

Fig. 5.1 Early concept sketch showing the “lighter” wrapping and the “heavier” section and their conceptual junction.

DESIGN DEVELOPMENT **05**

Precedents

Due to the nature of the design problem various precedents were looked at to inform different aspects of the design. Some precedents effected form and spatial implications whilst other had an influence on the material and architectural language. Each precedent will be briefly introduced with together with the implications it had on the proposed intervention.

Musee National Des Beaux-Arts Expansion

Architect: Rem Koolhaas
Location: Quebec Canada
Date: Competition 2010, Completion proposed for 2013



Fig. 5.2 www.oma.eu



Fig. 5.3 www.oma.eu



Fig. 5.4 www.oma.eu

This project is currently at the design development phase with the building being the winning entry in a design competition for the site. The addition, being the museum's fourth building is on a very complicated site. It is composed of three stack galleries that step away from the heritage site. It is a subtle reaction that helps bring coherence to the Museum within its context (www.oma.eu).

This simple but subtle respect of the heritage building and surrounding context is what served to inform the approach to the adjacent heritage site with the proposed block intervention



Fig. 5.5 www.oma.eu



Fig. 5.6 www.oma.eu

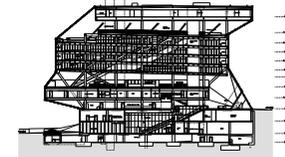


Fig. 5.7 www.oma.eu

Seattle National Library

Architect: Rem Koolhaas
Location: Seattle, USA
Date: Completed 2004

The Seattle National Library creates a Civic Space for the circulation of knowledge. The library has various programmes which flow across various platforms and "in between Planes". This is what gives the Library its form and logic which is both robust and elegant. (www.oma.eu)

The variance of spatial scales, the play on internal light and the creation of a civic space is what informed the proposed intervention. The Seattle Library encourages the user in through shapes that draw the user in off the street through an inside/outside intermediate threshold. This concept informed part of the entrance to the proposed intervention

CCTV-Television Culture Centre



Fig. 5.8 www.oma.eu



Fig. 5.9 www.oma.eu

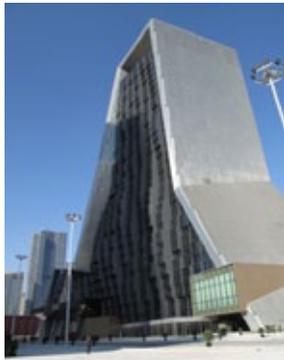


Fig. 5.10 www.oma.eu

Architect: Rem Koolhaas
 Location: China Beijing
 Date: 2002

Against the backdrop of the strong CCTV building, the culture centre has a more informal quality and houses multiple programmes, including conference and exhibition space. Its is encompassed by an elegant wrapping with a facade that appears to be in a frozen state of motion (www.oma.eu)

The wrapping form of the CCTV building serves as an informant to the proposed intervention as well as the dynamic facade that appears to want to bulge out from within the wrapping

Moses Mabhida Station

Architect: Arup Interchange Design
 Location: Durban South Africa
 Date: Completed 2010



Fig. 5.11 Architecture SA



Fig. 5.12 Architecture SA

The idea behind the station was to integrate the civic identity, with Architectural vision and heavy traffic flows. The building needed to have a strong identity considering its close proximity to the Moses Mabhida Stadium. The concrete forms with a screened gap in front of operable windows gives it a robustness and graceful presence. (Architecture SA, 19-21)
 The concrete form together with the screened openings served as an informant to the proposed intervention.

XXXX House

Architect: Yaizu Shizuoka
Location: Japan
Date: 2007



fig. 5.13 (www.noticiasarquitectura.info)



Fig. 5.14 (www.noticiasarquitectura.info)

This building was built as a pottery and exhibition studio on a very small budget. It is built with a very simple system of alternating composite frames. The purpose of this precedent is to highlight the pattern of light and dynamic patterns created by the use of simple alternating forms. (<http://www.noticiasarquitectura.info>)

Casa Da Musica

Architect: Rem Koolhaas
Location: Porto, Portugal
Date: 2007



Fig. 5.15 www.oma.eu



Fig. 5.16 www.oma.eu



Fig. 5.17 www.oma.eu

The Casa da Musica has its ideal "shoe box" auditorium at the centre with a redefinition of the functions and public realms around it. This serves as an informant to the spatial arrangement in the proposed intervention. The Casa Da Musica also has cut outs through the facade to frame specific views to the city which informs a similar approach to the facade of the proposed intervention (www.oma.eu)

Museum of Art Seoul University

Architect: Rem Koolhaas
 Location: Seoul Korea
 Date: 2005



Fig. 5.18 www.oma.eu



Fig. 5.19 www.oma.eu

The Building is a bold form that reacts to the topography. It has large open volumes and various scales as you move through the building. This served to inform the volumetric accentuation of spaces in the proposed intervention. The transparency and internal views afforded by the glass balustrades also creates a simple legibility within the building which informed part of the tectonic approach. (www.oma.eu).

Morgan Library

Architect: Renzo Piano
 Location: New York, USA
 Date:



Fig. 5.20 (www.arcspace.com)

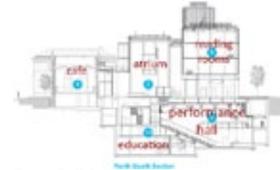


Fig. 5.21 (www.arcspace.com)



Fig. 5.22 (www.arcspace.com)

The building is a sensitive expansion to the Morgan library precinct. Half of its floor area, including an auditorium is situated underground so as to respect the scale of the existing older structures. This served as an example of how to fit a large programme into a confined space and remain sensitive to the heritage structures in terms of form and scale. (www.arcspace.com)

Conclusion

The precedents shown all have some influence on the spatial and tectonic decision in the building. The approaches highlighted will be simulated to form a contextually applicable intervention. This means that while the precedents inform the process, the specifics of the site will determine the built form. These precedents therefore be used as informants rather than copied responses.



The following three design informants were introduced in Chapter 2:

- **Functionality within Government**
Reshaping the public face and interface
- **Urban Response**
Creation of spatial Milieu
- **History**
Emphasizing sense of place

These will be expounded upon and translated into the built form under the following headings:

- Response to Synagogue
- Legibility and Transparency
- Connecting Fabric to Square
- Varying Spatial Scales
- Layering of Spatial Hierarchy
- Response to Hard Urban Fabric
- Dynamic Edge
- Capture views
- Connecting Black Box
- Solid Concrete vs. Agile Wrapping

Massing Development

Response to Synagogue

The Main form is a result of the response to the **Historic Icon**. The Synagogue site is dealt with in more detail by another student. Important though, is that the smaller structures are demolished and remembered at its edge through light steel frames. The form respects the Synagogue as an historic landmark and creates a backdrop upon which a **Sense of Place** and appreciation for the Site can happen. The wrapping, is composite Aluminium and perceptually a light and agile flow from the more intimate restaurant space below, connecting spaces from below ground and rising up over the functions within creating the height needed for the precinct as explained before.



