INTRODUCTION:
Following the investigation of the various building specific interfaces, it is clear that these interfaces should be connected with one another. INTERFACE now proposes a single element (movement) to join them together. This process of connecting interfaces can be applied to other, similar buildings. The following illustrates this process as a layered system.

Figure 5a: Diagrammatic representation of layering system
EXISTING as boundary

INTERNAL STRUCTURE as interface

MOVEMENT as connection

SERVICES occur directly along the lines of movement

SKIN influenced by internal spaces

IDENTITY as gesture/clue on how to utilize spaces

Figure 5b: Icons of building layering system
EXISTING as boundary:
A building is representative of a city (Bell 2004:137). It giving an idea of the boundaries within. If a building is a boundary, a city becomes a maze consisting of only layers of streets or paths. Movement occur in-through-out. Resulting with a city to become a gateway and not a destination.

Figure 5c: Existing building as boundary icon
Figure 5d: Sketches of internal and external boundaries currently seen in the proposed building.

- The building 'functions' in isolation and does not respond to the surrounding environment.
- Only entrance to the internal spaces.
- Internal boundaries to church square.
CONCEPT SKETCHES:

1. PRIMARY SKETCH

![Diagram showing primary sketch of alterations to the existing building]

- vertical axes introduced
- vertical extrusion - visible from street
- double volume towards street, single to the back - spatial experience in movement from public to private
- movement on external facade - spaces that can be seen will be used and for surveillance horizontal axes
- contact with the street
- partial eastern elevation of street facade
- extrusion on street facade = umbral
- extrusions to open building to the street
- shift in access to open front of building to the street physically and visually.

*Figure 5e: Primary concept sketch of alterations to the existing building*

2. SUCCESSION SKETCH 1

![Diagram showing succession sketch 1 of alterations to the existing building]

- movable street facade - open and close, therefore the building’s privacy is alterable according to time of day/programme
- demolish of eastern facade to open building to the public on the street
- archway - threshold to notify change in privacy of space, but open to public
- arch to create courtyard to the inside of the site
- extrusion - umbral
- roof garden - visual connection with street and Poynton
- service alley - visual connection with vertical axes
- change in vertical scale for spatial experience - see hierarchy of space
- semi public programme - people on ground floor can see activities on first floor

*Figure 5f: Succession 1 concept sketch of alterations to the existing building*
3. SUCCESSION SKETCH 2

Figure 5g: Succession 2 concept sketch of alterations to the existing building

- Extension of horizontal axes - connection to existing neighbour building (City Place)
- Proposed ramp used to define internal spaces
- Partitioning of internal spaces
- Primary movement - internal
- Secondary movement - external
- Introduction of new movement through the building - possibility of a ramp
- Extrusion of first floor - visual connection with the street, see elevation A-A
- Open to street
- Internal view of first floor extrusion
- Facade open to adjacent vacant site
- Vertical axis movement
- Double volume
- Possible eastern elevation
- Possible arch design
- Spatial interface: change in scale - residential example
- Semi public programme: people on ground floor can see activities on first floor
- Entrance - single volume
- Double volume
Movement occurs on ramp through building - becomes the primary route through the building. The ramp is the element to connect all the interfaces and define the internal spaces.

The axes connect the existing building fabric to the surrounding environment. The internal spaces start to overflow into the external spaces and serves as catalyst to regenerate the immediate urban fabric.

5. INITIAL DESIGN

The design is focused on movement through the building and using this to define internal spaces. Although this proposal is adequate in terms of spatial, physical and functional qualities, the aim of this study is to make moderate alterations to existing structures. Therefore the physical alterations to the existing structure is to drastic and the design is only used as footwork for the final proposal.
Figure 5i: Initial design sketches

- Extrusion of first floor - visual connection with the street, and enlarge rentable area
- Change in scale accentuates the movement from private to public space
- Natural light falls easily into the internal spaces
- Movement - ramp is utilized to define interior spaces and increase diversity of user group
- Spatial order according to Egyptian Temple terminology and hierarchical order in space (see figure 4b and 4e)
6. DEMOLITION OF EXISTING - final proposal:

- to allow natural sunlight to penetrate the deep space;
- visual connections between ground and first floor users;
- burst of volume = change in scale as interface

structural purposes - need new & extra structure to support the extension of veranda roof

to allow natural sunlight to penetrate and secondary entrance

to be demolished
existing to be left as is

mezzanine: floor to ceiling height not adequate for anything other than storage

movement:
- connection to both existing neighbour building (City Place) and adjacent vacant site.
- change axes of stairs for visual and physical access

for hierarchy of space (see figure 4b for illustration) and allow movement through

to church square
Figure 5k: demolition plans, not to scale
INTERNAL STRUCTURE as interface:
It is the embracing of permanent changes to the structure towards the creation of responsive interior spaces. The structure represents the transition zone between interior and exterior, adjacent spaces and between human and object. This transition zone becomes the point of interaction between physical mass and mental state (figure 5n).

