

_04 design development

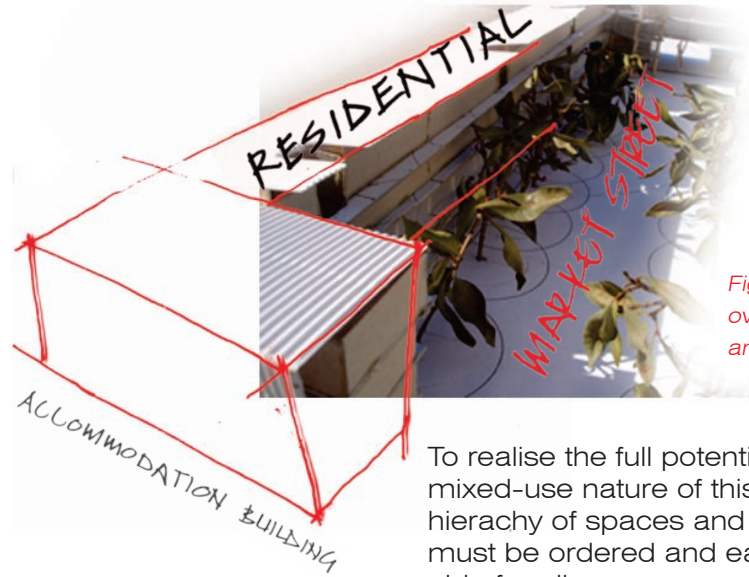


Figure 4.1. Model photograph of overnight accommodation building and market street

To realise the full potential of the mixed-use nature of this complex, the hierarchy of spaces and their functions must be ordered and easily identifiable for all users.

The advantages of a mixed-user environment are exponential, but challenged by access control, security and most importantly, identity. Housing residents need to attain a measure of privacy, while still partaking in the social and economic values the terminus offers.

Figure 4.3.



Figure 4.2. Aerial photograph of concept model

Similarly, overnight commuters must engage comfortably in the non-temporal genres provided, as do the users of the trade facilities who commute there daily.

There exists then an amalgamation of partisans, whose reference of time and space occupation varies considerably, reaching extremes supersed-

TRANSPORT

ing just the building programme.

Thus for true spatial quality of the respective users' acute spacial domain to be realised - form, composition and planning of both the buildings' physical and vsual content must orientate their partisans accordingly.

The development of the concept begins with the site, and the ordering of the programme content at this level, as it is almost always engaged by all users.

As discussed, the transit collection of taxi's, and busses further east of the complex needs to be connected to the main movement structure, to sustain trade to the interior of the complex. This is achieved not just by proximity of complimentary functions, but by their strict heirarcal arrangement, which as anchors dictate movement throughout the Terminus.

These respective anchors are identified as those that the general user will want to have access to as priority. These then presuppose the placement of secondary spaces, fostering an interdependent relationship between them.

The obvious primary programme is the trading stalls, with the eatery/ restaurant acting as secondary collector to the trading street's users - figure 4.5

The eatery is accompanied by a bathhouse to its north-eastern fringe, and by their composition collect the market street's partisans, forming an important gathering space for these users.

Traders, as well as any truck drivers or long distance commuters who occupy the bulk of the complexes' western half use the bathhouse, and market, sustaining cross-movement in the market street. To supplement this longitudinal movement further, a collection and drop-off point for taxi users is proposed at the terminus' crossing of Commercial Street.

The combination of users to the terminus is then captured in an enclosed form, marked as "square". The footprint of the building marked as "south" has also now evolved to support this square or court formation.

That zone marked in black, acts as a treshold space to the square for those moving from east of the complex, making the progression and definition of outside to inside space (square activity) more legible.

The double volume captured by the administration/business building seen in figure 4.4, similarly acts as a treshold to those entering that building, and the market street from the transit node. This space is then extended onto a square as collector, pronounced in landscaping by the fall of the site. This square then also collects people from the designated parking area south of the admin/business building.

