

MASONRY WALLS	
MATERIAL - SANS 10400-XA 4.4.3 Pg 10	
EXTERNAL SKIN	140mm (DOUBLE LEAF) STD. CONCRETE BRICKS (COMPLIES WITH R-VALUE REQUIREMENTS - PART 4.4.3)
MIN. REQUIREMENTS (SANS 10400-XA 4.4.3 Pg 10)	0,35 TOTAL R VALUE (m² K/W)
100mm SOLID CONCRETE ROOF (HEAT FLOW = DOWN) - SANS 10400-XA	
OUTDOOR AIR FLM	7m/s
4mm WATERPROOFING MEMBRANE, RUBBER SYNTHETIC (961 Kg/m²)	0,03
100mm 25 Mpa CONCRETE (2400 Kg/m³)	0,07
CEILING AIR SPACE (100mm TO 300mm NON-REFLECTIVE)	0,22
100mm RIGID FIBREGLASS BOARD (47.5 Kg/m³) SANS 204 Table 10 Pg 20	2,15
SUSPENDED 10mm GYPSUM BOARD (880 Kg/m³)	0,06
INDOOR AIR FLM (STILL AIR)	0,16
(MIN. REQUIREMENTS - SANS 204 Pg 17 Table 8)	2,70 TOTAL R VALUE (m² K/W)

