

Minimum Total R-value required: 3.2 m²K/W
Direction of heat flow: Up

Basic Roof Assembly: Clay type tiles
R-value for roof covering material: 0.35 m²K/W
R-value for ceiling: 0.05 m²K/W
Required added R-value for insulation: 2.8 m²K/W

Roof Venting: Unventilated
Basic roof construction: Conc./clay tile @ 22-45° w/ horiz. ceiling

Direction of heat flow: Up
Outdoor air film (7m/s): 0.03
Roof tile, clay or concrete 1922 kg/m³: 0.02
Roof air space (non-reflective): 0.18
Plasterboard, gypsum (10mm, 880kg/m³): 0.06
Indoor air film (still air): 0.11 m²K/W
Total R-value: 0.4

Minimum added R-value of insulation required: 2.8 m²K/W
Generic insulation product added: Flexible polyester blanket
Density of generic insulation added: 11.5 kg/m³
Thickness of generic insulation needed: 130 mm

OCCUPANCY CLASSIFICATION OF BUILDING

Occupancy: H4
Building nett floor area: 612 m²
Design occupancy time: 24 Hours per Day

Floor Construction
Slab-on-ground: Concrete slab on ground: Yes
In-slab heating to be provided: No

Suspended floors
Suspended floors as building envelope: Yes
In-slab heating to be provided: No

Insulation requirements floors
Slab-on-ground: Perimeter insulation required: No
Under-floor insulation required: No

Suspended floors
Insulation of unclosed perimeter required: Yes
Perimeter & under-floor insulation required: No

External Wall Construction
SANS 10400 XA Required R value: Masonry
Minimum R-value required: 0.35 Refer to SANS 10400-XA (4.4.3) Table 4 and advisory note.
Compliant masonry walling: Double-skin masonry wall, plastered internally or rendered externally, or Single-leaf masonry wall, nominal wall thickness not < 140mm plastered internally or rendered externally.

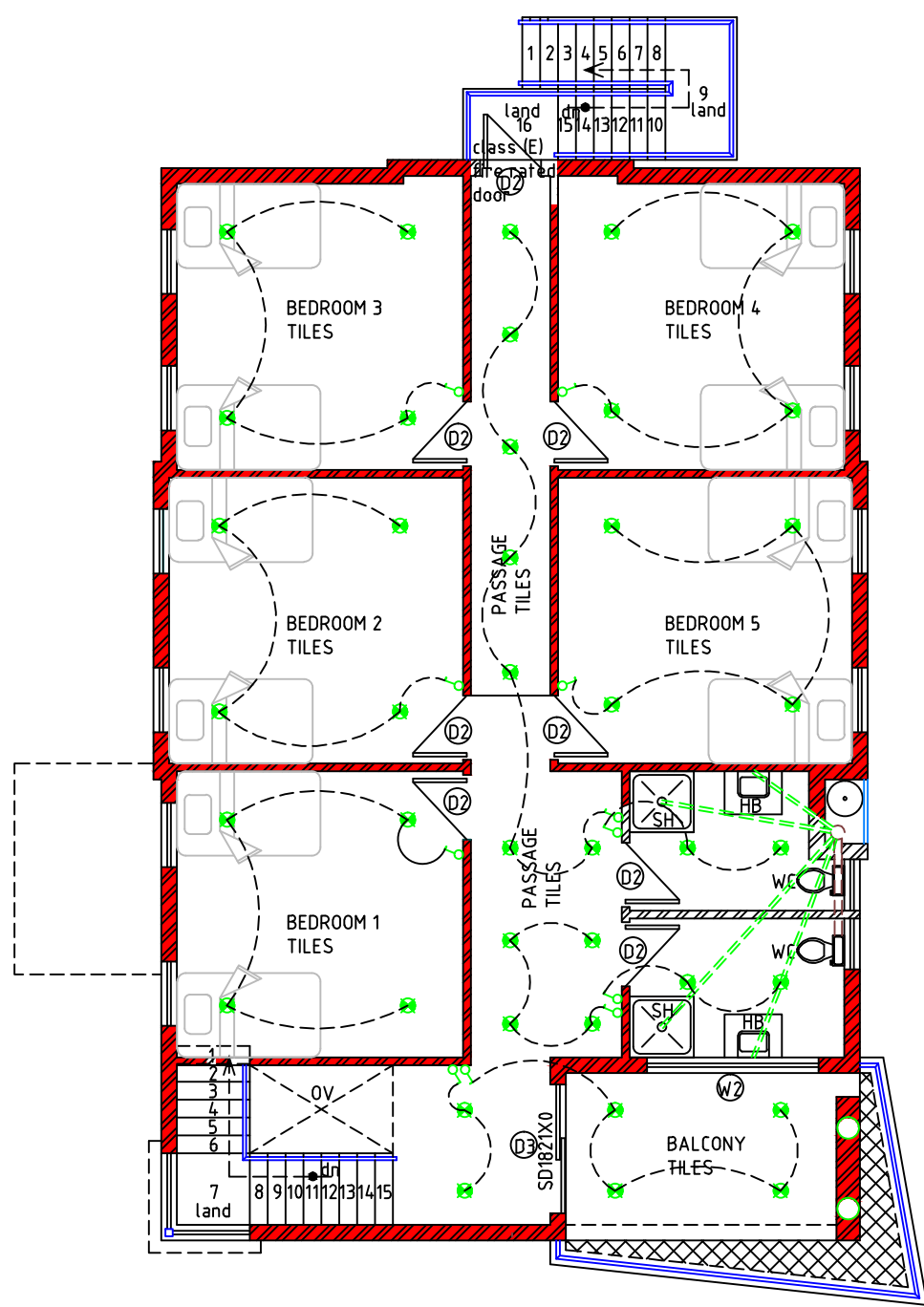
SANS 204 Required CR - value
Minimum CR-value required: 80 Hours
Advisory note - Applicable to masonry walls only in terms of SANS 204.
Double brick wall types: No cavity
C-R value: 40
C-R value of wall insufficient

