

# chapter 06

## the design development

In *The Phenomenon of Life*, the first book in the four volumes, *The Nature of Order*, Alexander explains the unlimitedness of wholes. Wholes are unbounded, because centres 'help' one another to define larger wholes. He found it impossible to draw boundaries around wholes.

For this precise reason, it is impossible to try and bring more life to the music precinct without affecting the larger environment of the campus and the public realm beyond. In the process of gradual mutual adaptation, the insertion of a new facility to accommodate the needs of the Department of Music is only one step in an effort to

establish more life and wholeness in the precinct and on Campus.

An urban strategy will need to be devised in order to accommodate the existing centres, the newly introduced centre and the possible future centres. Related principles of urban acupuncture will assist in catalysing spontaneous growth and place-making.

With an urban framework in place, the design of the new music school can develop according to principles of social, contextual and functional extension and conversion that will assist with an appropriate and relevant design.

*fig. 6.1 : 3D representations of the proposed urban strategy.*

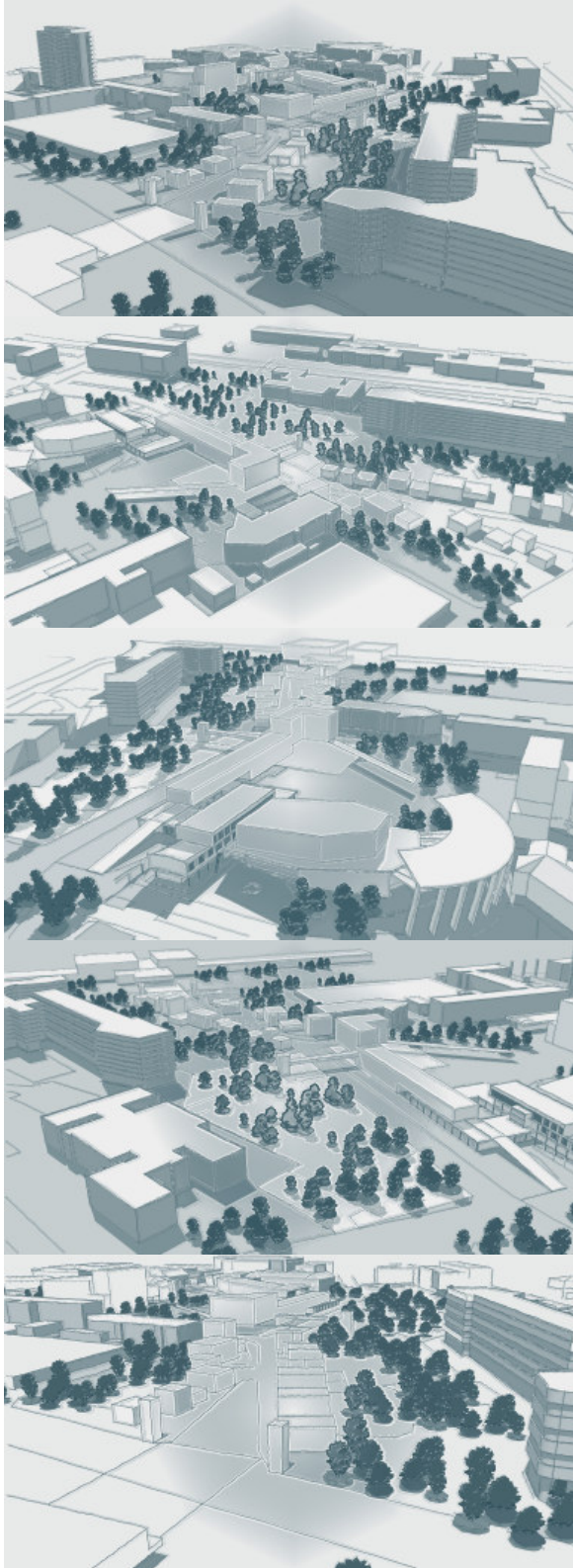
activity  
spine

transport  
node

temporary  
residential

academic  
focal point

recreational  
space



6.1.

development of an urban strategy

The music precinct on Campus can be the ideal scenario to initiate a process that will increase the life of the campus and ignites more social activity. With the proposed urban strategy in mind, characteristics of *great good places*, as defined by Ray Oldenburg, can also become characteristics associated with the environment of the music precinct and surrounds. According to Oldenburg there are certain prerequisites for successful urban environments. These qualities will provide an additional layer to the design of the new music centre in an effort to transform the existing context into a lively, free and spontaneous environment.

The first prerequisite is interaction. Human beings' need to communicate or not is

probably the primary requirement for our social fulfilment. The proposed urban strategy provides for this human need in various ways, be it formal structured interaction between a symphonic orchestra and an audience, informal meetings between students in a coffee shop or chance interactions between two people coincidentally running into each other on their way across a courtyard.

The ability to commute is another aspect conducive of a great urban place. The transport node proposed as part of the urban strategy will provide the opportunity for users to easily enter and exit the area via various transport systems, and they will have the ability to choose the one most suitable for them.

With the hustle and bustle of our daily lives constantly increasing, is it pertinent that our environments offer us spaces where we can spend quality time. The aim of the urban strategy is thus to provide options for people where they can spend the type of quality time they desire: stretched out on the lawn in the late afternoon sun, enjoying a glass of good wine to the sound of a jazzy tune or running along a tree-lined avenue in the brisk morning breeze.

In essence the vision of the project is to provide convenience and choice at every level for all the diverse users of the precinct, for these are the aspects that distinguish ordinary spaces from vigorous, human-orientated places.

fig. 6.2 : Diagram indicating the strong centres in close proximity of the precinct and there relationships to each other and the precinct. These centres are sources of people and interactions and can assist in revitalising the music precinct:

1. Vibrant, pedestrianised Tukkies and Libri Avenues.
2. The social hubs of the precinct - Cafe Burgundy's, La Pat and Steers.
3. Public and University performance venues - the Aula and the Musaeon.
5. A primary vehicular route and boundary of the campus - University Road. The existing Loftus Station across the road will be integrated into the proposed Gautrain Station.