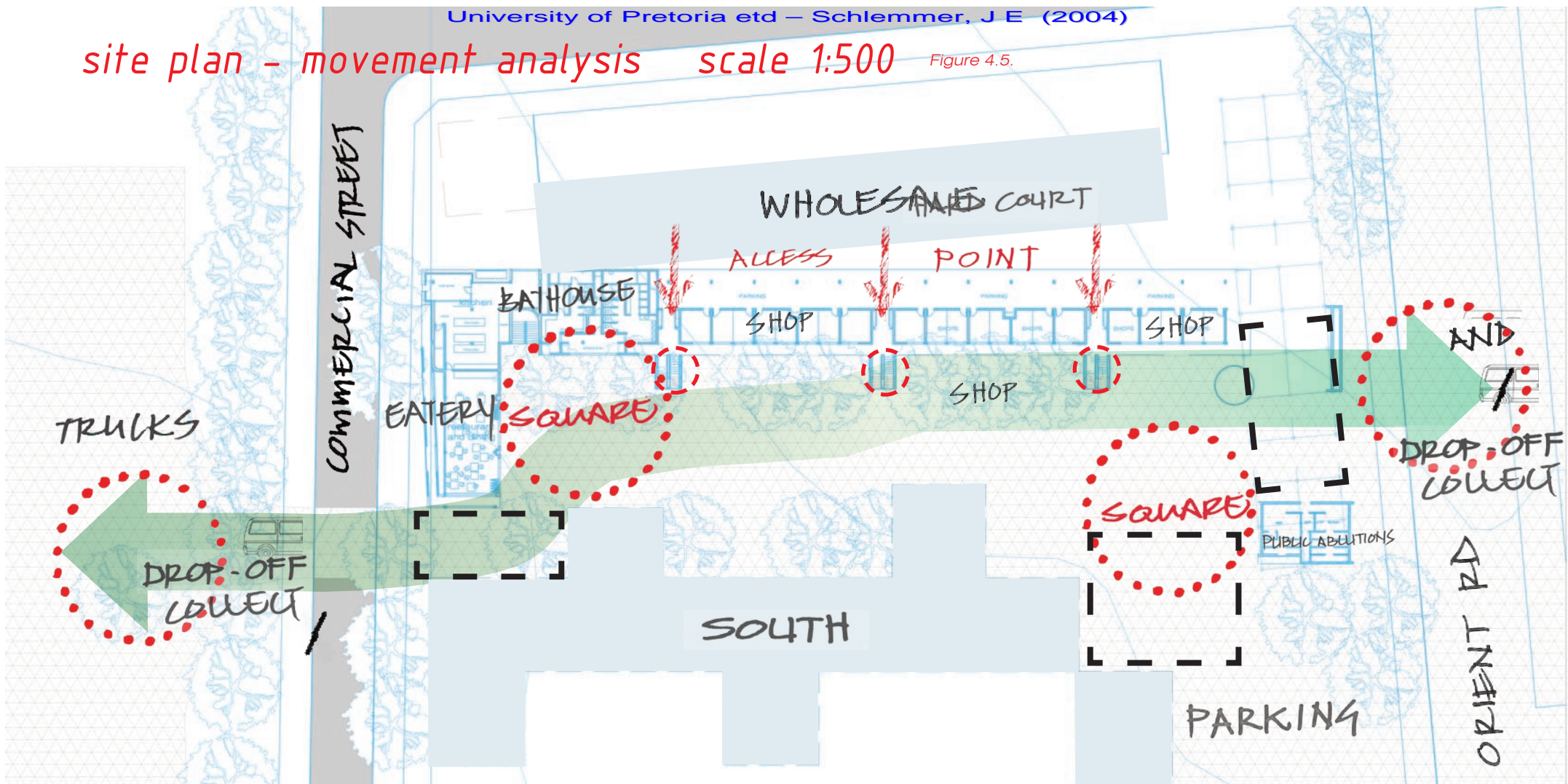
The public abblutions building houses only toilets and thus does not compete with the bathhouse facility. By its placement as a focal and orientating point, the abblutions are easily accessible by the transit users and traders of the market street.

Controlled access is provided for traders and residents accessing the market street and residential units from the "hard" court. These entrance corridors are easliy located by the staircases serving the housing above, and are legible by the collective spacial function of movement.

Figure 4.4. Concept sketch - longitudinal section



site plan - movement analysis scale 1:500 Figure 4.5.



conceptual site section

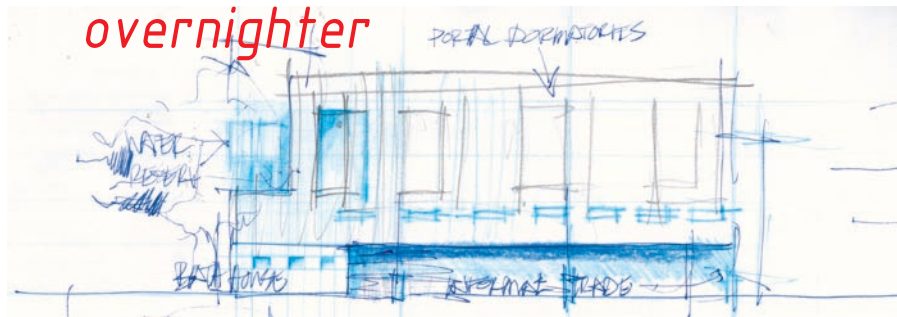


Figure 4.6. Concept sketch of western elevation

Its visual content is therefore interpreted semantically by the Terminus' respective users, which include both the literal (truck drivers and long distance commuters) and the extended visual user of the national road and town resident.

It is by this principle that the building hopes to respond mnemonically, with particular emphasis placed on the temporal and fixed natures of its users.

