INDEPENDENT DEVELOPMENT TRUST

ANNEXURE 2

THE DEMOLITION OF 112 PREFAB HOUSES (INCLUDING HOUSES UNDER THE ESKOM SERVITUDE) AND ERECTING OF 113 THREE BEDROOM BRICK HOUSES.

VOLUME 3 OF 3

BID DOCUMENT

Bid No.: DPWI01WCAN001-DB_CON001-CONTRACTOR

VOLUME 1

BIDDER'S INFORMATION
(Must be completed by Bidder)

Company Name	
Contact Person	
Cell / Tel Number	
Fax Number	
E-mail Address	
CSD Number	

ADVERT DATE: 16 SEPTEMBER 2025

PREPARED FOR:

THE INDEPENDENT DEVELOPMENT TRUST

IDT Western Cape Regional Office 14th
Floor, Customs House Heerengracht
Street, Foreshore, Cape Town, 8001

CLOSING DATE AND TIME: 15 OCTOBER 2025, 12H00

Enquiries Email Address: dpwi01wcan-tenders@idt.org.za;

Bid Document to Procure a design and build contractor. This document contains the Term of Reference, the Bid Data, the Returnable Documents, the Special Condition of Bid and the Contract Data.

NOTE: THE TWO ENVELOPE PROCEDURE WILL BE FOLLOWED FOR THIS TENDER. NON-COMPLIANCE WILL RENDER YOUR TENDER INVALID.

INDEPENDENT DEVELOPMENT TRUST

ANNEXURE 2

ADDITIONAL INFORMATION / SPECIFICATIONS BASED ON STAGE 2 REPORT

FOR

WCS: 045142 - THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

MAY 2025

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ANNEXURE 2.1: PROJECT MANAGEMENT

1 INTRODUCTION

The project mandates the professional team to oversee the demolition of the existing 112 prefabricated houses, foundation slab, the Domestic Quarters and to provide the most cost-effective solution for constructing 113 three-bedroom residential units, including all required infrastructure, in full compliance with applicable standards and regulations.

Stage 1 was approved on 6 August 2024, after which the Virtual Consortium proceeded to Stage 2: Concept Design. The purpose of Stage 2 was to define the preferred development approach, identify key project milestones, outline critical activities, and assess the necessary resources to implement the project in alignment with the client's brief.

Stage 2 has since been approved (refer to Annexure 1), and this report serves as an addendum to highlight specific recommendations and additional information requested during the Stage 2 approval process. It presents refined information from the relevant Professional Service Providers (PSPs), to enhance the accuracy and integration of the project's foundation moving forward.

The updated information is summarised herein, with detailed PSP reports and supporting documentation attached as Annexure 2.

2 PROGRAMME AND MILESTONES

The following milestones are relevant to this tender:

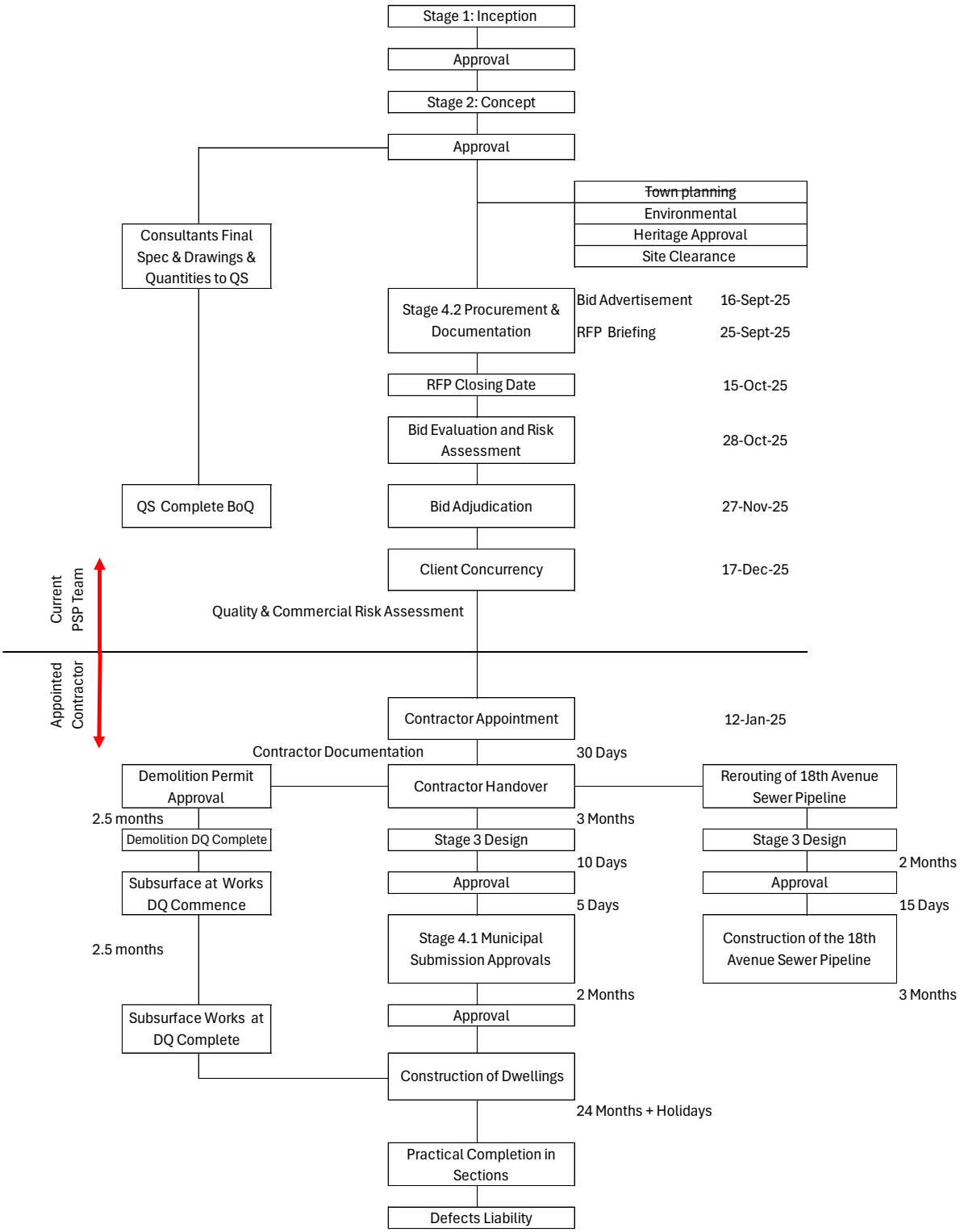
- **Bid Advertisement:** 16 September 2025
- **RFP Briefing & Clarification Meeting:** 25 September 2025
- **RFP Closing Date:** 15 October 2025
- **Bid Evaluation and Risk Assessment:** 15 – 28 October 2025
- **Bid Adjudication (BAC):** 7 – 27 November 2025
- **Client Concurrency Review:** 3 – December 2025
- **Contractor Appointment:** 12 January 2026

The appointed management contractor will assume responsibility for the subsequent phases of the project, including Detail Design (Stage 3), Municipal Submission (Stage 4.1), Construction (Stage 5), and Completion (Stage 6). Practical completion for the whole of the works is targeted for 22 September 2028. The incoming Professional Services Provider (PSP) team will be required to prepare and manage a detailed programme aligned with the approved project timelines.

2.1 MILESTONES

VIRTUAL CONSORTIUM

ACACIA PARK: MILESTONES



2.2 PROJECT PROGRAMME

The Detailed Project Programme is included as **Annexure 2.1A**.

2.3 DECANTING AND CONSTRUCTION PROGRAMME OVERVIEW

A phased demolition and construction programme has been developed for this project, structured around demolition and enabling works phase (5 months) and four sequential construction cycles over a total duration of 24 months. The approach ensures continuous workflow, coordinated decanting, and minimal disruption to residents.

Enabling Works: The programme begins with five months of enabling works at the Domestic Quarters. This includes the demolition, site preparation, subsurface works, and necessary infrastructure to support the start of construction for the Terrace buildings.

Cycle 1: Construction begins with vacant Terrace units (Domestic Quarters), which do not require decanting. This first cycle runs for six months, after which the completed units are used to accommodate residents as units are completed.

Cycle 2: Demolition for Cycle 2 takes place during the final 2 months of Cycle 1. Once the units are cleared, construction of 28 new units commences and continues for six months. Decanting involves moving 16 families into the newly completed Cycle 1 units and 12 families into Mopane Terrace.

Cycle 3: Demolition for Cycle 3 occurs during the last 2 months of Cycle 2. Construction follows immediately and spans six months, supported by decanting arrangements consistent with earlier cycles.

Cycle 4: Demolition for the final batch of units occurs during the last 2 months of Cycle 3 and 4. These are the last units to be replaced. Construction in Cycle 4 proceeds for six months, concluding the full redevelopment programme.

Programme Sequencing and Overlap: Each cycle includes a planned overlap where demolition for the next phase is integrated into the final stage of the preceding cycle. This ensures continuity of work and efficient use of decanting resources.

Decanting Strategy: A maximum of 28 families are decanted per cycle—16 into newly completed units and 12 into Mopane Terrace. This staged approach keeps temporary accommodation requirements manageable.

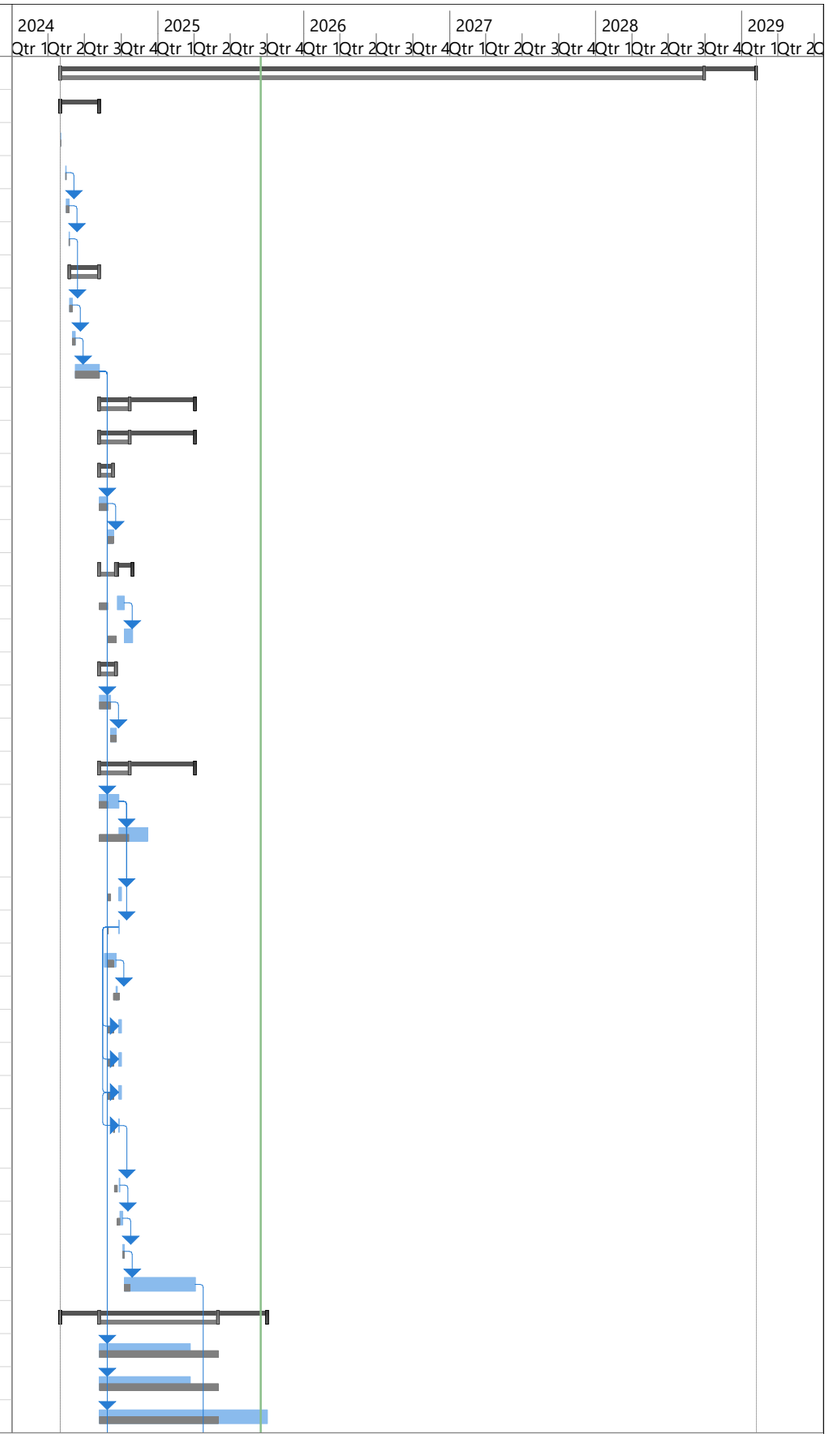
Overall Duration: The total construction period for the 113 units is 24 months, excluding five months allocated for enabling works. The phased and overlapping nature of the programme allows for streamlined delivery and reduced displacement periods for residents.

18th Avenue Sewer Pipeline: Rerouting of the sewer line from the military base, around the retention pond to the existing manhole located at 18th Avenue.

A provisional amount is allowed for decanting of units during the contract period.

The proposed demolition and decanting programme is included as **Annexure 2.1B.**

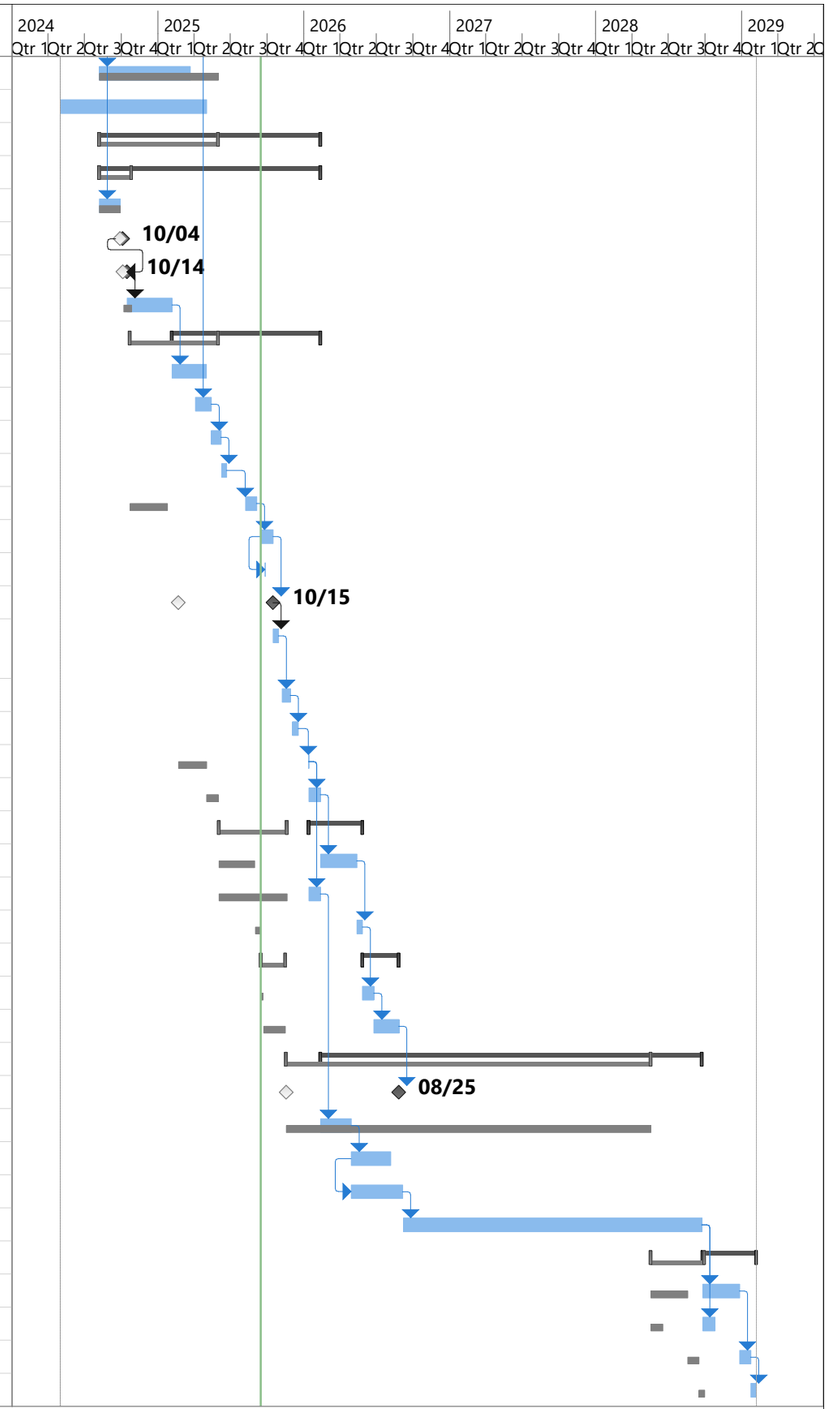
ID	Task Mode	Task Name	% Work Complete	Duration	Start	Finish	Predecessors
1		**Acacia Park 113 New Units**	**0%**	**1244 days**	**Wed 24/05/01**	**Mon 29/02/05**	
2		**STAGE 1**	**0%**	**70 days**	**Wed 24/05/01**	**Tue 24/08/06**	
3		Commencement	100%	1 day	Wed 24/05/01	Wed 24/05/01	
4		Client Brief	100%	1 day	Tue 24/05/14	Tue 24/05/14	
5		Review analyse client requirements	100%	6 days	Wed 24/05/15	Wed 24/05/22	4
6		Review meeting with client	100%	1 day	Thu 24/05/23	Thu 24/05/23	5
7		**Report**	**0%**	**53 days**	**Fri 24/05/24**	**Tue 24/08/06**	
8		Compile and submit Stage 1 report (Draft)	100%	5 days	Fri 24/05/24	Thu 24/05/30	6
9		Compile and submit Stage 1 report (Final)	100%	5 days	Fri 24/05/31	Thu 24/06/06	8
10		Client review and approval	100%	43 days	Fri 24/06/07	Tue 24/08/06	9
11		**STAGE 2**	**0%**	**172 days**	**Wed 24/08/07**	**Thu 25/04/03**	
12		**Concept design**	**0%**	**172 days**	**Wed 24/08/07**	**Thu 25/04/03**	
13		**Land Survey Process**	**0%**	**25 days**	**Wed 24/08/07**	**Tue 24/09/10**	
14		Land survey	100%	15 days	Wed 24/08/07	Tue 24/08/27	10
15		Submit land survey information	100%	10 days	Wed 24/08/28	Tue 24/09/10	14
16		**Geotechnical Studies**	**0%**	**27 days**	**Fri 24/09/20**	**Mon 24/10/28**	
17		Geotechnical Inspections	100%	12 days	Fri 24/09/20	Mon 24/10/07	
18		Review and finalise brief	100%	15 days	Tue 24/10/08	Mon 24/10/28	17
19		**TIS process**	**0%**	**30 days**	**Wed 24/08/07**	**Tue 24/09/17**	
20		Start process and draft TIS report	100%	20 days	Wed 24/08/07	Tue 24/09/03	10
21		Obtain information and draft Final TIS Report	100%	10 days	Wed 24/09/04	Tue 24/09/17	20
22		**Concept Design Process**	**0%**	**172 days**	**Wed 24/08/07**	**Thu 25/04/03**	
23		Architectural Draft Designs	100%	34 days	Wed 24/08/07	Mon 24/09/23	10
24		H&S consultant and request design input and baseline risk assessment	100%	53 days	Tue 24/09/24	Thu 24/12/05	23
25		SANS XA desktop study	100%	5 days	Tue 24/09/24	Mon 24/09/30	23
26		Issue Architectural site layouts	100%	1 day	Tue 24/09/24	Tue 24/09/24	23
27		Civil Infrastructure Design (Sewer, water, SW, Roads etc)	100%	21 days	Mon 24/08/19	Mon 24/09/16	
28		Update Stormwater Management, Sewer and Water Plan	100%	3 days	Tue 24/09/17	Thu 24/09/19	27
29		Electrical design	100%	5 days	Tue 24/09/24	Mon 24/09/30	26SS
30		Mechanical design	100%	5 days	Tue 24/09/24	Mon 24/09/30	26SS
31		Structural Design	100%	5 days	Tue 24/09/24	Mon 24/09/30	26SS
32		Issue engineering consultant information and reports to QS and Architects	100%	1 day	Tue 24/09/24	Tue 24/09/24	31SS
33		Architect to incorporate all engineering design input	100%	2 days	Wed 24/09/25	Thu 24/09/26	32
34		Architect's final concept design	100%	5 days	Fri 24/09/27	Thu 24/10/03	33
35		Submit Stage 2 report	100%	2 days	Fri 24/10/04	Mon 24/10/07	34
36		Client review and approval	100%	128 days	Tue 24/10/08	Thu 25/04/03	35
37		**ADDITIONAL APPROVALS / SPECIALIST REPORTS**	**0%**	**370 days**	**Wed 24/05/01**	**Tue 25/09/30**	
38		Environmental	100%	163 days	Wed 24/08/07	Fri 25/03/21	10
39		Site Development Plan	100%	163 days	Wed 24/08/07	Fri 25/03/21	10
40		Heritage	85%	300 days	Wed 24/08/07	Tue 25/09/30	10



Project: Project Programme
Date: Mon 25/09/15

Task	Inactive Task	Manual Summary Rollup	External Milestone	Progress
Split	Inactive Milestone	Manual Summary	Deadline	Manual Progress
Milestone	Inactive Summary	Start-only	Baseline	
Summary	Manual Task	Finish-only	Baseline Milestone	
Project Summary	Duration-only	External Tasks	Baseline Summary	

ID	Task Mode	Task Name	% Work Complete	Duration	Start	Finish	Predecessors
41		Town Planning	100%	163 days	Wed 24/08/07	Fri 25/03/21	10
42		Site Clearance	100%	262 days	Wed 24/05/01	Thu 25/05/01	
43		**STAGE 4.2**	**0%**	**395 days**	**Wed 24/08/07**	**Tue 26/02/10**	
44		**Tender Documentation**	**0%**	**395 days**	**Wed 24/08/07**	**Tue 26/02/10**	
45		Compiling Expression of Interest	100%	38 days	Wed 24/08/07	Fri 24/09/27	10
46		Request for Qualification (RFQ) Advertisement	100%	0 days	Fri 24/10/04	Fri 24/10/04	
47		Request for Qualification (RFQ) Briefing	100%	0 days	Mon 24/10/14	Mon 24/10/14	46SF+7 days
48		Request for Qualification (RFQ) Closing Date	100%	81 days	Tue 24/10/15	Tue 25/02/04	47
49		**Quality Assessment**	**0%**	**265 days**	**Wed 25/02/05**	**Tue 26/02/10**	
50		Social Facilitation Documentation	100%	61 days	Wed 25/02/05	Wed 25/04/30	48
51		Final specification, drawings and quantities submitted to QS	100%	28 days	Fri 25/04/04	Tue 25/05/13	36
52		BOQ Submission	100%	18 days	Wed 25/05/14	Fri 25/06/06	51
53		BOQ Review	100%	10 days	Mon 25/06/09	Fri 25/06/20	52
54		Bid Specification Committee (BSC) Meetings	100%	20 days	Thu 25/08/07	Wed 25/09/03	53
55		Bid Advertisement	0%	22 days	Tue 25/09/16	Wed 25/10/15	54FS+8 days
56		RFP Briefing and Clarification Meeting	0%	1 day	Thu 25/09/25	Thu 25/09/25	55SS+7 days
57		RFP Closing	0%	0 days	Wed 25/10/15	Wed 25/10/15	55
58		Bid Evaluation Committee (BEC) - Evaluate and undertake Risk Assessment	0%	9 days	Thu 25/10/16	Tue 25/10/28	57
59		Bid Adjudication Committee (BAC) Adjudicates	0%	15 days	Fri 25/11/07	Thu 25/11/27	58FS+7 days
60		Client Concurrency	0%	11 days	Wed 25/12/03	Wed 25/12/17	59FS+3 days
61		Contractor Appointment	0%	1 day	Mon 26/01/12	Mon 26/01/12	60FS+17 days
62		Contractor Handover	0%	21 days	Tue 26/01/13	Tue 26/02/10	61
63		**STAGE 3**	**0%**	**96 days**	**Tue 26/01/13**	**Tue 26/05/26**	
64		Stage 3 Design (Service Provider Commence)	0%	65 days	Wed 26/02/11	Tue 26/05/12	62
65		Demolition Permit Application & Approval	0%	21 days	Tue 26/01/13	Tue 26/02/10	61
66		Client review and approval of Stage 3 Design	0%	10 days	Wed 26/05/13	Tue 26/05/26	64
67		**STAGE 4.1**	**0%**	**65 days**	**Wed 26/05/27**	**Tue 26/08/25**	
68		Stage 4.1 Municipal Submission	0%	21 days	Wed 26/05/27	Wed 26/06/24	66
69		Client review and approval	0%	44 days	Thu 26/06/25	Tue 26/08/25	68
70		**STAGE 5**	**0%**	**683 days**	**Wed 26/02/11**	**Fri 28/09/22**	
71		Construction Site Handover	0%	0 days	Tue 26/08/25	Tue 26/08/25	69
72		Domestic Quarters Demolition	0%	55 days	Wed 26/02/11	Tue 26/04/28	65
73		Domestic Quarters Subsurface Works	0%	71 days	Wed 26/04/29	Wed 26/08/05	72
74		Rerouting of 18th Avenue Sewerline	0%	93 days	Wed 26/04/29	Fri 26/09/04	73SS
75		Construction of Dwellings (25 Months)	0%	535 days	Mon 26/09/07	Fri 28/09/22	74
76		**STAGE 6**	**0%**	**96 days**	**Mon 28/09/25**	**Mon 29/02/05**	
77		Defects Liability Period	0%	66 days	Mon 28/09/25	Mon 28/12/25	75
78		Asbuilts	0%	22 days	Mon 28/09/25	Tue 28/10/24	75
79		Final Account	0%	20 days	Tue 28/12/26	Mon 29/01/22	77
80		Close-Out Report	0%	10 days	Tue 29/01/23	Mon 29/02/05	79

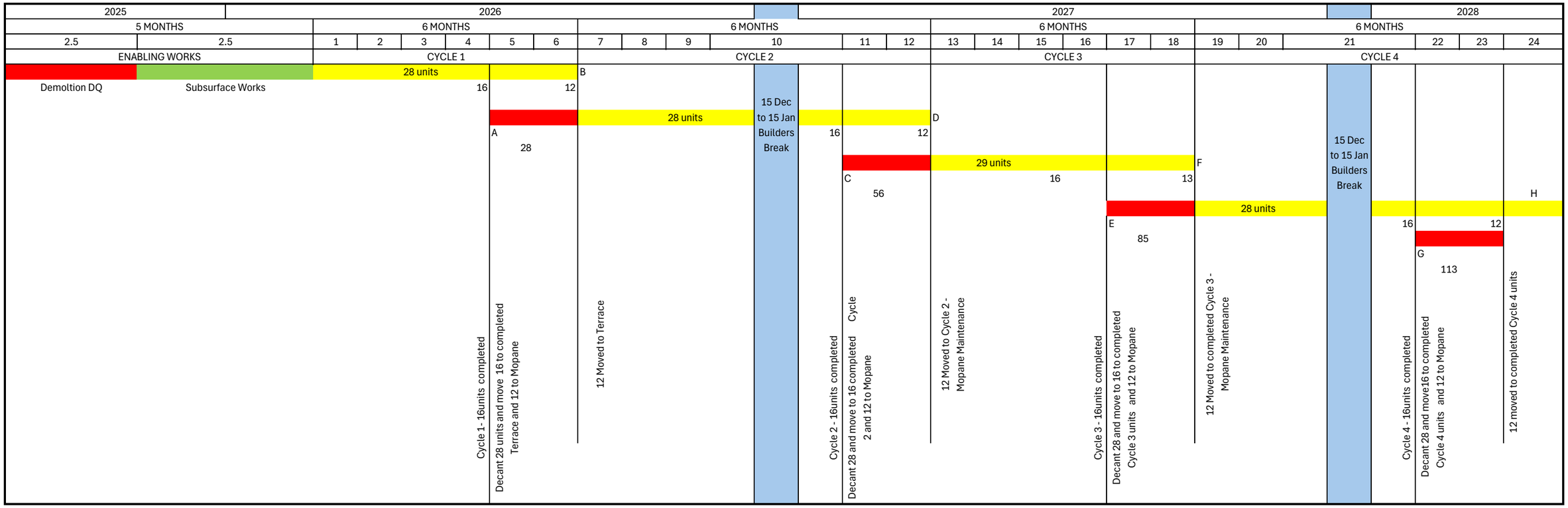


Project: Project Programme
Date: Mon 25/09/15

Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Baseline
Baseline Milestone
Baseline Summary
Progress
Manual Progress

VIRTUAL
CONSULTING ENGINEERS

DEMOLTION AND DECANTING SCHEDULE



A, C, E & G	Demolish 28 units ad decant 16 to newly completed units and 12 to Mopane
B, D, F & H	Decant remaining to newly completed units

Max number of families in decanting = 12
Should delays accor, Decanting can accommodate 24 families

ANNEXURE 2.2: SPECIALIST STUDIES

1 SPECIALIST STUDIES

(This section is to be read in conjunction with the approved stage 2 report - **Annexure 1.**)

1.1 SPECIALIST STUDIES REQUIRING STATUTARY APPROVALS

1.1.1 ENVIRONMENTAL

The proposed development does not trigger any environmental or water-related application processes, as the new dwellings will be constructed on the same footprints as the existing demolished units. There is no increase in water demand or significant alteration to land use, and no anticipated environmental impact beyond what already exists.

1.1.2 HERITAGE

The Notice of Intent to Develop (NID), along with the full Stage 2 Concept Design Report, was submitted to Heritage Western Cape (HWC) in May 2025 for review. This submission is intended to initiate the formal heritage approval process and determine whether a permit will be required under the National Heritage Resources Act.

Heritage Western Cape typically requires 4 to 6 weeks to assess such applications and provide written feedback. The project team is currently awaiting HWC's response regarding the type and extent of heritage authorisation, if any, that may be applicable.

1.2 SPECIALST STUDIES INCLUDED IN DESIGN TEAM REPORTS

1.2.1 TOWN PLANNING

A Site Development Plan (SDP) is not required for this project. As a result, no Town Planning statutory processes are triggered, and no further town planning approvals are necessary at this stage.

1.2.2 GEOTECHNICAL REPORT

The Geotechnical Engineer provided a geotechnical report, which was essential for informing project decisions. It ensured safety and stability while supporting compliance with relevant regulations.

1.2.3 TRANSPORT ENGINEERING

With the number of dwelling units remaining unchanged, a full Traffic Impact Assessment (TIA) is not necessary. Instead, the Transport Engineer has prepared a Transport Impact Statement (TIS) that outlines relevant traffic considerations.

1.2.4 LAND SURVEYING

The Land Surveyor completed a land survey covering the affected areas within Acacia Park, which enabled the design team to prepare the concept design.

ANNEXURE 2.3: ARCHITECTURE

ACACIA PARK
STAGE 2: Tender Documentation

23 May 2025

1. SCHEDULE OF ACCOMMODATION

SCHEDULE OF ACCOMMODATION (Confirmation Outstanding)

NOTES ON ACCOMMODATION NORMS:

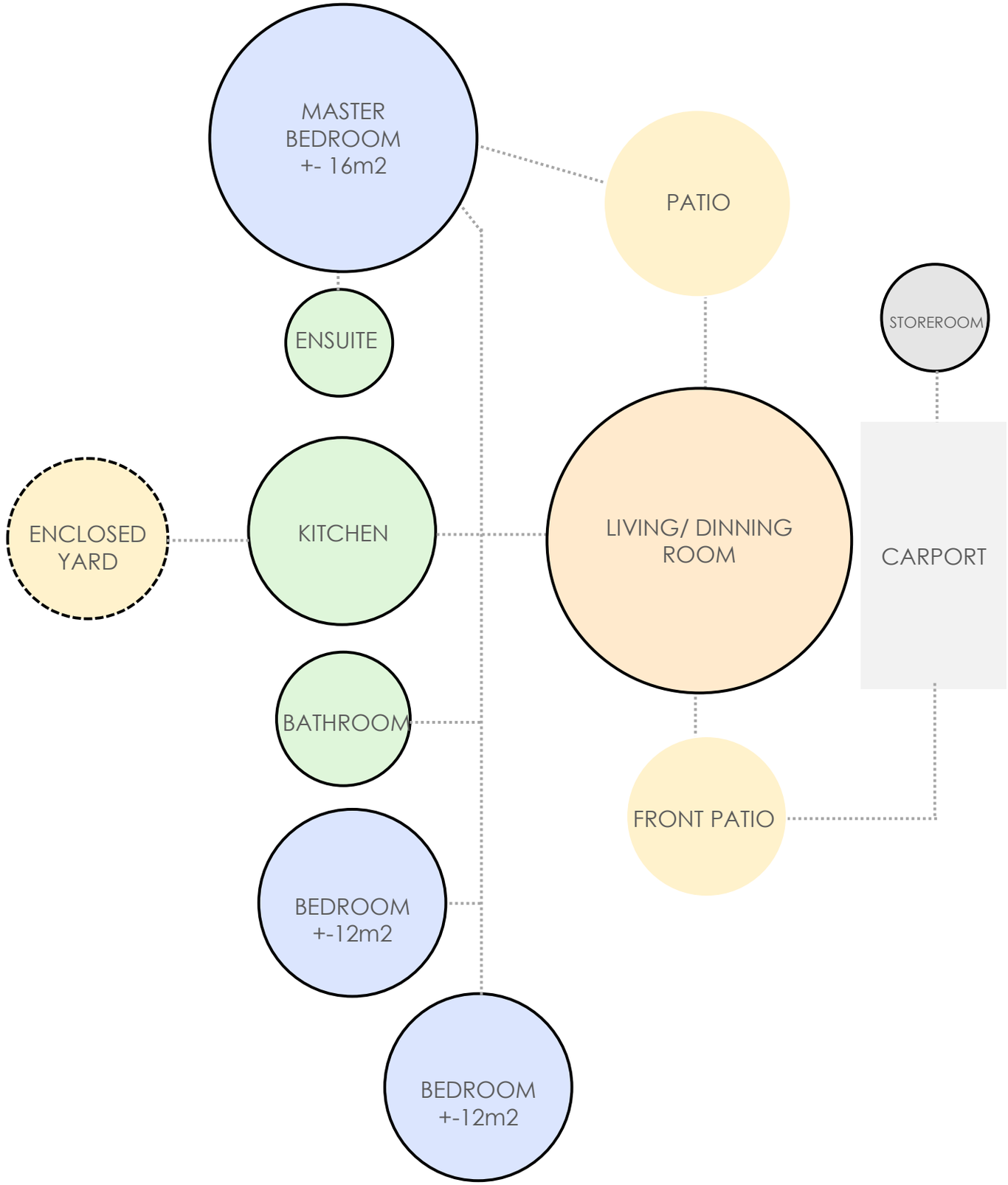
No norms documented has been provided , but we have been advised to proceed with the ACCOMMODATION SCHEDULE and AVERAGE BEDROOM SIZES as proposed.

The following deviations are noted:

A. In order to achieve the approx. 95m2 footprint of the units, we have had to do the following:
1) reduce the size of the smaller bedroom to 9m2
2} incorporate the shower into a corner bath for the shared bathroom for some units

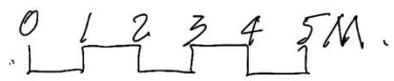
B. Consider a screening fence/hedge between units only where needed to improve privacy.

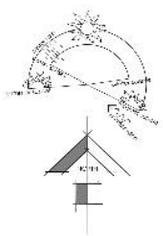
C. Replace Concrete roof tiles with coloured metal sheet roofing with similar profile and appearance to the existing roofing of the remaining masonry units. This facilitates fixing of SOLAR PANELS, of which approx. 12 will need to be accommodated on each roof.

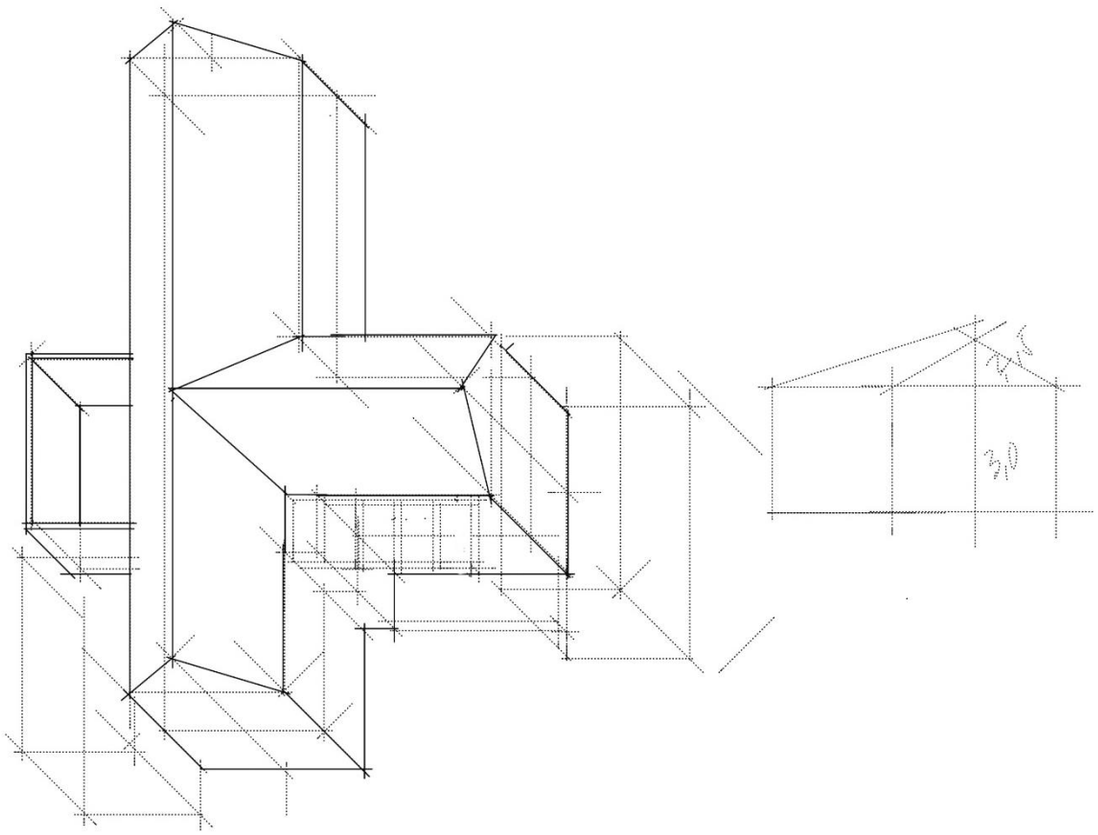


2. TYPOLOGY PROPOSAL

TYPE 4:
Sketch







TYPE 4 has the following features:

1. The T-Shaped form allows for the LIVING/DINING /KITCHEN AREA is centrally located flanked by the two-bedroom wings
2. The carport could be attached to any of the three ends of the T.
3. Passage lengths are minimised.
4. A hallway is introduced to create a threshold between inside and outside
5. The pitched roof over the BEDROOM wings will remain consistent , but the roof form over the LIVING area could assume different forms.
6. The ceiling to the living area could be higher, taking on the form of the room.

