



SERENITY HILLS

Architectural Design Manual

Serenity Hills Eco Estate



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Glossary of Architectural Terms

Fenestration

Design and placement of windows and doors in a building.

Green Roof

A roof covered with vegetation, providing insulation and reducing runoff. Includes layers for waterproofing, root barriers, and drainage systems.

Modular Construction

A process in which a building is constructed off-site under controlled conditions, transported, and assembled at the final location.

Passive Solar Design

Architectural design that optimises the use of the building's site, climate, and materials to minimise energy use.

Prefabrication

The practice of assembling building components at a site other than the location of use.

Sustainably Sourced

Materials obtained in ways that do not deplete the environment. Sustainability involves responsible management of resource lifecycles.

UV Light Filter

A device that uses ultraviolet light to kill bacteria and viruses in water, making it safe to drink.

Xeriscaping

A landscaping method that reduces or eliminates the need for supplemental water from irrigation.

Zoning Laws

Legal standards governing the use of land and the buildings on it, including shape, placement, and usage.

1. Introduction and Vision

This section establishes the foundational vision and objectives of the Serenity Hills community. It defines the overall aesthetic and environmental goals that guide all development within the estate, ensuring that all architectural endeavours align with the community's ethos of sustainability and excellence.

- **Purpose:** This manual delineates the architectural standards for Serenity Hills, aimed at ensuring all constructions harmonise with the community's vision for aesthetic excellence and sustainability.
- **Vision Statement:** Serenity Hills embodies an architectural philosophy that merges modern living with the natural environment, emphasising sustainability, functionality, and community living. The design approach prioritises low-impact, visually appealing structures that enhance residents' quality of life while respecting the local ecology.

Modern Vitruvian Triad: The design philosophy at Serenity Hills draws inspiration from Vitruvius's timeless principles of strength, functionality, and beauty, reinterpreted for the 21st century. Here, these principles evolve into:

- **Sustainability (Strength):** Structures are built to endure not just through robust materials and construction techniques but also through designs that are resilient against climate change and environmental impacts. This aspect emphasises the estate's commitment to long-term sustainability and minimal environmental footprint.
- **Usability (Functionality):** Every architectural element is designed with the end-user in mind, ensuring that spaces are not only accessible and safe but also adaptable to the evolving needs of the community. This ensures that homes and communal spaces enhance residents' quality of life and provide functionality that supports modern lifestyles.
- **Aesthetics (Beauty):** Beauty remains a central pillar, with architectural designs that reflect contemporary elegance while resonating with the natural beauty of the surrounding landscape. The aesthetic guidelines encourage creativity and innovation, ensuring that all constructions contribute to a visually cohesive and attractive community.

2. Sustainable Design

Sustainable design is at the core of Serenity Hills. This section details the principles and technologies that underpin energy efficiency, resource conservation, and ecological sensitivity in all construction projects. It outlines the requirements for passive solar design, energy-efficient systems, and water conservation measures that are essential for sustainable living.

- **Energy Efficiency:**
 - Buildings are oriented to optimise passive solar heating and cooling, with east-west orientation minimised to reduce solar gain during summer.
 - Insulation meets or exceeds R-values specified in the latest building codes, utilising materials such as spray foam, rigid insulation boards, and double-glazed fenestration.
- **Renewable Energy Integration:**
 - Solar panel installations are integrated aesthetically into the design, either roof-mounted or as part of building cladding, ensuring minimal visual impact.
 - Heat pumps are selected based on their coefficient of performance (COP) to maximise efficiency for both heating and cooling applications.
- **Water Management:**
 - Rainwater harvesting systems are mandated for all new constructions, capable of storing at least 5,000 litres, plumbed into non-potable water systems for irrigation and toilet flushing.
 - **Drinking Water Harvesting:** For rainwater to be safe for drinking, systems must include a multi-stage filtration process to remove particulates, pathogens, and chemicals. The recommended stages are:
 - **First Stage:** A sediment filter to remove large particulates.
 - **Second Stage:** An activated carbon filter to remove organic contaminants and chlorine.
 - **Third Stage:** A reverse osmosis filter to remove dissolved inorganic compounds.
 - **Fourth Stage:** A UV (ultraviolet) light filter to disinfect the water by killing bacteria and viruses.
 - **Maintenance and Monitoring:** Homeowners are responsible for regular maintenance of the filtration system to ensure its effectiveness. This includes periodic replacement of filters and UV light bulbs as per the manufacturer's recommendations.
 - **Integration with Landscaping:** In addition to their utility for drinking, rainwater harvesting systems are designed to integrate aesthetically with the property's landscaping, contributing to the overall visual appeal and sustainability of the environment.

