COMPATIBLE DEVELOPMENT SOLUTIONS IN THE CONTEXT OF HISTORICAL SETTINGS IN IRAN

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Abstract. This paper elaborates some prominent development solutions in the vicinity of historic buildings. These solutions differ from country to country, considering the special situation of each country, such as the number of historic monuments, the current construction quality, peoples' interests and the benefits of historic buildings and sites. To be able to evaluate the similar states of development strategies in Iran, a questionnaire focused on citing examples of any type of intervention through PowerPoint presentation for every group of architectural professionals was framed. The results indicated that most respondents preferred to adopt the following development solutions, in Iranian context as follows: adaptive re-use of existing listed buildings, development in the immediate vicinity of monuments while considering proper separation and articulation between them, extending monuments to increase the required spaces and also exploitation of suitable infill development. Obviously, this hierarchical order could differ from one context to another. To find out if any specific method for architectural design was preferred, interviewees were asked to rank five proposed solutions for architectural design in historic context. Respondents were mostly pro harmonic design with monuments for new constructions in the core zone of monuments, while considering a proper gap between new and old.

Key words: architecture, urban development, historical buildings, contextual design, historic settings

1. Introduction

The existence of numerous valuable historic buildings and sites is the result of a long and rich history of the Iranian civilization. Protecting architectural and urban heritages is the duty of all nations as they are the live history of human beings. They can teach many sustainable solutions for exploiting natural resources in daily life in different parts of the world; compatible with climatic, geographic and environmental characteristics of each location. Moreover, their existence creates a sense of pride and gives identity to each country. Moreover, from a social, historical or cultural point of view, people are trying to preserve monuments to save the memory of a certain event, lifestyle or any other characteristics as the core of their identity (Pop and Julean, 2015: 6, 14).

The significance of historic buildings is related to their many attributed values which can be classified in two groups:

− Direct and immediate tangible values such as: historical, architectural, aesthetic qualities, cultural, social, economic characteristics, recreation, commemorative and biodiversity (National Planning Policy Framework, 2012; Kalman, 2014). These values can be used as evidence in various researches.

− Indirect, mediated values such as: spiritual, non-historic significance as a consequence of the site's history, which are sometimes more influential than their historic value (National Planning Policy Framework, 2012), and also all other intangible cultural assets which are associated with the intrinsic, memorial or symbolic values of monuments (Van Oers, 2015).

However, an in-depth understanding of heritage buildings can result in the discovery of more values and a higher significance. In other words, perfect cognition could end up with demystification of more secrets latent within them and reveal more values. In reality, there is a cycle of understanding, valuing, caring and enjoying from architectural heritages (Tomback, 2007).

1.1. Development as an Indispensable Solution

The existence of historic buildings attracts more activities around them and necessitates the indispensable requirement of development within their sites. The results of an evaluation about urban expansion in the vicinity of the cultural heritages sites indicated the increase in land coverage during the last decades (Agapiou *et al.*, 2015: 676). The following are the main reasons for the growing interest to develop monument surroundings:

− Economic reasons: historic buildings attract tourists and thus boost the economy.

− Enliven the site: increase in activities and the presence of people would in turn lead to vitality in the area. In reality the built cultural heritage is able to make the social well-being and enhance the quality of life (Tweed and Sutherland, 2007: 62).

− Making the most of potentials of these sites: development can provide the possibility of taking maximum advantages of these areas.

− Safeguarding them will be facilitated by their return to daily life in society.

− They can act as a symbol of identity on local and regional scales.

− Generating or reinforcing the sense of belonging in society which in turn increases their involvement and participation.

− Avoiding the destruction of monuments: when monuments are the source of life for their surroundings, efforts for their protection and preventing them from further destruction will increase.

