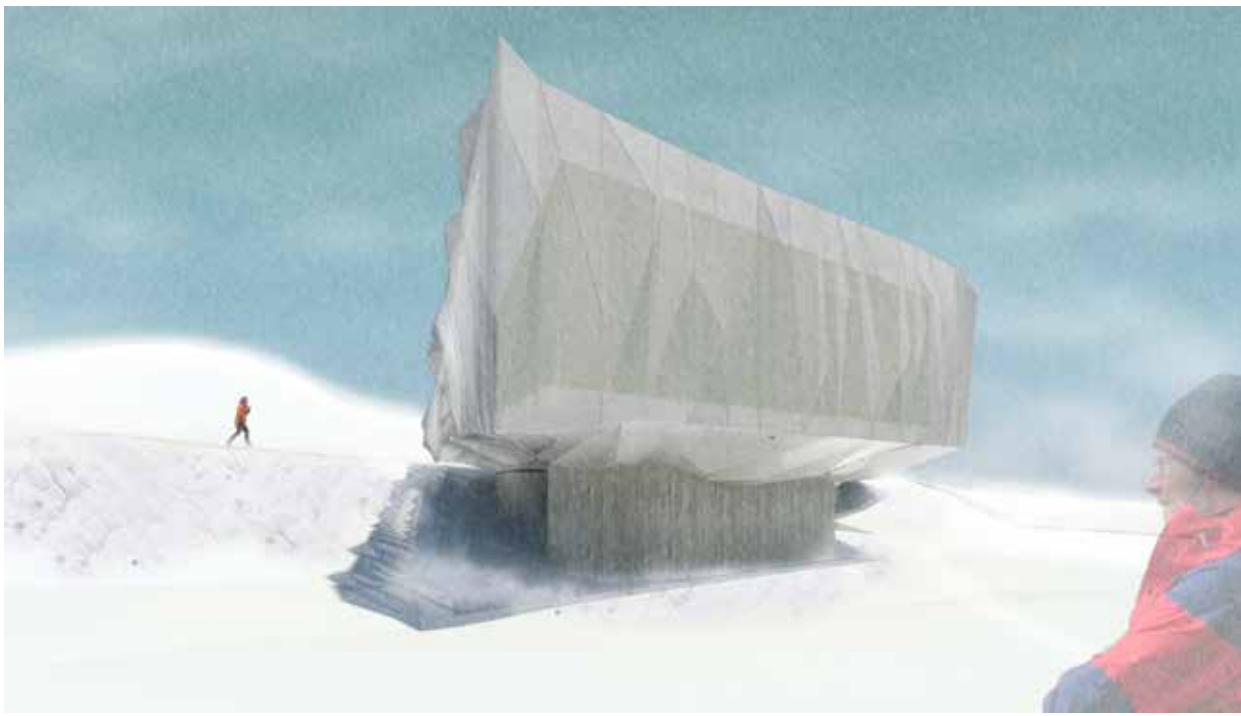
ELEVATION WEST



FLOOR PLAN



SECTIONS







PHOTOGRAPHS: JENS V. NIELSEN



ASSESSMENT PANEL AND ADVISERS TO THE PANEL

Lars Autrup

Hans Peter Svendler

Thue Christiansen

Ono Fleischer

Jan Søndergaard

Carsten Rode

Torben Schönherr

ASSESSMENT PANEL REPORT

**The assessment panel report was prepared
on the basis of input from:**

Jan Søndergaard, design professional, architect
Torben Schönherr, design professional, landscape architect
Carsten Rode, professor, design professional, engineer
Rambøll Denmark and Rambøll Greenland

Text editing

Anne-Mette Bølling, Arkitektkonkurrencerdk Aps

Graphic editing and layout

Jens V. Nielsen

Translation

OVRZ / Mette Aarslew

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