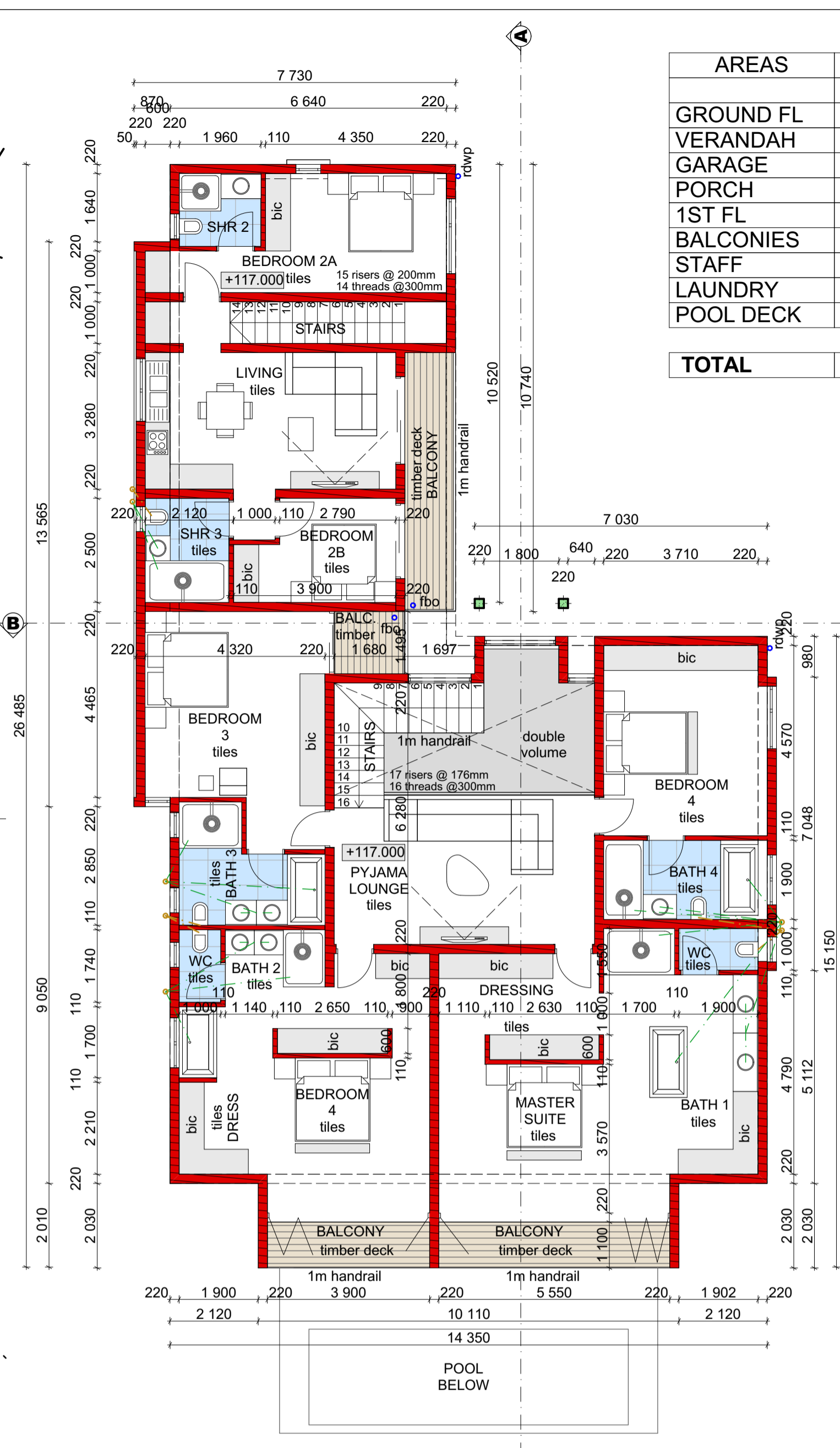
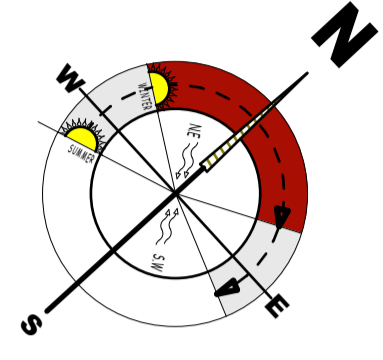


GROUND FLOOR PLAN
scale 1: 100

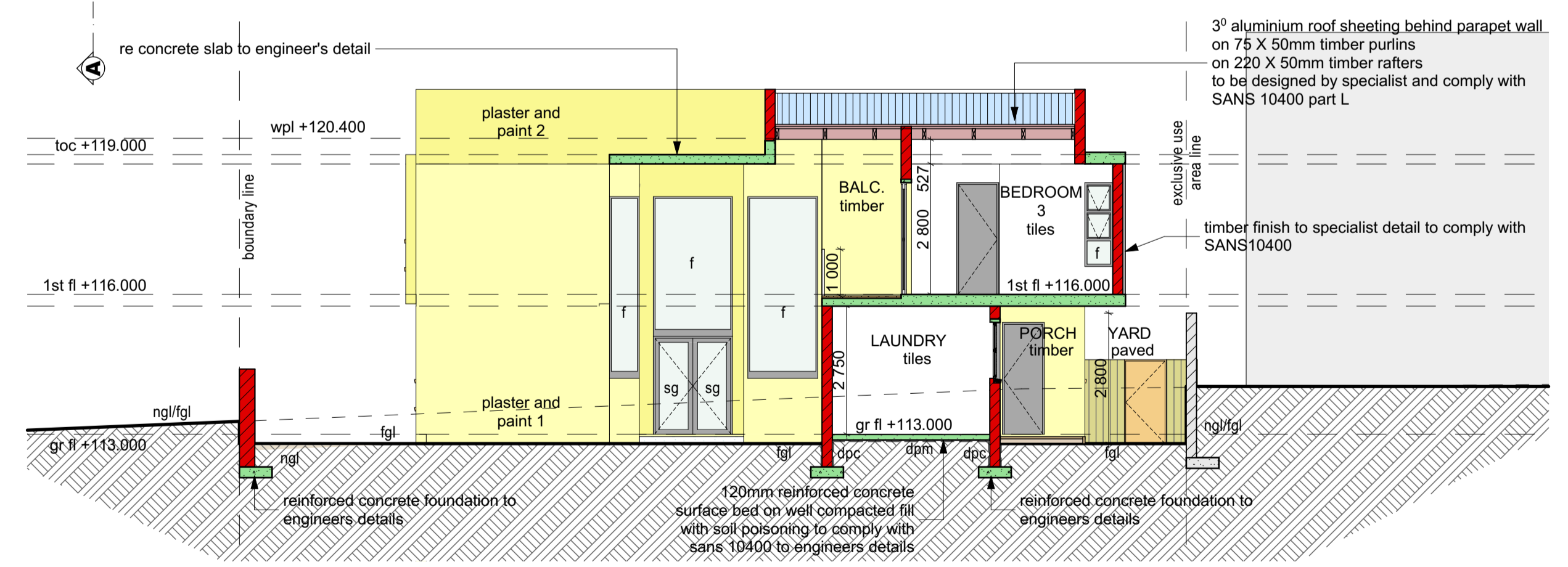
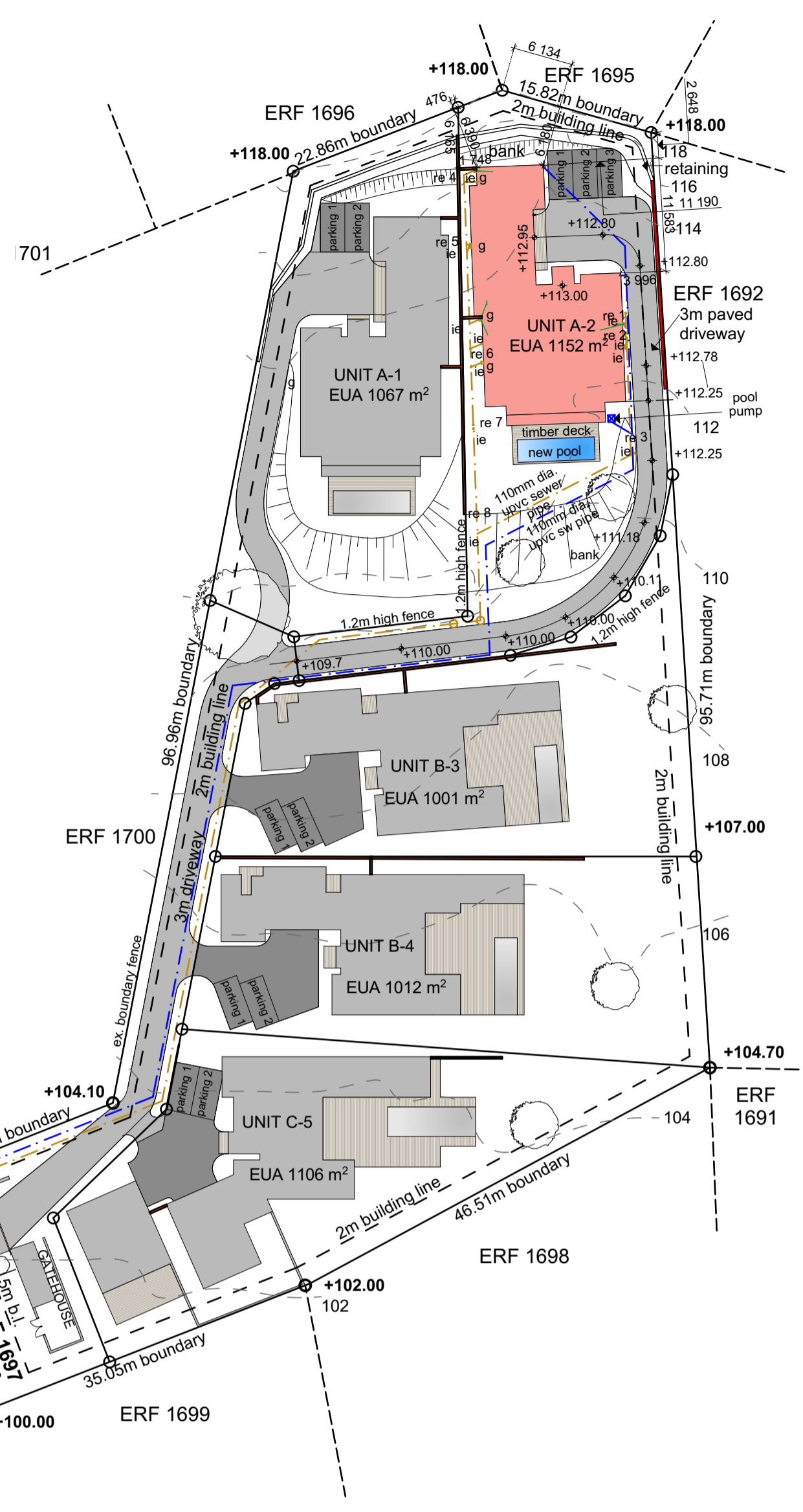


