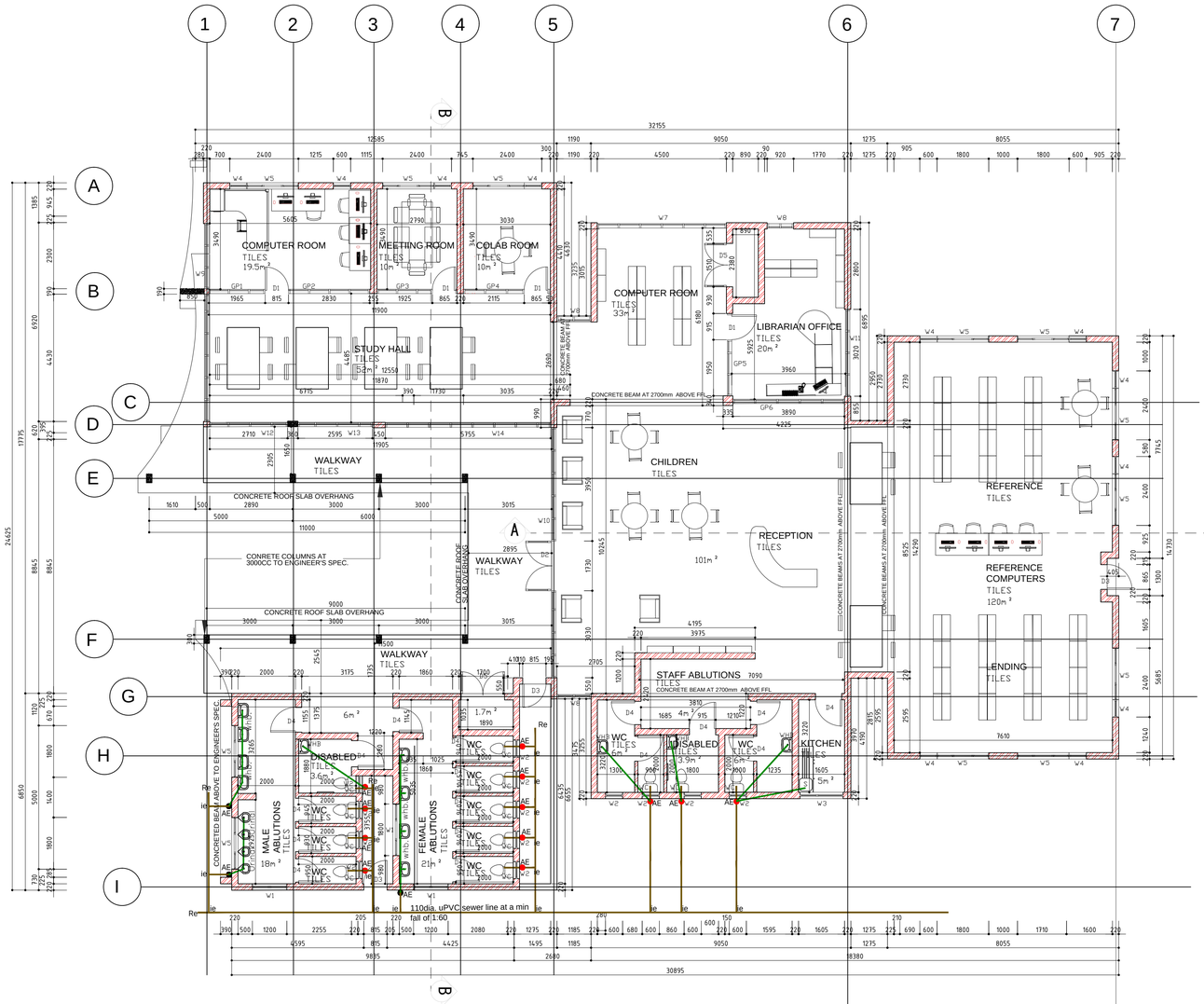


GROUND FLOOR PLAN
scale 1:100

SCHEDULE OF AREAS

Room description	Area in square meters
COMPUTER ROOM	19.5m²
MEETIING ROOM	10m²
COLAB ROOM	10m²
COMPUTER ROOM	33m²
LIBRARIAN OFFICE	20m²
CHILDREN RECEPTION STAFF ABLUTIONS PASSAGE	101m²
STAFF WC 1	6m²
STAFF WC 2	6m²
STAFF DISABLED WC	3.9m²
KITCHEN	5m²
MALE ABLUTIONS	18m²
FEMALE ABLUTIONS	21m²
COVERED ENTRANCE/WALKWAYS	87m²
STUDY HALL	52m²
REFERENCE REFERENCE COMPUTERS LENDING	120m²
PAVING/PARKING	500m²
700mm APRON	112m²
UNISEX DISABLED WC	3,6m²
TOTAL	1 129m²

ENERGY EFFICIENCY IN BUILDING

EXTERNAL WALLS

cr-value to be 40 hours with the r-value of 1.9

HOT WATER SERVICE

"?A minimum of 50% of the annual average heating requirement for hot water must be provided by means other than electric resistance heating (Geyser) or fossil fuels

o?See options below but not only limited to these:

"?Solar heating

"?Heat pumps

"?Geothermal heat

"?Renewable combustible fuel

"?Heat recovery from alternative systems and processes

"?The functional requirements of sub-regulation XA2 shall be satisfied when:

o?4.1.1 The population for which such building is designed is determined in accordance with Regulation A21;