Considering the above points, development needs a delicate balance between protecting historic heritages and up-to-date facilities for new uses (Lyall, 1998). Moreover, the new development needs to consider the whole urban structure, urban grain, the density, landscape, views and landmarks, materials and detailing as well (Parsons, 2010). The proper design of new development can act as a catalyst for further developments and make positive contribution to the character and local individuality of the historic environment. Successful development can have various secondary advantages for the area, including cultural, social, and economic benefits (Williamson,

2010). Economic attractions of the newly developed area in particular, motivate the urge to protect heritage buildings. The other benefits for the area, such as an increase in local employment, improved services and the creation of facilities will be followed by enhancing the sense of belonging in local residents which will in turn secures the future of heritages. The following table summarizes the so-called benefits of development to historic sites (Table 1) (De Grey, 1998; Williamson, 2010).

Table 1. Positive benefits of developments in historic sites

Social and Economic benefits	Cultural benefits
Creation or enhancement of retail, business, leisure and residential zones as well as initiating new policies regarding potential regenerations	The restoration of elements of listed buildings
Increasing the local employment	The improved setting of listed buildings
Revitalization and the return of the sense of place identity to historic sites	The enhancement of conservation areas values
Reconnection with the city and even turning to a new heart for the city	Funding more restoration projects from developed bodies of the site
Improvement of services	Securing the future of heritage assets
Acting as an impetus to establish new facilities such as museums, schools, social welfare centers and so on	

1.1.1 Sustainable Development

After accepting the fact that development in historic areas is necessary, the next issue would be the quality, standards and principles of development. The important concern here is considering the character, atmosphere and attractiveness of the environment as design guidelines rather than the price and convenience (Hanna and Binney, 1983). The investigation by

Hanna and Binney (1983) revealed that shoppers were attracted more by the charm of the surroundings of shops in London's Burlington Arcade or Chester's "Rows". In other words, the presence of past in present design should be perceptible which is applicable through various methods. MacCormac (1998) believes that the perception of tradition involves both its past and its present and their relationship together in a dynamic way. However, considering fundamental social, economic, environmental and cultural issues in development is required to achieve a sustainable development. Jeffrey Chusid (2010) (cited in Kalman, 2014) recognizes various coinciding themes of sustainability in preservation practices, which include: environment and energy; stewardship and management; social equity and economics; planning and design. Sustainable development can be evaluated from environmental, social, economic and cultural points of view. Fig. 1 illustrates the overlapping concepts of sustainable development.
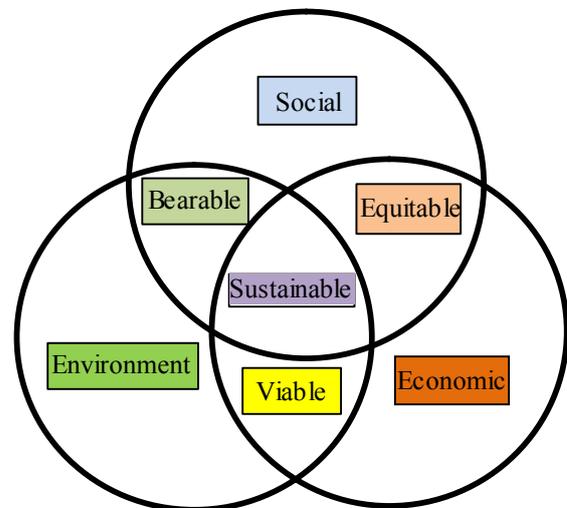

Fig. 1. Overlapping concepts of sustainable development (after Kalman, 2014).

1.2. Principles for Contextual Design

Talking about the threats posed to cultural heritages, natural disasters such

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as wildfires, floods and earthquakes come to the mind as the most important ones. Alternatively, risks may be posed by human actions, whether physical, socioeconomic or a human error; with catastrophic outcomes in most cases. For example inappropriate contextual design can cause irreplaceable damage to the present and future life of architectural heritage and its historic environment. Therefore, positive contribution of development to the character of historic environment needs to be checked by local planning authorities. The sustainable development of historical urban areas needs to use the potential of these sites in having the cultural and historic wealth (Al-Hagla, 2010: 234, 237).

Article 9 of Venice Charter emphasizes on revealing the aesthetic and historic values in any interventions based on authentic documents (Strike, 1994). While the external appearance and the aesthetic value is a key guide, considering other nonvisual aspects such as technological innovation, social or economic history is important as well (PPG15, 1994).