Figure 4.7. Section of overnighter building

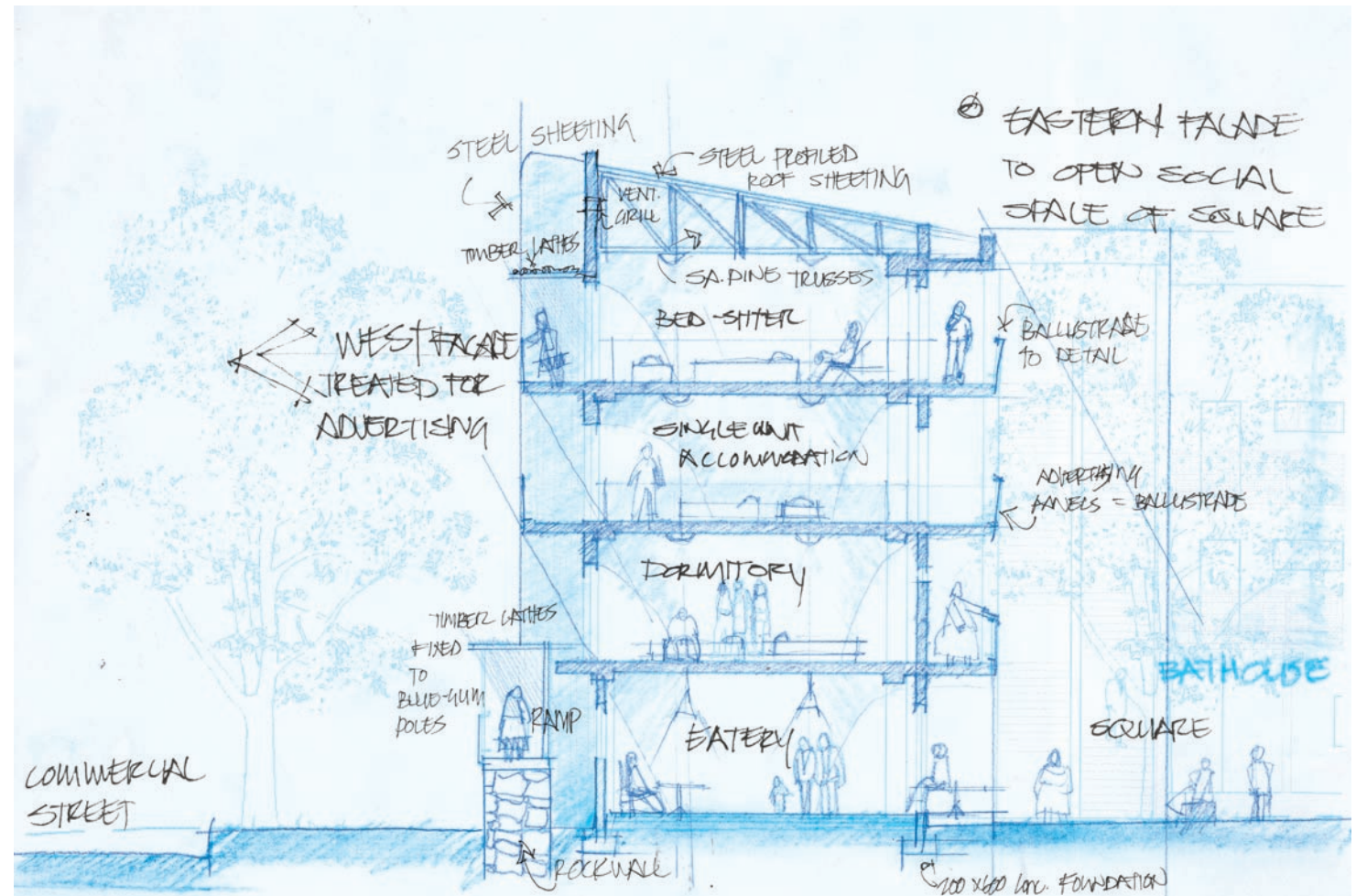
The overnight accommodation building is designed in anticipation of both its spatial and visual content.

Facing the N1, the building seeks firstly to maintain the guidelines of urban design development in response to scale and orientation.

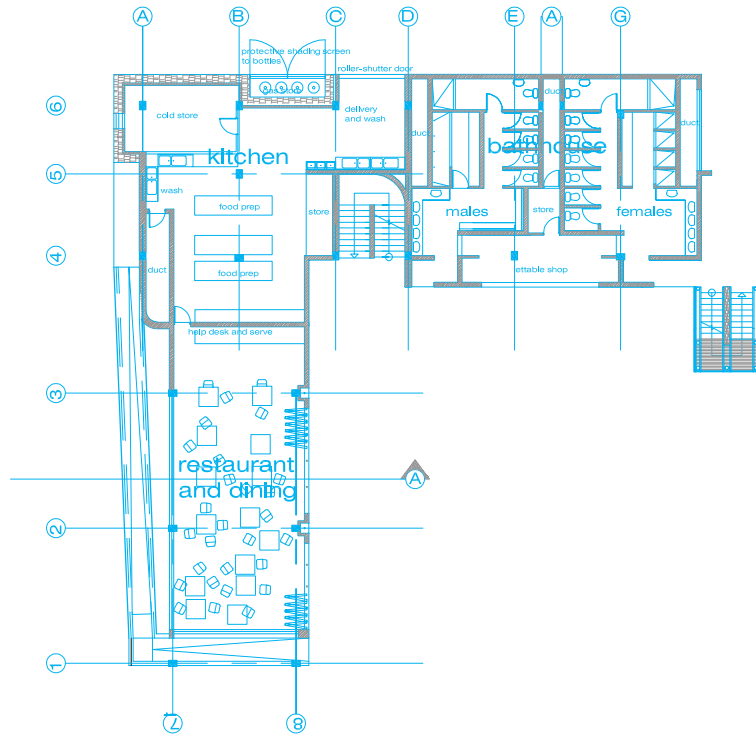
The national road has been acknowledged as a hard and almost impenetrable line, dictating the internalised activity of the Terminus.

However, as the complex will largely remain as a catalyst for some time, the building in question will be viewed inevitably for the time-being as an active and responsive facade of the complex as a whole.

Its didactic performance will similarly continue to be studied throughout the life of the building also.

