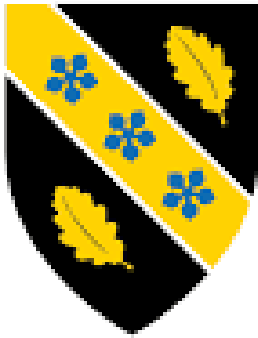


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An exemplar of Modern Architecture



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Word Count : 962

An exemplar of Modern Architecture : Fallingwater, Frank LLOYD Wright



(Figure 1, Fallingwater house and landscape, Travel photography blog, 2022)

Introduction and Historical background :

Fallingwater was designed by the American architect Frank Lloyd Wright and still remains one of the most significant works of American architecture, with over 75,000 visitors a year. Wright's designs still remain popular due to him redefining the harmony between architecture, society and nature through functional yet site-responsive designs. The remote site used for Fallingwater is located in Southwestern Pennsylvania, built partly over a waterfall on the Bear Run stream. (McCarter, R. 2002) The site was originally bought in 1933 by Edgar Kaufmann, a prominent figure in the Pittsburgh business and his wife Lillian. The sites purpose was to construct the family's weekend home in 1935 onwards as a retreat from city and business life (McCarter, R. 2002). Because of this, the modern home utilised organic architecture to integrate the house with the landscape to create a peaceful retreat. By doing this, the tranquil sound and atmosphere of the waterfall could be heard from within the building. This was because Wright believed that buildings should grow naturally from their surrounding environment, integrating the site to create the ideal home for the Kaufmanns.

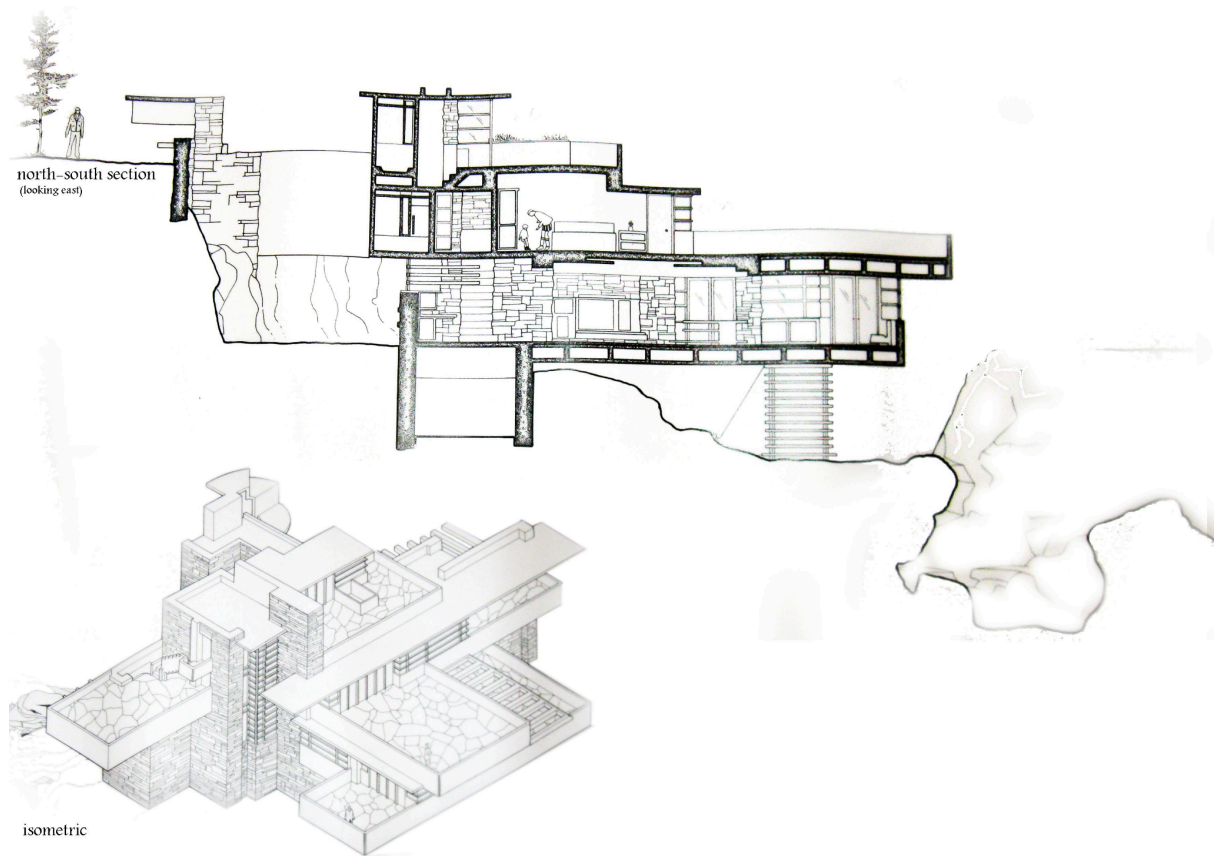
Plans and sections :