TYPE 4:

3 Bedroom

Unit Gross Area = 112.5m²

Unit Net Floor Area = 92m²

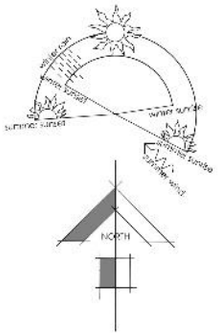
REFER TO DRAWING A 100

ACACIA PARK | TYPOLOGY 4A FLOOR PLAN | 2024/10/01
SCALE 1.100 ON A3

TYPE 4 VARIATIONS:
3 Bedroom

The TYPE 4 variations show slight adaptations of the plan layout to accommodate various locations on the site: Important considerations are:

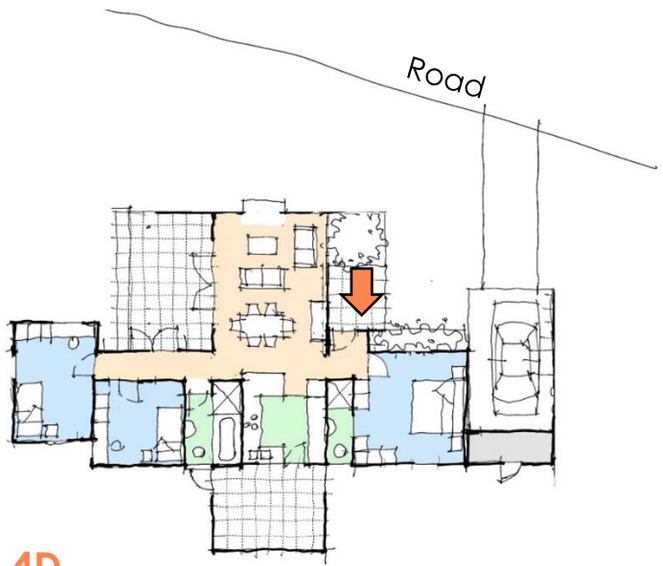
1. Orientation to ensure that sunlight reaches all Living areas and Bedroom spaces throughout the day.
2. Orientation to ensure that the room over the bedroom wings can be orientated for the placement of the bulk of the SOLAR PANELS.
3. Orientation to ensure a positive relationship to the street.



TYPE 4A

TYPE 4B

TYPE 4C



TYPE 4D

TYPE 4E

TYPE 4F
Unit for people with disabilities

TYPE 4: ROOF VARIATIONS

WITH DOUBLE PITCHED ROOF OVER LIVING AREA

TYPE 4: WITH DOUBLE PITCHED ROOF OVER LIVING AREA

TYPE 4: WITH SINGLE PITCH ROOF TO CREATE A HIGH-LEVEL LIGHT SCOOP ABOVE LIVING ROOM PATIO

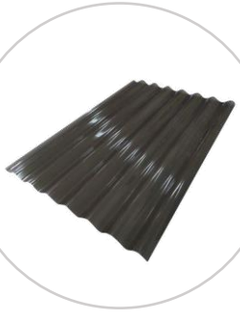
TYPE 4: SINGLE PITCH ROOF TO CREATE HIGH LEVEL LIGHT SCOOP

TYPE 4E:
Axonometric view

TYPE 4E:
Rear patio view

Finishes Schedule: Exterior

Corrugated roof



Smooth Plaster

Rough / Scratch Plaster Finish

Translucent Sheeting

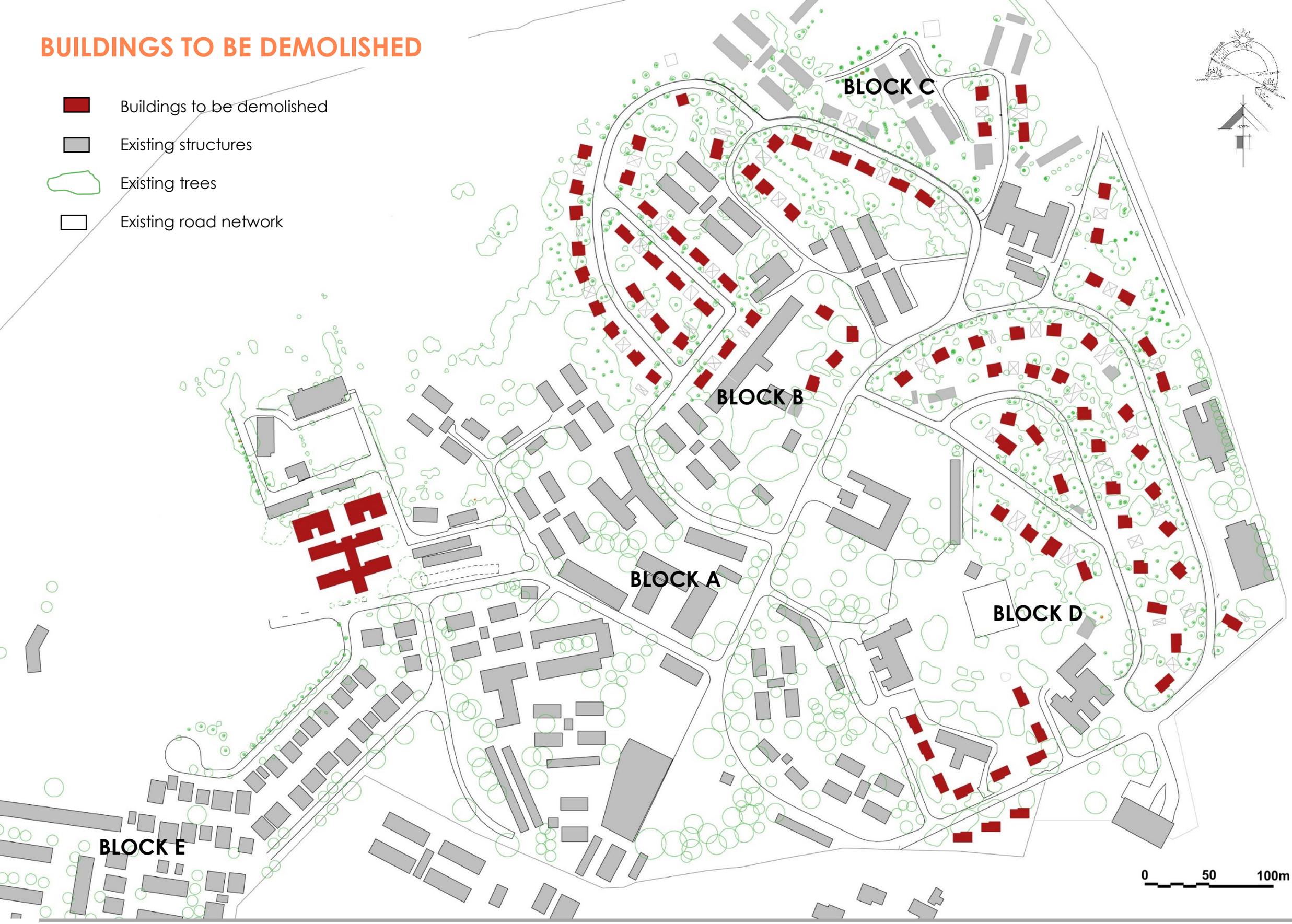
Aluminium Windows

Corrugated roof

3. TYPOLOGY 4 PROPOSAL IN CONTEXT

BUILDINGS TO BE DEMOLISHED

- Buildings to be demolished
- Existing structures
- Existing trees
- Existing road network



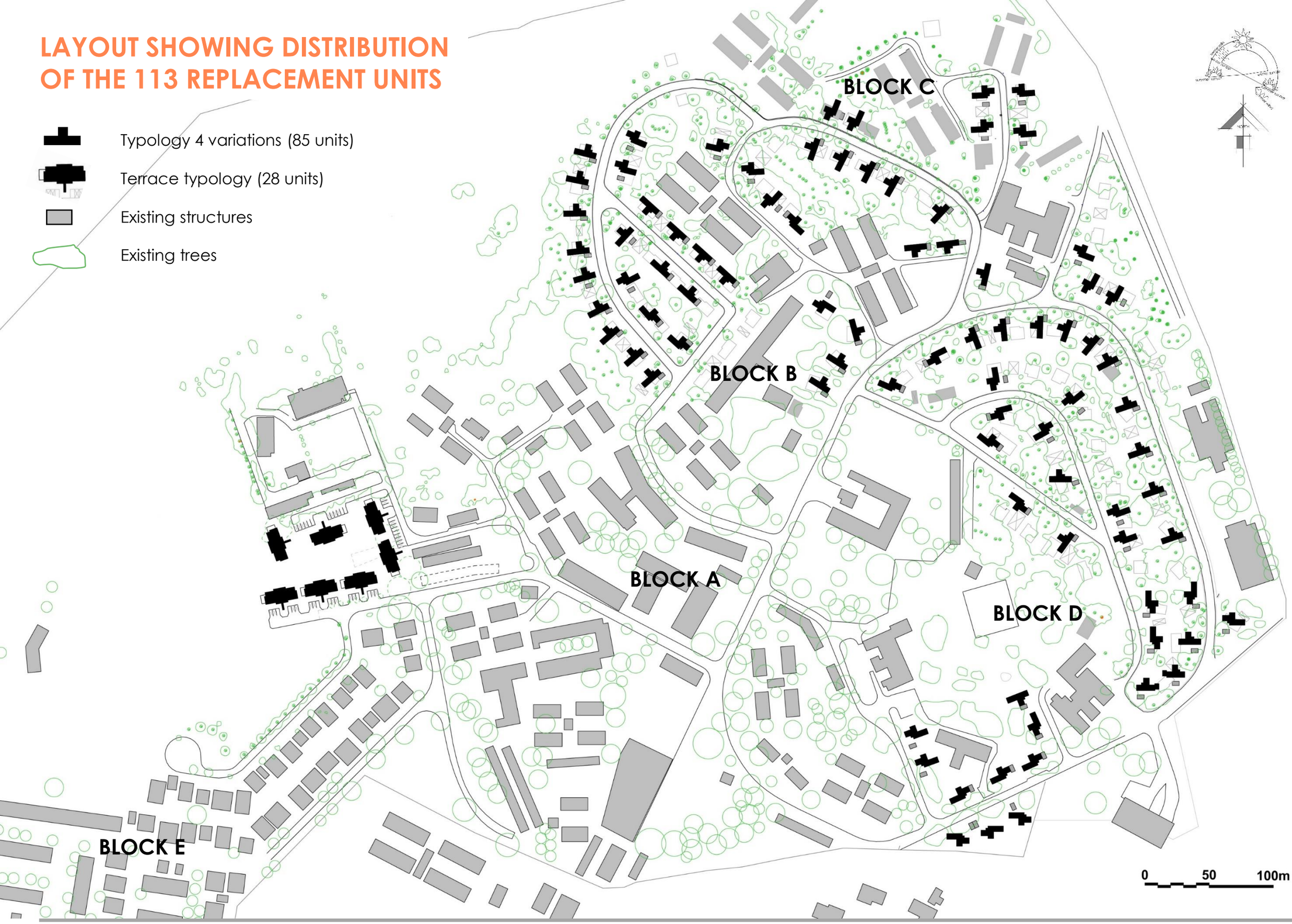
LAYOUT SHOWING DISTRIBUTION OF THE 113 REPLACEMENT UNITS

Typology 4 variations (85 units)

Terrace typology (28 units)

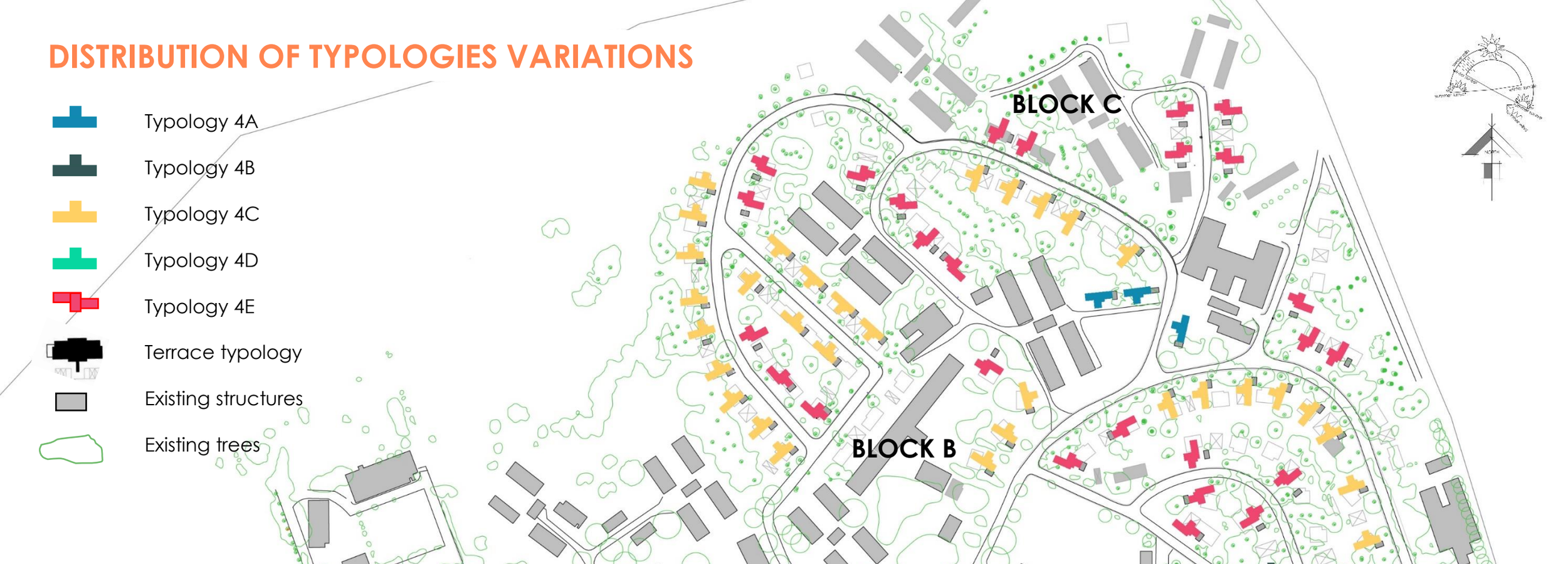
Existing structures

Existing trees



DISTRIBUTION OF TYPOLOGIES VARIATIONS

- Typology 4A
- Typology 4B
- Typology 4C
- Typology 4D
- Typology 4E
- Terrace typology
- Existing structures
- Existing trees



LAYOUT SHOWING DISTRIBUTION OF THE 113 REPLACEMENT UNITS

REFER TO DRAWING U 090

- Typology 4 variations (85 units)
- Terrace typology (28 units)
- Existing structures
- Existing trees
- New trees
- Green network
- Pocket parks
- Main recreational area
- Pedestrian network
- Forecourt

BLOCK C

BLOCK B

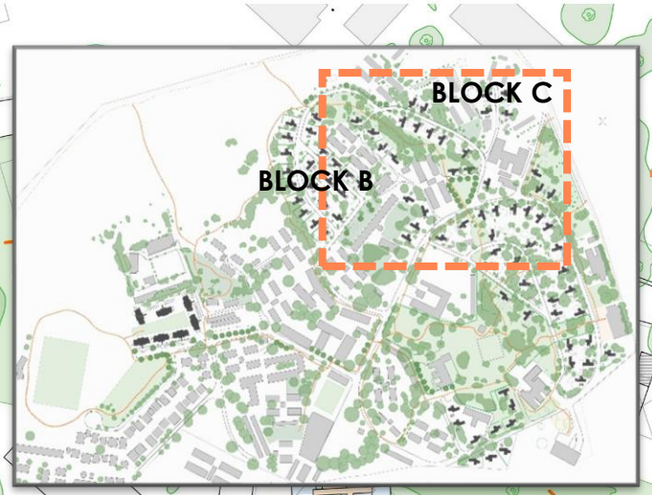
BLOCK A

BLOCK D

BLOCK E

0 50 100m

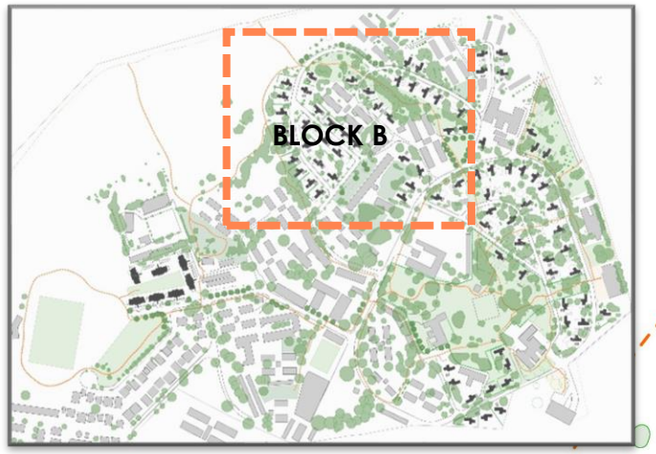

BLOCK D
4E
4C
4A
4D
Existing structures
Demolished units
0
50m



0 50m

Existing structures

Demolished units



Existing structures

Demolished units

0

50m

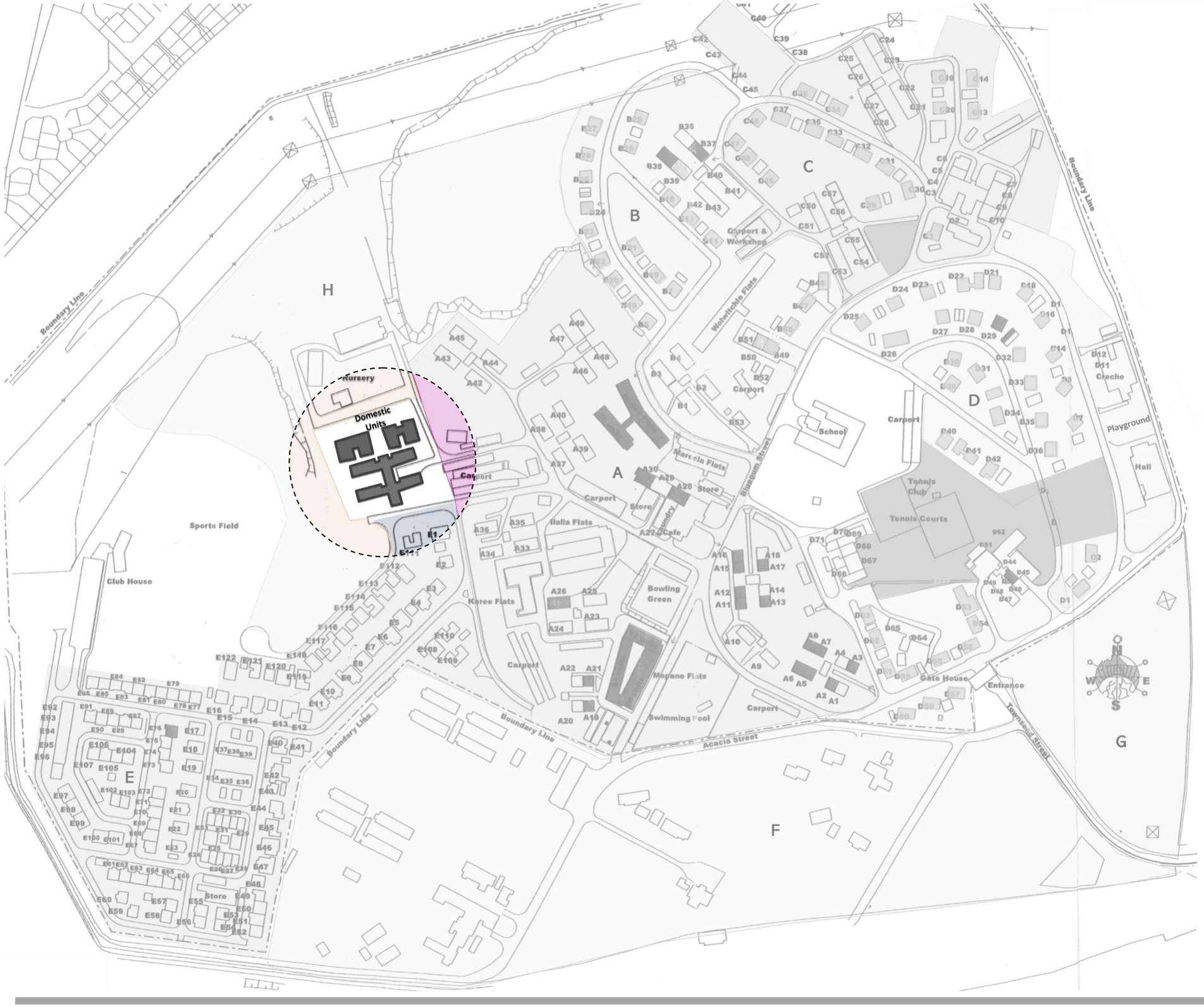
Street View

Green Lung

Typology 4 Axonometric

4. DOMESTIC QUARTERS PROPOSAL

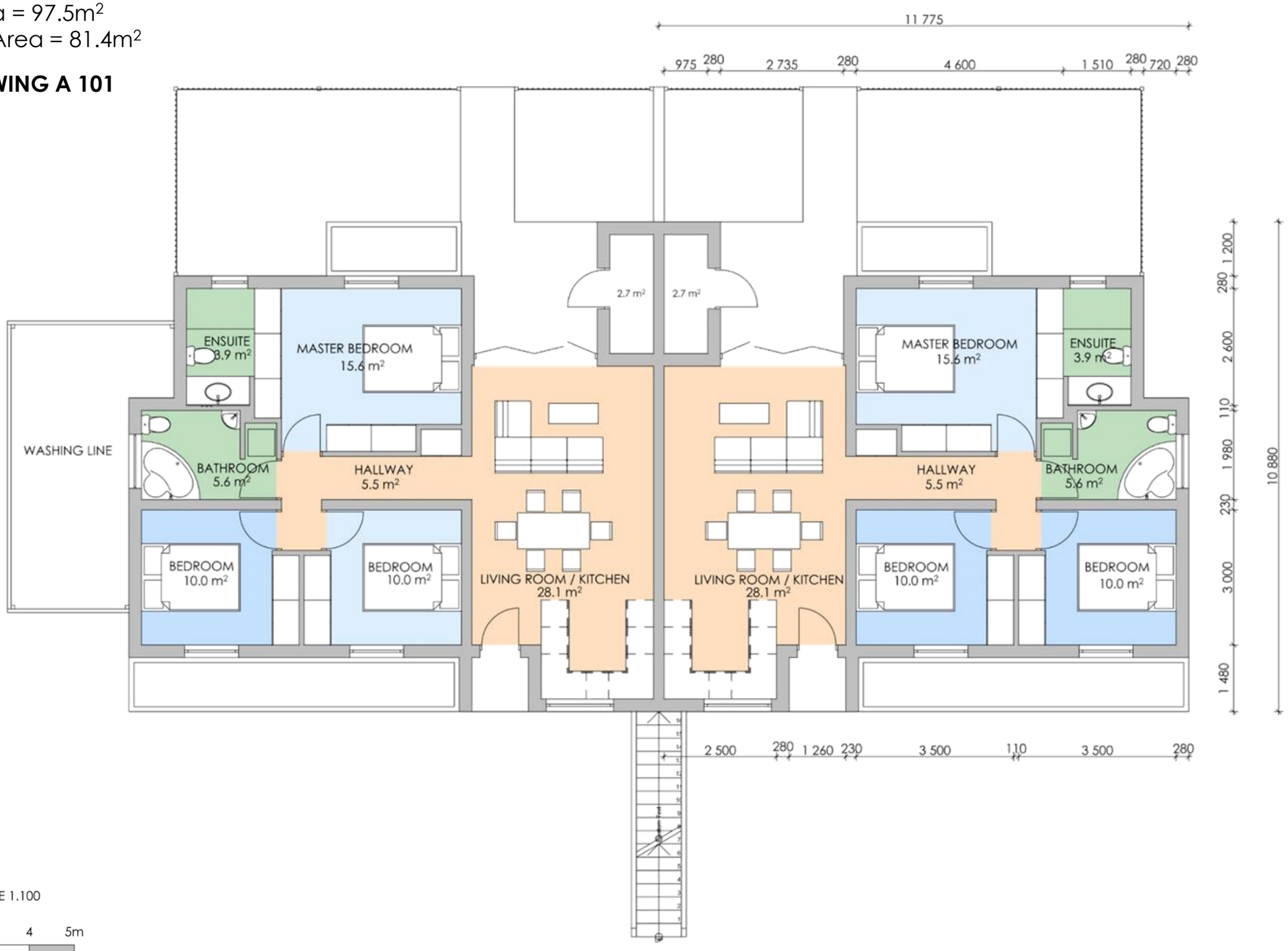
DOMESTIC QUARTERS SITE : LOCATION



TERRACE TYPE BLOCK TYPOLOGY

GROUND FLOOR
Unit Gross Area = 97.5m^2
Unit Net Floor Area = 81.4m^2

REFER TO DRAWING A 101



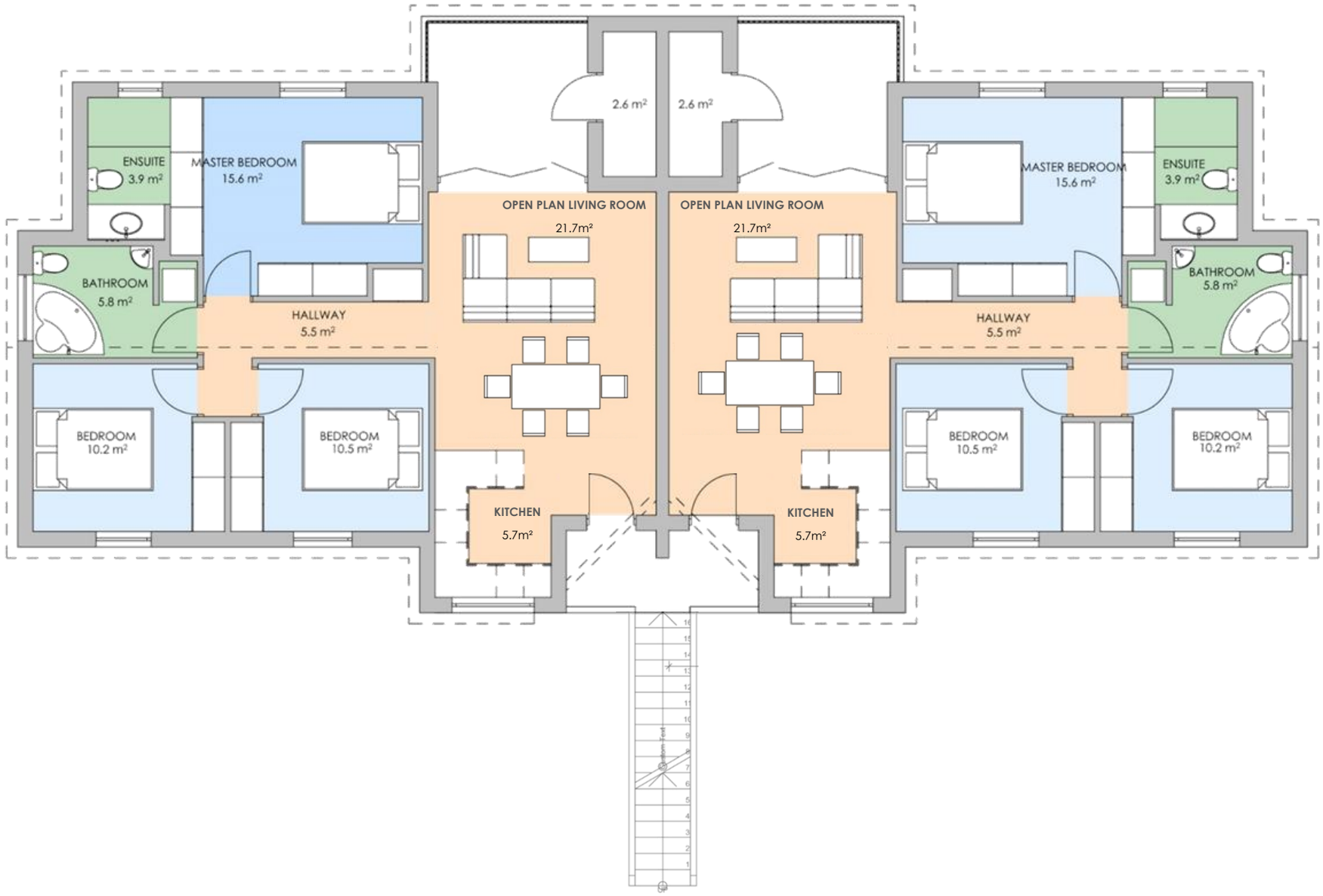
GROUND FLOOR | SCALE 1.100

0 1 2 3 4 5m

TERRACE TYPE BLOCK TYPOLOGY

FIRST FLOOR
Unit Gross Area = 97.5m^2
Unit Net Floor Area = 81.5m^2

REFER TO DRAWING A 102



FIRST FLOOR | SCALE 1.100

0 1 2 3 4 5m

TERRACE TYPE BLOCK TYPOLOGY

SITE LAYOUT

REFER TO DRAWING A 091

Number of Units = 28 (14 x 2 storeys)
Parking provided = 42 bays (28 x 1.5)

Covered bays **x 28**

Uncovered bays **x 14**

TERRACE BLOCK TYPOLOGY

It is noted that the external finishes of the terrace typology should be in accordance with the finishing schedule.

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5. LANDSCAPE PROPOSAL

LANDSCAPE

The landscape Proposal is a high-level view of elements that can be incorporated in the park to enhance the public spaces and enhance the residential environment.

The landscape plan indicated has been developed based on the urban design proposal and incorporates principles for improving legibility and wayfinding across the site.

Privacy and public space has also been reviewed as well as pedestrian routes and links across the site. These have been explored through the following items:

A. Landscape proposal plan
B. Legibility - Materials
C. Street furniture
D. Wayfinding signage to main spaces on site
E. Recreation Main parks
F. Recreation pocket parks
G. Screening | Privacy

The plan incorporates the proposed pedestrian network leading from a central recreation area to the most utilised sports areas and green corridors.

These are identifiable through open spaces which accommodates visual and movement access in a North, South direction along the green corridor as well as the West, East direction from the rugby field across to the hall.

- Main routes are bolstered with addition trees creating avenues.
- Green corridors are more natural and have pedestrian routes meandering through.
- Play areas are incorporated at the larger open areas.
- Pedestrian routes/ running track around the site.
- Main recreation spaces are utilised for larger gatherings.
- Pocket parks for intimate gatherings/ localised use.
- Improved legibility with signage and material choices.

A. LANDSCAPE PLAN

REFER TO DRAWING LA 092

B. LEGIBILITY MATERIALS

Using similar materials to demarcate spaces, furniture or routes assists in wayfinding across large areas and in identifying which are available for use by specific groups.

We propose that specific materials be utilised for furniture, pathways for pedestrians and for recreation spaces to assist users and residents by creating a clearly demarcated areas for private and for public use. For pedestrian routes, and forecourts to important buildings on the site, we propose using the exposed aggregate pavers. This would align with the newer material palette used at the main entrance and would clearly demarcate public spaces.

- Keep paving materials and patterns consistent to inform use of spaces.
- All pedestrian routes use the same paving material to assist wayfinding.
- Demarcates public, shared spaces and routes.
- Main public routes ending at forecourts are paved in similar materials, example, entrance forecourt and hall forecourt

Existing paving at entrance gate, Exposed aggregate pavers

Existing pedestrian walkway are tarred

Existing pedestrian walkway across park areas.

Existing Materials:
- Does not assist with wayfinding.
- Routes between units lead to service buildings.
- Scale of roads are not indicative of pedestrian routes vs car areas.

C. STREET FURNITURE

Bollards

Benches

Bins

Drinking Fountain

Fixed masonry wall type seating elements
This is suitable for creating a division of spaces and provides a surface for seating and play.
Example – cut stone concrete coping, aligned with cut stone bollards, drinking fountain, bins and benches.

- Currently there is limited street furniture in the park spaces, nor the play areas. This does not allow residents to stop and enjoy the recreation spaces comfortably.

- A family of street furniture and lighting will enhance the precinct aesthetic and assist with legibility of the spaces and routes.

- Seating / benches incorporated into park spaces for moments of rest and recreation.

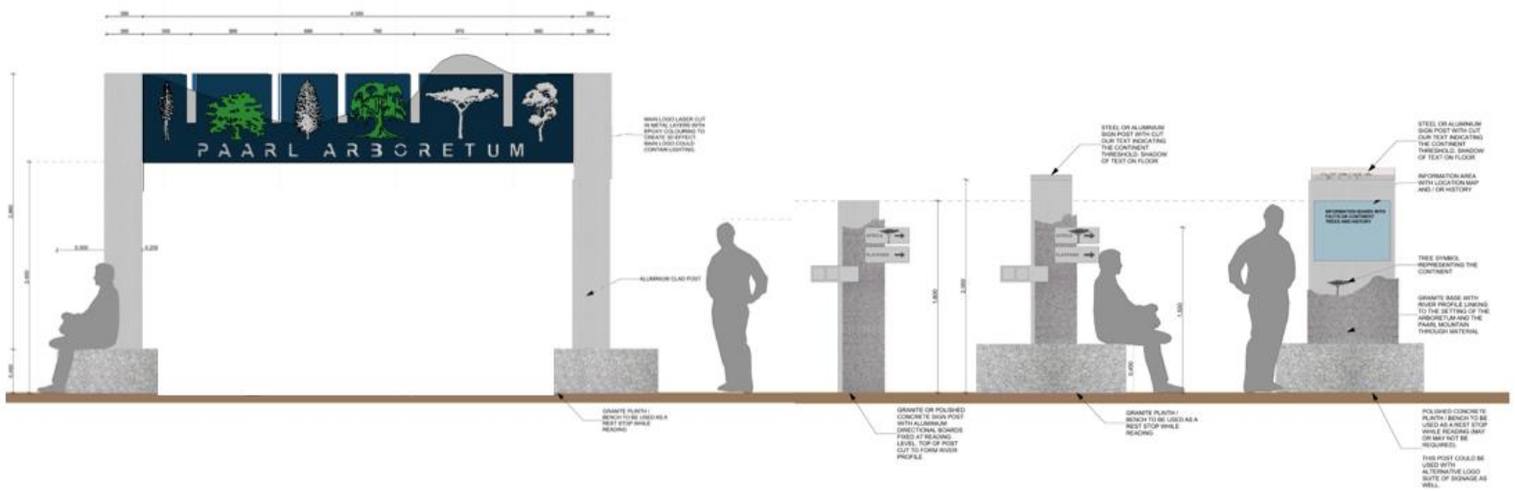
- Furniture such bins and drinking fountains need only be placed in specific public areas and are not required throughout the site, which may require maintenance.

- The inclusion of drinking fountains would enhance the experience of physical activity as proposed by the running route around the site and in the main parks.

Limited seating in park areas

Existing central green space with play equipment – located next to the school
No other furniture beside play equipment is provided – no seating.

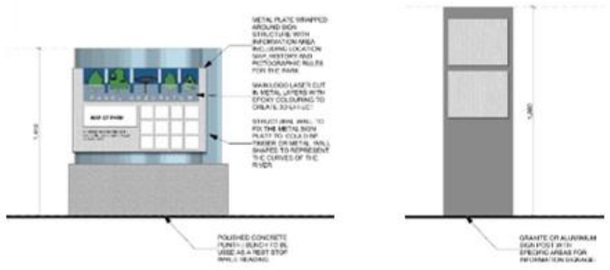
D. WAYFINDING SIGNAGE



ENTRANCE GATEWAY SIGNAGE

DIRECTIONAL SIGNAGE

INFORMATION SIGNAGE



Paarl Arboretum , site and wayfinding signage example

Torquay USA wayfinding signage example

- Wayfinding signage will be included to help occupants navigate towards the main spaces on the site such as hall, bowling green, nursery school, primary school, soccer field, main circular park etc.
- A pedestrian pathway system will also be integrated into the site, which is easy to follow and will help occupants to orientate themselves on the site. Currently there is no established pedestrian route.

Wayfinding signage is designed to assist people to navigate through the use of maps and directional signage.

Existing signage directing people to different blocks

Existing bus stop signage on site

E. RECREATION MAIN AREAS

Recreational pocket parks and intimate braai spaces:

Main recreation area located at the centre of Acacia Park:

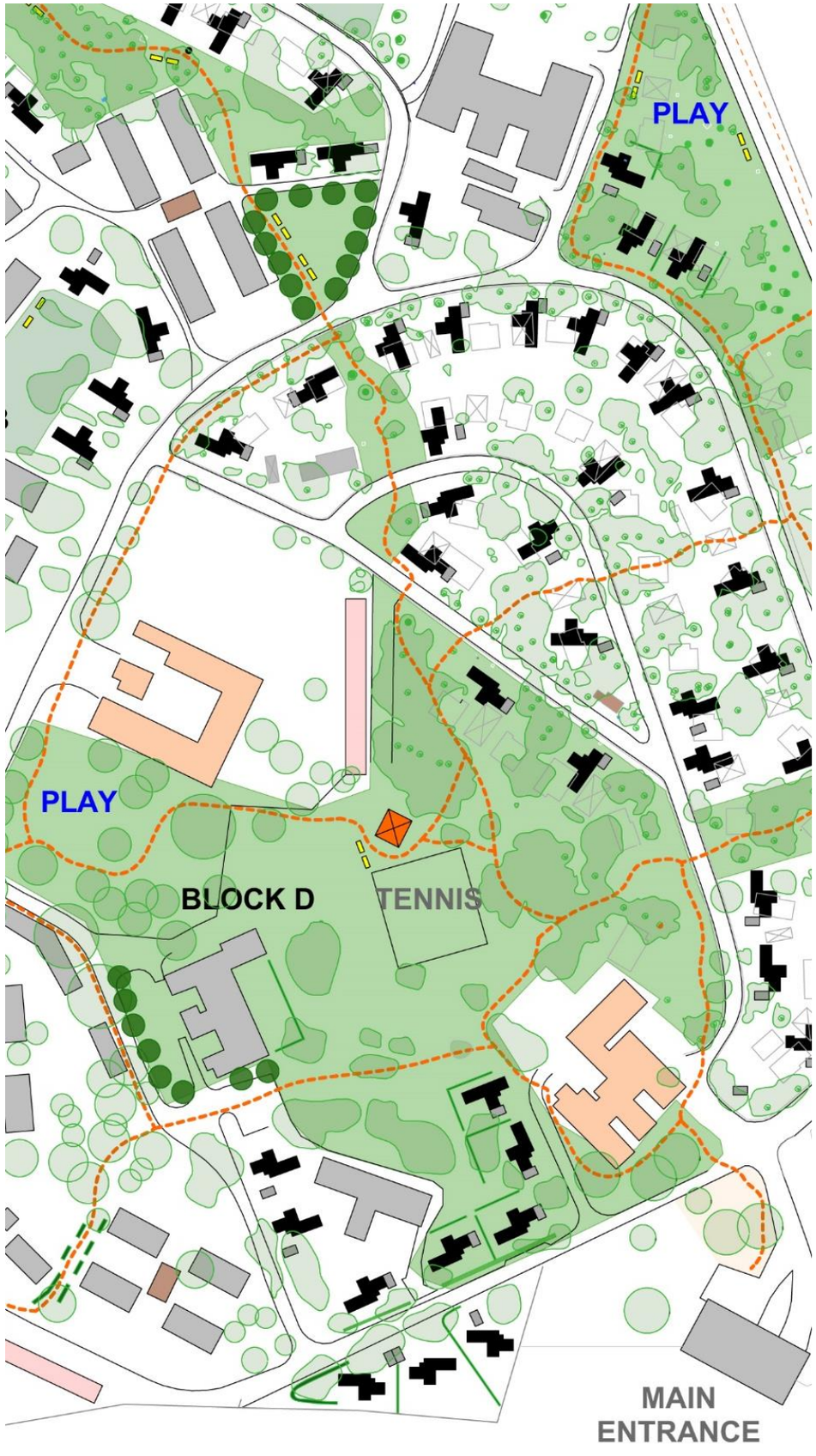
The main recreation area is located at the centre of the park and currently incorporated the tennis courts and sports pavilion. This area is close to the primary school and provides the most opportunity for family recreation, being adjacent to the play park.

