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Heritage Identity at Risk: Three case studies in Trondheim

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[INTRODUCTION]

Nowadays, culture and Cultural Heritage represent the most important foundation for creating and maintaining identity, belonging and citizenship values. Heritage and culture, indeed, influence and are affected by the daily life of every community and its people. The value and potential of Cultural Heritage, if well managed, is a key aspect of community development and a factor of increased quality of life in societies that are in a constant state of evolution (Di Pietro, 2017: 1).

Warehouses, Nidarosdomen and Dora bunkers are the main cultural and industrial heritages in Trondheim which influence the character of the city.

In this overview we are trying to look at three heritages in Trondheim, to see why they are part of the character of the city, what risks are treating them and what are the possible solutions for reprogramming these buildings.

This overview has been separated in three chapters below, where their identity and potential risks have been analyzed:

1. Identity
2. Risk Overview
3. Conclusion

We think it is important to distinguish between environment and landscape. The environment is what we observe, the purely physical elements, the biotope. The set of natural elements living and inert that make up the environment that surrounds us. This environment is observed by us and filtered by our own consciousness and experience, which generates a personal image of what we are observing.

Therefore, the landscape is a subjective image, a perception that varies depending on the person who is in front of this panorama. Gilles Clement, in his book "Gardens, Landscape and Natural Genius", defines the landscape as what you keep in your mind when closing the eyes in front of a sight. In other words, it is a perception, almost an imagination of what really exists and that has been modified by our consciousness, our experiences and our culture.

The cultural landscape could be considered as an entropized landscape, that is, a landscape in which are present elements of the culture and society of a territory and therefore speak of human activity, of a way of inhabiting, to build, to live and etc. about a culture. In this sense, the historical complex of Bakklandet has a great value, which goes beyond its mere form or aesthetics. It is a cultural and anthropological heritage, and that is where much of its value lies. Thanks to the presence of this together, we can be aware of a way of living, of a constructive

tradition, an economic system etc.

Preserving a landscape is not preserving a picture or a panorama, is preserving history, preserving heritage, preserving culture (Figure 1). This can resume somehow this reflection, that these three concepts are in a constant dialogue shaping a system from where any of them can't be taken away.

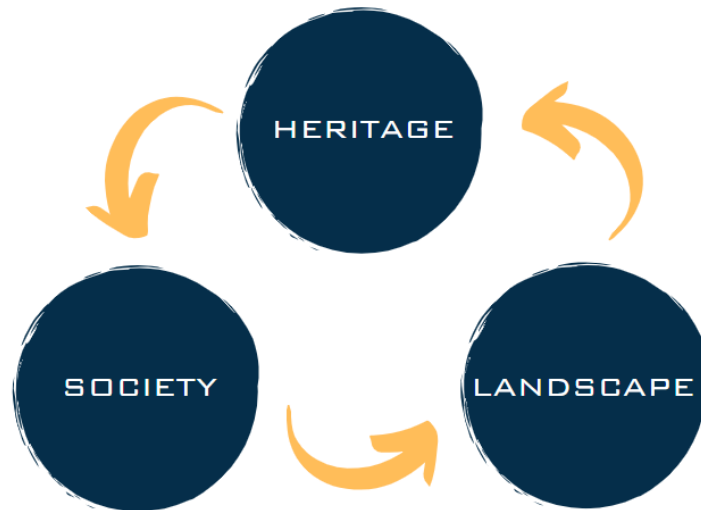


Figure 1. Heritage – Society – Landscape

[IDENTITY]

What gives a building its identity? People look places with different attitudes and their perceptions are not the same. Experts in Cultural Heritage field should think differently and consider whole parameters that make an identity for a heritage.

In this overview we thought about all items which contribute the definition of the case studies. In Figure 2 are reported many aspects which influence a heritage building. We tried to organize them in categories: aesthetic, environment, society. The lack of each one will change the identity of the heritage. This means that a combination of all factors makes the identity of these three cultural heritages.



Figure 2. Organized categories of identification items.