1ST FLOOR PLAN
scale 1: 100

AREAS	m ²	
	BULK	COV. F.A.R.
GROUND FL	149.0	149.0
VERANDAH	35.5	
GARAGE	51.3	
PORCH	2.0	
1ST FL	247.2	247.2
BALCONIES	20.3	
STAFF	20.1	20.1
LAUNDRY	6.1	
POOL DECK	36.9	
TOTAL	568.4	278.0 416.3



SITE PLAN
scale 1: 500



SECTION B-B
scale 1: 100

POOL NOTES:

- all levels & dimensions to be checked on site.
- earth leakage protection to be fitted to electrical supply
- precautions to be taken in regard to condensation, flooding seepage and rainwater in sunken pump chamber & filler unit.
- pool to be fenced in accordance with nbr.d4.1.2.3 - by owner.
- excess soil to be spread on site.
- 100mm gullie to be monolithically & pneumatically placed against undisturbed soil or other firm surface as directed by the engineer.
- 12mm minimum cover to all reinforcing.
- final position of pool & pump to be determined on site on day of set-out.
- waste water to be spread on site.

GENERAL NOTES:

- ALL WORK TO COMPLY WITH SANS 10400
- CORNER BEACONS TO BE LOCATED AND EXPOSED BEFORE WORK ON SITE COMMENCES.
- CONTRACTOR TO CHECK ALL DIMENSIONS AND LEVELS (SCHEDULES AND DETAILS) BEFORE THE RELEVANT WORK IS PLACED IN HAND AND REPORT ANY DISCREPANCIES TO THE DESIGNER/OWNER.
- ALL WRITTEN DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALING.
- ALL REINFORCED CONCRETE, SLABS, FOUNDATIONS, COLUMN DETAILS, BEAMS, STAIRS, STRUCTURAL STEEL WORK AND RETAINING WALLS ARE TO BE BUILT STRICTLY IN ACCORDANCE WITH PROFESSIONAL ENGINEERS DETAIL AND UNDER HIS SUPERVISION.

SITING AND EXCAVATION

- CONTRACTOR TO ENSURE THAT NO CHANGES IN LEVELS ARE MADE UNDER LOCAL AUTHORITY SERVICES OR UNDERGROUND SERVICES UNLESS PERMISSION HAS BEEN GIVEN IN WRITING BY THE LOCAL AUTHORITY.
- ANY DISCREPANCIES AND OMISSIONS ARE TO BE BROUGHT TO THE DESIGNER'S/OWNER'S ATTENTION IMMEDIATELY.
- THE CONTRACTOR IS TO INSPECT THE OFFICIAL APPROVED COPIES OF THE DRAWINGS TO ENSURE THAT ALL AMENDMENTS HAVE BEEN TAKEN INTO ACCOUNT.
- THE ATTENTION OF THE OWNER IS DRAWN TO THE FACT THAT CHANGES TO THE PLAN AND/OR SPECIFICATION AFTER OFFICIAL APPROVAL IS LIKELY TO INVALIDATE THAT APPROVAL.
- GLAZING TO COMPLY WITH PART N OF SANS 10400

DRAINAGE NOTES:

- ALL WASTE PIPES AND DRAINS TO BE ACCESSIBLE ALONG THEIR ENTIRE LENGTH.
- INSPECTION EYES (I.E.'S) TO BE PROVIDED AT ALL BENDS AND JUNCTIONS IN THE DRAIN AND AT A MAXIMUM OF 24M LENGTHS ALONG STRAIGHT RUNS OF DRAIN.
- ALL I.E.'S MUST HAVE MARKED COVERS AT GROUND LEVEL.
- CLEANING EYES (C.E.'S) TO BE PROVIDED AT ALL BENDS AND JUNCTIONS OF WASTE PIPES.
- WASTE TO BE FITTED WITH 64mm RESEAL TRAPS.
- WHERE THE VERTICAL DROP FROM SOIL FITTINGS TO THE MAIN DRAIN EXCEEDS 1.2m THESE FITTINGS ARE TO BE ANTI-SYPHONED

TOWN PLANNING INFO

	m ²	%
SITE AREA	6048	
TOTALS	PERMITTED FAR na	na
	PERMITTED COV 2419.2m²	40%

A1	PROPOSED FAR	416.3
	PROPOSED COV	278.0
A2	PROPOSED FAR	416.3
	PROPOSED COV	278.0
B3	PROPOSED FAR	452.0
	PROPOSED COV	298.2
B4	PROPOSED FAR	452.0
	PROPOSED COV	298.2
C5	PROPOSED FAR	472.3
	PROPOSED COV	402.1
GATEHOUSE	PROPOSED FAR	13
	PROPOSED COV	70.5
TOTALS	PROPOSED FAR 2221.9	0.00
	PROPOSED COV 1625.0	0%
TOTALS	REMAINING FAR 0.0m²	0.00
	REMAINING COV 794.2m²	0%