Figure 5l: Structure as interface icon
Figure 5m: Sketch of new structure as interface

- Ablution block, permanent for all programmes
- Extension of veranda roof to emphasis new entrance, and functional floor plane on first floor (e.g. stage) - stretch over sidewalk, functional and volumetric interface
- New/additional structure
- Vertical support for veranda roof extension (see detail: figure 5o)
- I-beams to support structural wall - functional interface
- To church square
1. **STRUCTURAL INTERFACE:**
This involves the luminal space created by the physical fabric of the building, the construction necessary for alterations and the influence thereof. The alterations have an impact on the surrounding environment and spatial experience.

<table>
<thead>
<tr>
<th>Interface</th>
<th>Physical</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1 Corner</strong></td>
<td>- Change in scale</td>
<td>- Removal of existing external veranda</td>
</tr>
<tr>
<td></td>
<td>- Shadow line</td>
<td>- Addition of extra columns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Enlarge existing column services</td>
</tr>
<tr>
<td><strong>2 Internal</strong></td>
<td>- Removal of structural wall</td>
<td>- Demolish wall</td>
</tr>
<tr>
<td></td>
<td>- Change in scale</td>
<td>- Additional structural supports</td>
</tr>
<tr>
<td></td>
<td>- Change in light value</td>
<td></td>
</tr>
<tr>
<td><strong>3 Vertical</strong></td>
<td>- Sudden change in scale</td>
<td>- Removal of staircases</td>
</tr>
<tr>
<td></td>
<td>- Natural light</td>
<td>- Additional wall</td>
</tr>
<tr>
<td></td>
<td>- Slows down movement</td>
<td>- Open connection to external neighbour building</td>
</tr>
<tr>
<td></td>
<td>- Signage wall (inclusive design)</td>
<td>- Partial demolition of roof floor slab</td>
</tr>
<tr>
<td></td>
<td>- Vertical connection</td>
<td>- New staircase</td>
</tr>
<tr>
<td><strong>4 Services</strong></td>
<td>- Additional central service ‘unit’</td>
<td>- Wet masonry of wall</td>
</tr>
<tr>
<td></td>
<td>- Focus movement on main movement axes</td>
<td>- Plant Room on roof, additional structure for maintenance</td>
</tr>
<tr>
<td></td>
<td>- Security to more private space at the back</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Centralise services</td>
<td>- Additional ablutions</td>
</tr>
<tr>
<td></td>
<td>Mental</td>
<td>Surrounding Environment</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Extended columns</td>
<td>- Awareness of soffit above head</td>
<td>- Visual connection with opposing site (Poynton)</td>
</tr>
<tr>
<td>Treatment to house</td>
<td>- Boundary on the sidewalk (evening)</td>
<td>- Connection with pedestrian movement on sidewalk – ultimately the connection to urban environment</td>
</tr>
<tr>
<td>Support</td>
<td>- Change in spatial experience</td>
<td>- Gives the opportunity for vertical dispersal of services</td>
</tr>
<tr>
<td>x²</td>
<td>- Awareness of sudden burst in volume</td>
<td></td>
</tr>
<tr>
<td>Existing (City Place)</td>
<td>- Change in floor levels</td>
<td></td>
</tr>
<tr>
<td>Roof and first floor</td>
<td>- Light and shadow lines on floor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Improve movement</td>
<td>- Vertical connection</td>
</tr>
<tr>
<td></td>
<td>- Change is scale</td>
<td>- Horizontal connection</td>
</tr>
<tr>
<td></td>
<td>- Inclusive design – natural ventilation and light</td>
<td>- Divides building in 2, improve movement to back of building</td>
</tr>
<tr>
<td>Additional</td>
<td>- Physical boundary</td>
<td>- Focus on horizontal movement</td>
</tr>
<tr>
<td>Presence</td>
<td></td>
<td>- Centralised ablutions</td>
</tr>
</tbody>
</table>

Figure 5n: Table of new structural interfaces
MOVEMENT as connection:
As designers we need to be aware of the relationships of design to the changing nature of our society. The attention to introduce inclusive design and access to space is fundamental. By allowing access to spaces (physical and visual), the building opens up to the public, allowing the spaces to be entered and utilized by a diverse range of people.

