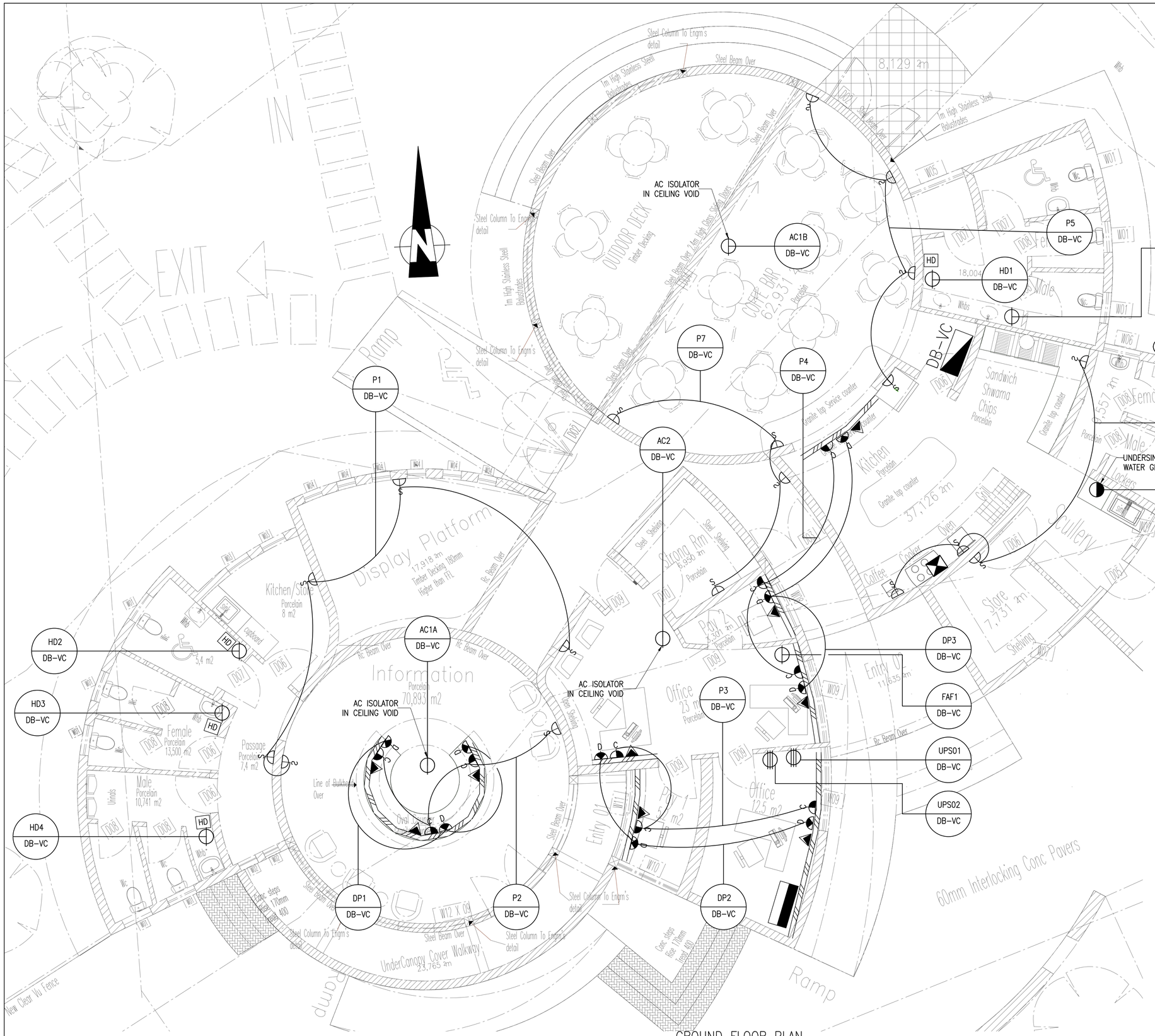

GROUND FLOOR PLAN

SCALE 1:50

ISSUED FOR TENDER

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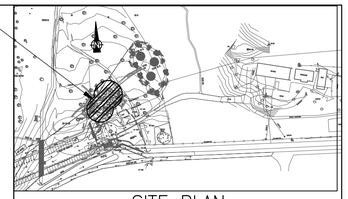

SITE PLAN

N.T.S

LEGEND

- C — 230V, 16A, 3 PIN ROUND, NORMAL SINGLE SWITCHED SOCKET OUTLET, WHITE IN COLOR, SANS164-12 & SANS164-2 MOUNTED ON POWER SKIRTING
- S — 230V, 16A, 3 PIN ROUND, NORMAL SINGLE SWITCHED SOCKET OUTLET, WHITE IN COLOR, MOUNTED @ 300mm A.F.F.L. UNLESS OTHERWISE STATED SANS164-12 & SANS164-2
- D — 16A 3-PIN SINGLE DEDICATED SOCKET OUTLET POWER SKIRTING / WALL MOUNTED
- 2 COMPARTMENT, 2 COVER, GALVANISED STEEL, EPOXY COATED,POWER SKIRTING
- 230V, 60A, DOUBLE POLE COOKER ISOLATOR MOUNTED 1400mm AFFL
- WALL MOUNTED 20A DP ISOLATOR
- 20A, DOUBLE POLE GEYSER ISOLATOR MOUNTED NEXT TO GEYSER.
- 20A, DOUBLE POLE ISOLATOR FOR FRESH AIR SUPPLY
- AP — DATA ACCESS POINT
- DOUBLE DATA POINT
- DATA CABINET
- ELECTRICAL DISTRIBUTION BOARD
- P__ — CIRCUIT NUMBER
- DB__ — DISTRIBUTION BOARD NUMBER

CLIENT

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

SANBI Biodiversity for Life

South African National Biodiversity Institute

REV NO.	DATE	DESCRIPTION
TD	2022-09-26	ISSUED FOR TENDER
A	2022-09-13	ISSUED FOR APPROVAL

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PROJECT CONSULTANT

PROJECTNEERS CONSULTING ENGINEERS & PROJECT MANAGERS

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DRAWING CHECKS

DESIGNER	DESIGN CHECKER	DRAWER	DRAWING CHECKER
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APPROVAL CONSULTANT

N.K. MPOFU

DATE	PNR NO. KC	
31-08-2022	20130388	THE WATER HELD AT THE PROJECTNEERS CONSULTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL

PROJECT NAME

ASSESSMENT, DESIGN & PROJECT MANAGEMENT OF REQUIRED NEW BUILDINGS & REPAIRS, RENOVATIONS & UPGRADES TO VARIOUS INFRASTRUCTURE ASSETS IN THE THOHOYANDOU BOTANICAL GARDEN, THOHOYANDOU, & NATIONAL ZOOLOGICAL GARDEN CAMPUSES BASED IN PRETORIA & MOKOPANE

SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE
POWER LAYOUT

DISCIPLINE

ELECTRICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

AS INDICATED

DRAWING NUMBER

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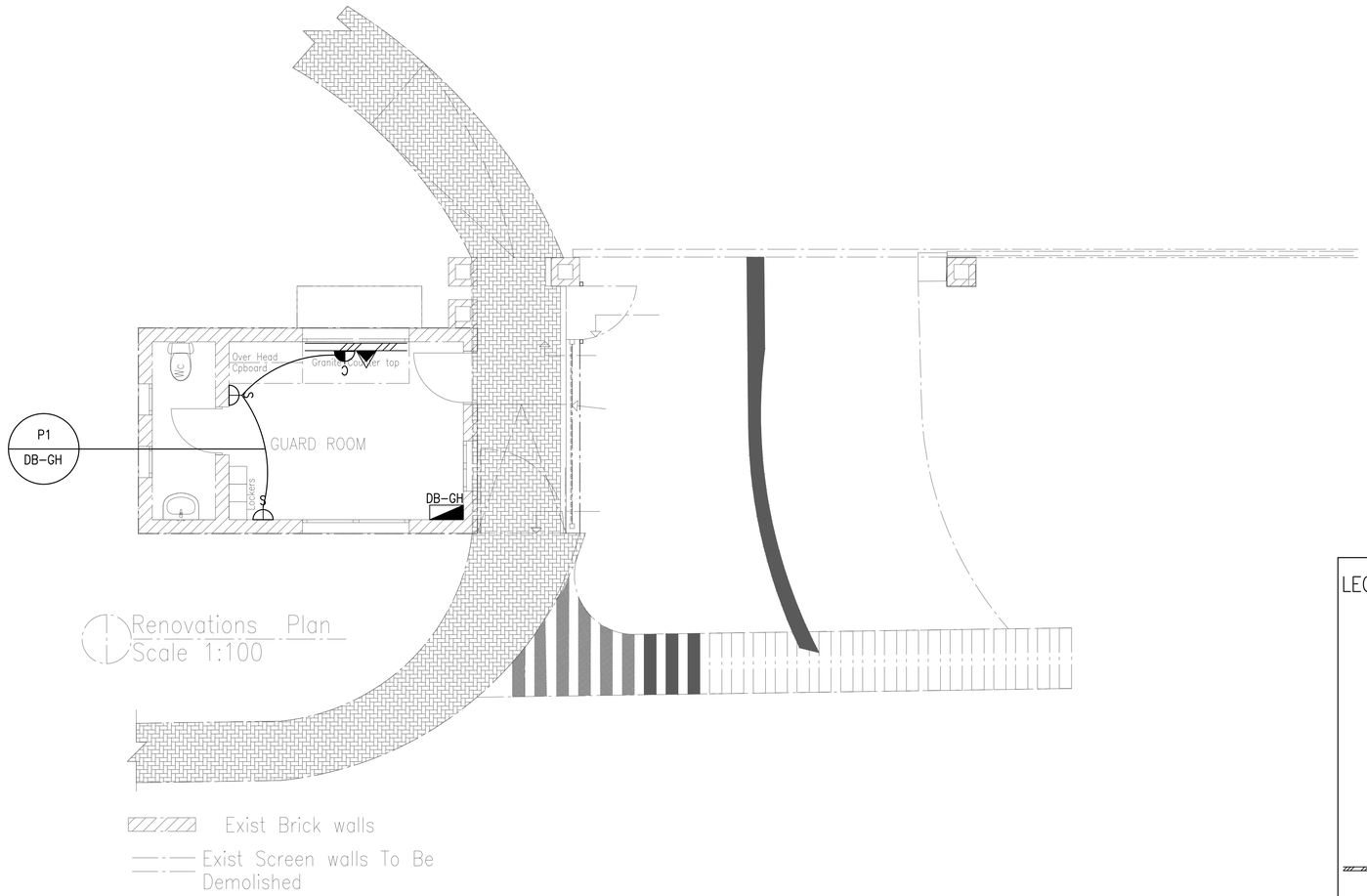

GROUND FLOOR PLAN

SCALE 1:50

ISSUED FOR TENDER

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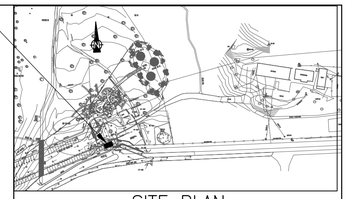

SITE PLAN

N.T.S

LEGEND

- C — 230V, 16A, 3 PIN ROUND, NORMAL SINGLE SWITCHED SOCKET OUTLET, WHITE IN COLOR, SANS164-12 & SANS164-2 MOUNTED ON POWER SKIRTING
- S — 230V, 16A, 3 PIN ROUND, NORMAL SINGLE SWITCHED SOCKET OUTLET, WHITE IN COLOR, MOUNTED @ 300mm A.F.F.L. UNLESS OTHERWISE STATED SANS164-12 & SANS164-2
- D — 16A 3-PIN SINGLE DEDICATED SOCKET OUTLET POWER SKIRTING / WALL MOUNTED
- 2 COMPARTMENT, 2 COVER, GALVANISED STEEL, EPOXY COATED,POWER SKIRTING
- WALL MOUNTED 20A DP ISOLATOR
- 20A, DOUBLE POLE GEYSER ISOLATOR MOUNTED NEXT TO GEYSER.
- 20A, DOUBLE POLE ISOLATOR FOR FRESH AIR SUPPLY
- AP — DATA ACCESS POINT
- SINGLE DATA POINT
- DOUBLE DATA POINT
- TELEPHONE POINT
- ELECTRICAL DISTRIBUTION BOARD
- P__ — CIRCUIT NUMBER
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DRAWING CHECKS

DRAWN BY	DESIGN CHECKED BY	DRAWN BY	DRAWING CHECKED BY
F.MPOFU	--	B.MDLULI	F.MPOFU

APPROVAL CONSULTANT

N.K. MPOFU

DATE	REF NO.	THE MATTER HELD AT THE PROJECTNEERS CANDLTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL
31-08-2022	20130388	