30 Bridgeway Road, 30 Morningside, Durban, 4001
Cell: 0794612555

ARCHITECT SIGNATURE: *[Signature]* REG NUMBER: T.Kinloch 27096

CLIENT: Mr Watkins

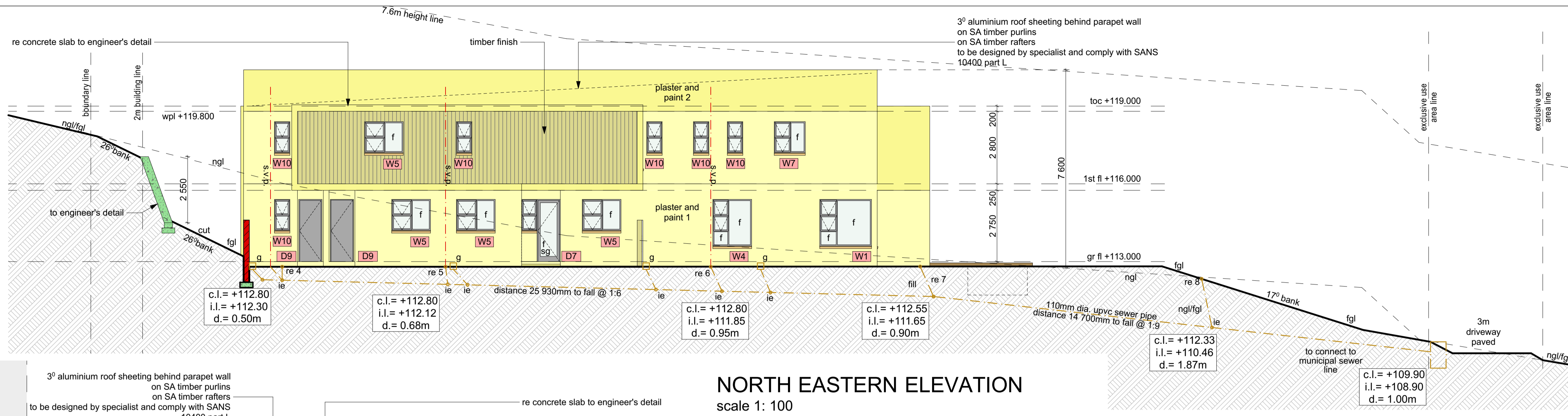
PROJECT DESCRIPTION: NEW DWELLING

CADASTRAL: ERF 1697 Durban North

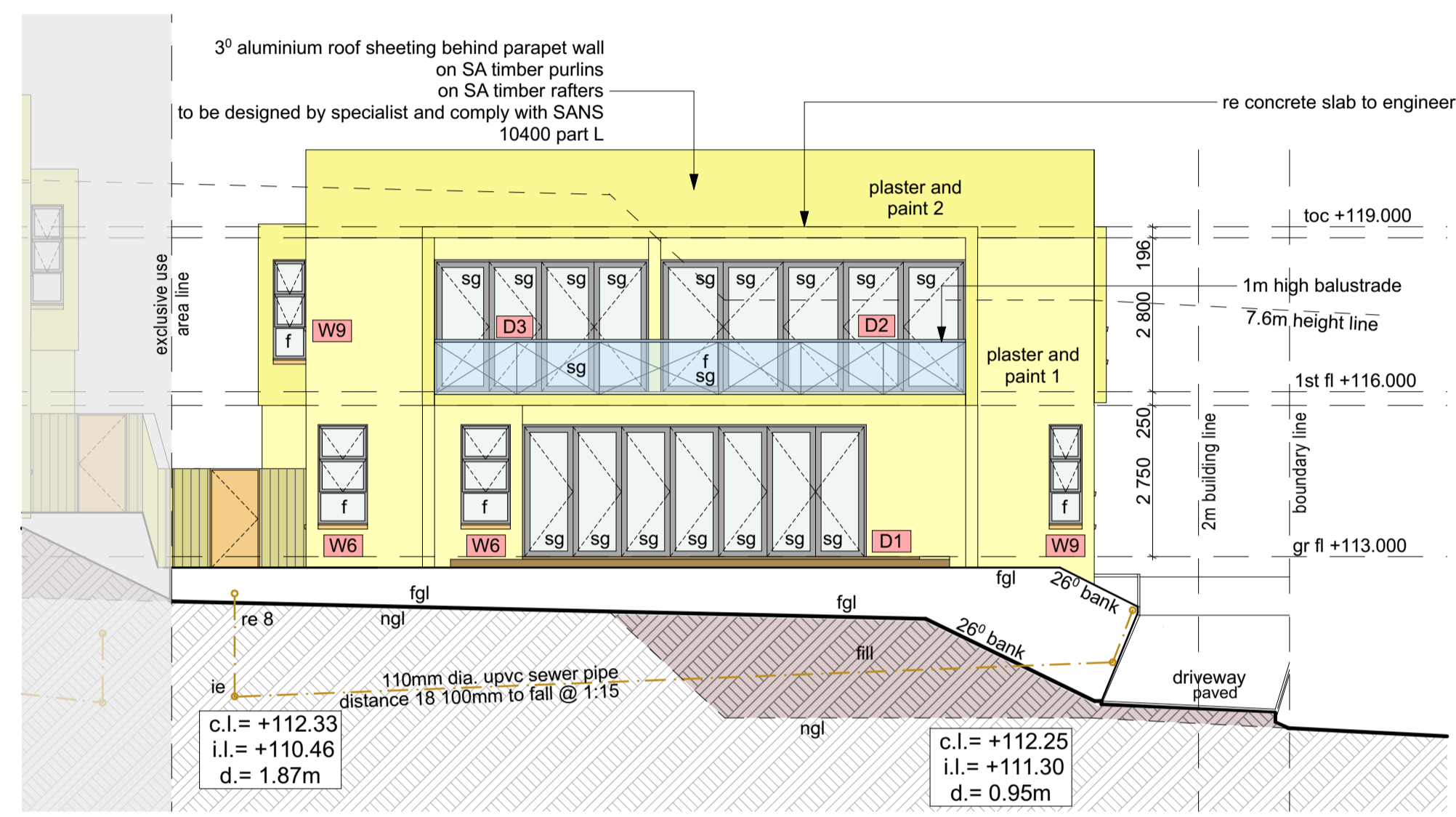
ADDRESS: 4 Grosvenor Place

DRAWING TITLE: PLANS SECTIONS AND ELEVATIONS

DATE/SCALE	JOB NO.	JOB STAGE	DRW NO.	REVISION
03 08 2021	132001/0A/02	SUB.	1	
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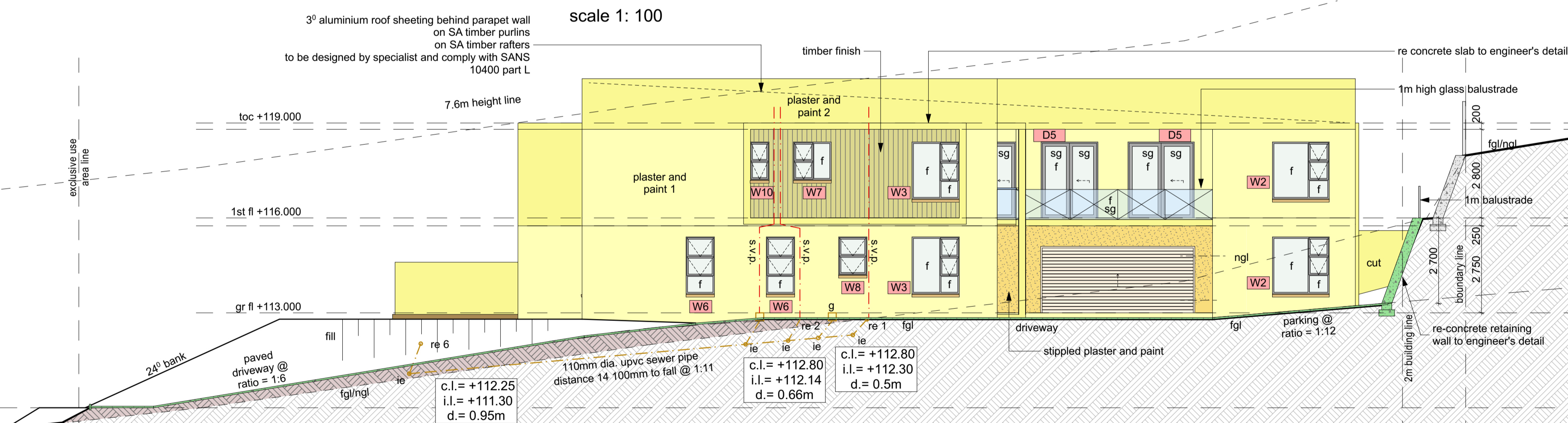
NORTH EASTERN ELEVATION
scale 1: 100



