

# **HISD 202-HISTORY OF ARCHITECTURE AND INTERIOR DESIGN**



**SPRING 2016\_\_ASSIGNMENT 2: POST-MODERN ARCHITECTURE**

**ARCHITECT : JAMES STIRLING**

**DR.MAHA AL-BUSTANI**

# JAMES STIRLING



Born as Sir James Frazer Stirling

**Nationality:** British

**Date of Birth:** 22<sup>nd</sup> April 1926.

**Died:** 25<sup>th</sup> June 1992

Stirling went to school at Quarry Bank High School in Liverpool England. He joined the black watch (Army) during the world war II before transferring to the Parachute Regiment. He was injured twice close by Germany before returning to Britain.

Stirling studied architecture in the university of Liverpool from 1945 until 1950.

He was as an assistant in the firm of Lyons Israel before leaving it with James Gowan to start their own business as “Stirling & Gowan” .Their first built Landmark was The Langham House Close in 1958. It was a landmark in of Brutalist residential Architecture.

He is one of of the first architects to question and deviate from the Modern movement. After some struggles and criticism from the public due to his “Inhabitable Homes” he gained back his popularity in the US as “Enriched Modernism Buildings”.

# JAMES STIRLING

## 1) What is his attitude towards the functional role in design?

James Stirling is famous for his functional buildings where the volumes are defined with very clean spaces and lines. In he also paid attention to the human scale and the communal integration in terms of space & circulation.

## 2) What is his attitude towards the communicative value in architecture?

Stirling believed that the buildings should reflect the lifestyle of the occupants which is mainly rich and has a variety in the appearance. Thus he used the segmentation of the building into several parts to have a rich value and to explore the relationships between the volumes and voids.

## 3) What is his attitude towards the role of technology in Architecture?

Stirling did not reject the technology but he made use of the trendy technological materials at that era such as the steel structure and the the glass. He has used curtain glass in many of his projects. He was also one of the newest architects to use technology and new materials in architecture.

# JAMES STIRLING

## 4) What is his attitude towards the main sources of inspiration, History in specific?

His gave a big importance to the historical and modern architecture. He was also influenced by the late designs of le Corbusier and the theories of Smithson. In one of his statements he mentioned the following: *“In a building we did at Oxford some years ago (the Florey Building, Queen’s College, Oxford, 1971), it was intended that you could recognize the historic elements of courtyard, entrance gate towers, cloisters; also a central object replacing the traditional fountain or statue of the college founder. In this way we hoped that students and public would not be disassociated from their cultural past.”*

## 5) How can you describe his design strategy in dealing with these sources?

Stirling always considered the reflection of history in his buildings and he also connected the building to the specific site. He somehow took the history and modernized it in his way with his own touch.

## 6) What is his attitude towards fitting Architecture to context ?

Stirling has always considered contextualism but in his own manner. His buildings show a great interest in their context in symmetry and in historical allusion. As in the example of the extension of the school of architecture at rice university, Stirling kept the same materials and the design forms but he added some elements such as the round windows to add life to the spaces.

# THE TWO ICONIC PROJECTS





# -1- LEICESTER UNIVERSITY



Location: Leicester, England

**Date** : 1959 – 1963 (4 years)

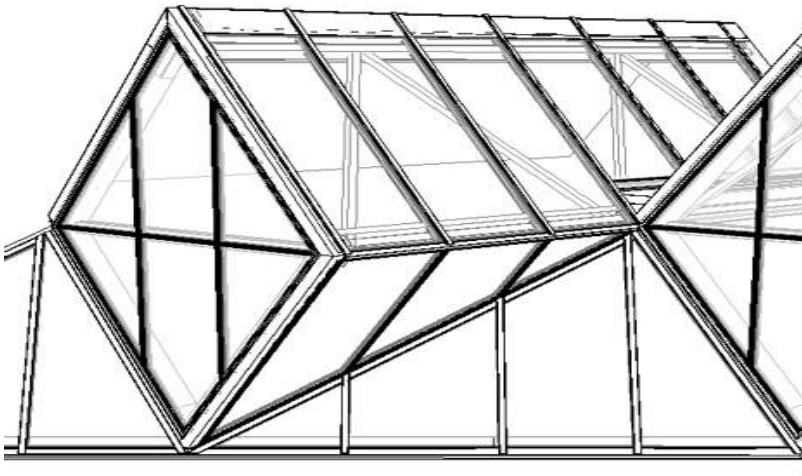
**Architect**: James Stirling

**Style**: Brutal/Post Modernism

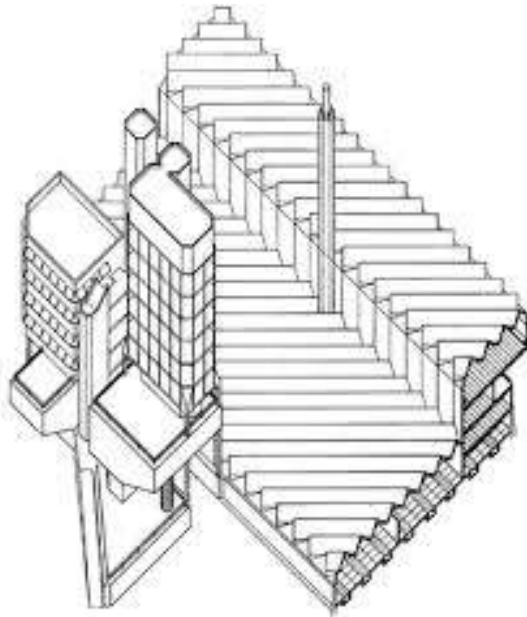
This building was done with James Gowan. It was a strong contrast to earlier British Post World War II work and was the origin of James Stirling's international reputation. It has large areas of glazing contrasted with heavy masonry forms.

He wanted his buildings to reflect richness as mentioned in his quotes:

*“I believe that the shapes of a building should indicate — perhaps display — the usage and way of life of its occupants, and it is therefore likely to be RICH and varied in appearance, and its expression is unlikely to be simple”*



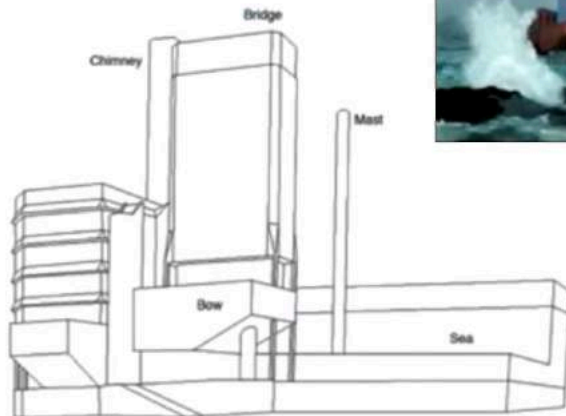
# CONCEPT



ENGINEERING !!!



