

## **Assessment of an Architectural Masterpiece in the World: Case Study of Hearst Tower, New York City**

Moyinoluwa Ola<sup>1</sup>, Abraham Taiwo<sup>2</sup>

<sup>1</sup>Afe Babalola University Ado-Ekiti, Department of Architecture,  
Km 7, Ado Ekit, Ekiti State

<sup>1</sup>Afe Babalola University Ado-Ekiti, Department of Architecture,  
Km 7, Ado Ekit, Ekiti State

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### **Abstract**

Architecture is believed to communicate to its audience by revealing its underlying meanings and gestures legible enough to be easily read. Many buildings around the world especially tall buildings bring attention to themselves by showing how they were built, engineering, structural stability, and physical forms among other things. However, Hearst Tower located in New York and designed by a British and award-winning architect Norman Foster can be considered an architectural masterpiece in the world, not just because of its height but because of the stone façade preserved in the design of the tower which was built over 80 years before its construction and a designated landmark site. This research methodology in this case is a case study of an architectural masterpiece of the Hearst Tower. It provides information on its background history, design, and construction team, its architectural design and sustainable design consideration, and a brief history of Norman Foster, the architect of this building.

**Keywords:** Hearst Tower, Masterpiece, New York, Norman Foster, Skyscraper

### **1. Introduction**

Architecture is communicative as it tends to express a certain concept and core intention of the designer. In Brisibe and Dminabo (2016), architecture is believed to "communicate in all ramifications to afford its audience 'readability', that is, the architecture ought to speak by revealing its underlying meanings and gestures legible enough to be easily read". Many tall buildings bring attention to themselves by showing how they were built, or how they remain stable. Some of these buildings have championed technology, exploration, or innovation because of the physical forms they embody (Kheir & Mir, 2016). Development in structural engineering and curtain wall construction has given architects the privilege to design and construct as high as they wish (Kim & Shin 2011). However, the increase of new structural systems and advanced technologies combined with Modernism's principles has given birth to the movement in architecture and innovations in the design of skyscrapers (Kheir & Mir, 2016, Kim & Shin 2011).

Hearst Towers can be considered one of the architectural masterpieces in the world, not just because of its height, but because of the stone façade preserved in the design of the tower which has been built over 80 years and is a designated landmark site (Wikipedia, 2019). The building was the first high-rise building in New York City to attain the Gold Rating under the Leadership in Energy and Environmental Design (LEED) led by the US Green Building Council (Lucas n.d.). However, the building received the 2006 Emporis Skyscraper Award as the best skyscraper of the year in the world. It is noted as an important historical moment in the history of America, since it was the first skyscraper to be built after the September 11, 2001 attack (Arch Daily, 2012).

## **2. Sir Norman Foster**

Sir Norman Foster was born in 1935 and he is a British and award-winning architect known for outstanding and innovative works with extensive use of steel and glass and inner space management. He is the founder of Foster and Partners, an architectural practice studio in more than 2 countries in the world including the headquarters located in London. Sir Norman Foster has done several architectural masterpieces notable throughout the world; buildings such as the iconic New York City skyscraper, and the Hearst Tower (Biography.com.Editors, 2019).

### *2.1 Early life*

Sir Norman Foster is a British architect born on June 1, 1935, in Manchester, England, and raised in a modest working-class family. While working at the Treasure Department at age 16, he contemplated architecture as a career, which he pursued after he completed national service in the Royal Air Force in 1953. He studied at the University of Manchester School of Architecture and City Planning and graduated in 1961 after which he earned his Master's degree at the Yale School of Architecture, where he was awarded a fellowship and studied under Paul Rudolph (Foster and Partners, 2016). Alongside Richard Rogers, his friend, and classmate from Yale, he set up an architectural practice Team 4 in 1963 but later broke away from his architectural practice.

### *2.2 Career*

Before his admission into the University of Manchester School of Architecture and City Planning, Sir Norman Foster first worked at John Bearshaw and Partners a local architectural practice as an assistant and was later promoted to the drawing department. After graduating from the university in 1961, he was in America for a year after which he opened his architectural practice firm in 1963 alongside Richard Rogas and others. Later in 1967, Sir Norman Foster founded Foster and Partners in partnership with Richard Buckminster Fuller until he died in 1983. The firm has handled several notable projects around the world (Wikipedia, 2019).