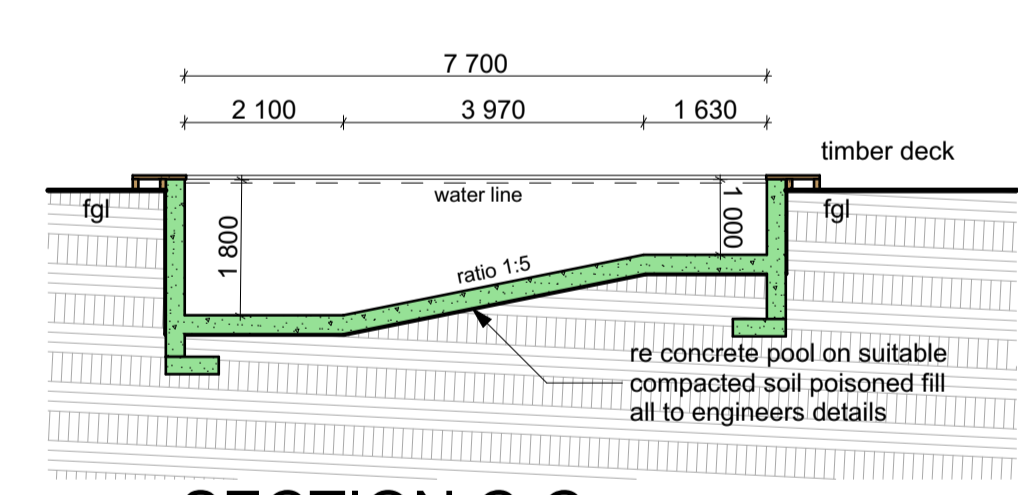
SOUTH EASTERN ELEVATION
scale 1: 100



NORTH WESTERN ELEVATION
scale 1: 100

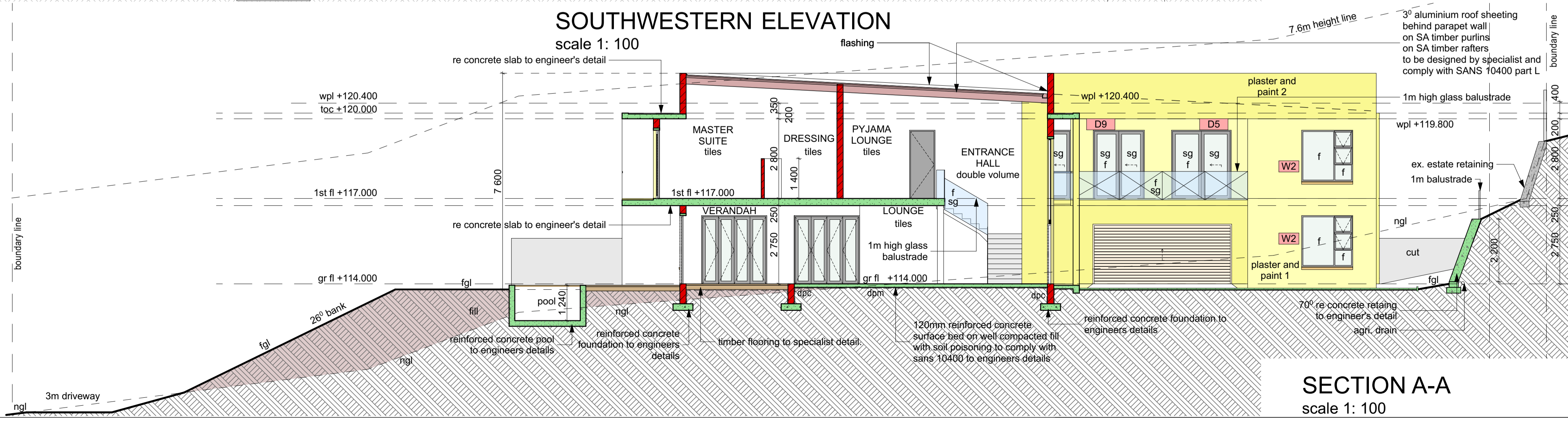


SOUTHWESTERN ELEVATION
scale 1: 100



SECTION C-C
scale 1: 100

- POOL NOTES:**
- all levels & dimensions to be checked on site.
 - earth leakage protection to be fitted to electrical supply
 - precautions to be taken in regard to condensation, flooding seepage and rainwater in sunken pump chamber & filter unit.
 - pool to be fenced in accordance with nbr.d4.1.2.3 - by owner.
 - excess soil to be spread on site.
 - 100mm granite to be monolithically & pneumatically placed against undisturbed soil or other firm surface as directed by the engineer.
 - 12mm minimum cover to all reinforcing.
 - final position of pool & pump to be determined on site on day of set-out.
 - waste water to be spread on site.



SECTION A-A
scale 1: 100



KINLOCH ARCHITECTURAL SERVICES
30 Bridgview Road, 30 Morningside, Durban, 4001
Cell: 0794612555

ARCHITECT SIGNATURE	REG NUMBER
Mr Watkins	T.Kinloch 27096
CLIENT	
Mr Watkins	
PROJECT DESCRIPTION	
NEW DWELLING	
CADASTRAL	
ERF 1697 Durban North	
ADDRESS	
4 Grosvenor Place	
DRAWING TITLE	
SECTIONS AND ELEVATIONS	
DRAWN BY: L.W.ZUNGU	CHECKED BY: T. KINLOCH
DATE/SCALE	JOB NO. JOB STAGE
03 08 2021	132001A/02 SUB.
1:100 A1 PAGE	DRW NO. REVISION
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	A

WINDOW SCHEDULE

WINDOW NUMBER	W1	NUMBER OF	1	WINDOW NUMBER	W2	NUMBER OF	2	WINDOW NUMBER	W3	NUMBER OF	2	WINDOW NUMBER	W4	NUMBER OF	1	WINDOW NUMBER	W5	NUMBER OF	4	WINDOW NUMBER	W6	NUMBER OF	4	WINDOW NUMBER	W7	NUMBER OF	2	WINDOW NUMBER	W8	NUMBER OF	1	WINDOW NUMBER	W9	NUMBER OF	4
FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL							
Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer							
Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E		
Thickness	5mm,			Thickness	6mm,			Thickness	5mm,			Thickness	5mm,			Thickness	4mm,			Thickness	4mm,			Thickness	4mm,			Thickness	4mm,			Thickness	4mm,		
Position	external			Position	external			Position	external			Position	external			Position	external			Position	external			Position	external			Position	external			Position	external		
Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated		

WINDOW NUMBER	W10	NUMBER OF	7	WINDOW NUMBER	D1	NUMBER OF	1	WINDOW NUMBER	D2	NUMBER OF	1	WINDOW NUMBER	D3	NUMBER OF	1	WINDOW NUMBER	W11	NUMBER OF	1	WINDOW NUMBER	W12	NUMBER OF	1
FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL			
Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: header height @ 5.1m				Note: header height @ 5.1m			
Glass type	PG smart glass X1 plus Low-E			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass		
Thickness	4mm,			Thickness	5mm,			Thickness	5mm,			Thickness	4mm			Thickness	5mm,			Thickness	5mm,		
Position	external			Position	external			Position	external			Position	external			Position	external			Position	external		
Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated		

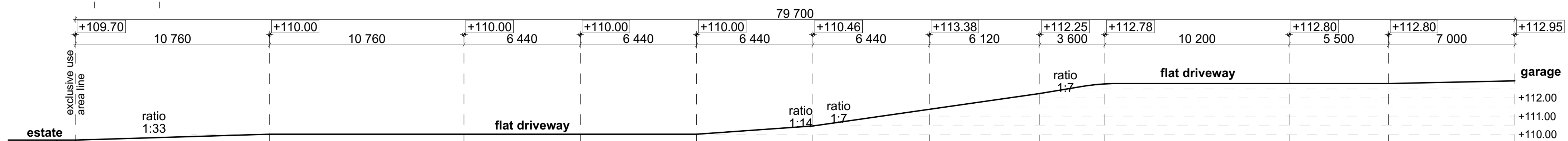
WINDOW NUMBER	D4	NUMBER OF	3	WINDOW NUMBER	D5	NUMBER OF	2	WINDOW NUMBER	D6	NUMBER OF	1	WINDOW NUMBER	D7	NUMBER OF	1	WINDOW NUMBER	D8	NUMBER OF	13	WINDOW NUMBER	D9	NUMBER OF	2	WINDOW NUMBER	GD	NUMBER OF	1	WINDOW NUMBER	MD	NUMBER OF	1
FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL				FLOOR LVL							
Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note: glazing thickness and frame to be confirmed by manufacturer				Note:				Note: Main door to be selected by client and architect											
Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Glass type	PG smart glass X1 plus Low-E, toughened safety glass			Door type	semi-solid hardwood door			Door type	solid hardwood door			Door type	role up garage door			Glass type	PG smart glass X1 plus Low-E, toughened safety glass		
Thickness	4mm			Thickness	4mm			Thickness	4mm			Thickness	4mm			Thickness	40mm,			Thickness	>40mm,			Thickness	as per manufacturer			Thickness	4mm		
Position	external			Position	external			Position	external			Position	external			Position	internal			Position	internal			Position	external			Position	external		
Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	white paint			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated			Frame Finish	aluminium black powder coated		

WINDOW NUMBER	D10	NUMBER OF	1
FLOOR LVL			
Note: glazing thickness and frame to be confirmed by manufacturer			
Glass type	PG smart glass X1 plus Low-E, toughened safety glass		
Thickness	4mm		
Position	external		
Frame Finish	aluminium black powder coated		

N.B. All latches and hinges supplied by manufacturer
 Dimensions to be checked and verified on site prior to manufacture
 Aluminum glass, ceiling, partitioning and expanded polystyrene to comply with A.A.A.M.S.A & its bodies. Safety glass to windows and doors to comply with NN3-SANS10400

WINDOW & DOOR SCHEDULE

scale 1: 50



DRIVEWAY SECTION

scale 1: 150



ARCHITECT SIGNATURE	REG NUMBER	T.Kinloch 27096
CLIENT	Mr Watkins	
PROJECT DESCRIPTION	NEW DWELLING	
CADASTRAL	ERF 1697 Durban North	
ADDRESS	4 Grosvenor Place	
DRAWING TITLE	SCHEDULE AND SECTION	
DRAWN BY: L.W.ZUNGU	CHECKED BY: T.KINLOCH	
DATE/SCALE	JOB NO.	JOB STAGE
03 08 2021	132001A/02	SUB.
1:100 A1 PAGE		
		3
		OF 5
		A

ORIENTATION

Design and Calculation Submission
As per the National Compulsory regulator and in terms of the National Building Regulations we hereby submit Energy Usage/Efficiency Analysis and calculations based on SANS 10400 Part XA:2011 (ENERGY USAGE IN BUILDINGS) AND SANS 204:2011 (Energy Efficiency in Buildings). These drawings indicate the calculated Energy usage and Energy Efficiency measures that were taken to ensure the building complies to the Deemed to Satisfy Requirements and or to achieve compliance to all performance targets under the current regulated standards SANS 10400 Part XA:2011 and SANS 204:2011.

All calculations were done by the manual calculation method with use of the regulated standard tables and diagrams with SANS 204:2011. Glazing Values for U and SHGC were obtained from the known and tested values "Smartglass performance Data Manual".

General Notes and Requirements
The developer/contractor/owner will comply to the following General Notes below and provide the information as stipulated on completion of the project.

The developer/contractor/owner will comply to SANS 10400 Part XA:2011 and applicable instructions to achieve compliance based on the calculations. Failure to comply to these drawings (EEU Series) will result in the Local Authority instructing work (Retrofitting) to be achieved compliance as per the National Building Regulation and their Mandate.

fenestration

The developer/contractor/owner will provide the Architect and the Local Authority Glazing Certificates indicating that the correct glazing was used in accordance to the calculated data, compliance instruction and fitted to the correct Fenestration Device as indicated in the Fenestration table.

insulation

Only TIASA and SABS approved insulation may be used.

Perimeter Floor Insulation (SANS 204:2011 - 4.3.2.1)
The developer/contractor/owner will provide the Architect and the Local Authority Insulation Certificate for perimeter floor insulation.

Floor Insulation - Under Surface Bed (SANS 204:2011 - 4.3.2.1)
It's Best practice to insulate under your surface bed, but the regulation only requires if The Developer/contractor/owner will using either in screed, under laminate or under carpet heating, conventional mat piped.
The Developer/contractor/owner will provide the Architect and the Local Authority Insulation Certificate for under surface bed insulation (if installed).

