

FENESTRATION WINDOW SCHEDULE - ground floor

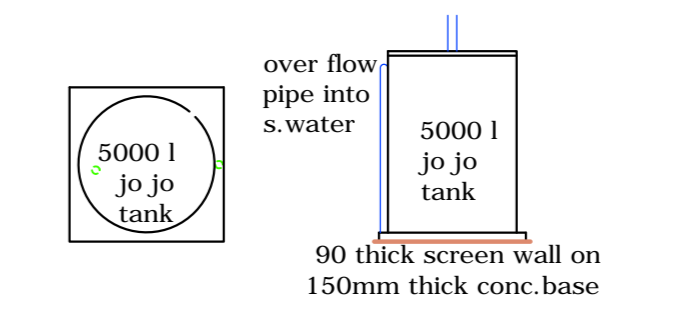
Window	Window size / m ²	per unit	total sq.m
w1	2.16	6	18.0
w2	1.02	4	4.08
w3	1.08	1	1.08
w4	0.36	1	0.36
w5	0.72	2	1.44
w7	0.72	4	2.88

total fenestration dwelling = 30.24
dwelling = 232.53 net sq m x 13% = 34.87
all fenestration air infiltration shall be in accordance with SANS 613@75 Pa pressure difference when tested.

FENESTRATION WINDOW SCHEDULE - first floor

Window	Window size / m ²	per unit	total sq.m
w1	2.16	5	10.8
w2	1.02	1	1.02
w3	1.08	1	1.08
w5	0.72	2	1.44
w6	0.84	10	8.40
w7	0.72	1	0.72

total fenestration dwelling = 24.06
dwelling = 235.35 net sq m x 13% = 35.30
all fenestration air infiltration shall be in accordance with SANS 613@75 Pa pressure difference when tested.