Throughout the history of traditional architecture, every style has been juxtaposed with previous ones over the centuries without any harshness of the sudden changes (Worthington, 1998).

1.2.1 Design Principles and Limitations of Interventions in Historic Settings

Design strategies in historic settings have various design ideas. While Dennis Sharp advocates a strongly modernist approach in creating new urbanistic opportunities for the future, Robert Adam suggests traditional methods (Warren *et al.*, 1998). However, it is possible to agree on some principles, acceptable by all; for example, characteristics related to cultural quality and urban livability should be considered

in any sort of development, such as a dense network of paths, access to mixed services with less vehicle travel (Gad Bigio, 2015).

Moreover, there are various conservation ethics, drawing upon all interventions in built heritages. Feilden (1982) states the historic evidence must not be destroyed, falsified, or removed and also any intervention should respect the aesthetic, historical, and physical integrity of cultural property (Kalman, 2014). John Warren stresses on truthfulness, reversibility, respecting the significance in any intervention in historic setting (Kalman, 2014).

English Heritage also proposes the consideration of authenticity based on the design or the integrity of the fabric (Earl, 2003). The state of authenticity for any cultural heritage depends on the true and reliable demonstration of their cultural value through various attributes, either internal or external, such as: form, material, function, techniques, setting and all forms of intangible features such as general sense and feeling (UNESCO World Heritage Operational Guidelines, 2013: Para. 82).

The article 2.2 of the Burra Charter (Australia, 2013) stresses on managing the change and do not preventing it (Kalman, 2014). Worthington (1998) believes that planning and managing change should be compatible with contemporary life and its requirements and not copy the surface of the past. Considering compatibility of volume, proportion, scale, material and colour with historic heritage in the new design would respect the past while having the spirit of the present which can be inherited by future generations as a precious asset.

In this regard, Australia's Burra Charter states standards for determining the cultural significance of a place by collecting and analysing all documents prior to any decision. Article 6.1 states that the priority lies with understanding cultural significance, then development of policy and finally management of the place in accordance with the policy. The following diagram shows the flow of heritage information (J. Paul Getty Trust) (Fig. 2) (Kalman, 2014).
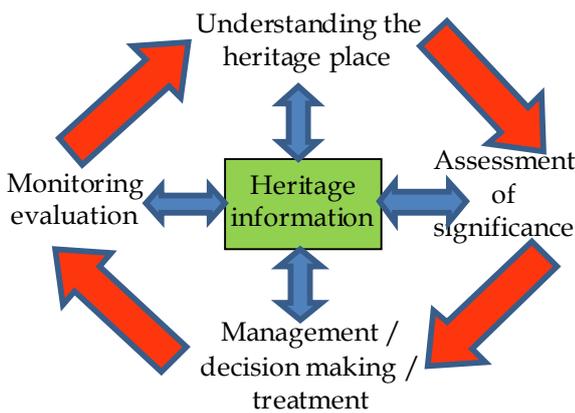

Fig. 2. The flow of heritage information

1.2.2 Decision Making on the Extent of Intervention

Any intervention in architectural heritage within historic environment needs to be performed carefully so as to not wipe out the legacy of the past but to accommodate change while respecting the environmental, economic, social, and cultural conditions of each place (Siravo, 2015; Van Oers, 2015). Moreover, the planning and management of historic areas development needs to consider the linkages between economic, architectural and cultural functions of heritage buildings (Throsby, 2015).

Fig. 3 shows the range of treatments from the greatest respect for cultural significance and historic fabric, to the greatest degree of intervention. However, all these interventions can be applied for various time spans for maximum

protection, including short-term, mid-term and long-term.

