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INTRODUCTION
The Sibaya Precinct is approximately 855 Hectares in extent and incorporates some 450 Hectares of existing KwaZulu-Natal coastal dune forest (Mlanga Forest, Forest 31 and Hawaan Forest) and the Ohlanga River basin and estuary. It has a 1 kilometre stretch of relatively undisturbed beach beyond the Mlanga Forest between the river mouth and Mdloti.

After detailed studies were undertaken the following development principles were established for the whole precinct –

- The existing dune forests are to be retained and extended over time;
- The development is to be concentrated on the hilltops to avoid urban sprawl;
- Sustainable communities should be created in line with the current international standards and ‘One Planet Living’ principles;
- The predominant character of the Precinct must be ‘green’ with exciting concentrations of urban forms, squares and hilltop architecture that grows out of the site in simple rectangular building block format;
- The general form of the architecture is rectilinear with use of functional clip-on’s and cut-out’s to create a distinctive architecture;
- Roofs should be seen as potential outdoor living areas with the balance planted;
- The architecture should be performance driven rather than style driven;
- Colours and materials are to be limited to create harmony throughout the diverse mixed-use, density and height conditions;
- Orientation, use of natural ventilation, energy efficiency and zero carbon is to inform the design process;
- The architectural design and detailing is to be of the highest quality and designs need to be robust and adaptable.

Figure 1: Aerial View of the Sibaya Precinct
TOWARDS A SUSTAINABLE FUTURE
The Sibaya development is intended to embrace the principles of **ONE PLANET LIVING**. These principles are aimed at improving our quality of life as well as contributing to the health of the planet by reducing our carbon footprint. Essentially our carbon footprint is a measure of the energy we consume and the amount of carbon that is released into the atmosphere as a result.

Carbon dioxide (CO\(_2\)) is the prime polluter of the environment and the prime contributor to global warming. The rise in temperature of the earth brought about by global warming will have a dramatic effect on our weather patterns and sea levels.

A way of cutting back on the amount of CO\(_2\) that is released into the atmosphere is to reduce our use of fossil fuels and, instead, to use energy from more renewable sources such as wind, wave & solar power.

### 2.1. SUSTAINABILITY PRINCIPLES

The principles of One Planet Living aims to achieve-
- Zero carbon emissions;
- Zero waste;
- Sustainable transport;
- Sustainable materials;
- Local and sustainable food;
- Sustainable water;
- The Preservation of natural habitats and wildlife;
- A respect for culture and heritage;
- Equity and fair trade;
- Health and happiness.

### 2.2 URBAN PLANNING

The planning of the Sibaya precinct has addressed the principles of **One Planet Living** by –
- Clustering development instead of creating ‘Urban Sprawl’;
- Promoting Mixed-use zoning & a diversity of housing types in each neighborhood;
- Creating an open space network to encourage natural diversity, manage water runoff, preserve wetlands and create local amenity;
- Promoting the use of native plant species in both the public and private environment;

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Figure 2: Sustainable Principles
TOWARDS A SUSTAINABLE FUTURE

- Promoting controlled urban agriculture and the use of planting within & on buildings;
- Minimizing environmental harm through the use of permeable surfaces and the management of storm-water runoff

2.3 SITE PLANNING

In terms of the planning of individual developments within the precinct it is the responsibility of the designers to embrace the principles of One Planet Living by -

- Responding to the local climate & topography – harnessing Prevailing winds, capturing solar power, harvesting Rainwater, reducing heat gain and responding to the topography of the site(s);
- Responding to the local context in terms of land use and amenity (views, open space, pedestrian movement, public transport, cycle lanes etc);
- Decreasing storm water run-off by limiting hard surfaces and using porous materials wherever possible to increase the water infiltration into the ground.

Figure 3: Sibaya Node 5 Framework Plan
2.4 ARCHITECTURAL DESIGN

In terms of the design of buildings the following principles need to be applied from an environmental sustainability point of view –

1. Natural Ventilation

Natural ventilation is the use of wind and temperature differences to create airflow in and through buildings – buildings should make use of prevailing winds and take advantage of sea breezes – the use of induced natural ventilation devices, such as extractor turbines is encouraged.

2. Openings & Solar control –

Windows can provide day lighting, passive solar gain, natural ventilation, and views – the effective use of natural light in buildings to minimize the need for electric light during daylight hours is encouraged – Openings should be protected by appropriate solar control devises. Glazing systems are to be chosen to reduce solar.