This area, being at the centre is well positioned as the intersections of all pedestrian routes and is the culmination of the green corridors extending to the ends of the site and perimeter and to the sports grounds.

Larger recreation parks are proposed for larger gatherings, similar to a district park, where children can **play, events** may be held and **recreation** such as **braai/ picnicking** may take place. These areas are used by all residents

Landscape elements such as hedging or fencing may be incorporated shield the residences from this public area.

These areas would incorporate street furniture such as bollards at parking areas, seating and benches and bins.



Images of the central recreation area.
Left – entrance to the main park is quite obscure

Existing central green space with play equipment – located next to the school

MAIN RECREATIONAL AREA

REFER TO DRAWING LA 400

F. RECREATION POCKET PARKS

Straw Hat Park USA:
Example of park setting between buildings with spaces for rest and play.

Xinhua Road, Shanghai:
Example of park setting between buildings with benches and screening elements.

Pocket Parks:
A number of park spaces exist between the residence buildings – these are built with washing lines and sometimes braai facilities which complete for space.
These pocket type parks may be redesigned to separate the functional communal laundry areas from the communal braai areas.

Landscape elements such as hedging or fencing may be incorporated to demarcate these spaces. This would also serve to provide some privacy to the residents of specific areas.

The pocket parks are desirable for families wishing to socialise with their direct neighbours, or by themselves and use facilities in close proximity to their residences.

As opposed to the main recreation spaces intended for the general population of Acacia Park, which are quite public in nature, these spaces are more intimate for the surrounding residences, though still allow for pedestrian movement through the area.

Shared laundry hanging area between residences. Hedges would assist with screening these areas

Existing pocket park with washing lines and braai area

G. SCREENING | PRIVACY

Hedges used to create screening for privacy Landscape elements such as hedging or fencing may be incorporated to create privacy for the residences and for pockets of residence types.

Hedges have been incorporated in the existing planning of the site and has been maintained in many placing. It is proposed that this be bolstered with additional hedging trees which would add to the 'Park' setting.

These could be used to screen Laundry hanging areas and to create privacy between residences, specifically in the brick residences and the blocks of Terrace units.

This type of planting also assists in leading residents/ visitors to specific areas, while keeping a very soft environment. Hedges also assist well with buffering wind – providing sheltered spaces.

Trees that work well as clipped hedges are Afrocarpus falcatus, Afrocarpus latifolius, Carrisa bispinosa, Searsia crenata, Cupressocyparis leylandii, Diospyros whyteana, Ilex mitis & Syzygium paniculatum.

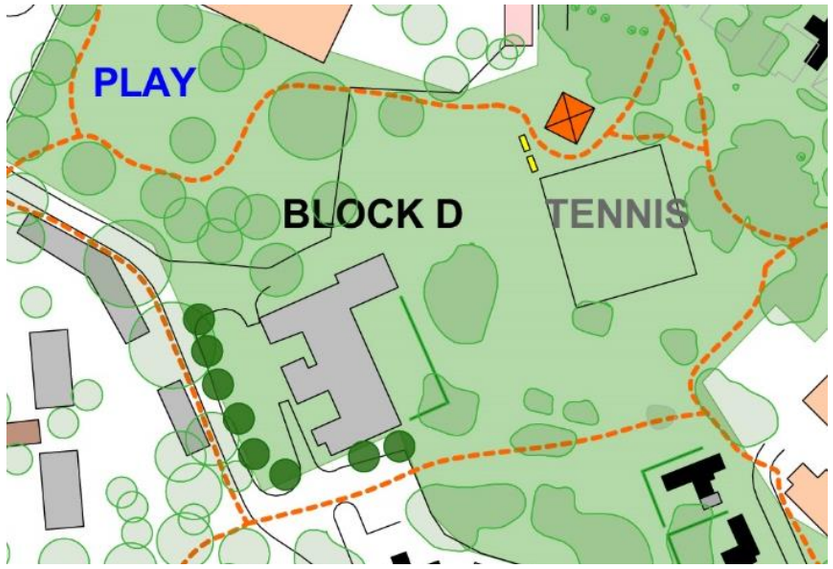


Image of existing hedges screening brick residence near main park

Image of existing hedges on site

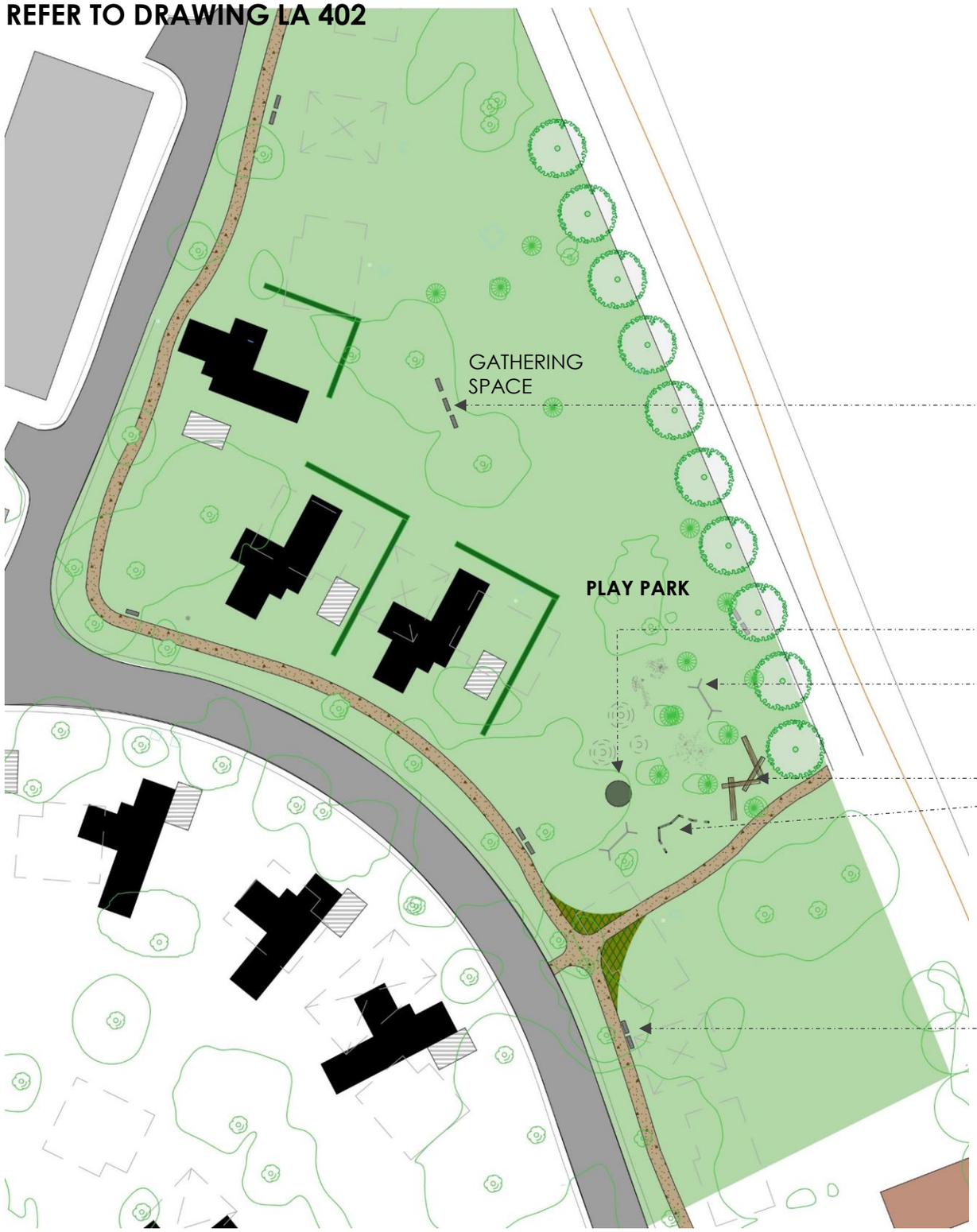
Image of pocket park with partial screening, though the shared washing lines are exposed.

BLOCK C PLAY PARK

REFER TO DRAWING LA 401

BLOCK D PLAY PARK

REFER TO DRAWING LA 402



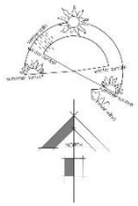
Bench

Merry - go - round

Swing

Balance Beam

Bench



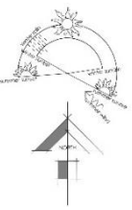
PLAY PARK AT THE SPORTS AND RECREACTIONAL HUB

REFER TO DRAWING LA 403

Gym Equipment

Bench
Swing

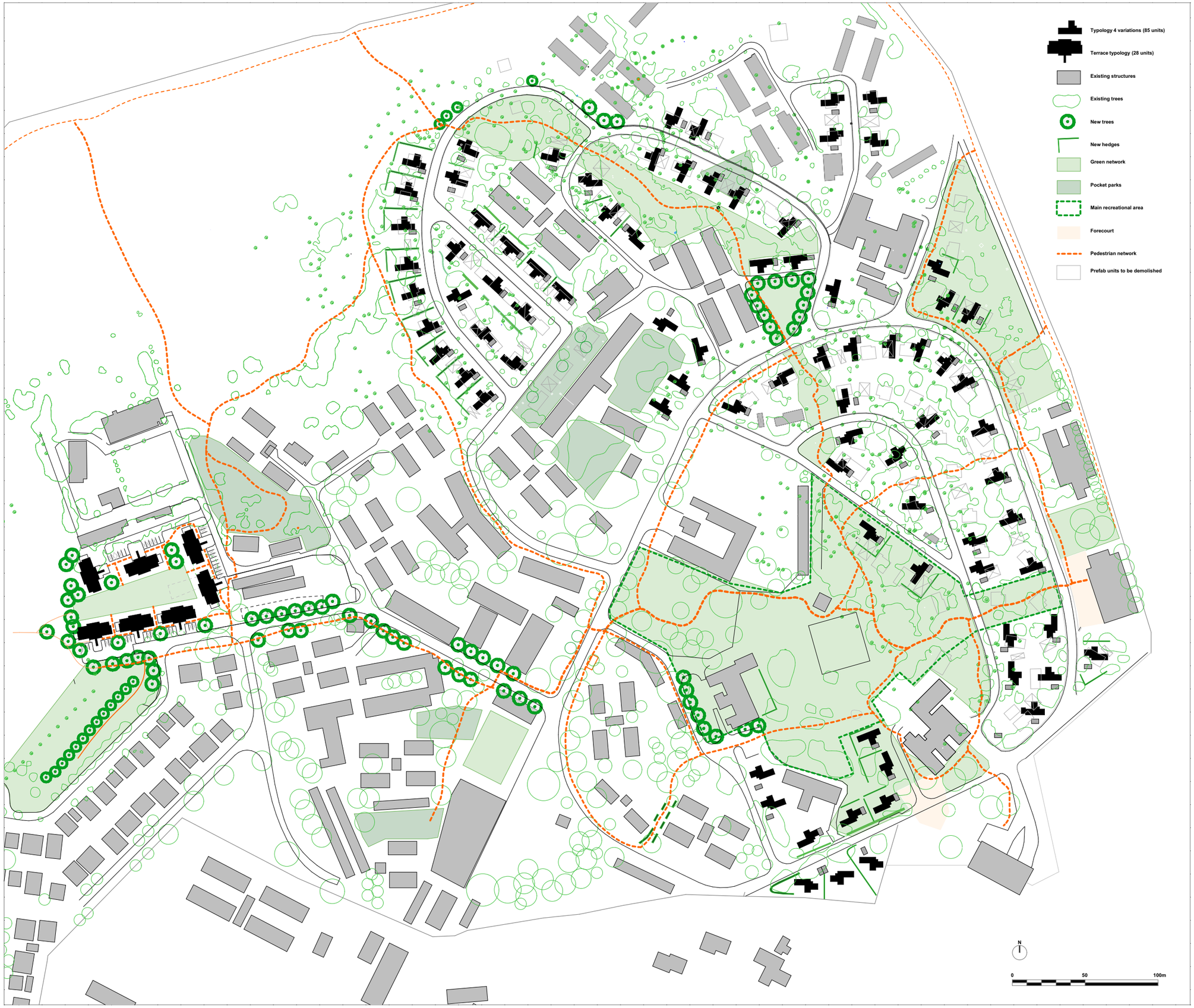
Balance Beam



Natural Play Equipment

Merry - go - round

Mounds (Berms)



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PROJECT NO.:
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TERRACE TYPOLOGY SITE PLAN

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Accomodation Schedule

Master Bedroom 1 - 17m²

Bedroom 2 - 12.1m²

Bedroom 3 - 12m²

En - Suite - 2.9m²

Bathroom - 5.5m²

Kitchen - 9.3m²

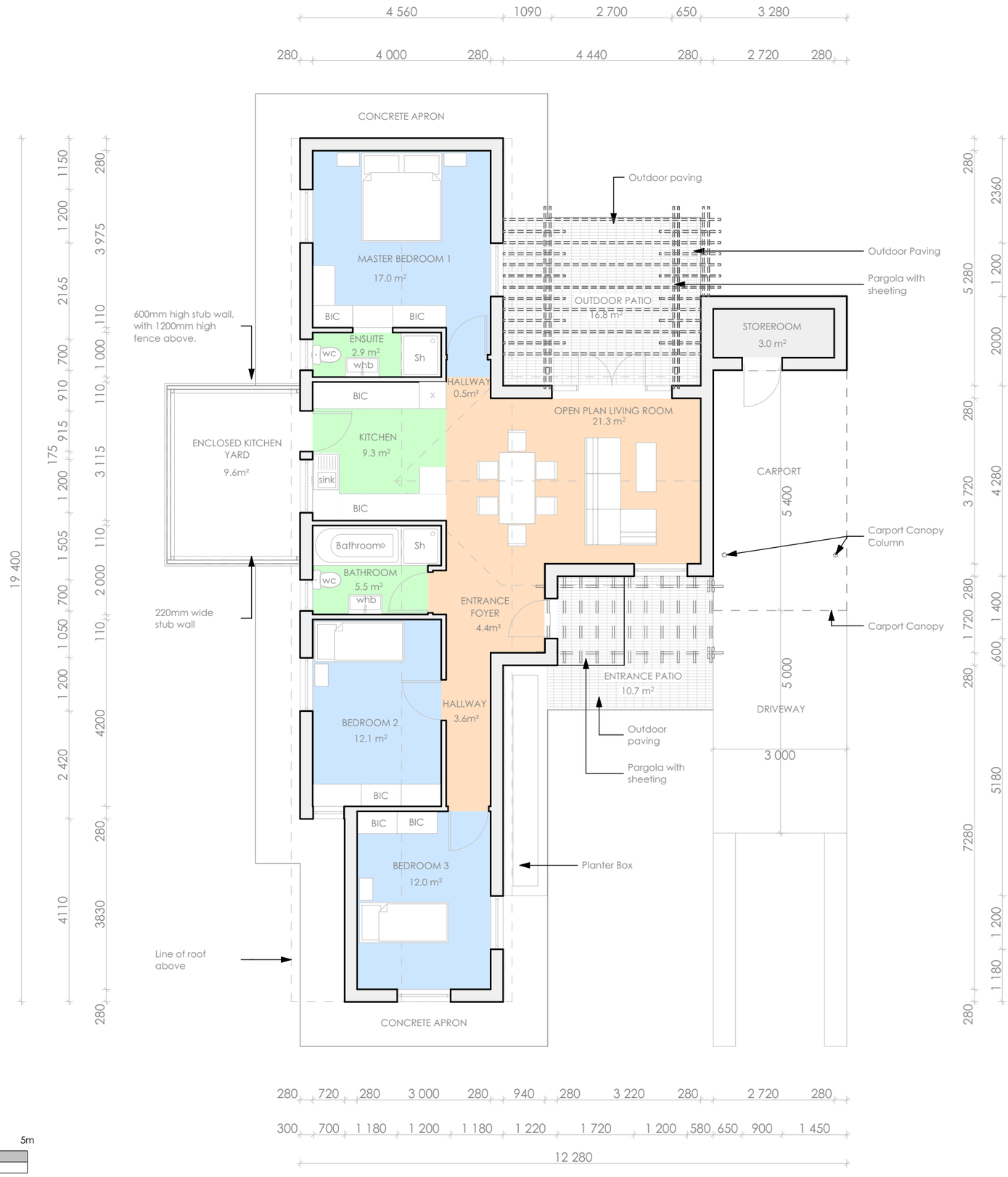
Open Plan Living Room - 21.3m²

Hallway - 4.1m²

Outdoor Patio Area - 16.8m²

Enclosed Kitchen Yard - 9.6m²

Entrance Patio - 10.7m²



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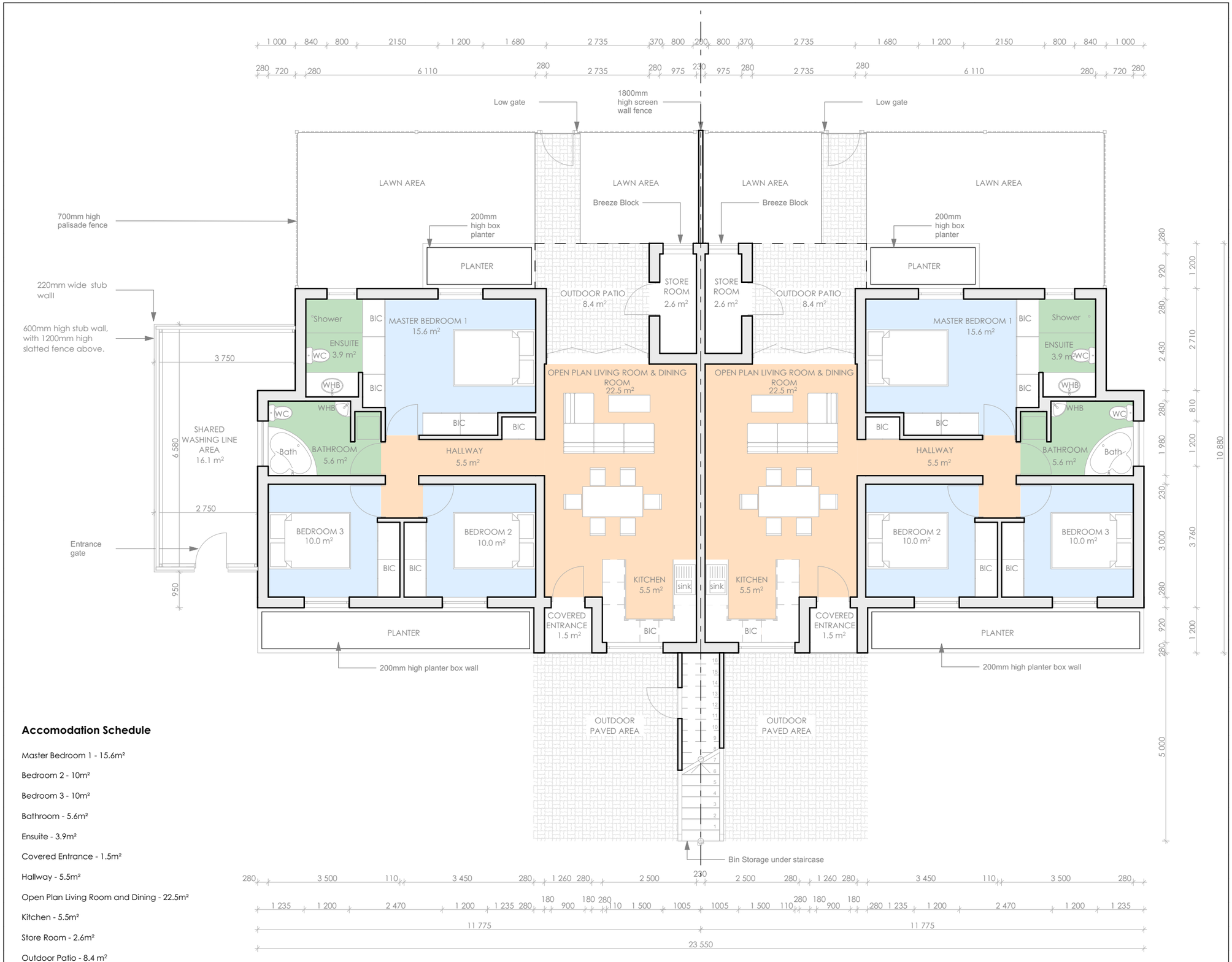

Accomodation Schedule

Master Bedroom 1 - 15.6m²

Bedroom 2 - 10m²

Bedroom 3 - 10m²

Bathroom - 5.6m²

Ensuite - 3.9m²

Covered Entrance - 1.5m²

Hallway - 5.5m²

Open Plan Living Room and Dining - 22.5m²

Kitchen - 5.5m²

Store Room - 2.6m²

Outdoor Patio - 8.4 m²

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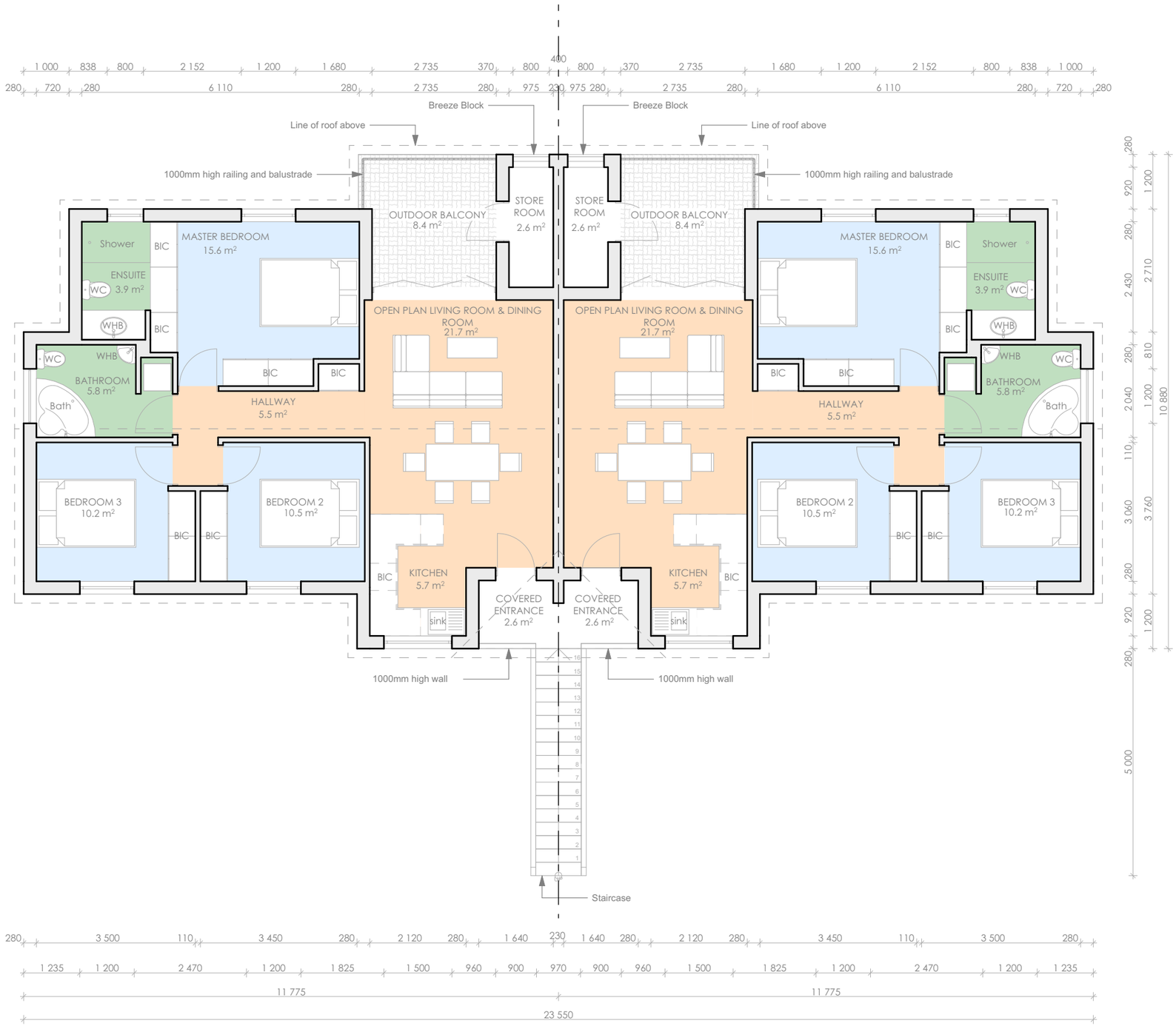

Accomodation Schedule

- Master Bedroom 1 - 15.6m²
- Bedroom 2 - 10.5m²
- Bedroom 3 - 10.2m²
- Bathroom - 5.8m²
- Ensuite - 3.9m²
- Covered Entrance - 2.6m²
- Hallway - 5.5m²
- Open Plan Living Room and Dining - 21.7m²
- Kitchen - 5.7m²
- Store Room - 2.6m²
- Outdoor Balcony - 8.4 m²

0 1 2 3 4 5m

N

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PROJECT: IDT Acacia Park

PROJECT NO.: 2407

DRAWING TITLE: TERRACE | FIRST FLOOR PLAN

PRINT PAPER SIZE: **A3**

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LANDSCAPE PLAN

092

SCALE 1:1500

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PROJECT: Acacia Park | PROJECT NO.: 2407

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PRINT PAPER SIZE: A1

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RECREATIONAL AREA

400

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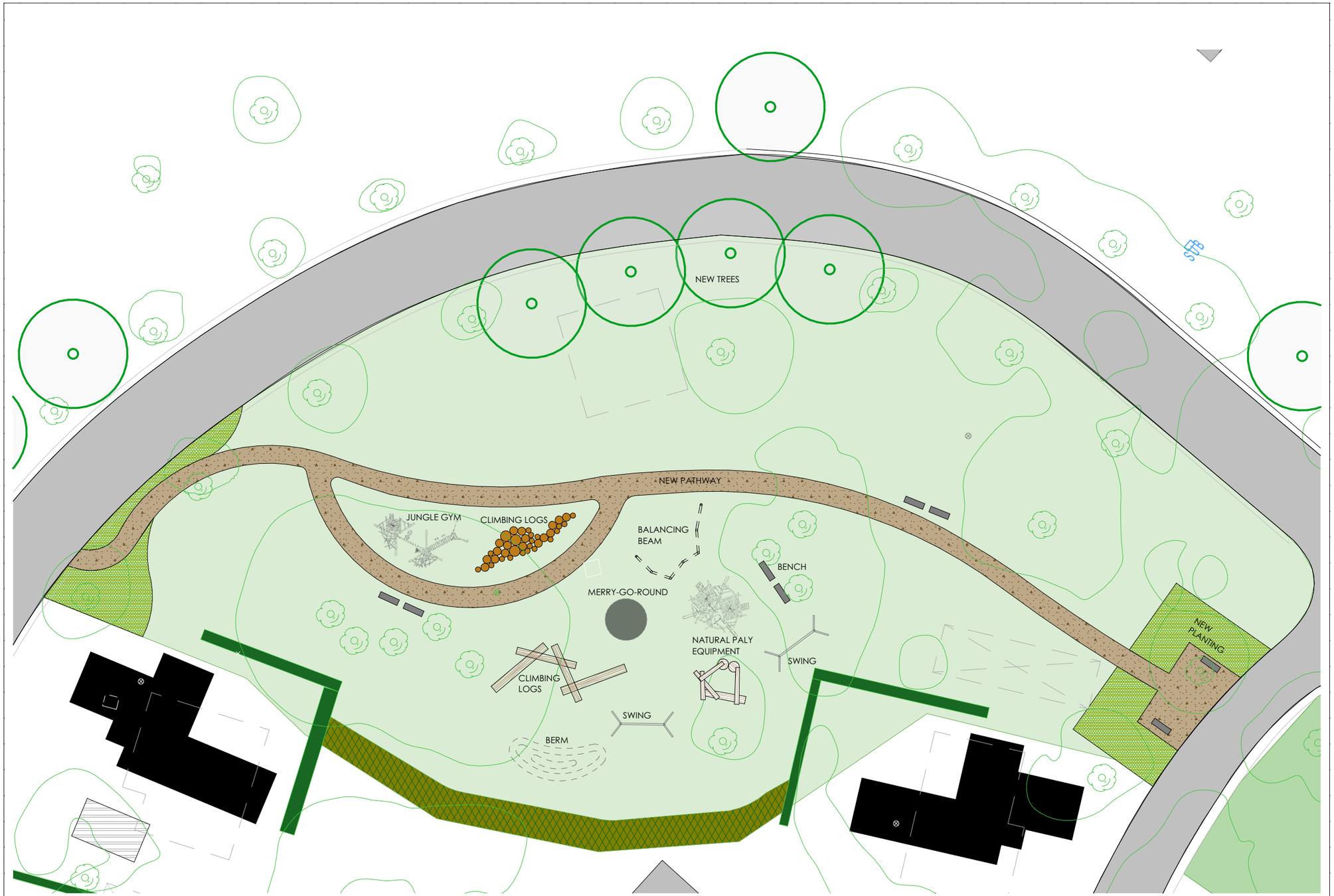

BLOCK C PLAY PARK

401

SCALE 1:300

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BLOCK D PLAY PARK

402

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403

SPORT FIELD PLAY PARK

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PROJECT: Acacia Park | PROJECT NO.: 2407

DRAWING TITLE: SPORT FIELD PLAY PARK

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DISCIPLINE:	DRAWING NUMBER:	REVISION:
LA	403	-

Project:	**ACACIA PARK**		
Project number:	2407	**Building:**	House
Document:	Specifications list		

Room name:	Sanitary Fitting and Brassware	**Room number:**	

IMAGE	ITEM	DESCRIPTION
	**772664WH**	**TOILET CLOSE COUPLE SUITE**
		Notes: Cobra Welcome Close coupled toilet suite. Top, dual flush capability
		with 3L and 6L flush available. Box rim. Package cistern and cistern fittings, pan, seat
		and cover, connector and instllation manual. Cistern manufactured with left hand
		side inlet hole only as per European standard.
	**C-15/350**	**FLEXI CONNECTOR**
		Notes: Flexible connector, fxf, chrome.
	**232-10/NV**	**ANGLE VALVE**
		Notes: Angle regulating valve with durable ABS handle, DZR body, flow
		regulating spindle type headpart G1/2 X G1/2 BSP connections.
		BATH
		"LIBRA WIDESTAR"1700x700 white acrylic bath. With outlet and overflow outlets.
	BE - 961	**BATH/ SHOWER DIVERTER MIXER**
		Under tile single lever mixer with sliding wall flange
	066-WT-ON	**BATH SPOUT** (Wall type) chrome plated.
	COBRA 370	BATH TRAP
		SABS 370 shallow seal bath P-Trap with
	COBRA 318-40	318-40 unslotted aquawaste
	**704201WH**	**BASIN WALL HUNG 575X455**
		Notes: 575x455mm rectangular wall hung basin with 1 taphole and integrated
		overflow

Project:	**ACACIA PARK**		
Project number:	2407	**Building:**	House
Document:	Specifications list		

Room name:	Sanitary Fitting and Brassware	**Room number:**	

IMAGE	ITEM	DESCRIPTION
	**232-10/NV**	**Angel valve**
		Notes: Angle regulating valve with durable ABS handle, DZR body,
		flow regulating spindle type headpart G1/2 X G1/2 BSP connections.
	**G-26090001**	**Head Shower set 3 sprays**
		Notes: GROHE Rain OÂ², Rain, Massage ball joint 15deg rotatable shower
		arm with connection thread 1/2 escutcheon GROHE DreamSpray perfect spray
		pattern GROHE Long-Life chrome finish SpeedClean anti-lime system Inner
		WaterGuide for a longer life suitable for instantaneous heater
	**G-29040001**	**Single lever shower mixer 1/2**
		Notes: concealed installation consisting of: set for final installation
		concealed body GROHE Longlife 46mm ceramic cartridge GROHE
		long-Life chrome finish adjustable flow rate limiter escutcheon and shaft
		sealing optional temperature limiter ref. no. 46 375
	**373SQ/N**	**P Trap**
		Notes: Shower type. With shallow seal and Grating. 1
		1/2BSP female iron outlet connections. Square grating.
	Shower door	1800 x 900 safety glass fully framed shower hinged door by specialist
		manufacturer (Showerlux or equal)
	Code	Vaal kite corner basin 470 x415 with 1 tap hole & overflow 2 wall hanger
	700-100	brackets 8126ZO

Project:	**ACACIA PARK**		
Project number:	2407	**Building:**	House
Document:	Specifications list		

Room name:	Sanitary Fitting and Brassware	**Room number:**

IMAGE	ITEM	DESCRIPTION
	**709300WH**	**Basin Wall Hung 495X430X190**
		Notes: Cobra Shelter Round wall hung basin. 495mm long X 430mm wide. 1x pre-punched
		tap hole in the centre of the basin. Overflow, expansion bolts & installation
		manual included. Compatible with Cobra round full pedestal [CWLPERD1-6DT01] and
		round semi-pedestal [CWLPERD2-6DT01]. Also compatible with Cobra standard-sized
		basin mixers.
	**302-32/N**	**Waste - Basin**
		Notes: Click type. Slotted, with integral plug. 62mm Ã˜ flange, 80mm long
		shank. 1 1/4BSP Male iron connection end.
	**340/N**	**Bottle Trap Universal**
		Notes: With adjustable telescopic waste connection pipe. 1 1/4BSP female inlet
		connection. 1 1/4BSP male iron outlet connection. Brass body. Comes with waste
		adaptor 1 Â¼ to 1 Â½ BSP & outlet adaptors 1 Â¼ & 1 Â½. Maximum flow rate
		+/- 37.5 l/min for trap alone, with Cobra pop-up waste, the flow rate is +/- 35.5 l/min.
	**NL - 951**	**Basin mixer Standard**
		Notes: Nile pillar type single lever basin mixer flow rate restricted to 6.0 ltrs/ min
		G1/2 female connection ends. Jaswic Approved
	**NL - 970**	**Sink Mixer**
		Notes: Nile pillar type sink mixer single lever flow rate restricted to 6 ltrs/ min
		G1/2 female connection ends chrome. Jaswic Approved
	Libra Revenge	**Corner Bath -** compact 1400 bath white acrylic 200 ltre volume. Provide C.P outlet
		and overflow

Project:	**ACACIA PARK SPECIFICATIONS**		
Project number:	2407	**Building:**	Houses
Document:	Specification		

ITEM	DESCRIPTION
Roof	Minimun 20 pitch
	Global roofing solutions Klip - LOK 700 profile in Colorbond AZ150, grade 550 steel, in
	single legths KLIP - LOK 700 Sheeting to be laid by an approved contractor in strict accordance
	with manufacturers specifications.
Flashings	Stop endings must be formed at the apex and the pan turned down at eaves to
	form drip. The roof sheeting shall be closed as necessary with purpose made
	flashings approved by suppliers. Flashings shall be notched around ribs, neat and
	tight, and fixed with **S10** clips. All operations to be performed with special tools
	from supplier.
Fasteners	for timber purlins secure sheets with KL700 clips and NO 10-11X45MM long
	self-drilling wafer head PHZ screws. Between purlin and sheeting fit
	approve underlay "SISALATION FIRESHIELD DS"
Structure	20 Degree pitch prefabricated approved SABS Timber trusses designed and
	manufactured by specialist approved fabricator. Trusses to be spaced 900 centres
	and fixed to 114x38mm SAP. Wall plates with galvanised steel hurricane fixing plates.
	Wall plates to be fixed to walls with 30x1,6mm galvanised hoop iron built into walls
	minimum 5 courses deep spaced at 1,200mm centres. Roof sheeting secured to
	timber purlins which must be minimum 50x76mm grade 4 S.A.PINE SABS quality
	approved. Purlins secured to trusses and rafters with galvanise , steel fixing cleats
Fascias and Barge boards with flashings	All fascias and barged boards to be 225x15mm nutec painted to match walls, as per
	paint specification. Plug and screw fix to walls and joints fitted with H-ALUMINIUM
	sections. All gable ends to be fitted with 300mm girth x0,9mm thick Colorbond
	steel to match roof sheets (225x75mm 90bend) secured with **S10** fixing clips. Head
	wall flashings as above but with 20 degree internal angle fitted over nutec board and over
	serrated head wall metal closure full width flashing. Ridge flashings to match roof
	sheets and fixed via **S10** clips
Valleys	Valleys formed with valley rafters and minimum 220x22mm S,A,PINE Valley boards
	fully lined with 0,9m x700mm girth (60x70x220x220x70x60mm)
	Provide leave guards in gutters
Gutters	All gutters to be colour baked on polymer silicon powder coated enamel paint
	finished O.G shaped 125x85x0,6mm with aluminium fixing brackets
	Gutters to be single lengths aluminium extruded on site. Rain water down pipes
	to be minimum 76mm Ø PVC with shoe and brackets plug and screw fixed to walls.
	Provide leave guards in gutters.
Ceilings and insulation	ceiling brandering to be nailed to underside of trusses which must be set level
	and packed up on wall plates where necessary. Brandering to be 38x50mm SAP
	merchant grade, fixed at 300mm centres. 6mm plaster board to be cloat nail fixed
	to structure and **apply on the same day** two 3mm thick coats at 90 degrees to each other
	createstone skim plaster, steel trowelled smooth without trowel marks and wavy
	surfaces. Paint as per paint specification. All ceiling spaces to be fitted with 130mm
	thick insulation "KNAUFINSULATION"roll.

