EE Supplemental Guide

Mediclinic
Victoria Hospital Phase 2
35 High Street, Tongaat, 4400
ERF 13872 of Tongaat

Competent Person: Ashwin Balkissoon
Prof. Registration No: 7731

Climatic Zone & Data

Site Location: Durban
Latitude: -29,86 South — Longitude: 31,03 East
Climatic zone: 5 — Sub-Tropical Coastal

Average Conditions:	Wind Speed		Temperature	
Summer : Dec – Feb	4,57	m/s	23,83	°C
Autumn : Mar – May	3,67	m/s	21,4	°C
Winter : Jun – Aug	3,5	m/s	16,83	°C
Spring : Sep – Nov	4,77	m/s	20,03	°C

Average Solar Irradiance:	15651	kJ/m²/d	4,35	kWh/m²/d
Winter Solar Irradiance:	10696	kJ/m²/d	2,96	kWh/m²/d

Building Design - Occupancy Classification

Occupancy Classification: E2

Hospital
Occupancy where people are cared for or treated because of physical or mental disabilities and where they are generally bed-ridden.

Building Design – Occupancy Times

Design occupancy times: 24 Hrs / Day — 7 Days / Week
168 Hrs / Week — 8736 Hrs / Year

Building Design – Population

Design Population – Reg. A20
1 person per 10 sqm
Design Population: 442 — No Requirement !

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Building Design – Floor Area

Proposal – Total Floor Area: 4423,03 m²

Proposal – Nett Floor Area:	
Basement Storey:	80,91
Ground Storey:	151,90
First Storey:	418,43
Second Storey:	1472,60
Third Storey:	1443,84
Total Nett Floor Area:	3567,68 m²

Building Design – Maximum Energy Demand & Consumption

Max. Energy Demand: Non-specified VA/m² — No further requirements
Permissible Demand: Non-specified kVA — No requirement
Max. Energy Consumption: Non-specified kWh/m² — No further requirements
Permissible Consumption: Non-specified kWh — No requirement

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Building Envelope – Primary Facade Orientation

Building Orientation: North East

Building Envelope – Floors

SANS 10400-XA Compliance:
Underfloor Heating Installed: No
No additional requirements.

SANS 204 Compliance:
Slab-on-Ground:
Concrete Slab-on-Ground: Yes
Vertical perimeter insulation not required.
Floor Heating System: No
No additional requirements.
Suspended Slab:
Suspended Floor: Yes
No additional requirements.
Floor Heating System: No
No additional requirements.

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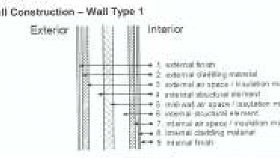
Building Envelope – Walls

SANS 10400-XA Compliance:
External Wall Construction – Wall Type 1
Wall construction: Masonry
Masonry walls shall be designed to achieve a minimum total R-value of 0.35
Double-skin, no cavity, plastered internally or rendered externally
Masonry wall complies with the necessary R-value requirements

External Wall Construction – Wall Type 2
Wall construction: Masonry
Masonry walls shall be designed to achieve a minimum total R-value of 0.35
Double-skin, no cavity, plastered internally or rendered externally
Masonry wall complies with the necessary R-value requirements

SANS 204 Compliance:
External Wall Construction – Wall Type 1



Required – Min. R-value: 0,35 — CR-value (Hrs): 60

	Component	Thickness (mm)	Density (kg/m³)	Conductivity K-value (W/mK)
Exterior 1	Cement plaster	15	1900	0,72
4	Brick	115	1826	0,82
5	Cement mortar	10	1650	0,72
6	Brick	115	1826	0,82
Interior	Cement plaster	15	1900	0,72
	Total Thickness:	270		

R-value Achieved:			
Summer : Dec – Feb	0,50	m²K/W	Acceptable
Autumn : Mar – May	0,51	m²K/W	Acceptable
Winter : Jun – Aug	0,51	m²K/W	Acceptable
Spring : Sep – Nov	0,50	m²K/W	Acceptable