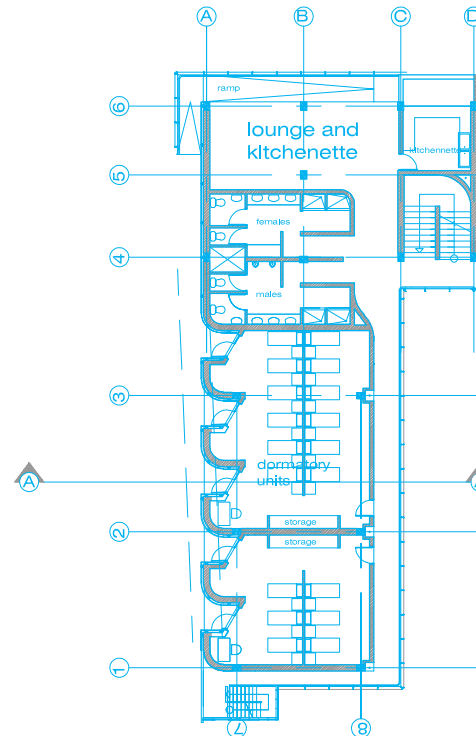


Ground floor plan



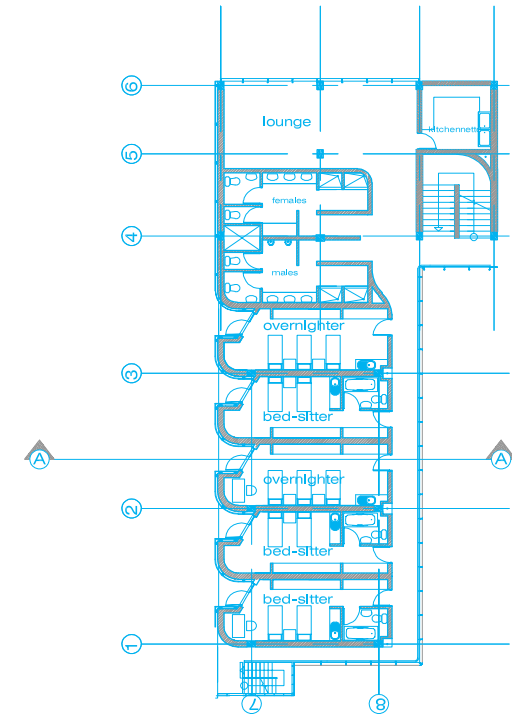
The building's programme is comprised of a variety of sleeping spaces with supporting communal facilities, such as ablutions and kitchenette, and the option of making use of the eatery at ground floor. The dormitory units are arranged for either small or large touring groups, with smaller units on the 2nd floor catering for smaller groups of people. This accommodation unit is repeated on the 3rd floor, with the intention however that these may be easily converted into bed-sitter or bachelor

First floor plan



units for permanent residents. As this building's occupation will very often not reach its full potential, the inclusion of permanent accommodation is pertinent to maintaining an element of passive surveillance and thus security to this building. Access to these units are oriented to the east, initiating a level of social engagement with other partisans of the square the building faces onto - figure 4.7.

Second/ Third floor plan



The main staircase serves this building only, restricting access to the housing. Placed to specifically orientate this building's users within the square, the access point also initiates social interaction with other users in the square.

Wheelchair access is provided for the bulk of the complex in this building, with the ramp circumventing its south, west and northern exteriors. An alternative route via the eastern portion was explored, but was omitted because of interference with the spacial quality of the square. Surveillance of the ramp is maintained through the eatery's western wall. This permeability and the solar gain to the interior, is controlled by a composite of blue gum poles and lathes -figure 4.7



Figure 4.8 A bridge connecting two informal settlements crosses the N1 - a common element sighted throughout the journey from Pretoria to Makhado. The concrete and steel bridge is clad in profiled channels and steel mesh to stop people throwing objects at passing traffic



Figure 4.9 Portions of the landscape are cut away for road construction exposing the crude texture of the rock. This is sighted specifically in the Waterberg mountain range en route to Makhado

inspiration

Figure 4.10.