Sir Norman Foster was named the 1999 Pritzker Architecture Prize as he attained the highest honor in his profession. In his 35-year career, he has received 165 awards in several countries which includes Britain's 1983 Royal golden medal for Architecture given by the Royal Institute of British Architects (RIBA), an honor of Grande Medaille d'Or was bestowed on him in France

in 1991. Also, in 1990, on the Queen of England's birthday, he received his Knighthood (The Pritzker Architecture Prize, 1999).

### *2.3 Design Philosophy*

In a report written by The Pritzker Architecture Prize, Sir Norman Foster said "I believe that the best architecture comes from a synthesis of all the elements that separately comprise a building: the structure that holds it up; the services that allow it to work; the ecology of the building-whether it is naturally ventilated, whether you can open the windows, the quality of light; the material used, the mass of their lightness: the character of the space; the symbolism of the form; the relationship of the building to the skyline or the streetscape; and how the building signals its presence in the city or the countryside. I think that holds whether you are creating a landmark or deterring to a holistic setting. Successful architecture addresses all these things and many more." (The Pritzker Architecture Prize, 1999).

### *2.4 Foster and Partners*

Foster and Partners is an international architecture and design studio founded in 1967 by architect Norman Foster and has started and completed over 300 projects in 45 countries in the world. Moreover, the firm has studios in more than 2 countries in the world and has its headquarters in London. The firm has created many contemporary architectural masterpieces that are easily recognized around the globe. Most of these buildings has become a major tourist attraction and epitomized innovations in architecture, such buildings include the London headquarters of Swiss Re, the Reichstag in Berlin, new Apple campus 2 (Foster and Partners, 2016). The firm's work ranges from large construction projects to small-scale projects with a scope of work that includes "masterplan for cities, design of buildings, interior and product design, graphics and exhibitions." (Brady and Xavier, n.d)

Foster and Partners from history have been known consistently to pursue such universal themes as "tradition and the future" and "humans and the environment" as architecture and cities are being created on innovative ideas (Foster and Partners, 2016).

## **3. The Hearst Tower**

### *3.1 Background*

Forster and Partners and Cantor Seinuk were commissioned by Hearst organization as architects and Structural engineers respectively in early 2001 to design a new headquarters at the site of the original building (Rahimiam & Elion, 2006). The Hearst Tower is located between 300 West 57<sup>th</sup> Street and 959 Eight Avenue, near Columbus Circle, in Midtown Manhattan, New York City. The tower is 600ft tall and incorporates two underground levels designed to accommodate over 2,000 Hearst Corporation employees. As shown in Figure 1, the building has 42 stories which include office spaces, an auditorium, a full-service television studio, executive dining areas, and good housekeeping test kitchens. (Jingtong, Xinran, Nathanielle & Gaoyang n.d: Lucas n.d). The Hearst Tower became the first LEED Gold Skyscraper in New York City. Forster and Partners and Cantor Seinuk were commissioned by Hearst organization as architects and

Structural engineers respectively in early 2001 to design a new headquarters at the site of the original building (Rahimiam & Elion, 2006).



Figure 1: Façade of the Hearst Tower in New York City  
Source: LinkedIn Cooperation, (2019)

### 3.2 Project team

#### 3.2.1 Client:

The Hearst Corporation is an international media company incorporated in the 1880s by William Randolph Hearst. The Hearst Tower is the headquarters of the cooperation (Schroepfer, 2004).

#### 3.2.2 Architect:

Foster and Partners is an international architecture and design studio founded in 1967 by architect Norman Foster and has started and completed over 300 projects in 45 countries in the world (Foster and Partners, 2016).

Adamson associate, Toronto, Canada, established by Gordon Sinclair Adamson (1904-86) was also involved as the associate architect of Hearst headquarters (Schroepfer, 2004).

#### 3.2.3 Structural engineer:

New York-based Cantor Seinuk

#### 3.2.4 Builder

The construction of the Hearst Tower was handled by Tuner Construction, New York (Schroepfer, 2004).