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE GUARD HOUSE
POWER LAYOUT

DISCIPLINE

ELECTRICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

AS INDICATED

DRAWING NUMBER

CLIENT	PROJ	DISC	PROJ NO.	CONT	SYS	SEQ	DRWG NO.	REV	PAPER SIZE
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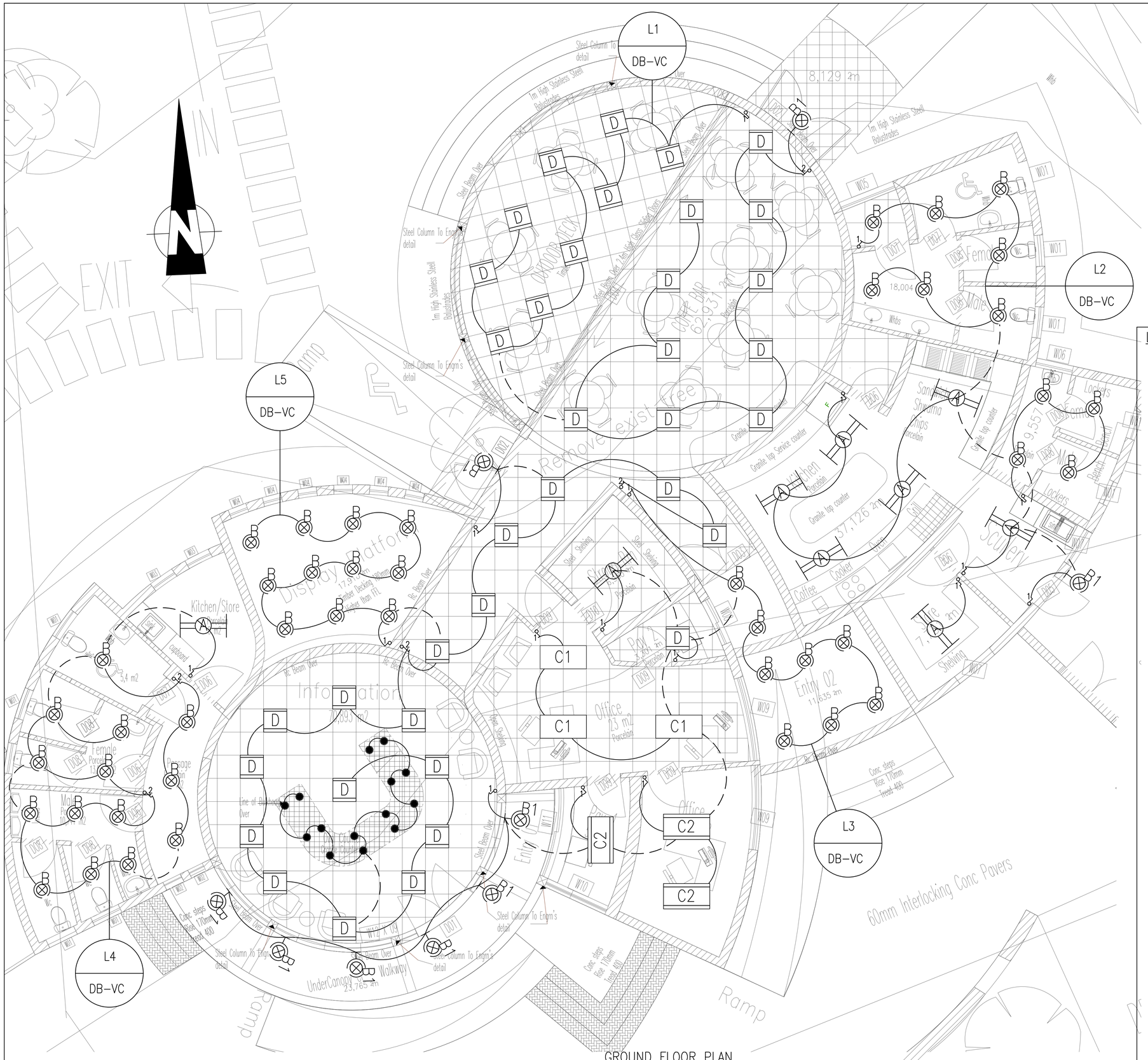

ISSUED FOR TENDER

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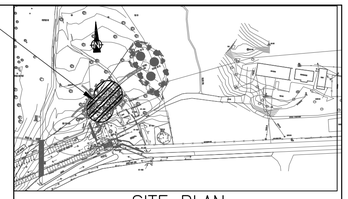

SITE PLAN
N.T.S

LEGEND

A	TYPE A: 1300mm SURFACE MOUNTED LED LIGHT FITTING, POLYCARBONATE OPTICAL COVER, 31W LAMP, 4200 LUMENS, 4000K COLOUR TEMPERATURE, IP66 PROTECTION, ELECTRONIC CONTROL GEAR.
B	TYPE B: RECESSED MOUNTED LED OPAL DOWNLIGHT, 120mm DIAMETER, HIGH PRESSURE ALUMINIUM DIE CAST HOUSING COMPLETE WITH WHITE EPOXY POWDER COATING, 12W LED LAMP, 850 LUMENS,4000K COLOUR TEMPERATURE,IP20 PROTECTION, ELECTRONIC CONTROL GEAR.
B1	TYPE B1: DECORATIVE RECTANGULAR SURFACE-MOUNTED BULKHEAD LUMINAIRE, HIGH PRESSURE DIE-CAST ALUMINIUM BASE, OPAQUE PRISMATIC HIGH IMPACT ACRYLIC DIFFUSER,32W LED LAMP, 5840 LUMENS, 4000K COLOUR TEMPERATURE, IP66 PROTECTION, ELECTRONIC CONTROL GEAR.
C1	TYPE C1: RECESS MOUNTED LED PANEL LUMINAIRE, 1200mm X 600mm, POLY-CARBONATE BODY, ACRYLIC OPAL DIFFUSER , 65W LED LAMP, 5850 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR.
C1E	TYPE C1E: RECESS MOUNTED LED PANEL LUMINAIRE, 1200mm X 600mm, POLY-CARBONATE BODY, ACRYLIC OPAL DIFFUSER , 65W LED LAMP, 5850 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR. EMERGENCY VERSION.
C2	TYPE C2: SURFACE-MOUNTED LED PANEL LUMINAIRE, 1200mm X 600mm, POLY-CARBONATE BODY, ACRYLIC OPAL DIFFUSER , 65W LED LAMP, 5850 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR.
C2E	TYPE C2E: SURFACE-MOUNTED LED PANEL LUMINAIRE, 1200mm X 600mm, POLY-CARBONATE BODY, ACRYLIC OPAL DIFFUSER , 65W LED LAMP, 5850 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR. EMERGENCY VERSION.
D	TYPE D: RECESS MOUNTED LED PANEL LUMINAIRE, 600mm x 600mm, POLY-CARBONATE BODY, ACRYLIC OPAL DIFFUSER , 36W LED LAMP, 3240 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR.
DE	TYPE DE: RECESS MOUNTED LED PANEL LUMINAIRE, 600mm x 600mm, POLY-CARBONATE BODY, ACRYLIC OPALDIFFUSER , 36W LED LAMP, 3240 LUMENS, 4000K COLOUR TEMPERATURE, IP20 PROTECTION, ELECTRONIC CONTROL GEAR. EMERGENCY VERSION
•	TYPE E: DECORATIVE 80mm DIAMETER, LED DOWNLIGHTER
1	10A 1GANG 1WAY LIGHT SWITCH
2	10A 1GANG 2WAY LIGHT SWITCH
2	10A 2GANG 2WAY LIGHT SWITCH
	ELECTRICAL DISTRIBUTION BOX
P/C	PHOTO CELL
L__	CIRCUIT NUMBER
DB__	DISTRIBUTION BOARD NUMBER

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South African National Biodiversity Institute

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DRAWING CHECKS

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APPROVAL CONSULTANT
N.K. MPOFU

DATE	PROF REG NO	
31-08-2022	20130388	THE MASTER HELD AT THE PROJECTNEERS CONSULTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL

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SITE
THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE
LIGHTING LAYOUT

DISCIPLINE
ELECTRICAL

CONTRACT NUMBER
G306/2018

FILE NUMBER
ZA2018_2008

SCALE
AS INDICATED

DRAWING NUMBER

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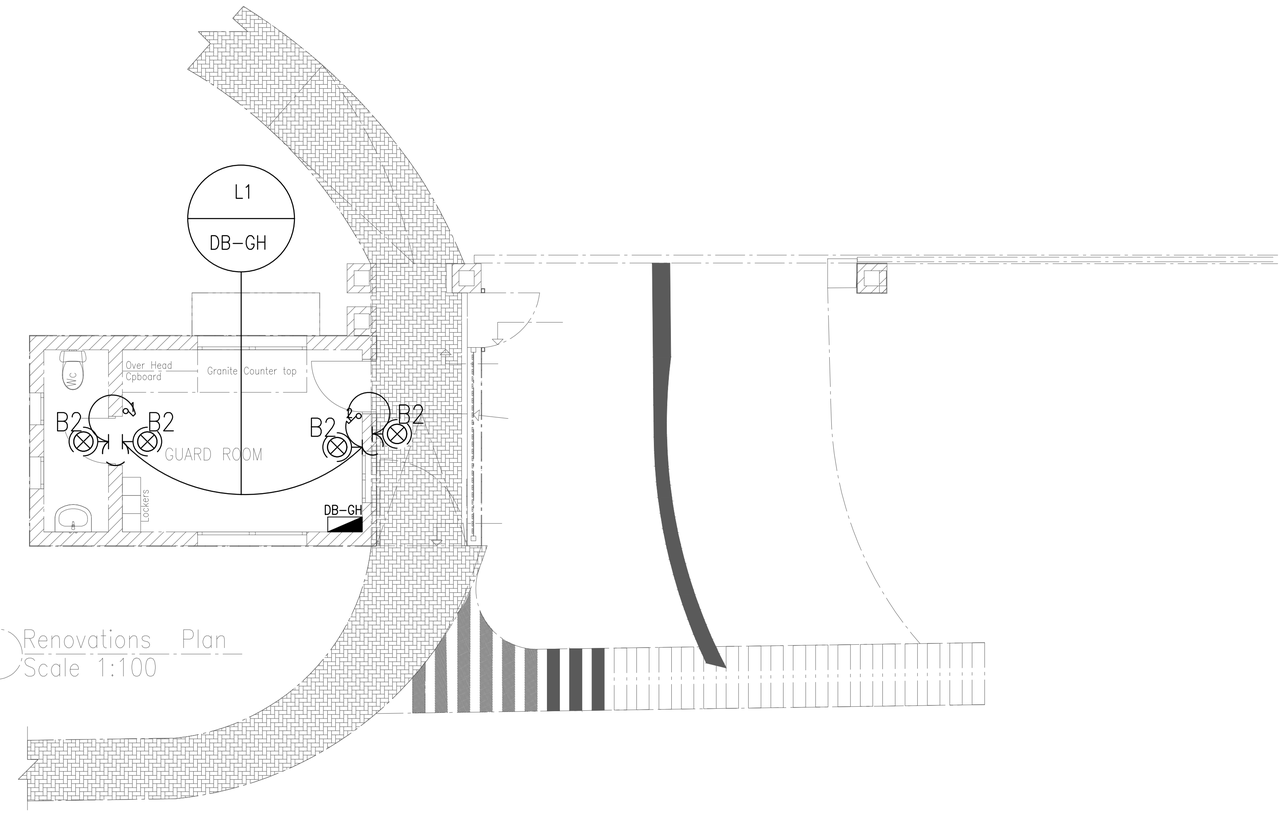

Renovations Plan
Scale 1:100

Exist Brick walls

Exist Screen walls To Be Demolished

GROUND FLOOR PLAN

SCALE 1:50

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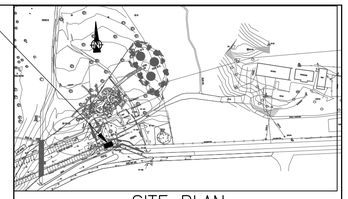

SITE PLAN

N.T.S

LEGEND

B2	DECORATIVE WALL MOUNTED BULKHEAD LIGHT FITTING, 11W LED LAMP AND ELECTRONIC CONTROL GEAR
1	10A 1GANG 1WAY LIGHT SWITCH
2	10A 1GANG 2WAY LIGHT SWITCH
2	10A 2GANG 2WAY LIGHT SWITCH
	ELECTRICAL DISTRIBUTION BOX
L__	CIRCUIT NUMBER
DB__	DISTRIBUTION BOARD NUMBER

ISSUED FOR TENDER

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APPROVAL CONSULTANT

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE GUARD HOUSE
LIGHTING LAYOUT

