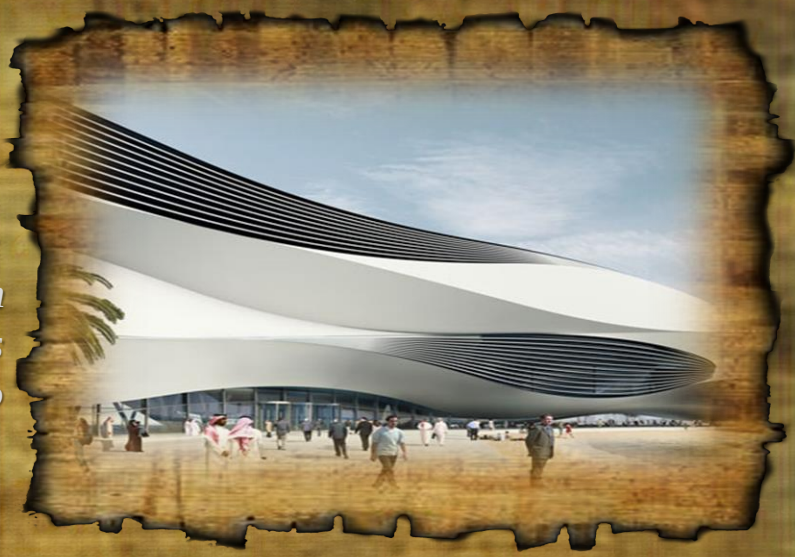
MUSEUM PROJECT

Task

Harchester has just won the bid to restructure and reorganise the counties arts and cultural facilities. This means they will rebuild Harchester's town museum and centralise the counties collections and resources, making the museum not only a new county centre, but also a centre of national importance. This has also been partly due to the Earl of Wickminister leaving his collections to the nation as well as a trust fund to help develop a building to show them to the public.



It is also been agreed to move the County's archaeological team to the museum and it is also intended to establish a centre of excellence for the history of the county, it will include both storage and research facilities. The local University also intends to buy in and move its History, Classics and Archaeology departments completely to the site.

This will add an educational element and research element and as a result extra funding will also be made available from the University and the EU for historical development. In this project, all aspects of design management, costing and solutions for planning will be included to show build up toward the final plan. A detailed design route along with specific research should lead to the creation of a successful project.

MUSEUM PROJECT

Introduction - Museums

Museums are institutions that preserve art, artifacts and sculptures for the betterment of society. Visitors can be inspired and enlightened by the exhibits available for viewing. Nearly all museums fall into one of the following categories: fine arts, applied arts, craft, archaeology, anthropology and ethnology, history, cultural history, military history, science, technology, children's museums, natural history, numismatics, and philately.

Museums fulfil their mission through tours of exhibits, lectures, and cultural programs. Due to the popularity of the Internet, there are also virtual exhibits. Museum activities, especially interactive exhibits, are currently being expanded through advances in museology, the study of how to organize and manage museums and museum collections.

Museums are important for the improvement of society, not only for general educational purposes, but also to probe specific issues, such as the difference between the veneration of art and religious icons. The Getty Museum, located in Los Angeles, attempts to address this issue with an exhibit containing religious art, such as a sixth century portrait of the Apostle Peter holding the keys to heaven and a table with a chalice, patent, and cross, also from the sixth century. Visitors are able to make their own conclusions about the relationship between religion and art.

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Museum Analysis-Modern

The Michael Lee-Chin Crystal addition to the Royal Ontario Museum began as a sketch on a paper napkin at a wedding. Berlin-based Polish-American architect Daniel Libeskind's design has met with equal parts criticism and praise from the public for its daring juxtaposition of glass and steel against the original historical brick structure. Of the building, Libeskind said "Why should one expect the new addition to the ROM to be 'business as usual'? Architecture in our time is no longer an introvert's business. On the contrary, the creation of communicative, stunning and unexpected architecture signals a bold re-awakening of the civic life of the museum and the city."

It's often said that the Guggenheim Museum Bilbao started the trend of making the building that houses art just as important as the art itself. Designed by renowned architect Frank Gehry, it is considered among the most ground breaking examples of architecture to have come out of the 20th century and serves as a landmark for the city of Bilbao, Spain. The design is both fluid and geometric, with its reflective titanium-clad walls sparkling in the sun. It has been credited for "putting Bilbao on the map".

