



**REVISED DESIGN PARAMETERS FOR
L'AGULHAS NATURE RESERVE**

12 AUGUST 2010

**as updated by
L'Agulhas Nature Reserve
Home Owners Association**

1. Introduction

Design Parameters for Khukammi Private Nature and Game Reserve were compiled by R&L Architects in their document of 19 November 2004. However, feedback from Members of the L'Agulhas Nature Reserve Home Owners Association (LNR HOA) via the Strategic Planning Questionnaire at end 2009 requested that the best elements of the Old Design Manual of 2001 be combined with those of the Design Parameters compiled by R&L Architects. This document integrates these two designs in a way that remains consistent with Clause 3.1.3 of the Objectives of the HOA, viz to be **"...in accordance with the proposed styles and design of the Developer"**.

It is important to ensure that development in LNR has as low an impact as possible on the environment and will complement the rural nature of LNR. Also of importance is that the building style in LNR reflects a specific character, which is the objective of this document.

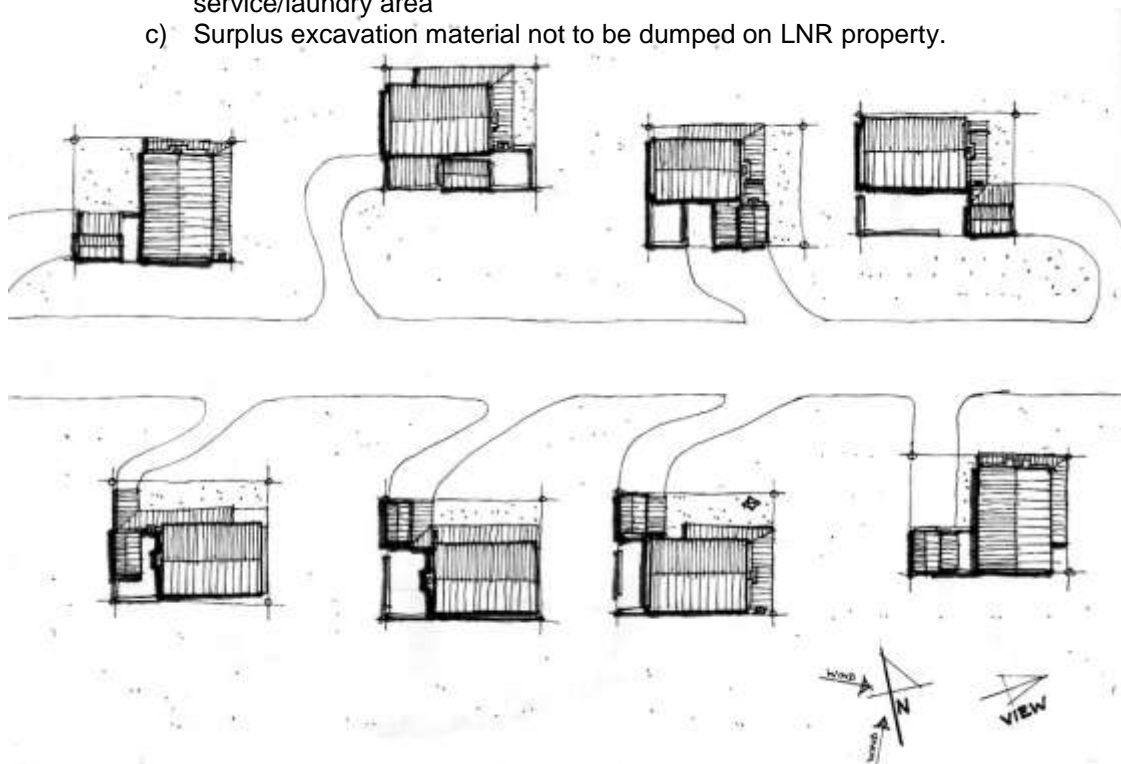
The design criteria in this document are in addition to those in the National Building Regulations and Building Standards Act No 103 of 1977 as amended.

The LNR HOA reserves the right to amend this document from time to time. It may also request that modifications be done by Owners to plans or layouts should they not comply with the Design Parameters currently in force.

New materials that may be appropriate have also been added and new building regulations requirements at national level on energy efficiency incorporated.