DISCIPLINE

ELECTRICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

AS INDICATED

DRAWING NUMBER

YEAR	PHASE	SITE	FILE NO.	CLIENT	SITE	DISC	DRWG NO.	REV	PAPER SIZE
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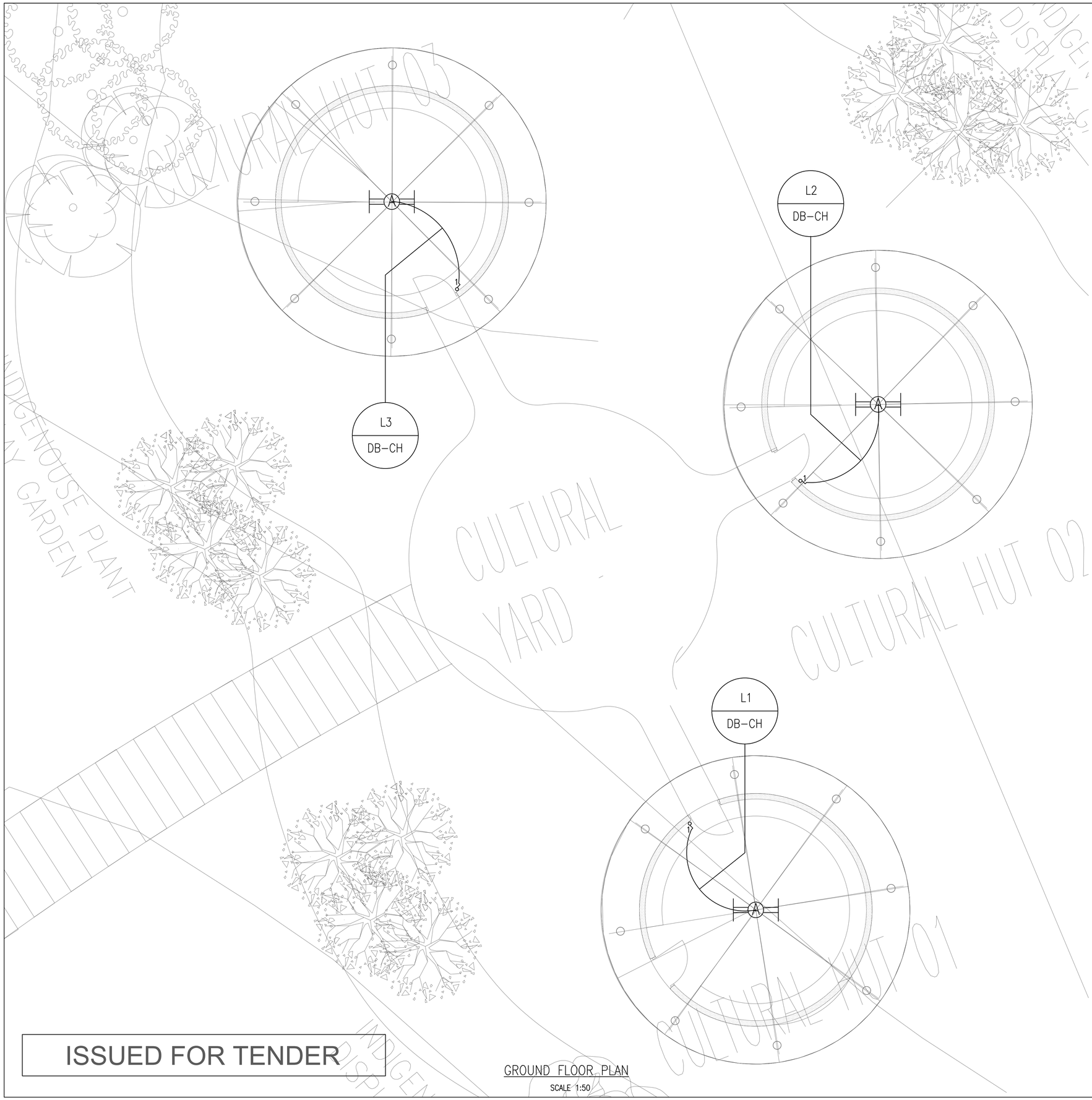

GROUND FLOOR PLAN

SCALE 1:50

ISSUED FOR TENDER

SITE PLAN

N.T.S

LEGEND

- TYPE A: 1300mm SURFACE MOUNTED LED LIGHT FITTING, POLYCARBONATE OPTICAL COVER, 31W LAMP, 4200 LUMENS, 4000K COLOUR TEMPERATURE, IP66 PROTECTION, ELECTRONIC CONTROL GEAR.
- 10A 1GANG 1WAY LIGHT SWITCH
- 10A 1GANG 2WAY LIGHT SWITCH
- 10A 2GANG 2WAY LIGHT SWITCH
- ELECTRICAL DISTRIBUTION BOX
- L__ — CIRCUIT NUMBER
- DB__ — DISTRIBUTION BOARD NUMBER

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DRAWING CHECKS

DRAWUP	DRAW CHECKER	DRAWN	DRAWING CHECKER
F.MPOFU	--	B.MDLULI	F.MPOFU

APPROVAL CONSULTANT

N.K. MPOFU

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE CULTURAL HUTS 1, 2 & 3 LIGHTING LAYOUT

DISCIPLINE

ELECTRICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

AS INDICATED

DRAWING NUMBER

PJN	ZYX	GAR	PRJ NO	CLNT	XR	TYC	DRW NO	RV	REV NO
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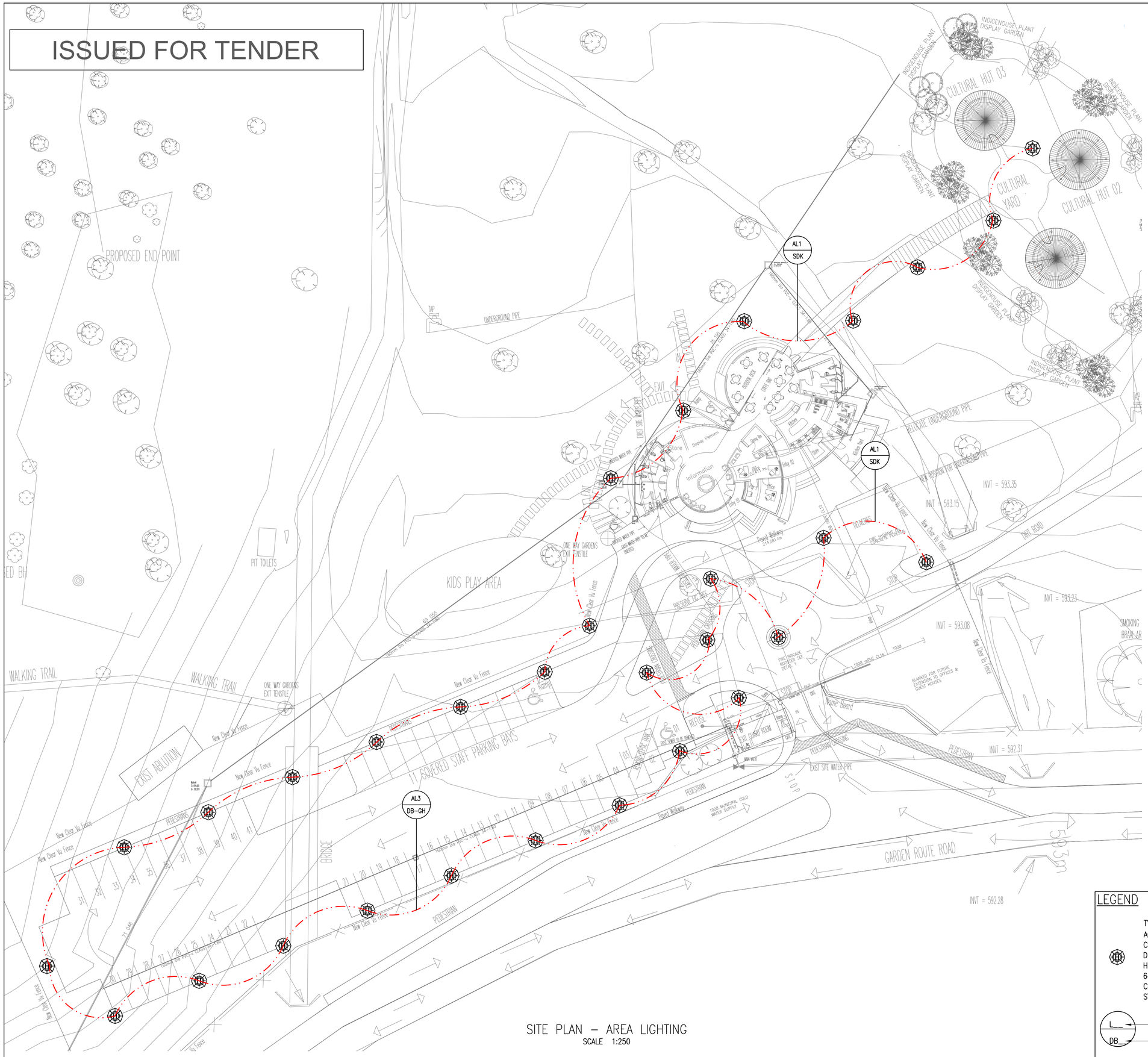
ISSUED FOR TENDER



SITE PLAN – AREA LIGHTING
SCALE 1:250

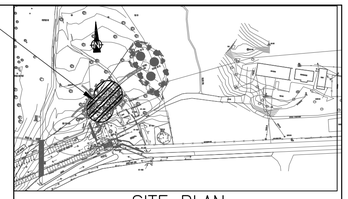
LEGEND

TYPE H – POST TOP LED LUMINAIRE, ACRYLONITRILE STYRENE ACRYLATE (ASA) TOP COVER, HIGH–PRESSURE POWDER–COATED DIE–CAST ALUMINIUM BASE AND GEAR PLATE, HIGH–IMPACT ACRYLIC PROTECTOR, 55W LED LAMP, 6490 LUMENS, IP66 PROTECTION, ELECTRONIC CONTROL GEAR COMPLETE WITH A 4m GALVANISED STEEL POLE.

L__ — CIRCUIT NUMBER

DB__ — DISTRIBUTION BOARD NUMBER

THIS DRAWING



SITE PLAN
N.T.S

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DRAWING CHECKS

DESIGNED	DESIGN CHECKED BY	DRAWN BY	DRAWN CHECKED BY
F.MPOFU	--	B.MDLULI	F.MPOFU

APPROVAL CONSULTANT
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SITE
THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE
LIGHTING LAYOUT

DISCIPLINE
ELECTRICAL

CONTRACT NUMBER
G306/2018

FILE NUMBER
ZA2018_2008

SCALE
AS INDICATED

DRAWING NUMBER

PRJ	SITE	BLDG	DISC	SHEET	VR	REV	DRW NO	RV
PJN	ZA	2022	2002	SANBI	TBG	EE	6103	TD

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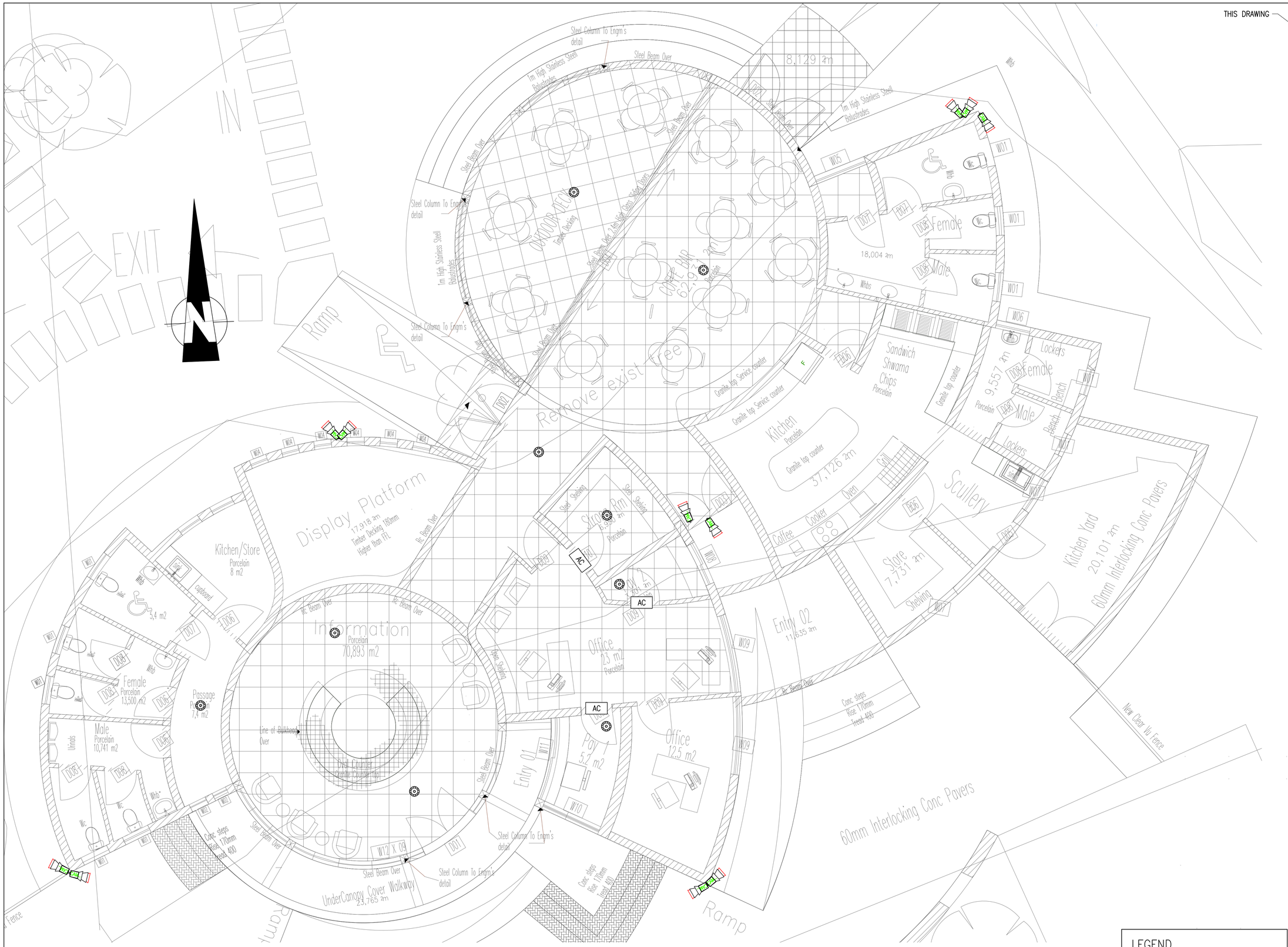