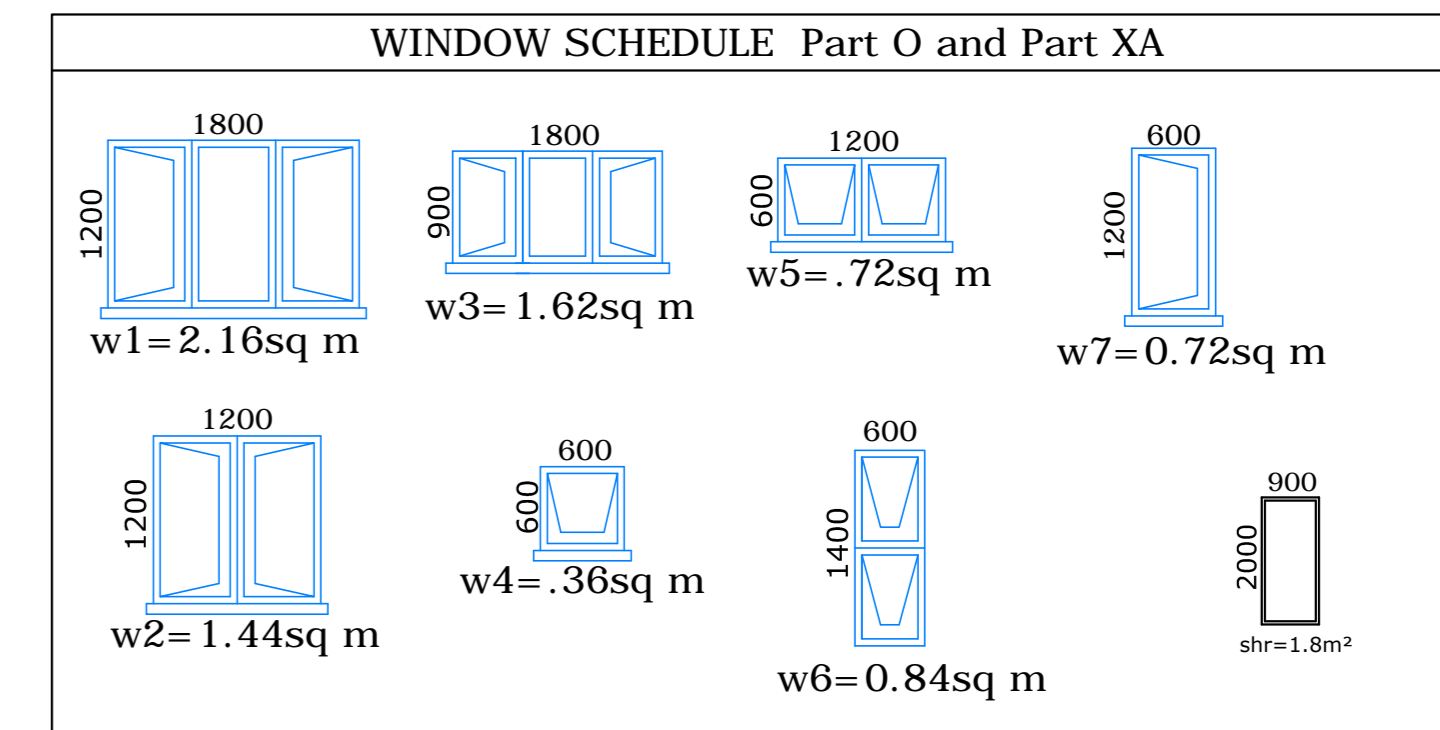


STORM WATER MANAGEMENT

SITE AREA = 1503 m² @ 40% = 601m²
COVERAGE - HARDENED SURFACE = 120m²
120 x 40 X 1.067 = 5
REQUIRED: storm water tank volume = 5m³
SUPPLIED: 5000l tank = 5m³
over flow pipe to discharge into storm water which is discharged onto road.

WINDOW SCHEDULE - GLAZING (part N)

type of glass	pane size in m	glazing thickness	frame type
w1 monolithic annealed	0.72	4mm	aluminium
w2 monolithic annealed	0.72	4mm	aluminium
w3 monolithic annealed	0.54	4mm	aluminium
w4 toughened safety	0.36	6mm	aluminium
w5 toughened safety	0.36	6mm	aluminium
w6 monolithic annealed	0.42	4mm	aluminium
w7 monolithic annealed	0.72	4mm	aluminium
w8 toughened safety	1.8	6mm	aluminium



ENERGY EFFICIENCY

1. Occupancy classification of building = H4
2. Climate Zone 5, subtropical coastal
3. Orientation and shading: North East to North West
4. External Wall

4.1. External wall to have a min. R-value of 0.35 m²·K/W - 140 thick solid clay block or 150 thick concrete block with 10MPa concrete infill.

4.2. 20mm plaster internally and externally.

5. Roof Assemblies

5.1. Roof assemblies to have a min. R-value of 2.7

5.2. Clay tiled roof assemblies

5.2.1. Direction of best flow down.

5.2.2. R-value of roof covering material = 0.48

5.2.3. R-value of approved insulation = 2.17

5.2.4. R-value of ceiling = 0.05

TOTAL = 2.7

6. Energy usage

4 people per house - floor area = 382 m²

6.1. Max annual energy demand @ 5m²/m² (50m²) = 1910 W/m²

6.2. Max annual energy consumption @ 5kWh/m² = 1910 kWh/m²

6.3. 21 off the energy efficiency bulb (E21x9) = 189 W
Total energy demand 1890w - arava = 0.49 W/m²

6.4. Total annual energy consumption - Lights = 344.92 kWh
1890 x 24hrs/day x 365 days = 0.90 kWh/m²
344.92 x 382 =

The annual demand and consumption of the above building is less than that of a H4 reference building.

ENERGY EFFICIENCY

7. Hot Water Supply

THERMAL INSULATION SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

Insulation shall be protected against the effects of weather and sunlight, be able to withstand external conditions within the pipes, and achieve the min total R-value of 1.0

7.1 Water insulation in buildings shall be in accordance with SANS 10252-1 and SANS 10254

7.2 Solar water heating system shall comply with SANS 1307/SANS 10106, SANS 10254 & SANS 10252-1

7.3 Dwelling to be supplied with a 300 l full pressure geyser which is situated on the outside wall near the bath room or kitchen. Solar collectors to be facing north for maximum exposure to sun.