2. General layout on site

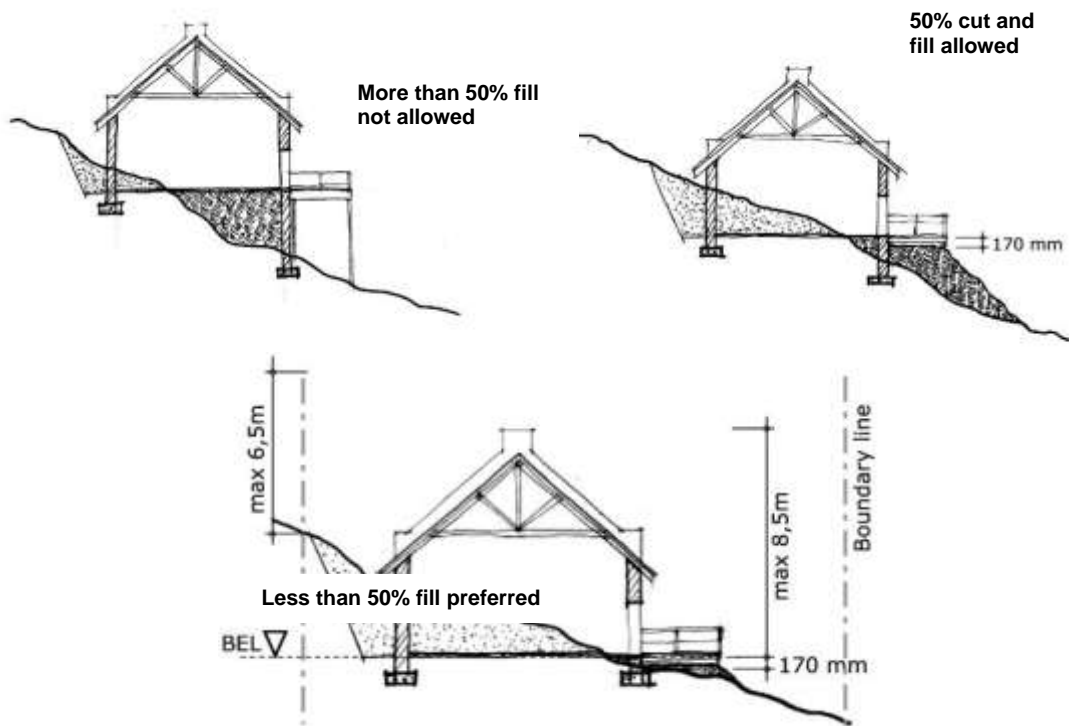
- a) No building lines, may build up to boundary line
- b) A suggested single garage with optional car port or tandem garage or double garage, patio, veranda with canopy, braai and screened service/laundry area
- c) Surplus excavation material not to be dumped on LNR property.



**Suggested site layouts – main view in a NE direction; prevailing winds from a NW and SW/SE direction
Alternative site layouts are shown in Appendix 1.**

3. Building proportions

- a) Coverage of all built structures on site (i.e. under roof) not to exceed 80%.
Note: This allows at least 20% for laundry yards, patios, etc which are essential to the LNR design style and concept
- b) Height restriction of 6,5m, measured from the natural ground level at the highest boundary of the site
- c) Base Excavation Level (BEL) to top of building may also not exceed 8,5m
- d) Chimney may project a maximum of 500mm above height restrictions
- e) The building consists of a maximum of two floor levels, as shown in the conceptual cross section on page 4
- f) Basement level permitted, provided that it is at least 2m below finished floor level of the building, with the basement ceiling height not exceeding 1 m above a height halfway between the highest and lowest heights of the natural ground level immediately adjacent to the building (otherwise it will be considered to be a floor level). Basement level also not permitted to have ceiling height more than 300mm above the highest point of the natural ground level adjacent to the building
- g) Main building may not be on pillars or columns.



Sections to show excavation cut and fill percentages and height restrictions

4. Plan layout

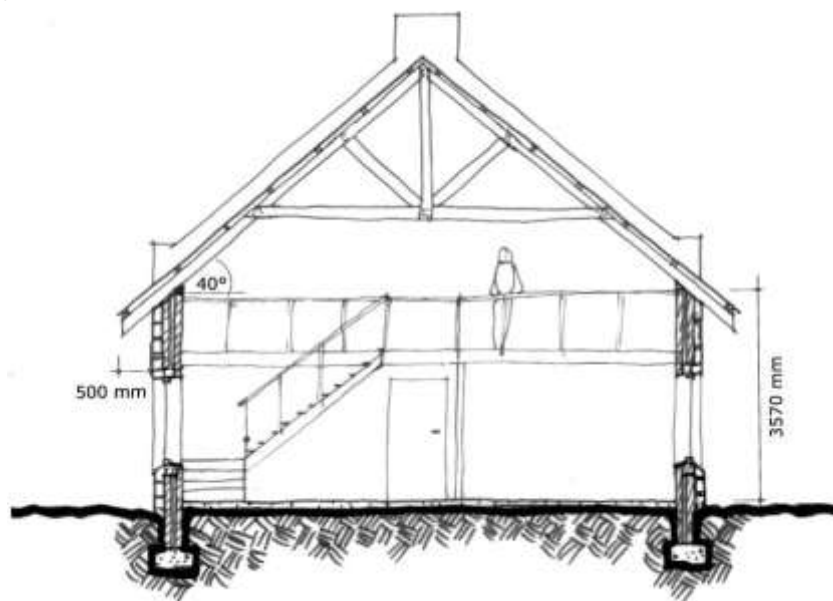
- a) May be designed by Martin van der Merwe, Professional Architectural Technologist, cell 071 146 0009, tel 028 435 6344, e-mail drafting@telkomsa.net

- b) May be designed by external design consultant/architect, but ***all*** designs to be approved by Martin van der Merwe on behalf of HOA ***prior*** to submission to Cape Agulhas Municipality
- c) A contour site plan shall be submitted for all designs for steeply sloping plots where a building height of above 6.5m is desired above BEL. N.B. Only 6.5m above the natural ground level at the highest boundary is allowed (Section 3(b)), with maximum height of 8.5m above BEL (Section 3 (c)).

