



### HOT WATER SERVICES

**HOT WATER SUPPLY:** (As per SANS 10400 - XA:2011)

- In order to comply with functional regulation X A2, contained in part XA of the National Building Regulations, the following guidance is provided:
  - 1) In order to comply with functional regulation X A2, contained in part XA of the National Building Regulations, the following guidance is provided:
    - 2) Requirements for water installations in building shall be in accordance with SANS 10252-1 and SANS 10254
    - 3) All hot water service pipes shall be clad with insulation with a minimum R-value in accordance with table 1
    - 4) Thermal insulation if any, shall be installed in accordance with the manufacturer's instructions.

**THERMAL INSULATION:** (As per SANS 10252-1:2004)

- Pipes, fittings and components shall, when necessary, be protected against freezing. The insulation provided shall be appropriate to a minimum temperatures that can be expected in that geographical area.
- All exposed pipes to and from the hot water cylinders and central heating systems shall be insulated with pipe insulation material with a thermal resistance (R-value) measuring unit ( $m^2 \cdot k/w$ ) in accordance with table 10, meaning and R-value of 1.00 for 15mmØ pipe.
- Insulation shall
  - be protected against the effects of weather and sunlight
  - be able to withstand the temperatures within piping, and
  - achieve the minimum total R-value given in table 10.

**TABLE 13-MINIMUM R-VALUE OF PIPE INSULATION.**

Internal diameter of pipe mm	Minimum R-value $m^2 \cdot K/w$
< 80 mm	1.0
> 80 mm	1.50

- Hot water vessels and tanks shall be insulated with a material that achieves a min. R-value of 2.  
N.B: to achieve this value, insulation in addition to the manufacturers installed insulation might be required.
- Insulation on vessels tanks and piping containing cooling water shall be protected by a vapour barrier on the outside of the insulation.
- The piping insulation requirements do not apply to space heating water piping.
  - located within the space being heated where the piping is to provide the heating to that space, or
  - encased within a concrete floor slab or in masonry. such piping shall comply with this part of SANS 10252.
- Piping to be insulated includes all flow and return piping cold water supply piping within 1m of the connection for the heating or cooling system and pressure relief piping within 1m of the connection to the heating or cooling system, where possible lengths of pipe runs shall be minimized.
- After thermal insulation material has been installed to the outer surface area. The ingress of moisture into such material shall be prevented. Note roughness increases the effective surface area of insulation material and consequently, heat losses and moisture increase the thermal conductivity of material.

**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 AMENDMENTS AFTER THIS PLAN IS APPROVED, THE OWNER OR CONTRACTOR (WHOEVER MADE THE DECISION) WILL BE LIABLE FOR ARCHITECTURAL AND MUNICIPAL FEES IN ORDER FOR US TO HELP WITH AMENDED PLAN.
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**ROOF: TIMBER TRUSS ROOF NOTES**

- 7-12° ROOF PITCH WITH IBR SHEETING, WITH SABS APPROVED UNDERLAY.
- 76 x 50mm PURLINS ON PVC UNDERLAY.
- TRUSSES FROM S.A. PINE AT 1200mm 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.
- AIRWAYS AND COURTYARDS TO BE FITTED WITH AT LEAST 1 x 50mmØ OUTLET PIPES FROM GATOPIT 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 ENCRUSH 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 BRICKWORK IN EVERY COURSE.
- ALL SCREED WALLS TO BE AT LEAST 1800mm HIGH ABOVE GROUND LEVEL.
- LINTOLS TO BE SUPPORTED MINIMUM 150mm FOR OPENINGS UP TO 4800mm. BRICKWORK TO BE BUILT IN EVERY COURSE BELOW FLOOR LEVEL AND ABOVE WINDOW LEVEL. EVERY THIRD COURSE BETWEEN IN-CONTINUOUS 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, HANDERS 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**

- 110mmØ uPVC SOIL PIPES TO FALL 1:50
- RESEAL TRAPS TO ALL WASTE FITTINGS AND GULLEYS.
- 50mmØ 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
<b>REVISIONS</b>		
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

DISCIPLINE:  
ARCHITECTURAL

WORK DESCRIPTION:  
NEW LIBRARY

DRAWING DESCRIPTION:  
SECTION AND DETAILS

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

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

**CONTRACTOR:**

CADD SYSTEM	AUTOCAD	FILE NAME
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