

**ORIENTATION**  
The orientation of the dwelling is as far as possible in accordance with SANS 204 4.1 & 4.2.

The Orientation is favourable.

**SHADING**  
To be in accordance with SANS 204 4.3.5  
If shutters used as a shading device they should be capable of restricting 80% of summer solar radiation.

**EXTERNAL WALLS**  
To be in accordance with SANS 10400XA 4.4.3

All external walls are masonry.

**FENESTRATION**  
To be in accordance with SANS 10400XA 4.4.3 or SANS 204 4.3.4.

All fenestration air filtration to be in accordance with SANS 613.

13% complies.

**ROOF ASSEMBLY CONSTRUCTION**  
To be in accordance with SANS 10400XA 4.4.2

Insulation to ceiling is 135mm fibre wool sheet - complies.

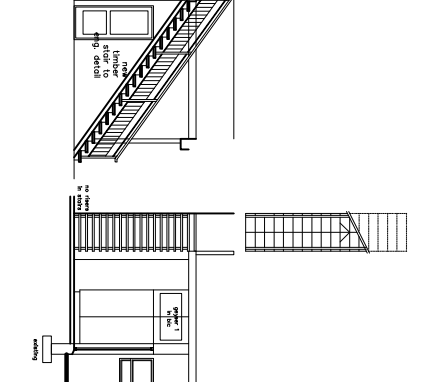
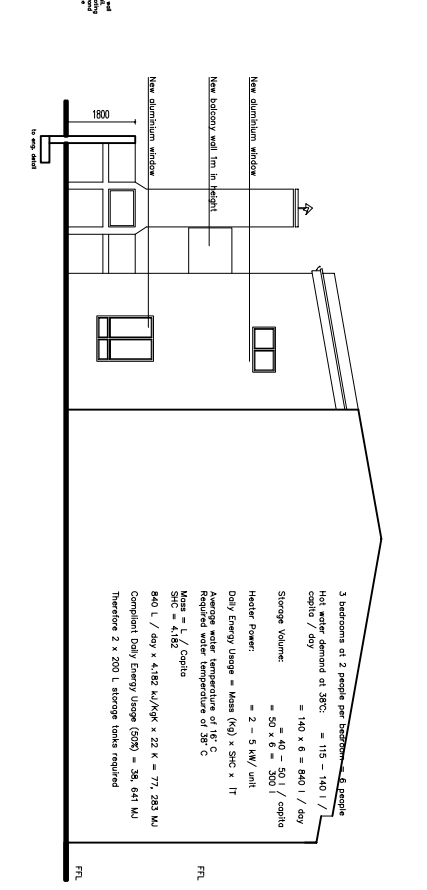
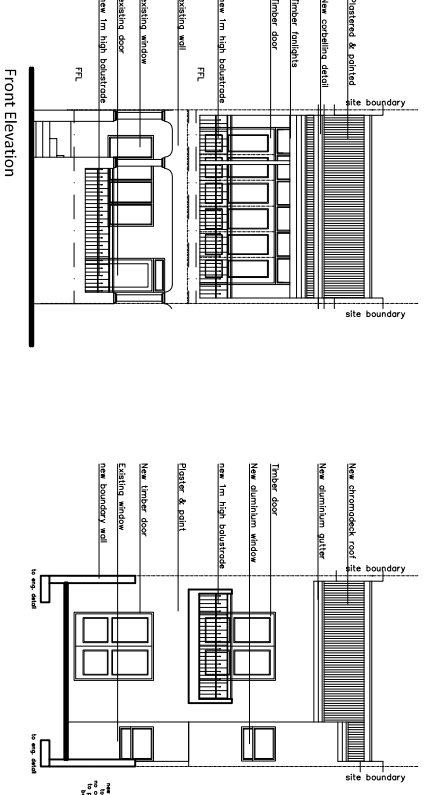
**IN-SLAB HEATING**  
N/A

**SERVICES**  
Lighting & Power  
To be in accordance with SANS 204 4.5.1  
Note energy efficient bulbs to be used throughout.