7.4 Hot water vessels and tanks shall be insulated with a material with a min R-value of 2.0

7.5 100mm thick flexible fibreglass geyser blanket with R-value of 2.17

7.6 All hot water service pipes to be max 28 mm dia. copper solo 400 class 1 and shall be lagged with 15mm thick FIBREGLASS PREFORMED PIPE SECTION insulation with a min. R-value of 1.00. (Fibreglass pipe insulation has a R-value of 4.83 / (gross of R-value go to http://www.industrialinsulation.com/fibreglass_pipe_insulation.htm)

7.8 Dwelling House: Total hot water demand: Storage vol @ 60°C: Heater power
Low Rural: (80-110 L/capita/d) : (100-150 L/capita/d) : 2-3 kw/unit
medium to high Rural: (115-140) L/capita/d : (40-50) L/capita/d : 2-5 kw/unit

Hot water storage capacity

Classification : H4 - Dwelling
Occupancy : 2 people / bed room. 24hrs a day. 7days a week.
Type of hot water generation: Solar with back-up element
Hot water demand (SANS 10252-1): 140l per day per person
Number of bed rooms: 2
Total demand : 2 x 8 x 140 = 2240l
Hot water storage capacity required: 2240 x 50% = 1120l (50%XA2)
Capacity provided : 4 x 300l

SPECIFICATION

FLOOR

1. All floor finish to be grano
2. 120mm concrete reinforced with b.r.c. mesh on 250 micro mm approved waterproof underlay.
3. 5% pentachlorophenol soil poison on all surface beds.

WALLS (part K) to engineers detail

1. Plaster & p.v.a. to both internal and external walls.
2. Facework: external face of inner skin to be bagged and applied with suitable waterproofing.
3. Provide 2 course of brick force above 2.1 m from floor, to form a ring beam around external walls and two course brick force at all level.
4. Precast, pre stressed concrete lintels over all openings less than 3m.
5. Provide 2 air bricks above all windows.
6. D.P.C. and air guard to be provided.
7. The average compressive strength of hollow and solid masonry unit is not less than 3.0 mpa and 4.0 mpa resp.
8. Free standing, retaining, parapet and balustrade wall is not less than 3.0 mpa and 5.0 mpa resp.
9. H4 ref. building loads not to exceed 3.0 kn/m²
10. Metal wall ties shall have a min thickness of galv. of 750 g/m²
11. Foundation wall core shall be filled with 10 mpa infill concrete.

ROOF (part J) to engineers detail.

1. Clay roof tiles on 38 x 38 battens on "white plastic" underlay on "gang nail" trusses spaced at 760mm centres, on 114 x 38 wallplates, trusses tied to b.w.k. with approved galvanised hoop iron.
2. Rhino board ceiling.
3. 120mm thick flexible fibreglass blanket ceiling insulation.
3. Approved flashing to be placed where roof tiles meet wall.
4. Fibre-cement fascia and barge boards.
5. 75 Ø pvc. rwp. and 125 Ø hr pvc. gutter.

DRAINAGE

1. All beris and junctions in drains and sewer pipes to have inspection eyes.
2. Waste pipes and vents to be 50 Ø pvc.
3. Soil pipes and vents to be 100 Ø pvc.
4. All sanitary fitting to be trapped in accordance to (n.b.r.).

GENERAL NOTES

1. All dimensions and levels to be checked on site before commencement of work.
2. Written dimensions should take preference over scale.
3. No walls of foundation to encroach on boundary line.
4. Structural work to eng. detail.
5. Coping to the tops of boundary/parapet walls.
6. All banks to be cut 34° max and fill #26 max.