CR-value Achieved:			
Summer : Dec – Feb	62,38	hours	Acceptable
Autumn : Mar – May	63,29	hours	Acceptable
Winter : Jun – Aug	63,72	hours	Acceptable
Spring : Sep – Nov	62,49	hours	Acceptable

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External Wall Construction – Wall Type 2
Required – Min. R-value: 0,35 — CR-value (Hrs): 60

	Component	Thickness (mm)	Density (kg/m³)	Conductivity K-value (W/mK)
Exterior	Cement plaster	15	1900	0,72
	Brick	115	1826	0,82
	Cement mortar	10	1900	1,5
	Brick	115	1826	0,82
Interior	Cement plaster	15	1900	0,72
	Total Thickness:	270		

R-value Achieved:			
Summer : Dec – Feb	0,49	m²K/W	Acceptable
Autumn : Mar – May	0,50	m²K/W	Acceptable
Winter : Jun – Aug	0,50	m²K/W	Acceptable
Spring : Sep – Nov	0,49	m²K/W	Acceptable

CR-value Achieved:			
Summer : Dec – Feb	61,57	hours	Acceptable
Autumn : Mar – May	62,50	hours	Acceptable
Winter : Jun – Aug	62,93	hours	Acceptable
Spring : Sep – Nov	61,69	hours	Acceptable

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Building Envelope – Fenestration

SANS 10400-XA Compliance:

Storey Level	Nett area (m²)	Fenestration area (m²)	Percentage (%) fenestration
Basement Storey:	80,91		
Ground Storey:	151,90	13,20	8,69
First Storey:	418,43	35,10	8,39
Second Storey:	1472,60	87,97	5,97
Third Storey:	1443,84	193,38	13,39

Compliance Achieved:

Basement Storey:	SANS 10400-XA satisfied
Ground Storey:	SANS 10400-XA satisfied
First Storey:	SANS 10400-XA satisfied
Second Storey:	SANS 10400-XA satisfied
Third Storey:	

Shading – Midday Summer Sunshine
North facing windows shaded: YES

Permissible air leakage – Glazing
Maximum permissible air leakage for glazing elements:
Operable glazing: 2,0 L/s/m²
Non-operable glazing: 0,31 L/s/m²
Glazed double action swing and revolving doors: 5,0 L/s/m²

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SANS 204 Compliance:
Fenestration Compliance – Natural Environmental Control
Conductance (C_U) constant: 1,4
Solar Heat Gain (C_{SHGC}) constant: 0,11

Storey Level	Permissible Max. Conductance	Permissible Max. SHGC	Calculated Conductance	Calculated SHGC
Basement Storey:	113,27	8,90		
Ground Storey:	212,66	16,71	75,64	4,20
First Storey:	585,80	46,03	119,35	17,71
Second Storey:	2061,64	161,99	299,09	53,49
Third Storey:	2021,38	158,82	923,05	128,57

Compliance Achieved:

Storey Level	Conductance	SHGC
Basement Storey:	SANS 204 satisfied	SANS 204 satisfied
Ground Storey:	SANS 204 satisfied	SANS 204 satisfied
First Storey:	SANS 204 satisfied	SANS 204 satisfied
Second Storey:	SANS 204 satisfied	SANS 204 satisfied
Third Storey:		

Fenestration Summary
Refer to Detail Fenestration Report for individual fenestration element summary.

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Second Storey

Orientation	Facade Area (m²)	Allowable A/C Energy Value	Achieved A/C Energy Value	SANS 204 Compliance ?
North				
North East	241,909	43,544	28,447	SANS 204 satisfied
East	51,328	9,239	0,000	SANS 204 satisfied
South East	143,375	25,807	21,394	SANS 204 satisfied
South				
South West	320,495	57,689	0,000	SANS 204 satisfied
West				
North West	96,401	17,352	0,000	SANS 204 satisfied