Contact details of local land surveyors are: Town & Country, Bredasdorp, tel 028 424 1545, Mr Frank Truter - cell 083 412 4698, e-mail towncountry@vodamail.co.za

5. Wall construction and materials

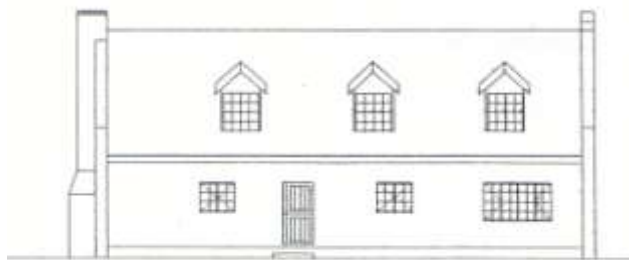
- a) Brick cavity walls with natural sandstone (Agulhas stone) cladding
- b) Simulated stone products (e.g. CEMSTONE - see www.cemstone.co.za) are acceptable instead of natural sandstone (Agulhas stone) as cladding. Prior approval as per 4 (b) above must be obtained for the specific simulated product selected
- c) As an alternative to natural sandstone (Agulhas stone) cladding, brick may be used ***together with*** a plaster ***and*** painted finish. Plaster to be "sponged" to "Arniston finish" as in Appendix 2 as in most "fisherman style" houses in L'Agulhas area. Unplastered brick or unpainted walls and the plastered finishes shown in Appendix 3 (e.g. Spanish plaster, fish scale plaster, banana plaster, etc) are ***not*** acceptable
- d) As an alternative to brick, cement bricks may be used. Note: If cement bricks used, best mortar mix practices should be followed to prevent wall cracking
- e) ***Paint on plaster to have sandstone/Agulhas stone colour*** to blend in with the bushy environment. Note: white paint will stand out too much
- f) Combination of natural sandstone (Agulhas stone)/simulated stone and plaster finish is acceptable
- g) Screen walls only to be used where necessary to screen off a service area. Screen walls to be a maximum of 2.1m high, and are ***essential for laundry yards*** (no laundry lines permitted on common LNR ground). Screen walls to be clad with natural sandstone (Agulhas stone)/simulated stone or have a painted plaster finish as in 5 (c) above
- h) ***No*** boundary walls permitted.



Conceptual cross section

6. Roof

- a) Height of wall plate about 3 570mm (nominal for 40° pitch)
- b) Open truss construction preferred. Note: Using ring beams may be a cheaper alternative to having excessively strong and expensive trusses to handle negative effects of sideways forces on walls that high wind speeds may impose. Bolted trusses are more aesthetic than gang-nailed trusses
- c) Roof pitch 35° - 45°
- d) Overhang 500mm
- e) Cladding material to be fibre cement roof sheets with Victorian profile or Bigsix. Zinalume with corrugated profile also acceptable. Thatch roof not permitted
- f) Cladding to be "Cape Green"/Dark Green/Colonial Green or "charcoal" coloured
- g) Eaves must show manufactured trusses, not gumpoles
- h) Gutters and fascias allowed on main roof. Gutters to be coloured to match fascias. Preferred material is brown continuous aluminium, with gutter exiting horizontally at about fascia level (to avoid unsightly goosenecks and vertical gutter pipes)
- i) Roof windows preferred in gable walls, but windows in roof acceptable (e.g. dormer windows as shown in conceptual design below). Where roof windows are selected in gables, these should not face the same way as dormer windows in the roof (i.e. mixed designs of roof windows not acceptable)
- j) Skylights acceptable.



