

**Window Schedule to Servant's room**  
 Servant's room - Nett Floor Area : 19.47m<sup>2</sup>  
 Area of Windows equals 1.95m<sup>2</sup> which represents 10.02% of the Nett  
 Floor Area and therefore complies with SANS 10400-XA:2021 Edition 2

Description	Sector	Width	Height	Glass Type	Frame	Area - m <sup>2</sup>	Thickness & Specifications
Window 1	North East	1.50m	0.90m	Single - Clear	Aluminium	1.35 m <sup>2</sup>	4mm monolithic annealed glass
Window 2	North East	1.00m	0.60m	Single - Clear	Aluminium	0.60 m <sup>2</sup>	4mm toughened safety glass
Total						1.95 m <sup>2</sup>	

**Door and Window Glazing Notes**

Window frame and glazing to fully comply with SANS 10400 N incorporating SANS 10137 and SANS 10160. Wind load is calculated as Category 3 - A0-600Pa in terms of Deemed to Satisfy Table based on SANS 10160. Window glazing is as specified with the relevant code number reflected above or below such window. Installer is to issue a certificate upon completion of the glazing installation that the glazing material indicated has been installed in the position indicated and such installation complies with the provisions of SANS 10137. The panes of all safety glazing material is to be permanently marked by the installer in such a manner that the markings are visible in individual panes after installation. 6mm toughened safety glass to be provided in the shower cubicle doors and any supporting panels provided that such panel or door does not exceed 1.6m<sup>2</sup> in extent. No changes are to be effected to the size, thickness or type of glazing material without the prior approval of the Architectural Professional.

**Stormwater Notes**

The means of the stormwater control for the existing dwelling, female servant's room and (room) the existing ancillary unit is unchanged, and will exist all as previously approved.

The proposed hardened area consists of the roof to the proposed garage only which totals 39.75m<sup>2</sup>.

Due to restrictions on the available space for further stormwater soakpits, the stormwater from the garage roof will be controlled within the curtilage of the property by means of two JoJo tanks (or equal) as detailed herewith.

The following calculations are provided to ensure compliance with Ethekwini Municipality's adopted stormwater policy dated 4 November 2016 with respect to domestic residences.

2 x 1.000 ltr JoJo tanks total 2.000 litre capacity which represents 2.00m<sup>3</sup>.

60% of 2.0m<sup>3</sup> = 1.2m<sup>3</sup> of stormwater volume deemed to be available for stormwater containment by such JoJo tanks.

1.2m<sup>3</sup> of JoJo tank x 40m<sup>2</sup> per m<sup>2</sup> = 48m<sup>2</sup> of stormwater surface area is therefore served by the JoJo tanks which exceeds the area of the garage being 39.75m<sup>2</sup>.

Due to the gable roof configuration, one JoJo tank will be placed on either side of the proposed male servant's room as shown on the lower ground storey plan.

Where JoJo tanks are mentioned, an equal SABS product may be substituted.

Note: Stormwater from the swimming pool surround percolates into the adjacent grassed area.

**General Notes**

The parameters upon which the foundations are to be determined and cast to be in accordance with the geotechnical engineers site investigation report.

100mm concrete floor slab reinforced with ref. 193 weld mesh on 250 micron SABS approved membrane underlay on 50mm blinding layer of clean river sand on 150mm hardcore poisoned with Chlorodane solution by specialist in accordance with SANS 10124.

SABS approved malthoid damp proof course including vertical damp proof course to be provided where indicated.

First storey reinforced concrete floor slab to be designed and constructed under the supervision of the appointed structural engineer, and certified as structurally stable upon completion of work.

Two courses blockwork/brickwork to be reinforced with brickforce in solid cement mortar at window sill and wall plate levels. Walls, and lintels over doors, windows and any openings to be designed and certified by the appointed structural engineer.

Concrete roof tiles on 38 x 38mm battens on approved underlay on gannall trusses at maximum 760mm centres. Roof pitch 20 degrees. Roof structure to be certified by the appointed structural engineer upon completion. Trusses to be braced and erected true and plumb. Trusses to be tied down with two strands of 2.4mm diameter galvanised steel wire anchored to a minimum depth of 400mm.

Smooth plaster & paint finish internally and externally all to match existing dwelling.

Impervious floor tiles to be provided to the bathroom of the servant's room.

