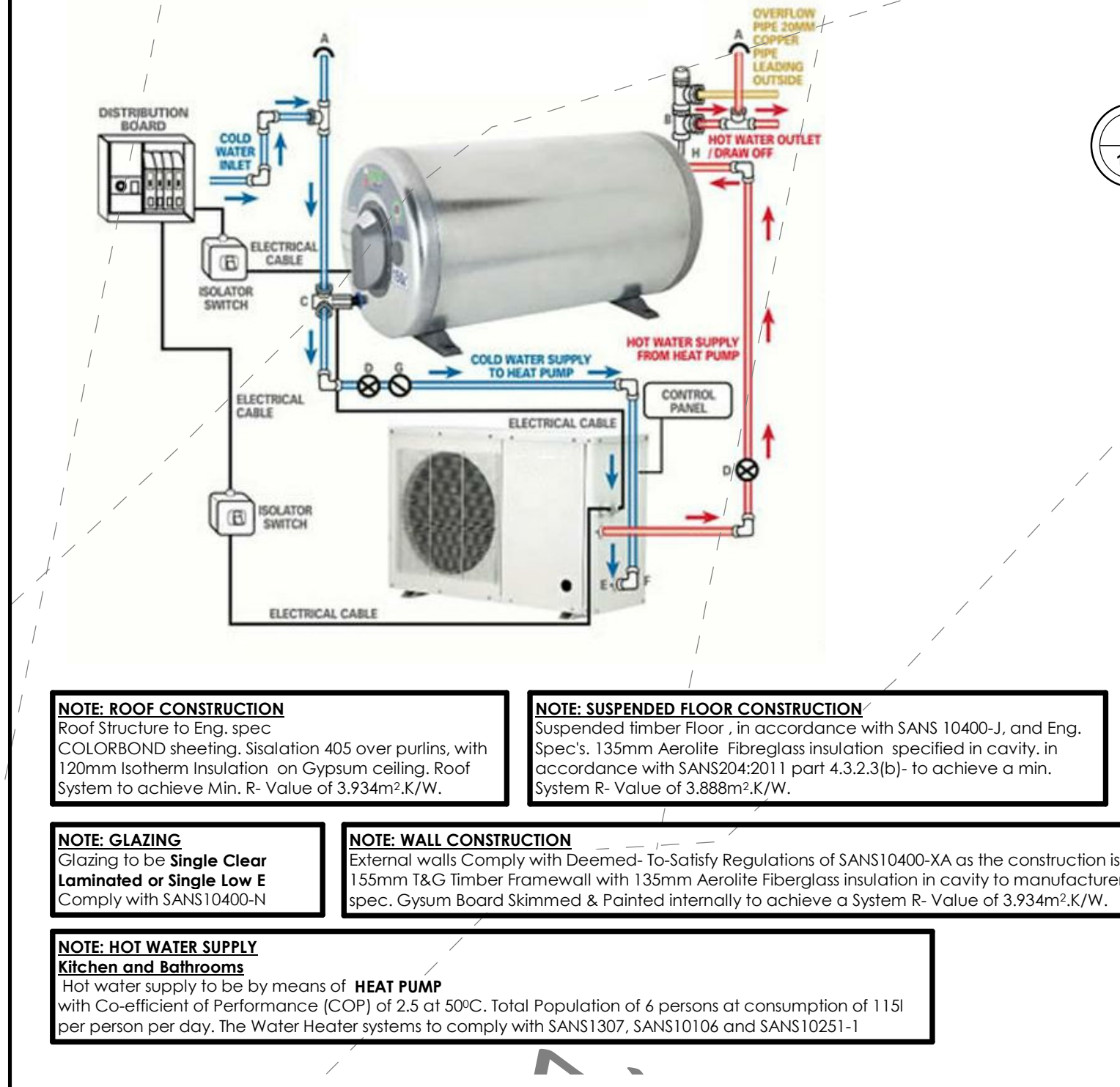


5_Ground_Floor_Managers_House

1 : 50



NOTE: ROOF CONSTRUCTION
Roof structure to Eng. spec.
COLORBOND sheeting, Sitalation 405 over purlins, with 120mm Isotherm insulation on Gypsum ceiling, Roof System to achieve Min. R-Value of 3.934m²K/W.

NOTE: SUSPENDED FLOOR CONSTRUCTION
Suspended timber floor, in accordance with SANS 10400-J, and Eng. Spec's. 135mm Aerolite Fibreglass insulation in cavity to manufacturer spec. Gypsum Board Skimmed & Painted internally to achieve a System R-Value of 3.888m²K/W.

NOTE: GLAZING
Glazing to be Single Clear Laminated or Single Low E Comply with SANS 10400-X.