Third Storey

Orientation	Facade Area (m²)	Allowable A/C Energy Value	Achieved A/C Energy Value	SANS 204 Compliance ?
North				
North East	222,897	40,121	34,557	SANS 204 satisfied
East	47,294	8,513	0,000	SANS 204 satisfied
South East	132,107	23,779	21,294	SANS 204 satisfied
South				
South West	295,307	53,155	48,840	SANS 204 satisfied
West				
North West	88,825	15,989	2,303	SANS 204 satisfied

Fourth Storey

Orientation	Facade Area (m²)	Allowable A/C Energy Value	Achieved A/C Energy Value	SANS 204 Compliance ?
North				
North East				
East				
South East				
South				
South West				
West				
North West				

Fifth Storey

Orientation	Facade Area (m²)	Allowable A/C Energy Value	Achieved A/C Energy Value	SANS 204 Compliance ?
North				
North East				
East				
South East				
South				
South West				
West				
North West				

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Building Envelope – Roofs

SANS 10400-XA Compliance:
Roof Assembly Requirement
Required – Min. R-value: 2,7 m²K/W
Direction of Heat flow: Down

Thermal Break Material Requirement
Metal sheet roofing fixed to metal purlins / rafters / battens ? Yes
A thermal break of a material with an R-value of not less than 0,2 shall be installed between the metal sheet roofing and its supporting member.

Min. R-value Requirement – Metal Roof Construction
Metal sheeting type roofing material: Yes
R-value for roof covering material: 0,36 m²K/W
R-value for ceiling: 0,05 m²K/W
Required added R-value for insulation: 2,29 m²K/W

Min. R-value Requirement – Tile Roof Construction
Clay / concrete tile type roofing material: No
R-value for roof covering material: m²K/W
R-value for ceiling: m²K/W
Required added R-value for insulation: m²K/W

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SANS 204 Compliance: STRICT
Roof Construction – Roof Type 1
Roof assembly ventilated ? No
Roof construction: ------
Roof Pitch:

Roof construction: Component	R-value (m²K/W)

Reflective foil / radiant barrier: Emissivity: ---
Insulation: ---- Thickness: mm; Density: kg/m³
R-value of Typical Roof Construction: 0,00 — 0,00

Roof Construction – Roof Type 2
Roof assembly ventilated ? No
Roof construction: 100 Solid conc. Slab w/ external waterproofing & suspended slab
Roof Pitch: Horizontal

Component	R-value (m²K/W) Down
Outdoor air film (7m/s)	0,03
Waterproof membrane, rubber synthetic (4 mm, 961 kg/m³)	0,03
Solid concrete (100 mm, 2400 kg/m³)	0,07
Ceiling air space (100 mm to 300 mm, non-reflective)	0,22
Plasterboard, gypsum (10 mm, 880 kg/m3)	0,06
Indoor air film (still air)	0,16
Reflective foil / radiant barrier: Emissivity: 0,9 outer & 0,05 inner	
Insulation: Rigid extruded polystyrene 'XPS' — Thickness: 60 mm; Density: 32 kg/m³	2,14 — 0,00
R-value of Typical Roof Construction	2,71 — 0,00 Acceptable

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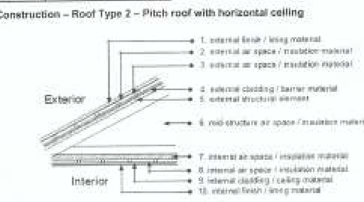
SANS 204 Compliance: Rational Solution
Roof Construction – Roof Type 2 – Pitch roof with horizontal ceiling



Roof Pitch : > 0° & ≤ 10°

	Component	Thickness (mm)	Density (kg/m³)	Conductivity K-value (W/mK)
Exterior 1	Aluminium	0,8	2800	200
3	Rigid foilfaced fibreglass reinforced cellular polyiso	60	34	0,022
5	Pine wood	76	510	0,12
6	Slightly ventilated air space	1000	0	0
	Radiant barrier / Reflective foil insulation	Installed		
	Emissivity:	0,2 outer & 0,05 inner		

Achieved R-value – Roof Assembly – Roof Type 2 – Pitch roof with horizontal ceiling