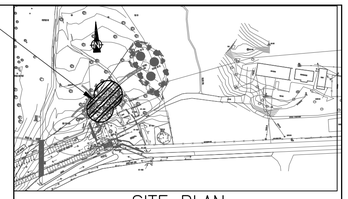
SITE PLAN – SECURITY

SCALE 1:50

ISSUED FOR TENDER

LEGEND

- IP CCTV BULLET CAMERA
- IP CCTV MINI-DOME CAMERA
- AC — ACCESS CONTROL



SITE PLAN
N.T.S

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DRAWING CHECKS

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N.K. MPOFU

DATE	PNC NO.	
31-08-2022	20130388	THE MASTER HELD AT THE PROJECTNEERS CONSULTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL

PROJECT NAME
ASSESSMENT, DESIGN & PROJECT MANAGEMENT OF REQUIRED NEW BUILDINGS & REPAIRS, RENOVATIONS & UPGRADES TO VARIOUS INFRASTRUCTURE ASSETS IN THE THOHOYANDOU BOTANICAL GARDEN, THOHOYANDOU, & NATIONAL ZOOLOGICAL GARDEN CAMPUSES BASED IN PRETORIA & MOKOPANE

SITE
THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE
SECURITY LAYOUT

DISCIPLINE
ELECTRICAL

CONTRACT NUMBER
G306/2018

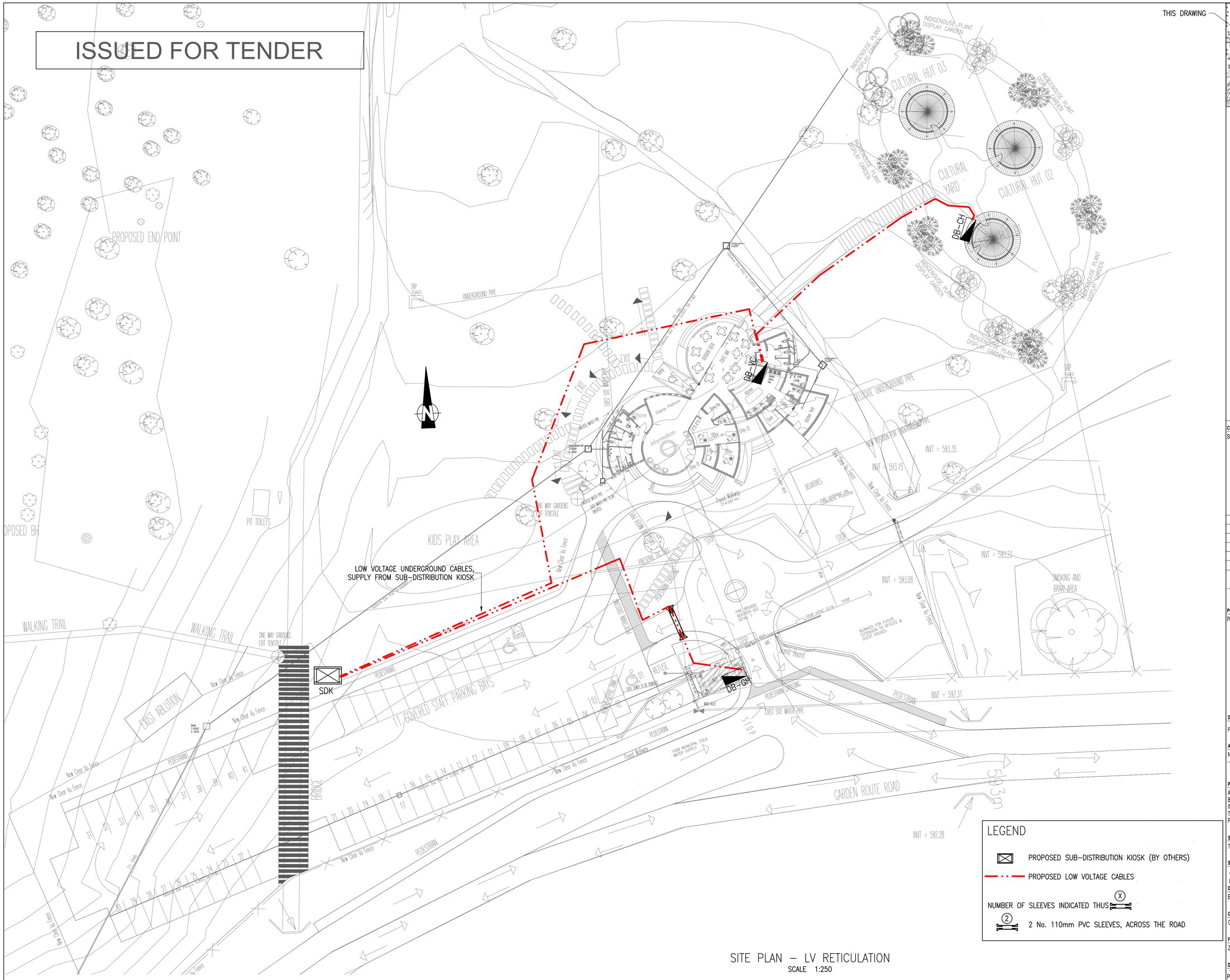
FILE NUMBER
ZA2018_2008

SCALE
AS INDICATED

DRAWING NUMBER
PJN_ZA_2022_2002_SANBI_ TBG_ EE_6200_TD

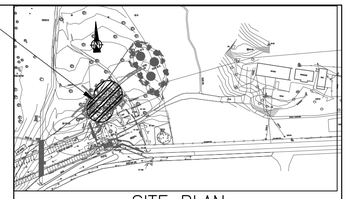
PAPER SIZE A1

ISSUED FOR TENDER



SITE PLAN – LV RETICULATION

SCALE 1:250



SITE PLAN

N.T.S

CLIENT

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

SANBI Biodiversity for Life

South African National Biodiversity Institute

REV NO.	DATE	DESCRIPTION
TD	2022-09-26	ISSUED FOR TENDER
A	2022-09-13	ISSUED FOR APPROVAL

REVISIONS

PROJECT CONSULTANT

PROJECTNEERS CONSULTING ENGINEERS & PROJECT MANAGERS

PROJECTNEERS

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DRAWING CHECKS

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F.MPOFU	--	B.MDLULI	F.MPOFU

APPROVAL CONSULTANT

N.K. MPOFU

DATE	PR.ENG NO	
31-08-2022	20130388	THE ENGINEERING ACT OF THE PROJECTNEERS CONSULTING ENGINEERS & PROJECT MANAGERS OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL

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THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE
LV RETICULATION LAYOUT

DISCIPLINE

ELECTRICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

AS INDICATED

DRAWING NUMBER

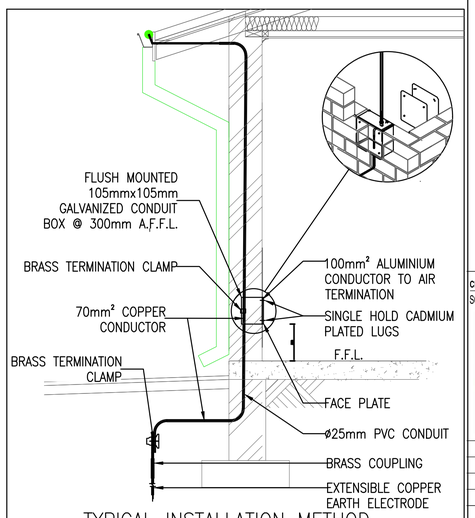
ORG	ORG	ZONE	FAC NO	CAT	VR	DIS	DRW NO	RV	REVISION
PJN	ZA	2022	2002	SANBI	TBG	EE	6300	TD	A1

LEGEND

- PROPOSED SUB-DISTRIBUTION KIOSK (BY OTHERS)
- PROPOSED LOW VOLTAGE CABLES
- NUMBER OF SLEEVES INDICATED THUS (X)
- (2) 2 No. 110mm PVC SLEEVES, ACROSS THE ROAD

ISSUED FOR TENDER

SITE PLAN – LIGHTNING PROTECTION
SCALE 1:250

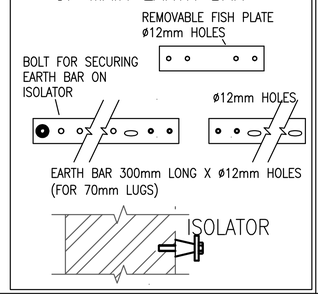


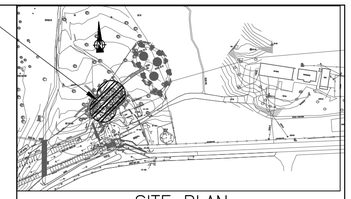
TYPICAL INSTALLATION METHOD OF TESTING BOX IN BRICK WALLING
N.T.S.

LEGEND

- 70mm BCEW BURIED AT 1000mm DEPTH, 1000mm AWAY FROM EDGE OF THE BUILDING
- ø16mm VERTICALLY DRIVEN 1.5m EXTENSIBLE EARTH ROD
- CADWELD CONNECTION
- EARTH LUG CONNECTION
- TINNED COPPER MAIN EARTH BAR MOUNTED ON WALL 350mm ABOVE TRENCH FLOOR
- CONNECTION TO SLAB REINFORCEMENT STEEL
- WALKWAY BONDING EARTH ELECTRODE 1500mm LONG, SOLID COPPER, ø16mm

ILLUSTRATION OF MAIN EARTH BAR





SITE PLAN
N.T.S

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THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE
LV RETICULATION LAYOUT