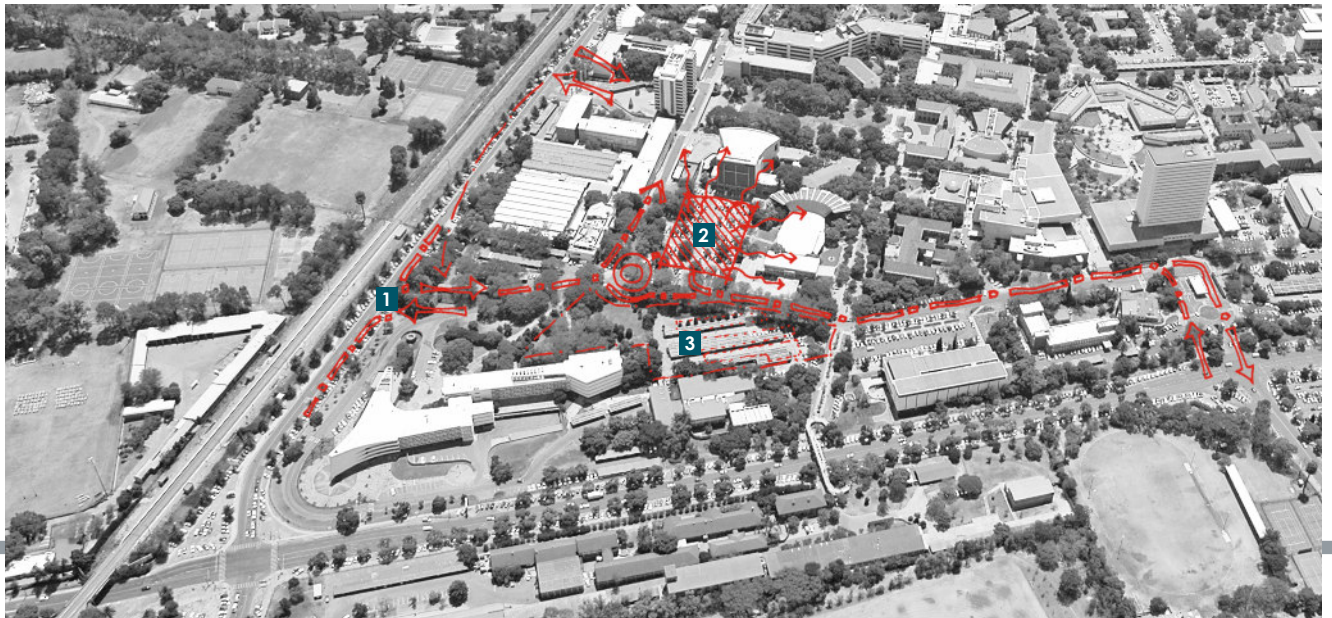
# urban vision - great good places

*"Today the role of music in a global context is no longer something outside itself, a reality or the truth. Instead music has become a medium that mediates. In other words music in global culture functions as an interactive social context, a conduit for other forms of interactions."*

(Slessor, 2003:65)

fig. 6.3 : Diagram indicating the future proposals by the University for the development of the music precinct and its surroundings:

1. Move the University Road entrance to a new location across from the proposed Gautrain Station to the bend in Senaats Road.
  2. Traffic from the south and west entrances will be concentrated primarily in the four-storey parking garage proposed for the open area behind the Aula.
  3. The undercover parking to the north of Visual Arts will be demolished, making way for a new open student green space.
- These interventions could have both positive and negative consequences for the music precinct.



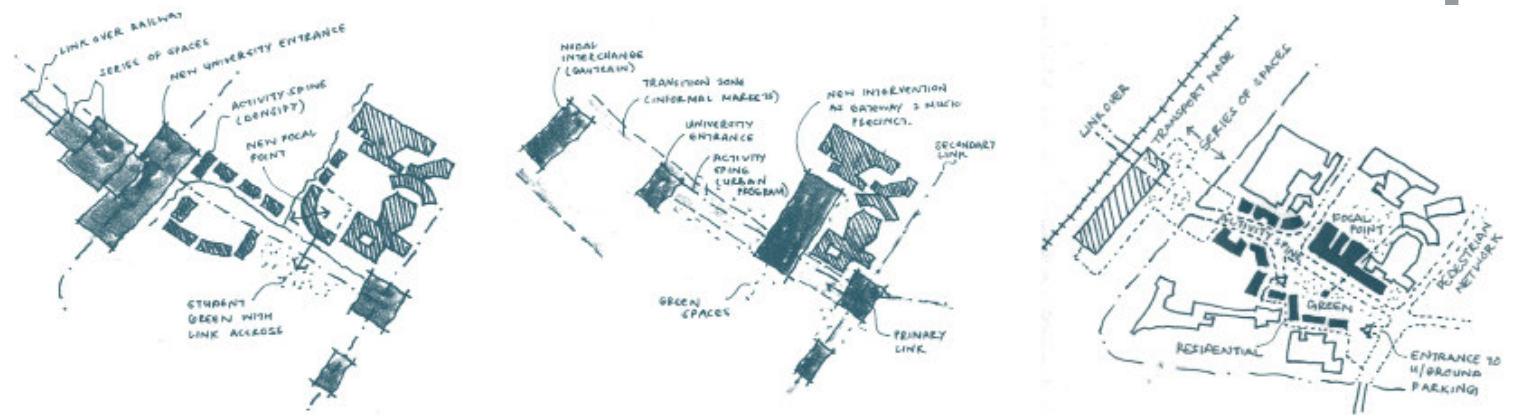
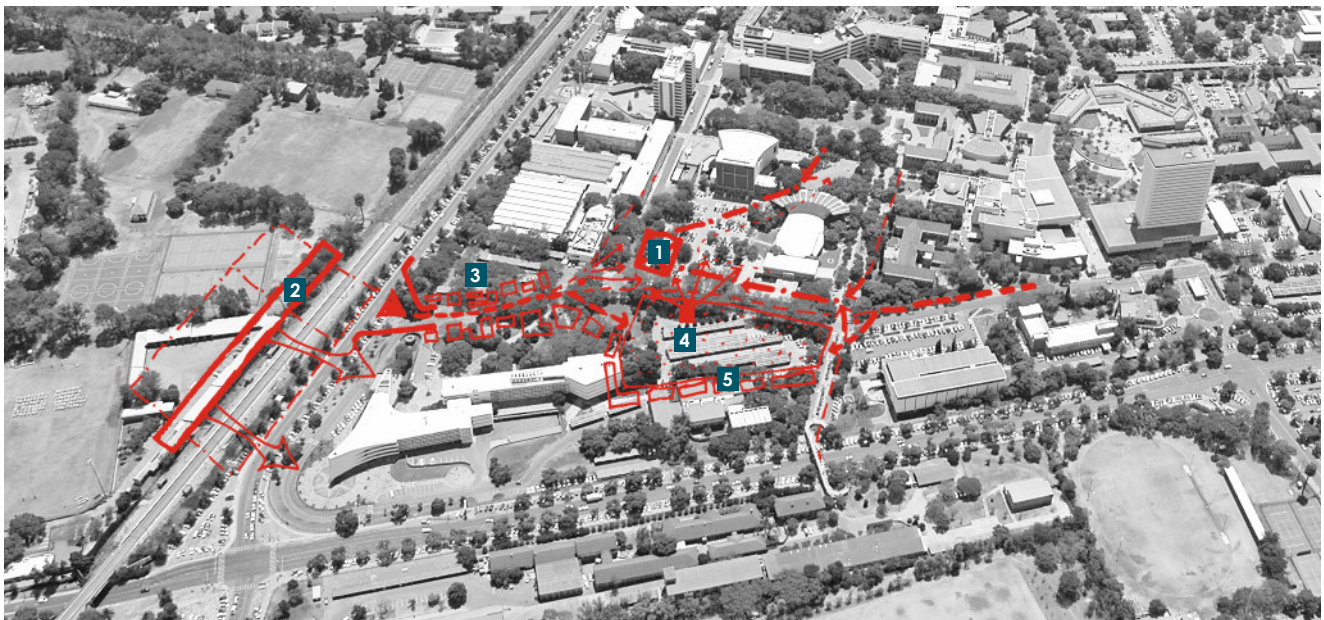
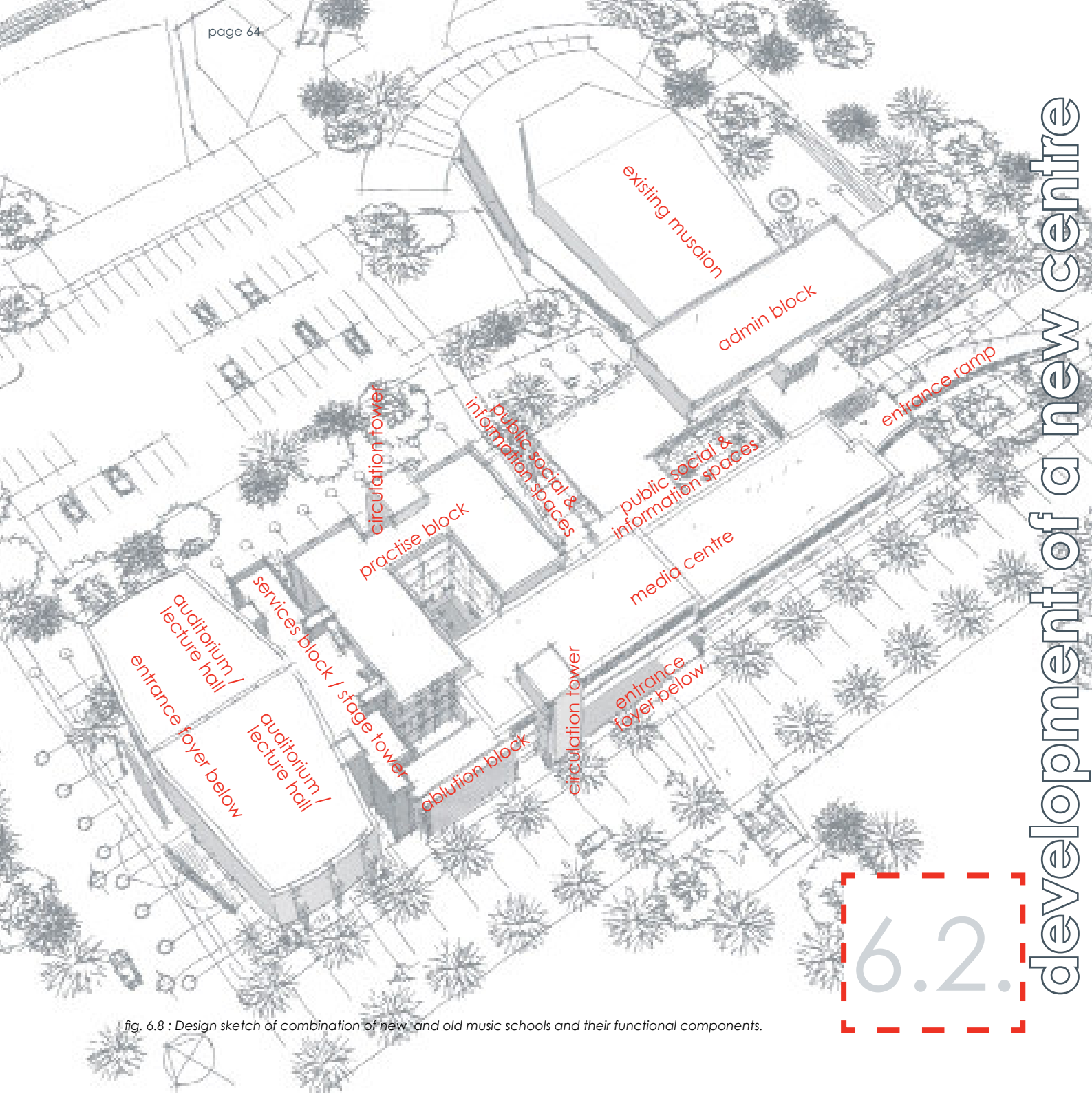