Fig. 5.24 Showing the building enclosure and its response to the synagogue

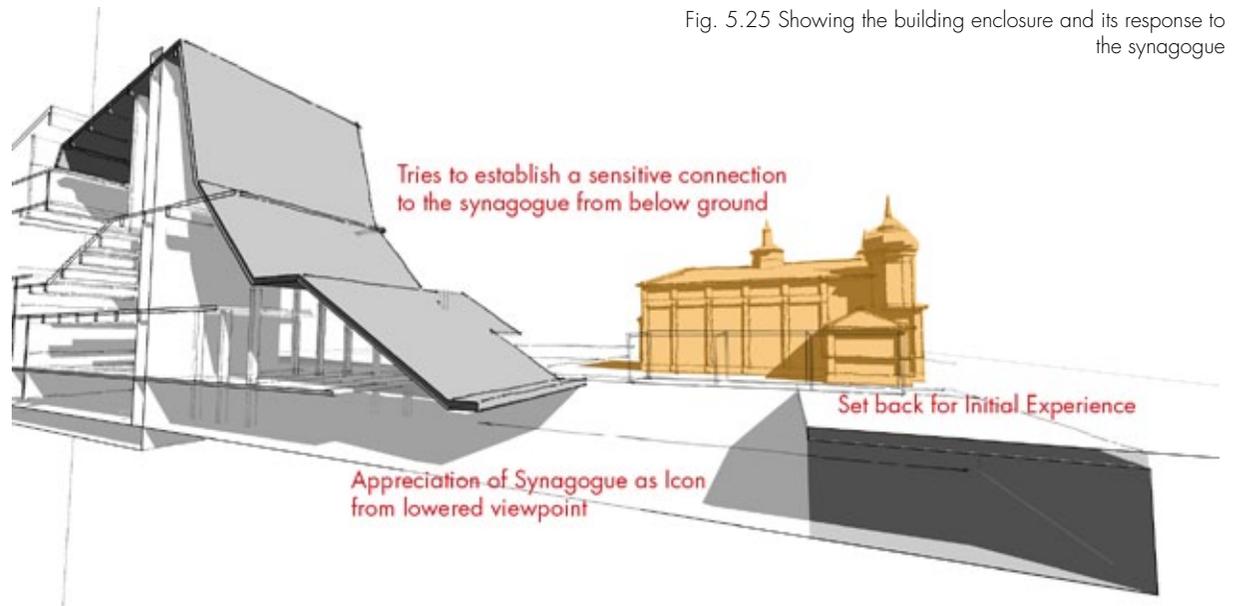
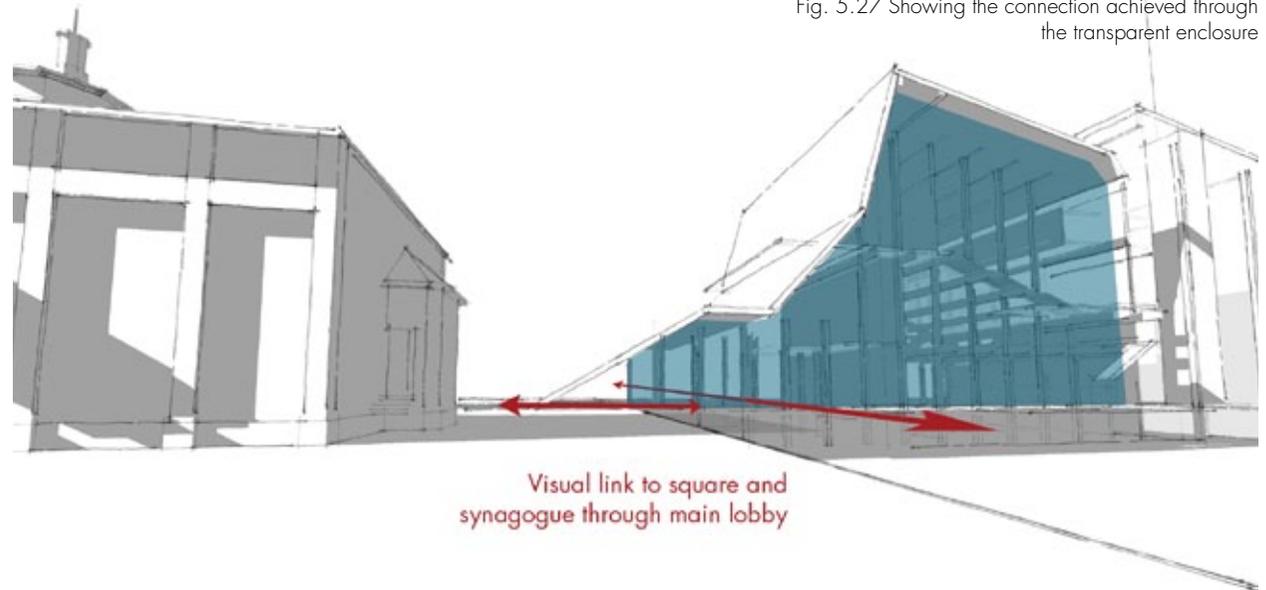
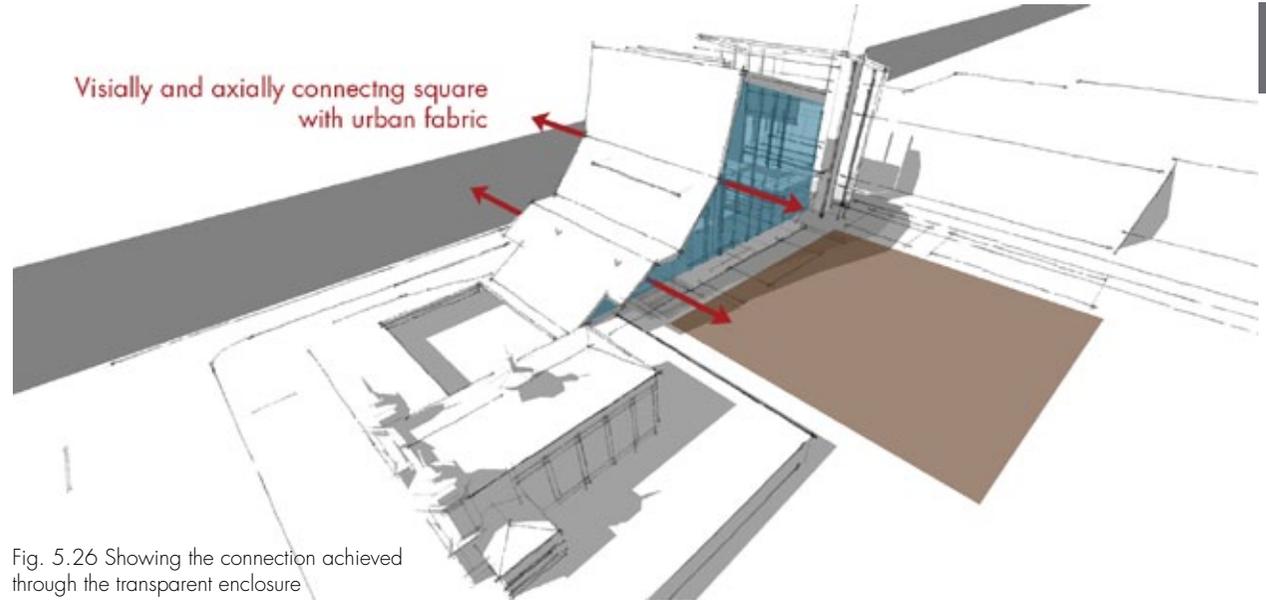