These decisions are made based on the conservation plan, which is a document for mapping the significance of different places and consequently determining appropriate policies and extent of interventions for maximum maintenance of values for future use and development (Kerr, 2013). Therefore, strategic decision-making should evaluate the degree of significance according to various values of each place. There are different criteria correlated to values such as historical, educational, scientific, architectural, or values which are informing of a historic theme, process or a pattern of life (Saradj, 2011). However, these criteria could differ according to each context, for example, Gulzar *et al.* (2015) stressed on keeping visual authenticity of façade by restoring the stones with the same characteristics of original fabric.
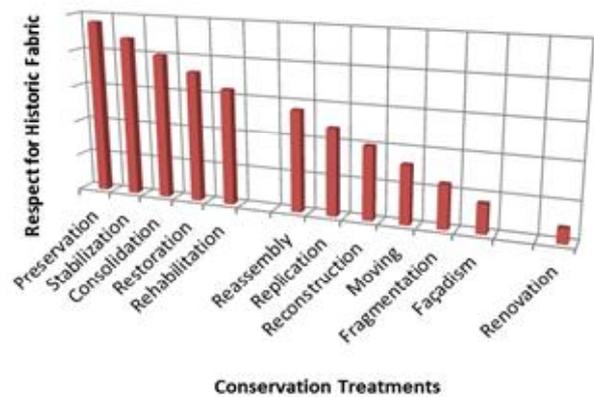

Fig. 3. Inverse proportion between the extent of intervention and Respect for Historic Fabric (after Kalman, 2014)

Furthermore, each criterion can be addressed through qualitative grades: excellent, very good, good, fair, or poor (Kalman, 2014). The association of these in descending orders is different from one country to another, such as

outstanding, significant and insignificant used by the Australian government or applying various numerical methods as used in Canada (Kalman, 2014) or grading as I (buildings with exceptional interest), II* (important buildings) and II (buildings with special interest) in the United Kingdom.

Following is an overview of development constructions in the vicinity of monuments alongside techniques and procedures taken in this regard as the outcome of long-term personal investigations and observations of the author.

2. Various Types of Developments in the Vicinity of Historic Buildings

Urban development is an essential part of contemporary cities. Therefore, providing guidelines for the re-use of monuments and at the same time searching for rules of any new architectural design in the vicinity of monuments, either adjacent to them or in their core zone, is of special concern. Otherwise defects in design can lead to chaos in the surrounding tissue and will influence the perception of monuments and their values. The follow-up discussion can be classified in three parts:
2-1 Rehabilitation and re-use of historic buildings and the resulting changes
2-2 Extension of historic buildings
2-3 Designing in the immediate vicinity of monuments

Following is the review of some examples of so-called various types of interventions and developments around historic monuments. Most of cases have been taken from the U.K. according to personal observation and feeling by the author as well as the long-time role of historic buildings in U.K. economic growth through urban regeneration (Tweed and Sutherland, 2007). The paper will try to give equivalent examples in Iran in the case of existence or available information.

2.1 Re-use of Historic Buildings

Adaptive re-use is in reality the blowing of a new life into old buildings. There are many examples in this regard, which can result in minimizing the intrusive intervention if planned properly. Appropriate uses of the building in addition to the continuous maintenance by users can improve the surrounding urban fabric as well. In fact, the new concept of use for monuments can make their revitalization and sustainability more feasible (Steinberg, 1996: 463). A prominent example in this regard is the Tate modern gallery in London which has transformed into a museum from an industrial site. The other active historic area is Covent Garden in London, with successful improvement of its functionality as a commercial and recreational centre.

This category of intervention is common in Iran, mostly turning houses into guest houses or hotels. One of the oldest examples of adaptive re-use in Iran is Abgineh Museum for displaying ancient Iranian ceramics and glass works, in which the function of a house has changed into a Museum. This 19th century palace with vernacular style was converted into a museum by the appropriate design of Hans Hollein in 1977, in which he used convenient furniture for interior spaces.

2.1.1 Façadism

Façadism or preserving the fronts of the building and dismantling the backs and building a new structure instead can be

placed in this category as it can be considered as an attempt to re-use the façade and benefit from the values of historic buildings, but not in an honest way. However, due to the lack of other alternatives, this solution can help historic urban texture retain their integrity and avoid jeopardizing the historic site. This can be seen in the Leicester Square of central London after demolition of the building behind it in January 2015 (Fig. 4). The other example is the 46-storey Hearst Tower in Manhattan, New York that has risen out of the cast stone façade of the original 6-storey building. The recent example in this category can be seen in Tehran's historic Hasan-Abad square, where the destruction of a part of it, is compensated by rebuilding the façade of the lost part (Fig. 5).