3. Colours and textures

Light colours reflect heat and dark colours absorb heat. Smooth surfaces absorb more heat than textured, ‘prickly’, surfaces. Colours and textures are to be chosen to respond to orientation.

4. Insulation

Good insulation is needed in walls & roofs to reduce unwanted heat gain or heat loss

5. Use of Natural & high tech materials

Natural material such as woods & stone are to be encouraged (except, No Natural rainforest timbers) – All other material origins should also be considered & selected for their low energy use in manufacture and delivery

6. Water

Water efficient landscaping is encouraged. Waste water is to be separated – grey water to be kept on site for reuse in garden irrigation and Black water to be piped through reed beds for filtering where possible.

Figure 4: Diagrams illustrating Natural Ventilation & Solar Control.
3.1. THE VISUAL DIMENSION

3.1.1 Successful towns & villages which have grown organically display a coherent Group Form through the use of similar materials & a limited range of variations within a spirit of good neighbourliness.

3.1.2 Vertical emphasis is provided by church spires, towers, chimneys, statues and other elements which also create points of orientation from a distance.

3.1.3 Successful examples of towns or villages which display good Urban Form have a recognition of Context, a respect for neighbours and a positive response to the Urban environment in which they are situated.

3.1.4 Rather than being formulaic these towns and villages encourage a wide variety of responses within a limited palette of materials and colours.

3.1.5 Generally, the major Public buildings are given visual emphasis and the general building fabric is subservient to the major public buildings. Buildings define and encapsulate street space and define the public environment.

Figure 5: Images Illustrating Visual Dimension
3.2. ENTRANCES & GATEWAYS

3.2.1 Our experience of urban environments is a dynamic one involving movement and time, and the movement through space is an important dimension to our appreciation of space.

If one is designing an environment where the pedestrian view is paramount it is important to create an environment which engages the mind as one progresses through it.

3.2.2 Gorden Cullen conceived the concept of ‘serial vision’ arguing that delight & interest is stimulated by contrasts, by the ‘drama of juxtaposition’. He also suggested that in addition to the immediate preset ‘existing view’, there are also hints of a different ‘emerging view’ – the tension between ‘hereness’ and ‘thereness’ should be present in the pedestrian viewpoint.

Figure 6: Images Illustrating Entrances & Gateways
3.3 AESTHETICS

The more ordered and visually coherent environments are the more harmonious they appear to be. Coherence comes from the grouping and recognition of patterns, and to make environments more visually coherent we use principles of organization, or grouping, to create ‘good’ group form. Our intuitive capacity for aesthetic appreciation has four distinct components that transcend time & culture:

3.3.1 A sense of rhyme & pattern
Rhyme – involves some similarity in the elements, and supposes the simultaneous existence of complexity and patterns. Colonnades, of varying heights & spans, can provide rhyme & pattern contributing to character & identity.

3.3.2 An appreciation of Rhythm
Rhythm relies for its impact on a stricter repetition. Visual pleasure derives from rhythmic elements varying from the simple binary kind to more complex repeated sub-systems. To avoid monotony, contrast & variety are essential.

3.3.3 A recognition of balance
Balance is a form of order generally related to ‘harmony’ among the parts of an environment. Asymmetrical compositions may also use elements of symmetry to achieve balance but in more complex and potentially interesting ways. Balance can also be achieved through colours, textures, and shapes, which cohere into a state of balance.

3.3.4 Sensitivity to harmonic relationships
Harmony concerns the relationship between different parts & how they fit together to form a coherent whole.

Figure 7: Images Illustrating Aesthetics
URBAN ARCHITECTURE
04 URBAN ARCHITECTURE

Figure 8: Images Illustrating Urban Architecture
Urban Architecture should -

- Create a sense of place;
- Mediate between inside and outside and between private & public space, providing gradations between the two;
- Have windows that suggest the potential presence of people and that reveal ‘frame’ internal life;
- Have character and coherence that acknowledges conventions and enters into a dialogue with adjacent buildings;
- Have compositions that create rhythm and repose and hold the eye;
- Have a sense of mass and materials expressive of the form of construction;
- Have substantial, tactile and decorative natural materials, which weather gracefully;
- Have limited decoration that distracts, delights and intrigues.

The Royal Fine Art Commission (RFAC), identified the criteria as to what makes a ‘good’ urban building as follows –

4.1 Order & Unity

In terms of building elements and façade design, order is manifested through such means as symmetry, balance, repetition, the grid, the bay, the structural frame etc.