AREA SCHEDULE IN M²

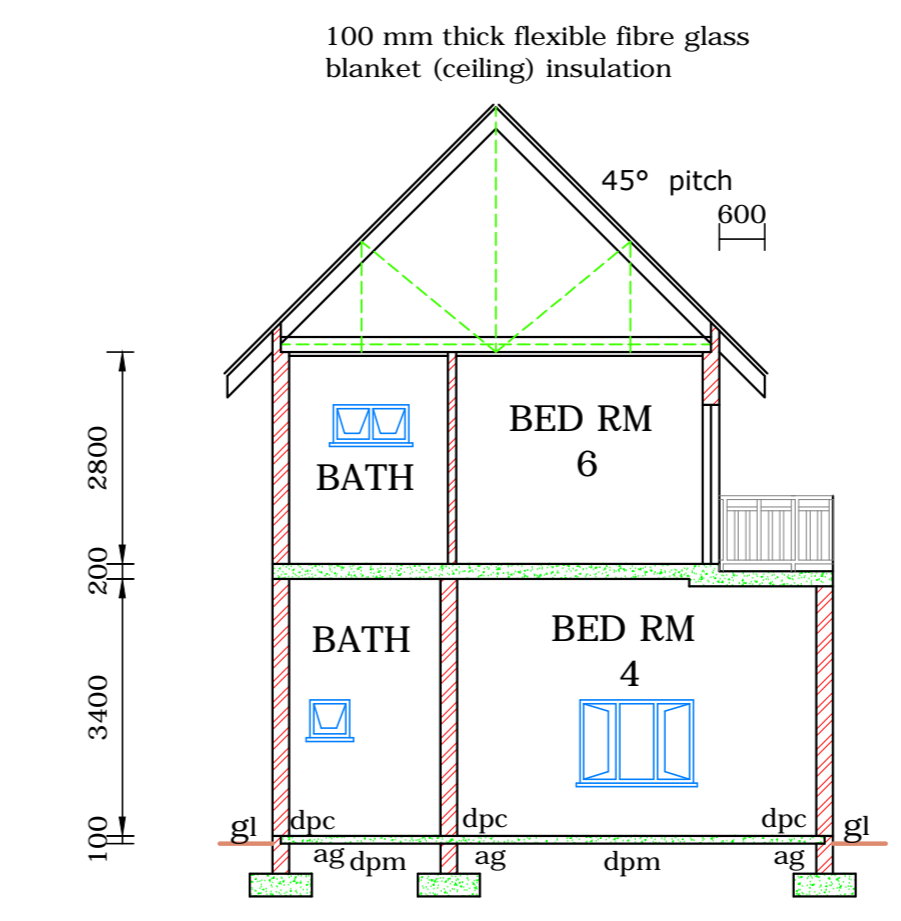
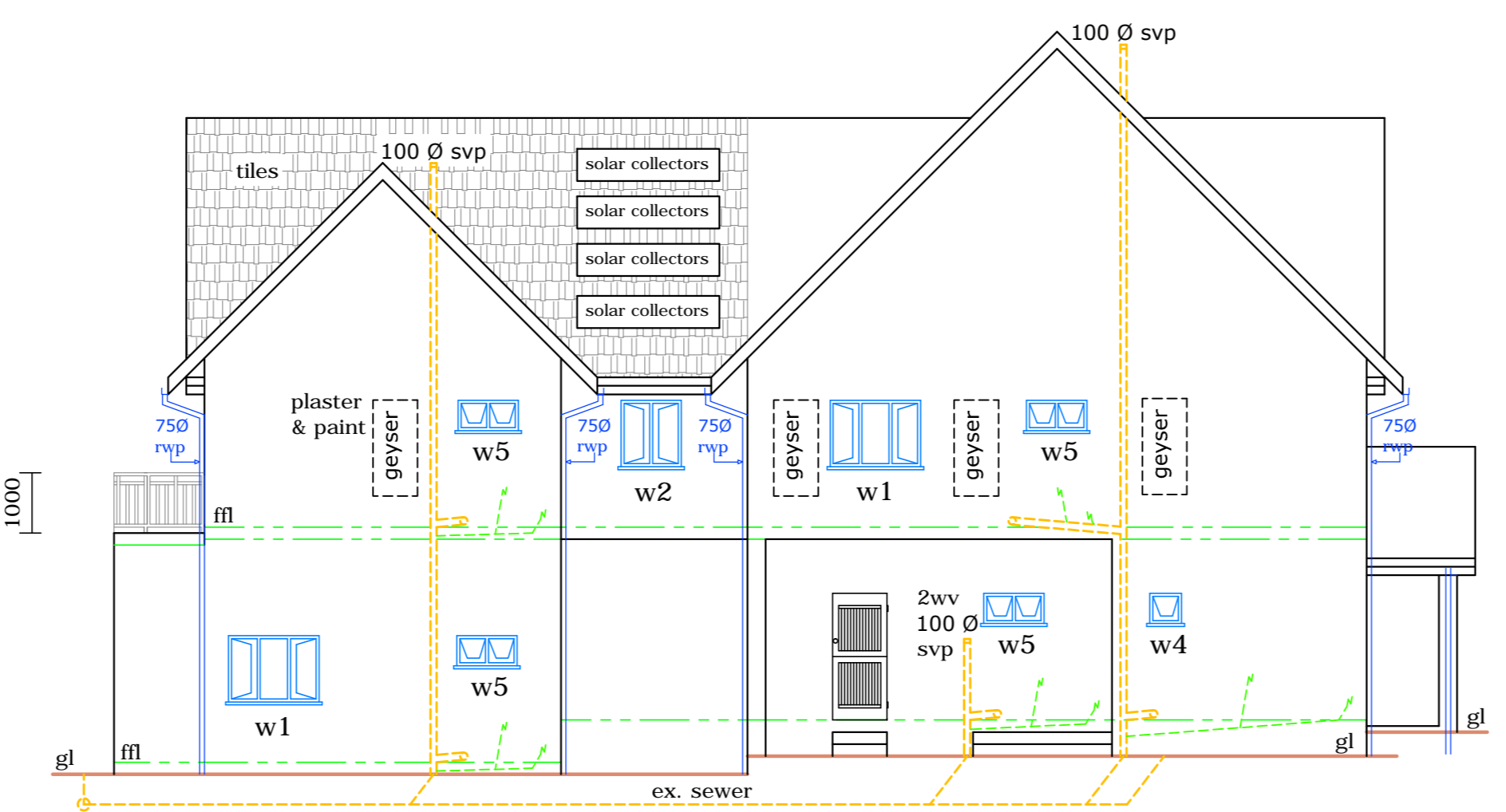
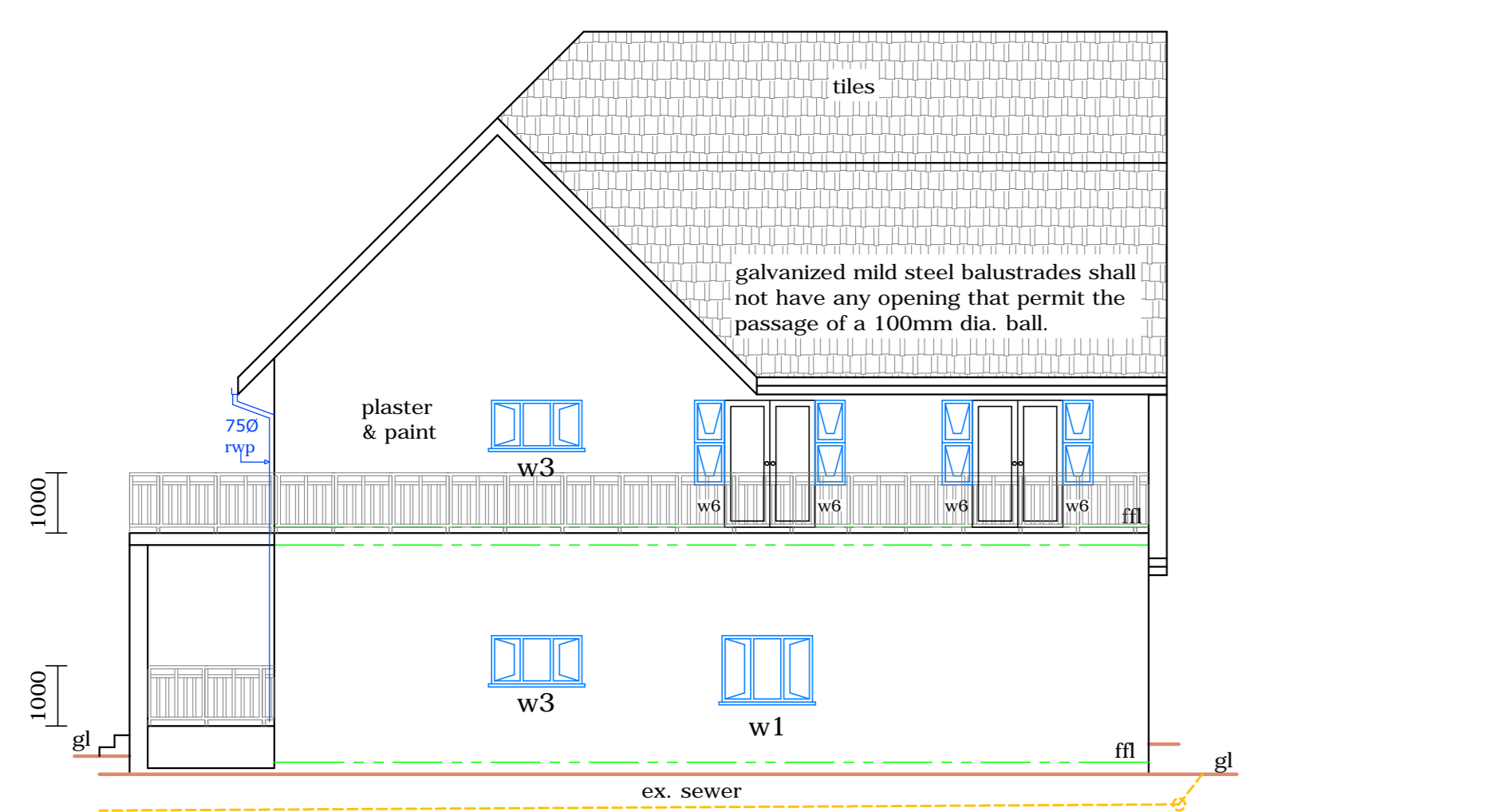
Area of site	= 1503
Permitted F.A.R.	=
Permitted coverage	= 601.2
Existing F.A.R.	=
Existing coverage	= 199
Proposed F.A.R.	=
Proposed coverage	= 133
New Total F.A.R.	=
New Total Coverage	= 332