Fig. 4. The application of Façadism during a development in central London

Special attention has always been paid to historical façades as the means of visual communication with the city. Façades have a significant role in shaping the townscape and contributing to urban identity. An example is the preservation of artistic elements in the façade of Shahin Agha Sebil in Cairo (Egypt) from during the Ottoman period. The restoration carried out to save this Islamic architectural façade from many weathering forms since many centuries (Bader and Mahran, 2015).

2.2 Extension of Historic Buildings

There are many examples of extending historic monuments for improving the usage of space, which needs careful architectural design for new buildings as well as specific attention to the connection between the new and the old parts. These extensions can be performed from either adjacent sides or by hollowing the buildings beneath. The examples of extension from adjacent sides are the new extensions of Victoria and Albert museum in London, the National gallery and its extended part called Sainsbury Wing (Fig. 6) in the Trafalgar square of London, designed by Norman Foster, and the extension of John Ryland library in Manchester (Fig. 7).

(a)

(b)

Fig. 5. Adding a façade layer in front of a building (a) to revive the unity of Hasan-abad historic eight-dome square (b) in Tehran

Extension from beneath: An example of extension from the beneath of existing buildings is the new shopping centre

under the St Pancras train station in London. Some extensions are also separated from the original building and an intermediate bridge interconnects the two buildings, such as the one that can be seen in the Bridge of Aspiration, connecting the Royal Ballet School and the Royal Opera House in central London (Fig. 8).

interior space, especially in places with harsh climates. This can be seen in Kings Cross train station with its spectacular added roof over its open gap space (Fig. 9). The other example is the British museum of London which has a similar later-added roof to increase the interior spaces.

Fig. 6. The extension of National Gallery (in the left of picture)

Fig. 8. The Bridge of Aspiration, connecting the Royal Ballet School and the Royal Opera House in central London

Fig. 7. The extension of John Ryland Library in Manchester

Fig. 9. The covering roof of Kings cross train station in London
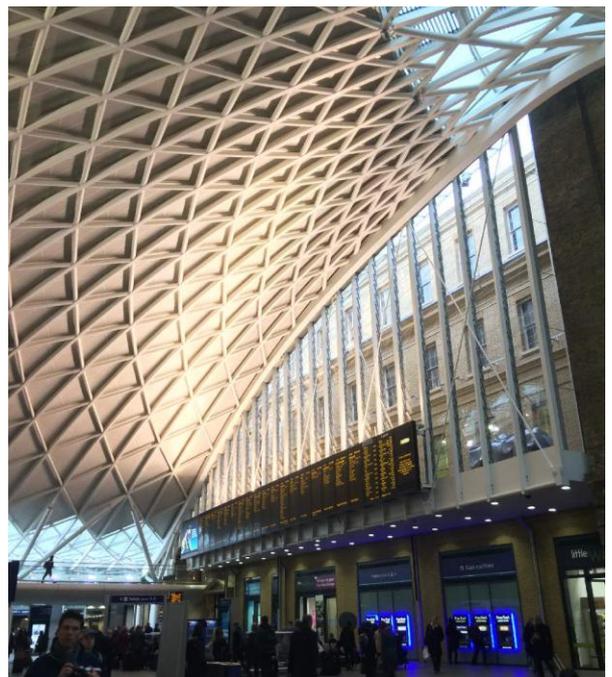
The other type of extension is performed in the form of adding a roof to the open gap spaces of buildings to increase the

The instances of extending monuments were common in Iran throughout history but are no longer being practiced. The

prominent example is the Jame Mosque of Isfahan which has been developed gradually throughout the history (Fig. 10).

Fig. 10. Jame mosque of Isfahan, built and developed gradually through the years

2.3 Infill Development in Historic Settings

Designing in the core zone of the architectural heritages has taken place in variant forms. The pyramid-shape entrance of the Louvre Museum in Paris is an example of the infill development; which was built in the middle of a historic palace to reconnect the separate spaces to one another.