At street level unity may come from repetition of an architectural element/s or less formally from common underlying design patterns such as building silhouette, consistent plot widths, fenestration patterns, proportions, massing, the treatment of entrances, materials, details etc.

4.2 Expression

Building should express its function honestly. Public buildings traditionally proclaim their significance through increased scale, contrasting style, lavish detail & high-quality materials providing “landmarks” in the street.

Most private buildings should be ‘backcloth’ buildings
4.3 Integrity
Through their form and construction buildings should express the functions they and their individual parts fulfill.

4.4 Plan & Section
The design needs to consider the building as a whole – not only its elevations but also its plan and section. There should be a positive relationship between a building’s façade and its plan and section.

4.5 Detail
Lack of detail impoverishes architecture and deprives us of a layer that brings us into close contact with a building where we can admire the beauty of the materials and the skill of the craftsman or engineer.
Small-scale detail is especially important at ground floor level to provide visual interest for pedestrians, while larger-scale detail is important for viewing from far away. Appropriate emphasis of entrances allows users to ‘read’ the façade, facilitating movement from the public to the private realm.

4.6 Integration
In most cases individual buildings should be subservient to the needs and character of the place as a whole. While there are occasional needs for a ‘prima donna’, the greater need is for a better vocabulary of well-designed, interesting ‘back-cloth’ buildings.
Too much emphasis on ‘style’ denies the opportunity of innovation and excitement - visual criteria such as scale & rhythm are often more important than a common ‘style’.
Many of the most successful groups of buildings are of dramatically different materials and styles (eg. Those around the Piazza San Marco, Venice).
5.1. Primary Building Envelope

The primary Building Envelope is defined for each site on the Precinct Plan. This indicates the primary area of the site that should be occupied by the building. Deviations from the Primary Building Envelope are subject to motivation and the Design Review process. The purpose of the Primary Building Envelope is to ensure that the placement of the building accords with the development of a supportive public & private open space network.

5.2. Building Interface Zone

The Building Interface Zone identifies a zone 5m within the site boundary within which a minimum of 50% of this zone is to be occupied by building allowing for horizontal modulation along this façade.

In addition, a range of building interface conditions are encouraged such as colonnades, balconies, clip-on elements and overhangs.

5.3. Double Volume Colonnade

Sites have been identified on the Precinct Plan where a mandatory colonnaded response is required. The colonnades are to be not less than 5m in width and not less than 8m in height from the sidewalk level. The colonnade provides a covered zone for pedestrians and can be used for activities such as outdoor eating.

5.4. Architectural Accentuation

Points of Architectural Accentuation are indicated on the Precinct Plan. These denote a portion of the building, such as a prominent corner, where specific architectural accentuation is required.

This may vary in form, including individual detailing; a change in the building form at that position; or through a vertical accentuation, such as a tower element or an increase in the building height. The primary purpose of this is to enhance the landmark quality of particular positions.

5.5. Building Heights

Building heights are indicated on the Precinct Plan. There are higher buildings indicated on specific sites to create focal points and lower buildings on peripheral sites to maintain views.

The interface between the lower level of residential accommodation and the street must be addressed to ensure privacy and security.

The disengagement of the ground floor from the semi-public domain is encouraged where the lowest level is residential. Retail frontages on sidewalks must be at sidewalk level.

5.6. Definition of height

All building heights are to be calculated from the adjacent sidewalk levels. The height envelope is inclusive of all levels (or part thereof) of a building projecting above sidewalk level.

A semi-basement parking area may not project above sidewalk level at any given point on a site’s boundary by more than 1,5 metres.
ARCHITECTURAL DESIGN
ARCHITECTURAL DESIGN

- A strong modulated façade-oriented architecture is encouraged with the roof being ‘disengaged’ to provide a strong definition at the sky;
- Visual surveillance of the street space and parking areas is to be optimised. Kitchens/living rooms/patios/balconies and front hallways should face onto the street to establish ‘eyes on the street’ for security;
- Stormwater cut-off drains are to be provided to prevent discharge from driveways into the access roads, or vice versa.