Underfloor/Surface Bed Insulation does not need to be installed if the declaration is signed that he/she will never install an underfloor heating system, but Perimeter Insulation will be required to comply to (SANS 204:2011 - 4.3.2.1)

Thermal Radiant Roof Insulation (SANS 204:2011 - 4.3.2.1)
The developer/contractor/owner will provide the Architect and the Local Authority Insulation Certificate for roof insulation.

Within the remainder of this submission
Please Refer to each separate section within this submission for the applicable calculation data, details and any additional information pertaining to those sections.

DECLARATION OF OWNER/DEVELOPER (UNDER FLOOR HEATING)

I/We _____ CANNOT GUARANTEE THERE WILL NOT BE A FUTURE UNDERFLOOR HEATING SYSTEM, so understand to comply to the functional regulation (SANS 204:2011 - 4.3.2.1) I/we will install underfloor/undersurface insulation only. And will install to the construction details within this submission to allow for the possible future installation of an underfloor heating system.

I/We _____ WILL NOT INSTALL UNDERFLOOR HEATING, so understand to comply to the functional regulation (SANS 204:2011 - 4.3.2.1) I/we will still be required to install perimeter insulation only. And will install to the construction details within this submission.

I/We _____ WILL INSTALL UNDERFLOOR HEATING, so understand to comply to the functional regulation (SANS 204:2011 - 4.3.2.2) I/we will install underfloor/undersurface bed insulation only. And will install to the construction details within this submission.

SIGN: _____ DATE: _____ OWNER

SIGN: _____ DATE: _____ DEVELOPER

DECLARATION OF OWNER/DEVELOPER

I/We _____ have read and understood the above General Notes & Requirements and will ensure that all components and products specified will be fitted to achieve compliance in terms of SANS 10400XA - 2011 and SANS 204:2011 and will abide by the calculated data within this submission and install components in accordance to the calculated data to achieve compliance.

SIGN: _____ DATE: _____ OWNER

SIGN: _____ DATE: _____ DEVELOPER

Design and Calculation Criteria

The following information is provided for accurate calculation for this project.

In terms of SANS 10400-A:2010(Edition 3) Table 1 (Occupancy or Building Classification)

H4 (Dwelling House

In terms of SANS 10400-A:2010(Edition 3) Table 2 (Design Population)

H4 (Dwelling House) - 6 Persons per House

In terms of SANS 204:2011 (Edition 1) Table 5 (Constants for Conductance: U Value and Solar Heat Gain Coefficient: SHGC

Conductance Cu (zone 5)
SHGC (zone 5)

In terms of SANS 10400XA (edition 1) Table 7 (min total R-Value of roof assembly)

Min required total R-Value (m2.k/w) - zone 1,3,7
Direction of heat flow - zone 5 up

In terms of SANS 204:2011 (edition 1) table 12 (maximum energy demand and energy consumption for lighting for the class of occupancy or building)

Maximum energy demand: 5KWh/m2
Maximum energy consumption: 5 KWh/m2

In terms of SANS 204:2011 (edition 1) table 7 (energy index)
Energy index. (zone 5)

General Note:

Contractor to check all dimension on site and on drawings. Any and all discrepancies must be reported to the architect.

Only figured dimensions are to be taken. Do not scale off drawings.

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All work to comply with the NATIONAL BUILDING REGULATIONS ACT 103 OF 1977 thereto as well as the by-laws of the relevant municipality.

These drawings are to read in conjunction with the structural engineer's, civil engineer's, mechanical engineer's or plumbing consultants drawings where specified.

Drainage
SABS materials used throughout. 75mm deep seal traps used with all waste fittings. All lbs to be marked at the surface and sealed. Wc's to have s or p traps with side access cleaning eyes. All Whbs to have 32 diam, waste pipes and 40 diam, waste pipes to all other fittings. Floor drains to have 100diam, soil pipes.

PLEASE NOTE:
THE EMPLOYER INDEMNIFIES THE ARCHITECT FOR ANY CLAIMS OR DAMAGES ARISING OUT OF OMISSIONS OR ALTERATIONS TO THE STANDARD PRACTICE, INSTRUCTED BY THE EMPLOYER.

FIRE NOTE:
THIS DRAWING HAS BEEN DESIGNED IN ACCORDANCE WITH THE SABS 0-400. THE FIREFIGHTING EQUIPMENT AND SERVICES INDICATED ON THIS DRAWING IS A GUIDELINE. ADDITIONS OR AMENDMENTS MAY BE REQUIRED DUE TO THE RECOMMENDATIONS OF A QUALIFIED RATIONAL FIRE SPECIALIST OR THE FIRE DEPARTMENT AT TIME OF SUBMISSION.

GENERAL NOTES:
All habitable rooms to have a minimum of 10% natural light and 5% natural ventilation to comply with the NATIONAL BUILDING REGULATIONS, otherwise specified, refer to mechanical engineers specifications only where applicable. All openings to have prestressed lintols over. Brickforce to every course for 5 courses above lintol. Brickforce to every fifth course of brickwork. Use figured dimensions only, do not scale off drawing.

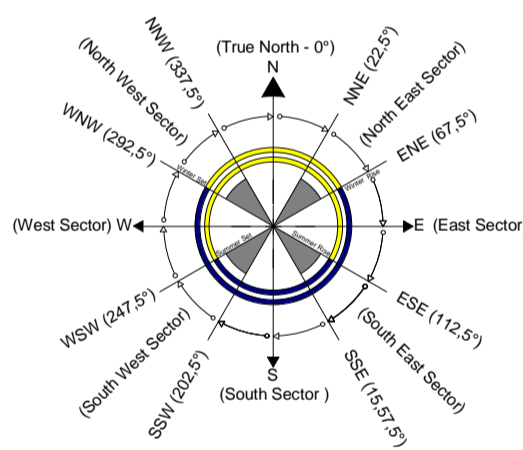
THE RECOMENDATIONS MADE BY THE QUALIFIED RATIONAL FIRE SPECIALIST AND/OR FIRE DEPARTMENT, TAKE PRECEDENT OVER THE FIRE SERVICES INDICATED ON THESE DRAWINGS. THESE DRAWINGS ARE TO BE THEN READ IN CONJUNCTION WITH THE APPROVED FIRE SPECIALISTS DRAWINGS AND APPROVED RATIONAL DESIGN DOCUMENTS.

All work to comply with the NATIONAL BUILDING REGULATIONS ACT 103 OF 1977 thereto as well as the by-laws of the relevant municipality.

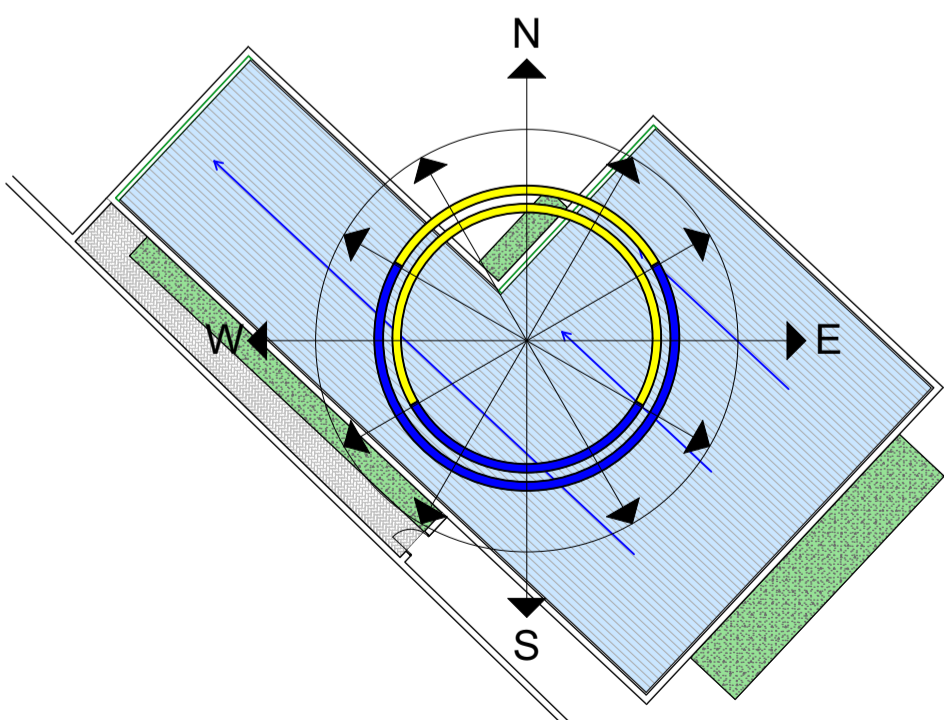
These drawings are to read in conjunction with the structural engineer's, civil engineer's, mechanical engineer's or plumbing consultants drawings where specified.

Drainage
SABS materials used throughout. 75mm deep seal traps used with all waste fittings. All lbs to be marked at the surface and sealed. Wc's to have s or p traps with side access cleaning eyes. All Whbs to have 32 diam, waste pipes and 40 diam, waste pipes to all other fittings. Floor drains to have 100diam, soil pipes.

