

## HIGH RISE BUILDINGS IN HISTORIC CITIES

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**Abstract:**High rise building was the most remarkable new building type to emerge in the late 19th century which has entirely changed the scale, appearance, concept and image of cities with its great visual impact. With advanced technologies the skylines of the cities dominated by high rise buildings all over the world in 20th century. In the 21st century it can be expected that more and more innovative high rise buildings will be built, utilizing the cutting-edge techniques also in historic cities with World Heritage Sites. High rise buildings' relationship with their context is more problematic than any other structure, the subject of what they add and what they take away to the city is quite controversial. Introducing a new building in a historic city has a dramatic impact on traditional urbanistic structure. In this study high rise buildings in historic cities with World Heritage Sites, their development, and impact on the city and the urban image are examined by selected examples from different historic cities. The current approaches for designing high rise buildings in a historical setting will be also examined.

**Key words:** High rise building, historic city, architecture

### Introduction

High rise buildings which are an indispensable part of our cities, will continue to exist in the future due to certain reasons such as evolving and changing social needs, rapid urbanization and population growth. There are different terms that define this building type; such as tall buildings, high rise buildings, skyscrapers depending on various contexts. In this study the term high-rise building is used which is substantially taller than their neighbours and/or which significantly changes the skyline.

High rise buildings have the potential to create a powerful image in the context of urban memory, even the potential to change the climate of the region. Technically, architecturally, socially and spatially their impact on the environment is quite strong. High rise buildings' relationship with their context is more problematic than any other structure, the subject of what they add and what they take away to the city is quite controversial. The most intense debates take place in historic cities while the separation or harmony between traditional and contemporary is more sharp and decisive here. High rise building was the most remarkable new building type to emerge in the late 19th century which has entirely changed the scale, appearance, concept and image of cities with its great visual impact. A high-rise building, can be a residential block an office tower or has a mixed use function. With advanced technologies the skylines of the cities dominated by high rise buildings all over the world in 20th century. In the 21st century it can be expected that more and more innovative high rise buildings will be built, utilizing the cutting-edge techniques also in historic cities with World Heritage Sites (WHS).

The global urban population has increased from 0.7 billion in 1950 to 3.9 billion in 2014. UN forecasts another 60 percent by 2050, as 6.3 billion people are projected to live in urban settlements (UN, 2014). A majority of people will be living in urban areas and vertical development is inevitable for the urban growth in the future cities. Cities, which can only be analyzed and understood by interdisciplinary study, are growing and developing constantly day by day. Christine Boyer, the author of 'The City of Collective Memory', suggests in her book that the city consists of three major layers; the city as a work of art (one common to the traditional city), the city as panorama(one characteristic of the modern city) and the city as spectacle (one appropriate to the contemporary city) (Boyer, 1994). These different architectural layers touch each other heterogeneously and form the diversity.

Every new proposed high rise building in a historic city should have a good architectural quality and bring a sustainable approach (Abel, 2006). By the architectural quality of the building is meant; scale, form and massing proportion and silhouette, facing materials, relationship to other structures, effect on the skyline, effect on streetscape and near views (CABE 2007). These type of buildings should be more urban and as well as respectful to a historic city as its impact on public space and the skyline is distinctive due to its scale and density. In this study high rise buildings in historic cities with World Heritage Sites, their development, and impact on the city and the urban image are examined by selected examples from different historic cities. The current approaches for designing high rise buildings in a historical setting will be also examined.

## Historic City – High Rise Building

Historic cities with World Heritage Sites have more exclusive place among world cities while they have common value for all humanity with Outstanding Universal Value. The urban conservation for these cities is important for the human history. Introducing a new building in a historic city has a dramatic impact on traditional urbanistic structure. High rise building and a historic city is perceived as two contrasting concepts while high rise building concept is fundamentally different from other contemporary building due to their scale and visual impact on the surrounding. Building a high rise building in a historical setting the protection of the authenticity and integrity is essential as it is an instantly recognizable addition to the city's skyline.