### *3.3 Background history of Hearst Tower*

In the late 19<sup>th</sup> century, William Randolph Hearst anticipated a headquarters building for his newspaper empire around 57<sup>th</sup> Street and Eighth Avenue. His initial intention was to have a two-story, mixed-use structure with stores, offices, and a 2,500-seat auditorium on the site. However, a six-story structure was commissioned between 56<sup>th</sup> and 57<sup>th</sup> Street in the 1920s for the headquarters of the Hearst Corporation's twelve magazines and was completed in 1928. The horseshoe-shaped structure has 40,000 square feet and was designed to accommodate seven additional floors which were never built. The name of the building was originally International Magazine Building and was designed by Joseph Urban and George P. Post & Sons (Rahimiam & Elion, 2006).

The initial building had several key features as the design reflected a sculptural representation of the musical and artistic heritage of its neighborhood. The facade of the building is precast limestone with a two-story base supporting four recessed stories. The architecture of the original building stood out in its time because it combined various architectural styles, such as large fluted columns and carved balustrades featured on the first two stories while the upper four stories are recessed back right from the base and highlighted by massive piers (Lucas 2003). It occupied an auditorium and features six sculptural groups executed at the building's corners, and two entrances, the main at eighth street and the other on 57<sup>th</sup> Street which was altered for Commercial purposes (Rahimiam & Elion, 2006).

In 1988, the Hearst International magazine building was selected as a Landmark Site by the Landmark preservation commission as it was considered a monument in New York's architectural heritage (Rahimiam & Elion, 2006). Figure 2 shows the Hearst Magazine Building.



Figure 2: Hearst Magazine building, Built 1927-1925  
Source: Landmarks Preservation Commission (1988)



### *3.4 Design Concept*

According to Schindler Elevator Cooperation, in the history of the Hearst Corporation, they have aimed to make groundbreaking innovations; however, this can be seen in the design of the headquarters known as the Hearst Tower, located in New York City. The basic concept behind the design of the Hearst Tower is to achieve an efficient, innovative, and technologically excellent building (Schindler Elevator Cooperation). Another important design consideration was to preserve the existing six-story landmark façade and incorporated it into the new tower design, and this was achieved as the building is a combination of both the old and new buildings (Jingtong, et al., n.d)

### *3.4 Site and building layout*

Since the 1920s, the original Hearst Magazine building has been located in New York City Columbus Circle neighborhood, between 56<sup>th</sup> and 57<sup>th</sup> street along Eight Avenue. The building is a 200 by 200 square block with 6 floors and forms the base for the new Hearst Tower which is the new headquarters for the Hearst organization (Lucas 2003). The Tower is a 44-story office building, with an 856,000 square-foot area, almost 600 feet tall, and has two underground levels (Rahimiam & Elion, 2006).

The building houses open-plan office spaces, an auditorium, and a cafeteria. The building is divided into two major zones, the office zones that starts from the 10<sup>th</sup> floor to the 44<sup>th</sup> floor about 110 feet from the street level, and also the area below the 10<sup>th</sup> floor has the entrances, lobby, cafeteria, and high interior open space auditorium at the 3<sup>rd</sup> floor (Rahimiam & Elion, 2006).

### *3.6 Structural and architectural attributes*

The Hearst Tower in New York was handled by structural engineering firm WSP Cantor Seinuk of New York City. The tower received several awards; in September 2001, it was noted as the first skyscraper in New York City, also noted as Emporis Skyscraper Award for the best skyscraper in the world completed in 2006, and received the 2008 International High-rise Award (Mele, Toreno, Brandonisio & De Luca, 2012)

The Hearst Tower is 46 stories and 183m tall, built on an existing famous six-story building. It has a prismatic form and a rectangular floor plan (Mele *et al.*, 2012). The building falls under Modernist high-rises with an explicit trait of structural expression, as they display their structural systems. Structural expressionism has redefined aesthetic quality to emphasize the role of new structural systems and materials. However, this expression could be considered to be fully compatible with the international and its formalism. In this structural type, the building core is centrally located with outriggers extending to perimeter belt trusses or large columns (Kheir & Mir, 2016).

The idea behind the form of the tower is driven by its structural logic which is a Diagrid system that gives it a bold yet elegant appearance (Kheir & Mir, 2016). A diagrid system is a structure modeled as a vertical cantilever beam on the ground and subdivided longitudinally into modules according to the repetitive diagrid patterns. Every module is defined by a single level of diagrid

that extends over multiple floors (Moon, 2011). The placement of diagonals, especially in steel structures adds to the stability and strength of the building under wind and seismic loads and it also reduces the impact of self-weight movement (Architectural Record Innovation n.d, Kim & Shin 2011).