Direction of Heat Flow:	Up m²K/W	Down m²K/W	Up	Down
Summer : Dec – Feb		4,50		Acceptable
Autumn : Mar – May		4,51		Acceptable
Winter : Jun – Aug		4,51		Acceptable
Spring : Sep – Nov		4,50		Acceptable

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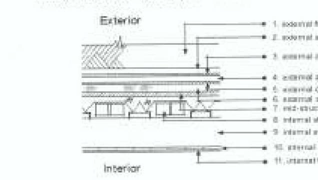
SANS 204 Compliance: Rational Solution
Roof Construction – Roof Type 3 – Flat roof



	Component	Thickness (mm)	Density (kg/m³)	Conductivity K-value (W/mK)
Exterior	Common earth soil	1000	1460	1,28
	Plywood	12	700	0,23
	Bitumen insulation	12	1000	0,2
	Roof insulation board	80	960	0,19
	Cement floor screed	100	2100	1,4
	Compacted reinforced dense cast concrete	250	2500	2,3
	Roof insulation board	200	960	0,19
	Unventilated air space	1000	0	0
	Gypsum plaster	60	1300	0,6
Interior	Render	10	1430	1,13

Achieved R-value – Roof Assembly – Roof Type 3 – Flat roof

Direction of Heat Flow:	Up m²K/W	Down m²K/W	Up	Down
Summer : Dec – Feb		2,96		Acceptable
Autumn : Mar – May		2,97		Acceptable
Winter : Jun – Aug		2,98		Acceptable
Spring : Sep – Nov		2,96		Acceptable

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Building Envelope – Building Sealing

SANS 204 Compliance
Permissible air leakage – Chimneys and Flues
Burning device type: ------

Permissible air leakage – External Doors
External door serves a conditioned space ? Yes
A foam or rubber compressible strip or a fibrous seal (or similar) shall be fitted to each edge of an external door and other such opening to restrict air leakage. Refer SANS 204 (4.4.3)
External door serves a habitable room in climatic zone: 5
A foam or rubber compressible strip or a fibrous seal (or similar) shall be fitted to each edge of an external door and other such opening to restrict air leakage. Refer SANS 204 (4.4.3)
External door/s of swing type: Yes
A draught protection device shall be fitted to the bottom edge of each door leaf. Refer SANS 204 (4.4.3)

Permissible air leakage – Exhaust fans
Exhaust fans serve a conditioned space ? ------
Exhaust fans serve a habitable room in climatic zone: 5
Identify whether any exhaust fan/s serve a conditioned space.

Permissible air leakage – Roofs, walls, floors and any openings
Roofs, external walls, external floors, or any opening/s (glazing or doors) serve a conditioned space ? Yes
Roofs, external walls, external floors, or any opening/s (glazing or doors) in the external fabric of the building shall be constructed to minimise air leakage. Refer SANS 204 (4.4.3)
Roofs, external walls, external floors, or any opening/s (glazing or doors) serve a habitable room in climatic zone: 5
Roofs, external walls, external floors, or any opening/s (glazing or doors) in the external fabric of the building shall be constructed to minimise air leakage. Refer SANS 204 (4.4.3)

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Building Design – Services

SANS 204 Compliance
Lighting and power
Artificial lighting:
The minimum artificial lighting levels for the occupancy and activity undertaken in the building shall be in accordance with the requirements of SANS 10114-1.
Natural lighting:
Natural lighting shall be in accordance with the requirements of SANS 10400-O.
Daylighting should be employed to reduce energy usage.