The concept of liminality, means mobility or freedom of movement (figure 4p), and connects the internal structures (interfaces) with each other. The internal movement disperse and become continuous with the external pedestrian movement – ultimately connecting interior spaces dispersed in the urban environment with each other.

Figure 5o: Movement as connection icon
Figure 5p: Sketch of movement connecting the individual interfaces
Figure 5q: Site plan with new movement routes. The internal movement becomes continuous with exterior pedestrian movement.
The permanent phase looks at materials such as structural steel and wet-construction. Though it may have a larger physical influence on the existing, it is used because of the robust properties and low or no maintenance and long lifetime. Predominantly, materials used have a low ecological impact such as the reuse of demolished materials (example: rainwater runoff) and new materials are produced from recyclable materials.
Figure 5s: First & second floor plan with permanent alterations to the existing
Figure 5t: Section D-D and external transitional zone

- **Figure 5t:** Second floor plan with permanent alterations to the existing fitting EA 2.
- **Figure 5t:** Section D-D: Detail - new rainwater runoff: NTS
- **Figure 5t:** Fitting EA 4: NTS
- **Figure 5t:** Fitting EA 2: NTS
- **Figure 5t:** 8400mm
- **Figure 5t:** 4100mm
- **Figure 5t:** General landscape concept: Subject to landscape architect specification
- **Figure 5t:** Pine in Plugs
- **Figure 5t:** Schotia Brachypetala (Kulibosbokbos)
- **Figure 5t:** Iris linearis
- **Figure 5t:** Phyllostachys chafferi
- **Figure 5t:** Astragalus vagans
- **Figure 5t:** NGL
- **Figure 5t:** FFL
- **Figure 5t:** Custom metal chain weaving for rainwater runoff from roof
- **Figure 5t:** EA 1: IP65 adjustable fitting, warm white 3" narrow beam LED with spread lens on plinth aquaflow permeable paving 40mm layer river sand 110mm Ø uPVC 300mm Ø uPVC
- **Figure 5t:** Interiors: NTS
- **Figure 5t:** Rough concrete aggregates - recycled material from demolition on site concrete anchor new wet construction - through filled with aggregates geotextile concrete footing
- **Figure 5t:** detailed - new rainwater runoff: NTS
- **Figure 5t:** Section D-D: NTS
Figure 5u: Isometric detail of suspended veranda and stage

**DECKING**
140 x 30mm (3600mm lengths)
COMPOSITE DECKING FIXED WITH CLIPPING SYSTEM, MOUNTED ON JOISTS WITH TIMBER NAILS

**JOISTS**
50 x 150mm HARDWOOD FLOORING JOISTS, LOCALLY SOURCED, GRADE A GCA PRESERVATIVE TREATED 9 600mm SPACING, FIXED TO RING BEAM SYSTEM WITH ANGLE PLATES

**RING BEAM**
300 x 160 x 1.46kg/m FLOORING STRUCTURAL STEEL CHANNEL WELDED TOGETHER AT SITE, BOLTED TO I-BEAM ON 8mm THICK PLATE

**SUPPORT**
100 x 100 x 22.8kg/m FLOORING ANGLES WELDED TOGETHER, EMBEDDED BETWEEN TWO 8mm THICK PLATES
COATED PLAIN STEEL PLATE BOLTED TO I-BEAM STRUCTURE TO SUPPORT JOISTS

**STRUCTURAL SYSTEM**
355 x 171 x 51kg/m FLOORING STRUCTURAL STEEL I-BEAM ANCHORED TO COLUMN ON STEEL PLATE, BOLTED TO HALL WITH M12 RAIL BOLTS BY STEEL PLATE WELDED ON END POINTS

**COLUMN**
300 x 300mm REINFORCED CONCRETE COLUMN
Figure 5v: Sectional & Isometric detail of acoustic separation

**Figure 5v: Sectional & Isometric detail of acoustic separation**

- **Material Details:**
  - Eco-Fibre Acoustic Board
  - Marmoleum Floor Sheets
  - Wood Floor & Service Spine
  - Cork Acoustic Ceiling Boards
  - Suspended Cork Acoustic Ceiling Board (600 x 600) with extended hanging cables
  - Existing roof structure
  - 2x20V Necessity Ceiling Track with 2x30W metal halide lamp, fittings interchangeable according to programme
  - 28mm custom stainless steel webnet
  - Existing timber mezzanine floor to be sand down and treated as per timber service spine

**Section A-A: NTS**

- Figure 5w: Section A-A with permanent and semi-permanent changes, including materials
Figure 5x: Detailed exploration of new ablutions – permanent changes