(Figure 2, Pen drawing of the site plan, By Author, 2026)

Site analysis :

Evident from my site plan, Wright integrates surrounding foliage into his design in order to create harmony between the building and its site, creating the ideal weekend home. Furthermore, Wright's bold decision to suspend the house over the waterfall rather than beside it, strengthens the sense of unity and connection between bear run and the house. Because of this, the waterfall became a living instrument inside of the home and an integral part of the design. As well as allowing for scenic and immersive views from the home all year.

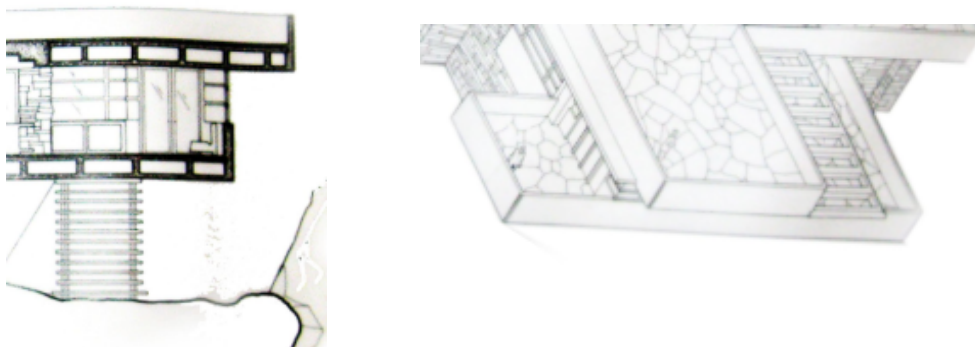


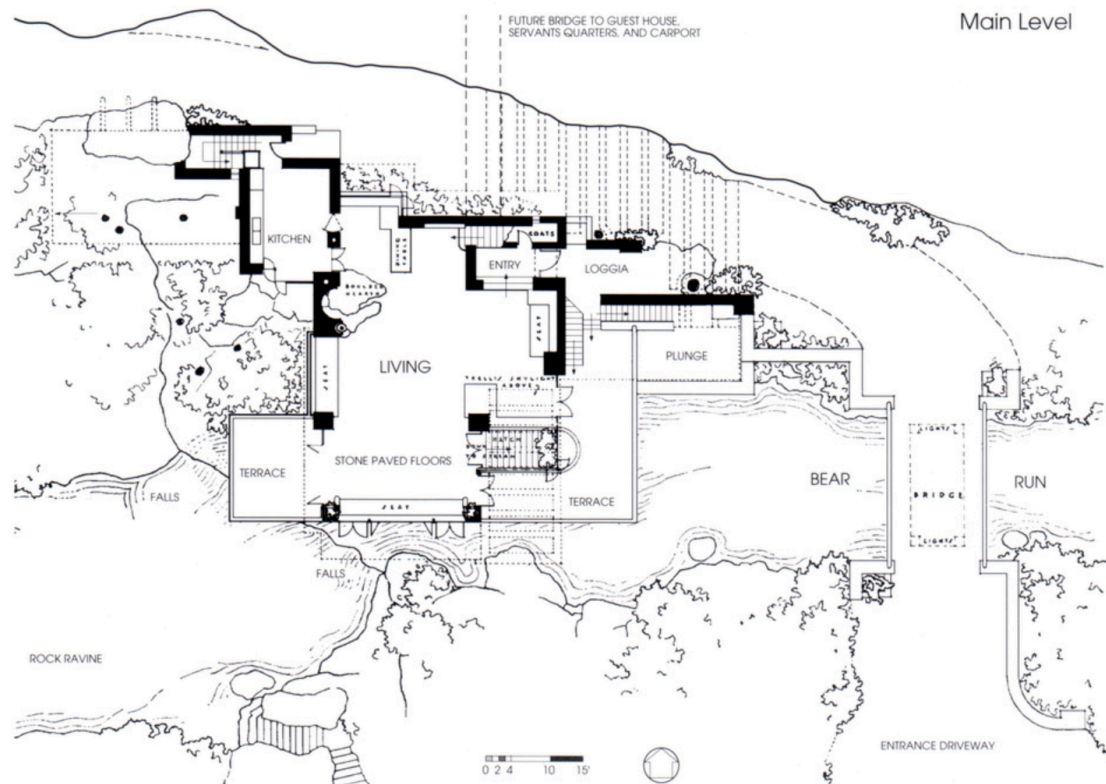
(Figure 3, North-south section and isometric of fallingwater, Frank Lloyd Wright, 1984)