Fig. 5.25 Showing the building enclosure and its response to the synagogue

Legibility and Transparency

Legibility and transparency are achieved via a sequence of **Visual connections** between the street, through the building and onto the square. Glass curtain walls are shaded by louvres spaced at large intervals so as to maintain the transparency of the envelope. This is screened as indicated further on. The concept being that much of the functions in the building are visible from elsewhere in the building and the square as well. This is to **connect the user** with the internal functions even in the case of a closed events albeit only through visual connections.



Connecting Fabric to Square

It is important that the square doesn't sit in isolation and that the block remains **largely penetrable** for most of the day and night. There are therefore through axis indicated in prominence by the arrows allowing access on ground floor through the building which sits as a **mediation** between the street edge and the square. There are various spatial thresholds that indicate privacy of varying degrees. The ground floor remains accessible, though predominantly public uses such as retail, Restaurant and Exhibition Component.

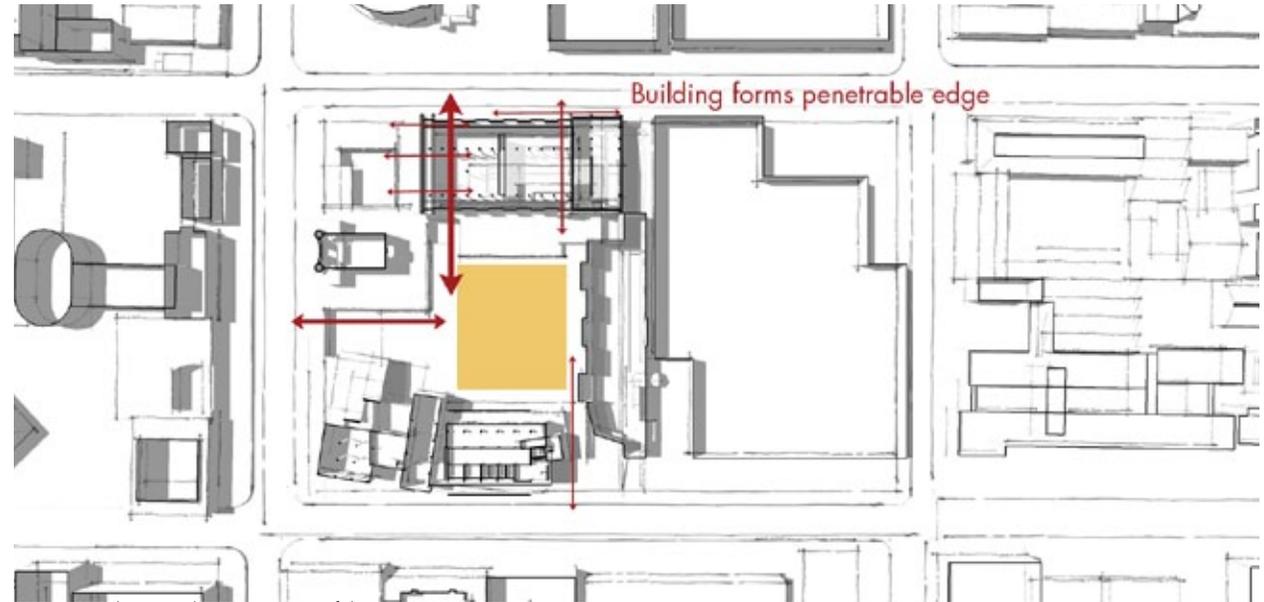


Fig. 5.28 Showing the connection of the square to the fabric through the building