Fenestration - Building with natural Environmental Control (Ground floor plan)

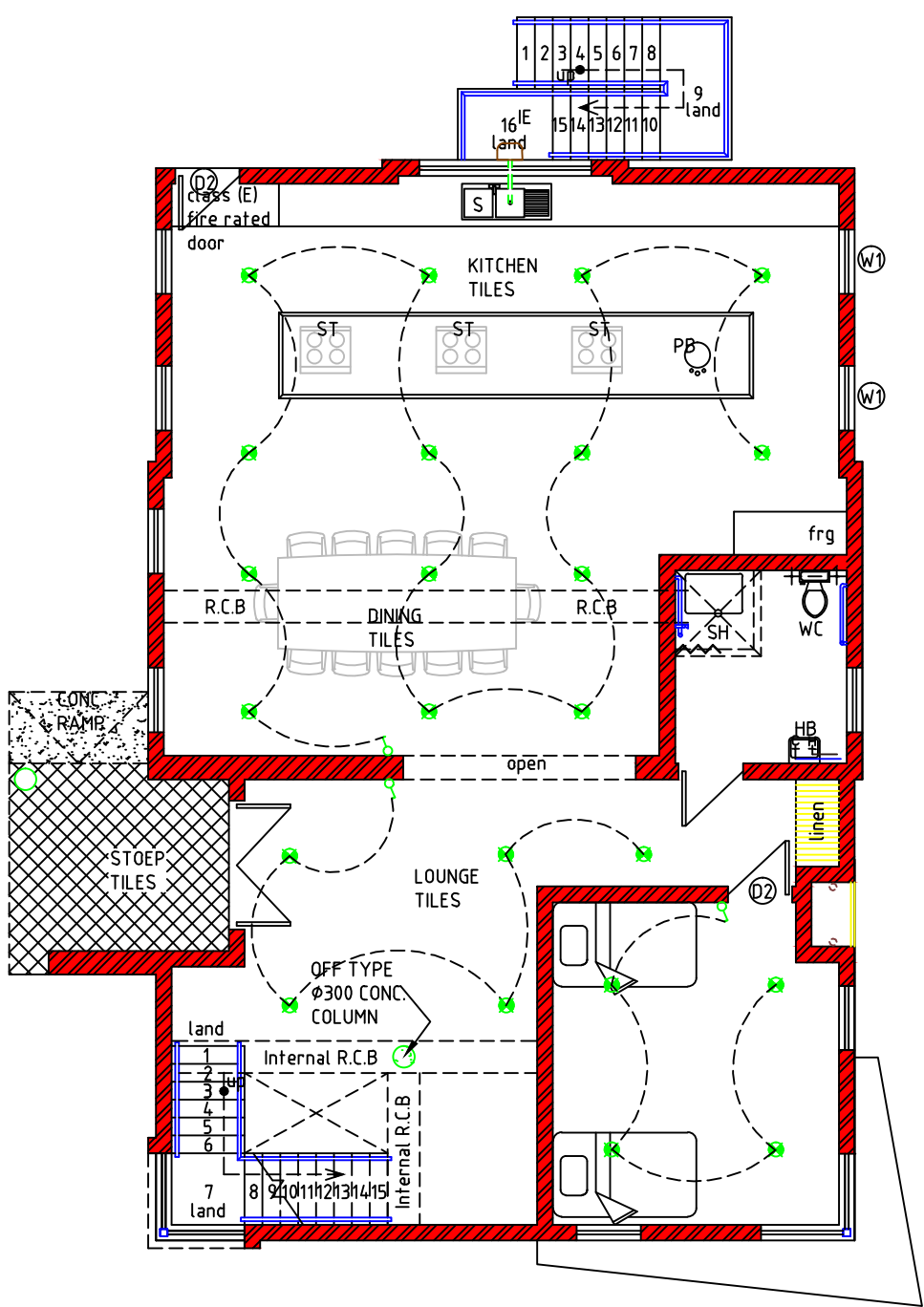
Net floor area: 153m²
Total area of glazing: 20.73m²
15% of nett floor area: 22.95m²
Glazing area to nett floor area: glazing area: 20.73m²
15% of nett floor area: 22.95m²
glazing area < nett floor area
Glazing is less than 15% of nett floor area of proposal therefore calculations i.Lo SANS 204 not required.

Fenestration - Building with natural Environmental Control (First floor plan)