Historic area or city is defined in 1976 UNESCO Recommendation as: *“Historic and architectural (including vernacular) areas” shall be taken to mean any groups of buildings, structures and open spaces including archaeological and palaeontological sites, constituting human settlements in an urban or rural environment, the cohesion and value of which, from the archaeological, architectural, prehistoric, historic, aesthetic or sociocultural point of view are recognized. (URL1)*

Cities are changing and developing rapidly and uncontrolled development can deteriorate the urban heritage with its tangible and intangible values that has shaped through the history. UNESCO defines its approach for the management of historic urban landscape as holistic; the goal is to integrate the conservation and social and economic development. It is crucial to manage the urban development around a World Heritage site and there are two important factors that should be considered; buffer zone regulation, maintenance. Buffer zone is intended to protect World Heritage sites from negative influences. It defines a neighboring zone that may influence a World Heritage site. Although it is not a must the majority of World Heritage sites have a buffer zone which guarantees the protection of the sites. They are not formal components but they contribute to the attributes of the Outstanding Universal Value and to the setting.

High-rise buildings in historical settings are added as new layers into the city and may become the elements which enrich the urban texture without destroying the local environment. CABE (Commission for Architecture and the Built Environment) and English Heritage published Guidance on Tall Buildings in 2007. The main principle is defined as: *to secure high quality design and ways to enhance and improve places in which people live their lives and conserve heritage assets for this and future generations.* Well-designed tall buildings in the right place can be a force for good, but that they also have the potential to cause a destruction of the historical fabric. The destruction can occur in two ways; *Visual character, Urban life quality.*

City can have various silhouettes depending on the viewing direction and the viewpoint. Silhouettes of cities possess their personal individuality, gives the first emotion, first perception for that city thus the first image is created in our minds. Key elements, historic -cultural landmarks and its historic characters of the setting can be observed by a viewer and tall buildings have the potential to determine and create a silhouette or to break the existing. Besides forming the built heritage some buildings in historic cities become the symbol of the city they characterized the urban policies, new developments or new decisions about tall buildings which will be analyzed

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<sup>1</sup> New development which can affect the World heritage site has the risk for the site to be admitted to the list of endangered World Heritage.

in the case cities. Preserving the free sky and vistas around these specific buildings is directly related to the perception of the image of the city.

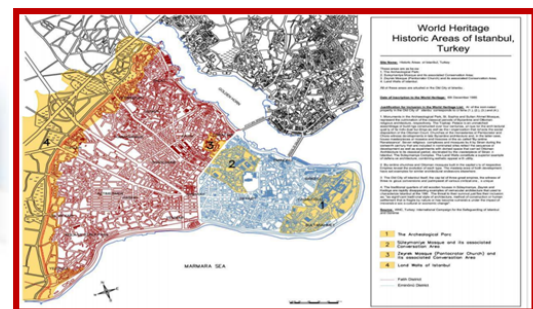
Lynch specifies three separate components of the city's image as follows: "identity, structure & meaning" and verifies that "in reality they always appear together" and determines the image. (Lynch, 2010). The Urban identity is created by urban images in long time process through the history and composed of various components. In the historical process cities have been shaped by various factors such as wars, religion and economy. Initially they were designed for defensive purposes then in medieval times religion shaped the city and religious structures became the focal point and identified the silhouette and image of the city. It is an indisputable fact that the image or identity of a city is not merely identified by the silhouette. The Urban identity of a city is determined by its own idiosyncratic features that are its geography, socio-cultural values of the community and the architectural production. In this respect the urban identity is dependent on meeting the needs of the present with the preservation of the past.

## The Case of İSTANBUL

The city of İstanbul is a harmonised combination of the works of nature and man and one of the most significant centers for Civilization and Culture of the world. During Marmaray excavations it has been observed that the history of the city starts in BC 8500. The city protected its status as a capital from Constantine the Great until the 20th century. Great empires like the Eastern Roman, Byzantine and Ottoman made this city their capital for 16 centuries long (Batur, 2011). Among its history the unique geography makes the city special, which is located on three pieces of land separated by the sea. The city was founded on a peninsula and surrounded by the Golden Horn (Halic) on the north, the Bosphorus on the east and the Marmara Sea on the south. Its relationship with the sea and its topography formed the original character of the city. Throughout the history peninsula has radically changed in the context of social-culturally and spatially and also through the fire and the impact of earthquakes. The four regions of Istanbul Historic Peninsula were declared as World Heritage Site on 06.12.1985 by UNESCO.