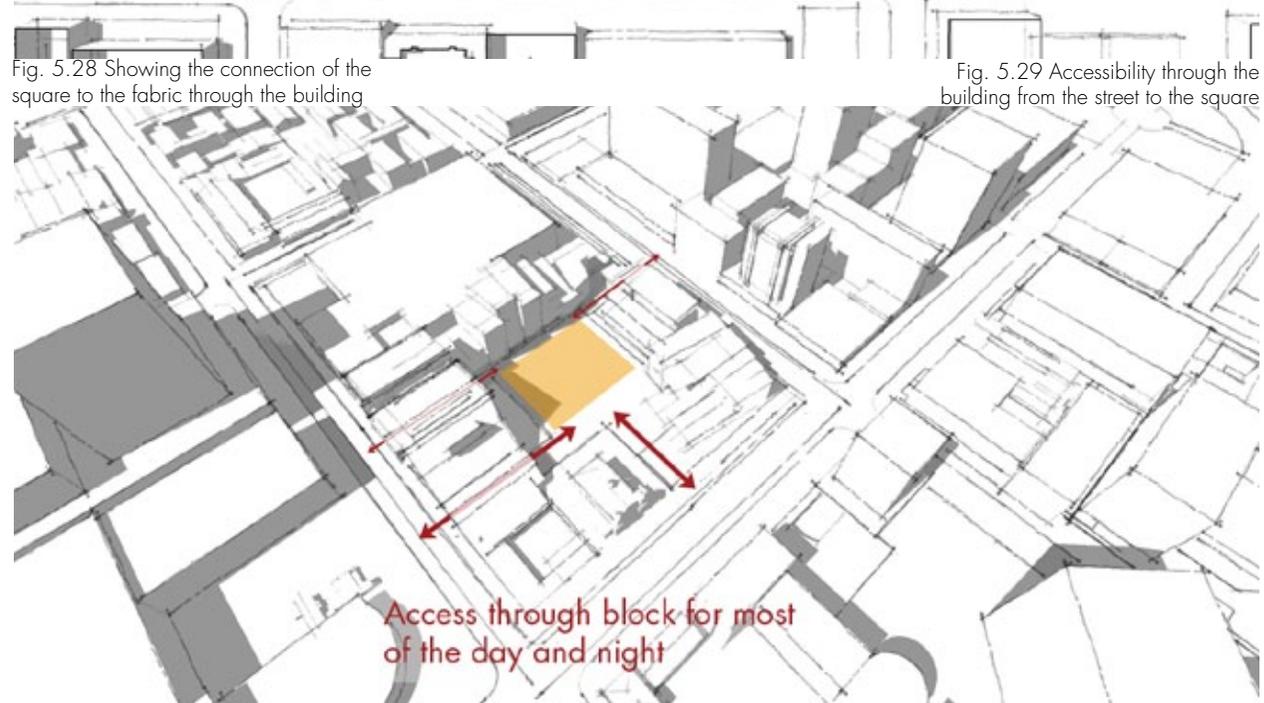


Fig. 5.29 Accessibility through the building from the street to the square

Access through block for most of the day and night

Varying Spatial Scales

The experience of a building is influenced in large part by how the user enters it at first and then encouraged through **avoiding monotony**. Varying spatial scales also indicate a hierarchy of privacy and **threshold changes**. The building therefore attempts to encourage the user in through a large entrance lobby and encourage the user to explore through the variance of scales along the journey throughout the building.

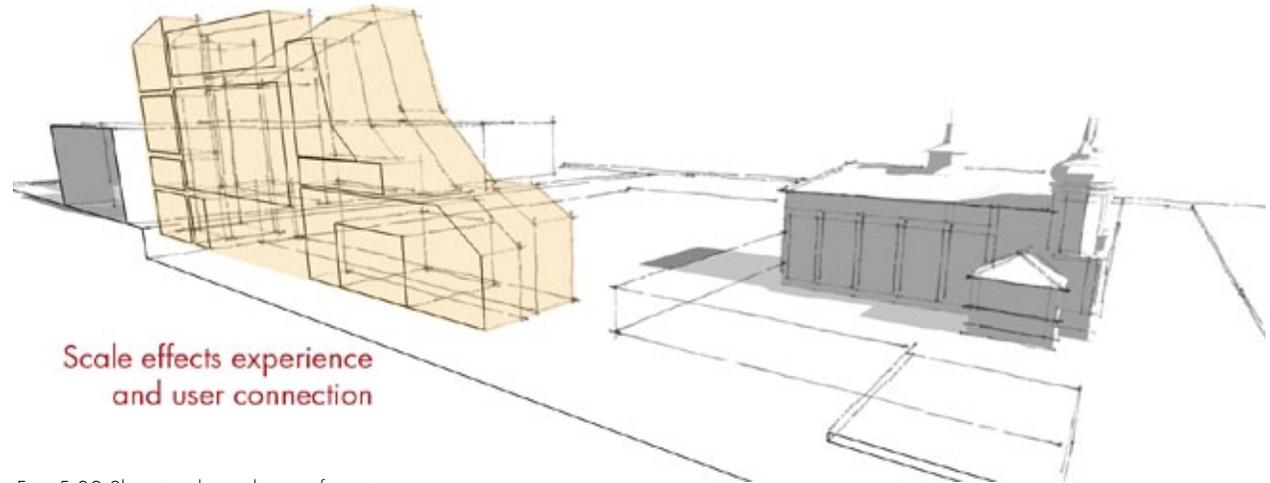


Fig. 5.30 Showing the make up of varying scaled spaces within the building

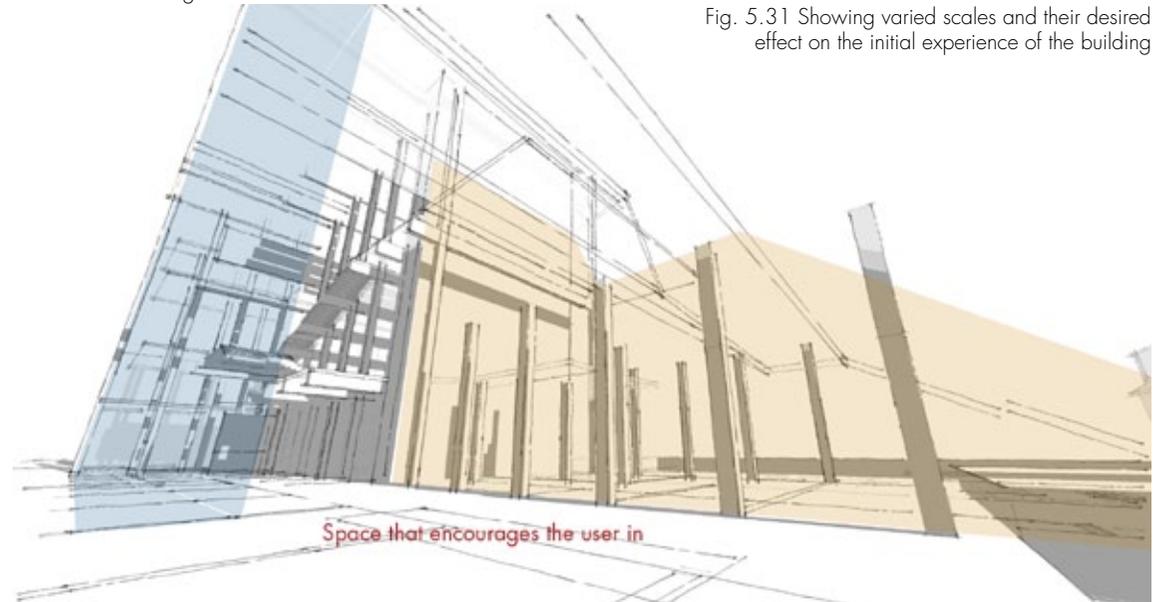
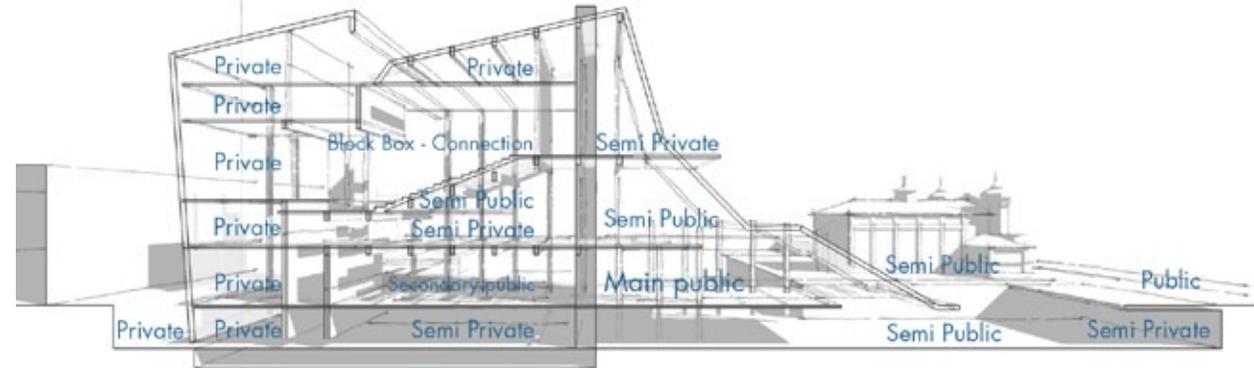