Its frame consists of a triangulated steel frame beginning on the 10<sup>th</sup> floor and ending at the top (Architectural Record Innovation n.d) with each façade's four-story triangles measuring 16.5m (54ft.) tall (Kheir & Mir, 2016). The Diagrid systems shown in Figure 3; consist of 12 composite columns and 10 mega-diagonals which has hollow box section filled with C45/55 concrete (Mele et al 2012). The building is constructed of steel, and the compressive and tensile nature of steel was explored to reduce the steel required by 20% if a typical moment frame was adopted (Kim & Shin 2011). The building exterior has articulated corners that give it a diamond-shaped pattern that promotes a constant shift in its visual relationship with the skyline that gives it a three-dimensional appearance. (Kheir & Mir, 2016)

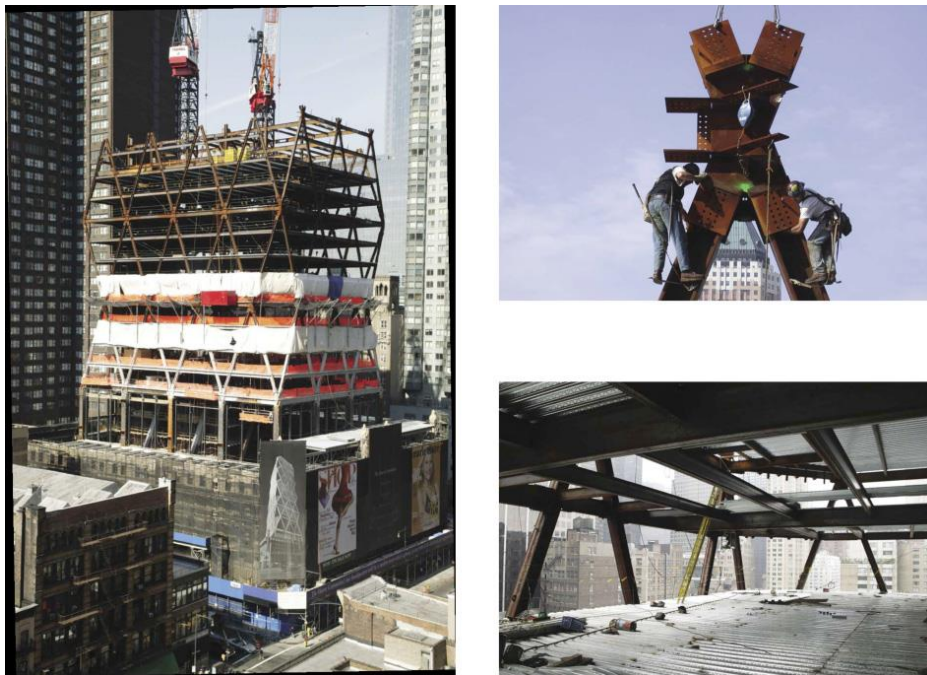


Figure 3: Hearst tower during construction showing the diagrid system  
Source: Kim & Shin 2011

### *3.7 Sustainability of the Building*

A combination of design-efficient structures and functional architectural forms is important to achieve a sustainable structure that is a healthy and environment-friendly building

(Elnimeiri, Susorova & Kim 2010). The building was the first high-rise building in New York City to attain the Gold Rating under the Leadership in Energy and Environmental Design (LEED) led by the US Green Building Council (Lucas 2003). More important is the preservation

of the six-story existing façade which was selected as a landmark site by the Landmarks Preservation Commissions in 1988 (Rahimian & Elion, 2006), also during the demolition of the internal wall, about 85% of the materials were recycled for reuse. The diagrid system adopted is highly structurally efficient (Lucas n.d).

The building has several energy-saving features which earned it the Golding rating. The exterior was clad with glass with a special 'low-E' coating to reduce solar radiation; energy efficiency was achieved through the use of daylight and occupancy sensors technology, storm water reclamation, and has the world's largest sustainable water feature (Lucas n.d., Verdict Media Limited, 2019).