## MARINE THEME



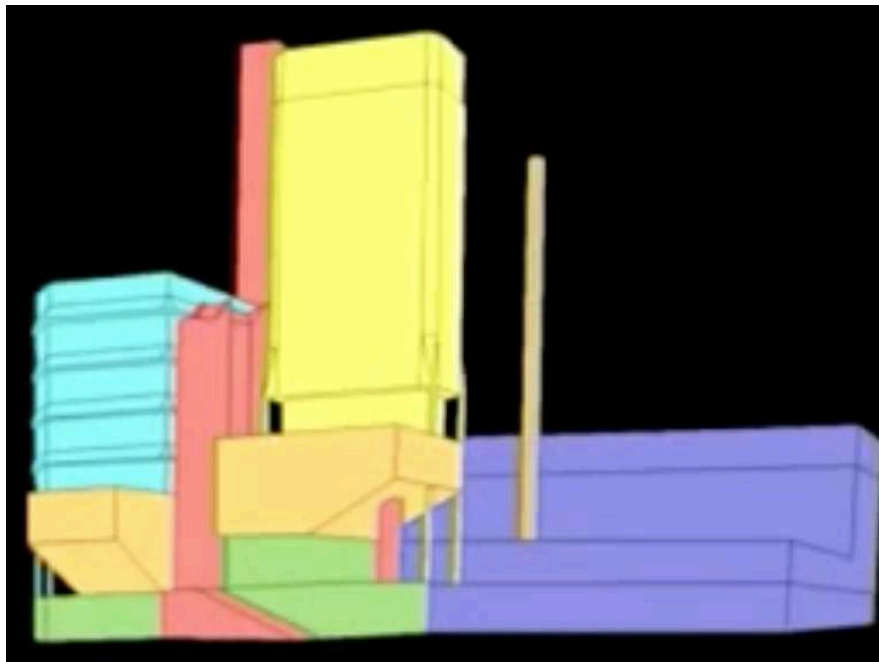
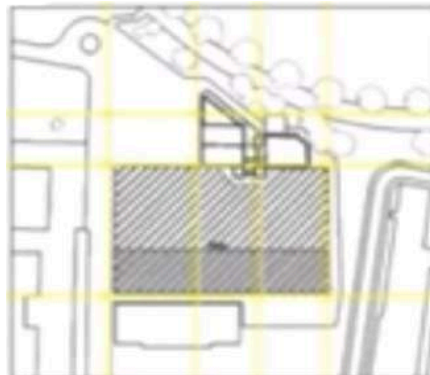
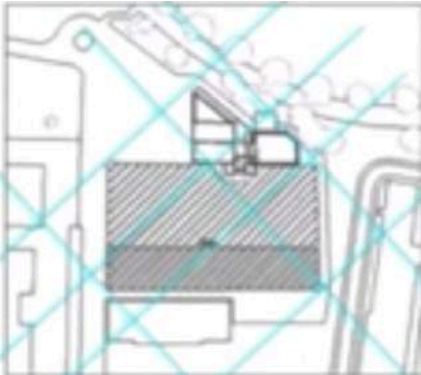
Stirling and Gowan were asked to accommodate different kinds of engineering in one building. Therefore they wanted to reflect this function of the building in their design. The materials used are truthful and exposed such as the steel pipes, the cantilevered structures and even the handrails seem to be like a ship. It was the right approach for such a function.

In addition to that likely to other engineering schools they don't really have big windows and nice views with natural lighting, Stirling also provided all the workshops by natural lighting with respect to the site by orienting the skylights 45 degrees to make use of the north cool lighting.

It is also reflecting the marine theme with its chimneys, mast and bow.

The building is very Dynamic and sculptural just like the concept of the post Modernism: ***"Form Follows Fiction"***

# FORM



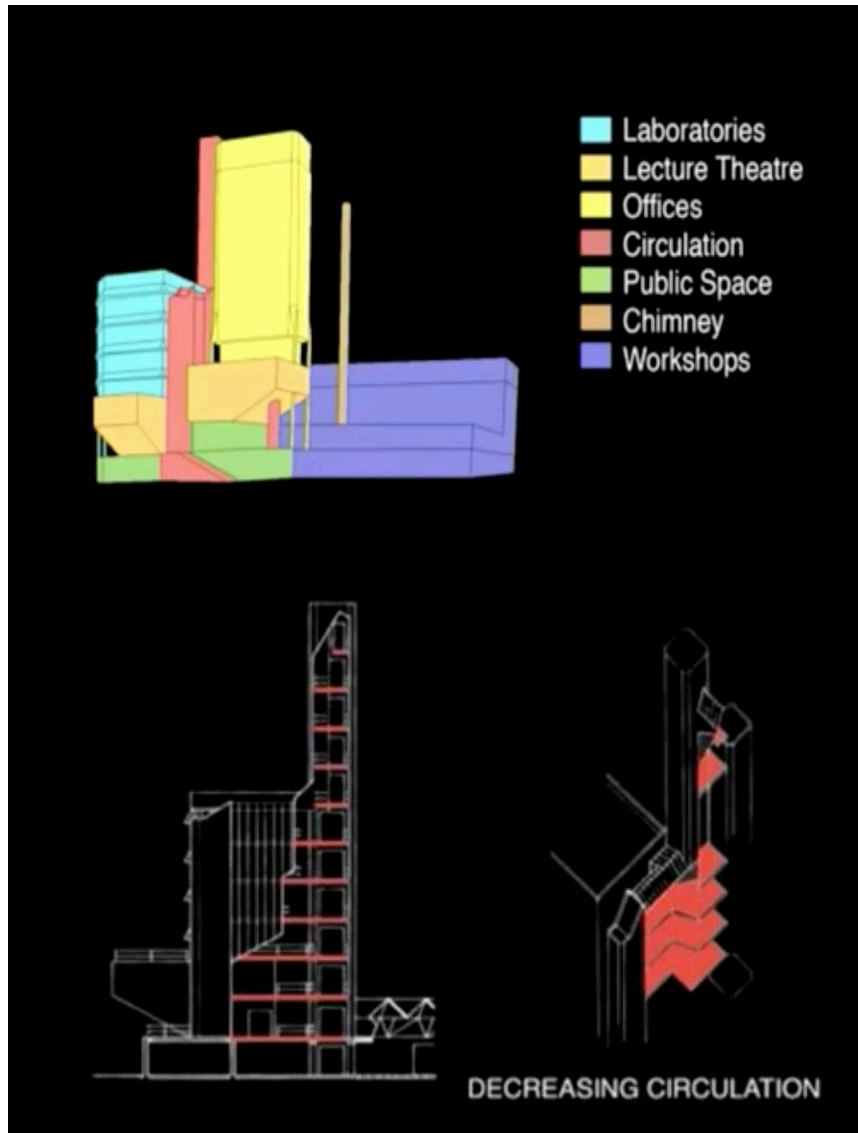
This building is a Post modern building. One of the features of Post modernism is manipulation of the geometrical shapes rather than being rectangular.

