

## **ANNEXURE "B"**

# **Lynedoch EcoVillage Basic Design Guidelines**

Concept Basic Design Guidelines, reviewed by Chris Posma SYNEFF Consult on 28 September 2003.

*FINAL VERSION: November 2003*

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# 1 The Vision

Lynedoch occupies a special location in the southern Stellenbosch Winelands with spectacular views of the Stellenbosch mountains across vineyards, fruit orchards and organic vegetable farms. Lynedoch is a pioneering settlement in ecologically sustainable development. The buildings, activities, community and landscape already manifest this vision. The expansion of the village to include homes for people attracted to living in a nurturing and unique environment, is to take place in naturally small increments to allow the social, economic and physical characteristics to develop with the community. The physical environment is both the container of, and inspiration for, the collective human settlement.

## 1.1 Concept of the development

Lynedoch EcoVillage already has a long history of human activity. More intensive use as a residential settlement is another phase in that history. This phase coincides with a growing awareness that human settlements throughout the world are undermining long term sustainability of the planet through the way in which they are built, operate, dispose of waste and are demolished in an ongoing cycle. Lynedoch Development Company has set out to pursue a form of development that will exemplify a settlement that meets the standards of environmental sustainability in 2020. This is a concept that is not realised in one development phase, but one that develops over time and is based on the best practice known and applicable at the time.

It is important to ensure that the vision of the village is carried through to the design and construction of the houses. Thus the architecture of the buildings should not conflict with one another in the landscape to the detriment of the environment. The visibility of the site requires that the buildings be seen as a coherent group rather than a disparate collection of individual houses. Individuality and creative expression is encouraged at the level of building plan, street elevation and detail design. Thus a generic Architecture is encouraged through strict control over the primary architectural elements, the use of natural materials, limited, earthy colours and landscaping that responds to the surroundings.

The technology utilised in the construction of the houses, while founded on conventional experience and engineering, is expected to address, in practical ways, the 2020 sustainability vision for the village. Thus the use of water, energy and other material resources will be carefully determined and defined and the long term maintenance and reuse of buildings is important.

The infrastructure that supports the operation of homes in the village has been carefully designed to minimise waste, maximise recycling and make use of all the existing features of the site; slope, dams and existing vegetation.

## **2 Introduction**

These Basic Design Guidelines, "BDG", are a condition of purchase of property in the Lynedoch EcoVillage. The guidelines are the basis on which the Lynedoch Home Owners Association (HOA) will assess the plans submitted for approval, prior to the statutory submission to the Local Authority. *The guidelines have been submitted for approval by the Local Authority.*

### **2.1 Intention of the Guidelines**

The BDG prescribe a response to the site, the views, the climate, the local ecology and the Lynedoch EcoVillage. The overall form, colour and height of the buildings is strictly controlled while the individual design of each building is encouraged.

These BDG seek to minimise visual impacts and establish a harmonious and visually pleasing character for the development.

The BDG do not unduly constrain building design but rather establish a language of architecture, technology and methodology for development.

The BDG create certainty for the buyers at Lynedoch EcoVillage and the general community as to what they can expect from their neighbours as well as from the development as a whole.

### **2.2 By-Laws and Regulations**

These BDG establish the character of the Lynedoch EcoVillage development, and are an addition to the local authority zoning scheme, by-laws and the National Building Regulations, all of which need to be complied with.

### **2.3 Architectural Design**

The design of the houses in the Lynedoch EcoVillage shall, in principle, be carried out by one of the qualified and registered Architects of ARG. In the case of a buyer wanting to contract her/his own architect, it is possible under reasonable conditions to be agreed upon with the Home Owners Association and Lynedoch Development.

### **2.4 Rights of the Home Owners Association**

The Association reserves the discretionary right to assess the appropriateness of any proposed architectural design or site development plan and its interpretation of the BDG in relation to the desired character and quality of environment envisaged for the Village.

The Home Owners Association also reserves the right to make minor adjustments to the design standards, as incorporated in the BDG, as it deems necessary from time to time, without right of compensation or appeal, in the interests of achieving the original concept of the development. Assessments will be made based on the latest current BDG and it is the responsibility of the owner to ensure their design is in compliance. Reference to superseded versions of the BDG to support designs that are not in compliance with the current BDG will not be accepted. In the case that major adjustments to the design standards become necessary, the adjusted BDG will be submitted for approval to the Local Authority.

### 3 Environmental Design Determinants

Environmental sustainability is a fundamental design consideration. Water use, energy, biodiversity and the nature of materials used for building are therefore of importance.

It is therefore required that each building displays an appropriate response to the characteristics of the sun, wind, rainfall pattern, topography, micro-climate and views. The diagram below shows the predominant climatic patterns that should be taken into account and these will be taken into account when assessing the building designs.

