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CULTURAL HERITAGE COMPENSATION:

APPROACHES TO TRANSFORMATION OF SITES WITH CULTURAL VALUES AND ARCHITECTURAL QUALITIES

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Kultur-landskapet

SWEDISH NATIONAL HERITAGE BOARD
RIKSANTIKVARIEÄMBETET

CHALMERS

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INTRODUCTION
Magnus Rönn & Benjamin Grahn Danielson

This proceeding is the last part of a research project investigating how compensation is expressed in designing detailed development plans in areas with heritage values and architectural qualities. The overall objective of the research project has been to produce new knowledge about heritage compensation as a concept, method and tool in planning processes. The practical benefit lies in development of empirical findings about how professionals handle cultural heritage and architectural qualities in the transformation of places. Our work about compensation when impacting cultural heritage, cultural environment and architectural qualities started already in 2012. In December that year Magnus Rönn, Benjamin Grahn Danielson and Stig Swedberg were granted funding from the Swedish National Heritage Board's R&D grant for the research project *Policies and Compensation Measures in cultural heritage sector* (2013-2015) which resulted in three publications, one national conference in Sweden on the topic of compensation when impacting cultural- and natural environment, and participation in several conferences both in Sweden and abroad. This was a first exploration of the idea and concept of compensation when it comes to compensating impact on cultural heritage. In 2018 Magnus Rönn, now at *Kulturlandskapet* and *Chalmers University of Technology* was granted funding for a continuation by the Swedish National Heritage Board's R&D, *Compensation, Cultural Environment and Cultural Ecosystem Services* (2017-2019).[1] This proceeding is the final part of this work, a collection of papers from a workshop in 2019.

At the centre of the research project 2018-2019 are three sub-studies: First, Magnus Rönn, carried out a study on heritage and compensation in detailed development plans. Eight detailed development plans in cultural heritage areas of national interest in Gothenburg, Sweden, have been examined. Secondly, a study was conducted on cultural heritage and cultural environment in the concept of ecosystem services. The study is based on document analyses and interviews, and was carried out by Susanne Fredholm, Freja Frölander and Krister Olsson, *Department of Conservation, Gothenburg University*. Focus is on how heritage values are described, understood and

expressed in the discourse of ecosystem services. Thirdly, an international workshop was arranged, with invited scholars. Ten professionals and researchers from Finland, Norway, Denmark, Sweden, United Kingdom and Greece were invited to the workshop. The intention was to broaden and deepen the findings on compensation for impact on heritage and architectural qualities.

This proceeding presents the third part of the project – the international workshop – called *Architecture, cultural environment and compensation in planning processes*.[2] The workshop took place at Chalmers University of Technology in Gothenburg, 16-17 September 2019, and was organized as a joint venture between *Kulturlandskapet* (a cooperative heritage consultancy) and *Building Design, Department of Architecture and Civil Engineering, Chalmers University of Technology*. The theme in the invitation was summarized in the following way: On compensation as a concept, method and professional practice by architects, architectural conservators and archaeologists in planning processes.

One of the approaches in the research project has been to understand the fundamental meaning of heritage compensation through the exchange of experiences – professional as well as scientific - with scholars and professionals such as architects, architectural conservators and archaeologists. Research and education at universities is completely dominated by studies on ecological compensation presented in scientific journals. Therefore, the search for knowledge on heritage compensation had to be conducted in a different way. For this reason, we decided to directly target selected groups for the workshop with a special invitation – call for abstracts – in May 2018 to selected associations and departments in Europe.[2] Based on their submitted abstracts, ten scholars were invited to present their contributions at the workshop in Gothenburg: Tom Davies, Iida Kalakoski, Athanasios Kouzelis, Mathilde Kirkegaard, Anders Larsson, Urban Nilsson, David Ross, Magnus Rönn, Jennie Sjöholm and Helena Teräväinen.

The Gothenburg-workshop was planned with regard to presentation, question and discussion. Each author had 30 minutes for their session. For each paper/author, two others of the invited scholars had been appointed in advance as discussants. Their task was to read and comment the paper in order to give qualified feedback to the author. This strategy for generating a valuable discussion on papers in sessions is commonly used in symposia in the Nordic Countries organised by the *Nordic Association of Architectural*

Research. The workshop ended in general reflection on compensation as key-concept, method and practice. After the workshop, invited scholars were given additional comments and were then asked to deliver improved papers within a month, to the organizers of the workshop, Magnus Rönn and Benjamin Grahn Danielson.

USES OF LANGUAGE AND APPROACHES

In this introduction we are using different concepts about cultural heritage. The overview follows the definition of cultural heritage that the National Heritage Board of Sweden uses. But the translation to English causes difficulties in a Swedish context, and semantic differences tend to complicate the explanation in an international context. For example, the National Heritage Board, use *kulturvärde* (cultural value) as umbrella concept when describing significant cultural heritage values in a certain area. Architectural quality is also an overall concept in architecture for properties, experiences and values in design proposals and the built environment. Qualities in architecture and urban design are sometimes included in *kulturvärden* by the Swedish National Heritage Board. Directly translated to English, this means cultural values. But in English, cultural values also mean a personal view upon certain ways of life that comes from your cultural background (kulturella värderingar). We have therefore decided to use heritage values as the concept in this text. For this reason, when describing compensation in this introduction, this concerns compensation for negative impact on heritage values in the landscape and built environment. Heritage values are both tangible- and intangible. In this proceeding, negative impact means lack, damage and loss.

Compensation comes from the Latin word *compensare.* The concept is used in the sense of compensating, indemnifying, balancing, settling, restoring and reaching a balance etc. There are several synonyms in both English and in Swedish (for example in the dictionary published by The Swedish Academy). Their meanings have in common that there must be some sort of deficiency, lack, loss or damage that must be replaced. Compensation for impact on heritage values due to development can from this point of view correspond to measures that aim to redress insufficiencies in spatial planning, to recreate lost heritage values and/or repair damages on listed buildings with architectural qualities. Compensation measures can in a Swedish context make sense through the underlying intention, through certain values and/or qualities that are negatively impacted when an area is transformed and put to a different use than the previously intended. How compensation

should be carried out and practiced, and the means used, are contested issues in communities and the society as a whole. There are also different views on values and qualities depending on which professions are involved. The controversial issue is whether heritage values and qualities are unique and fixed to a specific plot, or whether they are mobile and can be redesigned at another site. Architects, architectural conservators, archaeologists and other heritage professionals work differently and have different approaches to this issue in transformation of areas.

Using the term *compensation* could be an awkward use of English in an Anglo-Saxon context. In his contribution to this proceeding, Tom Davies raises this concern as an interesting difference between a Swedish context and an English one. Mitigation seems to be a more common concept than compensation when transformation of heritage is addressed. Davies refers to the Merriam-Webster dictionary, which describes compensate as to supply an equivalent and to offset an error, defect, or undesired effect. Synonyms for compensation in this sense may also include "payment" and "remune-ration".[3] Davies points out that *mitigate* in the Merriam-Webster dictionary has a different interpretation. It means to become less harsh or hostile and to make less severe or painful, offering alternatives such as *alleviate* (guilt), *mollify* (calm-down) and *extenuate* (excuse).[4] The Merriam-Webster dictio-nary presents two contrasting meanings of the word compensate, the first of a monetary or financial compensation and the second of measures to restore injury, harm and loss.

The Swedish context presents a stronger distinction between compensation as a measure and actions on one hand, and on the other hand as monetary or financial issue. These different understandings of compensation can be seen in the transformation of areas with valuable nature- and/or heritage values. However, the difference lies in if it is a single, individual interest or a public interest that is referred to and meant to be compensated. If it is a question of compensating the interest of one party, for example a property owner whose ownership of land is infringed upon by the municipality or the state, then it is a monetary issue. A typical example is when a property owner through a detailed plan is prohibited from demolishing a building, or is expected to preserve it, with regard to its heritage value. In such a case the municipality may be obliged to compensate the property owner in money. When it comes to listing historical buildings with the support of the Historical Environment Act, a preservation measure that highly complicates its use, the State may in

a corresponding way be obliged to compensate the owner in money. If the case concerns the damage or loss of natural- and/or heritage values that are considered to be of public interest and utility to the community and for the citizens, the developer or the party causing the damage is held responsible for its compensation. In such a case it is not a question of monetary compensation, but rather a question of replacing loss. This may include measures such as repairing, rebuilding, restoring etc. due to development in the area with the identified values. Both meanings of compensation occur in the planning and formation of detailed plans. The concept of compensation thus has two different meanings in the Swedish language, depending on who is the decision maker and what type of value is impacted.

There are no regulations that address compensation measures in the Swedish *Planning- and Building Act* when it comes to development and exploitation that impact heritage values. The law, however, prescribes that buildings should be designed and situated in a way that is suitable with regard to the landscape and cityscape, natural environment and heritage on site, and result in a positive overall impact (PBL 2:3). The built areas' specific historical, heritage, environmental and artistic values should be protected (PBL 2:6). Compensation can be addressed as a precondition for developing areas of public interest, such as heritage. The *Environmental Code* provides regulations about compensation when impacting valuable natural environments, cultural heritage areas that are of general interest to the whole society and a utility for citizens in the community. According to the Environmental Act, it is possible to detail "*demands and requirements to compensate impact on general interest that a planned enterprise leads to*" (MB, chapter 16 §9 p.3). The requirement for compensation is consequently not limited to developments that impact specifically protected natural and cultural heritage areas/sites. Further, there are also local policies and guidelines that inform potential compensatory measures.

In the City of Gothenburg, two important documents contain requirements for compensation measures that should be applied in the planning process. The first policy is from 2008: *Compensation measures for nature and recreation,* which was adopted by the City's Building, Property Management Committee, Environment Committee, and the Traffic Committee. Compensation in the policy is "*a voluntary agreement between the municipality and the developer to compensate natural and recreational values that are being damaged or lost when detailed plans are implemented*" (2008:7). The Urban

Planning Department at Gothenburg City Council refers to this policy in those detailed plans that mention compensation measures.

The second document is the *Comprehensive Plan for Gothenburg*, accepted by the City Council in 2009. Nature and cultural heritage are strategic areas for the city in the first part of the comprehensive plan, where compensation also is to be applied. "*Removed natural, cultural heritage, and recreational values are to be compensated*" (CP, part 1:96). An active approach to preserve, protect and compensate cultural heritage is emphasised as urgent. "*Actively apply use-regulations, protection-regulations, demolition prohibition, and compensation measures for built environments with heritage values, in the formulation of in-depth advancements of the comprehensive plan and detailed development plan*" (CP, part 1:97). The future planning should aim to "*develop and use methods of compensation measures for nature, culture heritage, and recreational values in the planning*" (CP, part 1:96). The comprehensive plan for Gothenburg is hence a document that supports compensation in planning and development, guiding the process of detailed development plans in cultural heritage areas.

COMPENSATION AS AN ESSENTIALLY CONTESTED CONCEPT IN PLANNING

Compensation is a controversial concept with divergent meanings. How can compensation be defined in the transformation of areas with heritage values and architectural qualities? What kind of measures and actions in planning are expressions for heritage compensation? As a starting point for the discussion on compensation in this context, we use the idea of "essentially contested concepts" by Walter Bryce Gallie, a British social theorist – professor, politician and philosopher. His paper on "essentially contested concepts" was first published in 1956 in *The Proceedings of the Aristotelian Society* and later in 1964 in the book *Philosophy and the Historical Understanding*. Gallie provides a tool for analysing the term compensation and how this key-concept is understood in exploitation of sites with heritage values and architectural qualities. The theoretical framework sheds light on conflicts regarding compensatory planning processes and transformations of areas through exploitation.

Typical for "essentially contested concepts" are disputes about the correct meaning and interpretation of different terms and language use. However, there is no way to determine what is the right, or wrong, use of words. Profes-

sionals have differing opinions. Gallie uses the word *championship* as an example. In the world of sports, championship is normally something that is appreciated and valuable. At the same time, the concept changes meaning according to the circumstances. Championship is not only about being the best. A champion should also fight well and win the public's heart.

Gallie's idea of essentially contested concepts fits into the discussion on compensation. The transformation of sites is often followed by debates on how to understand heritage values and architectural qualities. Statements from professionals about "good", "bad" or "accepted" actions when dealing with loss of important environments, sites and objects are also controversial. The heritage sector is composed of architects, architectural conservators and archaeologists who all have different opinions on heritage compensation; what it is and how the concept should be used in the transformation of sites. Compensation may appear as a law-based requirement when permits are needed for projects, as a voluntary agreement according to local guidelines, an alteration of architectural design depending of critique from key actors, or unspoken actions by professionals imbedded in planning processes as ethical issues in order to obtain access to building plots. Ethics do not respect geographical boundaries and the limitations by law. The challenge for professionals from an ethical point of view is to find what characterises a suitable way to handle compensation issues in planning processes. Gallie provides a starting point for identifying some important functions connected to compensation as key concept in the transformation of sites:

Open concept

1) Compensation is an *open concept* with changing expressions. With the knowledge of what heritage compensation is, professionals can recognize, explain and point out illustrative examples. Knowledge is obtained through education, practice and research. Scholars who understand the concept have to be capable of demonstrating and accounting for compensation intended to restore damage to values and loss of qualities. Compensation as an open concept includes new kinds of measures and actions to protect heritage values and safeguard architectural qualities in the transformation of sites. There is an on-going revision of compensation thinking, reinterpreting of expressions and specifications around how to bridge different opinions in planning processes. No final definition of what characterizes heritage compensation can be found. The concept receives its meaning through a critical dialogue among stakeholders. Communication is therefore a prerequisite for the

understanding of compensation as an open concept in the transformation of areas including heritage values and architectural qualities.

Future-oriented uncertainty

2) Compensation is connected to *future-oriented uncertainty*. Professionals taking part in the preparation of detailed development plans are supposed to be able to foresee how heritage values and architectural qualities are affected by forthcoming projects. They must make a future-oriented evaluation of not yet implemented developments presented in drawings and illustrations. Nevertheless, scholars must regard the transformation as an already built environment, read a plan proposal and its regulation, interpret the design or new buildings at the plot, and come to a conclusion. The challenge lies in seeing the future in the plan and how identified heritage values and architectural qualities have been safeguarded. In this context, compensation responds to a "wicked problem", filled with uncertainty about the outcome (Churchman, 1967). Anders Larsson notes in his contribution that the mitigation hierarchy (avoid, minimize, restore and compensate) is a strategy that might be used for ecological compensation in projects where there is an obvious link between damage and measure. But the strategy is not suitable for exploitation in areas with heritage values and therefore must be criticized. According to Larsson, the mitigation hierarchy favours tangible properties and clearly defined damage to nature at the expense of aspects of intangible heritage, such as stories and memories.

Typical for "wicked problems" is that challenges cannot be solved by traditional analyses that attempt to find the best measures to restore cultural heritage. There are no clear relationships between identified heritage values and architectural qualities at the site, plan proposals, requirements in laws and local guidelines, damage and loss pointed out by professionals and suggested compensation measures. The mitigation hierarchy seems to be an inappropriate policy to use as a foundation for heritage compensation. A more creative approach needs to be developed.

Horst Rittel and Melvin Webber (1973) describe wicked problems as ill-defined issues that have unique causes and solutions. There are several possible compensation actions in plan proposals that may be considered appropriate responses to the damage of heritage values and loss of architectural qualities. This is a wicked problem. Since there are different solutions to compensating negative effects, the plan proposal will be marked by *uncertainty.* How do

we care for, protect and safeguard heritage values and architectural qualities in a positive way? This question represents a fundamentally unfixed point in the planning process that will remain until the final decision. In Sweden, there are cultural heritage areas of national interest. The County Administrative Board in any Swedish county may turn down a detailed development plan approved by the municipality if they suspect it will cause considerable damage to an area of national interest. Neighbours may also appeal against the detailed development plan, delaying its implementation, or even necessitating change or cancellation.

Promoting debates

3) Demands for compensation measures for loss and damage to heritage values and architectural qualities *promote debate*. There are fundamental disagreements among professionals regarding the possibility to restore values in nature and cultural heritage. On the one hand, ecological compensation is supported by the Swedish Environmental Protection Agency, which has published a manual, dealing with compensation in Environmental Assessment. Heritage compensation, on the other hand, is perceived as a controversial proposal with regard to the demolition of historically important buildings, displacement of designated housing with architectural qualities, and exploitation in cultural heritage areas of national interest. However, displacement is a compensatory measure that has been used in practice for over a hundred years in Sweden, in order to salvage heritage values. Old buildings have been moved from areas undergoing transformation to new allotments in special districts. Three very well-known examples in Sweden are *Skansen* in Stockholm from 1891, *Kulturen* in Lund established in 1892 and the foundation of *Old Linköping* in 1953. There are several small-scale examples from all over the country, while Skansen has risen to become an international concept for outdoor museums of this type.

Heritage compensation is particularly controversial among the authorities responsible for cultural heritage issues and preservation within the state, such as the Swedish National Heritage Board and the County Administrative Boards. One example of how compensation through moving important buildings promotes debate is the relocation of the mining city Kiruna, which within these proceedings is addressed by Jennie Sjöholm. In 2004, the mining company LKAB informed the Municipality of Kiruna that the underground extraction of iron would be continuing towards the central areas of the city. This would necessitate the evacuation of central parts of the small city, and

the city centre would literally have to be moved! In the Competition Brief 2012 for a new city centre for Kiruna, the following is stated:

The existing cultural heritage should be treated as a resource. *Possibilities exist of transferring certain buildings from the old city to new townships, but this is not to say that they will have the same value as in their original positions. New values will be added. Buildings can acquire new functions and other contexts. The new city centre must tell its own, unique story.* (Architectural competition brief 2012:46)

And further:

The old city centre has a number of buildings which must or can be moved. The participants can suggest locations anywhere on the competition site, but must specifically show those which are suitable in the new city centre[...] The treatment of historic buildings and environments which will be affected by the ground deformation has been a topic of discussion ever since the process of urban transformation began in 2005. The moot point has been which buildings are to be moved, preserved or recreated and which can be documented and demolished. Important qualities – material, economic, architectural, social and, not least, heritage-related – are lost when buildings are pulled down and the existing milieu disappears. This discussion has been characterised by a variety of viewpoints. Some argue that, in principle, all buildings must be moved, and existing heritage values recreated as far as possible, while others do not really ascribe any value at all to older buildings and view them exclusively in terms of expense and problems. (Architectural competition brief 2012:52-53)

Charged with values

4) Compensation, heritage values and architectural qualities are concepts in the transformation of areas *charged with values*. The existence of resources in terms of values is acknowledged in relevant laws. Compensation, actions and measures in plan proposals presuppose that there is justified criticism of the exploitation. The point that is missing is an appropriate response to loss of heritage values at sites, damage to architectural qualities, often connected to the intention of safeguarding appraised properties in protected heritage areas. Consequently, compensation as concept, method and practice is embedded with values – dislike or approval. This is the case regardless of whether the measures are considered sufficient to preserve resources or are criticized for

not recreating affected qualities. Values are also included in acceptance of losses through demolitions of buildings, as well as design proposals aimed at adding new qualities to the site and its surroundings.

Compensation is linked to evaluation in planning processes. Heritage values and architectural qualities are seen as something basically positive in national guidelines and local policies. A detailed development plan containing heritage compensation is therefore sometimes accredited with positive value. The plan has a certain number of desirable characteristics. It is a positive feature from an ethical point of view to safeguard properties and give back experiences of cultural heritage that would otherwise have been lost through the exploitation. From this perspective, compensation measures in the transformation of sites can be seen both as an attractive way of securing access to plots by developers and town planning offices, and simultaneously a way to re-create qualities and potentially add new values to the area. Compensation is a result of negotiations and judgments within the plan proposal, which allow the implementation of projects at the building plots under certain conditions.

Value-charged questions

5) The need for heritage compensation is examined in plan proposals with the help of *value-charged questions*. The exploitation of areas with natural environment and heritage values are assessed in two fundamental ways in plan proposals. Partly this is done with regard to general objectives of the Historic Environmental Act, the Planning and Building Act and the Environmental Code, and partly taking into account local policies, guidelines in comprehensive plans and political objectives. Key actors consider questions in relation to plan proposals that are based on professional opinions and ideals; these include interpretation of the site in plan proposals and its potential, how new buildings fits in the area and affect identified values and qualities. Professionals acquire knowledge by posing questions to plan proposals. Response to these questions may decide whether the heritage investigation needs to be supplemented, if the architectural design must be changed, if compensation measures must be carried out to safeguard existing heritage values and architectural qualities at the site.

Through a manual from 2014, the Swedish National Heritage Board has presented a list of which questions that need to be asked when examining a planning proposal in cultural heritage areas of national interest. These ques-

tions are based on the regulations in the Environmental Code concerning the prohibition of exploitation and development that impose significant damage to the protected areas. The County Administrative Board in each county is responsible for examining the plan proposals and assesses the risk of significant damage. The County Administrative Board can annul plans that are assessed as risking significant damage to an area of national interest. To decide if a planning proposal involves such a risk, the National Heritage Board proposes that the analysis should deliver answers to the following six questions:

a) *What is lost, and what is gained?*
    Does this include single objects, structures or visual and functional connections, which are important for the understanding and readability of the cultural heritage of national interest? Do added features impact the scale, shape or character in a way that negatively impacts the readability, i.e. the possibility to understand and experience the historical development (of national interest) in the landscape?

b) *Is the impact visual or functional?*
    Are sightlines, scale, context, spatiality, orientation or other aspects of the visual experience of the environment changed in a way that negatively affect the understand and experience the cultural heritage of national interest? Do the plans disturb paths, communication routes or other functions or prerequisites of significance for the possibility to use, manage and move around in the area? Can the planned measures mean that availability to the area decreases, that the environment is fragmented, barriers created or that the possibility to visit the area in any way is made more difficult?

c) *Is the impact direct or indirect?*
    Is it likely that the measure can be followed by other measures or specific features, which in turn can result in negative consequences? Is there a risk that the measure decreases prospects of using and managing the area, or leads to a changed use of that environment so that the readability of the context of the cultural heritage of national interest is negatively impacted in the long term?

d) *Is the impact temporary or permanent?*
    Does the measure mean that the possibility of understanding and experiencing or using the area of national interest is severely deterio-

rated for a limited time? Do characteristics and expressions of national interest disappear or are added features impacting the cultural heritage of national interest in a negative, permanent and irreversible way?

e) *What characteristics are impacted?*
    Does the measure impact the characteristics that are crucial for the readability and the experience of the environment, i.e. are they, or parts of their physical expressions, aspects without which the cultural heritage context of national interest no longer is readable? Does the added feature impact those characteristics that support or reinforce the readability and the experience of the environment?

f) *How are the values in the environment affected?*
    Will the values, which form the basis for the national interest be lost or corrupted? Are these values so diminished by the change that the area now in a lesser way highlights the cultural heritage context of national interest?

Learning and knowledge

6) Compensation entails *learning* in detailed development plans through design, investigations and documentations. Transformation of listed cultural heritage areas demands and enables studies by consulting firms. Their task is to examine the area, describe heritage values/resources and document architectural quality. New information is added to the planning process, which affects the choice of compensation measures and the design of plan proposals and alterations. If the survey concerns an area with cultural heritage of national interest, it is included in the assignment to further develop the description of that national interest, provided by the Swedish National Heritage Board. Through the assignment given to the consultants, the basis and support of the national interest is updated. New knowledge about the heritage values gives the planning process clear elements of learning.

It is the Swedish National Heritage Board that in its role as central authority establishes cultural heritage areas of national interest and produces the initial descriptions of the heritage values and resources of significance, and the important characteristics within them. The descriptions, however, give no guidance to planning or design in detailed plans. The descriptions are too short and general in their form. Because of this, architects and heritage consultants in Sweden are often hired to assess, document and illustrate

the heritage values/resources and architectural qualities in the area subject to development. The professional base for compensation is therefore found in the consultant's surveys, their identification of heritage values/resources and architectural qualities, and their report on potential consequences. The consultant's surveys and assessments are used as negotiation papers and are being relied upon by stakeholders when the planning proposals are assessed.

Interest and power
7) Compensation is measures and actions linked to *interests* in society and *power* in designing detailed development plans. Power is expressed in the way heritage values and architectural qualities are taken care of in transformations. The assignment to town planning offices is to make detailed development plans that facilitate exploitation. From this perspective, compensation is a way to make plots accessible for building. By bargaining, compensatory measures can be used by town planning offices and developers to combine demolition with construction of new buildings and simultaneously take care of heritage values and architectural qualities in the area. Compensation measures are thus expressions of different ideas about the best way to use sites. The balance between private and public interests shows how power is distributed in society, which in turn influences the reach and direction of safeguarding cultural heritage and architectural qualities during transformation. Professionals defending cultural heritage have a difficult position in planning processes characterized by negotiations among key actors. They are part of the referral bodies and have to react to plan proposals developed by a project group at the town planning offices.

The concept of compensation represents a new paradigm in development and transformation in areas with cultural heritage or high natural environment values. In the heritage sector, compensation has traditionally referred to monetary compensation for intrusions in the property owners right to use their property. For example these intrusions involve protection, prohibition of demolition, preservation, listing of buildings in historical building records and the establishment of protected heritage areas. In these cases, a private interest is compensated. The new paradigm instead means that the developer should compensate damage or loss due to development that was of public interest, or the loss of a resource when the development was carried out for the common good. The shift of perspective is characterized by the "polluter pays"-principle, and the concept of compensation for impact on heritage values is, in a way, an extension of this principle. This means that compensa-

tion is a fundamental ethical issue. In planning processes, heritage values are addressed as a collective, common good and as something of public interest to the community, which is compensated when impacted by development, exploitation and transformation (Lerman, 2014). But, in current practice it is rare that the County Administrative Board (in a Swedish context) in their assessment of planning proposals demands compensation measures due to impact on heritage values. On the contrary, compensation measures are mainly a voluntary agreement, arising from the demands of municipal policies that aim to lessen negative impact, while also making plots buildable (Grahn Danielson, Rönn & Swedberg, 2015).

In Sweden the responsible authority for assessing an application for development on sites and land is the town planning office. The planning office is expected to weigh aspects for and against preservation of heritage values and architectural qualities. In this assessment of different interests, the suitability of the land for the proposed purpose is also assessed. What is most important, and how could conflicts be avoided? The town planning office is thus the body that the politicians assign to work with detailed plans with the purpose of enabling new development, while simultaneously defining which different interests and stakeholders there are tied to the site.

From a heritage point of view, this is not a situation where two equal fighters meet in the boxing ring. New development is always a priority, even in cultural heritage areas of national interest. In Gothenburg, the town planning office's solution is to combine demolition of old buildings and construction of new buildings, through requirements of caution, protection, prohibition and design regulations. It is the compensation measures that form the method for making land buildable, and they are used for strengthening the position for cultural heritage and architectural qualities and to create a better balance between stakeholders in the planning process.

WRAPPING UP: HERITAGE COMPENSATION

The proceedings are divided into three sections with three papers in each group. The division is based on how the authors describe and use the concept of compensation for impact in terms of history, contemporary issues and future-oriented reconstruction of heritage values and architectural qualities. The first three contributions deal with compensation from a historical perspective founded on the use of landscape and environments. This is the broad starting point for the discussion. In this part of the proceedings, gene-

ral approaches to compensation in a historical environment are explored within a social context. The contributions present a background to compensation as a concept; they point out important conditions for citizens, and the possibilities of experiencing of cultural heritage.

The second group explores compensation in specific planning contexts as measures, actions and alterations of planning proposals suggested by town planning offices. Compensation has many faces in the planning process. How key actors regard heritage values and architectural qualities is crucial for the planning and designing of plan proposals. Protected areas can be perceived both as obstacles to development, as important to save for the future due to their values and as a resource for further exploitation.

The third group of contributions presents creative solutions to compensation issues and future-oriented actions in individual projects as well as on regional levels. This part includes examples of compensation measures proposed by a consultant firm with an assignment of dealing with heritage values and architectural qualities within the work of a new detailed plan. This represents compensation as a solution to a design problem in an architectural assignment. Another alternative future-oriented understanding of compensation includes the development of landscape observatories. A third way forward for compensation measures can be a digital translation of lost values, transforming them to realistic experience through new technologies. The contributions present very different creative solutions to compensation issues:

1) Rethinking compensation as a general concept in a social context.
2) Heritage compensation in planning processes.
3) Creative compensation measures and future-oriented actions.

Before we go further into the contributions a short presentation of compensation thinking can be of interest. Four types of compensation for restoring cultural heritage and architectural qualities are possible to discern and reflect upon (Grahn Danielson, Rönn & Swedberg, 2017). They are: a) Same value/quality, on site; restoring similar heritage values and architectural qualities at the same site that has been damaged. b) Same value/quality, off site; restoring similar heritage values and architectural qualities, but now at a different site. c) Other equivalent value/quality, on site; restoring another kind of heritage value and/or architectural quality of equal importance, at the site. d) Another equivalent value/quality, off site; restoring other kinds of heritage values and

architectural qualities of equal importance, but on a different site. This basic model for discussing compensation in a planning process can be useful in finding measures and action enabling response to loss of values and qualities, when cultural environments are regarded as an issue of public interest and understood as a benefit/utility to all citizens and the whole society.

1. Rethinking compensation as a general concept in a social context: This first section includes three papers. We start the discussion on heritage compensation in the proceedings with a contribution by Athanasios Kouzelis. His chapter, *Vernacular architecture design principles as resources of compensation in planning process*, presents the Greek Archipelago in a sustainable and historical context. People who live surrounded by the sea have constructed buildings, practical devices and exploited material resources available from their surroundings. Compensation thinking in this context is expressed as an exchange of ideas and actions in order to overcome shortcomings in the environment. Physical limitations in the environment seem to trigger a development of compensation thinking. This means that compensation measures and actions corresponding to cultural heritage and architectural qualities can be found in many different historical environments all over the world

Kouzelis uses the Greek Archipelago as an illustrative example for compensation thinking. According to him, the forms of housing and the traditional construction techniques in the Aegean have created a specific encoding character for the purpose of bioclimatic and ecological sustainability. He suggests that this historical environment can serve as a model for other cultures as compensation by overcoming environmental challenges in planning. From this point of view, local mitigation is a tradition born out of need, and heritage compensation can therefore operate in many different societies and levels. Kouzelis argues that compensation as a planning and design principle bridges the gap between a local and a global level. Vernacular architecture and design methods can contribute to a heritage-oriented paradigm where the concept of compensation is a sustainability project.

In the second chapter, Mathilde Kirkegaard focuses on cultural heritage environments that are firmly established in the local community. The chapter, *Cultural Environments – A Social Matter*, addresses a missing link between the intrinsic potentials of the cultural environments and compensation as a concept. Her findings are part of a research project conducted in Denmark. According to Kirkegaard historical features generate new narrati-

ves for the local community that can be part of a development strategy. She considers compensation of heritage in relation to a continually changeable heritage environment that includes important social layers. Her perspective on compensation is rooted in the striving to ensure that cultural heritage is preserved and pursued by the people of today, besides securing national interest at heritage sites.

Kirkegaard argues for a balance between bottom-up and top-down methods in the development process of a cultural environment. In this approach, heritage compensation is closely connected to the everyday life. The method calls for a collective effort for finding compensation in the transformation, which in turn reflects a common understanding of the site-specific history. "The use" promotes cultural experiences for citizens. Compensation thereby becomes a matter of a collective coloured by individual perceptions and practices routed in the use of cultural environment.

Kirkegaard notes that compensation in relation to heritage values can have many outcomes. When cultural environments contain social layers, some fundamental questions must be considered during the initial phase: For whom is the development designed and who is affected by the development? These questions must be used to define compensation as measures and actions during the process of alteration. The concerns must also be a part of the negotiations. Kirkegaard argues that a collective identity can be a "product" of compensation in the transformation of sites. In this understanding of the concept, the "product" and outcome are consequently not understood to be only added physical value. Compensatory measures and actions regarding heritage values need to be a part of the process; the local perspectives should be included in order to strengthen collective identity tied to the specific site. Compensation is a social matter expressed through the tangible values in a physical setting.

The third chapter by Tom Davies is titled *Defining New Values for Cavemen and finding the Human in Heritage*. He starts the discussion by pointing out that the understanding of mitigation has changed considerably over recent decades and has become an integral part of planning systems for archaeology. Mitigation has the same meaning for Davies as compensation has for Kouzelis and Kirkegaard in their contributions. Davies continues the discussion by looking at the origins of heritage mitigation in the 19th century and how the idea is a response to loss; it is an expression for

the need to conserve the past in a rapidly changing industrial society. He ends his contribution by considering modes of, or approaches to heritage mitigation, heritagisation processes, continuity, as well as displacing and borrowing strategies in order to explore how they may deliver intangible- and tangible values in a heritage context.

According to Davies, the need for an inclusive heritage narrative and the bene- fit of stories, can be seen by looking at the driving forces behind the conser- vation, documentation and record-making of heritage values/- and sites. In the United Kingdom, the current legislation protecting ancient monuments, preserving historic buildings and safeguarding cultural environment provi- des a stark contrast to the plundering of antiquity which preceded the herita- ge management of today. This reveals that mitigating the loss of our pre-in- dustrial environment is a central motivation to the design of the legislation.

Davies argues that key actors involved in heritage mitigation measures must recognize the importance of telling stories – of intangible heritage values. For this reason, Davies seeks approaches that can comfort the individual through the familiarity of a common story of everyday lives, which in turn enables people to reconcile themselves to the sense of loss, while at the same time promoting experiences of community and heritage culture. Like Kirke- gaard, Davies claims that mitigation should be expressed in a social context of a common heritage, heritage values and architectural qualities, not sepa- rated from present users. This in turn presents the need to move away from simplistic narratives that serve to preserve only the physical buildings and sites, and to move towards mitigation strategies that celebrate those places for the people who made them and for whom they have meaning.

2. Heritage compensation in planning processes: This section contributes to the discussion on compensation in the contemporary planning. Magnus Rönn reports from his research on compensation in detailed developme- nt plans conducted in Gothenburg. This fourth chapter in the proceedings presents findings from three case studies of transformation in heritage areas of national interest. Measures, actions and alterations of plan proposals can be defined as compensation in planning processes if the proposed plan a) comprises development that is assumed to have a negative effect on the cultu- ral environment, b) which in turn leads to revisions of the plan proposals, c) and finally imposes new plan regulations or changes in the design of the new buildings. According to Rönn, compensation in planning processes is defi-

ned by the intention behind it. There must be critique from key actors about how heritage is treated in plan proposals. Compensation in this context is not defined as the naming of measures but through actions and their objectives in restoring heritage values or protecting architectural qualities.

Rönn claims that heritage compensation is a practice embedded in detailed development plans. Compensatory measures are expressed in planning documents, in illustrations of new buildings and maps, and in regulations at the sites. This is a hidden type of compensation that becomes visible through studying the planning process, from mission to an accepted detailed development plan. The compensation in processes is characterized as problem solving, planning method, tangible measures, and means of control over exploitation. The overall objective of this type of planning process is to provide access to the site and make the construction of new buildings possible. Depending on the critique received from key actors, at the plan proposal level, compensation is used to protect values in the area, to preserve qualities at the site and to demand appropriate architectural design.

The title of Helena Teräväinen's contribution is *Unspoken Compensations on Heritage values? Three planning examples from Finland.* This fifth chapter presents, compares and discusses three cases of transformation in cities and towns in Finland. According to Teräväinen, heritage values are considered irreplaceable and compensation measures have therefore not been transformed to a special planning concept in Finland. However, compensation does take place among professionals when designing plan proposals. In this interpretation, compensation is an unspoken practice in planning. Actions hidden in measures in the transformation of sites include consideration of heritage values and architectural qualities. Compensation is an overall concept for a professional outcome with different expressions.

Teräväinen uses three critical case studies to illustrate her perspective on compensation as an unspoken practice in town planning and urban design. Compensation is visible as an exchange of views and requirements that may lead to alteration or preservation of heritage values in a plan proposal. The first of Teräväinens cases is from Vaasa, an old town with many listed buildings. In this case compensatory considerations are embedded in the understanding of the city by the town planning office, which maintains a tradition of safeguarding heritage values in contemporary planning. Compensation is a pre-requisite when granting a land use agreement. Case two is from

Seinäjoki, a town dominated by modern buildings. Heritage compensation in this case takes the shape of the re-use of a building – not yet pointed out as important – as an alternative to demolition. Compensation is expressed in terms of housing for inhabitants and new spaces of cultural value for citizens. The third case is Lapua, a small town with a defunct industrial site, Old Paukku. In this area, "the Canteen" is a building of great value. Teräväinen argues that the town could afford the renovation of the Canteen, but the building is threatened by the municipality's plan alteration, which will terminate the protection. In a second plan proposal, ten out of thirty buildings in Old Paukku are to be conserved. This limited protection also causes disagreement. Twenty-five years after the initial survey of the industrial site, the town starts to sell plots to developers, a shift to which Teräväinen is critical. The transformation of the industrial estate represents a missed opportunity for compensation, which could have been achieved through the renovation of the Canteen and other historically important buildings in Old Paukku.

The sixth chapter is a contribution by Jennie Sjöholm titled *Demolition, dislocation and documentation in transforming mining towns*. The study covers the transformation of the mining city *Kiruna* and the town *Malmberget* in Northern Sweden. Both must be relocated in order to let mining operations continue, a business which is crucial to the survival of the municipalities and its citizens. In this case, demolition, relocation, and documentation are main strategies in managing the historic environments during the urban transformation. The mining company is obliged to compensate for the damage it causes. However, Sjöholm finds that the mitigation measures for the negative impact on Kiruna and Malmberget primarily cover economic values and focus on replacing functions – not heritage values and architectural qualities within the affected sites.

The mitigation strategy for the restoration of negative impact on heritage values and architectural qualities in Kiruna and Malmberget focuses on the relocation of a limited number of listed buildings, and the documentation of the built environments that will be demolished. Sjöholm argues that compensation depends on the fact that cultural heritage is socially constructed. Compensation for the destruction of Kiruna and Malmberget has been minimized by a redefinition of the significance of the built heritage. Historically important buildings are dismissed as not being part of the heritage. Thus, de-heritagisation is taking place. Cultural heritage in the built environment is considered non-significant, buildings lose their protection,

and are ultimately being demolished. Both safeguarding and de-heritagisation appear as negotiable properties in the transformation process. Sjöholm ends her contribution with a key question: How can historic environments be given a stronger position in planning processes with democratic aspirations, and how can local as well as national features of cultural significance be represented in transformations of towns and communities?

3. Creative compensation measures and future-oriented actions: The final section of the proceedings presents three papers concerning solutions to compensation issues. Urban Nilsson starts the discussion in chapter seven by presenting creative compensatory solutions to design problems through a detailed development plan in Nacka, Stockholm. His contribution is titled *Considerate conversion – in order to take care of and reuse cultural heritage. A practical example*. Nilsson presents a case where he himself is involved as a consultant in a large-scale project and has proposed different kinds of compensation. The area in question is the *Kvarnholmen* peninsula in the Stockholm archipelago. Nilsson summarizes several mitigation measures in a table, structured in columns for nature, topography, paths, existing and new houses, mills/silos, offices, warehouses, bakeries etc. In each of these columns he lists potential compensation actions and measures to take care of heritage values in the area, like renovating and reusing buildings with architectural qualities and constructing new houses inspired by the previous design in this historically important area. Nilsson presents an overview of the working method, which provides knowledge about the cultural environment, its heritage values and architectural qualities

In this case, heritage compensation is expressed in several ways starting in the planning strategy and followed by protection in plan proposals, by the reuse of old buildings and designing of new buildings with respect to the surroundings. Key views, streets and parks are laid out in order to safeguard the cultural heritage and nature. Compensation measures are utilized to keep the balance between exploitation and restoration, recreation and interpretation of existing and new values. Nilsson points out that many architectural interpretations of the built environment have been made in the transformation of Kvarnholmen. New stairs, towers and passageways replace former functions. A "true" reconstruction of the local Oat mill was constructed before the demolition of the original. In negotiations between Nacka municipality, the developer and representatives for the cultural heritage sector, the bakery (one of the significant buildings in the area) could

be saved by a new passage through the building. The preservation of the bakery was an effort undertaken by the owner of the property and is as such a good example of compensation. As a heritage consultant, compensation is a practical tool for Nilsson, used in order to safeguard the most important heritage values. Negotiation in planning processes means that sacrifices must be made. Therefore, he argues for the importance of setting the right priorities in the early phases of the process and of "fighting the right battles". By using compensation as a concept, Nilsson claims that it is also possible to recreate heritage values that have been lost and to push the design of the new architecture towards solutions that complement and/or highlight the existing landscape and buildings.

In chapter eight, Anders Larsson provides a contribution titled *Place logic rather than project logic: Landscape Observatories as regional coordinators of large-scale projects and compensation measures*. In previous studies of compensation measures for natural environment and cultural landscapes in large scale infrastructural projects in Sweden, Larsson found that demanding compensation measures for affected ecological and heritage values was a hypothetical possibility seldom taken into consideration in practice. However, when it was taken into consideration, compensation measures took place within the formal road and railway area. The strategy in planning documents followed the mitigation hierarchy (avoid, minimize, restore and compensate) when natural environment- and heritage values were affected by large-scale infrastructural projects. Tangible values were the focus of mitigation and compensation processes in these large projects. Priority was given to compensation measures, which could be delimited, measured and controlled via administrative systems for quality assurance and assessments.

Larsson proposes *landscape observatories* as hubs for regionally centred coordination of landscape knowledge, which can be used for creating cultural compensation in landscapes. The fundamental division between nature and culture in planning processes and by professionals is criticized for being out of date and posing an obstacle to creative solutions to compensation issues. Compensatory philosophy is guided by language use and differing fundamental conceptions. Larsson points out that, because of this, different types of European landscape observatories have previously been established. Larsson suggest that landscape observatories could be turned into hubs for providing knowledge on compensation. He raises a controversial idea in this context, which concerns the very basics of compensatory theory: Why cannot nature

sometimes be compensated by restoring heritage values, or vice versa? Or objects be compensated with activity, or vice versa?

Landscape observatories may offer a fresh start for the discussion on mitigation as an alternative to the continued handling of projects, mitigation aspects and compensation measures within the present project-oriented system. The current practice moves incrementally in small steps towards better solutions year by year, while our landscapes are destroyed bit by bit because of unpredicted cumulative effects. Larsson's suggestions are in answer to his own negative experience of the present planning system regarding large-scale infrastructure. The current practices do not correspond to the public participation and democratic values upheld in the European Landscape Convention.

In the final chapter David Ross discusses compensation for cultural loss through new technologies and tools. His contribution is titled *Creative tourism and digital reconstruction: two approaches for heritage loss compensation*. The idea behind digital reconstruction is that archaeological sites can provide experiences after they have been physically destroyed. Ross discusses the advantages and limitations surrounding the use of technological solutions to compensate tangible and intangible heritage values. He starts by pointing out that it is the developers that are responsible for the negative impacts caused by development, and that they should therefore provide means for compensation. This can be applied to archaeological sites regardless of whether the safeguarding focuses on material remains or is intended to compensate stakeholders for the inevitable loss of heritage values. But how can the loss of important heritage values, sites and objects be compensated?

In his contribution, Ross presents two solutions for preserving and presenting the essence of place in cases of physical loss and means of compensation in order to retain their memories: a) Digital reconstruction and b) creative activities in terms of tourism development as well as other audiences, such as local communities where heritage has been impacted.

Digital technologies can provide solutions where heritage destruction is compensated by preserving a faithful and accurate replica in a digital form. This solution requires resources, both for the digital construction and maintenance of the result. Intangible values such as memory may become new attractions of regional and national interest, recognized landmarks, as well as business opportunities for the local community. Ross believes that intangible

archaeological heritage is best used by actors in collaborative compensation projects that focus on both tourism development and heritage preservation. The basic idea in Ross' proposal is that archaeological sites and monuments, destroyed by urban expansion, can still be experienced by offering access to a digital reconstruction, creative experiences and saved memories. Both approaches have advantages and disadvantages and choosing which one to develop as compensation depends on the individual case. Ross assumes that the selection of compensation approach will depend on the heritage being compensated for and on those who are singled out as having the most benefit of the new experiences.

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NOTES

[1] Researchers connected to the project are: Magnus Rönn, Kulturlandskapet & Chalmers University of Technology, Benjamin Grahn Danielson, Picea kulturarv & Susanne Fredholm, Freja Frölander and Krister Olsson, Gothenburg University. The reference group included in the project: Tony Axelsson, Gothenburg University, Lars Jacobzon, The County Administrative Board, and Madelene Seberbrink, City of Gothenburg.

[2] See: http://www.kulturland.se/portfolio/workshop-architecture-cultural-environ-ment-and-compensation-in-planning-processes/

[3] See recommendation for choosing the right synonym for compensate in Merriam-Wester dictionary:

"pay, compensate, remunerate, satisfy, reimburse, indemnify, repay, recompense mean to give money or its equivalent in return for something//pay implies the discharge of an obligation incurred// *paid* their bills compensate implies a making up for services rendered// an attorney well *compensated* for her services remunerate clearly suggests paying for services rendered and may extend to payment that is generous or not contracted for// promised to *remunerate* the searchers handsomely satisfy implies paying a person what is required by law// all creditors will be *satisfied* in full reimburse implies a return of money that has been spent for another's benefit// *reimbursed* employees for expenses indemnify implies making good a loss suffered through accident, disaster, warfare// *indemnified* the families of the dead miners repay stresses paying back an equivalent in kind or amount// *repay* a favor with a favour// recompense sug-gests due return in amends, friendly repayment, or reward//passengers were *recompensed* for the delay." Source: https://www.merriam-webster.com/dictionary/compensate#etymology

[4] See recommendation for choosing the right synonym for mitigate in Merriam-Wester

dictionary:

"<u>relieve</u>, <u>alleviate</u>, <u>lighten</u>, <u>assuage</u>, <u>mitigate</u>, <u>allay</u> mean to make something less grievous. <u>re-lieve</u> implies a lifting of enough of a burden to make it tolerable// took an aspirin to *relieve* the pain <u>alleviate</u> implies temporary or partial lessening of pain or distress// the lotion *alleviated* the itching <u>lighten</u> implies reducing a burdensome or depressing weight// good news would *lighten* our worries <u>assuage</u> implies softening or sweetening what is harsh or disagreeable// ocean breezes *assuaged* the intense heat <u>mitigate</u> suggests a moderating or countering of the effect of something violent or painful// the need to *mitigate* barbaric laws <u>allay</u> implies an effective calming or soothing of fears or alarms// *allayed* their fears." Source: https://www.merriam-webster.com/dictionary/mitigate#other-words

PART 1

VERNACULAR ARCHITECTURE: DESIGN PRINCIPLES AS RESOURCES OF COMPENSATION IN THE PLANNING PROCESS

Athanasios Kouzelis

ABSTRACT

The Greek Archipelago constitutes an historical particularity and belongs to birthplaces of our civilization. The Greek case will be used to discuss research issues of general interest: How can vernacular architecture be a basis for regaining design principles that use local resources and seek sustainability?

The present essay deals with the compensation planning principles in the culture of the Aegean Sea. The development of particular tools for food production (mortars, hand-mills etc.), machinery (wind-mills and water-mills), pigeon dwellings, excavated and solid-built dwellings using solar energy and specific tower-mills using wind energy (taralis, monopatos, xetrocharis), have been prototypes for modern sustainable and bioclimatic technology.