Nidelva River Warehouses

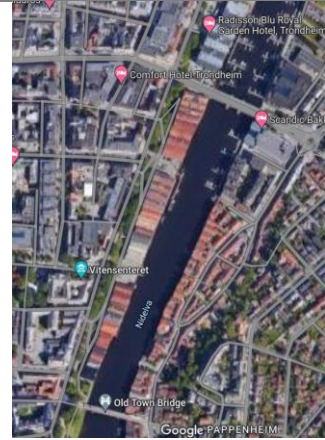
In table 1 are reported the identification items we found to be relevant for Nidelva river warehouses.

Table 1. Identification items overview of Nidelva river warehouses (Author).

Category	Identification	Details	Picture
Aesthetic	Color	Various warm colors create a specific visualization	
	Form	Rhythm in forms	
	Material	Traditional material and structure	
	Skyline	Create a unique up level view conceded with sky and sea	

Society	Social space	Beaches to relax	 URL1
		Places to work	
		Tourist attraction point	 URI2
	Traditions and craftworks	Traditional structure	
Environment	Morphology	Structured based on location	
		Located in different height from street level	

Separated by green spaces with neighborhood



Google maps

Water

Directly connection to the sea



unique accessibility (boats, bridges)



URL1

Reflection

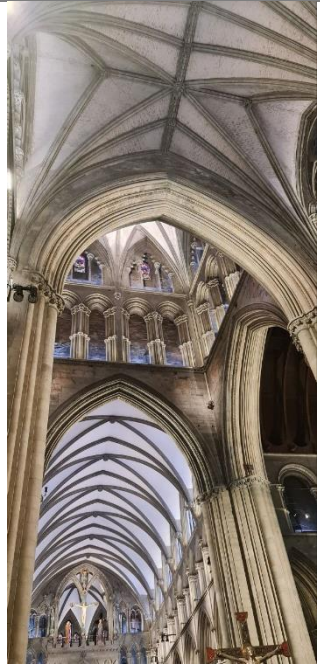






Nidaros Cathedral

During the history cathedrals were the respectful places which people tried to build them skillfully because they consider them as a symbol for cities. Nidaros cathedral was not an exception of this fact and during many years while it was destroyed by fire, many times people were eager to rebuild it again and safe it. Obviously, the reason is that this building is a part of citizens' identity which is going to be discussed in detail in Table 2.

Table 2. Identification items overview of Nidaros Cathedral.

Group 4

Category	Identification	Details	Picture
Aesthetic	Material	Traditional material (soap stone)	
	Form	High sharp cone structure	 URL3
	Skyline	Recognized by people from all over the city	 Google Earth (3D view)
Society	Social space	Surrounded by green space to stay and rest	 URL4
	Traditions and craftworks	Attractor space	 URL4

Event center



URL5

Material arts



URL4

Environment

Morphology

Landmark of the city




URL6

Locating at the beginning of the way to centrum and sea



Google map



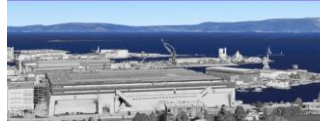

Green space	Separated by green spaces with neighborhood	
		Google map
Acoustic		

Dora Bunker

World war II brought a German heritage to Norway beside the dreadful results. Dora I was used as a bunker and Dora II supposed to be added to that, but it was not finished successfully. Now these huge buildings are squired Trondheim archive and Dora II is an ocean water analysis site. Based on the unique identity of Dora this heritage is kept and even it is reused as Trondheim archive. In table 3 we will discuss about the identification items regarding Dora.

Table 3. Identification items overview of Dora Archive.

Category	Identification	Details	Picture
	Color	Workers community	
			Google Earth (3D view)
Aesthetic		Different color to separate the new part from the old one	
	Material	Imported German reinforce concrete	

	Form	Huge cubic form with high density	
Environment	Morphology	effective transportation infrastructure	 Google Map
		Causing a huge industrial zone	
		Accessibility to sea	 Google Earth (3D view)
Society	Social space	Workers community	 Google Earth (3D view)

Just imagine that the case studies were in different forms and colors than the real one (Figure 3). The tables are representing how each factor set a specific feature for the warehouses. Figure 4 reports an example of different locations for Nidelva's warehouses with a road in place of the river. In Figure 5 we have tried to remove the river from the satellite view of Trondheim, especially close to the cathedral zone. In Figure 6 we removed the green space surrounding the cathedral and put a huge square in place of it. In figure 7 the Dora bunker was thought as a structure far away from the sea. In Figure 8 the materials

constituting the building were replaced by other different materials to show how it would change.



