3.1.1 The Role of the EBRC within the CBD

The intention is for the EBRC to act as the catalyst in transforming the Apies river into a continuous greenbelt through the city that provides an ecological, cultural and social link from the north to the south of the city. The EBRC needs to ‘activate’ or ‘animate’ the river in its context. The greenbelt should form informal cultivation gardens for the EBRC, reintroducing indigenous medicinal plants into the environment. This greenbelt will form a type of urban agriculture whereby the roots, bark, leaves etc can be harvested sustainably. The biophysical environment will be pulled from the ridges (See fig.3.4-7) into the city at the same time directing people along it towards the ridges. The sequence on page 34 indicates the envisioned process of ‘animation’ that will result from the EBRC.
3.1 Frame 1 - This represents the current condition in Pretoria City with the ridges in the north and south acting as the 'nature rooms' for the city. The Aplies River connects these ridges, with scattered green patches along it. Throughout the city similar green spaces occur, but with no coherent link between them.

3.2 Frame 2 - With the EBRC established, its function will pull indigenous vegetation, medicinal plants specifically from the Witwatersberg Ridge. At the same time, because of its abundance of existing medicinal plants, vegetation from Salvokop will begin to spread into the city towards the EBRC, which begins to form the greenbelt.

3.3 Frame 3 - 'Nature Corridors' spread perpendicular from the greenbelt, moving away from the river linking the smaller green patches and cultural installations. The vegetation from Salvokop continues to spread northwards.

3.4 Frame 4 - The lines of vegetation meet, linking the ridges. The emphasis of migration is now on the 'corridors', which begin to form an east west link, from which smaller 'corridors' spread.
3.2 Existing Frameworks

3.2.1 ISDF

The Integrated Spatial Development Framework (ISDF) is the urban design framework currently being utilised for the Pretoria inner city focusing on its growth and development. The aim of the ISDF is planning and integration of the city's main components; land use, transportation, natural environment and open space.

Interlinking of open spaces that can be used for recreation and entertainment is of high importance along with a fully...
integrated public transport system. There is also recognition of the importance of creating a sense of place and belonging in Pretoria, this is to be assisted by conservation approach to worthy buildings and structures.

The ISDF divides the inner city into sixteen precincts, these are to be labelled and developed according to their unique character. The site for the EBRC falls in the Hospital Hill precinct and is also influenced by development proposals for Struben Street, Boom Street, CBD North, the Zoo and Arcadia.

Proposals for the CBD North and Zoo precincts place an emphasis on Dr Savage Street with requests for a strong gateway feature for the CBD and new entrance to the Zoo linked to the Apies River open space system and public transport systems.

The Struben Street Boulevard stretches from Marabastad in the west to the Apies River in the east and forms a strong link between the Union Buildings, the Zoo and Marabastad. Its development is separated into three areas; through Marabastad, from Potgieter Street to Paul Kruger Street and from Paul Kruger Street to the Apies River (ISDF, 1999, p48).

In the first section where Struben Street crosses D.F. Malan Drive, a gateway element is to be established to emphasize the sight line to the Union Buildings tying them to the rest of the city. The residential street edge through Marabastad is to be developed in such a way that its historical character is maintained (ibid).

In the second section there is an emphasis on the Union Buildings as a focal point by establishing appropriate building lines and heights to define street spaces. There is also encouragement for diversity of land use (residential, retail and office)(ibid).

In the third section the termination of Struben Street is to be emphasised with a new urban square as a focal point on the Apies River. In the Arcadia proposal, this square is to be connected to an inter-precinct ‘art-walk’ that links the Union Buildings to the Pretoria Art Museum (ibid).

Boom Street runs parallel to Struben Street and shares many of its characteristics. Boom Street links the Steenhoven Spruit to the Apies River with proposals for urban open spaces at both these points of connection. Environmental upgrading required in the Marabastad section is to enhance high activity/trade image that exists (ISDF, 1999, p51).

The ISDF recognises the Hospital Hill precinct as a largely institutional area with mainly educational and medical facilities. Most of the emphasis is placed on establishing an identity for the precinct along the roads and intersections, unfortunately with little emphasis on making the precinct more permeable and enhancing important pedestrian links. There is also little emphasis on the Apies River that runs through the middle of the entire area.

Many of these principles are repeated in the Apies River Urban Design Framework.

3.2.2 ARUDF

The aims of the Apies River Urban Design Framework (ARUDF) are:

- To exploit the river as a natural and cultural asset to Pretoria by making it an accessible, integrated open space system.
- To turn the river into a place of prosperity and human
interaction by creating tourist opportunities and pedestrian activities along it.

-To strengthen the interaction between the river and its surrounding environment by creating an appropriate interface with adjacent developments and by making it user friendly for locals and visitors (ARUDF, 1999, p84).

By integrating the principles of the ISDF and the ARUDF, the following small scale design framework was created.
3.3 Proposed Framework

3.3.1 Environmental

- Indigenous vegetation is to be increased on the ridges and pulled through (along with vegetation from the Zoological gardens) the greenbelt, strengthening it and rehabilitating the biophysical landscape along the river (See fig. 3.9).

- This indigenous vegetation should include medicinal plants creating the possibility of an urban agriculture within the greenbelt.

- Small nature rooms (Dewar and Uyttenbogaardt, 1991, p81) should be encouraged to spread into residual building space creating private social spaces and encouraging pedestrian movement.