fig. 6.4, 6.5 & 6.6 : Diagrams indicating a new urban strategy for the area - one that is aimed at revitalising the music precinct together with its surrounding context. The strategy can also be applied to other precincts on Campus to improve the urbanity of the institutional environment.

fig. 6.7 : Diagram indicating the interventions of the proposed urban strategy. The interventions are to be developed over time according to the changing needs of the users of the environment and the demands of the University. These interventions represent strong centres that extend their energy to the spaces in between.

1. New music facility for the Department of Music, being the focal point and gateway to the precinct on the south-west corner of the precinct. The facility should also link with the north and east edges to tap from the existing energy sources.
2. A transport interchange with informal market place.
3. An activity spine with an extended urban program: jazz café, multimedia shop, music instruments & repair shop, bookshop, office space, art galleries etc.
4. An underground parking area with a student green space at ground level and a link to the new music centre to allow for future expansion of the Music Department.
5. Research and night school facilities around a central green space.





# 6.2.

## development of a new centre

fig. 6.8 : Design sketch of combination of new and old music schools and their functional components.

## 6.2.1.

The context analysis proved the portion of the existing parking area directly to the west of the Music Building to be the most suitable area for the new music school. This will allow the existing grid of the Music Building to be extended in order to give the new music school similar proportions. By extending the grid together with the current music educational facilities, a more defined south and west edge to the precinct can be created. The music precinct will then be defined by facilities in service of the Music Department right around its edges, leaving a central void area to serve as green space and services area to the buildings of the precinct. With the new music school remaining within the boundaries of the precinct, the avenue of fever trees along the south edge can also be preserved with a subtle pedestrian link across the Ring Road to the new student green space and underground parking area. With the establishment of two axes as the foundation of the design, the current voids – supposedly social pockets – can also be integrated with the new development and be revitalised at the same time. These spaces include the entrance area and central courtyard to the Music Building and the current spill-out space to the Musaion on its west side.

The two main axes of the intervention are the north-south and east-west axes. The north-south axis links the new student green space and underground parking to the social hub of performance venues and restaurants on the north side of the precinct, running through the new combined music school on the edge between old and new, thus being the 'social glue' of audiences and performers that bring the two buildings together. Due to the public nature of this axis it will become the performance axis of the intervention. This will imply that all the public-related functions and spaces of the intervention be situated

along this route: vehicular public access to the precinct via the underground parking, main access point into the music facilities, chance performance spaces, information and administration facilities, direct access to the formal performance venues like the Musaion, the Amphitheatre and the Aula as well as to the restaurants on the north edge.

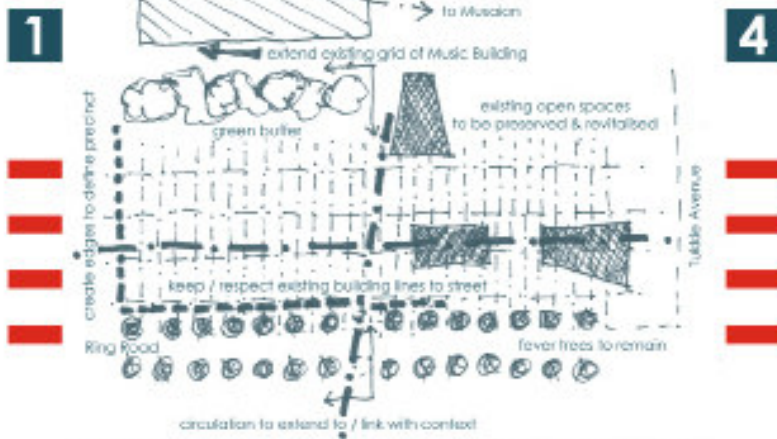
The east-west axis connects Tukkies Avenue, a major Campus circulation spine, with the new University Road entrance. Because this axis originates in Tukkies Avenue and then continues to connect all the existing as well as the new Music Department facilities, it will be primarily a more private axis, a preparation axis. All the facilities required for the preparation of music will branch off this axis in an orderly, legible manner: administration, research, practise and rehearsal (primary performance).

The axis will also provide an indirect connection with the social spaces of the intervention. This axis will further be divided at its origin into a link at ground level through the existing Music Building to the new music school and a link over the existing practise room wing towards all the additional facilities of the new music school.