Compensation as a design principle aims at restoring and enhancing building methods for housing and material production, as well as solar and wind energy constructions adapted to modern sustainable and bioclimatic technology. Namely, the disclosure and creation of specific local sustainability goals can increase compensation for financial efficiencies and long-term domestic prosperity, without a need of more external trade supplies.

The making out of the special characteristics and the originality of such constructional and morphological methods, within the economic conditions pertaining to the particular environment of the Aegean Archipelago, calls for a continued systematic compensation (objective reward system) to rethink values and qualities in design processes. The findings may be used in a Nordic context also, namely for the Baltic and North Sea islands.

KEYWORDS

compensation, sustainability, vernacular architecture, bioclimatic technology, material and livelihood production.

INTRODUCTION

Vernacular architecture concerns built settlements taken most directly from its natural environment's sources, exploited with a cohesive and instinctive sense of sustainability. Such settlements that come to mind are the villages in the islands of the Greek Archipelago, the stone villages of Ireland and Gotland, as well as many others in the inaccessible sea places around the world. Such places have stood the test of harsh terms of sustainability, being dependent mainly on nature's available resources and the local climate conditions (Davis, 1991:45-46).

Vernacular architecture exhibits a sense of building simplicity and absolute environmental purposefulness that correspond to standard patterns of grouping for protection and serviceability, providing a 'household centred' site organization. This organization is constituted by homogeneous and well-coordinated architectural design principles that can be valuable as prototypes for a modern option of sustainable architecture in general.

The architectural design principles and the material forms of housing tradition in the villages of the Greek Archipelago have developed a specific character encoding for the purposes of bioclimatic and ecological sustainability. The principles have, developed according to a maritime economy and the remoteness of the islands; this can serve as a model for other insular cultures. The emergence of a specific character of tools, mechanisms and systems of autonomous energy, as well as a service of basic subsistence needs, both require a systematic, historical and scientific elaboration of the known sustainable achievements of the Greek Archipelago's culture. Emphasizing the enduring consistency and standardization of the buildings' and utensils' morphology, an implementation of improved innovative applications, created by the experience and spirit of the people of the sea, can be approached for learning from their vernacular architecture and design (Vellinga, 2014:4).

SOLID-BUILT HOUSING AS RESOURCE OF SUSTAINABILITY

Vernacular architecture constitutes an historical answer to the necessity of accommodation to the inhabitants of an insular place, which depends on its rural and maritime natural environment, as well as on naval trade relations with the mainland economies.

Vernacular Architecture takes maximum advantage of the natural environment's possibilities with the optimal economy of means. Building materials

are taken from near the construction site. The materials and the construction techniques determine the final form and plan of the dwellings. It is obvious that the combination of the different natural and human characteristics of the environment has determined the constructive, formal and functional traditions, e.g. there is stone architecture if there is stone locally, and the inhabitants know the work of stone masonry. It has followed models based on the tradition, which has been reproduced and developed for a long time in a geographic region with all its characteristics. The result is a rational, typological, functional and constructive characterization: architecture serves the necessities and the economical possibilities of the society. This rational sense is reflected in the simplicity of the inner distribution in dwellings or auxiliary buildings, and also in the solutions of the traditional construction techniques and the variety of bioclimatic resources, which link man with the environment through vernacular architecture.

The insular villages of the Greek Archipelago were developed organically in repetitive forms based on cell-like additive tradition (Figure 1). The houses are very close to each other, and in many cases, the buildings share party walls or roofs. Both interior and exterior spaces are developed simply and economically. The plans of rectangular shapes, usually with 1:2 proportions, vary according to specific needs within the limitations of the building order. They are single or two storey' houses, and include living space, sleeping rooms and kitchen areas. In some cases, a work room is included, while the toilet is always outside of the building. Each dwelling has a small outdoor space: an interior courtyard, a yard or a roof terrace (Tsianaka, 2016: 86, 96-97).

The buildings resemble those in the rest of Cycladic islands: solid volumes, thick masonry walls with small openings, a whitewashed plaster skin covering almost everything with an integrative power and, the creation of composition through continuous repetition. All those elements have produced organic urban and building forms, evolving through a long response to the climatic conditions using the locally available resources, and at the same time imprinting the social evolution through time.

A particular ergonomic scale is evident, similar to the one found in ships: low doors, narrow and steep stairs, tiny inner/outer spaces. These are products of necessity rather than choice, since the dominant design rule was material and space minimalism. Nature is the chief designer of the architectural idiom, imposing its whims on the local builders, i.e. the dwellers themselves in most

cases. Climate, earthquakes, scarcity of material, and topography have been the primary design parameters, and respected with admirable integrity & ingenuity. Tradition resulting from long experience dictated the building specifications from layout to decoration, with little room for experiments or deviations from the established norms.

The most visible element of this vernacular architecture is the flat earthen roof (doma) used for drying products, collecting rain water, sleeping on hot summer nights, or for social contacts: an element harmonized with the hot dry climate (Figure 1 and 2). Their vaulting was constructed on a shutter board supported by wooden beams, whose ends rested on the sidewalls. The gaps between the beams were filled with transverse wooden beams, which brought a layer of boughs of variable thickness. The shape of the dome was completed by coating on a lean mortar, whose outer surface was properly configured for the cylindrically shaped dome. Upon this was spread mortar with Theran earth, which was about 20-25 cm thick, formed in horizontal bands starting from the base of the dome (Radford & Clark: 71-72).

Especially the Cycladic type of dwelling embodies interesting environ-mental qualities, essentially because of the functional simplicity of the

Figure 1. Solid-built houses in Chora of Mykonos (author's pic. archive).

structure. This type of architecture puts more emphasis on protection from light, not only at the scale of individual buildings, but also at the urban scale. Furthermore, it provides a micro-climatic air conditioning by alternating shadowed and sun-exposed spaces in the whole settlement, providing ventilation though small openings oriented mainly from south to north. The settlement's unified roofs act not only as sun protection membranes but also as rainwater collectors, supplying through vertical pipe drinkable water to underground storage cisterns. The transformation of curved ceilings into a flat roof has made rainwater collection easier than symmetrical vaults.

Rainwater collection was a decisive factor in the overall layout and form of each building – even churches or country houses. Every solid-built dwelling had one or more underground cisterns where rainwater was collected from roofs and terraces via elaborate routes. They were usually placed in the basements or in the courtyard. They were either carved into the rock or stone-built with a vaulted roof. Their position, typologically, was within or near the house's kitchen. Stored water was disinfected with a piece of limestone, and was carefully withdrawn through a hatch over the cistern. (Stasinopoulos, 2006: 4).
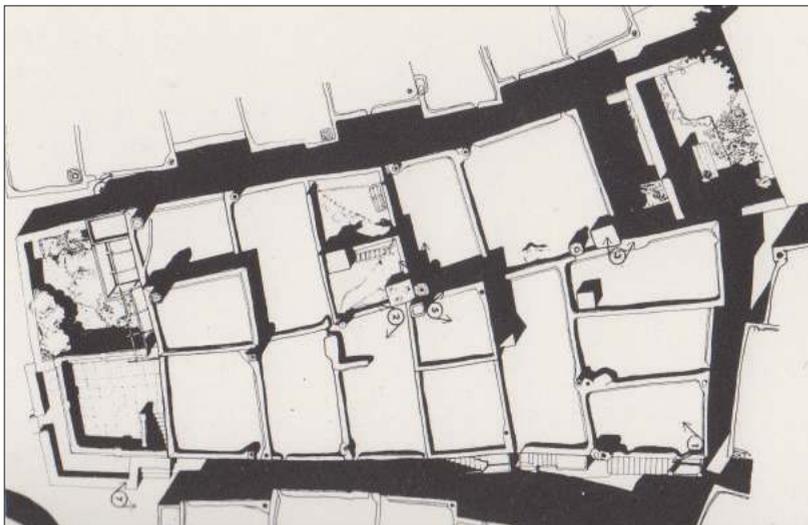

Figure 2. Bird's eye view of a neighbourhood in Chora of Mykonos. Source: 'Helleniki Paradosiaki Architektoniki, Cyclades', vol. 2.

The most characteristic peculiarity developed in the culture of the Greek archipelago is a special type of ''passive system" dwelling that was constructed by the inhabitants of Santorini and Milos for many centuries, either by digging or built-in methods of structural art. The capabilities of local building materials produced by volcanic lava utilized a unique way to build vaulted spaces, which were insulated and sealed using kissiris (a kind of pumice). Kissiris was the pumice that replaced spongiform red stone in the construction of domes, while Aspa (ash, from Santorini's earth), in a mixture with lime, formed the bonding material for refractory mortars.

This vaulting was constructed on a shutter board supported by wooden beams whose ends rested on the sidewalls. The gaps between the beams were filled with transverse wooden beams, which brought a layer of bushes of variable thickness. The shape of the dome was completed by coating a lean mortar, whose outer surface was properly configured for the cylindrically shaped dome. Upon this was spread mortar with Theran earth, which was about 20-25 cm thick formed in horizontal bands starting from the base of the dome.

These formal features of the Greek Archipelago's vernacular architecture became well known after Le Corbusier's journey to the islands of the Aegean Sea. There, he discovered the dwellings' sculptural rationality and uniformity that later influenced modern architecture, bringing together the calculation of living with rational building. However, he ignored that these islands' vernacular architecture was a result of necessity and response to vital economic needs of the inhabitants, as well as to the environment's viable resources (Lejeune & Sabatino, 2010:33).

ARCHITECTURAL FORMS OF SUSTAINABLE INSULAR ECONOMY

Every insular economy demands means for self-sufficient forms of material production. Based on specific environmental conditions, the subsequent design of tools and constructions play a decisive role in the development and improvement of sustainable living.

In the insular primary economy, all tools for ploughing, harvesting, grinding and fishing have been designed and applied according to a material conformity, which serves small as well large productive needs. Deriving from hand tools, such as small and big mortars for grinding grain and fruits, the design rule of over-sizing led to the construction of specific mills in the islands of the Greek Archipelago for a better cereals output.

The basic operating principles of the energy produced by the wind became known in the islands of the archipelago during the 15th century with the introduction of the windmill, a mechanism of conversion of wind into mechanical energy. This type of energy was utilized to perform various productive projects, and cover the whole range of domestic and productive needs. The wind had remained unused on shore, despite the fact that inhabitants of the archipelago, being mainly sailors, had known empirically that this was the main factor for sailing, because the energy of the wind is proportional to its velocity cubed (to the power of 3). In particular, coastal regions have continued to function as aerodynamic fields at elevated positions, where a maximum load of wind can be received, in such a way that it can become a powerful energy supply at the disposal of residents.

It is estimated that the energy that can be acquired from a windmill is theoretically 59.3% of the total energy of the wind, but in fact achieves only 60% of the theoretical maximum. The energy that can be taken from a specific speed of wind depends on the surface area exposed to the wind. This is called the windmill's 'scanning area'. In a vernacular type of windmill, used for grinding corn, the scanning area is a many-sided surface shaped by the blades (Kouzelis, 2006:74-75).

The windmill as an architectural structure is a peculiarity that is harmoniously linked to the cubist morphology of the island settlement houses, usually on a high site and projected building similar to a Greek-orthodox church on a hill. In addition, its aesthetic expression is a counterpart to the homogeneity of the residential complex, optically disrupting its repeated, cubical, solid uniformity.

The oldest type of windmill that we find in the Greek Archipelago seems to be the 'taralis', as it is called on the island of Karpathos (Figure 3). The Taralis mill in its original form, is only found on Karpathos island, especially in Tristomo bay and Aperi. Nowadays, only ruins can be seen, but combined with the descriptions from the locals, the design and its function can be easily concluded. It is one of the rarest forms of horizontal mill encountered in Europe, and is similar in function to the horizontal Persian windmill of the 13th century.

Another type of 'taralis' mill, without many similarities to the horizontal mill of Tristomo, is found on Karpathos in only two cases. These mills are oriented according to a one way wind direction: the western wind that prevails on the

island from May until November. Their form is based on the type of continuous flow of Bernoulli's hydrodynamics: S1 • U1 = S2 • U2 = Q, where Q is the constant supply of air. Therefore, as the vertical cross section descends, the airflow increases, and thus increases the speed of the mill. Both cases are constituted of two parts. One in which the mill's wings rotate, and another where the millstones grind the cereal. They are constructed of island stones and both rooms are roofed with a terrace. The whole construction is open to the front and rear, forming an air stream so that the wings can spin. The rest is enclosed, having a door made of a special Karpathian wood and cut horizontally into an upper and lower part (Leimona-Trempela, 1974:319-320).

An eminently peculiar form of a windmill in the Greek archipelago is the 'axetrocharis' or 'monopatos', which grinds through the force of one-directional winds. It is found usually on Crete and the Karpathos islands. A plausible explanation for its design is that the western wind called 'bonentis', or the north-western wind called 'maistros', often blow over these islands. The islanders, in order to build such a windmill, first chose a suitable place, where the local western or north-western winds were strong and dominant. Usually they built windmills on ridges, one next to the other, like at the entrance of Lassithi's plateau, in Karfi and Exo Potamous of Crete, or in the villages Olympus, Spoa and Othos of Karpathos. In some cases, as for instance in the hinterland, where the winds are not so strong, the islanders constructed an additional floor to give height for a better effect (e.g. Fr. Papadakis' windmill in Othos).

Figure 3. A 'Taralis' windmill in village Olympos of Karpathos (author's pic. archive).

All the mills have a semi-circular front, because it helps the flow of the wind without creating adverse draughts on their surface. Their entrances always face the axis and oppose the wings of the mill, so that the grinding cannot be affected by the draughts inflow. The windows are not like those in Karpathos, but the mills in other islands have only one or two small windows measuring approximately 0,70m × 0,25m.

There is always a loft. The edges of the roof are interrupted in some places in order to prevent the accumulation of rainwater. The stonewall thickness is usually around 0.50 m to 0.75 m. Some mills are reinforced with a retaining wall outside, on the side of the wings, if they receive more air pressure due to greater height. In addition, the walls are built very durable, because apart from the weight of the roof, they are loaded with additional pressures such as the mechanism of the millstones, the grinding bowl and the stress of the rotating wooden shaft.

Usually the Monopatos windmill does not have outbuildings, but sometimes, in some mills in the village of Olympos on Karpathos, or on rivers of Crete, next to the mill there is an outbuilding where the miller can stay during the days of heavy work. Some mills on Mount Olympus of Karpathos are built in the courtyard of the miller's own house.

The whole mechanism of the windmills is composed of wooden elements, with some iron parts. The connection between the parts is sophisticated, in order to create a flexible yet rigid structure when the wind is flowing and the mill is grinding. The system of the wooden fan mechanism and the sails framework are the elements that bind and transfer the energy of the wind in the upper part of the mill (because the bottom always remains stationary), so that its vertical axis can rotate freely.

There are usually eight horseshoe-shaped sails, made of thick canvas on the mills, and wrapping around the beams of the fantail. The beams are fixed radially and their front edges are connected with wire to form a many-sided sail framework. In the front, the axis is extended approximately 1.5 m, and on the other end it perforates the mill's wall to connect a perpendicular beam to the interior roof, called 'trapeza'. The bond between the axis and the 'trapeza' is made by special planks, which are called 'drakoi' (in English: 'dragons') or 'leontes' (in English: 'lions').

The rotation axis forces a wooden cogwheel to turn. The cogs of the wheel and the gaps between them correspond to similar sockets on a vertical wooden cylinder, the 'fonari' (which means lantern). By this construction, the wheel multiplies the lantern's rotational speed due to their circumferential difference. There are usually 42 cogs on the wheel and 7 lanterns. Thus, during a full wheel rotation the lantern makes 6 full faster rotations, speeding up the grinding work by the equation 42:7 = 6. (Leimona-Trempela,1974:324).

The cogwheel, the lantern and the axial supporting beam are made of rough wood, such as Agrilia (wild-olive tree) and adramytines (cold-resistance species), two local wild qualities of wood that do not perish of tensions or rot caused by worms. The rest of the wooden parts are made of pine tree trunks (Figure 4). The cogs and the poles of the lantern are coated with a mix of soap and water, to avoid friction, and provide the rotating millstones with an easy slip. The lantern and the upper millstone have the same vertical iron axis in order to rotate simultaneously. Both millstones (upper and lower) consist of many pieces fixed together, and tied by iron hoops. The pieces of the upper millstone (called 'panarea') usually originate from the island Milos and the pieces of the lower millstone (called 'katarea') usually originate from Fokaia in Asia Minor. The vertical connection between the axis and the millstones is made by a peculiar iron swallowtail-shaped component, which is called 'chelidona' (Leimona-Trempel, 1974:328).

At the bottom, the iron shaft ends in a wooden beam named 'nekros'. This beam is always placed under the floor of the millstones: on its one side it is hinged on the windmill's wall and on the other side is it hangs from the ceiling by a wooden traction beam. This suspension allows an alternating of the distance between the upper and lower millstone in order to get the desired size of produced flour, as well as to regulate the upper millstone's rotation to move faster or slower.

Particularly, the top of a 'xetrocharis' windmill in Rhodes is built of planks, cut vertically to create a parapet height of 0.60 m. This construction supports the rotating hoop in the direction of the wind. For stabilizing the sail to rotate at a desired speed, iron or wooden pegs are placed in specific recesses on the top's rotating axis. For the same purpose in Mykonos' windmills, a type of wooden brake is used, which clamps the cogwheel, and immobilizes it by using a system of pulleys.

In addition to grain milling, windmills have also been used to produce olive oil, an important product for the nutritional and energy needs of the islanders. Here, a distinctive, traditional kind of olive press named 'trapitos' (from Latin 'trapetum') is placed at the core. Scientific reports about the origins of such an oil press mill, combined with archaeological findings (in Chios, Knossos, Molyvos of Lesbos, and elsewhere), show a peculiar building morphology of a stone, cubistic structure. The building form of the olive presses is not the same as the cylindrical shape of the windmills, which produce flours. In particular, to the cylindrical room for the mechanical pressing of the olives are attached rooms of rectangular ground plan, without any big openings, for storing the raw material and the produced olive oil safely against the influence of the sun light.

In the oil presses' interior, a perpendicular wooden axis passes through the centre of two hemispherical millstones (orbes), which are placed inside the mortar (olmos), the pressing vessel, with their flat surfaces facing the roller (Figure 5). The effectiveness of the device is based on the proper placement of the hemispherical stones, which should be placed less than two centimetres (1 Roman inch) from the central cylinder and the walls of the mortar, in order to keep the olives' kernels intact. For the best resistance to the mechanical stresses, the islanders use specific local kinds of stone, such as trachyte,
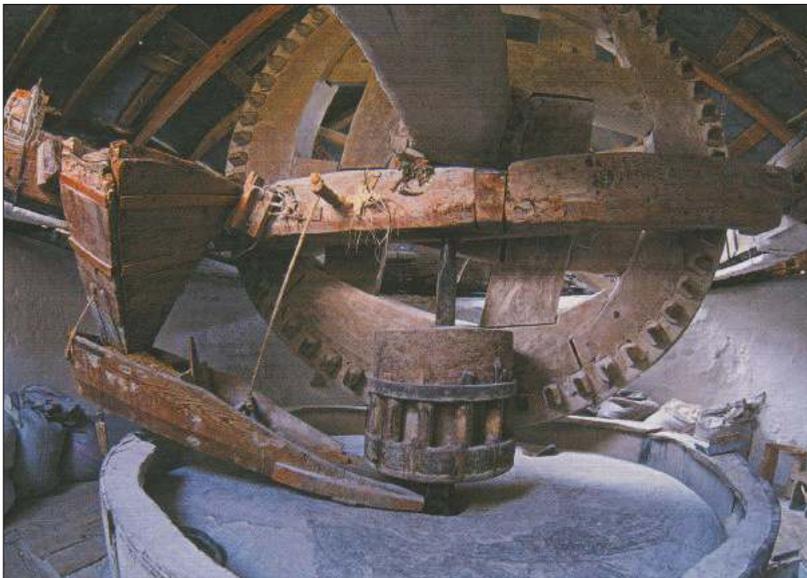
Figure 4. A windmill's cogwheel and cereal shovel on the island Kalymnos (author's pic. archive).

rhyolites, tefritis and andesite, which are quarried mainly on Milos, Santorini, Kos, Nisyros, Lesvos and Limnos *(Kouzelis, 2006:60-64)*.

The energy needs for lighting and heating the islanders' homes and buildings formed atypical equipment for exploitation of the on-site-located resources. From the rigid marble lights to the cave houses of Santorini Island, autonomy in energy power has been the main principle for developing self-sufficiency. For instance, lighting storm lamps by burning pigeon tallow initiated ideas that correlated factors of primary production with energy, and a similar case is the breeding of bees in sufficient quantity for each year's production of honeycombs to make candles. Thus, the vernacular residence of the islanders constitutes a constant pattern of development of methods for household economy, giving priority to the natural environment's resource usability.

A similar vernacular pattern is the construction of a peculiar architectural form on the peripheries of the settlements, the dovecotes, widely known for their aesthetic significance. The dovecotes were first built in an era of a burgeoning feudal system in the Cyclades, and centred on Tinos. The production and consumption of pigeons was necessary for the survival of the islanders in difficult trading times. The pigeon fat covered a part of nutrition and lubrication needs, and their dung enriched cereal and plant cultivation in the small fields of the islands. Dovecotes were also rented several times during the period of field care. Studying a sample of Tinos' dovecotes, 82% are located outside the villages, and only 18% are built inside the villages. The construction of dovecotes simulated the morphology of small castles, which drew several elements from decorative, medieval, Venetian architecture (Figure 6). According to the law "Droit du Colombier", the possession of a dovecote was not a prerogative of landlords, but of all the residents who had rural property. For this reason, beyond the purely utilitarian value, the dovecotes symbolized a social value. The possession of one conferred social status, replacing or supplementing other belongings. It is a fact that the dovecotes' detailed and elaborate structures created an architectural peculiarity, elements of which also became incorporated in other buildings of the islanders' settlements (Goulandris & Charitonides, 1977:28).

The dovecotes are built having a good 'screen' as their builders used to say, suggesting places sheltered from the wind, with an open space in the front so that pigeons can fly free above the hillsides and over the sloping fields, and placed near water. As a result, the complexes of the dovecotes are spread

along rivulets, with the front side facing them. The valleys of Agapi, Potami-as, Livadias and Kardianis on the island of Tinos, continue even today to be a living outdoor museum of Greek vernacular architecture, evolved exclusively as an artistic symbol of sustainability conceptualization. Apart from their common architectural elements, many variations and changes have been created in their internal layout and external morphology. Resultantly, design diversity has been the primary and general characteristic of the dovecotes, as is the case with all other building structures, a fact substantiated by travel reports on the archipelago, which state that *"from thousands of dovecotes in the islands, no one is similar to another".* (De Choisel-Gouffier)

CONCLUSION

Compensation as a planning and design principle is understood in the historical context of a cultural environment. In this case, compensation is expressed as an exchange of ideas and actions in order to overcome shortcomings in the environment. It is a "bottom up" strategy for learning. By investigating the Greek Archipelago's vernacular architecture, we can recover much accumulated wisdom. Studying its building and design methods in relation to compensation will give us better practical knowledge of solving design
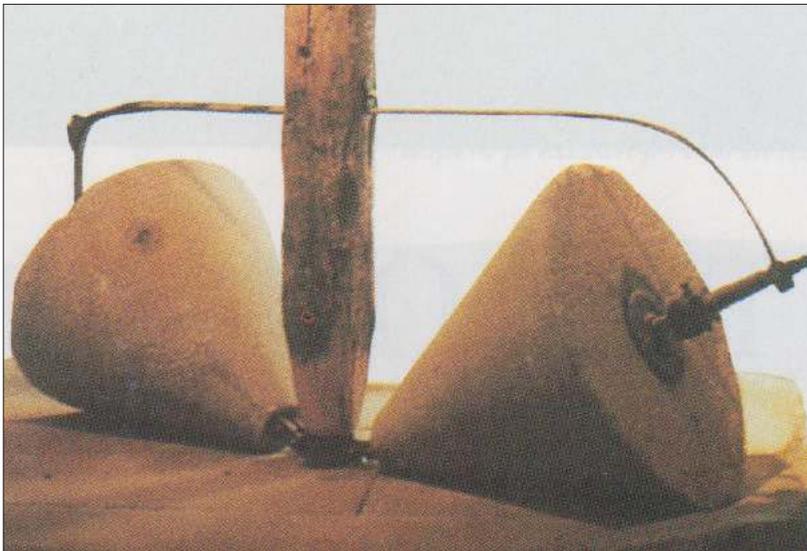

Figure 5. A traditional oil press. Source: 'O politismos tis elias' Attiko Metro Journal.

problems. Many notions about the vernacular have been associated with resource rarity, poverty, underdevelopment and the past; it is not viewed as a work of architecture that is well adjusted to its local surroundings, cultures and economies, but rather as amateur work. This has led to the replacement and abandonment of many unique vernacular prototypes for the sake of modern bizarre architectural applications. Cultural compensation is a concept that offers a new kind of understanding of cultural heritage.

The traditional forms of housing and production in the Aegean have developed a specific encoding character for the purposes of bioclimatic and ecological sustainability, developed according to the maritime economy and the remoteness of the islands, and can serve as a model for other insular cultures, as compensation for the overcoming of shortcomings. Lack of resources seems to trigger a development of 'compensation thinking'. From this point of view, local mitigation is a tradition born out of need. It is a type of cultural heritage compensation that can be seen operating in many different societies. Compensation as a planning and design principle bridges the gap between the local and global level.

Figure 6. Dovecotes in Tinos hinterland (author's pic. archive).

The emergence of a specific character of tools, mechanisms and systems of autonomous energy, and services for basic subsistence needs, require a systematic historical and scientific exploitation of the known achievements of culture of the Greek Archipelago. This requires emphasizing the enduring consistency and standardization of their morphology in order to permit the implementation of new and improved applications for the benefit of respecting the aesthetic richness and sustainability of physical facilities, architecture and artefacts created by the experience and spirit of the people of the sea over the course of centuries.

However, it is also beneficial to compare cases of empirical island sustainability with those of modern times based on scientific research and studies. The reason is that the islands of the Greek Archipelago have not developed contemporary, advanced technologies to enhance and maintain their viability. Of particular comparative interest are the islands of the Baltic and North Sea where scientific studies on sustainability already apply low tech and renewable sources such as solar heating, photovoltaic conversion, thermodynamic heating, wind energy, biogas, co-generation and rain-water recovery (Gautin-Müller, 2002:37*).

Reading for instance the 2014 Agenda for Sustainable Development of the Island of Åland, we find that it aims to achieve a radical overhaul of the architectural landscape of existing settlements through the implementation of measures based on four priority principles. These principles are decided by local societies according to the perception that 'in a sustainable society, nature is not subjected to systematically increasing: first, concentrations of substances extracted from the earth's crust; second, concentrations of substances produced by society; third, degradation by physical means (over-exploitation of natural resources); and lastly, people are not subject to structures that systematically undermine their capacity to meet their needs' (Development and Sustainability Agenda for Åland, 20014:5,13).

In the light of these principles, the most interesting is the latter as it is related to the needs of the island's inhabitants, which constitute a crucial criterion for the use of local renewable sources and the conditions of energy and food production within the framework of the existing residential structure. For the purpose of architectural and design clarity, contemporary, advanced low- technologies do not fit unconditionally to the buildings' vernacular origin and character. It matters whether a building appliance interacts with

the natural resources more than with the human needs. Such design practice favours only a building's situation in situ, as for instance, southern exposure to encourage passive/solar heating, or evergreens planted to the north of it for protection from winter winds, to improve energy efficiency. Moreover, solar, wind, water and geothermal energy facilities are usually far from the visual register of the residential units. Perhaps this practiced form of sustainability is also inspired by approaches in other similar areas, as for instance, the Danish islands of the Funen Archipelago. Both in Samsø and Ærø, the islanders' settlements are connected with onshore wind turbines and energy appliances (biomass boilers, solar collectors and heat pumps) that alter the islands vernacular architecture and landscape. (Clark, 2010:265-266).

Vernacular architecture as scientific knowledge provides a great range of morphological and building approaches that facilitate long-lasting comfort and well-being in a constituent sustainable environment. As is already known, more than 70% of a person's lifespan is spent indoors; in northern Europe's islands, this can be much more than in the Greek Archipelago. An essential architectural resource is sustaining indoor well-being and physiological comfort in conjunction with self-sufficiency of local energy sources and livelihood production. Therefore, using vernacular architecture's resources in situ can reach a more integrating conceptual framework for sustainability, thereby helping architects and designers to seek pragmatic solutions rather than giving a set of solutions in the framework of calculated macro-economic perspectives and low technologies. (Jong-Jin & Rigdon, 1998:15).

In any case, the diverse simplicity of vernacular architecture and its innovative design methods can contribute to a culture-oriented paradigm of compensatory sustainability projects. To be clear, the Greek Archipelago's typological characteristics can be successfully used by innovative sustainability project approaches, as a basis for the adaptation of construction to the environment and to the place, through empirical and generational experience and learning. This principle of compensation by design is essential for taking advantage of the environment's possibilities and an optimal economy of the available local human and material resources.

Therefore, executive compensation programs focusing on the concept that properly designed sustainability plans can reward significant investment in the most recent financial crisis, as well as contribute to operational impacts on the islanders' societies, are eligible in an aggregate sustainable corporate

development (Glass Lewis, 2016:5*). Design is used in order to compensate. For instance, The Smart Islands Initiative (operated by DAFNI in Greece) conveys the significant potential of islands to function as laboratories for technological, social, environmental, economic and political innovation, offering higher quality of life to local communities and helping their inhabitants to get a sustainable and inclusive economy (Diktyo Aeiforon Nison Aigaiou, 2017:1-2*).

Vernacular architecture on the islands of the Greek Archipelago provides sustainable affordances with a holistic approach beyond physical restraints to encompass a community based lifestyle. This means that the islanders in principle choose affordable and well-protected places near areas of economic interest (trade, farming, fisheries and livelihood production). They organize their buildings within the immediate proximity of their households, creating small beneficial open spaces for joint activities such as social gatherings, playing, washing and drying. In the same way joined in the visible field of the settlement, are buildings that have a clear economic significance for the viability of the inhabitants (windmills, fishing boatyards, dovecotes and warehouses). From this overall organization, a homogeneous architectural complex emerges where, on the one hand, all buildings are built with a common structural technique, and on the other hand, with a parameterized stereometry that essentially distinguishes them as singularities within a solid uniform whole.

However, it should be noted that sustainable design principles alone do not set a proper future for the islanders of the Greek Archipelago (Figure 7). They demand an ongoing analysis and synthesis of actual socioeconomic and environmental parameters, with specific criteria that are set alongside welfare requirements. These requirements are related primarily to dwelling coherence, food crops from sea and land, solar, wind and sea-wave energy production, waste management, biodiversity and building construction principles that take care of vernacular tradition, sun-light and heating, indoor and outdoor ventilation, and insulation and waterproofing as crucial factors of sustainable well-being and prosperity, with full respect to the natural environment resources (Figure 8).
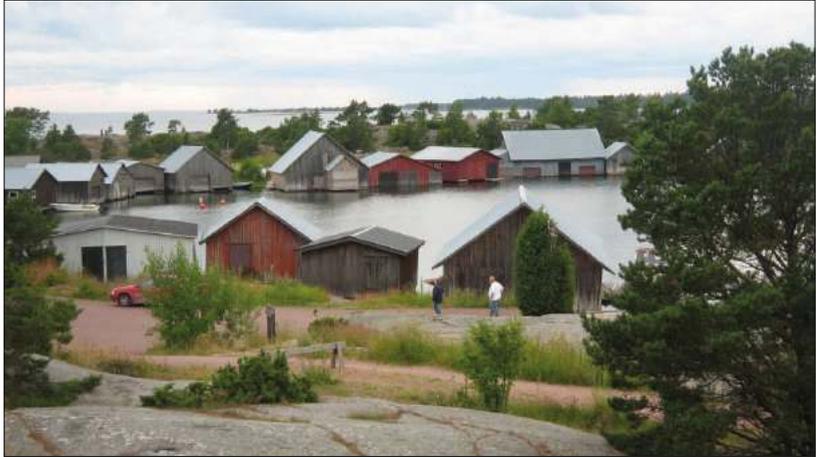
Figure 7. Fishermen's houses in the island Milos. Source: shelleytravel.wordpress.com.

Figure 8. Fishing huts in Käringsund Åland Eckerö. Source: mapio.net jtp67.

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CULTURAL ENVIRONMENTS – A SOCIAL MATTER

Mathilde Kirkegaard

ABSTRACT

The paper will originate from the perspective that cultural environments contain both physical and social understandings, and that it shall not be conserved, but rather reinterpreted. The text will focus on developments of cultural environments that are anchored to, and integrated with the local community, and address the missing link between the intrinsic potentials of the cultural environments and the compensation of cultural environments.

Different cases will exemplify the process of cultural environments becoming a central part of their respective local communities. These cases express how the historic traces contribute to a new narrative for the local community and the development strategy. They underline the link between the life that has been lived in the historical frameworks of the cultural environment, and a development where "life" is in the centre of the development scheme.

The social context is being undermined in many governing heritage management situations. The strategic development of cultural environments can be tied to the local community and thus generate a symbiosis which secures the development of the cultural environment and enhances the identity and site-specific value of the local environment. The compensation of cultural heritage is considered in relation to a continually changeable heritage environment - when perceived to contain a social layer. This social view on compensation is rooted in the attempt to ensure that cultural heritage, besides securing the national historical interest, has a value for people today.

INTRODUCTION

Cultural heritage is described by the Cultural Ministry in Denmark as something in the context of "ours" and "us". The ministry underlines the common value of cultural heritage in the following introductory statement on their webpage:

> *Through time, Denmark has built collections that have given us the opportunity to relate to our past in order for us to relate and understand our present and the world around us. […] A large part of the Danish cultural heritage is located in the country's museums, archives and libraries. However, the preservation of the country's ancient monuments and buildings is also comprised by the effort of protecting our common cultural heritage.* (Kulturministeriet 2019)

UNESCO has expanded their notion of cultural heritage with an immaterial list of 508 cultural heritage subjects of an intangible nature (UNESCO list 2019). The material list of UNESCO is comprised of 1092 subjects (UNESCO list 2019) and to these there are clear guidelines for the preservation and development of heritage. The immaterial list is in its nature of definition not connected to something tangible, but there are exceptions. One of the exceptions is the Chinese traditional architectural craftsmanship for timber-framed structures, which in its essence is connected to the physical wooden structure, but since it is the craftsmanship that comprises the (UNESCO defined) heritage, it is registered on the intangible list.

The example of traditional Chinese architectural building methods articulates one of the current imbalances when defining cultural heritage, and thus the fundament for preservation or development. Cultural heritage is comprised of both the physical elements and an intangible value of certain use, act or work, or the intangible value that the physical heritage is given by the people.

On UNESCO's material list, there are different types of subjects and some of them can be described and categorised as cultural environments: as a collection of buildings or/and landscapes connected by the same historical narrative. A few of the areas have been labelled "in danger", but almost all the sites have a description of elements that pose threats to the preservation of the heritage. One of the sites that could be categorized as a cultural environment is Antigua Guatemala, which in 2017 had the following threats: "*Commercial*

development, housing, and impacts of tourism, visitor and recreation" (UNES-CO Antigua Guatemala 2018, see Figure 1).

How can cultural environments be a part of the development of society, include the life lived in it, in a manner that does not pose a threat towards the self-same environment?

The text will shed light on the social aspect of cultural environments, and its inseparable relation, as a point of departure for the discussion about compensation measures in cultural heritage. Cultural environments will be explored as a type of heritage that is in-between the immaterial list and material list, as something that contains a social layer. This orientation will be elaborated with case examples focusing on development schemes. "Democratic" development of cultural environments will be discussed as a possible approach to the management of cultural environments and as a way to compensate loss when altering or developing cultural environments. Compensation of cultural heritage is also considered in relation to a continually changeable heritage environment - when perceived to contain a social layer. This perspective on compensation is rooted in the attempt to ensure that cultural heritage,

Figure 1. Antigua Guatemala, Guatemala, credit: Murray Foubister, Original title IMG_3059.jpg, source: https://www.flickr.com/photos/mfoubister/6849911252/

besides securing the national historical interest, has a value for people today. Integration of the social layer in the management of cultural heritage is thus a way to compensate for material loss, but when cultural environments are perceived in a less materially orientated manner, the matter of compensation becomes evident. Because, for whom does heritage have value?

THE CONCEPT OF CULTURAL ENVIRONMENTS

The Danish research group from Aarhus School of Architecture called Screening af Kulturmiljøer (SAK) has for the past years screened 2000+ Danish cultural environments in collaboration with the respective municipalities (Figure 2). The screened cultural environments are outlined and mapped by means of a description condensed to the following: a built area that cohesively tells the narrative of the site.

The Danish cultural ministry describes cultural environments as follows:

> *It is not only the singular cultural heritage element that needs to be protected. Often the surroundings are just as important and thus should be preserved as valuable cultural environments. All these traces from human activities through time tell a narrative of the development of the past society* (Translate: Kulturministeriet 2019).
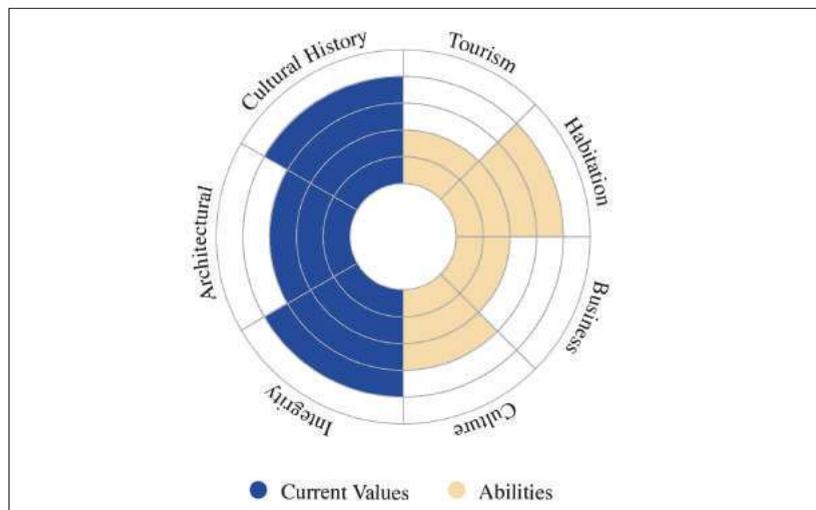

Figure 2. The SAK evaluation diagram. Source: SAK, Aarhus School of Architecture.

The cultural environments both comprise a value of preservation due to the historical traces, but they also comprise a local connection. Cultural environments need to be considered as part of a context of the surrounding buildings and the network of people living in and around it. Cultural environments cannot be conserved in a glass display cabinet in a museum; they are a part of the adaptable context of lived life. Cultural environments are a result of human acts and can be a part of the current acts of people.

The research group SAK rates the cultural environments in Denmark in collaboration with the respective municipality (Figure 3). The rating is made with a focus on the current state of the cultural environment: the architectural value, the historical value and the integrity (cohesiveness), but also the abilities of the cultural environment in the categories of: tourism, businesses, culture or habitation. These abilities, or potentials, of the cultural environments is linked to a development orientation with an offset in the intrinsic values of the cultural environments.

Many examples show the effect historical areas can have on the ability to attract tourism, new inhabitants or new businesses. In the previous example of Antigua Guatemala, UNESCO described these abilities (tourism, business and habitation) as possible threats against the cultural environment. The evaluation that (in a condensed description) are presented on UNESCO's webpage can be interpreted as conflicting with the social layer of heritage.

The value of cultural environments is an official matter, but also a matter of perception and thus it cannot be separated from the perceiver. A cultural environment is given a value by the people visiting, using and living at the
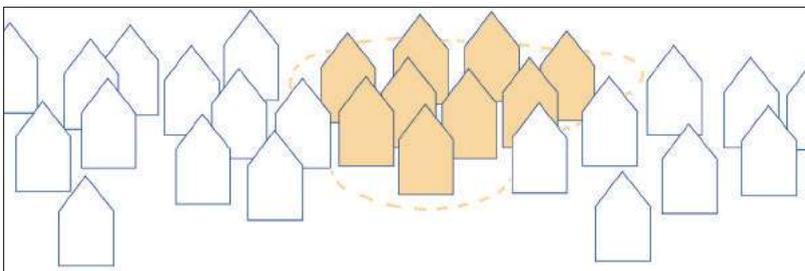

Figure 3. Concept drawing of a cultural environment and its context. Source: Mathilde Kirkegaard.

site. The value of the cultural environment can be found both at a personal level, but also in a collective understanding of the narrative of the site. The connection between the cultural heritage and the value given by the people is described in *Uses of Heritage* from 2006 by Laurajane Smith:

> *It is value and meaning that is the real subject of heritage preservation and management processes, and as such all heritage is 'intangible', whether these values or meanings are symbolized by a physical site, place, landscape or other physical representation, or are represented within the performances of languages, dance, oral histories or other forms of intangible heritage* (Smith 2006:56).

Laurajane Smith categorizes all heritage as intangible. In relation to the two lists of tangible and intangible heritage, made by UNESCO, the question of the balance between these two themes arises in the quote. Tangible and intangible are subjects that both consist of counterparts, but also subjects that are dependent on one another. In this paper, the meaning of tangible and intangible will move towards the notion of a physical part of the cultural environments and a social part of cultural environments.

Since cultural environments cannot be conserved in glass display cabinet, they need to be able to follow the development of society. Cultural environments can be perceived as a line, not as a fixed point in time, where the line represents the past use of the environment and invites for current and future use. Laurajane Smith describes in the following quote how the interaction between current use and the historical frames is evident:

> *There is an interlinked relationship between the activities that occur at places and the places themselves – but it is this tension between action and material representation that is an important element of heritage* (Smith 2006:83).

"CITY BRANDING"

Nordkraft is a former power plant located in the Danish city of Aalborg. It is an example of the balance between new use and historical frameworks. The former power plant is located at the harbour front and it has a prominent appearance in the cityscape, which categorizes the building as a landmark. Aalborg has been famous for its large industries, smoking chimneys and rough environment. Today, the city of Aalborg has been transformed into

a city of knowledge (connected to the growth of the university). The former power plant gave and still gives its context a sense of place and local identity. The transformation of Nordkraft has operated as a milestone for the changing city.

Architect and writer Anna Klingmann explores the interlink between city and branding in her essay *Heros with Flaws*, and she underlines the power of the built environment in the following quote:

> *Thinking about architecture as part of our economic environment brings us also to think about opinion shaping, power, identity, and experiencing the world. When seen in a socio-economic context, architecture is now no longer part of marketing our environment; it has become the essence of it* (Klingmann 2009:30).

The subtitle of this part of the paper is "city branding", which has become a well-known term among architects, and also somewhat rejected, due to its simplification of the added value buildings or areas can create. The word 'branding' is also associated with the consumer culture: e.g. the rapidly changing fashion industry. Branding can organize products so the consumer can differentiate the product from other products and identify it with that particular brand. "City branding" can, therefore, be viewed as a distancing approach from organic developments and inclusive development methods, but some of the aspects of city branding can work as inspiration to strategic methods in the striving for a collective, local identity.

Aalborg has, in its development from an industrial city to "knowledge city", attempted to preserve the industrial characteristics, which today is the main identifiable character of the city. Nordkraft has a visual link to its history, but through a new use it has been reinterpreted. The Danish architect Lars Juul Thiis describes in his essay *Tales of the Unexpected* how the industrial landscapes in general are important in relation to the identity of the area:

> *The conversion of industrial buildings for public purposes has been a major force in rejuvenation of the European city. These conversions represent not only the reuse of a physical, historical framework but also a new approach to the urban fabric as a defining factor for new neighbourhood and city identities* (Thiis 2010:55).

Lars Juul Thiis is the founder of Cubo, the architectural firm that transformed the industrial building Nordkraft. Along with the previous quote, Thiis exemplifies Nordkraft with the following: *"the stories and tales of this vast building complex […] informed and energized the design process"* (Thiis 2010:55). When the power plant Nordkraft closed, the immediate solution was to demolish the building. The reinterpretation, introducing a new program with new use, has generated a strong sense of identity. The architectural theoretician Christian Norberg-Schulz describes in *Genius Loci* from 1980 how a building must be understood in its physical, social and historical context.

> *To respect the genius loci does not mean to copy old models. It means to determine the identity of the place and to interpret it in ever new ways. Only then we may talk about a living tradition which makes change meaningful by relating it to a set of locally founded parameters* (Norberg-Schulz 1980:182).

He states that the genius loci – the spirit of the place – must be respected, and by doing so the identity of a place can be enhanced or reinterpreted in a transformation that relates to the local context. The research group SAK describes how: *"cultural environments contribute to the creation of a historical understanding and identity"* (Translate: Arkitektskolen Aarhus 2018:4). The physical environment can generate a general understanding and identity that is perceived collectively. It becomes a common understanding of the narrative of the site and a testimony of the historical DNA of the site – which is one of the strong intrinsic abilities of cultural environments.

PLACES VS. NON-PLACES

In the example of Nordkraft, it is apparent that the transformation has had an effect on the local identity. The historical references are relevant in relation to a collective sense of identity, which could be linked to city branding. In *Non-Places – An Introduction to Supermodernity* by the French anthropologist Marc Augé from 1992, places and non-places are described. The notion of 'place' becomes clear when non-places are described:

> *If a place can be defined as relational, historical and concerned with identity, then a space which cannot be defined as relational, or historical, or concerned with identity will be a non-place."* (Augé 2008:63).

Marc Augé describes non-places as places without any relational, historical and identity value. Augé furthermore underlines how non-places are places without any social interaction. The relational value is connected to the people relating to the place, and the historical value is given by the people perceiving the place. The matter of identity is likewise a value that is sensed by the people affected by the place. Cultural environments are places with layers acting as a testimony of the previous "life" at the site. The visual narrative of a cultural environment can become a common development direction, which Nordkraft in Aalborg exemplified. One of the intrinsic potentials of cultural environments lies within the social layer of the common narrative – the collective sense of identity.

Laurajane Smith describes in *Uses of Heritage* how the notion of identity in relation to cultural heritage is something that happens between people:

> *Identity is not simply something 'produced' or represented by heritage places or heritage moments, but something actively and continually recreated and negotiated as people, communities and institutions reinterpret, remember and reassess the meaning of the past in terms of the social, cultural and political needs of the present* (Smith 2006:83).

Identity is described as something that collectively is created in different social constellations, but also something that is in constant change and challenged by these changes. At the moment, the notion of identity is challenged by having a hollow sound in planning and design. It is considered something that can be captured in the built environment and as something that can be created in a culture. The notion of identity is in a divide between individual identification with the place and the collective understanding of the identity of the place. The definition of identity has to cover a very broad term, which makes the term less specific in development schemes. The description of non-places by Marc Augé emphasizes the importance of identity, the role it plays in the definition of a place and its specific nature, despite its broad sense.