Structure analysis :

These plans reveal that the reinforced concrete design also has cantilever elements which gives the design its uniqueness and character. These elements helped redefine the previous limitation of construction capabilities with their sense of floating in the surroundings with little visible support. For this, Wright used four main foundation piers that helped support the cantilever beams that suspended the first floor out over the stream (Meek, T. 2018). The way the living spaces are projected outwards also creates a sense of relationship and reach to the forestry, using structure to connect the indoors and outdoors.

Examples from images :



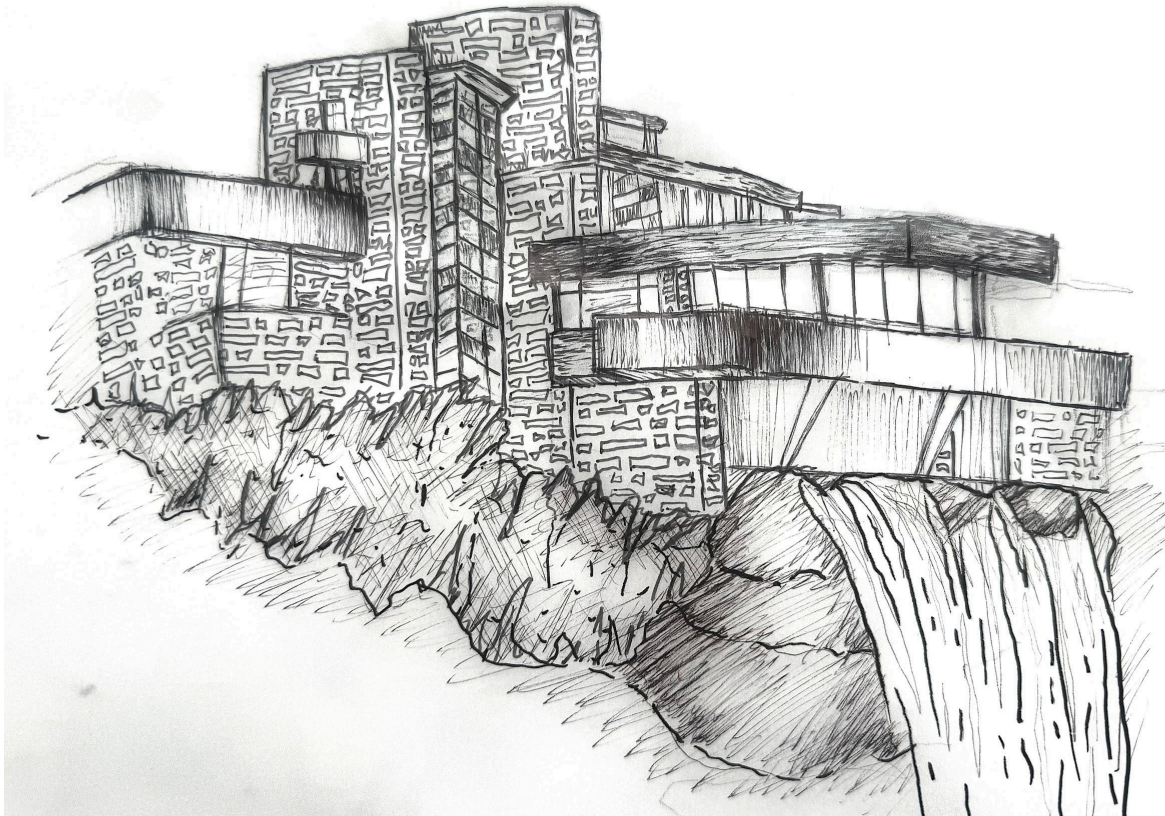


(Figure 4, Main level floorplan layout ,Terry, 2018)

Floorplan analysis :

This floorplan image reveals some of Wright's experiments with scale and spatial design. He utilises different levels with smaller entrances and pathways that open up into spacious rooms which created a sense of expansion and growth from initial shrinkage (Holt, B. 2026). This is seen from the narrow entry to the spacious living space. This shift could be interpreted as an inspiration from the growth and shrivel of bear runs nature through the seasons, or could just be Wright's unique interpretation of space.

Materials and light :



(Figure 5, Pen drawing of a perspective shot, By Author, 2026)

Wright's variety of materials include reinforced concrete for the cantilevered terraces, natural stone and large spans of glass in his unique design. The quantity of glass would allow for plenty of natural light to enter, illuminating the home. Wright exhibits organic architecture through his stone masonry, utilising Pottsville sandstone from a nearby quarry for the walls. These were constructed in a rough, disorganised manner to imitate the stone ledges near bear run (Fallingwater, 2026). Contrasting to this organic idea, Wright also utilised steel casement, single-glazed windows to create a modern but seamless blend of the interior and exterior space (Jerome, P. 2025). Wright may have added a sum of windows due to the surrounding moist environment to help eliminate condensation issues. He also chose Cherokee red for the metal window frames to possibly emphasise rather than disguise them. This creates a bold contrast between linear continuity and rough stone (Lind, C. 1996). Further demonstrating Wright's innovative use of modern and industrial materials, Wright also utilised steel. This was structurally as reinforcing bars and architecturally in the steel frame windows and doors (Fallingwater, 2026). Therefore the overall material choices unify modern and organic architecture, showing the ideas and materials can efficiently function together.