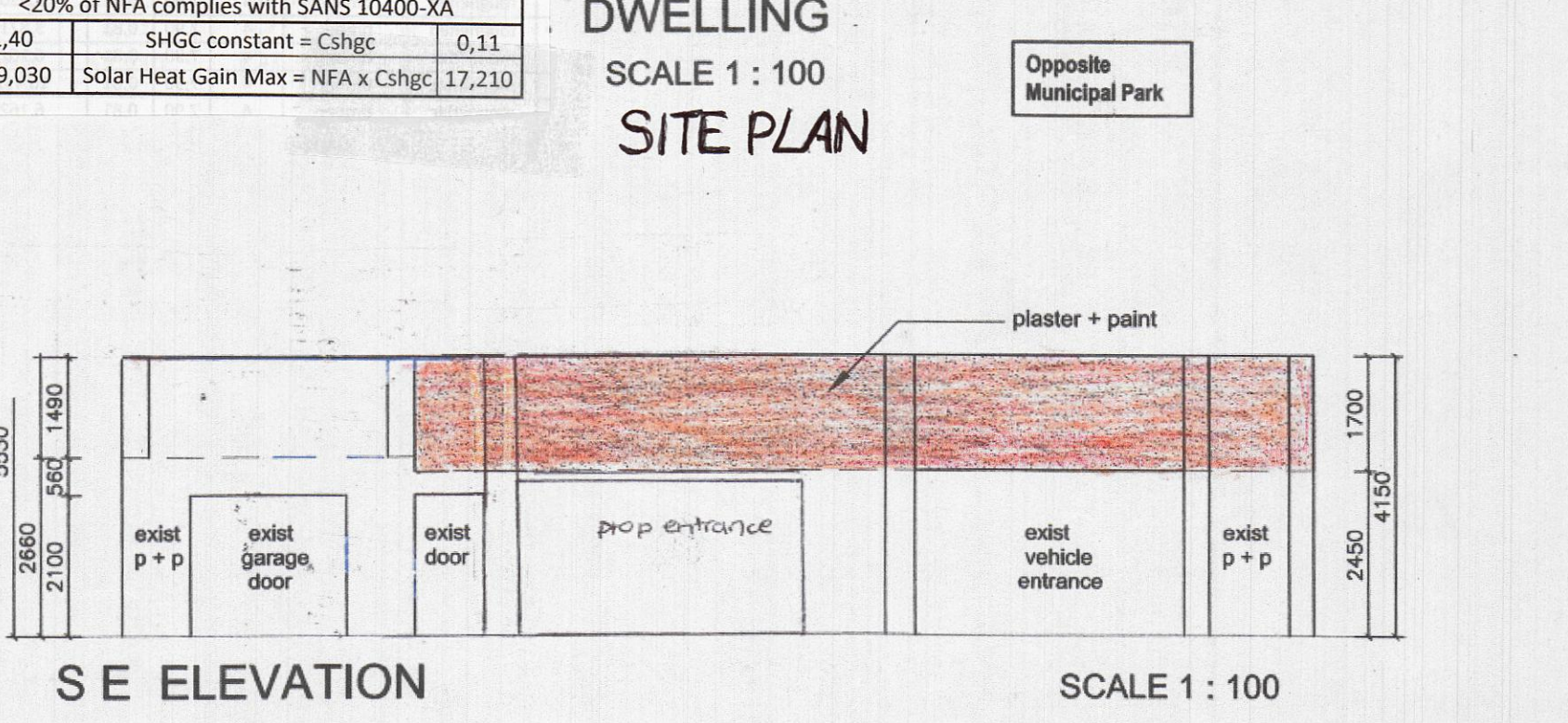
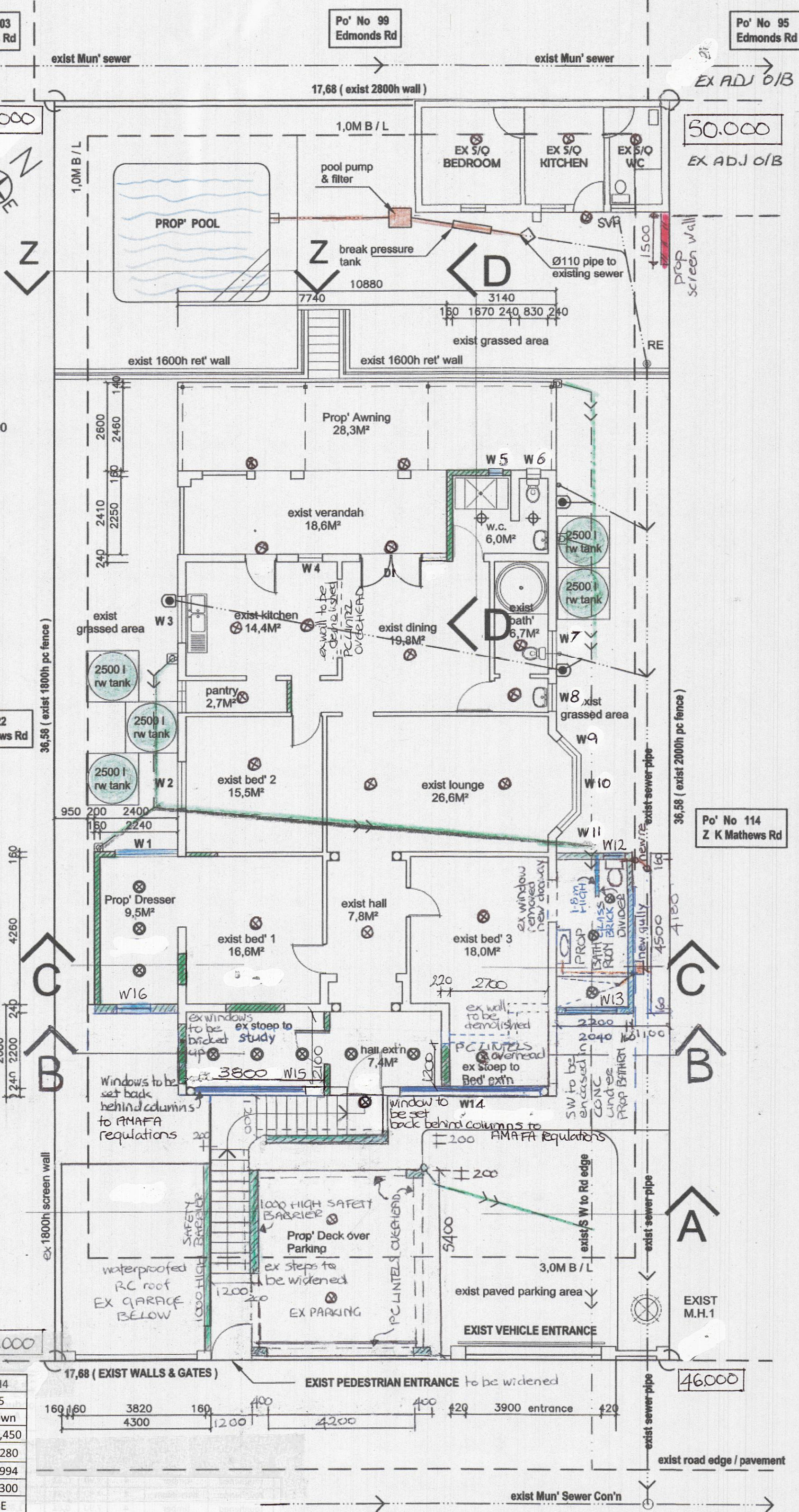
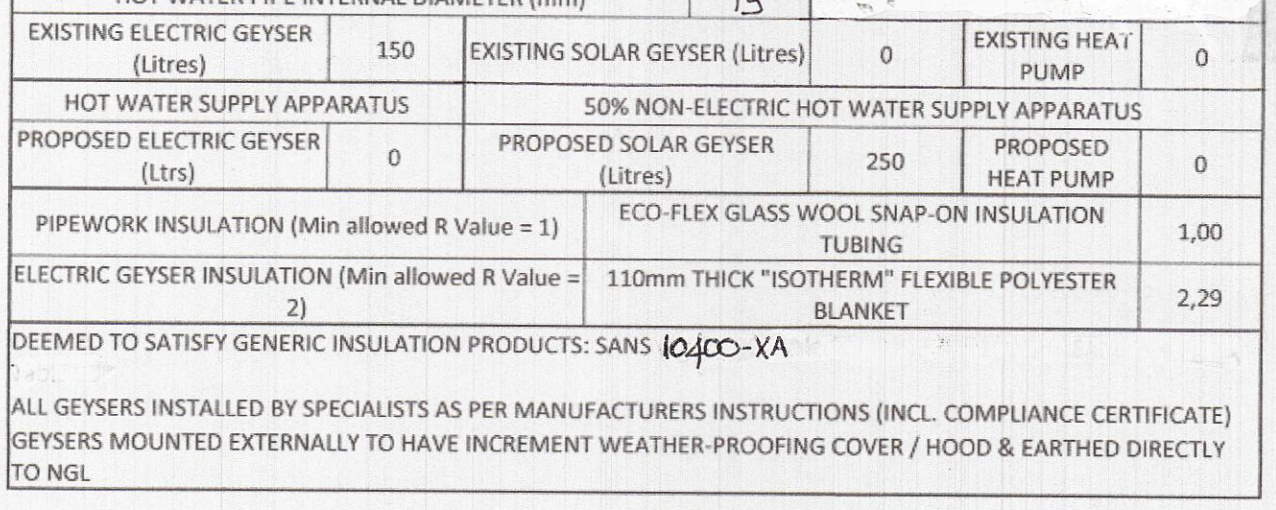
LIGHTING AND POWER	
TOTAL FLOOR AREA (m²)	319,000
CLASS OF OCCUPANCY	H4
ENERGY DEMAND (W/m²)	5
ENERGY CONSUMPTION (kWh/m²)	5
MAX. ENERGY DEMAND ALLOWED	1595
MAX. ENERGY CONSUMPTION ALLOWED	1595
ELEMENT	W
DOWN LIGHT	12
TOTAL ENERGY DEMAND - TED (W/m²)	444
TOTAL ANNUAL ENERGY CONSUMPTION (kWh/m²)	1134,42