Fig. 5.31 Showing varied scales and their desired effect on the initial experience of the building

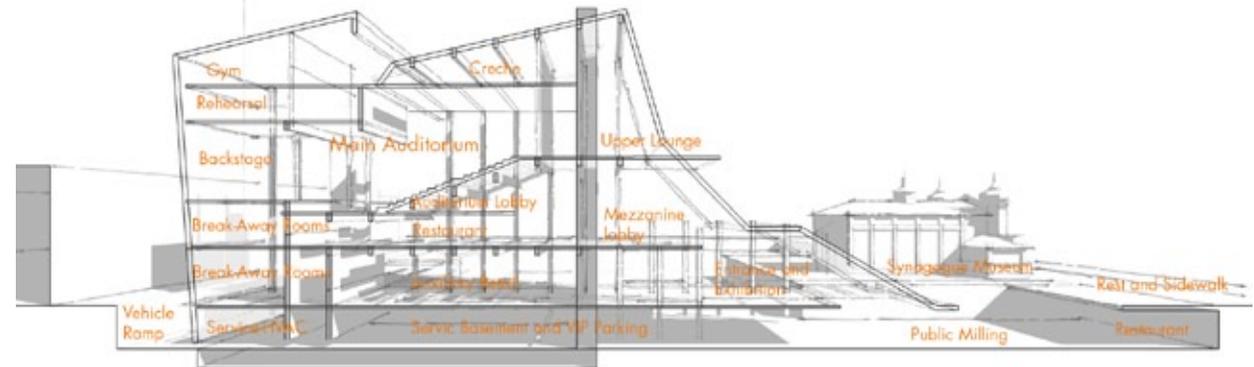
Layering of Spatial Hierarchy

Layered throughout the building is a spatial hierarchy which **gradually becomes more private** as you move away from the synagogue side and up through the building. It is intended that the ground floor remains largely public with retail and restaurants being the main accommodation with the meeting venues allocated out of the public realm. As the user moves through the building the spaces become less public with specific **mediation zones** that act as transitions from a more public to a less public or private zones. This becomes very clear as the user is confronted with changes in volume.



Layering of spatial heirachy

Fig. 5.32 Showing the spatial hierarchy in the building.



Related functions

Fig. 5.33 Showing the functions related to the hierarchy

Response to Hard Urban Fabric

The eastern edge of the building is wrapped over with a hard off-shutter concrete wall with horizontal penetrations. This is to form a **mediation** between building from the synagogue, connecting it to the more **robust fabric**. The northern and southern edges have a ventilated cavity clad with perforated Corten to give it the appearance of homogeneity whilst still not being solid. The building moves from a dynamic state on the west and gradually becomes **perceptually more solid** toward the east side. The concrete edge steps down to respect the considerably lower adjacent building.

