



SITE & ROOF PLAN 1:150
SHOWING STORMWATER LAYOUT

ORIENTATIONS:

* ORIENTATION TO BE IN ACCORDANCE WITH SANS 204 4.1 & 4.2

NORTH FACING ROOMS WITH WINDOWS:

* LOUNGE, BEDROOM

EAST FACING ROOMS WITH WINDOWS:

* LOUNGE, EN SUITE

SOUTH FACING ROOMS WITH WINDOWS:

* BEDROOMS, BATHROOM

WEST FACING ROOMS WITH WINDOWS:

* NONE

SHADING OVER WINDOWS & DOORS:

* SHADING TO BE IN ACCORDANCE WITH SANS 204 4.3.5.

* NORTH FACADE TO HAVE A OVERHANG OF 1100mm

* EAST, SOUTH & WEST FACADE TO HAVE NO OVERHANG, PARAPET WALL.

EXTERNAL WALLS:

* EXTERNAL WALL IN ACCORDANCE WITH SANS 104XA 4.4.3.

* ACCORDING TO PG. 11 TABLE 3, THE MINIMUM CR- VALUE, IN HOURS FOR EXTERNAL WALLS FOR ZONE 4 ON A H4 OCCUPANCY ARE NOT ALLOWED TO BE LESS THAN 100 hrs.

* ACCORDING TO PG. 11 TABLE 4, A DOUBLE BRICK WALL WITH A DOUBLE BRICK WITH R-VALUE = 1, CAVITY INSULATION TO BE 130 hrs.

FENESTRATION OF ALL GLASS WINDOWS & DOORS:

* FENESTRATION IN ACCORDANCE WITH SANS 104XA 4.4.4

* ALL FENESTRATION AIR INFILTRATION TO BE ACCORDANCE WITH SANS 613.

* BUILDINGS WITH FENESTRATION AREA UP TO 15% OF NETT FLOOR AREA PER STOREY COMPLY AUTOMATICALLY

* BUILDING WITH FENESTRATION AREA GREATER THAN 15% OF NETT FLOOR ARE TO COMPLY WITH SANS 204.

ALLOWABLE CONDUCTANCE ON FLOOR PLAN

* 102.48m² X 1.4 = 143.47

ALLOWABLE SHGC ON FLOOR PLAN

* 102.48m² X 0.13 = 13.32

ACTUAL CONDUCTANCE CALCULATIONS

* 13.29m² X 5.6 = 74.42

ACTUAL SHGC CALCULATIONS

* P/H VALUE NORTH, EAST, SOUT, WEST FACADE

* P = 235mm

* H = 3215mm - 2100mm = 1115mm

* H = 3215mm - 1500mm = 1715mm

500mm HIGH WINDOW, 1715 + 1000 = 235 / 2715mm - P/H 0.09

1200mm HIGH WINDOW, 1115 + 900 = 235 / 2015mm - P/H 0.12

1800mm HIGH WINDOW, 1115 + 300 = 235 / 1415mm - P/H 0.17

NORTH FACADE CALCULATIONS (single clear glazing) - 1.74

* W3 - 1.80 X 0.77 X 0.58 = 0.48

* D4 - 3.15 X 0.77 X 0.52 = 1.26

EAST FACADE CALCULATIONS (single clear glazing) - 0.24

* W1 - 0.30 X 0.77 X 1.05 = 0.24

SOUTH FACADE CALCULATIONS (single clear glazing) - 2.94

* W2 - 0.72 X 0.77 X 1.25 = 0.69

* W3 - 1.80 X 0.77 X 0.47 = 0.39

* W5 - 2.16 X 0.77 X 0.47 = 0.78

* W6 - 0.75 X 0.77 X 0.52 = 0.30

WEST FACADE CALCULATIONS (single clear glazing) - 2.37

* W3 - 1.80 X 0.77 X 1.18 = 0.98

* W4 - 1.44 X 0.77 X 1.25 = 1.39

TOTAL SHGC ON GROUND & FIRST FLOOR

* NORTH = 1.74

* EAST = 0.24

* SOUTH = 2.94

* WEST = 2.37

* TOTAL = 7.29 (below 13.32 allowed)

ROOF ASSEMBLY CONSTRUCTION:

* ROOF ASSEMBLY IN ACCORDANCE WITH SANS 104XA 4.4.5

* ROOF ASSEMBLY NEEDS TO ACHIEVE A MINIMUM TOTAL R-VALUE OF 3.7 IN AN UPWARDS DIRECTION IN THE CAPE TOWN AREA.

* METAL ROOF SHEETING R-VALUE 0.30

* SISALATION R-VALUE 3.35

* CEILING R-VALUE 0.05

TOTAL R-VALUE 3.70

* THERMGUARD INSULATION R-VALUE 0.04

* THERMGUARD INSULATION THICKNESS TO BE 120mm

* NO ROOFLIGHTS TO BE USED.

* NO IN-SLAB HEATING TO BE USED.

SERVICES:

* SERVICES IN ACCORDANCE WITH SANS 204 4.5 & 4.6

LIGHTING & POWER:

* LIGHTING IN ACCORDANCE WITH PART O IN SANS 10400.

* H4 OCCUPANCY POPULATION COUNT - 4 PEOPLE per HOUSE.

* H4 OCCUPANCY ENERGY DEMAND - 5 W/m²

* H4 OCCUPANCY ENERGY CONSUMPTION - 5 kWh/m²

* POWER SAVING BULBS TO BE USE THROUGHOUT THE WHOLE HOUSE.

MECHANICAL VENTILATION & AIR CONDITIONING:

* ALL ROOMS IN PROPOSED DESIGN HAVE A OPENABLE WINDOW OR DOOR FOR NATURAL VENTILATION.

HOT WATER SUPPLY:

* HOT WATER SUPPLY IN ACCORDANCE WITH SANS 10400XA 4.1

* REQUIREMENTS FOR WATER INSTALLATIONS IN BUILDINGS SHALL BE IN ACCORDANCE WITH SANS 10252-1:2004 AND SANS 10252-1 INSTALLATION OF WATER SYSTEMS.

* ALL HOT WATER SERVICE PIPES SHALL BE CLAD WITH INSULATION WITH A MIN. R-VALUE OF 1. (PIPE INTERNAL DIAMETER OF 80mm OR LESS)

* THERMAL INSULATION, IF ANY, SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

* ISOVER GEYSER INSULATION PACK R-VALUE 1.25. SNAP-ON PIPE INSULATION R-VALUE 1.00.

* HEAT PUMP "KWIKHOT" 600KPA 150 litre CYLINDER WITH 3.5KW HEAT PUMP. THE CONTRACTOR IS TO MAKE REASONABLE ALLOWANCE FOR ANY FUTURE SOLAR WATER HEATING INSTALLATIONS.

PROPOSED NEW HOUSE FOR AMPHORIA (PTY) LTD	
ERF	ERF 273 - POR. 5 & 31 - DASSENVALLEY FARM 45
STREET	MEUL ROAD
AREA	PHILADELPHIA
CHECKED	Skalk Steyn
DATE	29 AUGUST 2013
REVISIONS	
DRAWING NUMBER:	1779 / ROOF & XA

**SKALK
STEYN
ARCHITECTURE**