6.1 ARCHITECTURAL LANGUAGE
The following images illustrate the basic elements of the Architectural Language for the architecture at Sibaya.
- Composition – base, middle and top;
- Shaded openings;
- Vertical emphasis to openings;
- Clip-on’s and cut-out’s;
- Overhanging roofs;
- Rectilinear forms with vertical emphasis;
- Timeless, elegant architecture;
- Performance, rather than stylistically, based architecture heavier base, lighter top;
- Earth/natural colours;
- Where Vehicle parking is to be accommodated in basements the garage door should not be visible from the access road. Where no basements are provided garages must be an integral part of the building design & not visible from the public environment. Driveways are to blend in seamlessly with the access roads;
- Parking courtyards should be regarded as an extension of the social space with dwellings designed to overlook them;
- Building entrances and corners should be accentuated to promote legibility and to create a threshold from the public street space;
- Units should face both towards the street and inner courtyard where possible – corridors visible from public space are discouraged;
- Verandas/patios/terraces at lower levels should be designed to encourage social interaction with the street;
ARCHITECTURAL DESIGN

- Clip-on’s to, and cut-out’s from primary earth-coloured form;
- Composition – base, middle & top;
- Overhanging “flat” roofs define top of building;
- Contextually based architectural;
- Response – corners emphasized, prominent points recognised;
- Vertical emphasis to planes & openings reduces mass of building

Figure 11: Architectural Language
ARCHITECTURAL DESIGN

- Composition – base, middle & top;
- Clip-on’s to primary form;
- Louvred walls and sunscreens for solar protection & ventilation;
- Overhanging “flat” roofs;
- Introduction of landscape into facades;
- Responsive to orientation – sun & views;
- Responsive to context – retail edge, corners, entrances

Figure 12: Architectural Language
ARCHITECTURAL DESIGN

- Composition – base, middle & top;
- Cut-out’s from primary form;
- Definition of the building at the top;
- Solar protection of openings;
- Fragmentation of façade to break down bulk;
- Vertical emphasis at prominent position;
- Vertical emphasis to openings;
- Earth/natural colours.

Figure 13: Architectural Language
ARCHITECTURAL DESIGN

- Composition – base, middle & top;
- Colonnades to retail edge;
- Clip-on’s to, and cut-out’s from, primary form;
- Vertical emphasis at strategic position;
- Vertical emphasis to openings;
- Natural/earth coloured materials.

Figure 14: Architectural Language
ARCHITECTURAL DESIGN

- Composition – base, middle & top;
- Colonnades at retail edge;
- Clip-on’s to primary form;
- Vertical emphasis to openings;
- Overhangs at roof.

Figure 15: Architectural Language
ARCHITECTURAL DESIGN

- Colonnades at retail edge;
- Composition – base, middle & top;
- Vertical emphasis to openings;
- Overhangs at roof;
- Openings cut-out, or recessed, from primary form;
- Formal & syncopated rhythms
ARCHITECTURAL DESIGN

DOMESTIC BUILDINGS

- Protected window openings;
- Covered outdoor spaces;
- Composition – base, middle & top;
- Use of natural materials – stone, timber, facebrick

Figure 17: Architectural Language
ARCHITECTURAL DESIGN

- Generous overhangs and covered outdoor spaces;
- Use of natural materials – timber, stone

Figure 18: Architectural Language
ARCHITECTURAL DESIGN

- Composition – base, middle & top;
- Heavier materials at ground level, lighter materials above;
- Definition of the building at the sky;
- Use of warm natural materials and colours;
- Seamless transition between indoors & outdoors

Figure 19: Architectural Language
ARCHITECTURAL DESIGN

- Transparency between indoor and outdoor spaces;
- Use of warm, natural materials;
- Generous outdoor spaces protected from the weather.

Figure 20: Architectural Language
ARCHITECTURAL DESIGN

- Crisp, modern, unfussy detail;
- Use of warm natural materials;
- Water used as part of the architectural composition;
- Seamless flow between indoors & outdoors
ARCHITECTURAL DESIGN

- Use of natural, warm materials;
- Water used as part of the architecture;
- Indoor/outdoor integration

Figure 22: Architectural Language
ARCHITECTURAL DESIGN

- Use of water as a design element – Possible method of rainwater collection;
- Use of warm, natural materials;
- Architecture responds to climatic factors

Figure 23: Architectural Language
ARCHITECTURAL DESIGN

- Buildings respond to slope;
- Buildings respond to views but ensure privacy & adequate private open space;
- Security provided by change in level

Figure 24: Architectural Language
ARCHITECTURAL DESIGN

RESORTS AND LODGES

- Generous overhangs;
- Base, middle & top;
- Flat, or slightly pitched, roofs;
- Natural materials;
- Stone walls integrate the buildings with the landscape.