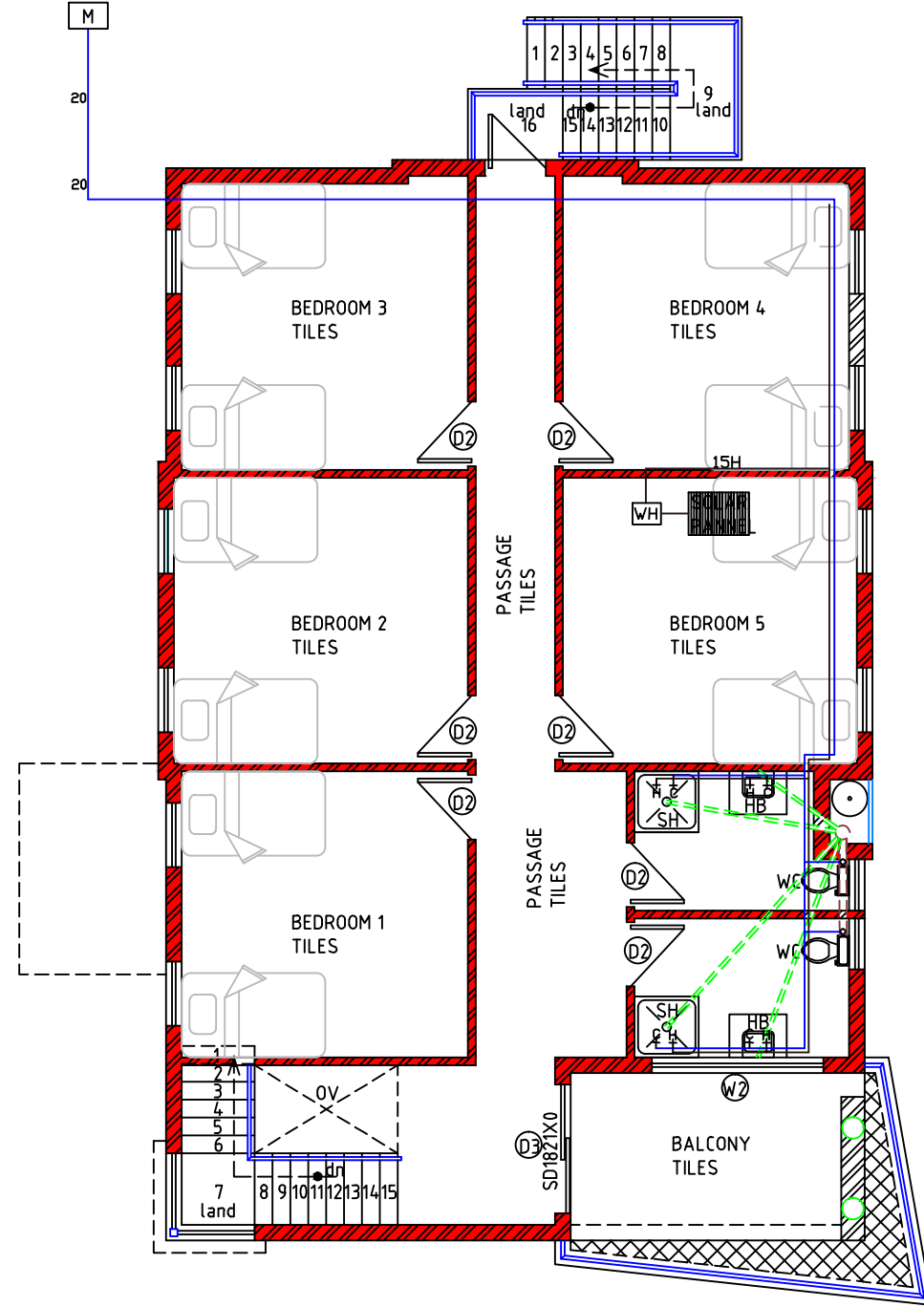
Net floor area: 153m²
Total area of glazing: 24.32m²
15% of nett floor area: 20.54m²
Glazing area to nett floor area: glazing area: 24.32m²
15% of nett floor area: 20.54m²
glazing area < nett floor area
Glazing is less than 15% of nett floor area of proposal therefore calculations i.Lo SANS 204 not required.