Figure 3. Warehouses in different form and color.



Figure 4. Warehouses in different location.



Figure 5. Trondheim without its river (Google map).



Figure 6. Big square in place of the green area in front of Nidarosdomen (Google map).



Figure 7. Dora bunker far away from the sea (Google Earth 3D view).

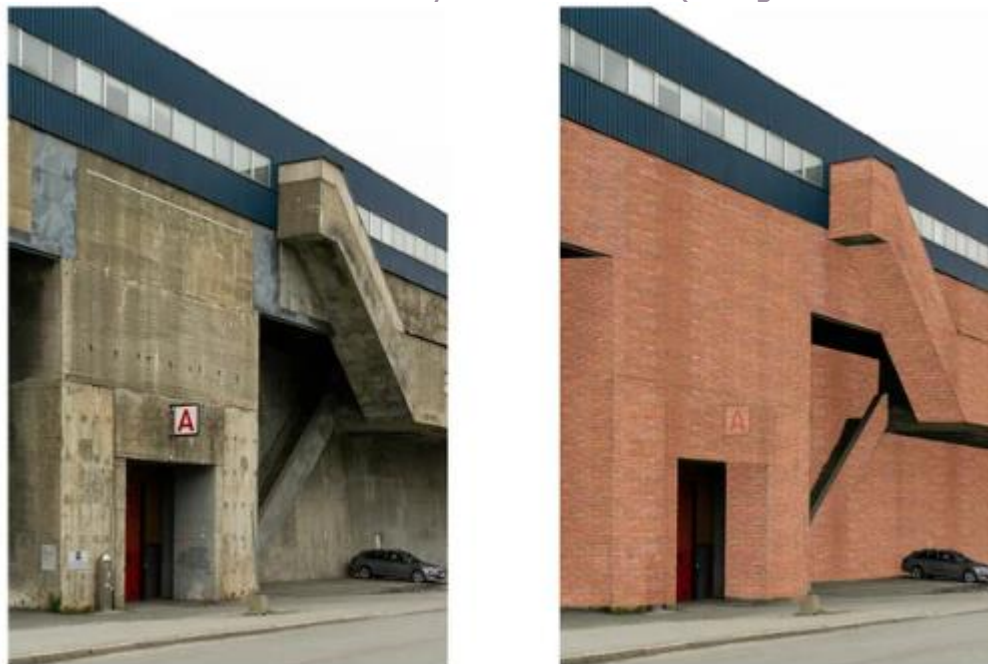


Figure 8. Dora bunker with different materials.

[RISK OVERVIEW ON CASE STUDIES]

In the following tables (4-5) we tried to relate the real Climate Changes risks and the identity items we have identified to try to make connections between them and try to figure out what item would be affected by what risk. The aim was to establish strategies about what is in a more vulnerable situation, and what are the priorities, to start an active procedure to preserve the heritage, the landscape and the culture.

For this purpose, the identity items were grouped in three categories and the potential risks derived from climate changes were reported as well. A sort of icon code was used to establish the different damages that may have affected each of these items: full symbols meaning "Permanent Damage" and empty ones meaning "Temporary Damage". The different damages were also divided in three grades of severity depending on the size of the symbols (bigger ones, higher risk, medium ones for medium risk and smaller one for smaller risk) – *Table 4*. This same process was made for all the three case-

studies individually. Unfortunately, while doing this operation we faced some issues related to the lack of quantitative data to produce reliable conclusions. For this reason, we prefer to leave the table empty in order to show to the readers only the method of a possible risk analysis considering aesthetic, society and environment aspects and we really hope to have further occasions to collect data and fill out the table accurately.

Future research can consider the idea of creating one table for each of the different case studies and compare them by overlapping.

In this way, it would be possible to see analyze them as a set. This could have been the most interesting aspect of the tables because it would have allowed us to establish priorities and strategies on a preservation plan.