HOT WATER SERVICES	
SANS 10252-1:2004 AND SANS 10400-XA 4.1	
CLASS OF OCCUPANCY	H4
No. OF PERSONS	6
HOT WATER CONSUMPTION PER DAY PER PERSON (Litres)	80
TOTAL HOT WATER CONSUMPTION PER DAY (Litres)	480
50% OF TOTAL HOT WATER CONSUMPTION PER DAY (Litres)	240
TOTAL HOT WATER CONSUMPTION PER ANNUM - 365 Days (Kilolitres)	175,20
HOT WATER PIPE INTERNAL DIAMETER (mm)	15
EXISTING ELECTRIC GEYSER (Litres)	150
EXISTING SOLAR GEYSER (Litres)	0
HOT WATER SUPPLY APPARATUS	50% NON-ELECTRIC HOT WATER SUPPLY APPARATUS
PROPOSED ELECTRIC GEYSER (Litres)	0
PROPOSED SOLAR GEYSER (Litres)	250
PIPEWORK INSULATION (Min allowed R Value = 1)	ECO-FLEX GLASS WOOL SNAP-ON INSULATION TUBING
ELECTRIC GEYSER INSULATION (Min allowed R Value = 2)	110mm THICK "ISOTHERM" FLEXIBLE POLYESTER BLANKET
DEEMED TO SATISFY GENERIC INSULATION PRODUCTS: SANS 10400-XA	