- Xeriscaping and the use of native, drought-resistant plants are prescribed to reduce irrigation requirements.

3. Architectural Guidelines

This section sets forth the architectural standards and materials specifications for Serenity Hills. It aims to ensure all construction is in harmony with the estate's aesthetic and sustainability goals, providing guidelines that enhance both the natural landscape and the living experience of the community.

3.1 Building Size and Proportions

- **Minimum Building Size:**
 - **Residential Units:** All new residential constructions must have a minimum floor area of 70 square metres. This requirement is designed to ensure that even the smallest homes maintain a level of spatial quality and functionality that supports comfortable living and aligns with the community standards of Serenity Hills.
 - The 70sqm excludes secondary structures such as carports, garages, or staff quarters.

3.2 Construction Techniques:

- **On-site Construction:** All structural elements are built on-site, with some components like trusses and doors prefabricated to reduce on-site work and maintain construction efficiency.
- **Modular Construction:** Not currently in use but considered as a potential future method to allow for design flexibility and rapid construction.

3.3 Colour Palette:

Exterior Walls:

Dulux Codes Specified:

- 70YY66/130 Habitat: A natural tone that blends seamlessly with the surrounding landscape, suitable for the estate's desire to harmonise with nature.
- 70YY46/160 Thyme: A deeper tone that complements the lighter 'Habitat', providing an aesthetically pleasing contrast while still maintaining an earthy feel.

Interior Walls: *Suggestion*

Dulux Codes Specified:

- 50YY83/029 Natural White: A light and neutral colour that enhances the sense of space and light within interiors, providing a clean and versatile background for any decor style. Other colours by application of interior design schemes.

Roofs:

Light or Dark grey roofing within manufactures standard ranges.

Underside of roof structure and fixings: Carport exposed roof timbers and Main unit roof exposed timbers: Cleats, rafter hangers, bolted connections all to be primed with metal primer and painted black with metal paint to match the colour of the treated timber assembly of the carport.

3.4 Walls & Building Materials:

- **Masonry:**
 - **Usage:** Masonry, comprising both bricks and concrete blocks, is widely utilised at Serenity Hills for its structural robustness and thermal mass, which contribute to energy efficiency by moderating indoor temperature fluctuations. It is especially favoured in the construction of load-bearing walls, and as an aesthetic facade treatment without plaster but still painted.
- **Material Choices:**
 - **Bricks:** Cement Bricks are chosen for their natural insulation properties, durability, and low maintenance needs. Aesthetic brickwork is often left partially exposed to provide an alternate look and differentiate design elements that are built from the same materials, aligning with Serenity Hills' commitment to blending structures with the natural landscape.
 - **Concrete Blocks:** These are used primarily in garages and secondary structures where cost of construction and fire resistance are paramount and thermal comfort may be a secondary consideration. Concrete blocks should also be rendered and painted to match the estate's colour palette, providing flexibility in design while maintaining the functionality.
- **Sustainability Aspects:** Where possible, masonry materials are sourced locally to reduce transportation emissions, and the use of recycled materials is encouraged to minimise the environmental impact.
- **Architectural Integration:** Masonry is often combined with other materials like concrete, glass and timber structures to provide a balance of traditional and modern aesthetics. For instance, a masonry unit provides a solid base for a timber deck, merging strength with visual lightness and openness.

- **Stone:** Primarily used in landscaping, local stone, found on site, is positioned to enhance aesthetic appeal and maintain a connection with the natural environment. It is not used structurally in facades or walkways.
- **Timber:** Used for roof trusses or rafters and outdoor decking. Internal framing, cladding, and decorative interior finishes do not involve timber, as the primary construction involves masonry, plaster, and paint.
- **Glass:** Standard glass is used throughout, with safety glass employed in critical areas such as doors, windows below a certain height, and in balustrades to meet safety standards.
- **Steel:** Employed in a limited capacity and not structurally significant except in future considerations like Light Steel Framed Buildings (LSFB), which will be subject to review.

3.5 Roofing:

All residential units at Serenity Hills currently feature sloped roofs that are sheeted with high-quality materials. This design choice ensures optimal water runoff and durability, while also providing a consistent aesthetic across the community. At this stage, there are no flat roofs or other styles used in the standard unit constructions, maintaining a uniform look and structural integrity throughout the estate.