HISTORY AND ATMOSPHERE

In the subject of identity, there is the notion of effect from the physical environment. 'Effect' refers to the impact created when people are affected by the physical environment, and it can be described in an individual and collective sense. Christian Norberg-Schulz is in *Genius Loci – Towards a Phenomenology of Architecture* merging the physical environment with its ability to affect people and he underlines the intangible ability of the physical environment:

What, then, do we mean with the word "place"? Obviously we mean some-thing more than abstract location. We mean a totality made up of concrete things having material substance, shape, texture and colour. Together these things determine an "environmental character", which is the essence of place. In general, a place is given as such a character or "atmosphere". A place is therefore a qualitative, "total" phenomenon, which we cannot reduce to any of its properties, such as spatial relationships, without losing its concrete nature out of sight (Norberg-Schulz 1980:7-8).

Norberg-Schulz emphasizes the identity of the place and individual percep-tion. The quote is concluded by a statement of the sensing being a qualitative phenomenon between subject and object. Maurice Merleau-Ponty described in 1945 in *Phenomenology of Perception* how an object cannot be separat-ed from the person that is doing the seeing (Merleau-Ponty 2012:334). The connection between the subject and object is crucial in phenomenology, and within the notion of affect, there is a phenomenological relation to the physical environment.

The effect of the built environment is also introduced by architect Juhani Pallasmaa and psychologist Ingrid Gehl. Ingrid Gehl describes in her book *Bo-miljø* how some of the needs people have in relation to the built envi-ronment are a psychological need for identification with the surroundings (Gehl 1971:18). Ingrid Gehl tries to map the different impacts the built envi-ronment has on the social constellations, both in the collective sense and the individual one, as a part of a collective. Gehl underlines the importance of the local community having an impact on their surroundings and that the surroundings are relatable for the people affected by them. The relatable characteristics are tactile structures, signs of use and warm colours. Juhani Pallasmaa describes in his book *The Eyes of the Skin – Architecture and the Senses* how the materiality and sign of use (expressed by the age of the building) influence the people affected by the built environment.

Natural materials express their age, as well as the story of their origins and their history of human use. All matter exists in the continuum of time; the patina of wear adds the enriching experience of time to the materials of construction (Pallasmaa 2012:34).

The historical signs in the built environment give an expression of time and age, which Pallasmaa expresses as an important factor for the modern person. Pallasmaa elaborates with the following quote:

> *We have a mental need to grasp that we are rooted in the continuity of time, and in the man-made world it is the task of architecture to facilitate this experience.* (Pallasmaa 2012:35).

The part of the built environment that represents history is according to Pallasmaa something attractive to the modern person. The sensing of time is in this case, like effect, something that happens in the interaction between the subject and the built environment. Cultural environments can express a narrative connected to the previous use and its age. Pallasmaa underlines the intrinsic ability of historical environments, which can have a value for people today. The connection between the people affected by the cultural environment and the matter of sustaining it can be used as a powerful tool in preservations schemes. The built environment can through its age and historical traces give an indirect "message". This indirect message becomes an effect of the historical buildings, which is sensed by the individual, but also experienced collectively. It can thus be used to empower the collective sense of place and local identity.

INDIVIDUAL RELATION AND COLLECTIVE IDENTITY

The text has touched upon different aspects of the cultural environment:

A) The sensing, which is experienced individually, but can be expressed as a general effect
B) An individual perception, connected to the individual relation
C) A collective understanding, that can generate a strong sense of identity

A. Sensing   B. Individual perception   C. Collective understanding
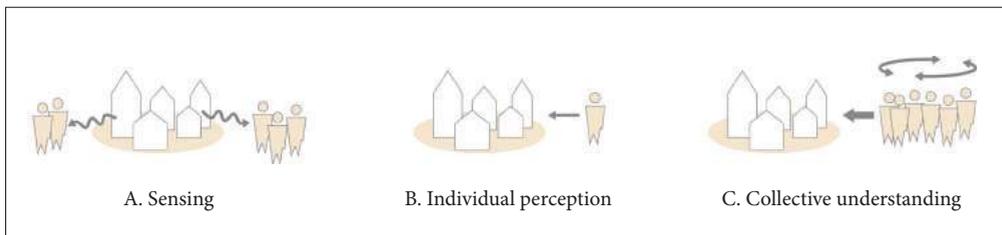
Figure 4. Concept drawing of a cultural environment in relation to senses, perception and collective understanding. Source: Mathilde Kirkegaard

In Figure 4, the diagram shows three types of intrinsic abilities of the cultural environment. The sensing: the effect that can emanate from the historical frames. The individual perception that recognises the personal gaze. The collective understanding that can be found in a cohesive understanding of the identity of the site. By outlining these, the people in and around the cultural environment become evident.

If the historical areas are in the category of "ours" and "us", affects individuals and have an impact on the community, it ought to be managed through "democratic" means. This orientation is not new in architectural planning and it refers to a top-down and bottom-up balance in decision-making. Among other methods, it can be endeavoured through designs of an inclusive nature. Catalyst design is a planning method that moves the process of decision-making into the public space. Through catalyst designs, or process-orientated designs, the community can gain an insight into the process, or be invited to participate in the process.

"DEMOCRATIC" PLANNING

Jesko Fezer describes in *Urban Catalyst – The Power of Temporary Use* how small designs can act like acupuncture that, with a small needle, give energy to an area beyond the small pin (Oswald et al 2013). When one is working with designs as a catalyst to activate an area, the main purposes is to explore the opportunities of the area and to change the perception of the area. It can activate the area, and inform and invite the local community to engage. As described previously, the research group SAK points towards a set of intrinsic abilities, or potentials, within the cultural environment: habitation, tourism, business or culture. This can be translated to potentials for "new life" in the cultural environment, which underlines the importance of integrating the local community and respective relevant parties in the interventions during a transformation.

The integration of the local community and relevant parties can vary from e.g. actual cooperation to casual interaction with the design (using it, watching it, touching it). The intervention will, as mentioned, strive to open dialogue and invite the local community and relevant parties to engage. After an intervention in the cultural environment, the following process would be influenced by the gained knowledge from the intervention and the relation with the social layer in the cultural environment. The following process could consist of a permanent design, development plans or a workshop regarding

development strategies. The intervention can work as a catalyst to activate the cultural environment and it has the purpose of exploring the development opportunities.

The narrative of the cultural environment can be, in development schemes, a strategic baseline, which also can underline the unique characters and identity of the cultural environment. One example is how the municipality of the Australian city Ballarat placed cultural heritage in the focal point of a large regeneration strategy. As mentioned above, the built environment can be understood to be something beyond the physical object and to contain a social layer - addressed as something that needs to be considered in the process of implementation or alteration.

Ballarat is an inland city in Australia with a population of around 100.000. The city was in 2003 registered as a member of the International League of Historical Cities and in 2006 it hosted the 10th World League of Historical Cities Congress. The tourism in Ballarat has not grown since the 1960s, it consists of around 15% of the economy of Ballarat, and it employs 2870 people. In December 2017, the City of Ballarat presented a plan to sustain the heritage of Ballarat. One of the main subjects of the plan was to gain an insight into the citizens' attitude towards the different cultural heritage areas and elements. Two of the four aims stated the following:

> *- Liveability: Making sure local people are central to our work in delivering the heritage plan. […] – Accountability: Continuing to meet and expand on our legislated responsibilities and making transparent decisions to meet our community's expectations* (City of Ballarat 2017:1).

The City of Ballarat describes the reasoning behind the heritage plan with the following:

> *Heritage is of critical importance to the Ballarat community and our city's future. In whole-of-city consultations, the people of Ballarat said that of all the things they value about Ballarat, they love its heritage the most and want to retain it* (City of Ballarat 2017:2).

The plan seeks to share the responsibility of the heritage and introduce a participatory planning approach that gives local people and stakeholders a central role. The participatory approach has been established by the Council's

Historic Urban Landscape (HUL), which is a pilot program by UNESCO. HUL has been working holistically to align conservation with social goals. The participatory planning invites the local community to contribute to the different stages of the planning process from the initiating phases to the final decisions. The participatory method empowers the local community and puts them at the centre of planning – and in this case at the centre of the heritage plan. The plan is supposed to run from 2017-2030, and is in this paper exemplified as a top-down planning attempt to include the local community. The plan strives to cover aboriginal cultural heritage, archaeology, geomorphology, built/created landscapes, living intangible elements (traditions, stories, historical events, skills, etc.) and material culture (objects, images, etc.). Thus, it strives to include a large spectre of the local community.

With this strategy, Ballarat attempts to open up the planning and management of their heritage. The project is still very new, but the method and the intention to include the public voices in the process acknowledges that the cultural environments are "ours" and therefore also should be treated more "democratically". Public workshops and online forums have been some of the methods to include the local community of Ballarat in the process, but also a method for the government of Ballarat to gain an insight into the perception of the heritage through the eyes of the local community.

The means of inclusion and underlining the site-specific identity are in the case of Ballarat managed through physical/visual interventions and through ordinary information methods on news platforms (e.g.: public events, workshops, built improvements of the heritage and via textual descriptions). The combination of the two different methods targets a larger group of the local community compared to strictly using written communication on news platforms.

The heritage in Ballarat is claimed to be an important factor in the attractiveness of its habitation and of great importance for the people in the city. The invitation to participate in the heritage management is an invitation to influence the process, but also an invitation to be educated and informed about the heritage. The knowledge generates a deeper insight into the heritage, but it also generates a more collective perception. The city of Ballarat is allowing individual voices to be heard, while creating a common narrative for the city. The common understanding of the narrative creates an opportunity for the citizen, businesses, municipality and government to streamline the effort and enhance the site-specific narrative.

In Ebeltoft, a small coastal city in Denmark, an old malt factory had been left to decay (Figure 5). The factory is located in the heart of the city. It has high towers, working as a landmark, and the contrasting appearance along with its powerful red colour makes the building unique in the cityscape.

By an intense effort, citizens raised the economic means to renovate the building and hereafter the municipality joined the project and contributed financially. The old malt factory is not yet open, but it has become a landmark for the city and attracts a new type of citizen: young entrepreneurs. The industrial building connects the city of Ebeltoft with its past and it expresses a new narrative of the city of Ebeltoft. Its visual appearance expresses the industrial part of the history of Ebeltoft that was hidden and forgotten. The landmark has become a symbol of the engagement, commitment and collective effort.

The approach, in the case of the malt factory in Ebeltoft, is in its order opposite to the development of the heritage in Ballarat. In Ballarat, the government and official institutions initiated the enhancement of the historical narrative of the city that, as part of the process, includes the citizen. In Ebeltoft, the initiative of the citizens made a development plan for the histor-

Figure 5. Malt Factory, Ebeltoft, Denmark (under reconstruction). Photo: Mathilde Kirkegaard.

ical building where after a collaboration was established with the municipality. In both cases, the heritage management was balancing bottom-up and top-down. Bottom-up meaning the engagement or initiative of the citizens and top-down meaning the official management of the heritage.

A balance between bottom-up and top-down in the development process of a cultural environment, in relation to compensation measures, can be understood to generate a socially sustainable solution. The ownership and engagement that can be created among the local community, along with the use that ultimately can gain an economic benefit, can delegate the maintenance and preservation. A collective effort, due to the collective understanding of the site-specific history, can compensate for the alterations often needed in developments.

THE ARBITRARY ECONOMICAL PERSPECTIVE

Menon, a Norwegian firm working with environment and resource economy in Norway, explains in the report *Verdien av Kulturarv* the economic effects of cultural environments and historical buildings. They state the following:

> *We find the same positive willingness to live in a cultural environment as to live nearby a cultural environment […]. Furthermore, the study shows that the preservation of worthy buildings contributes to increased wealth in the local community in the shape of increased labour and tourism. This shows that historical elements and cultural environments contribute with worth for society* (Translate: Menon Economics 2017:69).

The quote explains their findings, which in the report are explained through a percentage increase in estate values, labour and tourism. The report underlines an economic benefit for the people living or working in and around a cultural environment. The end of the quote states that cultural environments, in general, have a value for society, and that the effect is not isolated to the specific site. The investigations from Menon also exemplify that the economic value is attached to the "*use of the cultural environment*" (Menon Economics 2017:47). There is an increase in the economic benefits from an active cultural environment, compared to a cultural environment acting as a backdrop.

MANAGEMENT OF DANISH CULTURAL ENVIRONMENTS

In Denmark, there is no official preservation law for cultural environments. The buildings within the cultural environment can have an official

degree of preservation value, but in many cases, the buildings cannot be granted that status because they are historically relevant in relation to the context of the cultural environment. It is the collective of buildings and its landscape that conveys a strong narrative, which ultimately categorizes it as a cultural environment.

The municipalities can make preservation plans for an area, but this is very costly, and the government can only grant the landscape or the individual building with an official preservation status. A cultural environment can contain a few buildings having an official preservation status, but otherwise, it is without a collective preservation plan. This can both generate a possibility to be freer in the alteration of cultural environments, but it can also result in cultural environments being destroyed by development.

When broadening the definition of cultural environments to be more than the physical frameworks, the management of cultural environments cannot be confined to physical preservation methods. The management methods are often not inclusive of the life that is lived in the cultural environment or can be unfolded within it. If historical buildings and areas are recognized to be "ours", they should be treated "democratically" and generate value for people today. Management becomes a social matter.

COMPENSATION AND THE SOCIAL MATTER

Antigua Guatemala exemplified, as a cultural environment, how the use can be considered a threat to the preservation of the cultural environment. Contradictorily, the same types of use (tourism, habitation and business) are considered a development ability by the research group SAK and the report by Menon underlines that an active cultural environment (an environment in use) gains economic benefits in and around the cultural environment.

"The use of cultural environment" is a vital part of cultural environments when understanding it to contain a social layer and being of a social matter. It is interlinked with the perspective that cultural environments should have a value for the people today and tag into its present context. In other words, the cultural environment should include a contemporary substance. In this context, compensation is closely connected to everyday life. "The use", or an active cultural environment, generates an experience for the people that are affected by the place. Compensation measures, within this social orientation, can thus be generated both in the management and in the transformation process.

As mentioned, a cultural environment consists of an area, not a single object, and it is entwined in its context of physical structures and social networks. The social network comprises the people present in and around the cultural environment, consisting of tourists, inhabitants or labourers. Previously, phenomenological theory was mentioned in relation to individual perception. If the notion of social networks and individual perception are combined, then the matter of "who" becomes evident, because, as mentioned earlier, who gives the cultural environment its value?

Ditt Kulturarv Ä Inte Mitt is the title of Orvar Löfgrens paper from 2003 (Carlberg et al 2003), which means: "your cultural heritage is not my cultural heritage". He seeks to underline that there is an individual perception of historical elements. Such a statement underlines the span of cultural heritage, thus it can be perceived as a collective identity, but also as something that can differ from person to person.

The compensation becomes a matter of collective utility, but it is also rooted in a recognition of the individual perception. When compensating loss of cultural heritage, the "product" of the loss can be of a tangible nature, but it can also be of an intangible nature, or both. Likewise, the gain, added value, or the preservation can be of a tangible and/or intangible nature.

CULTURAL ENVIRONMENTS IN DEVELOPMENT SCHEMES
The malt factory was (and is) a large contrasting building in the cityscape of Ebeltoft. Due to its visible historical narrative, the building has a profound impact on the citizens. The bottom-up initiative was rooted in the individual relation to the building. Some citizens reminisced about their own time as an employee at the factory or family members who worked there. The newer citizens and young people found the ability for creative and innovative expression in the raw industrial and attractive structures.

A collective perspective of the building was generated after the effort of fundraising and communicating the project. The narrative of the building streamlined the effort of the citizens and the municipality. In this case the social network in and around the cultural environment was an indispensable asset. The malt factory has become a flagship for Ebeltoft and an important part of the historical DNA of the city.

Cultural environments can be understood as a line: with traces of previous use, abilities for present use and adaptable for future use. The restoration of the malt factory allowed the history of decay to be present. The building has not been polished, but made habitable for new use in a framework that represents its history and the two different phases of its lifespan: factory and decay.

Fred Scott describes in *On Altering Architecture* from 2008 how heritage can be considered as a line. In this relation, he stresses how cultural heritage influences the collective experience in relation to the local identity and belonging:

> *The past is not abstract; it has material reality as heritage, which in turn has material consequences for community identity and belonging* (Scott 2008:29).

As mentioned, cultural environments can generate a collective identity and a united understanding of the site-specific history. As a part of the collective understanding lies an individual perception, which also shapes the attachment to the cultural environment. These individual attachments and the ability to generate a united identity are part of the intrinsic abilities of the cultural environment. These intrinsic abilities can be used strategically in development schemes both to develop the cultural environment and its context.

THE NARRATIVE IN DEVELOPMENTS

As mentioned previously Jesko Fezer describes how design means can be communicative and inclusive of the local community. Marielyst is a small holiday town in Denmark, which has hosted Danish tourists in the summer months at the seaside hotels since the 1930s. In recent years, the identity of the small town has become unclear and the town suffered from a decrease in tourism and habitation.

In 2014, a new design for the town square was established with support from a large Danish fund Realdania. The design consisted of a large wooden terrace connecting and framing the buildings, leading towards the beach and pulling the seaside into the town square. The design managed to underline the historical identity of the city.

In a podcast by Realdania, the local shop and hotel owners in Marielyst describe how the new design has had a collective effect on the individual effort to maintain the different businesses' visual appearance (Realdania

2019). The shop owners explain how they are united in the effort of connecting to the same visual language. This new visual language is connected to the history of the seaside town. It has generated a collective effort to underline the narrative of the site. The enhanced identity by the new design, has caused an increase in tourism and a longer season of tourism. The large wooden terrace has worked as a reminder for the locals of their town's historical identity as a seaside holiday town.

COMPENSATION IN CULTURAL ENVIRONMENTS

Design can be used in cultural environments to underline the narrative of the site. When the narrative is enhanced, it can communicate the site-specific history to the local community. The development can be streamlined so that the municipality, businesses and local community maintain the cultural environment under the unison of the common narrative. The narrative is a counterpart to the collective identity.

In Figure 6, the diagram shows a cultural environment where the "life" is posing a threat, like the example of Antigua Guatemala. Two arrows point towards a second state of the cultural environment where the "life" has become a part of the development process and has gained knowledge about the cultural environment. In this example, the "life" in the cultural environment is a part of the preservation management. A synergy between the use of the cultural environment and the knowledge about the cultural environment can generate a sustainable preservation solution, as the malt factory in Ebeltoft and the seaside town of Marielyst exemplified (and maybe the city of Ballarat will exemplify in the future).
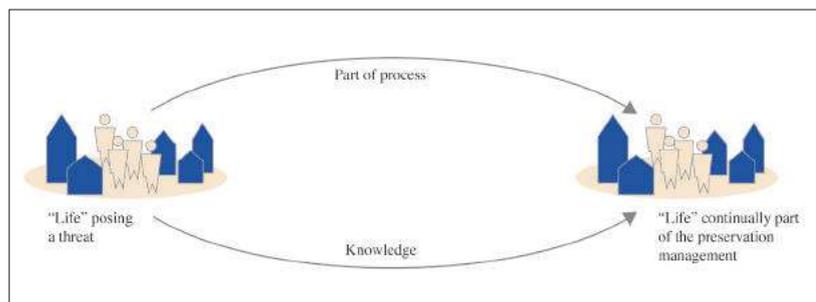

Figure 6. Diagram of "life" as informal preservation management. Source: Mathilde Kirkegaard.

The individual relation to the cultural environment can increase the interest in the development, and the collective understanding can streamline the efforts. When recognising the social layer in cultural environments, management needs to do the same. Compensating measures in relation to heritage can have many outcomes, and many case examples exemplify the physical compromises. When understanding heritage to contain social layers, the initial phase has to consider for whom the development is, and who is affected by the development? Hereafter the "product" of the compensation can be defined. Accordingly, the way in which people interact with the place and the value of the place, both individually and collectively, needs to be considered.

When compensating in heritage sites, e.g. cultural environments, the compensation has to be present in the process of alterations as part of the negotiations. An inclusive and informative process can in turn generate a streamlined development effort and a collective identity. A streamlined development effort can generate a continually evolving environment, but in a direction that builds upon the site-specific history. Likewise, the inclusion and knowledge without obligation can encourage a voluntary management effort.

A collective identity can be a "product" of the compensation – one of the aims in the negotiation process. The "product" of compensation measures are consequently not understood to be a physical added value. The compensation measures need to be a part of the process, to secure a local inclusion, and this can generate a compensation "product": a strengthened collective identity tied to the specific site. The social view on compensation is rooted in the attempt to ensure that cultural heritage, besides securing the national historical interest, has a value for people today.

LIVELY CULTURAL ENVIRONMENTS

Fred Scott underlines that when altering a historical building, there are both cultural, physical and special factors to be considered (Scott 2008:144). Scott describes historical buildings as "host" to a certain use, and to avoid demolishing or decay the building must host a new use or new life. This orientation is linked to compensation as a social matter, which, when incorporated into the alteration, can generate a sustainable preservation solution by the inclusion of the social network of the cultural environment. In the quote below, Scott underlines the link between the integration of new use and the historical frames:

Change of use almost always requires spatial and physical changes. […] most alteration occurs as a result of changes of use; this is the source of the new life of the building. The new use is one usually derived from expediency, from needs that may be outside of formal different and more complex in re-use than in pure architecture. This disjuncture has its value" (Scott 2008:171).

The disjuncture between historical, physical frameworks and the social layer has value, and this value has been described in this text as a value to the individual and the collective understanding. The social layer can present a threat towards the cultural environment, but it can also be considered of great value to the continued preservation of the cultural environment. "Life" in cultural environments is equivalent to developing and continuing the life of the cultural environment.

The "life"-line of the cultural environment continues and is redefined, generating value in the present through the people in and around the site. The "life" can be a safeguard to the preservation, but the measures of preservation needs to be articulated on different levels: from citizen to preservation experts. The management balance of bottom-up and top-down, often used in urban developments, can be a relevant method in the matter of compensating for loss. This perspective on compensation outlines a compensation strategy, but the balance of bottom-up and top-down also generates a compensation "product": a value for people today.

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DEFINING NEW VALUES FOR CAVEMEN AND FINDING THE HUMAN IN HERITAGE.

Tom Davies

ABSTRACT

The goals of mitigation/compensation of impact from development have changed considerably in recent decades, during which their delivery has become an integral part of our respective planning systems. From the Post-Processual 'dressing up as a caveman and experiencing heritage as our ancestors once saw it' days of the 1990s, we have been able to move from a materials-based appreciation to one that enshrines itself in notions of heritage value. These values are not restricted to material recovery and conservation, but instead might be safeguarded by digital means, preservation by record or intangible heritage vernacular accounts. These are typically couched in terms of social-capital and wider benefit to regeneration, identity and community building; recognising the role heritage plays for society.

This essay looks at that shift and considers the nature of 'heritage values' and how they might be developed further. Working from today's approach to mitigation it takes art-critic Walter Benjamin's assertion that we should bridge the gap between 'actor' (heritage and practitioner) and 'audience' (community/society) by 'filling in…the orchestra-pit' (Coles 1999:28). Exploring ideas such as making heritage 'manifest', Foucault's heterotopias and Lefebvre's distinctions of the 'ordinary' and 'other', it considers how we might anchor these heritage values in our everyday and work towards a heritage narrative which represents both place and the community that hold those heritage values (Foucault 1967, Lefebvre 1987, Diaz 2005 & Gonzalez-Ruibal 2008). It concludes with three-steps for achieving such a heritage narrative.

KEY WORDS
Heritage, human-agenda, compensation, planning tools, materials and values, continuity, displacement and borrowing

TELLING STORIES – NARRATIVES OF HERITAGE

The goals of *compensation* or *mitigation* (as it is referred to in the UK) of impact from development have changed considerably over recent decades, during which they have developed into an integral part of our respective planning systems. From the Post-Processual 'dressing up as a caveman and experiencing heritage as our ancestors once saw it' days of the 1990s, we have been able to move from a materials-based appreciation of heritage to one that enshrines itself in notions of heritage value. These values are not restricted to material recovery and conservation, but instead might be safe-guarded by digital means, preservation by record or intangible vernacular accounts through stories and process. This is typically couched in terms of social-capital and the wider benefit it can contribute to regeneration, identity and community building. This essay explores a revised approach, which can be explained by Walter Benjamin's theatre analogy that *"epic theatre induces the melting down of the boundary between actor and audience with the filling in of the orchestra-pit"* (Coles 1999: 28). This is applicable to heritage in the opportunity provided by excavation, documentation and exhibitions etc. to connect to communities and public through a more comprehensive approach to heritage narratives. This is explored through the changing relationship between heritage and practitioner and community/society (as actors and audience) as a basis for reconnecting. (Figure 1)
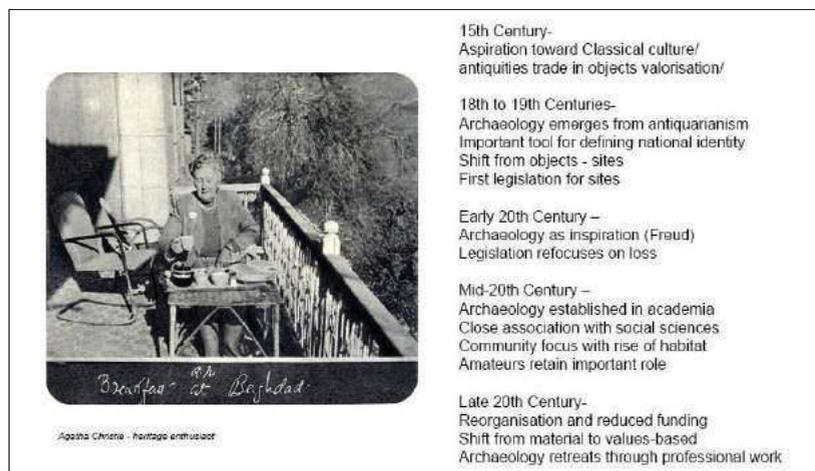

Figure 1. Agatha Christie and archaeology timeline (https://www.pinterest.com/pin/407083253798694175/)

The essay opens with the origins of heritage mitigation in the 19th Century and how it responded to loss and a need to conserve our collective past in a rapidly changing Industrial society (Patterson 2011). It takes a future-focused view of heritage from this, characterised by thinkers such as human geographer Brian Graham who asks *"if heritage is the contemporary use of the past, and if its meanings are defined in the present, then we create the heritage that we require and manage it for a range of purposes defined by the needs and demands of our present societies"* (Buss 2014: 5). The application of this is developed by exploring notions such as making heritage 'manifest', which seeks to unpack singular narratives so as to open them for society at large, and Lefebvre's ideas concerning the 'ordinary' and the 'other', as a means of considering how we might anchor heritage values in our everyday-lives and make it more inclusive of place and the communities that hold those heritage values (Gonzalez-Ruibal 2008 & Diaz 2005). The essay closes by considering available means of heritage mitigation, process, continuity, displacing and borrowing to understand how they work and can best be delivered/redressed.

The contemporary focus is contextualised by looking at what happened when material-based heritage, derived from late 19th Century legislation, met the human agenda, which emerged in the late 1960s, prompting the shift to values-based heritage focusing on the significance of heritage and what it can contribute to society, which underpins current practice. Notions of narrative and whose narrative that is, are paramount in this, asking that if heritage work tells a story, whose story is that, and how it is told? Reviewing this allows an exploration of how a broader more inclusive narrative might be achieved, which articulates the values of both place and community in future planning. This potentially allows the values of place to be carried forward by a living community by its making manifest their rhythms and traditions (Gonzalez-Ruibal 2008 & Knox 2005). This involves the following questions,

1. How and why should we move from reductive narratives which simplify the story to produce heritage narratives, which really represent place and community (making manifest)?
2. What scope do the notions of the ordinary and the other have for making 'manifest' our collective heritage and identity in our everyday lives?
3. What methods are available today to develop narrative and how can we develop them?

This essay has origins in work by the author Tom Davies and colleague Even Smith-Wergeland presented at the European Association of Archaeologists (EAA) in Barcelona 2018 titled *Digging towards the future: The Changing Role of Archaeology in Urban Planning*. This considered the benefits of inter-disciplinary practice and how heritage values might be interpreted through place-making in the design of new development projects, as boundaries, divisions and continuity of use. The focus of this essay, through process and narratives relating to community and place, moves from the tangibility of that presented at EAA to the intangible in trying to permeate place and community with a sense or awareness of heritage. Examples of process include exhibitions, pop-up museums, talks as well as arts or performance. These provide means of bringing groups together and providing opportunity for discussion and sharing as a forum for themes and traditions.

SETTING THE STAGE

Compensation and *mitigation* present curious terms for what we are trying to secure as heritage practitioners, in seeking to redress the impact to our changing environments and communities. The Merriam-Webster dictionary describes compensating as both 'to supply an equivalent' and to 'to offset an error, defect, or undesired effect', introducing both notions of balance and of 'righting of wrongs'. Related words include 'payment' and 'remunerate'. 'Mitigate', according to Merriam-Webster has a rather different interpretation 'to cause to become less harsh or hostile' and 'to make less severe or painful', offering alternatives such as 'alleviate' (guilt), 'mollify' (calm-down) and 'extenuate' (excuse) (Merriam-Webster). These contrasting pictures, the first of a monetary or financial nature and the second of injury, harm and critically loss are both critical in the consideration of this essay. Not to imply that those who employ 'compensation' are financially motivated and those who use 'mitigation' are emotional, it is rather the case that we mean something of both. Societally, we tend to address our claims to 'righting of wrongs' through financial or non-emotive terms, regardless of the fact that those wrongs also have an emotional aspect or root.

The notions of tangible and intangible heritage mentioned above can broadly be delineated as material and non-material or physical and societal. However, it is perhaps better to consider them in light of this definition as 'Living' or 'intangible' heritage from UNESCO;

Intangible Cultural Heritage means the practices, representations, expressions, Knowledge [and] skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. (Labadi 2013:129).

Reconciling this with the notion of a present and future focused approach to heritage, detailed by Graham, we can suggest that advancing intangible heritage provides a platform for dialogue and collective identity. Archaeologist Brigitte Buss warns us that without "*…such dialogue, established conservation policies and practices will only serve to reiterate outdated identity narratives and continue to tacitly reinforce outmoded conceptualisations and values behind them.*" (Buss 2014: 28).

A HOLISTIC PATH – FROM CARE OF MONUMENTS TO HERITAGE OF COMMUNITY

The transition from material to value-based heritage, from the late '60s, forms part of the larger human agenda, which emerged after the Second World War. This is reflected in the holistic approach which developed after the Venice Charter of 1964 and the United Nations Conference on the Human Environment at Stockholm (UNESCO 1964 & Handl 2012). This agenda reflects the changing role of welfare, from collective to individual, and the role heritage plays in helping communities to define and communicate their own identity (Jensen et al. 2017). Today we speak of *heritage communities* and see our work increasingly focused on how to return social capital such as community-building, culture and an improved quality of life from heritage work (CoE 2005: 2:12, Zagato 2015, Gonzalez-Ruibal 2008 & Kiddey & Schofield 2011).

This interpretation stands in marked contrast with heritage and place-making expert Gregory Ashworth's view that three paradigms of preservation, conservation and heritage currently co-exist. This interpretation opts for the view that heritage has essentially subsumed the other two. Within this Ashworth's definition of heritage demonstrated its present and future focus. Quoting Lowenthal (1985) Ashworth tells us *"heritage is about creating something, not about preserving anything"* and in that *"a heritage approach*

has a significantly different way of viewing the basic time dimensions of past, present and future than does a preservation approach." (Ashworth 2010: 10).

 Anthropologist Thomas C. Patterson's account of the development of archaeology (ergo heritage) demonstrates the changing relationships of give and take, past and future in this development. Patterson attributes the professionalization of archaeology as a shift from economically driven antiquities to nation-building and an increasing need to define national identities, which Buss equates to early globalisation through the increased contact brought about by trade (Buss 2014). For Patterson this period is characterised by large-scale excavations and other heritage endeavours and the emergence of heritage institutions and museums, backed by philanthropic benefactors and state. It is alongside this that early legislation, such as the UK's *Ancient Monuments Protection Act* (1882), set about securing heritage on the domestic agenda. This advanced into the protection of buildings and other sites through successive acts and with that assuring the place of heritage within the development of our societies with increasing professionalization of the heritage sector. Boosted by state-led and Keynesian economic stimulus, this produced burgeoning heritage and anthropology departments by the 1950s. Later, as the role of the heritage practitioner became assured under legislation and Keynesian economics failed, archaeology became increasingly reliant on that legislation, which according to Patterson resulted in a seeking refuge and the intake into the profession becoming increasingly middle-class and restricted (Patterson 1998).

At the point of systemic global economic failure in the late '60s, heritage's place was being redefined within the human agenda (Figure 2), and incorporating the rising focus on communities and individualism. This arguably has origins in Brutalism's notion of 'as found' in the '50s and was developed through the Preservationist and Environmental movements of the early '70s. This commonality is reflected in the treaties and conferences that followed, which whilst there are many, include *Our Common Futures* (WCED 1987), the *Declaration of Rio 1992* and the *Burra Charter* (for Places of Cultural Significance) (ICOMOS 2013) and the *Faro Treaty* (Zagato 2015). The focus of these moves determinedly toward social sustainability and the introduction of intangible heritage in the stories and traditions of communities. *The UN Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living and on the right to non-discrimination in this context*, published in late 2018 draws these two strands together,

possibly for the first time, recognising the important link between place and community in policy (Farha 2018);

21. Document the unique profile of each community, linking upgrading to historical struggles for rights (18)

21.80. Residents of informal settlements should be supported in documenting the history of their settlement. Planners and development partners need to consider informal settlements not only as geographically but also as historically defined communities, considering how and why the site was chosen, what claims have been made by residents and other parties, and how the right to housing is understood by those who live there. (18)

21.81. Demographic information should be gathered to build a complete picture of the community and the needs of residents, including detailed maps of the settlement, numbers of households and individuals, tenure status (including informal renters), means of livelihood, housing expenditure, service provision status and local governance structures. (18)

Developing Patterson's view, it can be argued that in c.1970, following withdrawal of state funding where heritage was increasingly seeking refuge in its own legislative framework, that the emerging Post-war human agenda began to drag heritage back into the fold. This transpired through the combined humanitarian and heritage related treaties and conferences, which took place and produced a rift between heritage policy and heritage practice. Whilst policy and aspiration has since 1970 shifted to a values-based approach, inherently reliant on the perception of those values by those who hold them, its realisation in practice has been held back by dependence on the legislative framework that ensures continued practice. This is reflected by slow development of outreach and community engagement in professional heritage work, which has only really started to come to the fore in the last decade (see below).

In any event, it demonstrates that heritage practice was born out of societal need and has in recent years been in the process of reconciling with that need. This can be recognised from the post-processual critique of the 1980s, which established the intellectual necessity of exploring issues of symbolism, meaning, and human subjectivity, to recent entreaties to transfer the value of deposits excavated, into a mosaic of resources that describe

the changing conditions that shaped those earlier human environments. These by dint of developer investment, have been made accessible to people who might find that they enrich their experience of living and working in those locations (Johnson 2012: 270 & Barratt 2012: 3). Or in the words of Futurist Jerome Binde *"The key fact in our historical awareness is not the past but the future. As an instrument for the improvement of the future, history must institute, without teleological guarantee, the very possibility of human progress."* (Buss 2014: 38).

The idea that place and community are intractable is not new, stemming back to the 19th Century, with Nietzsche's work concerning the relativity of values to cultural diversity and others, but this becomes a hot topic with Heidegger and Lefebvre in the 1900's (Diaz 2005). Lefebvre's constructs of the ordinary and the other are particularly useful in understanding this relationship, and introduce the groundwork for Gonzalez-Ruibal's ideas about making heritage 'manifest'. Lefebvre's 'ordinary' is the everyday, the aspects of our environment that we take for granted. Diaz suggests in built-form that this might be the housing that makes up the background of the places where we live, whilst the 'other' is that non-ordinary, the things that make our lives special, such as the places where we interact, come together and share experience which builds communities. Intangible heritage, in our stories and narratives, represents the non-material of this, relating possibly to Heidegger's ideas on physical matter and the 'Worlds' we establish within the places where we live which give them meaning and significance. Making 'Manifest' for Gonzalez-Ruibal is about making that intangible narrative that binds as tangible and inclusive as possible, which in current heritage practice we discuss with terms such as communal heritage value (HE 2016).

MAKING THAT MATERIAL SHIFT TO VALUES AND BELONGING

The need and benefit for an inclusive heritage narrative can be understood by looking at the drivers behind our need to conserve, document and make records of our heritage, as the basis for heritage mitigation/compensation. The consensus on this is a pragmatic view that the accelerated change of Industrial and Post-Industrial society produced an obligation to do so. Legislation protecting ancient monuments dating to the later 19th Century, extending Post-war (1947 in the UK) to historic buildings and environment, contrasts starkly with the plundering of antiquity which preceded it, and reveals the legislative response to mitigating the loss of our pre-Industrial environment. However, when viewed only as a moral obligation this doesn't

credit the drivers which underpin it, which according to Gonzalez-Ruibal is a tangible sense of loss (Kohl 1998, Gonzalez-Ruibal 2008 & Hamilakis 2011).

The rapid, intense development of cities, the exploitation of countryside for agriculture and the bomb damage of the Second World War, all represent massive impacts. Our efforts to conserve and reconstruct or to document and capture that earlier familiar environment prior to its loss, represent a need to save something of that familiarity, within which our memories and collective experiences are rooted as well as a sense of feeling safe. Gonzalez-Ruibal distinguishes between the intentional loss and damage of conflict and what he sees as the more insidious and widespread damage of modern technical progress which rendered buildings such as mills, windmills, barns, obsolete almost as quickly as our late 20th and early 21st Century technical innovations become redundant. The comparatively short life of the landline telephone, analogue television and radio or a pair of socks that I own with images of cassettes and records, of which my daughters have no idea, are all testaments to this progress.

Gonzalez-Ruibal suggests, rather than meeting this loss by documenting it for posterity, which provides rather cold comfort in the poor echoes of the original it produces, or preserving it at expense of future development of the communities to whom it belongs, that we instead try to make its values manifest in our everyday as a way of realising social capital from it. Whilst the drivers behind the development of heritage mitigation undeniably include the importance of telling our story, I want to suggest that not being comforted by the familiarity of that collective story in our everyday lives, leaves us unable to reconcile that sense of loss and feeling bereft at the same time as it fractures our communities and culture.

This sense of loss is tangible in accounts by Brutalist architects Peter and Alison Smithson of the 'As Found' approach they took in trying to carry forward existing landscape and character of place in their designs. This might incorporate material remains but also included programming and use which reflected existing culture and use. Together with their artistic contemporaries in London's Independent Group their work sought to borrow material, ideologically and artistically from the vanishing environment of the interwar period. All these responses represent ways of saving aspects of this familiarity. Gilles Dorfles documents this reaction to loss, dramatic change and the industrial scale production of media and produce in his

book Kitsch, capturing the zeitgeist which underpinned the cultural-revolution, behind the human agenda by attempting to discern value within mass-media and production, and contend with the impacts of our industrial progress (Dorfles 1977).

The past thirty years have seen a repositioning from a material to a values based approach through the growth of literature and policy on intangible heritage (the stories and cultural identities of communities). This is seen in the work of writers such as Laura-Jane Smith and that of ICCROM and ICOMOS and other bodies, providing heritage practice guidance which seeks to include community and its heritage values. The difficulty emerges in engaging with communities about their heritage, seen from their perspective, in our everyday work. We have overcome the remote efforts of last decade's heritage outreach, which relied on signage, video and other media to reconstruct and communicate information recorded on-site. The past decade has increasingly seen practitioners working with communities to communicate information from research and investigations, and to understand the values held by that community to their heritage (Belford 2014 & Peacock 2016). Whilst this has moved us significantly in recognising the heritage values of place and community, in responding to the pressures of commercial heritage work, the results of these excellent projects - typically exhibitions and community meetings/workshops - tend to have a fait accompli or sense of job done. Whilst it is true that the value of these events are carried further by those who attended, there are a number of ways in which we can realise the potential of this further.

The following sections try to set out how working closely with community and site through various media might produce something more comprehensive, which can be seen as making those values manifest through Lefebvre's the 'ordinary' and the 'other'. The paper concludes by considering the significance of this in drawing together sustainable development goals and heritage, and reflecting on the implications for future practice.

"BUILD OF YOUR IMAGININGS A BOWER IN THE WILDERNESS ERE YOU BUILD A HOUSE WITHIN THE CITY WALLS" (KHALIL GIBRAN)

Trying to unpack the somewhat abstract notion of 'Making Manifest' requires us to consider both what is meant by this and how it might be brought about. One definition taken from the Merriam Webster online dictionary describes manifest as "*to make evident or certain by showing or displaying",* conveying a

strong sense of being present even tangible within a place (merriam-webster. com). We often achieve this in our everyday lives by talking about something, which brings it to the fore in a person's thoughts and by revisiting the topic reminds us and makes that thing feel present. Description and the way in which we talk about a thing are crucial in this, in providing a tangible narrative sense of the thing being discussed.

A community, which has experienced collective events, will have some collective sense of a common narrative, generated over successive opportunities to discuss, form and refine this commonality. It is this process of repetition and revisiting that produces a common account, which despite variations from person to person, will be broadly assented to as the community's common narrative. This is what we are doing when we digest and write a history of those events. At the same time, this refines the narrative as the various accounts from across the community are boiled down and an agreed version is arrived at. While it is immaterial whether this account closely reflects what actually happened or not, it is the fact that it is assented to by the majority of a group that counts. Narratives exist first by word of mouth and in time are refined and written down by those who consider it important to set things down for posterity.

As a community develops over time, narratives may change drastically and can be relative to particular generations, in terms of the events which were definitive for them. Community focused heritage work should seek to provide some account of the narratives it uncovers and, in returning those heritage values to the community, there is potential for current and past narratives to be revised and further detailed by the addition of new data.

Having established that the medium of narrative for the community is word of mouth and then the written word, the medium of narrative for the heritage practitioner has traditionally been the written report, more recently the outreach-sign at the edge of site and increasingly outreach events, such as community site visits, exhibitions and discussions. The latter are the only media to engage principally through dialogue and cooperation with community and reconcile heritage information concerning earlier narratives with accounts currently circulating within the community. In returning something of heritage value into circulation, this goes some way toward making manifest a broader understanding of place and the origins of the community. It also shares in the temporary nature of verbal narrative, being similarly imperma-

nent and susceptible to revision and loss. Written reports and signage have a capacity to provide something more permanent. However, this is necessarily outside of the ownership of the community, in the manner in which signage often sits at the edge of site, or in incidental locations hoping to be noticed so that it might tell its story, whilst reports have a tendency to languish in archaeological offices and archives, requiring the reader to hunt for them. In both instances a process of engagement and interaction is lacking, which would bring this story into the domain of the community.

FOR "THE USER'S SPACE IS LIVED – NOT REPRESENTED OR CONCEIVED" (HENRI LEFEBVRE)

In discussing and writing down their own narratives, communities take ownership of them and in doing so become able to relate and respond to them, providing the essential driver behind their development. As we as heritage practitioners apply ourselves to fulfilling the implicit agendas of 'heritage communities', we should be increasingly concerning ourselves with how communities can take ownership of the narratives we uncover to make them their own. In this way it is possible to help communities to become more aware of their heritage and to reconcile themselves with the different aspects of their stories, producing 'Living' or intangible heritage, referring to a misconception that it has no physical form such as a building or site.

This question of place in intangibleness is illuminated by Henri Lefebvre's notions of the ordinary and the other, which define place in the built environment, by which these values can anchor themselves and Foucault's heterotopias, which in contrast to utopias, offer a real and tangible place (Foucault 1967, Lefebvre 1997 & Diaz 2005: 3-4 & 9-10). Place differs from physical space in this instance by being defined by an aspect of value for individuals and/or community, which bestows it with meaning. Lefebvre makes the distinction between ordinary and other, between the parts of environment, which we take for granted and which effectively form the backdrop of our everyday lives, and those with which we interact, sculpting our collective experience of the places where we live. The academic Luis Diaz, looking at the London Borough of Camden's late '60s housing, defines this as equating to dwellings and the places where community forms, such as shops, public space, community halls etc. (Diaz 2005).

Picking up from the 2018 paper on design in new development as a means of carrying forward heritage values, the ordinary and the other present

opportunities for us to imbue our built environment with narrative through other means. This could be through programming, continuing former uses of place, where they can be shown to be of value to the community. As part of this, detailed consideration of the original design intentions and the reality of a site or building can provide useful information for the community in these terms. Equally, the adoption and adaptation of place by the community should also be considered in this, and given equal weighting in order to secure future viability of use. Extending this beyond the practicalities of day to day living, what community does in that place in terms of recreation or tradition in defining key aspects of identity are equally, if not more, important. Taking this comparative approach to considering values and place is of even greater use where place is underused or being used in a way, which is to the detriment of the community and can help to understand the nature of the problem.

The Story is in the Soil – of process, narrative and place
Working with community to achieve this provides an opportunity to discuss different aspects of place and develop the narrative of community and place. The community may want to realise this by making changes to their environment to reflect aspects of narrative, or use conventional means such as signage and outreach to tell people their story. Process is paramount in this, in producing the physical outcome of changed environment but most importantly in providing the opportunity to work together and rediscover those traditions and values through that process. This allows a collective revisiting and discussion about what those values, and the events and traditions they refer to, mean to the community as a whole. Additionally, by quite simply allowing this to take place in the place where those memories, traditions etc. happened, it reconnects those values with the place to which they belong, imbuing that place with meaning.

The central role of enfranchisement and participation in this is demonstrated in these two excerpts from the *Rio Declaration on Environment and Development* (UNEP 1992) and the *Faro Convention on the Value of Cultural Heritage for Society* (CoE 2005). The Rio Declaration states that "*Environmental issues are best handled with the participation of all concerned citizens at the relevant level… each individual shall have… the opportunity to participate in the decision making process. States shall facilitate and encourage public awareness and participation by making information widely available*" (UNEP 1992: Principle 10). The Faro Convention builds on this describing 'heritage

communities' as made up of *"people who value specific aspects of cultural heritage which they wish, within the frameworks of public action, to sustain and transmit to future generations"* and recognises that such communities may consist of experts and non-experts, professionals and non-professionals (Council of Europe 2005: Articles 2, 12). On the basis of this, archaeologist Paul Belford proposes a triangle comprising professional, academic and community [archaeology] as a means of securing the balance required for social, intellectual and economic sustainability (Belford 2014: 35). Whilst strict adherence to this is surplus to requirements in much of heritage based process, it does provide a useful testing ground to see and explore the potential of heritage based process.

Heritage based process would typically take the form of a collective project, working together to improve that place or some community endeavour which helps community members. By example, this is one of the aims of the case-study work for my PhD, which looks at restoring and securing use of a tenants' hall, protecting a housing estate through community-generated conservation guidance and discussing the needs of community in a suburb, which lacks opportunities for work and recreation. Community narrative

Figure 2. Gordon Matta-Clark, Graffiti Truck, 1973. [Estate of Gordon Matta-Clark] (https://place-sjournal.org/article/gordon-matta-clark-spacism/)

can equally benefit from art and cultural projects, which might bring people together through process, or highlight the issues facing that community through collective efforts. A key example of this is the work of artist Gordon Matta-Clark in the 1970's (Figure 2), which saw communities decorate a jeep (Graffiti Truck 1973), work on salvage projects, street-performances and food-giveaways (Pig Roast & Cuisse de Bouef '71 & '75) and a Resource Centre and Environmental Youth Program for Loisaida (1976) (Richard 2019). Regardless of whether these projects work towards an end-product or not, they all provide opportunities to work together and revise and generate a community narrative (Richard 2019).