The University looks very dynamic and is somehow reflecting or projecting the function of the building to the outside. The building looks very sculptural and picturesque because of the different types of form used varying from the basic form which is the cube but subtracted and rotated in different directions. This what makes the building unique. If we have a look at the plan we can see that the main forms where generated by using a grid in 2 different directions 90 degrees and 45 degrees.

There is a variety of dominant lines such as the vertical lines for the offices, Horizontal lines for the workshops and oblique lines for the lecture theatres.



# SPACE



The spaces were arranged in a logical way to fit their functions but also the form was trimmed to fit to the spaces. So there is a interrelation between the outside and the inside.

The building consists of the following main spaces as mentioned on the left hand side diagram.

- ✓ Labs
- ✓ Lecture theatres
- ✓ Offices
- ✓ Public space
- ✓ workshops

The circulation is decreasing while going in the upper direction due to the form and the structure of the building itself.

All the spaces are located around an atrium that allows the natural light in from the center of the building.

# STRUCTURE



The building structure is based on a solid load bearing brick structure which is carrying the glass rooftop of the workshops in addition to supporting the tower load at the same time.

There is a cantilevered elements that were there for a purpose which is allowing the equipments to be shifted directly to the workshops from the service road.

All the walls were load bearing to allow the circulation and the efficiency of spaces.in addition to few columns at the corners of the building

At that time where there was no CAD technology Stirling could still achieve very complex details to make the building design work.



Brick Solid Base

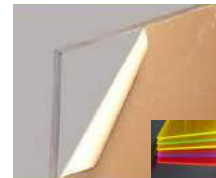
Brick Door (Aesthetics)

# MATERIALS



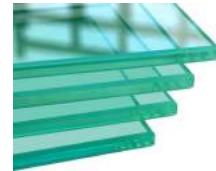
## CONCRETE STRUTS

The concrete struts were used for example in the support of the cantilevers



## PLY GLASS

This is the type of glass used in the roof of the workshops which is allowing the access of daylight and reducing the glare.



## TEMPERED GLASS

The glass used for the façade to maintain safety standards



## BRICK TILES

Materials are truthful and what you see is what you get.



## BRICKS

The dominant material applied on the facade



## STEEL PIPES

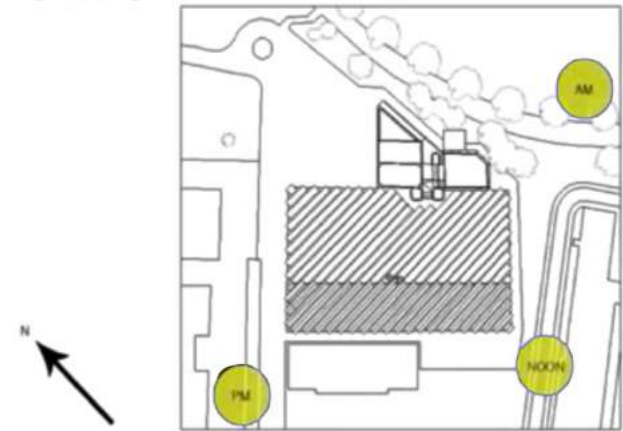
Used inside to reflect the engineering aspect



# INTEGRATION WITH THE SITE



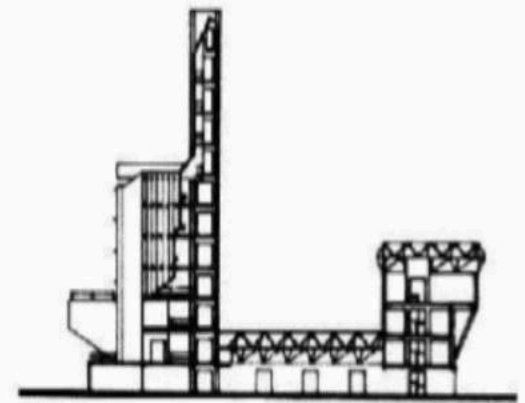
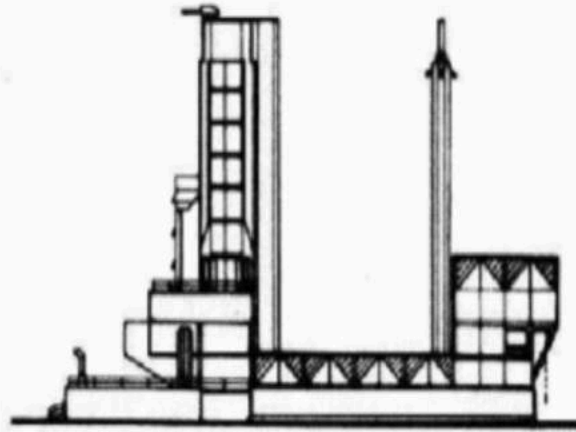
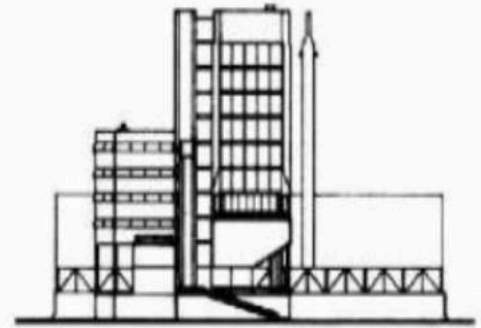
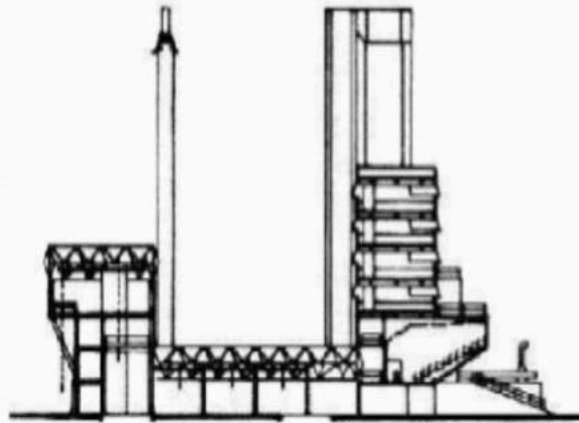
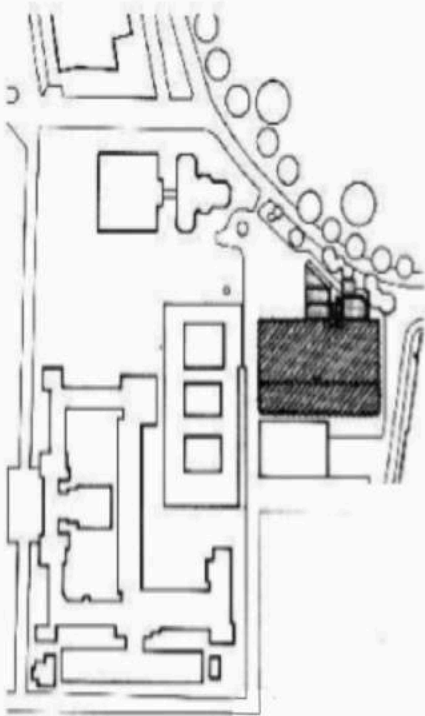
LIGHTING



The lighting is a very important element especially in spaces used during the daytime such as the offices and the workshops or the university in general. The first consideration Stirling took is the orientation of the building to fulfill the function requirements. In addition to the integration to the site in terms of material and the context of the building which is mainly glass and bricks as well.