- **Sloped Roofs at Serenity Hills:**
 - For sloped roofs, Serenity Hills employs materials specifically chosen for their durability, sustainability, and suitability to local environmental conditions. The community uses high-quality, non-pierced fixed sheeting for roofing, which is ideal for coastal areas prone to harsh weather conditions. This sheeting provides the necessary durability and is also designed to minimise the need for maintenance.
- **Key Features:**
 - **Material:** The roofing employs high-quality metal sheeting that is specifically chosen for its longevity and ability to withstand local climatic conditions.
 - **Design:** Engineered to avoid piercing, which enhances waterproofing integrity and overall durability.
 - **Sustainability and Performance:** The metal roofing is selected not only for its practicality but also for its environmental benefits, including high recyclability and energy efficiency due to its ability to reflect solar radiation.

Lifespan and Maintenance:

- **Durability:** Each roofing material is selected to ensure a minimum effective lifespan of 30 years, reflecting a commitment to long-term sustainability and reduced lifecycle costs.
- **Maintenance:** The chosen materials require minimal maintenance, aiding in cost-efficiency and reducing the environmental impact over time.

Roof Inclusions:

- Only concealed fixing sheeted mono-pitched roofs.
- Solar panels must integrate seamlessly into the design.
- Sustainable or recycled roofing materials encouraged.

Roof Exclusions:

- No traditional tiled, flat, high-pitched roofs such as A-frames, or traditional unrelated roofing forms such as Mansard, Balinese etc.
- Visible solar panel installations that disrupt the aesthetic coherence.

Future Considerations for Green Roofs at Serenity Hills:

- While green roofs are not currently implemented at Serenity Hills, they represent a forward-thinking option for enhancing sustainability in future developments. Proposed primarily for flat or gently sloping structures that may be introduced, these living roofs could provide aesthetic benefits, biodiversity enhancement, improved insulation, and natural stormwater management.
- **Guidelines for Potential Future Implementation:**
 - **Installation:** Detailed guidelines would be established for the correct installation of green roofs, including substrate layers and appropriate vegetation to ensure their effectiveness and longevity.
 - **Maintenance Practices:** Comprehensive maintenance practices would be documented to help manage these ecosystems effectively, ensuring they remain vibrant and functional.

Strategic Objectives:

- Integrating green roofs would align with Serenity Hills' sustainability objectives by reducing the ecological footprint of new constructions and contributing to the estate's green initiatives.

3.6 Exterior Design Spaces:

- Outdoor living spaces are integrated into the overall footprint of the building, covered by pergolas or other green structures that provide shade and cooling.

3.7 Apertures:

3.7.1 Windows

- Windows and doors are placed to maximise natural light and ventilation, adhering to the fenestration standards for thermal performance.
- Framing colours to be dark grey as per developer specifications
- Material preferably aluminium as per developer specifications. Steel framed (provided air gap performance meets or exceeds that of aluminium, coloured to spec)
- Priority should be placed on Architecturally designed spaces that will comply with energy performance reporting requirements over merely implementing Low-e and double glazing systems.

Window Inclusions:

- Slimline aluminium frames where possible (accounting for wind loading on larger apertures)
- Aluminium colour to spec

Window Exclusions:

- Highly reflective glass
- Overly sectioned and framed windows
- Speculative shapes and facade arrangement (save for functional purpose to be motivated)
- Non approved colours
- Mirror tint or coloured tint glazing

3.7.2 Doors

- Sliding, Hinged, folding stacking, individual stacking (Shop Front)

Doors Exterior Inclusions:

- Timber framed to spec with solid timber door leaf
 - Single hinged leaf
 - Single pivot hinged leaf
 - Stable door in solid timber
- Timber leaf with glazed (clear or obscure) panels

- Aluminium framed to spec based on type

Doors Exterior Exclusions

- Aluminium framed leaf with or without glazed panels on standard hinged doors
- PVC framed doors
- Overly decorative panels
- overly decorative obscuring of glazed panels
- Mixed materials (Aluminium door in timber frame and vice versa)

Doors Interior Inclusions:

- Side hinged or sliding doors (Surface or pocket)
- Solid timber frames
- Semi solid or solid timber door leaf
- Simple panels

Doors Interior Exclusions:

- Aluminium frames
- Aluminium door leafs

4. Community and Environmental Considerations

The integration of community and environmental stewardship is crucial for the development of Serenity Hills. This section describes how architectural designs should enhance community interaction and respect the local environment. It emphasises cultural integration and environmental preservation, ensuring that developments enhance rather than detract from the estate's ecological and social fabric.