These contextual design generators thus assist in the making of the following design decisions:

1. two main links / circulation routes through the intervention
2. the main entrance to the combined music school at the intersection of public and private
3. an iconic corner as edge to the building and the precinct at the west end of the intervention
4. two secondary entrance points: one from Tukkies Avenue over the existing building and the other on the west side directly to the auditoria

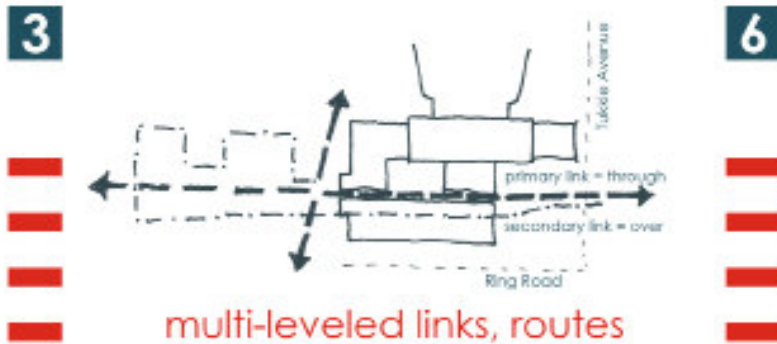
fig. 6.9 (opposite page) : Diagrams indicating the contextual design generators of the project.



1 preserved, revitalised, established



2 axes, origins, endpoints



3 multi-leveled links, routes



4 preparation axis & spaces



5 performance axis & spaces



6 summary



## 6.2.2. spaces, forms & scale

The form giving part of the process started with a series of negative spaces. The existing voids around the Music Building were analysed and some proved to have the ability to be revitalised and integrated into the 'social network' of the scheme. These spaces formed the basis to which additional voids were added to complete the network.

The diagrams on the opposite page indicate the spaces required for the project as well as the relationships they need to have with the surrounding built fabric and each other. Once the spaces and their links were established, an outline for the social network at ground level could be generated. Each space in the network was then assigned a function in order for the network to fulfil both the social and spatial needs of the intervention. The function of each space refers to the main idea for that space, although together the social network serves as the communal, interaction, circulation and transition part of the intervention – the outside space that compliment the internal functions and spaces of the building, the glue that keeps the functional parts together and creates a transition between the most private areas of the music school and the rest of the campus. These spaces were designed to be robust and versatile – able to adapt to the needs of the users.

Once the voids were established, the built forms of the building could be decided. Two main ideas inspired the forms of the building components:

1. a series of intersecting rectangles
2. a solid geometric core anchoring a formal organic volume

The idea of intersecting rectangles forming a core to anchor a hovering formal organic volume was inspired by the language of the context and is evident in the designs of both the Aula and the Musaion. Similar to the voids, each rectangle were assigned a certain function which in turn determined the properties and edge treatments of that particular rectangle. The preparation spaces need to be more private, enclosed and rigid whereas the performance spaces could allow for a public audience, thus being more open and flexible.

The formal organic volume created the iconic corner on the west end of the site and hosts the highlight of the preparation axis – a venue for performance and rehearsal on a more intimate level than provided by the Aula and Musaion.

In section the same ideas apply: intersecting rectangles and a hovering formal organic volume. The existing Music Building, its facades and detail influenced the development of the heights and scale of the new music school. In order to respect the Music Building and its delicate facades a rectangle with similar proportions was introduced above the practise room wing.

From there the volumes were gradually increased in order to obtain a height on the west end of the site that would correspond with the scale of the Aula and the Engineering buildings on the west edge of the precinct. In an effort to maintain continuity of the social network at ground level, various volumes were lifted onto columns to free the ground plane.

### generating form

fig. 6.10 :  
Diagrams indicating the generation  
of the form of the building.

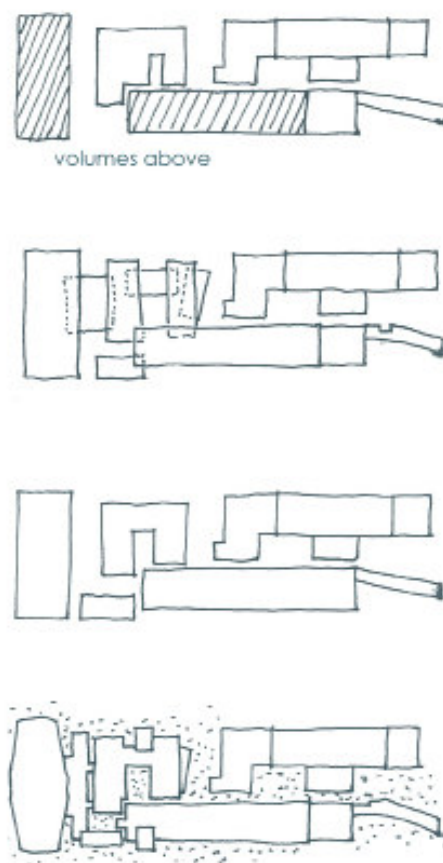
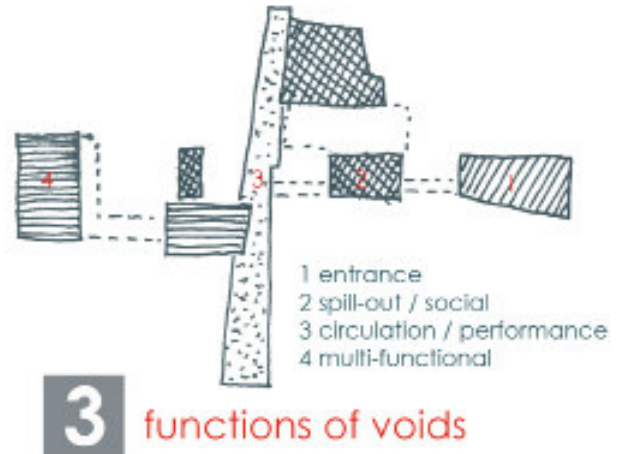
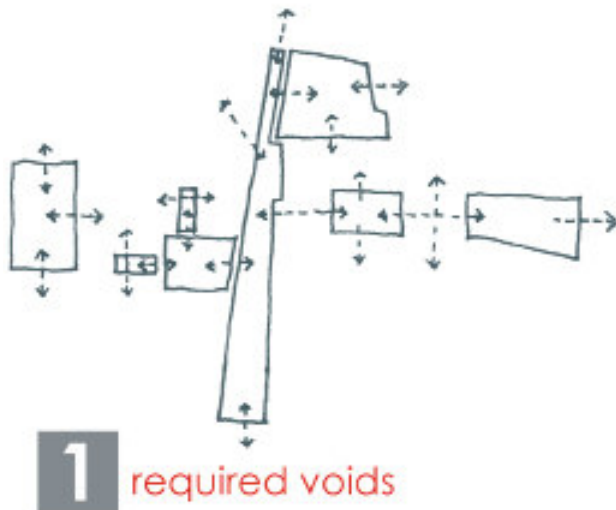


fig. 6.11 : Diagrams indicating the generation of the social spaces of the building at ground level.