# TECHNICAL DRAWINGS



# -2- NEUE STAATSGALERIE



**Location:** Stuttgart Germany

**Date :** 1984

**Architect:** James Stirling

**Style:** Post-Modern Architecture

This building was a competition for the extension of the neoclassical Staatsgalerie in Germany. James Stirling was the winner of this competition.

The design of the building provoked a vivid debate about postmodernism and German architecture. Postmodernism design moved away from “form follows function” and used elements from classical architecture often out of context, something made possible by new building methods and materials.

In his design, Stirling celebrated architecture as “Art of Building” by putting various elements together.



# CONCEPT

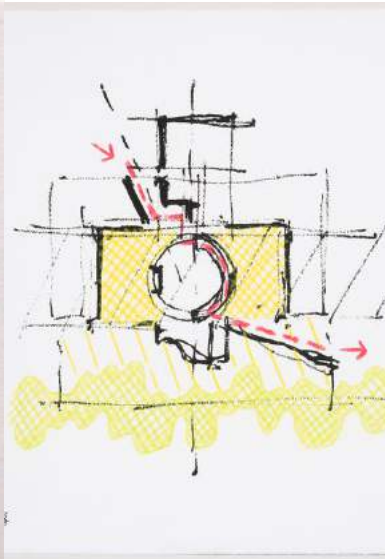
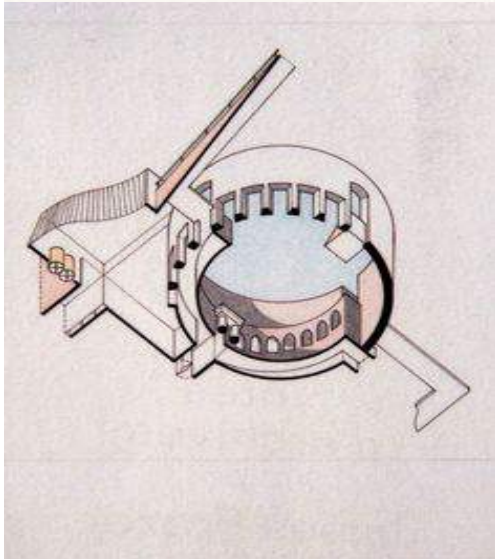


Building as art!!



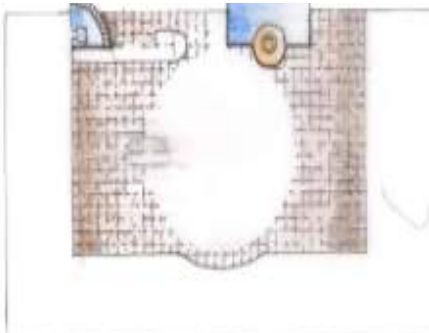
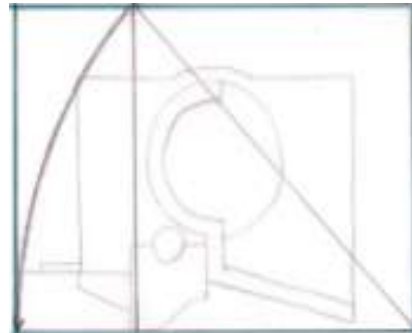
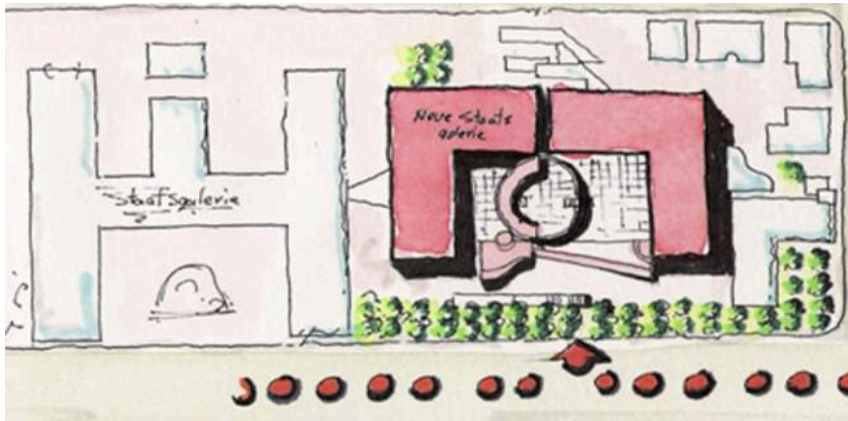
The idea was to have a building that exhibits itself as art before exhibiting what is inside it. He has fused in a complex way the modern and the post modern elements and used the materials in a very creative and imaginary manner. As in this previous designs Stirling rejected simplicity.

He has considered the context and the demand of the local citizens. The purpose of any museum is to definitely grab the attention of the public. So that is the reason why he has created a path way that leads directly to the museum; but not only that he wanted people to experience the artistic beauty of the building itself by controlling their circulation and using strong colors that reflect the post modern style and at the same time grabs the attention of the public.





# FORM



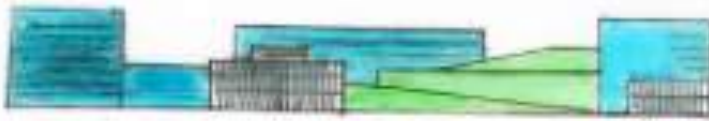
The building is a fusion of the monumental style of classical buildings of the 19th century and informal (modern) element such as the U-shape and the central open rotunda with the large colored steel for the curtain wall and the usage of truthful concrete.

The form is also generated from the manipulation of different geometrical shapes that were abstracted to come up with an interesting outcome. As he always mentioned the building is an art for him and he wants to represent the richness of the occupants in addition to the function. Therefore Stirling used some abstract forms that allow him to achieve this goal.