A written motivation is to be included in the submission for approval to the Home Owners Association describing how the proposed development manages water use and energy conservation. The landscape plan will indicate how biodiversity is to be addressed. (See section 4)

Environmental criteria on which each design will be evaluated in general are:

- Pollution, including global warming, ozone depletion, toxicity, embodied energy, etc
- Exhausting of resources, including energy, (non-) renewable resources, local resources,
- Land Use
- Sensory Effects,
- Disaster Potential,
- Waste,
- Renewal and/or reuse and/or dispose,
- Durability,
- Strength,
- Skills.

The NIBE-criteria and the ratings by criteria of many of the possible materials are available in the NIBE documentation that will be updated until end 2004 at least. This documentation will be kept in ARG's office, but can be consulted at ARG's office in the framework of the Lynedoch project.

More specifically attention will also be given to:

- Water saving and reuse measures,
- Energy consumption during construction,
- Energy consumption<sup>1</sup> during use,
- Adequacy of passive ventilation system
- Appropriateness of landscaping/planting plan

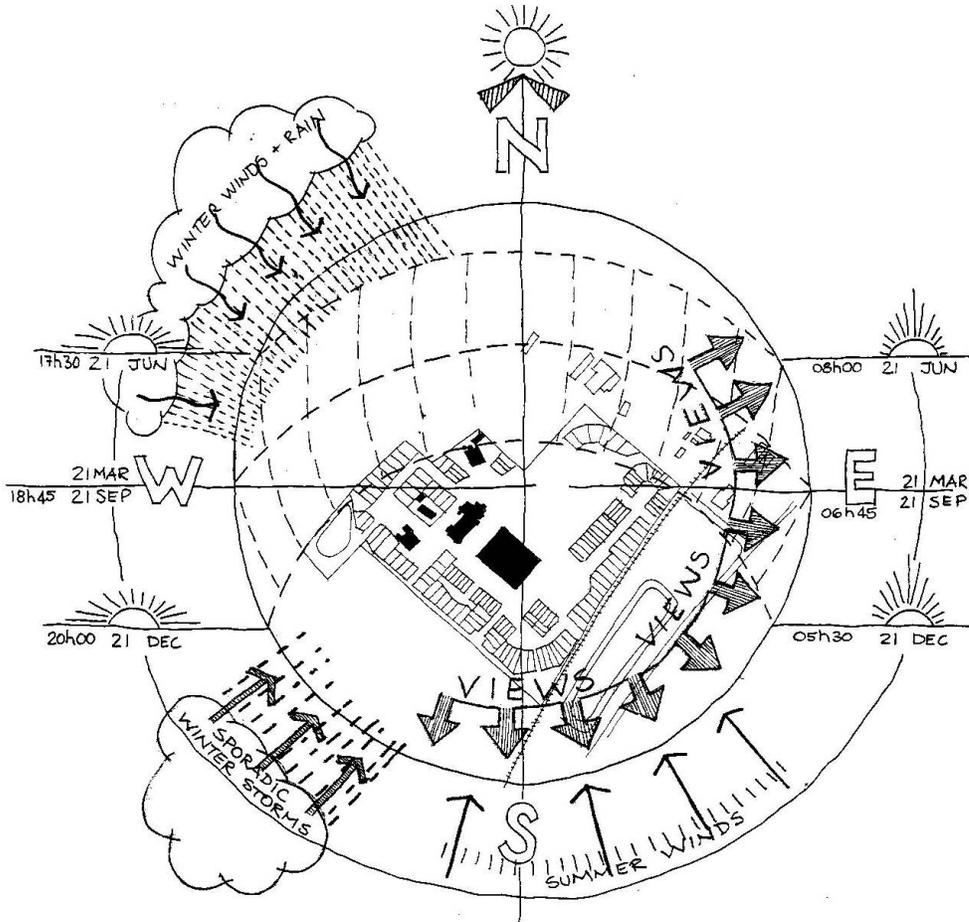
The totality of the above effects is expressed in "environmental cost". For each functional unit (m<sup>2</sup> of wall, m<sup>2</sup> of roof, etc.) the environmental cost of several options has been estimated.<sup>2</sup> The choices with the lowest environmental cost are preferred.

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<sup>1</sup> A separate document, titled "Indoor Climate Control", is developed and can serve as a tool to improve the environmental quality of the architectural design. This document is available in the form of a spreadsheet and comprises: (i) preferred indoor temperatures estimated by type of room and by month, (ii) sun angles by hour of the day and by time of the year, (iii) need for heating by month and need for cooling by month calculated by choice of materials and dimensions of rooms.

<sup>2</sup> A number of standard details has been developed, based upon the most interesting materials that are available and that can be used for the Lynedoch Project. These details are available in a separate document titled "Design details and their environmental rating".