## 6.2.3.

design generators  
functionaccommodation  
schedule

## ground floor

**Existing Music Building Practice Room Wing (south)**

- 1x staff room & kitchenette
- 7x offices for part-time lecturers
- 2x flexible conference rooms
- 1x consultation room
- 1x waiting area
- storage
- ablution

- 1x copy room
- 1x reception
- ablution

**New Music School**

- media centre (individual & group research facilities; copy area; books, magazines and digital collections, audio-visual booths)
- 1x media centre admin office
- 11x individual practise studios
- 4x group studios
- 2x flexible rehearsal / backstage studios
- ablution

**Existing Music Building Practice Room Wing (north)**

- 1x information centre
- 1x restaurant
- 1x kitchen with storage
- 1x exhibition space
- 1x lounge & foyer
- 1x cocktail bar
- ablution
- refuse areas

**New Music School**

- 1x multi-purpose entrance deck
- 1x foyer
- 2x atria
- 1x drum studio
- 1x percussion studio
- 2x flexible music education studios
- 1x seminar room
- 3x flexible performance studios
- storage
- plant room
- 2x ablution
- 2x kitchen facilities
- multi-purpose foyer with information desk

## first floor

**Existing Music Building**

- 13x offices for lecturers
- 1x seminar room

## second floor

**Existing Music Building**

- 16x offices for lecturers
- 1x board room

**New Music School**

- research lounge (audio-visual booths and computer facilities)
- 1x media centre archives
- 11x individual practise studios
- 4x group studios
- 2x flexible rehearsal/ backstage studios
- ablution
- storage
- 2x artists' cloakrooms
- machine room
- 1x entrance foyer to auditoria
- 2x auditoria / lecture halls

## third floor

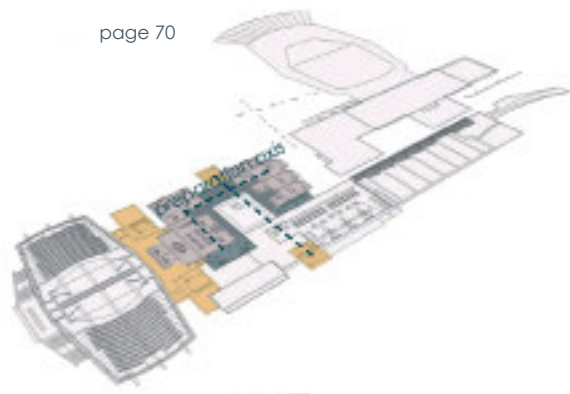
- 1x music technology lab
- 2x post-production studios
- 4x recording studios
- 2x seminar rooms
- 4x organ studios
- plant rooms

In tune with the Brutalist language, the different functions of the building were also grouped together and expressed externally through the facades of each functional block. As mentioned earlier, the axes formed the basis for the circulation strategy as well as for the functional grouping.

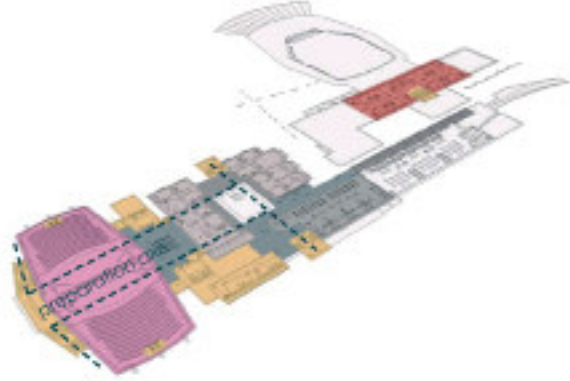
The preparation axis from east to west connects the more private spaces required for the preparation of music which includes: administration and offices, media centre, practise facilities and two lecture halls with acoustic properties suitable for small-scale music performances.

The performance axis runs from south to north and connects the public spaces of the intervention which includes: public access to underground parking, entrance foyer to music school, administration and offices, information centre, flexible group studios (also part of practise block) able to open up towards the public walkway as performance venues and the spill-out space, restaurant and foyer to the Musaion.

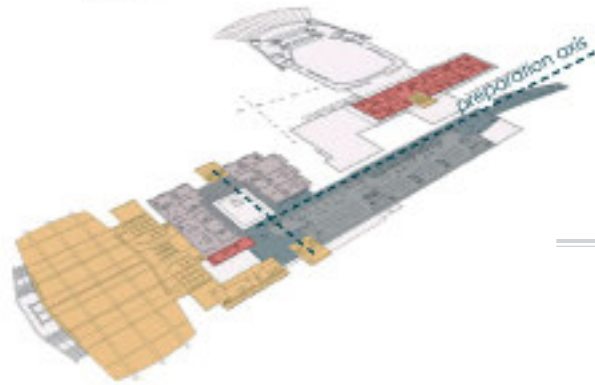
Vertically the functions of the building progress from public at ground level to private at the higher levels.



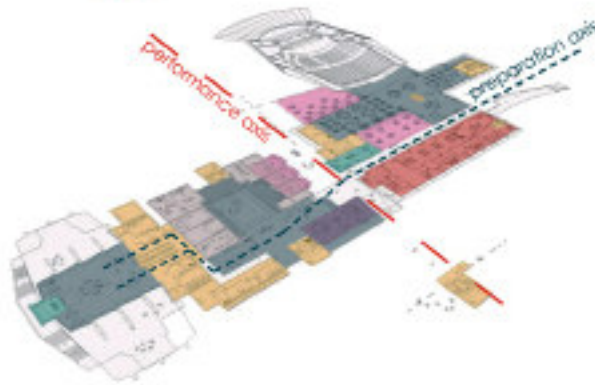
third floor



second floor



first floor



ground floor

### key issues

performance vs. preparation

solid vs. void

grouping of similar functions

express internal functions externally

fig. 6.12 : Functional zones of the intervention along the axes of preparation and performance.

### legend

- administration
- social
- services
- research
- practice
- information
- performance

## 6.2.4.

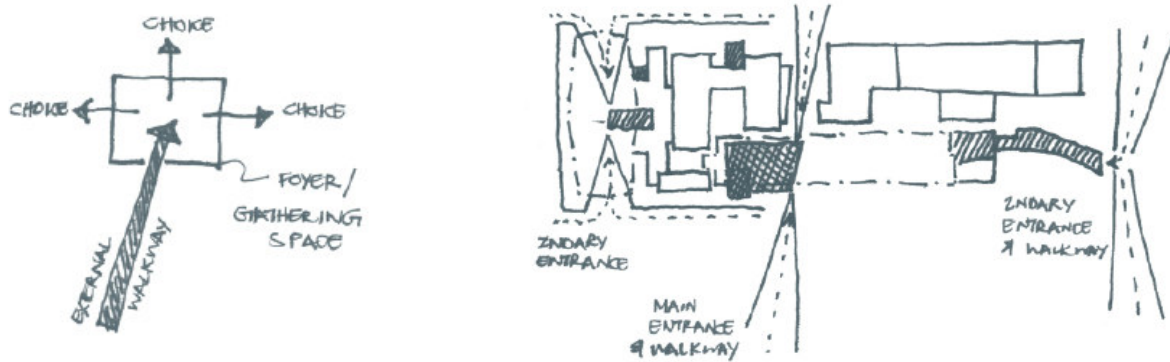


fig. 6.13 : Diagrammatic sketches of the entrance strategy to the building.

The main goal for the circulation strategy was to have a legible system with choice of access to all the areas of the intervention. Entrances and vertical circulation cores had to be visible and easily accessible. The way that entrances are treated in Brutalist architecture further inspired the creation of entrance points:

First the primary entrance point was selected to be at the intersection of the two axes. Two secondary entrances were selected to be at the end points of the preparation axis – thus at Tukkies Avenue on the east and at the auditoria on the west. Each entrance point is provided with an external walkway to emphasize the entrance, followed by a foyer / gathering space from where subtle entrances to the various functional parts lead. In other words, the physical entrances are not celebrated individually, but rather the walkway leading to a transitional area of choice (fig. 6.13).