Project:	**ACACIA PARK SPECIFICATIONS**		
Project number:	2407	**Building:**	Houses
Document:	Specification		

ITEM	DESCRIPTION
First Floor Concrete floor	First floor slabs to be reinforced concrete all in accordance with structural engineers
	details and specifications. Shutter boards to be of good quality and adequately
	proped to achieve a true level surface free of voids. Allow for casting in
	electrical conduits & draw boxes. Soffits of 1st floor slabs to be cleaned and
	prepared for skim plaster finish.
Staircase	Staircases to be reinforced concrete to structural engineers details.
	RISERS - 180mm Max
	TREADS - 280mm Minimum
Finishes	For floor finishes refer to finishing schedule.
	KITCHEN - R9 full bodied porcelane tile 600x600
	BATHROOMS and WC - R9 full bodied porcelane tile 600x600
	BEDROOMS - Minimum 8mm engineered laminate floor planks on rubber underlay
	LOUNGE - Floor Worx 3mm thick 228x1219 planks / 0.5 wear layer
	DINING - Floor worx 3mm thick 228x1219 planks / 0.5 wear layer.
	SHOWER - Floor and walls 1800 high to be waterproofed with "SIKA"approved
	product and tiled with mosaic R11 Rating on floor standard wall tiles.
	STAIR: Concrete stairs to have granolith screeds with reeded nosing.
Skirtings:	70x22mm S.A.P painted as per paint spec. with "velvaglo"matt finish.
	100mm high porcelaim floor tiles neatly cut and finished with P.V.C edging
	on top, to all tiled floors.
Lintels and Beams	All window and door openings to be formed with precast concrete lintels
	(110x76mm and 160x76mm). Minimum 5N° coarses above concrete lintels to be
	provided and all 5 coarses to be built with gavanised brickforce wire.
	Brickforce in cavity type walls to be in each 110mm brick skins, separately.
	All lintels, provide cranked DPC's over sloping mortar beds and in external
	skin, weep holes to be provided at 900mm centres.
Windors & Doors	All windows and external doors to be powder coat finished aluminium of
	approved colour and as per schedule. Windows and Doors to be manufactured
	of extrusions designed for minimum 1200 KPA wind load. Wall openings to be
	fitted with DPC's to head , cills and reveals. Plaster / aluminium frame junctions
	sealed with "SIKAFLEX 11FC"all round both inside and outside (refer to details)
	Shop drawings to be submitted to Architect for approval before production starts.
	Casements to be fitted with stainless steel friction stays.
Glazing	All glazing to confirm to N.B.R. Part N and SANS 1263-1 for sfety glass
	Glass to be of clear float quality.
Cills	Fit precast concrete cills with sloping top and water drip set in mortar bed.

Project:	**ACACIA PARK SPECIFICATIONS**		
Project number:	2407	**Building:**	Houses
Document:	Specification		

ITEM	DESCRIPTION
Joinery: Bedroom and kitchen cupboards - Refer to detail layouts.	
Carcasses	All floor and wall mounted cupboards. Carcasses to be of 16mm particle board
	with both faces finished with white melamine, grade 1.
Backs	Backs of carxasses to be of 3,2mm masonite white spray finished. Backs to be
	glued and panel pin fixed to carcass particle board. Exposed edges t have 1mm
	thick P.V.C edging neatly cut inline with board face.
	Wall mounted cupboards to have 70x22 SAP fixing rail fixed inside cupboard
	along top board.
Fixed shelves	16mm particle board finished with white melamine both sides, grade 1.
	Exposed edges to be 1mm thick PVC edging. Unsupported shelves maximum
	span not to exceed 1,000mm, unless a front rail is provided (45x22mm).
Work - Top Rails (Front and Rear)	70x22 SAP (On flat) support rails to work tops front and back with melamine finish where
	exposed.
Skirtings:	100mm high x22mm SAP skirtings / bases to be provided and front to be finished
	with floor tiles to match room.
Worktops	Approved stone finish 12mm thick "solid surface""SALVOCORP'or equal approved bonded to
	18mm thick waterproof particle board and wrapped around front edge.
	Rear upstand to be formed with 25mmØ radius and 100mm high.
Doors & Drawer fronts	"peen"finish malamine on 16mm 1st grade particle board. All esposed edges
	to be 2mm thick PVC edging of matching colour bonded to particle board.
	Doors to be routered to receive concealed "B lum hinges'.
	All drawers to be fitted with metal drawer runner soft closing type.
Handles	Fit all drawers and doors with 130mm solid stainless handles
Drawers	sides 16mm melamine particle board. Base of drawer to be 3,2mm white
	mosonite set into routered grooves of drawer sides and front,
Sink	"Franke Trend Line 721" size - 1200x535 DEB Stainless steel
	double end bowl drop on type. S. Steel unit to be sealed all round onto counter top
	with "SIKAFLEX 11FC". Cut - out in counter top must be sealed before installation of
	sink. Provde plumbing kit "SPZI F/2 for double bowl product NO. 1120009.
	Stinless steel mixer - Franke saturn ARC swivel No. 1150037

Project:	ACACIA PARK SPECIFICATIONS		
Project number:	2407	Building:	Houses
Document:	Specification		

ITEM	DESCRIPTION
Cornices	100mm coved polystyrene to be fixed to all walls and seal junctions with
	SIKAFLEX 11FC"or equal approved.
Walls : Exterior	R.O.K clay bricks (222x102x76) to be used for all walls. Walls to be constracted in
	stretcher bond with 10mm mortar joints and perps. All exterior wall of 280mm cavity
	construction composed of two 110mm ROK brick skins tied together with
	galvanised butterfly wall ties spaced at 900mm centres horizontally and every
	4th course vertically. Cavity walls to be provided with
	brickgrip D.P.C (375 micron PVC)- cranked 75mm at
	floor slab level as well as at lintol and beam level. **All cavities must be cleaned**
	on **a dailly bases**. Every 4th brick course to receive galvanised brickforce wire
	reinforcing. Provide DPC's at all wall openings.
Interior	Minimum 110mm ROK clay bricks stretcher bond with brick force wire at every 4th
	course and DPC at floor level. Provide 230mm R0K walls on terrace typology G. FLR.
Wall finish	All **external** surfaces must be plastered and finished with 2 coats lime and cement
	plaster wood floated to a smooth even finish minimum 10mm thick. Use bonding
	liquid at concrete lintels. As per elevations, provide textured plaster panels where
	indicated on elevations.
	Internal walls to receive 1 coat cement plaster applied with wood trowel to a even
	true surface, free of bulges. Cretestone skim plaster to be applied with steel trowel
	finished true, smooth and free of trowel marks.
Bath room and Kitchen walls	As per finishing schedule walls to be tiled full height in bath rooms. Kitchen walls -
	As per room layout apply ceramic tiles to splash backs at sinks and work tops
	minimum 600mm HIGH. Other walls to be of 2 coats plaster and paint finish.
Foundation walls	280mm foundation walls - cavity to be filled with concrete up to under side of floor
	slabs. After curing, filling of clean sand to be compacted to 95% AASHTOO,with
	mechanical compactor. Mass concrete or reinforced concrete to Stuctural Engineers
	details for wall strip footings (minimum 1:3:6mix).
Strip Footings	**Walls** / **Base Width** / **Base minimun Depth**
	280mm / 700mm / 250mm
	220mm / 700mm / 250mm
	110mm / 600mm / 220mm
	Strip footings must be excavated to depth minimum 300mm onto solid bearing
	capacity to be confirmed by Structural Engineers
Floors (GROUND)	Compacted clean fill to receive 50mm sand blinding. Fit 375 micron "gunplus"
	or equal approved damp proof membrane over full floor areas and all membrane
	joints must be over lapped and sealed with approved tape. D.P.M to be turned up
	walls to suit 100mm slab depth. 20mpa concrete floor slabs to be cast level and to
	minimum constant depth of 100mm. Slab to receive minimum 25mm Thick cement
	screed well compacted and finished floor level to allow for floor tiles (10mm thick).
	Refer to finishes schedule for floor finishes.

Project:	**ACACIA PARK SPECIFICATIONS**		
Project number:	2407	**Building:**	Houses
Document:	Specification		

ITEM	DESCRIPTION
Internal Doors and Frame	Internal doors to be 813x2032x40mm flush type. All doors to be of semi- solid core
	with 40x8mm H. wood edging strips exposed and both faces with 3,2mm thick
	masonite all for polyurathane (Velvaglo low voc) paint finish.
	Internal door Frames frames to be of 100x51mm meranti or equal approved wood
	with 43mm deep rebates for 40mm flush door leaves. Frames to be fully primed
	including **Rear Faces** before installation. Frames to be fixed to walls with
	galvanised ceramic lugs (3 per style). Sand smooth and apply 3 coats polyurathane
	(Velvaglo low Voc) sanded between coats.
Ironmongery - Internal Doors	
Furniture	"Waterbok on Rose" by ASSA Abloy code AL 6W 00 Finish - AS - anodised silver
Locks	Union upright lock code 22311-7615mm Two Lever
	finish - chrome plated
Bath Room lock	union code 22314 -76/8 SS
	NOTE:
	Aluminium doors and windows to be supplied with ironmongrery from
	manufacturer.
Hinges	All doors to be fitted with three (3) brass butt hinges 100x76mm
Door Stops (Bedrooms & WC's)	Rubber tipped AL 8722 AS anodised silver
Security Gates	Entrance and kitchen doors to be fitted with 'TRELLIDOOR' Security gates with slam
	locks.
Burglar Bars	All windows to be fitted with galvanised mild steel burglar bars, powder coat
	finished. Vertical bars (10x10mm solid square) fully welded to 30x5mm flat frame.
	Frame to be 15mm clear off wall face all round and chemical bolt (M10) fixed
	through 15mm tubular spacers to walls.
Power Supply	50% of power supply to be provided from approved solar panels
Hot water cylinders	200L Insulated HWC linked to solar panels & isolation switches. Provide 600 KPA
	pressure reducing valves and vacuum breakers and stop taps.
	Water pipes to be PVC with matching fittings to suite water pressure. **Municipality**
	to supply and fit **water meter** and **pre-paid electricity box**. Approved distribution (D.B)
	board to be recessed into wall.

END

ANNEXURE 2.4: STRUCTURAL ENGINEERING

1 INTRODUCTION

This report provides information as to the structural engineering scope for the project: Design and Build Contractors for The Demolition Of 112 Prefab Houses (Including Houses Under the Eskom Servitude) And Erecting of 113 Three Bed Brick Houses within Acacia Park.

The transition from drywall to brick wall construction necessitates a comprehensive review and upgrade (were required) of existing structural and civil infrastructure to ensure compliance with current safety standards.

1.1 PURPOSE OF THIS SPECIFICATION

This report is an Annexure to the approved Stage 2 report and provides additional information / specification on the recommended methodologies.

2 GENERAL DESCRIPTION IF THE WORKS

2.1 BACKGROUND AND INTRODUCTION

As per the stage two report the following recommendations were made:

- Top-Down Demolition: Given the construction materials and support configurations, the buildings must be demolished from the top down. This approach ensures controlled dismantling, reducing the risk of unintended collapse or structural failure.
- Foundations: New foundations to be cast as footprint for all new dwellings. No existing foundations to be used
- Geotechnical Investigations: To determine the soil's bearing capacity, composition, and other relevant properties at positions of new dwellings site were done (refer to Stage 2 report). Allowance for additional test to be done at individual units.
- Rational design: All new structural elements to be designed in accordance with SANS 10400: Part B: Structural design. Rational designs to comply with SANS 10160 Parts 1-8 (Basis of Structural Design for Buildings and Industrial structures.

2.2 GENERAL DESIGN CONSIDERATIONS

Based on the single storey dwelling (typology 4) and the double storey dwelling (terrace typology) the following general design considerations have been made.

2.2.1 Material Standards

All materials used shall comply with the following standard specifications, the latest of which shall be held to apply:

- SANS 28 - Metal ties for cavity walls
- SANS 227 - Burnt clay masonry units
- SANS 471 - Portland cement
- SANS 626 - Portland blast-furnace cement

- SANS 831 - Portland cement 15 and rapid-hardening Portland cement 15
- Concrete Masonry Association - The Masonry Manual

2.2.2 Masonry Units

General-purpose stock bricks or common bricks shall have a minimum average compressive strength of 7 MPa unless otherwise specified. Where stock bricks are required for load bearing walls or foundations then the compressive strength shall be 14MPa.

Satisfactory proof of load bearing capacity of bricks offered shall be submitted before deliveries are made to the site.

For samples, 6 units of each type of brick shall be submitted to the Engineer for approval. All subsequent deliveries shall be to the standard of the approved samples.

2.2.3 Fine Aggregate (Sand)

Fine aggregates used in mortar shall be naturally occurring sand or consist of crushed rock or gravel, or a combination thereof with naturally occurring sand being hard, clean and free from dust, shale, clay, loam roots and other impurities.

Fine mortar aggregates shall comply in all respect with SANS 1090.

2.2.4 Water

Water shall be clean and free from injurious amounts of acids, alkalis, sugar and other organic substances. Water suitable for drinking purposes shall be acceptable. If so, required by the Engineer, the suitability of water shall be proved by tests carried out by an approved laboratory.

2.2.5 Mortar

Mortar is to be Class II mortar and consist of 1-part Portland cement, one-part hydrated lime and 5 parts of sand by volume for normal brickwork. Mortar for foundations, lintels and for all load bearing walls higher than 3000 mm shall be Class I mortar and shall consist of 1-part Portland cement, ¼ part hydrated lime and 4 parts sand.

In the case of a cement-milled slag mortar, the sand and slag shall be mixed first and then the cement added.

Cement mortar should be used within two hours of the first contact of the cement with water. No mortar which is older than two hours or has begun to set should be used.

2.2.6 Wall Ties

Metal wall ties in brickwork and blockwork shall be galvanised crimped steel, single wire type, 4 mm diameter minimum, complying in all respects with SANS 28.

Ties cavity walls shall be PWD butterfly type formed of 4mm diameter steel wire galvanised class A for the expected conditions.

2.2.7 Reinforcement

Wall reinforcement shall consist of two 3.15 mm diameter longitudinal wires at appropriate centres for the thickness of the wall and with 2.80 mm diameter cross wires welded to the longitudinal wires at 300 mm centres. All wire used shall be of high tensile steel

2.2.8 Concrete to Brickwork Ties

End of junctions of brick walling to concrete are to be tied to the concrete by means of 1.6 x 32 x 500 mm galvanised hoop iron ties.

Brick linings to concrete are to be tied with 4 mm diameter crimped galvanised wire ties to SANS 28.

2.2.9 Precast Prestressed Concrete Lintels

Approved precast prestressed concrete lintels of suitable size of the thickness of the wall and the width of the opening shall be used over openings in plastered and bagged walls.

Wherever possible, the minimum bearing for precast prestressed lintels, at their ends and over intermediate supports, shall be:

a) For openings not exceeding 600 mm - ½ brick (110 mm)
b) For openings exceeding 600 mm - 1 brick (230 mm)

Where this requirement necessitates a total lintel length exceeding 6.6 m, a joint may be introduced centrally over an intermediate pier in a position to be approved by the Engineer. Such joints shall be stiffened by the introduction of welded wall reinforcement as specified prior and extending a minimum of 300 mm on either side of the joint, i.e. 600 mm minimum total length.

2.2.10 Roofing

All trusses spanning less than 8 meters to be in compliance with to SANS 10400 Part L if manufactured onsite and all truss spans longer than 8 meters to be engineered design roof trusses.

Roof trusses design to be able to accommodate future solar panels to be installed by others. Truss spacing to accommodate for geysers.

2.3 FREESTANDING DWELLINGS TYPOLOGY 4: DESIGN CONSIDERATIONS

2.3.1 Introduction

In alignment with Typology Four, the following structural considerations have been made, and additionally preliminary structural drawings have been added to the drawing list.

2.3.2 Foundations

A 600 x 250 mm reinforced concrete foundation has been selected for all load bearing brickwork and a 600 x 250 thickening shall be used for all non-load bearing brickwork. Both the foundations and the thickening shall have a concrete strength of 25Mpa. This has been selected to accommodate the soil conditions and the presence of trees in the area. The inclusion of tree root barriers was evaluated in the Civil Engineering Stage 2 report, given that nearby trees can potentially impact the structure and cause damage.

Based on the geotechnical investigation for the relevant zones the following depths have been recommended to achieve a satisfactory bearing capacity of +150 Kpa. Additionally, provisions for shoring and battering are required in areas where excavations between 1.2m – 1.5m are expected. Provisions are also to be made in areas where the water table exceeds the average noted in the geotechnical report or where the ground conditions are saturated

- At Zone B: The foundation based be at a depth of approximately 700mm below ground level.
- At Zone C: The foundation based be at a depth of approximately 700mm below ground level.
- At Zone D: The foundation based be at a depth of approximately 700mm below ground level.

2.3.3 Brickwork

All brickwork for the typology 4 shall achieve a minimum compressive strength of 14 MPa, ensuring adequate structural integrity and durability to support the design loads and withstand environmental conditions over time

2.4 TERRACE TYPOLOGY: DESIGN CONSIDERATIONS

2.4.1 Introduction

In alignment with Terrace Typology, the following structural recommendations have been made and additionally following preliminary structural drawings have been added to the drawing list.

2.4.2 Foundations

Based on the geotechnical investigation for Cluster H, it is recommended that the foundation be placed at a depth of approximately 900mm below ground level, providing an allowable bearing capacity of +200KPa. An 800 x 250 mm reinforced concrete foundation has been

selected for all load-bearing brickwork, while a 700 x 250 mm thickening will be used for all non-load-bearing brickwork, with both foundations having a concrete strength of 25MPa. This selection is made to accommodate the soil conditions and the presence of trees in the area, with the inclusion of tree root barriers due to potential impacts from nearby trees. Additionally, provisions for shoring and battering are required in areas where excavations between 1.2m – 1.5m are expected. Provisions are also to be made in areas where the water table exceeds the average noted in the geotechnical report or where the ground conditions are saturated.

2.4.3 First floor Slab

After evaluating the considerations in the Stage 2 report, it was determined that the in-situ concrete method shall be selected for the terrace typology due to its design flexibility and suitability for the site conditions. The slab shall be 230mm thick and having a minimum strength of 30 MPa. The high tensile steel in the reinforced concrete slab is to be approximately 80kg/m^3.

2.4.4 Concrete beams

Two 280mm x 450mm have been added to the preliminary layout to distribute the loads of the first-floor cantilever slab more effectively. The concrete beams to have a minimum of strength of 30 MPa and the high tensile steel in the beams is to be approximately 140kg/m^3. Refer to Annexure A, DWG no. 0554-02-ST-04.

2.4.5 Brickwork

All brickwork for the terrace typology shall achieve a minimum compressive strength of 14 MPa, ensuring adequate structural integrity and durability to support the design loads and withstand environmental conditions over time.

2.4.6 Carport

The carport shall consist of a structural steel frame made from hot-rolled steel sections for specific grades in accordance with SANS 50025 and SANS 10162. The carport will measure 5.5 metres wide by 12.8 metres long, with a minimum height clearance of 2.3 metres. The foundations shall consist of concrete footings 800mm x 300mm with a minimum depth of 500 mm to soffit of the foundation having a strength of 25 MPa. The high tensile steel in the concrete bases is to be approximately 100kg/m^3. The roof will use IBR (Inverted Box Rib) sheeting, with corrosion protection provided by hot-dip galvanizing or powder coating. The design must comply with SANS 10160 for wind loads expected and all construction must adhere SANS 10400 and SANS 10162. Refer to Annexure A, DWG no. 0554-02-ST-07.

3 DRAWINGS

Refer to Annexure 2.4A for drawings.

Description	Drawing no.
Typology 4 Foundation/ Concrete Layout and Details	0554-02-ST-01
Typology 4 Surface Bed Layout and Details	0554-02-ST-02
Typology 4 Foundation Reinforcement Layout and Details	0554-02-ST-03
Terrace Typology Surface Bed Layout	0554-02-ST-04
Terrace Typology Foundation Layout and Details	0554-02-ST-05
Terrace Typology Foundation Reinforcement Layout and Details	0554-02-ST-06
Terrace Typology Carport Layout	0554-02-ST-07

4 CONCLUSION

In conclusion, the report outlines key recommendations for the following.

4.1 FREESTANDING DWELLINGS TYPOLOGY 4

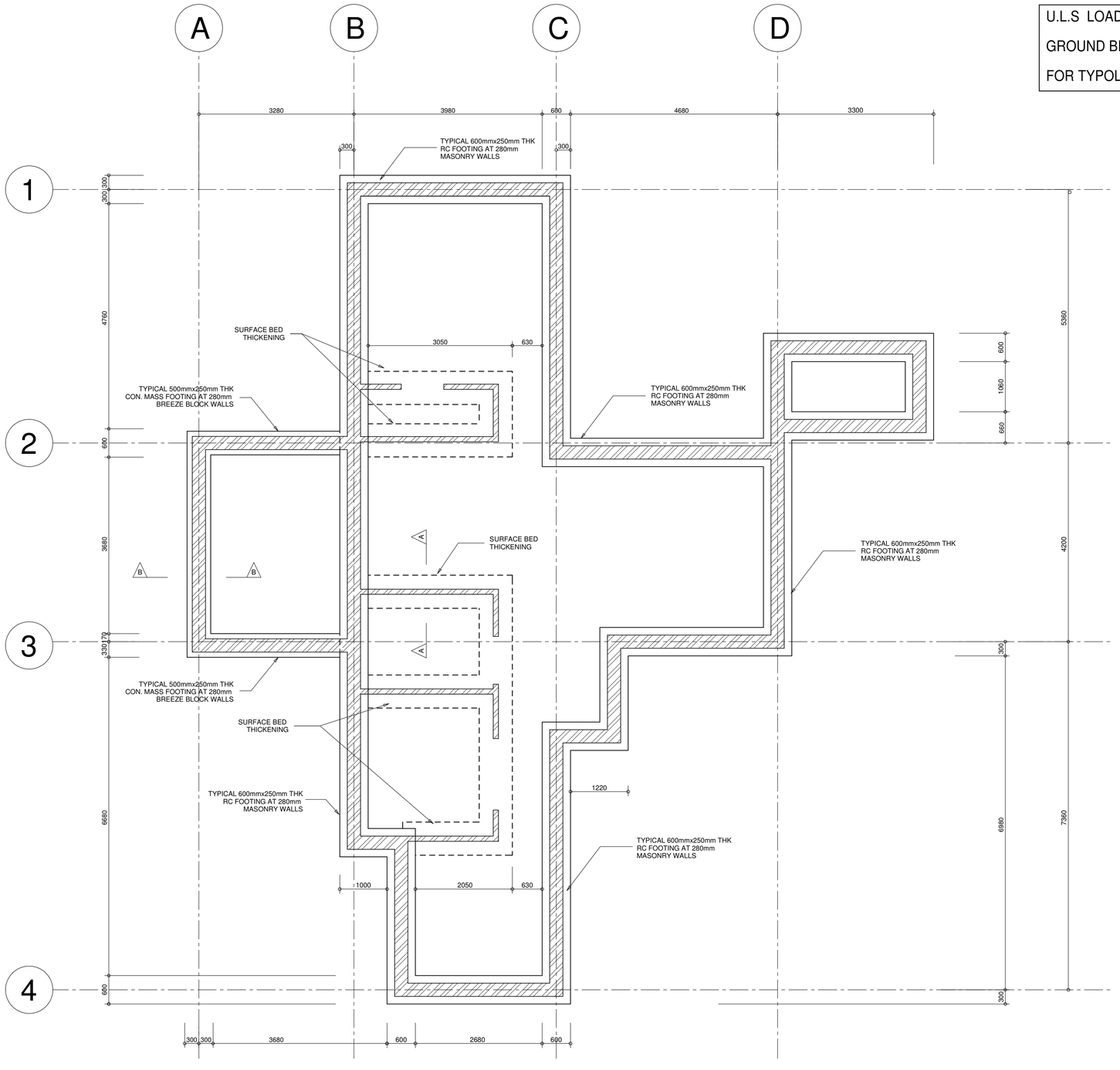
Foundations to be 600 x 250mm reinforced concrete with the design strength of 25MPa. The minimum depth to the soffit of the foundation shall be:

- Approximately 700mm at Zone B
- Approximately 700mm at Zone C
- Approximately 700mm at Zone D

4.2 TERRACE TYPOLOGY

The structural design recommends an in-situ cast first-floor slab with a thickness of 230mm and a minimum strength of 30 MPa, supported by additional 280 x 450mm beams with the same strength specification. Foundations to be 800 x 250mm reinforced concrete with the design strength of 25MPa and depth to the soffit of the foundation shall be a minimum of 900mm. All brickwork in the terrace typology will meet a minimum strength of 14 MPa, ensuring structural integrity. Furthermore, the carport will be a 12.8 x 5.5m galvanized structural steel frame, covered with IRB sheeting roofing and finished with Balu or composite timber cladding.

ANNEXURE 2.4A: DRAWINGS



FOUNDATION LAYOUT

SCALE 1:50

U.L.S LOADING OF 90 KPa ON GROUND BELOW FOUNDATIONS FOR TYPOLOGY 4

Notes

GENERAL AND SPECIFICATIONS

1 GENERAL:
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ALL CONCRETE WORK ACCORDING TO SABS 1200G
ALL STRUCTURAL STEEL WORK ACCORDING TO SABS 1200 H.
ALL EARTHWORKS ACCORDING TO SABS 1200D.
ALL BRICKWORK ACCORDING TO SABS 0164.

CONCRETE

1 CONCRETE STRENGTH (UNLESS SHOWN OTHERWISE):
MASS CONCRETE AND BLINDING: CLASS 15/26
STRIP FOUNDATIONS: CLASS 25/19
SURFACE BEDS CLASS 25/19
BASES & STAIRS: CLASS 30/19
COLUMNS: CLASS 30/19
WALLS, BEAMS & SLABS: CLASS 30/19
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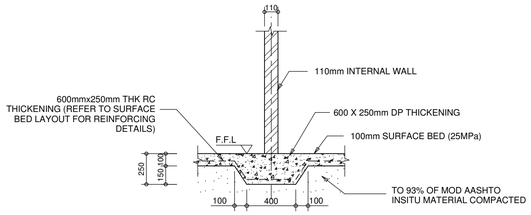
3 CONTRACTOR TO CO-ORDINATE ALL SERVICES TO BE CAST INTO CONCRETE. ONLY OPENINGS LARGER THAN 200mm DIAM ARE SHOWN ON STRUCTURAL LAYOUTS.
4 CONCRETE COVER TO REINFORCING:
BASES AND STRIP FOOTINGS: 50mm
COLUMNS AND BEAMS: 30mm
SLABS: 30mm
5 CONCRETE SHALL BE CURED ACCORDING TO SABS 1200G
6 CONCRETE FINISHES:
ALL VISIBLE EDGES OF SLABS & BEAMS AND ALL COLUMNS MUST HAVE 25mm x 25mm CHAMFERED EDGES.
HIDDEN UNFINISHED SURFACES - ROUGH
SPECIAL OR OFF-SHUTTER - TO ARCHITECT'S SPEC.
ALL OTHER CONCRETE - SMOOTH FINISH
7 ALL LOAD BEARING BRICKWORK TO BE 14MPA

REINFORCEMENT

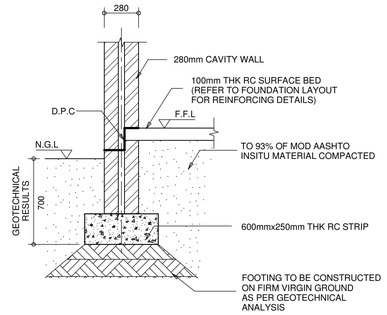
1 ALL REINFORCEMENT TO BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE CASTING OF CONCRETE. THE ENGINEER SHOULD BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CASTING OF CONCRETE.
2 NO HEATING, CUTTING OR WELDING OF REINFORCEMENT ARE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.



SECTION A-A:

250mm THICKENING IN SURFACE BED

SCALE 1:25



SECTION B-B:

STRIP FOOTING DETAIL

SCALE 1:25

0 2000 4000

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Date: _____

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ACTING CHIEF EXECUTIVE OFFICER
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VIRTUAL
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P O BOX 323
GROENKLOOF
0027

discipline: STRUCTURAL

service: CIVIL AND STRUCTURAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARKS

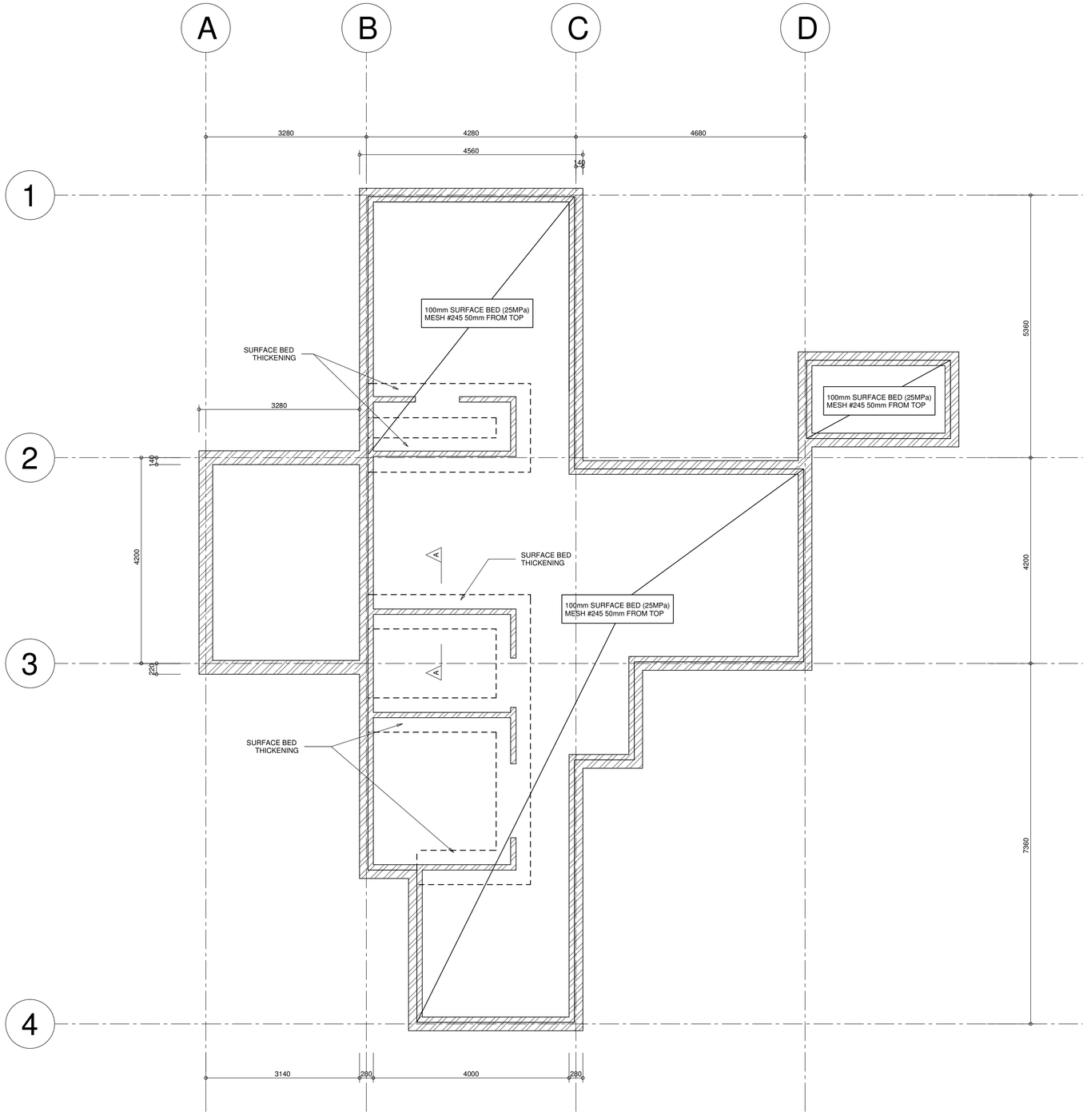
project number: ----

drawing title: ACACIA PARK: FOUINDATION/ CONCRETE LAYOUT AND DETAILS

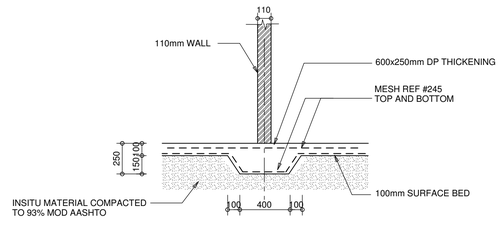
ref.no. --	designed M LUSHIKU
scale AS SHOWN	drawn M LUSHIKU
date SEPT 24	checked R. ISHMAIL

drawing number: 0554-02-ST-01

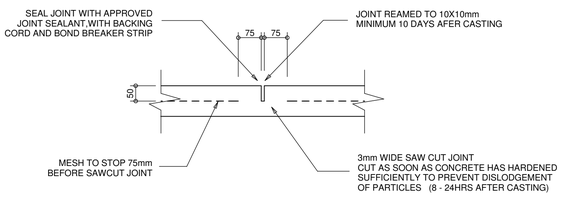
revision: A



SURFACE BED LAYOUT
SCALE 1:50



TYPICAL SECTION:
250mm THICKENING IN SURFACE BED
SCALE 1:25



DETAIL 1.
SAW CUT JOINT
SCALE 1:10

0 2000 4000

FOR INFORMATION

Notes

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ALL STRUCTURAL STEEL WORK ACCORDING TO SABS 1200 H.
ALL EARTHWORKS ACCORDING TO SABS 1200D.
ALL BRICKWORK ACCORDING TO SABS 0164.

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STRIP FOUNDATIONS:	CLASS 25/19
SURFACE BEDS	CLASS 25/19
BASES & STAIRS:	CLASS 30/19
COLUMNS:	CLASS 30/19
WALLS, BEAMS & SLABS:	CLASS 30/19

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SPECIAL OR OFF-SHUTTER - TO ARCHITECT'S SPEC.
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APPROVED JOINT SEALANTS

1. SIKAFLEX 11FC+ OR PRO-2HP
2. DURAKOL 25
3. PROSTRUCT 542 OR 544

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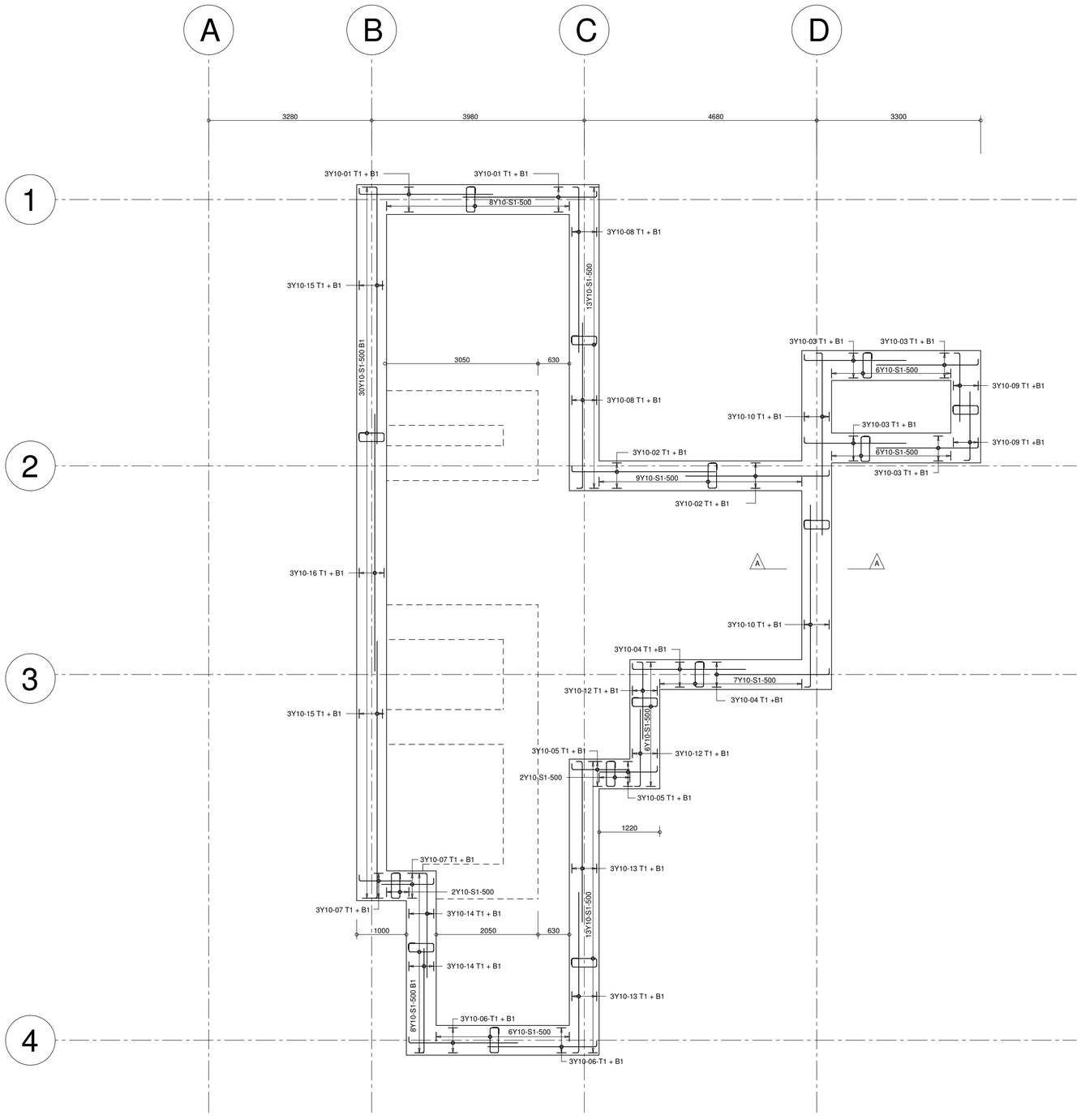
service: CIVIL AND STRUCTURAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARKS

project number: ----

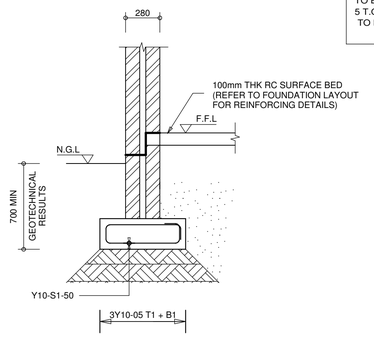
drawing title: ACACIA PARK: SURFACE BED LAYOUT AND DETAILS

ref.no. --	designed M LUSHIKU
scale AS SHOWN	drawn M LUSHIKU
date SEPT 24	checked R. ISHMAIL

drawing number: 0554-02-ST-02
revision: A



FOUNDATION REINFORCEMENT LAYOUT
SCALE 1:50



TYPICAL SECTION A-A:
STRIP FOOTING DETAIL
SCALE 1:25

Notes

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NOTE:
1 FOR WALLS REFER TO ARCHITECTS LAYOUT.
280
2 ALL 280mm MASONRY WALLS TO HAVE 600x250mm THK RC STRIP FOOTINGS.
4 F.F.L OF ALL RC BASES AND STRIP FOOTINGS TO BE CONFIRMED
5 T.O.B OF ALL RC BASES AND STRIP FOOTINGS TO BE CONFIRMED

MEMBER	No OF	BARS PER MEMB	DIA.	LENGTH	TOTAL NUM-BER	MARK	S C	BENDING A	B	C	D	E/r
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		12	Y10	2400	12	04	34	2280				
		12	Y10	1250	12	05	34	1160				
		12	Y10	2300	12	06	34	2190				
		12	Y10	1150	12	07	34	1050				
		12	Y10	3450	12	08	34	3330				
		12	Y10	1500	12	09	34	1380				
		12	Y10	3750	12	10	34	3660				
		12	Y10	1650	12	12	34	1550				
		12	Y10	3350	12	13	34	3230				
		12	Y10	2200	12	14	34	2100				
		12	Y10	5300	12	15	34	5170				
		6	Y10	5150	6	16	20	(5170)				
		116	Y10	1500	116	S1	60	500	170			

	8	10	12	16	20	25	32	40	TOT
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Y		410							410
TOT		410							410

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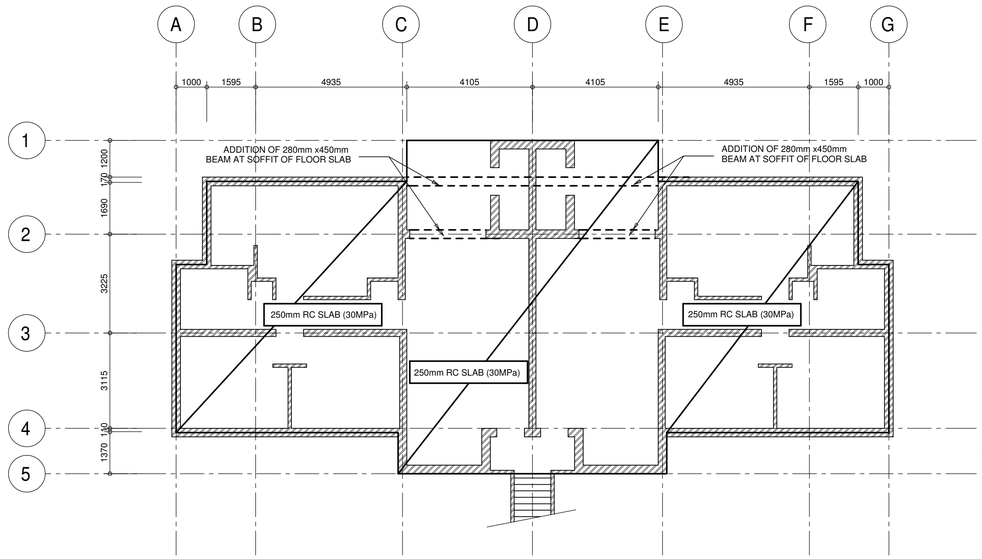
project number: ----
drawing title: ACACIA PARK: FOUNDATION REINFORCEMENT LAYOUT AND DETAILS

ref.no. -- | designed M LUSHIKU
scale AS SHOWN | drawn M LUSHIKU
date SEPT 24 | checked R. ISHMAIL
drawing number: 0554-02-ST-03
revision: A

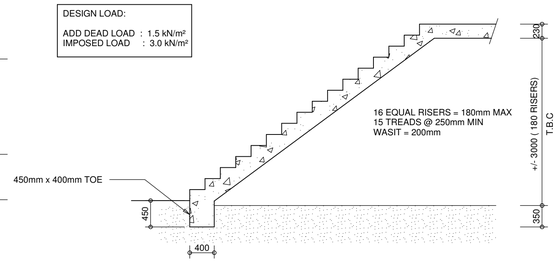


FIRST FLOOR LAYOUT

SCALE 1:100

DESIGN LOAD:

ADD DEAD LOAD : 1.5 kN/m²
IMPOSED LOAD : 3.0 kN/m²



STAIRCASE SECTION

SCALE 1:50

Notes

GENERAL AND SPECIFICATIONS

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ALL STRUCTURAL STEEL WORK ACCORDING TO SABS 1200 H.
ALL EARTHWORKS ACCORDING TO SABS 1200D.
ALL BRICKWORK ACCORDING TO SABS 0164.