The other example is the construction of the new structures, with a gap, in the vicinity of architectural monuments, aimed at enhancing the quality of the surroundings as done around St Paul cathedral in London. The new shopping malls on the adjacent sites attract more people and also provide a new platform to enjoy the view of the historic building and to achieve better perception (Fig. 11). The gap between the St. Paul and the surrounding new developments is more vital now compared to the years before the development in the surroundings, and the presence of the higher number of people in comparison with the past, can prove it.

Designing new structures, around historic structures, can be seen at many places such as in front of John Ryland Library in Manchester (Fig. 7) and Liverpool port development which is constructed with a completely modern design and a light-framed structure (Fig. 12). However, this design does not look appropriate due to inadequate space between the new and the old.

A similar development has been realized at the site of Holy Roodhouse in Edinburgh, Scotland, through the construction of the Scottish parliament in front of it and at the other side of the parliament square (Fig. 13). The connection between the new and the old buildings is quite weak in this case as opposed to the development around St Paul cathedral in London. One reason could be the lack of view to the historic monument from the parliament building.

(a)

(b)

Fig. 11. Development around St. Paul Cathedral in London; (a) the view from the top, and (b) The view from the entrance of newly built shopping centre in the core zone of St.Paul Cathedral.

Table 2. Intervention varieties in the core zones of historic buildings

Design approach in the core zone of historic buildings		Examples
Rehabilitation by adaptive re-use		- Tate modern gallery
Façadism		- Leicester Square of central London
Connected extension to architectural	From adjacent sides	- the National gallery and its extended Sainsbury wing in the Trafalgar Square of London - Victoria and Albert museum in London
	From beneath	- St Pancreas train station in London
	Adding roof	- Kings cross train station - British museum of London
	Connection of original and extension by a bridge	- The example in Central London
Infill development	New Building in the open space of architectural heritage	- Louvre Museum in Paris
	New construction in the vicinity of architectural monuments with a gap	- New shopping centres around St Paul Cathedral in London
	Construction of new building in front of historic site	- Scottish Parliament in front of the Holy Roodhouse historic palace
	Intermediate new construction between two historic buildings	Millennium bridge over the Thames river in London, connecting St Paul cathedral and Tate modern gallery

Fig. 12. Modern design in Liverpool port development

(b)

Fig. 13. The lack of coherence in the development around Holyrood house historic building in Edinburgh (a); photo (b) shows the Scottish parliament in the other side of street

(a)

The novel approach is the construction of an intermediate new element between two historic monuments, such as the connection of St Paul cathedral and Tate Modern gallery by Millennium Bridge over the Thames River in London (Fig. 14).

Designing in historic settings is getting more attention in Iran in recent years and many examples can be cited. But the most debatable is the commercial building of "Naghsh-e-Jahan Arg" around the world heritage site of Naghsh-e-Jahan square (Fig. 15).

Fig. 14. Millennium bridge connecting the St Paul cathedral and the Tate modern gallery

Table 2 summarizes the above discussion on various design possibilities around historic buildings.

Fig. 15. The commercial building of "Naghsh-e-Jahan Arg" around the world heritage site of Naghsh-e-Jahan square

3. Compatibility of Development Solutions in the Context of Historical Sites of Iran

People, especially the decision makers on construction legislations, are the main actors in reshaping the cities' environment (Jigyasu, 2015). Therefore, the people's perception from built heritage is very important. The study of Bamert *et al.* (2016) showed that there is no universal perception from cultural heritage and the strategy for their maintenance. Meanwhile, it is important

to consider different views and opinions, to obtain the collective memory towards built heritages prior to assign any related strategies and regulations (Bamert *et al.*, 2016: 122).

To determine the awareness and attitudes of prospective Iranian professionals, a survey was performed, mainly focusing on Master and PhD students of architecture, after a comprehensive explanation of all various developments in historic settings, which have been described in section 2. The 5-point Likert scale response categories of very high, high, medium, low and very low have been used to show the agreement views of 56 respondents to the compatibility of each of the eight development solutions as described in section 2 and summarized in table 2, according to the four criteria outlined in Fig. 16. The questions asked the compatibility of eight development solutions with the Iranian conditions according to the following four criteria:

− The number of historic buildings,
− The current construction conditions,
− People's culture and interests and
− The benefits out of the specific development for the Iranian people.