**Figure 1.** The Location of Historic Peninsula in the City



**Figure 2.** WHS of İstanbul

**1. Sultanahmet Archeological Park** (First Degree Archeological Site and Urban Archeological Site)

**2 The Süleymaniye Mosque** and Environs Protected Area

**3 Zeyrek Mosque** (Pantokrator Church) and Environs Protected Area

**4 İstanbul Land Walls**

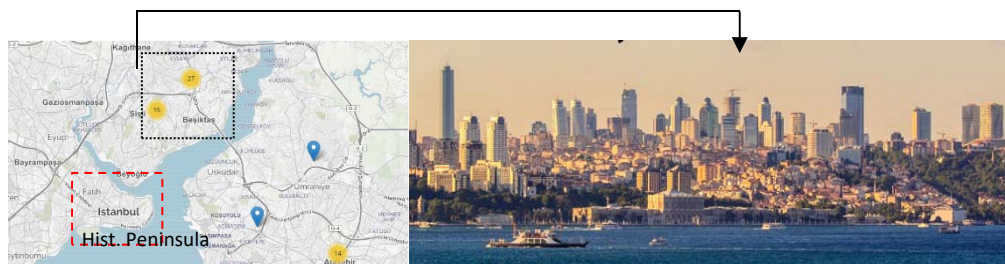
The four sites of the property are first Degree Conservation Sites, the masterpieces are the ancient Hippodrome of Constantine, the 6th-century Hagia Sophia and the 16th-century Süleymaniye Mosque. The Historic Peninsula was surrounded by ancient walls which were built by Theodosius in the early fifth century.



**Figure 3.** View of Istanbul's historic peninsula, looking from Galata. Abdullah Frères, ca. 1880-93 and a collage of WHS.

The total area is 2,110 hectares; 1,562 hectares of which is covered by the Historic Peninsula and 548 hectares by the Buffer Zone. The “Buffer Zone” is determined in the Management Plan lying parallel to the Land Walls is within the boundaries of Eyup, Bayrampasa and Zeytinburnu Districts. The skylines of the Historic Peninsula express the Outstanding Universal Value of the property. In the Prost’s İstanbul Master Plan (1936-58)<sup>2</sup> the first principles and regulations were determined to protect the silhouette of the Historic Peninsula. He put 40 m height limit: that allows max. 3-storey buildings with heights not exceeding 9.50 meters in locations those are above sea level by 40 meters or more, with the purpose of protecting the silhouette of the Historic Peninsula. (Bilsel, C, Pinon, P., 2010)

After the proclamation of the Republic, Ankara became the capital city and contrariwise to other metropolises the population of Istanbul has reduced in 1930s. In 1950s the city started witnessing demographic expansion due to migration which still continues increasingly. High rise buildings appeared first in 1950s and until to the mid 1970s averaging 25 stories office and hotel buildings were built. 1980s were megapolization period (Akdağ, et.al 2010), after 1980s the new urban regeneration process is started (Tekeli, 2014). The remarkable high-rise buildings were built in 1990s in new commercial districts (Zincirlikuyu, Maslak and Beşiktaş) in European side. In the 20th and 21th century the number of high rise buildings is increased rapidly in the city. There are 43 high rise buildings taller than 150 m and 33 of them are completed. The tallest completed building is the Sapphire Tower (2010) with 261 m height. 56 percent of these buildings have residential functions, 21 percent have mixed-use and the rest have hotel and office function. The Cluster of tall buildings are established around Levent-Maslak district and forming a highly visible and attractive symbol of the modern metropolis which change the symbolic perception. The number of tall buildings increasing in both sides of the city and from different locations of the city various characteristics of skylines can be observed. (CTBUH)



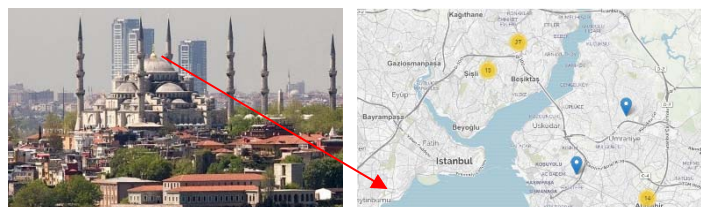
**Figure 4:** Cluster of tall buildings in İstanbul (CTBUH)

The startling development is occurred with the construction of 16/9 residential tower complex with 3 buildings of 27, 32 and 37 storeys in the western district of Zeytinburnu which began in 2010 and damaged the silhouette of the highly valued Historic Peninsula when viewed from Bosphorus. Many objections were raised by public before and during the construction of the buildings regarding the negative impacts that they could cause, but somehow the legal procedures have been fitted or changed in order to complete the construction. Despite all these objections and the on-going court processes the buildings were completed. The 3 blocks obstructed the view and caused an