NOTE: WALL CONSTRUCTION
External walls Comply with Deemed-to-Satisfy Regulations of SANS10400-XA as the construction is 155mm T&G Timber Framewall with 135mm Aerolite Fibreglass insulation in cavity to manufacturer spec. Gypsum Board Skimmed & Painted internally to achieve a System R-Value of 3.934m²K/W.

NOTE: HOT WATER SUPPLY
Kitchen and Bathrooms
Hot water supply to be by means of HEAT PUMP with Co-efficient of Performance (COP) of 2.3 at 50°C. Total Population of 6 persons at consumption of 115l per person per day. The Water Heater systems to comply with SANS1307, SANS10106 and SANS10251-1

ENERGY EFFICIENCY IN BUILDING	
Occupancy	- H3
Occupancy Times	- 24 hrs per day
	- 7 days a week
Building Netf area	- 173m ²
Building Total area	- 217m ²
Climatic Zone	- Zone 4

Main Axis Building Orientation - North
Suspended Timber Floor on ground
See floor Construction Note
External Wall construction
See wall construction Note
Fenestration Calculations
Ground Floor
Netf floor area - 79m²
Fenestration area to floor - 9.06m²
Fenestration percentage - 11.5%
Max Conductance allow - 110.60
Max Solar Heat Gain - 10.27

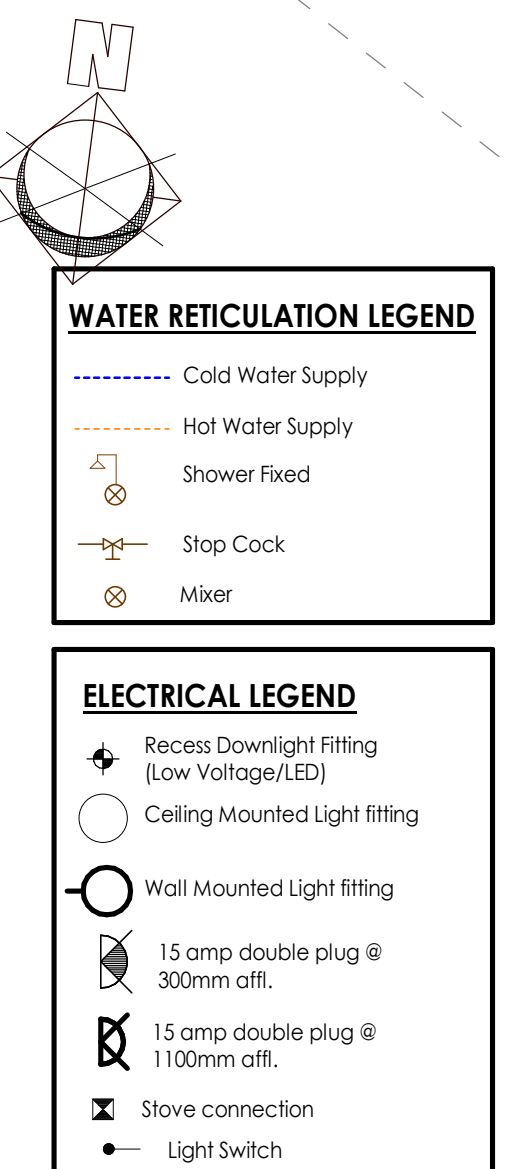
Achieved Aggregate Conductance / Solar Heat Gain
Calculated Conductance - 71.57
Calculated Solar Heat Gain - 6.18
Conductance / Solar Heat Gain Available
Calculated Conductance - 39.03
Calculated Solar Heat Gain - 4.07
First Floor
Netf floor area - 94m²
Fenestration area to floor - 20.16m²
Fenestration percentage - 21.4%
Max Conductance allow - 131.60
Max Solar Heat Gain - 12.22

Achieved Aggregate Conductance / Solar Heat Gain
Calculated Conductance - 129.58
Calculated Solar Heat Gain - 11.94
Conductance / Solar Heat Gain Available
Calculated Conductance - 2.02
Calculated Solar Heat Gain - 0.28

Roof construction
Minimum Total R-value required: 3.7m²K/W
Basic roof assembly - Metal sheeting
- Ventilated
- Pitch 3° degrees with 6.5mm Gypsum Horizontal ceiling.
Roof covering - 0.03 m²K/W
Ceiling - 0.05 m²K/W
Required insulation - 3.35 m²K/W
Sitalation 405 Reflective Foil Laminate used under roof sheeting - 1.26 R-value
120mm ISO THERM used between Rafter's above ceiling - 2.3 R-value
TOTAL R VALUE - 3.56

COMPLIES TO SANS204 REQUIREMENTS.
Air filtration & Leakage
Max permissible operable glazing - 2.0 L/sm²
Max permissible fixed glazing - 0.31 L/sm²
Max permissible doors - 5.0 L/sm²
External doors - Habitable Room - Door seal required
Roof, walls and floor to be constructed to minimise air leakage in conditional space