Figure 25: Architectural Language
6.2. FORM

6.2.1 Three typologies have been established –
- Urban – strong reference to public space interface;
- Forest and riverene – emphasis on environmental response and lighter development;
- Slope – the transition between the above 2 typologies

6.2.2 In the Urban typology Buildings must meet the street but they need to deal with the public/private interface in a suitable way – either through a change in level or a set back

6.2.3 The Dominant form of buildings should be rectilinear with the use of clip-on’s as described later. The overall form should be expressed in 3 parts
- Base;
- Middle;
- Top.

6.2.4 There could be a Heavy or light base and heavy or light middle with a Floating roof element. The upper storey(s) should, ideally, be lighter;

6.2.5 Buildings, generally, should be built to the perimeter of plot with cut backs & clip-on extensions to the primary form;

6.2.6 There are 5 elevations to the form – the roof is the 5th elevation;

6.2.7 The form can be modified using cut-outs and protrusions or with an emphasis on a framework;

6.2.8 The form should be expressed in earthy natural materials with light colourful material clip-on’s with planting on elevations encouraged;

6.2.9 The Form should get lighter at the top (touch the sky lightly);

6.2.10 Strong rectilinear forms may be used as clip-on’s from the dominant form
6.2.11 Buildings should step down the slope allowing for fragmentation into the landscape;

6.2.12 The emphasis in mass & form is on elegance;

6.2.13 Where buildings exist on adjacent stands, explicit reference is to be made to the adjacent building;

6.2.14 The emphasis in elevational treatment is on elegance, proportioning & balance – all apertures and fenestration should be consciously considered in a proportioning system that brings all windows, doors and recesses into a relationship with the facades’ overall modulation;

6.2.15 Vertical modulation within the elevation, and the accentuation of entrances should be carefully considered.

6.2.16 All antennas, satellite dishes, & air-conditioned units may not be exposed on any of the 4 elevations.

6.2.17 Planting is encouraged on elevations but this needs to be controlled and allow for maintenance.
6.3 ROOFS

6.3.1. Roofs must be considered as the fifth elevation and integrated into the overall form of the building;

6.3.2. 50% of the roof area must be useable – for collecting rainwater and as an additional useable outdoor space. This area can be covered but can’t be enclosed;

6.3.3 Roof traffic area finish to match building form material;

6.3.4 The roof terrace facilities (bar, sitting area, etc) may not be permanently closed in, but may have moveable screens for weather protection – the building must touch the sky lightly;

6.3.5 The roof terrace cover may be -

- concrete (no roof tiles allowed);
- Timber;
- Steel;
- Canvas;

- Planting;
- Glass (solar panels).

6.3.6 The roof terrace cover colour should be grey, or planted

6.3.7 Roofs can be on different levels but cognizance must be taken of stormwater design and landscaping. The design must ensure a logical harmony within the building, adjoining buildings and the surrounding environment.

Figure 28: Useable roofs
6.4 CLIP-ON ELEMENTS

6.4.1 Clip-on’s serve as functional elements to the primary form whilst simultaneously allowing for distinct architectural character;

6.4.2 Screens can be – timber, steel, glass, concrete or planting;

6.4.3 Off-shutter concrete or planting;

6.4.4. Window boxes can be – timber, steel, glass or concrete (different finish);

6.4.5 Roof elements can be – timber, steel or glass;

6.4.6 Technical screens can be – timber, steel, off-shutter concrete;

6.4.7 Clip-on’s may go over the build-to lines (on all five elevations);

6.4.8 Clip-on’s must be positioned to control sun but not impact on views from adjacent buildings.
6.5 MATERIALS

6.5.1 Main structure
- Concrete, Rammed earth, Face-brick work (only if approved), Plastered brickwork, Steel and timber on the lighter sections, natural stone.

6.5.2 Clip-on’s
- Planting, Timber, Fibre - cement sheets, Glass (non reflective & non coloured), Metal profile sheeting, coloured (in limited areas only and used as contrast), Metal grilles, Durable canvas - like material;
- Structure (timber, steel).

6.5.3 Retaining structures
- Natural stone, earth-coloured concrete, or plastered & painted brickwork geo-fabric earth-retaining solutions, suitably engineered and approved, ‘loffelstein’ walls (suitably planted).