The second important factor regarding the circulation was to have as much continuity of circulation at ground level to emphasize the buildings relationship with the surrounding natural and social context. Penetrable edges through which the users can filter from one space to another enhances the inside-outside relationships of the spaces and assist in creating the social network. In order to

provide a sufficient flow and as little circulation barriers as possible at ground level, volumes were raised onto columns to free the space below.

For the entrance to the new music school at Tukkies Avenue a ramp was selected as the extended walkway that gradually draws the users in. The new ramp to the first level media centre complements the existing ramp down from Tukkies Avenue to the Music Building and it also enables easy access for disabled users. The ramp continues to become an interactive walkway, linking the first level media centre with the courtyard space and walkway at ground level.

For the west entrance a large foyer defined by glass infill, beneath the hovering auditoria, was selected as transition between the internal orientated auditorial spaces and the natural surroundings. A grand free-standing concrete staircase was introduced into the space as connection to the auditoria above. The size of the staircase emphasizes the more public and performance function of the auditoria / lecture halls. The external staircases were introduced as an emergency route to the auditoria and, as a more solid element, it also assist in defining the west edge of the building.

The vertical circulation towers on the south

and north façades are highlighted as sculptural light shafts that provide access to all the levels of the building. The tower on the south side sits within the foyer space at the main entrance and is thus easily accessible to public users. The tower on the north façade is primarily for the use of the music students and staff. An additional courtyard space was introduced as a further transition between the public foyer at the main entrance and the more private circulation tower for the practise block on the north. The two towers are constructed from *LiTraCon*, a concrete material with glass particles as aggregate. The towers will thus be filled with filtering natural light during the day while at night they will become beacons in the landscape with the internal lighting causing a subtle glow on the outside.

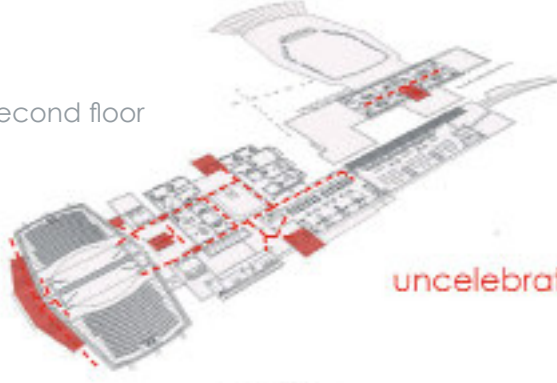
Two lifts are introduced in the building that provide, together with the ramp from Tukkies Avenue, sufficient disabled access to all the parts and levels of the building. The two lifts are positioned on the north façade, one within the circulation tower to the practise block and the other adjacent to the auditorium, accessed via the foyer. The lift to the auditoria also functions as a service lift for the transportation of equipment and instruments to the practise rooms and auditoria.

third floor



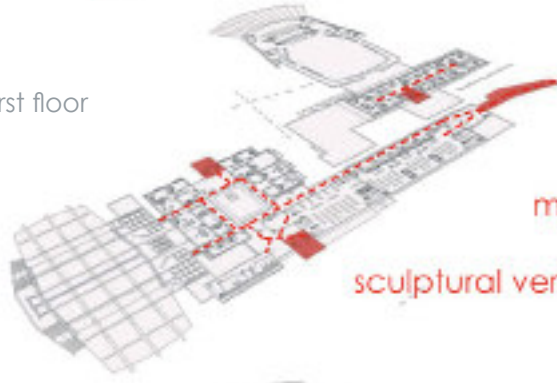
- double volume walkways ■
- extended external walkways ■

second floor



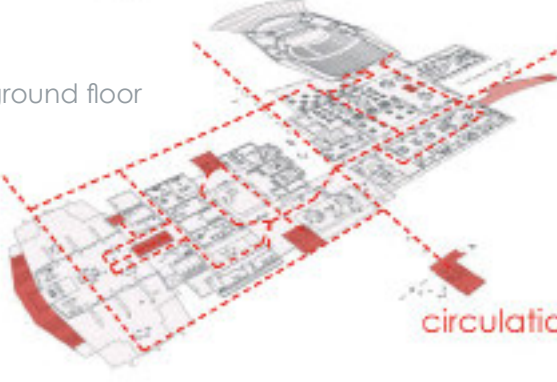
- entrance ramps ■
- transitional foyers ■
- uncelebrated physical entrances ■

first floor



- multi-leveled interaction ■
- sculptural vertical circulation towers ■

ground floor



- continuity of flow ■
- circulation = interaction spaces ■

fig. 6.14 :  
The circulation through the  
intervention at each level.

## 6.2.5.

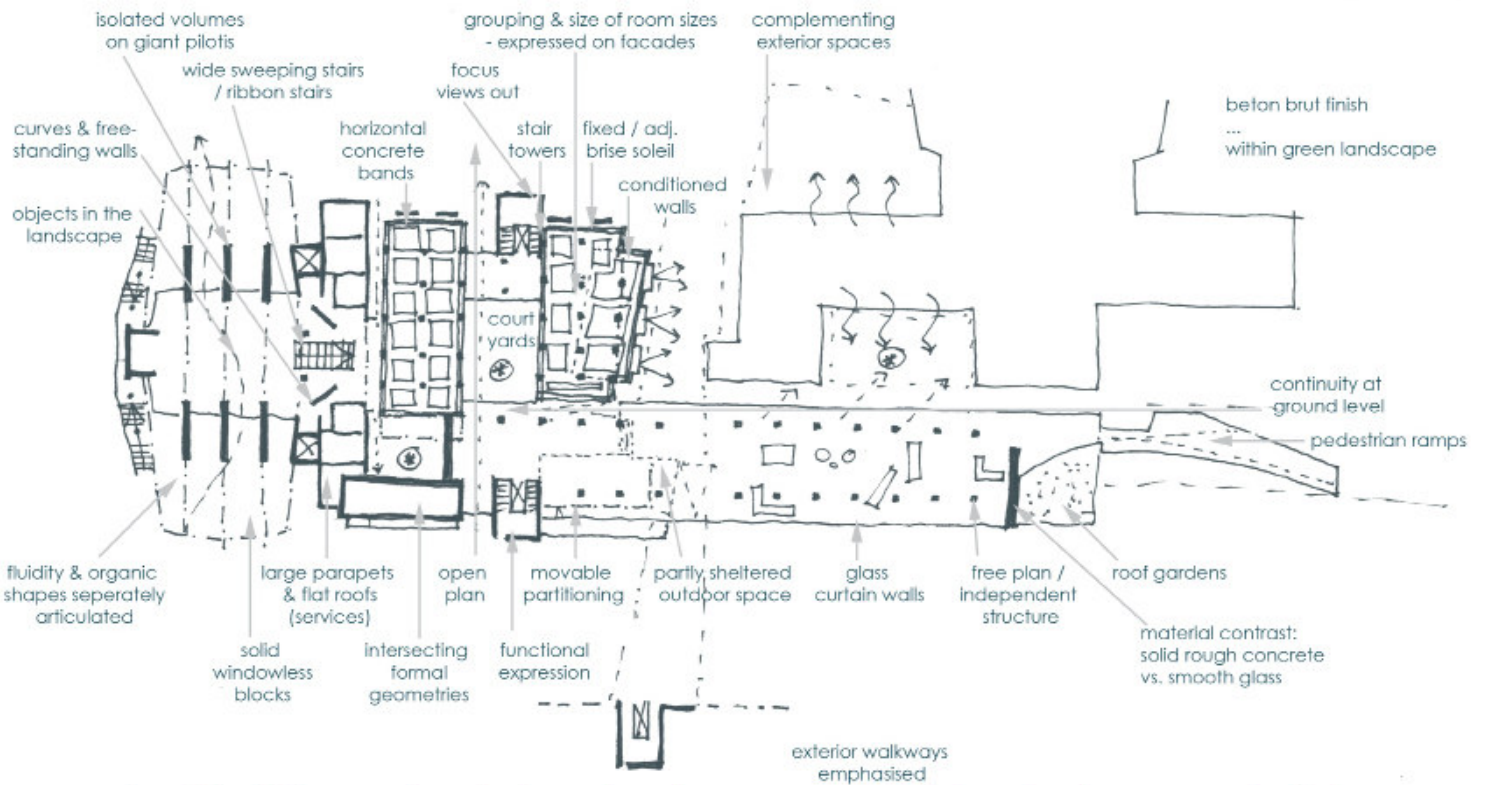


fig. 6.15 : Early sketch of the possible implementation of Brutalist influences on the design of the new music school.