Energy demand and consumption – Lighting and power
Maximum permissible -
Energy Demand (Power) Lighting: 44230,3 W
Annual Energy Consumption Lighting: 387457,428 kWh

Basement Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)
30	2	24	129	790
33	1	12		
36	1	10		

Ground Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)
30	2	24	108	734
33	1	12		
15	1	12		

First Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)
40	1	24	206	1437
30	2	24		
37	1	12		
33	1	16		
36	1	16		

Second Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)
40	1	12	184	1088
30	2	24		
33	1	12		
36	1	12		
15	1	16		

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Seventh Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)

Eighth Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)

Nineth Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)

Tenth Storey

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)

External & Security Lighting

Lamp Power (W)	No. of Lamps	Hours in use / day	Energy Demand (W)	Energy Consumption (kWh)
71	13	12	1300	7154
27	1	12		
4,4	21	24		
41	6	24		
6	2	11		

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Energy Demand (Power) – Lighting
Total lamp energy demand (W): 1927,40 — Energy demand acceptable
Available energy demand (W): 42302,90 — Energy demand acceptable
or
Total lamp energy demand (W/m²): 0,44 — Energy demand acceptable

Energy Consumption – Lighting (per annum)
Total energy consumption (kWh): 11211,78 — Energy consumption acceptable
Available energy consumption (kWh): 376245,65 — Energy consumption acceptable
or
Total energy consumption (kWh/m²): 2,53 — Energy consumption acceptable

Total Energy Demand / Consumption – Whole Building Summary
Energy Demand
Max. Permissible -
Energy Demand – Building (kW): Non-specified
Energy Demand – Lighting (kW): 44,23
Utilised -
Energy Demand – Lighting (kW): 1,93
Energy Demand – Hot Water (kW):
Available -
Energy Demand – Building (kW): Non-specified
Energy Demand – Lighting (kW): 42,30 — Energy demand acceptable

Energy Consumption (annum)
Max. Permissible -
Energy Consumption – Building (kWh): Non-specified
Energy Consumption – Lighting (kWh): 387457,43
Utilised -
Energy Consumption – Lighting (kWh): 11211,78
Energy Consumption – Hot Water (kWh): 0,00
Available -
Energy Consumption – Building (kWh): Non-specified
Energy Consumption – Lighting (kWh): 376245,65 — Energy consumption acceptable

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Hot Water Services
Hot water design requirement – Energy and storage capacity
Building Occupancy: Hospital: E2
Type of Accommodation?: Hospitals – General
Hot water demand – Assumed: 135,00 L/bed/day
No. of Beds ?: 127
Daily Hot Water Demand: 20574,00 L – Incl. 20% allowance for heat loss
Annual Hot Water Demand: 7488,94 kL – Based on design occupancy
50 % of Annual Hot Water Demand: 3744,47 kL – Incl. 20% allowance for heat loss

Energy design consumption – Electrical resistance heating
Energy consumption – Calculated @ 60 °C:

Summer	Autumn	Winter	Spring	
78036,71	84239,89	94213,37	87229,75	kWh

Energy Consumption – Daily: 943,02 kWh – Calculated @ 60 °C
Energy Consumption – Annual: 344419,72 kWh – Calculated @ 60 °C
50 % of Annual Energy Consumption: kWh – Calculated @ 60 °C

Hot water storage requirement
Minimum Hot Water Storage Volume: 3429 L

Hot water storage tank system – Adopted
Tank Storage Volume: L
Rated Power Input: kW
Reheat Time: h
Reheat period may not exceed 8 hrs

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Mediclinic
Victoria Hospital Phase 2
35 High Street, Tongaat, 4400
ERF 13872 of Tongaat

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Building Envelope – Fenestration – Summary

Storey Level	Nett Floor Area (m²)	Fenestration Area (m²)	Percentage (%) Fenestration	Permissible Max. Conductance	Conductance Calculated	Permissible Max. SHGC	SHGC Calculated
Basement Storey:	80,91			113,27	0,00	8,90	0,00
Ground Storey:	151,90	13,20	8,69	212,66	75,64	16,71	4,20
First Storey:	418,43	35,10	8,39	585,80	119,35	46,03	17,71
Second Storey:	1472,60	87,97	5,97	2061,64	299,09	161,99	53,49
Third Storey:	1443,84	193,38	13,39	2021,38	923,05	158,82	128,57
Fourth Storey:							
Fifth Storey:							
Sixth Storey:							
Seventh Storey:							
Eighth Storey:							
Nineth Storey:							
Tenth Storey:							