- Nature corridors are to be pushed along paths of movement creating strong links between cultural, social,
entertainment and open spaces, while encouraging the further development of these facilities (See fig. 3.9).

- Built form should be integrated into the landscape creating semi-enclosed spaces for social interaction, integration of indoor and outdoor space and creating a responsive space on the river.

- When possible, trees should be planted rather than shrubs as this allows for visibility through the greenbelt and prevents hiding spaces for undesirables.

- Biophysical landscaping should take place as this requires a lower maintenance, allows the greenbelt to spread on its own and increases the bio-diversity.

- Create a damming system (with early flood warning devices) where the channel changes from concrete to natural to slow the water velocity, preventing erosion at this point (See fig. 3.10).

- Use this damming system as an alternate small-scale energy source.
- Built form should emphasise the transition between the urban and rural river, creating awareness of the biophysical environment (See fig. 3.10).

- New buildings along the river should be permeable providing sight lines to the river, especially for the higher areas to the east. Panoramas of the city skyline and ridges should not be obscured.

3.3.2 Movement

- There needs to be a strong identity node at the termination of Nelson Mandela Drive that offers direction towards other cultural facilities in the city (See fig. 3.11).

- A gateway building for the CBD is to be placed at Hove’s Drift. It should be a mix-use building that facilitates the existing taxi-terminus, and should pull trade activity from Marabastad and push pedestrian activity along Nelson Mandela Drive northwards.

- A strong pedestrian route is needed to link the taxi-terminus to Belle Ombre train station. This route is to continue
southwards to Nelson Mandela Drive.
- A bicycle path should follow this pedestrian route to encourage alternative transport methods.
- Car parking should be placed near the river with public transport stops at regular intervals along the river to promote the river as an activity spine.
- Establish an east/west cultural walk from the Zoo / Aquarium (where it ties to ‘Museum Park’) to the Union Buildings with retail / entertainment facilities to be located along this.

Extend this walk to the Pretoria Art Gallery (See fig. 3.12).
- A north/south cultural walk exists (See fig. 3.17). Where these walks intersect at the Apies River, a strong cultural node is to be formed.
- Maintain the existing retail functions along Struben Street to form a soft edge to define the south end of the precinct.

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3.3.3 Imageability

- A linear focal point or active edge is needed on Dr Savage Street to slow traffic, integrate the two adjacent land parcels and create awareness of the facilities within the precinct (See fig. 3.13).
- Perimeter walls need to be both physically and visually permeable, contributing to the imageability of the precinct.
- Existing walls along the river should be opened up providing views on and across the river (See fig. 3.13).

- All the bridge crossings along the river need to be accentuated creating awareness of the river and emphasising its cultural heritage.
- Public amenities, bus stops, street furniture etc. are to be provided along the river. These must reflect the image of the river to form a coherent linear structure.
- The existing residential pocket should be reserved for student accommodation, linking nodes within the precinct. Spaces amongst the existing institutions should be tied to the
- The taxi-terminus at Hove’s Drift should be formalised and a retail/trade node should be developed here. This will pull the trade activity from Bloed and Boom Streets into the Hospital precinct and tie these activities to a strong north/south pedestrian route (See fig.3.14).

- Informal taxi stops along Du Toit street need to be moved to this node, opening Du Toit street to stronger cultural/pedestrian route, helping to direct activity along Nelson Mandela Drive.

- The precinct needs to be opened-up to inner city activity from the south-west, however small private spaces should be established for the institutional users (See fig.3.14).

- Existing buildings need to open up onto the river. These buildings should be reserved for mix-use with an emphasis on entertainment and small scale retail on ground level (activities to overflow outdoors) and residential on the floors above.
- New buildings are to celebrate the river and interact with the biophysical environment. They should follow the form of the river so as not to create any possible lost spaces (See fig. 3.15).

- Flood plains should be reserved for biophysical vegetation and pedestrian movement.

- Bridging should be encouraged within the large land parcels. This will form links across the river and create an awareness of the river.

- Prefabricated structures along the river should be replaced with more responsive, appropriate building types that will enhance the qualities of the green belt.

- Existing historical buildings and those with architectural merit should be emphasised and integrated into the green belt system.
3.3.4 Cultural

- All the cultural / historical assets (See fig.3.17) along the river should be made recognisable. Relevant information (placards, booths, tours, etc) is to made available within these areas. This will create a strong cultural / educational walk along the entire river.

- The Caledonian precinct is recognised as an arts and culture node, associated facilities must be encouraged to become established here. A link to 'Museum Park' should be established (See fig.3.17).

- The open grounds on the Pretoria Technikon Arts campus should become a public sculpture garden integrated into the greenbelt, from which a strong link must be made to the Caledonian precinct (See fig.3.16).

- Enforce the gateway at Hove’s Drift by locating a new entrance to the Zoo on Soutpansberg Street. The recreational activities within the Zoo are to be extended to the new entrance, tying them into the Apies River green belt.
and pulling them into the city and encouraging pedestrian activity northwards (See fig. 3.16).

- The Pretoria Technikon Art Campus and the medical campus should be linked over river (through the sculpture garden) to form a student activity node. A pedestrian link could form between this node and the Caledonian arts node.

- Buildings along the Struben Street Government Boulevard must not obstruct any sight lines to the Union Buildings. New buildings on the Technikon Art Campus should frame views of the Union Buildings (See fig. 3.16).

**URBAN DESIGN**