CONCRETE

1 CONCRETE STRENGTH (UNLESS SHOWN OTHERWISE):

MASS CONCRETE AND BLINDING:	CLASS 15/19
STRIP FOUNDATIONS:	CLASS 25/19
BASES & STAIRS:	CLASS 30/19
COLUMNS:	CLASS 30/19
WALLS, BEAMS & SLABS:	CLASS 30/19
SURFACE BEDS	CLASS 25/19

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4 CONCRETE COVER TO REINFORCING:

BASES AND STRIP FOOTINGS:	50mm
COLUMNS AND BEAMS:	30mm
SLABS:	30mm

5 CONCRETE SHALL BE CURED ACCORDING TO SABS 1200G
6 CONCRETE FINISHES:
ALL VISIBLE EDGES OF SLABS & BEAMS AND ALL COLUMNS MUST HAVE 25mm x 25mm CHAMFERED EDGES.
HIDDEN UNFINISHED SURFACES - ROUGH
SPECIAL OR OFF-SHUTTER - TO ARCHITECT'S SPEC.
ALL OTHER CONCRETE - SMOOTH FINISH

REINFORCEMENT

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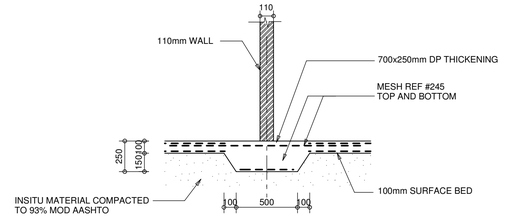
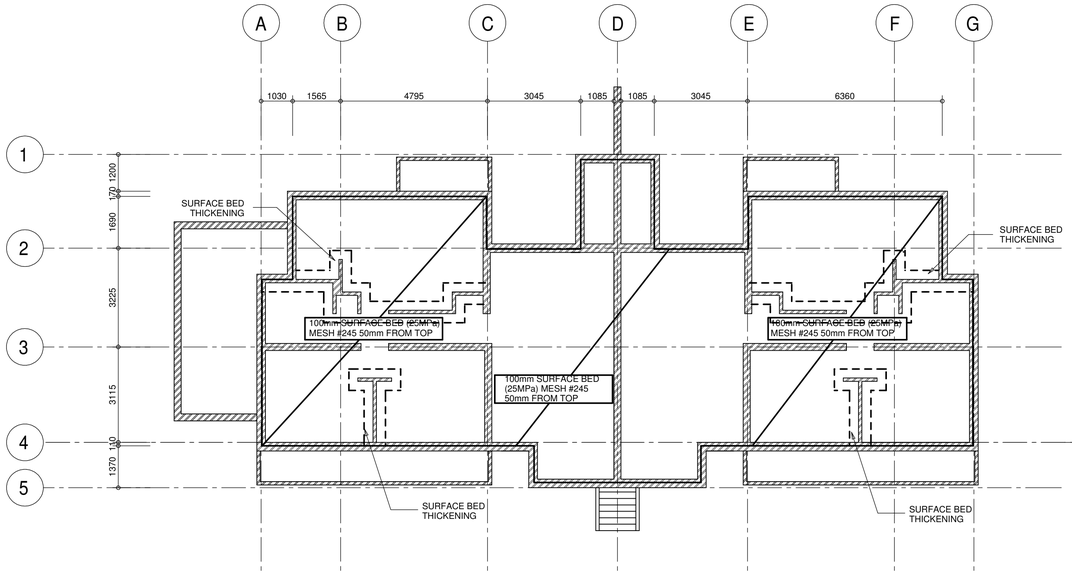
BRICKWORK

1 ALL BRICKWORK TO BE 14 MPa



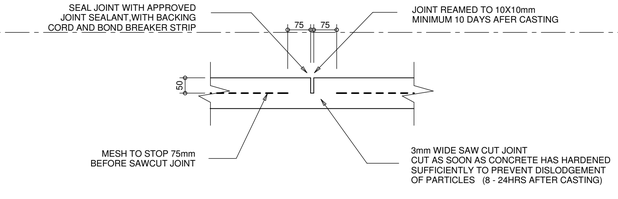
TYPICAL SECTION:
250mm THICKENING IN SURFACE BED

SCALE 1:25



GROUND FLOOR LAYOUT

SCALE 1:100



DETAIL 1.
SAW CUT JOINT

SCALE 1:10

0 2000 4000

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discipline: STRUCTURAL

service:

CIVIL AND STRUCTURAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARKS

project number: ----

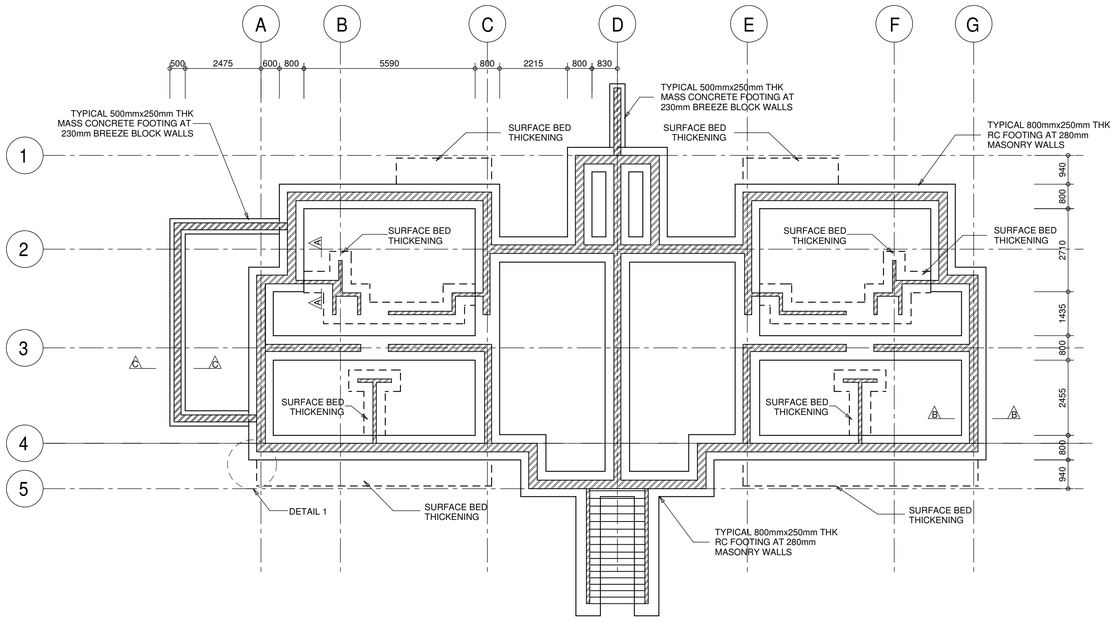
drawing title:

ACACIA PARK:
TERRACE TYPOLOGY
SURFACE BED LAYOUT

ref.no. --
designed M LUSHIKU
scale AS SHOWN
drawn M LUSHIKU
date SEPT 24
checked R. ISHMAIL

drawing number: 0554-02-ST-04

revision: A



U.L.S LOADING OF 160KPa ON GROUND BELOW FOUNDATIONS FOR TERRACE TYPOLOGY

Notes

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ALL EARTHWORKS ACCORDING TO SABS 1200D.
ALL BRICKWORK ACCORDING TO SABS 0164.

CONCRETE

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SURFACE BEDS	CLASS 25/19
BASES & STAIRS:	CLASS 30/19
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SLABS:	30mm

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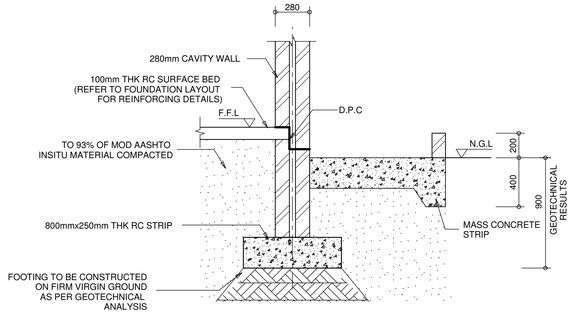
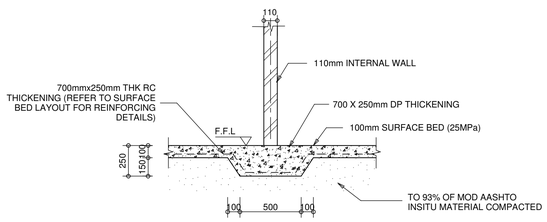
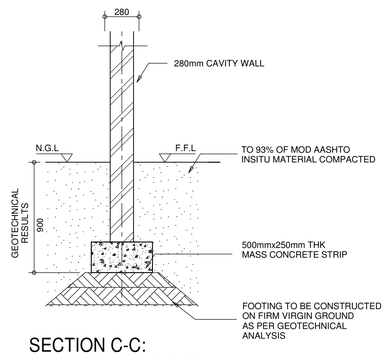


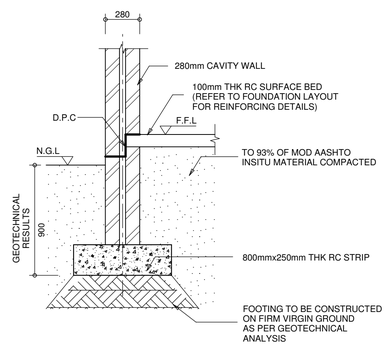
DETAIL A
PLANTER BOX FOUNDATION
SCALE 1:25



SECTION A-A:
250mm THICKENING IN SURFACE BED
SCALE 1:25



SECTION C-C:
STRIP FOOTING DETAIL
SCALE 1:25



SECTION B-B:
STRIP FOOTING DETAIL
SCALE 1:25

0 2000 4000

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Date: _____

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professional registration no.: N/A

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page type: A1

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MR. SIFISO MDAKANE

implementing agent
independent development trust
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2032
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ACTING CHIEF EXECUTIVE OFFICER
MS. TEBOGO MAJARA

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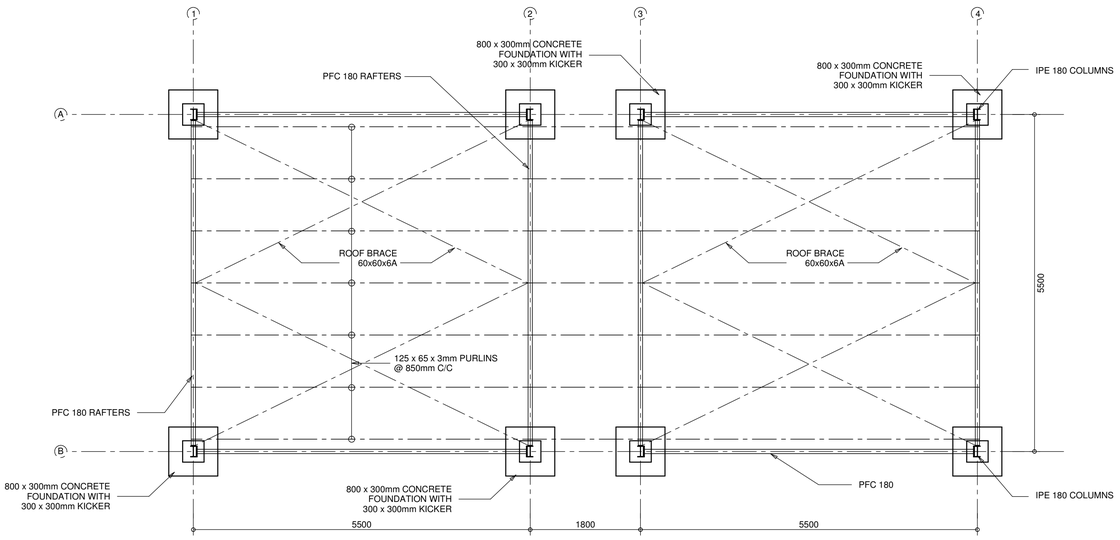
GROENKLOOF
0027

discipline: STRUCTURAL
service: CIVIL AND STRUCTURAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARKS

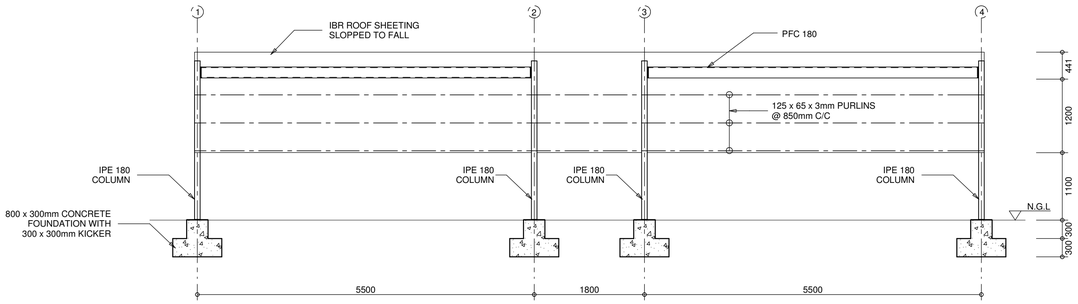
project number: ----
drawing title: ACACIA PARK: TERRACE TYPOLOGY FOUNDATION LAYOUT AND DETAILS

ref.no.	--	designed	M LUSHIKU
scale	AS SHOWN	drawn	M LUSHIKU
date	SEPT 24	checked	R. ISHMAIL

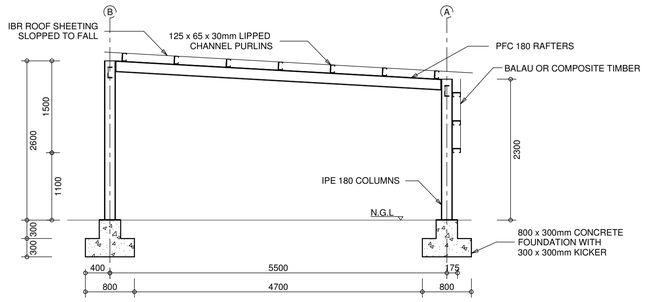
drawing number: 0554-02-ST-05
revision: A



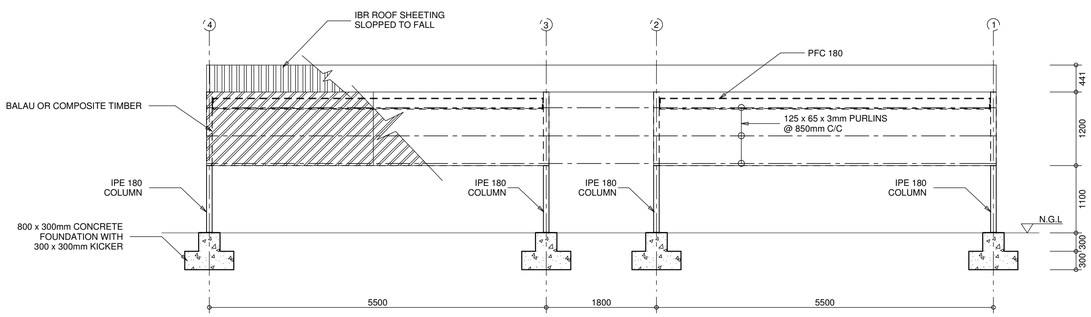
PLAN VIEW
SCALE 1:50



ELEVATION VIEW A
SCALE 1:50



SECTIONAL VIEW
SCALE 1:50



ELEVATION VIEW B
SCALE 1:50

Notes

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SURFACE BEDS CLASS 25/19
BASES & STAIRS: CLASS 30/19
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Date: _____

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name: N/A

date: N/A

professional registration no.: N/A

cad file name: 0554-02-ST-07

page type: A1

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implementing agent: independent development trust
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0027

discipline: STRUCTURAL

service: CIVIL AND STRUCTURAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARKS

project number: ----

drawing title: ACACIA PARK: TERRACE TYPOLOGY CARPORT STRUCTURE

ref.no. --
designed M LUSHIKU
scale AS SHOWN
drawn M LUSHIKU
date SEPT 24
checked R. ISHMAIL

drawing number: 0554-02-ST-07

revision: A

ANNEXTURE 2.5 CIVIL ENGINEERING

1 INTRODUCTION

This report provides information as to the civil engineering scope for the project: Design and Build Contractors for The Demolition Of 112 Prefab Houses (Including Houses Under the Eskom Servitude) and erecting of 113 Three Bed Brick Houses within Acacia Park.

The transition from drywall to brick wall construction necessitates a comprehensive review and upgrade (were required) of existing structural and civil infrastructure to ensure compliance with current safety standards.

1.1 PURPOSE OF THIS SPECIFICATION

This report is an Annexure to the approved Stage 2 report and provides additional information / specification on the recommended methodologies.

2 GENERAL DESCRIPTION IF THE WORKS

2.1 BACKGROUND AND INTRODUCTION

The Civil Engineering works are to investigate and assess the existing infrastructure which comprises of the water supply, waste-water reticulation, stormwater reticulation, roads, parking and platforms for new dwellings. All new civil engineering elements will be designed in accordance with the relevant SANS standards to ensure safety, structural integrity, and compliance with regulatory requirements.

The design will adhere to SANS 10400, including Parts A (General principles), P (Drainage), R (Stormwater Disposal), and W (fire installation), which govern the overall building principles, public safety, environmental durability, and wall construction. Additionally, rational designs will comply with SANS 1200 Parts DM (Earthworks), L-LF (Piping, Sewerage and Drainage), and M-MK (Road works), ensuring proper earthworks, drainage system design, and road construction methods.

2.2 SEWER

2.2.1 Freestanding single units (Typology 4)

The existing main sewer infrastructure in Blocks B, C, and D comprises of vitrified clay pipework with a diameter of 150mm. These existing main pipes will remain in place, as they are structurally sound and meet current engineering standards. In contrast, all sewerage lines, (Ø 100mm vitrified clay pipes), connecting the new units to the existing main sewer system will be entirely replaced with new Ø110mm UPVC Class 34 pipes at a minimum 1:60 slope. This is essential to ensure optimal flow capacity and long-term durability.

The new piping will connect to the existing main sewerage line through a newly constructed manhole, facilitating efficient waste management and maintenance access. For detailed specifications and layout, refer to Annexure2.5 A, Drawing No. 0554-01-WS-01.

All obsolete/abandoned sewerage piping and manholes located within the footprint of the new houses will be systematically capped and removed. Wherever feasible, we will repurpose existing connections to optimize resources and minimize disruption. Furthermore, the tops of abandoned manholes, along with any associated piping, will be thoroughly backfilled with in-situ material.

2.2.2 Double story units (Terrace Typology)

The existing sewerage infrastructure within the domestic quarters is set to be demolished and replaced with a new Ø 160mm uPVC main sewerage pipe and Ø 110mm uPVC pipe connecting to each unit, this is to enhance overall functionality and efficiency. This new pipeline will be strategically installed behind the newly constructed double-story terraces with a minimum slope of 1:60 while also ensuring minimal disruption to the surrounding area. It will connect seamlessly to the existing Ø 150mm main sewer pipe located in the adjacent field. The design ensures a gravity-based flow, utilizing the elevation difference for efficient drainage, and provides a seamless connection to the existing infrastructure without the need for additional pumping or interventions.

The proposed design is intended to meet current engineering standards and enhance the longevity of the sewerage system. For detailed specifications and alignment, please refer to Annexure 2.5A, Drawing No. 0554-01-WS-01 and Drawing No. 0554-01-WS-05.

2.3 WATER

The current water supply pressure at Acacia Park was tested to be between the range of 3.2 bar and 3.8 bar which is sufficient to meet the park's water distribution needs, including all residential dwellings and hydrant requirements, this pressure range is within acceptable limits for residential and fire protection services.

Furthermore, pressure tests conducted on the hydrants confirm that they maintain more than sufficient pressure to ensure optimal performance during emergencies. After site inspections it was found that the maximum distance between the fire hydrants were 80m, therefore, no upgrades or changes to the fire water systems are necessary, as per the guidelines outlined in SANS 1200 Part LF and SANS 10400-W. For further details and specifications, refer to Annexure 2.5A, Drawing No. 0554-01-WS-01. This design ensures that the water supply system can accommodate future growth while adhering to engineering and safety standards set in SANS 10400 and SANS 1200.

2.3.1 Water supply for freestanding single-story units (Typology 4):

The water supply for the new units will be connected to the existing main supply line via a Ø25mm polycop line, complete with a Ø25mm stopcock at the connection point to ensure effective control and isolation of the water supply for each unit. This installation will adhere to the relevant standards outlined in the South African National Standards (SANS) documents to ensure compliance with safety and performance criteria. For detailed specifications and layout, refer to Annexure 2.5A, Drawing No. 0554-01-WS-01.

To enhance water management and monitoring, each dwelling will be equipped with its own dedicated smart water meter. This initiative not only provides accurate usage data but also facilitates efficient water management and promotes conservation among residents. There is existing irrigation at blocks B, C and D. The new irrigation will be placed in a similar position to the existing irrigation system with the same connection to the water supply.

2.3.2 Water supply for double story units (Terrace typology):

Each terrace within the development will be supplied with a Ø40mm polycop feed line. At the connection point to the main supply line, there will be a Ø40mm stopcock installed to facilitate effective control and isolation of the water supply. For further details, please refer to Annexure 2.5A, Drawing No. 0554-01-WS-01 for typical layout and 0554-01-WS-07 for area layout.

In addition, each unit will be equipped with its own dedicated smart water meter. This setup will enable accurate monitoring of water usage, promoting efficient water management and conservation among residents.

The irrigation system for the new double-story units at Acacia Park will be designed in a grid format with irrigation points spaced 4 meters apart, ensuring even coverage and effective watering of landscaped areas. It will connect to the main water supply using 12 mm diameter piping to maintain adequate flow rates while minimizing water wastage. Additionally, a shutoff valve will be installed at the connection point to facilitate easy control, maintenance, and system adjustments, refer to Annexture A, Drawing No. 0554-01-WS-07.

2.4 STORMWATER DRAINAGE

The stormwater infrastructure associated with the identified units scheduled for demolition has been assessed and is currently in functional condition, no additional stormwater runoff is expected with the addition of the new typologies. It is planned that the new units be constructed in the same location/vicinity as the demolished units, no upgrades to the existing stormwater system will be necessary.

To ensure compliance with relevant regulations, stormwater management practices will adhere to SANS 10400 standards, while stormwater reticulation will be designed in accordance with SANS 1200 Part LE. This approach ensures that the stormwater infrastructure meets the required safety and performance criteria, maintaining effective drainage and minimizing potential environmental impacts, refer to Annexture A, Drawing No. 0554-01-WS-02 for typical unit layout.

2.4.1 Freestanding single-story units (Typology 4)

The existing stormwater runoff from the site is directed into channels along the roadway and subsequently flows into the surrounding detention pond. The new units will adopt the same stormwater removal strategy, with driveways and paved areas designed to slope appropriately, directing runoff toward the detention pond.

For detailed design and specifications, refer to Annexure 2.5A, Paving Drawing No. 0554-01-WS-02. This approach ensures effective management of stormwater, mitigating potential flooding and promoting sustainable drainage practices in line with best engineering standards.

By utilizing the existing drainage infrastructure, the project aims to enhance water management efficiency while maintaining environmental integrity.

2.4.2 Double Story Units (Terrace Typology)

The terraces located at the domestic quarters will feature newly constructed stormwater infrastructure designed to efficiently manage runoff. This system will direct stormwater through channels along the newly developed road, ensuring effective drainage towards the surrounding stormwater drainage systems and adjacent grasslands.

For detailed design and specifications, refer to Annexure 2.5A, Drawing No. 0554-01-WS-02. This approach not only enhances the overall drainage capability of the site but also promotes sustainable water management practices, reducing the risk of flooding and protecting the surrounding environment. The implementation of this new infrastructure aligns with best engineering practices and regulatory standards.

2.5 EARTHWORKS

Earthworks are a critical component of the site preparation process, involving the removal, alteration, and relocation of soil and rock in designated areas. This process is essential for preparing the site for subsequent construction activities, including the installation of new layer works and top finishes. The earthworks will be conducted in accordance with SANS 10400 to ensure stability and compliance with regulatory requirements.

To protect paved areas and foundational structures from damage caused by tree roots, it is advised to install tree root barriers. These barriers will prevent roots from infiltrating paved surfaces, extending their lifespan while also promoting tree health by directing root growth away from pavement. This proactive measure ensures both infrastructure integrity and sustainable tree growth.

For detailed specifications and design considerations related to the earthworks, refer to Annexure 2.5A, Drawing No. 0554-01-C-04 for layer works. This comprehensive approach to earthworks not only prepares the site effectively for new construction but also minimizes environmental impact and promotes sustainability in the overall project execution.

2.5.1 Demolition phase / Site Clearance:

The demolition phase of the project will involve minimal civil demolition activities. Specifically, the bricks and concrete obtained from the demolition of the Domestic Quarters will be processed and crushed for reuse in road construction, serving as part of the layer works. This approach not only promotes sustainability by reducing waste but also contributes to cost-efficiency in the project. The reuse of these materials aligns with the principles outlined in SANS 1200, which emphasizes responsible construction practices and effective materials management.

Provisions for site clearance have been accounted for, with detailed specifications and quantities provided in Annexure 2.5A, Civil Specifications and Quantities. This ensures that all necessary measures are taken to prepare the site effectively while complying with relevant

standards established in SANS 10400, particularly those concerning site preparation and safety. Refer to Annexture A, Drawing No. 0554-01-C-04.

2.5.2 Earthworks for all freestanding single-story units (Typology 4):

The layer works for all paved areas surrounding the units are designed to provide a durable and stable foundation that supports both the structural integrity of the pavement and effective water management, this will include a minimum 1m apron around each dwelling consisting of the same layer works are the paved areas for foundation protection.

The top layer will consist of a 500mm x 500mm block paver, selected for its aesthetic appeal and durability, placed atop a 25mm clean sand bed with a 150mm G5 subbase gravel layer beneath, compacted to 95% Maximum Dry Density. This gravel layer provides adequate drainage and load distribution, significantly reducing the risk of pavement failure. Beneath the subbase, a 150mm G7 fill/insitu layer will be compacted to 93% Maximum Dry Density (100% compaction for sand), offering additional stability while utilizing existing materials. To define the perimeter and prevent material movement, E1 edging will be incorporated. For detailed specifications and design considerations, refer to Annexure 2.5A, Drawing No. 0554-01-C-04.

To enhance drainage, the paving will be intentionally sloped toward the existing stormwater channels and surrounding grasslands. This design facilitates efficient runoff management, minimizing water pooling and ensuring effective stormwater control. Overall, this comprehensive approach guarantees the durability of the paved areas while aligning with relevant SANS standards, contributing to a functional and aesthetically pleasing environment.

2.5.3 Earthworks for all double story units (Terrace typology):

The paved areas surrounding the terraces will be constructed using a robust layering system designed for durability and effective drainage. The top layer will consist of a 500mm x 500mm block paver, selected for its aesthetic appeal and long-lasting performance. Beneath this, a 25mm clean sand bedding on top of a 150mm G5 subbase gravel layer which will be compacted to 95% Maximum Dry Density, providing adequate drainage and load distribution. Under the subbase, a 150mm G7 fill/insitu layer will be compacted to 93% Maximum Dry Density (100% compaction for sand).

To enhance water management, the paved areas will be intentionally sloped toward the existing stormwater drains and surrounding grasslands. This design ensures efficient runoff management, directing water away from the paved surfaces and minimizing the risk of pooling. For detailed specifications and design considerations, refer to Annexure 2.5A, Drawing No. 0554-01-C-04.

2.6 PARKING AREA FOR DOUBLE STORY UNITS (TERRACE TYPOLOGY):

The parking areas, including covered parking spaces, will be constructed using a robust system designed to support vehicle loads effectively. The top layer will consist of 80mm interlocking concrete pavers with a compressive strength of 35MPa, which are thicker and stronger than traditional clay bricks, making them ideal for high-traffic areas where durability and performance are critical.

Beneath the concrete paver layer, a clean sand bedding on top of a 150mm C4 cement stabilized layer will be installed, compacted to 96% Maximum Dry Density, ensuring superior load distribution and enhancing the overall strength of the pavement structure. Below this, a 150mm G7 in situ/fill subgrade layer will be compacted to 93% Maximum Dry Density (with 100% compaction for sand), providing a stable foundation that further supports the weight of vehicles.

Tree root barriers will be installed to prevent damage to the pavement and underlaying layers. This will help maintain the integrity of the pavement structure.

To facilitate effective stormwater management, a new BK2 kerb and C1 channel will be integrated into the design, directing runoff away from the parking areas. For detailed specifications and design considerations, refer to Annexure 2.5A, Drawing No. 0554-01-C-04. This ensures that the parking areas are not only durable and functional but also aligned with industry best practices and relevant SANS standards, contributing to a safe and efficient development.

2.7 ROADS FOR DOUBLE STORY UNITS (TERRACE TYPOLOGY):

The road construction will feature a robust layered system designed for vehicular loads and long-term durability. The top layer will consist of 80mm interlocking concrete pavers with a compressive strength of 35MPa, making them thicker and stronger than traditional clay bricks, ideal for high-traffic roadways.

Beneath the paver layer, a 25mm clean sand bedding on top of a 150mm C4 cement stabilized layer will be compacted to 96% Maximum Dry Density to enhance load distribution and provide a solid foundation. Below this, a 150mm G7 in situ/fill subgrade layer will be compacted to 93% Maximum Dry Density (with 100% compaction for sand) to ensure stability.

To manage stormwater runoff effectively, the design will include a BK2 kerb and C1 channel, directing water away from the roadway. For further specifications, refer to Annexure 2.5A, Drawing No. 0554-01-C-04.

2.8 PATHWAYS:

All pathways will feature a layered system for durability and effective drainage. The top layer will consist of a 50mm clay brick layer, selected for its aesthetic appeal and suitability for pedestrian use, in line with SANS 1200 standards.

Beneath this, a 25mm clean sand bedding with a 150mm G5 subbase gravel layer underneath, which will be compacted to 95% Maximum Dry Density, following SANS 10400 guidelines for site preparation. The G5 gravel enhances drainage and load distribution, minimizing surface deformation.

Additionally, a 150mm G7 fill/insitu layer will be compacted to 93% Maximum Dry Density (100% compaction for sand), providing overall stability. For detailed specifications, refer to Annexure 2.5A, Drawing No. 0554-01-C-04. Tree root barriers will be installed to prevent damage to both the pavement and the trees. This will help maintain the health of the trees

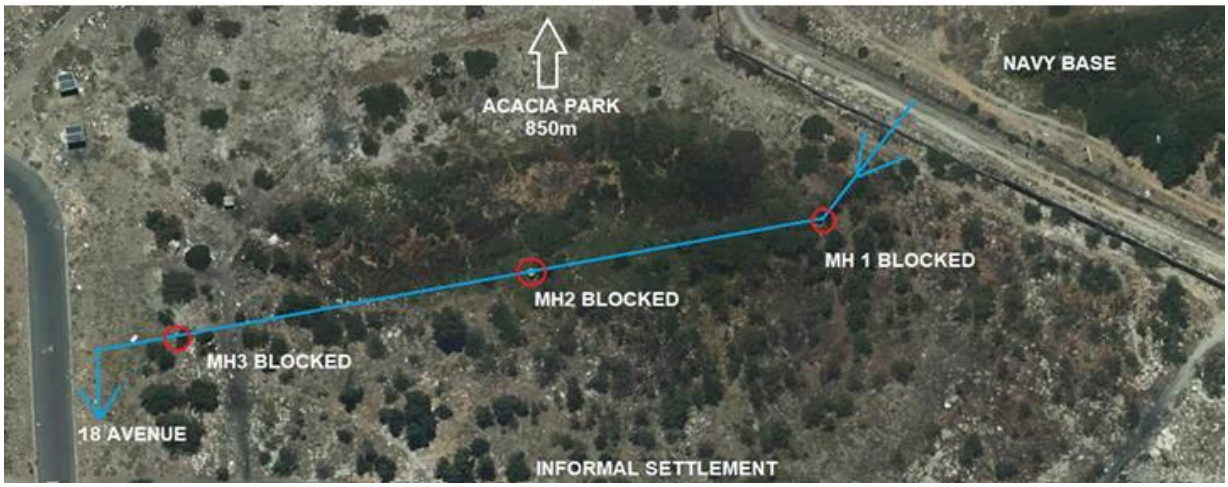
while ensuring the integrity of the pavement structure. This ensures the pathways are functional, durable, and compliant with relevant SANS standards.

2.9 18TH AVENUE:

The sewerage pipes running through the retention pond have collapsed and require rerouting to address ongoing sewage overflow issues. Contributing factors include the removal of manhole covers and the infiltration of stormwater into the sewer system due to its placement within the retention pond. These issues necessitate immediate attention to prevent further complications.

This item is not part of the scope of the project; however, Acacia Park's sewerage system connects to this outlet. Therefor it is imperative that the 18th avenue sewerage system is upgraded, if not it will result in the same overflow issues that is currently present on the park. This item has been allowed for in the Bill of Quantities.

The new sewerage lines will be bypassed at a new manhole situated before manhole 5 and rerouted around the retention pond into manhole 8. Refer to Annexure 2.5A, 18th Avenue design, drawing no. 0554-01-WS-03.



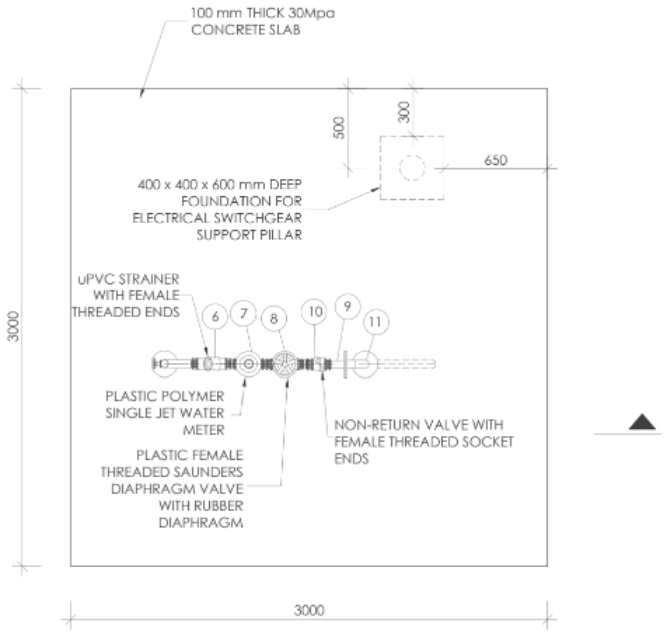
Picture 02: Blocked manholes near Navy Base and informal settlement.

2.10 BOREHOLES

Considering the shortage of potable water in the city, it is recommended that a borehole system be developed to reduce the dependence on potable water for the irrigation of the lawns and gardens of Acacia Park. The system will require some pressure system, such as an elevated tank system and a dual network for each property.

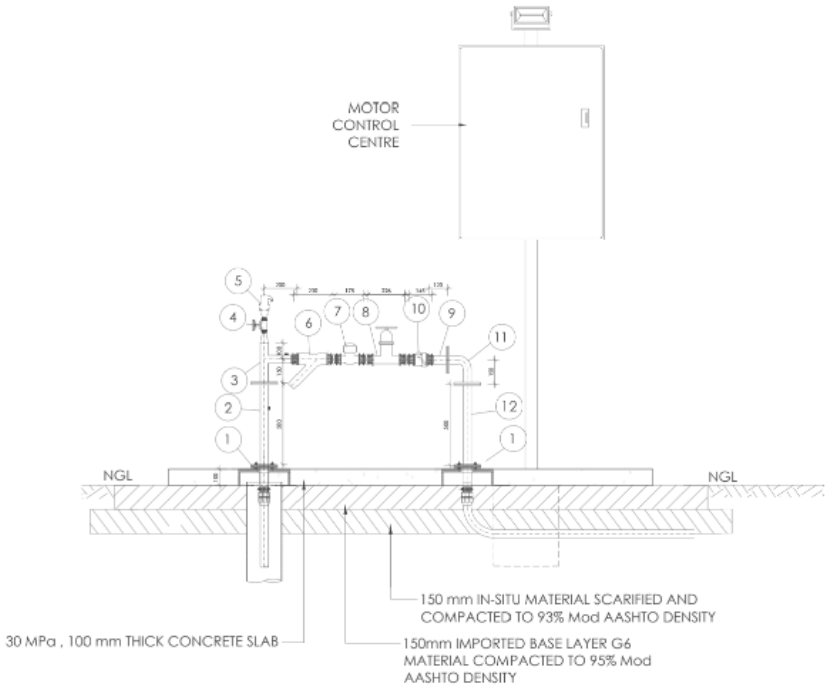
The borehole water in Cape Town is also known to contain elevated levels of iron, so the borehole water will require testing before the system's final design. The benefit of using borehole water for the irrigation of Acacia Park is that an estimated 232m^3/d of potable water could be saved, based on irrigation for Blocks, B, C & D.