o?4.1.2 The hot water demand is determined in accordance with table 2 and table 5 of SANS 10252-1:2004;

o?4.1.3 The storage requirement is based on maintenance of a hot water temperature of 60 0C;

o?4.1.4 Solar water heating systems shall comply with SANS 1307, SANS 10106 and SANS 10254 based on the thermal performance determined in accordance with the requirements of SANS 6211-1 and SANS 6211-2.

o?4.1.5 All exposed hot water service pipes (SANS 10252-1) shall be clad with insulation with a minimum R-value in accordance with SANS 204.

o?4.1.6 Thermal insulation, if any, shall be installed in accordance with the manufacturer's instructions.

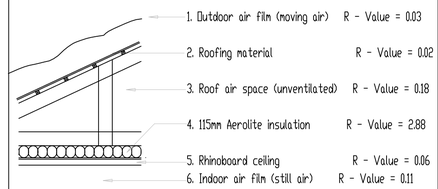
All exposed hot water pipes with a 80 mm diameter

"?Must be insulated with a minimum R-value of 1.00

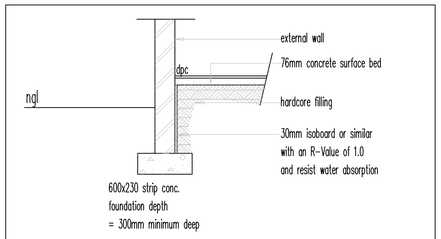
All exposed hot water pipes with a diameter greater than 80 mm diameter

"?Must be insulated with a minimum R-value of 1.50

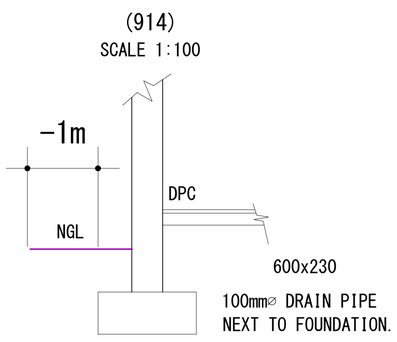
R- Value For Roof In Climate Zone 2: 3.2



Total R - Value = 3.28 m2.K/W

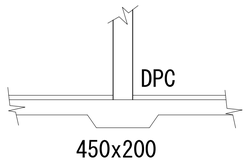


TYPICAL PERIMETER INSULATION



TYPICAL FOUNDATION DETAILS

SCALE 1:100



110mm WALL FOUNDATION.