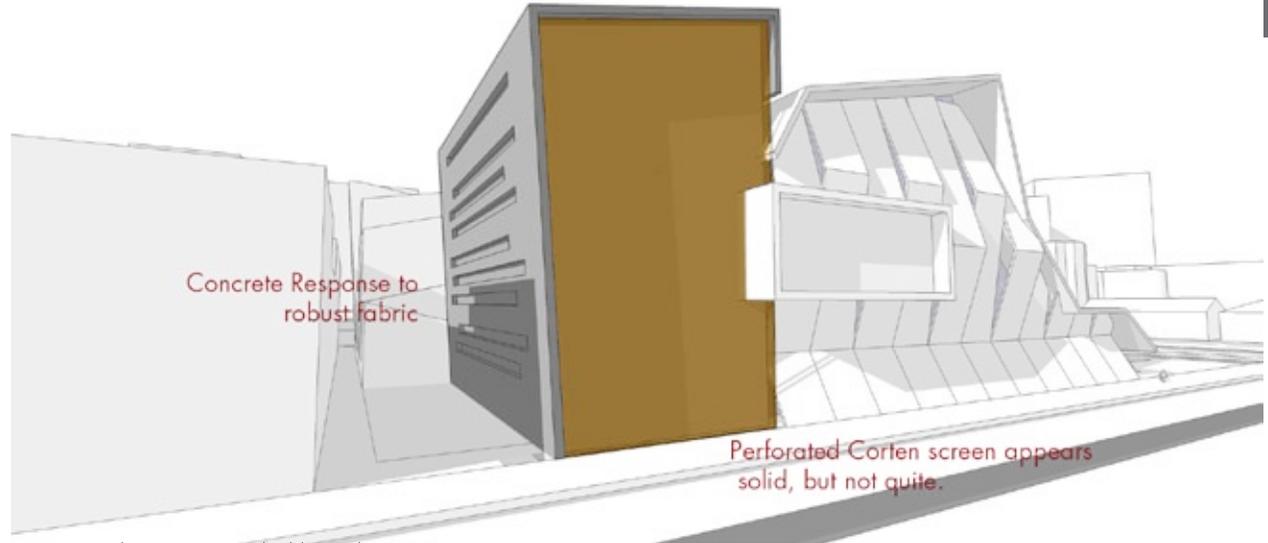


Fig. 5.34 Showing eastern building edge in relation to the adjacent building

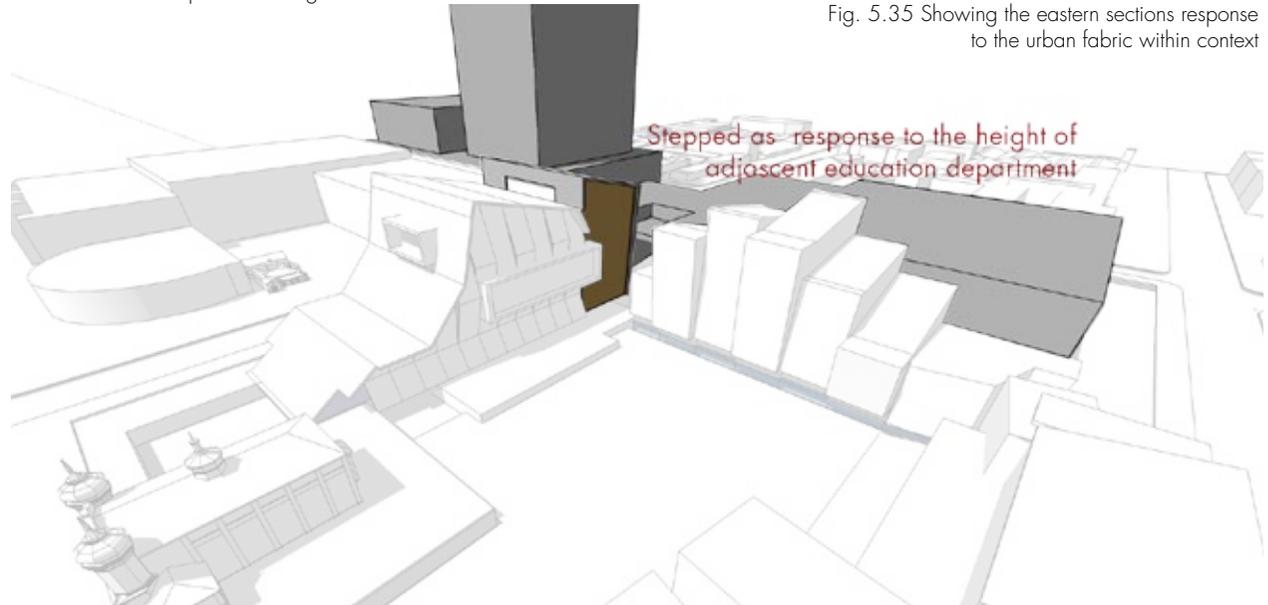


Fig. 5.35 Showing the eastern sections response to the urban fabric within context

Dynamic Edge

The louvre frames are designed to look like they are in a **dynamic frozen state**. This aims at giving a literal interpretation of the buzzing activity of meetings and performances happening inside. They are off set from the glazing to form an **intermediate threshold**, before entering the building. Herein there will be opportunity for bicycles to park and the user to feel a scale difference from the harder street edge as an initial welcome into the building. The louvres will allow dappled light through thus giving it a less harsh quality in contrast to the street as well.

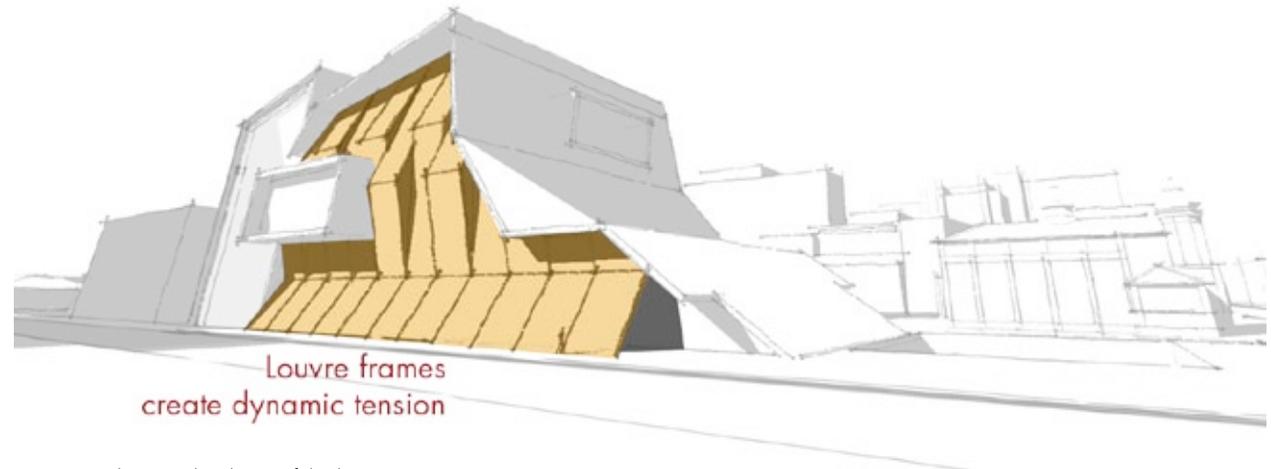


Fig. 5.36 Showing the shape of the louvre frames in relation to the street context

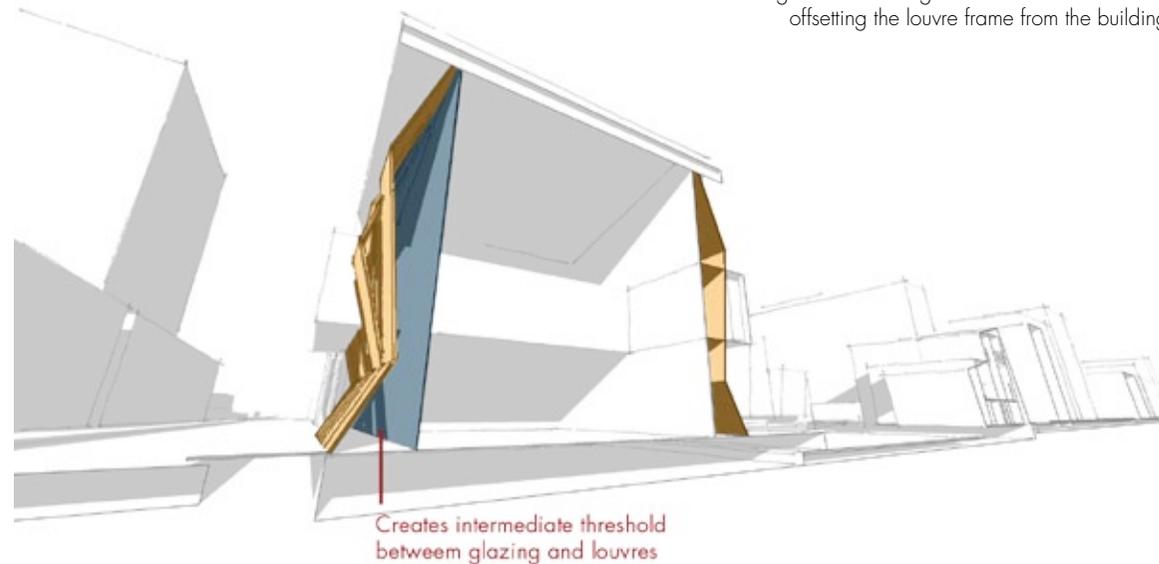


Fig. 5.37 Showing the intermediate threshold created by offsetting the louvre frame from the building enclosure.