PROPOSAL ADDITION AND ALTERATION

SITE	PORT.13/946 92 KENNETH KAUNDA ROAD BROADWAY
DATE / DRAWING No.	03 / 06 / 2021
OWNER'S TEL.	082323284
OWNER'S NAME	P RAMANAN
OWNER'S SIGN	<i>P.Ramanan</i>

drawn by: *P* email: loganpillay@gmail.com ph: 082 222 4247

LOGAN PILLAY
10 BUCKHURST PLACE
LITCHEE FARM
VERULAM



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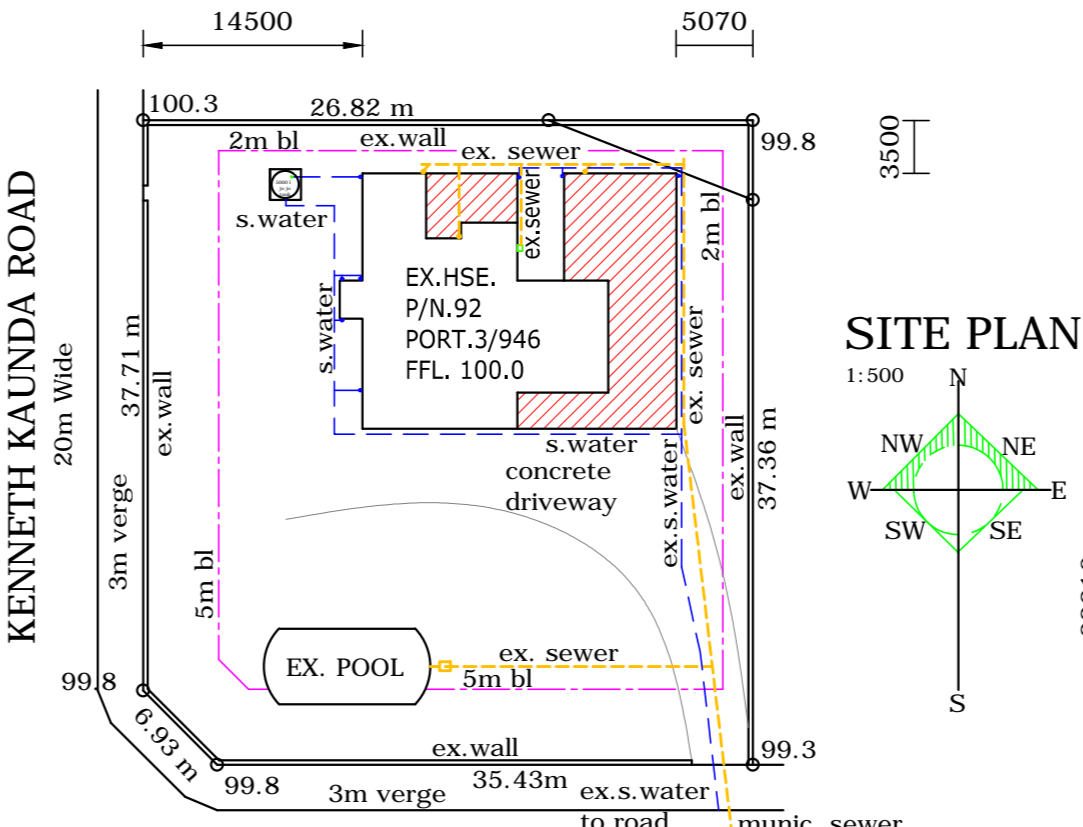
