



APPLICATION OF SANS 10400-XA & SANS 10400-XB			
ZONE 4 - CLASSIFICATION H1 / Hotels			
	REQUIREMENTS	ACTUAL	In order
1	DESIGN REQUIREMENTS	Building to be orientated North/South with longest axis orientated East/West	N/A
2	UNDER SLAB INSULATION	Insulation with minimum R-value of 1.00 to be used under the floor slab where underfloor heating is used	In order
3	WALLS	Masonry walls need to achieve R-value of 0.35	In order
4.1	ROOFING 1.8" Metal roof with horizontal ceiling	Heat flow up and the roof system needs to achieve a minimum R-value of 3.7	In order
		Outside air surface Roofing material 76mm Airgap & Sissalation Ceiling to roof air space Isover Aerolite insulation 135mm Nutec Ceiling Inside air Space R-value req. 3.7	0.05 0.024 0.175 0.385 3.38 0.05 0.091 4.155
5	PIPE INSULATION	Internal pipe diameter ≤ 80mm: Minimum R-value of 1.00	In order
6	GEYSER INSULATION	Minimum R-value of 2.00	In order
7.1	LIGHTING - Classification H4	Maximum energy demand on new areas affected Constant = 5 W/m ² 576 m ² x 5 W/m ² = 2880 W (MAX.)	576 m ² x 5 = 2880 W (MAX.) 002 x 36 W Flu = 72 W 001 x (2x5W) LED = 0 W 000 x (2x10W) LED = 0 W 000 x 5 W LED DL = 0 W 005 x 28 W CFL = 980 W 000 x 0 W = 0 W TOTAL = 1052 W 1052W / 576.00m ² = <5W/m ²
7.2	MAXIMUM ANNUAL ENERGY CONSUMPTION	Maximum energy consumption of new areas affected Constant = 5 kWh/m ² 576m ² x5kW/m ² .a (as/year) = 2880Wh.a MAX.	In order
		8 hours/day 5 day/week x 48 weeks/year 1920 hours/year 1.05 kW x 1920 h.a 2016 kWh 2016 kWh.a < 2880Wh.a	In order
8	FENESTRATION	Total area of the fenestration to be less than 15% of the total of the new floor area affected	In order
		See Fenestration calculations PAGE 201	

Aluminium 'COLORBOND' Saffix 410 roof sheeting at 5° as per manufacturers specifications.
 on Sikalast FR405
 on 76x50mm SA pine purlins at max 1200mm c/c
 on 114x38mm SA pine timber rafters at max 750mm c/c
 fixed to wall with GMS hangers, all to be in accordance
 SANS 10400 - Part L and by an approved roof specialist.
 6mm Nute ceiling board fixed to 38mm x 38mm SA pine
 bracing at max 450 c/c.
 135mm ISOVER Aerolite insulation on top of ceiling

Proposed PVC gutters and downpipes
 installed as per manufacturers specifications
 to match existing

Proposed cavity brick wall to be
 plastered and painted by specialist

Existing yard wall to be built up
 by specialist.

Existing wall to remain
 unaffected

Existing wall to remain
 unaffected

Existing foundation to remain unaffected

Ex. parapet wall to remain unaffected

roof apex
 13 624

u/s of ceiling
 12 550

u/s of inlet
 12 125

425

2125

UFFL
 10 000

30mm screed on 100mm thick reinforced
 concrete floor slab (all in accordance with
 the engineer's drawings and specifications.)
 on 250 Micron DPM (SABS approved
 underlay) on a 50mm sand blinding layer
 on compacted fill not exceeding layers of
 150mm.
 All structural elements as per engineer's
 drawings and specifications

BEDROOM
 TILES
 D1
 1

LOUNGE
 TILES
 D2
 1

W3
 1

roof pitch @ 5°

1050

1050

1050

Proposed PVC gutters and downpipes
installed as per manufacturers specifications
to match existing

Aluminium 'COLORBOND' Safflok 410 roof sheeting
at 5' (as per manufacturers specifications) on;
Sisalation FR405 on; 76x50mm SA pine purlins at
max 1200mm c/c on; 114x38mm SA pine timber
rafters at max 750mm c/c fixed to wall with GMS
hangers, all to be in accordance SANS 10400 - Part
L and by an approved roof specialist.

Proposed brick wall to be plastered and
painted by specialist

Existing wall to remain
unaffected

Ex. floor slab to remain unaffected

Existing foundation to remain unaffected

NGL

LAUNDRY ROOM
SCREEDED

roof apex
12 606

u/s of lintel
12 126

480

2125

UFFFL
10 000

00