

# **REFURBISHMENT OF CULTURAL HERITAGE BUILDING STOCK, EXAMPLES OF SUSTAINABLE MODERNIZATIONS “CONTEMPORARY ADDITIONS TO OLD BUILDINGS”**

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## **Summary**

Considering the future, the most important problems of our day is how to protect the Historical Heritage, and how to benefit from it. And as an answer to this question, by benefiting from our cultural background, it is necessary to provide the contemporary requirements and to transfer this attitude to the future generations. Throughout the time functions may change but, old buildings may stay. This situation requires that the old buildings are open to a new contemporary uses. [1–2] In an effort to make historic buildings more suitable for modern day living, contemporary additions are needed as a means of obtaining more space.

**Keywords:** contemporary additions, refurbishment of historical buildings, sustainable modernization of historical buildings,

## **1 Introduction**

Architects have grappled with the question of how a building should relate to its surrounding context. Should it be a singular object, or should it blend into its surroundings? In an effort to make historic buildings more suitable for modern day living, contemporary additions may be needed. When new forms are physically joined to old forms, however, the question of context becomes more immediate. So the question turns into should the new building be in harmony with the old structure and blend into the historical environment, or should it act as a singular object and rub out the old. For hybrid buildings of both new and old architecture, there are some particular design philosophy best suited to achieving a sustainable result aesthetically that will withstand the test of time.

During the nineteenth century, the issue of what it meant to restore a building was a point of debate between two influential architects, John Ruskin and Viollet-le-Duc. Ruskin argued that honest restoration was impossible since the original work and the new construction were separated in time, while Viollet-le-Duc was a proponent of mimicking the original work with new construction. [3] Ruskin would not have supported an addition to a building that mimicked its original form, for that matter, preservation rules established Since the preservation movement began in the 1930s (Venice Charter), of today’s endorses Ruskin Model. So it can be said that the most successful additions to historic buildings and environments are those that best respect and retain the building’s heritage significance and add a contemporary layer that provides value for the future.

## 2 Additions to Historic Buildings

Most old buildings are irreplaceable, and this gives them a special, endangered status in the eyes of many individuals. The desire to save old buildings can be based on; rational thinking, the sense of emotional dogma, belongings, identity, irreplaceably of Old buildings, and Interest of preserving meaningful architectural qualities.

So in the re-functioning process of the old buildings, the new functions space organization programme may need new spaces which cause new additions to old buildings. This can be called defines as “Contemporary additions to old buildings for necessity of the new function”. It can therefore be reasonably argued that adaptation is a method of extending the useful life of buildings and hence their sustainability by a combination of improvement and conversion. [4, 5, 6] As discussed above the additions should;

- Reflect its contemporary layer,
- Respect and retain the old building’s heritage significance with its;
  - scale,
  - proportion of old and new,
  - massing and height,
  - materials and colour differences between old and the new,
  - roof shapes,
  - details and ornamentation,
  - reversibility,
- Not mimic the old structure
- Recognizable and should be differ from the old structure as stated in Venice Charter.

The methods of the additions can be classified as;

- Additions to roofs or roofs as additions
- Additions to facade (side, rare additions)
- Additions of architectural elements,

### 2.1 Additions to roofs or roofs as additions

The Roof addition of British Museum is one of the contemporary extensions respecting and retaining the significance of historical building. Norman Foster has designed a roof addition to the old building which can be takedown able, and with this addition, the open spaces of the building can be acclimated, and opened for the public’s use.

The roof addition can be obtained as a protection roof for preserving the archaeological values in situ. The Protection roof of Terrace Houses in Ephesus can be given as an example for this case, with its contemporary structure and material use. This roof reflects its contemporary layer properly with its reversibility.



**Fig. 1** *The Protection Roof  
Ephesus Terrace Houses, Turkey*



**Fig. 2** *The Addition roof  
of British Museum, London*

## 2.2 Additions to facade

The additions to mass of the building can be a side addition, or a rare addition. All the four addition examples occurred during the re-functioning process of the old buildings. The new programme of the new use needed more living space.



**Fig. 3** *A Side Addition  
Example from London*



**Fig. 4** *A Rare Addition  
Example from Izmir, Turkey*

All of the four additions are contemporary addition examples, with contemporary material use. All of the four examples respect and retain the significance of the old building with their scale, proportion, massing and height, material use, colour use and roof shape. The designs of new buildings are very simple; all are designed lower than the old one, and can be recognizable build as the representatives of their own century.



**Fig. 5** *A Rare Addition Example  
from London, Kings Cross Train Station*



**Fig. 6** *A Side Addition Example  
from Lisbon, Fado Museum*

## 2.3 Additions of architectural elements

For the requirements of the nowadays uses or again as the need of the re-functioning process of the old buildings, some architectural elements such as passages combining the two old buildings or combining the old building with a new building, staircases or etc. can be added to old buildings as well.



**Fig. 7** *A Passage Addition combining  
to old buildings, London*



**Fig. 8** *A staircase  
addition, Rotterdam*

### 3 Conclusions

When an addition to a historical building is required for functional, economic or other reasons it should be designed to be compatible with the existing building and the environment. At the same time, the design of the addition should be distinct enough so that it does not appear to have always existed; it should be recognizable and should differ from the old structure, reflect its contemporary layer as stated in Venice Charter.

### References

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