

DISMANTLING, MOVING AND STORAGE OF “THE FISHERMEN” AND “THE SEAGULL”

Technical plan and conservatorial assessment. June 2020.

The parties involved are (click on the links for more information in English):

- [Veidekke](#) – Executing contractor with project planning responsibility
 - [Sarens](#) – Subcontractor with special expertise in transportation
- Team Urbis (Statsbygg’s planning and design group)
 - [Dr. ing. Aas-Jakobsen AS](#)
 - [NIKU](#) (the Norwegian Institute for Cultural Heritage Research)
- [Norconsult](#) – Independent inspections pursuant to the Norwegian Planning and Building Act (incl. extended inspections)
- [DNV GL](#) – Third-party inspections initiated by Statsbygg

The status as per 3 June is that Norconsult has completed its independent inspection of the design and planning work, and has submitted its notification of completion of inspection in accordance with the regulations. Norconsult is now continuing to inspect the execution of the work. This includes checking the planned work procedures and specific activities on site.

DNV GL has completed its third-party inspection and has delivered its final report, which concludes that the steel frames that will be used during the dismantling, moving and storage are robust, that the jacking solutions that have been chosen are suitable, and that the stress is of such a nature that the works of art are not expected to suffer any significant damage.

Conservatorial assessment

The Norwegian Institute for Cultural Heritage Research (NIKU) is advising on cultural heritage issues in connection with the planning and development of a new Government Quarter. NIKU’s role in this context is to ensure that “The Fishermen” and “The Seagull” do not suffer any unnecessary damage during dismantling, storage and installation in their new locations. All the work is being carried out by mural conservators, who are working closely with Team Urbis and Statsbygg. The conservators are involved in the execution of all work that requires direct contact with the surfaces. They also review all the work procedures and technical drawings to make sure that no work is planned that might damage the works of art during moving, storage and mounting. Part of their assignment is to carry out a weekly inspection of the works of art to identify any risk factors in the execution of the work, and check that the works of art are not being damaged.

NIKU has undertaken two assessments of the state of the works of art, one in 2016 and another in spring 2020. In the latest assessment of the state of the works of art, the framework around “The Fishermen” was also assessed since it is, and will become, a permanent part of this work of art.

The Fishermen

In the most recent assessment of the state of “The Fishermen”, some loose stones were found in the lower part of the frame. These were largely from an area of the fresco that has required extensive repairs in the past. An area where the rendering was coming loose was

also found. The damage is probably the result of exposure to water and frost, and is not related to the bombing. To ensure that no original material was lost, and that the work of art would not be damaged, all loose stones were reattached. The loose rendering was reattached using injection mortar and the edges were secured.

The weekly inspection of the work of art during the dismantling will show whether further safeguards are necessary, and the conservators will then protect the front of the areas to ensure greater stability. It is expected that some stones may come loose and fall off, but this is considered insignificant damage. Any stones that fall off and are caught will be glued back into place at a later date. Some stones from other parts of the building are also going to be kept to replace any stones that fall off and are not caught.

Once the work of art has been detached, it will be placed in a box built specially for this purpose. The box for “The Fishermen” will not be air-conditioned since the artwork has always stood outside. However, if it proves necessary, air-conditioning can quickly be installed in the box. The climatic conditions inside the boxes will be logged, and NIKU will monitor the readings to detect any deviations. During the period when “The Fishermen” is in storage, the conservators will regularly inspect the work of art to check for any changes.

The Seagull

The most recent assessment of the state of “The Seagull” did not find any new damage to the surface. NIKU finds no change from 2016. “The Seagull” has always been indoors, and it therefore poses slightly different challenges to “The Fishermen”. The original chalk lines are intact, and the work of art has never been exposed to an outdoor climate. During the relocation process, the surface of “The Seagull” will therefore be covered with sealed plates to prevent water penetration, with built-in valves to ensure ventilation. A window has been added to the plates to allow NIKU to check for condensation during their weekly inspections.

This protective plate will remain on the work of art during transportation, and will only be removed once the work of art has been safely placed inside the storage box. The storage box for this work of art will be air-conditioned. The climatic conditions inside the storage box will be monitored by several sensors. The conservators will regularly check the climatic conditions inside the box and the state of the work of art.

Steel frames

Two steel frames will be installed on each work of art. One frame will be mounted on the back of the work (the bracing frame), and a second frame structure (the relocation frame) will surround the entire work.

The framework on the back of the works of art will have a stabilising function and will also play a central role when the works are to be mounted on Building A. “The Fishermen” is going to be mounted on the façade of Building A, and the bracing frame will therefore be made of stainless steel. “The Seagull” is going to be installed in a similar indoor environment to its current one, so there is no need for this.

The purpose of the framework that will surround the entire artwork is to enable safe relocation, and it is therefore called the relocation frame. It will remain mounted during the entire storage period, because this frame will have the same function when the work of art is to be mounted in its new location as during removal from its current location.

The steel frames have been designed in a collaboration between Veidekke and Team Urbis (Dr. ing. Aas-Jakobsen AS). Veidekke has had the main responsibility for the relocation frames, and Aas-Jakobsen has had the main responsibility for the bracing frames. The reason for this collaboration was to ensure a system that was adapted to the greatest extent possible for mounting in Building A, the final details of which are currently being designed.

The work on attaching the frames will be performed in June and July.

The illustrations below show the relocation frame (in purple) and the bracing frame (in dark pink).