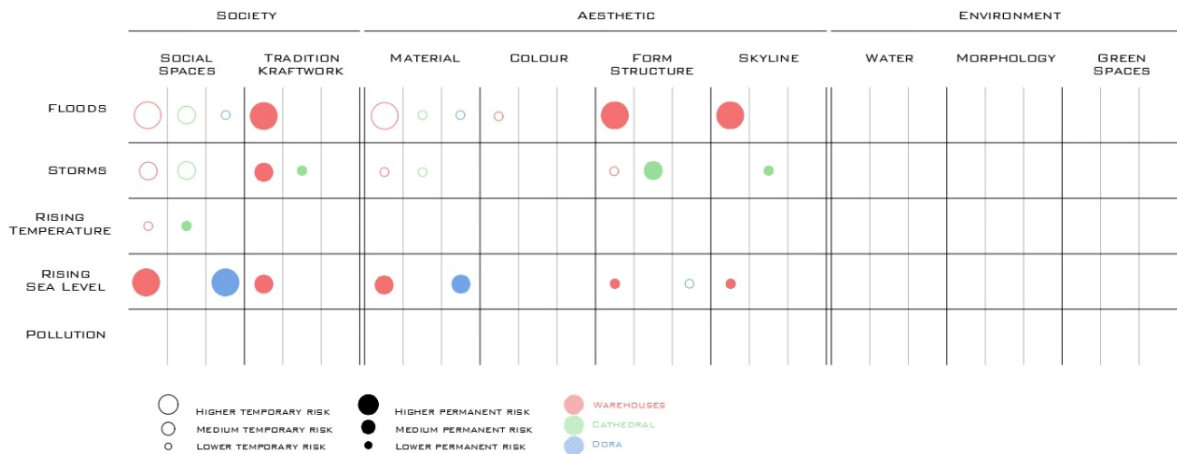
Table 4. Climate Changes risks affecting identity items (society, aesthetic, environment) in a case study.

	SOCIETY		AESTHETIC				ENVIRONMENT		
	SOCIAL SPACES	TRADITION KRAFTWORK	MATERIAL	COLOUR	FORM STRUCTURE	SKYLINE	WATER	MORPHOLOGY	GREEN SPACES
FLOODS									
STORMS									
RISING TEMPERATURE									
RISING SEA LEVEL									
POLLUTION									

○	HIGHER TEMPORARY RISK	●	HIGHER PERMANENT RISK
○	MEDIUM TEMPORARY RISK	●	MEDIUM PERMANENT RISK
○	LOWER TEMPORARY RISK	●	LOWER PERMANENT RISK

Although it was not possible to complete the table with reliable data, the authors nevertheless tried and obtained a preliminary result (shown in Table 5). Even if not all fields are filled in, and the information contained can only be considered qualitative, it can already be noted that among the three cases taken into consideration (Warehouses, Nidarosdomen and Dora bunker), warehouses are in a more dangerous situation when we consider the possible risks associated with climate change.

Table 5. Preliminary results.



[CONCLUSION]

We believe that the elements we have listed and described, categorized within the macro-areas of "aesthetic", "environment" and "society", are those that confirm and constitute the identity of these historical sites that we had the pleasure of studying and visiting during the Summer School. The identifying elements define the landscape and heritage of Trondheim and must be preserved in the final aim of preserving the landscape, society and heritage.

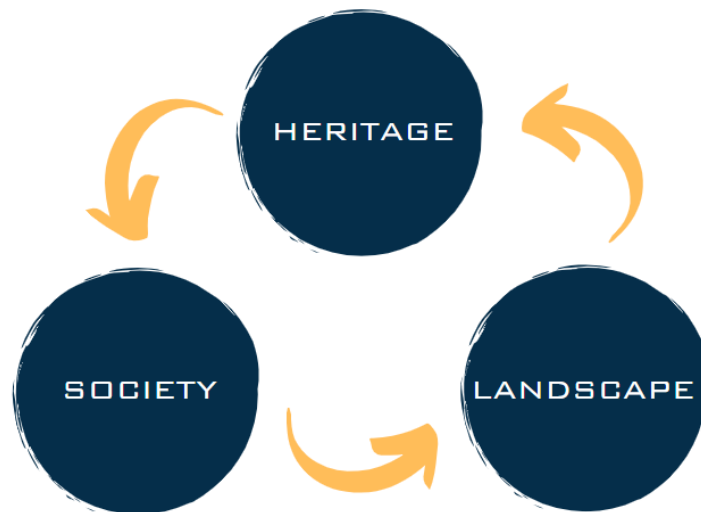


Figure 9. Relationship between Heritage – Society – Landscape.

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