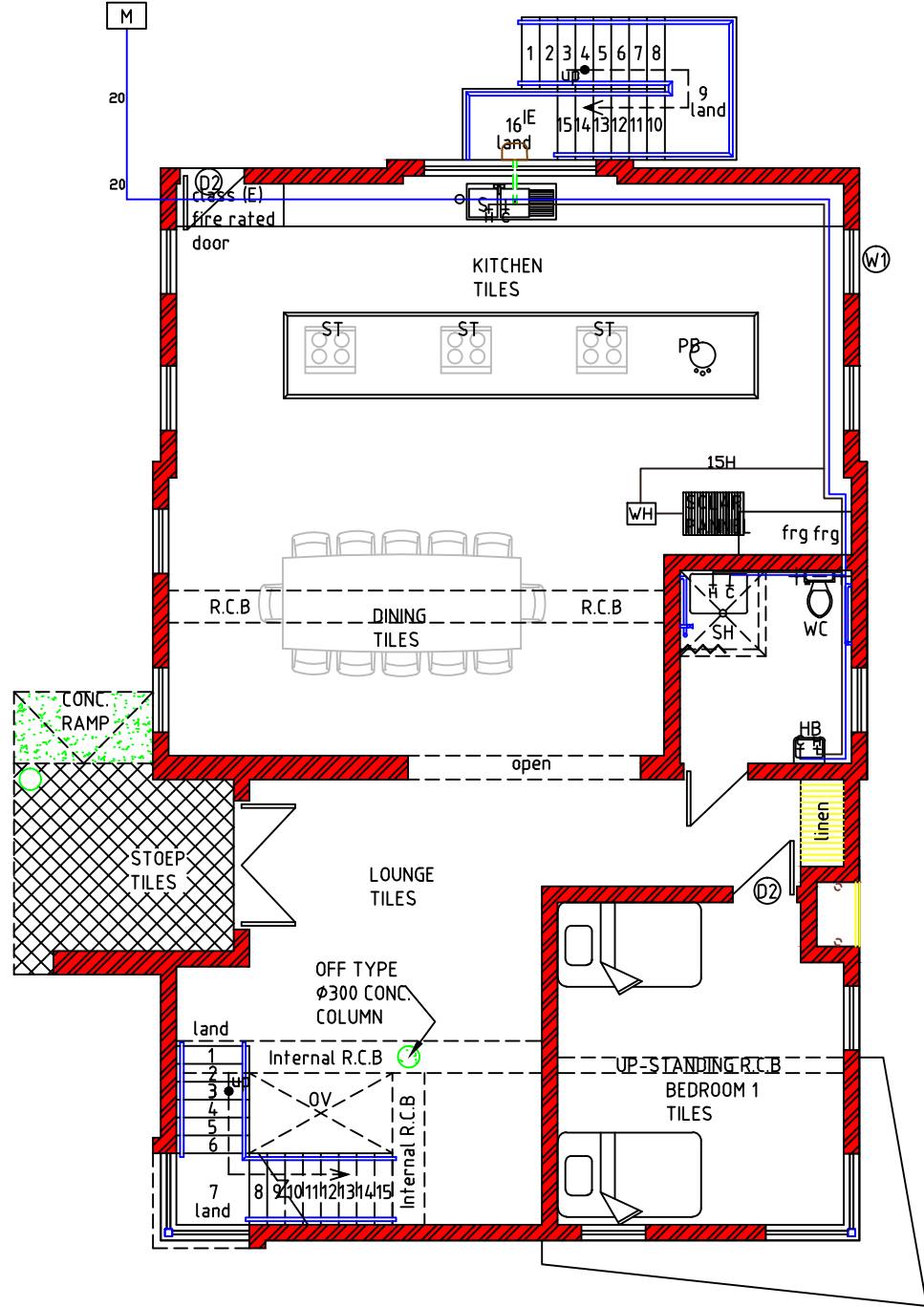
FIRST FLOOR ELECTRICAL PLAN
SCALE 1:100



GROUND FLOOR ELECTRICAL PLAN
SCALE 1:100



FIRST FLOOR HOT WATER LAYOUT PLAN
SCALE 1:100



GROUND FLOOR HOT WATER LAYOUT PLAN
SCALE 1:100

SCHEDULE OF AREAS	
PROPOSED FIRST FLOOR OFFICES	410m²
PROPOSED GRND FLOOR OFFICES	410m²
PROPOSED FIRST FLR. ABBLUTION	153m²
PROPOSED GRND. FLR. ABBLUTION	153m²
TOTAL	1126m²
STAND	8565m²
COVERAGE	7%
FAR	0.1m²

SHEET TITLE:	
PROPOSED NEW OFFICES, MALE & FEMALE STAND BY ABLLUTION FACILITIES	
PROPERTY DESCRIPTION : 87 ERAND A.H.	
CLIENT :	
DATE: 31 OCTOBER 2024	
OWNER'S SIGNATURE :	

Project: JW14468 - MALE & FEMALE STANDBY ABLLUTION FACILITIES AT MIDRAND DEPOT			
Description: FENESTRATION CALCULATIONS, ELECTRICAL LAYOUT, HOT WATER LAYOUT			
Issued For: TENDER			
Size: A1	Scale: As Shown	Sheet No: 6 OF 8	Original Date: October 2024
Project No: JW14468	Drawing No: ARCH - 06	Revision: 0	