Fibre cement fascias, bargeboards and 125mm P.V.C. gutters and 75mm diameter P.V.C. downpipes to garage. Stormwater to be connected to JoJo tanks or equal as described elsewhere on this plan.

No portion of the roof or foundation to the proposed outbuilding is to encroach over the boundary.

External walls comply with the minimum R Value of 0.40 in accordance with SANS 10400 XA:2021 Edition 2.

Stair treads to be a minimum of 250mm with risers not exceeding 200mm.

Boundary beacons to be exposed prior to commencement of foundation trench excavation.

**Electricity Demand and Consumption**

Building Sealing

Roofs, external walls and floors that form the building envelope and any opening such as windows and doors in the external fabric of the servant's room shall be constructed to minimize air leakage. A foam or rubber compressible strip or a fibrous seal to restrict air leakage shall be fitted to each edge of an external door that serves a habitable room (or conditioned space) all in terms of SANS 10400-XA:2021 Edition 2.

Maximum permissible air leakage for operable glazing to be 2.0 L/s. per square metre with a pressure difference of 75Pa.

Maximum permissible air leakage for non-operable glazing to be 0.21 L/s. per square metre with a pressure difference of 75Pa.

**Water Reticulation Notes - Calculations and Specifications**  
 In Respect of the single roomed Servant's Room

**Occupancy:** H3 Population: 2 persons per bedroom x 1 bedrooms = 2 persons.

19mm internal diameter HDPE service pipe to be used from the water meter directly to the proposed servant's room and to be used throughout below ground.

19mm internal diameter copper pipes to be used above ground.

Mains fed Type 3 Water Heater to be installed whereby in terms of Annex F in SANS 10252 it is not necessary to provide individual pipe sizes for the installation.

Municipal water supply pressure taken as 25M. Ambient water temperature taken as 20 degrees Celsius. Assumed heating period of water taken as 2.5 hours.

The Heat Pump and electrical storage tank is to be installed, maintained and replaced when necessary in accordance with the manufactures specifications.

**Hot Water Demand:** 2 x 115 litres = 230 litres per day.

The storage volume at 60 degrees Celsius = 2 x 50 litres = 100 litres per day.

An assumed heat loss of 10% is to be taken into account.

Therefore, 100 litres + 10% = 110 litres geyser storage volume required.

Consequently a geyser of 150 litre capacity will comply with SANS 10400-XA:2021 Edition 2

**Nett Heater Power required:**

$$Q = (M \times C \times \text{delta-t}) / t$$

$$Q = (0.11 \times 1.16 \text{ kWh/m}^3 \times \text{°C} \times (60 - 20)) / 2.5\text{h}$$

$$Q = 2.04\text{kw. Therefore, a 3.0kw electrical water heater will comply}$$

**Heat Pump - Output required:**

$$Q = (M \times C \times \text{delta-t}) / t$$

$$Q = (0.23\text{m}^3 \times 1.16 \text{ kWh/m}^3 \times \text{°C} \times (60 - 20)) / 2.5\text{h}$$

$$Q = 4.27\text{kw at 100% of the Demand. Therefore at 50% of the Demand 2.14kw output is required. Consequently, a 3.0kw Heat Pump is Deemed to comply with SANS 10252.}$$