The Weisman Art Museum is another celebrated achievement of architect Frank Gehry, featuring his unmistakable titanium-clad curves. Overlooking the Mississippi River in Minneapolis, the Weisman Art Museum is among the American Midwest's most well-known buildings. The side that faces the University of Minnesota Twin Cities is brick to blend in with the rest of the buildings, but the opposite side is a glittering abstraction of a waterfall and a fish.

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Museum Analysis- Old

The British museum - The core of today's building, the four main wings of the British Museum, was designed in the nineteenth century. The external architecture of the Museum was designed to reflect the purpose of the building. The monumental South entrance, with its stairs, colonnade and pediment, was intended to reflect the wondrous objects housed inside. The design of the columns has been borrowed from ancient Greek temples, and the pediment at the top of the building is a common feature of classical Greek architecture.

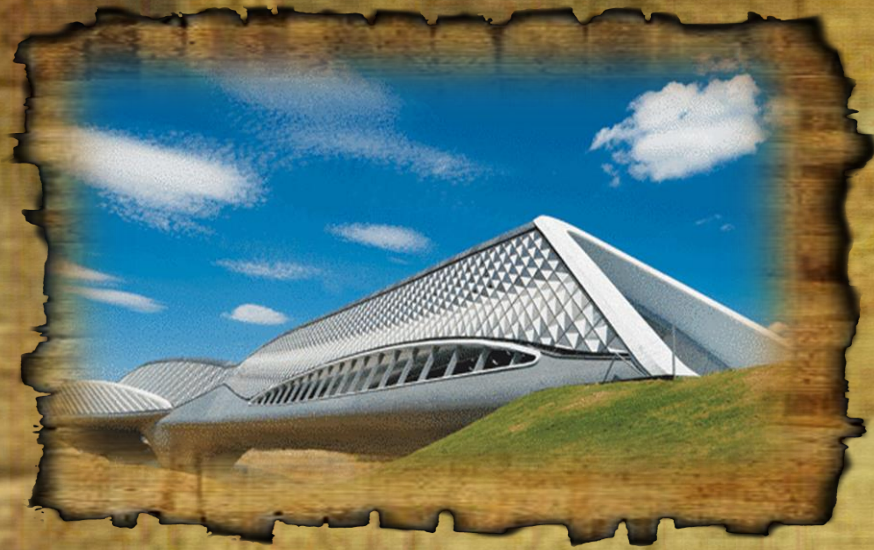
Museum Island in Berlin's historic heart is home to five world-class museums; this unique ensemble of historic museum buildings, all built under different Prussian kings, is a UNESCO World Heritage site and covers everything from the famous bust of Egyptian Queen Nefertiti to European paintings from the 19th century. Museum Island is home to the Altes Museum, Alte Nationalgalerie, Bode Museum, Neues Museum, and Pergamon Museum, which has monumental reconstructed temples and gates of the ancient world.

Havana National museum of Art - Its construction was completed in 1953, three years later it received the collections of the then National Museum. It was built on the site of the former Mercado del Polvorin. It was the final solution to provide a permanent seat to the National Museum, which bad been created by decree in 1913, but was wandering from one place to another in the city without government support. The Palace of Fine Arts houses the largest collection of Cuban plastic art. There is a hall dedicated to the Cuban painting and gravure from the 16th century up to now.

MUSEUM PROJECT

Architectural Influences- Zaha Hadid

In my design, I am looking for new modern architectural qualities that are astounding and attractive to the eye. The correct combination with curves and glass presents a contemporary design but not unique enough. These building have to cross boundaries and that's what Zaha Hadid portrays in her work. To the left is one her recent builds, the Riverside museum in Glasgow, Scotland. It features very strange curves created by curves which appear like mountain peaks in a front facing view.



Zaha also built the Bridge Pavilion in Zaragoza in 2008. This build was fascinating because of the different materials that she used. She chose fibre glass reinforced concrete from the Austrian company Rieder to envelope the bridge: she covered the outer skin of the building with 29,000 triangles of fibreC in different shades of grey.

She had designed the London aquatics centre, made famous during the London 2012 Olympic and Paralympic games. Her designs are remarkable, defying what the human brain initial thought was logical. She can transfer imagination to reality within reason. The site is 45 metres (148 feet) high, 160 metres (520 feet) long and 80 metres (260 feet) wide. The wave-like roof is stated to be 11,200 square feet (1,040 m^2).

MUSEUM PROJECT

Modern Complex sites – Westfield Shopping centres

Westfield shopping centres have introduced a different class to the way the British public currently shop. When building the Stratford city and Sheppard's Bush centres, the came with a modern and classy look to them, rejuvenating the way the public look at the way we shop today. As well as unique structural designs and spectacles to look at, the Westfield shopping centres have also attracted diversity within cultures and continue to hold new events to bring in more money and people.