In addition to building identity and social cohesion, they can also raise the profile of the community and help to challenge accepted (often detrimental) narratives in the media, something Matta-Clark was particularly concerned with. This might draw in advocacy and support working for the community, as people become more widely aware of their story and help to protect against development pressures of the ill effects of underfunding and cuts for example.

THE TOOLS TO MAKE YOU FEEL AT HOME – OF CONTINUITY, DISPLACEMENT AND BORROWING

Having considered how intangible heritage is rooted in place, meaning that heritage values are easiest to conserve with continuity of place, they can and do survive in narrative traditions when place is lost. Heritage narrative and the traditions pertaining to it can be and are transposed from place to place through the very different mediums of *displacement* and *borrowing*. In both instances, the heritage narrative at the end destination is changed by a range of factors, not least the new physical context within which it will become manifest. *Displacement*, whether static (at the same location but in new surroundings) or dispersed (relocated), is in nearly all cases an involuntary event resulting from necessity, such as the slum clearances of the 1950's and '60s, or the impact of potential natural disaster. In both instances the community is forcibly required to relocate. This can be a static change, such as at Park Hill, Sheffield, where the resident community was rehoused from their 19th Century housing to the Modernist blocks designed by Jack Lynn and Ivor Smith in the late '50s. Lynn and Smith's Park Hill includes several aspects of continuity, such as the retention of street-names and replacement of the 'other' aspects of the earlier neighbourhood, such as the public houses, which recognise a community's need to belong and identify with their new

neighbourhood (Hollow 2010). This reflects the conservationist approach of Brutalism and its reverence for the work of sociologists such as Michael Young, Karen Stephen and Nigel and Julia Henderson, in looking to slum neighbourhoods for their sense of community. At the same time, this heralds the human agenda, which emerged in heritage in the 1970's (Risselada 2011).

In demonstrating displacement there are numerous examples of slum-clearance and relocation also from the 1960s. One such example, in which residents were relocated from Oxford's medieval district of St Ebbes to the newly built Blackbird Leys in the late '50s and '60s, has been studied as part of a recent plan to redevelop the shopping centre at St Ebbes, that relocation made place for (Peacock 2016 & Pers. Comm Peacock and Ford). Elderly residents at Blackbird Leys record a continued connection back to their former district with a number of stories which span the two. This appropriation and connecting to 'making the familiar unfamiliar' space is key in place-making, shown at the extreme end of Kiddey and Schofield's work on the homeless communities of Bristol. They demonstrated this by this quote from Council of Europe's Director of Culture and Cultural and Natural Heritage: 'A heritage that is disjoined from ongoing life has limited value. Heritage involves continual creation and transformation. We can make heritage by adding new ideas to old ideas', which reveals something of our response to heritage interrupted (Kiddey & Schofield 2011: 5-6).

St Ebbe's, Oxford, England/Black Bird Leys Estate
Displacement from medieval city-quarter
Westgate Centre Redevelopment
Workshops and pop-ups
Opportunity to review history and community in transition
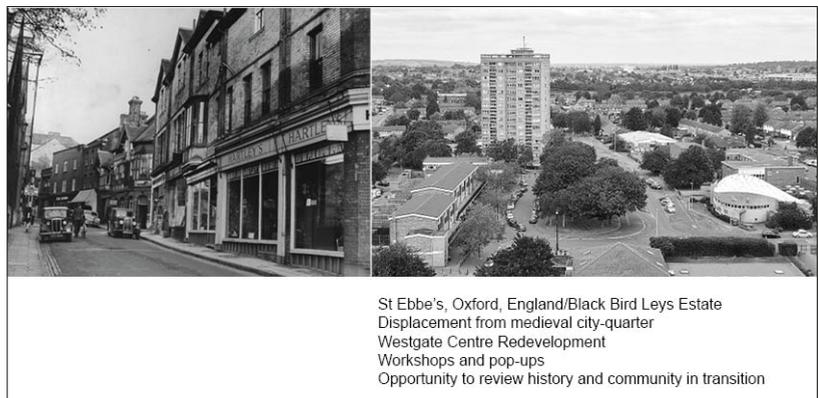
*Figure 3. Displacement at St Ebbe's, Oxford, England. (https://www.oxfordmail.co.uk/news/17542761.survey-launched-on-future-of-blackbird-leys/ & https://www.oxfordmail.co.uk/news/15611414.scrumping-for-memories-in-st-ebbes-young-film-oxford-students-uncover-the-citys-hidden-past-buried-beneath-the-westgate/)*

Both the recent heritage work for the redevelopment of the Westgate shopping centre at St Ebbes and impacts to the Grade I Listed St Paul's Church (1712-30), Deptford, London have been subject to planning conditions requiring investment in community heritage, reflecting the ongoing change in professional practice (Figure 3). In Oxford, this took the form of travelling pop-up exhibitions and community outreach, connecting past and former residents and the wider community to the history of St Ebbes (Figure 4). In Deptford, mitigation for impact from the Thames Tideway Super Sewer worked to build links between the church and the local community; which is made all the more interesting given the fact that the crypt of St Paul's housed a famous South London psychedelic gig venue in the 1980s-90s, called unsurprisingly 'The Crypt Club' (Peacock 2016 & Pers. Comms Peacock, Ford and Buss).

Camden's Highgate New Town Phase I (built 1972-78) distinguishes itself in this, by demonstrating both static change, through rehousing slum dwellers, at the same time as its architect Peter Tabori *borrowed* aspects of its design from the Italian Hill-towns of Tuscany and Umbria (Swenarton 2017). To understand the impact of this in heritage terms as well as its potential for defining the revised identity of Highgate's community, it's worth reflecting on how it came about.

St Paul's Church, Deptford, London (1712-20)
Thomas Archer (Grade I Listed)
Thames Tideway Mitigation for impact
Invested in community-building and awareness
of history
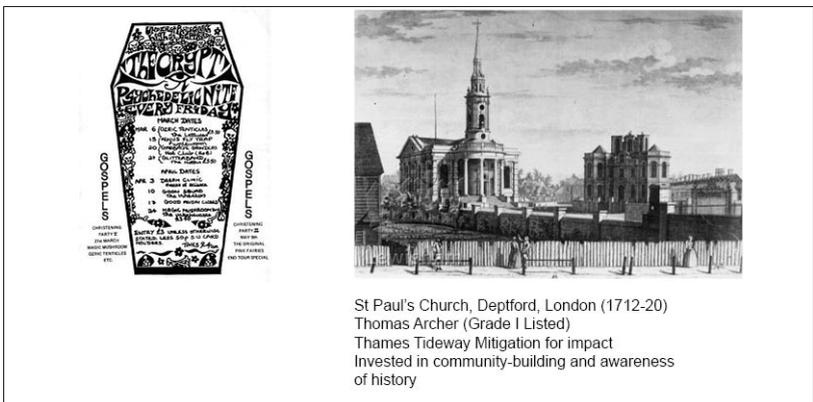
Figure 4. St Paul's Church and The Crypt Club, Deptford, London (www.angelsinexile.com/sites/taste/html/crypt2.htm & tboroughphotos.org/lewisham/st-pauls-church-deptford-30/)

Tabori who studied under Neave Brown at Regent Street Polytechnic (now University of Westminster) completed his thesis under the supervision of Anglo-Italian, Florence born architect Richard Rogers. Inspired by Rogers' interest in housing, Tabori studied industrialized housing through real sites and briefs, which came to focus on vertical facades with hung balconies (Figure 5). Rogers suggested that Tabori look to the terraces of central Italian hill-towns for inspiration, which Swenarton contextualises in Cook's Camden, through the Architectural Review's coverage of hill-towns and terraced sites at that time and Atelier 5's Siedlung Halen (1961).

The similarity between the terraces and pedestrian routes of Highgate New Town Phase I (named Tuscan Hill Town on the original plans) and those of Italy's hill-towns is easy to see, and is also present in his work for Lasdun on the Ziggurat Halls of the University of East Anglia and his other Camden project, Polygon Road (Oakshott Court 1971-76). However, Tabori's borrowing from Central Italy extends further than this. The hill-town originated with the Etruscans, best known for the Villanovan culture, who occupied central and northern Italy prior to the development of Rome in late Prehistory. A study of another hill-town, Civita-di-Bagnoregio defines these early settlements by their elevation and an axial layout of streets, which intersect-
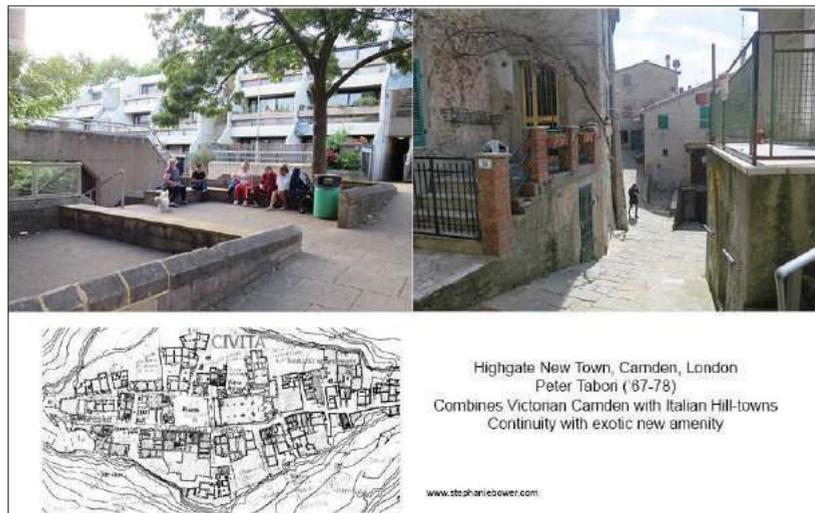

Figure 5. Highgate New Town, Seggiano & Civita di Bagnoregio (Tom Davies & www.stephaniebower. com)

ed the town. These comprised an east-west aligned street, which became the Decumanus under the Romans, and a north-south aligned street, which became the Cardo. This apparently had religious origins stemming from the Etruscan's God Tinia who sat in the North and gazed southward, cleaving each town in two. The intersections, called the Mundus by the Romans, were often the site of temples providing points of interaction for public life, whilst also being thought to be the entrance to the Underworld. The grid-plans became formalised under the Romans and following a low period, many of the hill-towns saw dramatic growth and renewal during the medieval period. This redefined them with the dense and complex street-plans they have today as land became a scarce commodity, through multiple small alterations, getting the most out of available space, producing bridges, tunnels etc. through a variety of unusual arrangements between intersecting properties (Barbacci 1987: 6-13).

Whilst Highgate has a more regular layout, partially derived from the earlier Victorian street-plan, the drawing below shows two clear east-west axes (former streets) and a north-south axis at the centre, following the former Retcar Road, with the intersections providing the key-points of public interactions. Within this each dwelling runs through its respective terrace, providing visual and physical communication with the adjacent terraces and houses, with a variety of steps and elevated walkways, reminiscent of those of Italian hill-towns.

What makes this 'borrowed' heritage, in as much as relocated communities can carry forward 'displaced' heritage, is that Tabori actively drew upon the positive conditions of hill-towns and the earlier landscape of Highgate, which had developed over time. This arguably goes further than just carrying forward aspects of earlier place in creating conditions for community in borrowing from the heritage of other cultures to pull in elements, which might complement the in-situ aspects of continuity.

Admittedly, borrowing represents a more positive means of transposing heritage values than displacement, but displaced communities are able with the right conditions to reconstitute some of the key aspects of their earlier heritage. While not wishing to suggest that this makes displacement in any way positive, it does present some means of helping communities to adapt to significant change.

WRITING THE CULTURAL GRAMMAR OF LONG-TERM COMMUNITY

Pulling together the various borrowed elements from Italy and Victorian Camden at Highgate, Tabori tries to create the conditions for community by drawing from what he perceives as good qualities from elsewhere, as demonstrated by this quote from P.L. Knox's *Creating Ordinary Places: Slow Cities in a Fast World* (2005),

> *Ordinary places… are constantly under social construction by people responding to the opportunities and constraints of their particular locality. As people live and work in places, they gradually impose themselves on their environment, modifying and adjusting it to suit their needs and express their values.* (2005:3)

Also according to Knox, this presents a cultural grammar, which should provide;

> *… a setting for social interaction, daily routines of economic and social life, the structuring of people's life paths (both opportunities and constraints), an arena for gathering everyday 'common-sense' knowledge and experience, siting for processes of socialization and social reproduction and an arena to contest social norms.* (2005:2)

REDEFINING THE WHEEL – CONTINUITY, DISPLACING AND BORROWING

With all that in mind, it is possible to reconsider what concern the main objectives of heritage and conservation have for both community and place. With the assumption that Gonzalez-Ruibal is right and that heritage is about contending with our collective sense of loss, then what we do as heritage practitioners should be principally concerned with coming to terms with that loss. This lends a new meaning to the words 'mitigate' or 'compensate', implying that we really are trying to adjust for the loss of our tangible and intangible culture. In that sense, whilst reports on shelves represent the physical output of a job done, the real measure of our success should be in our ability to recognise and celebrate the cultural traditions and narratives that we use to tell us and others about ourselves. Compensation or mitigation is expressed in the social context of a collective heritage, meaning that cultural values and architectural qualities cannot be separated from their users.

This presents a real need for progress, beyond the hegemonies and simplistic narratives of heritage tourism and preservation of buildings and sites alone, to narratives that celebrate those places for the people who made them, and for whom they mean something. As part of which it is imperative that we acknowledge and support ownership by those communities in continuing to manage and develop both place and community. This returns us to Walter Benjamin's epic theatre analogy and the interpretation of Patterson's account of the development of archaeology (ergo heritage) that current practice has withdrawn from societal engagement and which we are currently striving to redress. What is done in excavation, documentation etc. is still the same process established as necessary to mitigate loss, but in the withdrawal into reliance on legislation, which occurred over recent decades, the heritage professional as actor has (in Benjamin's eyes) withdrawn from their audience. Luckily the heritage event, be it excavation or documentation, represents process, which communities can engage with and, together with those undertaking heritage work, can *"fill in the orchestra-pit"* (Coles 1999: 28). Critically, this means that what is done in mitigating remains vital, and the issue lies with the inclusivity of the way it is done. In light of this, here are three steps, by which we can achieve comprehensive narrative:

A first step is to move from a priori details of the genesis of a site or building to include acknowledgement of subsequent development and current and past meaning of that place. Whilst we have left behind earlier efforts to regress a building or site back to its first phase and willingly recognise the value of later contribution, the weighting of current heritage practice remains heavily upon the first phase, rather than the value for society and community today. Current guidance and legislation advise and establish scope for this, so this revision of narrative and method is principally about realising this as process and practicing what we preach. This can be achieved by opening up the heritage event (excavation, documentation etc.) for community to participate in experiencing and engaging with it. In return, those undertaking the work will have the opportunity to raise the profile of the site or building and learn from those with relationships or knowledge pertaining to it. A key difference here is in engaging during rather than after the event. Exhibitions, workshops, performances etc. taking place after site-work has been completed are processes in their own right and as such constitute events of their own. The written-report still has a role to play in this, determined by the degree to which its informa-

tion is disseminated (event, digital-platforms etc.) to contribute to ongoing discourses. This can and has been secured through planning conditions (Pers Comm: Peacock and Ford).

A second step is to consider the adoption and adaptation of place by community in a similar light to the way in which we consider its inception and creation. This usefully both recognises how aspects of use, as intended by design (such as with late '60s community focused housing), actually manifests and helps ensure that plans for future management and care are determined with the consultation of those who will implement and contend with them. Examples of displacement and borrowing are both useful in offering means and references for contending with the realities of the rapidly changing world in which we live, and preventing or acknowledging the sense of loss in the former (Figure 6).

A third step is to reconcile the relationship between community and place. Lefebvre's 'ordinary' and 'other' provide good advice as to where we might focus our efforts in grounding community heritage in place. By revising our

Figure 6. Residents at evening at Highgate New Town, building cultural grammar. Photo: Tom Davies

approach in this way, it is possible to unlock the full potential of the 'other' for place and community. Whilst all process, which reflects on aspects of a community's narrative can potentially contribute to varying degrees, a mixture of process (such as events and shared endeavours) and permanence (staying put) has potential to bring people and narrative together whilst the product of process can serve to remind us of those connections in our everyday. Finally, it is this need for the tangible and the intangible, which tells us how important connection between community and place is and that, while aspects of narrative will survive uprooting and displacement, they survive far better when kept in the body of the place where they belong.

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PART 2

DESIGN, HERITAGE AND COMPENSATION - RENEWAL IN AREAS WITH CULTURAL VALUES AND ARCHITECTURAL QUALITIES

Magnus Rönn

ABSTRACT

The objective is to investigate, analyze and discuss compensation in the planning processes of sites with appointed cultural values. The overall goal is to develop knowledge of how key players understand the heritage and architectural qualities in detailed development plans. The research method is based on case studies. From a selection of 39 detailed development plans obtained from the City Planning Authority of Gothenburg, three were chosen and studied in this paper. Selected detailed development plans were analyzed through close reading of documents, site visits and discussions at seminars. Detailed development plans seen as products have compensation measures embedded in the design as fixed regulations. They are demand-oriented to both land-use and architectural design. Compensation as a process is expressed by changes through opposition. The City Planning Authority eliminates criticism by changing the detailed development plan according to values and qualities protected by key players.

Typical compensation measures consist of supplementation of the detailed development plans with descriptions of cultural values, through texts and illustrations provided by investigations conducted by contracted consultants, revisions of the proposals for the detailed development plans and the introduction of more specific regulations for the control of architectural design as response to criticism. The demolition and construction of new buildings are combined with protection and the prohibition of the demolition of cultural values on the plot. Cultural values can also be transferred by compensation actions into aesthetic programs for the design of additional buildings.

KEY WORDS
Design, compensation, heritage values, detailed development plan

INTRODUCTION

This article discusses compensation in detailed development plan processes. The intention is to describe, understand and explain how cultural values and architectural qualities are treated when exploiting areas of national heritage interest. Three information-rich cases in Gothenburg are examined. The focus of the study is compensation that aims to recreate values and preserve qualities of the environment. The detailed development plans contain protection of cultural values, demolitions and the building of new built environments. Exploitation occurs in areas of national heritage interest.

The areas are also included in the city's program for the preservation of cultural-historical valuable built environments. The cases therefore encompass both national claims of designated cultural environments and local decisions regarding consideration for cultural values in planning. According to the Swedish Environmental Code, exploitation may not considerably damage national interests. Thus appears the legal regulation that is to be the foundation of the planning and designing of detailed development plans in areas of national heritage interest. The examination of the detailed development plans is part of the research project *Compensation, Cultural Environment and Cultural Ecosystem Services as Means of Control.* The overarching goal of the research project is to develop knowledge about how cultural values and architectural qualities are identified and preserved in municipal planning processes. In this goal is included the examination of the occurrence of compensation when damage is caused to valuable cultural and natural environments.

The research project is realized with financial support from the Swedish National Heritage Board's R&D grant. The practical utility lies in knowledge of how key players – municipal administrations, consultants, builders and governmental agencies – defend, protect and renew cultural environments in detailed development plan processes. Exploitation includes both loss of values and demands for new qualities that the renewal is to provide. The theoretical utility of the research project lies in the development of concepts and models that highlight the compensation thinking in detailed development plan processes. In the center of the research project are questions of how concepts of culture and expressions of compensation appear in the planning and design of the detailed development plans for areas of national heritage interest.

Compensation

Compensation has several different meanings in land-use planning. The phraseology is ambiguous. Compensation can appear as problem solving, concrete measures, planning method and means of control to remove the risk of damage (Rönn, 2018). There are two municipal regulatory documents in Gothenburg that are of import for compensation thinking in planning. The first document is the policy of 2008 that is called *Compensatory measures for nature and recreation*. The policy is used for designing detailed development plans. Compensatory measures in the policy are *"measures that are taken in connection to exploitation to compensate (replace) a lost value or function"* (Gothenburg City 2008:9). The second regulatory document is the 2009 *Comprehensive Plan for Gothenburg* (CP), which consists of three parts. In part one, natural and cultural environments are a strategic area for the city where compensation is to be applied. The following statements can be found in the CP: *"Removed natural, cultural and recreational values are compensated"* (CP, part 1:96). An active approach to compensation, protection and preservation of cultural values is raised as urgent. *"Apply actively use-regulations, protection-regulations, demolition prohibition and compensatory measures for cultural, historically valuable built environments in the formulation of in depth advancements of the comprehensive plan and detailed development plan"* (CP, part 1:97). The aim is to *"develop and use methods of compensation measures for nature, culture and recreation values in the planning"* (CP, part 1:96). Compensation in these guidelines focuses on tangible values in natural, cultural heritages and areas for recreation (se Figure 1, Figure 2 and Figure 3).

In governmental investigations and research reports, compensation is described as tool, method and measure in projects (Grahn Danielson, et al. 2015). Compensation as tool in planning processes depends on regulations in the Swedish Environmental Code. Compensation as method at a municipal level amounts to balancing interferences in valuable natural and cultural areas. Compensation as measure aims to recreate values that are damaged because of exploitation. Compensation thinking is expressed in legislation and R&D projects as demands to recompense, replace, recreate, remedy, weigh, balance, or equalize interferences that risk damaging natural and cultural values (Persson 2011; Swedish Environmental Protection Agency (Naturvårdsverket) 2016; SOU 2017:34). Ecological compensation dominates the debate and is depicted as an answer to investigations on societal infrastructure, especially within landscape architecture and environmental studies. From the Swedish Environmental Protection Agency, there is an expressed support for ecological compensation.
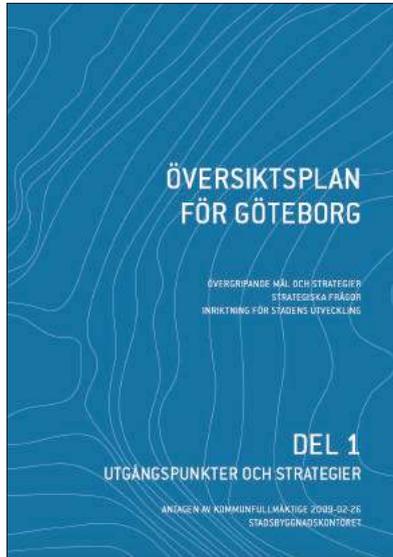
Front pages to the comprehensive plan in Gothenburg, part 1.

Figure 2. Front pages to the comprehensive plan in Gothenburg, part 3.

Figure 3. Front page to the policy on compensation measures for exploitation of nature and recreation areas.

The Swedish National Board of Housing, Building and Planning and the County Administrative Boards also have information about ecological compensation on their websites. The opportunity for compensation with support from the Environmental Code when cultural values are damaged is, however, invisible on governmental websites (Grahn Danielson, et al 2015). Instead, you have to turn to practice to get information about cultural and environmental compensation. There exists a professional practice to include City Planning Authorities and consultants in the detailed development plan processes that comprise of compensation for exploitation in cultural environments.

How does compensation thinking appear? What changes in detailed development plans can be understood as expressions of compensation? For a measure to be defined as compensation in this article, four conditions have to be fulfilled. There has to exist (a) a plan mission, that (b) contains an exploitation of land, that (c) has or risks having a negative effect on the cultural environment in the area, and that (d) leads to revisions of the detailed development plan proposals, new plan regulations or changed design of the new buildings. The condition for compensation by this definition is that there is critique against how heritage and cultural environments are treated in the plan process. Additionally the objections have to have an impact and lead to changes to be interpreted as examples of cultural environment compensation.

The point of this definition is that there is an empirical answer to the question if planning and design of detailed development plans contain compensation or not. The compensation thinking is highlighted in detailed development plans as solutions to problems, demands and suggestions of measures that aim to reconstruct cultural values of the site. The difficulty lies in the interpretation of the changes and their compensatory function in the specific case. In accepted detailed development plans, the compensatory measures are embedded in documents such as descriptions, illustrations, maps and regulations, and they are not visible in revisions during the detailed plan process. This is a hidden form of compensation that becomes visible through investigation of the planning processes, from mission to accepted detailed development plans. Compensation must be understood in its context.

Detailed Development Plans
The Town Planning Office, TPO, has the mission to design detailed development plans in Gothenburg. The form and contents of detailed development plans are regulated in the Planning and Building Act. The legal regulation has

a strategic significance for the preservation, renewal and keeping of cultural values in connection with exploitations. In detailed plan processes, it is included to try if the exploitation is appropriate with consideration to public interests and private interests. The suitability of the site for the planned purpose is tried through a collected assessment. The detailed plan is a document consisting of three parts:

- **Plan Description:** There has to exist a plan description that mentions conditions, purpose and considerations. This description is the basis for the design of the detailed plan with consideration for interests and consequences (the Planning and Building Act, Ch. 4, § 33).

- **Implementation Description:** There has to exist a description that presents the implementation of the detailed plan (the Planning and Building Act, Ch. 4, § 31). The actual implementation is thereafter regulated through certain contracts between municipalities and builders.

- **Site Plan with Plan Regulations:** There has to exist a plan of the site with regulations that indicate the purpose of the site and the conditions of the exploitation. The site plan presents in regulations how the site may be used and exploited (the Planning and Building Act, Ch. 4, § 30).

Cultural Environment Investigations as Planning Document
The planning document is a comprehensive term for the investigations of cultural heritage and cultural environments, which consultants perform in the development of detailed plans. According to the Swedish Environmental Code, areas of national heritage interest are to be protected against considerable damage (the Swedish Environmental Code, Ch. 3, § 6). That consultants are hired to present cultural values and architectural qualities is expected when exploitation is planned in areas of national heritage interest. The short descriptions of the national heritage interests need to be made clearer.

The cultural environment investigations conducted by the consultants are planning documents that can be used in three ways in the detailed plan process. 1) Partly to identify, describe and protect cultural values in detailed development plan proposals, 2) partly to design regulations that aim to preserve cultural values in detailed plans and 3) partly as a basis for aesthetic programs that aim for architectural steering and control of new built environments in the plan area.

National Heritage Interests

National interests are governmental claims that come into effect for detailed development plans when land-use is initialized or changed. The Swedish National Heritage Board has the task to produce areas of national heritage interest with adherent national heritage descriptions. Municipalities are obliged to consider national interests in their plans. Areas *"that have meaning from a public point of view because of their natural or cultural values with consideration to outdoor life are to be protected, as far as possible, against measures that can damage the natural and cultural environment,"* (the Swedish Environmental Code, Ch. 3, § 6). The County Administration Board is to take care of and coordinate the interests of the government. The County Administration Boards' unit for Cultural Environment and Community Planning reviews proposals of detailed development plans and judges them with consideration to the national heritage descriptions (the Planning and Building Act, Ch. 3, § 10). In cases where a detailed plan risks causing considerable damage to a national interest, the County Administration Board shall reject the detailed plan.

The Swedish Environmental Protection Agency has in consultation with the Swedish National Board of Building, Housing and Planning and with the Swedish National Heritage Board proclaimed legal advice for the judging of considerable damage of national interests in planning (Regulation 2005:17). Considerable damage is a legal concept that allows for several different interpretations when proposals of detailed development plans are judged. In the 2014 handbook from the National Heritage Board, the County Administration Boards are designated as both councilor and controller of exploitations that affect areas of national heritage interest. The National Heritage Board recommends that the County Administration Board uses dialogue: *"In many cases, a measure can be adjusted when it comes to design, scale, or location so that the change can be implemented while cultural heritage values are provided for by the additions concurring with the cultural-historical content of the site"* (Swedish National Heritage Board, 2014:48-49).

Cultural Environment, Cultural Heritage and Cultural Value

The National Heritage board defines cultural environment, cultural heritage and cultural value in a brief manner in the report *Platform Cultural values and selection* (Plattform Kulturhistorisk värdering och urval) from 2015. Here, by cultural environment is meant the whole environment affected by humans. It can be a single building, a complex or a remnant and can include districts, large parts of a landscape or a whole region. Some cultural environments

are considered more valuable than others and are therefore designated as areas of national heritage interest. Cultural heritage includes all material and immaterial expressions (traces, remnants, objects, constructions, environments, systems, structures, businesses, traditions, names, knowledge etc.) of human occupation. To be able to give guidance in detailed development plan processes, the contents of cultural environments and cultural heritage have to be limited, specified, described and made visible. This is a condition for a meaningful understanding of the concepts of detailed plan processes. A basic function of the planning document is therefore to clarify how cultural heritage and cultural environments should be understood in specific cases.

In the phraseology of the National Heritage Board, cultural value is a collective term for values that can be ascribed to environments with a starting point in cultural, social and aesthetic aspects. To create increased clarity in the use of concepts, it is suitable to use cultural value as an umbrella term. Cultural value is found in the Planning and Building Act and in the Swedish Environmental Code; two laws control planning and design of detailed development plans in areas of national heritage interests. There is, however, no profession that can claim interpretation precedence. Management and development of knowledge about cultural value within social planning is a concern for several academic subjects: architecture, landscape architecture, history (architectural history, art history and settlement history), conservation and archeology.

Cultural value in detailed development plans appears as qualities, properties and experiences that can be identified, visualized and described in cultural environment examinations by consultants. Randall Manson (2002) highlights cultural value in an international context. He points out that cultural value often refers to the visible qualities and attributes of things. According to *The Value Handbook* (2006) by CABE, cultural values in architecture tell us who we are both in a historical and in a contemporary context. The heritage provides identity to our time and place in history. Cultural value in built environments connects us to past and future generations, contributes to our sense of national identity and represents human achievement. Kristen Olsson (2003) notes that concepts such as cultural environment and heritage reflect an antiquarian point of view held by the Swedish National Heritage Board. To protect, preserve and administer becomes more important in an antiquarian context than to refine cultural environments and renew cultural heritage that have been designated as valuable. These conflicting perspectives come into expression in the planning and design of detailed development plans in Gothenburg. The detailed

development plans are designed and reviewed according to regulation in the law, identified cultural values and exploitation. Photomontages and illustrations have to provide a just view of planned renewal and its effect on national interests and designated cultural values in the planning documents. This is a prerequisite for fair assessment of detailed development plan proposals.

Purpose, Theory and Method
This article examines, analyzes and discusses compensation thinking in connection with planning and design of detailed development plans for areas of national heritage interest. The examination has been limited to three detailed development plans in Gothenburg. The purpose is to understand compensation expressions in detailed development plans and how compensation functions appear in the planning process. The case study method forms the theoretical framework for the examination (Schön, 1983; Groat and Wang, 2002; Johansson, 2007). From an initial selection of 39 detailed development plans, three cases have been chosen for an in-depth study. The motive for the selection is strategic. The detailed development plans are assumed to convey information about compensation thinking in contemporary planning.

There are two main reasons for the choice of case study as a method for description and analysis of the chosen detailed plans. To begin with, the method is suitable to highlight complex connections. Case studies result in information rich stories. The second reason lies in the case study's closeness to practice. Professional competency in architecture and urban planning appear as a repertoire of cases – examples of solutions that after revisions are reused for new assignments. Flyvberg (2006) defends the scientific importance of case studies. He emphasizes that the case study is useful both to develop theories and to test new knowledge. Data from the chosen detailed development plans have been collected, compiled and analyzed as cases with support from the five following methods:

- **Archive Studies:** To gain an overview of the contents of the detailed development plans, the city planning authority's archives were reviewed on site. Examples of key documents are the detailed plan applications, mission plans, the consultants' cultural environment investigations, detailed development plan proposals with revisions, examination verdicts, accepted detailed plans, appeals and verdicts. Complementary contracts that regulate the implementation have been obtained from the archive of the Property Management Administration.

- **Close Reading:** The key documents have been analyzed through close reading (Brummet 2010). Words and sentences that describe the key players' attitudes towards cultural values have been examined in detail and compiled in a meaningful pattern.

- **Site Visits:** The sites for planned and implemented building projects have been studied. The sites are a source of knowledge. Site visits make apparent to what degree new built environments have been adapted to the surroundings, the detailed plan's effect on cultural values in the area, as well as accomplished implementation of compensation measures.

- **Seminars and Workshops:** The preliminary results of the study was discussed at two seminars: at the City Planning Authority in Gothenburg (2018-09-06) and at the Swedish National Heritage Board in Stockholm (2018-10-08). Additionally, selected detailed development plans and their treatment of cultural values were discussed at workshops held at two conferences: first, at a conference about cultural environment and community planning held in Stockholm (2018-01-14) and at an international conference in Denmark, Aarhus (CHAT 2018-10-27). The paper has also been presented at the NAF symposium in Gothenburg, 13-14 June 2019 and in Bologna at the IX AISU Conference, 11-14 September 2019.

CASE STUDIES

In this section, the chosen detailed development plans from Gothenburg are presented. It is the Town Planning Office (TPO) that produces these planning documents. The case descriptions treat the planning and design with focus on cultural value and compensation thinking. The detailed development plans have in common that they make possible exploitation that affects areas of national heritage interest. The national heritage descriptions contain a motivation for the appointment and a short description of how cultural values are expressed in the area. Styrsö, Guldheden and the City Center of Gothenburg are three national interests that are included in the cases.

Case 1: Dwellings and Premises on Styrsö

In 2011, Treuddens Förvaltning applies for a plan ruling for new construction, extension and reconstruction on Styrsö, which is located in the southern archipelago of Gothenburg. The intention is to build new dwellings, reconstruct existing group homes and expand a lodging house on the plot with apartments (Request for Detailed Development Plan 2011-08-

31). To the application, a layout with new buildings placed on the plot is attached. In 2013, TPO gets the task to establish a detailed plan for exploitation after the Property Management Administration left the land allocation to the property owner. TPO notes that the plan area is an area of national heritage interest. In the national heritage description, the built environment of Styrsö is designated as rich and varied with elements of older agricultural settlement. Here exists a coastal and archipelagic environment with contents from the Stone Age to present day. With reference to the national interest, the expansion is to be studied in the plan work with a starting point in landscape image and the older built environment of the surroundings, (Statment 2013-03-26). It is, however, first after notations from referral bodies that the detailed plan is completed with an antiquarian planning material. The following key sentences in the national interest description describe the connected cultural values of the built environment:

> T*he built environment gives as an overall effect a rich and varied view of an archipelago parish […] Here, there exist older agricultural and fishing settlements on Brännö and Styrsö Hallsvik. The later development for fishing with denser built environment and concentration around the harbor appears particularly well at Styrsö Tången. Styrsö Bratten is the best example of built environments of seaside resorts. The lighthouse and maritime pilot place at Vinga and the quarantine establishment on Känsö are the only preserved establishments of this kind in Northern Europe* (National Interest Description:21).

Detailed Plan

In 2015, TPO presents a detailed plan for consultation that allows a varied use of the land. The plan proposal makes it possible to build 50 dwellings as villas and apartment buildings at the site (Detailed Development Plan 2015-09-23). The lodging house, which was built at the start of the 20th century as staff housing for nurses, will be complemented with hotel rooms, alternatively, dwellings and summer café. It also allows use of the site for exhibitions and a gathering hall. According to the proposal, the existing group home can be demolished to give room for new buildings. Likewise, an apartment building repurposed as a bed and breakfast, called Äpplebo, may be demolished to make room for new built environment. The exploitation is connected with the design requirements for new built environments. To promote the planned additions, TPO complements the detailed plan with suggestions for exemption from shoreline protection in the area. TPO sees this limitation of

outdoor life access as so minor that no compensation measures are needed to make up for lost natural and recreational values. The need for dwellings is judged as more important than the national heritage interests for cultural preservation and outdoor life. In the proposed detailed development plan, the following items are identified as important for the planning.

- A living archipelago all year round
- An important tourist attraction and recreation area
- A car free district mainly with dwellings
- A "homogeneous" population and unilateral housing supply

The assessment is, however, that exploitation is more important than the preservation of the cultural environment. TPO highlights the need for work-places and dwellings of varying sizes and means of tenure. Culture and nature make Styrsö attractive and puts demands on care and preservation. This is a somewhat contradictory position between conservation and exploitation. Two buildings, according to the detailed plan, can be demolished in connection with exploitation of the area (Figure 4, Figure 5).

Figure 4. Villa Äppelbo. The building is going to be demolished in connection to exploitation of the area. Photo: Magnus Rönn.

Figure 5. Group home for elderly. This building will be demolished in connection to exploitation of the area. Photo: Magnus Rönn.

Critique and Complementation

The County Administration Board deems that the detailed development plan needs to be adjusted with regard to the Shoreline Protection Act. Exemption demands particular reasons and no such circumstances are accounted for. Because the exploitation occurs in an area of national heritage interest, there should have been a cultural-historical examination as foundation for the plan proposal (Remark 2015-11-03). The Cultural Administration describes Äpplebo as a cultural-historically valuable house (Figure 4). The administration asks for a holistic approach in the planning process. The intended built environment needs to be designed in harmony with the surroundings of the site (Remark 2015-10-02).

TPO notes that the question for exemption has to be investigated further. Better planning material is needed to judge how the cultural environment is affected. The lack of knowledge about cultural values at the site in the detailed plan is remedied by hiring consultants to do investigative commissions. The consultant company Radar receives the task to describe the cultural values of the site and to judge the consequences of the planned built environment. The consultants are also to develop plan rulings that will assure cultural values (Built Environment Analysis and Landscape 2016-05-31). According to Radar, the new built environment suits the location. There is nothing wrong with the fundamental principles of the design. The cultural environment of the area can be assured through regulation of the detailed plan through facade material, color, socle, balcony front and windows. Large trees at the site should be preserved. Rio Göteborg is hired to conduct an archeological examination. The archaeologists find a new ancient monument in the area (Archeological investigation 2015).

TPO completes the plan and implementation description with texts from the consultants' planning material. It is about design principles for the controlling of architectural solutions, design regulations, settlement historical descriptions and remnants from the Older Bronze Age. The built environment is limited to provide protection for the ancient monument. The land-use in the detailed plan continues to be flexible and enables demolitions as well as the erection of new dwellings and the establishment of hotels, hostels and restaurants. The design regulations, however, are detailed and control the design of veneer, materials, colors, socle, balcony fronts and windows with vertical divisions (Figure 6).

The revised proposal still contains proposals for exemption from the Shoreline Protection Act. TPO states that the need for new dwellings on Styrsö represents an interest that is more important than the shoreline protection and the cultural values of the area (Detailed Development Plan 2016-11-22). The design regulations are to guarantee that exploitation takes the surrounding built environment and landscape into consideration. The County Administration Board approves of the motives for the exemption. The requirements of the design are judged as sufficient with consideration for the cultural environment of the site (Remark 2016-09-06).

Compensation

TPO considers the need for new dwellings and businesses on Styrsö to be of greater importance than the preservation of cultural values. The trade-off of interests results in a planning process that aims to make the site available for exploitation. Therefore, the demolition of houses and additions of new buildings do not consist of decisive objections. Because the planning material for the cultural environment is produced only after the plan proposal is presented for consultation, the compensation measures receive a partially administrative alignment. The exploitation of the area is motivated in two ways in the detailed plan: 1) the plan and implementation description is complemented with accounts of the cultural environment and 2) the design of new built environment is controlled through detailed design requirements. The first method aims to redeem lack of knowledge in the plan proposal. TPO adds texts and illustrations from the investigations made by the consultants to the detailed plan, which therefore obtains references to the settlement history of

Figure 6. New buildings and reconstruction of existing houses in a traditional architectural design. In the background, towards the hill, there are new buildings in modern architectural style. Source: Detailed development plan for Styrsö Skäret lodging house and dwellings, Gothenburg City.

the area, landscape image and cultural values. The result is a better proposal. The second method creates acceptance through detailed plan regulations. The design of intended built environment is adapted to the identified qualities of the site. The detailed development plan appears as a negotiation result with exchanges of viewpoints and adaptations that make implementation possible at the same time as the risk of considerable damage to an area of national heritage interest is minimized, with consideration to demolitions in the area. The encroachment into the cultural environment is accepted by the County Administration Board.

Case 2: Student Accommodations in Guldheden
In 2014, TPO produces a detailed plan for Northern Guldheden. The purpose is to complete the district with accommodation for 50-55 students. The developer is SGS Studentbostäder. The student accommodation is to be built in Olssons trädgård, which is situated in connection to Guldhedstorget. The park was created in the 1930s by the artist Carl Oskar Olsson. TPO states in the detailed plan that the accommodations are to be designed with careful consideration of the cultural-historical values because the area is of national heritage interest (Statement 2014-03-31). The area is additionally part of the municipal program for preservation of cultural-historically valuable built environments (Figure 7 and Figure 8). In the national interest description of northern Guldheden, the expression of the district's values is phrased as follows:

The nature adapted plan of 1944 with three connected ring roads, which softly follow the terrain. The sparsely grouped built environment with alternate short, three storey slab blocks and seven storey tower blocks, lies in a surrounding of barren rocks and greenery. The silhouette with "mountain towers" on the ridge above central Gothenburg is a characteristic landmark in the cityscape. The design formation of the built environment is with the simple, shadow catching details of the brick architecture of the veneer. The structure of family apartments with playhouse in the center of the area and connected center facility for social and commercial service – a built tower with low, plastered store mews and small apartments that were originally intended for housekeepers as well as seven storey cohousing with a connected former restaurant building. In the square environment is inserted a former allotment garden that has turned into a small park with an artificial pond (National Interest Description: 19).

The background of the detailed development plan is an investigation from 2005 that had the task to examine the possibility for complementation of the district with a new built environment. One of the sites that was investigated was Olssons trädgård (Program 2005-11-29). In the investigation, the building of a new built environment in the garden is described as infringement on the "center value" of the national interest, wherefore placement, volume and scale of the exploitation is considered to be a central question in case of a possible mission plan. Three years later, TPO together with White Arkitekter present an antiquarian plan that is to clarify architectural qualities and designated values in the national interest description. Silhouette, plan and architecture are three key terms in the presentation, (Antiquarian Planning Material 2008). The goal is that the plan material will work as a knowledge and inspiration resource for the future planning and building permit process.

Qualities of both architecture and urban design make northern Guldheden an area of national heritage interest. The city plan is adapted to the terrain. The design of built environment starts with the ideal of the neighborhood. The district was built for the exhibition of 1945 called "Live Better" (Bo Bättre), and is considered an archetypal example of the housing construction of the postwar era. In the center of the district lies Guldhedstorget, a demarcated urban space designed with a clear architectural idea as foundation. Olssons trädgård, which was saved at the extension of northern Guldheden, lies in connection to the square. The relation between the park and Guldhedstorget, is marked by a pond with a sculpture and seating areas.

The Detailed Development Plan
The detailed development plan from 2014 permits the building of a new tower block with 50-55 small apartments in Olssons Trädgård (Figure 11 and Figure 12). The existing one storey building at the site is demolished. The tower block is to be placed as close to the street as possible to minimize the intrusion in the park. Veneer material, silhouette and roof are to be adapted to the surroundings. In motivation for the exploitation, TPO refers to the wishes of the politicians for new dwellings, access to public transport and that northern Guldheden has a developed infrastructure that can be jointly used. TPO judges the impact on Olssons trädgård to be moderate. The building of dwellings is not considered as damaging to the national interest (Detailed Development Plan 2014-04-29). Three measures in the plan proposal have a compensatory function: 1) new oaks are to be planted in the park as replacement for trees that have to be cut down because of the tower block;

Figure 7. The boarder for the area of national interest in Norra Guldheden. Source: The 2008 antiquarian planning document from the Town planning office in Gothenburg and the 2014 detailed development plan.

Figure 8. Norra Guldheden from above 1947. Source: The 2008 antiquarian planning document from the Town planning office in Gothenburg and the 2014 detailed development plan.

2) improved seating at the square and 3) the Tower block is divided into volumes to create a smaller silhouette. Through these adaptations, TPO states that the intrusion into the national interest can be accepted.

Critique and Complementation

In the consultation, the politicians of the Cultural Affairs Committee back the administration's remarks and reject the plan proposal. It is unsuitable to place a tower block in Olssons trädgård in consideration of the cultural values of the site. The exploitation is an irreversible encroachment into the park (Statement 2014-05-26). The County Administration Board expresses understanding for the need for compact dwellings, but it does not offset the damage that the detailed development plan brings upon the area of national heritage interest. To build a tower block as a solitary unit contradicts designated values. The plan proposal is rejected and the County Administration Board informs that the detailed development plan may be rejected (Remark 2014-06-13). TPO moves forward with the detailed development plan and hires Archidea to do a cultural environment and cityscape analysis of the exploitation. The new consultant also proves that the tower block has several negative consequences for the architectural qualities and cultural historical values of the site (Archidea 2015-02-25). According to TPO, the need for dwellings, however, does weigh heavier than the effect on the national interest (Detailed Development Plan 2015-08-18). Partially to meet the critique, the volume and height of the building can possibly be reviewed. In the revised detailed development plan, the tower block has 40 small apartments distributed over seven floors. The tower block has gained a smaller silhouette (Figure 9 and 10). Now the County Administration Board accepts the placement in Olssons trädgård on the condition that the detailed development plan is complemented with detailed design terms (Remark 2015-09-23). The solution lies in the architecture of the building. TPO takes the opening into account and adds a number of detailed design terms to the detailed development plan. The tower block is to be (a) divided into volumes to create a narrow silhouette, (b) be provided with a hipped, brick roof without dormers, (c) be given a carefully detailed design for the eaves, socle, windows, gates, porches and balcony railings, (d) the veneer is to be done in brick or plaster and (e) the color palette is to harmonize with the surroundings. Additionally, an antiquarian expert consultant is to take part in the building permit process (Detailed Development Plan 2015-12-01). Through these measures, the exploitation is accepted and the County Administration Board refrains from reviewing the detailed plan.

Compensation

TPO stresses in the interest trade-off that the construction of dwellings is a prioritized political goal. Dwellings are a prioritized interest in the comprehensive plan, which is the reason why the building of new small apartments weighs heavier than the preservation of the park. The ruling principle in the plan mission is to make the site available for exploitation through an exchange of demands and viewpoints that gain a compensatory function in the planning process. Critique leads to modifications of the plan proposal. TPO uses five means that make it possible to build student accommodations in an area of national heritage interest: 1) complementation of plan and implementation description, 2) detailed design terms, 3) reduction of the silhouette of the building, 4) planning and improvement of seating and walkway and 5) antiquarian expert for control of the building permit. The detailed development plan is gradually expanded with images and text portions from the planning material that describe the cultural environment and its values. TPO comments and

Figure 9. The park close to the square in Norra Guldheden. Photo: Magnus Rönn.

Figure 10. Green area and park in Norra Guldheden. Photo: Magnus Rönn.

critiques problematic illustrations provided by consultants that emphasize the negative consequences the exploitation has on the national interest.

The introduction of the detailed regulations for the control of the design helps to create acceptance for the impact on the cultural environment. The design demands and placement of the tower block next to the street are described as mitigating circumstances that minimize the encroachment in the park. The remaining sections of Olssons trädgård are to be preserved as a public park, which makes the County Administration Board accept the placement. The felled trees in the park are replaced through the planting of new oaks, the square receives new seating and the staircase/walkway in the plan area is improved. Finally, the design is to be quality assured in the plan and building permit process through antiquarian expertise. The compensation thinking appears in this case as both administrative additions in the detailed development plan, measures, detailed design terms, and as control of design and the building of the tower block.