6.5.4 Materials not permitted
- Fascia boards, classical mouldings, artificial stone, ornate fountains, precast concrete columns & walls, paned windows & doors, exposed downpipes, exposed plumbing pipes, exposed corridor & parking garage lighting;
- Exposed antennas, satellite dishes, & air-conditioning units;
- Aluminium awnings, mock/non-functional shutters;
- Exposed concrete retaining block structures.

Figure 30: Clip-on elements
6.6 COLOURS AND TEXTURES

6.6.1 Buildings can have one of three base colours – grey, sand and red/brow/earth colour in dominant rectilinear form;

6.6.2 Detail colour – maximum of three colours – red, blue, purple, yellow or black/dark grey;

6.6.3 Stainless steel and black are to have controlled use and to be softened by natural element such as timber;

6.6.4 Metal Roof colour to be dark or light grey;

6.6.5 Whites and pastels must be reduced to a minimum;

6.6.8 Colours specifically not allowed
- Green (planting is this colour);
- Large areas of silver;
- Concrete;
- Reflective materials.

6.6.6 Main structure:
- Maximum of 2 colours allowed;
- Base colour can be Plascon E14-4 Mayan Stone, E15-4 Burwell, D14-3 Golden Pop, D15-3 Cream of mushroom, C14-3 Blond Wood, C15-3 French fry, B8-5 South sand, B9-5 Pipi, B13-6 Honey nut, B14-6 Brittle;
- These can be mixed.

6.6.7 Details – for clip on’s – from these colours-
- Plascon A12-7 Mandarin, A13-7 Cheddar, A15-7 Sunglow, A16-7 Daisy yellow, A30-7 Electric blue, A31-7 True blue, A4-7 Real red, A5-7 Poppy, A36-7 Purple, A38-7 Cape claret.
ENVIRONMENTAL DESIGN
7.1 The following inter-related principles are intrinsic to the design of ‘Green’ buildings:

- Local appropriateness;
- Conservation of the natural environment;
- Resource efficiency;
- Lifecycle approach;
- Zero waste;
- Use of renewable resources;
- Sustainable procurement;
- Local production for local use;
- Human health and wellbeing;
- Monitoring and evaluation;
- Positive legacy.

7.1 Use the climate, topography, materials and form to make the building more responsive to the environment.

7.2 Natural ventilation together with induced ventilation devices such as ‘venturi flues’ and ‘solar chimneys’ should be used & expressed as part of the building’s overall aesthetic.

7.3 Rainwater collection is encouraged.

7.4 Maximum use should be made of the indoor/outdoor potential of the local climate and outdoor spaces should be covered.

7.5 Flat concrete roofs should be planted where they are not used as outdoor rooftop terraces.

Figure 32: Environmental response
8.1 Landscape and building is seen as one – A dialogue between landscape and building is encouraged – landscape is an architectural element.

8.2 Landscape can be used on façades, roofs, terraces and balconies.

8.3 Even large scale buildings must have landscape integrated.

8.4 Vertical landscape is encouraged.

8.5 Indigenous planting is encouraged.

8.6 Street edges to be formal.

8.7 Courtyard spaces can be informally planted.

8.8 Planting can be on clip-on elements or as a clip-on itself.

NOTE: A separate document entitled “Sibaya Landscape Controls” is attached to these documents.
09

LIGHTING, SIGNAGE AND GRAPHICS
9.1 Lighting is to be integral to the design of the building & should follow the spirit of the architecture.

9.2 Light fittings could be designed as clip-on elements.

9.3 It is the intention to have a harmonious nighttime environment & the use of up-lighters to wash walls is encouraged.

9.4 The lighting strategy should be sensitive to the natural eco-system of fauna and flora. Lighting installations must not compete with the surroundings (who is the biggest and brightest).

9.5 Lighting can become part of an expressed technical tower.

9.6 The colour of the light source must be consistent throughout the development in the white ranges of light. Lamp intensity, type & colour will be subject to the approval of the Design Review Panel.

9.7 All signage and graphics are to be designed as an integral part of the building’s architecture.

9.8 All signage and graphics are subject to design review approval before installation.
Interaction with client and security consultant needed

Figure 1: Aerial View of the Sibaya Precinct
DESIGN REVIEW PROCEDURE
11 DESIGN REVIEW PROCEDURE

11.1 SUBMISSION PROCESS

The review process involves four steps.