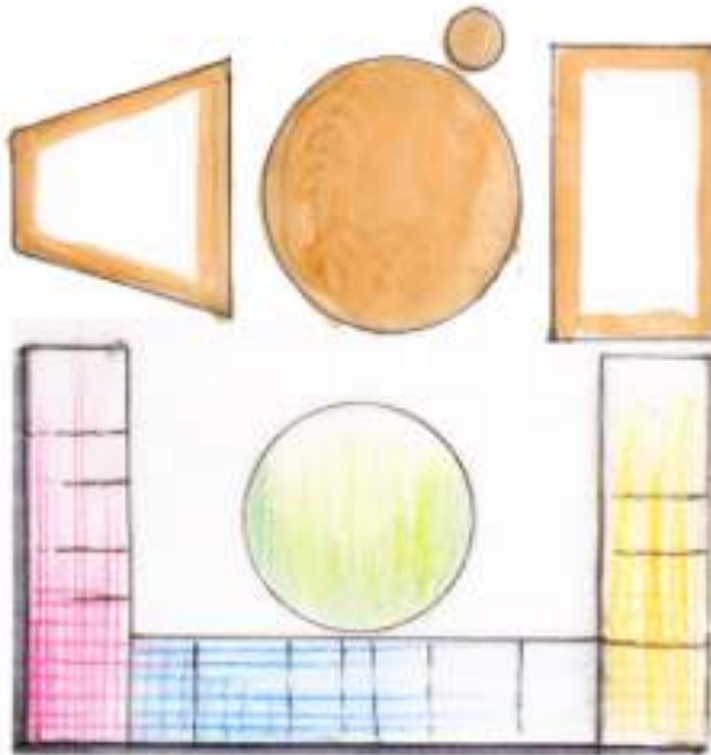
He subtracted forms from each other in addition to the usage of the golden ration in his plan that is following a strict grid. Once again the fusion of modernism and post modern.



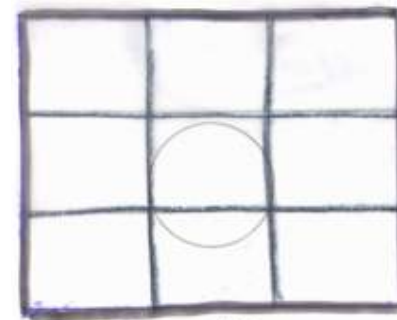
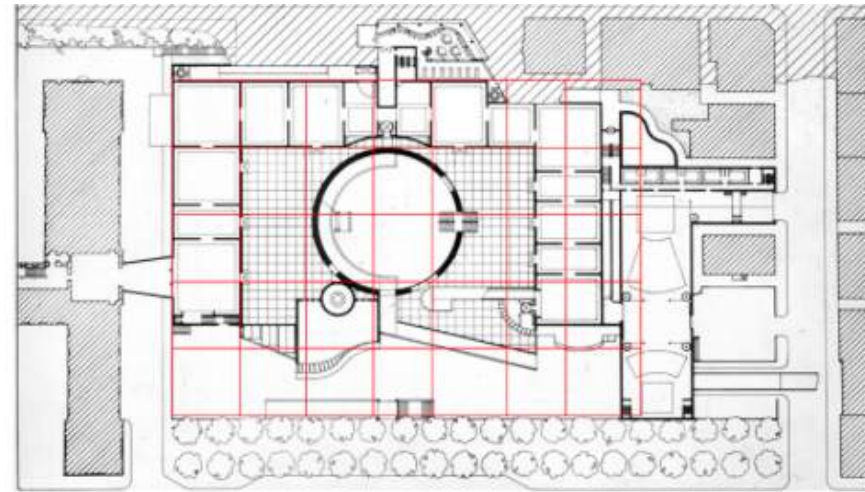
# FORM



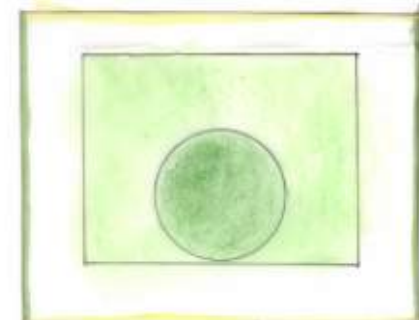
Basic Forms in Elevation



Basic Forms in Plan

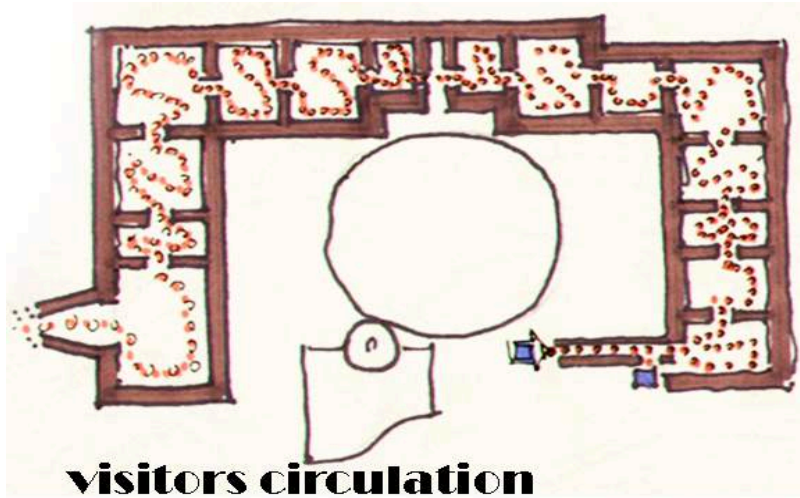


9 Square Grid



Circle+ Rectangle

# SPACE

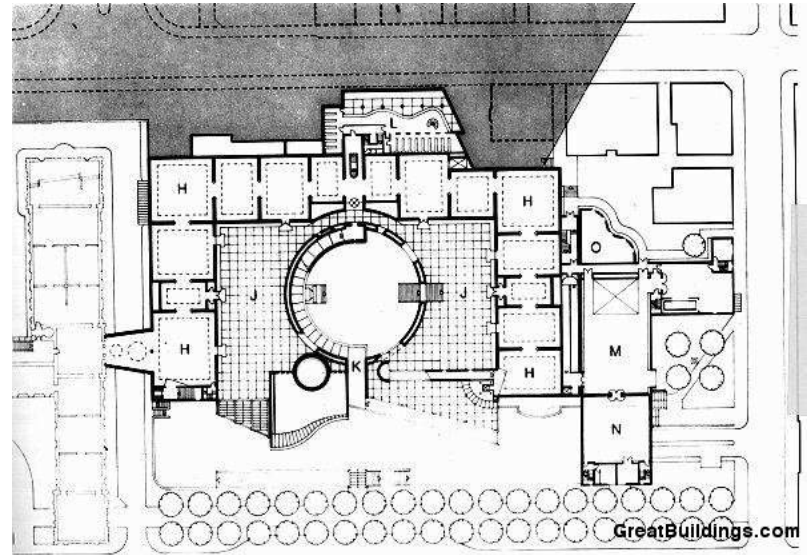
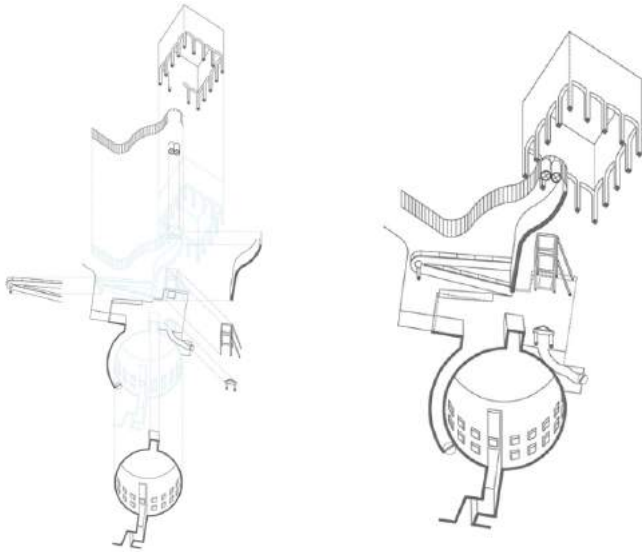


The spaces in general are very open and easy to circulate inside it because the traffic flow should be smooth and safe for the users. It is also a repetition of modules to generate the overall composition.