DISCIPLINE
ELECTRICAL

CONTRACT NUMBER
G306/2018

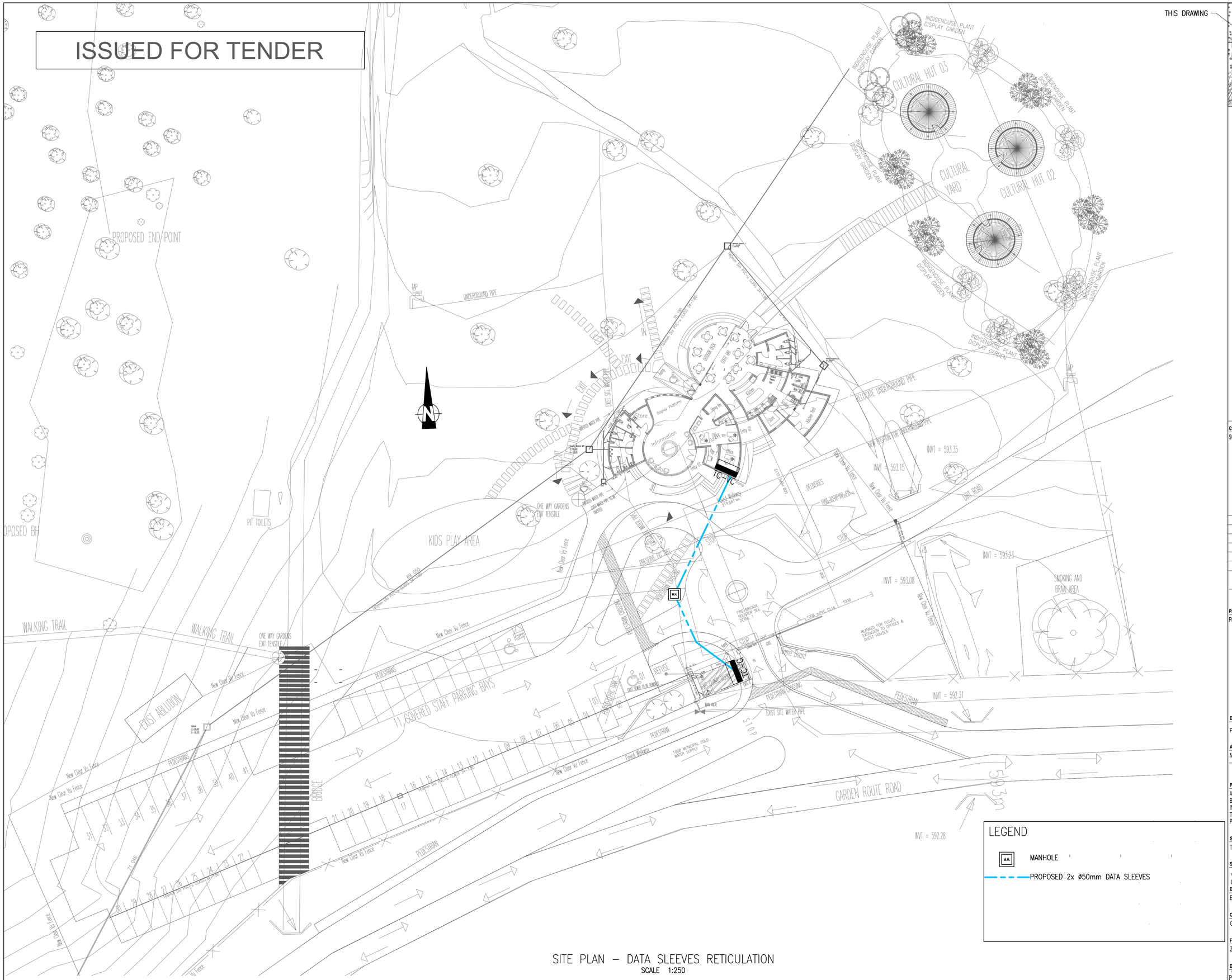
FILE NUMBER
ZA2018_2008

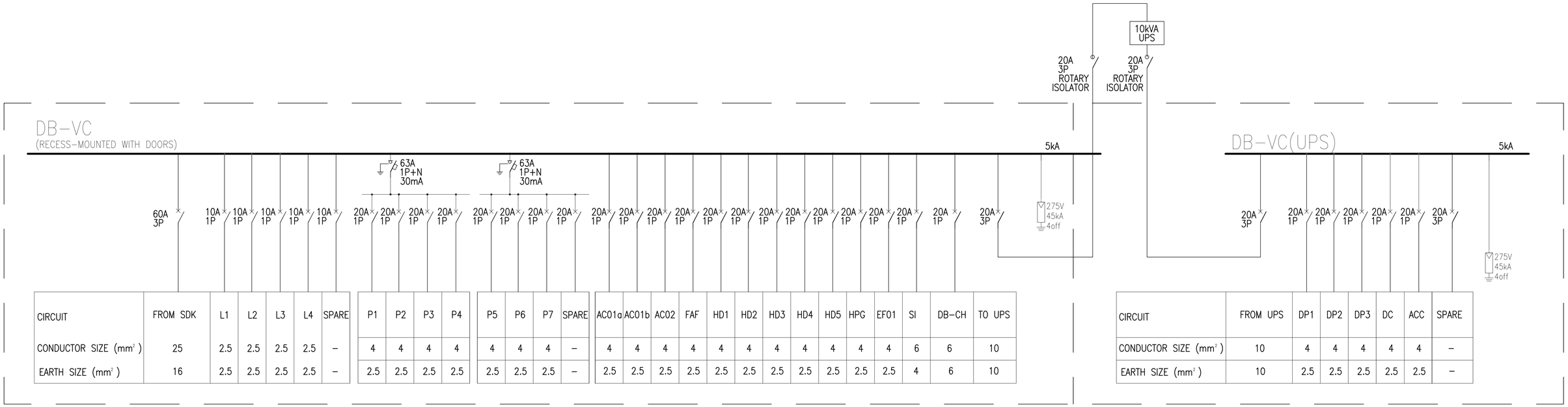
SCALE
AS INDICATED

DRAWING NUMBER

ORG	UNIT	LOC	TYP	PRO NO	CURF	SYS	FUNC	SEQ NO	SH	SHEET NO
PJN	ZA	2022	2002	SANBI	TBG		EE	6301	TD	A1

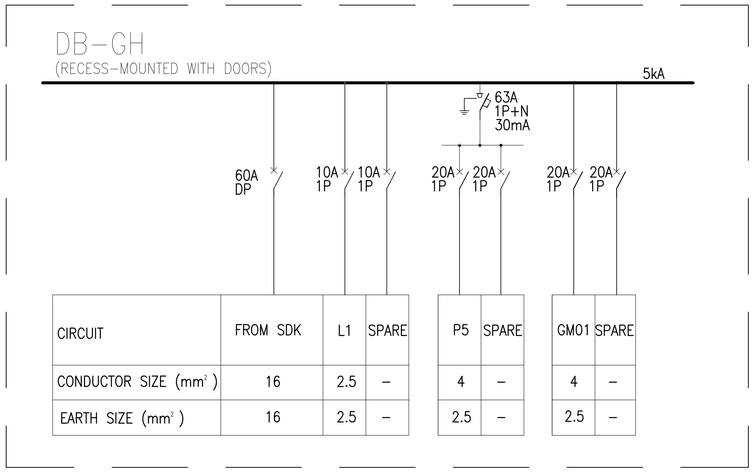
ISSUED FOR TENDER


PROPOSED END POINT
PIT TOILETS
KIDS PLAY AREA
WALKING TRAIL
WALKING TRAIL
EXIST ABLUTION
BRIDGE
11 COVERED STAFF PARKING BAYS
PEDESTRIAN
PEDESTRIAN
PEDESTRIAN
PEDESTRIAN CROSSING
REFUSE
Information
Display Platform
Store
Kitchen Yard
Office
Lobby 01
Lobby 02
Kitchen
Cafe
Cafe Bar
Outdoor Area
Deliveries
Exist Site Water Pipe
Fire Hydrant
Fire Hydrant Buffer 1 See Detail 1
Blanked For Future Extension To Offices & Guest Houses
Name Board
Stop
Stop
Stop

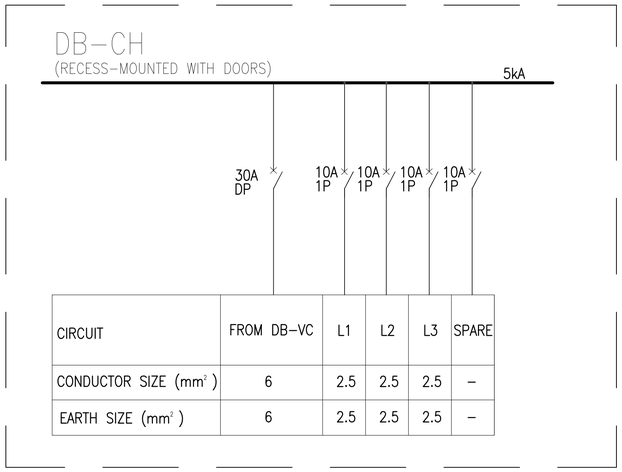


CIRCUIT	FROM SDK	L1	L2	L3	L4	SPARE	P1	P2	P3	P4	P5	P6	P7	SPARE	AC01a	AC01b	AC02	FAF	HD1	HD2	HD3	HD4	HD5	HPG	EF01	SI	DB-CH	TO UPS
CONDUCTOR SIZE (mm^2)	25	2.5	2.5	2.5	2.5	–	4	4	4	4	4	4	4	–	4	4	4	4	4	4	4	4	4	4	4	6	6	10
EARTH SIZE (mm^2)	16	2.5	2.5	2.5	2.5	–	2.5	2.5	2.5	2.5	2.5	2.5	2.5	–	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	4	6	10

CIRCUIT	FROM UPS	DP1	DP2	DP3	DC	ACC	SPARE
CONDUCTOR SIZE (mm^2)	10	4	4	4	4	4	–
EARTH SIZE (mm^2)	10	2.5	2.5	2.5	2.5	2.5	–



CIRCUIT	FROM SDK	L1	SPARE	P5	SPARE	GM01	SPARE
CONDUCTOR SIZE (mm^2)	16	2.5	–	4	–	4	–
EARTH SIZE (mm^2)	16	2.5	–	2.5	–	2.5	–



CIRCUIT	FROM DB-VC	L1	L2	L3	SPARE
CONDUCTOR SIZE (mm^2)	6	2.5	2.5	2.5	–
EARTH SIZE (mm^2)	6	2.5	2.5	2.5	–

PLEASE NOTE THE FOLLOWING;

-ELECTRICAL DISTRIBUTION BOARDS TO BE RECESS-MOUNTED WITH DOORS AND LEGEND CARD FITTED BEHIND THE DOOR
-COLOUR WHITE MOUNTED @ 1800mm MEASURED FROM THE TOP OF THE DB.
-INCOMING CABLES TO ENTER FROM THE BOTTOM OF THE DB
-OUTGOING CABLES TO EXIT THE DB FROM THE TOP/BOTTOM
-ALL EQUIPMENTS IN THE DB TO BE CBI
-DISTRIBUTION BOARD SHOP DRAWINGS TO BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE

ISSUED FOR TENDER

LEGEND

xA xP	ON LOAD ISOLATOR (xA, rating Amps)(xP, Poles)
xA xP xmP	EARTH LEAKAGE (xA, rating Amps) (xP, Poles)(xmA, relay value)
T N xA xP	CONTACTOR (xA, rating Amps) (xP, Poles)
xA xP xmP	EARTH LEAKAGE WITH OVERLOAD (xA, rating Amps)(xP, Poles) (xmA, relay value)
xkA	3PHASE, NEUTRAL & EARTH BAR (xkA, fault level rating)
xV xkA	SURGE ARRESTOR(xV, rating level) (xkA, fault level rating)

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F.MPOFU	--	B.MDLULI	F.MPOFU

APPROVAL CONSULTANT
N.K. MPOFU

DATE	PNR NO. NC	
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SITE
THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE
SINGLE LINE DIAGRAM

DISCIPLINE
ELECTRICAL

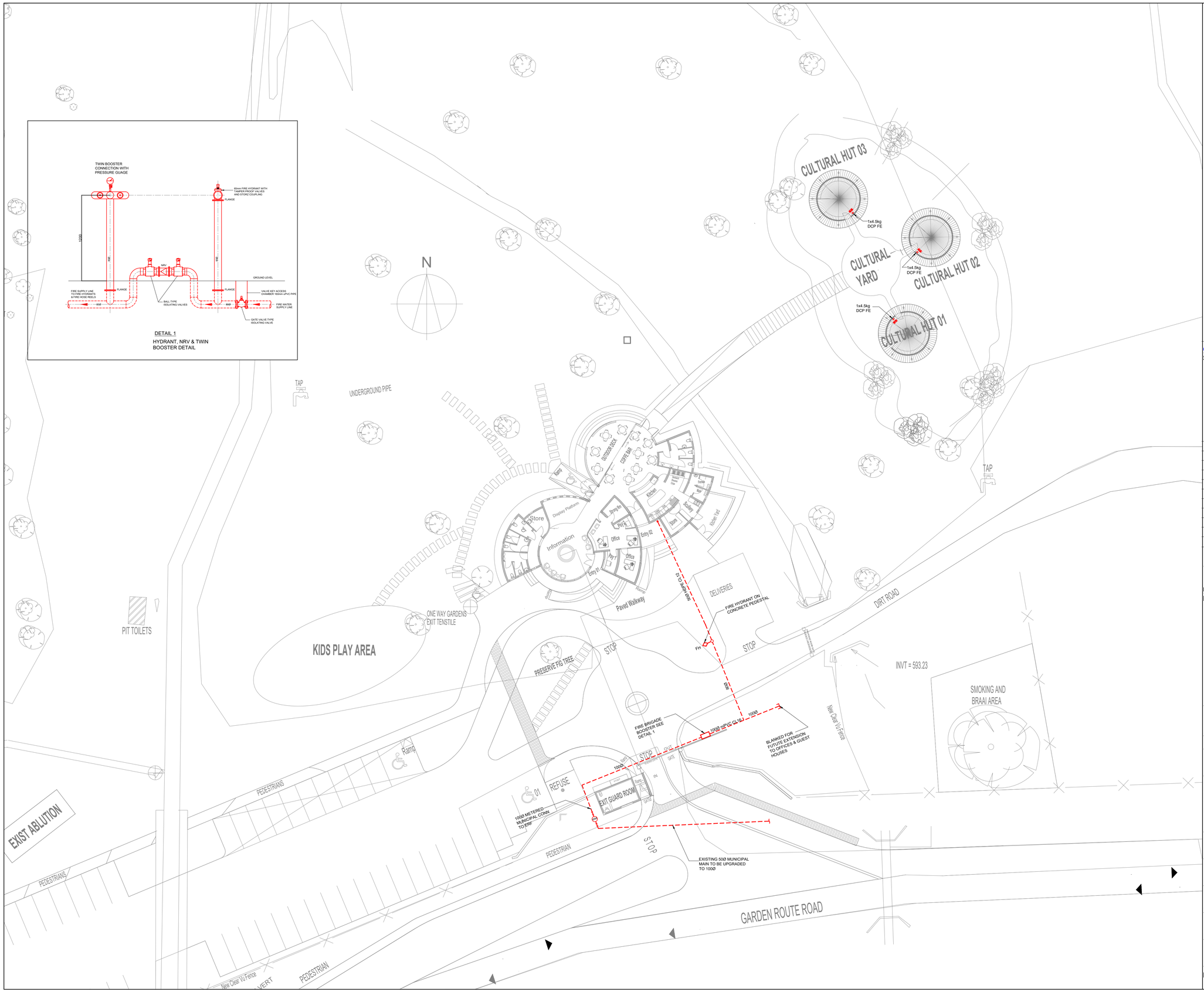
CONTRACT NUMBER
G306/2018

FILE NUMBER
ZA2018_2006

SCALE
AS INDICATED

DRAWING NUMBER

ORG	LOC	YEAR	PROJ NO	CART	VOL	DISC	DRAW NO	RV	PAPER SIZE
PJN	ZA	2022	2002	SANBI	TBG	EE	6400	TD	A1



NOTES

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE
SITE FIRE WATER RETICULATION LAYOUT