Fenestration Element

Element	Storey Level	Identifier No:	No. of Units	Width (m)	Height (m)	Area	Framing System	Glass Desc.	U-value	SHGC	Glass Material	Thickness (mm)	Orientation
1	Ground Storey	Entrance	1	4,300	3,070	13,201	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South East
2	First Storey	Lightbox	1	8,662	2,650	22,954	Aluminium	Double 3/6/3 : tinted, low E	3,40	0,54	Laminated annealed safety glass	8	South East
3	First Storey	Lift Lobby	1	3,996	3,040	12,148	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
4	Second Storey	Lightbox	1	8,662	2,650	22,954	Aluminium	Double 3/6/3 : tinted, low E	3,40	0,54	Laminated annealed safety glass	8	South East
5	Second Storey	Staff Room	1	8,453	2,650	22,400	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	South East
6	Second Storey	Lift Lobby	1	2,975	1,450	4,314	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
7	Second Storey	Gen. Store	7	2,000	2,650	37,100	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
8	Second Storey	Rest Room	1	2,000	0,600	1,200	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
9	Third Storey	Lightbox	1	8,662	2,650	22,954	Aluminium	Double 3/6/3 : tinted, low E	3,40	0,54	Laminated annealed safety glass	8	South East
10	Third Storey	Lift Lobby	1	4,582	1,450	6,644	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
11	Third Storey	Mng. Office	1	12,500	0,600	7,500	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
12	Third Storey	Ablutions	8	0,600	0,600	2,880	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
13	Third Storey	Linen Room	1	2,000	0,600	1,200	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
14	Third Storey	Dirty Utility	1	2,600	0,600	1,560	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
15	Third Storey	Equipment	1	3,980	0,600	2,388	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
16	Third Storey	Clean Utility	1	2,400	0,600	1,440	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
17	Third Storey	restricted	1	2,100	2,150	4,515	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
18	Third Storey	lean passag	2	4,800	2,150	20,640	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
19	Third Storey	lean passag	1	3,580	2,150	7,697	Aluminium	Double 3/6/3 : clear, low E	3,40	0,66	Laminated annealed safety glass	8	North East
20	Third Storey	nale chang	2	1,000	0,600	1,200	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	North West
21	Third Storey	tech store	1	1,800	0,600	1,080	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
22	Third Storey	tech store	2	2,100	0,600	2,520	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	North West
23	Third Storey	ward staff	1	8,460	2,650	22,419	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South East
24	Third Storey	staff pass	1	2,400	2,650	6,360	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
25	Third Storey	proc. Room	1	2,365	2,650	6,267	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
26	Third Storey	wards	2	8,055	2,650	42,692	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
27	Third Storey	aiting loung	1	8,128	2,650	21,539	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
28	Third Storey	aiting loung	1	3,732	2,650	9,890	Aluminium	Single : low E	5,73	0,66	Laminated annealed safety glass	8	South West
29	------												