Conceptual design of dormer windows

7. Roof canopy (afdak) and Outbuildings

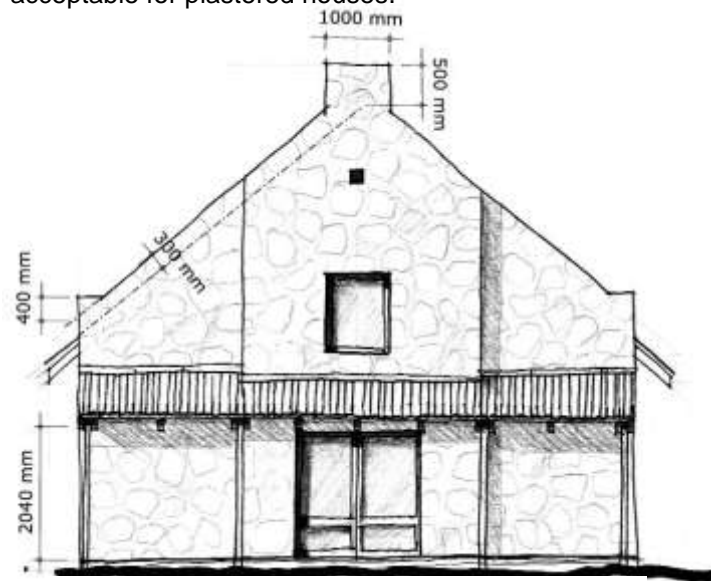
- a) Roof pitch 6° - 8° maximum. Pitches of veranda roofs to fit in with design of house
- b) Cladding material to be fibre cement with Victorian profile or Bigsix. Zinalume with corrugated profile also acceptable. Thatch roof not permitted
- c) Cladding to be "Cape Green/Dark Green/Colonial Green" or "Charcoal" coloured
- d) Gutters and fascias allowed meeting criteria as per 6 (h) above
- e) Parapet walls allowed on 3 sides of canopy perimeter.



Detail of roof overhang with canopy

8. Gable walls

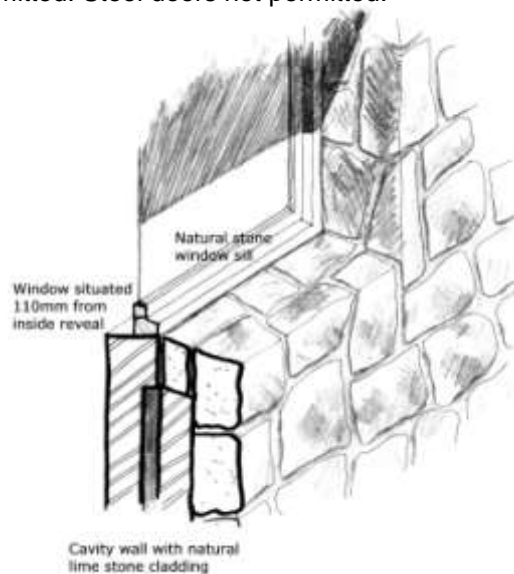
- a) General form and dimensions, as illustrated, to be maintained
- b) Continuity of finishes to follow through from façade. No waterproofing on top of gable walls for stone or simulated stone clad houses, but this is acceptable for plastered houses.



Conceptual elevation of gable wall with canopy

9. Windows & Doors

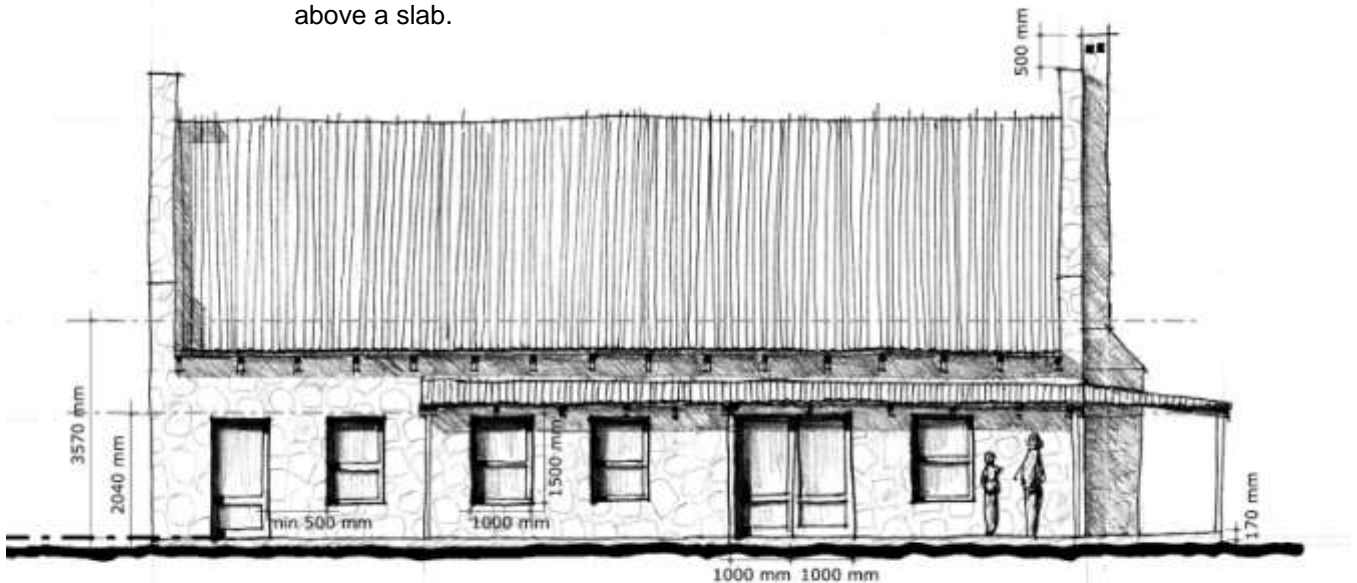
- a) Dimension ratio for windows of 1 horizontal to 1.5 vertical. Windows in bathrooms and above counters may be of ratio 1 to 1. Windows in lounge/dining room/living room area only may have dimension ratio up to 1.5 horizontal to 1 vertical to permit as much view as possible from these areas
- b) Window sills in natural sandstone (Agulhas stone)/simulated stone or plaster
- c) Cottage pane windows acceptable but not preferred
- d) Frames to be timber or powder coated aluminium in colours ranging from brown/bronze to black or natural timber not painted. Steel window frames not permitted
- e) Minimum column width of 500mm between windows and between windows and doors
- f) Position depth in wall 110mm from the inside reveal
- g) Doors to be wood with natural timber colour or brown, or powder coated aluminium with colours as per 9 (d) above. Sliding doors and stacking doors permitted. Steel doors not permitted.