DISCIPLINE

MECHANICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

ZA2018_2008

SCALE

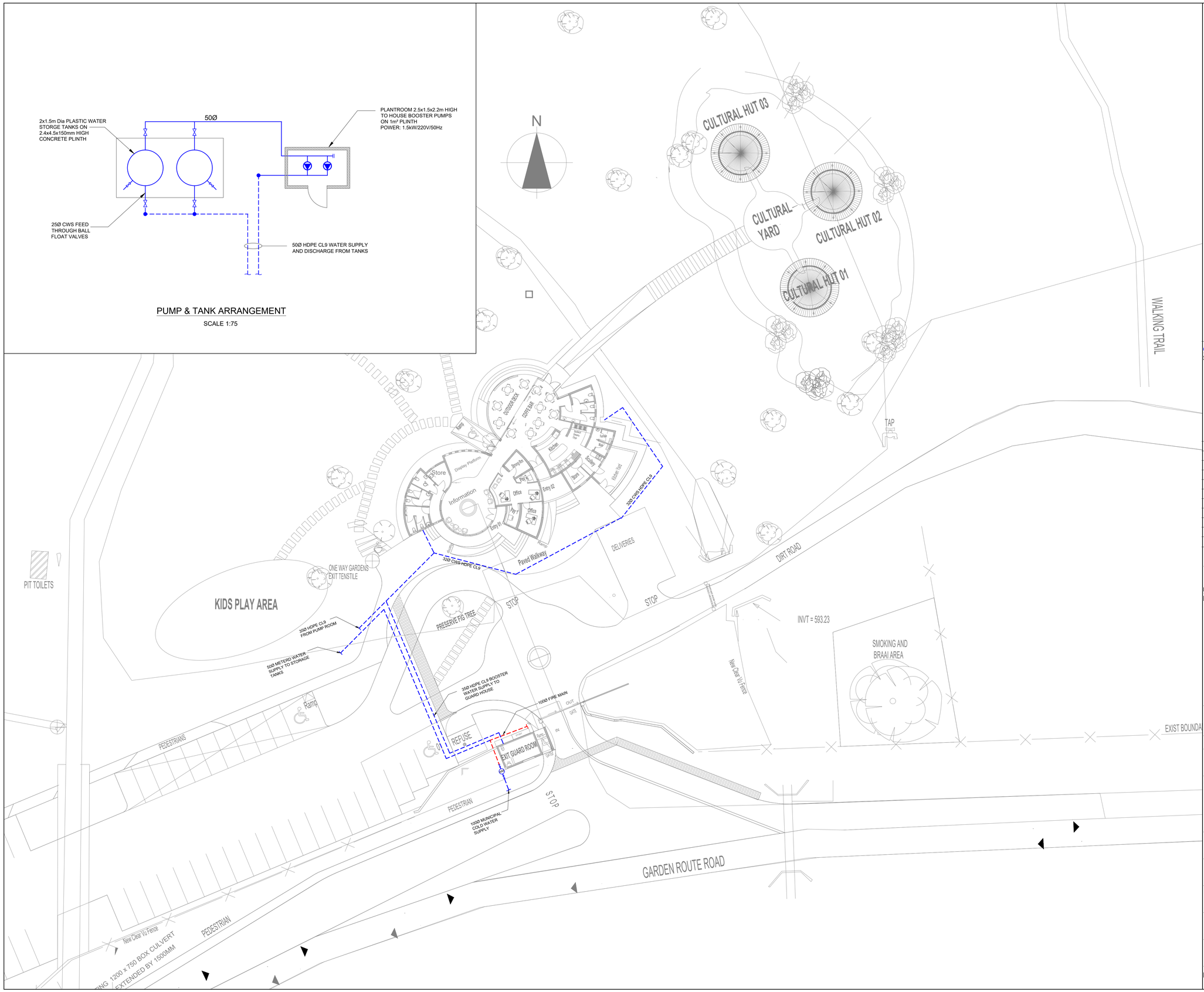
1:250

DRAWING NUMBER

PJN	ZONE	DISC	PROJ NO	CLASS	VOL	SHEET	DRAW NO	REV	PAPER SIZE
PJN_ZA_2022_2002_SANBI_		TBG_	ME_	5001_				R00	A1

PUMP & TANK ARRANGEMENT

SCALE 1:75



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SHEET TITLE

VISITORS CENTRE
SITE WATER SUPPLY RETICULATION LAYOUT

DISCIPLINE

MECHANICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

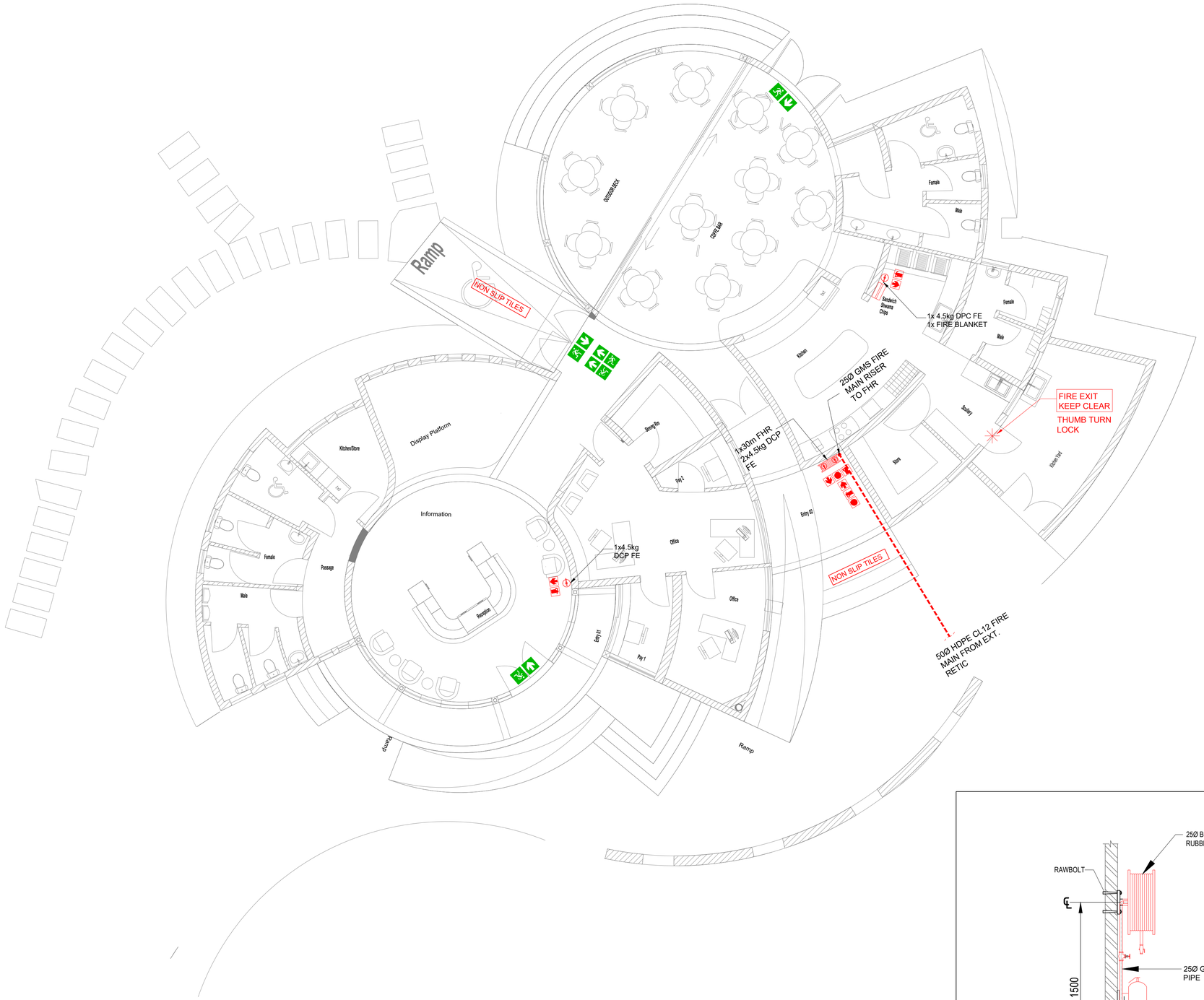
ZA2018_2008

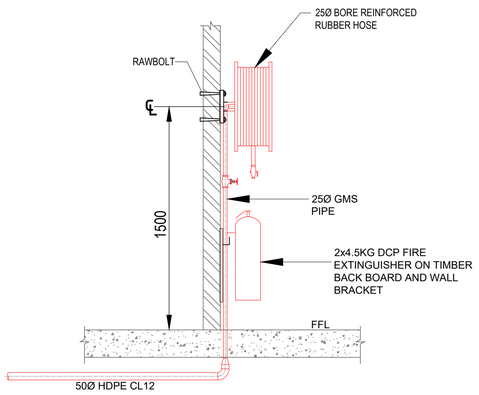
SCALE

1:250

DRAWING NUMBER

ORG	DISC	SHEET	REG NO	CLIENT	SITE	YEAR	SERIAL NO	REV	SHEET SIZE
PJN	ZA	2022	2002	SANBI_	TBG_		ME_5002	R00	A1





HOSE REEL / EXTINGUISHER DETAIL

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LEGEND:

ESCAPE ROUTE
E1 EXIT TYPE 1
E2 EXIT TYPE 2
E3 EXIT TYPE 3
E4 EXIT TYPE 4
F4
F5
F6
F7
F8
F9
DOOR FITTED WITH THUMB TURN LOCK

CLIENT
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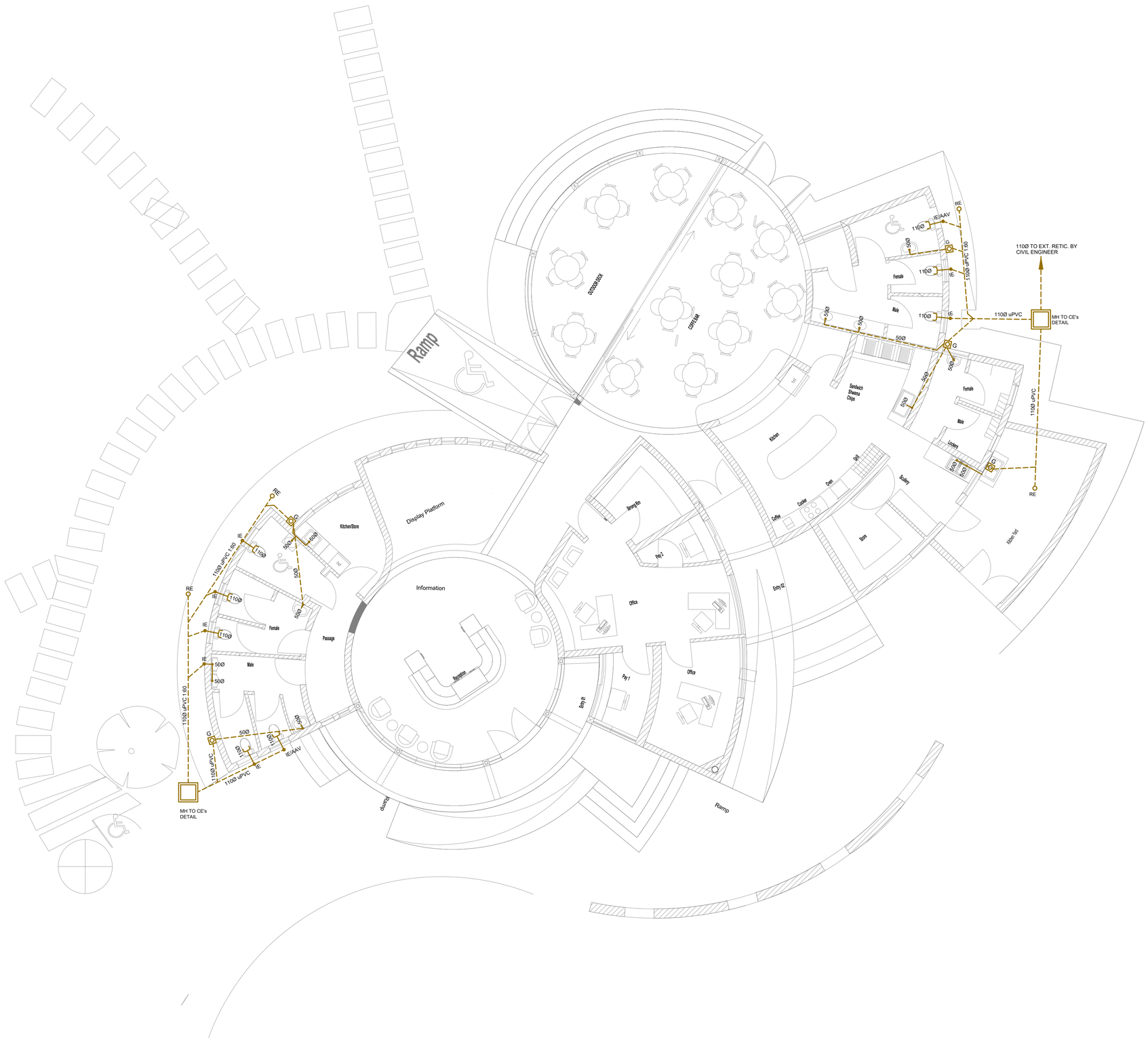
ZA2018_2008