## 4 Site Development Guidelines



### 4.1 Overview

This section of the guidelines is to direct the use of the site area of each plot and is a combination of the Boland Zoning Scheme Regulations and additional guidelines evolved specifically for Lynedoch. These guidelines must be read in conjunction with the Zoning Scheme Regulations and do not replace or annul any of them.

### 4.2 Zoning

The residential plots are zoned for residential use as defined by the zoning regulations contained in the Land Use Planning Ordinance of 1985. Residential plots are either Residential 1 or Residential 3 and it is the responsibility of an owner to verify which is applicable to his/her erf.

### 4.3 Coverage

Coverage will be in accordance with Zoning scheme regulations except where departures have been granted with the approval of the sub-division. Both residential 3 and Residential 1 sites have a departure to 75% coverage.

#### **4.4 Height restriction**

The maximum height of any residential buildings is the equivalent of a double storey above natural ground level (NGL). Chimney tops must be above roof ridge to facilitate good extraction, but never more than 75 cm above roof ridge.

#### **4.5 Building lines**

Building lines for Residential 1 sites : certain sites have special building lines related to their size, shape and position and each one will have to be checked with the town planner.

Building lines for Residential 3 sites will in general conform to the following restrictions:

- i. 0m building lines on street boundary (street zone),
- ii. 0m building line on the side/shared boundaries,
- iii. 0m building line on rear boundary,

and except where fire fighting servitudes of 1m wide are required to ensure access to the rear of each property from a Public Open Space or a street.

#### **4.6 Parking**

At least one public car parking bay is required for each residential erf. These parking places are grouped in communal parkings well spread over the site of the village. In addition a parking bay may be situated on each residential erf

#### **4.7 Exterior lighting**

- All exterior lighting to be subdued. Accent lights not to be more than 600mm above the Finished Ground Level (FGL).
- No exterior flood lights allowed.

## 5 Architectural Guidelines

ENVIRONMENTAL DESIGN DETERMINANTS				
PRINCIPLES	TECHNICAL SPECIFICATIONS	SPECIFIC EXCLUSIONS	PREFERENCES	COMMENTS
<b>WATER</b>				
Reduce the use of water as much as possible. <sup>3</sup>	All plumbing fittings to be water saving, including aerator taps, on all basins, sinks and baths	Fittings without leakage.		Water supply in the Western Cape and in South Africa generally is limited and is depleting natural resources in a way that affects the natural balance negatively
Reduce the use of water as much as possible	Minimum length of hot water piping, and minimum diameter.	More than 6 m length for the kitchen and more than 10 m length for the bathroom.	Diameters of ½ inch or less.	Prevention of too much hot water remaining in the pipes.
Reduce the use of water as much as possible	Low and/or dual flush toilet cisterns and shower heads Deep toilets.	Toilet cisterns over 7 litres capacity	Low and/or dual flush toilet cisterns and shower heads Deep toilets.	Rating system for washing machines. Hot fill from the solar collector for dishwashers and washing machines.
Recycle Water	Recycling is carried out at a village level but any individual house recycling system will be considered provided it meets health and engineering specifications.	For showers, drinking, cooking and water taps that are accessible for children. Clothes washing is confirmed after tests.	Toilet flush, irrigation.	Attention should be paid to avoid that the recycled water system and the clean water system be interconnected by mistake.

<sup>3</sup> The inhabitants all over the world will also have problems to share the available water. The withdrawal of water in Africa is expected to go from about 184 km<sup>3</sup> in 2002 to about 236 km<sup>3</sup>. This means that the water consumption will have to drop from about 217 m<sup>3</sup>/year/capita in 2002 to about 182 m<sup>3</sup>/year/capita in 2020, including agricultural water, domestic water and industrial water. The domestic use at the world scale is about 108 liter/day/capita. Because of the increasing needs for industrial and agricultural water, we estimate that a reasonable target is to drop the domestic use in the Lynedoch EcoVillage with at least 30%, say at maximum 75 liters/day. Furthermore the project is going to recycle as much as possible the black and grey water resulting from the domestic consumption. The Lynedoch EcoVillage project has adopted a target of at least 75% recycling at a yearly basis.