<sup>2</sup> Prof. Henri Prost, Head City Planner of Paris Region was invited to Istanbul in 1936 to make a Master Plan for Istanbul. Although he is criticized for not having evaluated Istanbul within a general development perspective and for transforming the fabric of the city's historic core to rationalize the traffic circulation, his role was significant in the protection of the unique silhouette of the historic peninsula. He mentioned that the Marmara shore of the old city was endowed with “one of the most beautiful views of the world” (Bilsel, C, Pinon, P., 2010)



adverse impact by changing the background setting of the Blue Mosque, Topkapi Palace and Hagia Sophia. The court ruled that those buildings were illegally built as they “negatively affected the world heritage site that the Turkish government was obliged to protect” (URL 2). According to the expert reports<sup>3</sup> these 3 buildings located in the buffer zone area and they harm the appreciation of the Outstanding Universal Value of the World heritage Site from different viewpoints. Even though Turkish top administrative court affirmed a decision which imposes the demolition of the buildings it has not been implemented yet.



**Figure 5: 16/9 Buildings and Historic Peninsula**

The 1/100.000 scale Istanbul Master Plan is a reference document that shapes Istanbul’s future silhouette concerning the spaces and guiding plans which emphasize a holistic silhouette main plan for the districts including the Historic Peninsula, the Golden Horn and the Bosphorus. Those districts have a direct influence on the silhouette of Istanbul and therefore it is very important to consider them while preparing a study regarding Istanbul’s silhouette. Several significant viewpoints like the Bosphorus Bridge, the Üsküdar coastline, Harem, Haydarpaşa, Kadıköy Center coastline, Moda, Kabataş coast, the Unkapanı Bridge, the Galata Bridge etc. were identified in order to observe the effects of high buildings on the silhouette. While doing this the natural surface differences and average eye level observation were taken into the consideration. By digital analysis the ultimate height of the buildings that would not affect the silhouette of the Historic Peninsula was defined. (İstanbul Hist.Penin. Site M.P. 2011)

## The Case of LONDON

Another historic city that changed its silhouette in time due to the high rise development is London, which is one of the world cultural capital with its 2000 years history. St Paul’s Cathedral (1711) has been the tallest building in London until the early twentieth century. After the construction of Faraday Building and Unilever House in the 1930s, the views of St. Paul’s Cathedral from the River Thames were obstructed. Consequently ‘St Paul’s Heights Policy’ (a local view protection policy) was implemented in 1937 to protect and enhance important local views from different directions. Until 1970 during post war reconstruction period some high rise building were built in city as the number increased in 1980s the sensitivity to conservation and heritage considerations and also view protection agenda revived.(part 2) . Through history the dynamics of building high-rise buildings in the city has been shaped by different policies and in the 2000s, a cluster of tall buildings were built in the east of the City. They are set in the background of The Tower of London<sup>4</sup> which is a palace-fortress and the best-preserved example of a royal Norman castle. The Tower of London<sup>(3)</sup> (Insc. 1988) is one of the four (The Royal Botanic Gardens at Kew<sup>(1)</sup>, The Palace of Westminster <sup>(2)</sup>, Maritime Greenwich) inscribed prominent UNESCO World Heritage Sites in London. The relationship between the Tower of London and the city in the background is a very sensitive point that should not harm the appreciation of the Outstanding Universal Value of the World heritage Site. In order to conserve the cultural heritage and to protect the skyline of the four towers of the White Tower some visual separation should be obtained between the upper parts of the White Tower and the tall buildings in the background.

<sup>3</sup> According to the İstanbul 4<sup>th</sup> Administrative Court expert report. The impact of the skyscrapers on the silhouette of the city has been documented after it has been observed from several points such as the ferry passing the Bosphorus, Bosphorus Bridge, Salacak, Harem, Maiden’s Tower, Kadıköy and Çamlıca. (URL 3)

<sup>4</sup> The centrepiece is the 11th century White Tower - “white” because of its massive whitewashed walls.



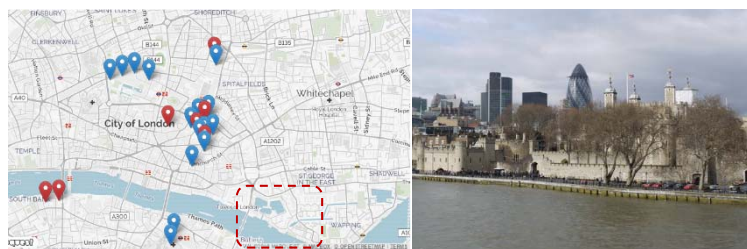
**Figure 6:** WHS in London

The free sky space around the White Tower enhances the value of its visual dominance and where this space has been compromised then the visual appearance has been depreciated. Some prominent tall buildings of the late 20th and early 21st centuries and earlier periods such as spires of city churches are rising behind the tower (Konuk, G. 2008).