SCALE
1:75

DRAWING NUMBER
PJN_ZA_2022_2002_SANBI_ TBG_ ME_5003_R00

PAPER SIZE
A1



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4. ALL PORTABLE WATER PIPEWORK ABOVE GROUND TO BE COPPER SANS 460 UNLESSS OTHERWISE NOTED. UNDERGROUND PIPES TO BE HDPE.
5. DRAINAGE & WATER INSTALLATION TO BE IN ACCORDANCE TO SANS 0252 : 2 AND SANS 10252 : 1.
6. ALL DOMESTIC HOT WATER SUPPLY & STORAGE VESSELS PIPES TO BE INSULATED TO SANS 10400 - XA AND SANS 204.
7. DRAINAGE/WASTE PIPES TO BE IN uPVC TO SANS 967.
8. DRAINAGE PIPE OUTSIDE BUILDING SHOWN FOR GUIDANCE ONLY. REFER TO CIVIL ENGINEERS DRAWINGS FOR DETAIL.

DRAINAGE LEGEND

	PIPE AT HIGH LEVEL
	PIPE BELOW GROUND
	PIPE ABOVE GROUND
	DIRECTION OF FLOW
G	TRAPPED GULLY
FD	DOUBLE SEAL STAINLESS STEEL FLOOR DRAIN
RE	RODDING EYE
CE	CLEANING EYE
AAV	AIR ADMITTANCE VALVE
	VENT COWL
WP	WASTE PIPE
VP	VENT PIPE
	PIPE RISER
	PIPE DROPPER

CLIENT

SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE

SANBI Biodiversity for Life

South African National Biodiversity Institute

REV NO.	DATE	DESCRIPTION
R00	2022-09-13	ISSUED FOR REVIEW.

REVISIONS

PROJECT CONSULTANT

PROJECTNEERS CONSULTING ENGINEERS & PROJECT MANAGERS

PROJECTNEERS

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DRAWING CHECKS

DESIGNED	DRAWN CHECKED	DRAWN	DRAWING CHECKED
S.MUTARINGE	S.MUTARINGE	I.SVODZIWA	S.MUTARINGE

APPROVAL CONSULTANT

N.K. MPOFU

DATE	PROF. REG. NO	THE MASTER HELD AT THE PROJECTNEERS CONSULTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL
31-08-2022	20130388	

PROJECT NAME

ASSESSMENT, DESIGN & PROJECT MANAGEMENT OF REQUIRED NEW BUILDINGS & REPAIRS, RENOVATIONS & UPGRADES TO VARIOUS INFRASTRUCTURE ASSETS IN THE THOHOYANDOU BOTANICAL GARDEN, THOHOYANDOU, & NATIONAL ZOOLOGICAL GARDEN CAMPUSES BASED IN PRETORIA & MOKOPANE

SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE
DRAINAGE LAYOUT

DISCIPLINE

MECHANICAL

CONTRACT NUMBER

G306/2018

FILE NUMBER

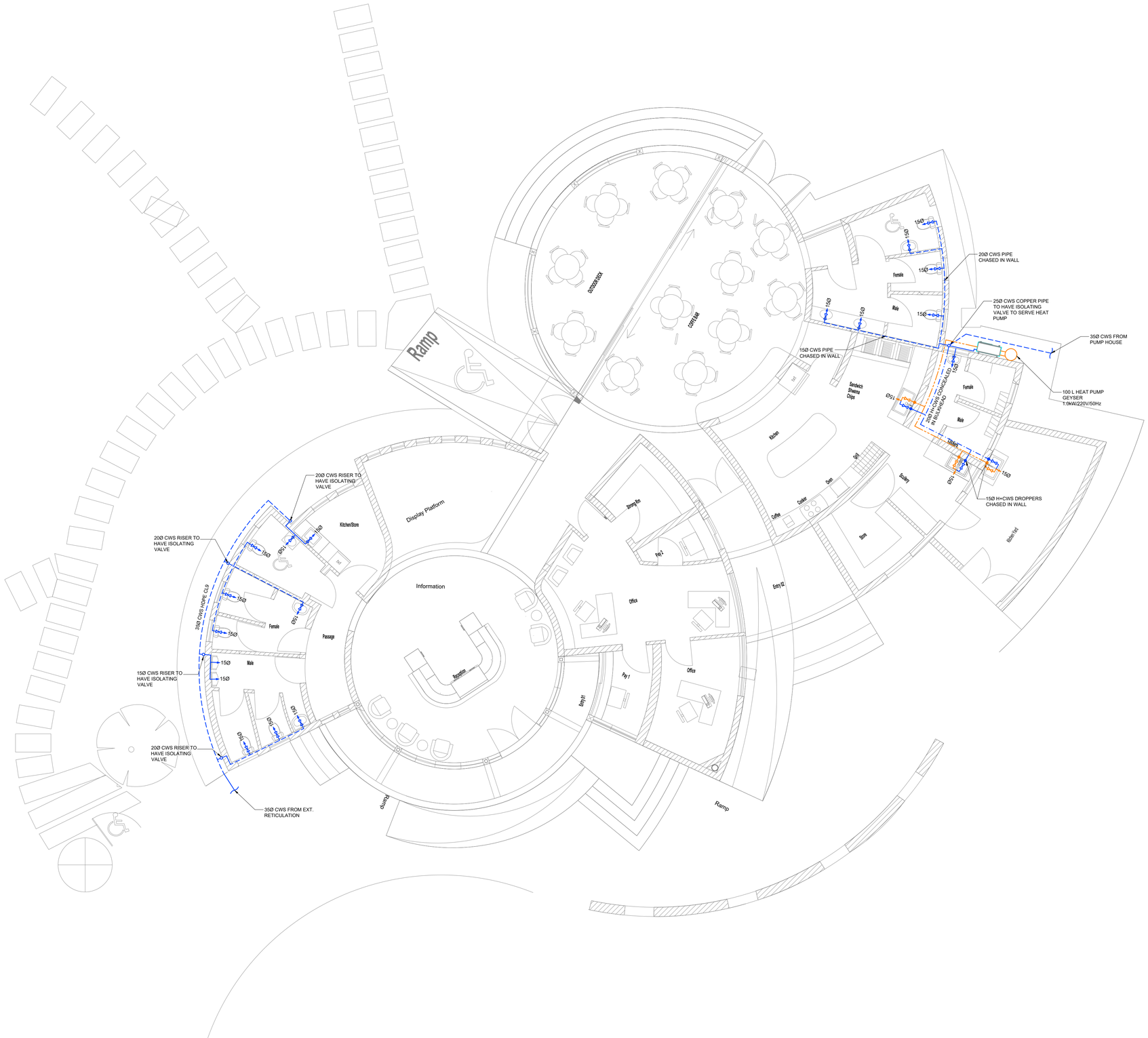
ZA2018_2008

SCALE

1:75

DRAWING NUMBER

PRJ	DCN	DWG	REG. NO	CLIENT	SITE	ROLE	SERIAL NO.	REV	SHEET SIZE
PJN	ZA	2022	2002	SANBI	TBG	ME	5004	R00	A1



NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS DRAWINGS.
2. DO NOT SCALE FROM THE DRAWING, THE CONTRACTOR MUST CHECK AND CONFIRM ALL DIMENSIONS INCLUDING LEVELS ON SITE WITH THE SERVICES ENGINEERS.
3. ANY QUERIES AND/OR DISCREPANCIES MUST BE REFERRED TO THE SERVICES ENGINEER BEFORE MATERIALS ARE ORDERED AND BEFORE EXECUTION ON SITE.
4. ALL PORTABLE WATER PIPEWORK ABOVE GROUND TO BE COPPER SANS 460 UNLESSS OTHERWISE NOTED. UNDERGROUND PIPES TO BE HDPE.
5. DRAINAGE & WATER INSTALLATION TO BE IN ACCORDANCE TO SANS 0252 : 2 AND SANS 10252 : 1.
6. ALL DOMESTIC HOT WATER SUPPLY & STORAGE VESSELS PIPES TO BE INSULATED TO SANS 10400 - XA AND SANS 204.
7. DRAINAGE/WASTE PIPES TO BE IN uPVC TO SANS 967.
8. DRAINAGE PIPE OUTSIDE BUILDING SHOWN FOR GUIDANCE ONLY. REFER TO CIVIL ENGINEERS DRAWINGS FOR DETAIL.

WATER LEGEND

- PIPES BELOW GROUND
- PIPES ABOVE GROUND
- PIPES AT HIGH LEVEL
- ISOLATING VALVE
- COMBINED PRESSURE/TEMP RELIEF VALVE
- PRESSURE REDUCING VALVE
- CWS — COLD WATER SUPPLY
- R — RISER (FROM BELOW / TO ABOVE)
- D — DROPPER (FROM ABOVE / TO BELOW)