ENVIRONMENTAL DESIGN DETERMINANTS				
PRINCIPLES	TECHNICAL SPECIFICATIONS	SPECIFIC EXCLUSIONS	PREFERENCES	COMMENTS
<b>ENERGY</b>				
Reduce energy consumption as much as possible. <sup>4</sup> Diversify energy sources to use most appropriate source for each use.	Water heating to be via Solar Panels. Electrical or LP gas back-up is optional.	Stand-alone hot water cylinders. Storage tanks on top of roof	Use and improvement of existing systems.	Lynedoch receives more than adequate solar radiation to heat water for domestic use except for a few days in winter.
Reduce energy and diversify energy sources.	Cooking to be by LP gas hob. Option solar cooking.	Electric hobs	LP Gas ovens	LP Gas is much more energy efficient than electricity or paraffin for cooking
Reduce energy and diversify energy sources	Space heating by passive solar heating and good insulation. Option minimal electrical or LP Gas back-up. Long term heating only in living room, short term in bathroom.	Electrical space heating and at the same time the absence of insulation in walls and roofs.	Low wattage space heaters as back-up for the living areas. Larger windows at northeast to northwest orientations. Trombe-walls at northeast to northwest orientations.	It is possible to attain sufficient internal temperature in winter through good insulation, passive sun energy and heat from cooking and occupants
Use low energy lighting and electrical appliances	Specify low energy lighting requirements. Also specify low energy requirements when buying electrical appliances etc.	It is not acceptable if not at least 50% of the "globes" are of an energy saving type.	See list, every room has it 's own preferences. It is often much better to have a low general level of artificial light combined with higher levels of light at specific spots.	Flourescent may be energy efficient but not every type of flourescent is good for health. Use as much natural light as possible.

<sup>4</sup> The Lynedoch EcoVillage is aimed to be sustainable for circumstances expected to be realistic for the year 2020. The expectation is that the available resources on earth will have to be shared with much more inhabitants. For example the African population will grow from 850 million Africans in 2002 to 1.300 million Africans in 2020. They will have to share energy resources which are at the risk to be more and more exhausted. The energy consumption is expected to grow, not only because of the growth of the population but also because a higher consumption per capita (expected to be about 15% until 2020 in the African context). It is difficult to define a quantified target for the energy use. A solution could be to follow the example of ecological projects in other countries, where the use of prime energy has dropped with about 30% in 10 years. For the period from 2002 to 2020 the Lynedoch project could adopt a target of 40% reduction. This general target needs further detailing for every category of houses. Concept Basic Design Guidelines by ARG, reviewed by Chris Posma SYNEFF Consult on 28 September 2003.

<b>ENVIRONMENTAL AND AESTHETIC DESIGN DETERMINANTS</b>				
<b>PRINCIPLES</b>	<b>TECHNICAL SPECIFICATIONS</b>	<b>SPECIFIC EXCLUSIONS</b>	<b>PREFERENCES</b>	<b>COMMENTS</b>
<b>MATERIALS</b>				
Use materials that are in ample supply and locally produced.	See below for specific requirements	See below for specific exclusions.	Locally produced materials	The aim is to avoid exhaustion of materials and to avoid unnecessary transportation.
Use materials that from renewable resources	See criteria in NIBE documentation for each of selected materials.	Hardwoods from tropical forests that are being destroyed (e.g. most supplies of Meranti are exported and from unsustainable sources)	Timber from sustainably grown forests (best known sources: certified Pine-wood from SA and certified hard wood from Mozambique)	There are few timbers that are locally produced but it is possible to obtain imported timber from sustainable forests
Promote the use of safe materials, from health point of view	See criteria in NIBE documentation for each of selected materials.	Asbestos, products with high level of formaldehyde, product with toxics.	Natural wood. Supawood is best of board products but still has relatively high level of formaldehyde	Health risks associated with manufacturing and use. Many substances, especially from petrochemical sources, emit toxic gases for much of their lifetime.
Use Durable and environmentally friendly flooring materials		Vinyl flooring Certain synthetic carpets	Natural timber Woollen carpets Hessian Carpets Corcolem	Not included in the design of the houses. To be considered as recommendations for the home owners.
<b>EXTERNAL WALLS</b>				
To reduce the total quantity of embodied energy and resources used to construct buildings	Masonry walls to comply with National Building Regulations (NBR). Timber or Everite sheets to comply with NBR and insulation values.	Solid bricks Solid concrete blocks Solid concrete	Materials that are manufactured on site, with local materials such as earth or sand, and with low cement content and low fuel input for machinery would thus be the best option. Use on-site clay for brick-making, pine from local logging companies, joinery work from local manufacturers	Materials must be selected to ensure the lowest possible embodied energy. This is determined by the resource content of the masonry material, the manufacturing process – how energy intensive it is, and the distance the materials need to be transported to site.
Obtain a visual harmony of good quality ecologically sound finishes on the walls.		Rude face brick work, Solid concrete block work, Decorative plaster work such as Spanish style plaster or ornate mouldings.	Regular work with smooth surface in stabilized earth blocks and bricks, Smooth surfaced plasters, Everite panels.	