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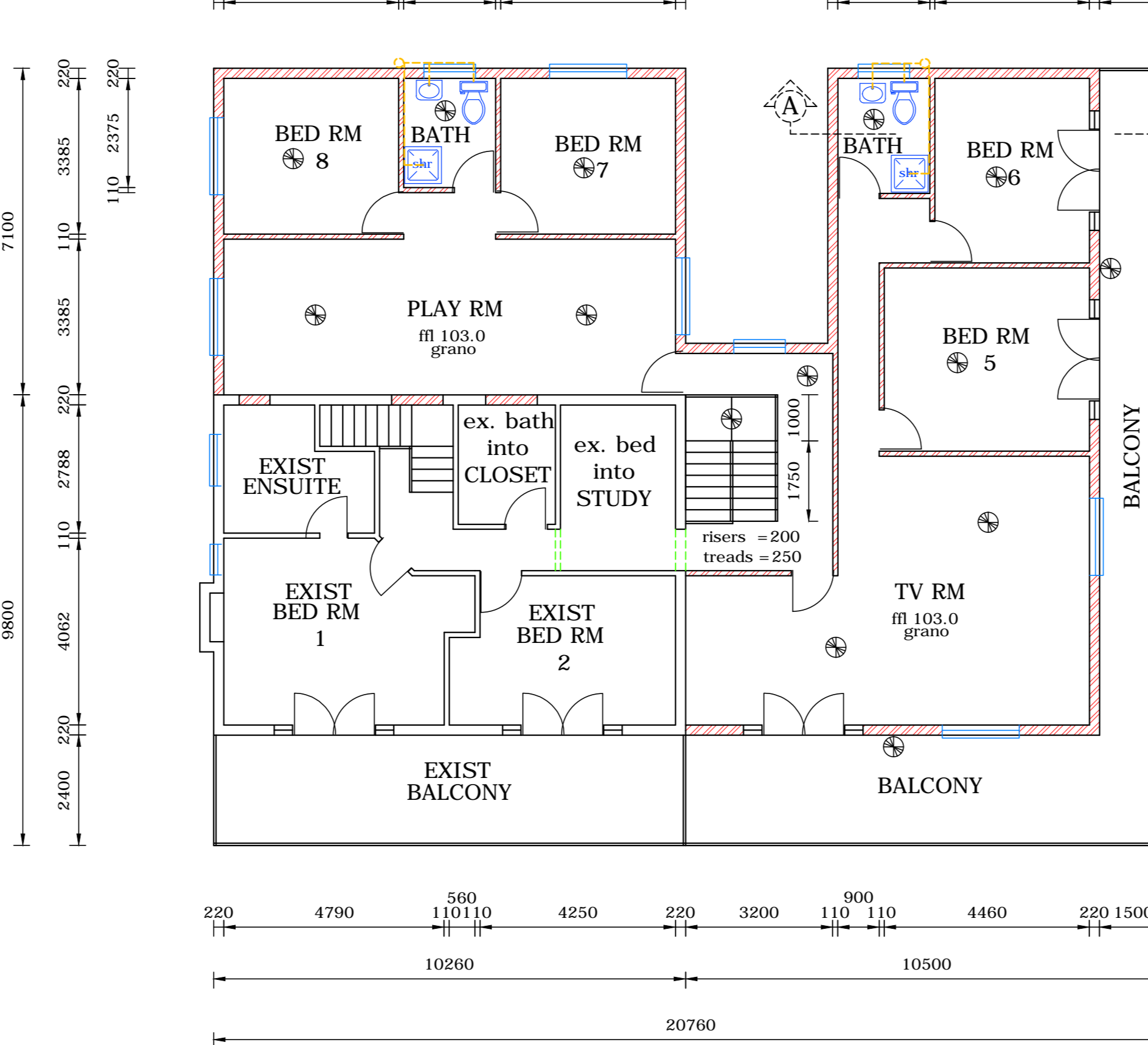
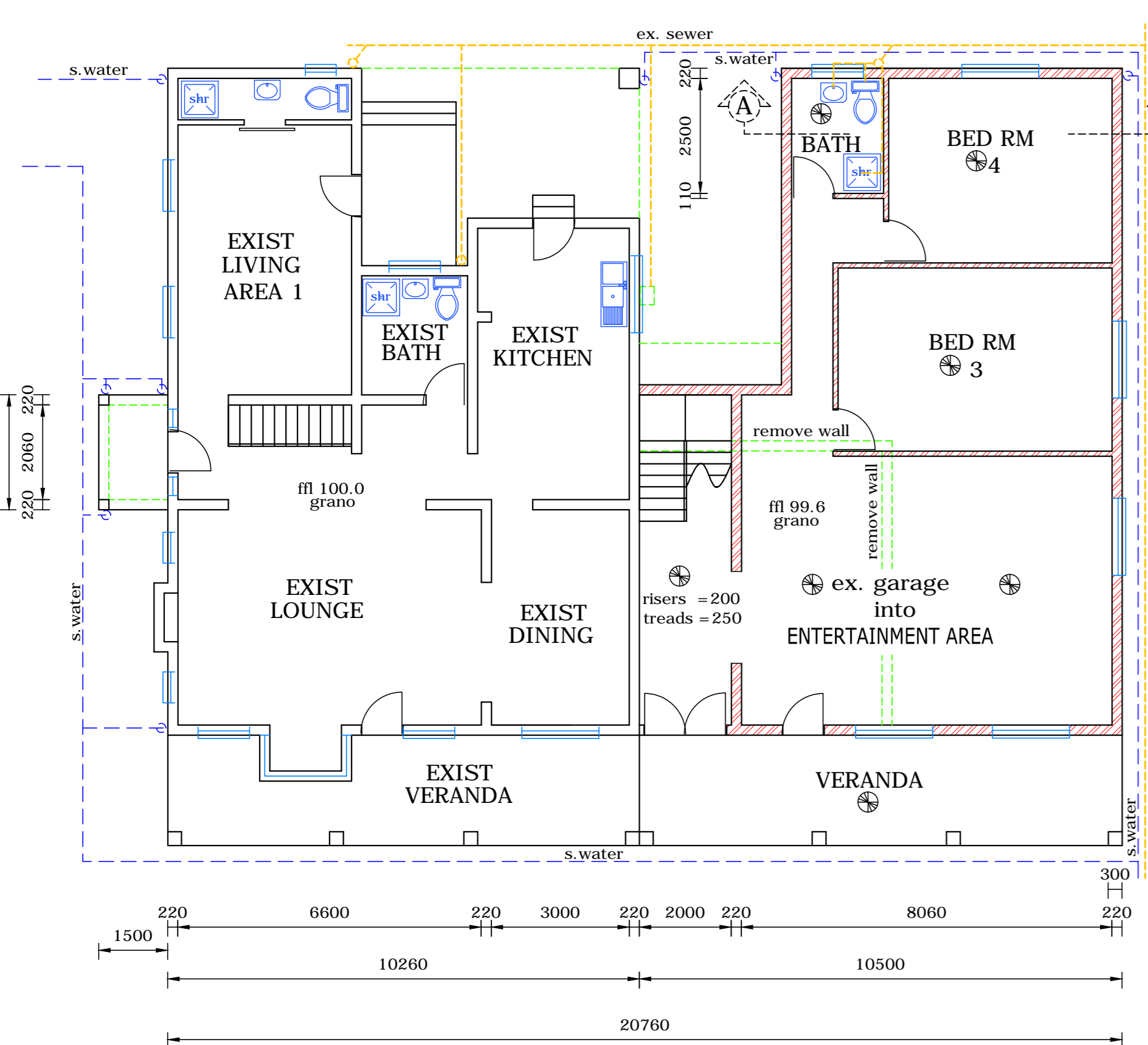
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GROUND STOREY PLAN
1:100

FIRST STOREY PLAN
1:100