Services
Lighting and power
Max. energy demand - 1085W
Max. energy consumption per Annum - 1085 kWh
Total lamp energy demand - 187W
Total energy demand - 0.86W/m²
Total energy consumption - Lights - 408.41kWh or 1.88kWh/m²
Available annual energy consumption - Lights - 676.59kWh
Hot water service
Type of accommodation - Dwelling house, low rental: 80-115L/capita/day
Assumed Hot water consumption - 115L
No. of persons per day - 6
Assumed daily Hot water consumption - 690.0 L
Assumed Annual Hot water consumption - 25.16kL
50% of Annual Hot Water consumption - 12.58kL
Minimum volume of hot water provided by means other than electrical resistance
Daily Hot water consumption, to be provided by means other than electrical resistance heating - 345L
100% of Annual Hot Water consumption supplied by means of HEATPUMP



1. GENERAL

1.1 Copyright of this drawing & all documentation pertaining to the project issued by the Architect is reserved by the architect.

1.2 This drawing is not to be scaled. Use written dimensions as indicated only.

1.3 It is the responsibility of the contractor to check all setting out dimensions before commencing any work. Any discrepancies to be reported to draughtsman immediately. This includes levels, heights, boundaries & benchmarks.

1.4 All floor levels indicated on the drawing are unfinished levels.

2. SITE

2.1 The footprint of the building shall be cleared of all vegetable matter, tree stumps, timber & any other material that may decompose.

2.2 All boundaries & building line positions to be verified & checked by the contractor & any setting out discrepancies shall be the responsibility of the contractor.

2.3 Stormwater to be removed from site.

2.4 All site work to be in accordance with national building regulations & building standards act 103 of 1977.

3. FOUNDATIONS

3.1 Foundation horizon to be a minimum of 600mm below ngl as per engineer's specification.

3.2 All foundations to be as per engineers specification unless otherwise stated.

3.3 All trenches to be compacted prior to casting.

4. SURFACED

4.1 Wet & compact hardcore filling material as per engineers specification.

4.2 Compact 60mm thick sand bedding above hardcore.

4.3 Install usb green damp proof membrane under entire surfaced, joints to be lapped & taped as per manufacturer's spec.

4.4 Surfacebed to be 20 MPa concrete with mesh ref 193.

4.5 Retaining walls to engineers specifications with waterproofing to specialists details (ie: 4mm index torch on membrane with subsoil drain or similar.)

5. WALLS

5.1 All walls to have dpc.

5.2 All brickwork to be set out with a profile of 85mm increments vertically.

5.3 Brickforce every 4th course & every course over openings.

5.4 All brickwork min 7mpa class 11.

5.5 Windows built in with dpc.

5.6 Vertical damp proof membrane to all floor level changes.

5.7 Smooth plaster finish internal & external unless otherwise stated.

6. FLOORS

6.1 All rc floor slabs to eng details.

6.2 Floor finish as per plan.

6.3 Timber floors to NBR specifications or engineers details.

6.4 50mm screed to all rc floors.

7. ROOF

7.1 Roof type & pitch as per sections.

7.2 Trusses to roof specialists details unless otherwise stated.

7.3 Galvanised hoop iron built into min 4 courses brickwork.

8. WINDOWS & DOORS

8.1 Refer to plan or window & door schedule.

8.2 Glazing to comply to part N of the National Building Regulations.

8.3 DPC to underside of all windows.

8.4 Lintols over all openings.

9. DRAINAGE

9.1 All drainage & plumbing installations to comply with NBR & local by laws.

9.2 100 uPVC sewer mains with a min fall 1:60

9.3 50 uPVC at head of drain pipe.

9.4 Rooding eyes at all changes of direction & at head of drain.

9.5 Inspection eyes at all junctions of drains.

9.6 Drain pipes under buildings to be protected from load.

AREA SCHEDULE
ERF AREA - 40.4358 HA

GROUND FLOOR
INTERNAL AREA = 123m²
CARPORT = 36m²

FIRST FLOOR
INTERNAL AREA = 94m²
OPEN TERRACE = 68m²
TOTAL INTERNAL AREAS = 217m²
TOTAL COVERAGE = 242m²

PROJECT NAME
PROPOSED NEW ADDITIONS FOR TENIQUA TRUST ON PORTION 70 OF 203 ELANDSKRAAL, SEDGEFIELD

DRAWING TITLE
GROUND FLOOR_MANAGER'S COTTAGE

DRAWING NO. **105A** REV. NO.
01/27/18 SCALE As indicated

CLIENT
TENIQUA TRUST

SIGNATURE
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