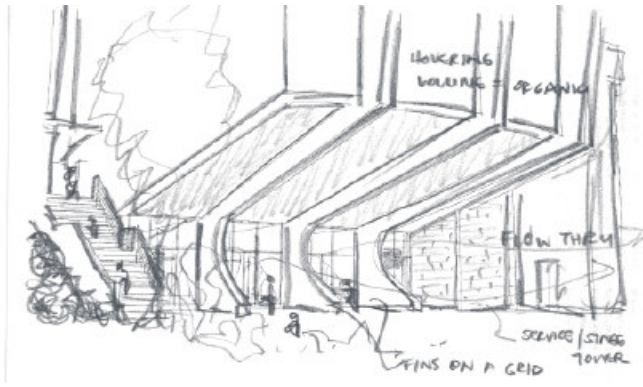


fig. 6.16 : Sketch of auditoria entrance.



fig. 6.19 : Sketch of Music Building courtyard with walkway above.

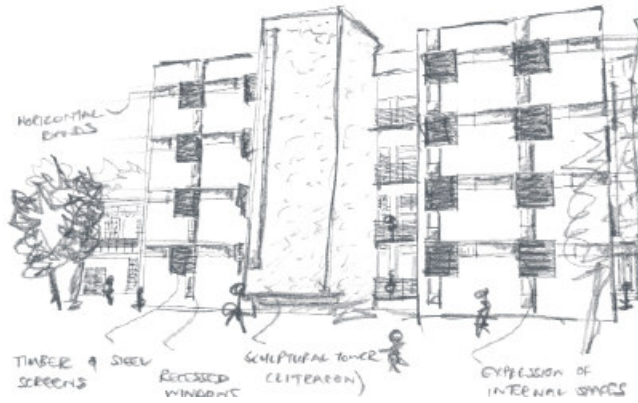


fig. 6.17 : Sketch of practise block with sun control.

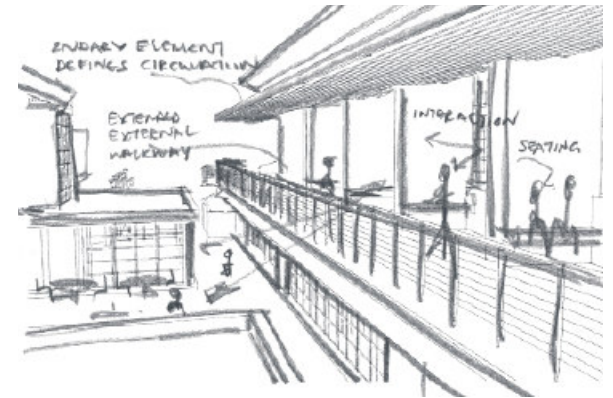


fig. 6.20 : Sketch of extended external walkway.

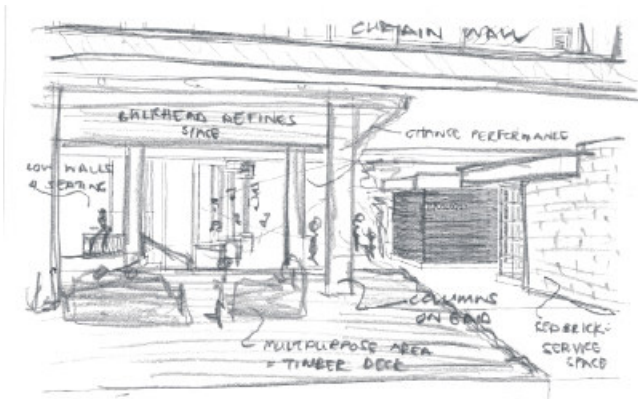


fig. 6.18 : Sketch of main entrance foyer.



fig. 6.21 : Sketch of preparation axis east entrance.