FENESTRATION CONDUCTION: Width & Height = Element Dimensions / U & SHGC = SANS											
Element	Opening Width (m)	Opening Height (m)	Area - A (FA m²)	Glazing Description	Frame Description	Glass Thk (mm)	U (W/m²K)	SHGC	Conduction = A x U	SHGC = A x U	Conduction = A x U
W 1	1,700	1,000	1,700	monolithic	aluminium	4	7,90	0,81	13,430		
2	1,200	1,500	1,800	monolithic	timber	4	7,90	0,81	14,220		
3	1,200	1,500	1,800	toughened	timber	4	7,90	0,81	14,220		
4	0,400	0,600	0,240	toughened	timber	4	7,90	0,81	1,896		
5	0,400	0,600	0,240	toughened	aluminium	4	7,90	0,81	1,896		
6	0,400	0,600	0,240	toughened	timber	4	7,90	0,81	1,896		
7	1,000	0,700	0,700	toughened	timber	4	7,90	0,81	5,530		
8	0,700	0,700	0,490	toughened	timber	4	7,90	0,81	3,871		
9	0,800	1,300	1,040	monolithic	timber	4	7,90	0,81	6,162		
10	1,600	1,300	2,080	monolithic	timber	4	7,90	0,81	16,432		
11	0,600	1,300	0,780	monolithic	timber	4	7,90	0,81	6,162		
12	0,400	0,600	0,240	toughened	aluminium	4	7,90	0,81	1,896		
13	1,700	1,700	2,890	toughened	aluminium	4	7,90	0,81	22,831		
14	3,800	1,300	4,940	toughened	aluminium	4	7,90	0,81	39,026		
15	3,200	1,300	4,160	toughened	aluminium	4	7,90	0,81	32,864		
16	1,000	1,000	1,000	monolithic	aluminium	4	7,90	0,81	7,900		
D 1	1,700	2,100	3,570	toughened	aluminium	6	7,90	0,81	28,203		
TOTAL FA (m²) =									27,650	TOTAL	218,435
										Max. Conduction	219,030

FENESTRATION P + H + G = SANS 10400-XA SOLAR HEAT GAIN: SHG											
Element	Area - A (FA m²)	G (m)	P (m)	H (m)	P/H	Orientation	SHGC	E (m²)	A x SHGC	E (m²)	A x SHGC
W 1	1,700	0,30	0,200	1,300	0,154	NW	0,81	0,64	0,881		
2	1,800	0,60	0,600	2,100	0,286	SW	0,81	0,65	0,948		
3	1,800	0,60	0,600	2,100	0,286	SW	0,81	0,65	0,948		
4	0,240	0,60	5,100	1,200	4,250	NW	0,81	0,00	0,000		
5	0,240	0,60	2,600	1,200	2,167	NW	0,81	0,00	0,000		
6	0,240	0,60	2,600	1,200	2,167	NW	0,81	0,00	0,000		
7	0,700	0,60	0,600	1,300	0,462	NE	0,81	0,41	0,232		
8	0,490	0,60	0,600	1,300	0,462	NE	0,81	0,41	0,163		
9	0,780	0,60	0,600	1,900	0,316	NE	0,81	0,52	0,329		
10	2,080	0,60	0,600	1,900	0,316	NE	0,81	0,52	0,876		
11	0,780	0,60	0,600	1,900	0,316	NE	0,81	0,52	0,329		
12	0,240	0,30	0,200	0,900	0,222	NW	0,81	0,60	0,117		
13	2,890	0,30	0,200	2,000	0,100	SE	0,81	1,07	2,505		
14	4,940	0,60	0,600	1,900	0,316	SE	0,81	0,82	3,281		
15	4,160	0,60	0,600	1,900	0,316	SE	0,81	0,82	2,763		
16	1,000	0,30	0,200	1,300	0,154	SE	0,81	1,00	0,810		
D 1	3,570	0,60	4,100	2,700	1,519	NW	0,81	0,22	0,636		
TOTAL SOLAR HEAT									14,817		
Max. SHG									17,210		

CLASS OF OCCUPANCY	
Climatic Zone	5
Direction of Heat Flow	Down
NETT Floor Area = NFA (m²)	156,450
Total Fenestration Area = FA (m²)	31,280
Ratio Percentage (%) Total	19,994
20% of NFA	31,300
Orientation: Longer Building Axis	SE
Ratio Percentage (%) Total	<20% of NFA complies with SANS 10400-XA
Conduction Constant = Cu	1,40
Conduction Max. = NFA x Cu	219,030
SHGC constant = Cshgc	0,11
Solar Heat Gain Max = NFA x Cshgc	17,210