PRIMADOR

Project Name: Hammerskraal

11/29/2021

Glazing Calculator for naturally-ventilated buildings

Input Panel | Next Line | Review | Climate map

Climate Zone	Zone 2	Temperate interior	
Floor Number	1	Conductance constant (C_U)	1.4
Net floor area	362 m²	Solar Heat Gain constant (C_{SHGC})	0.12

Conductance Allowance | Solar heat gain allowance

Achieved	Target	
66.39m²	18.3%	tt glazed area
28.2	43.4	Solar Heat Gain
367	506.8	Conductance

ID	Window Description	GLAZING ELEMENT (glass & frame) Area Width (m)	Height (m)	Shading P (m)	H (m)	Orientation	PRODUCT Category	Glass Description	Select frame material	Glazing Element Area Total (m²)	P/H	Solar exposure factor (E)	Glazing system SHGC	SHGC of proposed glazing	Glazing total U-value	Conductance of proposed glazing
1	W4	0.6	1.8	0.60	2.58	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.12	0.63	0.81	0.55	7.90	8.53
2	W4	0.6	1.8	0.60	2.58	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.12	0.63	0.81	0.55	7.90	8.53
3	W4	0.6	1.8	0.60	2.58	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.12	0.63	0.81	0.55	7.90	8.53
4	W4	0.6	1.8	0.60	2.58	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.12	0.63	0.81	0.55	7.90	8.53
5	W4	0.6	1.5	0.60	2.69	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	0.9 m²	0.11	0.63	0.81	0.46	7.90	7.11
6	W4	0.6	1.8	0.60	3.15	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.10	0.63	0.81	0.55	7.90	8.53
7	W5	1.8	0.6	0.60	1.38	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.22	0.51	0.81	0.45	7.90	8.53
8	W5	1.8	0.6	0.60	1.38	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.22	0.51	0.81	0.45	7.90	8.53
9	W5	1.8	0.6	0.60	1.38	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.22	0.51	0.81	0.45	7.90	8.53
10	W5	1.8	0.6	0.60	2.69	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.11					
11	W5	1.8	0.6	0.60	3.15	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.10					
12	W7	4.5	2.1	0.60	2.77	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	9.45 m²	0.11					
13	W8	1.2	2.1	0.11	2.77	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	2.499 m²	0.02					
14	W8	1.2	2.1	0.60	0.11	North	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	2.52 m²	5.45					
15	W4	0.6	1.8	0.60	3.15	South	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.10					
16	W5	1.8	0.6	0.60	1.84	South	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.16					
17	W4	0.6	1.8	0.60	2.35	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.13					
18	W4	0.6	1.8	0.60	2.35	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.13	1.01	0.81	0.88	7.90	8.53
19	W4	0.6	1.8	0.60	2.35	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.13	1.01	0.81	0.88	7.90	8.53
20	W5	1.8	0.6	0.60	8.39	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.04	1.19	0.81	1.04	7.90	8.53
21	W5	1.8	0.6	0.60	8.39	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.04	1.19	0.81	1.04	7.90	8.53
22	W5	1.8	0.6	0.60	8.39	East	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	1.08 m²	0.04	1.19	0.81	1.04	7.90	8.53
23	W9	6.9	2.1	0.50	3.88	West	Single-glazed	6 mm Clear/Vue	Aluminium/Steel							
24	W10	9.0	2.7	2.90	3.88	West	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	24.262 m²	0.37	0.81	0.81	15.92	7.90	191.67
25	W12	2.7	2.7	1.65	3.86	South	Single-glazed	6 mm Clear/Vue	Aluminium/Steel	7.317 m²	0.21	0.48	0.81	2.84	7.90	57.80
26	W13	3.0	2.7	1.65	4.12	South	Single-glazed	6 mm Clear/Vue	Aluminium/Steel							
27	W14	5.8	2.7	1.65	4.12	South	Single-glazed	6 mm Clear/Vue	Aluminium/Steel							

Nett glazed area	66.39 m²	Achieved SHGC	28.2
Nett glazed area to floor area ratio	18.3%	Target SHGC	43.4