Thirty two separate analyses by SPSS22 for each question proved the significance of results with 99% reliability (e.g. df=4, $\chi2$= 34.357, p= 0.412) and also showed very similar consensus for the seven development solutions out of eight, outlined below in hierarchical order. The separate consideration of the respondents is related to the adaptive re-use of historic buildings wherein the respondents believe the highest compatibility of this solution. The reason is related to the very common and current culture of exploiting it in Iran nowadays; while the lowest

compatibility of this solution is related to the improper construction quality. The highest compatibility of all other seven development solutions (infill development, extension to historic buildings, façadism, adding roof, development in the vicinity of monuments, exploiting the architectural connecting element between two monuments and bridging two non-adjacent historic buildings for their connection) is because of the benefits of their implementation and the lowest compatibility reason of each is attributed to the current weak construction quality in Iran compared to the possibility of exploiting more advanced technology in U.K.

Moreover, comparing all cases with each other indicates that the highest compatibility of design solutions for the Iranian conditions is adaptive re-use according to the current culture and interests of people and also the large number of historic buildings in the country. Also, the lowest compatibility of development methods for Iran is related to bridging non-adjacent buildings and façadism due to the disputable construction quality and the probability of exacerbating the condition (Fig. 16). Generally the following order is resulted from comparing all development methods as a suggestion of their compatibility with the current situation in Iran in descending order:

1. Adaptive re-use
2. Development in the immediate vicinity of monuments while considering a suitable gap and articulation between them
3. Adding roof in required spaces, next to historic buildings
4. Extension to historic buildings to improve their effective function

5. Infill development in historic sites
6. Connecting monuments by intermediate architectural element
7. Façade preservation and rebuilding behind them for specific architectural heritages
8. Bridging non-adjacent historic buildings or a historic building and its expansion

4. Architectural Design Principles of New Developments in Historic Settings

After the agreement on the type of the development, the quality of the architectural design is a major issue. Generally the new design needs to respect the worth, values and the importance of the architectural and cultural aspects and the authenticity of historic building while being contemporary. There are various criteria for detailed decision making, e.g. some believe in similarity in scale, form, material, colour, detailing and invention within style, abstraction and replication of past for the new design (Sotoudeh and Abdullah, 2013) while others apply contradiction for easier recognition. Previous experiences used the following methods in new design besides historic buildings: lighter colour, similarity in roof shape, creating harmony through similarity and the repetition of simplified ornaments (Yuceer and Ipekoglu, 2012). In addition to the aesthetic appearance, adequate attention should be paid to recreate the spirit and character of the original environment as well as considering the new function and the contemporary standards of safety (Hegazy, 2015).

After discussing the first part of the survey with groups of respondents and involving their mind by showing many examples of various types of

developments in historic sites, they have been asked to give their preference towards the principles of the new architectural design in historic settings. Achieving the 0.45 degree of agreement by analysing through the Kendall coefficient of concordance W (N=5, K=56, ∑Ri=836, ∑Ri2=167640, W=0.45) the results are reliable with more than 99% significance (Siegel, 1988). Therefore, the following hierarchical design criteria in descending order (from the most important to the least important) has been suggested for architectural characteristics of the new developments in historic settings proposed by the Iranian prospective professionals.

1. Proportionate with monuments in dimensions such as height and skyline
2. Considering the gap between the monuments and their surrounding newer development to not jeopardize the visual quality

3. Accordance with monuments in form, shape and architectural style
4. Accordance with monuments in detail and architectural ornaments
5. The lack of coordination with monuments

5. Conclusion

The ongoing construction in historic settings in developing countries could endanger the value of the architectural heritages if not planned properly. This paper described the procedure of considering the users and professionals viewpoints in urban development where there is an architectural heritage within them.