Case 3: Dwellings at Carlanderplatsen
In 2006, the Property Management Administration turns to TPO and orders a detailed development plan for the building of dwellings at Carlandersplatsen. The same year, TPO is contacted by Akademiska hus who wants to expand the University of Gothenburg into Renströmsparken. As support for

Figure11. The new tower block with placement in the park close to the square in Norra Guldheden. Photo: Magnus Rönn.

Figure12. The new tower block in the streetscape in Norra Guldheden. Photo: Magnus Rönn.

the expansion, initial sketches by GF Konsult are attached (Request for Plan Change 2016-07-13). TPO coordinates the requests for the detailed development plan in a preliminary investigation. The plan area is used for recreation and is included both as an area of national heritage interest and in the municipality's program for the preservation of cultural-historically valuable built environments (Preliminary Investigation 2006-09-08). Despite that, the area appears as possible for exploitation in a detailed development plan that allows for new land-use of parkland.

It is a controversial exploitation of green space that is suggested. A majority of the members of the City Planning Committee approve the proposal however, and give TPO the task to create a program that will provide the university's need for premises and at the same time will try to build new dwellings at Carlanderplatsen. The national interest description of the central part of Gothenburg is relatively extensive compared to other descriptions. However, cultural values are clearly connected to the plan area. The following parts of the national interest description are relevant:

> *The urban building of the 20th century and the continued expansion of the city with the initial decades' terrain adaptation, unregulated plan pattern, but also the complementation of the grid city […] Upper Johanneberg with institution complexes in park environment […] Götaplatsen with surrounding institutions. The villa neighborhood of Lorensberg and closed off rental house neighborhoods of lower Johanneberg. The functional city building of Folkhemmet in upper Johanneberg with slab blocks oriented in the cardinal directions in a mountainous natural environment* (National Interest Description:15-16).

Plan Program and Critique

In 2009, TPO presents the program as a foundation for a detailed plan that contains dwellings and an extension of the university. The building of new dwellings is lifted as a prioritized goal for the municipality together with densification of the city. In the weighting between exploitation and preservation of natural and cultural values, TPO reaches the conclusion that part of Carlanderplatssen can be built upon. TPO does not see any risk of the expansion damaging the national interest, or that it will lead to considerable effects on nature and landscape (Program 2009). Experts at the Cultural Affairs Administration point out that Renströmsparken was part of the Jubilee Exhibition of 1923 in Gothenburg (Statement 2009-05-25). The Park and Landscape Committee wants to remove all dwelling projects at Carlanderplats-

en (Protocol 2009-05-12). The greenery that will disappear because of the construction in the park should be reintroduced to the site as sedum roofs. The County Administration board is mainly positive to that the University gets their need of space met and that it allows for the building of dwellings in an attractive location (Consultation Remark 2009-06-11). At the same time, the County Administration Board indicates a few uncertainties in the planned exploitation. The limit for the new built environment has to be specified and the design has to be clarified. TPO targets the continued plan work on expansion of the university in Renströmsparken, preservation of the green strips in the area and the construction of new dwellings at Carlandersplatsen.

The Plan Material

TPO orders three planning investigations for the detailed development plan: a cultural environment investigation from Melica (Figure 13), a nature and landscape analysis from Calluna (Figure 14) and an aesthetic program from Tengbom, an architects' office (Figure 15). According to the nature and landscape analysis, the plan area has great natural values that are negatively affected by the exploitation. Red listed ash trees and 19 trees of natural interest will disappear. As compensation, the consultants suggest that cut down trees be used as birdfeed (Nature and Landscape Analysis 2012-06-15). The planning document for the cultural environment is an extensive investigation that presents (1) historical annual rings in the plan area, (2) urban experience values, (3) architectural details and the character of the cityscape, as well as, (4) critical points that from a cultural environmental point of view are important at exploitation (Cultural environment Report 2012). The consultant points out that the area is of cultural-historical importance and has had a central role in the development of the city. In the ground, there are remnants from the Gothenburg Exhibition of 1923. The planning document expresses a developed image of the cultural values, but lacks clear advice as a base for the design of an intended built environment. As critical points, the consultants emphasize the scale and character of the built environment, the paths, passages, connections, terrain adaptations, architectural qualities and materials. TPO has limited the aesthetic program to Carlanderplatsen. The program provides a short background on the commission. The focus is, however, on the design and construction of new dwellings at the site. The consulting in the program goes from an overreaching design idea as foundation for the design. The aesthetic program contains both the comprehensive and detailed design. The architectural consulting comprises built environment and traffic as well as choice of material, color scheme, surface pavements, seating and plants (Aesthetic Program 2012-08-28).
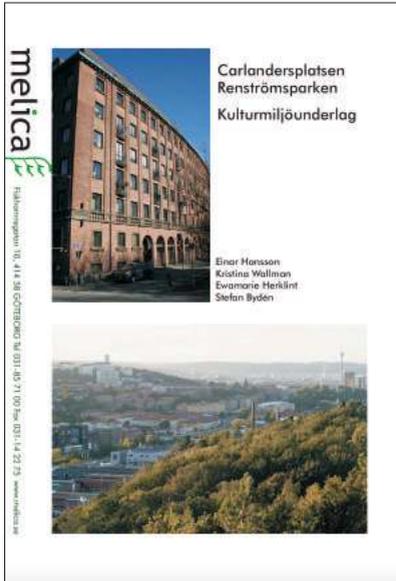
Figure 13. Front page of the cultural investigation by Melica.

Figure 14. Front page of the nature and landscape analyze by Calluna.

Figure 15. Front pages of the aesthetic program Tengbom and Gothenburg City.

Detailed Development Plan

In 2012, TPO presents their plan proposal for the extension of the University of Gothenburg into Renströmsparken and the construction of 115 dwellings at Carlanderplatsen with adherent changes of the land-use (Detailed Development Plan 2012-09-05). Four residential blocks can be built according to the plan proposal. The County Administration Board sees the dwellings as a positive addition to the environment, although the design of skylights and roofing needs to be reviewed. The exploitation of the landscape however does have a negative effect on the woodpeckers in the area (Consultation Remark 2012-10-15). The Cultural Affairs Committee has no objections to the encroachment in the area of national heritage interest. The Parks and Landscape Committee, however, wants to limit the exploitation. Two of four residential buildings at Carlanderplatsen should be excluded. This objection is important. The final plan proposal by TPO only includes two dwellings at the site (figure 16). The politicians in the committee also want to limit the expansion of the University of Gothenburg. The intent is to protect Näckrosdammen in Renströmsparken. TPO prioritizes planned exploitation and claims that from a public point of view the plan proposal is the most suitable land-use. To mitigate the critique, a number of compensatory measures that aim to recreate natural values that would disappear because of the exploitation and measures to preserve cultural values in the plan area are presented in the detailed plan (Detailed Development Plan 2015-10-27).

Compensation

The detailed development plan contains both compensation measures for the encroachment in the landscape and administrative changes as well as regulations that use cultural values at the same time as the land becomes accessible for exploitation. The national heritage description of the center of Gothenburg gives no clear image of the site's cultural values. In this case, it is likely that it is the cultural environmental investigation by the consultants that is the foundation for the compensation thinking in the detailed development plan. TPO describes in the interest trade-off the expansion of the university and the building of dwellings in the plan area as a socially useful investment that is seen as more important than the preservation of the natural and cultural environment in the area. Exploitation is prioritized. As compensation, there are both concrete measures and revisions of the detailed development plan with directions that regulate architectural design and the land-use.

The manner to remove obstacles to the detailed development plan and its implementation consist of four methods that get a compensatory function. 1) Complementation of plan and implementation description with text and illustration from the cultural environment material, 2) new buildings with support from a design program adapted to the site's architecture and the city plan, 3) regulations in the detailed development plans that protect selected natural and cultural values, and 4) compensation measures as amendment for the encroachment in the landscape at Carlanderplatsen. It means that the area is to be (a) thinned out and have new viewpoints added, (b) gain a walkway with new benches, bins and lighting, (c) natural stone is to be reused for the construction of new stairs, (d) protection for foundations from the Gothenburg Exhibition of 1923, (e) protection for bird biotopes and (f) felled trees are to be saved to give the lesser spotted woodpecker a good natural environment.

CONCLUSION AND DISCUSSION

There are several demands and wishes in the detailed development plan process that gain compensatory functions. Compensation thinking in planning can be summarized in the following model on expressions: (Figure 17) The compensation in the three cases is expressed as problem solving, planning method, concrete measures and means of control that promote exploitation. In common is the underlying intent: the implementation of the plan.

Figure 16. Two new dwellings in the detailed development plan for Carlanderplatsen. Illustration by Wallenstam and White. Source: Detailed development plan for dwellings and businesses at Carlanderplatsen and Renstörmsparken.

The obstacles have to be removed through revisions of detailed development plans and the intended built environments have to be adapted to the cultural values of the site. It is fundamental that detailed development plans contain both demolitions, protection of cultural-historical values and detailed design requirements for new built environments. These often "hidden" expressions of compensation are imbedded in the plan process as demands for consideration of areas of national heritage interest. Likewise, the mitigation of lack of knowledge in the detailed development plan proposals is an unspoken form of compensation that appears in revisions of plan and implementation descriptions. The knowledge gaps in the proposals are filled with data from the investigations into the cultural environment made by the consultants. This is compensation with an administrative character. The prime example is complementation with text and images from the consultant investigations that make the detailed development plan appear as better decision-making material.

Compensation as problem solving is about removing obstacles for new built environments by accommodating important objections by key players against the proposals in the detailed development plan. For example, remarks from the County Administration Board that are about the detailed plan risking to considerably damage national interests are a "problem" for TPO that has to be removed. Such objections lead to revisions of detailed plans.

Compensation as method aims to make the land available for planned built environment by balancing interests. Needs and utility are weighed against damage and measures that have compensatory functions. Exploitation is in the cases combined with protection, preservation and demands for architectural design.
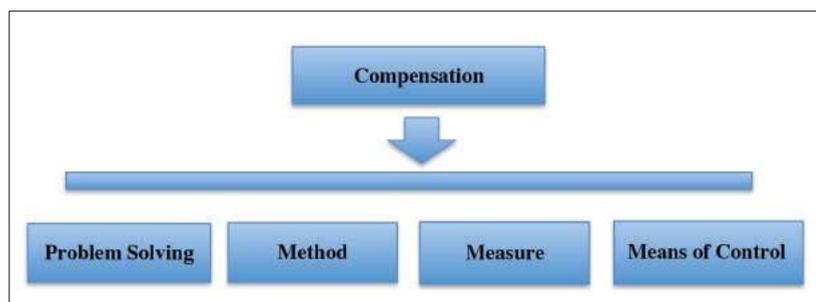

Figure 17. Model by Magnus Rönn illustration compensation in detailed development plans as problem solving, method, measure and means of control.

Compensation as measure is expressed in several different ways in detailed development plans. It can be measures that either aim to minimize the loss of natural and cultural values or restore damaged qualities in the area. Such compensation measures can be found in the detailed development plans for northern Guldheden and Carlandersplatsen. Compensation as measure can also appear as changes of the plan and implementation description, where lack of knowledge is remedied. Compensation has in this case an administrative character, although the consultants' investigations lead to new knowledge of cultural values, which to a varying degree affect the design of new built environments. Compensation as means of control has several different expressions in detailed development plans, such as regulations of preservation, protection and design demands of new built environments. These kinds of compensatory functions increase in number during the plan process as an answer to the lack of knowledge about the cultural values and architectural qualities at the site, demands from regulations and key players and needs for changes that makes exploitation possible. In a corresponding way, aesthetic and quality programs are instruments for the design of architectural solutions in the area.

Compensation Forms

There are several different forms of compensation in the cases. The compensation thinking in the detailed development plan process appears as both expressed compensation measures and as implicit demands that have compensatory functions. It is not the phraseology that decides what is compensation but the aims and effects of the actions. From this point of view, the following compensation forms can be found in the cases:

- **Cultural Environment Investigation:** All three detailed development plans contain cultural environmental investigation as planning material. The national heritage descriptions have to be interpreted, complemented and concretized into requirements to be usable in detailed development plan processes. Special consultants have therefore been hired to identify cultural values and architectural qualities in the plan area. A recurring question in the consultations is to what degree the presented values have been preserved in the detailed development plan.

- **Revisions of Plan and Implementation Descriptions:** In all three detailed development plans, the plan and implementation descriptions have been complemented with material from the cultural environment descriptions by the consultants. It is a way to create, from a cultural

environmental point of view, a better decision-making material that legitimizes the encroachments into the areas of national heritage interest. Additionally the risk of the detailed development plan being viewed as incomplete is minimized. TPO presents which aspects of the consultations have led to revisions of the plan proposals. At the same time as the detailed development plans become richer with knowledge of cultural values, this form of compensation has an administrative character.

- **Compensation Measures:** The detailed development plans contain several examples of expressed compensation measures that are to make up for damage of the landscape following the exploitation. Concrete compensation measures are to be found in the detailed development plan for Norra Guldheden where parkland is claimed for the tower block. Here the compensation measures consist of replanting, new seating and a walkway. In the detailed development plan for expansion of dwellings at Carlanderplatsen, the compensation measures are thinning of greenery, new viewpoints, new seating and reuse of paving stones for walkways. The design demands in the cases are an unspoken form of compensation measures with concrete effects on the design of new built environments.

- **Plan Regulations:** In the cases, protection, design and caution regulations exist as a hidden form of compensation. It is a way to combine building and demolition with protection and defense of cultural values in detailed development plans. The greater the objections from the key players, the more detailed demands that exist in the detailed development plans. The detailed development plans for Styrsö as well as the detailed development plan for Norra Guldheden allow demolitions of built environments in an area of national heritage interest. In both these cases, the obstacles for demolitions are removed through detailed design regulations of built environments in the area. The plan regulations contribute to that the Cultural Affairs Administration and the County Administration Board accept the demolitions.

- **Aesthetic Program:** This means that cultural environmental investigations describing cultural values and qualities of architecture and cityscape have been further developed into programs that form the basis for the architectural design of the planned exploitation. This is the case with the detailed development plan that enables the building of new dwellings at Carlanderplatsen. In this case, the compensation thinking is a fundamen-

tal prerequisite for the renewal. Through the hiring of new consultants, identified cultural values and architectural qualities are transformed into design programs for architectural means of control of the exploitation.

- **Antiquarian Control:** This means that cultural environment based design regulations are followed up by experts in planning and building. This is the case of the detailed development plan for the student accommodation in northern Guldheden. Initially, the County Administration Board sees the exploration as a considerable damage to the national heritage interest. The placement in the park is judged as unsuitable. However, the addition of detailed design regulations and antiquarian control of planning and building allows the County Administration Board at last to accept the building of student accommodation in the park. The measures gain a compensatory function. The addition of antiquarian control is used to quality-assure the design regulations. The demand is explained by the fact that the County Administration Board in a review remark considered that the planned tower block could cause considerable damage to the national interest.

From the reports, it appears that several factors in the cases contribute to the growth of the presented forms of compensation. The driving forces consist of lack of knowledge that has to be remedied, regulations of changes, need for preservation and assurance of new qualities in the area. The relationship between driving forces and compensation forms can be summarized in the following model: (Figure 18).

Interest Trade-Offs
It is particularly two types of interest trade-offs in the studied detailed development plans that effect the result from a cultural environmental perspective. Partly the judgments of the suitability of the site for the planned goal, partly trade-offs between desired exploitation, identified values in the area and desired qualities. It is TPO who answers for the trade-offs in detailed development plans. It is thus the same key player that gains the commission from the politicians to produce plans, test exploitations and make possible new built environment, and which defines interests and values in the area, their physical expression, weight and importance in the specific case. A fundamental question is therefore to what degree the interest trade-off is a meeting between equal viewpoints in the detailed development plan process and how interests are represented. A complementing aspect is if the objective and impartiality of interest are at hand in these kinds of trade-offs.

Behind the planning tasks of TPO, there are political priorities. The need for dwellings is lifted in the detailed development plans as answers to the requested exploitation. Nevertheless, the image is not unambiguous. Demolitions and new building are connected with demands for adaptation, carefulness, protection and prohibition of demolition. This indicates that the exploitation interest has been weighted against cultural values, which in the cases are represented by governmental national interests and local interests for preservation. However, how the interest trade-off is handled and the strength of each interest is not clearly presented in the examined detailed development plans.

The implementation of detailed development plans is regulated in contracts with developers (builders). These contracts are in the cases called plan contracts, land allocation contracts and exploitation contracts. In contrast to the detailed development plans, it is only in one of the cases that it appears that the exploitation happens in an area of national heritage interest. From this point of view, the contracts are poor on information. The cultural environment does not have its own heading in the contract templates. There is no visible coordination in the contracts with national interest descriptions or the municipalities' programs for the preservation of cultural-historical built environments. Instead, compensation appears in the contracts as the result of
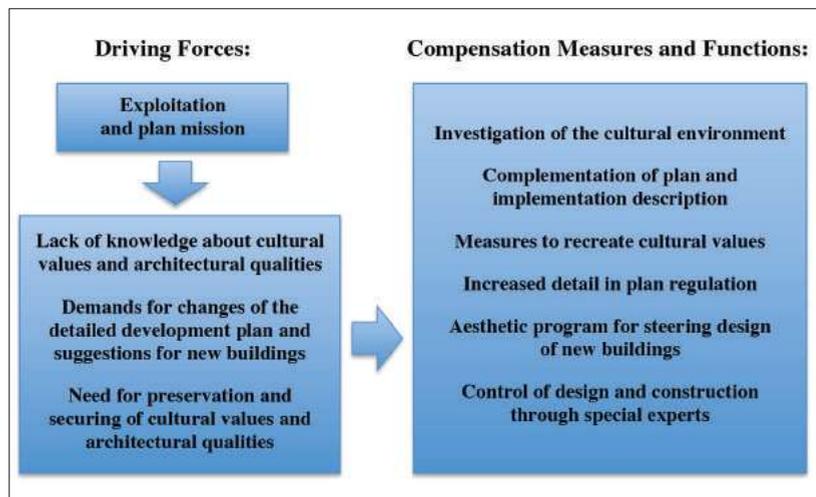

Figure 18. Model by Magnus Rönn illustration compensation in detailed development plans as problem solving, method, measure and means of control.

negotiations in the detailed development plan process, an exchange of view-points that at last allows for new built environments. Both concrete measures and revisions of proposals for detailed development plans that promote exploitation emerge as answers to objections in this negotiation culture.

There is no visible need for legitimization of compensation measures in the cases through references to regulations in the Swedish Environmental Code. The Cultural Environmental Code is invisible. The plan mission aims to make possible the planned exploitation with support from the Planning and Building Act. It is an overarching goal that can explain why the compensation thinking in the planning and design of detailed development plans appears as problem solving, planning method, concrete measures and strategies to remove obstacles. The negotiation culture is goal-oriented and combines demolition to give room for new buildings, with preservation through demands for architectural adaptation and protection of cultural values. An interest trade-off puts large demands on the planning documents. The short national interest descriptions do not provide sufficient instructions and therefore need to be further developed in the detailed development plan processes. For that reason, , the consultants' investigations have a deciding importance for the possibility of understanding cultural values as resources in planning.

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UNSPOKEN COMPENSATIONS FOR CULTURAL HERITAGE VALUES?
THREE PLANNING EXAMPLES FROM FINLAND

Helena Teräväinen

ABSTRACT

Since 2013, several projects have been running in Sweden about cultural heritage values and compensation in urban planning. New possibilities have been scrutinized to find out how compensation measures could also be possible to use as not only an extension of the polluter pays principle but also when a project results in negative impact on cultural heritage.

In Finland, the legislation does not concern compensation for the lost or threatened cultural heritage values in the built environment, and only a couple cases exist about compensations in the natural environment. Usually, compensation issues have been handled more from the landowner's viewpoint, for example, when the implementation of local plans prevents the accustomed use of the land. In Finland, the main means to conserve built cultural heritage is the town plan, which can order to preserve or at least deny demolitions. Planning officers and cultural heritage administrators are struggling on different planning levels with owners and politicians, trying to conserve the cultural heritage values, and to adjust new building projects in the environment.

To investigate the key issue compensation in the Finnish context, this paper discusses professional practices in town planning concerning built cultural heritage in three example cases 1) Vaasa (plan alteration and building permit), 2) Seinäjoki (town plan, architectural competition and renovation project) and 3) Lapua (finding and keeping cultural values, re-use of an old factory area). The paper aims to illustrate, how practitioners are using different methods for balancing interests between exploitation and preservation in areas with cultural heritage values.

KEYWORDS
planning, cultural heritage, preservation, re-use, compensation

INTRODUCTION

In Finland, compensation issues have conventionally been a process seen from the landowner's point of view, for example when the implementation of the town plan prevents the accustomed use of the land. The Finnish legislation does not concern compensation for the lost or threatened values of the Cultural (or Natural) Heritage. Recently, there have been some cases about compensations in natural environments and some research projects. However, how to compensate something irreplaceable, either cultural or natural heritage?

The main means to conserve built cultural heritage is the town plan, which can order to preserve or at least deny demolitions. Planning officers and cultural heritage administrators are struggling on different planning levels with owners and politicians, trying to conserve the cultural heritage values and to adjust new building projects in the environment.

The inventories and evaluations of cultural heritage environments have been carried out on different levels. The national level evaluation[1] was made by NBA (National Board of Antiquities, today FCA Finnish Cultural Agency) and the Ministry of Environment together, and was confirmed later by the National Land Use Targets 2009. Additionally, the regional plans display the valuable subjects at regional level. All levels must be shown and conserved on the town plan, which also includes the spots that have been evaluated as locally significant. Local master plans also should have all cultural heritage areas and spots on the map, but according to the *Land Use and Building Act* (1999), the town plan always overrules other plans, and is the most important. Sometimes fights seem to arise between the municipality, regional level and the state. A recent example about the master plan level is Helsinki City Plan, which is the new strategic master plan in Helsinki. This left some big problems to be solved after appeals to the supreme administrative court: for example the Vartiosaari area is involved in the national heritage level RKY, and is also protected as a cultural heritage area in Uusimaa Regional Plan, but Helsinki is growing fast and decided Vartiosaari to be planned for housing. For now, the planning for Vartiosaari is called off, but political decision makers in the capital city probably have not given up on exploitation ideas. Of course, cities are trying to define new ways to handle the value issues, and for example, Oulu City has started in 2019 to formulate a master plan dedicated only for "cultural heritage".

In Sweden, compensation measures are seen as a new method for handling impact on cultural heritage in land use planning. Several projects (Grahn Danielson, Rönn & Swedberg, 2015; Rönn & Grahn Danielsson 2017; Rönn 2018) have studied further the idea how compensation measures can be understood as an extension of the polluter pays principle. Even though the compensation measures in Sweden are also mainly used when natural environments are damaged by development, the researchers have shown how it is possible to use compensation measures when a project results in a negative impact on cultural heritage. The researchers have successfully distributed results and experiences of their work in international workshops and conferences, and encouraged us in Finland to co-operate, and to study and develop the concept compensation in the Finnish context.

The cultural heritage is seen as a subject to conserve or preserve – is it possible to be utilized, too?

Cultural heritage values are seen as irreplaceable, and compensation measures have not even been discussed in Finland. However, the maintenance of the built heritage is founded on an existing purpose of use, either the preserved one or a new re-use. Specialists and authorities on variable levels, among them researchers, architects and planners may have divided opinions, therefore interaction and discussions are necessary in the field.

To increase knowledge in the field, University of Turku and the Association of Cultural Heritage Research organized a development project concerning the education of specialists for the cultural environment. The final report[2] of the project was published 2019, and according to professor Maunu Häyrynen, the organizations working in the field regard very differently the utilization of cultural heritage in the environment. Resources are reducing, and accounting in the state economy is revising the mind-set of the administration. The utilization belongs to the outlook, which sees the cultural heritage as a medium to achieve goals decided from other points of view, not thinking of the values in the cultural heritage environment. The aims can be, among others, the economic development, social integration, or assertion of identity. The utilization can be fulfilled through integrating conservation and care of the cultural heritage with other aims, for example strengthening the vitality, well-being or cultural self-expression.

To enhance cooperation and to share responsibility on different spheres of cultural environment or the built heritage, the Finnish state admi-

nistration organized a strategy project, which took several years, and was intended to be open to the public. The central definitions and goals concerning cultural heritage in Finland have been published in the *Cultural Environment Strategy 2014-2020.*

> *Cultural environment refers to an environment created by human activity, and through interaction between humans and the natural environment. It includes the cultural landscape, the built cultural environment, and archaeological sites. The cultural environment includes both whole areas and individual sites. Cultural landscape is an environment created by the combined effects of humans and the natural environment, which can be viewed, for example, as a regional, visual, empirical or historical whole. The built cultural environment or built heritage includes built areas, buildings, and different kinds of structures, such as roads, bridges and power lines. Archaeological heritage forms the oldest datable part of the cultural environment and is the historical basis for the cultural environment. Archaeological sites are structures, formations or objects made by humans, preserved in the landscape, in soil, or under water.* (Cultural Environment Strategy 2014-2020:9)

Reading the strategy booklet reveals the atmosphere in different administrative domains. It is obvious that cultural values and the cultural environment are treasured. In the strategy, which has 25 pages of text, the most often used words in the cultural heritage discourse are "to preserve" (six times; "preservation" four times) and "to conserve" ("conservation" nine times in the strategy). "Values" is mentioned 25 times, and even "the irreplaceable values" is mentioned once. Actually, the leading thought among the people who work in the field seems exactly to be that values are irreplaceable. A couple of times one can find the phrase "to utilise" and once "to re-use", but never in this text (or elsewhere in the conversations) does "to compensate" turn up.

The strategy shows the present and future situation from the point of legislation. The functioning of land use planning is the most important medium when dealing with the areas of the cultural environment. According to the *Land Use and Building Act* (132/1999), one goal of land use planning is to promote the beauty of the built environment and the protection of cultural values. The content requirements on different planning levels emphasize the protection of the landscape, cultural heritage and the built environment, and land use planning is the most frequently used tool for protecting and enhancing the cultural environment.

The idea and the practice demand different functions to be adjusted to fit together in the land use planning process. The management and protection of cultural environments is based on a comprehensive understanding of the cultural environment as a whole, and land use planning processes support sustainable utilization of the cultural environment. *The Cultural Environment Strategy 2014-2020* aims to reach the state of affairs where the monitoring responsibilities for the cultural environment have been defined clearly and used in political decision-making and administration, and also the cooperation between different administrative branches in preparing legislation has become closer, so that the various laws function more seamlessly in relation to each other. Now that the strategy period is approaching its end, a lot of work has been done, but not all goals have been accomplished. An interesting point of the strategies is always the language and the idea of understanding the same. After finishing my doctoral dissertation on cultural heritage discourse 2006, my interest still is in the developing discourses around the issue. After the *Cultural Environment Strategy* came out in 2016, I have conducted a short survey in the field of cultural heritage experiences and interpretations of different actors, and this revealed how the discourses still differ between different authorities, not to mention how difficult the concept is in public discussions. Definitely more research and new ways to operate are needed also in Finland.

Ecological or environmental compensation?

Cultural values and cultural heritage are apparently highly respected and seen as irreplaceable, but nothing can be found about "compensation". However, in the field of natural environment, there has already been an opening, and the Ministry of Agriculture and Forestry of Finland has done a pre-account[3] in 2017 about different methods for possible compensation processes. The report mentions the term "biodiversity offsetting" becoming increasingly common concerning the natural environment. Other terms in use are "ecological compensation" and "environmental compensation", which can be seen as larger concepts, and not only attached to biodiversity.

In the Finnish legislation, "compensation" is most commonly used in connection with damages to be compensated and the compensation by money. So there is not any terminology in the Finnish language, and because the compensation has been voluntary, no need has risen for exact definitions. However, I will investigate in the paper if compensation is an unspoken practice in town planning, being actions that are embedded in the planning

process, and are expressed as alteration of planning documents, in order to get access to sites with cultural heritage values and implement new buildings.

Reading more about environmental (ecological) compensations[4] opens (perhaps) aspects to consider about the possible compensations in the cultural heritage in the built environment. Nina Nygren, Doctor of Administrative Sciences in Tampere University, has done post-doctoral research about how to define ecological compensation (Nygren, 2015). First, the compensation needs a systematic process. In this system, the nature values should be compensated with nature values and not by money. The compensation involves the weakening, or loss of the local nature values and diversity of the nature, which the possible initiative causes.

In practice, the compensation is situated in complicated processes between man and nature, and even broadly understood it is causing certain systematic uncertainties and problems. Nygren refers to Joseph W. Bull et al. (2013), who mentioned eight theoretical problems in his extended article:

- currency i.e. how to measure the biodiversity (the problem may be worse of course with "unmeasurable" culture values)
- how to define "no net loss"
- equivalence i.e. how to define the loss and gain in the biodiversity
- longevity i.e. how long should the compensation plan continue
- time lag i.e. is the time lag between the loss and the compensation allowed
- uncertainty during the process
- reversibility i.e. if the possible losses of values in natural environment are technically compensable
- thresholds i.e. which kind of threshold values are the upper limits for the compensation

Countries have different systems to lead through these problems, but there is not any totally perfect way to handle them; nature compensation is a process of social negotiation. Nygren points out a big theoretical and political question, which seems to be even more complicated with culture than nature values, that is, if we understand the value compensation as an apparently neutral process, where the values are changed into numbers, calculated and exchanged. There are numerals and indicators in ecology, but then the social, cultural and other more difficult values are left in the background. This is also an ethical question – is this kind of calculation possible or even right?

However, judging values is very difficult to manage as a neutral process, because architectural qualities and cultural heritage values are constantly seen from different perspectives in planning processes. Even if the evaluation already has been done by high level authorities (as in Finland RKY2009) – municipalities and town planning, FCA as a top-down authority, constructor companies, consulting architects and citizens may have different interests for the future of cultural environment. Open discussions, documentation and evaluation of cultural heritage should be always possible in the processes.

Which kind of compensation is possible through negotiations?
As written in the previous section, the environmental compensation is not very widely known or used in Finland, nor concerning nature values, not to mention values in cultural heritage. To update the compensation issue in practice, I have interviewed public servants both in the Ministry of Environment and on the regional level, which according to my view of things gathers the best-updated legal knowledge in planning and cultural heritage questions. Lauri Jääskeläinen is a lawyer acting as a special authority in the Ministry and was already involved in the previous reform of *Land Use and Building Act* (1999).

> *In the context of cultural heritage, preservation is known and sometimes used as the procedure, which you already mentioned in the email: in order that the town plan would not be unjust (out of proportion) and the municipality would not become liable for damage (MRL 57 §), the conservation is compensated by increasing the permitted building volume elsewhere on the site. In practice, the municipalities to my knowledge have never compensated conservation with pure money. The compensation like in your question has been sometimes used voluntarily with some nature subjects. Among others, the concrete company Rudus has voluntarily done different restoration actions in the areas where rock material has been taken. As far the cultural heritage is concerned, I have never come across.* (Jääskeläinen, 5.4.2019, translation by the author)

Another interview was carried out with Pekka Normo, who has also been working as a special authority for several years with the reformation of the Land Use and Building Act. He reasserts that the compensation procedure is very rare in Finland, and according to him is only used sometimes interrelated with natural environment.

To update the planning and conservation issues in practice also on the regional level, I interviewed Juhani Hallasmaa, who is inspector[5] of planning and cultural heritage in Ostrobothnia. According to him, none of this kind or almost none of any preservation activities have taken place in the area. Nevertheless, he mentioned some interesting ongoing planning cases with relation to cultural heritage issues in Vaasa and Seinäjoki, which are discussed in the section describing the case examples.

THE AIM OF THE PAPER & RESEARCH QUESTION

To investigate the key issue of compensation in the Finnish context, this paper discusses professional practices in town planning concerning built cultural heritage. Through the case examples, this paper aims to show how the municipality can offer new building volumes in the town plan as compensation for conserving old buildings. Compensation in this context is also expressed as exchange of views and requirements in planning that may lead to alteration or preservation in cultural environments.

- Which kind of tools and methods are the practitioners using for balancing interests between exploitation and preservation?
- Which kind of compensations can be detected in the planning process in the case studies (in this paper)?
- How could the compensation be defined in the Finnish context?
- How could practices from other countries be implemented in Finland?

METHOD AND THEORY

The research method here is case study research, and the aim has been to deal with it in the most rigorous way, using two cases from the same time period and the third, which was antecedent as a comparative case. The context of the cases is broadly the same: three towns dealing with preservation or exploitation and re-use of cultural heritage in Finland, Southern Ostrobothnia. Case study is the preferred method in situations like these, when in the beginning the main research questions are "How?" and "Why?" and the researcher has little or no control over behavioural events, and the focus is on a contemporary (as opposed to an entirely historical) phenomenon in its real-world context (Yin 1989/2014).

A case can be an individual: a group, or a class, it can be an institution or a town planning process with a centrepiece of old buildings already or not yet highly evaluated as cultural heritage on the national level. The case of

Old Paukku in Lapua, which has been thoroughly investigated, beginning in 1992, presented in a doctoral dissertation (Teräväinen 2006), discussed in scientific papers (Teräväinen 2010; 2014; 2018), is in this paper used as a comparative case on which the cases from Vaasa and Seinäjoki are reflected. A case could also be a large-scale community, like an industry, a profession or a town. It can handle also multiple cases in the same context.

A case study investigates the subject to answer research questions that may be loose in the beginning, and which seek a range of different kinds of evidence, which lie there in the case setting. No one kind or source of evidence is sufficient or sufficiently valid on its own. The use of multiple sources of evidence, each with its strengths and weaknesses, is a key characteristic of case study research. Another characteristic is that in the beginning there are no a priori theoretical notions, whether derived from the literature or not, because until the data is there and the context understood, it is impossible to know what theories or explanations would work best or make the most sense (Gillham 2000).

Basically, a case study is an in-depth study of a particular situation, to delve profoundly and to research them from different viewpoints (Shuttleworth 2008). This heartened the author to use once more Old Paukku, from which she knows inclusively and had, one can say, the actor's or participant's knowledge, which is very useful and can reveal issues with so called inside-knowledge. The two other cases were studies created by using interviews and documents in archives. The difference between an inside actor and a researcher coming from outside the case is of course remarkable: in Vaasa could be found several cases where the planners were not eager to discuss the purposes of research.

The aim of the study was to find out how the compensation is used (or is it used at all) in the urban planning context in Finland. Therefore, the research was more to make new perceptions, not so much to generalize or to find typical features, because usually this method is said to be not generalizable. On the other hand, the highly recognized researcher Bent Flyvbjerg has expressed the view that this is one of the five misunderstandings about case study research (2006). He argues that it is possible to generalize on the basis of an individual case, and therefore that the case study can also contribute to scientific development.

The primary aim in the case Old Paukku (2006), which here is used as a comparison, was to understand other actors' subjective intentions, which in the end came out as collective structures of meanings, i.e. discourses, allowing a Foucauldian power analysis to be carried out. According to Foucault, the discourse is not merely what is said, it is also about who is doing the talking, how they have done it, in what context, in reaction to what, and so on (Foucault 1980; 1997).

The reason for leaning on Foucauldian discourse analysis in the case Old Paukku was due to the extremely centred role of political decision-making in the case. Foucault's discursive practices work both in inhibitive and productive ways, implying a play of prescriptions that designate both exclusions and choices. Now this paper, in dealing with two more cases, does not focus on power relations inside the municipalities, because the research has not been done in the same depth. However, the aim of this paper is to find out the possible ways of "the compensation" used in Finnish planning cases, and so the author has ended up observing the use of certain words and ways of writing, but not applying herself to the power problems. The discourses have been investigated on national and local levels only to find out the use of the concept "compensation". This way, the discourse analysis here leans more on the Anglo-American tradition, which has remained a largely linguistic concept, but it is equally clear that this also could be used within the field of political action (Hook 2002).

EXAMPLES FROM SOUTH OSTROBOTHNIA, FINLAND
CASE 1. Vaasa – Kirkkopuistikko 4 (Church Boulevard 4)
The Vaasa case presents a plan alteration from 2018 in the cultural heritage area, which is significant on the national level, according to RKY 2009. Vaasa is a middle-sized city (67 600 inhabitants) on the west coast of Finland, originating in 1606 during the reign of Charles IX of Sweden. Therefore, the history of Vaasa is quite long even though the original, old city burned in the year 1852. The water border has been moving continuously because the lithosphere is rising ca. 8,5 mm each year in the area, because it was depressed by the weight of a continental ice sheet during the last ice age. So after the fire, both the city centre and harbour were moved closer the sea. The oldest features and buildings postdate the fire. The town plan drawn for Nikolaistad (the name in the autonomy time with Russia) by the county architect C.A. Setterberg from 1855 is still clearly perceived in the cityscape, because the streets and esplanades, parks and many distinguished buildings are still there.

Vaasa has many different subjects listed in the national level invention (RKY 2009), which was made by NBA (National Board of Antiquities; today FCA Finnish Cultural Agency) and the Ministry of Environment together, and confirmed later by the National Land Use Targets. One of the most important areas in the list includes five central parks, which are actually running criss-cross through the city centre, and where public buildings stand in the squares and landmarks in the street ends. Narrow fire lanes run through the neighbourhood precincts. This significant cultural heritage area was drawn and decided already in Setterberg's town plan.

The regional plan obviously displays all targets from RKY2009, and additionally the valuable subjects on regional level. All levels of cultural heritage must be shown and conserved in the town plan, which also includes the spots, which have been evaluated as only locally significant. The street of the case example in Vaasa, "Kirkkopuistikko 4" is situated in the above-described area, and already in the previous plan from 2000 contained protection marks ("sr") for the existing, built cultural heritage. In this earlier plan, the building volume was 3770 m^2 (gross floor area). In the approved town plan of 2018, the permit building volume is increased to 4925 m^2 (gross floor area). The planning documents show elevation drawings of existing buildings and a new tower with eight floors. In addition, another new building has space on the site. For car parking there are underground spaces.

The plan alteration had started after the landowner had sent an application to the town board in September 2016. Planning architect Anne Majaneva, who was interviewed by email March 2019, explained that no negotiations actually were necessary on compensations or generally on values of the cultural heritage, because the landowner had offered already in his application to refurbish the existing, cultural heritage building, if he would gain more floor area for the new building. Of course, the statement of reasoning in the decision documents expressed support for the general growth of needed housing units in the area and the possibility to set off the utilization of the site. Underground parking is expressed as improving attractive living environments and the townscape. The city council has validated the decision to start the planning alteration by focusing on more housing, following the master plan.

The town plan has two different parts: the neighbourhood 1007 consists of the area where the landowner wanted the plan to be altered (Figure 1). The plot has earlier belonged to Vaasa Electricity (their old headquarters had

been in the three floor stone house). Just a couple years after the ownership changed, the new owner sent the alteration application to Vaasa City.

The plan alteration includes also another plot Kirkkopuistikko 2, where the old wooden buildings are already protected by Conservation law from 1994. This part of the plan consists of a very worthy building, so called Hallstén house, which belongs to Ostrobotnian Museum, and has been removed from its location several times. In this plan, Vaasa wanted to confirm the conservation and to enable a new use for the house: a School Museum is planned to be there. The purpose of use is at first expressed as a totally protected area (green colour and SR), but an added text gives possible use alternatives for business, office, service and even housing, and very little floor area: 300 + 50 m2.
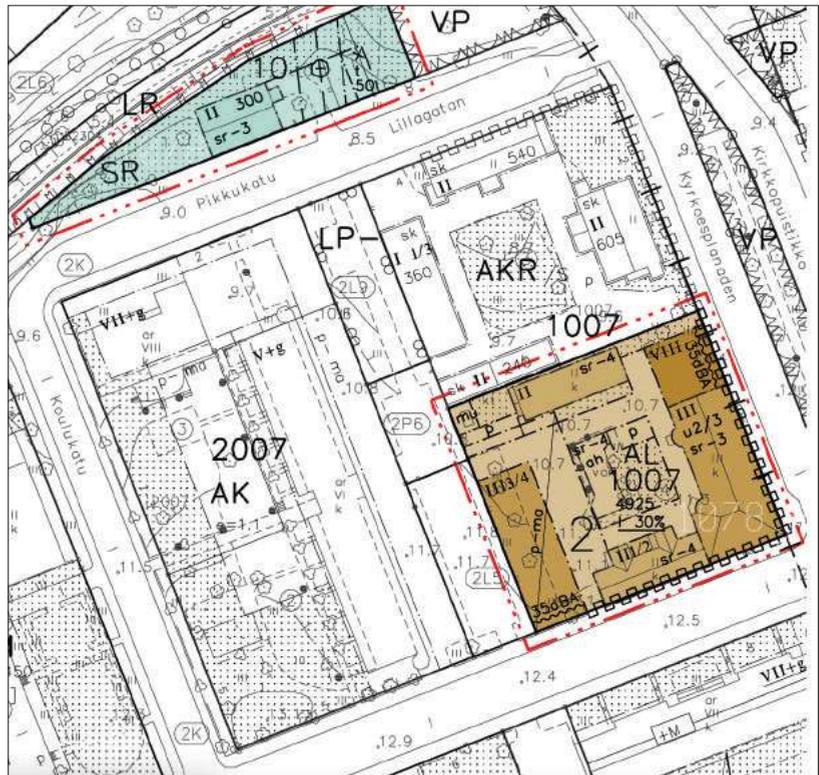
Figure 1. AK1078 Kirkkopuistikko 4. Source: City of Vaasa.

> *The goal of the town plan made possible to build more housing in the central, visible and culturally historical place with suitable architectural means and to give a new purpose of use to the Hallstén House (in a neighbour quarter)* (Vaasa City Council 12.12.2016).

Even though the documents and the interview do not mention any compensation initiatives, it is obvious that the city board and council share a certain understanding of how to make the cultural heritage renovations possible: giving new floor area to the plot Vaasa City allows better economic possibilities for the owner to also renovate the old building with cultural heritage values. To approve the new town plan, the city demanded that the landowner sign the land use agreement concerning the site. Compensation is "hidden" in the case as a pre-condition for land use agreement.

In addition to the planning report and the maps, the planning documents also contain several sketches by consulting architects of the new eight floor high tower and sunlight at different hours in the environment. Adjusted drawings and several illustrations are presented to depict the future townscape. The additional tower appears rather heavy if we are looking only at the site itself, but in comparison with the whole city scale in Vaasa, and in the

Figure 2. The illustration on Kirkkopuistikko shows the eight-floor tower built into three-floor stone house. Source: City of Vaasa.

neighbouring quarters in the area decided with RKY in 2009, the tower is adjusted sufficiently (Figure 2).

In the interview, architect Majaneva mentioned also other possible cases in Vaasa, which could include negotiations on compensation, but the responsible architects were not willing to discuss them. Sometimes the planning process does of course not succeed – and in the end, a couple of valuable buildings have been pulled down in Vaasa. However, Vaasa is an old historical town, and in the planning culture, there seems to be a vigorous drive to raise not only economic reasons but also softer, cultural heritage values. Compensation is obviously already embedded in the understanding of Vasa as an old city and a way of safeguarding cultural heritage values in contemporary planning.

CASE 2. "Kalevan Navetta" (Kaleva Cow house in Itikanmäki) Seinäjoki
An interesting renovation project is currently going on in Seinäjoki: Kalevan Navetta (Kaleva Cow house), an old brick building from the 1890s that will turn into a cultural centre in the middle of a new housing area. Seinäjoki is a rather young city: it received city rights in 1960. Before it was only a small settlement and railway junction. The wooden settlement has gone long ago, and the town is growing fast. Seinäjoki is the centre of Southern Ostrobothnia and today there are approximately 63.300 inhabitants. It has grown in extent because three neighbour municipalities have been abolished and joined to Seinäjoki. The town is well known for its modern architectural heritage: Aalto Centre is the complete administration centre designed by architect Alvar Aalto, mostly in the 1960s, and that is part of the nationally significant cultural heritage (RKY 2009). Today the municipality is very strongly renewing its commercial centre, and the townscape is changing because there will be more high-rise buildings than before.

New housing areas are rising also around the centre; one of them is Itikanmäki where the examined Case 2, Kalevan Navetta (Kaleva Cow house) lies. The planning map shows the area situated between three important and heavy traffic lines. The city centre is located south of this area, behind Highway 19, which is seen on the lower edge of the map with big traffic circles. The other road on the left (west) runs towards Vaasa. On the right (east) is the junction of the railroads: to the north runs the Helsinki-Rovaniemi line, which is the main railway line in Finland. Towards the west, the line turns toward Vaasa, which is not operated as heavily. Recently a bridge has been built over the Highway 19 for bicycles and pedestrian traffic.

The Itikanmäki area is located outside the city centre and behind the highways, which allowed the former small industrial quarter to stay unoccupied for quite a long time, and luckily the old cow house was kept and not demolished, even though the huge roadwork nearby threatened the building thirty years ago. Actually, the building had never housed cows, already during construction in the 1890s, the owner Life Insurance Company gave up cattle tending. From 1912, a broadcloth factory started there, and in the 1930s, the defence force bought it for a warehouse.

As already noted, Seinäjoki does not have a long history; neither does it have as many old distinguished houses as Vaasa. The town has a modern appearance and is under on-going change. However, during all its existence (the town has its 60th birthday in 2020) the municipality has employed professional architects and planners as office holders, who have cherished the cultural heritage from older periods. However, Kalevan Navetta was not listed on any level of cultural heritage before the planning and housing project began in the neighbourhood. The preliminary agreement about planning between Seinäjoki town and the landowners, which at that time were Cooperative Itikka and Atria Consortium (both in meat industry), was signed on the 27th November 2007. Seinäjoki published the participation and evaluation plan in March 2007. Seinäjoki Museum insisted in the expert report that the cultural heritage evaluation of the built environment
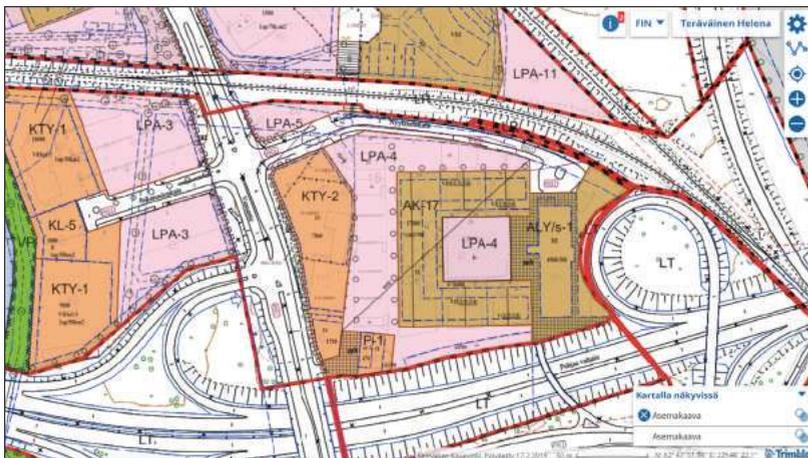

Figure.3. The new town plan for the area. Source: City of Seinäjoki.

be done. In August 2008, the Historical Association of Seinäjoki presented their survey and evaluation of the area.