Section through window to show position in wall and natural stone window sill

10. Patios and verandas

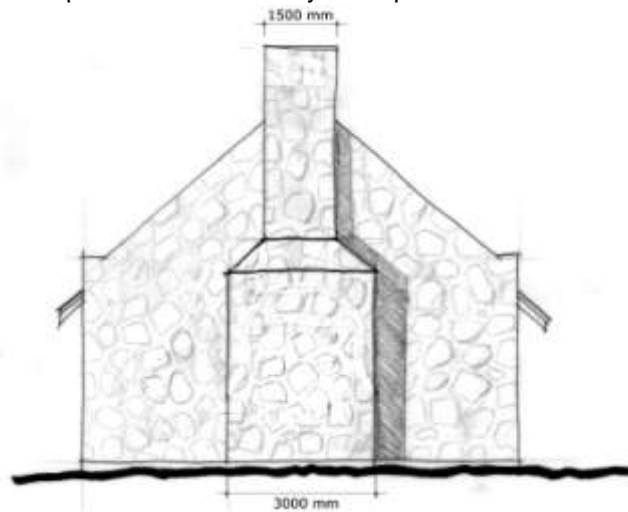
- a) Preferably 170mm above natural ground level
- b) To consist of either timber or clad and paved with natural sandstone (Agulhas stone)/simulated stone or grey interlocking paving bricks as per 19 (a)
- c) Preferably to consist of light materials
- d) Non-slip ceramic tiles may be used for safety reasons in elevated areas or above a slab.



Conceptual elevation of patios and verandas

11. Braai and fire place

- a) Weather protection of chimney to be part of wet works structure



Conceptual elevation to show gable wall with fireplace

12. Baiustrading

- a) Timber throughout
- b) Design to be light and inconspicuous

- c) Powder coated bronze (or coloured as per 9 (d)) aluminium frames may be used to support glass panels when desired in elevated, windy areas.

13. Garage

- a) Same guidelines apply as for main building
- b) Single garage with optional car port or tandem garage or double garage
- d) Timber garage door. Should be incorporated into rest of design.

14. External plumbing and services

- a) No plumbing reticulation to be visible externally. Note: The Rules of LNR prohibit boundary walls which are thus not available to hide unsightly aspects of visible sewage or plumbing piping from other residents.



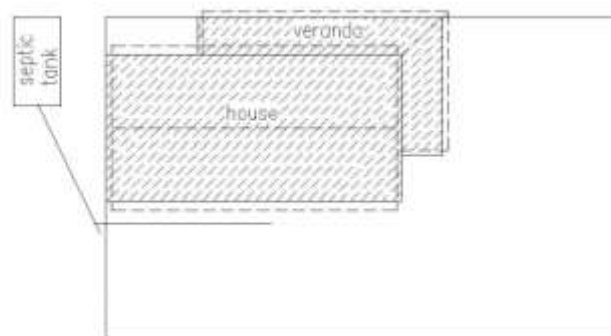
Conceptual elevation to show canopy serving veranda, braai area and carport

15. Burglar bars

- a) These are to be internal only. Colour to match window frames.

16. Septic tank

- a) This may be constructed on common ground in LNR, with the tank spaced at least 2 m from a structural wall (see sketch below)
- b) Design of tank to be as specified by the Cape Agulhas Municipality
- c) Connection to future sewage mains to be provided for.



Typical location of septic tank

17. Energy efficiency (including solar water heating, insulation, etc)

- a) Building designs must comply with the latest revision of the National Building Regulations and Building Standards Act No 103 of 1977 as amended.

In June 2010 the Minister of Trade and Industry Minister published a regulation for the environmental sustainability of buildings, which is a sub-regulation to the National Building Regulations and Building Standards Act, allowing two months for comment.

The regulation requires all **new** buildings to be fitted with renewable energy water heating systems, such as solar water heating systems.

The regulation also stipulates that different elements of buildings, such as roofs, ceilings, walls and windows, have to meet minimum requirements for preventing loss of heat in winter or heat gain in summer

- b) Solar water cylinders, when mounted externally, are to be coloured to match the roof
- c) Point of Entry (POE) filter advisable to reduce well-known corrosive effects of LNR borehole water on expensive solar water or other installations.