**private:**
- IA 3 LIGHT FITTING: suspended open source (BW Philips Ambiance Standard shape compact fluorescent lamp, E27 base).
- STAINLESS STEEL: 0.6mm polished Stainless Steel - 3 x 450mm width flat panels on wall, floor to ceiling - 1 x custom handwash crib
- VALCHROMAT WALL STRIP: 12mm grey large strata Valchromat sheets with varnish - floor to ceiling

**transition:**
- WALL TILES: 500 x 500 light grey glass mosaic tiles
- STAINLESS STEEL: brushed Stainless Steel receive cover plate - brushed Stainless Steel removable dustbin - soap dispenser with brushed Stainless Steel wall plate - removable brushed Stainless Steel water trough with 100mm splashback
- SPLASH MAT: black interlocking rubber mats with holes
TAPS:
- Chrome plated wall spout
  - single temperature, touch free electronic control spout
  - flow time: 4 seconds
  - operating pressure: 0.3 bar

METERING STOPTAP:
- concealed electronic metering stoptap (in wall recess)
- default flow time setting: 4 seconds
- sensor operation

LEGEND
- Stainless steel water closet with black seats
- Hand wash area: Stainless steel surface with wall mounted chrome plated pipe tap
- Built in stainless steel cistern (urinal)
- Built in furniture

NEW CONSTRUCTION
- Existing structure

WALL: Painted matt white enamel
- Wall recess for allocated soap, shampoo, liquid and paper towel
- Polished stainless steel cover
- Wall tiles with wooden and mosaic tiles
- Suspended chrome taps and pipes - Watertight enclosure
- Stainless steel water trough, with splash back and mat

CUSTOM STAINLESS STEEL HARDWARE GRIP AND HANDLES (TOP ONLY) WITH SUSPENDED CHROME TAP AND PIPE - AS POP TRANSITION AREA

Grey lining: stainless steel, valance, motor and top only with suspended chrome tap and pipe - as pop transition area

Ablutions plan: NTS
SERVICES occur directly along the lines of movement:
“changeability itself is frequently the object of admiration. For it means movement, progress and eternal youthfulness…”
Daisetz Suzuki (Plummer 2009:20)
Available services and spatial size needed for changing services (current and future use), as per engineer:

- **Water** – 50Ø mm
- **Data** – 50Ø mm
- **Electricity** – 100Ø mm (figure 5v: adequate natural light in day)
- **Air-conditioning** – 500Ø mm, split units is used if needed, otherwise the natural ventilation is more than adequate (figure 5u)

**Figure 5z:** Sketch of new services along the lines of movement

- services are like an infection spreading through the building
- defines internal spaces

- primary service route
- services branching of from primary route
- permanent service ‘unit’, the only constant because:
  - green design: it is not necessary to change wet services with each new programme
  - allows for duct to plant room

services branching out as needed per specific programme

- service ‘duct’ - semi permanent installation, easy access for maintenance, addition or removal of services is fast

new service duct

to church

**square**
semi-permanent changes:

Figure 5aa: Ground floor ceiling plan with lighting layout, part of the semi-permanent changes to the proposed building.
Figure 5bb: First floor ceiling plan with lighting layout, part of the semi-permanent changes to the proposed building.
1. NATURAL VENTILATION:
Due to the long and narrow windowless nature of the existing building, one gets the sense of feeling blocked in. Studies done in Japan on offices spaces indicated that “psychological tension associated with windowless rooms arises not because the outside is not visible, but rather because there is not enough room to allow the eye to roam freely” (Abe 2003:25) Thus by creating higher floor to ceiling ratios (4.5m) it creates the illusion of a ‘window’, liberating a person of the feeling of being boxed in, and by doing this also allow natural ventilation to take place.

By making these alterations to the existing building, there is no need for air-conditioning in the building. In the unlikely event that a programme may need air-conditioning, provision is made to house the services. Figure 5x illustrates possible programmes in the building.
2. NATURAL LIGHT:

Light gives a static building the ability to change. The building “register change and movement of natural light” (Plummer 2009:18). Therefore the building is altered to introduce these changes to mimic the changing rhythms of life.

Figure 5dd: Sketch of existing and new natural light penetrating the internal spaces
These sections are merely an indication of how natural light falls into the internal spaces after permanent alterations to the building. It does not reflect the spaces as illustrated by figure 5x, brought about by semi-permanent and temporary alterations.
These sections are an accurate indication of the interior spatial qualities after permanent and semi-permanent changes are made to the proposed building. It illustrates how natural light and where specified artificial light falls into the spaces.