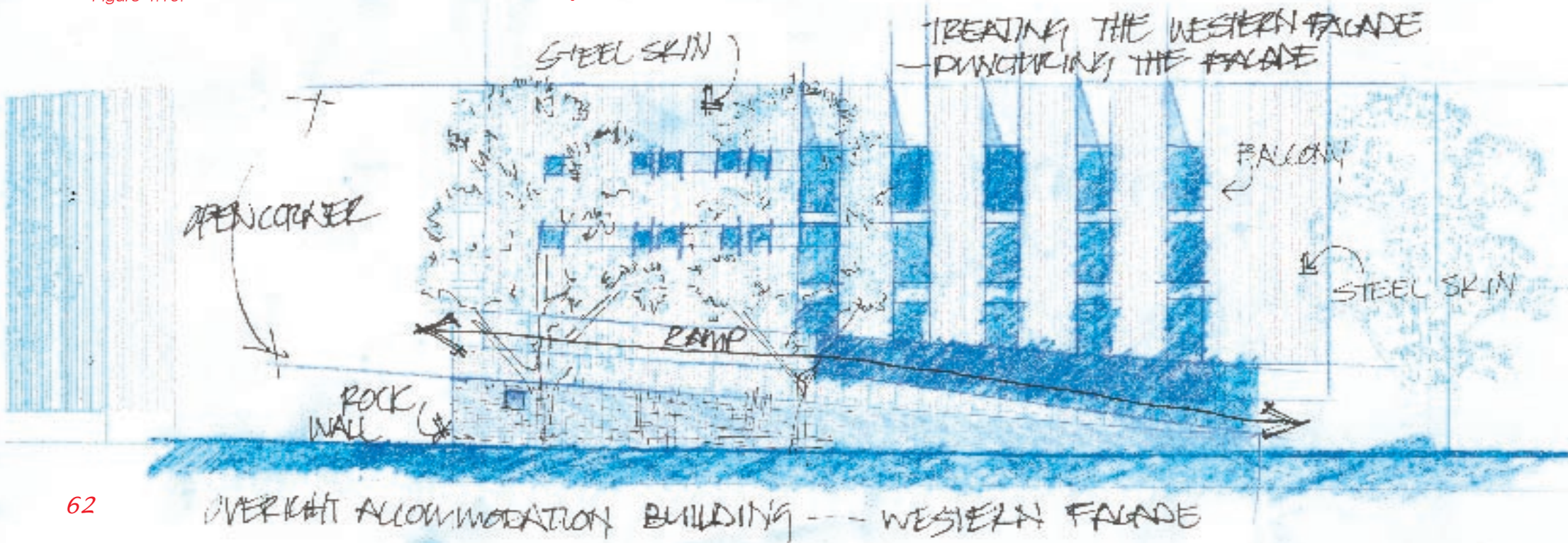




Figure 4.11 Second-hand profiled steel sheeting is used to build houses in both informal and formal settlements. The untreated material ages over time due to harsh climatic conditions, leaving it stained. The dialogue of this material is to be continued on the skin cladding system of the overnight accommodation building

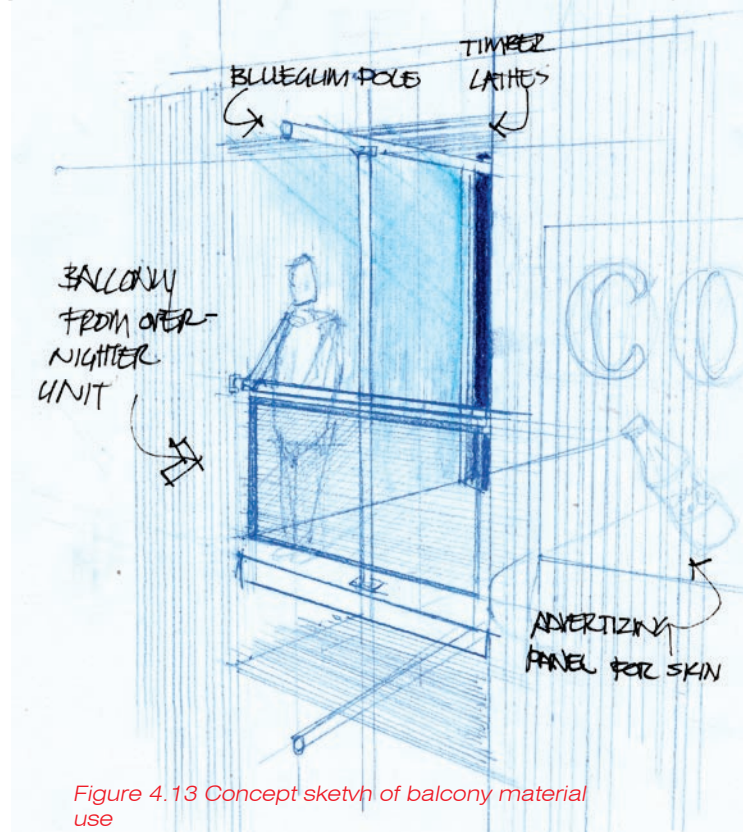


Figure 4.13 Concept sketch of balcony material use



Figure 4.12 A combination of steel and timber reveals an interesting aesthetic

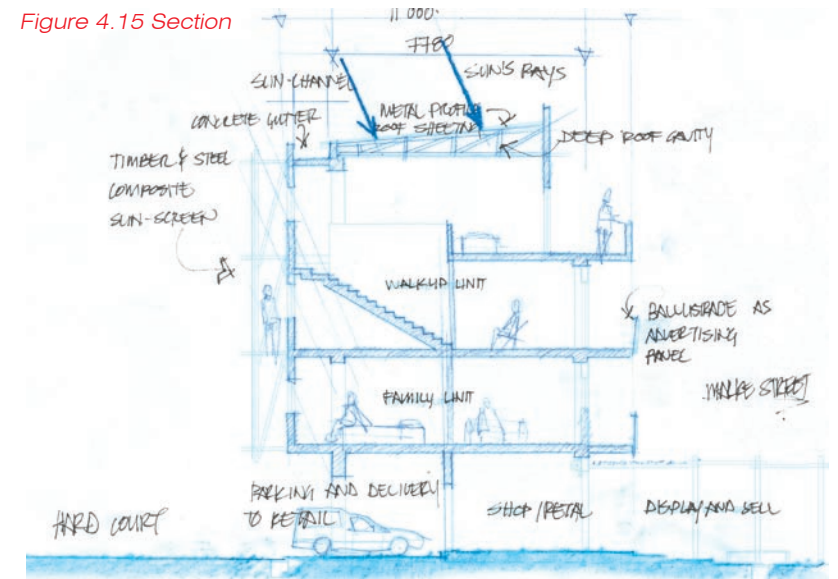
The western facade is attenuated to reflect the overall industrial nature of the precinct, and suggests material dialogue of the truck drivers. An over-arching metal profiled skin covers the building, which is punctured by balconies of the units. A more detailed surface of face brick and timber is revealed representing humane attributes of “home” and “shelter” - figure 4.13.