STEP ONE: (ORIENTATION)

1. Payment of plan scrutiny fee.
2. Orientation (owner and architect must be present).
3. Confirmation that design team has all current and relevant documentation.
4. Outline of the One Planet Living Principles and their impact on the design process.
5. Confirmation of individual site constraints in terms of TPS and Review Process.
6. Review of the sustainability assessment schedule.

note: this will not be a design submission step and no drawings will be considered other than a site analysis plan.

STEP TWO: (CONCEPT)

1. Conceptual planning drawings.
2. Site plan detailed analysis in context of proposed plan.
4. Sustainability assessment schedule completed (Step 2) (written submission).
5. Compliance with TPS requirements.

STEP THREE: (SKETCH)

1. Sketch drawings for approval to proceed to working drawings.
3. Review TPS requirements.
4. Review of sustainability assessment schedule (Step 3)(new written schedule required).
6. Technical Study (normally 1:20 scale section through building indicating its technical concept and character)

STEP FOUR: (WORKING DRAWINGS)

1. Working drawings.
2. TPS criteria in written tabulated format.
3. Sustainability assessment sheet complete for review committee to finalise their approval.
4. Stamping of approved drawings for submission to Local Authority for approval – note prior to the Local Authority Approval, no work may proceed.

2. Only architects registered with the South African Council of Architects may submit designs on Sibaya. Please note that the Architect must be a fully registered architect, in terms of the Architects Act, and shall be present at all the prescribed steps.

3. The Architect shall be the principal agent from concept to completion of the final building and issue of occupation certificate.

4. A plan review/scrutiny fee is payable prior to step one meeting being scheduled as per the current Sibaya Management Association (SMA) scale of fees (subject to review).
5. A verge fee will be levied on the site, which shall be paid prior to a formal site handover being held (Note: SMA representative will arrange all formal site handovers).

6. No drawings may be submitted to the Local Authority without the drawings having been stamped and signed by SMA.

11.2 MOTIVATION OF SUBMISSION

The design team will need to present a comprehensive motivation of their design solution in relation to the issues discussed in Volume 1 of these guidelines and the specific site analysis.

The following must be submitted in writing to the review committee one (1) week ahead of the formal presentation at each step of the review process:

i. Comprehensive site analysis of erf. The architect can use a variety of options to illustrate the analysis - site sections, computer generated data, etc.

ii. Impact analysis of adjacent and affected properties.

iii. Plans, sections and elevations

iv. Materials, textures and colours.

v. Response to urban settlement making.

vi. Form in the context of Volume One. 3 dimensional studies

vii. Environmental “clip-on’s” motivation.

viii. Landscaping

ix. Lighting, signage, branding, graphics & artwork

x. Town Planning Scheme requirement response Density, bulk, height, coverage, footprint, build to lines etc.

xi. Sustainability assessment schedule (completed as the project is resolved).

xii. Design philosophy/approach
SUSTAINABLE ASSESSMENT SCHEDULE
## 12.1 CRITERIA - SOCIAL

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Criteria</th>
<th>B'mark</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.0.1</td>
<td>Daylighting</td>
<td>100%</td>
<td>% of habitable spaces within 2H of a window (H = height of window).</td>
</tr>
<tr>
<td>S.0.2</td>
<td>Ventilation</td>
<td>100%</td>
<td>% of habitable rooms with 10% of floor area openable window – with unpolluted air source.</td>
</tr>
<tr>
<td>S.0.3</td>
<td>Noise</td>
<td>60%</td>
<td>% of habitable space where noise does not exceed 40dba.</td>
</tr>
<tr>
<td>S.0.4</td>
<td>Thermal</td>
<td>100%</td>
<td>Ambient (excl. air conditioning). Temperature does not exceed 28°C or fall below 19°C for more than 5 days p.a.</td>
</tr>
<tr>
<td>S.0.5</td>
<td>Views</td>
<td>100%</td>
<td>% of habitable space within 6m of an external window with a view.</td>
</tr>
<tr>
<td>S.0.6</td>
<td>Safety</td>
<td>100%</td>
<td>Access to and around building. Adhere to the safety and managed environment guidelines.</td>
</tr>
<tr>
<td>S.0.7</td>
<td>Materials</td>
<td>100%</td>
<td>% of materials which comply with Zero Carbon criteria.</td>
</tr>
</tbody>
</table>
## 12.1 CRITERIA - ECONOMIC