The survey performed in this paper revealed that awareness about the specific requirements for architectural design in historic settings is not sufficient and is increasing gradually. Moreover the legislation has not paid enough attention to this issue.
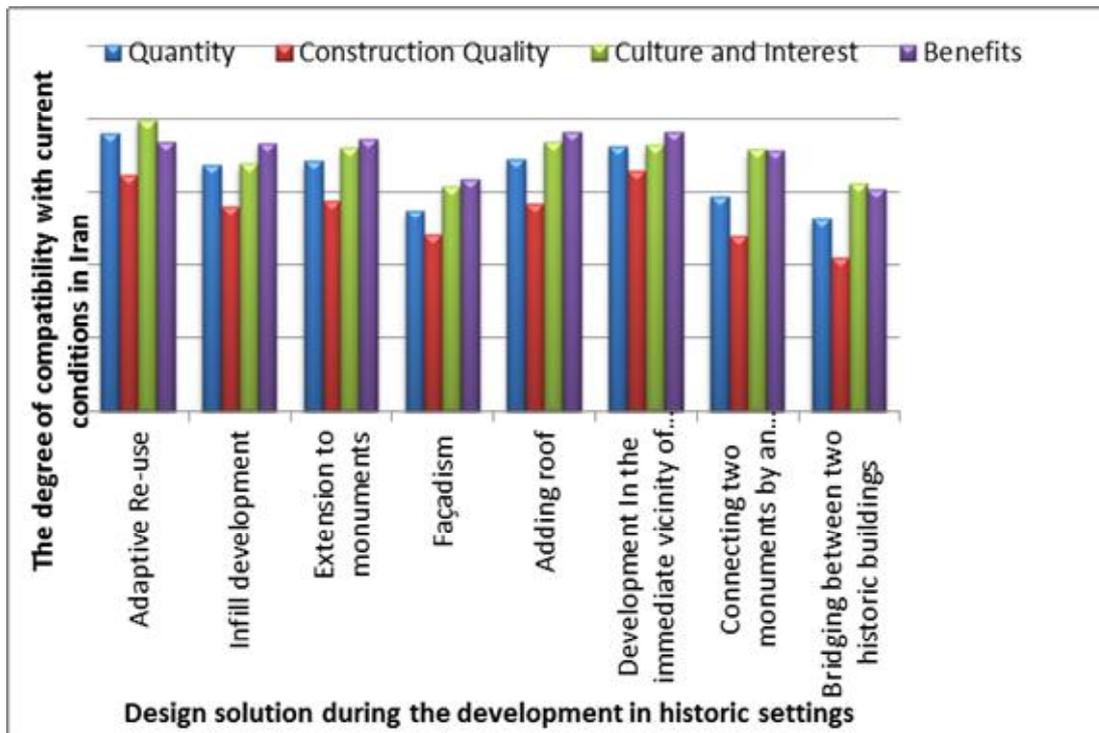

Fig. 16. Evaluating the compatibility of the development solutions with the Iranian conditions

This paper concluded eight different approaches of the development in historic settings which have already been adopted in Europe and other parts of the world; this new classification is discussed in section 2 and summarized in Table 2. Obviously, the application of any design approach is different from one country to another, due to the number and age of the historic buildings in each country, the current culture and interest of the local residents, the existing situation of the construction quality and the extent of benefit from any development programme. To examine the suitability of the various development approaches with the Iranian conditions, the postgraduate architecture students, as prospective professionals, have been chosen to pursue the survey. The results indicated that the most convenient policy is the adaptive re-use of the historic buildings and the requirement of reviving the surrounding areas of the monuments through new developments and suitable articulation between new and old. On the other hand, the least compatible approach is related to the methods which are either not common in Iran or need advanced technology and meticulous construction, such as façadism or connection of the historic buildings by an intermediate element.

Moreover, the quality of the new architectural design, in either being compatible, neutral or in contrast with the historic buildings has been reviewed in section 4. Then to find out the most acceptable method by people, the issue has been investigated by asking the respondents to put the various suggested solutions in order. The results indicate that the coordination of the new constructions with the historic buildings is preferred respectively according to the height and skyline, visual quality, form and shape, style and architectural ornaments. This public tendency of Iranians towards the intervention in historic areas in comparison with the quite diverse approaches in the U.K. might be related to the visual memory of residents.

Acknowledgment

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