Figure 5ff: Sketch of natural and artificial lighting penetrating the internal spaces, after permanent and semi-permanent changes.
3. SERVICE SPINE:

A semi-permanent layer of material is introduced which is robust yet is able to be removed (as change is social conditions) without damage to the permanent materials. Wood is chosen because of lower financial implications and connections as interlocking systems are easy to install as well as remove, and can be structurally secured to last longer.

It becomes the service tray spreading the necessary services through the building. The design allows for easy access to all services thus maintenance and changes can be done without difficulty.
Figure 5ii: Exploded isometric of wood service spine

Figure 5jj: Section of service spine footing indicating how the services run down the mullion into the access flooring

TYPICAL ASSEMBLY OF SERVICE SPINE - EASY TO REMOVE BUT WITH ROBUST CONNECTIONS

standard pine timber panel with timber tone and water repellent, high sheen wood finish

- timber stop block
- recessed warm white LED ribbon
- steel channel
- marmoleum floor sheets
- access panel
- eco-fibre
- acoustic board

detail 05 - spine footing:
4. POSSIBLE PROGRAMMES:
These possibilities were used as framework towards the proposed design.
SEMI-PUBLIC PROGRAMME
ground floor plan - music school, recording studio and retail

PUBLIC PROGRAMME
ground floor plan - retail centre
SKIN AND IDENTITY:
The interior spaces affect the shape of the skin which in return influences the identity. There is a gradual transition from private to public space towards the street. This is indicated not only through a change in vertical scale, but in the physical fabric as well. The building starts to reveal itself to you (construction materials and services) towards the more public areas.

Figure 5ll: Skin and identity icon
- moderate alterations

I-beam structure as 'gateway' and maintenance plant room

stacking doors to open facade

adjustable entrance facade:
- open to create interface
- closed to become barrier and interactive wall in the evening

adjustable facade - extend into interior as well as the sidewalk

'gate' open and close allow or prevent access to adjacent site - dependant on current programme

extrusion of interior space

swinging plane - open or close facade, also serve as branding surface

proposed new building skin

floor area

to church square

Figure 5mm: Sketch of alterations to the skin and identity
**TEMPORARY CHANGES:**

The temporary phase is subject to tenant requirements. With permanent and semi-permanent changes, any additions to the structure as needed with each new tenant can be removed and reused.

**NORTH FACADE - UMbral**

**EAST FACADE - UMbral**
<table>
<thead>
<tr>
<th>No.</th>
<th>Given Spaces (Permanent and Semi-Permanent Changes)</th>
<th>Possible Spatial Use as Per Tenant (Temporary Changes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="Image1.jpg" alt="Image 1" /></td>
<td><img src="Image2.jpg" alt="Image 2" /></td>
</tr>
<tr>
<td>2</td>
<td><img src="Image3.jpg" alt="Image 3" /></td>
<td><img src="Image4.jpg" alt="Image 4" /></td>
</tr>
<tr>
<td>3</td>
<td><img src="Image5.jpg" alt="Image 5" /></td>
<td><img src="Image6.jpg" alt="Image 6" /></td>
</tr>
</tbody>
</table>
CONCLUSION:

The thesis examined the existence of multiple scales within the city and how these various scales relate to interior spaces. There are transition zones between these 'scales' that need to be breached. These transition zones can act as physical boundaries thereby preventing infiltration or alternatively only possess the behavioural qualities of a boundary thereby territorializing space without being a physical or visual 'wall'.

INTERFACE embodies this transition zone - the body of research that looks between, in and around the structures and envelopes that comprise this space. It seeks to acknowledge the importance and transition between two phases (or spaces), and to recognize the potential it holds. INTERFACE seeks to harness this potential by connecting these transition zones with the surrounding qualitative environment of different scales.

Existing - external boundaries

Existing - internal boundaries

to church square

Skin - influenced by internal spaces & identity - as clue on how to utilize the space

Services - directly along line movement. DEFINE SPACES
INTERFACE further acts as the transitional zone between: interior and exterior, various zeitgeists, as well as the transitional zone between human and object. This enables the adjacent spaces to transform and respond to the current user profile and social need. The study recognises the city as a collection of behaviours, intervening at all scales within the network. By simply altering the moderate scale, it has an effect on all scales. In doing so, INTERFACE demonstrates the importance of interior architecture to society as well role it can play in the preservation and regeneration of urban conditions.

In conclusion, the idea is not only to keep the existing occupied and significant; but to trigger relations and social spaces, “to stimulate new patterns and situations of urban movements in the city” (Obrist 2009:11).