These are the following major spaces:

- ✓ Entrance: which a big open space to hold a huge number of people before they get their tickets and access the exhibition areas.
- ✓ Rotunda space: this is a space where some of the sculptures are exhibited in an open space and which is considered the focal point of this building. This part especially is reflecting the historical period such as the roman and the Greek era)
- ✓ Gallery and Exhibition Spaces: this is the core of the museum where the users can experience a different environment in contrast with the outdoors.

# STRUCTURE



The building is a combination of load bearing walls and structural columns that hold the whole mass of the building.

In addition to that even the main structural steel and the stone cladding convey this meaning of the complex mix between modernism and history pus the colorful structure.



# MATERIALS



EXPOSED CONCRETE COLUMNS



MULLIONED GLASS

The materials use are mainly:

- ✓ Exposed concrete
- ✓ Mullioned tempered glass
- ✓ Travertine and sandstone
- ✓ Colorful industrial steel
- ✓ Linoleum and parquet flooring



TRAVERTINE AND SANDSTONE



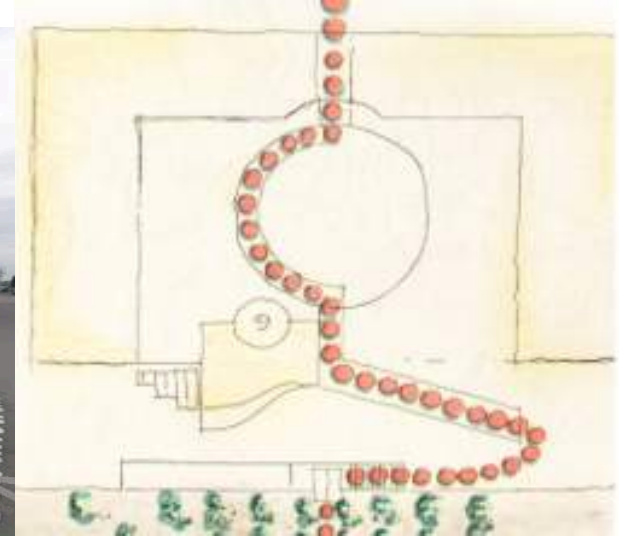
COLORFUL INDUSTRIAL STEEL



LINOLEUM FLOORING

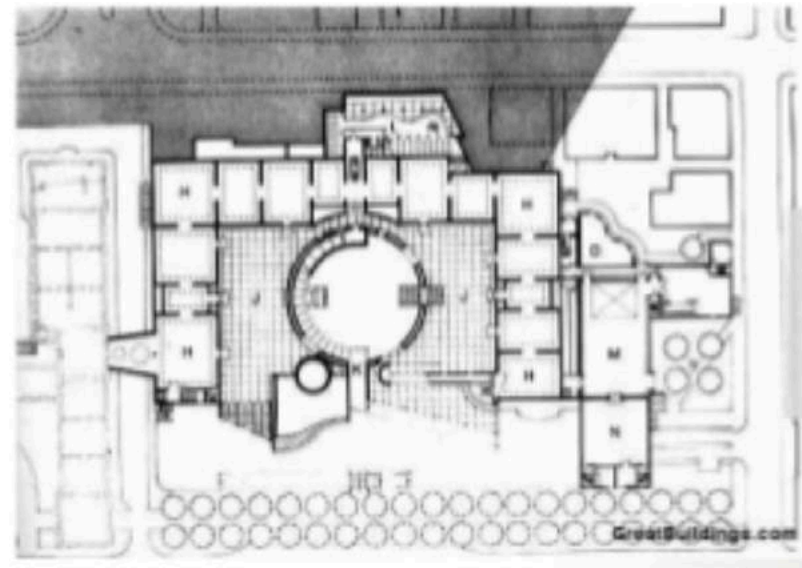
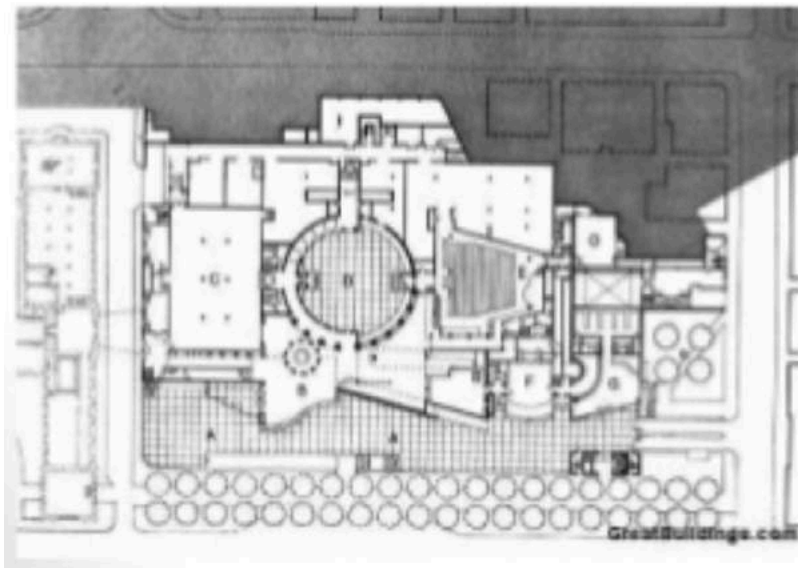
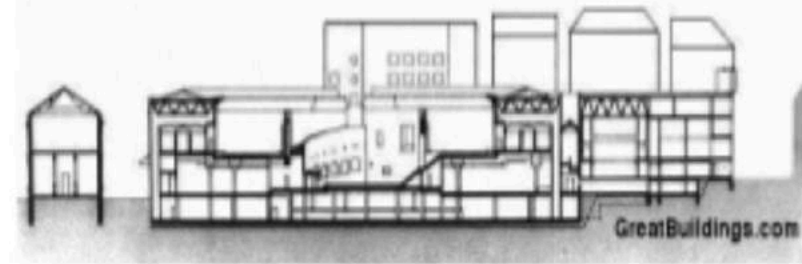
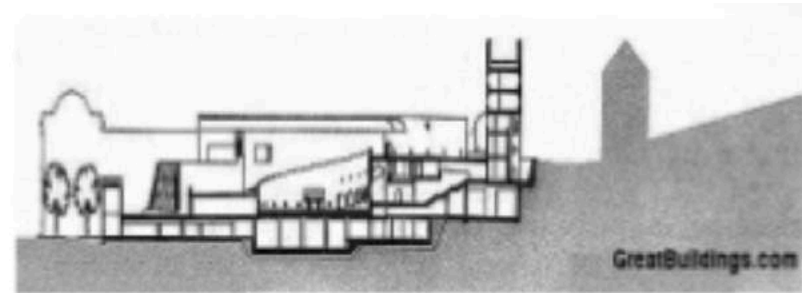
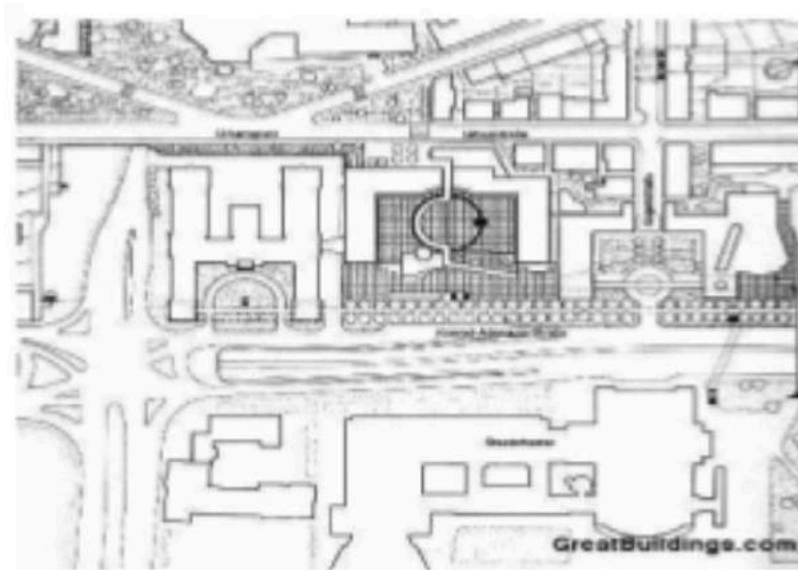