**GENERAL NOTES:**  
 ANY DISCREPANCIES BETWEEN SITE & PLAN TO BE BROUGHT TO THE ATTENTION OF PLAN AUTHOR.  
 OWNER &/OR CONTRACTORS TO NOTIFY THE ENGINEERS & BUILDING INSPECTOR OF THE COMPULSORY INSPECTIONS DURING THE CONSTRUCTION STAGES.  
 REGISTERED PROFESSIONAL ENGINEER TO BE RESPONSIBLE FOR RATIONAL DESIGN INCLUDING STRUCTURAL ASPECTS OF ROOF & SUPPORTING STRUCTURE & FOUNDATIONS, WALLS, COLUMNS, ROOF MEMBERS, ETC. & TO PROVIDE COMPLIANCE CERTIFICATE ON COMPLETION OF INSTALLATION.  
 CHANGES TO THE PLAN &/OR ANY SPECIFICATION AFTER OFFICIAL APPROVAL ARE LIKELY TO INVALIDATE THIS APPROVAL.  
 ALL LEVELS AND DIMENSIONS TO BE CHECKED PRIOR TO COMMENCEMENT OF WORK.  
 ALL BOUNDARY PEGS OR BEACONS TO BE EXPOSED BEFORE COMMENCEMENT OF WORK.  
 CONTRACTOR TO BUILD STRICTLY IN ACCORDANCE WITH ENGINEERS' SPECS & UNDER HIS SUPERVISION.  
 CONTRACTOR TO USE ON SITE DIMENSIONS.  
 CONTRACTOR TO MAKE GOOD ALL BUILDING WORK AFFECTED BY ALTERATIONS.  
 ALL NEW FASCIA BOARDS, DOWN PIPES & GUTTERS TO BE PVC.  
 2 AIRBRICKS PER ROOM EXTERNALLY & OVER DOORS WHERE NECESSARY.  
 P C LINES TO BE USED OVER ALL INTERNAL & EXTERNAL OPENINGS & WHERE OTHERWISE SHOWN.  
 PLASTER & PAINT TO MATCH EXISTING.  
 EXCESS SOIL & RUBBLE TO BE REMOVED FROM SITE.

**FOUNDATIONS:**  
 ALL NEW FOUNDATIONS TO BE FOUND IN VIRGIN SOIL & SHALL NOT EXCEED OVER BOUNDARIES & TO ENG SPECS.

**FLOORS:**  
 25 mm SCREED ON 75 mm RC SLAB WITH APP DPM WITH BRC MESH ON 150 mm WELL COMPACTED, POISONED FILL.

**WALLS:**  
 BRICKWORK TO HAVE BRICKFACE EVERY 3 COURSES UP TO WINDOW HEAD HEIGHT & EVERY 2 COURSES TO WALLPLATE LEVEL IN SOLID CEMENT MORTAR.  
 DPCS TO BE PROVIDED AT FLOOR LEVEL & UNDER CILLS.  
 TIES & WALL PLATES OF 14 x 38 mm.  
 EXTERIOR: 150 mm BLOCKS TO BE REINFORCED WITH BRICKFORCE WITH SOLID JOINTS IN CEMENT MORTAR AT WINDOW CILL & WALL PLATE LEVELS.  
 INTERIOR: 90 / 100 mm BLOCKS.  
 CONCRETE BLOCKS TO BE TO SANS.

**NEW ALUMINIUM AWNING:**  
 PITCH 6° ALUMINIUM SHEETING ON STEEL PURLINS ON ALUMINIUM FRAME ON ALUMINIUM COLUMNS & FIXED TO WALLS.