GENERAL NOTES:
All habitable rooms to have a minimum of 10% natural light and 5% natural ventilation to comply with the NATIONAL BUILDING REGULATIONS, otherwise specified, refer to mechanical engineers specifications only where applicable. All openings to have prestressed lintols over. Brickforce to every course for 5 courses above lintol. Brickforce to every fifth course of brickwork. Use figured dimensions only, do not scale off drawing.



ORIENTATION DIAGRAM (SANS 10400XA:2011 & SANS204:2011)



Building Orientation Relative to Orientation Diagram PROPOSED DWELLING HOUSE

WALL CONSTRUCTION DATATABLE(SUMMARY)

ZONE	Min R-Value Required	WALL TYPES	TOTAL MASONRY THICKNESS	MASONRY WALL R-VALUE	EXTERNAL FINISH TYPES	EXTERNAL FINISH THICKNESS	EXTERNAL FINISH R-VALUE	INTERNAL FINISH TYPES	INTERNAL FINISH THICKNESS	INTERNAL FINISH R-VALUE	TOTAL R-VALUE OF ENTIRE WALL CONSTRUCTION	ACHIEVE COMPLIANCE
5	.35m2KW	masonry- clay stock with plaster finish external and internal	200mm	.44m2KW	cement and sand plaster finish	15-20mm	0.18m2KW	cement and sand plaster finish	15-20mm	0.18m2KW	0.80m2KW	yes (achieves better than)
5	-	-	-	-	-	-	-	-	-	-	-	-

3. Compliance SANS 204:2011 (Edition 1) - 4.3.2 (floors)

The following must be performed to achieve Compliance with the deemed to Satisfy Requirements under SANS 204:2011 (edition 1) - 4.3.2 Floors.

Please Refer to the below calculation or data indicating the product used and the product R-Values, which in addition is highlighted on the Installation Details. Please note, we regard the installation of the underfloor/under surface bed insulation as best practice and will result in a (comfort factor) and will prepare the building for underfloor heating if required, now or in the near future.
But if the Owner/developer as per signed declaration does not install underfloor heating, then the owner developer is still required to install perimeter insulation as per installation detail 1 to comply to the functional regulation in terms of 4.3.2.1.

In addition the contractor/developer/owner will have perimeter insulation to all non Livable Areas, Garages, Stores etc (installation Details 1 Applies), this is to prevent any heat /cold transfer loss between livable zones within the building and achieve compliance in terms 4.3.2.1.

The following min Values and requirements must be met to achieve compliance.

The building has a floor area of less than 500m2

To satisfy the functional regulation
The developer/contractor/owner will install insulation around the vertical edge of the surface bed perimeter and will comply to 4.3.2.1 a-c (refer to detail 1)

Must have an R-Value of not less than 1.0 for all climatic zones except zone 5 in screed, under laminate or under floor heating is used.

To Satisfy the functional regulation
The developer/contractor/owner will install undersurface be insulation and will comply 4.3.2.2. (refer to detail 2)

Must have an R-Value of not less than 1,5 for climatic Zones 1 and 2. This project is located in zone 5.

Product specifications and/or Calculation Data

Product installation details (obtained from "isoboard" product information and brochures and websites.)
Product R-Value Data (obtained from "isoboard" product information and brochures and websites.)

Certificates for the above insulation will be presented when installation or project has been completed and issued to the Building Inspector and the Owner/Developer.

FLOOR INSULATION DATATABLE(SUMMARY)

ZONE	Insulation Use	Min R-Value Required	Product Description	Thickness	R-Value	ACHIEVE COMPLIANCE
5	-	-	-	-	-	-
5	-	-	-	-	-	-

4. Compliance SANS 204:2011 (Edition 1) - 4.3.6 (Roof Assemblies and Insulation)

The following must be performed to achieve compliance with the deemed to satisfy Requirements under SANS 204:2011 (edition 1)

4.3.6 Roof Assemblies

Required: as per SANS 204:2011 (edition 1) table 8- zone 5 Durban with up direction of heat flow.

Min R- Value 3.7

Normative Construction Values:

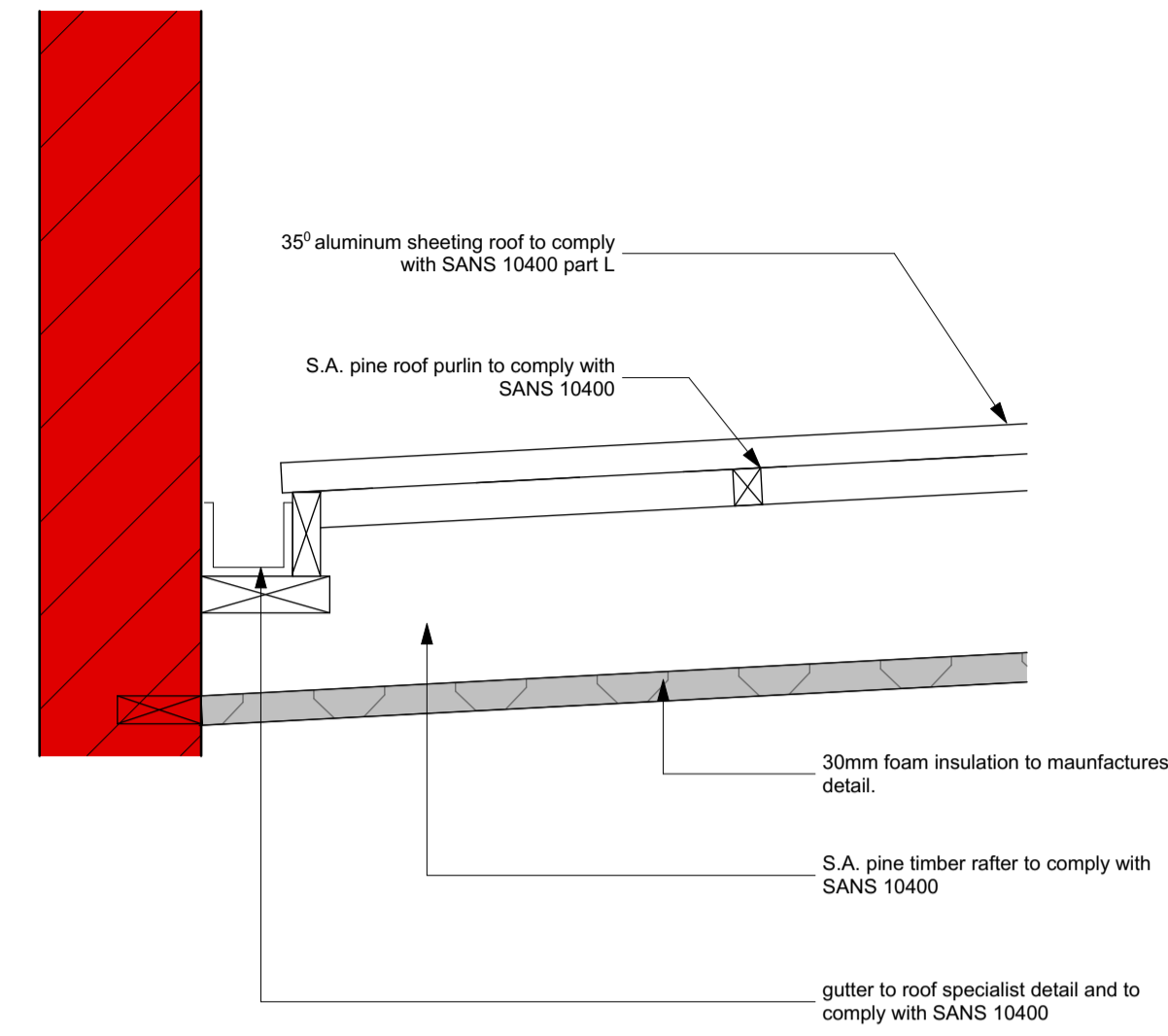
On this building we have 2 roofing and ceiling scenarios present. Please refer to each scenario drawing and calculation and location of those roofing scenarios on the location plan.

The Roof construction of the building is as follows.

Un ventilated Roof space

Roof Assembly 1

INSULATION



Product specifications and/or Calculation Data

Product installation details (obtained from "isoboard" product information and brochures and websites.)
Product R-Value Data (obtained from "isoboard" product information and brochures and websites.)

Certificates for the above insulation will be presented when installation or project has been completed and issued to the Building Inspector and the Owner/Developer.