Achieved U-Value: 367.5
Target U-Value: 506.8

AREA SCHEDULE

SITE AREA:
4 550 m²

NEW BUILDING AREA:
496m²

COVERED ENTRANCE AREA:
87m²

TOTAL BUILDING AREA:
583m²

COVERAGE:
13 m²

F.A.R:
0.13 m²

GENERAL NOTES:
- ALL WORK TO COMPLY WITH NBR AND LOCAL BY-LAWS.
- REFER TO GIVEN DIMENSIONS ONLY.
- CONSULT THE AUTHOR IN CASE OF ANY UNCERTAINTIES.
- THE CONTRACTOR IS RESPONSIBLE FOR CORRECT SETTING OUT OF THE BUILDING.
- IF THERE ARE AMENDEMENTS AFTER THIS PLAN IS APPROVED, THE OWNER OR CONTRACTOR (WHOEVER MADE THE DECISION) WILL BE LIABLE FOR ARCHITECTUTAL AND MUNICIPAL FEES IN ORDER FOR US TO HELP WITH AMENDED PLAN.
- COPYRIGHT IS RESERVED TO WANTHLA ARCHITECTSCc.

ROOF: CONCRETE TILES
- 23-26° ROOF PITCH WITH ROOF TILES. WITH SABS APPROVED UNDERLAY.
- 38 x 38mm BATTENS ON PVC UNDERLAY.
- TRUSSES TOFROM S.A. PINE AT 760mm CENTRES FASTENED SECURELY WITH 2 WIRES OF 4mm (EMBEDDED AT LEAST 300mm INTO BRICKWORK WITH CONNECTING DEVICES ACCORDING TO SCHEDULE 1 OF SABS 0400, TABLE L2
- ALL WEB MEMBERS TO BE MINIMUM 38 x 114mm GRADE 5 WITH EQUAL THAN 1500mm. APPROVED BRACINGS, MUST PREVENT BUCKLING AND KEEP TRUSSES UPRIGHT.
- VALLEY AND HIP RAFTERS TO BE GRADE 7. 50 x 228mm S.A. PINE.
- LAMINATED TIMBER TO COMPLY WITH SABS 876.
- 50mm GLASS FIBRE INSULATION TO BE INSTALLED ON CEILING.

FLOORS AND WATERPROOFING
- SURFACE BED TO BE MINIMUM 85mm THICK 20MPa CONCRETE PERFECTLY LEVEL AND AT MINIMUM 150mm ABOVE GROUND ON PROPERLY COMPACTED HARDCORE FILL
- 25mm THICK SCREED AND FINISHES AS INDICATED.
- SUSPENDED CONC. FLOOR SLABS TO ENGINEER'S DETAILS AND SPECIFICATIONS.
- DPC UNDER ALL WALLS (EXCEPT FREE STANDING), FLOORS AND WINDOW SILLS AND TO ALL VERTICAL CHANGES IN FLOOR LEVELS.
- FLASHING TO ALL PARAPETS AND CHANGES IN ROOF LEVELS.
- ATRIUMS AND COURTYARDS TO BE FITTED WITH AT LEAST 1 x 50mm∅ OUTLET PIPES FROM CATCHPIT FITTED WITH GRATING AND SILT TRAPS.
- PLANTERS TO BE WATERPROOFED AND DRAINAGE INSTALLED.

FOUNDATIONS, BRICKWORK AND PARTITIONS
- ALL FOUNDATIONS TO BE 25MPa CONCRETE AT LEAST 230 x 700mm MINIMUM 200mm UNDERGROUND TO ENGINEER'S DETAILS AND SPECIFICATIONS.
- BOUNDARY WALLS' FOUNDATION MUST NOT ENCROACH ON BOUNDARY LINE AND WALLS ARE TO BE PLASTERED AND PAINTED ON THE INNER WALL.
- PARAPET WALLS TO BE AT LEAST 300mm HIGH AND MINIMUM 500mm WITH BRICKFORCE IN EVERY COURSE.
- ALL SCREEN WALLS TO BE AT LEAST 1800mm HIGHABOVE GROUND LEVEL.
- LINTOLS TO BE SUPPORTED MINIMUM 150mm FOR OPENINGS UP TO 4800mm. BRICKFORCE TO BE BUILT IN EVERY COURSE BELOW FLOOR LEVEL AND ABOVE WINDOW LEVEL, EVERY THIRD COURSE BETWEEN IN-CONTINUOS BANDS.