18. TV antennas and satellite dishes

- a) TV antennas and satellite dishes are to be mounted in a position so as to be as inconspicuous as possible.

19. Connections to services in LNR

- a) Owner to provide driveway to connect to road in Reserve. Driveway preferably to be natural sandstone (Agulhas stone), but other acceptable materials are grey interlocking paving bricks (as already used on roads in Reserve), tar or gravel (but latter can be problematical in wet weather for sewage trucks)
- b) Owner to connect to water main in LNR via isolating valve, water meter, water stop valve and POE filter (optional). Cast iron covers to be provided to water meter and water stop valve to prevent damage
- c) Owner to connect to electricity distribution box via cable to easily accessible glass fibre meter box on external building wall so that electricity meter readings are facilitated. Electricity meter to be provided by Owner.

20. Construction

- a) During construction, Owners to ensure that as little disruption/damage as possible occurs to LNR, the environment and neighbours in LNR
- b) No labourers to sleep in LNR overnight
- c) Builders to provide chemical toilet for labourers in LNR
- d) No making of fires permitted in LNR
- e) Surplus excavation material not to be dumped on LNR property
- f) Damage done during construction to LNR fynbos on building site or roads must be reinstated or Owner will be billed by HOA to correct such damage.

21. Exemptions from design parameters

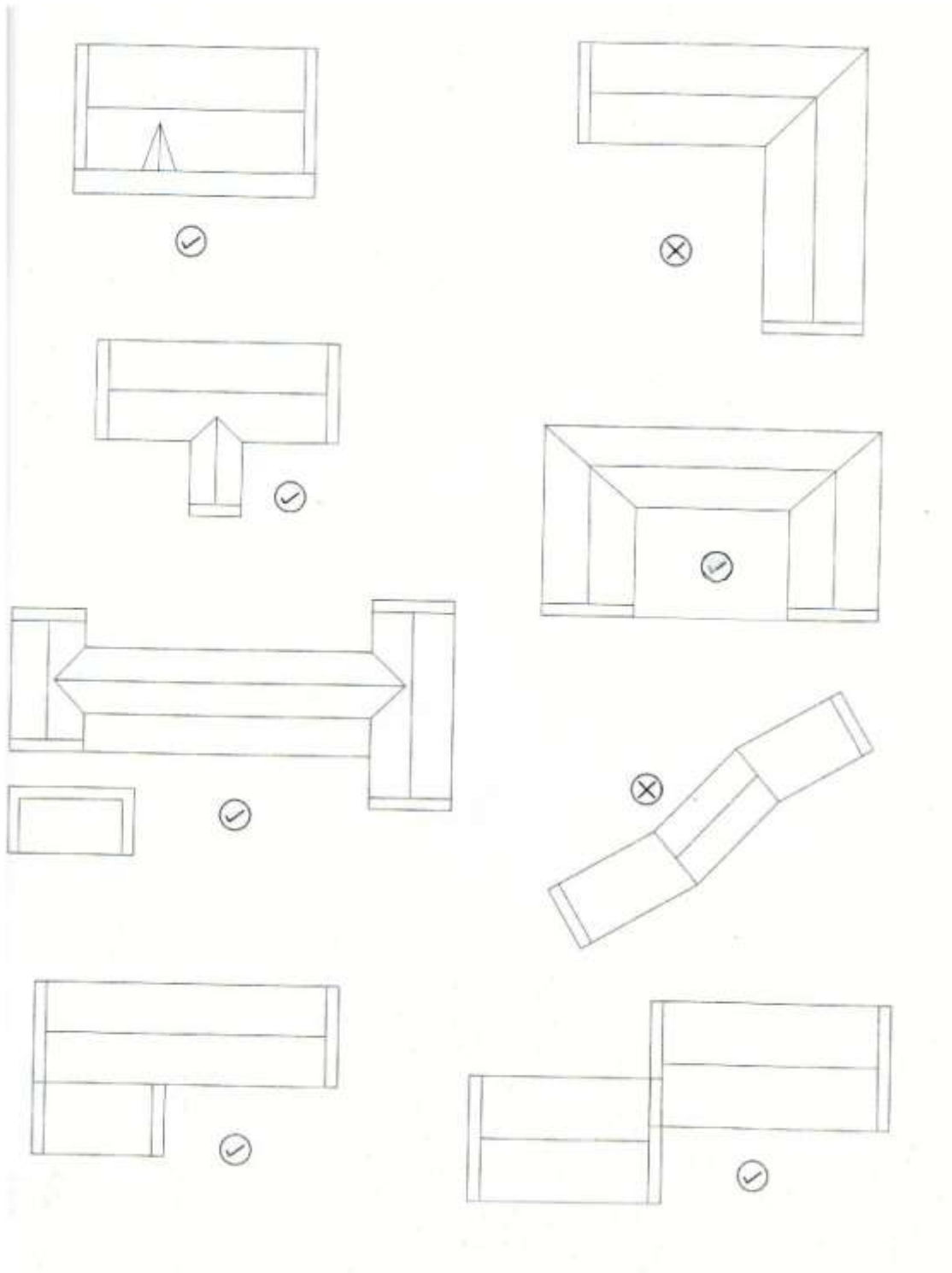
- a) Should an Owner not be in a position to comply with certain of these Revised Design Parameters in new plans for erecting a dwelling, the Owner may apply in writing to the Chairperson of the Executive Committee (EXCO) of LNR for exemption from specific criteria
- b) The application shall clearly set out the reasons for such non-compliance
- c) A contour site plan shall be submitted for ***all*** applications made in terms of Section 3 such as 50% cut and fill exceeded, height restrictions in Section 3 (b), (c) or (d) not met, levels in Section 3 (f) exceeded, etc
- d) Exemptions will only be granted ***in exceptional circumstances***, with due regard being taken to ***all*** consequences of such exemptions, i.e. approval process should not be taken for granted
- e) Where necessary, approval may also need to be obtained from parties who were part of the design parameters approval/compilation process, e.g. Cape Agulhas Municipality, Cape Nature, etc
- f) The HOA is not able to grant any exemptions from the National Building Regulations, such as the example shown in Appendix 4 re wall heights and thicknesses.