ENVIRONMENTAL AND AESTHETIC DESIGN DETERMINANTS				
PRINCIPLES	TECHNICAL SPECIFICATIONS	SPECIFIC EXCLUSIONS	PREFERENCES	COMMENTS
<b>ROOFS</b>				
Avoid the use of materials with a chemical content that damages the environment.	See criteria NIBE for each of selected materials.	Materials that are excluded: IBR profile metal sheets; Fibre cement sheet; "kliplok" sheets	Roof materials to be natural tiles, concrete tiles, thatch, corrugated, metal roof sheeting, or slate	Many chemical compounds in building materials can cause substantial external damage to the environment over time.
Use insulation materials (and materials in general) which do not release fibres into the atmosphere.	In particular the internal atmosphere should be free of fine mineral fibres.	'Think Pink'; Glass fibre wool, any material containing Asbestos.	Organic materials, e.g. cellulose fibres, Other safe materials e.g. polyester, isotherm, isofoil etc.	Organic materials are most renewable and most benign from a health perspective.
To minimize the impact of the way the building is constructed. Pitched roof (i) ensures greater run-off and requires less water proofing and (ii) has the potential to provide relatively cheap additional internal space.	Main roof pitch to be greater than 25 degrees unless house is double storey in which case the roof pitch may conform with that of lean-to roofs as specified below. • Lean-to roofs to have a pitch of between 5 and 10 degrees. • Roofs must extend over the walls below.			The architecture of the buildings should not conflict with one another in the landscape to the detriment of the environment. The visibility of the site requires that the buildings are seen as a coherent group rather than a disparate collection of individual houses.
To minimize the impact of the way the building is constructed.	Lean-to roofs and Flat slabs not to exceed a total of 50% of overall roof area, except if double storey. • Lean-to roofs and balcony slabs on street side of building not to exceed 3m in depth from the front of the building. • Double storey houses must have either a lean-to roof or balcony of at least 1,5m depth on the street façade, or a pergola of similar size.	Flat slabs as roof for the second storey. <i>(This must be an error.)</i>	In the case of double storey it is recommended to moderate the pitch between 5 and 10 degrees. Flat concrete roof slabs are allowed at the level of the first floor.	Enough scope for variety with the specified constraints. It is recommended not to put flat slabs above stoeps on northeast to northwest orientations in order to let the winter sun come into the house.
Ensure that visual impact on the surrounding environment is limited	Solar panels must be mounted in the plane of the roof.	Separate storage tanks are not allowed on the roof	Integrated collector-storage systems are accepted on the lower parts of the roof	All efforts must be made to reduce the visual impact of all buildings.
Ensure that visual impact on the surrounding environment is limited	Dormer windows, skylights and roof lights are allowed but must not be greater than 20% of the			

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	roof area		
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<b>ENVIRONMENTAL AND AESTHETIC DESIGN DETERMINANTS</b>				
<b>PRINCIPLES</b>	<b>TECHNICAL SPECIFICATIONS</b>	<b>SPECIFIC EXCLUSIONS</b>	<b>PREFERENCES</b>	<b>COMMENTS</b>
<b>DOORS AND WINDOWS</b>				
If materials are imported from other regions in South Africa or elsewhere in the world, make sure the materials are from sustainable managed sources.	-All windows to be vertical or equally proportioned, not horizontal. -Garage doors to be single type only with a maximum of 3 allowed.- Awnings to match window and door colour.	-Winblocks -Striped awnings	-Timber or aluminium windows with natural finishes -Meranti is a wood that is often used, but which normally comes from unsustainably harvested forests in Brazil and Indonesia. Alternatives would be properly treated gums from the Southern Cape or Pine wood with slightly larger dimensions.	-Vertical proportion to simplify structure and to provide some consistency across the EcoVillage. -Most suppliers will provide the information on request, but rather find another supplier in the event that you get a supplier that is either unwilling to divulge information or is simply ignorant.
<b>CHIMNEYS</b>				
Ensure that visual impact on the surrounding environment is limited. Ensure that the chimneys are effective, without risks of carbonmonoxyde (CO).	Maximum total circumference to be 4m for any freestanding element or from where the chimney emerges from the roof. Maximum height of chimney to be no higher than 1m above apex of roof. Top of the chimney at least as high as the apex of roof ( <i>of the section of the house where the fireplace is located</i> ).	Chimneys lower than the apex of roof if the pitch is lower than 10 degrees.	All efforts must be made to reduce the visual impact of all buildings.	
<b>BALCONIES, PERGOLAS AND TERRACES</b>				
Ensure that visual impact on the village environment is limited.	All balustrades to be at least 75% void.Colour to be natural wood or trim colours.	Diagonal members	Green pergolas at northeast to northwest orientations.	Green pergolas give shadow in summer and let the sun pas in winter