# INTEGRATION WITH THE SITE



There is a public walkway cutting through the gallery, going from a front terrace through a ramp towards the rotunda, where it circulates around its edge and leads to the street on the back side of building without giving a chance to actually enter the museum. This is enabled by sloped character of site and a system of ramps and different levels. The building is responding to the context once again.

# TECHNICAL DRAWINGS





# -3- RAFFLES HOTEL



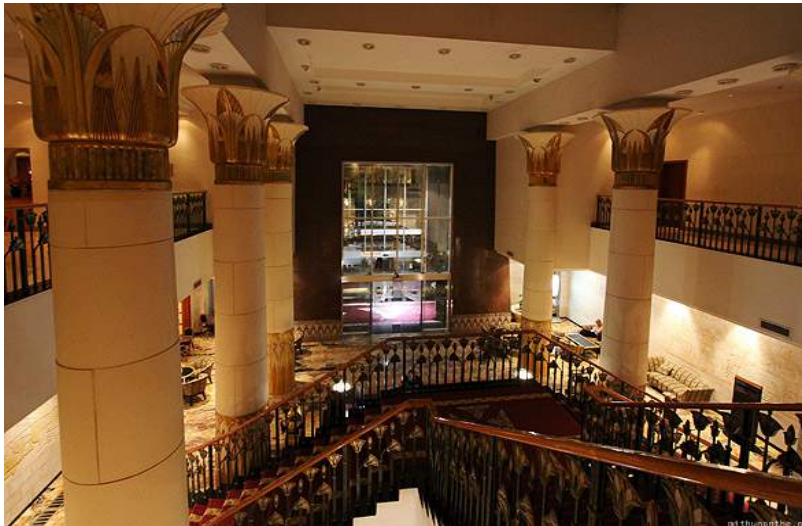
**Location:** Dubai, United Arab of Emirates

**Date :** 2007

**Style:** Post-Modern

Raffles hotel is one of the luxurious buildings in Dubai which is reflecting the Egyptian era style in a very contemporary manner.

It is fitting within the culture of the UAE and merging many other cultures together especially the Egyptian one by the usage of the fluted columns and the heliography inscriptions on the walls in addition to the extensive usage of golden colors and finishes.



# CONCEPT



The building is reflecting the multicultural context of Dubai and revisiting one of the oldest structures and cultures in the world which is mainly the Egyptian culture but in a very modern way. The whole building looks like a pyramid which is subtracted in different parts by keeping the symmetry and the balance of the pyramid. The building by itself looks like a giant modern pyramid with some touches of glass.

That Is one of the building and methods which is matching with stirling style since he was always considering the context and revisiting history in addition to the complex fusion of styles.

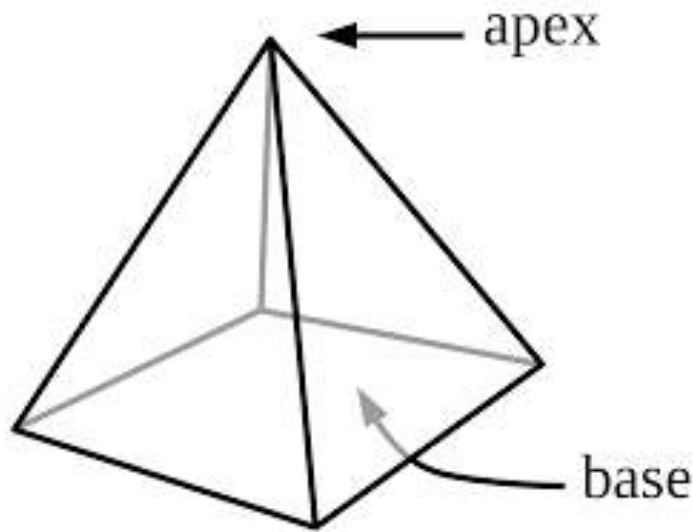
So instead of the solid structure and the plain materials the wafi center is having one of the oldest forms in the world with the most modern materials and technology.

Also the multicultural is shown by integrating many elements from different cultures.