Capture Views

The concept of legibility is highlighted here through the connection of the internal users with the outside through the capturing of views. This creates a mediation with and **connection to the urban fabric** and the users not within the building. **Surveillance and defense** of both the street edge and square is afforded through these “boxes”. Views toward the Synagogue as a connection to the **history of government** are also made possible.

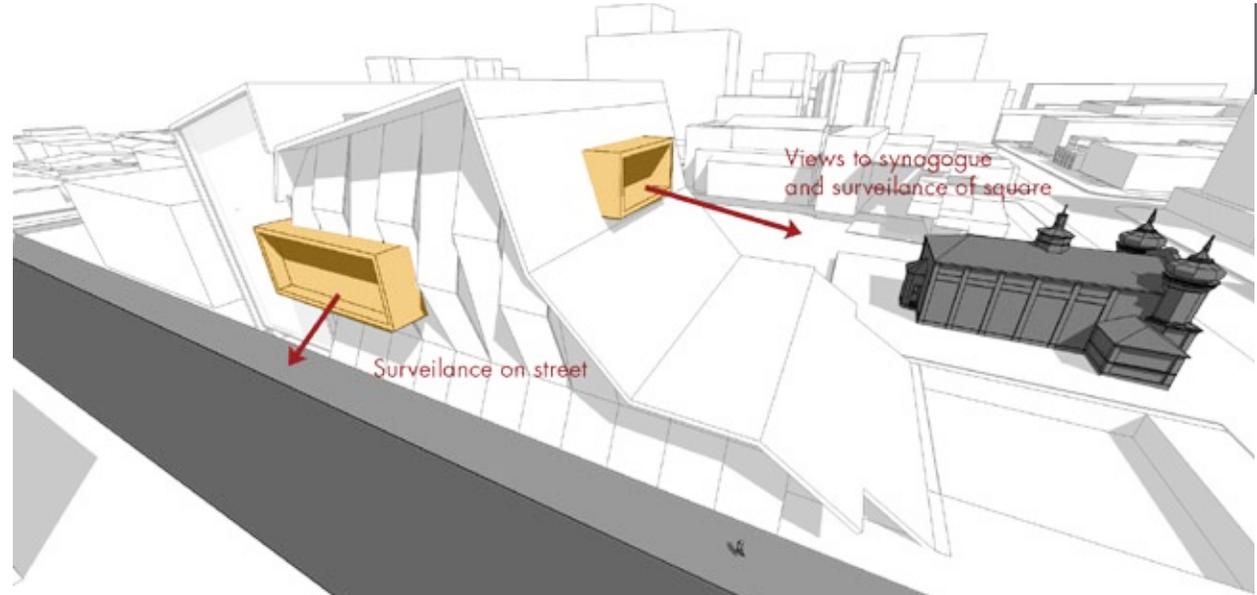
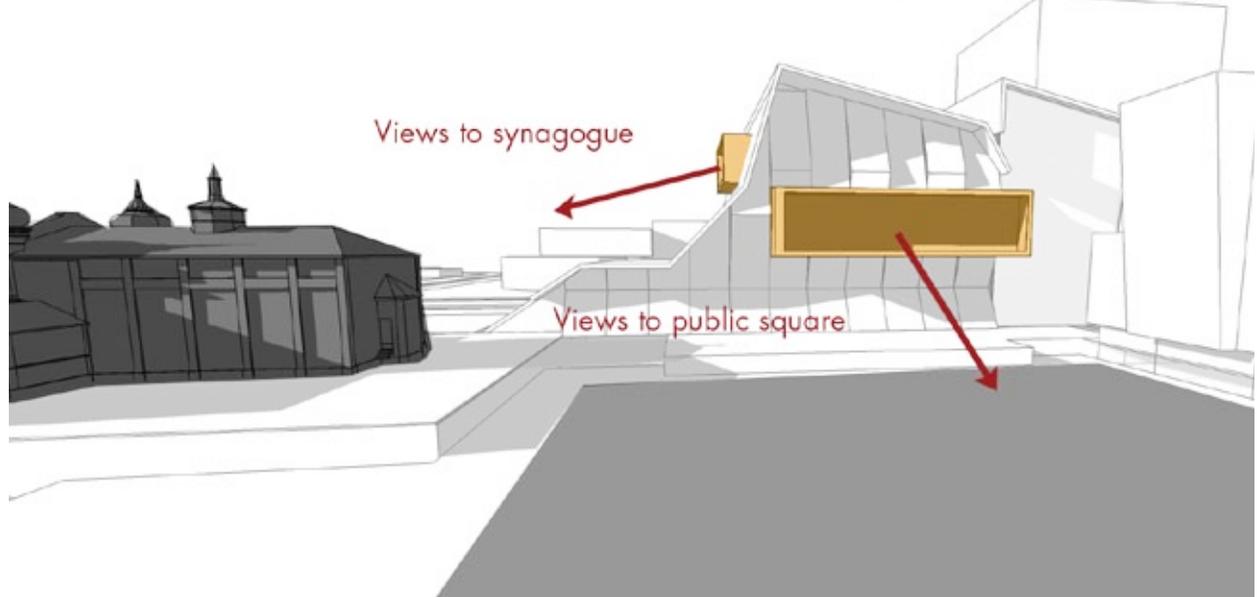


Fig. 5.38 Showing the box shape projecting through the facade to give specific views.

Fig. 5.39 Showing the box projections connecting the building visually to the square and synagogue.



Connecting Black Box

The main auditorium forms a **conceptual link** between the **two building entities**. The form of the auditorium becomes a volume definer within the building with the lobby spaces on either side **projecting through** the facade, making this connection between the dynamic and static forms of the building. This conceptual link also serves to connect the various realms and give the user a sense of connection albeit only on a visual level.