**ROOF:**  
 REINFORCED CONCRETE ROOF TO ENGINEERS DETAILS, TOPPED WITH INSULATING SCREED TO FALLS & COVERED WITH WATERPROOFING LAID IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

**DRAINAGE NOTES:**  
 NEW SEWER TO LINK TO EXISTING SEWER & DRAINAGE.  
 ALL EX SEWER PIPES & DRAINS TO BE PERMANENTLY SEALED.  
 ALL COMPONENTS TO BE WATER TIGHT.  
 NO CONCERN FITTINGS PERMITTED.  
 ALL FITTINGS & FIXTURES TO BE REPLACED.  
 1 E TO ALL BENDS & JUNCTIONS.  
 SOIL (SEWER) PIPES TO BE 100 mm Ø PVC.  
 6 mm TOUGHENED SAFETY GLAZING FOR SHOWER ENCLOSURES.  
 WASTE PIPES TO BE 50 mm Ø PVC WITH ALL GULLY SURROUNDS.  
 RIPS 100 mm Ø GUTTERS 125 mm Ø.  
 RAINWATER TO BE DISCHARGED TO STORAGE TANKS TO OVERFLOW TO MUNICIPAL RW.  
 RAIN WATER STORAGE TANKS TO BE ON 100mm RC BASE WITH 100mm OVERHANG.  
 WATER PIPES TO BE WATER TIGHT WITH INTERNAL PRESSURE OF 50 kPa & EXTERNAL PRESSURE OF 50 kPa WITHOUT LEAKING.

**POOL NOTES:**  
 WASTE WATER TO CONNECT TO EX SEWER VIA BPT.  
 EARTH LEAKAGE TO BE FITTED TO ALL ELECTRICAL SUPPLIES.  
 PRECAUTION TO BE TAKEN AGAINST FLOODING & RAIN WATER IN PUMP CHAMBER & FILTER UNIT, TO BE ADEQUATELY DRAINED.  
 PRECAUTIONS TO BE TAKEN IN REGARDS TO CONDENSATION.  
 PLANT ARRANGEMENTS & FIXING TO SUPPLIER'S REQUIREMENTS.  
 EARTH LEAKAGE PROTECTION TO BE FITTED TO ELECTRICAL SUPPLY.  
 ELECTRICAL EQUIPMENT TO BE HOUSED.  
 THE POOL TO BE COMPLETELY SURROUNDED BY REGULATION SAFETY FENCING AT A MINIMUM HEIGHT OF 1200 mm WITH SELF-CLOSING & LATCHING GATE OR SITE TO BE COMPLETELY SURROUNDED BY FENCING MIN 1200 mm HEIGHT WITH SELF CLOSING ELECTRONIC GATES.  
 BPT TO CONNECT TO OPEN CHANNEL MAN-HOLE OR RODDING EYE VIA REDUCER.  
 2000 x 100 mm Ø PVC PIPE LAID AS HORIZONTAL BPT.  
 CO MIN 275.

**IT IS THE OWNERS' RESPONSIBILITY TO OBTAIN THE NECESSARY DOCUMENTS FOR PLAN APPROVAL & COMPLETION CERTIFICATE.**  
 CERTIFICATES REQUIRED PRIOR TO OCCUPATION CERTIFICATE: STRUCTURAL ENGINEER, PLUMBING, ELECTRICAL, SOIL POISONING & OTHERS AT MUNICIPALITY'S DISCRETION.

**NO LIABILITY IS ACCEPTED BY V HOBBS FOR ANY CLAIMS CONNECTED WITH THE WORK OR ANY DAMAGE TO THE PROPERTY OR SERVICES**

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**ENDORSEMENTS:**  
 FLOORS TO COMPLY WITH PART I SANS 10400.  
 WALLS TO COMPLY WITH PART K SANS 10400.  
 ROOF TO COMPLY WITH PART L SANS 10400.  
 STAIRS & SAFETY BARRIERS TO COMPLY WITH PART M SANS 10400.  
 GLAZING TO COMPLY WITH PART N SANS 10400.  
 DRAINAGE TO COMPLY WITH PART P SANS 10400.  
 SW TO COMPLY WITH PART R SANS 10400.  
 NATURAL LIGHTING TO COMPLY WITH PART O SANS 10400, MIN 10% OF FLOOR AREA.

**NO OBJECTION TO RELAXATION OF BUILDING LINES**

TEL No	NAME	SIGNATURE	ADDRESS
			122 ZK Mathews Rd
			114 ZK Mathews Rd

on ERF 5406 of DURBAN  
 Postal address 118 Z K MATHEWS ROAD, GLENWOOD DURBAN.

Rate No 1647 9079  
 Tel No 076 612 7930  
 Date: MAY 2023

OWNERS SIGNATURE  
 OWNERS SIGNATURE

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DRAWING No: 118ZKM  
 sheet 1 of 2