STAIRS AND BALUSTRADES
- STAIRS TO BE 750mm MINIMUM WIDTH, TREADS 300mm, RISERS 170mm WITH 6mm MAX. DEVIATION.
- 1000mm HIGH BALUSTRADES TO ALL STAIRS AND BALCONIES.
- MAXIMUM 3000mm VERTICAL RISE PER FLIGHT, WINDERS WHERE SHOWN, TO BE AT LEAST 250mm WIDE, 450mm FROM THE NARROW END AND ANGLE BETWEEN THE RISERS TO BE CONSTANT.
- MINIMUM HEADROOM TO BE 2100mm MEASURED FROM PITCHLINE.
- GLASS BALUSTRADES (IF SHOWN) TO BE SAFETY GLASS.

GLAZING (AS PER NBR PART 'N')
- ALL PANE SIZES AND THICKNESS AS DESCRIBED ON WINDOW SCHEDULE.
- BATHROOM WINDOWS TO BE FROSTED GLASS.
- ALL GLAZING ON DOORS TO BE SAFETY GLASS.
- GLAZED AREA LESS THAN 300mm ABOVE FFL TO BE COV.WITH SAFETY GLASS.
- ALL GLAZED AREA TO COMPLY WITH SANS 204.

DRAINAGE
- 110mm∅ uPVC SOIL PIPES TO FALL 1:50
- RESEAL TRAPS TO ALL WASTE FITTINGS AND GULLEYS.
- 50mm∅ WASTE PIPES.
- DRAINAGE TO HAVE A MINIMUM INVERT LEVEL OF 450mm BELOW THE NATURAL GROUND LEVEL.
- REINFORCED FOUNDATIONS OVER SOIL PIPES, WHERE PIPES ARE LAID UNDERNEATH BUILDING.
- ALL DRAINAGE TO COMPLY WITH SECTION 'P' OF NBR.

FIRE NOTE
- BUILDING TO COMPLY WITH SANS 10400 'T' : 2011' 4.9.2
- NO COMBUSTIBLE ROOF COMPONENTS SHALL PENETRATE THE SEPARATING ELEMENT DIVIDING THE SPACE BETWEEN THE GARAGE AND THE HABITABLE ROOMS.

REVISION No	DATE :	DESCRIPTION:
-	-	ISSUE FOR TENDER

REVISIONS
SIZE ON ORIGINAL DRAWING 100 mm

CONSTRUCTION OF MAKUWA LIBRARY

PROJECT NAME:
CONSTRUCTION OF MAKUWA LIBRARY

CLIENT:
FETAKGOMO-GREATER TUBATSE LOCAL MUNICIPALITY
PO BOX 206
BURGERSFORT 1150
FETAKGOMO - GREATER TUBATSE LOCAL MUNICIPALITY

DISCIPLINE
ARCHITECTURAL

WORK DESCRIPTION
NEW LIBRARY

DRAWING DESCRIPTION
GROUND FLOOR LAYOUT AND DETAILING

FILE No.			
DESIGN	SS MOGALE	K. BODIBA	DRAWN
SCALE	AS SHOWN	SS MOGALE	CHECKED

RESPONSIBLE PROFESSIONAL

DATE	NAME	SIGNATURE	PR NUMBER
22-11-2021	SS MOGALE		T0206

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384 Justice Mahommed Street
Sunnyside 0002
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Email: simonmgl@yahoo.com | Website: wanthlaarch.co.za

CONTRACTOR :

CADD SYSTEM	AUTOCAD		FILE NAME
SIZE	DRAWING NUMBER		REV
A1	WAN-001		1