Borehole yield testing will be required, and it will be in accordance with the specification DA: Borehole Pump Systems. The borehole will also require registration with the City of Cape Town and DWS. The borehole installation will follow the standard specification.



PLAN - BORE HOLE CONCRETE DETAIL AND PIPE WORK
SCALE 1 : 25

Picture 03: Bore hole concrete detail



SECTION A - A
SCALE 1 : 25

Picture 04: Bore hole section

It is recommended that two (2) boreholes be provided, one for Area B, C & D and another for the rest of the park. The borehole pump will be connected to the irrigation system and be controlled with a pressure switch, which will stop and start the system, based on the cut-out and cut-in pressure settings. Refer to Annexture A, 0554-01-WS-06. A detailed report has been included in Annexture B for Borehole proposal.

2.11 ALLOWANCES

Provisions have been made for the installation of road markings in areas where they do not currently exist, this will be indicated in the Bill of Quantities provided by the Quantity Surveyor. Additionally, 100mm and 50mm diameter electrical sleeves will be incorporated for all new dwellings, including double-story terraces and freestanding single-story units. Refer Annexure 2.5A, Drawing No. 0554-01-WS-02.

3 DRAWINGS

Refer to Annexure '2.5A' for drawings.

Description	Drawing no.
Sewer and Water Supply layouts	0554-01-WS-01
Stormwater and Paving layouts	0554-01-WS-02
Sewer 18 Avenue Design	0554-01-WS-03
Layer works Design	0554-01-C-04
New Sewer Reticulation Design layout (Terrace)	0554-01-WS-05
Borehole Detail	0554-01-WS-06
New Water Supply Design layout (Terrace)	0554-01-WS-07

4 CONCLUSION

The Civil Engineering assessment and proposed infrastructure enhancements for Acacia Park provide a comprehensive framework aimed at optimizing sustainability, efficiency, and compliance with regulatory standards. The strategy involves retaining existing sewer systems while installing new, high-durability UPVC pipes, thereby improving waste management capabilities and minimizing environmental disruption.

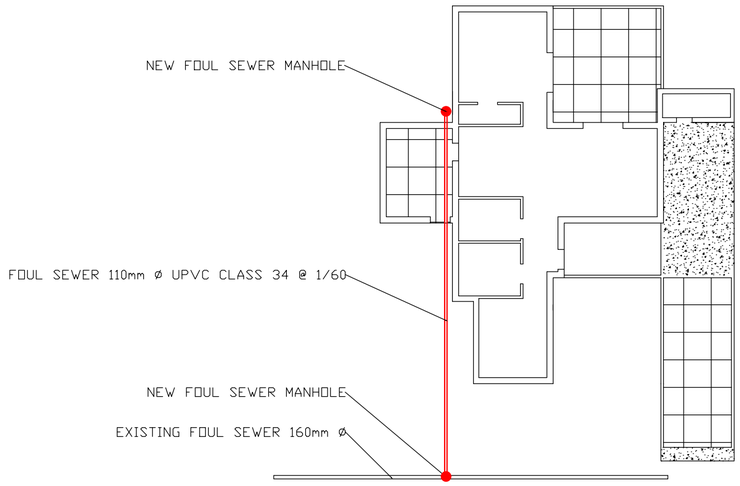
The new water supply network will be integrated with existing lines and equipped with smart metering systems to facilitate conservation and efficient management. The stormwater drainage design adheres to relevant regulatory requirements, ensuring effective runoff management and mitigating potential flooding risks, therefor there is no need for additional stormwater management systems.

In the context of 18th Avenue, which is not included in the scope of his project, new sewer lines will be strategically bypassed and rerouted to enhance the overall functionality of the drainage system. This will facilitate improved waste management while minimizing disruption to existing infrastructure. Not upgrading this line will result in the same overflow issues that the park is currently experiencing/has been experiencing for the last seven (7) years.

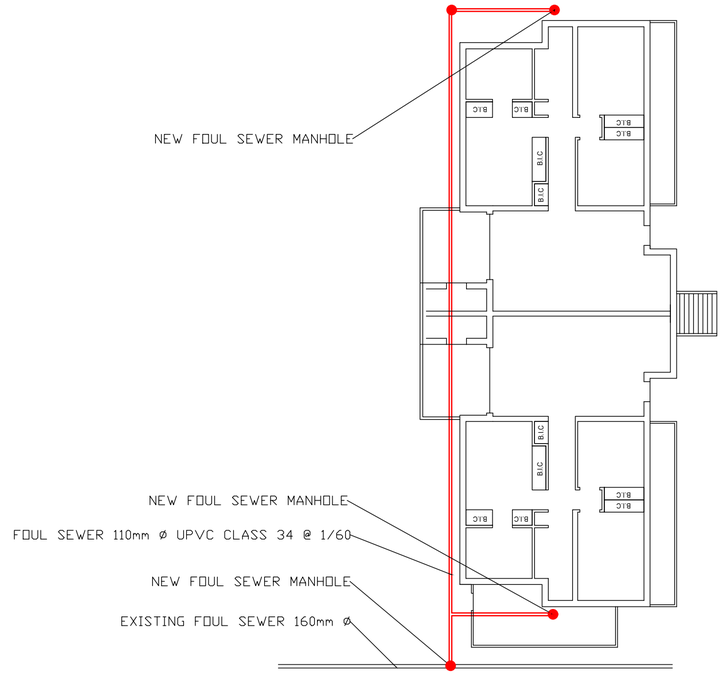
The earthworks strategy emphasizes sustainability by incorporating recycled materials from demolition activities, while the design of paved areas, roads, and pathways complies with SANS standards to ensure structural integrity and longevity. Furthermore, the proposal for a borehole irrigation system addresses the critical issue of potable water scarcity, promoting efficient water usage for landscaping.

Furthermore, new roads and pathways around Acacia Park will be introduced as per the architect's suggestion. Implementing these measures will enhance the overall infrastructure and functionality of the area.

ANNEXURE 2.5 A: DRAWINGS



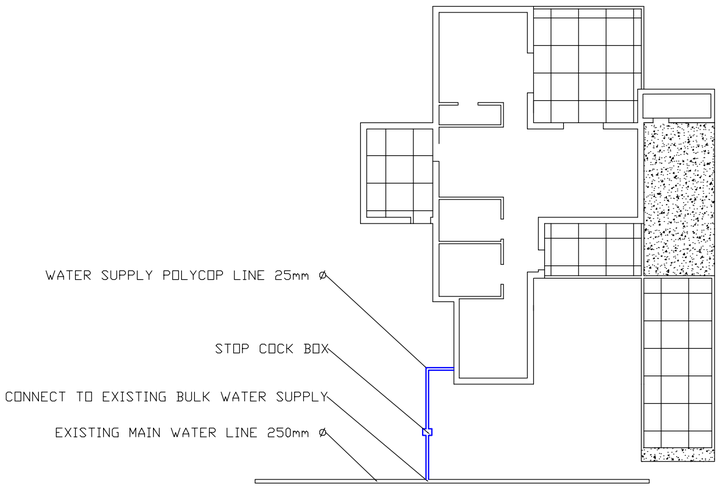
SINGLE DWELLING FOUL SEWER RETICULATION



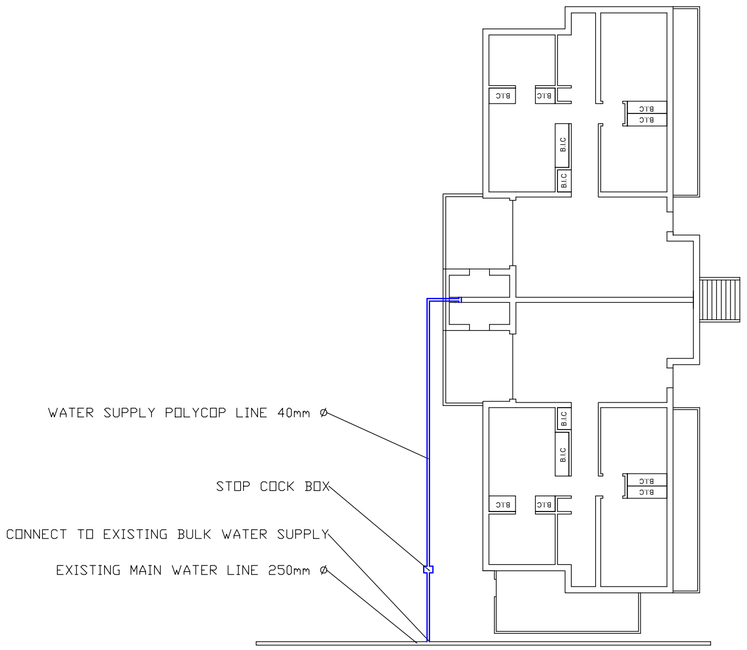
TERRACE FOUL SEWER RETICULATION

GENERAL NOTES:

1. DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL THE RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS.
2. ALL THE WORK TO BE EXECUTED IN ACCORDANCE WITH THE RELEVANT SECTION OF SANS 1200 AND THE PROJECT SPECIFICATIONS.
3. DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.
4. PIPE LENGTHS ARE MEASURED TO THE CENTRES OF MANHOLES, CHAMBERS OR CATCHPITS.
5. CO-ORDINATES ARE GIVEN AT THE CENTRES OF MANHOLES.
6. MANHOLE, CHAMBER OR CATCHPIT COVER LEVELS ARE NOT FINAL AND SHALL BE ADJUSTED TO SUIT THE GRADES AND LEVELS OF THE SURROUNDING FINISHED SURFACES.
7. THE CONTRACTOR SHALL CHECK THE POSITION AND LEVEL OF EXISTING PIPES BEFORE COMMENCING ANY CONSTRUCTION WHICH MUST LINK WITH SUCH PIPE. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
8. STORMWATER PIPES SHALL HAVE SPIGOT AND SOCKET JOINTS WITH RUBBER RING SEALS. CONCRETE PIPE CLASS TO BE 100D.
9. SEWER PIPES TO BE HEAVY DUTY uPVC CLASS 34.
10. WATER PIPES TO BE uPVC CLASS 12.
11. PIPE BEDDINGS SHALL BE CLASS B FOR RIGID PIPES AND FLEXIBLE FOR PVC AND HDPE PIPES (SANS 1200 LB).



SINGLE DWELLING MAIN WATER SUPPLY



TERRACE MAIN WATER SUPPLY

0 250 500

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

	110mm ø SEWERAGE PIPE
	SEWER MANHOLE
	25mmø WATER SUPPLY PIPE
	STOP COCK BOX

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

_____

certified as-built drawings as per Centralised Drawing Archive AS-BUILT DRAWING REQUIREMENTS

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date: _____

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cad file name: ACACIA PARK LAYOUTS

page type: A2

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service

ACACIA PARK: DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES & ASSOCIATED INFRASTRUCTURE

WCS number: 0554 - ACACIA PARK

drawing title

SEWER AND WATER SUPPLY LAYOUTS

ref.no.

scale: 1:250

date: SEPT 24'

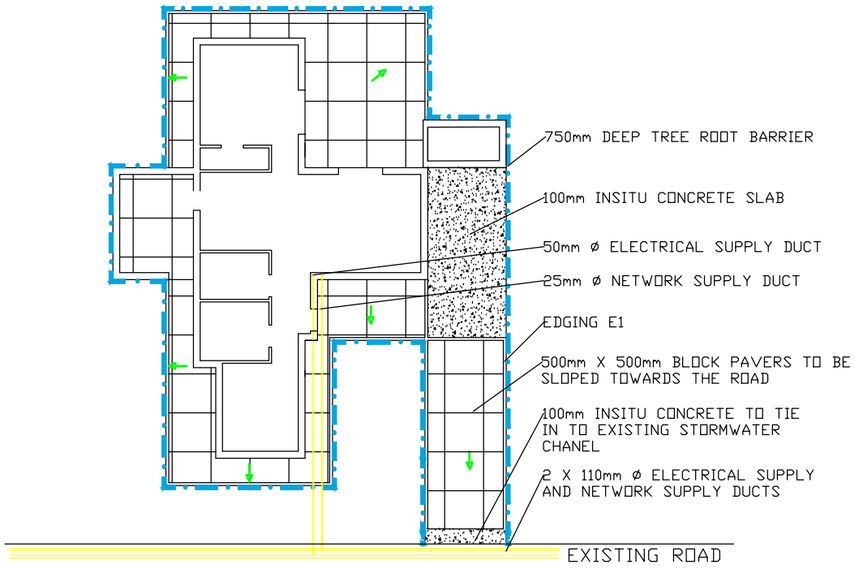
designed: MG. ADRIAANSE

drawn: MG. ADRIAANSE

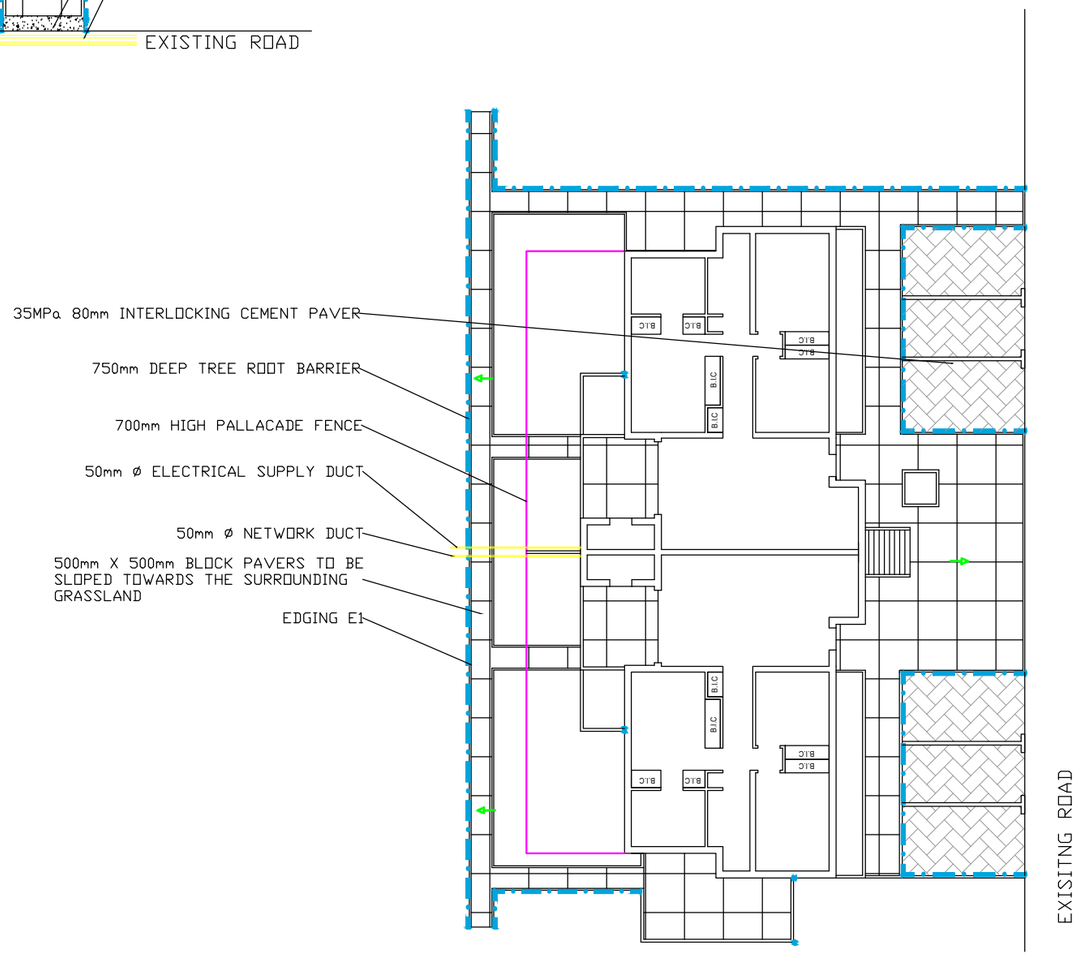
checked: R. ENGELBRECHT

drawing number: 0554 - 01 - WS - 01

revision: A



SINGLE DWELLING
PAVING TYPICAL
LAYOUT



TERRACE PAVING
TYPICAL LAYOUT

GENERAL NOTES:

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10. WATER PIPES TO BE uPVC CLASS 12.
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0 100 200

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

	FENCE LINE
	STORMWATER DIRECTION
	TREE ROOT BARRIER
	ELECTRICAL AND NETWORK DUCTING

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

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cad file name: ACACIA PARK LAYOUT

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DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES & ASSOCIATED INFRASTRUCTURE

WCS number: 0554 - ACACIA PARK

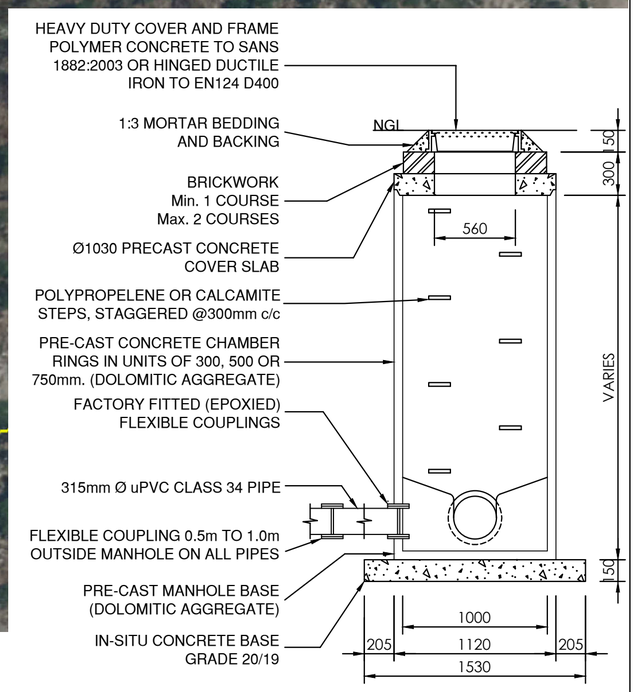
drawing title

STORMWATER AND PAVING LAYOUT

ref.no.	designed MG. ADRIAANSE
scale 1:250	drawn MG. ADRIAANSE
date SEPT 24'	checked R. ENGELBRECHT

drawing number: 0554 - 01 - WS - 02

revision: A



Datum 10.000	NGL	NGL	NGL	NGL	NGL	
Pipe Dia & Grade		Ø315mm @ 1:276	Ø315mm @ 1:276	Ø315mm @ 1:276	Ø315mm @ 1:276	Ø315mm @ 1:276
Ground Level	16.625	17.641	17.263	17.703	17.255	16.500
Distance		58.467m	43.840m	51.205m	13.609m	31.019m
Invert Level	12.848	13.057	13.216	13.402	13.452	13.500
Manhole No.	MH 8	ADD MH1 BP	ADD MH2 BP	ADD MH3 BP	ADD MH 4 BP	MH 4

SEWER LINE LONG SECTION

0 250 500

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

Checked by: _____

Date: _____

Approved by: _____

Date: _____

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date: REFNO

professional registration no.: PROF.REG

cad file name: ACACIA PARK SEWER LAYOUT

page type: A2

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Department: Public Works and Infrastructure
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CAPE TOWN: PARLIAMENTARY RESIDENTIAL ACCOMODATION: THE PROVISION OF PERFORMANCE BASED INTEGRATED FACILITIES MANAGEMENT SERVICES FOR A 5 YEAR PERIOD

WCS number: 0554

drawing title: 18TH AVENUE SEWERAGE RETICULATION

ref.no. -

designed R. SAMSODIEN

scale AS SHOWN

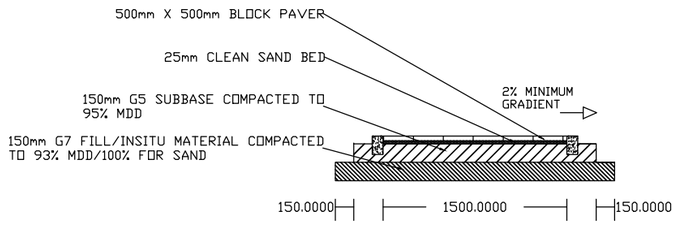
drawn R. SAMSODIEN

date JULY 23

checked R. ENGELBRECHT

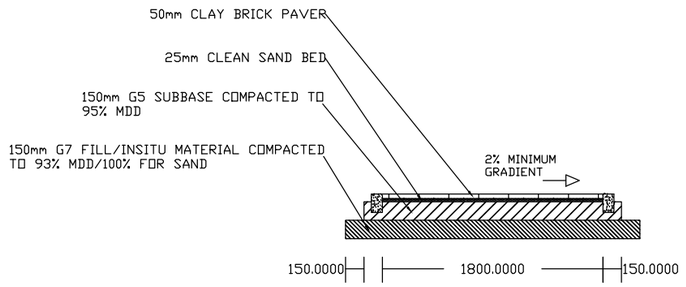
drawing number: 0554 - 01 - WS - 03

revision: B



TYPICAL PAVED APRON SLAB LAYER WORKS

SCALE 1:50



PAVED PATHWAYS LAYER WORKS

SCALE 1:50

GENERAL NOTES:

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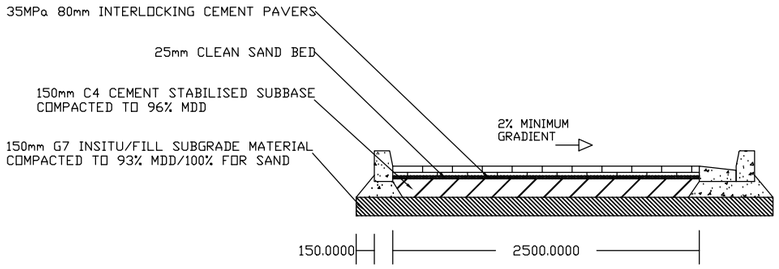
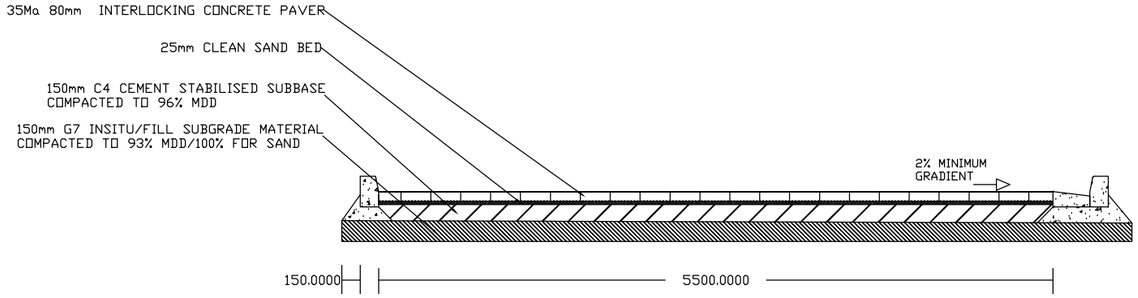


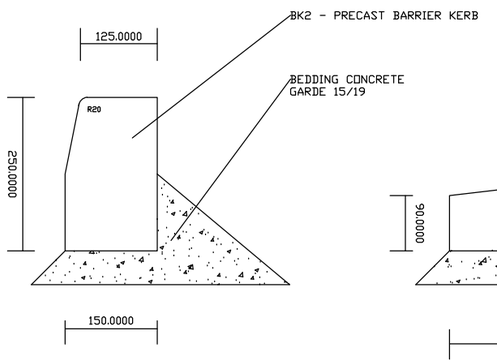
TYPICAL PARKING BAY LAYER WORKS

SCALE: 1:50



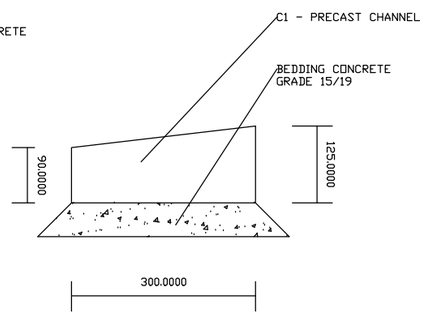
TERRACE NEW ROAD LAYER WORKS

SCALE 1:50



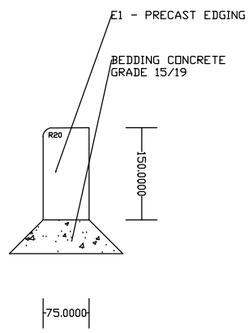
BK 2 KERB

SCALE 1:10



C1 CHANNEL

SCALE 1:10



E1 EDGING

SCALE 1:10

NOTE:

1. READ THIS IN CONJUCTION WITH ALL OTHER ENGINEER'S DRAWINGS
2. CONTRACTOR TO CHECK DIMENSIONS ON SITE AND REPORT ANY DISCREPENCAIES IMMEDIATELY.
3. THE KERB SHAPE IS TYPICAL, VARIES ON TYPE.
4. REFERENCES NUMBERS TO THIS DETAIL REFER TO "CAPE CONCRETE" CATALOGUE OR SIMILAR APPROVED.

0 100 200

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

certified as-built drawings as per Centralised Drawing Archive AS-BUILT DRAWING REQUIREMENTS

name: _____

date: _____

professional registration no.: _____

cad file name: ACACIA PARK LAYOUT

page type: A3

client

public works & infrastructure

Department: Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

DIRECTOR-GENERAL
MR. SIFISO MDAKANE

implementing agent

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PO Box 73030
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ACTING CHIEF EXECUTIVE OFFICER
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0027

discipline: CIVIL ENGINEERING

service

ACACIA PARK:
DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES & ASSOCIATED INFRASTRUCTURE

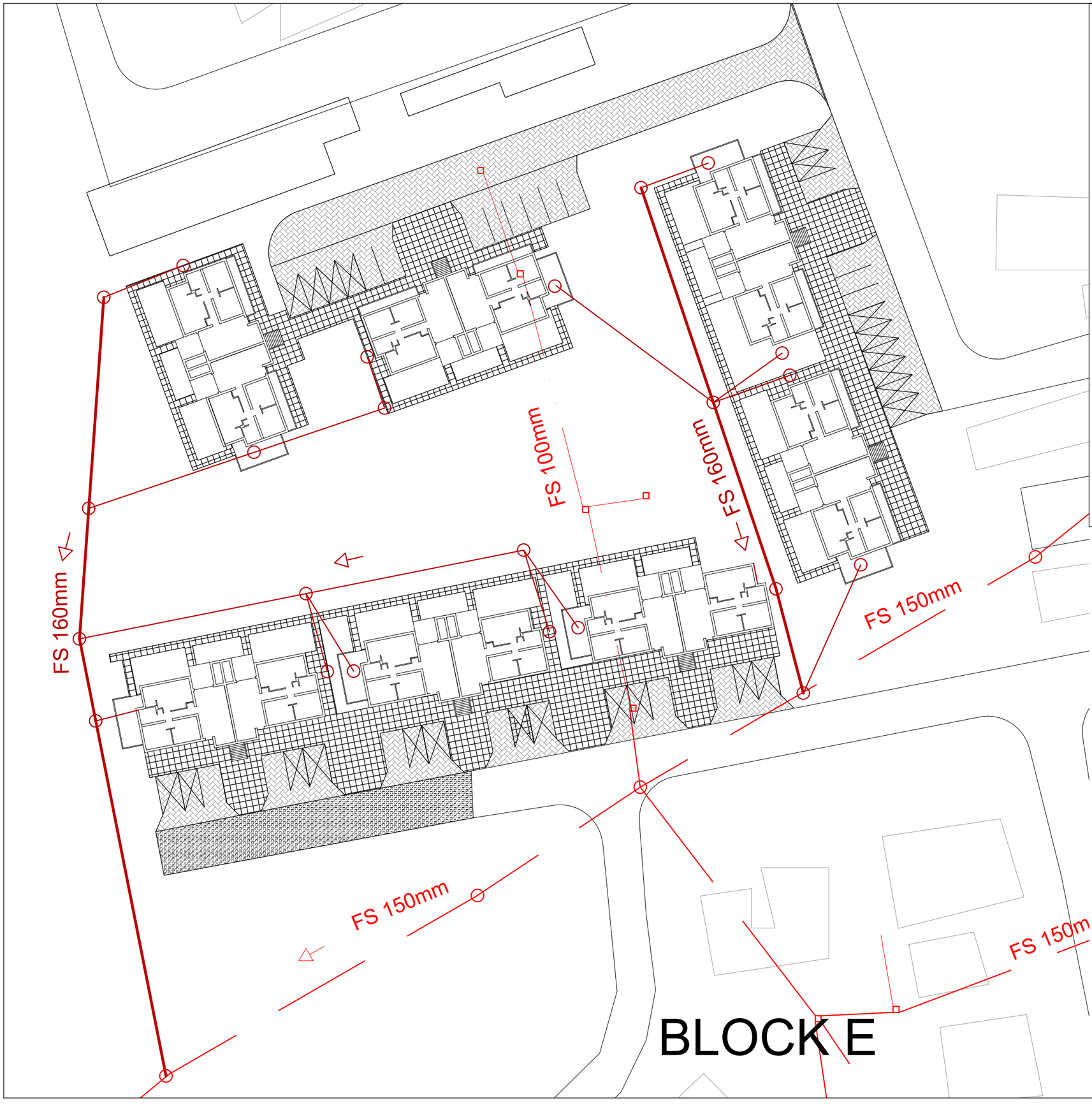
WCS number: 0554 - ACACIA PARK

drawing title: LAYERWORKS

ref.no.	designed MG. ADRIAANSE
scale AS SHOWN	drawn MG. ADRIAANSE
date SEPT 24'	checked R. ENGELBRECHT

drawing number: 0554 - 01 - C - 04

revision: B



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8. STORMWATER PIPES SHALL HAVE SPIGOT AND SOCKET JOINTS WITH RUBBER RING SEALS. CONCRETE PIPE CLASS TO BE 100D.
9. SEWER PIPES TO BE HEAVY DUTY uPVC CLASS 34.
10. WATER PIPES TO BE uPVC CLASS 12.
11. PIPE BEDDINGS SHALL BE CLASS B FOR RIGID PIPES AND FLEXIBLE FOR PVC AND HDPE PIPES (SANS 1200 LB).
12. ALL WATER SUPPLY PIPING CONNECTING DWELLINGS TO MAIN LINES WILL BE Ø40mm POLYCOP PIPE CLASS 12

0 100 200

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

	NEW SEWERAGE MANHOLE
	NEW SEWERAGE PIPE
	EXISTING SEWERAGE PIPE
	EXISTING SEWERAGE MANHOLE
	REMOVED SEWERAGE PIPE

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cad file name: ACACIA PARK PARKING LAYOUT

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ACACIA PARK: DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES & ASSOCIATED INFRASTRUCTURE

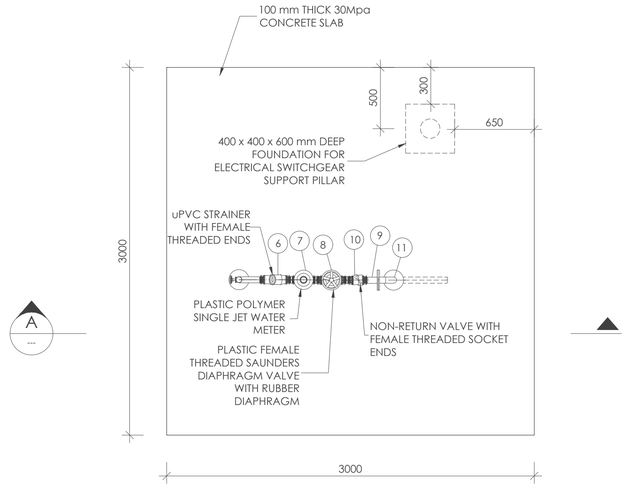
WCS number: 0554-ACACIA PARK

drawing title: NEW SEWERAGE RETICULATION LAYOUT

ref.no.	designed MG. ADRIAANSE
scale 1:500	drawn MG. ADRIAANSE
date SEPT' 24	checked R. ENGELBRECHT

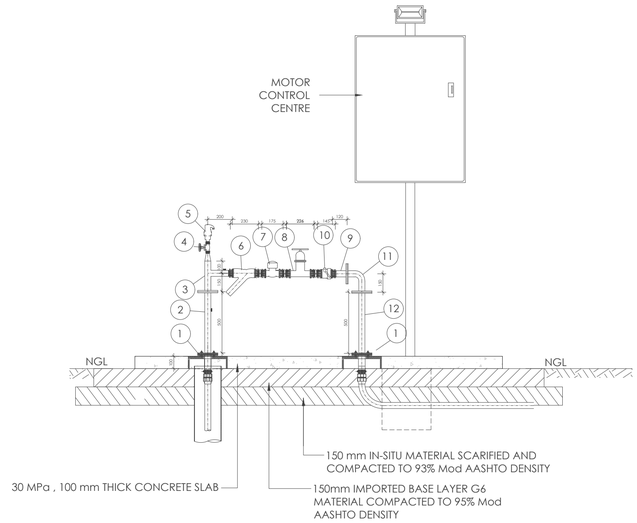
drawing number: 0554 - 01 - WS - 05

revision: B



PLAN - BORE HOLE CONCRETE DETAIL AND PIPE WORK

SCALE 1 : 25



SECTION A - A

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scale: AS SHOWN

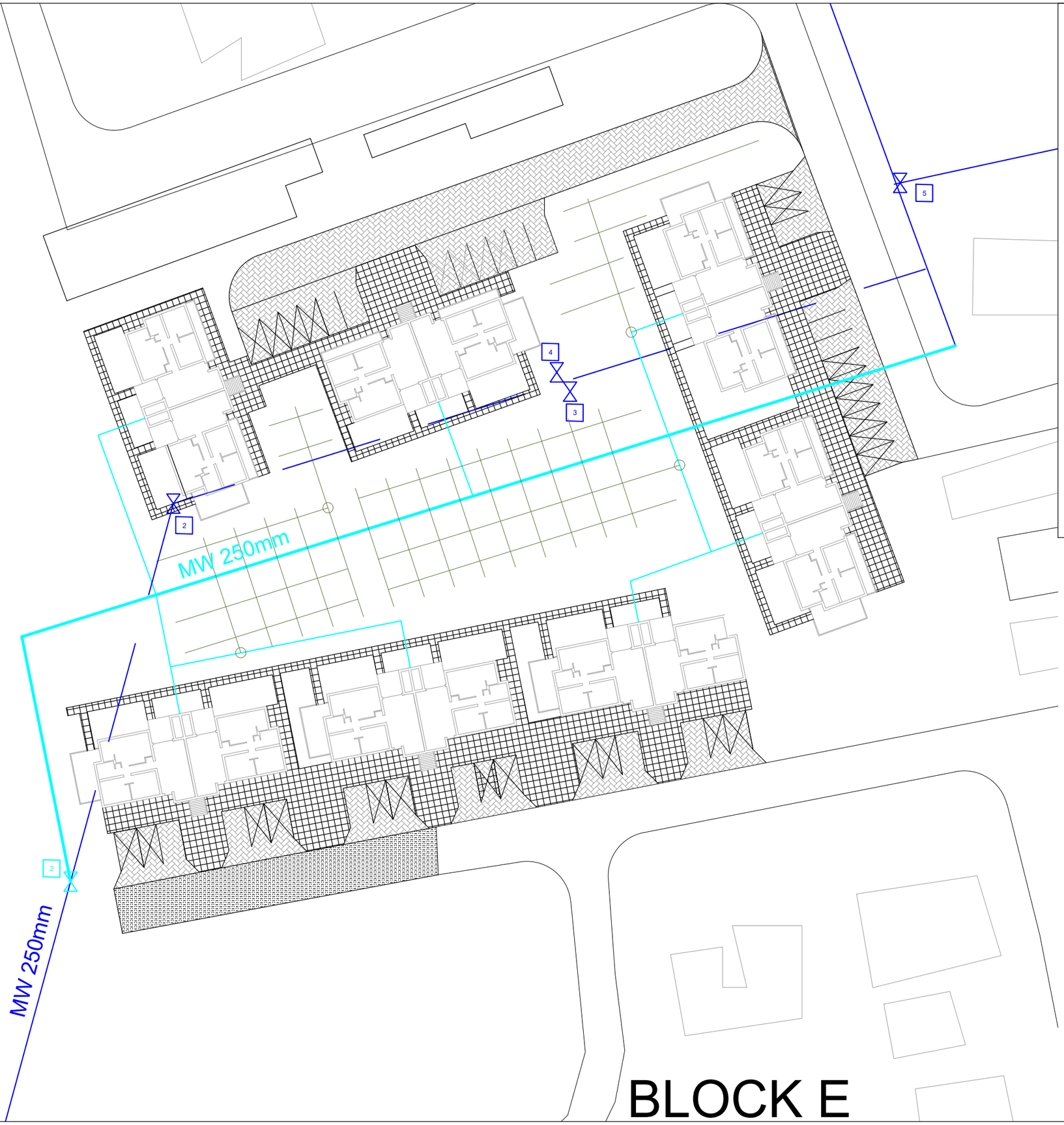
drawn: S WESSELS

date: OCT'23

checked: JA WILSENACH

drawing number: 0554-01-WS-06

revision: A



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0 100 200

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

	NEW WATER SUPPLY VALVE
	NEW WATER SUPPLY PIPE
	EXISTING WATER SUPPLY PIPE
	EXISTING WATER SUPPLY VALVE
	REMOVED WATER SUPPLY PIPE
	IRRIGATION SHUT-OFF VALVE
	IRRIGATION PIPE

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WCS number: 0554-ACACIA PARK

drawing title

NEW WATER SUPPLY LAYOUT

ref.no.

scale: 1:500

date: SEPT' 24

designed: MG. ADRIAANSE

drawn: MG. ADRIAANSE

checked: R. ENGELBRECHT

drawing number: 0554 - 01 - WS - 07

revision: A

ANNEXURE 2.5 B: BOREHOLES PROPOSAL

INDEPENDENT DEVELOPMENT TRUST

BOREHOLE PROPOSAL

FOR

THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

OCTOBER 2024

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REVISION RECORD:

Revision	Date	Comment
0	2024/10/31	First Issue
1		
2		
3		
4		
5		

This document has been checked and approved for issue by:

P Smit	Pr.Sci.Nat / Pr.PC.Water	31.10.2024	
Name	Professional	Date	Signature

The document has been reviewed by Client representative:

Name	Position	Date	Signature

Approvals	Tick
Approved	
Approved with comments	
To be revised.	