**Heat Pump - Flow Rate:**

$$F = P / (C \times \text{delta-t})$$

$$F = 2.14 / (4.18 \text{ kJ/L} \times \text{°C} \times (60 - 20))$$

$$F = 2.14 / 167.2 \text{ kJ/L} \times \text{°C}$$

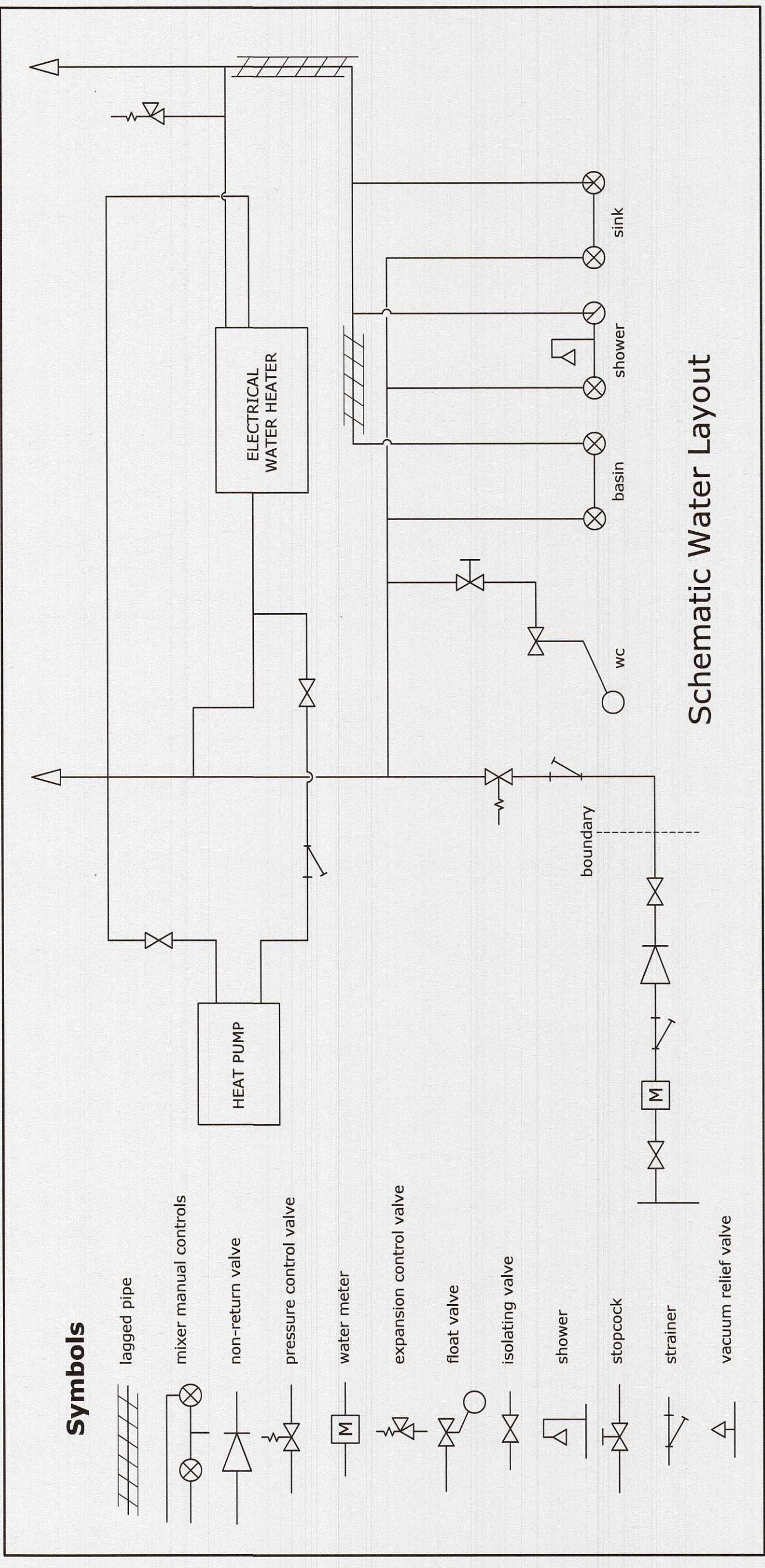
$$F = 0.0128 \text{ litres per second}$$

$$F = 46.08 \text{ litres per hour}$$

Therefore, in terms of the Generic Heat Pump capacities, a 3.0 kw Heat Pump will provide a Pump Flow rate of 85 litres per hour and therefore will meet the requirements of SANS 10252-1. Not more than 50% of the hot water is to be heated by means of conventional geyser with electrical resistance. Dead leg pipes do not exceed 12 metres in length in this installation. Geyser to be insulated with a premium specification universal blanket made from 70mm thick polyester fibre and laminated with silver plastic film.

All hot water service pipes to be clad and insulated to a minimum R value of 1.0 by means of 40mm fibre glass or 50mm polyester blanket insulation.

The above calculations and specifications ensures compliance with SANS 10400-XA:2021 Edition 2



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ENERGY ZONE 5H

SITE CLASS DESIGNATION : C/A

The attention of the owner is drawn to the fact that deviations to this plan and / or specifications after formal approval is likely to invalidate such approval.

CLASSIFICATION H3

**LITTLEFIELD & ASSOCIATES**  
*Specialists in Residential Developments*

**Proposed double garage and servants room, boundary retaining wall and conversion of the existing servant's quarters into an ancillary unit for Ms.N.Z. Dlamuka at 7 Watt Road, Hillary. Portion 2 of Erf 528 of Bellair**