Already two decades ago in the cultural circles of Seinäjoki, an idea to renovate Kalevan Navetta as a place for art exhibitions had emerged, that is to say there is not any proper art museum in the town. At that time, there were other existing examples of industrial areas in Finland, which had been renovated for cultural use, the nearest example in the neighbour town Lapua. However, Seinäjoki town was not prepared to take the development task at the time.

The Itikanmäki area, where Kalevan Navetta is located, has had many owners over the years (Figure 3). The main landowner had been Itikka Cooperate. Senate Properties, who is the work environment partner and specialist of the Finnish Government, had considerable and large areas. Seinäjoki town did not own any continuous or remarkable plots there. During the planning process, the construction company Peab[6] acquired the land in its possession.

So Seinäjoki did not ever actually own the land, but in having the position of authority as the planner, the city negotiated the intention and land use agreements in 2007, and of course later made the town plan alteration. Seinäjoki was using the planning power, and to find the best solution it decided to arrange an architectural competition in 2009 together with the developer, the construction company Peab.

Looking from the angle of the site development, the goal of the architectural competition was to find a solution for Itikanmäki, which would offer a practicable way for gradual constructions over 7-10 years. The area should be able to offer a safe living environment already during the construction. The competition area was 4,3 hectares and it should enable the building of 19 000 m2 (floor area). Kalevan Navetta was not noticed as very significant in the competition program, and accordingly not all invited architects handled it delicately, but the winning proposal gave pride of place to it, and suggested re-use as an art centre. The evaluation principles were among others cost-efficiency of the construction, attractive living environment and the townscape. In addition, there was a mention about a possible new purpose of use for Kalevan Navetta. The competition was resolved in October 2009, and the winning design proposition was made by Architect Eero Lahti from Tampere.

Seinäjoki started the plan alteration project soon after the competition was resolved. The new plan was approved on 14.11.2011, and it preserved two of the most important old buildings: Kalevan Navetta and an office house in the western part of the site (Figure 4). The housing area with seven multi-storey blocks was realized rapidly over the next years.

The construction company Peab Oy did not start to design any new uses for Kalevan Navetta, but instead decided to sell it on. The figures of bargaining are not public information, and to my knowledge, the city was not interested in the property. An innovative entrepreneur in Seinäjoki, Petri Pihlajaniemi, who is experienced in renovations of cultural heritage buildings, had already carried out other "impossible" projects. He bought the property and employed Hirvilammi Architects from Seinäjoki to make the architectural design and renovation plans for cultural purposes in the building. The work is going on and Kalevan Navetta (or Kaleva Art Center, maybe) shall be opened in the spring of 2020. The municipality and other actors like Art and Craft of South Ostrobothnia are going to hire the spaces.

Figure 4. Illustration of Itikanmäki in Seinäjoki. Kalevan Navetta is the low building on the right. Source: City of Seinäjoki.

This case shows clearly how important the role of Seinäjoki City has been in negotiations and planning, and "the compensation" has actually been offered for multiple parties through the town plan. The original landowner got rid of the impractical old real estate. The buying developer and constructing company built new apartment houses, and were able to release the buildings, which were not suitable for housing. The renovator who bought the old warehouse, now seen as a local heritage building, is probably also making a profit when Kaleva Art Centre is leased out to the municipality and different associations in art and culture, and fully in citizens' use. Cultural heritage compensation is in this case about re-use of a building on site – not yet pointed out as important – instead of being destroyed.
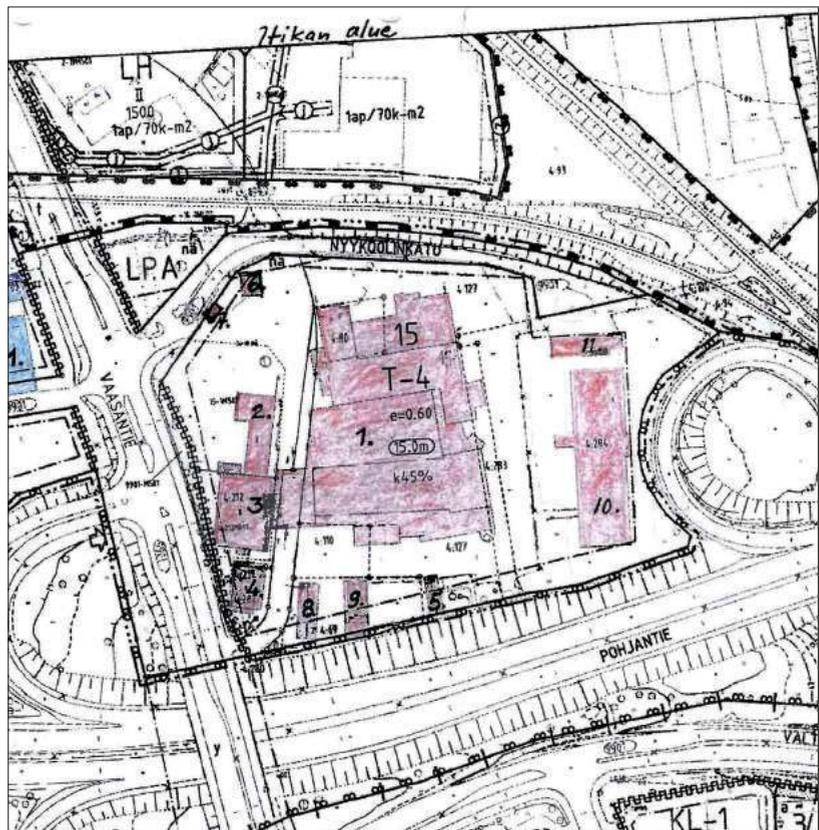

Figure 5. The old industrial buildings on the invention map. In the invention report 2008. Source: City of Seinäjoki.

Obviously, all parties are content, and all the constructing work is done by entrepreneurs, not the municipality. In the end, the city gets the compensation through new housing for inhabitants and new spaces for cultural use (for the citizens). The original owner got rid of the (for them) useless old industrial buildings, and the second owner (Peab Oy) could sell the preservation site, and nevertheless build and sell 19 000 m2.

The compensation discussions dealing with natural heritage compensation (Nygren 2017) should not aim to be concerned with money, and subsequently, also in this case about cultural heritage, we should avoid calculating directly monetary values. Compensation in context should be understood as negotiations in the planning process in order to safeguard or develop cultural heritage values on the site.

Instead of checking the sums, we can look at the cultural heritage invention (Figure 5). There are 11 different buildings, and only two of them were marked for preservation on the town plan: number 8 Officer's house and number 11 Kalevan Navetta. In the left (west) part buildings 2, 3 and 4 were still in use, and obviously, there was not any need for special preservation marks, even though in the invention report their values were noticed. Reading through the invention report, no special identity or symbolic values for most buildings is to be found. All of them express the town's industrial history, but most of them are not very recognized in the cityscape or in the landscape, and are not in the original shape. During the planning process, different operators, both officials and associations, gave their statements and even a historical home association did not stand up for the old buildings but only objected against the height of the new apartment houses. Many statements expressed satisfaction because the area would be now cleaned up when the old buildings would be taken down.

Without specified calculations we can assess that the area of Itikanmäki has gained more cultural heritage values in the built environment than the lost values of the local industrial history. Two old buildings are renovated and new cultural spaces will open. In addition, a well-designed comfortable housing area has risen close to the city centre.

DISCUSSION AND THE COMPARATIVE CASE OLD PAUKKU
The case of Old Paukku in Lapua has been under scrutiny several times (Teräväinen 2006; 2010; 2014; 2017 and 2018), but in this paper it will once

again be highlighted in the discussion part. This example could be fruitful because I have been following it for almost three decades, and also been involved for several years, as well as having made the first intervention of the built environment there in 1992.

Lapua town had to buy the old cartridge factory area in 1992 from a semi-private company; earlier the owner had been the Finnish State. The precondition of the deal was to retain the cartridge industry in the town in a new place, and due to that, keep the employment situation at a sufficient level. The factory site had been closed for outsiders, and even the drawings were kept secret with no mentions in the building permission archives. In the inventory, the buildings were sorted in three categories by the cultural heritage value, which included industrial and building history, architectonic values, and features important to the identity of place. The current condition was also sorted in categories from "weak" to "good shape".

According to this inventory several buildings, most of them old warehouses, were dropped into the category "not important to preserve". Because the site was at the time not in national[7] or regional heritage lists, nor even mentioned in the research of Finnish industrial sites (Putkonen 1989); the evaluation had to do quickly by the city architect, who also was responsible later for the plan alteration and the whole renovation project. Knowing all the consequences, one had to use a kind of unspoken compensation method hidden in the process, keeping in mind that the place certainly had important identity values, which could be lost if the old buildings were destroyed. It was of course clear that not all could be saved without useful purposes and with the economic situation of the municipality. In the evaluation were approximately 30 buildings of different ages: the oldest parts from 1910s and the latest from 1980s. 10 buildings, in the second plan alteration from 2009, have now been marked (sr) to be conserved, but over the years, many disagreements about them have risen, too. The technical division of the municipality has tried to pull down, using the excuse of tax assessment and real estate, for example a wooden canteen building from the early days of the factory (1923) and a concrete hall from 1970, which are both important because of their history, as well as sheltering the inner courtyard.

The unspoken (or hidden) compensation method contained here the idea that some of the oldest (but not in good shape) buildings far from the main building[8] could reveal plots for some new purposes, perhaps dwellings, which

was also examined in the beginning for the entire site, but was not profitable in 1990s in the depression period. Therefore, the municipality could have the possibility later to sell plots to constructors. This has happened now in recent years, 25 years after the inventory and evaluation were completed. One high-rise apartment building is already completed (Skanska), also a new bridge over Lapua river has been built and now three more buildings are under construction (Lujatalot).

 Land surveyor Moisio in Lapua town was able to give the information about the price in both the Skanska contract of 2012 and the Lujatalo contract of 2018, but it is impossible to show total calculations concerning everything that happened on Old Paukku site, i.e. all the restoration work and the original price paid in 1992. Actually, the aim of the hidden compensations cannot be achieved, because when the municipality sells real estate, the money does not have any marks tied to Old Paukku.

From the point of compensation and cultural heritage values, Lapua town could now afford the renovation of the Canteen, which is one of the most important buildings in Old Paukku, but is again threatened by the muni-

Figure 6. Old Paukku Culture Centre is again under planning alteration in 2019, because Lapua town aims to terminate the conservation conclusion of the Canteen (conservation ordered by Ministry of Environment). Source: City of Lapua. On the eastern part the high-rise plots are now in the area "not important to preserve", in the cultural heritage inventory the contract with Skanska was signed in 2012 and the building is completed and almost all apartments sold. Lujatalo is currently finalizing one eight-floor building and starting another, not as high.

cipality and a plan alteration to terminate the protection conclusion. The introduction made it clear not to use monetary values in these comparisons between possible compensation cases, but now comparing the two sites, Case 2. Kalevan Navetta in Seinäjoki and Old Paukku in Lapua, it is very tempting to use monetary values, because of the difference due the land ownership. Seinäjoki was not the owner in any phase, the city only used its planning and negotiation authority. In the end, the city and the citizens are winning by getting more spaces for cultural services, and even more cultural heritage values are saved. Then, in Lapua, the municipality is having a very different role: it owns the whole area of Old Paukku, but cannot use any money coming from the transactions concerning the new housing plots, to save the endangered cultural heritage building in the area.

The clearest compensation of the cases discussed in this paper was apparently Kirkkopuistikko 4 in Vaasa. However, there was not any threat of demolitions, and the value of the existing cultural heritage was not questioned, as it was already conserved in a previous plan,. On the other hand, the new, rather massive addition was not seen as either challenging or threatening the values already acknowledged.

CONCLUSIONS

The cases illustrate practitioners work in planning when cultural heritage values are involved. In Case 1 and Case 2, the city was not the landowner, but used the ultimate power of town planning very strongly. In the third comparative case, everything seems to be more difficult – the city owns the area, and even though the area belongs to nationally significant cultural environments (RKY 2009), preservation problems are still going on. Obviously, the municipal planning organizations are different both in size and in professional competence, because of the size of the municipalities.

The examples are different in ownership and, following the financial management and the deals in Vaasa Case and Seinäjoki Case, all parties seem to go along with "win-win". In Lapua, because the area belongs to the municipality, all calculations are public information, but selling two sites for high-rise housing does not benefit preservation subjects in the area. In the municipal accountancy, income and expenditure are not targeted for a certain place, and the dominant way of regarding old buildings in 21st century has been very harsh: when write-off in taxation is overdue, the building should be pulled down, regardless of the cultural heritage value. Of course, the size of

the municipalities effects also the economics: in the growing cities of Vaasa and Seinäjoki, the municipality is in charge of the plan alteration and in addition they can sell the plots at a higher price than in Lapua, where the population is decreasing.

Compensation stands out in the case studies as a problem-solving practice in a cultural environment context. The overall objective is to get access to the site for new buildings. Compensation is an unspoken method, which is expressed as transformation of plans and actions by key-players – not in words and not used always very successfully. In highly developed city planning organizations, compensation has been used fluently and with good outcomes, but in smaller towns and with public property results are not as creditable. We can think of "hidden" compensation in Finland to be embedded in the town planning processes as a part of negotiation and implementation.

Recently, I have been involved in the cultural heritage evaluation process at regional level. The Regional Council of South Ostrobothnia is responsible among others for regional planning, for the cultural heritage inventory and evaluation on the regionally significant cultural heritage in the built environment. Inventories are done in different phases, and now the discussions and meetings about value are going on, where the consultants, authorities from the museum (Seinäjoki Museum represents Finnish Cultural Agency) and other experts are gathered together. The national level evaluation of cultural heritage in the built environment was a very long process, and after 2009, all subjects are secured. Actually they were already secured in 2000-2002 within the regional planning process. Now when the inventories in different periods are available, there could be a possibility to consider cultural values also from the point of compensation, and still of course not about monetary compensations. It seems hard to decide for example which of the 1950s schools perhaps are regionally very significant – those schools we used to see in every village are now really threatened to be demolished, because of the indoor air problems. The regional council in Finland has been, and still is, working very closely in association with all the municipalities in the area, and if in the evaluation all "perhaps to pull down" are taken into account, there will not be many examples left in the region. There are also other types of buildings that often come up for discussion, like society houses in the villages and some very coherent and large milieus of the rehabilitation era after the World War II. In this kind of discussion, we might be able to use the idea about compensation – another similar subject from the same era but in a different village

Table 1. Comparisons about unspoken compensations and benefits in the case studies.

Case Examples • town • starting point	Process • methods • tools • plan contents	Cultural values • cultural heritage • cultural activities & art
Case 1. **Kirkkopuistikko 4** • Church boulevard 4 • Vaasa City • RKY 2009, CH National Level • Private land	**Strong Town Planning instrument** • Land use agreement • Alteration paid by the estate • More gross floor area (m2) • Preservation marks remain	• More space for culture (Hallstén house as a museum) • More housing • **Cultural heritage safe (sr)** =>**renovation** • **Cultural benefits increase**
Case 2. **Kalevan Navetta** • "Kaleva Cowhouse" • Seinäjoki City • heritage values not recognized • Private land	**Strong Planning Instructions** • Land use agreement • Alteration paid by owners • Architectural competition • hefty gross floor area (m2) • Inventory and evaluation **Private deals/ win-win**	• Spaces for art & culture • More housing • **Cultural heritage values recognized** , Local level, in the town plan (sr) & **renovation** **Cultural benefits increase**
Comparative Case **Old Paukku** • Vanha Paukku • Lapua Town • RKY 2009 CH National level, now in danger • Public land (town)	**Weak Planning Instructions** • Many plan alterations • Land use agreement • Sale; high gross floor area(m2) • Heritage value exposed in earlier process/ RKY2009 **Citizens fight for the heritage**	• More high-rise housing • **Cultural heritage in danger:** CH RKY2009 but Lapua not willing to conserve the Canteen (sr) • **Cultural benefits still in the area**

could perhaps compensate the value of some demolished building, but how to decide which is the one marked on the regional planning map and so to be left as evidence of the past?

Thinking about the multidimensional concept "compensation" may open new research possibilities, at a different level. Above, I sketched new ways of thinking in regional planning, where we have to deal with the cultural environment as huge entities. Another view would be cultural heritage as a part of ecosystem services, thinking more widely than just the customary, often presented, ensemble of culture as services. I hope that the collaboration in research between Finland and Sweden concerning compensation measures in cultural environment planning shall go on.

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NOTES

[1] RKY = Rakennettu kulttuuriympäristö; in English Built Cultural Environment or Cultural Heritage in Built Environment/ *Nationally Significant Cultural Environment in National Land Use Guidelines 2017.*

[2] Kulttuuriympäristön asiantuntijan erikoistumiskoulutuksen kehittämishanke: Loppuraportti

Toimittajat: Maunu Häyrynen, Helena Lonkila ja Katrina Virtanen, Turun yliopisto, Kulttuurituotannon ja maisemantutkimuksen koulutusohjelma, Pori 2019, Kulttuuriympäristötutkimuksen seura ry, Samfundet för kulturmiljöforskning rf.

[3] Kompensaation soveltaminen Suomessa Esiselvitys nykyisestä toimintaympäristöstä ja mahdollisuuksista hyödyntää kompensaatiota eri keinoilla ja kohteissa Loppuraportti 8.6.2017. Gaia Consulting Oy & Pellervon taloustutkimus PTT/ Ministry of Agriculture and Forestry of Finland

[4] In English: ecological compensation, biodiversity offsetting, environmental compensation.

[5] This person knows the municipal planning issues in South Ostrobothnia, working for the state authorities in Centre for Economic Development, Transport and the Environment. The interview was done both in the phone and email February 2019.

[6] Peab is a leading Nordic construction and civil engineering company with about 15,000 employees and about SEK 53 billion in net sales.

[7] Old Paukku was listed as Nationally Significant Cultural Environment 2009 (2009 RKY by NBA (National Board of Antiquities) and Ministry of Environment).

[8] This building was obviously the largest by floor area and had three stories, and so would be the most important in the discussions of the re-use, and also renovated very soon to a library, museums, adult education center and music institute

DEMOLITION, DISLOCATION AND DOCUMENTATION IN TRANSFORMING MINING TOWNS

Jennie Sjöholm

ABSTRACT

This study investigates approaches towards conservation of the historic buildings and historic environments in the largescale urban transformations of Malmberget and Kiruna in northernmost Sweden, and how these can be understood as mitigation measures for negative impact on historic values and architectural qualities caused by the mining activities. Both towns were founded at the turn of the 19th century, to enable mining the rich iron ore deposits in the region. Currently, subsidence caused by mining is affecting the built environments, because the iron ore reaches beneath the settlements. Both towns are designated heritage sites of national interest for the purpose of conserving the cultural environment, and both have conservation plans adopted by the respective local councils. In Kiruna, there are listed buildings, and many buildings are protected in detailed development plans.

The mining company is obliged to compensate for damage it causes. However, compensations primarily cover economic values, and focus on replacing functions, not heritage values. Mitigation measures for negative impact on historic values and architectural qualities can mainly be considered as constituting relocation of some of the historic buildings, and documentation of the built environments that will be demolished. An alternative strategy to compensation for the loss of historic environments seems to be to redefine the built heritage and its significance. 'Heritagisation' processes are taking place, in which some of the historic buildings are reaffirmed as representing significant built heritage, and thus are being relocated, while the major bulk of historic buildings, many that have had formal protection, are instead being dismissed as heritage. Thus, 'de-heritagisation' is taking place, as the historic values of these buildings are considered to be non-significant, they lose their protection, and are ultimately being demolished.

KEYWORDS

urban transformation, mining towns, heritagisation, built heritage

INTRODUCTION

Previous research indicates that economic compensation or mitigation measures for negative impact on historic values and architectural qualities rarely is explicit in urban developments in Sweden (Rönn, 2019). Rönn's study showed that, in practice, mitigation includes measures such as producing base line studies in order to gain more knowledge about historic sites, or adapt new developments to the existing height, façade materials, etc. In this study, the dimension of mitigation or the lack thereof is investigated, and discussed in relation to the urban transformations taking place in the mining towns of Malmberget and Kiruna, in northernmost Sweden. Mitigation in this context is understood as negotiations in planning processes – an exchange of statements regarding affected heritage values and critical demands about historic sites – followed by alterations of the planning proposals. Mitigation can also be understood as measures taken before, or in relation to, demolitions of historic buildings or built environments, such as documentation or commemoration of the sites.

In Malmberget and Kiruna, the iron ore deposits reach beneath the two settlements, and continued mining causes subsidence. Therefore, Kiruna has been renowned as a town that will be moved, whereas Malmberget is gradually disappearing as inhabitants and services are relocated to Gällivare nearby. From a conservation perspective, this is a challenge. Both towns are designated by the state as areas of national interest for the purposes of conservation of the cultural environment. Gällivare Council and Kiruna Council have respectively adopted conservation plans for the towns and, especially in Kiruna, protect many of the highlighted historic buildings in detailed development plans. In Kiruna, there have also been listed buildings, which are protected by the Heritage Conservation Act. The mining company is obliged to compensate for damage it causes. However, compensations primarily cover economic values, and focus on replacing functions. Economic compensation for lost heritage values is seemingly not discussed.

This study investigates which approaches stakeholders have towards conservation of the historic buildings and historic environments in the urban transformations of Malmberget and Kiruna. It also discusses how these approaches can be understood as mitigation measures for negative impact caused by the mining activities.

The study is based on analyses of publicly available documents and observations of activities during the urban transformations. Planning documents include both documents produced prior to the urban transformations and documents produced due to the transformations. Documents include comprehensive plans, detailed development plans with associated documents, conservation plans, designations of the towns as heritage sites of national interest, and investigations and decisions regarding listed buildings. The documents originate from the main actors: Gällivare Council, Kiruna Council, the County Administrative Board of Norrbotten and LKAB, and include material produced by consultants.

Figure 1. Top image shows Kiruna between the Luossavaara and Kiirunavaara mountains, with subsidence from the mine in the foreground. Bottom image shows the open pit that divides Malmberget. Photo: Daryoush Tahmasebi, Norrbotten's Museum.

In addition, observations during the urban transformations have been useful for the analyses of the documents, as well as media reporting. Observations include meetings, projects, seminars and conferences, but also what actually is happening with the historic buildings and built environments as the urban transformations proceed.

THEORETICAL FRAMEWORK

Compensation measures for negative impact on historic values and architectural qualities span from economic compensation to regulation of use and design (Andersson, 2015). Examples of mitigation measures include reconstruction of heritage values, creating new sites with equal qualities and limitations in the design of new developments (Rönn, 2019). Historic environments, and the historic values attached to the sites, often seem to be conceptualised in the planning processes as static, where the designated heritage is a fixed entity.

However, this study draws on the notion of cultural heritage as being socially constructed (Harrison, 2013; Smith, 2006; Walsh, 1992). According to Tunbridge and Ashworth (1996), heritage is always contemporary, albeit based on history, and it reflects current needs and demands for it. Focus in this study is on the official heritage, which is legitimised by the state, e.g. through legislation (Harrison, 2013). This is done through 'heritagisation', that is, the process in which built environments, objects or practices are transformed into heritage, as meaning and cultural significance are attached to them (Harrison, 2013; Harvey, 2001; Walsh, 1992). To gain heritage status, there must be an overall understanding and agreement between stakeholders, such as acceptance by local community, inclusion in planning processes, protection through legislation etc. In these heritagisation processes, new heritage can appear, already designated heritage can be reaffirmed or reinterpreted, or already designated heritage can be dismissed (Sjöholm, 2016).

A crucial aspect is how transferable heritage values are, and if they are movable to a new site. Rönn (2017) suggested that heritage values can be perceived as either fixed to a specific site or movable, and the perception depends on the stakeholders' role in developments. From a conservation perspective, aspects of authenticity and integrity are essential in determining whether it is feasible to move a historic building. Authenticity refers to the credibility or truthfulness of heritage, whereas integrity refers to the material completeness that carries the heritage values (Jokilehto, 1999), although the concepts

are ambiguous. *The Nara Document on Authenticity* (ICOMOS, 1994) is the most elaborate document on the matter, and concluded that authenticity can relate to a number of aspects: authenticity in form and design, materials and substance, use and function, traditions and techniques, location and setting, as well as spirit and feeling. In a workshop prior to the Nara conference, it was stressed that authenticity may refer to conceptually different qualities depending on the situation (Larsen & Marstein, 1994).

URBAN TRANSFORMATIONS IN MALMBERGET AND KIRUNA

The mining towns Malmberget and Kiruna are located above the Arctic Circle, in the interior of the county of Norrbotten. Gällivare municipality has about 18 000 inhabitants, whereof 10 500 live in Gällivare, 1 600 in Malmberget, and 800 in Koskullskulle. Kiruna municipality has just over 23 000 inhabitants, of which about 18 000 live the main town Kiruna. The towns were established in the late 19ᵗʰ century, to enable large scale iron ore mining in the sparsely populated region. The towns, together with technological development for refining the iron ore, and the building of a railway connecting the towns with the iron ore shipping harbours in Luleå and Narvik, were prerequisites for opening the mines and making the mining operations profitable (Hansson, 1998).

The mining company Luossavaara-Kiirunavaara AB (LKAB), which is fully state owned since the 1950s, has iron ore mines and ore processing in both Malmberget and Kiruna, and its head office in Luleå. LKAB is the county's largest private employer with around 3 700 employees. In comparison, the second largest is the steel company SSAB (Svenskt Stål AB) in Luleå with around 1 300 employees (County Administrative Board of Norrbotten, 2014). LKAB's production contributes to over 90% of the EU's iron production (SGU, 2015).

The development of Malmberget

Malmberget originated as a shantytown in 1888, when the railway opened. The workers built houses from what building material they could find directly upon the iron ore deposits, to live near their working place. The housing was poor, and social problems were common; a town plan was not adopted until 1899. Malmberget was then developed with the town plan area, an adjacent company area – which never was regulated by the Council and thus controlled by detailed development plans – and a railway area.

In the 1950s, a huge open pit gradually emerged in the centre of Malmberget. Gradually, the pit has divided Malmberget into two parts. The town centre was therefore relocated during the 1960s, to the old railway area that had become redundant when LKAB reorganised and relocated the processing and transport of the iron ore to an industrial site outside Malmberget.

A new school, public bath, retail stores etc. were built in the new town centre, replacing what was demolished. The only relocated building was the church, which was partially dismantled and rebuilt, and partially newly constructed (Johansson, 2007).

As mining continues, the open pit extends, and subsidence is affecting the built-up areas. In 2009, the first parts of the company area were enclosed, and buildings started to be demolished. In the comprehensive plan, almost the entire town will be gradually transformed into an industrial area (Gällivare Council, 2014). According to the plan, this will be implemented in four phases during the next fifteen years. To replace Malmberget, Gällivare is developed with new neighbourhoods, schools, sport facilities, etc. About five historic buildings have been, or are planned to be, relocated to newly developed housing areas in Gällivare. About 30 historic buildings have been moved from Malmberget to Koskullskulle, where they form a new neighbourhood.

Figure 2. Historic buildings behind the fence in Malmberget, as the land is transformed into an industrial area. Photo: Daryoush Tahmasebi, Norrbotten's Museum.

The development of Kiruna

Kiruna was founded by LKAB, and was formally established in 1900 when the town plan was adopted. Because of the difficult situation in Malmberget, with poor housing and social problems, there was a requirement from the state that the mining company had to guarantee they would provide housing and public amenities for the workers (Brunnström, 1981). This contributed to Kiruna being designed as a model company town, with an adjacent service and supply town, and a railway area (Brunnström, 1981; Brunnström, 2008). LKAB hired renowned architects and planners, and invested in modern housing in the company area, provided schools, a hospital, fire station, and built a tram connecting the residential areas with the workplaces.

Kiruna was granted town rights in 1948, after which the company area, the service and supply town, and the railway area merged. During the 1950s and 1960s, Kiruna was expanding with new neighbourhoods. The town centre was renewed, during which many of the old, small-scale buildings were replaced with new, larger buildings. During the 1970s, a neighbourhood, close to the mining area, was affected by subsidence and demolished.

In 2004, it become publicly known that continued mining would have dramatic consequences for the town, and the Kiruna Council announced that they would move the town to enable continued mining (Kiruna Council, 2004). The idea is to gradually abandon the areas next to the mine and extend the town in the other direction. This will happen phase by phase over the next fifteen years. A green area will act as buffer zone between the industrial area and the built environments. It has been decided that a new town centre will be located northeast of today's settlement. There was an urban design competition for the new centre in 2013, which is now under construction. The first building to be built was a new town hall, which was inaugurated in 2018. Also, a new main sewage line and a new electricity supply system began to function in 2009, a new route for the railway was opened in 2012, and new routes for the public road E10 are under construction. LKAB is also establishing a new company area northwest of today's settlement. Some buildings from the old company area have been moved here, but there is also new housing under construction.

DECISIONS ON BUILT HERITAGE IN MALMBERGET

Both Malmberget-Koskullskulle and Kiruna are designated heritage sites of national interest for the purpose of conserving the cultural environment

(National Heritage Board, 1990). Malmberget-Koskullskulle was highlighted in the designation as being well preserved, with the company areas and the service and supply towns having buildings representative for its time.

The local authority adopted a conservation plan in 1984 (Gällivare Council, 1985), but never implemented it in detailed development plans. In Malmberget, this is partly because the company area was never included in the town plan, and was thus not under the local authority's regulations, and lacked detailed development plans (Sjöholm & Nilsson, 2011). Representatives for Gällivare Council also considered the protection of the company area to be the state's responsibility. The reason for this was partly because LKAB is state owned, and partly because designating the area a heritage site of national interest was a state decision (Storm, 2014).

There have been proposals to list buildings according to the Heritage Conservation Act. The County Administrative Board has investigated buildings,

Figure 3. Focushuset in Malmberget. Photo: Daryoush Tahmasebi, Norrbotten's Museum.

such as the company hotel and part of the industrial remnants in the company area, and found that protection would have been desirable. However, LKAB did not agree to have the buildings listed, so the County Administrative Board decided not to proceed (County Administrative Board of Norrbotten, 2002).

Even if not protected, LKAB initially intended to move many of the buildings, and not only historic buildings with significant heritage values. This decision was however reversed when a 1960s brick building was destroyed during the moving process. According to the current plan, most buildings will be demolished, except approximately 30 historic buildings from the company area. Some have already been moved to Gällivare and placed in a new housing area. Most of the buildings have been relocated to the nearby settlement of Koskullskulle. Some additional buildings are planned to be moved (LKAB, 2016).

DECISIONS ON BUILT HERITAGE IN KIRUNA

Kiruna was highlighted, in the designation as a heritage site of national interest, as an urban environment and industrial landscape, developed as a model town, with a town plan and architecture of high quality (National Heritage Board, 1990). In 2010, the County Administrative Board performed a more detailed description and value assessment, as a base-line study for decisions on how to manage the built heritage in the urban transformation. They concluded that as Kiruna transforms, a large number of buildings must be relocated in order to maintain the significance of the heritage site (County Administrative Board of Norrbotten, 2010).

Three buildings listed according to the Heritage Conservation Act have so far been affected by the urban transformation, and managed in the urban planning. Those are: Hjalmar Lundbohmsgården, the residence of LKAB's first manager; the (old) railway station; and the (old) town hall. The Kiruna Council and LKAB made a joint application to the County Administrative Board of Norrbotten in 2010, requesting permission to relocate Hjalmar Lundbohmsgården, and to repeal the protection of the railway station and the Town Hall so that the buildings could be demolished (Kiruna Council & LKAB, 2010).

Hjalmar Lundbohmsgården was listed in 2001 (County Administrative Board of Norrbotten, 2001a), and was one of the first buildings to be affected

by the urban transformation. LKAB and the Kiruna Council had agreed to move the building, for which they got permission (County Administrative Board of Norrbotten, 2011b). According to the decision, all buildings within the property must be relocated to a site that is similar to the original in size, vegetation and, if possible, connection to the surrounding environment. The County Administrative Board stated that the relocation of listed buildings is an unusual approach, but this is the only possible means of conservation in Kiruna, given the relocation of the town. According to the County Administrative Board, parts of the authenticity connected to the setting will be lost during relocation, but other heritage values may be maintained through careful reconstruction. Furthermore, the assessment suggested that the relocation of property due to on-going mining activity is part of the historic context, and new heritage values may originate. The property was then owned by the local authority, but the Kiruna Council preferred that LKAB would be responsible for the long term maintenance of the property. In 2014, it was decided that it was to be handed over to LKAB with the promise that it would remain open to the public (Kiruna Council & Luossa-vaara-Kiirunavaara, 2014).

The (old) railway station was listed in 2003 (County Administrative Board of Norrbotten, 2003). LKAB and the Kiruna Council wanted to demolish the building, and therefore to have the protection repealed. This was granted by the County Administrative Board (2011a). This decision was motivated by two factors: first, the estimated risk of moving the full volume of the building and second, the calculation that dismantling and rebuilding the railway station would be unreasonably costly compared to the heritage values of the building. According to the County Administrative Board, they assessed the heritage values of the Kiruna railway station in comparison with other listed Swedish railway stations; there is also documented knowledge about historic railway sites, and a representative selection is protected. The railway station has now been demolished, and a temporary station has opened along the new railway route.

The (old) town hall was listed in 2001 at the request of Kiruna Council (County Administrative Board of Norrbotten, 2001b). LKAB and the Kiruna Council wanted to demolish the building, and had already agreed on LKAB financing the construction of a new town hall. However, the County Administrative Board dismissed the application to repeal the protection. Instead, the regulations were amended to allow the building to be dismantled, rebuilt

and partially reconstructed at a new location (County Administrative Board of Norrbotten, 2012). The decision was based on an investigation made by a consultant hired by the County Administrative Board. The objective of the investigation was to show in which way, and to what extent, it would be possible to dismantle and rebuild the Town Hall, as well as calculate the cost (Gezelius, 2011). The investigation also presented possible ways to modernise the building, for example by upgrading technical systems, improving accessibility, and increasing energy efficiency. The County Administrative Board found the relocation of the Town Hall reasonable when considering the building's significant heritage values and in relation to the estimated cost of dismantling and rebuilding. The Kiruna Council and LKAB opposed this decision. The local authority had intended to reuse some artistic details of the building, such as the bell tower and the doorknobs of the main entrance, but otherwise have the building demolished. Hence, the County Administrative Board's decision was appealed to the Administrative Court in Luleå. However, they approved the decision to dismantle and rebuild parts of the building, but rejected the stipulation of rebuilding a specific design (Administrative Court in Luleå, 2013). This decision was appealed by the local authority to the Administrative Court of Appeal, who judged in favour of the Kiruna Council (Administrative Court of Appeal in Sundsvall, 2014). Thus, the building lost its protection and was demolished in 2019.

The local authority adopted a conservation plan in 1984, in which significant buildings, areas, and parks were highlighted (Kiruna Council, 1984). The local authority has gradually implemented the conservation plan by protecting buildings in detailed development plans (Sjöholm, 2008).

During the process of creating a detailed development plan for the area where the mine would first expand, a controversy developed between the local authority and LKAB on the one hand, and the County Administrative Board of Norrbotten on the other. The draft consultation version of the detailed development plan shows that the local authority initially proposed the relocation of all protected buildings within the planning area (Kiruna Council, 2009). This was supported by the local authority's value assessment of buildings within the planning area, which was a part of the environmental impact assessment associated with the detailed development plan. This investigation suggested that most historic buildings should be relocated and, in most cases, restored to their original condition (Kiruna Council, 2010b). However, this proposal to move protected buildings was later withdrawn

(Kiruna Council, 2010a) when the local authority and LKAB made an agreement regulated by civil law about the mining company's liability and undertakings. The detailed development plan for the area, adopted by the local authority in 2011, stipulates that only five of the originally 23 protected buildings within the area will be relocated (Kiruna Council, 2010a). During the amending of the detailed development plan, the local authority and LKAB made a civil law agreement, which precisely outlined the buildings that would be kept and relocated, within the whole town and during the entire urban transformation process. According to this agreement, up to 21 buildings will be moved (Kiruna Council & Luossavaara-Kiirunavaara, 2011). These 21 buildings include the wooden church and its bell tower, as well as a few wooden houses. How these particular buildings were chosen is not accounted for in the detailed development plan or associated documents. The agreement between the local authority and the mining company effectively means that all other buildings, irrespective of previous value assessments or protection, will be demolished as the mine expands. Due to this, the County Administration Board in Norrbotten was reluctant to approve the detailed

Figure 4. Historic buildings that have been relocated from Malmberget to Koskullskulle. Photo: Jennie Sjöholm.

development plan. This caused controversy between the local authority and the County Administrative Board, which ended when it was agreed that two additional buildings would be relocated, and the local authority would finalise a cultural heritage analysis.

In May 2019, the Kiruna Council announced that more historic buildings would be relocated. Representatives from the local authority, the mining company and the County Administrative Board had decided on which buildings, based on heritage values, condition and construction, cost of moving and possible new location (Kiruna Council, 2019). This means that in total, about 50 historic buildings will be relocated during the entire urban transformation process.

DOCUMENTATION OF BUILT HERITAGE

Extensive documentation has been taking place during the urban transformations, and are used as a means of conservation. The protected buildings are documented, before relocation or demolition, but also non-protected and not previously valued parts of the built environments are included. Much of the documentation is either made by consultants on commission by LKAB, or with financial support of LKAB.

In Malmberget, buildings in the company area were documented by the county museum, on commission by LKAB (Norrbottens museum, 2009). A year later, LKAB and the local authority made a pilot study, investigating means of documentation and conservation (Gällivare Council & LKAB, 2010). Malmberget has also been documented by the local authority through interviews, photo, film and model making (Gällivare Council, 2015). This documentation focused on the period from 1960 onwards, because the history of the town until then already was recorded.

In Kiruna, protected buildings such as Hjalmar Lundbohmsgården, the railway station, the town hall and workers' housing were documented on commission by LKAB by the county museum Norrbottens museum and other consultants. Also, housing from the 1950s and 1960, which had never been reflected upon as built heritage, was documented, such as the building block called Ullspiran, which was the first to be demolished (Historiska Hus, 2014).

Ann-Helén Laestadius, an author who grew up in the neighbourhood Ullspiran, interviewed people who had also lived there, and published a book,

Figure 5. The art installation in the block Ullspiran in Kiruna, where building materials from the demolished buildings are layout in the footprint of the former buildings. Photo: Jennie Sjöholm.

Figure 6. The new company area in Kiruna, with new constructions next to relocated historic buildings. Photo: Jennie Sjöholm.

which was partly based on the question *"how does it feel"* to move a town (Laestadius, 2014). Before demolition, a farewell party was arranged at the site, as part of the book production, where all the people who had lived there were invited. The initiative was Laestadius', and it was financed by LKAB. Another initiative, initiated as a joint project by the local authority and LKAB, aimed to capture the essence of daily life in town. This led to a photographer continuously documenting Kiruna, its habitants and built environments over a number of years, resulting in four books so far (Törmä, 2010, 2012, 2015, 2018).

In addition to documentation, part of the demolished buildings in Kiruna are incorporated as objects of art in the green area that is being created. The green area, which functions as a moving buffer zone between the industrial area and remaining built environments, is intentionally designed as a reminiscence of the vanished houses and of the settlers that first populated the town in 1900. This is made through large scale, iconic photos from the first years of Kiruna's establishment, transferred onto concrete blocks placed in the green area. In addition, Swedish artists were invited to make proposals on how to develop the transforming area, and the chosen artistic design was made with the purpose to convey the memory of the demolished built environments (Forsberg, 2012; Forsberg, 2015). Building material from the demolished buildings was used to build patterns reflecting the shapes of the original buildings' footprints, which was described by one of the artists as "*we think the material itself has a value and carries memories and history*" (Dahlström, 2015).

In Malmberget, a *"Farewell Focus"* event was arranged in September 2019, after the 1960s block in the town centre with a high-rise serving as a landmark had been evacuated. Before demolition, local artists and writers arranged a week with lectures, exhibitions, concerts and open house in apartments on one of the top floors. The event was sponsored by the region, Gällivare Council, LKAB and other local companies and organisations.

CONCLUSION AND DISCUSSION

This study shows that demolition, dislocation, and documentation are the main strategies in managing the historic buildings and the built environments, during the urban transformations in Malmberget and Kiruna. Given the situation and the importance of the mine, both financially and socially, the only possible means of conservation of the historic buildings and historic environments are relocation. All stakeholders agree on this, hence there are

no incompatible views on moving buildings as such. The different views are on to which extent historic buildings should be moved to keep the integrity of the designated heritage sites of national interest. Actors representing exploitation interests consider a small number of buildings to be sufficient, whereas actors representing conservation interests conclude that a significantly larger number of buildings is needed to preserve the heritage values.

It is interesting to reflect on the County Administrative Board's decisions on the listed buildings Hjalmar Lundbohmsgården and the town hall, as those texts are the most elaborate ones regarding motives for moving the buildings. Their assessment was that parts of the authenticity connected to the setting of Hjalmar Lundbohmsgården would be lost when relocated, but other heritage values may be maintained through careful reconstruction. Regarding the town hall, their assessment was that the building's significant heritage values could be preserved through having the building dismantled, rebuilt and partially reconstructed.

Reconstruction of heritage values, creating new sites with equal qualities, and limitations in the design of new developments have been suggested as mitigation measures for destruction of historic sites. Based on visits to the areas of relocated buildings from the company areas in Malmberget and Kiruna during the spring of 2019, different approaches are taken at the two sites. Most of the relocated buildings from Malmberget have been gathered in a new neighbourhood in Koskullskulle. There has been an effort to reconstruct the characteristics of the original historic environment, through the buildings' setting in the landscape, and the relation between the buildings and the spaces between them. This can be seen as an effort to create the new place with qualities equal to the original. In Kiruna on the other hand, the setting is not reconstructed. Relocated buildings are placed on a hill, and thus given a prominence in the landscape they did not previously have, which is noteworthy for Hjalmar Lundbohmsgården. New housing is also built in the area, with high-rises in close proximity to the relocated historic buildings. This indicates that there has been little limitation for the design of the new developments in terms of adapting them to the historic environment.

Mitigation for negative impact on historic values and architectural qualities in Malmberget and Kiruna can mainly be considered as constituting the relocation of – a few – historic buildings, and a rather extensive documentation of the built environments that will be demolished. Economic compensa-

tion is not payed as such for the loss, other than that the mining company has agreed to move certain buildings, and supports activities arranged by locals in response to demolitions.

An alternative strategy to compensation of the loss of historic environments in these urban transformations seems to be to redefine the built heritage and its significance. Heritagisation processes are taking place, in which some of the historic buildings are reaffirmed as significant built heritage, and thus are being relocated. The major bulk of historic buildings, many that have had formal protection, are instead being dismissed as heritage. Thus, de-heritagisation is taking place, as the historic values of these buildings are considered to be non-significant, they lose their protection, and are ultimately being demolished.

Both mitigation as relocation of buildings in the urban transformations, and actions in order to redefine the built heritage and its significance in the planning processes appear as negotiable properties. A key question is how historic environments can be given a stronger position in planning processes with democratic aspirations, and how local as well as national aspects of cultural significance can be represented in transformations of towns and communities.

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PART 3

CONSIDERATE CONVERSION – IN ORDER TO TAKE CARE OF AND REUSE CULTURAL HERITAGE. A PRACTICAL EXAMPLE

Urban Nilsson

ABSTRACT

The knowledge that heritage consultants produce in their surveys should be passed on in the planning process through dialogue, analyses of consequence and close attention. This results in city plans and realized projects where cultural historic value is an integrated part and tells the (hi-)story of the site concerned. The physical expressions of the cultural heritage of the site have to be balanced against what is added. The additions are needed functionally, economically and in order to make the new urban district both ecologically and socially sustainable. This requires both fantasy as well as creativity. Therefore a close cooperation between the heritage consultant and the architects (plan, landscape and buildings) is paramount in the search for the right balance and an optimal result. In such a result, the architectural level needs to be as high as the prioritization, preservation and development of the heritage . In this way it is possible to reach a long term lasting urban whole.

In the practice of a heritage consultant – in this case using the urban development of Kvarnholmen as an example – compensation was a useful tool. By using compensation as a concept, the most important values were safeguarded. It was possible to recreate values that had been lost. It was also used to heighten the architectural level of the whole and, by the design, stress the cultural values of the existing landscape and buildings: the essentiality of the site or its Genius loci.

The changing of the site has made a great physical impact, yet the conversion of the historic fabric has been carried through with conscious consideration and therefore the place is still recognizable.

KEY WORDS

Cultural heritage, Industrial heritage, Cultural significance, Conversion, Reuse, Mill, Waterfront development, Urban development

CULTURAL HERITAGE AND URBAN DEVELOPMENT

To develop a property, which was used as an industrial plant for instance, to a new district is a complex process. From when planning begins, all the way to completion, means that the site is converted in a pervasive way. The process of conversion takes a long time and holds a lot of participants – property owners, authorities, the municipality, architects, experts in different fields, stakeholders and citizens. The latter are practitioners of their democratic rights in the planning process. In this large team, it is after all possible to take care of the physical remains that are carriers of cultural significance.

To find the right balance point is hard, but possible. It requires that the physical properties that were considered of cultural historic value be set against other aspects that are assessed as being of public interest. In this process, we as heritage consultants, must be bold in prioritizing what really is important. "To choose and not to choose, that is the question." That is the road to making new durable, sustainable and successful developments of the city and of society.

My intention is to go into more detail using one of the cases from my own and Nyréns' practice – Kvarnholmen. Experiences from similar urban developments are used to set this example in relief, pointing out the values raised in the surveys and comparing this with the physical result gives an opportunity to evaluate the impact of the development concerning the cultural heritage.

The phases of urban development

From the conservationist's point of view, the order of action in planning and building can briefly be described by the following sequence of phases.

Survey -> assessments -> negotiation amongst the parties -> analysis of consequences -> plan regulations and planning democracy -> development agreements -> realization

Below, these actions or concepts are used as subheadings in a general description of the process. The main point of this essay is to describe the handling of heritage throughout the planning process, here divided into six phases. Since the purpose also is to evaluate the physical result of the conversion, the building process also is taken into consideration in an additional seventh phase *Realization.*

Compensation in this context has several faces; it can be a process, a method and a result of negotiation among key-actors expressed as measures in detailed development plans.

Survey

Based on existing material, often produced by the municipal museum for instance, classifications of the cultural value of the site, Nyréns makes a survey of the built environments that are to be developed.[1]

Assessments

The survey gives an account for which cultural historic values the environment harbours. In surveys after 2009, we have also added two more layers of analysis. One is where we focus on the sensitivity and durability of heritage sites.[2] This kind of material has been popular amongst city planners since it is useful in the planning process. The main reason for this is that the survey presents a prioritizing between the physical expressions that carry cultural historic value. The other level of analysis is to look a step ahead: here we recommend what structures, physical parts or objects to prioritize when developing the site.