- **Cultural Integration:**
 - Architectural designs reflect the heritage of the region with modern interpretations of traditional forms, ensuring that new constructions feel rooted in the community's historical context.
- **Environmental Preservation:**
 - **Environmental Impact Assessment:** An extensive EIA has been conducted site-wide at Serenity Hills. The findings and recommendations from this assessment have been fully integrated into the general development practices to ensure that all projects align with the best environmental preservation standards.
 - **Implementation:** Specific measures identified in the EIA are implemented to minimize ecological disruption and enhance sustainability throughout the estate's development.
 - **Continuous Monitoring:** Environmental monitoring is rigorously carried out during and after construction. This ongoing process helps to assess the impact of the development activities and ensures compliance with the environmental management plan.
 - **Mitigation and Adaptation Strategies:** Detailed strategies for environmental mitigation and adaptation are included in the environmental management plan. These strategies are designed to address potential impacts proactively and are adjusted as necessary based on continuous environmental monitoring outcomes.

5. Regulatory and Submission Requirements

*Compliance with local and national regulations is mandatory for all construction within Serenity Hills. This section provides a comprehensive guide to the regulatory landscape, including zoning laws, building codes, and environmental regulations. It lays out the submission process for architectural plans, detailing the required documentation and the review process to ensure all constructions meet the established standards.

- **Local Compliance:**
 - Detailed compliance procedures with local zoning and building codes are provided, along with the necessary contacts for obtaining permits and environmental clearances.
- **Design Review Process:**
 - The Design Review Committee evaluates all submissions based on specific criteria outlined in the manual, including aesthetics, environmental sustainability, and integration with existing structures.
 - A comprehensive checklist for submission is included, detailing required documents, drawings, and other submission materials.
- **Approval Procedures:**
 - A timeline for the review and approval process is defined, offering clear expectations for turnaround times and next steps following submission.
 - Procedures for appealing decisions of the Design Review Committee are outlined, providing a clear pathway for revisions and resubmission.

*Accompanying documents will deal specifically with these requirements.

6. Annexes

* The annexes serve as a resource hub, supporting the practical implementation of the design manual's standards. They include detailed lists of approved materials and suppliers, contact information for regulatory and oversight bodies, and additional resources that architects and builders may need to effectively plan and execute their projects within Serenity Hills.

- **Resources and Contacts:**

- An extensive list of resources, including approved material suppliers, contact information for local authorities, and details of environmental consultants, is provided to assist in meeting the manual's standards.
- A directory of emergency services and utility contacts supports the community's ongoing needs.

*Accompanying documents will deal specifically with these requirements.

Disclaimers

General Disclaimer:

The information provided in the Serenity Hills Architectural Design Manual is for general informational purposes only. All information in the manual is provided in good faith, however, we make no representation or warranty of any kind, express or implied, regarding the accuracy, adequacy, validity, reliability, availability, or completeness of any information in this manual.

Liability Disclaimer:

Under no circumstance shall the Serenity Hills Homeowners Association or its representatives be liable for any direct, indirect, incidental, consequential, or punitive damages arising from the use of this manual or from any of the projects implemented based on this guide. This includes, but is not limited to, errors, omissions, or inaccuracies in the content of the manual, regardless of the cause.

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All actions taken by the user of the manual are strictly at their own risk. The Serenity Hills Homeowners Association is not liable for any losses or damages in connection with the use of the information contained in this manual. It is the user's responsibility to ensure that any projects or actions taken as a result of using this manual comply with local regulations and standards.

Construction Disclaimer:

The architectural guidelines provided in this manual are not a substitute for professional advice. Always consult with a professional architect, engineer, or contractor for advice applicable to your specific situation. The Serenity Hills Homeowners Association does not endorse any specific contractors, manufacturers, or products.

Updates and Amendments:

The Serenity Hills Homeowners Association reserves the right to amend or update the information contained within this manual without prior notice. Users are encouraged to periodically review the manual to ensure they are working with the most current information.

Approval Required:

All architectural and construction projects within Serenity Hills must receive prior approval from the Serenity Hills Design Review Committee. Compliance with this manual does not guarantee approval, as each project will be evaluated on its individual merits.

*Drafted by
Maker d+a
On behalf of Serenity Hills*