Illustrations by Estelle Heuseveldt & martin van der Merwe

Appendix 1. Alternative Site Layouts

✓ Acceptable

X Unacceptable



Appendix 2. Acceptable Plaster Finish

“Arniston finish” as in most “fisherman style” houses in L’Agulhas area

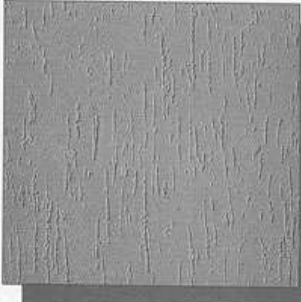
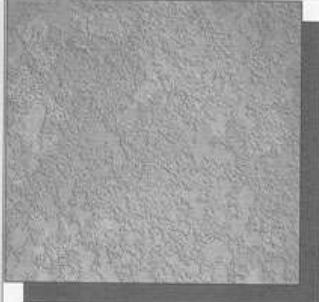
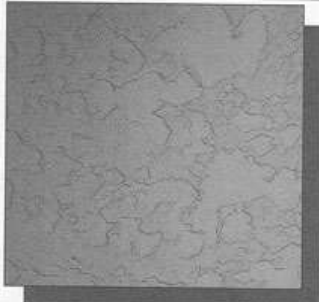

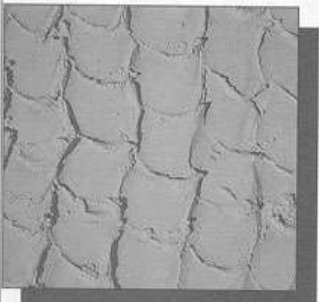
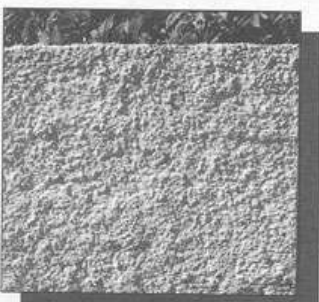
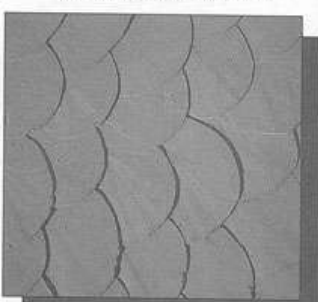
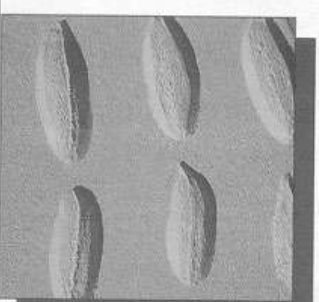
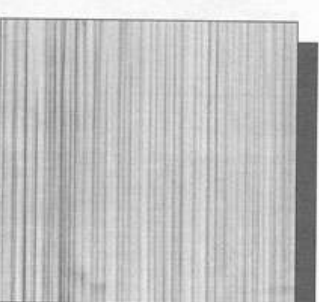



Detail of typical “Arniston finish”



Note: i) Plaster to be painted natural sandstone (Agulhas stone)
ii) The above photographs are best viewed electronically and not via hardcopy to ensure true reproduction, e.g. in the Members Section of www.lagulhas.co.za

Appendix 3. Unacceptable Plaster Finishes (as "Arniston finish" required)