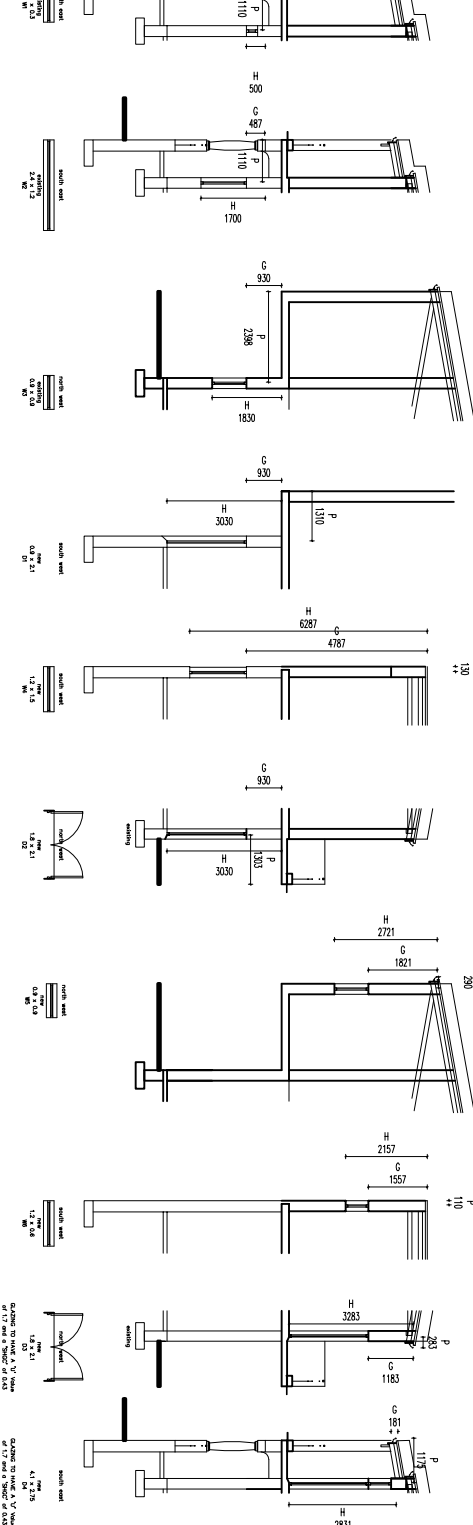
Mechanical Ventilation & Air Conditioning  
N/A

**HOT WATER SUPPLY**  
To be in accordance with SANS 10400XA 4.1  
Solar heating systems need to comply with SANS 1307, SANS 10106, SANS 10254 & SANS 10252-1. (These are regulations regarding the actual systems.)  
Requirements for water installations in SANS 10252-1:2004 and SANS 10252-1 (The installation of water systems).  
All hot water service pipes shall be clad with insulation with a minimum R-value of 1. 25mm polyurethane foam or similar approved.

**NOTE**  
3.2kw R410 Samsung alliance water heat pump.  
Storage Vessel: Kwikot 150l High Pressure Geyser.  
Lagging: Thermax 1540 pipe insulation. 15mm wall thickness operating temperature 40° - 90° C



**3 bedrooms at 2 people per bedroom & 2 people hot water demand of 38°C = 115 - 140 l / capita / day**  
Storage Volume = 140 x 6 = 840 l / day  
Hot water demand of 38°C = 115 - 140 l / capita / day  
Water Power = 50 x 6 = 300 / capita  
Daily Energy Usage = Water (kg) x SHC x DT  
Average water temperature of 15° C  
Water = 1 / Capita  
SHC = 4.182  
840 l / day x 4.182 kJ/kg°C x 22 K = 77,283 kJ  
Compliant Daily Energy Usage (DEU) = 38, 641 kJ  
Therefore 2 x 200 L Storage Units required



Material	Thickness	Area	Volume	Weight	Distance	Gradient
MH	1	10 000	10 000	10 000	10 000	Wardrobe / Re
Re	3	10 000	10 000	10 000	10 000	Cover Level
Re	3	9 305	9 352	9 426	9 500	Invert Level
Re	3	648	648	574	500	Depth
Re	3	2 877	4 457	4 457	500	Distance
Re	3	1 / 60	1 / 60	1 / 60	1 / 60	Gradient

**DISTRIBUTION BOX**  
CEILING MOUNTED LIGHT FITTING  
EXTERNAL LIGHT SWITCH  
DOUBLE LIGHT SWITCH  
SINGLE PLUG SOCKET  
DOUBLE PLUG SOCKET  
STOVE POINT  
TELEPHONE / MIRCOW SOCKET OUTLET  
HMC 150L 600kpa

**ERF AREA:** 95.0 m<sup>2</sup>  
**GROUND FLOOR:** 64.35 m<sup>2</sup>  
**FIRST FLOOR:** 67.06 m<sup>2</sup>  
**BALCONY LOUNGE:** 5.11 m<sup>2</sup>  
**BALCONY BEDROOM:** 3.43 m<sup>2</sup>

**TOTAL:** 139.95 m<sup>2</sup>  
**nett floor area ground:** 55.1 m<sup>2</sup>  
**nett floor area first:** 54.7 m<sup>2</sup>

**MIKE WOLTERS ARCHITECTS**  
16A Castle Mews  
New Market Street  
Cape Town

TEL: 021 461 4271  
FAX: 086 542 6376  
Email: katie@mjwa.co.za  
(SACAP 7196)

drawn by K.D.  
scale 1:100 A1  
date 19 February 2013  
drawing number MJWA 00\_12