

## **P5 Reflection**

Ockenburgh Community Hotel  
Duong Vu Hong  
4511549

## **Architectural Engineering**

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Architecture: Mauro Parravicini  
BT: Paddy Tomesen  
Research: Jan Jongert  
Delegate: Leo van den Burg

It all started with my interest in a life cycle of buildings, particularly its last phase - demolition and deconstruction. This topic leads me to the case of Youth Hostel (built in 1971) in Ockenburgh, a seaside suburb of The Hague. The hostel was a steel frame modular building designed by Dutch architect Jan van Klingeren, who was famous for his attempts to bring social ideas of people's interaction and integration to his architecture. Primary thanks for that, the rescue committee took actions to keep the structure intact, during the building's deconstruction in 2010. After that the steel elements were moved to a private area 30 km away when it is now in a limbo stage awaiting for decision-making. I have initially seen this as the perfect starting point to study possible reuse of steel structural elements at a new site. Initially, Marineterrein in Amsterdam, the former site of the Dutch Royal Navy lately opened to general public and investors, seemed a perfect place which requires fresh and sustainable approaches in term of building construction. I think that had also strong relationship with the general theme of aE Graduation Studio, where we are challenged to bring architecture and innovation together to create sustainable solutions.

My technical research examines the current flow of construction steel in the market and seeks for current limitations of steel reuse and future possible improvements to be implemented. The overall aim of the research paper was to verify the feasibility of reusing entirely steel structure, of non-industrial buildings, in a different location, with a possibility of changing its configuration in order to meet new demands. The general ambition of this solution is a potential increase of reclaimed steel sector in order to save energy and reduce waste of material. Due to the reason that steel recycling only mitigates the environmental impacts, since it alone requires a significant amount of energy (including transport, melting, re-manufacturing processes). Scientific literature and case studies, as well as interviews, were used as primary methodologies in the research process.

Finals conclusions of the research were that currently, the limitations of reusing steel components make the whole operation very challenging. Normally it is too complicated for investors and designers to choose this path. Additionally, at the moment most of the possible proposed improvements have rather a theoretical character. Therefore, almost all steel structures which are entirely reused come from the industrial sector - pre-engineered portal frame system, which is designed to be assembled and disassembled. The case studies confirmed that even a careful building deconstruction does not give a high change for its steel structure to be reused again in another place.

In consequence of the research result, I have decided, after 4 months since the start of graduation, to change my project's location and take hypothetical scenario when the structure remained in its original plot in Ockenburgh. The advantages were no need of transportation and fewer operations and intermediates involved in the process. The on-site structural transformation is more realistic alternative (than off-site reuse), which can provide both, functional adaptability and a new image of the building. This should be seen as a new business opportunity which adds values such as culture and heritage to reuse materials, consequently also leads to significant economic benefits.

The Ockenburgh site has its complex history since building's deconstruction in 2010, which involves series of discussions between local community and municipality of the Hague about future of this place. Two projects of exclusive hotel complex were stopped by local protesters, which wish to maintain the Ockenburgh site with a respect to its natural surrounding and historical origin. Hence that my architectural project involves the in-situ transformation of the existing structure in order to create (together with a historic brick house from the 1880's) a courtyard building, as a typology which binds together both groups: local community and travellers. In the other words it is a combination of two different programs - a community center and a small hotel, together it creates a hybrid function, which could be named as Community Hotel. This need was developed through site visits, discussions and mail conversations with the local community, architects, non-profit organizations which organize events on the site. Thus I believe the project has its relevance in a wider social context and when it finished, it could be used as part of the discussion about the future of the site but also the deconstructed structure which is waiting for its "second-life".

When I had started my graduation, my interest and motivation were clear, I wanted to focus on a deconstruction of buildings and reuse of structural elements. The thing I did not know is where I will end up. What will be the location? Will it be a building? What function should it have? Through the research and design process, I have changed the site, the program and the scale of the project. I have to admit that it created for me a bit of confusion in term of my main focus point. The project blended many aspects together, on one hand, it was about reusing old material (steel) with the combination of a new one (CLT) to create a hybrid structure. On the other hand, it was a hybrid of community center and hotel, to create a social space of interaction between locals and guests. One might also ask how much is it a generic proposal or a specific project for that particular context. Moreover, there was a difficulty that the project has never aimed to be purely technical (it is not supposed to be about a development of a joint connecting old elements together with an integration with new), but either it was not about a complex flow of materials in the deconstruction market. As expected in this cases, it came to be something in-between the fields (make&flows - two main themes of the studio).

Nevertheless, after accepting this fact I came to a conclusion that this project is very much architectural, in the way that is cross-reference several issues at one time, I believe that is how architecture profession works in general (or at least this complexity should be seen as one of the aims), especially at the professional level. I think, in the end, the project is the direct response to the Ockenburgh case, since most the design principles arose from the local context. However, it certainly also depicts the broader topics of reclaimed structures and need of integration between local communities and tourism (including sustainable tourism movement). Therefore, solutions in these two fields such as structural logic between steel profiles and CLT panels or community hotel ideas can be seen as universal proposals, which are able to be adapted to a different location. Finally, I am also fully aware the fact that such transformation of an existing structure is a complicated operation and in reality much more studies and detailing would be required. Although it is probably the point when architecture stops and actual engineering starts. The two meetings I had with structural consultants were very positive, so I consider that as a promising beginning to urgently relevant but underestimated topic.