Element	Projection-P (m)	Height-H (m)	Height-G (m)	P/H	Factor (E)	C_A	C_B	C_C	S_H	S_C	Conductance	SHG	Energy Value
1	2,400	3,070	0,000	0,780	0,482	0,000	0,670	0,020	1,000	0,480	75,642	4,200	4,315
2	0,000	0,000	0,000	0,000	1,240	0,000	0,670	0,020	1,000	1,000	78,045	15,370	9,866
3	2,600	3,040	0,000	0,860	0,292	0,000	0,920	0,020	1,000	0,360	41,303	2,341	3,481
4	0,000	0,000	0,000	0,000	1,240	0,000	0,670	0,020	1,000	1,000	78,045	15,370	9,866
5	0,115	2,650	0,000	0,040	1,152	0,000	0,670	0,020	1,000	1,000	76,162	17,032	11,429
6	0,115	1,450	0,000	0,080	0,704	0,000	0,920	0,020	1,000	0,920	14,667	2,004	2,703
7	0,115	2,650	0,000	0,040	0,760	0,000	0,920	0,020	1,000	1,000	126,140	18,609	25,050
8	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	4,080	0,475	0,694
9	0,000	0,000	0,000	0,000	1,240	0,000	0,670	0,020	1,000	1,000	78,045	15,370	9,866
10	0,115	1,450	0,000	0,080	0,704	0,000	0,920	0,020	1,000	0,920	22,589	3,087	4,163
11	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	25,500	2,970	4,335
12	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	9,792	1,140	1,665
13	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	4,080	0,475	0,694
14	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	5,304	0,618	0,902
15	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	8,119	0,946	1,380
16	0,115	0,600	0,000	0,190	0,600	0,000	0,920	0,020	1,000	0,840	4,896	0,570	0,832
17	0,115	2,150	0,000	0,050	0,740	0,000	0,920	0,020	1,000	0,920	15,351	2,205	2,829
18	0,115	2,150	0,000	0,050	0,740	0,000	0,920	0,020	1,000	0,920	70,176	10,081	12,934
19	0,115	2,150	0,000	0,050	0,740	0,000	0,920	0,020	1,000	0,920	26,170	3,759	4,823
20	0,115	0,600	0,000	0,190	0,608	0,000	0,910	0,020	1,000	0,840	6,876	0,482	0,743
21	0,115	0,600	0,000	0,190	0,956	0,000	0,670	0,020	1,000	0,870	6,188	0,681	0,539
22	0,115	0,600	0,000	0,190	0,608	0,000	0,910	0,020	1,000	0,840	14,440	1,011	1,560
23	0,115	2,650	0,000	0,040	1,152	0,000	0,670	0,020	1,000	1,000	128,461	17,046	12,483
24	0,115	2,650	0,000	0,040	1,190	0,000	0,670	0,020	1,000	1,000	36,443	4,995	3,541
25	0,115	2,650	0,000	0,040	1,190	0,000	0,670	0,020	1,000	1,000	35,911	4,922	3,490
26	0,115	2,650	0,000	0,040	1,190	0,000	0,670	0,020	1,000	1,000	244,622	33,530	23,771
27	0,115	2,650	0,000	0,040	1,190	0,000	0,670	0,020	1,000	1,000	123,420	16,917	11,993
28	0,115	2,600	0,000	0,040	1,190	0,000	0,670	0,020	1,000	1,000	56,669	7,767	5,507
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ETHEKWINI MUNICIPALITY (NORTH)
NR18050076
APPLICATION NO.

BUILDING APPLICATION
APPROVED in terms Section 7 of The National Building Regulations and Building Standards Act No. 103/1977.
2018-09-27
DATE — Local Authority
This plan is approved on the basis of the information shown herein.
Attention is drawn to the attached documentation & that this approval shall lapse ONE year after the above approval date unless the erection of the building in terms of NBR Act 103/1977 is commenced.

FIRE AND EMERGENCY SERVICES.
RECOMMENDED FOR APPROVAL IN RESPECT OF FIRE SAFETY COMPLIANCE ONLY.
SIGN: .... DATE: 14/09/2018

Rev	Description	By	Date

Client
MEDICLINIC
EXPERTISE YOU CAN TRUST.

Client signature:

Project
PROPOSED ALTERATIONS & ADDITIONS TO EXISTING HOSPITAL AT MEDICLINIC VICTORIA HOSPITAL, 35 HIGH STREET, ERF 13872 TONGAAT.

Drawing
SUBMISSION DRAWING
XA CALCULATIONS

Architect reg no: 7731
Architect signature:

zai
ZAI CONSULTANTS PTY (LTD)
Office No.3, 1st Floor, 21 The Boulevard,
Westway Office Park, Westville, 3635 — Tel : 031-3031901

	Initial	Date	Copyright reserved	Date
Designed	AB/TK	.	App.	
Drawn	TK/DJ	05/01/17	Pl.	
Scale	AS SHOWN		Client	
Drawing no.	14021/1011/S		Rev.	.