Figure 4: Interior of the building showing the connection of the original build to the tower  
Source: LinkedIn Corporation, (2019)

#### **4. Conclusion**

The Hearst Tower is located between 300 West 57<sup>th</sup> Street and 959 Eight Avenue, near Columbus Circle, in Midtown Manhattan, New York City. The tower is 600ft tall and incorporates two underground levels designed to accommodate over 2,000 Hearst Corporation employees. The building has 42 stories which include office spaces, an auditorium, a full-service television studio, executive dining areas, and good housekeeping test kitchens. (Jingtong, Xinran, Nathanielle & Gaoyang n.d: Lucas n.d). Hearst Towers can be considered one of the architectural masterpieces in the world, not just because of its height, but because of the stone façade preserved in the design of the tower which has been built over 80 years and is a designated landmark site (Wikipedia, 2019).

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**References**

- Arch Daily, (2012). Flashback: Hearst Tower / Foster + Partners. Retrieved May 21, 2012, from: <https://www.archdaily.com/204701/flashback-hearst-tower-foster-and-partners>
- Architectural record innovation (n.d). Norman Foster and the Hearst Corporation complete an 80-year-old vision. Retrieved May 9, 2012,
- Biography.com.Editors, (2019), Norman Foster Biography. Retrieved May 9, 2012, from: <https://www.biography.com/artist/norman-foster>,
- Brady P., and Xavier D., (n.d) The Work of Foster and Partners Specialist Modelling Group
- Brisibe W., G., & Dminabo F., (2016), Towards Understanding Architectural Theory: A Review On‘Reading’ Architecture *International Journal of Academic Research and Reflection*. Vol. 4, No. 3, pp 53-63
- Elnimeiri, M., Susorova, I., & Kim, H., (2010). Sustainable Structures and Architectural Forms of Tall Buildings. *International conference on sustainable building Asia* pp 487-492
- Foster + Partners, (2016), Foster + Partners: Architecture, Urbanism, Innovation. Vol. 2
- Jingtong, L., Xinran, L., Nathanielle S., & Gaoyang, Y., (n.d). Hearst Tower, *Arch 631 Nichols*
- Kheir, A., Mir, A., (2016), an overview of structural & aesthetic development in tall buildings using exterior bracing &diagrid systems, *international journal of High-rise buildings*, vol 5, No 4, pp 271-291, <http://doi.org/10.21022/IJHRS.2016.5.4.271>
- Kim H., & Shin S., (2011) A Study on Innovation in Technology and Design Variation for Super Tall Buildings, *Journal of Asian Architecture and Building Engineering*, 10:1, 61-68, DOI: 10.3130/jaabe.10.61
- Landmarks Preservation Commission, (1988). Designation List. Retrieved May 9, 2012,
- Lucas J., M., (n.d) The Hearst Tower: Combining Steam Driven Absorption Cooling with a DOAS/Radiant, System. *The Pennsylvania State University Department of Architectural Engineering Senior Thesis-Mechanical Option*
- Mele, E., Toreno, M., Brandonisio, G., & De Luca, A., (2012). Diagrid structures for tall buildings: case studies and design considerations, *the structural design of tall and special buildings*: vol 23, pp 124-145, DOI: 10.1002/tal
- Moon, K. (2011). Diagrid Structures for Complex-Shaped Tall Buildings, *Procedia Engineering* 14 (2011) 1343–1350. doi:10.1016/j.proeng.2011.07.169
- Rahimian, A., Elion, Y., (2006). New York's Hearst Tower, a restoration, adaptive reuse, and a modern steel tower rolled into one. *Structure Magazine*, pp 25-29
- Schroepfer T., (2004). Global Design and Building Practice: A Case Study of Hearst Headquarters, New York, NY *ARCC Journal*: Vol 4 (1), pp 93-99. DOI:10.17831/enq:arcc.v4i1.60
- Verdict Media Limited (2019) Retrieved May 9, 2012,
- Wikipedia (2019). Hearst Tower. Retrieved May 9, 2012, from [https://en.wikipedia.org/wiki/Hearst\\_Tower\\_\(Manhattan\)](https://en.wikipedia.org/wiki/Hearst_Tower_(Manhattan))
- Wikipedia (2019). Norman Foster. Retrieved May 9, 2012, from: [https://simple.wikipedia.org/wiki/Norman\\_Foster\\_\(architect\)](https://simple.wikipedia.org/wiki/Norman_Foster_(architect))