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4	SCOPE OF WORK	2
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5	BUDGET FOR SCOPE OF WORK	2

1 INTRODUCTION

This report aims to provide design details for the irrigation of lawns with borehole water at Acacia Park. The lawns to be irrigated for this project are in Blocks B, C, and D, as shown in Figure 1 below. It is envisaged that the remaining area Block A, E and H will be done separately by 'Resolve" who is currently doing their investigations.

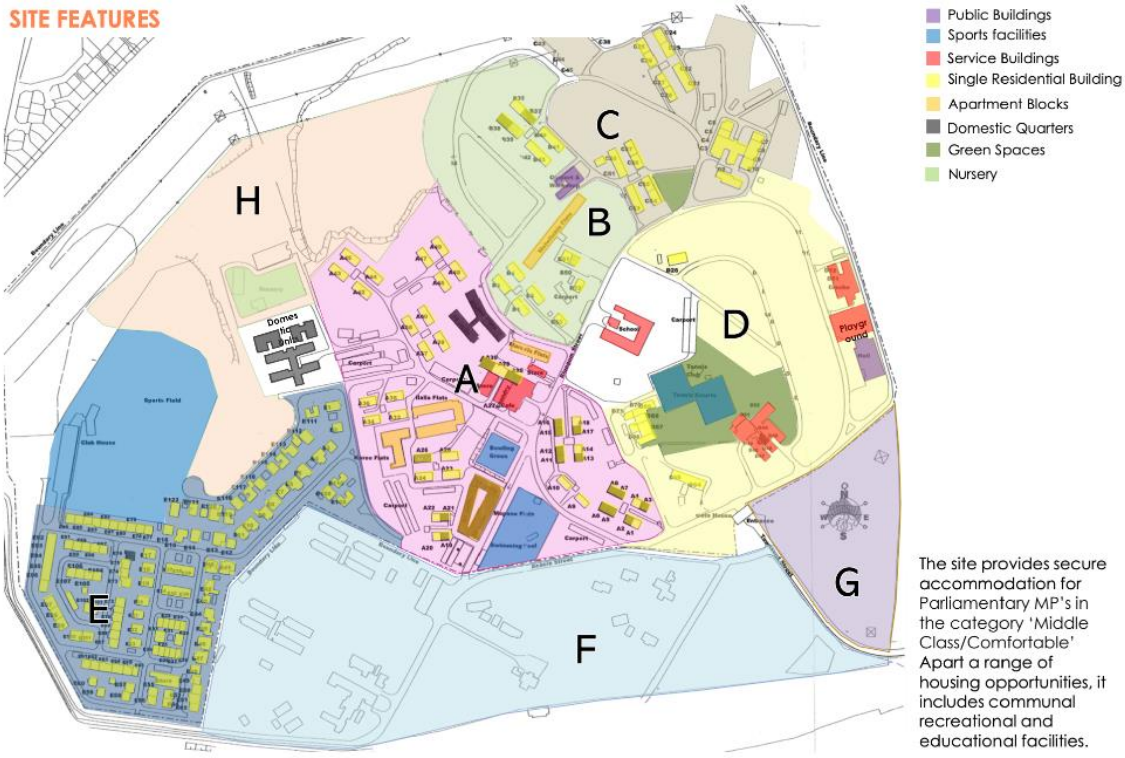


Figure 1: Site layout for irrigation

2 WATER USAGE

The daily consumption of water at Acacia Park is 588.7Kl/d. This includes potable water used for irrigation.

Figure 2: Water usage

3 METHODOLOGY

A high-level calculation was conducted to determine the estimated area requiring irrigation. At the same time, the available weather information was used to determine the volume of water needed to irrigate the area. The available rainy days have been subtracted to calculate the estimated volume of irrigation water required. The calculations allowed the estimation of borehole water needed for the irrigation of lawns and gardens.

3.1 AREA TO BE IRRIGATED

The area to be irrigated during the project's first phase will consist of blocks B, C and D. The estimated area is about 150 000m^2. The area covered by dwellings, carports, etc, covers an estimated area of 57 400m^2. The remaining area is, therefore, about 92 600m^2. The irrigation requirements were calculated based on the remaining area.

3.2 IRRIGATION WATER REQUIREMENTS

The average rainfall in the Cape Town area is reported to be 475mm, and the rainy days are about 100 days. The estimated volume of water has been calculated based on watering requirements of 2.5 mm/d. Considering the area and the irrigation requirements, an average irrigation volume of 232m^3 would be required. Rainfall occurs on about 100 days per year, requiring irrigation for the remaining 265 days.

3.3 BOREHOLE REQUIREMENTS

The total irrigation water needed for the area is 232m^3/d. Two boreholes are planned one (1) for Blocks B, C, D and one (1) for Blocks A and H. Their sizes will depend on the findings from the drilling and testing reports. Pump sizing can only be determined once the borehole yield is established.

3.4 REGULATORY REQUIREMENTS

The City of Cape Town requires an application for a new borehole / wellpoint submitted at least 14 days before it is sunk. Registration of the borehole / wellpoint is needed after it is sunk.

It is a regulatory requirement that the boreholes be registered with the DWS and that an application be made to take water from a water resource.

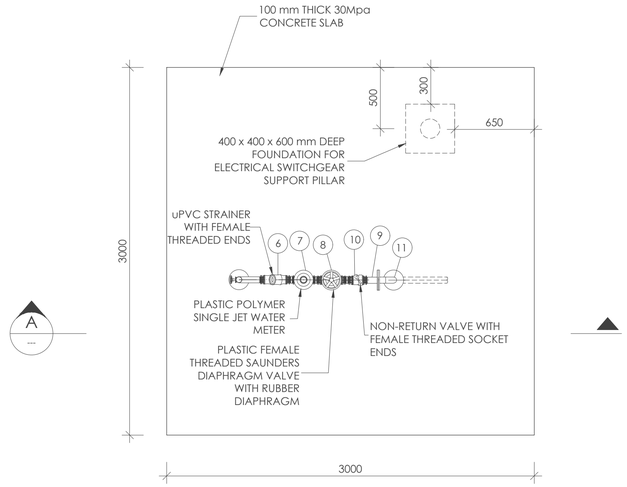
4 SCOPE OF WORK

4.1 BOREHOLE INSTALLATION

Once the borehole installation has been approved, will the installation be done as per the standardised installation provided in the DWG 0554-01-WS-06. The borehole pumps must be specified based on the safe yield of the borehole.

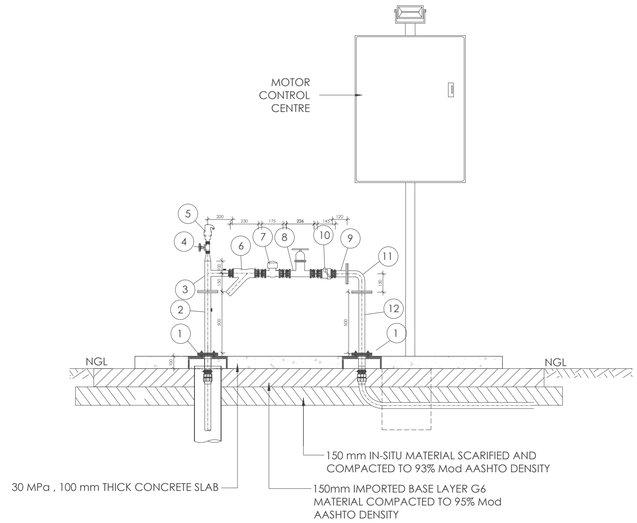
5 BUDGET FOR SCOPE OF WORK

The estimated cost of a borehole for area B, C and D is R350 000.00.



PLAN - BORE HOLE CONCRETE DETAIL AND PIPE WORK

SCALE 1 : 25



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SCALE 1 : 25

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drawing title

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date: OCT'23

checked: JA WILSENACH

drawing number: 0554-01-WS-06

revision: A

ANNEXURE 2.6: ELECTRICAL ENGINEERING

1 INTRODUCTION

This report provides information as to the electrical engineering scope for the project: Design and Build Contractors for the Demolition of 112 Prefab Houses (Including Houses Under the Eskom Servitude) and the Erecting of 113 Three-Bed Brick Houses within Acacia Park.

The transition from drywall to brick wall construction necessitates a comprehensive review and upgrade (were required) of existing electrical and mechanical infrastructure to ensure compliance with current safety standards, enhance energy efficiency, and accommodate modern electrical requirements.

1.1 PURPOSE OF THIS SPECIFICATION

This report is an annexe to the approved Stage 2 report and provides additional information/specification on the recommended methodologies.

2 GENERAL DESCRIPTION OF THE WORKS

2.1 INTERNAL INFRASTRUCTURE

2.1.1 Main Distribution Board

The distribution boards shall be manufactured in accordance with SANS 10142-1. The total height of the boards shall not exceed 1800mm measured from the final floor level. The new installation shall be supplied from the possibility of two energy sources, namely:

NORMAL MUNICIPAL SUPPLY

All distribution boards shall be painted as follows:

- Normal power : Electric White
- UPS power : Purple and Blue

The following switchgear components can be considered. All equipment utilised in distribution boards shall be rated at 240-Volt AC. Circuit breakers shall have a minimum rupturing capacity of 6kA. Distribution boards will have accommodation for essential and non-essential supplies.

2.1.2 Smart Metering

The metering system must comply with SANS 474:2006, ensuring safety, accuracy, and proper communication protocols. It should support load balancing and prevent circuit overloading, monitored via a smart meter. Integration with a pre-paid platform is required, involving both hardware and software links to the utility's billing system for real-time data and remote access. This setup improves energy efficiency, eliminates manual readings, and gives users better control over their electricity usage.

2.1.3 Smart Switches and Power Sockets Outlets

Installing smart switches and outlets enhances control, convenience, and energy efficiency in line with SANS 204, while all devices must comply with SANS 164 standards. Strategic placement of both smart and normal switches and outlets throughout the house is key for functionality, including USB charging outlets per SANS 164-2. Smart switches may offer dimming features and automated control for lighting and ventilation based on humidity or presence. Power outlets, whether smart or normal, should follow the required Type M or N standards. Surge protection is recommended to safeguard connected devices and smart outlets.

2.1.4 Lighting

The design and installation must adhere to the SANS 10142-1 and SANS 204 standards. The lighting design for the dwelling units will primarily feature LED technology, adhering to SANS standards for energy efficiency and safety.

To accommodate varying atmospheres the following types of fittings will be used throughout the units:

- LED Downlights
- LED Bulkheads
- LED Panel diffusers
- LED Chandeliers
- LED Open Channel
- LED Vapour-proof Lamp

2.1.5 Wiring Systems

Installation to adhere to SANS 10142-1, SANS 10142-2 and SANS 529. The colour of the conductors for all 220/250V circuits shall correspond to the colour of the supply phase for that circuit. Neutral conductors shall be black. No cables rated at less than 600/1000V will be permitted in distribution boards.

Lighting and switches:
The circuit wiring of lighting circuits shall be 2.5mm² insulated copper conductors and a 2.5mm² insulated copper earth conductor in trunking or 20mm diameter conduits

Power sockets:
2.5mm² insulated copper conductors; 4mm² may be used for high-load appliances such as stoves, geysers and heat-pumps.

Extractor fans:
2.5mm² insulated copper conductors.

Conduits and Accessories:
The suitable conduit and accessories, such as elbows, saddles, junction boxes, and couplers, must comply with SANS 61386. For underground cable installations from the substation to the kiosk using 120 mm² and 70 mm² armoured cables, larger conduits or sleeves (minimum 110

mm for 120 mm² and 75 mm for 70 mm²) are used, adhering to SANS 1507 for underground cable specifications and routing practices.
Earth continuity conductors:
The earthing conductors shall be as per SANS 10142-1 requirements for all circuit loads.

2.1.6 Security Systems

The current houses in the Pak are equipped with intercoms and some with alarm systems, and these shall be retained in the new houses.

The following will be installed:

- Intercom (VoIP)- Enables two-way audio transmission and utilises local area network (LAN) or WiFi for signal transmission.
- Intruder Alarm- Allows users to arm/disarm the system and enter codes. Utilise passive infrared (PIR) or dual-tech technology to detect movement.
- Motion detectors- Dual Technology sensors combine PIR and microwave detection for increased accuracy and reduced false alarms.
- Panic Buttons- Simple activation, often requiring just a press of a button. Can directly trigger alarms to a monitoring service.

The systems can be integrated into a centralised security control panel or mobile app for streamlined management. Users can monitor their dwelling units remotely.

2.1.7 Home Automation

- Smart Hub Connectivity: Requires integration with fibre, Wi-Fi (2.4 GHz & 5 GHz) to ensure fast, stable communication.
- Lighting Automation: Needs smart light switches (with dimming features) for auto-control.
- Smart Power Outlets: Install both Type M or N outlets with surge protection; smart outlets must support 15A-16A/220–240V AC and enable remote access and energy monitoring via the hub.
- Cloud Integration: Each unit must be connected to the internet to support remote control, real-time automation and secure data encryption.
- Infrastructure Provision: Include conduit sleeves for power, data, and control wiring, ensuring accessibility for future upgrades and maintenance.

2.1.8 Internet and Connectivity

Provision for conduits and outlet boxes required for internet connectivity will be made between the main houses and external manholes.

2.2 Reference Standards and Regulations

SANS CODE	TITLE	APPLICATION
SANS 1507-3/6	Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V)	Defines insulation, sheath, and construction for LV cables
SANS 1339	Electric cables — Cross-linked polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV	Construction and type approval for XLPE/SWA MV power cables
SANS 10142-1	The wiring of premises – Part 1: Low-voltage installations	Wiring rules, conduit fill, voltage drop, grouping, installation
SANS 10198-14	The selection, handling and installation of electric power cables of rating not exceeding 33 kV – Part 14: Installation of cables	Covers trench depth, bedding, separation, warning tape, and bend radius
SANS 1213	Mechanical cable glands	Construction and properties of uPVC/HDPE underground cable ducts
SANS 61386	Conduit systems for cable management	Defines mechanical and environmental strength requirements
SANS 10292	Earthing of low-voltage distribution systems	Earthing/bonding of metallic conduits and cable screens
SANS 1973-3	Low-voltage switchgear and control gear ASSEMBLIES	Construction and specification of DBs
SANS 60598, 1464-22	Safety of luminaires	Safety and marking of luminaires
SANS 164-0 / -1 / -2	Plug and socket-outlet systems	Socket outlet safety and standards
SANS 60669-1	Switches for household and similar fixed electrical installations	General requirements for switches

3 EXTERNAL RETICULATION

External Lighting:
For walkways and streetlights, use a 10mm² 3-core SWA (Steel Wire Armoured) cable with insulated copper conductors to support high current capacity over a total distance. The cable's armour serves as the earthing conductor, providing robust mechanical protection and ensuring a reliable grounding path throughout the installation. This approach eliminates the need for a separate earthing cable, optimizing both efficiency and cost while maintaining high safety standards.

New Kiosk:
Three new kiosks will be installed and supplied from the existing 11kV Substation D using a new SWA 120mm² AL 4-core cable 400V, with 70mm² as a separate earth continuity conductor from Substation D.

For the connection from the kiosk to the unit dwellings, SWA 16mm² 2-core insulated armoured copper conductor will be used, with the cable armour serving as the earth conductor.

3.1 DWELLING RETICULATION

The following reticulation option arises from the architect's submission:

1. Retained 85 prefab locations and added 28 Domestic Quarters
   a. The respective supply kiosks shall be utilized for existing locations. This option will not require any additional load on the feeding substation since there would be a reduction in load. Reference to drawing number **0554-03-EE-005**.

3.2 CLUSTERS MAIN ELECTRICAL PANEL

The three new kiosks will be installed and supplied from the existing 11kV Substation D using a new SWA 120mm² AL 4-core 400V, with 70mm² as a separate earth continuity conductor. For the connection from the kiosk to the unit dwellings, SWA 16mm² 2-core insulated copper conductors will be used, with the cable armour serving as the earth conductor.

3.3 LED AREA AND STREET LIGHTING

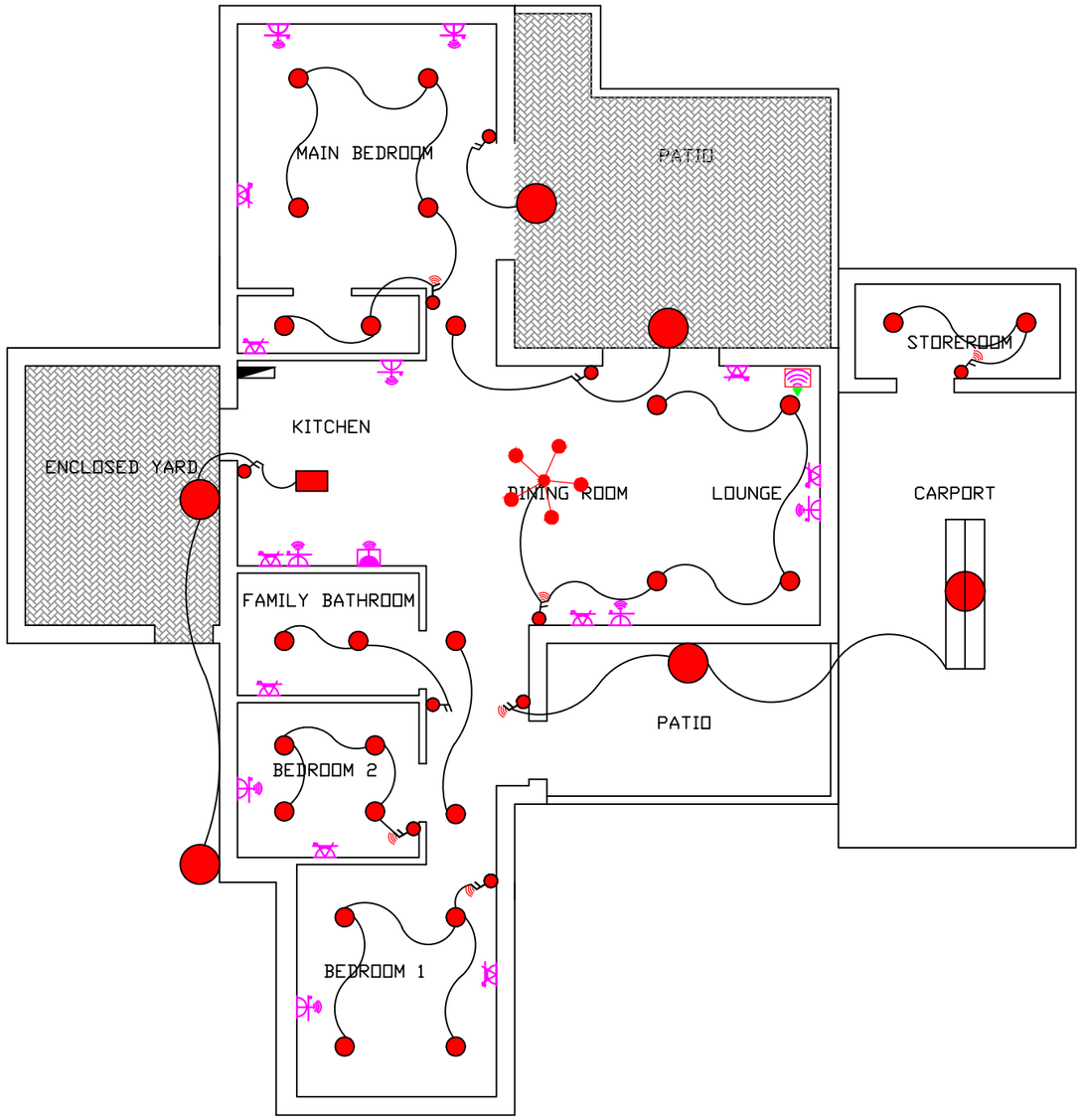
Energy-efficient LED lighting fixtures around driveways and walkways are recommended. These will be based on post-fittings and wall-mount bulkheads.

4 DRAWINGS

Refer to Annexure 2.6A for drawings.

Description	Drawing no.
Typology 4 Lighting and Electrical Power Supply Layout	0554-03-EE-001
Terrace And Electrical Power Supply Layout	0554-03-EE-002
External Post-Top Lighting Layout	0554-03-EE-003
Medium Voltage & Low Voltage Electrical Layout	0554-03-EE-004
New Kiosks Feed from Sub-Station D	0554-03-EE-005

ANNEXURE 2.6A: DRAWINGS



No.	DATE	AMENDMENT	D.P.W.

LEGEND

- Single wall socket with switch (300mm AFFL)
- Combination Type- 16A 3pin + Euro+ USB-C + Type C wall WiFi socket with switch (300mm AFFL)
- Double wall socket with switch (300mm AFFL)
- 20 A DP Isolator WiFi with switch
- WiFi Modem with Ethernet port
- Distribution Board

LIGHTING

TYPE A	55mm Downlight 5W LED lamp.
TYPE B	Wall Mounted Bulkhead 36W LED lamp
TYPE C	Ceiling Mounted Fitting with a 2x24W T8 Open Channel LED Lamp
TYPE D	Ceiling Mounted Fitting with Vapour Proof Diffuser and a 18W LED Lamp
TYPE E	Ceiling Mounted Chandelier/pendant 6 Lamp LED fitting

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THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

discipline: ELECTRICAL INSTALLATION

WCS number: 0554

drawing title

ACACIA PARK DWELLING LIGHTING AND ELECTRICAL POWER SUPPLY LAYOUT

ref.no.

scale: NTS

date: OCT'24

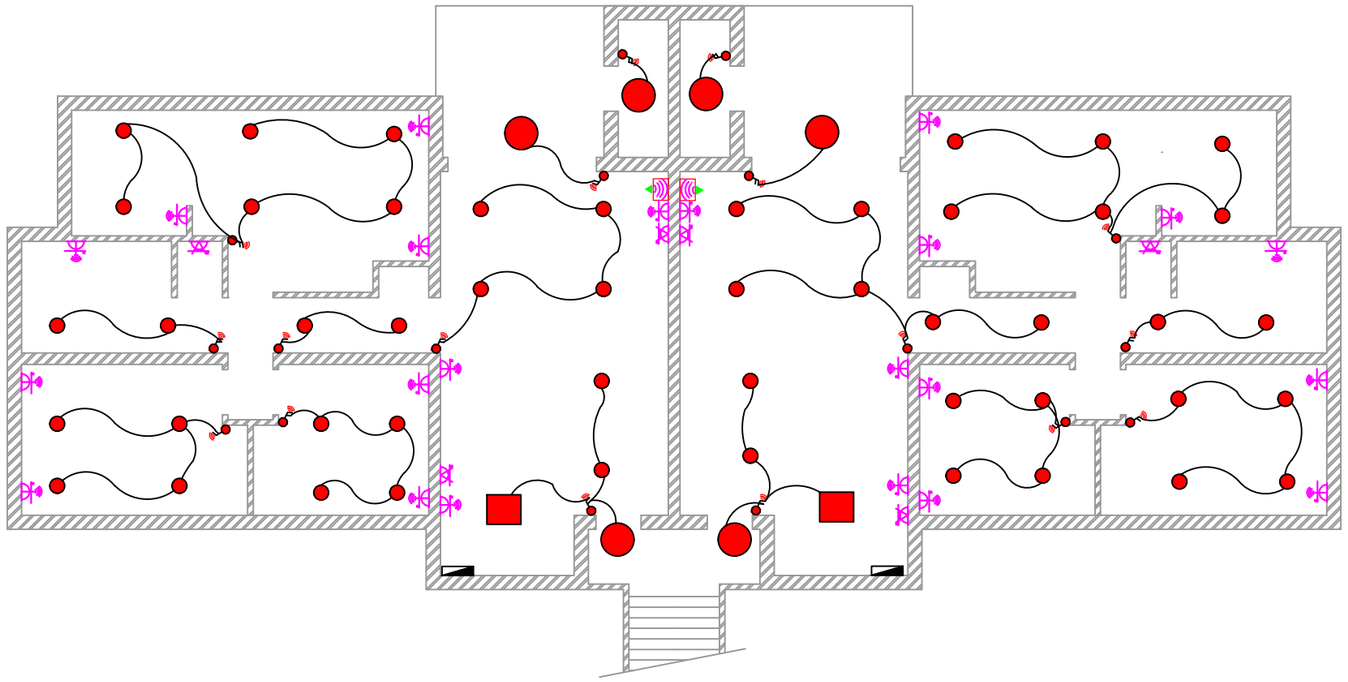
designed

drawn: M.GWARUBANA

checked: M.RATSHITANGA

drawing number: 0554-03-EE-001

revision: 0



FIRST FLOOR LAYOUT

No.	DATE	AMENDMENT	D.P.W.

LEGEND

- Single wall socket with switch (300mm AFFL)
- Combination Type- 16A 3pin + Euro+ USB-C + Type C wall WiFi socket with switch (300mm AFFL)
- Double wall socket with switch (300mm AFFL)
- 20 A DP Isolator WiFi with switch
- WiFi Modem with Ethernet port
- Distribution Board

LIGHTING

TYPE A	55mm Downlight 5W LED lamp.
TYPE B	Wall Mounted Bulkhead 36W LED lamp
TYPE C	Ceiling Mounted Fitting with a 2x24W T8 Open Channel LED Lamp
TYPE D	Ceiling Mounted Fitting with Vapour Proof Diffuser and a 18W LED Lamp
TYPE E	Ceiling Mounted Chandelier/pendant 6 Lamp LED fitting

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

_____

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name: N/A

date: N/A

professional registration no.: N/A

client

idt
independent development trust

cad file name: 0554-EE-002

page type: A1

consultant

VIRTUAL
CONSULTING ENGINEERS

P O BOX 323
GROENKLOOF
0027

service

THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN
THE WESTERN CAPE

discipline: ELECTRICAL INSTALLATION

WCS number: 0554

drawing title

ACACIA PARK TERRACE AND ELECTRICAL POWER SUPPLY LAYOUT

ref.no.

scale: NTS

date: OCT'24

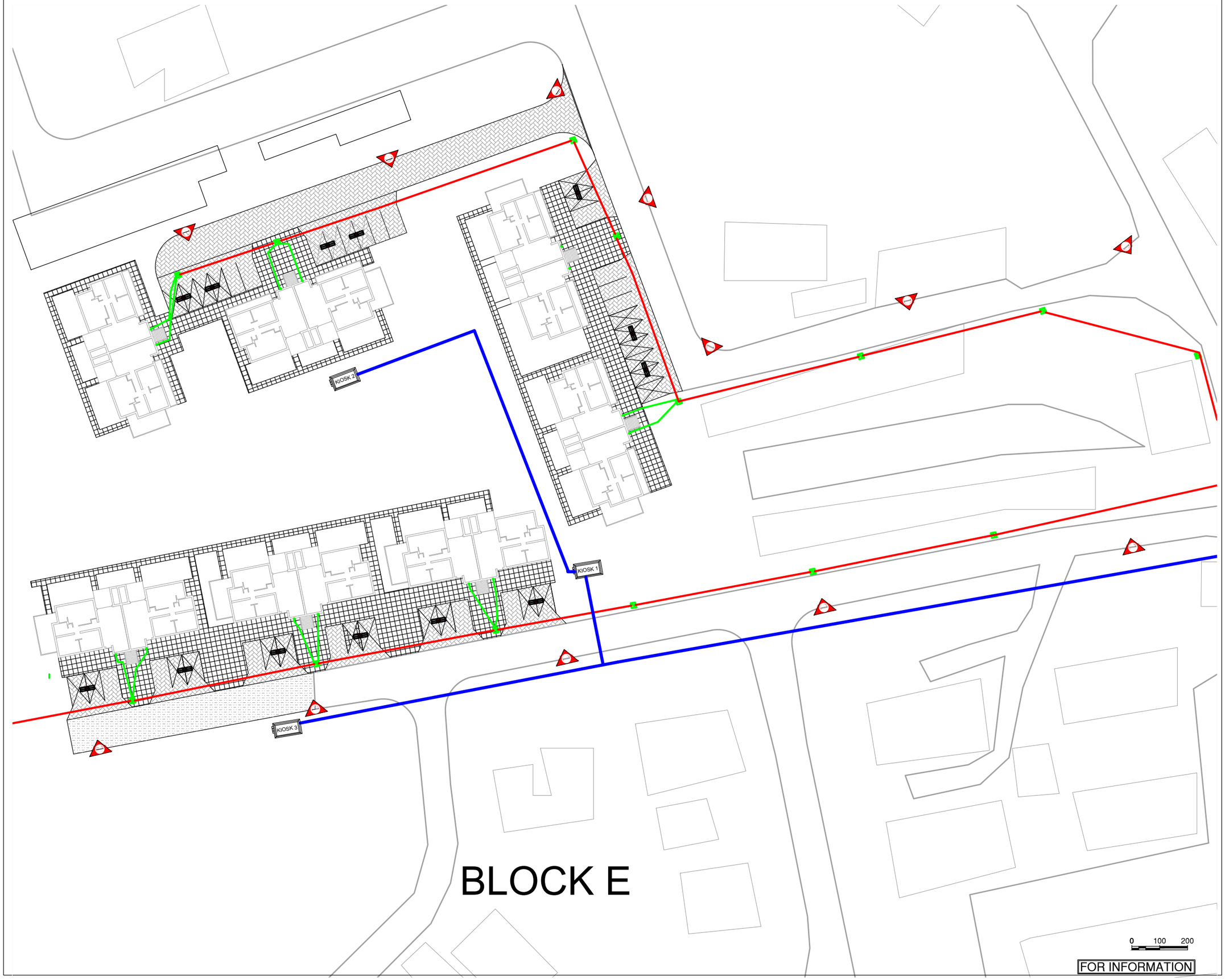
designed

drawn: M.GWARUBANA

checked: M.RATSHITANGA

drawing number: 0554-EE-002

revision: 0



No.	DATE	AMENDMENT	D.P.W.

LEGEND

- 26.9W Vapor-proof Lamp Fitting
- 110mm Sleeve
- 50 mm Sleeve
- KIOSK — 250 A KIOSK FEEDER TO DWELLING UNITS
- Manhole

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

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name: _____

date: _____

professional registration no.: _____

cad file name: 0554-EE-003 EXTERNAL SERVICES

page type: A3

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Department:
Public Works
REPUBLIC OF SOUTH AFRICA

DIRECTOR-GENERAL
MR. SIFISO MDAKANE

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discipline: ELECTRICAL ENGINEERING

service

THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

WCS number: 0554

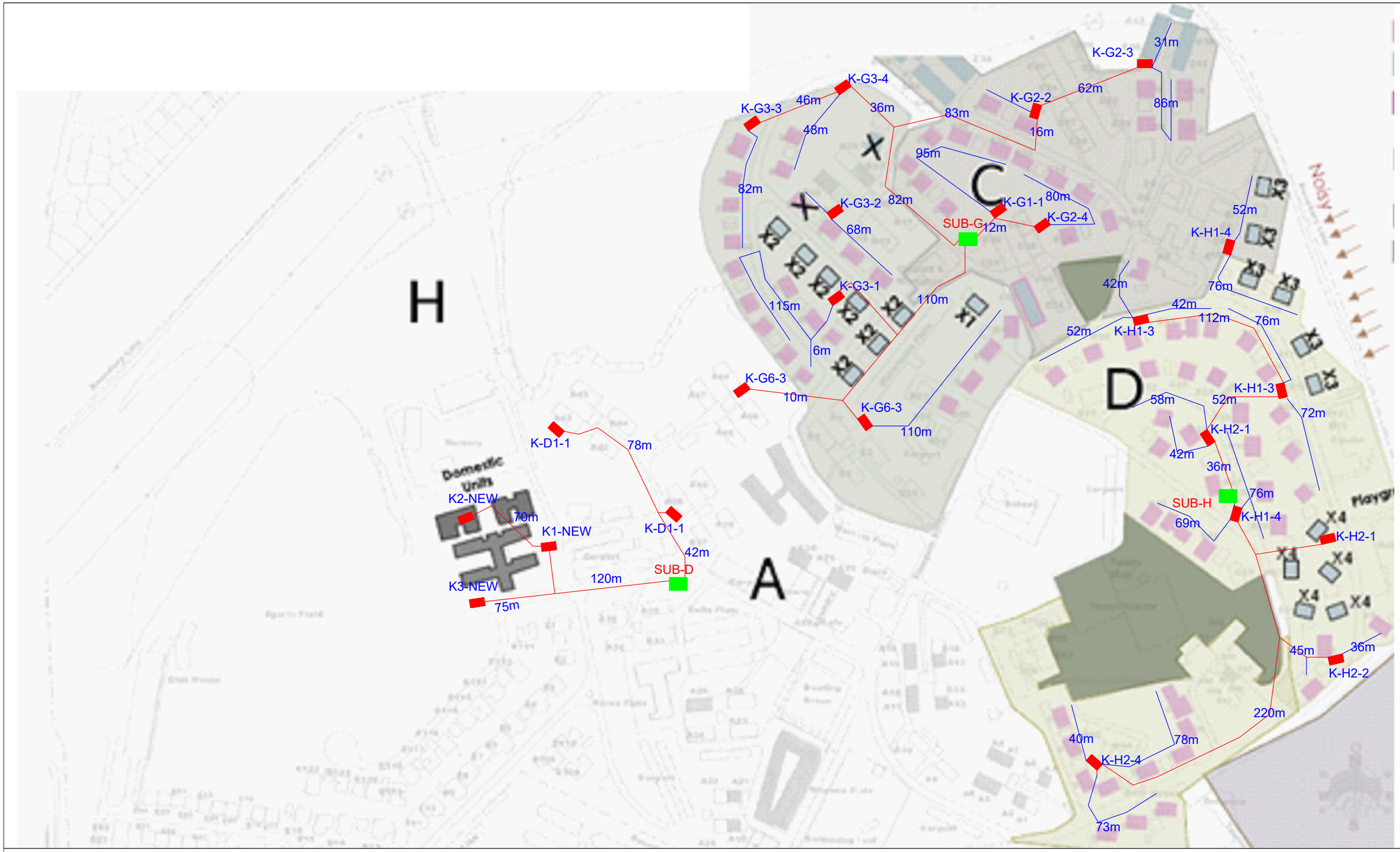
drawing title

ACACIA PARK EXTERNAL POST-TOP LIGHTING

ref.no.	designed
scale: NTS	drawn: M. GWARUBANA
date: NOV' 24	checked: M. RATSHITANGA

drawing number: 0554 -03- EE - 003

revision: 0



No.	DATE	AMENDMENT	D.P.W.

LEGEND

- MV Cable
- LV Cable
- KIOSK
- SUB STATION

Checked by: _____

Date: _____

Approved by: _____

Date: _____

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name: N/A

date: N/A

professional registration no.: N/A

client

independent development trust

cad file name: 0554-ELEC-001

page type: A1

consultant

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0027

discipline: ELECTRICAL INSTALLATION

WCS number: 0554

drawing title

MV & LV ELECTRICAL LAYOUT

service

THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

ref.no.

designed: B.PHALISO

scale: NTS

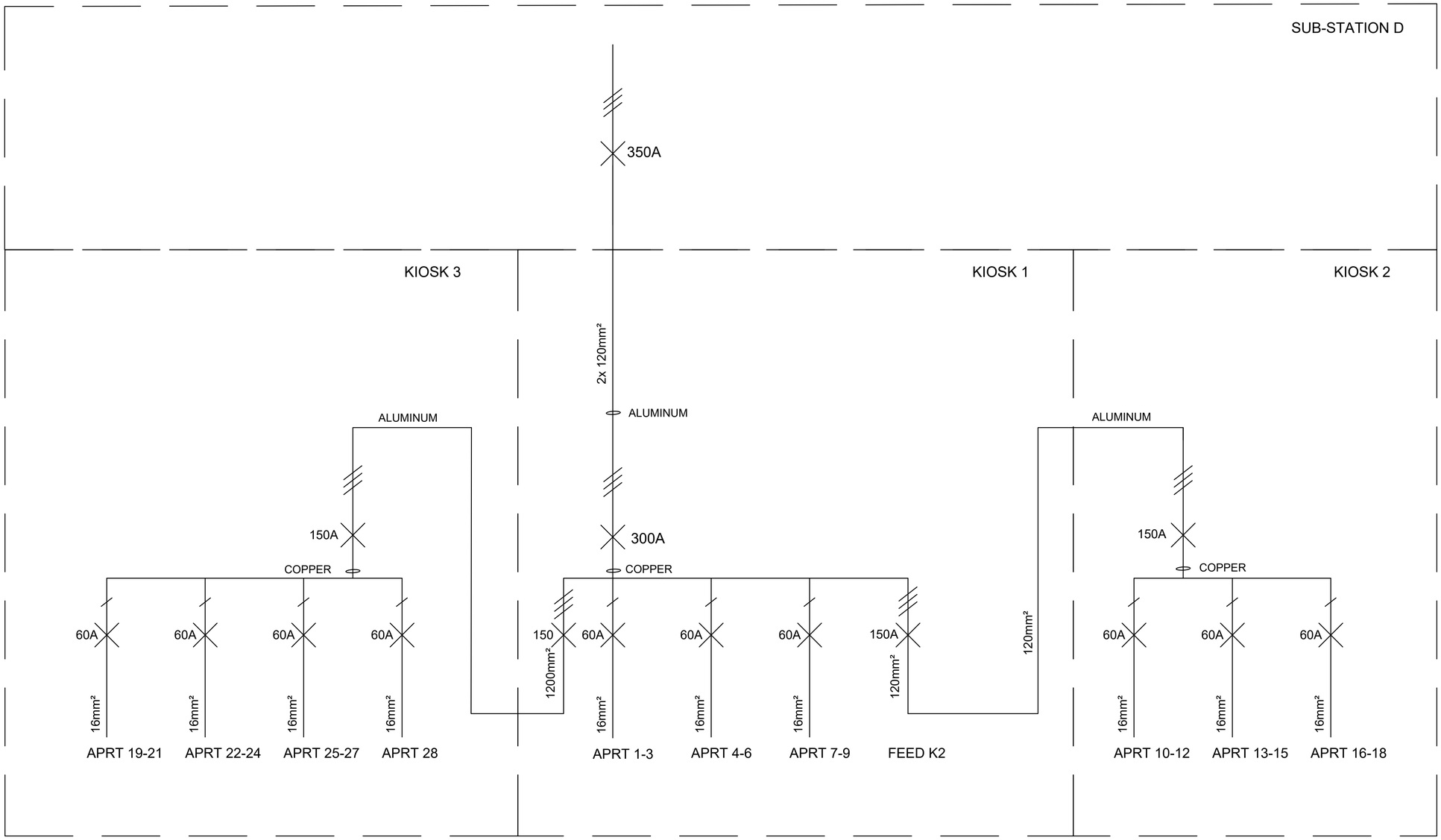
drawn: B.PHALISO

date: NOV'24

checked: M.RATSHITANGA

drawing number: 0554-EE-004

revision: 0



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FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.