In response to the visual content of this facade, the metal skin is defragmented in covering to allow advertisement panels to be attached to it. The generic application of materials or advertisement boards to this surface by members of the public is achieved.

Figure 4.14 Concept sketch of housing balcony and passage



Figure 4.15 Section



The development of the housing component to the Terminus is directed by its relationship to the soft and hard activities that flank its southern and northern boundaries, and its composition as a successful mix of units that will sustain non-monofunctional tenant activity.

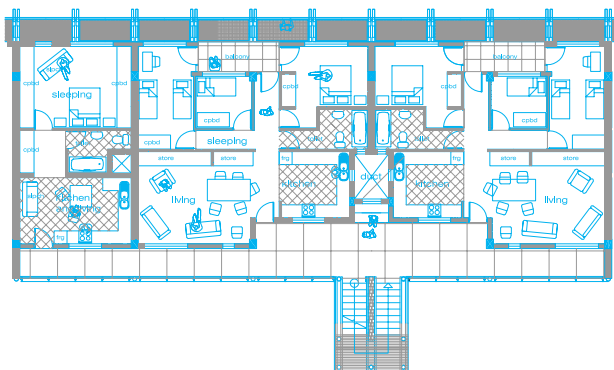
Family, extended-family and smaller bachelor units are grouped into portions of the housing building, with a sufficient number of access points serving them.

These units share a common area of the passage and staircase as social space, which fronts the market street.

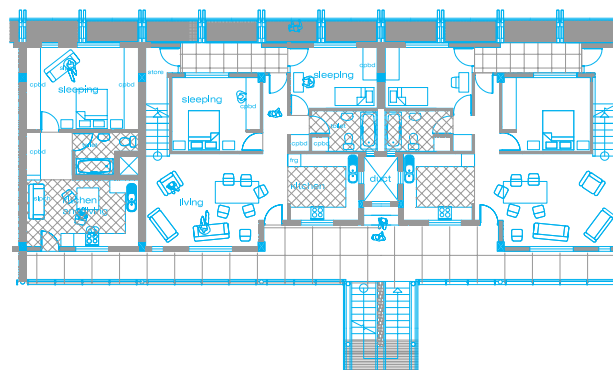
An element of security is initiated, as access to the units is visible by large numbers of people from the market street.

The sleeping areas of the units are oriented to the northern half, to take advantage of the solar orientation. A more private space is attained as the living area acts as noise buffer to the social activities of the market street, and the hard court to the north provides reduced noise levels also. Noise resolution of this court and the wholesale depot has already been discussed.

Solar control to this facade is treated by two components. Firstly, a figurative sun channel is placed as a heat retardant in each unit. This channel is easily adaptable to either add more space to the respective rooms, or to be used as a private retreat area for any of the unit's residents.



Housing plan arrangement



Plan of walk-up and bachelor units

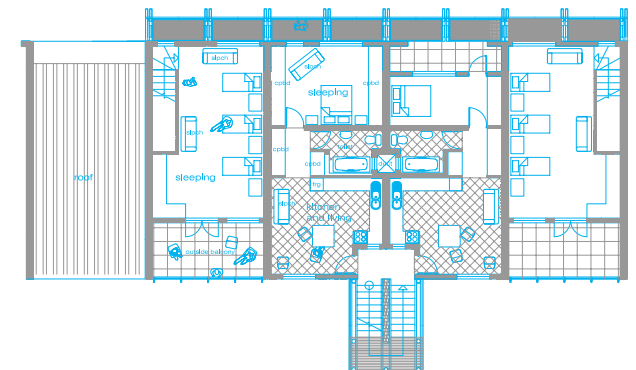




Figure 4.16 Above: Local application of materials for sun-screening

The second component, is the fixture of a timber pole and steel mesh composite structure. This structure is comprised of expanded metal panels that are fixed to a sliding rail, allowing users to determine the quality and quantity of sunlight to the interior of the units. The northern facade is thus animated by the respective units' tenants, alleviating an otherwise monotonous facade.



Figure 4.19: Trading stall found at the side of the road in a the formal settlement of Elim , 30km east of Makhado

Individual colouring of units' walls also help assign a sense of ownership to tenants. Figure 4.18 depicts the red sand found in site as possible colour, applied as pigment to the plaster finish on walls.

The shops at ground floor level are simply detailed volumes that are either used as retail space, or storage of goods. In the latter arrangement, the display of goods is displaced in to the market street itself.

Blue gum pole detailing of this facade sustains the continuity of materials used elsewhere in the complex. The structure and composition of these timber elements is executed to define different zones of the market street, and in abstract continues the texture and density predicated by the trees. The southern facade is thus graded in detail from the trees to the concrete building.