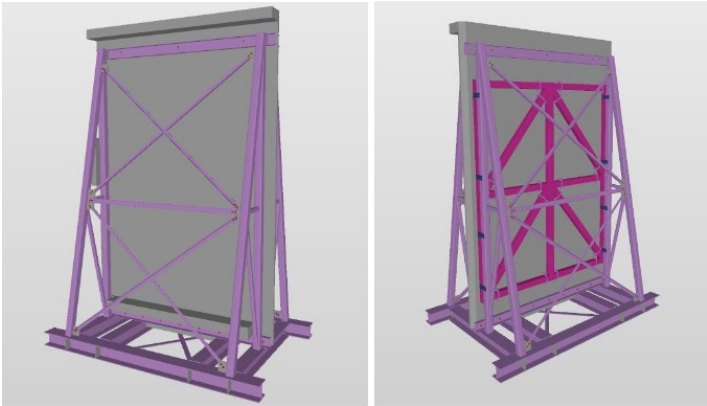


Figure 2 "The Seagull" with its relocation frame and bracing frame

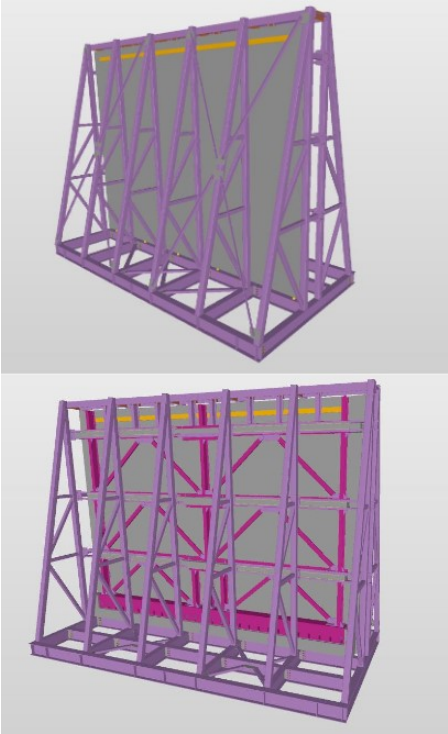


Figure 1 "The Fishermen" with its relocation frame and bracing frame

Transportation

Sarens, which is a subcontractor to Veidekke, is a specialist in transportation. The company has been involved in both the project planning and design process and the risk assessments, and is in charge of both the planning and execution of the chosen solutions. Both works of art will be moved using the same basic solution, using hydraulic jacks and SPMTs (Self Propelled Modular Transporters).

The relocation frames for the works of art will be used when "The Fishermen" and "The Seagull" are being jacked down from their current locations and loaded on to their respective SPMT. "The Fishermen" will be jacked down on to two SPMTs, while "The Seagull", which is considerably lighter than "The Fishermen", will be jacked down and loaded on to a single SPMT using a skidding system.

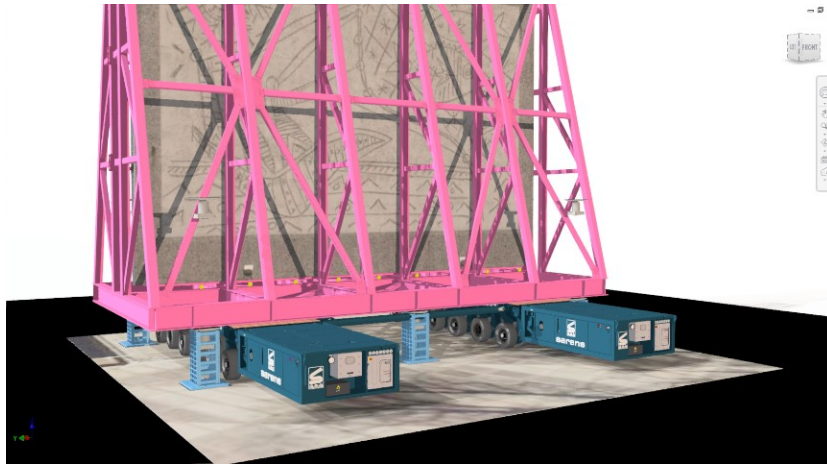


Figure 3 "The Fishermen" with its relocation frame and bracing frame on the jacking tower and SPMT

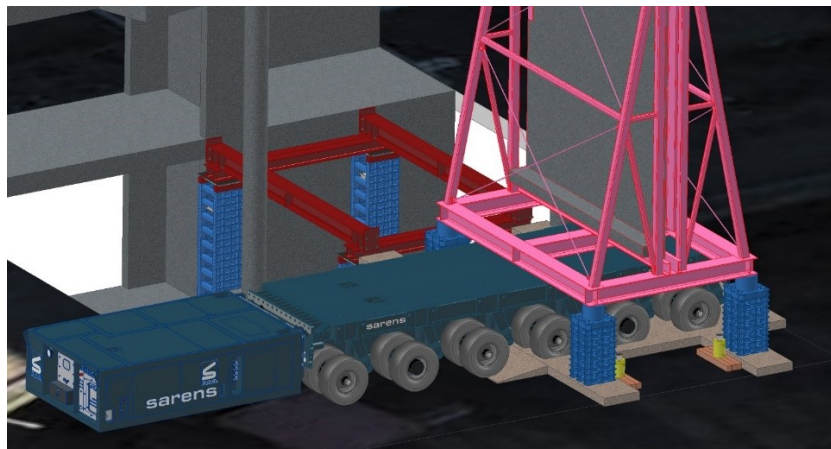


Figure 4 "The Seagull" with its relocation frame and bracing frame on the jacking tower and SPMT