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Criteria</th>
<th>B'mark</th>
<th>Description</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC.0.1</td>
<td>Local Contractors</td>
<td>35%</td>
<td>% of local contractors (50kms)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC.0.2</td>
<td>Local Materials</td>
<td>60%</td>
<td>% of materials sourced locally (100kms)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC.0.3</td>
<td>Heights</td>
<td>100%</td>
<td>% of habitable space with floor to ceiling heights of 2800.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC.0.4</td>
<td>External Space</td>
<td>100%</td>
<td>Design facilitates flexible external space usage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC.0.5</td>
<td>Modular Planning</td>
<td>100%</td>
<td>Building permits future adaptability.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC.0.6</td>
<td>Sustainable Technology</td>
<td>25%</td>
<td>Use of new sustainable technology in design.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## 12 SUSTAINABLE ASSESSMENT SCHEDULE

### 12.1 CRITERIA - ENVIRONMENTAL

<table>
<thead>
<tr>
<th>Ref No</th>
<th>Criteria</th>
<th>B'mark</th>
<th>Description</th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.0.1</td>
<td>Rainwater</td>
<td>40%</td>
<td>% of rainwater harvested on site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.2</td>
<td>Water Efficiency</td>
<td>100%</td>
<td>% of water efficient fixtures and appliances.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.3</td>
<td>Run-off</td>
<td>100%</td>
<td>% of run-off water absorbed on site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.4</td>
<td>Grey water</td>
<td>100%</td>
<td>% of grey water recycled.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.5</td>
<td>Landscaping</td>
<td>50%</td>
<td>% of landscaping with low water requirement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.6</td>
<td>Ventilation</td>
<td>50%</td>
<td>% of building ventilated naturally and passively.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.7</td>
<td>Heating &amp; Cooling</td>
<td>50%</td>
<td>% of building using passive environmental control.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.8</td>
<td>Appliances &amp; Fittings</td>
<td>100%</td>
<td>% of appliances which are rated energy efficient (energy star rating).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.0.9</td>
<td>Renewable Energy</td>
<td>30%</td>
<td>% of building energy requirements met by renewable resource.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.10</td>
<td>Construction Waste</td>
<td>25%</td>
<td>% of construction waste recycled on site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.11</td>
<td>Neighbouring Buildings</td>
<td>0%</td>
<td>% of neighbouring buildings affected – sunlight, daylight and ventilation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.12</td>
<td>Embodied Energy</td>
<td>100%</td>
<td>Materials with embodied high energy rating constitute less than 1% of the weight of the building.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E.13</td>
<td>Recycled Materials</td>
<td>20%</td>
<td>% of materials recycled by weight.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12 SUSTAINABLE ASSESSMENT SCHEDULE

12.2 GREEN STAR RATING

What is a green building?
A green building is a building which is energy efficient, resource efficient and environmentally responsible - it incorporates design, construction and operational practices that significantly reduce or eliminate the negative impact of development on the environment and occupants.

What is a rating tool?
A green building rating tool sets standards and benchmarks for green building, and enables an objective assessment to be made as to how “green” a building is. The rating system sets out a “menu” of all the green measures that can be incorporated into a building to make it green. Points are awarded to a building according to which measures have been incorporated, and, after appropriate weighting, a total score is arrived at, which determines the rating.

Rating system
To achieve certification, building owners submit documentation to the Green Building Council of South Africa who employ independent assessors to assess the submission and score the building. Certification is awarded for 4-Star, 5-Star or 6-Star Green Star SA ratings.

Most rating tools offer two different certifications: ‘Design’ and ‘As Built’. A ‘Design’ certification can be submitted for and awarded at the end of the design phase of the project. The intent is that the building can then be marketed as a Green Star SA certified building, having demonstrated the green building strategies to be included in the building. At the end of construction, a project can submit for and be awarded ‘As Built’ certification, certifying that all green building strategies were in fact incorporated into the final building.

Design submissions can be made as soon as the required evidence is available; this could be prior to commencement of construction. The Certified Rating can be achieved prior to practical completion, but must be achieved no later than 24 months after practical completion.

As Built submissions must be made after practical completion, and the Certified Rating must be achieved no later than 24 months after practical completion.

The categories in the Green Star SA rating tools include:
- Management
- Indoor Environmental Quality (IEQ)
- Energy
- Transport
- Water
- Materials
- Land Use & Ecology
- Emissions
- Innovation