Ideas and theories underpinning the design :

Wright's ideas also pushed previous limitations during the historical period, experimenting with advanced materials and ideas. The consulting engineers criticised Wright's decision to place the house on a rock ledge over the waterfall, seeming hazardous at the time. As well as expressing concern about Wright's usage of reinforced concrete which was a new material during this period in America and untested in domestic construction. (McCarter, R. 2002). Wright's ambition did not stop here, he was also yet to experiment greatly with steel prior to the construction as sashes were traditionally made of wood (Fallingwater, 2026). Meaning this modern building showed an advancement in American architecture and potentially paved the way for the future of architecture. Furthermore, the success of this building is made further evident as he later designed the Guggenheim museum which opened in 1939 with similar design ideas. This building also used a subtle cantilever element with similar modern materials to fallingwater including glass, reinforced concrete and steel (The Guggenheim Museums and Foundation, 2026). Proving Wright's modern approach, materials and design choices were efficient and practical throughout his architecture journey.

Conclusion :

In summary, Fallingwater remains one of the most remarkable designs in modern and organic architecture. His design succeeded by carefully integrating the building within the surrounding landscape and creating a balance between both natural and advanced materials. He also succeeded at developing an innovative and complex structure with cantilever elements by pushing boundaries and limitations within architecture and construction. As well as being visually pleasing, his design was also functional and successfully fitted the criteria of a weekend home for the Kaufmans. However it now remains as an iconic landmark that attracts tourists globally, demonstrating the timeless appeal of Wright's designs.

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