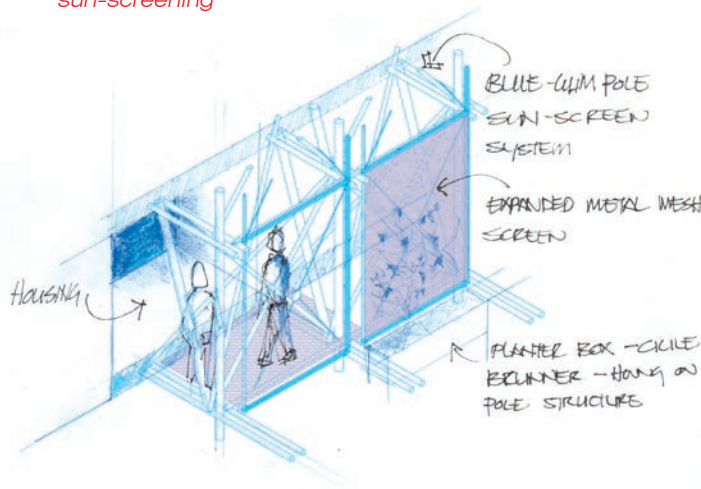


Figure 4.17 Above: Concept development of sun-screen

Figure 4.18 Below: Red sand at the bus depot



Figure 4.20 Below: Concept development of shop front



The administration/ business building is bound by Orient Street and the taxi and bus facilities to its east, and the market street to its west. As discussed earlier, the programme allocated to this building is done to strengthen Orient Street as the new high order street.

The building is comprised of easily divisible lettable office area. Pertinent to its spatial and circulation development, is the four-storey volumed atrium at its centre. This space plays a number of roles. The first, is its connection with the housing building: the atrium is to act as a hinge of these two buildings. Secondly, this hinge is to be visible from the market street, acting as a focal and orienting point, making access to the building legible - figure 2.41

The toilet and kitchen services line the circumference of the atrium, with the main staircase placed therein as well. The result is the collection of all users of the building - both tenants and visitor, in one meeting place - figure 2.22