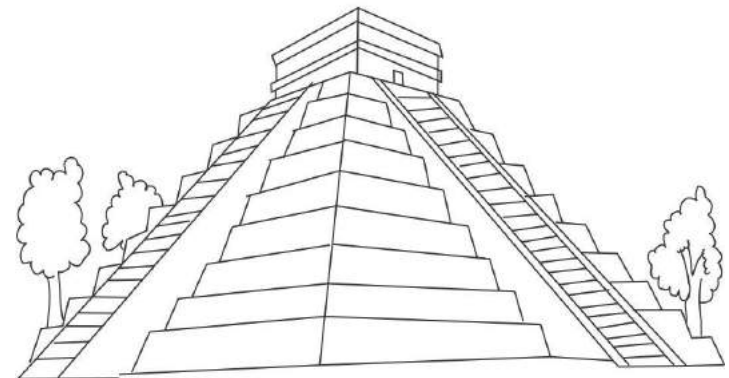
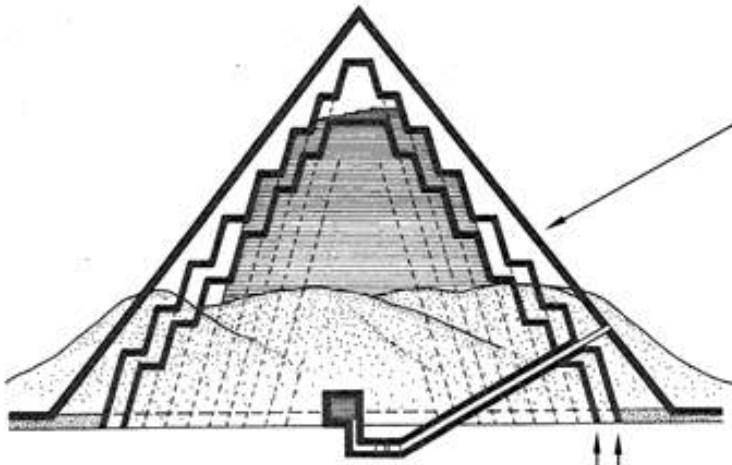


# FORM

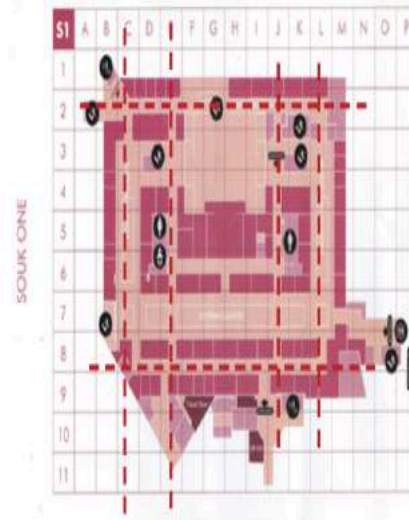
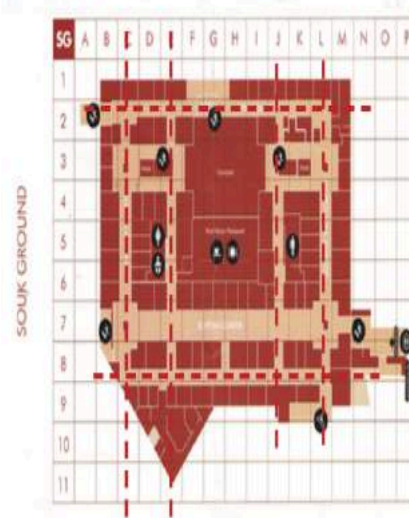


The form is a manipulated pyramid with different element; this is somehow reminding us of the Hammurabi temples and ziggurat which is again going back to history but the finishes and the context is different and that what makes the whole building different.

Dubai is a very modernized and developed city with a very sophisticated urban environment and wafi Center is merging into it just like what stirring used to do in his projects. So the form here is coming from the inside of the pyramid itself.



# SPACE



Pyramid has a huge base and while going up in levels it becomes smaller and smaller until it reached the pointed apex of the pyramid that has lights.

Around it there the Wafi city and mall that are following exactly the same theme and concept and it has the retail area which reflects the Arabian souk and the old culture of shopping in the Arab countries.





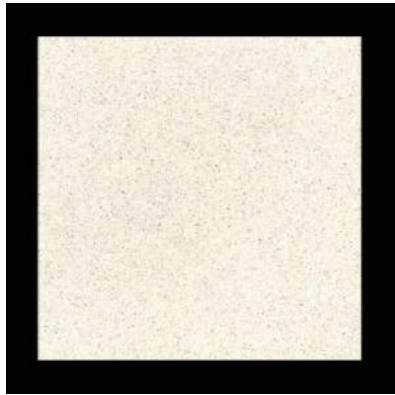
# STRUCTURE



EGYPTIAN POST AND BEAM SYSTEM



# MATERIALS



*GRFC*



*Colorful glass*



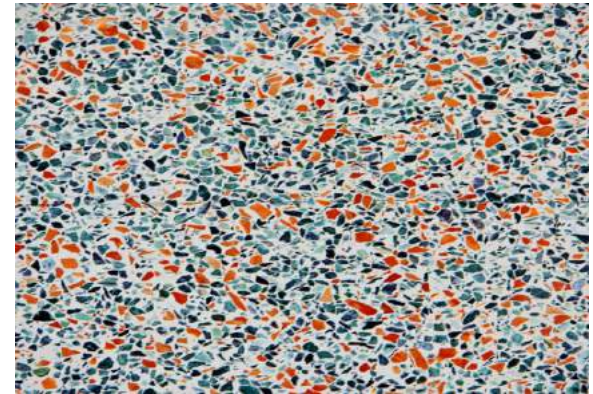
*Spiral glass*



*Marble*



*Stainless Steel*



*Terrazo*



# INTEGRATION WITH THE SITE



The building is matching with the site and the context of the whole UAE and it is one of the best and iconic buildings of Dubai. It shows the growth of the UAE and the multicultural society of Dubai in fusion with history.

# CONCLUSION

## \* THE MAIN FEATURES AND THEORIES IN HIS PROJECTS

- He fuses modern and post modern style
- The materials used are matching with the context of the building
- The function is one of his major concerns
- Stirling is manipulating shapes to achieve the interesting outcome by subtracting and adding elements.
- His form is an architectural ART
- He considers the building as a reflection of the user therefore it should be richer.
- He is rejecting the simplistic shape of the buildings and interested more into the dynamic structures.
- The signature is always there even though the buildings look different due to the different contexts

## \* WHAT WE HAVE LEARNED

- This project helped us to understand the way of thinking of one of the most famous architects in the world and the key factors of his success. The building which is responding to specific needs and specific locations in respect to the context is never a failure and always interesting
- We also learned that architecture and interior design is not only about drawings or CAD software's but mainly about a brave designer way of thinking and a courageous and risking client.
- We understood that the building should respond to the context and should be artistically designed.



# CONCLUSION

SIMILARITIES	DIFFERENCES
<ul style="list-style-type: none"><li>• Connected to the site</li><li>• Fused modern and post modern elements</li><li>• Related to the history since Stirling considered history as a very important element for the next generations.</li><li>• Respected and reflected the culture.</li><li>• Usage of subtraction and union techniques and different lines directions (vertical horizontal and oblique) to emphasize the dynamism in his projects</li><li>• Geometrical forms.</li><li>• Plan is not extruded to get the 3D but manipulated</li><li>• Form follows function</li></ul>	<ul style="list-style-type: none"><li>• Openness of the spaces (Dubai's one have enclosed spaces)</li><li>• Different cultures</li><li>• The glass is not used in Dubai's case.</li></ul>

We believe that Stirling design and approach is suitable for this region of the world since the society is multicultural and everyone likes to explore other cultures in both history and modern era. On the other hand this is somehow making Dubai lose its identity of buildings since the context is not matching with the old UAE