Negotiation amongst the parties

Throughout the planning process, there is an ongoing discussion on how to develop the new district. Since the sites that the conservationists and landscape architects at Nyréns work with are mostly heritage environments, this is an important aspect of the development for everyone involved. Beside the societal interests of cultural heritage, urbanism and architecture, such aspects as availability, safety, social- and ecological resilience are met in the process. The economic potential is great if the location of the site is favourable,and gives the owner of the real estate an opportunity to exploit and develop. The economic value of the site gives, on the other hand, the municipal authority, as holder of the planning monopoly, the means to make demands concerning the number of qualities and a high level of architectural value, among other things.

Analyses of consequences

After balancing all interests, an analysis of consequence concerning the cultural heritage is written.[3] This is a kind of record of the agreement made between the owner, the city and the cultural heritage consultants. In weighing the cultural historic value against the development, seen as a real estate

business deal, there is also a set of prerequisites of societal interest that the heritage consultant has to take into consideration.

Damage of cultural values can be compensated in this phase by a proposal from consultants. However, the final balancing of exploitation interest against cultural heritage interest is made by the town planning office.

Plan regulations and planning democracy
In this complexity of interests, an analysis of consequences is produced. Seen from the cultural historic point of view, this investigative document records the pros and the cons of the proposal and functions as material in the planning process. In the plan proposal, for example, regulations (q, k and r) are formulated in order to safeguard the heritage. This first proposal is presented to the public, to the authorities and to stakeholders in a democratic, consultative process. This round ends in referral responses and the proposal is hence adjusted, and is then again taken under consideration during the exhibition phase. In cases of national interest, which are protected by the environmental Code, the county government is a particularly important referral body, since it can reject the plan by referring to the risk of significant damage to cultural heritage.[4]

Development agreements
In a parallel process, a business agreement is made between the city and the developers. This process is complementary to the planning process but since it concerns real estate business, and the negotiations are prior to the deal, it is not as transparent as the planning process, which is democratic. This phase is normally expert-oriented and does not involve citizens.

Realization
When the plan has been approved by the city council and gained legal force, the planning process is finished.[5] During the planning process, both architectonic and real estate values have been created, which now can be valued as economic assets. From here on, the property owner can develop the different planned parts and/or sell parts of the real estate stock to other developers. Within the municipal administration, the district is now handled as projects or parts of the building process, and building permits shall be based on the effective plan.

CASE STUDY: KVARNHOLMEN

Industrial plants situated at the waterfront are such areas that are converted to new districts within the city, a social change that today also comprises the former flourmill of Kvarnholmen in Nacka. The conversion of the mill – complete with streets, docks, public spaces, housing and community service – makes for a considerable change of scene. In some senses, the conversion implemented is breath taking in contrast: from a sleepy, enclosed and shut-down industrial community, to a lively district in the Greater Stockholm area.

Kvarnholmen is situated in the Stockholm archipelago, and dates back to the 1890s as a commercial business. From the 1920s to the 1980s, it was operated by the large co-operative company Kooperativa Förbundet as a flourmill and food industry. Its cultural historic significance is related to the mill as a cooperative food industry, redesigned and expanded by architects of Kooperativa
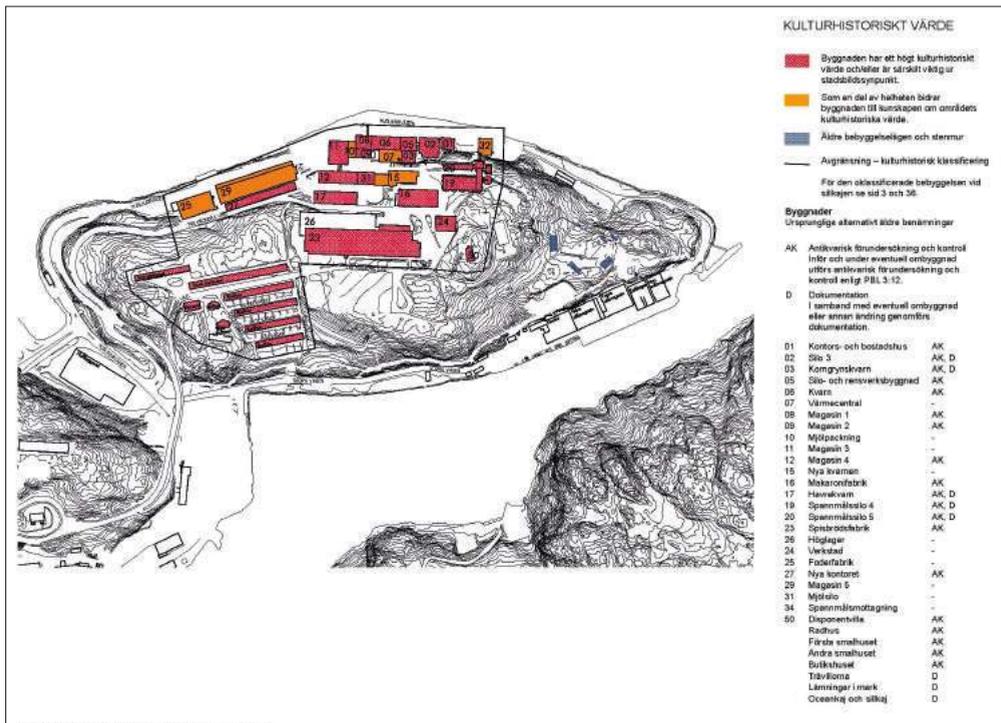

Figure 1. From Kvarnholmen - antikvarisk förundersökning 2004. On the map the cultural historic classification that was the basis for the plan is presented. Of the 27 buildings with higher value 23 was preserved or reused.

Förbundet's own architectural firm (KFAI), and the fact that through providing the then modern industry with housing, an ideal example of what society should look like in the future was presented (Figure 1). KFAI were considered forerunners of the strong and early modernist wave in Sweden – Functionalism – that was strongly manifested in 1930 when the internationally renowned exhibition Stockholmsutställningen took place. It was possible to visit Kvarnholmen by boat, thus making it one of the main attractions of the exhibition programme. It is clear to see that this was a good opportunity to showcase what was politically considered as an ideal society by the ruling party - the Social Democratic Labour Party. This is the main reason why Kvarnholmen, as part of the waterway to Stockholm from the sea, is considered of national interest [6], and is thus protected by law through the environmental act.

Since the 1980s, several ideas on how to reuse the land and industrial plant of Kvarnholmen have been put forward. The planning started in 2002 and large parts are today completed, in particular phases 1 and 2.

The presentation of the Kvarnholmen process below is based on experience from professional practice. It also rests heavily on a number of documents and city plans.[7]

Planning aims
The aim for the municipality of Nacka was to convert the relatively remote peninsula of Kvarnholmen from a site dominated by industry to a new borough in Nacka using its cultural historic values. A political issue and an important precondition for developing the area for about 4 500 inhabitants and 3000 workspaces (program of 2005) was to secure a road connection from the east via a bridge and a tunnel.[8]

The owner, Kooperativa Förbundet, and the developer/builder, JM AB, founded a joint company, Kvarnholmen Utveckling AB, for the development. Besides the location of Kvarnholmen, close to the centre of Stockholm, a number of other qualities add to its attraction. Worth using for the developer were also the scenic setting of the site in the archipelago, its good communications of boat and bus and its heritage as intangible capital. Using heritage as a marketing argument for moving to the historic Mill, is one example of how the developer has created a demand for real estate and condominiums at the site. The considerable conversion that Kvarnholmen has experienced, and is still going through, will make it attractive in a long-term perspective.

Architectural ideas

After several unsuccessful attempts of planning in the program stage, using different proposals as starting points, Nyréns was in 2004 asked to contribute. In the earlier proposals, the buildings of the old mill were overlooked, not preserved and not reused to an extent that the County Administrative board of Stockholm (Länsstyrelsen i Stockholms län) assessed as sufficient. The county government monitors the environmental code (miljöbalken MB) concerning sites of national cultural historic interest, of which Kvarnholmen is a part. [9] That makes Länsstyrelsen one of the most important referral bodies in the assessment of a forthcoming city plan. The reason why Nacka turned to Nyréns was primarily our reputation in converting other sites in Nacka from industrial areas to cityscapes, for example Nacka Strand, the Shipyard of Finnboda and Atlas Copco in Sickla.

In cooperation between the urban planners of Nacka, the developer KUAB and Nyréns, the planning process was instigated. The Nyréns team consisted of architects, landscape architects, planning architects and conservationists of the built environment. As early as 2004, it was uncommon for an architectural firm to provide such a broad interdisciplinary group of urbanists.

When the planning process ended, the group was dispersed and the projects were allocated by their developers to various architectural firms. Architects and landscape architects at Nyréns have carried out a number of these projects. Three new buildings for housing at the quay were designed and projected as well as the design of the public spaces. Today the iconic oat mill – Havrekvarnen – is restored and reconstructed by architects from Nyréns.

Cultural heritage – surveys and participation

In Kvarnholmen, the existing material for the conservationists' work had the character of being overviews.[10] These two documents *(Kvalitetsprogram för Nackas norra kust 2000 and Kulturmiljöprogram Nacka 1987)* were still important in the process as pointers, stressing the high cultural historic values of a cooperative society of the early modern movement: complete with industry, communications, housing and in interplay with the topography of the archipelago.[11]

This means that the cultural historic value of the built environment was not classified beforehand. The classification was instead made in the early cultural historic surveys that Nyréns made.[12] These functioned as a basis for deci-

sions during the planning process. Other important tools were the design programs, which were produced by Nyréns as a collective, in cooperation with the planning group at Nacka. These documents were produced in close integration with the city plans – description and plan – for phases 1 and 2. As conservationists, we worked closely throughout these two planning processes and ensured that the values stated were followed up as provisions of protection in the plans (Figure 2).

When the planning process ended, the new city plan was implemented, and is still being carried out. The planning group finished their work, and the process passed on from planning to building. Nacka as well as the developer changed organisations accordingly, which is normal in Sweden, due to how the building legislation is constructed. The developer sold private blocks of land to different property owners, whose objective was to develop existing buildings or to build new ones. On the other hand, Nacka was in charge of the communal land – streets, squares, parks, quays and landscape. To get building permits, all the projects within the building process

Figure 2. The numbers on the photo correspond with the numbers in Table 1 on in Appendix. Notice the long and wide key (4), the key row (8, 9), the 2nd row (10-13) and the 3rd row (7). To the east the shoreline park (3). To the east and west nature land (1).

were monitored by administrative officers whose task was to interpret the regulations of the plan.

All projects had to include a conservationist, who saw through the project in the documentation and building phases. Nyréns had this role in the refurbishment of a number of the mill buildings: five projects for three different clients.

Cultural heritage - consequences

The recent 20 years of population growth in Greater Stockholm and hence the enlargement of the urban fabric, as is the case in expanding regions in the "post industrial" world in general, leads to new types of cityscapes and built environments. In the case of Kvarnholmen old converted industrial buildings and old housing are intertwined with contemporary additions. The result is a new whole where the historic structure, the cultural landscape and the buildings add a layer of time, and hopefully of belonging, to the site, for people who visit, live and work in Kvarnholmen. Rightly used, the time dimension, as expressed in physical remains, has a great potential in the management of the district in terms of social sustainability.

The development has been implemented on land already developed – docks, industrial purposes and housing. A part of the new development has also been carried through on unexploited land. The new road Vikdalsvägen, leading up to the bridge Svindersviksbron, is constructed on the rocky landscape typical of the Stockholm archipelago, and the new housing alongside the road is under way. When balancing the losses and the gains regarding the consequences for the cultural historic environment, it is important to stress that most parts of the land that earlier were unexploited have been reused as nature-like parkland for outdoor life. This also contributes to the ecosystem services , which is an advantage, but is not the subject of this essay.

The use of land has changed entirely since stockyards, workshop activities and functions in general have been transformed into streets, squares, quays and nature-like parks. Existing mill buildings, often of large dimensions, have been converted into housing or other functions as schools, services, shops or restaurants.

Demolished volumes were replaced by new volumes of the same size and situation. Additional buildings have been arranged and placed in such a way

that the historic silhouette have been preserved, though slightly altered. The objective was to not alter the silhouette of the mill buildings seen from the water when approaching Stockholm, which is of national interest. Very few new yards for apartment buildings have been added. Instead, the landscape design is oriented towards a joint utilization of land.

Compensation in the planning process
One important purpose with studying Kvarnholmen is that it is possible to compare the goals of the planning process with the results, that is, what was built. On this site, this is possible since the planning and building processes have gone on for a long time.

Not all the objects presented on the situation plan are analysed in the table. (See Appendix) The phases studied are the early ones – 1 and 2 – which include the mill area. Focus is on parts or objects that the author of this essay is most familiar with (Figure 3).

Figure 3. The picture is taken from Djurgården (the Royal hunting ground) 1945 by the Malm reportage bureau. Source: The archives of Kooperativa förbundet

On compensation

How the landscape has been handled and how the ground – quays, stre-
ets, parks - have been laid out during the transformation of Kvarnholmen
are crucial for the overall result in safeguarding the cultural heritage of the
site (Figure 1 and Figure 4). The existing building structures and the way
in which new volumes have been added have been decisive while shaping
the new whole. Here compensatory measures have been an important tool,
when keeping the balance between taking away on the one hand, and resto-
ring, recreating and interpreting on the other.[13] (See Appendix: Table 1 - the
section on compensation. The numbers in the table are used as references
in the following part. The numbers also appear on the areal photo Figure 3)

Ground, landscape

Concerning the original nature (1) of the peninsula, much of it was already
exploited by KF:s food industry. Because of the recent and ongoing deve-
lopment, even more land has been utilized. The footprints and the volumes
of the new buildings tend to be larger, which affects the historic environment

Figure 4. The waterfront of the former Kvarnholmen mill. Photo: Urban Nilsson 6th of august 2019'

and lowers its cultural historic value.

As a compensation for this, a lot of land with the original nature of the Stockholm archipelago has been preserved. The solution has also been to use nature as parts of new parks. The new shoreline park exposes the natural fault line with its pines and its visible rocks. Common use of public spaces and use of roofs have reduced the areas of land that has to be used as yards for apartment buildings. This is favourable for the preservation of nature and for the appearance of Kvarnholmen as a former industrial district. Otherwise, Kvarnholmen would risk appearing like any other new district where housing dominates.

The topography (2) is characteristic for Kvarnholmen as an important part of the great fault line of the northern coast of Nacka, and which reaches all the way into the centre of Stockholm. This fault line is the reason why the waterway from the Baltic Sea through the centre of Stockholm to the great lake Mälaren is located here. The food industry was mainly located on the steepest site, adapted to the topography and arranged in three rows. These rows of buildings have been preserved as structures and as buildings. Single buildings have been replaced by new ones, repeating the old volume.

At the quayside, the oldest mill buildings in red brick highlight an extraordinary waterfront. The second row behind is also a part of the waterfront, since it is built at a higher level. The buildings of the third row can also be mostly seen from the west. The topography makes the situation dramatic, and the alleys between the rows make it possible to look in straight lines into Gamla Stan (= The Old Town) in the centre of Stockholm. From the quay and from the top of the hill, the view onto the archipelago is breath taking.

The long quay (4) by the flourmill Tre Kronor is an important trait of Kvarnholmen, representing a significant cultural historic value. In the process, it was therefore important to safeguard its full size. Consequently, the design of the ground is large in scale and stern with its elements – benches, platforms etc. – inspired by the quay functions of stacking, storing, loading and unloading.

The adding of several new flights of stairs, aisles and passageways (5) between different levels and buildings was to create the necessary physical connections. The new elevator with a passageway is another example. From a cultural, historic point of view, this was also to recreate, or rather to

interpret, a number of lost phenomena – stairs, towers/conveyors and aisles/
passageways between the buildings.

Keeping and restoring the large quay with its supporting shoreline park is one
of the compensatory measures made. The removal from the mill buildings
of, for example technical equipment used in production, can to a certain
extent be seen as compensated for by the restoration of the large quay. Since
the housing does not really need such a large area as the old industrial quay
for its functions, other arguments had to be used for its preservation, rather
than those based on cultural historic values. The magnificent quay is not
only of great value for the everyday users but can also contribute in making
Kvarnholmen a destination.

Almost all conveyors, aisles and passageways between levels and buildings
have been taken away for functional reasons and through lack of use. A large
number of new architectural interpretations of these have been built. The
former functions that were removed are compensated for by the new stairs,
towers and passageways (Figure 5).

The location of new buildings was, in the early stages of the development,
strictly directed to the sites that were already exploited. This meant for
example that the east-west orientation of the lines through the building
structure of the mill could be kept. In this way, considerable cultural values
could be safeguarded.

Besides the fault line, preserved nature is an important trait of Kvarnholmen.
Parts of the land have been exploited, but a good part still exists, and has
been developed in a way that makes it easier to access and to use. The loca-
tion of the shoreline park (3) also exposes nature to the waterway arriving
from Stockholm. These measures, and how they are designed, compensate
for the loss of original natural landscapes.

Existing buildings
The Oat mill (7) is one of the most important buildings of industrial heritage,
as well as early architecture of the International style in Sweden.[14] Despite
its icon status, it was, after taking it out of operation, left unmaintained for
a long period. In the planning of phase 2, the building was provided with
prohibition against demolition and given lasting protection. Despite this, the
plan was changed in 2016, and the property owner was permitted to pull the

damaged building down, due to its poor technical status. The permit is conditional and stipulates a true reconstruction close to the original design and execution.[15] To make a true reconstruction of the Oat mill is to compensate for the demolition of the original artefact. The solution is negotiated between the parties in the process – the owner, Nacka, the County government, the architect and the heritage consultant.

The example of the Oat mill is interesting because it points to the crucial question: Is there a cultural historic value left when the physical artefact has been taken away and replaced by a replica? The question has everything to do with the concept of compensation, and could be in itself a topic for research. The focus for this paper however is to look at the consequences for Kvarnholmen as a whole, and consequently this paper deals with the Oat mill only in passing.

The Tre Kronor mill, office and silo (8) are the oldest buildings on Kvarnholmen and the most prominent part of the waterfront. In order to reuse the mill as a condominium, Nacka required that the developer painstakingly preserve the exterior facades facing the water. Therefore, referring to the national interest, the developer could not put balconies onto the main facades, which are the most visible seen from a distance. The principle for the facades facing the slope were freer and here balconies were used.

Before the transformation, some of the interiors of the mill still contained original technical equipment. These interiors were changed, and the equipment was removed. In order to compensate for that, the plan stated that parts of the wooden building framework should be kept, which was carried out.

The flour warehouse (10) is a simple and, for its function, appropriate building. For the Swedish branch of the International style – so called "Functionalism" – words such as function, simplicity and utility were catchwords. As a result, the flour warehouse reflects, in its physical form, the spirit of Swedish functionalism.

It was not self-evident to reuse the warehouse as an apartment building, due for example to too small windows and low floor heights. In negotiating the preservation of the building, this was balanced against the scope of necessary changes. The result was a number of principles, for example prohibition of projecting balconies to keep the flat facades. The objective of the plan regulations was therefore to keep as much of the simple delicacy of the original

Figure .5 The photo is taken in between the key row and the 2nd row, in the direction of Södermalm in the centre of Stockholm. The passageway to the elevator is right in the middle. To the left the flour warehouse refurbished as condominiums. Photo: Urban Nilsson 6th of august 2019

architecture as possible – the four corners, the idea of the flat roof and the flat facades. Above all the masonry – dark red brick and grey lime joints – makes the building a solid cornerstone amongst the mill buildings.

The fact that the developers were not allowed to make several of the changes that they wanted is a kind of compensation for the permission to reuse and rebuild the warehouse.

The bakery (11) is situated in what is the centre of Kvarnholmen and is on the top of the hill. Early in the planning, it was evident that the bakery had prerequisites for being the focal point of the new district. The building had a very large surface spread, which made it a problem of being a barrier. In negotiations between Nacka, the developer and representatives for the cultural heritage aspect, the bakery was however saved, and its barrier effect was eased by making of a passage through it. Furthermore, the most altered part of it was pulled down. Alterations to the facades have also been made, especially by making holes for windows in the housing parts. An important feature that was preserved, and is now reused for the north entrance, is the large canopy that originally covered the loading platform for trucks. To preserve the bakery as a whole and details like the canopy was an effort for the owner of the property, and for that reason it is a good example of compensation.

Added buildings
The most important buildings were kept, thus keeping the authenticity of the site. For those pulled down, the principle for replacement was to ensure that new buildings would blend in, without changing the view too much, seen from the waterway.

During the process, the large silo (12) in the International style was replaced. This dramatic action lowered considerably the level of cultural historic value of the legendary flourmill. This can be considered a failure, seen from the cultural historic point of view. At the same time, the new structure may be regarded as an architectural interpretation of the old silo.

The large silo was a splendid exponent of the architecture of the modern movement, and one of the earliest industrial buildings of that style in Sweden. Early in the process, the developer drove for the removal of the silo, due to difficulties in adapting it for housing. Neither Nacka nor the County Administrative board could resist the symbolic and commercial

force of the developers' will to exchange the plant for new housing, naming it a signature building.[16]

While the new apartment building was designed, two parts of the cultural historic value were after all preserved. One was the basic building of the silo-containers, which was used as a basis for the new structure. The other is a steel structure supporting the conveyors left on the quay, as a kind of sculpture in remembrance of how the grain was loaded into the silos and unloaded into ships or trucks. The two items that were preserved were however too small to be seen as a sufficient compensation for the large volume that was pulled down. The new design is in itself – both in layout and volumetrically – inspired by the old silo containers, which are identifiable, but architecturally interpreted as a series of connected contemporary apartment buildings.

The very large scale of the apartment building was possible to carry out since the plot already was exploited. Without this reference to an existing plant, such a large building would presumably not have received a building permit on the northern coast of Nacka, due to its national interest. It is possible that the new structure even paved the way for other large apartment buildings, which have been planned in later stages of the process, and built on plots that earlier were unexploited. The fact that the silo plant was pulled down, and that a very large volume was allowed in an area of national interest, is of course ironic, and is a measure that can be disputed. An attempt to start a public debate about the heritage issue of Kvarnholmen was made by Bengt O.H. Johansson in the form of an article in the daily press but unfortunately, it fell flat.[17] Moreover, the County Administrative board of Stockholm passed the plan that Nacka submitted. As a conscious participating party in the planning process, the architects of Nyréns declined the opportunity to compete in the design of the new apartment building.

Seen as a measure of compensation, a new design inspired by the silo does not make up for the great loss of value that the removal caused. An alternative way to do it would have been to modify the existing plant for new housing and/or other functions. Fifteen years ago, a project of this kind was seen as something almost unrealistic, but since then the international examples are many, and today that kind of solution could perhaps have been considered. In the ongoing planning process of the former large brewery Pripps in Ulvsunda, Stockholm, the proposal in question is to reuse two large silo plants for housing condominiums.

Figure 6 Kvarnholmen seen from the west with its three rows of mill buildings balancing on the edge of the fault steep. Photo: Urban Nilsson 6th of august 2019

The more recent flourmill and silo buildings of the 2nd row were also removed (13). The prerequisites were different here, since the cultural historic value that these buildings represented was not as high. Considering the high pressure from Nacka, the developer and the public to make room for housing, the removing of these was a straightforward choice to make. Replacing these structures with apartment buildings, using the same footprint and volume as the existing ones, was an idea to which it was easier to agree. The result is that the waterfront view has not been altered too much, compared to earlier, while the main difference seen from afar is the light that comes from the windows of the apartments at night and reflections during daytime.

Additional buildings for housing were also planned and later built: three by the quay and five along Tre Kronors väg (14). The additions were adapted to the character of the existing architecture, concerning volumes and materials, but contemporary in expression. Flat roofs without eaves, four corners and flat brick or plaster facades of the Kvarnholmen modernism are traits that were used for the new buildings.

The new buildings were to compensate for the removal of existing buildings in the 2nd row and for the parts of the Bakery that were removed. Measures of compensation were also that the new buildings should have design traits inspired by the existing modernist buildings. This was to avoid juxtapositions between old and new buildings that would threaten the Kvarnholmen characteristics (Figure 6).

CONSIDERATE CONVERSION – TO CONCLUDE

In the practice of Nyréns, we can clearly see that the perspective that we as heritage consultants and surveyors can offer, leads to changes in planning processes. The presentation to and reading within the group – owners, city planners, architects among others – moves the starting point of the project. The group undergoes a process of rethinking and replacing of position. This opens opportunities! In fortunate cases, it is possible to design a plan together, where a project in which the physical expressions of the cultural historic value of the site are well represented, and are an integrated part of the overall design.

Compensation is a practical tool to use as a heritage consultant, in order to safeguard the most important values. In the negotiation of what shall be kept

and what to let go, sacrifices must be made. Therefore it is important beforehand to get your priorities right, thus fighting the right battles. By using compensation as a concept, it is also possible to recreate values that have been lost, and to push the design of the added architecture towards solutions that stress the existing landscape and buildings. In respecting the spirit of the site – its Genius loci – the design of the new can be moulded from its context. This was done in the case of Kvarnholmen.

One parallel example to Kvarnholmen is Centralverkstäderna in Örebro (CV = the national workshop for engines and cars of the national railroad network). This is an ongoing planning process where we as heritage consultants have participated, and where we believe that our work has made a considerable difference. After the first stages of planning, more entities of cultural value are now preserved, compared to the ambitions of the original plan – structures as rails, directions of expansion, original buildings, outdoor spaces and parks. The gains in preserving the structure, many buildings and the most important land was traded off against losses in removed buildings and natural landscapes used as plots for new buildings. The CV-example is a clear parallel to the way the parties in the Kvarnholmen plan process negotiated. The currency in these negotiations was, among others, the value of the cultural historic heritage.

The result of a conversion, as described above, is a new district added to the existing cityscape. Due to the high exploitation that the investors expect in growth regions in these cases, the added volumes have a large scale, which will alter the site in the long term. The juxtapositions between new and old are there to stay, and contribute in fortunate cases to an environment that is richer. The changing of the site has made a great physical impact, yet the conversion of the historic fabric has been carried through with conscious consideration, and therefore the place is still recognizable.

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Appendix, Table 1: Ground, landscape; added buildings and existing buildings.

The following table presents schematically the handling of, and changes in, the physical heritage at Kvarnholmen. It is structured by three headings – Added buildings, Ground, Landscape and Existing buildings. The table and its subheadings facilitate a comparison between for example the handling of a site or a building. The table is supported by a discussion on the concept of compensation, taking the example of Kvarnholmen.

Ground, landscape	Removed/ reused	Profound rebuilding	Considerate reuse	Addition	Compensation
1 Natural landscapes	Exploitation	-	-	Eastbound linking road to the centre of Nacka via bridge and tunnel. Housing in the south east.	The exploitation on the Kvarnholmen peninsula is large but still has many natural landscapes, showing the Stockholm archipelago, havs been preserved.
2 Topography Figure 6	-		The former industrial exploitation was adapted to the topography of the fault line by structuring the buil-dings in three rows.	The existing structures, adapted to the topography, have been a starting point for the new additions being made.	In order to make new additions it was required to use existing structures, already adapted to the topography.
3 Shoreline park	Reused		A boat depot by the shore was turned into a park.	New design complete with revetment and furnishing.	In this case the question of compensation is indirect and less straight forward. For the development of the new district it is favourable with a park i.e. land that is not privatized. The design favours cultural historic values partly because a park makes it less necessary to build yards for apartment blocks, partly because the use as park displays the mountainside as part of the fault line which is one of the most crucial features of the northern Coast of Nacka as a national interest.

4 Quay Figure 4	Reused	Partly reconstructed due to need of maintenance.	The quay as a phenomenon is recovered with close attention to detail.	New functions as a boat dock for passenger traffic and a viewpoint for pedestrians were added. The furnishing and lighting were made in a robust manner equivalent to the potency of the physical milieu. Other functions on the ground were designed with stacks of grain or piles of material as inspiration.	The long quay by the flour mill Tre kronor is an important trait for Kvarnholmen. Therefore, it was in the process important to safeguard its size. This can be seen as a compensatory measure because the housing does not really need such a large area for its functions.
5 Passages, stairs, walkways and elevator Figure 5	-	-	-	These important featu-res for the architecture and functions in the district are additions. The longest flight of stairs connects in a north-south orientation the quay with the highest point on the plateau. By the stairs and its landings all levels in between are reachable – streets, yards, squares etc. To make connections easier within the area, passages for pedestrians have been made in strategic points straight through the 2nd, 3rd rows and the bakery.	To add new stairs and a new elevator is to recreate the lost phenomena – stairs, towers/conveyors and aisles/passageways in between the buildings. This new interpretation of former functions that was removed can be considered as compensation for other, now lost, cultural historic values physically expressed as technical equipment or buildings.

				The elevator runs in a tower and connects the level of the 3rd row via a walkway.	
6 New housing, ground	-	-	-	Yards especially designed for the new apartment buildings are relatively few. Instead the design is oriented towards a shared use of public spaces.	Residents of the new housing shall at first hand use public parks, quays and squares. Added buildings have been placed so that the number of apartment building yards have been reduced.
Existing buildings	Removed/ reused	Profound rebuilding	Considera-te reuse	Addition	Compensation
7 The Oat mill	Reused/ removed	-	A larger part of the mill is reconstructed to a level of detail that is ambitious. One part is reused.	-	The property owner was permitted to pull the damaged building down due to its poor technical status. The permit is conditional and stipulates a true reconstruction close to the original design and execution. To make a true reconstruction of the Oat mill is to compensate for the demolition of the original artefact.
8 The Tre kronor mill and silo

Figure 4 | Reused | Entirely changed interior | Exterior and parts of brick walls and other framework | To the south the exterior is facing the steep mountain side, balconies are added. Dormer windows in roof pitch. | In order to reuse the mill as a condominium Nacka required that the developer painstakingly preserved the exterior facing the water. Some interiors were still harbouring original equipment, which was removed. In order to compensate for that, the city plan stated that parts of the wooden building framework should be kept. |

9 The Mill office

Figure 4 | Reused | | Exterior and parts of interior | Few additions – one balcony and a few dormer windows. | The refurbishment is considerate concerning the exterior and more pervasive in the interior. The alterations can be seen as balanced against the value that the building again can house housing. |
| 10 The flour warehouse

Figure 5, 6 | Reused | Entirely changed interior. | Exterior preserved but modified. Framework reused. | Added volumes on the roof for elevators and other types of building technology e.g. ventilation. | It was not self-evident to reuse the warehouse as an apartment building due to too small windows and low floor heights. For example, in negotiating the preservation of the building, balancing against the scope of possible changes a number of principles were the result. The objective of the plan regulations was therefore to keep as much of the simple delicacy of the original architecture as possible. |
| 11 The Bakery | Reused | Entirely changed interior. About 1/3 of the bakery was removed. New façade facing yard as part of housing. | Exteriors to the north, west and south preserved but modified. Framework partly reused. | The long and narrow part of the building to the south is preserved and rebuilt for housing purposes. On top of it stands a two-story addition. | The bakery had a large surface spread. In negotiations between Nacka, the developer and cultural heritage representatives, the bakery was saved but its barrier effect was eased by making a passage through it, and by removing the most altered parts. The facades have also been altered, especially by making holes for windows in the housing parts. An important feature that was preserved and reused for the north entrance is the large canopy that originally covered the truck loading platform. To preserve the bakery as a whole and details like the canopy was an effort for the owner and is therefore a good example of compensation. |

The Macaroni factory, the Head office of Juvel, the Managers house and the mill building nr. 11. Also the former grocery store, the apartment buildings and the row houses.	Reused	Not analysed	Not analysed	Not analysed	Not analysed
Added buildings	Removed/ reused	Profound rebuilding	Considera-te reuse	Addition	Compensation
12 Silo-plant 1928, 2nd row Figure 4	Removed	-	-	Interpreted housing volumes. The footprint of the additional housing is larger than the original silo-plant.	Volumes inspired by original silo and adapted to the fault line the northern Coast of Nacka.
13 Flour mill and silo (1960s and 70s), 2nd row Figure 4, 6	Removed	-	-	Interpreted housing volumes	Volumes copied from original buildings and adapted to the 2nd row.
14 New housing, buildings	-	-	-	The design of the volumes is	The additions were adapted to the character of the
				inspired by the mill buildings of the era of the International style at the site. Flat roofs, no eaves, steep and flat facades in brick or plaster as in the area.	existing architecture, concerning volumes and materials, but contemporary in its expression. This was to compensate for the removal of existing buildings.

PLACE LOGIC RATHER THAN PROJECT LOGIC: LANDSCAPE OBSERVATORIES AS REGIONAL COORDINATORS OF LARGE-SCALE PROJECTS AND COMPENSATION MEASURES.

Anders Larsson

ABSTRACT

This essay will focus on experiences from previous research projects and master courses with the aim of highlighting some core issues and problems regarding large scale infrastructure projects, landscape assessment and compensation measures, especially concerning cultural values in the agri-cultural landscapes of Scania, the southernmost part of Sweden. Problems, but also possibilities, related to evaluation, mitigation and compensation are discussed.

Landscape Observatories as established under the European Landscape Convention are introduced as a possibility for trans-organizational learning around landscape matters in a broad sense. It is concluded that regional landscape observatories could function as hubs for more efficient manage-ment of large-scale landscape interventions and contextually relevant miti-gation and compensation measures. Incremental changes in the present legi-slation and administration, which seems to be the prevalent strategy, might not be sufficient in order to safeguard our cultural heritage or be in line with the objectives of international agreements.

KEYWORDS
Compensation measures, Landscape observatories, Regional planning, Infrastructure planning, Large-scale projects, Project logic, Place logic

INTRODUCTION – THE PROBLEM

In previous studies of compensatory measures for nature and cultural environments in large scale infrastructural projects in Sweden, we concluded that the possibility of demanding compensation measures by law for affected ecological and cultural values was seldom taken into consideration in practice. Besides, work on landscape analysis, environmental impact assessments and compensation measures were not carried through by local or regional coordination of ongoing, parallel large-scale infrastructure projects, but rather by a project centred logic. Each project had its specific budget and project management, which could lead to duplication of workload, problems regarding transparency within the planning process and poor considerations concerning possible synergy effects. One example illustrated how the almost simultaneous construction of a motorway and a railway affected exactly the same bird protection area, but no attempts were made to cooperate and look for synergy effects between the separate projects (Persson et al. 2015; Persson & Larsson 2014). In addition, compensation measures in Sweden usually only take place within the formal road and railroad area (fundamentally overlapping with the safety zone along the roads and railroads), and in-kind compensation measures are considerably more in use than out-of-kind measures, which further complicates the situation regarding cultural compensation, where in-kind compensation might actually be impossible. For some cultural elements, such as ancient remains, only documentation and dissemination of the results from e.g. an excavation is obligatory (Persson & Larsson 2014).

The jurisdictional base regulating compensation for damage regarding cultural values is found in the *Environmental Code* (Miljöbalken), chapter 7, 16 and 17, while the *Planning and building act* (PBL) and the law regarding cultural environments (Kulturmiljölagen) do not cover the issue of compensation for exploitation areas of general interest at all. According to the Environmental Code, compensation measures should be reasonable regarding actual costs, as contrasted to systems or policies focused on the principle of 'balancing', where costs for damages should be fully covered (Grahn Danielson et al. 2015). In a review of juridical cases, published in 2015, no circumstances of compensation for cultural environments according to the Environmental Code could be found (ibid.). Thus, in Sweden, there is a great need of further discussion on the juridical framework, terminologies and implementation in planning practice, as suggested by many others (e.g. Grahn Danielson et al. 2015). This paper will however not

specifically enter the legislative field any further than this, but rather focus on methodological and organizational issues.

EIA, VALUES, EFFECTS, MITIGATION AND COMPENSATION

An Environmental Impact Assessment (EIA) functions as a base from which ecological and cultural values are presented and where effects and consequences of infrastructure projects, leading up to mitigation and compensation measures, should be investigated and presented as transparently as possible (Trafikverket 2011). The reader of this essay will probably have sufficient knowledge about EIAs to follow the very basic discussion below. Of special interest is however to have the mitigation hierarchy (avoid, minimize, restore and compensate for expected damage on ecologically and culturally valuable environments) in mind for the coming discussion, since this is the 'leitmotif' when it comes to all theories and practices related to encroachment and compensation, whether in green or grey environments (e.g. Trafikverket 2018; Trafikverket 2011; BBOP 2009).

After having worked with infrastructure planning in practice as an EIA-coordinator, it is quite obvious for the author of this essay that ecological values influence the process much more than cultural values, which is validated by many other authors (e.g. Eliasson et al. 2018; Stenseke 2016). There is for example the European Water Framework Directive, Natura 2000 areas and red listed species to consider. The existing green/blue environments, or biotopes established as compensation for those lost, have to be at least as functional after the intervention as before. Ancient remains could on the other hand be excavated, and the obligatory compensation measure restricted to preparation of informational material and signs, where people can read about the no longer existing ancient remains and findings from the excavation. As Swensen and Jerpåsen (2008) formulate it, the cultural heritage and the protection and caretaking of cultural values is "*more to be seen as a derivate interest*", when compared to the protection and caretaking of the "*green interests*". In addition, the mitigation hierarchy seems to be constructed more from an ecological perspective than from a cultural perspective, where there is often an obvious link between identified damages and compensation measures. Application of the mitigation hierarchy in a cultural value perspective favours tangible values and clearly defined objects, at the expense of cultural aspects of more intangible and prosaic value, discussed further below.

One explanation for the dominant ecological perspective, at least within an infrastructural planning context, might be that the municipalities have the responsibility for streets within the urban areas, while the Swedish Transport Administration has the responsibility for the national and regional road and railroad networks outside the urban areas. Urban areas and their elements are more often considered and discussed in a cultural context (even parks and other obviously green elements), while large infrastructure projects outside our cities have more obvious negative effects on ecological values than cultural values. Cultural values in the countryside could also often be of intangible rather than tangible values, for example a long historical continuation of farming as activity, and the related open landscapes with no other identifiable tangible objects (more below). This puts further demands on the planning processes regarding cultural values in rural landscapes, since tangible values have always been more in focus within the mitigation and compensation process than intangible values, also when considering nature values (Germundsson 2005; Eliasson et al. 2018; Swensen et al. 2013). Additionally, the EIA-methodology has been in use for a longer time within infrastructural planning than within urban, comprehensive land-use planning in Sweden. Since compensation measures are tightly connected to EIA, landscapes outside of urban areas and tangible rather than intangible values, this might be the reason why we have not in the same way developed effective tools for compensation of cultural values as compared to ecological values, whether speaking of rural or urban environments (e.g. Swensen and Jerpåsen 2008; Rönn 2018).

The report *Kulturarv i samhällsplaneringen – Kompensation av kulturmiljövärden* (Grahn Danielson et al. 2014, available only in Swedish) explains how the concept of compensation has developed as a part of two separate scientific discourses on protection of ecological and cultural values – the former having been developed out of an environmental discourse while the latter has developed out of an antiquarian discourse. Thus, on one side we have the geological, biological and technological sciences, while on the other we have the archaeological, ethnological and artistic sciences. The legal framework for compensation measures is based on ideas from nature conservation, while cultural conservation and compensation had to inherit technically similar jurisdictional constructions. Priority is given to compensation measures, which could be delimited, measured and controlled via administrative systems for quality assurance (tangible values). Therefore, cultural compensation could not develop according to its own scientific discourse,

and there is still a long way to go before the scene is set for a more appropriate administrative environment for cultural compensation (Grahn Danielson et al. 2014). It should however also be mentioned that there can exist internal conflicts within e.g. the cultural heritage domain, such as between conservators/restorers, archaeologists and experts on landscape and the built environment on the other hand.

Another problem with a traditional EIA might be that it mixes *values* and *value assessment* within the same models, where different scales of effects and consequences, ranging from very negative effects to slightly negative or even positive effects, are distinguished between (e.g. Trafikverket 2011). One example is the diagrams where values are listed on one axis and the different alternative alignments (A-X) on the other, while the boxes where they intersect are filled with different colours related to positive effects (green) or very negative effects (dark red)(Figure 1). Quite effective and seemingly transparent, but maybe also confusing?

Erikstad et al. (2008) acknowledge the risk of mixing these different aspects, while also mentioning that the evaluation models as such vary, depending on

ENVIRONMENTAL ASPECTS ENVIRONMENTAL INTERESTS	Alternative 0	Alternative 0 +	Alternative A	Alternative B	Alternative C
Landscape character	Impacts with justification based on the bases for assessment shown.	Impacts	Impacts	Impacts	Impacts
Cultural environment	Impacts	Impacts	Impacts	Impacts	Impacts
Natural environment	Impacts	Impacts	Impacts	Impacts	Impacts
Outdoor life	Impacts	Impacts	Impacts	Impacts	Impacts
Health	Impacts	Impacts	Impacts	Impacts	Impacts
Etc.					

Figure 1. Fundamental example of overall assessment for feasibility study. The report provides an overview of the actual consequences, the scope of the consequences (evaluation), and the basis for the assessment. The report on environmental aspects should be ranked with regards to how essential they are. Green = Positive impacts. Light green = Negligible or no impacts. Yellow = Small or insignificant negative impacts. Light Braun = Observable negative impacts. Orange = Large or very large negative impacts. Source: Swedish Transport Administration (2011).

the authority or agency in charge of the work. Some models range from high to low value, while others range from international to local value, and when mixing different models, low value might be mistaken for local value. This is unfortunate since, within traditional conservation perspectives, local values could very well mean 'of high local value'. Terms such as 'international value' might also be mistaken for being something of importance on a wider geographical scale, like bird migration, rather than something of 'exceptional' value and a quite unique phenomenon. A high local value does not exclude a high international value, and vice versa. Therefore, Erikstad et al. (2008) suggest a more transparent model, where values are separated from strategic considerations and cause/effect relationships such as risk and vulnerability (Figure 2).

The suggested model has a grading of values from large (international & national) to local, instead of a grading from large to small, after which an assessment of risk and vulnerability can take place (Erikstad et al. 2008). It could be discussed whether it would not be even more logical to skip the "large" and "medium" altogether in their model, and actually use the model from the Norwegian Ministry of Environment (illustrated in Erikstad et al. 2008), which ranges from international to national, regional and local value, perhaps even extended by a further subdivision from high to low within each
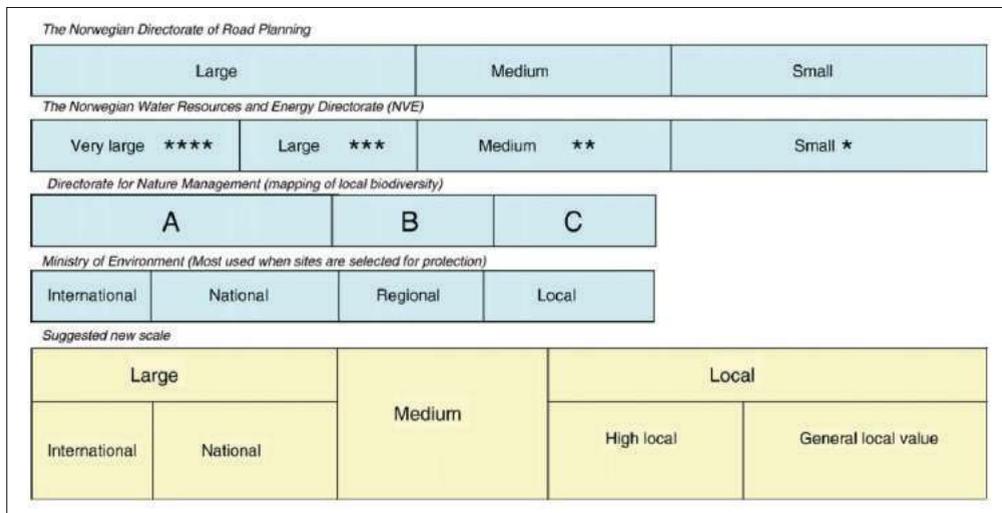

Figure. 2. Different value scales used in Norway and a suggested modification for EIA-use. Source: Lars Erikstad, et al. (2008).

category. However, as mentioned by Germundsson (2005) there is always a risk that when heritage values are formulated as being of national interest (value hegemony), local and regional heritage values could be diminished by comparison. It is unclear whether the suggested model/models above would counteract this problem or not. The belief in the specific models as such could also be criticized. Comparability and simplicity are strived for, so that no matter who the person is that has the responsibility for the evaluation, within specific areas of competence, results should be possible to measure and control by the administrative system. This is also a result of the project-centred logic. Within a place-centred logic, focus is more on transparency, continuity and discussion among a group of specialists, rather than on comparability and simplicity. The latter is believed to lead to a higher level of efficiency, while it might actually be the other way around, especially when/if long-term effects (cumulative) and resulting consequences for landscape values would be given a better status and treatment within the EIA-process.

A more well-known and often discussed problem related to heritage preservation, which you could easily find examples of also within nature conservation, is the tendency to focus on individual objects rather than the landscape or system as such, especially since there is often less knowledge on landscape and the system-level than on the object-level. In the Scanian landscape, Skåne (southernmost part of Sweden), the historically wide and open agricultural landscape could for instance easily be mistaken for being a product of the modern and strongly rationalized agricultural industry, since it differs from the idealized Swedish enclosed and small scale farming landscape (Germundsson 2005). Many laymen do not know that the Scanian landscape of today is actually much greener than it was 100-200 years ago (Larsson 2004). Consider for instance the preservation program for Svaneholm estate (where the first full scale enclosure reform was carried out in the 1780s, resulting in an open and large-scale landscape). The preservation program focuses on the park and the old manor house, not the open Svaneholm landscape, representing a historically decisive moment, which had vast consequences for all other Swedish agricultural landscapes (Germundsson 2005). The old manor house and the park were not of such ground-breaking value for the forthcoming countryside estates. This phenomenon could easily be detected also when planning for large-scale infrastructures, where e.g. the alignment is drawn in such a manner that it effects as few objects as possible, while the possibly more intriguing landscape characteristics are not described in any more elaborate way than as the scenic backdrop.

Closely related to this is the discussion about tangible versus intangible values, which we have already briefly touched upon above (Eliasson et al. 2018; Swensen et al. 2013). Eliasson et al. (2018) mention that there is an awareness about how important it is to consider intangible values, but in practice the focus is more often placed on tangible aspects such as ancient remains, churches and historic buildings. Swensen et al. (2013) write that the actual distinction between tangible and intangible values is most often irrelevant to people, but it is the intangible values (narratives), which matter most to laymen, while experts tend to focus more on tangible values. From their case studies in three different Norwegian towns, they could conclude that non-visible elements such as sound, smell and memories of people and activities, and also elements and places, which were already lost, mattered a lot to people. Thus, additional methods for documentation of cultural values are needed (Swensen et al. 2013).

> *Instead of taking departure primarily in the aesthetics of the visual landscape, it is crucial to reverse the focus and take departure in the fact that the cultural landscape is one that is worked and formed by people* (Germundsson 2005: 28).

So what to do about all of this? Eliasson et al. (2018) mention that the concept of cultural ecosystem services (CES), i.e. the dimensions of cultural heritage, place identity, aesthetic and existential values within the ecosystem services concept, could help to improve the status of cultural values in planning processes. Until now, however, studies have shown that due to the intangible nature of CES aspects, evaluation difficulties and methodological and conceptual reasons, the CES dimension has had some troubles concerning its integration into the ecosystem services approach (e.g. Eliasson et al. 2018; Blicharska et al. 2017), comparable to other results above, concerning nature versus culture. There is however increased support for integrated assessment of ecological and cultural values in landscapes within e.g. the Millennium Ecosystem Assessment (2005). Since the ecosystem services concept has had influence on international policies regarding socio-ecological systems, Eliasson (2018) also believes that there is a potential for further integration simply by utilizing existing knowledge and policies within heritage planning at local and regional planning levels. However, integrated assessment might cause some problems, regarding the necessity for cultural compensation to develop its own scientific discourse (Grahn Danielson et al. 2014).