ENVIRONMENTAL AND AESTHETIC DESIGN DETERMINANTS				
PRINCIPLES	TECHNICAL SPECIFICATIONS	SPECIFIC EXCLUSIONS	PREFERENCES	COMMENTS
<b>COLOURS AND FINISHES</b>				
Avoid the use of materials with a chemical content that damage the environment	See criteria NIBE.	All petrochemical paints for wall applications.	-Natural paints or sealants for doors, windows and fittings.	-Petrochemical based paints continue to exude small toxic emissions that do impact on health and the environment. -Health risk and environmental damage also involved in manufacturing process. -Many chemical compounds in building materials can cause substantial external damage to the environment over time.
Reduce visual impact when viewed from a distance. Harmony and controlled variety of colours.	Wall colours to be as per Breathcoat catalogue colours, Gobi Sand, Bronze Sand, Sandstone, Soap Stone, Calcite, Ochre Silica. Windows and doors to be natural wood or natural anodised aluminium or one of three colours – AS PER MIDAS Colour Chart; Mallard Green (8567-5), Yacht Blue (8469-5) and Etruscan Red (8315-5)	No more than two colours to be used on the walls of one building.	Buildings should be coloured in a way that blends into the natural environment. Where two colours are used on one building the darker one should be at the base of the building.	Most suppliers will provide the information on request, but rather find another supplier in the event that you get a supplier that is either unwilling to divulge information or is simply ignorant.
	All trims such as fascia boards, barge boards, verandah supports, etc. are to be natural wood or one of three colours – AS PER MIDAS Colour Chart; Mallard Green (8567-5), Yacht Blue (8469-5) and Etruscan Red (8315-5)			
Reduce heat by using reflective colours.	Roof colour to be light grey or natural galvanized.			Light colours reflect heat.
To enhance the use of natural energy as a	Polycarbonate corrugated sheets against specific parts of		Charcoal grey if the air in the roof space is to be used as a means to	Darker colours absorb heat.

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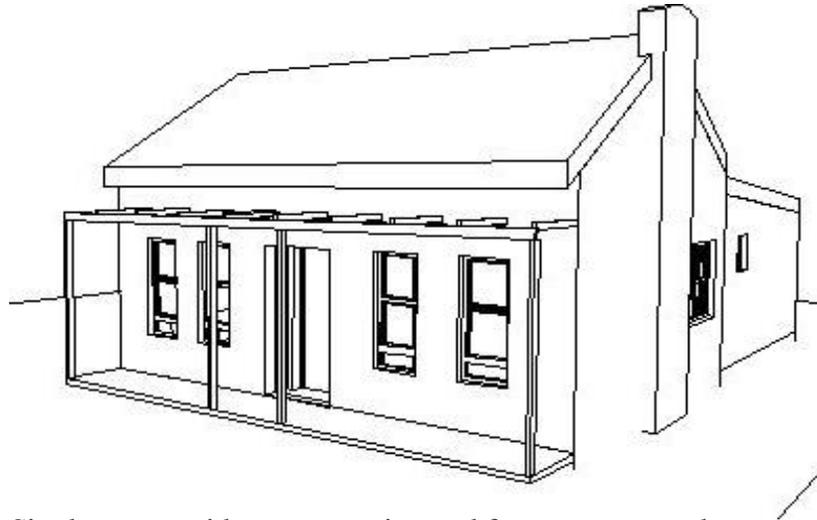
means to heat the building.	northeast to northwest walls, with inlet of warm air.		heat the building. Use of specific colours at specific places: absorption.	
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<b>ENVIRONMENTAL AND AESTHETIC DESIGN DETERMINANTS</b>				
<b>PRINCIPLES</b>	<b>TECHNICAL SPECIFICATIONS</b>	<b>SPECIFIC EXCLUSIONS</b>	<b>PREFERENCES</b>	<b>COMMENTS</b>
<b>BOUNDARY WALLS AND FENCES</b>				
<p>Ensure that visual impact on the village environment is limited.</p> <p>Promote a coherent and open streetscape with good surveillance from houses.</p> <p>Promote open rear spaces for sense of space and surveillance</p>	<p>Boundary walls on the street side of the house to be a maximum of 900mm high.</p> <p>Rear boundaries only to be enclosed with fences or hedges or combination of wall and fence.</p> <p>No boundary wall to be higher than 900mm above NGL. Fences and hedges to be max of 1.8m high</p> <p>All walls to match walls of the main house in colour and finish.</p>	<p>Fences on the street side of the building</p> <p>Vibracrete or concrete walls</p> <p>Security wires of any kind on top or sides of the walls or fences</p>	<p>Boundary walls and fences should be unobtrusive, both in terms of the materials used and how it is painted or treated.</p> <p>It is recommended that neighbours try to bring harmony in the boundary walls and fences per group of houses.</p>	None
<b>MISCELLANEOUS</b>				
Ensure that visual impact of services on the surrounding environment is limited.	In general all services such as pool filtration system, refuse bins, washing lines, air conditioner units, are to be concealed from the street and the neighbours, behind walls or screens and the like.		Refuse bins grouped in some 5 or 6 clusters for the whole EcoVillage.	
Ensure that visual impact of plumbing on the surrounding environment is limited.	All plumbing to be concealed from view from the street, except gutters and downpipes.			
Ensure that visual impact of satellite dishes and aerials on the surrounding environment is limited.	Satellite dishes and aerials not to be mounted higher than the eaves of the roof.		It would be interesting if neighbours work together for the installation a satellite for a group of houses. It can reduce energy and cost.	