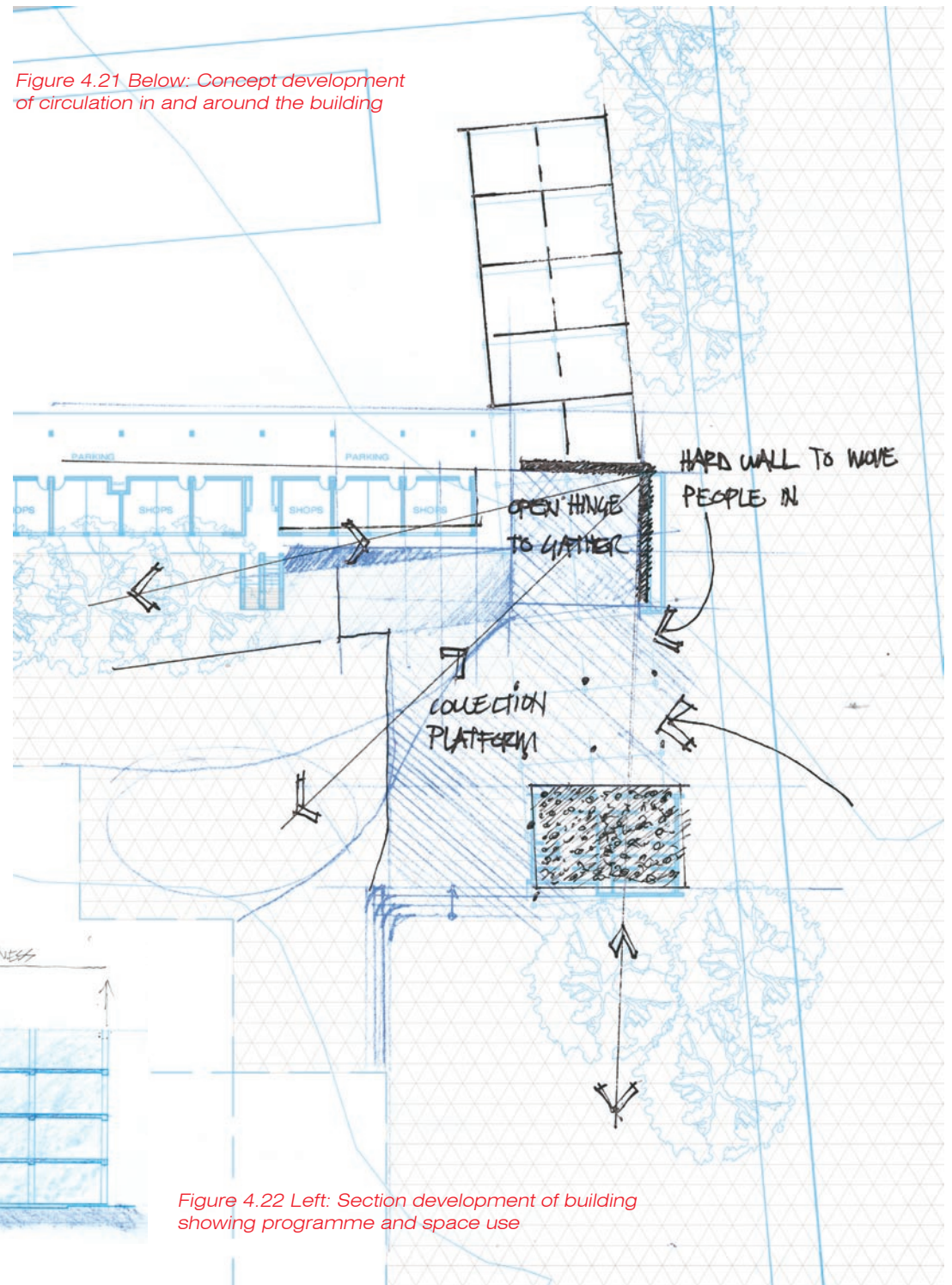


Figure 4.21 Below: Concept development of circulation in and around the building

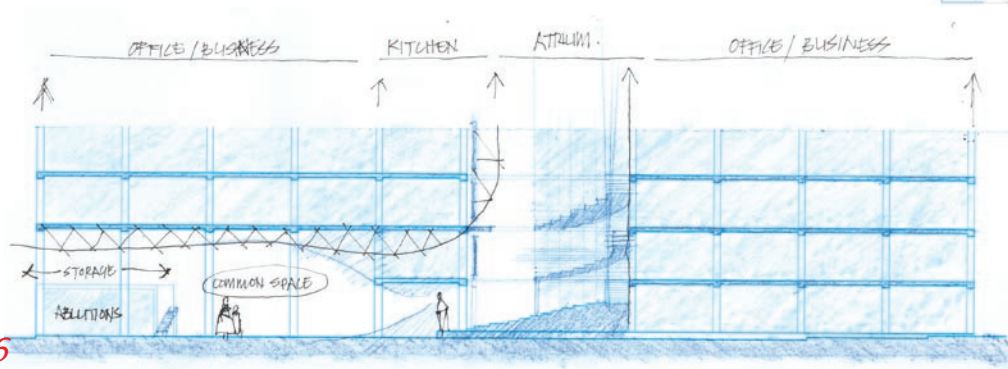


Figure 4.22 Left: Section development of building showing programme and space use

Figure 4.23 Below: Cross-section

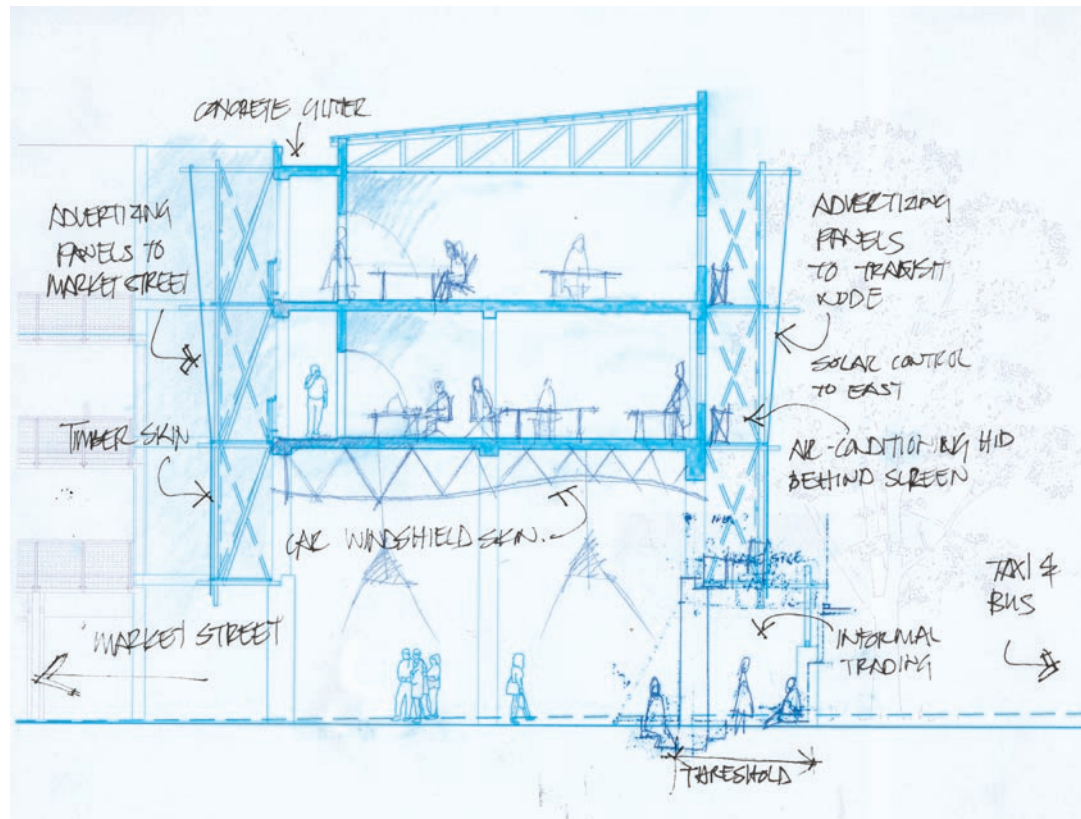


Figure 4.24 Below: Preliminary eastern elevation, depicting the use of the sun-screen system

Social interaction is dictated, with the shared services of the offices helping to sustain this activity.

By its orientation (east -west), the solar gain into the building is similarly resolved with the timber pole and steel composite structure. Advertising boards are fixed to the panels that are also movable to allow control of light quality. The wall of the 4-storey volumed atrium helps define the concentration of movement into the complex, and acts as a mountable surface for other advertisements.

The double volume under the building is a collector space for those moving from the transit facilities to the market street - figure 4.23

The underside of this volume is clad with unused car-windshields sourced from local scrap-yards. Its linear form helps dictate longitudinal movement, and serves as an acoustic skin for a space that may double-up as a multi-purpose gathering space.

