

23 Years Euregional Prize for Architecture

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Hydropower station in the Highlands

Participant info

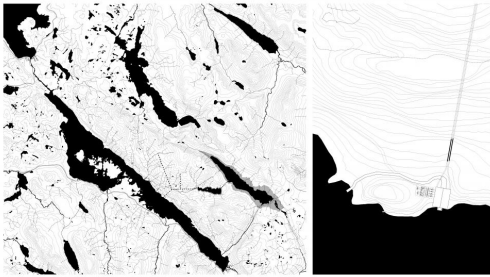
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Project info

There is a certain bipolarity inherent in the task of planning a power station in a setting of such raw natural beauty as the Highlands.

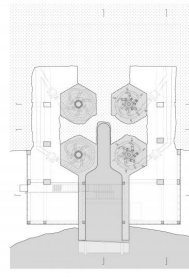
The topic of an infrastructure building itself already stands for a different relationship between man and environment compared to other classical architectural typologies, and in this specific context also for a very sensitive relationship with an otherwise untouched landscape, evoking romantic topics such as the sublime and the picturesque, but also the monumental. It is this very tension between technology and nature that forms the conceptual basis for the project, both on a very pragmatic level and a less tangible one.

Given the site's inaccessibility and the obvious need for a strong substructure where heavy machinery is involved, the functions were clearly separated. The main machine hall - including turbines, fitting-space and tailrace - is built directly into the rocky ground and the crane-system, which is traditionally part of the general structure, is replaced by a gantry. All other functions are accommodated in a rather light timber structure surrounding and protecting the main hall like the tent of an excavation site. This results in an arrangement vaguely reminiscent of the Scottish Tower Houses with the main space of the machine hall surrounded by other serving functions in the double wall made up of the two different facades of the building: an enveloping skin of vertical burnt-timber planks on the outside and polycarbonate on the inside. The fact that the hall is protected from rain but still open to the cold and the roof material being simple roofing paper underline the rational aspects of the project. It is other elements, like the high side windows, the stairs above the tailrace and the bothy on the last floor, that also invoke other, maybe more emotional associations.

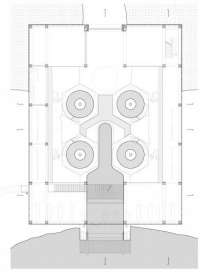


1 | Lake Mead, the dam and the powerhouse

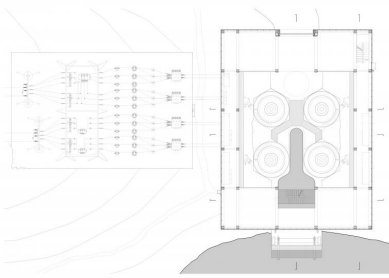
2 | Powerhouse



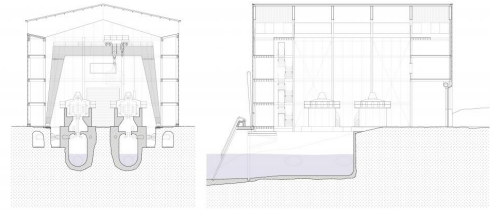
3 | Layout level 2 - turbine, spherical water and water



4 | Layout level 2 - turbine geometry and water

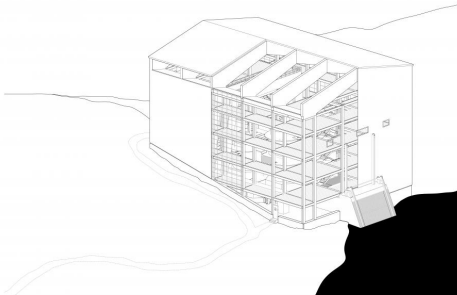


5 | Layout level 2 - turbine, spherical water and water



6 | Cross section showing power

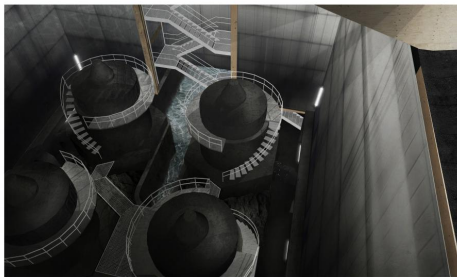
7 | Longitudinal section showing water



8 | Structural model



9 | View towards the power house from Lake Mead



10 | Interior perspective from 5th level



11 | Water