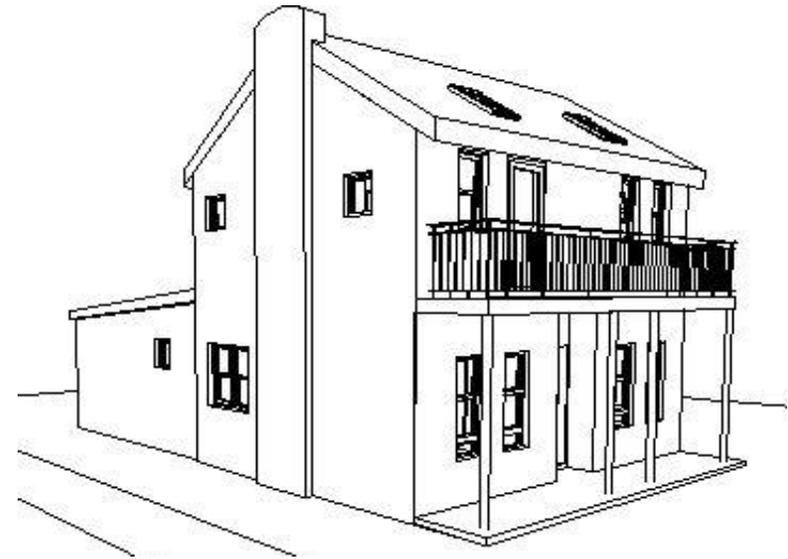
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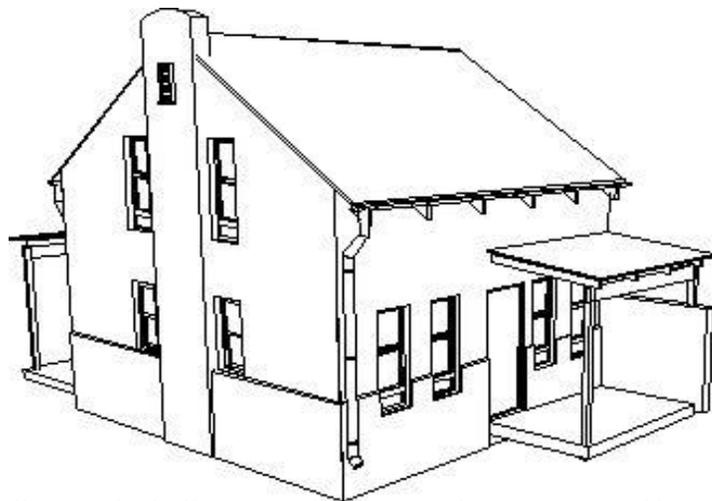
<b>FUNCTIONAL AND AESTHETIC DESIGN DETERMINANTS</b>				
<b>PRINCIPLES</b>	<b>TECHNICAL SPECIFICATIONS</b>	<b>SPECIFIC EXCLUSIONS</b>	<b>PREFERENCES</b>	<b>COMMENTS</b>
Buildings are seen as a coherent group and the architecture of buildings should not conflict with one another.	Each house must be a single main form with connected secondary forms such as garages.	The specific exclusions for the respective elements are without exception and an owner may not include any of the specific exclusions in any building plan submitted for approval.	As specified for each element.  The architect(s) are asked to develop/integrate patterns that inspire harmony, whilst buildings may be individually designed.	A generic architecture is encouraged through strict control over primary architectural elements, the use of natural materials, limited, earthly colours and landscaping that responds to the surroundings.
The best quality for the lowest price and the lowest environmental cost.	Materials used must conform to an approved specification for that element.		Materials with the lowest environmental cost and with the highest contribution to low energy indoor climate control are preferred. The function of those materials may be expressed in the architecture.	
Contribution to harmony by the colours of the roofs.	The roofs of the houses should all be a similar colour, for the same material used, and of a similar pitch level by level.		The chosen colour should take into account to enable cheap and beautiful solutions.	
Individual expression of colours on external walls, windows and doors.	The colour of the houses must be very muted.		That neighbours discuss together, and with assistance by the architect about the colours, and the fine communication between different complementary colours.	