In addition, the terminology in itself (ecosystem services) tends to point towards nature more than culture, even if the term cultural ecosystem is strengthened. Maybe it is not the assessment as such that needs to be a better integration of different values, but rather the legislation that needs to be more responsive towards the specifics of each discipline, while the *practical handling* of landscape compensation (nature + culture) should be undertaken as an integrated and trans-organizational learning process? As mentioned earlier, the planning and assessment process normally follows a specific project-logic, rather than being situated in a more holistic regional context, and comprised of several ongoing and overlapping projects and processes. Place-logic as alternative to project-logic will be further elaborated on below.

HIGH SPEED RAILWAYS AND THE CULTURAL LANDSCAPES

We have been working on the new plans for a High Speed Railway (HSR) through Scania within the framework of an international master's course at the Swedish University of Agricultural Sciences (SLU) in Alnarp during the past two years. The HSR is an interesting study object since it involves working with a completely new scale of infrastructure in Sweden. There is reason to believe that some forms of mitigation and compensation measures, such as those regarding ecological values and noise, could be carried through even better this time. This depends on the large-scale as such and the subsequent obvious conflicts, which of course leads to extra attention from the authorities, but also because we have learned to handle these types of problems relatively well by now. Building eco-passages in sensitive natural environments is a standard procedure rather than something novel, at least when it comes to the most simple and cheap versions of tunnels. However, we have not in the same way developed effective tools for compensation of cultural values (e.g. Rönn 2018). In addition, there is a risk that cultural values will be more negatively affected than usual, because a HSR must be given a much straighter alignment than railways for traditional, slower trains, which means that the railway will not be able to sneak around the most sensitive environments, as it used to. In the worst case, buildings, estates and coherent cultural environments of high conservation values might have to be removed almost entirely.

Compensation measures are only carried through in practice within the formal road and railroad area in Swedish infrastructure planning. Compensation in municipal policies is a voluntary agreement with the developer.

The situation seems to be quite different in for example Denmark, which was illustrated during field studies within the course. The formal requirements might have stipulated that compensation measures should actually foremost be carried through within the formal railroad area, but according to planning officers and landscape architects we met, it was all about finding constructive ways of discussing the problems and possibilities together with the municipalities. Thus, in Denmark, off-site compensatory measures were obviously discussed to a much higher degree than in Sweden. We saw examples of e.g. new recreation areas stretching far away from the formal railroad area, resulting in impressing solutions regarding parks for recreation and biodiversity that fitted well into the local landscape context. Thus, it is clear that the range of possibilities could be extended also in Sweden, not least during the very specific window of possibilities, which has opened up due to the public interest in the HSR project, if only the responsible authorities could be a bit more creative and open minded regarding the formal requirements and regulations.

Scania, which was in focus during the master course, is a densely populated region of Sweden, but with the population and villages in the plains scattered all over the landscape, rather than concentrated to fewer urban settlements

Figure 3: Illustration from student work by Julia Hellström, SLU Alnarp (2019).

near lakes, rivers etc., as in much of the rest of Sweden. The closeness to ground water made it possible to dig out wells and place your homestead almost anywhere. Most villages were destroyed, especially during the 19th century, since the land relocation reforms forced farmers to move their farms from the collected villages to their new plot of land. New drainage technology made most of the plains very well suited for large scale farming. Cultural heritage values and ancient remains from periods long before the farming era are found everywhere. There is additionally much existing, modern infrastructure to consider, like roads, railroads, power lines, etc. Thus, there is little possibility to avoid major negative effects on the landscape and for people living in Scania. There are however some possibilities to 'overcompensate' in such landscapes, such as building eco-passages over, not only the new railroad, but also adjacent and already existing infrastructure, in order to open up for wildlife and public access where there previously were barriers. Some students discussed this possibility within the course. Below is an example of a combined eco- and recreational bridge over a railroad, which could easily be extended to stretch over more than one infrastructural element (Figure 3).

Other students worked on suggestions about how to make better use of patches of leftover land close to the railroad area, which could not be used effectively for e.g. agricultural production after the intervention. If close to urban settlements, such land could be developed into new parks and recreational areas, just as the examples we saw in Denmark. The example below illustrates such a possibility close to the city of Eslöv (Figure 4). A new, green corridor through the western parts of the city is suggested, along with eco-passages, etc. The municipal officer from Eslöv who took part in the final presentations in the course stated that it now almost felt like the new railroad had become a prerequisite, not a hindrance, for getting green structure projects like this one on the table for negotiation.

The problem remaining might be that the present road and railroad process does not allow for such creativity. The system is still ruled by project-logic rather than place-logic (Persson et al. 2015), making it difficult to discuss synergy effects between other ongoing infrastructure projects or compensation measures that could bridge barriers created by already existing infrastructure. Within the project-centred planning process, it would be equally difficult to coordinate all the different authorities and stakeholders affected in the region, with their multiple and not always overlapping goals. The fact that little attention is paid to the cultural heritage compared to ecological

values, especially the intangible values, further complicates the situation. It could also be worthwhile mentioning the always-difficult issue of long-term consequences resulting from the project as such, new land values and further exploitation possibilities in which the infrastructure project will result, affecting forthcoming planning and development (cumulative aspects, e.g. Jones (2016)). A platform for discussing the complexity of regional landscapes and large-scale landscape interventions in its totality, including all relevant stakeholders, seems to be missing. Each sector is working individually on improvements and fine tunings of its own set of methodologies. Below, landscape observatories will be presented and discussed as possible hubs for regionally centred coordination of landscape-related data, interests, and measures related to mitigation and compensation aspects.

LANDSCAPE OBSERVATORIES

As stated earlier, the local or regional connection is of great importance since it will make it possible to avoid some problems, related to the project-centred

Figure 4: Illustration from student work by Johan Henriksson, SLU Alnarp (2019).

logic, which guides most large-scale infrastructure projects of today. Projects should rather be coordinated regarding competence, planning and management through a regional hub of some kind, where the parties involved represent a broad view on landscape values, threats toward these and ongoing and planned projects in the region. Such a regional landscape body should be able to coordinate landscape character analyses, impact assessments and compensation measures on e.g. major landscape projects (road, railroad, wind power, etc.). This would lead to a better picture of the regional context, minimize the risk of duplication, as well as understand how synergy effects could be better attained (Persson et al. 2015; Persson & Larsson 2014). Regional coordination is also preferred to national coordination since, as mentioned above, values formulated on a national level often diminish the importance of local values (Germundsson 2005). This is why it could be of interest to learn more about Landscape Observatories.

On behalf of the Swedish National Heritage Board (Riksantikvarieämbetet, RAÄ), a group of researchers at SLU Alnarp have written a report, which presents a number of examples of different types of European landscape observatories, with a particular focus on organizational issues and with the aim of discussing possible applications in a Swedish context (Sarlöv Herlin et al. 2019). Landscape observatories are largely based on the European Landscape Convention (ELC), which aims, for example, to increase the democratic elements of decision-making, map changes and raise awareness on landscape related issues. Sweden ratified the convention in 2011 and thus has a responsibility to implement the guiding principles of the convention within national policies and legislation directed towards matters affecting national landscapes (Sarlöv Herlin et al. 2019). RAÄ is the authority in Sweden with responsibility for the initial implementation aspects regarding ELC.

ELC came about as a reaction towards the manifold, negative, driving forces affecting the landscapes of today, acknowledged widely from the 1990s. Together with an insight about the need for a trans-sectorial landscape policy, this considers the citizens' right to information and right to participate in landscape related decisions. A relationship towards the Aarhus convention is obvious, just like the Faro convention regarding the value of cultural heritage from the Council of Europe (Sarlöv Herlin et al. 2019). An effective and appropriate protection, management and planning according to the statutes of the ELC raises a demand for continuous observation and suitable forums for exchange of information, such as observatories, centres or institutes for

landscape. A foundation of the ELC is to integrate the ecological and cultural heritage perspectives (including social aspects) and work towards a holistic perspective handling the entire landscape, and not only the specific objects one by one (ibid.). Thus, a landscape observatory, based on the ELC, should address most of the difficulties related to evaluation of ecological and cultural values, mitigation and compensation aspects mentioned above.

The Council of Europe (2008), responsible for the guidelines regarding the implementation of the ELC, have listed possible tasks to be carried out by landscape observatories, which could include information about the status of the present landscapes, developing indicators for observing landscape changes or the carrying through of such observations, collecting information about landscape policy and experiences on protection, management and planning, through collecting and using historical documentation on how the landscape has developed over time, and providing data which could increase the understanding of current trends (Council of Europe 2008; Sarlöv Herlin et al. 2019). The existing landscape observatories are of many different types, from those which have a local focus or handle very subject-specific tasks, to those of much higher complexity, initiated either through national legislation or from a grassroots perspective, covering a larger geographical area (often regional level) and with professional governance supported by e.g. regional political bodies. It should be noted that many of the topics and functions included in European landscape observatories are already considered and handled by various official authorities in Sweden, even though there is no collected landscape body corresponding to an observatory (Sarlöv Herlin et al. 2019).

An inventory in 2015 found approximately 60 European landscape observatory initiatives in Europe. A majority of these (27) were local observatories in Italy. 13 observatories of a regional character were found in France, whereof one is a transnational observatory in cooperation with Belgium. Other initiatives regarding observatories can be found in countries such as England, Holland, Finland, Portugal, Switzerland and Sweden. Spain has 3 observatories (Catalonia, the Canary Islands and Andalucía), whereof the one in Catalonia is the most well-renowned in Europe (Sarlöv Herlin et al. 2019).

The landscape observatory in Catalonia (http://www.catpaisatge.net/eng/index.php), active since 2004, functions for example as an information hub, a link between politicians and citizens and an initiator of various preser-

vation and development projects in the region. The board of the observatory consists of representatives from regional authorities, universities and professional organizations. The chairperson is a representative from the local Catalonian government from within the ministry of land and sustainability. The landscape as such is located in Olot, where there are both archives and a library with landscape related material available for all citizens. Through bottom-up projects such as "Wikipedra" (http://wikipedra.catpaisatge.net/), a part of the inventory of the cultural environment, citizens are encouraged to submit information about where traditional dry stone buildings and dry stone walls can be found and, after inspection, the data is registered digitally, and could eventually end up on tourist maps of the region. Thus, important cultural environments are made visible and available in a much better way than before, as well as the historical knowledge about these objects increases (Sarlöv Herlin et al. 2019). Such regional and bottom-up projects are often more effective than conventional, top-down, landscape management approaches (e.g. Bohnet & Konold 2015). Other tasks carried through within the Catalonian observatory include e.g. Landscape Catalogues, containing landscape character assessments, landscape quality objectives and guidelines on preservation and management for different parts of the region. There are many other tasks carried out by the Catalonian landscape observatory, such as initiating education on landscapes, including didactic material to be used by the elementary schools, arranging seminars and workshops, which are documented and published on the homepage, plus several publications written by the staff, such as newsletters, annual publications, bibliographic catalogues, calendars and information about international landscape related projects (Sarlöv Herlin et al. 2019).

The most important aspect of a landscape observatory might however be that it should function as an active part in planning processes and exploitation projects affecting regional landscape values. Thus, it should not be mistaken for other, more local, forms of visitor and information centres, often established for touristic reasons, where information about geology, flora, fauna, cultural history etc. (e.g. the Swedish "naturrum") is available. Nevertheless, there might of course be overlapping functions as well as cooperation between landscape observatories and other forms of local and/or regional information centres.

A Scanian restart and redevelopment of the "Skånes Landskapsobservatorium" is planned to be introduced during the autumn of 2019, with SLU as

coordinating department. This will however start with a much more limited agenda compared to the Catalonian example, but with ambitions that will grow successively.

DISCUSSION

Individual trees in a tree avenue cannot be preserved forever, but must be replaced with new and vital plant material from time to time to safeguard not only the ecological status, but especially the cultural value of the object as such – the tree avenue. In addition, why could nature not sometimes be compensated by culture, or vice versa, as well as objects be compensated with activity, or vice versa? What would be the best for the affected area as a whole, in a longer time span, and in what ways could authorities facilitate the development of vital agricultural landscapes that not only preserve, but also re-generate, natural and cultural values? There are many more questions than the above mentioned to consider when it comes to safeguarding cultural heritage, when planning for large scale infrastructure in Sweden, clearly illustrating the complexity of handling legislation, implementation and cooperation among different stakeholders.

One might wonder if "compensation" as such is actually the best concept to use, since this relates back towards the landscape, or landscape objects, as it or they was/were before the intervention. This might also unconsciously give priority to in-kind and on-site measures, especially when it comes to ecological, green, features. If a pond was destroyed, we would of course like another one in its adjoining surroundings, in order for the present inhabitants of the habitat to thrive and reproduce to at least the same extent as before the intervention. However, it might be more difficult if a castle and its surrounding English park were ruined. The risk of aestheticism is obvious if an imitation of the castle would be erected right next to the old one, and a new adjacent park laid out in front of this (Duncan & Duncan 2001). This would be true even if the castle could be kept as it is, and transported to a new place. A landscape, which has had a high-speed railway placed right through it, will never again be the same as before. On the other hand, the new cultural landscape might thrive in its original meaning (e.g. farming and gardening) even better than before by more up-to-date interventions (out of kind).

Should we, to a greater extent, try to illustrate and describe the conditions for a qualitative and vibrant cultural landscape after the intervention just as accurately as we do when documenting the landscape and its existing

values before the intervention? Instead of seeking to replace an old estate environment, with classical buildings and hunting grounds, with something that is even reminiscent of what has been, we could instead aim to preserve the phenomenon as such – a vital and diverse landscape when it comes to production of food and other meaningful activities for the population of today. The old estate must of course be given its historical documentation, open for coming generations to be aware of, but there might not be a need for more large-scale farming in the surroundings. Looking at a broader context, one might discover that the nearby apartment area is an area where unemployment is high and people are eager to learn about urban farming and urban gardening, leading towards small-scale production of food supplies to be sold to the public or nearby restaurants, or not at least to social benefits (e.g. the project Stadsbruk, as illustrated in Rasmusson et al. 2016 & Nilsson 2015). The historical *idea* of working with the land and producing food is safeguarded, but put into a modern context. This might be more interesting than to preserve the buildings as such, especially when they are most probably occupied by people with jobs in the nearby cities, outside the agricultural sector, while the land is taken care of by a farming company situated somewhere else, especially if there is no realistic alternative for re-locating the railroad alignment. However, there is a need for a more profound discussion regarding out-of-kind and off-site solutions, both regarding the cultural heritage and ecological values. The lost habitat might not be of the most vulnerable kind in the region, while a very different kind of habitat could lead to great improvement of the situation regarding extinct species of a very different kind. Fish should maybe be substituted by birds, or the other way around. The mitigation hierarchy might be obsolete. One objection could be that any such changes in the strategies or willingness to compromise about the value of the original environments, objects and functions might lead to a more liberal form of planning in general, where out-of-kind compensation is rather seen as an excuse while not bothering too much about the destruction of heritage values.

Instead of getting rid of the mitigation hierarchy, which might to some degree prevent a too liberal attitude towards the original environment when in use, it should maybe be extended by a fifth, more forward looking step (e.g. improving and strengthening both ecological and cultural aspects). Here, landscape observatories could be used as a platform in the early stages of planning processes to facilitate a constructive dialogue between different agencies and developers. The report "*Kulturmiljövårdens riksintressen enligt 3*

kap. 6 § miljöbalken" (Riksantikvarieämbetet 2014) mentions some examples of improving and strengthening values related to cultural heritage, such as improving accessibility, creating or re-creating connections, structures and other spatial attributes, which increase the possibility to interpret the landscape, i.e. the possibilities to understand and experience the cultural environment. Ann Whiston Spirn's discussions regarding "landscape literacy" could also be well worth developing further in this context (Whiston Spirn 2005).

To sum up, regional landscape observatories, as described above, would not only be timely to introduce in Sweden, due to e.g. international commitments, but could also function as the hub we need for better organizing an effective, democratic and constructive discourse on landscape change and preferred development. After all, we must work for the long-term benefit of landscape values, be they ecological or cultural, not looking at each project as an isolated object or specific time limited process. Cumulative Effects Assessment (CEA) are after all best undertaken regionally, not project-by-project, as mentioned by Jones (2016). A fresh start might be preferred instead of a continued handling of projects, mitigation aspects and compensation measures within the present project-oriented system, incrementally moving a little bit towards better part-solutions year by year, while our landscapes are destroyed bit by bit because of unpredicted cumulative effects. The present planning system regarding large-scale infrastructure most certainly does not correspond to the obligations we have undertaken, especially regarding public participation and democratic values, by ratifying the European Landscape Convention.

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CREATIVE TOURISM AND DIGITAL RECONSTRUCTION: TWO APPROACHES FOR HERITAGE LOSS COMPENSATION

David Ross

ABSTRACT

Preventive archaeology provides an opportunity to discover and study a significant amount of archaeological resources. However, unless sites of extraordinary value are identified, the materiality of the discoveries is often lost, meaning their perceived value for developing educational, cultural or tourism initiatives decreases substantially.

Compensation measures for the negative impacts of urban expansion on archaeological heritage ensure that stakeholders are compensated in cases where heritage loss is inevitable, yet, the idea that archaeological heritage retains potential to be experienced after it has been physically destroyed is not typically considered. Assuming that heritage comprises not only its material fabric, but also intangible elements of memory, values, and archaeological knowledge, this essay reviews two measures to compensating heritage loss through development of tourism activities: digital reconstruction and creative tourism.

Digital reconstructions offer visitors a chance to experience and interact with a digital replica of the impacted heritage. Creative tourism stimulates visitors' creative expression as a means of highlighting the process of sense-making of lost sites. By focusing on the story of loss, it is argued that these solutions can offer memorable experiences to visitors, while helping to preserve and present the essence of place in situations of heritage loss.

KEYWORDS

creative tourism, archaeological heritage, compensation, interpretation, digital reconstruction

INTRODUCTION

Developer compensation in the context of urban expansion refers to the notion that developers are responsible for the negative impacts caused by the construction of building projects, hence are required to offer reparations for the loss endured. Concerning impact on archaeological heritage, developers should provide measures that either ensure the safeguarding of material remains or ensure that stakeholders are compensated in cases where heritage loss is inevitable.

Often, archaeological sites that have been physically destroyed are ignored by the tourism sector, implying that they have been permanently lost. Analysing the role that archaeology plays in developer-funded contexts, Goudswaard, Bos, van Roode, and Pape (2012, p. 105) note that "*apart from museums, very little use is made by other fields of the results of archaeological or heritage research*". The idea that archaeological heritage is still able to inform tourist experiences after it has been physically destroyed is not usually considered a viable option for compensation. This is partly because the conventional archaeological tourism model is designed to create value from visitor interaction with the material aspects of archaeological heritage. Yet, while it is true that preventive archaeology generally causes loss of material remains, it also generates significant archaeological knowledge that has value for tourism.

This paper explores the development of tourism products and experiences as an option for compensation, building on research from two recent projects. First, research that examined the way providers (e.g. tour guides and cultural tourism businesses) use the knowledge and memory associated to archaeological sites that have been physically lost to offer memorable experiences. Based on a case study of the Alentejo region in Portugal, the study found that the use of participative co-creation approaches allows tourists to engage meaningfully with archaeological elements, without the need to physically access or interact with archaeological sites.

The second research is VISTA-AR, a project led by the University of Exeter (UK) and funded by the Interreg France (Channel) England (see www.vista-ar.eu). Overall, this project aims to increase visitor numbers to heritage sites by developing digital interpretation exhibits and experiences. One of the rationales behind this is to enable visitors to access heritage features and artefacts that are not immediately accessible.

The aim of the present paper is to reframe both research projects mentioned above from a developer compensation perspective. Two solutions for preserving and presenting the essence of place in cases where physical loss has occurred are discussed as a means of compensating for lost heritage and retaining their memory: digital reconstruction and creative tourism activities. Advantages and disadvantages are highlighted, as well as resources required and other implications. Although these approaches are discussed here as solutions for compensation through tourism development, theoretically they can also be developed for other audiences, for example local communities where heritage has been impacted.

PREVENTIVE ARCHAEOLOGY AND HERITAGE CONSERVATION

The implementation of large development projects entails a range of impacts. As part of environmental impact assessment, project developers are required to survey the area affected by the building works to identify any cultural resources potentially threatened by the new development. In some cases, development project plans are modified or cancelled due to the scientific or cultural value of the resources revealed during impact assessment. For example, in Foz Côa Valley (Portugal), a large dam was planned but later cancelled due to the discovery in 1994 of Prehistoric rock art of outstanding scientific value. As a result, the site was listed as a UNESCO World Heritage Site, and a thematic museum opened to the public in 2010, supporting the development of cultural tourism activities (Zilhão, 2005). In this example, preservation in situ feeds the tourism industry by enabling tourists to visit the archaeological sites.

A more common approach in developer-funded archaeology is preservation by record, which refers to the process of documenting relevant archaeological artefacts and sites before they are destroyed or left unexcavated (when identified by non-intrusive means) (Demoule, 2012; Jones, 1984). This procedure is an attempt to document and transfer the materiality of heritage to other media, e.g. written text, photographs, or digital record (Willems, 2008). As a result, all that remains is the knowledge about the past of the region, meaning a conventional cultural tourism approach is not possible because there is little or no archaeology left to engage with.

The matter assumes greater significance when it is verified that approximately 90% of field archaeology at the present day in most Western countries is developer-led (Bugalhão, 2011; Fulford, 2011). Funding invested into these

archaeological surveys has few practical returns for either project developers or the general public. For the most part, data gathered is retained as 'grey literature' in the project developers' records. When made available through public consultation sessions or published reports/monographs, the knowledge is often not conveyed in a user-friendly way for non-specialists (Huvila, 2017). As Eoin and King (2013, p. 662) point out, "*documenting culture (whether material or 'intangible') here hardly constitutes 'safeguarding'*", adding that the heritage loss occurs in two moments: "*the first time physically, when construction causes landscape destruction/transformation, the second time when the 'records' that are supposed to replace them are not made publicly accessible, simply because the infrastructure enabling this to happen is non-existent*".

The difficulty to act on heritage in post-destruction scenarios is borne from the assumption that archaeological heritage is lost entirely after the material remains have perished. In situations where preservation by record of material heritage is the most common approach, this assumption is challenged. The archaeological knowledge generated in preventive archaeology refers to tangible heritage that has lost its tangibility. In this sense, it is intangible archaeological heritage (Ross, Saxena, Correia, & Deutz, 2017). Further to its conceptual implications, the emphasis on physical fabric has practical implications in the way it shapes the development of archaeological tourism. The following section examines the role of material and immaterial aspects of archaeology and how they are approached in tourism.

INTANGIBLE ARCHAEOLOGICAL HERITAGE AND TOURISM

For the most part, archaeological tourism is traditionally related to leisure activities that provide the means for the interpretation of the past and human history, through contact with material heritage, i.e. museum exhibits, visits to archaeological sites, among others (Prentice, 1993). The emphasis is on the material objects, i.e. ancient ruins and artefacts unearthed during excavation, their context and all of the physical properties which can be explored by the five senses (Hurcombe, 2007). In common frameworks, archaeological tourism is made up of three elements – visitor, interpretation and phenomenon (e.g. archaeological site) (Ludwig, 2015). Visitors apply interpretive tools to engage with the archaeological object/monument and, in doing so, create meaning from the experience (Figure 1).

The negative impacts of preventive archaeology interventions (e.g. loss of physical fabric) disrupt the triangle model. Nonetheless, preventive archaeology also has positive outcomes, as it generates scientific knowledge, enhances local memory and values associated to historical remains, and creates a story of the loss. These memory, values, identity, historical meaning and archaeological knowledge are generated from human interaction with the material fabric of an historical site, and persist following material destruction (Carboni & de Luca, 2016; Hodder, 2012; Smith, 2006).

Thus, underlining the positive instead of the negative impacts allows a broader conceptualisation of developer compensation. Goudswaard et al. (2012) introduce the term reverse heritage to address knowledge produced in developer-funded archaeology contexts, arguing that archaeological elements could add place-inspired character that enhances spatial quality of the proposed development. DeSilvey (2017) examines heritage at risk, and argues that physical decay of historical monuments presents an opportunity to experiment with new conservation approaches aiming at transformation
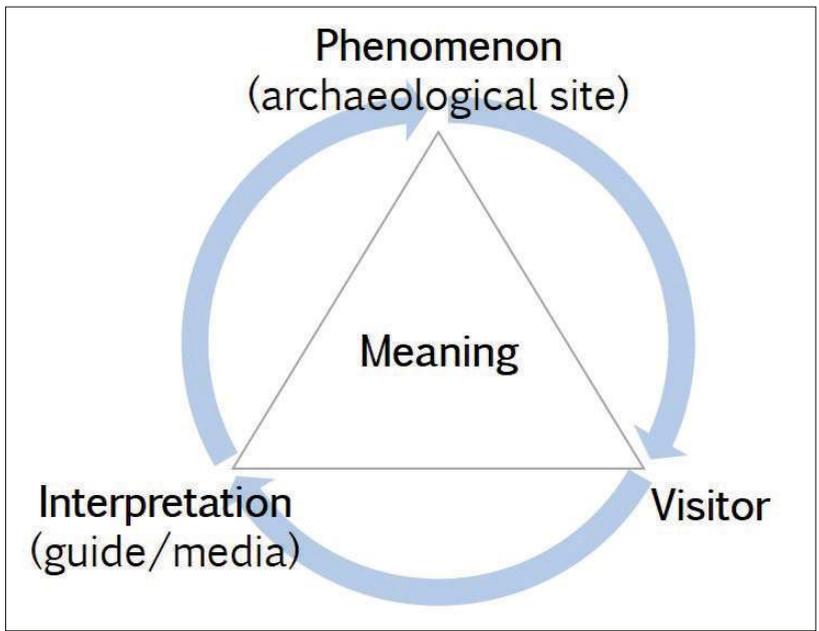

Figure 1. The interpretive triangle. Source: adapted from Ludwig (2015).

and reinvention. Rather than erasing a monument, physical loss can be seen to reinforce a sense of identity by highlighting its memory and values inherent in a place (Fibiger, 2015; Holtorf, 2015). At the core of the argument is the idea that physical loss does not erase but in fact may add to heritage.

Indeed, there is a strong appeal in the loss of heritage, which can be captured for tourism. Weaver and Lawton (2007, p 110) introduced the concept of attraction residuality, "*which essentially entails the perpetuation of an attraction in the aftermath of its physical loss.*" The authors argue that the physical loss of a tourist attraction can be approached in three ways as means of perpetuating its memory: reconstruction, memorialisation, and redefinition. Reconstruction of a lost attraction can take place either in-situ or ex-situ. For example, the Lascaux and Altamira caves have been replicated at real scale due to deterioration of the original cave paintings caused by visitors (Corruchaga & Monforte, 2006). There is also a growing interest in virtual reality reconstructions of destroyed heritage that enable users to experience a sense of place (Ellenberger, 2017). Memorialisation can happen through mechanical reproduction such as souvenirs, or social reproduction such as organising events that celebrate the memory of the lost attraction (Kersel & Luke, 2004). Finally, redefinition concerns reinventing the lost attraction in new moulds, and implies acceptance of its loss and expressing grief through re-creation of meaning and memory in a different form.

Infamous examples such as Bamiyan Buddhas in Afghanistan, which continue to attract visitors despite having been totally destroyed in 2001, suggest that physical loss can take a centre place in a narrative and create compelling stories. Peacock (2018) describes how temporary exhibitions and events, such as pop-up museums at rescue excavation sites, draw visitors into the scene of archaeological excavation to witness physical destruction as it happens, and to engage first-hand with evolving narratives of place. In Portugal, the building of the Alqueva dam in the archaeology-rich Alentejo region submerged a great number of archaeological sites. Despite this, recent studies suggest that lost monuments such as Castle of Lousa maintain tourism attractiveness, enlivened through local tourism providers' initiatives that create narratives focused on the monuments' material and conceptual loss as a result of constructing the dam (Ross & Saxena, 2019).

Other historical sites with low materiality, such as battlefields, attract many visitors despite not having much to show. Warnaby, Medway, and Bennison

(2010) write about marketing of places with diminished materiality, such as Hadrian's Wall, in the UK. The monument's large extension across England, coupled with its ruin and, in some places, total erasure, creates a diffused materiality, or fuzzy place. Authors relate fuzziness of Hadrian's Wall to the lack of fixed borders, arguing that the monument has attained 'conceptual entity' as a result of the implementation of an administrative jurisdiction and tourism management project.

Despite this potential, the physical loss of an archaeological site disrupts the conventional interpretation triangle model. In order to enable visitors to create meaning without the archaeological object/monument, tourism providers should enhance visitor input and interpretation aspects of the experience. Moreover, there is a need to find a replacement for the destroyed material remains. This can be something tangible, such as physical or digital replicas, or something intangible, such as a story that compels tourists emotionally. The following sections discuss two approaches to develop tourism experiences that do not require visitor access to actual material heritage.

DIGITAL RECONSTRUCTION

The development of digital technologies has been growing at a rapid rate, and has been increasingly used in the heritage and tourism industries. More and more heritage sites, museums, and tourist attractions are adopting digital solutions to offer enhanced interpretation as a way of boosting their attractiveness to potential visitors and competitiveness against other attractions. According to tom Dieck and Jung (2017), digital interpretation, such as augmented reality, benefits museums and heritage sites in six dimensions:

- Economic, by attracting new visitors, increasing visitor numbers and revenue;
- Experiential, by offering new exciting experiences;
- Social, by creating multi-user experiences, e.g. gamified exhibitions;
- Epistemic, by exploring new concepts for visitor engagement;
- Historical/Cultural, by triggering interest in history and telling personal stories of past events;
- Educational, by offering interactive and personalised learning experiences that allow learning at your own pace.

Implementing digital interpretation using technologies such as virtual or augmented reality creates new value that appeals to visitors' interest and

offers a platform for their enjoyment and learning. Digital interpretation can take many different forms, depending on the goal. It can provide a more passive experience, e.g. the visitor is given an opportunity to view historical sites and objects in a contemplative manner that highlights aesthetics and passive learning. Experiences may also be more interactive and gamified, e.g. giving visitors the opportunity to engage with objects and monuments, and explore different aspects of each, thus personalising the experience to suit each person's interests (Ellenberger, 2017).

In a situation of heritage loss, digital technologies provide solutions to compensate for heritage destruction by preserving a faithful and accurate replica in a digital form (Bec et al., 2019). Indeed, web projects such as Google Open Heritage and Sketchfab have created vast libraries of 3D models and digital records of heritage, which provide an important tool for the conservation of heritage at risk. Moreover, whilst tourism experiences based on digital conservation and reconstruction may raise issues concerning perceived authenticity, due to engaging with replicas, they also offer innovative ways to present heritage in an interactive manner without fear of visitor-inflicted damage (Dawson, Oliver, Miller, Vermehren, & Kennedy, 2013; Guttentag, 2010). By digitally reconstructing heritage that has been destroyed or made inaccessible, the interpretation triangle is kept intact, with tourists being able to engage with the archaeological phenomena, albeit in a digital version.

Experiencing digital reconstructions

There are numerous ways to create tourist experiences using digital reconstruction. Amongst them, two main forms have become increasingly popular and widespread in heritage tourism: augmented and virtual reality experiences.

Augmented reality

Augmented reality (AR) superimposes digital content over real landscape, buildings or objects. By using a device such as a tablet or smartphone, visitors are able to observe an enhanced version of reality that includes an overlay of digitally generated videos, animations, pictures, or information in real time. In situations of heritage loss, AR can be used to render destroyed archaeological sites onto the newly built development, allowing visitors to see what the site looked like in different stages of time, e.g. while it was in use, the ruins at the moment they were excavated and how they look now under the new development. This reconstruction can also be projected onto the archaeological remains for in-situ experience. Another possibility is to use a physical

marker, which can take the form of a piece of furniture, to trigger the digital reconstruction. Installing the marker within the perimeter of the new building allows visitors to interact digitally with the archaeology that gave way to the development.

For example, as part of the VISTA-AR project, a digital reconstruction of the Lord's House at the Château de Fougères, in France, has been created to augment the site's ruined foundations (Figure 2). By making the reconstruction available in an AR platform, visitors are able to view and explore the monument in-situ. Although the monument exists only in digital form, visitors can still experience a sense of place and use the technology to learn about this feature and enhance their overall visit to the castle.

Virtual reality

Virtual reality (VR) differs from AR in that it offers a replacement to reality as opposed to an enhanced version of reality. By wearing a headset, visitors cut off completely from their surroundings and enter a fully immersive, digital environment that can be enhanced with multi-sensory features. The VR experience can either be more interactive, with a game-like approach offering a chance for user input, or more passive by enabling aesthetic contemplation of digitally reconstructed archaeological sites. Adding a storyline to the VR environment enriches the experience by creating a sense of cultural presence in addition to the visualisation of the site (Pujol & Champion, 2012).
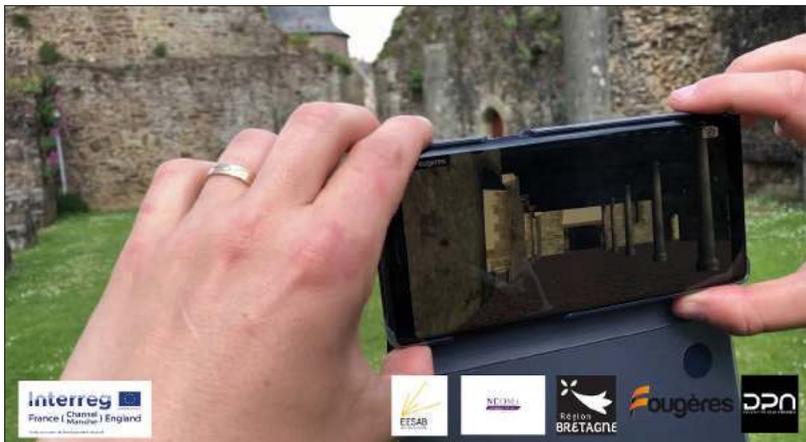
Figure 2. AR application at Château de Fougères. Source: EESAB.

VR provides a chance to have an immersive experience of sites and monuments that have been destroyed but are reconstructed and brought back to life, assuming proper record has been made prior to their destruction. For example, the Tin Coast in Cornwall (UK) includes many miles of deactivated mine tunnels, most of which are inaccessible to the public. As part of the VISTA-AR project, some of these are now being made accessible through VR. Visitors will wear a headset, and be able to experience going down a mineshaft in the eyes of a 10-year old boy who is following his father, as he himself begins working as a miner in the 1860s. Nearby, Geevor Tin Mine has also created a VR experience of the mine, but employed a tour-like approach instead of a fictional story. These examples illustrate how the same tech, and indeed the same type of heritage, can provide two different types of experiences.

Resources required

Despite their popularity, the developing of digital reconstructions requires a significant investment of time, expertise and funding. As for technical production, an extensive list of tasks is required, including laser scanning of material remains, 3D modelling, texturing, animations, soundscapes and software for user-interface (Figure 3). Given the time and expertise required,

Figure 3. Stages of rendering a 3D model of a tin mine tunnel. Source: EESAB.

develop most commonly procure these experiences from companies specialising in digital media production.

But tech development is just one part, as digital reconstruction in itself has limited value. Visitor satisfaction of digital exhibits can be substantially improved when these include a compelling story that engages visitors at an emotional level (Lombardo & Damiano, 2012). Thus, human resources required include archaeologists to provide authenticity and accuracy, scriptwriters for writing engaging stories and curators to turn a digital reconstruction of a historical site into a visitor experience. The story developed can include the appeal of loss in order to make it more memorable.

In terms of operations, there are two ways developers can offer AR to visitors. One option is to setup a welcoming centre where visitors can obtain tablet or smartphones devices (for free or for a fee) to experience the digital reconstruction. Another option is to make the software available for visitors to download and use on their own device. This option removes the need for a visitor centre, requiring less effort from the developer and more from the visitor, who must be tech-savvy, own a powerful/compatible device (e.g. have enough memory for running and storing the software), and be willing to install a dedicated app on his/her device. The developer may be required to make Wi-Fi available on-site to facilitate visitor download.

Installing and managing a VR installation is similar to a museum exhibition, in that a physical place to house the digital experience is necessary, as well as staff to maintain and manage visitor use of the VR system. A powerful server computer is required to run the software, and a number of headsets made available for visualising the digital environment. A lighter option is to develop the VR reconstruction for smartphone systems, making the software available for visitor download and access in their personal device using an inexpensive solution such as Google Cardboard. Advantages include reduced costs for VR production and operation, and increased portability of the experience. On the down side, the experience is less immersive, which affects user experience.

Digital reconstructions of archaeological sites that have been destroyed can prove a powerful measure to compensate for heritage loss. However, the resources required to develop and maintain digital experiences may outstrip the budget available for compensation. Therefore the chapter now turns to review a second, less expensive approach: creative archaeological tourism.

CREATIVE ARCHAEOLOGICAL TOURISM

In an increasingly saturated cultural tourism market, some providers began to develop tourist-centred experiences emphasising creative expression as means of differentiating from competitors. This form of cultural tourism has been called creative tourism and comprises activities that allow tourists a greater role in participating in the experience, offering them a venue to express their creativity and realise their artistic potential (Richards, 2011). At the heart of creative tourism is creativity and co-creative/participative experience.

Both creative tourists and providers apply their creative skills at different levels to engineer and consume tourism experiences. In conceptualising levels of creative ability, Little-c refers to creativity applied in everyday chores (such as playing a musical instrument), while Big-c is used to describe breakthrough ideas that significantly change the way a field is perceived. An intermediate level named Pro-c sits between little and Big creativity and explains cases where creativity is used at a professional level (Kaufman & Beghetto, 2009). This grading is helpful to understand the role of creative tourism providers, who are likely to have enhanced and perfected their creative skills in the course of their profession. Even though they may not create products that significantly change the cultural tourism industry, working on creative tourism experiences helps providers to improve their creative skills in a greater capacity.

The second key aspect of creative tourism is participative co-creation. Co-creation occurs when both tourism provider and tourist come together to create and perform the tourism experience (Campos, Mendes, Valle, & Scott, 2015). This means that creative tourism experience includes tourists' personal resources as a key part of the experience (Richards & Wilson, 2006), which is particularly useful when providers employ participative heritage interpretation strategies that encourage visitors to come up with questions and interpretations of the heritage site, according to their own values, beliefs and prior knowledge (Copeland, 2006). In other words, the core value proposition is the process of engaging with the past, allowing each individual to make sense of the past and situate the monument within his or her broader worldview. Examples of participative heritage strategies include presenting a holistic version of the site, enhancing visitors' prior knowledge, emphasising provocation rather than instruction and encouraging tourists' questions and sharing of ideas.

Co-creative archaeological tourism can be defined as a composite of activities that allow tourists a greater role in expressing their creativity in crafting experiences inspired in archaeological elements (Ross et al., 2017). It makes use of the role of memories, stories and actors' creative aptitude, which anchor archaeological sites to the present and transform them into resources for cultural and creative tourism. This approach places the individual rather than the monument at the centre of the experience, thus arguably shifting the attention away from interaction with the actual physical fabric towards an immersive process of creative sense-making.

In this sense, co-creative archaeological tourism presents an opportunity to formulate tourism experiences in developer-funded archaeology contexts where the physical fabric of archaeology is no longer present. Moreover, participative interpretation (co-creation) assumes a deconstruction of the archaeological tourism triad into tourist and interpretation, and offers an alternative that distributes the role of the archaeological site among the remaining two elements for enhanced interpretation and tourist action.

Experiencing co-creative archaeological tourism
Co-creative archaeological tourism experiences fall into two main categories: themed activities and creative storytelling experiences.

Themed activities
The knowledge generated from preventive archaeology has the power to inspire themed activities that memorialise lost heritage, whilst creating value from archaeology. These activities tap into the creative potential of both tourist and provider, and decrease the need for interaction with materials remains.

An example of themed events that celebrate archaeological landmarks is historical re-enactments. For instance, the Endovélico Festival, in Alandro-al, Portugal, revolves around the archaeological knowledge generated from the study of a local historical temple that no longer exists. The festival program includes all sorts of archaeology-related activities, such as themed walking tours, seminars, as well as concerts and other performances for general entertainment.

Experimental archaeology activities also use the archaeological knowledge of a place to create participative experiences that do not require the visitor to

be in the presence of original archaeological sites or artefacts. For instance, in Alentejo, a local museum organised a workshop about the Alentejo shale plates, a type of ornamental artefact commonly found in prehistoric burial sites in the region. The workshop enabled participants to learn about the plates' historical significance, and create their own in a creative experience. Cooking activities can invite visitors to learn how to cook with ancient techniques and ingredients, allowing tourists to employ their creative skills to interpret the archaeological record, and discover the diet of local communities of the past.

Another example are artistic installations inspired by archaeology. Workshops with local artists and artisans can recreate archaeological artefacts found locally, or use the same materials and techniques found in the archaeological record, to produce new works of art that celebrate lost heritage. These pieces can then be integrated within the new development. In Alentejo, developers of Alqueva dam have created an artist residence program that offers an opportunity for artists, creative people and researchers to develop a piece of work over a period of time, at the end of which the artwork is presented to the local communities. These initiatives enhance spatial quality of places affected by large developments, and provide a channel to promote archaeological knowledge generated through developer-funded archaeology. For purposes of compensating local communities, affected heritage is memorialised, and new points of interest and landmarks are created that tourism businesses can include in their tours.

Creative storytelling
In situations of heritage loss, tourists are unable to experience archaeological heritage, given the absence of material remains to support their interpretation. The tour guide becomes key in facilitating the experiences, and must resort to secondary elements (e.g. landmarks, discourse) to convey the significance of the intangible archaeological heritage. Tourism providers can shift attention away from materiality by applying participative interpretation strategies that highlight the broader historical significance of an archaeological site rather than its specific details.

Furthermore, tour guides can employ creative storytelling techniques focusing on intangible aspects of destroyed archaeological heritage to engage the tourist in a participative experience of sense-making. For example, problem-solving situations whereby providers ask tourists how and why they would have acted in a preventive archaeology situation, thus stimulating their involvement with the appeal of loss. By creating stories that involve tourists

with destroyed monuments and the events that led to their loss, tourists are offered a compelling experience that does not require actually seeing the original building. This kind of experience calls for the guide's imagination and creativity when interpreting heritage, in order to transport tourists to a particular moment in the past.

Creativity can also be used to provoke discussion with tourists and drive attention away from the absence of materiality. A co-creative approach that stimulates tourists' creativity and imagination can open new venues for approaching the sense of mystery derived from the monuments' destruction. Likewise, exploring shared references from tourists' prior knowledge and cultural background can also be a powerful tool for tourist engagement. If tourists' own interpretation is key to a memorable experience, then an experience developed around destroyed heritage will likely be more successful if it is able to engage the tourist in a personal way (Poria, Butler, & Airey, 2003). That is, heritage loss motivates providers to be creative and follow a co-creative approach that tailors the information conveyed according to the tourist's cultural background.

Resources required

Compared to digital reconstruction, co-creative archaeological tourism is less expensive and can be developed using existing infrastructure. Nonetheless, project developers need to create collaboration networks with other local actors whom they are not traditionally associated with, e.g. private tourism businesses, non-profit organisations and tourism-relevant public actors (Dias-Sardinha, Ross, & Gomes, 2018). Furthermore, such collaboration needs structure and a lead facilitator, which could either be the local destination management organisation, or a relevant public or non-governmental organisation. It could also be the developer, provided they have the necessary expertise and social capital to work directly with local actors. Intangible archaeological heritage could thus serve as a focal point to tie different actors into collaborative compensation projects that focus on tourism development and heritage preservation.

A further requirement is to ensure that local tourism providers have access to the archaeological record and skills to develop it into engaging experiences. In this sense, project developers may need to deliver capacity-building programs directed at tourism actors focusing on two aspects. First, to make sure all actors can access the knowledge generated from developer-funded archaeological interventions by sharing the findings of the interventions;

second, to highlight the tourism potential of intangible archaeological heritage, and stimulate tourism providers' creativity to enable them to develop experiences focusing on the appeal of loss.

CONCLUSION: COMPENSATING HERITAGE LOSS THROUGH TOURISM DEVELOPMENT

Archaeological sites and monuments that have been destroyed due to urban expansion can still be experienced by offering access to digital reconstructions or creative tourism experiences that highlight tourist participation and sense making. Both approaches have advantages and disadvantages, and choosing which one to develop as a form of compensation depends on each case, particularly on the type of heritage impacted, the tourism context, the audience targeted, resources available and what developers aim to achieve through compensation.

Type of heritage impacted: The compensation approach will depend on the heritage being compensated for. Is it a unique significant site, e.g. listed monument, or is it an ordinary find? What kind of scientific, cultural, or aesthetic value does the site have? Does the site have monumentality that can be reconstructed digitally? Or low materiality which invites for tourist imagination?

Tourism context: Co-creative tourism experiences can be anchored on other archaeological resources, and complement standard archaeological tourism, thus creative tourism is more adequate for archaeological-rich destinations. Digital reconstructions work well as a stand-alone experience, thus are more suitable for destinations where archaeology is not a particularly strong pull factor. Do developers want to create a must-see experience, or an add-on to the wider local offer?

Target audience: Developers should consider what type of compensation they are looking to provide, and who the main beneficiaries of the new experiences will be: Members of the local community? School groups/children? Tourists in general? Particular niches, e.g. scientific tourism? In principle, visitors and local communities alike could benefit from digital reconstruction and creative storytelling experiences, given adjustments are made to safeguard issues of heritage ownership and commodification in narrative and place-making.

Resources available: For digital reconstruction, do developers have the financial resources to create digital interpretation experiences? Does the loca-

tion have infrastructure to support the experience (e.g. Wi-Fi)? For creative tourism, does the developer have social capital and reputation to stimulate collaboration among local actors? Do local actors have the necessary skills to invest their time in creating participative experiences?

Developers' strategic aims: Digital reconstruction may be more costly, and require a hands-on approach, but offers straightforward options for generating revenue, i.e. an AR or VR experience can easily be monetised. A creative tourism approach may be more suitable for instances where developers favour supporting a community approach that gives the spotlight to local tourism actors.

Regardless of the solution chosen, it is essential to underline the idea that the tourism value of heritage is not confined to its physical fabric. This can be challenging because conventional approaches to heritage conservation and to archaeological tourism focus on engaging and creating value from material interaction, either from a supply side as product development, as well as for demand side due to perceived authenticity. As has been argued in this essay, one way to overcome this is to tap into the appeal of loss, and create stories of the monuments' destruction, which are included in digital reconstruction or in co-creative tourism narratives. When physical loss is accepted as representing part of the history of an archaeological site rather than its extinction, project developers, heritage professionals and tourism providers are in a better position to focus their energy and efforts to ensure that the memory and intangible values associated to impacted monuments are preserved for the future and available for public consumption.

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