ROOF INSULATION DATATABLE(SUMMARY)

	Roof Description	Min R-Value Required	Radiant Insulation Barrier	Thermal Insulation Barrier	R-Value	ACHIEVE COMPLIANCE
1	3.0 deg rafter, aluminum sheeting	2.7m2 KW	Aluchusion d.sided Bubble Foil FR White	50mm foam board	2.8m2 KW	yes (achieves better than)
2	-	-	-	-	-	-

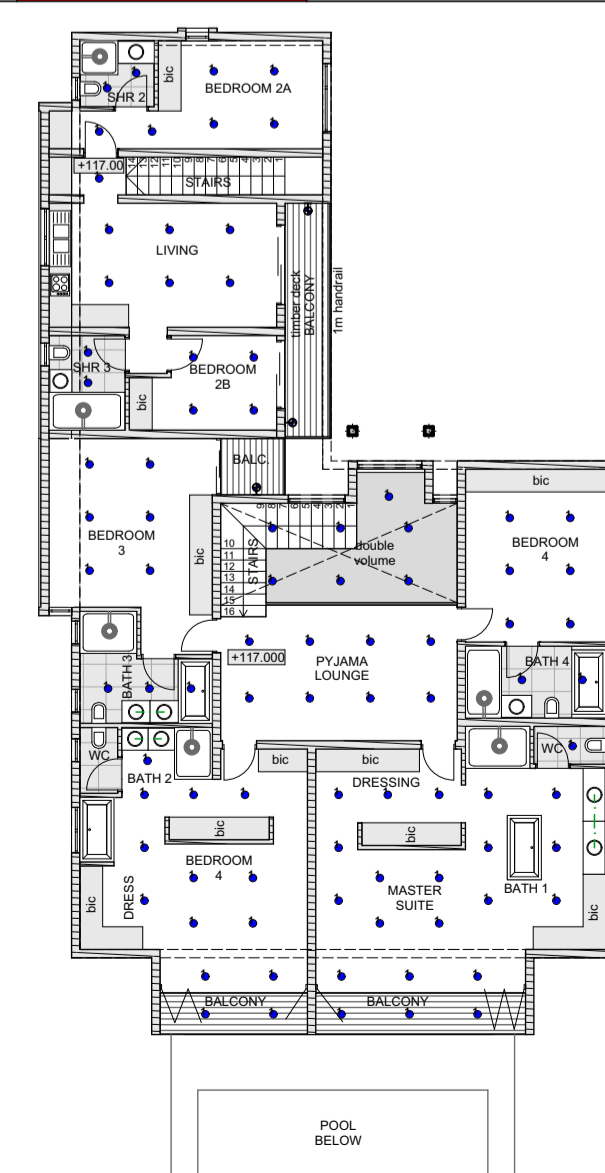
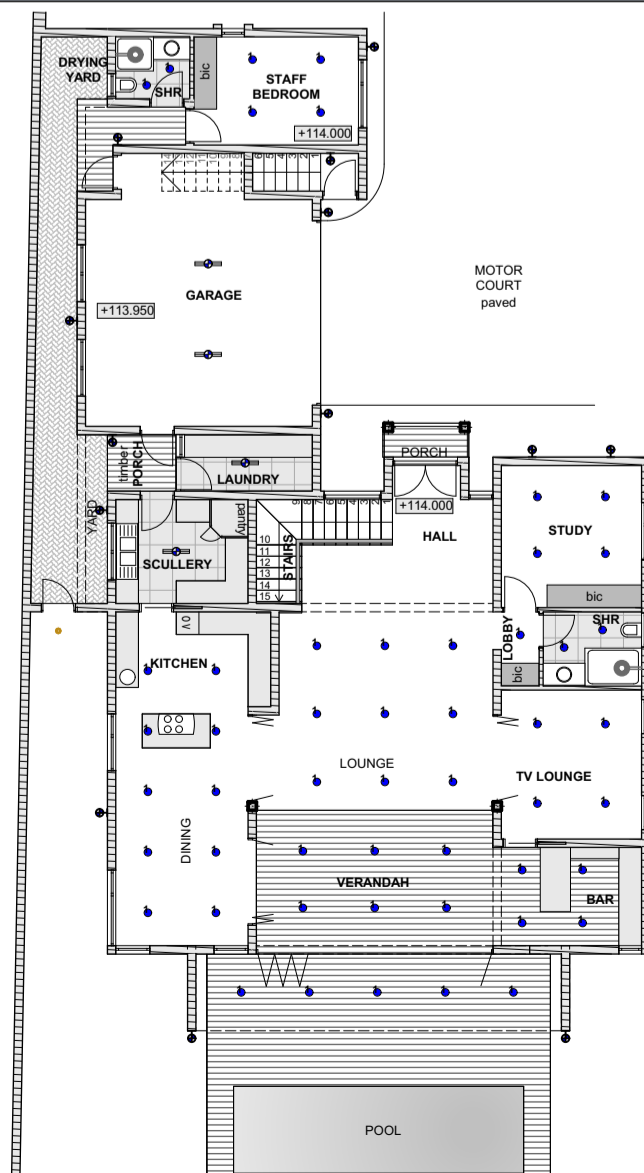
LIGHTING

Level	Net Area	Building Class	Building Occupancy	Population	Energy Demand (W/m2)	Energy Consumption (kw/ha m2)	Max Energy Demand (W/m2)	Max Energy Consumption (kw H A)
FLOOR AREA	473.7	H4	PROPOSED HOUSE	6 PERSONS	5	5	2368.5	2368.5
TOTAL	0				5	5	0	0
							2368.5	2368.5

Fitting no.	Brief Lighting Description	Power Rating	Quantity	Total Power Usage
1	LED	4.5	138	621
2	COMPACT FLOURESCENT	20	17	340
3	T 8 LINEAR FLOUR	72	4	288
4	COMPACT FLOUR (GB)	7	0	0
5				0
6				0
7				0
8				0
9				0
TOTAL				1249

Energy Demand Per SGM (TOTAL FITTING WATTAGE/TOTAL SGM)	TOTAL SGM	CALCULATION W/m2	(RESULT IS LESS THAN ALLOWABLE)	5 W/m2
Total fitting (WATTS)	473.7	2.63669888	(RESULT IS LESS THAN ALLOWABLE)	5 W/m2

DAYS PER WEEK	WEEKS PER ANNUM	ASSUMED LIGHT USAGE IN HOURS (17:00-22:00)	HOURS PER ANNUM	TOTAL WATTAGE FOR SELECTED LIGHTS (KW)	TOTAL ENERGY CONSUMPTION PER ANNUM (KW/H A m2) MAX ALLOWED ENERGY CONSUMPTION	WATTS TO BE REMOVED
7	52	5	1820	1.013	1843.66	
CALCULATION 2 (GARAGE AND STORE FITTINGS) - THESE LIGHTS ARE ONLY USED OCCASIONALLY						
DAYS PER WEEK	WEEKS PER ANNUM	ASSUMED LIGHT USAGE IN HOURS (17:00-22:00)	HOURS PER ANNUM	TOTAL WATTAGE FOR SELECTED LIGHTS (KW)	TOTAL ENERGY CONSUMPTION PER ANNUM (KW/H A m2) MAX ALLOWED ENERGY CONSUMPTION	
7	52	1	364	0.2265	82.446	
TOTAL				1.2395	1926.106	>(RESULT IS LESS THAN ALLOWABLE) 2368.5 -442.394[NIL]



LIGHTING PLAN

1: 200



30 Bridgeway Road, 30 Morningside, Durban, 4001
Cell. 0794612555

ARCHITECT SIGNATURE _____ REG NUMBER T.Kinloch 27096

CLIENT Mr Watkins
PROJECT DESCRIPTION NEW DWELLING
CADASTRAL ERF 1697 Durban North
ADDRESS 4 Grosvenor Place
DRAWING TITLE ORIENTATION, INSULATION & LIGHTNING

DATE/SCALE	JOB NO.	JOB STAGE	DRW NO.	REVISION
03 08 2021	132001A/02	SUB.	4	A
1:100 A1 PAGE			OF 5	

LAMP TYPE SCHEDULE

Table with columns: No., Type, Lamp Type Description, Wattage per lamp, and a column for quantity. Lists various LED and fluorescent lamp types and their specifications.

8. Compliance SANS 204:2011 (Edition 1) 4.5 Services 4.5.1 Lighting and Power

Please refer to the calculation data within this submission using (Manual Calculation method. Using formulas and tables within this regulation)

Minimum Lighting Levels shall be determined in accordance with the requirements of SANS 10114-1 and SANS 10400-0. Compliance with the relevant national legislation is required for safety.

Under 4.5.1.3 The Energy demand (power) and energy consumption for the building has been determined in accordance with the requirements using table 12 for this particular building occupancy.

The Electrical Layout is a Proposed Layout Only. Lights May be located in New Positions. But total wattage per year may not be exceeded.

Light Fittings may be replaced but fittings replaced must be of an equal wattage or less.

PLEASE NOTE THE FOLLOWING: THE ELECTRICAL LIGHTING LAYOUT THAT IS ON THIS SHEET FOR DESIGN AND CALCULATION PURPOSES ONLY INDICATING THE MAX AMOUNT OF LIGHT FITTINGS THAT MAY BE USED PER ROOM. THE DESIGN MAY BE CHANGED, THE QUANTITY OF FITTINGS MAY BE REDUCED BUT NOT INCREASED AND THE TYPE OF LAMP MAY BE CHANGED AS LONG AS ITS EQUAL OR LESS THAN THE WATTAGE INDICATED.

THE DEVELOPER DOES NOT HAVE TO SUPPLY THE AMOUNT OF FITTINGS AS INDICATED (FOR CALCULATION PURPOSES ONLY). FINAL LAYOUT AND QUANTITIES ARE TO BE FINALISED BY OWNER AND DEVELOPER ONLY AFTER CONSULTATION.

ELECTRICAL LIGHTING LEGEND table with icons for ceiling mounted lighting, recessed lighting, wall mounted lighting, ceiling fan, and fluorescent lighting.

HOT AND COLD WATER RETICULATION

9. Compliance SANS 204:2011 (Edition 1) 4.5 Services - 4.5.2 Hot Water Services

Please refer to Calculation data within this submission using, (please refer to Drawing and Tables on this drawing which are obtained from Table 2 and 5 from SANS 10252:1 (Edition 3)

Developer/Contractor/Subcontractor (Plumber/owner) will comply to SANS 10252. All applicable Parts with regards to supply and installation of a water supply system (Hot and Cold).