<p>PLASTER TEXTURES</p> <p>Plaster also referred to as rendering, stucco, wall coating or facing, is applied in one, two or three coats to internal or external walls; used to improve weather resistance of exposed walls, either smooth or textured and coloured in a variety of ways to suit the style or preference.</p> <p>The mixture is generally cement: sand (1:5 nom) often together with lime or a plasticiser; water is added to provide a workable consistency. The thickness of any one coat plaster should not exceed 15 mm. A fine sand can be blended with a coarser sand depending on the texture required.</p> <p>Uneven surfaces should be levelled by dubbing out separately and allowed to dry before the full coat is applied. For problem walls or off-the-shutter concrete, a key should be provided as follows:-</p> <p>SPATTERDASH: (1:2 nom mix) is applied by throwing the slurry by brush or flat scoop onto the surface and left as is to dry.</p>	<p>STIPPLE KEY: (1:3 nom mix) is brushed or scraped into the surface and stippled with a carpet brush.</p> <p>SCRAPING: Or combing freshly applied undercoat that has set, is to provide a key for the subsequent coat.</p> <p>Suction in obtaining a good bond is to dampen the surface just sufficiently to ensure uniform absorption.</p> <p>Dry-dash is clean dry stone or marble chips (3-5 min), thrown with a flat scoop in the soft plastered surface (butter coat) and tamped flat with a wooden trowel.</p> <p>To plaster 100 m² x 15 mm thick, you require 10 sacks cement and 2 m³ sand.</p> <p>Nominal mix: 1 sack cement and 3 builders wheelbarrow sand; or batch by bucket, 1 bucket cement and 5 buckets sand.</p>	<p style="text-align: center;">REFER TO OTHER WALL COATINGS ON PAGE...?</p> 
		
<p>FINE SPANISH PLASTER</p>	<p>ROUGH SPANISH PLASTER</p>	<p>ROUGH CAST PLASTER</p>
		
<p>ENGLISH COTTAGE PLASTER</p>	<p>COUNTRY COTTAGE PLASTER</p>	<p>FISH SCALE PLASTER</p>
		
<p>BANANA PLASTER</p>	<p>VERTICAL BRUSH PLASTER</p>	<p>HORIZONTAL CEMENT BAGGING</p>

Appendix 4. Extract from National Building Regulations re Permissible Heights of Different Thicknesses of Masonry Walls

PERMISSIBLE DIMENSIONS OF MASONRY WALLS IN BUILDINGS (SABS 0400)							
Nominal wall thickness, mm	Use of wall in a building	Max. storey height, m ⁽¹⁾⁽³⁾	Max. height, ground floor to top of external gable, m	Max. un-supported length, m ⁽²⁾	Min. nominal unit strength, MPa		Min. class of mortar ⁽⁴⁾
					Solid units	Hollow units	
90	Non-structural internal wall in any storey	3.0	NA	6.0	7.0	3.5	III
	External infilling and cladding to framed building to height of 25m	3.3	NA	note (3)	7.0	NP	II
	Wall providing lateral support in single storey building but carrying no gravity load other than its own weight.	3.0	NA	6.0	7.0	3.5	II
110	Non-structural internal wall in any storey	3.3	NA	7.0	7.0	3.5	III
	External infilling and cladding to framed building to height of 25m	3.3	NA	note (3)	7.0	3.5	II
	Structural wall in single storey building	2.6	4.0	6.0	7.0	3.5	II
	Wall providing lateral support in single or double storey building but carrying no gravity load other than its own weight	3.3	NA	7.0	7.0	3.5	II
140	Non-structural internal wall in any storey	3.0	NA	7.0	7.0	3.5	III
	External infilling and cladding to framed building to height of 25m	3.0	NA	5.0	7.0	3.5	II
	Structural wall in single storey building	3.3	5.0	6.0	7.0	3.5	II
	Structural wall in double storey building	3.0	7.5	6.0	10.5	7.0	II
190	Non-structural internal wall in any storey	3.5	NA	9.0	7.0	3.5	III
	External infilling and cladding to framed building to height of 25m	3.3	NA	7.0	7.0	3.5	II
	Structural wall in single storey building	3.5	5.5	8.0	7.0	3.5	II
	Structural wall in double storey building	3.3	8.5	8.0	10.5	7.0	II
230	Non-structural internal wall in any storey	4.0	NA	9.0	7.0	3.5	III
	External infilling and cladding to framed building to height of 25m	3.3	NA	8.0	7.0	3.5	II
	Structural wall in single storey building	4.0	6.0	9.0	7.0	3.5	II
	Structural wall in double storey building	3.3	8.5	9.0	10.5	7.0	II
90-50-90 to 90-110-90 cavity wall	External infilling and cladding to framed building to height of 25m	3.3	NA	5.0	7.0	3.5	II
	Structural wall in single storey building	3.0	4.5	8.0	7.0	3.5	II
	Structural wall in double storey dwelling unit without concrete slab roof	2.8	7.5	8.0	14.0	NP	II
110-50-110 to 110-110-110 cavity wall	External infilling and cladding to framed building to height of 25m	3.3	NA	6.0	7.0	3.5	II
	Structural wall in single storey building	3.0	5.0	9.0	7.0	3.5	II
	Structural wall in double storey building	3.0	8.0	9.0	14.0	7.0	II