# 6.3.

# views of the building

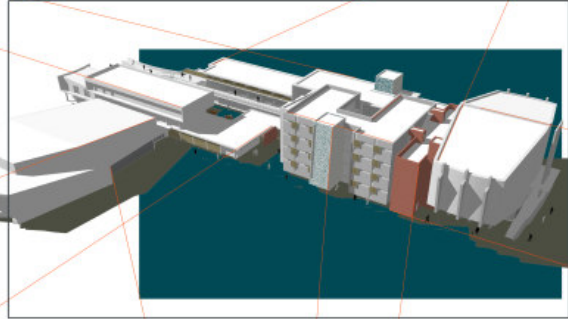


fig. 6.22 : axonometric view from the north-west

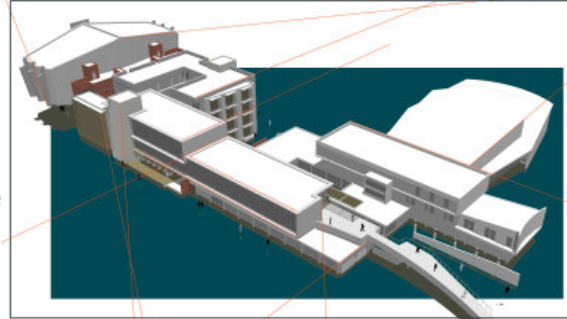


fig. 6.23 : axonometric view from the south-east



fig. 6.24 : view from the south-east along the ring road



fig. 6.25 : view of the main entrance along the performance axis



fig. 6.26 : view of the media centre's south facade



fig. 6.27 : view from the south-west towards the auditoria

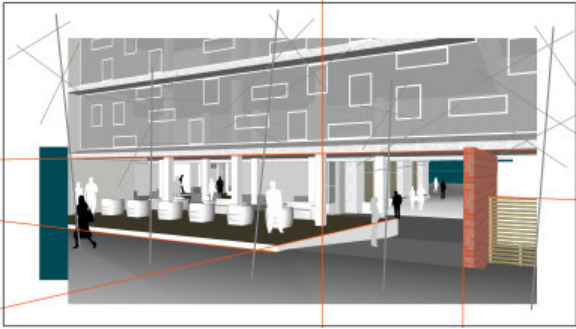


fig. 6.28 : view of the entrance foyer as gathering space

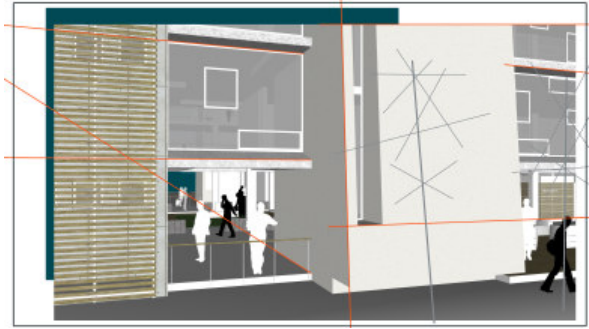


fig. 6.29 : view into the foyer space from the south edge

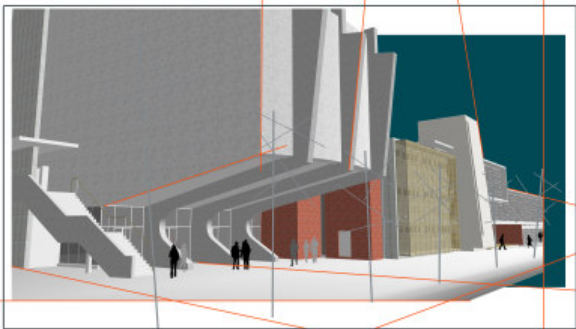


fig. 6.30 : view from the south-west towards the auditoria

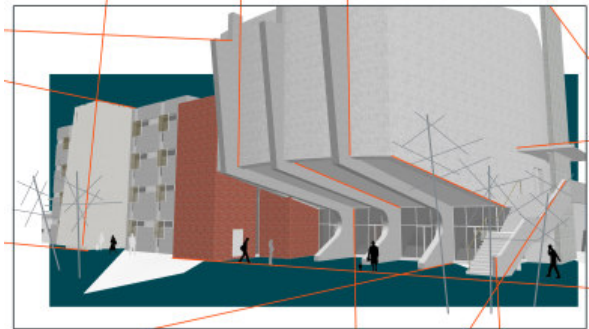


fig. 6.31 : view from the north-west towards the auditoria

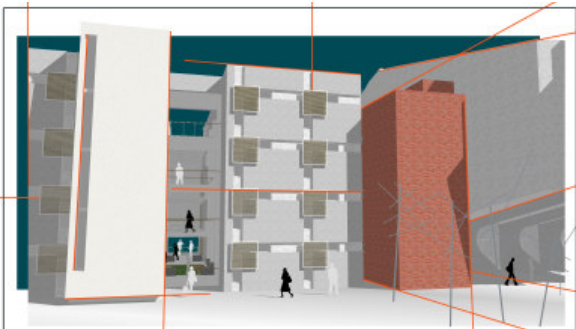


fig. 6.32 : view from the north towards the practise block



fig. 6.33 : view towards the performance studios



fig. 6.34 : view from the north down the performance axis

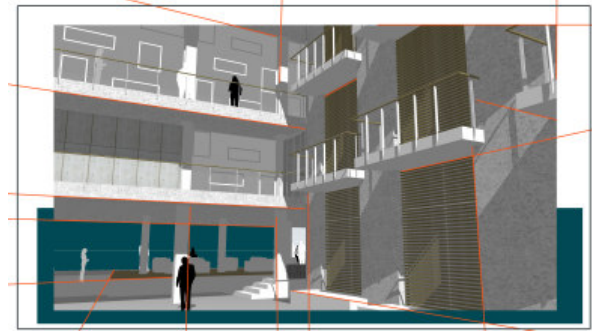


fig. 6.35 : view towards the performance studios & walkway



fig. 6.36 : view from the north-west towards the auditoria



fig. 6.37 : view of the existing courtyard along the preparation axis



fig. 6.38 : view from the information box towards the entrance



fig. 6.39 : view of the entrance to the media centre

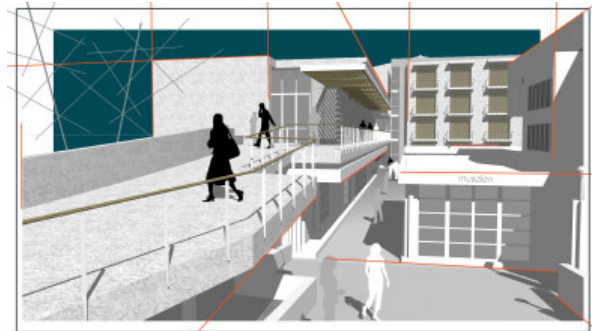


fig. 6.40 : view of the ramps from Tukkies Avenue on the east side



fig. 6.41 : view of the north facade of the media centre

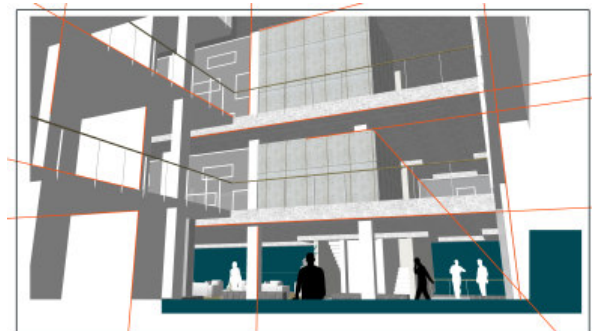


fig. 6.42 : view from the courtyard towards the media centre



fig. 6.43 : view of the north facade of the new music school

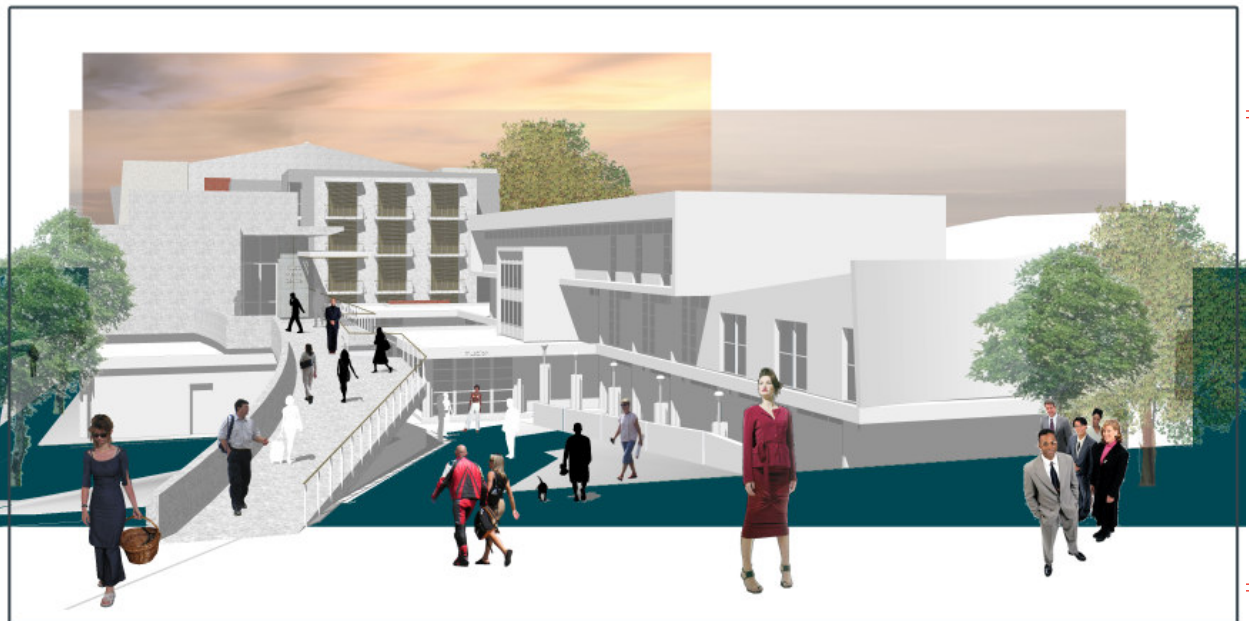


fig. 6.44 : view from Tukkies Avenue towards the east facade of the new music school