The interior itself provides a very spacious feel as well as classy touches such as marble flooring and creative lighting features. It uses a range of light shaded and bright colours to allow light to flow through the space, which is further expanded by different glass panelling on the roof. Overall the new shopping experience has been further expanded by the usage of new materials.

The modern designs became a spectacle at the 2012 Olympics where in Stratford city could be admired by all of the visitors. The shopping centre in this location cost £1.4 billion but also created 18,000 jobs in the process. A complex building like this one brings people together and the use of modern technology can help emphasise the need for modern looking buildings taking on different challenges, giving inspiration and new ideas for all to see.

MUSEUM PROJECT

Building Site Issues

Building public buildings carries a big responsibility and normal carries the reputation of the town with it. Successful buildings are often visited by tourists and appreciated by the public. However, bringing in a tourist attraction could annoy locals. Another problem to anticipate is how well the space is used and how well the building will fit in with existing Architecture and other monuments around it if there are any. A good example of a strange use of space is the Arc de Triomphe in Paris. It is well surrounded by sights however this one in particular is isolated on an island in the middle of the road and is often awkward to visit.

This example is the Guggenheim museum in Bilbao, designed by Architect Frank Gehry. As astonishing good as the building is, the problem it presents is it is too extravagant for its low key surroundings. It has been said that tourism has divided its economy after the museum influenced new developments after previously being big in mining. It could be seen as an interruption on the landscape and is degrading to the civil and cultural life as well as forgetting about the community.

There are several issues with use of space within public areas. Even within a space that contains many influential monuments, Paris contains certain buildings that could use public space slightly better, and to match the themes of current buildings in the surroundings. The Bibliotheque Nationale has a 'windswept' plaza and harbours very little life in its dull brown surroundings. Especially in the ideal location of the popular Paris, its features need to be improved.

MUSEUM PROJECT

Material Research

For my designs I must consider different materials for constructing structures and for aesthetic purposes. Initially I'd like to explore very modern materials like glass and metal and possibly avoid concrete and bricks. After researching the Architect Zaha Hadid, I would like to use her ideas and combine them with some traditional ideas behind historic buildings. This could mean using modern construction materials for a mixed of old and new designs.

Steel *- Ever since skyscrapers went up in Chicago, steel has been a major component in commercial building construction. Before that, builders used cast iron. But they found that structural steel beams set in concrete allowed them to frame tall buildings that were more fire resistant and more structurally sound than cast iron. Since that time, steel has not only become the best building material for commercial construction but closely tied to economic health. In fact, many experts look to the steel industry as an indicator of how well the economy is doing .*

Timber *companies tout wood as a durable, renewable resource, and engineered timber is gaining some traction as an alternative to steel. For example, the new arts and media building at Nelson Marlborough Institute of Technology in New Zealand used engineered wood in place of typical steel and concrete construction, and the company that worked on that building says that it's taking on more and more contracts that would have gone to steel construction companies*

Composite materials like ***Fiber Reinforced Plastics*** *(FRP) and alternative metal alloys are gaining popularity in commercial construction, as well. Composites can be more durable than steel, and repairing damaged composite components is often less costly and requires less heavy machinery. The big drawback with these alternative materials right now is the cost. Because FRP and other composites are relatively new, they're still costlier to produce than steel components.*

Steel's Pros and Cons

There are a couple of problems with using steel in construction. In very humid areas, coastal regions, or even in rooms like the bathroom that get very moist, steel will corrode unless builders use extra coatings of anti-corrosives to protect it . Also, since steel conducts heat and cold well, it's not ideal from an insulation standpoint. To make a steel building energy efficient requires additional insulation. Green builders use steel in eco-friendly construction projects because of its durability and renewability. Steel is long-lasting, and combined with other eco-friendly building materials is often used for green building projects. And unlike other recyclable materials such as plastic, steel doesn't lose quality each time it is recycled. There's also less waste associated with steel construction compared to wood, because you can weld small "offcuts" together to do smaller jobs.