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

VISITORS CENTRE
WATER SUPPLY LAYOUT

DISCIPLINE

MECHANICAL

CONTRACT NUMBER

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FILE NUMBER

ZA2018_2008

SCALE

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DRAWING NUMBER

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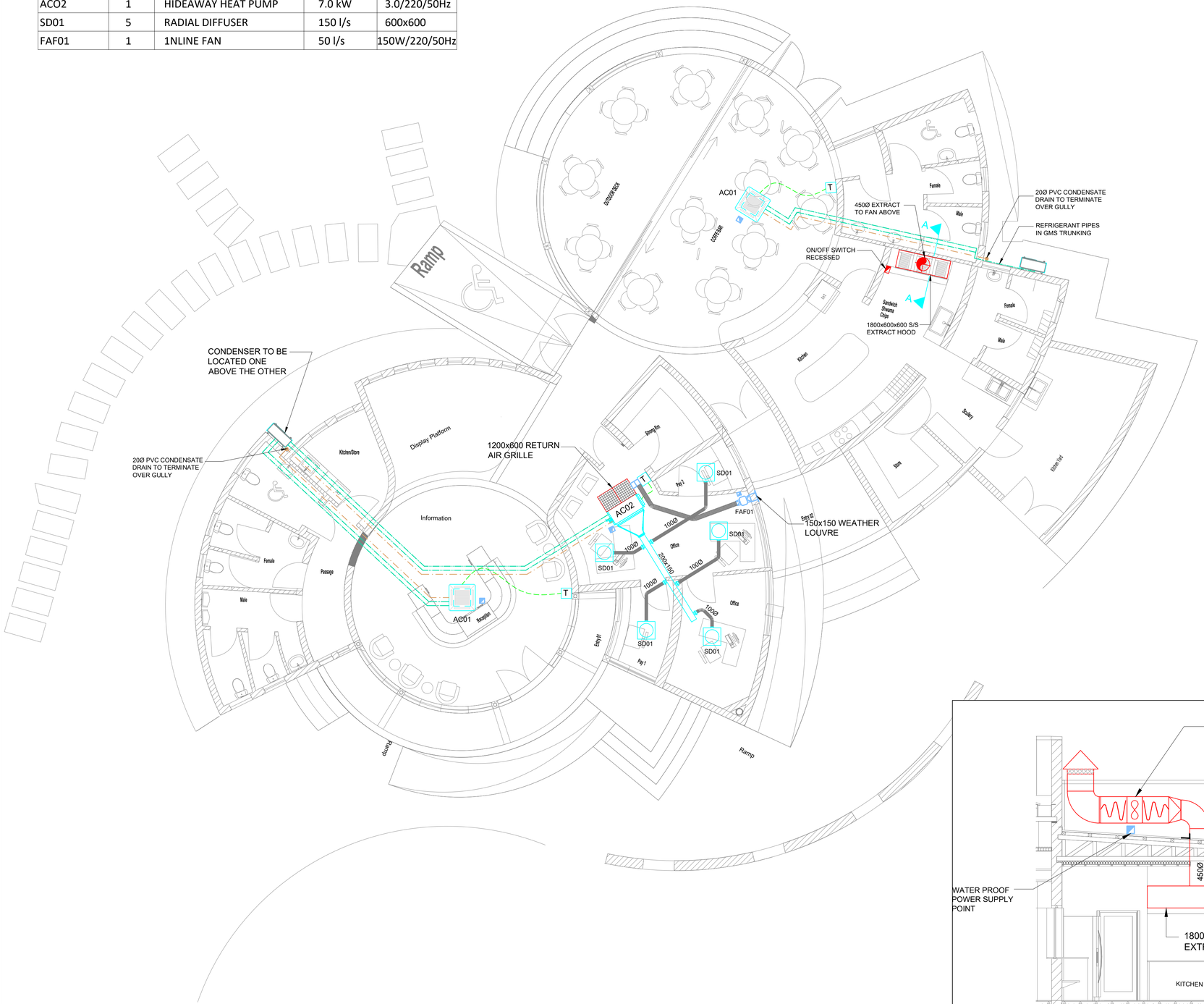
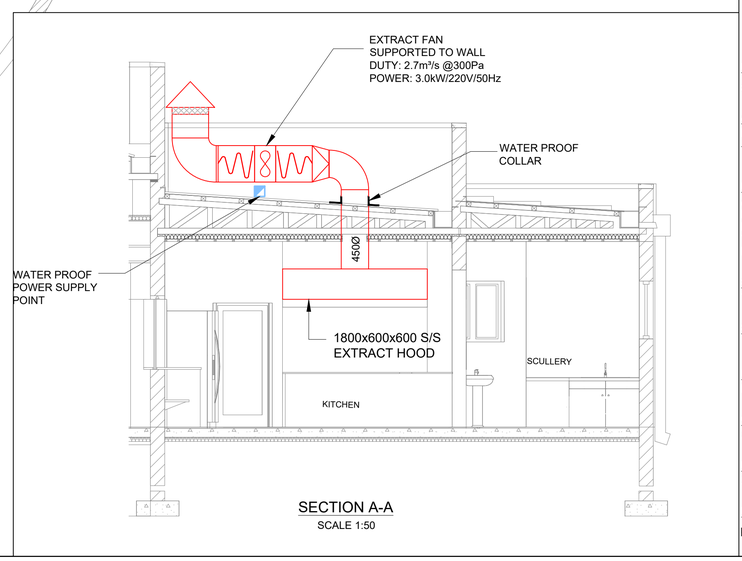
PJN	ZA	2022	2002	SANBI_	TBG_	ME	5005	R00	A1

SCHEDULE OF HVAC EQUIPMENT

REF	QTY	TYPE	CAPACITY	POWER REQ"D kW/V/HZ
AC01	2	HEAT PUMP CASSETTE	7.0 kW	3.0/220/50Hz
ACO2	1	HIDEAWAY HEAT PUMP	7.0 kW	3.0/220/50Hz
SD01	5	RADIAL DIFFUSER	150 l/s	600x600
FAF01	1	1NLINE FAN	50 l/s	150W/220/50Hz





SECTION A-A
SCALE 1:50

NOTES

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T HARD WIRED CONTROLLER 1500mm AFFL

POWER POINT

FD FIRE DAMPER

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APPROVAL CONSULTANT
N.K. MPOFU
DATE: 31-08-2022 | PROF. REG. NO: 20130388 | THE MASTER HELD AT THE PROJECTNEERS CONSULTING MIDRAND OFFICE BEARS THE ORIGINAL SIGNATURE OF APPROVAL

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SITE
THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE
VISITORS CENTRE - HVAC LAYOUT

DISCIPLINE
MECHANICAL

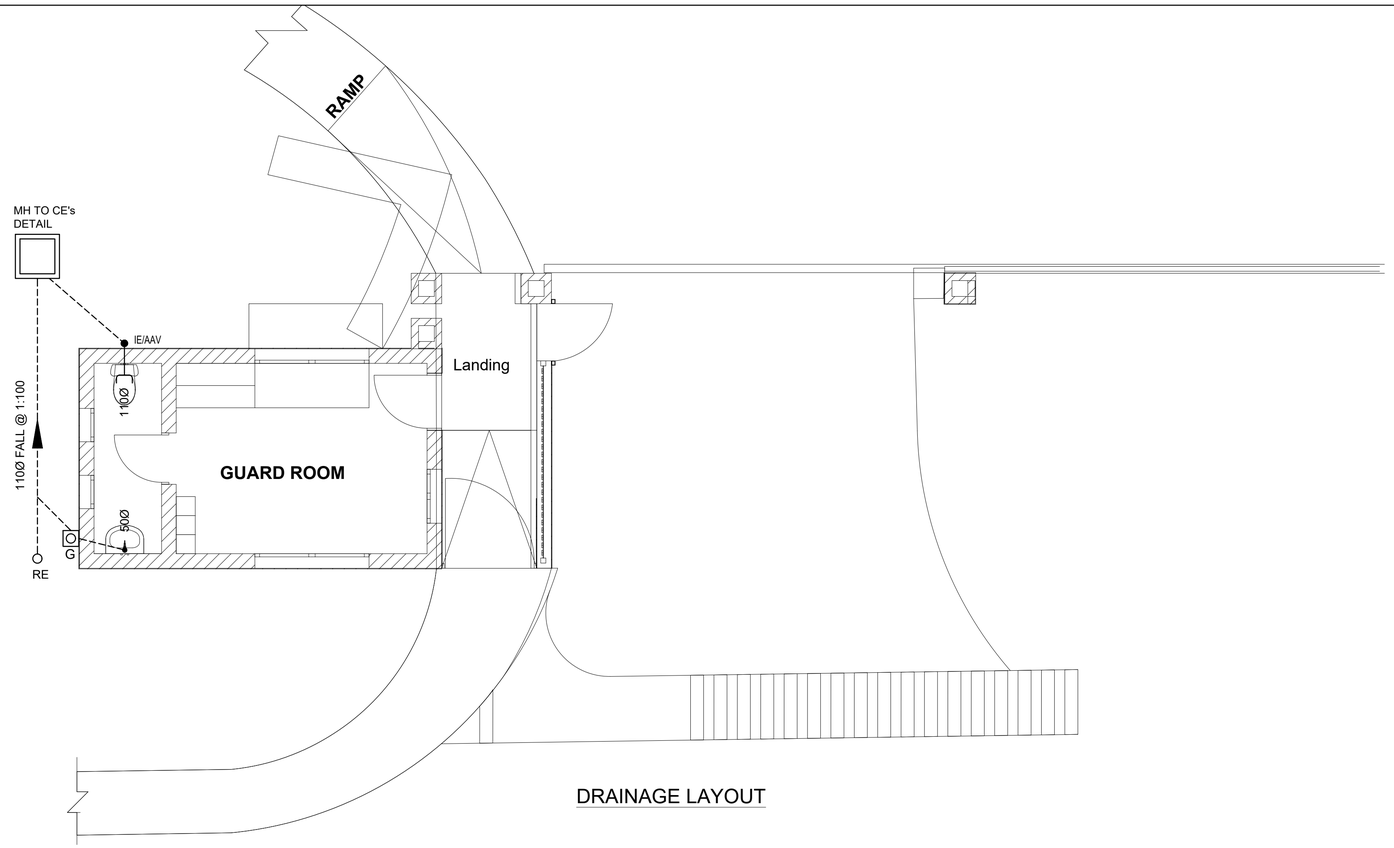
CONTRACT NUMBER
G306/2018

FILE NUMBER
ZA2018_2008

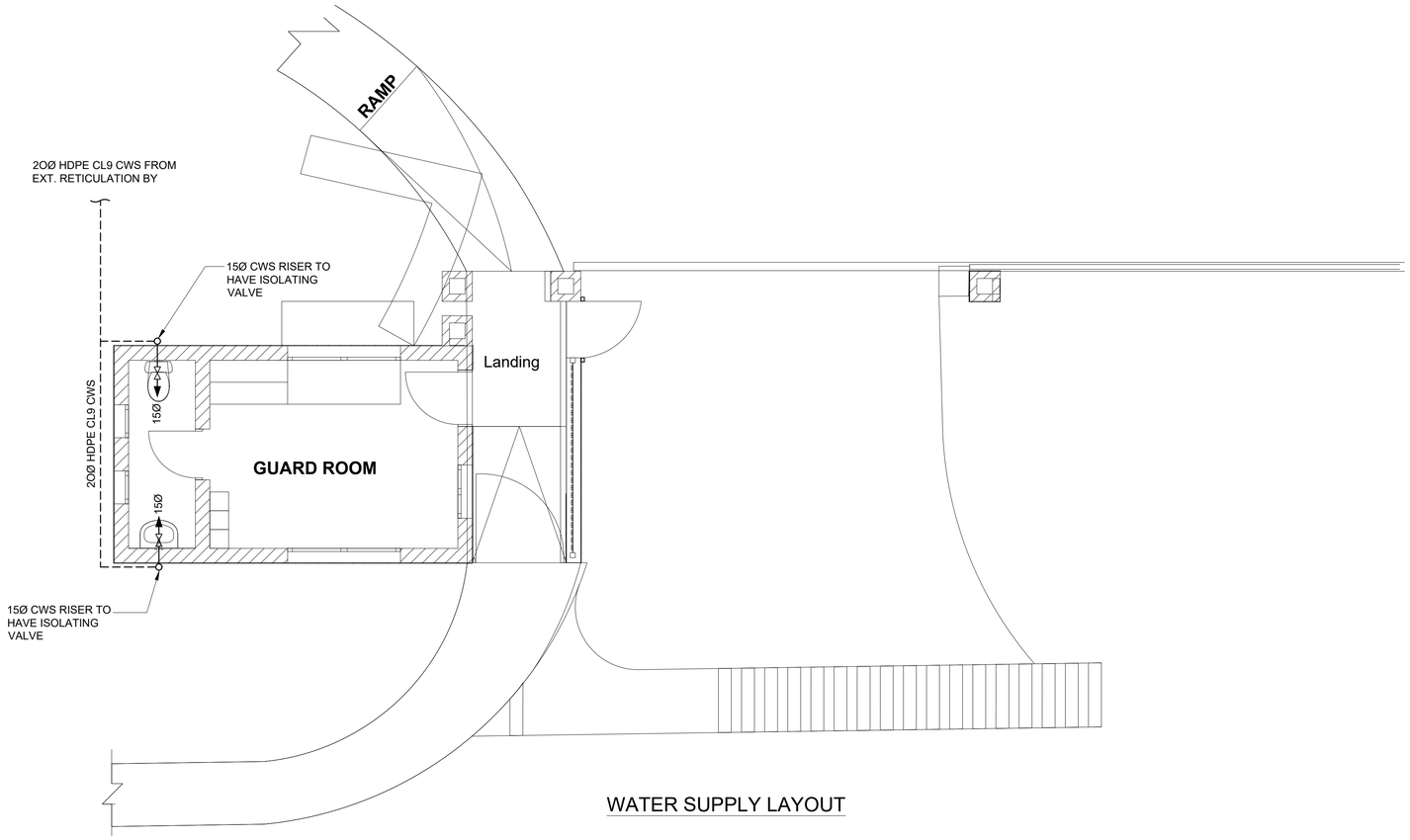
SCALE
1:75

DRAWING NUMBER
ORI | DISC | SUBT | FILE NO | CLASF | SYS | FUNC | SERIAL NO | REV
PJN_ZA_2022_2002_SANBI_ TBG_ ME_5006_R00

SHEET NO
A1



DRAINAGE LAYOUT



WATER SUPPLY LAYOUT

NOTES

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6. ALL DOMESTIC HOT WATER SUPPLY & STORAGE VESSELS PIPES TO BE INSULATED TO SANS 10400 - XA AND SANS 204.
7. REFER TO EQUIPMENT DATA SHEETS FOR EQUIPMENT SPECIFICATION.
8. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SCHEMATIC DRAWINGS.

DRAINAGE LEGEND

- VERTICAL DROP
- PIPE BELOW GROUND
- PIPE ABOVE GROUND
- DIRECTION OF FLOW
- G — TRAPPED GULLY
- RW — RODDING WAY
- IE — INSPECTION EYE
- AAV — AIR ADMITTANCE VALVE

WATER LEGEND

- ISOLATING VALVE
- R — RISER (FROM BELOW / TO ABOVE)
- D — DROPPER (FROM ABOVE / TO BELOW)

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SITE

THOHOYANDOU BOTANICAL GARDENS

SHEET TITLE

GUARD HOUSE
WET SERVICES LAYOUT

DISCIPLINE

MECHANICAL

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G306/2018

FILE NUMBER

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SCALE

1:50

DRAWING NUMBER

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PJN	ZA	2022	2002	SANBI	TBG	ME	5005	R00	A1