Developer/Contractor/Subcontractor (plumber/owner) will comply to SANS 204 Part 4.5.2 Hot Water Services 4.5.2.1 a m of 50% by volume of the average hot water heating requirement shall be provided by means other than electrical resistance heating, including but not limited to solar, heating, heat pumps, heat recovery from other systems or processes (extracted from SANS 204:2011 (edition 1)

4.5.2.2 The solar water system shall comply with the following regulations in addition. 1. Thermal performance SANS 1307 and SANS 10106 2. Installation SANS 10254.

Entire Exposed piping (hot) that means from the hot water storage or producing device (tanks or gysers) will be lagged with a thermal insulation material with 1m of the Cold Supply to the hot water storage or producing (tanks or gysers) as per SANS 204:2011 - Part 4.5.2.3.

Insulation Material will comply to TIASA AND SABS regulations.

The insulation material will be protected from the effects of weather and sunlight, and be able to withstand the temperature of the piping and will have a min R-Value of 1.5 as per Table 13 determined with a hot water surface temperature of 60°C and an ambient temperature of 15°C.

Hot water storage or producing device (tanks or gysers) will be insulated by an insulation material with a min R-Value of 2 as per SANS 204:2011 - Part 4.5.2.6.

THEORETICAL HOT WATER CALCULATION

HOT WATER DEMAND CALCULATION

6 person home

Water demand based on medium to high rental (domestic residence - moderate to high income) 'GUIDELINES FOR HUMAN SETTLEMENT PLANNING AND DESIGN' 25-145 litres per person per day.

Assumed highest usage 145 litres

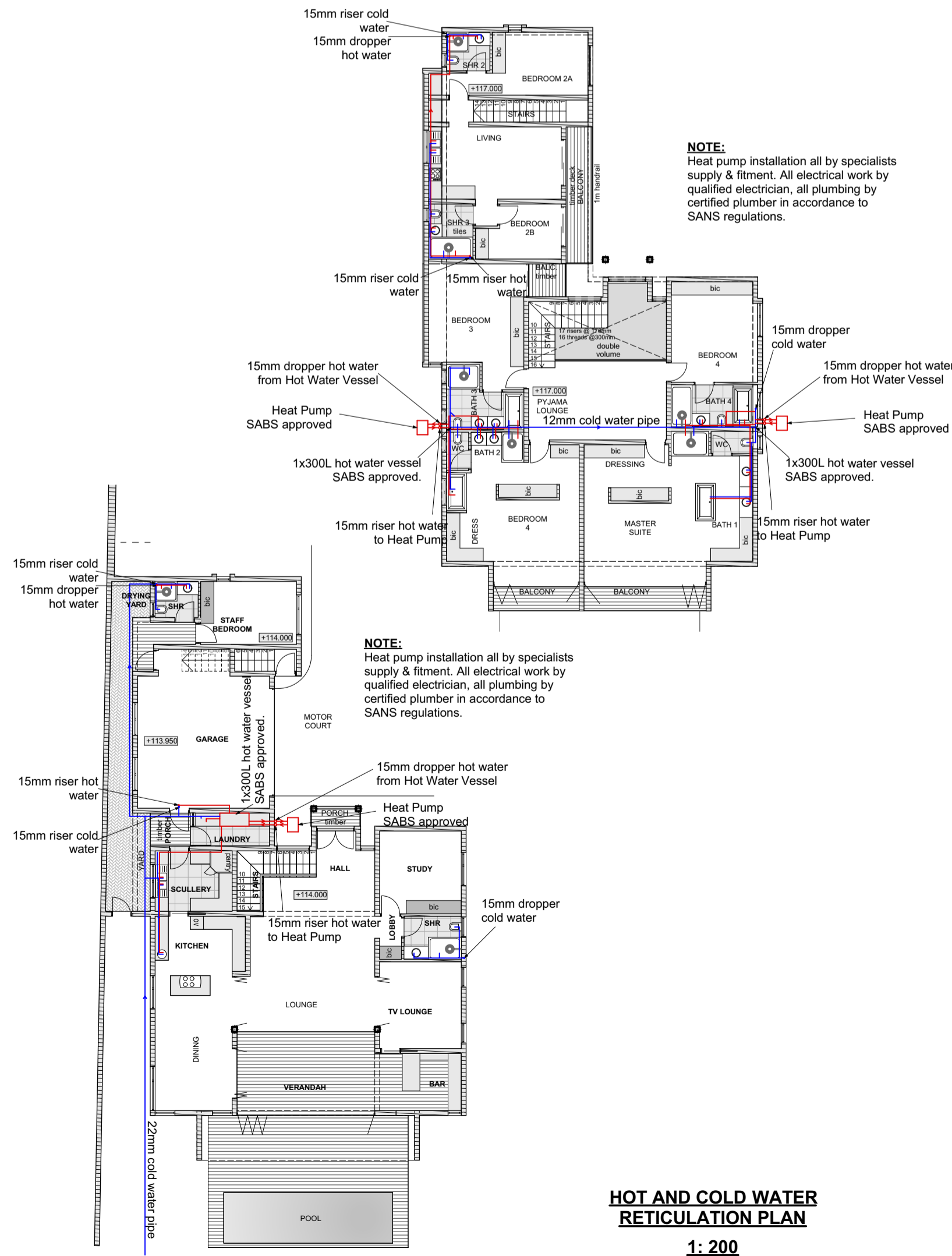
6 persons x 145 litres (6x145) = 870 litres per day

870 Litres per day x 365 days per year (870 x 365) = 317 550 Per Annum.

Total Hot water Storage at 60deg = 300L per day

THIS HOT AND COLD WATER LAYOUT DRAWING IS A GUIDE ONLY. ONLY A TRAINED PLUMBER (VIEW DESCRIPTION UNDER SANS 10400-A:2010) MAY INSTALL THE HOT AND COLD WATER SYSTEM AND ALL HOT WATER VESSELS, (CONVENTIONAL AND SOLAR). ONLY A TRAINED AND QUALIFIED ELECTRICAL CONTRACTOR MAY INSTALL THE ELECTRICAL SYSTEM REQUIRED FOR HOT WATER VESSELS. A TRAINED PLUMBER MAY ALTER THE SYSTEM AS REQUIRED, BUT MUST ADHERE TO ALL SANS REGULATIONS AT ALL TIMES FOR PIPE ROUTING, SIZES, SUPPLY, AND INSULATION. ALL HOT WATER MANUFACTURING DEVICES MUST BE SABS TESTED AND APPROVED AND MUST BE INSTALLED IN ACCORDANCE. DOMESTIC SOLAR HEATING WITH HOT WATER STORAGE VESSELS, WITH A HOT WATER MAINTENANCE HEATING ELEMENT WILL BE USED. DOMESTIC HEAT PUMP WITH HOT WATER STORAGE VESSEL, WITH A HOT WATER MAINTENANCE HEATING ELEMENT WILL BE USED. DOMESTIC IHNAI ON DEMAND IN LINE GAS WATER HEATER WILL BE USED, NO HOT WATER VESSEL REQUIRED, (AS ON DEMAND REQUIRED).

DEFINITION OF A TRAINED PLUMBER UNDER SANS 10400-A:2010 Any person who in the trade of plumbing has, interns of the Manpower Training Act, 1981 (act no. 56 of 1981), passed a qualifying trade test, has been issued with a certificate of proficiency or has obtained a National Certificate in Construction Plumbing, National Qualification Framework Level 3.



HOT AND COLD WATER RETICULATION PLAN 1:200

Energy Efficiency Calculations

CLIENT: CADASTRAL DESCRIPTION: SITE ADDRESS: PROPOSAL: Warkins erf 1697 Durban North 4 Grosvenor Place proposed new dwelling

Net Floor Area - Ground Floor table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

North East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

North West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

Totals table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

Facade Area - Energy Index table with columns: Facade Area, Energy Index, Max Aggregate AC Energy Value, Energy Constant D1-Ca, Heating Shading D2, Energy Constant D1-Cb, Cooling Shading D3, Energy Constant D1-Cc, Conductance Table 6.

North West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

Totals table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

Net Floor Area - 1st Floor table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

North East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

North West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

Totals table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

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South West Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

South East Elevation table with columns: W, H, Area, Conductance Table 6, Aggregate C Value, SHGC Table 6, P, H, Total, Exposure Factor Table C, Aggregate SHGC.

Totals table with columns: Area, Zone, Max Conductance, Total Conductance Value, Area, Zone, Solar Heat Gain, Total SHGC.

FENESTRATION



30 Bridgeway Road, 30 Morningsview, Morningside, Durban, 4001 Cell: 0794612555

ARCHITECT SIGNATURE: T. Kinloch REG NUMBER: T.Kinloch 27096

Client Mr Watkins

PROJECT DESCRIPTION NEW DWELLING

CADASTRAL ERF 1697 Durban North

ADDRESS 4 Grosvenor Place

DRAWING TITLE LIGHTING, WATER RETICULATION, FENESTRATION & AREA DIAGRAM

DRAWN BY: L.W.ZUNGU CHECKED BY: T. KINLOCH

DATE/SCALE: 03 08 2021 JOB NO. 1320/01/02 JOB STAGE SUB. DRW NO. 5 REVISION

1:100 AT PAGE 1320/01/02 SUB. OF 5

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