Single storey with rear extension and front stoep pergola

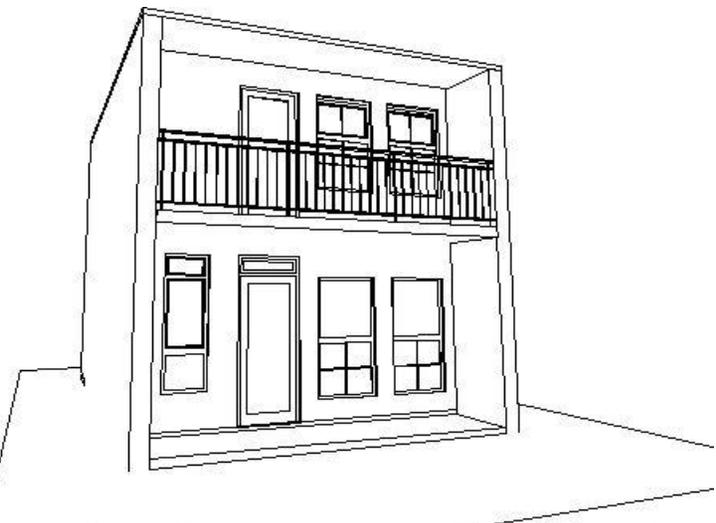


Double storey with extension to rear and front stoep and balcony



One and a half storey with front and rear stoeps with  
lean-to roofs

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Double storey terrace house with low pitched roof  
and front balcony and stoep

## 6 Landscape Guidelines

PRINCIPLES	TECHNICAL SPECIFICATIONS	SPECIFIC EXCLUSIONS	PREFERENCES	COMMENTS
<b>PLANTING</b>				
To ensure a consistency of planting with the natural vegetation, a promotion of appropriate biodiversity and to ensure a minimum standard of landscaping throughout. A preference for indigenous plants is promoted so as to not introduce alien vegetation into the EcoVillage and also to promote water wise landscaping.	See plant list in Appendix 1, with specifications for: (i) trees and fruit trees (ii) hedges (iii) low arbustres (iv) grass	In general non-indigenous plants are excluded. However, plants such as food crops, vegetables and fruit may be planted provided they are approved by the Home Owners Association first to ensure that there are no genetically modified crops or any other unacceptable practices introduced into the Village	A select range of plants is preferred in the development. See plant list Appendix 1.	Planting of trees and shrubs should enhance the natural diversity of the environment.
<b>EXTERIOR LIGHTING</b>				
Reduce light pollution and save energy.	These will be low level light bollards.	Area floodlighting	All exterior lighting is to be low-level and low intensity. Infra-red controlled spot lights may be provided on the street side for security	High level lighting will cause light pollution in the otherwise dark rural area.
<b>HARD LANDSCAPING</b>				
Prevent rainwater run-off that could have negative effects on the surrounding environment.  Encourage maximum percolation on the site.	A maximum of 75% of the site (including the footprint of the house) is allowed to be hardened and a preference for porous paving systems is promoted.	Tarmac		To reduce surface water run-off and increase percolation into the ground.

## **7 Design Approval Procedure**

### **7.1 Responsibility**

- Owners must seek compliance with the National Building Regulations and all the requirements of the Local Authority. These guidelines and approval procedure do not replace the municipal responsibility for ensuring such compliance.

### **7.2 Approvals**

- All building, site development and landscape plans are to be submitted to the Lynedoch EcoVillage Home Owners Association together with the requisite scrutiny fee.
- The scrutiny fee will be in proportion to the value of the property being assessed (Scale of fees to be determined)
- It is recommended that sketch plans are submitted for preliminary assessment to avoid unnecessary waste of effort and time. Active interaction with the Professional Consultants is encouraged. 25% of the scrutiny fee would be payable on submission of sketch plans.
- Only after approval by the Home Owners Association may the owner submit these plans to the Local Authority (Stellenbosch Municipality).
- Construction can only commence once approval has been granted by the Local Authority.
- Approval of plans by the Lynedoch Home Owners Association does not imply or guarantee approval by the Local Authority.

### **7.3 Construction**

- During construction the Building Contractor is obliged to adhere to the relevant rules of the Code of Conduct of the Home Owners Association in general and more specifically the rules in the sections 5, 7 and 8 of the Code of Conduct.
- On completion a Certificate must be obtained confirming compliance with the Architectural guidelines and the Code of Conduct.

### **7.4 Disclaimer**

- It should be noted that, should the guidelines be updated for what so ever reason, that any design features that may exist in any existing building built prior to the amendments, may not be used as a precedent and that the previous guidelines may not be used. Nor may any illustrations and sales literature be used to justify any departures.

### **7.5 Update of Guidelines**

- Any plan submitted after any update of the guidelines will be obliged to follow the latest set of guidelines.

### **7.6 Conflict Resolution**

A procedure for conflict resolution will be added in due course. This will take into account conflicts between a prospective owner/builder and the Home Owners Association, and conflicts that may arise after construction.