**Figure 7.** Tower of London

In 1991 to protect the strategic views the Secretary of State for the Environment determined Protected Vistas and directions with planning guidance. However, in 2007, the Government's Strategic Views protection was devolved on the Mayor of London and in this year narrow-scoped Mayor's London View Management Framework (LVMF) was published which has been revised and significantly widened in 2010. Although new regulations implemented to protect the perspectives and views of historic monuments in 2007, it failed to ease tensions between different actors (Appert 2015). The London Plan 2011 and the City of London Local Plan are the planning policies that manage the construction of high rise buildings in the city. Conservation areas and also the areas where would adversely affect the protected views are considered as inappropriate areas for the construction of high rise buildings. These determined protected views are 'protected views of St Paul's Cathedral', 'the Tower of London' and 'Views from the Monument'



**Figure 8:** Buildings 100 m+ completed/under construction around Tower Of London

64 percent of tall buildings in London have office functions, 20 percent have residential and the rest have mixed-use function. There are 49 high rise buildings taller than 100 m and 16 of them are taller than 150 m. The tallest completed building in London is the Shard (2013) with 306 m height. (CTBUH)

Tall buildings are permitted to be proposed on suitable sites only if they have potential effect on (city of London):

- *the City skyline*
- *character and amenity of their surroundings including their relationship with existing tall buildings*
- *significance of heritage assets and their setting*
- *effect on historic skyline features*



**Figure 9:** The LVMF protected vistas map

## Conclusion

Each city has its own unique dynamics of urbanization and those dynamics differ depending on the cultural, political, economical and geographical position of the country that the city belongs to. Cities, which can only be analyzed and understood by interdisciplinary study, are growing and developing constantly day by day and this is also valid for historic cities. Building a high rise building in a historical setting has a direct effect on the surrounding heritage and unfortunately there are many examples of unsightly designed, improperly settled buildings which have visually adverse impact over a wide neighborhood. High rise buildings which are an indispensable part of our cities will continue to exist in the future due to certain reasons such as evolving and changing social needs, rapid urbanization and population growth. These building types have the potential to create a powerful image in the context of urban memory, even the potential to change the climate of the region. Technically, architecturally, socially and spatially their impact on the environment is quite strong. Where should they fit in a city and their relation to existing heritage and their height should be clearly determined by needed planning guidance with the participation of different stakeholders. Every new proposed high rise building in a historic city should have a good architectural quality and bring a sustainable approach and not destruct the Visual character and Urban life quality of the city. These type of buildings should be more urban and as well as respectful to a historic city as its impact on public space and the skylines is distinctive due to its scale and density. In the historical process different urban policies, political decisions, global actors and economic systems influenced decision-making mechanism. Regarding urban interventions which are produced by legal policies change the urban image and shaped the historic cities as analyzed in case cities above. The Urban identity of a city is determined by its own idiosyncratic features that are its geography, socio-cultural values of the community and the architectural production therefore each city has its own story.

Historic cities with World Heritage Sites have more exclusive place among world cities while they have common value for all humanity with Outstanding Universal Value. Any proposed building in a historic city has to consider the existing skyline and should not harm the views and the major landmarks of the city. These assessments have to be done by digital analysis methods to understand the effects of those buildings on the context and the silhouette. Not only conservation of the cultural and historical heritage of the city has to be considered but also the fulfillment of the needs of a living and dynamic city has to be taken into the consideration. A sensitive balance has to be obtained between both phenomenon as high rise buildings have the potential to create a powerful and positive image in the context of collective urban memory, and may become the elements which enrich the urban texture. Urban identity is dependent on meeting the needs of the present with the preservation of the past.

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<sup>5</sup> Skylines are "the outline or silhouette of a building or number of buildings or other objects seen against the sky," (Oxford English Dictionary)

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- Figure 3.View of İstanbul's historic peninsula, looking from Galata. Abdullah Frères, ca. 1880-93, Library of Congress and a collage by the authors.
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- Figure 5: 16/9 Buildings and Historic Peninsula, photo source:URL 2 , map CTBUH.
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