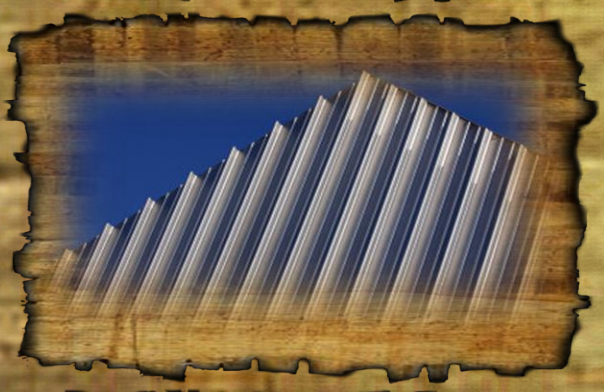
MUSEUM PROJECT

Material Research

For my designs I must also consider the materials that will decorate the outside of the building. This could include various cladding, different glass arrangements and perhaps a more traditional approach with concrete, stock brick and columns.

Metal Cladding *– As metal cladding began to be used on a wider range than simply industrial buildings then architectural features such as horizontal profiles and curved eaves and corners have been developed. The colours and textures are mixed. Materials for cladding are chosen for their cost, manufacturing parameters, durability and appearance. The most commonly used materials are steel and aluminium. Stainless steel and weathering steels are also reasonably available. In particular circumstances other materials such as copper, bronze and titanium have also been used.*

Glass Curtain walls – *The curtain wall method of glazing allows glass to be used in large uninterrupted areas creating consistent attractive facades. By far the most common glazing type, glass can be of an almost infinite combination of colour, thickness, and opacity. For commercial construction, the two most common thicknesses are 1/4 inch (6 mm) monolithic and 1 inch (25 mm) insulating glass. Presently, 1/4 inch glass is typically used only in spandrel areas, while insulating glass is used for the rest of the building (sometimes spandrel glass is specified as insulating glass as well). The 1 inch insulation glass is typically made up of two 1/4-inch of glass with a 1/2 inch (12 mm) airspace.*



Corrugated metal – *composed of sheets of hot-dip galvanised mild steel, cold-rolled to produce a linear corrugated pattern in them. The corrugations increase the bending strength of the sheet in the direction perpendicular to the corrugations, but not parallel to them. Normally each sheet is manufactured longer in its strong direction. It is lightweight and easily transported. It was and still is widely used especially in rural and military buildings such as sheds and water tanks.*

Curved Concrete shells - *a structure composed of a relatively thin shell of concrete, usually with no interior columns or exterior buttresses. The shells are most commonly flat plates and domes, but may also take the form of ellipsoids or cylindrical sections, or some combination thereof. The curved shapes often used for concrete shells are naturally strong structures, allowing wide areas to be spanned without the use of internal supports, giving an open, unobstructed interior. The use of concrete as a building material reduces both materials cost and construction costs, as concrete is relatively inexpensive and easily cast into compound curves.*

MUSEUM PROJECT

Final Specification

I have been told to produce a range of visuals and models for presentation to the client showing ideas for my museum design for consideration Here are a list of points that I have learned from my research and need to include within my designs from my company..

- *A feature or design aspect that combines the community with the arts within the museum.*
- *An innovative design which is modern and ties in heritage and history within the plot.*
- *The capacity for a few thousand visitors at any one time*
- *Enough space for safety procedures to commence and to comply with heath and safety aspects*
- *A design that smartly includes the access to a railway station*
- *A small plot which links into the area of the museum to be used by the universities.*
- *The use of durable construction material for the frame structure such as Fibre reinforced plastics.*
- *The use of either metal cladding, glass curtain walls and curved concrete shells to be used as an outside layer to the structure of the building.*
- *Try to complete the project and become Carbon neutral.*

The target is to achieve the perfect balance with modern design that ties in with the history and culture that is still here.

Open the second file – Roughs and Development

- Then return to this and view
- Final design

- And check the display for county hall.

- Also check PowerPoint for the council client presentation

MUSEUM PROJECT

Final Design

This is my final chosen design. I felt that it matched up well to the specification that I had created in the beginning after research. The overall balance of a modern take on historical architecture has been portrayed well through the carefully constructed theme of th Pyramids which remain a very important part of history. The quality of the arts is combined well within the museum, through the design and classics department at the university, therefore creatively combining links with education and the community. The overall plot is cleverly constructed, allowing thousands of visitors at any given time due to how vast the plot is. The many floors in both the museum and the station overcompensate for the potential visitors and current residence of Harchester. Concerning safety aspects within the buildings, fire exits have been included though out as well as fire resistant materials when possible. All structures are intertwined with other walls meaning that if it were to collapse, this wouldn't be possible because of the detailed combination. The only downfall is the possibility of keeping construction Carbon neutral, which is particularly impossible to complete in the given time with the equipment available. It is inevitable that construction materials go to waste and fossil fuels that are burnt in construction and therefore would need to much to become neutral when there is a steady increase in use of cars and other vehicles that will constantly pollute.