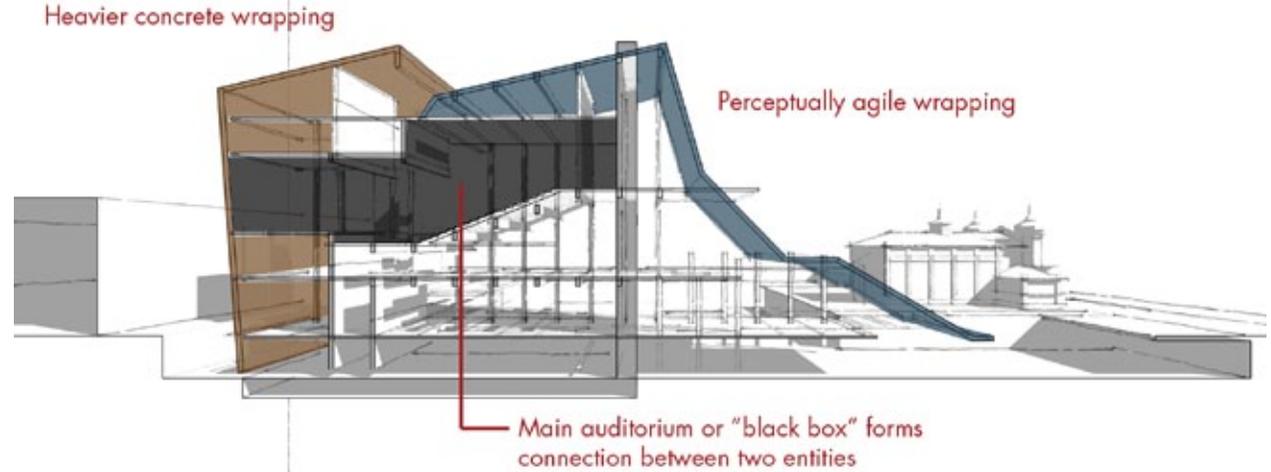
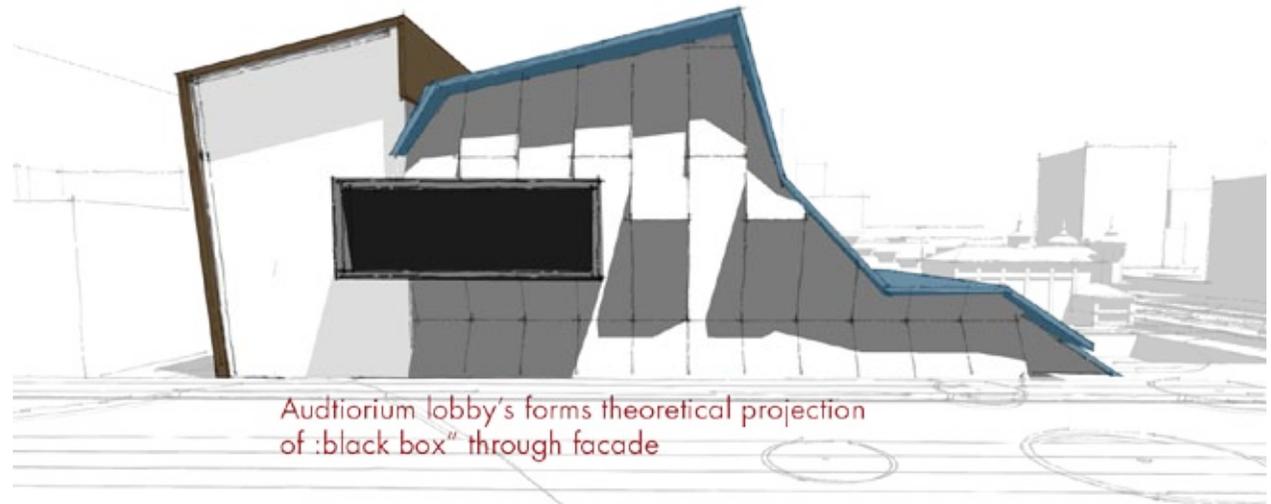


Fig. 5.40 Showing the conceptual connection between the building forms on section

Fig. 5.41 Showing the conceptual connection between the building forms on elevation



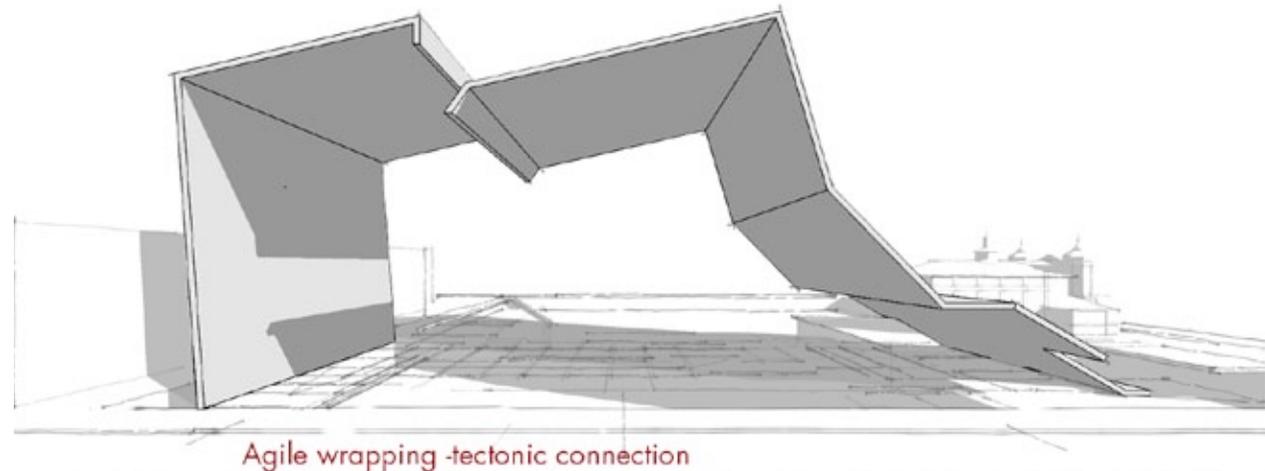
Solid Concrete vs. Agile Wrapping

The Solid and **heavy** concrete frame is **juxtaposed** with the **lightness** and agility of the wrapping. The wrapping itself also becomes heavier, starting with a composite aluminium wrapping to the west and becoming off shutter concrete to the East. This although, a physically heavier material has a partial appearance of lightness due to its agile form. The expression of this **dialogue** forms various **solid, void** connections allowing for simple legibility of the built forms and spaces.



Fig. 5.42 Showing the solid concrete structure.

Fig. 5.43 Showing the wrapping structures.



Conclusion

The intervention has addressed the three design informants with the spatial implications as follows:

- **Functionality within Government**

Reshaping the public face and interface.

The spatial flow has been prioritized and legibility within the building emphasized in order to increase user ease and encourage the continued visitation of the building

- **Urban Response**

Creation of spatial Milieu

The buildings response to the street edge as well as the public square encourages a connection between them whilst clarifying for the user, spatial hierarchy and various zones.

- **History**

Emphasizing sense of place

The building has endeavoured to fulfil the need for urban densification whilst respecting the existing historical fabric through considering and responding to the heritage precinct and adjacent heritage site.

These informants have aided the massing development and volumetric implications with the result being that the intervention has responded to its context in a manner that should help to maintain the urban spatial milieu