LEGEND

Checked by: _____

Date: _____

Approved by: _____

Date: _____

as-built drawings

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certified as-built drawings as per Centralised Drawing
Archive AS-BUILT DRAWING REQUIREMENTS

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date: _____

professional registration no.: _____

cad file name: 0554-EE-003 EXTERNAL SERVICES

page type: A1

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Department:
Public Works
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DIRECTOR-GENERAL
MR. SIFISO MDAKANE

consultant

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THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

WCS number: 0554

drawing title

NEW KIOSKS FEED FROM SUB-STATION D

ref.no.

designed

scale: NTS

drawn: B.PHALISO

date: NOV' 24

checked: M. RATSHITANGA

drawing number: 0554 -EE - 005

revision: 0

ANNEXURE 2.7: MECHANICAL ENGINEERING

1. INTRODUCTION

This report provides information as to the mechanical engineering scope for the project: Design and Build Contractors for The Demolition Of 112 Prefab Houses (Including Houses Under the Eskom Servitude) And Erecting of 113 Three Bed Brick Houses within Acacia Park.

These brick homes will facilitate the need for mechanical systems. Properly sized hot-water units, piping, and ventilation will be utilized while meeting the applicable SANS codes for safety and comfort.

1.1. PURPOSE OF THIS SPECIFICATION

This report is an Annexure to the approved stage 2 report and provides additional information / specifications on the recommended methodologies.

2. GENERAL DESCRIPTION OF WORKS

2.1. BACKGROUND AND INTRODUCTION

Based on the recommendations in the Stage 2 report, this specification is for the mechanical installation compromising of the following:

1. Hot water generation
2. Hot and cold-water reticulation
3. Bathroom ventilation
4. Fire Fighting equipment

2.2. GENERAL DESIGN CONSIDERATIONS

Based on the occupancy cycles of the dwellings as well as the requirements of SANS 10400: Part XA. (In according with the SANS 10400 XA: 2021 regulations, no more than 50% of the annual domestic hot water volume should be provided by electrical resistance heating. This means that at least 50% of the hot water must be heated using alternative energy sources, such as heat pumps or solar water heaters). Heat pumps are recommended as the alternative energy source (refer to the Stage 2 report)

2.2.1. Heat Pumps

Heat pumps for hot water generation must be SANS approved and compliant with SANS 1352.

The preferred design of the condensers is "tube-in-tube". Water must be in the inner tube and the hot gas in the annular space and generate 3kW of heating.

The production of constant temperature 60°C hot water, while condensing at 55°C. Take back warm water of up to 45°C, without exceeding a compressor head pressure of 60°C.

The water temperature leaving the heat pump shall be constant and shall be controlled at 60°C with a fluctuation tolerance of plus/minus 1°C. The refrigerant shall be R22 and the maximum condensing temperature of the compressor shall not exceed 55°C.

Heat pumps shall be coupled in such a way that they shall not stop and start intermittently and shall not run for less than 30 minutes at a time.

Each heat pump shall be fitted with automatic evaporator defrost controls which shall be demand controlled as opposed to time clock operation.

A manual reset head pressure control shall be fitted.

The heat pump shall be protected against loss of refrigerant and subsequent damage.

Unit casings and drip trays shall be constructed in coated mild steel. Condensers shall be constructed from copper or equal considering the operating conditions.

Preference will be given to condensers which are performance guaranteed against scaling for 5 years.

The heat pump will be supplied with an appropriately sized circulating pump to ensure matched circulation of water for optimum heat transfer in the heat pump.

Where tube-in-tube condensers are offered, the water must flow in the inner tube and the hot gas in the annular space.

Heat pumps are expected to operate down to 2°C ambient temperatures. Ambient temperatures of up to 50°C shall not adversely affect heat pump operation.

Preference shall be given to locally manufactured units where local companies can also supply expertise and competent service.

Only machines having a 60°C hot water COP of at least 3.6 at 15WB ambient will be considered.

Condensate pipes shall be suitably insulated so as not to allow moisture formation, plastic piping will be permissible.

2.2.2. Hot Water Cylinders

The preferred hot water cylinder is a 150 L vessel rated at 400 kPa from the locally manufactured solar cylinder (XSTREAM range or similar approved), chosen for its durability and energy efficiency. Key features include:

- Vinyl ester lined interior to resist corrosion and extend service life.
- High-density polyurethane insulation for minimal heat loss.
- UV resistant, corrosion free outer casing that withstands harsh environments.

- Factory fitted copper to copper connections for all inlets and outlets, including:
  - Draincock
  - Inlet and outlet connections for the heat pump
  - Temperature and pressure (safety) relief valve
  - Hard water element housing with a sacrificial anode at the tank base
- Inlet diffuser to reduce turbulence and ensure even heating.
- Waterproof electrical junction box (IPx4 rated) to protect electrical components.

2.2.3. Hot and Cold-Water Piping and Fittings

The water supply and distribution requirements are as follows:

- Cold water supply from mains to be 25mm.
- Each dwelling to be fitter with a Smart water meter.
- All wall fitted (chased) piping to be copper Class 2 with compression fittings (15mm).
- All exposed piping to be Pex Al Pex (or similar) piping with compression fittings (15mm).
- Insulation on hot water pipes and geysers to ensure that the result is a reduction of electricity. Hot water piping to be insulted with 25mm thick Thermaflex pipe lagging
- All WC and wash hand basins pipe connections to be provided with angle type stop valves (15mm).
- External standpipe with threaded tap (15mm) to be installed in the courtyard.

2.2.4. Bathroom Ventilation

Ceiling mounted extract fan at 10 air changes per hour. Discharge to be to the outside with a weather louvre. An occupancy sensor to be fitted for the fan. The fan and light must be on separate switches.

Bathroom to be fitted with door grills.

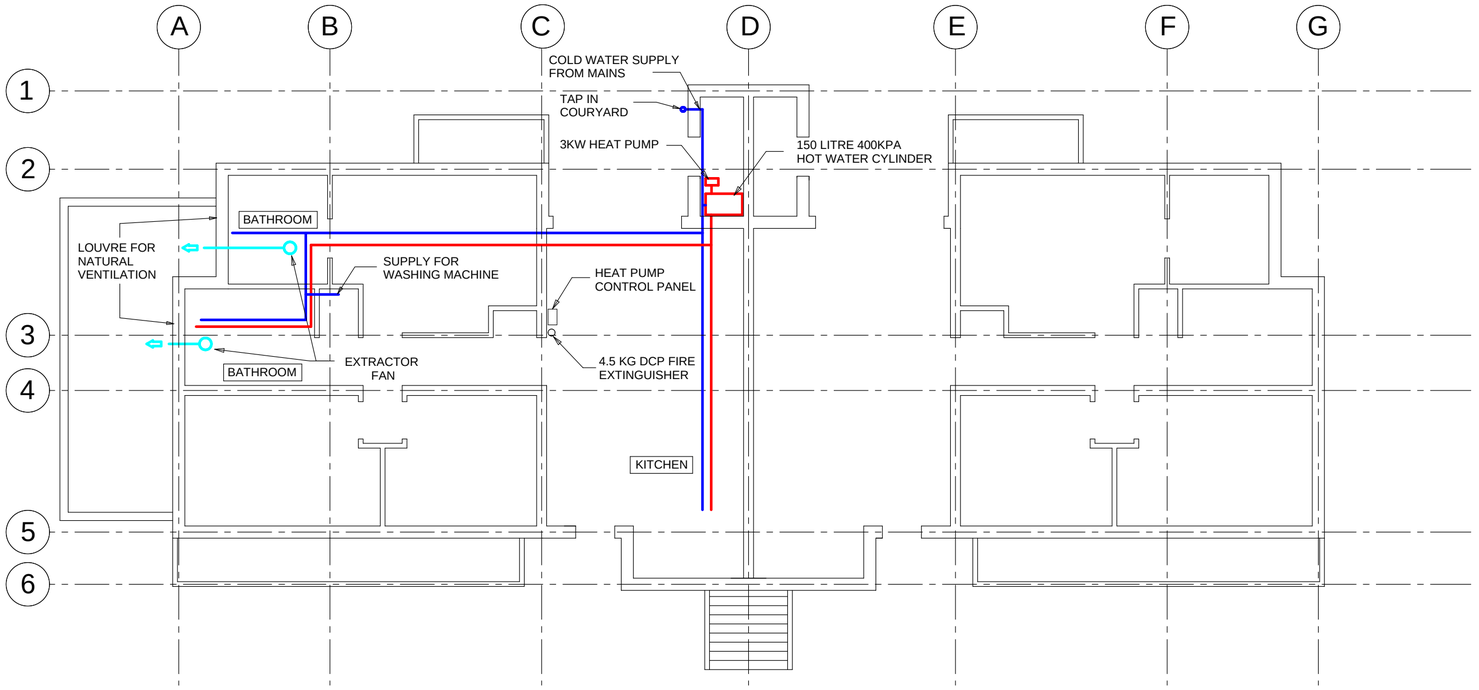
2.2.5. Fire Fighting

Each dwelling to be provided with 4.5kg DCP fire extinguisher.

2.2.6. Mechanical Installation

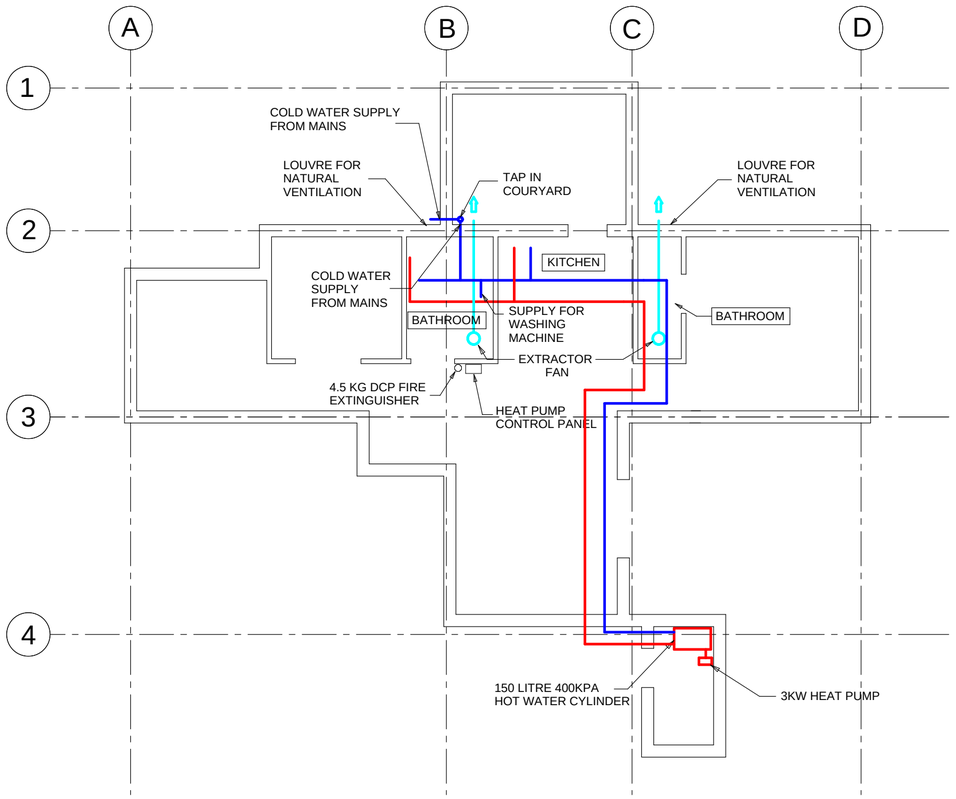
Refer to Annexure 2.7A (drawing no. 0554-06-ME-01).

ANNEXURE 2.7A: DRAWING



TERRACE TYPOLOGY LAYOUT

SCALE 1:100



TYPOLOGY 4 LAYOUT

SCALE 1:100

NOTES

GENERAL AND SPECIFICATIONS

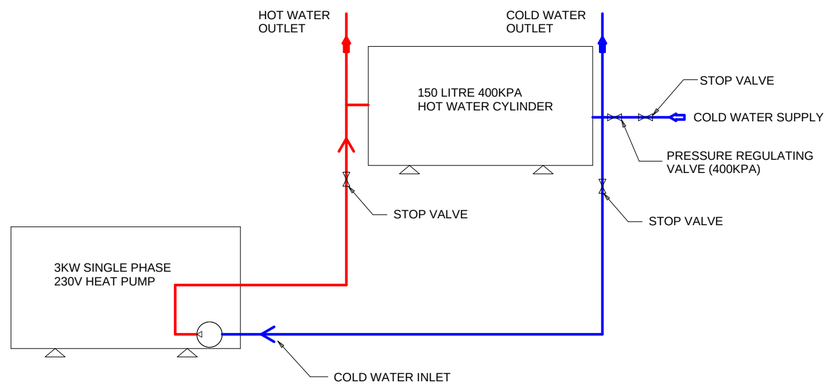
1 GENERAL:
THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE ARCHITECT'S DRAWINGS AND SPECS. ALL DIMENSIONS MUST BE VERIFIED BY THE CONTRACTOR ON SITE. ANY DIFFERENCES MUST BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
ALL PLUMBING WORKS IN ACCORDANCE WITH SANS 10254, SANS 1687 AND SANS 1352.

WATER RETICULATION:

1 3KW HOT WATER HEAT PUMP COMPLETE WITH CONTROL FOR ON/OFF, DAY TIMER, TEMPEATURE SETTING AND FAULT DISPLAY. HEAT PUMP AND HOT WATER CYLINDER TO BE A MINIMUM 500mm FROM GROUND LEVEL MOUNTED ON HOT DIPPED GALVANISED BRACKETS.
2 150 LITRE - 400KPA HOT WATER CYLINDER WITH 3KW ELECTRICAL BACK UP ELEMENT
- INNER CYLINDER VINLY ESTER INNER
- HIGH DENISTY POLYURETHANE INSULATION
- UV RESISTANT AND CORROSION FREE OUTER CASTING
- SOLAR FITTINGS AND FACTORY FITTED COPPER TO COPPER
3 HOT WATER PIPING IN ROOF SPACE, 15mm PEX-AL-PEX WITH COMPRESSION FITTING. DROPPERS TO SANITARY FITTING IN WALL TO BE 15mm COPPER CLASS 2 WITH COMPRESASION FITTINGS.
4 COLD WATER PIPING N ROOF SPACE, 15mm PEX-AL-PEX WITH COMPRESSION FITTING. DROPPERS TO SANITARY FITTING IN WALL TO BE 15mm COPPER CLASS 2 WITH COMPRESASION FITTINGS.
5 PRESSURE REDUCING VALVE 400KPA WITH ISOLATING VALVE UPSTREAM.
6 COLD WATER SUPPPLY (25mm) FROM MAIN.
7 HEAT PUMP CONTROL PANEL MOUNTED INSIDE AND VISIBLE/ACCESSIBLE.
8 OUTSIDE STANDPIPE IN COURTYARD WITH THREADED TAP.
9 WASH HAND BASIN AND WATER CLOSET TO HAVE ANGLE STOP VALVES.
10 HOT WATER PIPING TO BE INSULATED WITH 25mm THICK THERMAFLEX PIPE LAGGING

VENTILATION:

1 CEILING MOUNTED EXTRACTOR FAN WITH 10 AIR CHANGES PER HOUR.
2 EXTRACTOR DUCTING TO SUIT FAN SELECTION.
3 AIR DISCHARGED OUTSIDE WITH WEATHER LOUVRE.
4 OCCUPANCY SENSOR FOR FAN AND LIGHT
5 DOOR GRILL 300mm x 300mm
6 LOUVRE FOR NATRUAL VENTILATION



HEAT PUMP AND GEYSER DIAGRAMATIC CONNECTIVITY

0 250 500

FOR INFORMATION

No.	DATE	AMENDMENT	D.P.W.
REV A	04/10/2024	INFORMATION	A.N

LEGEND

- COLD WATER LINE
- HOT WATER LINE
- VENTILATION LINE

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Date: _____

Approved by: _____

Date: _____

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PROF.REGSIGNATURE
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cad file name: 0554-06-ME-01

page type: A2

client: public works & infrastructure
Department: Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA
DIRECTOR-GENERAL
MR. SIFISO MDAKANE

implementing agent: independent development trust
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MS. TEBOGO MALAKA

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GROENKLOOF
0027

discipline: MECHANICAL

service

MECHANICAL ENGINEERING SERVICES IN THE REGION OF ACACIA PARK

project number: 0554

drawing title

MECHANICAL LAYOUT

ref.no. --
designed A NIEFTAGODIEN
scale AS SHOWN
drawn Y MATHEWS
date OCT'24
checked CHECKED
drawing title

0554-06-ME-01

revision A

ANNEXURE 2.8

HEALTH AND SAFETY SPECIFICATION AND BASELINE RISK ASSESMENT

THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE

INDEPENDENT DEVELOPMENT TRUST

Rev.01

FOREWORD

This Health and Safety specification has been compiled under the guidelines of the Occupational Health & Safety Act no.85 of 1993 and amended Construction Regulations.

Huge emphasis is placed on the requirements of the New Construction Regulations 2014 under the Occupational Health and Safety Act and the Baseline Risk Assessment that form the basis of this specification. Contractors are encouraged to not only read these two documents in isolation but must consider the By-Law Relating to Community Fire Safety 11257 and Relevant National Building Regulations SANS Codes 10400.

Should there be any contradiction between this document and the Act; the Act must take preference except where explicitly stated. Similarly, where this document is silent on a specific Health & Safety requirement, the Act must be used as the minimum requirement.

Should you be unclear about anything set out in this document, please contact this office.

Ensuring you of our best intentions and service at all times

Stephan Julius
Managing Member (Pr. CHSA 014/2024) **Date: 02/10/2024**
Frontline Safety Health & Environmental Consultants
Tel: (021) 914-7080
Fax: 0866 0564 69
E-mail: info@frontlinesafety.co.za
Website: www.frontlinesafety.co.za

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1. INTRODUCTION AND BACKGROUND

1.1 Background to The Health and Safety Specification

The Construction Regulations (February 2014) place the onus on the Client to prepare a preconstruction Health and Safety specification, highlighting all risks not successfully eliminated during design setting standards for Health and Safety during construction phase. The Health and Safety Specification will be based on the findings of the Baseline Risk Assessment.

1.2 Purpose of The Health and Safety Specification

To assist in achieving compliance with the Occupational Health and Safety Act 85/1993 and the promulgated Construction Regulations (February 2014) to reduce incidents and injuries. This specification shall act as the basis for the drafting of the construction phase Health and Safety plan by the Principal Contractor.

The specification sets out the requirements to be followed by the Principal Contractor and their contractors so that the Health and Safety of all persons potentially at risk may receive the same priority as other facets of the project e.g., Cost, programme, environment, quality etc.

PROJECT DETAILS
Description of Works includes: The Demolition of 112 Prefab Houses and Erecting of 113 3-Bedroom Houses and Associated Infrastructure at Acacia Park in the Western Cape which includes but not limited to: • **Structural:** Foundations, reinforcement, surface bed, concrete beams, load-bearing brickwork, slabs and carport. • **Civil:** Installation of water connections, replacement of sewer lines, road construction, stormwater reticulation, layer works and paving. • **Electrical:** Lighting, wiring, backup supply, smart metering, distribution boards, switches and outlets. • **Mechanical:** Hot and cold water systems and ventilation. Principal Contractor to obtain the latest drawings from the appointed architect and relevant engineers.
Contract Duration: TBC

2. HEALTH AND SAFETY SPECIFICATION

2.1 Intention

This specification covers the requirements for eliminating and mitigating incidents and injuries on **THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE.**

The scope also addresses legal compliance, hazard identification and risk assessment, risk control and promoting a Health and Safety culture amongst those working on the project.
The specification also makes provision for the protection of those persons other than employees.

2.2 Provision for Health & Safety Cost

The Principal Contractor and their contractors shall make adequate provision for the cost of Health & Safety Measures during the construction process as required by the Construction Regulation 5(1)(g).

3. INTERPRETATIONS

3.1 Application

This specification is a compliance document drawn up in terms of the South African legislation and is therefore binding. It must be read in conjunction with relevant legislation as noted previously.

4. MINIMUM ADMINISTRATIVE REQUIREMENTS

The following Construction Work Permit requirements should be provided by the appointed Principal Contractor for lodgment to the Department of Labour:

1. Health and Safety Plan & Risk Assessments **(Project Risk Assessment not Baseline)**
2. Principal Contractor Appointment Letter **(Signed by PC and Client)**
3. Construction Manager Appointment **(Full name and Surname as on ID Document)**
4. Construction Manager Competency **(SACPCMP Registration or Formal Qualification and CV listing previous projects as required by the DoL Western Cape)**
5. Construction Health and Safety Officer Appointment **(Full name and Surname as on ID Document)**
6. Full time Construction Health and Safety Officer Competency **(SACPCMP Registration)**
7. Valid Letter of Good Standing
8. Valid CIDB letter of Registration
9. Company Profile including list of current and completed projects with values
10. Health and Safety Specification Acknowledgment Letter (**Signed by PC and Client)**
11. Principal Contractor Cost of Health and Safety **(Signed by Management)**
12. Appointment of Temporary Works Designer **(Including Competency)**
13. Appointment of Contracts Manager 16.2 **(Including Competency)**
14. Chief Executive Officer complete C.V and competencies

4.1 Assignment of Contractor's Responsible Persons to Manage and Supervise Health and Safety on Site.

The Principal Contractor shall submit management and supervisory appointments as well as any relevant Appointments in writing (as stipulated by the OHSA and Construction Regulations), prior to commencement of work. Proof of competence must be included.

Note: All appointments shall be done by the Chief Executive Officer/Managing Director or his/her assistant in terms of Section 16 of the OHS Act 85/1993 with exception to the Construction Manager in terms of Construction Regulation 8. The Construction Manager shall be full-time on site unless an Alternate Competent Construction Manager has been appointed in writing.

4.2 Competency of Principal Contractor Responsible Persons

The Principal Contractors' competent persons for the various risk management portfolios shall fulfil the criteria as stipulated under the Definition of Competent in accordance with the Construction Regulations (February 2014). Proof of competence for the various appointments must be included prior to start of work.

4.3 Compensation for Occupational Injuries and Diseases Act (COIDA) 130 Of 1993.

The Principal Contractor and their contractors shall submit a valid Letter of Good Standing from their Compensation Insurer-FEM or Compensation Commissioner to the Client's Representative as proof of registration before they commence work on site.

Note:
A client must ensure before any work commences on a site that every Principal Contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act No. 130 of 1993).

Principal Contractor must ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993.

4.4 Occupational Health and Safety Policy

The Contractor and their contractors shall submit a Health and Safety Policy signed by their Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented by the Company / Contractor.

4.5 Health and Safety Organogram.

The Principal Contractor and their contractors shall submit an organogram with contact numbers, outlining the Health and Safety Site Management Structure including the relevant appointments / competent persons. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram should be updated when there are any changes in the site Management Structure and must be site specific.

4.6 Preliminary Hazard Identification and Risk Assessment

The Principal Contractor and their contractors shall develop Risk Assessments and Method statements by a competent person for the risk that they foresee during construction.

Note, the Principal Contractor shall ensure that a competent Risk Assessor is appointed in writing and shall be Full Time on site for the duration of the project.

Principal Contractor to provide a 14-day Look Ahead Hazard Identification Risk Assessment (HIRA) for upcoming activities before they are encountered on a bi- weekly basis and forward an electronic copy to the appointed Health and Safety Agent. Contractor to ensure that provision is made should physically impaired/challenged employees be employed.

Furthermore, the Principal Contractor and their contractors to ensure that Daily Safe Task Instruction/ Planned Tasked Observations are conducted prior to any activity with proof placed on file. Contractors may use their own Formats/Templates.

The following is a site-specific source of risks that have been identified but is not limited to and must, as a minimum, be appropriately addressed by the Principal Contractor in their Health & Safety Plan with Control Measures but is not limited to:

Site Establishment
- Offloading of containers/site office
- Secure / Safe Storage of Material, Plant & Equipment
- Ablution Facilities
- Eating facilities
- Vehicle Access to Site
- Location of existing Services
- Dealing with existing structures and Traffic
- Provision for drinking water for all staff

Crane Management System (i.e., All Cranes)
- Competency and Medical Certificates of Operator
- Load Test Certificates
- Rescue Plan
- Crane Management Plan/System to be provided.
- (Emergency Procedures)
- CR 23 and Driven Machinery Regulations (2015) must be adhered to
- Relevant Inspections conducted by an LMI as per DMR 18 (2015)
- Cranes shall be fitted with wind meters/anemometers and must be in line with section 10 and 44 of the OHS Act 85/1993 and all relevant SANS codes

  Should the crane be found not to be fitted with a gauge/anemometer due to its Design, then the Principal Contractor must provide alternative control measures e.g., the use of a handheld wind gauge/anemometers or any other suitable control measures to assist with wind monitoring for all activities.

Hoarding & Access Control
- Public Liability / Access Control / Compliance to Section 9
- Site needs to be Adequately Secured.
- Relevant Construction Warning Signage
- Daily inspections with proof placed on file.
- Hoarding to be in line with approved Design Drawings

Public Liability
- Effect of Construction Work on members of the public and existing property e.g., Neighboring Property
- Noise Control
- Dust Control
- Temporary lighting

- Relevant signage
- Hazardous Chemical Substances

Working near existing services

- Principal Contractor to provide control measures to protect the existing services
- Contractor to liaise with Client/Electrical Consultant prior to any electrical activities.
- Contractor to provide full method statement and risk assessment when working on live electrical Cables.
- Must be communicated to all staff prior to the activity.
- Identification and protection of existing services i.e., Electrical Cables, Telkom, Data etc.
- Principal Contractor to provide adequate control measures including cable detection for unknown services
- Principal Contractor to work according to all approved drawings
- Lockout/Tag-out Procedures required and must be issued by competent persons prior to activities
- Identification and protection of ***Unknown*** services e.g. **the use of Cable Detection/Cable Detectors etc.** when working near live cables
- All Staff must be provided with the relevant Personal Protective Equipment (PPE).
- ***NOTE, No person shall enter any live/existing manholes before ensuring that it's safe to do so, that the manhole has been declared safe to enter and free of toxins by a competent persons, that task specific risk assessments with sufficient control measures has been provided and communicated with proof placed on file. Gas Free certificates to be issued by competent persons***
- The Principal Contractor shall tie into the existing services with minimal disruption. Principal Contractor and their contractors to provide adequate control measures when working close to overhead lines including relevant permits/wayleaves. Adequate Earthing required for plant and material when close to High Voltage Cables.
- The Principal Contractor to assess the risk of the work areas prior to commencement in these areas

Plant & Machinery

- Principal Contractor to provide designated area should any plant and machinery be parked at night. Plant to be fully secured to avoid possible unauthorized access.

Unplanned collapse of Material or structures- Contractor to provide control measures.

- Principal Contractor to provide adequate protection to avoid falling objects e.g., Crash Decks, Catch Nets, Apron Fans etc. or any other similar protection as and where needed. Principal Contractor to assess all work areas prior to start of work.
- Structure to be inspected periodically by a competent person to render the structure safe. The structure to be maintained in such a manner so that it remains safe for continuous use.
- Records of inspections and maintenance are to be kept on file and must be made available on request to an inspector.
- Principal Contractor to provide full method statement and risk assessment.

Working at Heights including Scaffolding

- Principal Contractor and their contractors to compile a Site-Specific Fall Protection Plan in Line with CR 10.
- Process to Remove Equipment, Tools Scrap, Material etc. too and from Elevated Positions.
- System to Protect Persons / items or material falling from any elevated positions/areas. System to Protect Persons / items or material falling from any elevated positions/areas/excavations/manholes
- Note, all employees working at heights shall be in possession of Working at Heights Training issued by a competent person and service provider and must be in line with all relevant Unit Standards
- **All Scaffolding must comply with CR 16 and SANS 10085:1-2024**
- Design Drawings to be provided by a competent person
- Daily inspections to be conducted or prior to use and recorded at least weekly or as per SANS 10085

Note: No Trestle, Walkthrough and Aluminium Scaffolds may be used on site

Note, The Principal Contractor shall ensure that design drawings are provided for all scaffolds including scaffolds that are not in line with SANS 10085-1:2024 typical design drawings.

Protecting of Persons Affected by Construction (Section 9 of the OHS Act 85/1993)

- Removal of material while working above/close to persons neighboring property/persons
- Risk Assessments and Method Statement to be provided and communicated to relevant parties.
- Construction Activities
- Crash Decks or any other suitable means of protection (If Applicable)

Procedure to identify underground HV/Electrical Cables

Compliance to the Driven Machinery Regulations (2015)

Traffic Management Plan to include but is not limited to i.e.:

- Scheduling of traffic management
- Delivering of Material and Equipment
- Signage, Competent Flagmen and Compliance with all relevant regulation and legislation.
- Plan to be Monitored and Reviewed at least monthly (Every 30 Days) or as the building programme/activities changes.
- Adequate barriers and delineators to be provided and placed strategically as needed.
- Procedure for maintaining road signage.
- All employees/ visitors always wear Hi-Viz vests.
- Competent Flagperson shall be provided and readily available to assist with all Deliveries.

Temporary Works (Including possible bracing and shoring of excavations)

- The Principal Contractor shall comply with CR 11, CR 12, CR 10 and CR 13
- *Competent persons to be appointed in writing (Proof of competence shall be provided for all relevant appointments and shall include competence for all employees designing, inspecting, supervising and erecting temporary works) These employees shall be in possession of training for the relevant temporary works systems and or the preferred service provider. Where Unit Standards are available, the Principal Contractor shall ensure that all persons are in possession of such training*
- *The Principal Contractor shall appoint a competent Engineer/ Professional*
- *Engineering Technologist to Design and inspect all temporary works and forward such proof of competence to the relevant Engineer prior to commencement.*
- *The Client/Client Representative reserves the right to comment and approve/decline such person*
- *All Temporary Works Designers and Inspectors shall have satisfied the definition of competence as required by the OHS Act 85/1993.*
- *"An all-inclusive assessment should be on all four components knowledge, training and experience, and where appropriate qualifications exist in relation to the work to be performed."*
- *"Temporary works designer(s) must be mandated by the contractor to perform any or all of the three functions." and ensure that all temporary works are erected as per the temporary works design*
- The Principal Contractor shall comply with CR 12 and CR 10
- Erecting and Stripping of Temporary Works to be done by competent persons with supervision
- Approved Design Drawings issued by a competent person to be done by competent
- persons
- Casting of Concrete
- Daily Inspections to be conducted by competent person
- Control measures should Drilling/ Cutting into Slab be required (If Applicable)
- Adequate Edge Protection- **No Danger Tape or shade cloth**
- The Principal Contractor shall provide control measures and ensure that all material is suitable and structurally sound for its intended purpose
- Authorization to be provided in writing by a competent person (Before Concrete Pour and stripping of temporary works structures)

- Handover Certificates/ Signed off by a Competent Person
- Safe Access required at all times
- Control measures should Drilling/ Cutting into Slab be required
- The Principal Contractor and their appointed contractor/temporary works team shall provide a procedure to ensure that edge protection is provided at all times especially when erecting or removing/stripping temporary works structures
- *The appointed contractor shall closely monitor and control all construction loads when on concrete decks/roof. The contractor shall consult the appointed Structural Engineer and verify any specific requirements.*
- The contractor shall receive written confirmation from the appointed Structural Engineer prior to loading any slab/deck.

Lifting and Installation Procedures
- Principal Contractor to submit Full Method Statements of their lifting and installation procedures e.g., manually, or mechanically.
- All lifting equipment to comply with Driven Machinery Regulation (2015)
- Should any lifting exceed 5 tons, a rigging study should be provided for approval prior to commencement of such activities.

Waste Management Plan/System to be implemented.
- Rubble to be stored neatly in bags/bins and collected as needed.
- Principal Contractors to provide sufficient Bins / Bags always and must be removed on a regular basis or as and when needed.
- All hazardous material to be stored separately and must be disposed of at an authorized landfill site. Proof of Disposal to be provided.
- Rubble shall not be allowed to accumulate on site and shall be removed at regular intervals.

Hot Works
- Principal Contractors and their contractors to ensure that Fire Equipment and adequate precaution measures are in place when grinding, welding / hot works etc. including PPE and demarcation.
- Hot work permits to be issued once the area has been inspected by a responsible person and declared safe with proof placed on file. (Note- All permits should not exceed one (1) working day)
- Compliance with CR 25& 29

Temporary Flammable Liquid/Material Storage
- Principal Contractor to ensure that adequate ventilation is provided with Relevant Signage and Fire Precautions provided.
- Adequate Fire Equipment to be readily available.
- Compliance with all relevant legislation and regulations including the Community Fire Safety By-law Compliance and CR 25& 29.

Working near of Electrical Services
- Contractor to provide full method statement and risk assessment when working on live electrical Cables. Must be communicated to all staff prior to the activity.
- A comprehensive lock-out procedure to be implemented
- All Staff must be provided with the relevant Personal Protective Equipment (PPE)

Procedure to identify HV/Electrical Cables
Electrical Installations – High and Low Voltage
Compliance with the Driven Machinery Regulations (2015)

Civils Work

- Excavation & Compliance with Construction Regulation 12, 13 and 10, 23
- Compliance with the South African Road Traffic Signs Manuel (SARTSM) Chapter 13 volume 2.
- Sufficient delineators
- Persons/Equipment falling into Excavations- Control measures required
- Edge Protection
- Traffic and Pedestrian Accommodation
- Asphalt
- Kerbs and channel
- Brick paving
- Heavy Construction Vehicles/Mobile Plant
- Road Cleaning to be maintained daily
- Bulk Earth Works and Layer Works
- Asphalt Surfacing
- Working alongside road
- Procedure to identify underground HV/Electrical Cables including unknown services

The Principal Contractor shall use Cable Detectors or any other suitable methods to identify possible unknown services prior to any excavation/activity when applicable. The Principal Contractor shall tie into the existing services with minimal disruption as far possible. The Principal Contractor shall study all surveys and reports and consult the relevant Engineers as needed.

Electrical Installations including working close to sub-stations and/or re-rerouting of existing Cables

- A competent contractor must be appointed to install all specialized cables such as low/high/mega voltage cables in and around the site.
- Must be carried out under competent supervision.
- Lockout/Tag-out Procedures required and must be issued by competent persons prior to activities and shall be issued to the Electrical Engineer for comment
- Excavations
- Cable laying/Stringing
- Working with live cables/live installations
- Working close to existing/ or installing new substations
- Tying in of new electrical lines onto existing lines
- Working on control and switch gears
- Switching process and Isolation operations
- Working with & in close proximity of live apparatus
- Compliance with SANS 10142 and all relevant legislation
- Relevant Permits to be obtained by authorized persons
- Diverting of existing cables
- Protecting of existing cables

Demolition during construction phase

- Adequate measures to ensure the safety of public
- Identifying services of live services
- PPE
- Relevant signage to be displayed
- Noise- Procedure to control noise to be in place.
- Use of Portable Power Tools
- Combustibles
- Debris
- Housekeeping
- Demolition method statements & Risk Assessments
- Dust inhalation

Safe Use of Portable Electrical Equipment

- Electrical Drilling Machine/ Angle Grinder
- Kango / Jack Hammer
- High Pressure Equipment
- Any Other Equipment used by Principal Contractor

Mobile Elevated Working Platforms (MEWP's)

- Competency and Medical Certificates of Operators
- Load Test Certificates & 6 monthly thorough examinations
- Emergency Procedures Rescue Plan
- Emergency/Rescue Procedures
- CR 23 and Driven Machinery Regulations (2015) must be adhered to
- Relevant Inspections conducted by an LME/LMI as per DMR 18(2015)

The Principal Contractor, their contractors and service providers shall ensure that all vehicles and plant are adequately earthed especially when in close proximity of electrical cables

Manual and Mechanical Handling

Health Hazards

- Dust
- Noise
- Vibration
- Possible Existing hazardous materials
- Possible Contaminated land
- Working with cementitious material
- Working with fuel, lubrications and other chemicals
- Vermin
- Possible Hazardous Biological Agents
- Asbestos Exposure

Environmental Management

- Contaminated Land/Water
- Air and Dust Pollution;
- Noise Pollution;
- Water Pollution;
- Possible Soil Pollution;
- Normal and abnormal operations;
- Waste Management practices;

<u>Additional Activities foreseen on site.</u>

- Public Safety- Relevant precautions to be taken (Hoarding/Physical Barriers, signage etc.)
- Process to move equipment, tools, scrap material, etc. to and from elevated positions.
- Storage/control of Hazardous Chemical Agents
- Use of Temporary Access
- Unforeseen activities

N.B. A risk assessment will be performed for all unplanned work and submitted to Health and Safety Agent for approval prior to work commencing.
Principal Contractor and their contractors to ensure that the risk assessments, as well as other risks identified by them, are updated at least every 30 days or as the risk changes are recorded and communicated to all relevant parties with proof placed on file- CR 9. Note: All reviews must be signed off by the appointed Risk Assessor.

Note: All identified risks and hazards must be based on a documented method (method statements)

Furthermore, the Principal Contractor and their contractors shall provide a Monitoring and a Review Plan including a Risk Register indicating all activities.

Note: Principal Contractor must ensure as far as is reasonably practicable, ergonomic related hazards are analyzed, evaluated, and addressed in a risk assessment.

4.7 Fall Protection Plan: Erecting and Working on Scaffolding, Working at Heights, and Working near Excavation Edges

Working at heights includes any work that takes place in an elevated position. The Principal Contractor and their contractors must submit a risk/task-specific Fall Protection Plan in accordance with Construction Regulations 10. The Fall Protection Plan must be job specific, be reviewed at least monthly (Every 30 Days) or as the risk changes or after any incident. Contractors to ensure that medicals are provided for all persons exposed to elevated positions.

Scaffolding must comply with the requirements of **SANS 10085-1:2024.** Scaffolds are used extensively by Contractors and strict control measures must be in place to prevent Unauthorized alterations to scaffolding such as removing ties and scaffold boards. Competent persons to be appointed in writing to:

- erect scaffolding (Scaffold Erector/s)
- act as Scaffold Team Leaders
- inspect Scaffolding daily and after inclement weather (Scaffold Inspector/s).
- **The Scaffolding must comply with SANS 10085:1-2024, fully cladded including, Crash Decks etc. as and when needed.**

Written Proof of Competency of above appointees to be available on Site.
Where scaffolding or work from scaffolding may negatively affect the public, it must include a scaffold fan/apron or access tunnel. Shade cloth must be used to enclose the scaffolding below the first fan/apron. Should the scaffolding be adjacent to an existing pavement of similar public walkway, a pavement **gantry and crash deck** will be required (overhead protective structure).

All employees working at heights must have a Medical Certificate issued by an Occupational Health Practitioner (OHP) in the form of an Annexure 3 and have valid Working at Heights Training Certificates.

A Fall Protection Plan Must Include.

a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified by location.
b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof.
c) a programme for the training of employees working from a fall risk position and the
d) records thereof.
e) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
f) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

4.8 Health and Safety Officer 8(5)

The Principal Contractor shall provide a Full-time fully registered Senior Construction Health and Safety Officer CHSO with proof of SACPCMP registration placed on file. The CHSO to have at least five years' experience in the building environment and at least 3 years registered as SACPCMP practitioner.

Additional courses required:
- Risk Assessor
- Fall Protection Planner
- Incident Investigator
- Legal Liability
- Scaffolding Supervisor/Inspector/Erector

All contractors that have been appointed by the Principal Contractor shall ensure that they appoint a Part Time safety officer that will visit the site at least twice a week.

4.9 Medicals

The Principal Contractor to ensure that all his or her employees, including all appointed contractors, have a valid medical certificate of fitness specific to the demolition work to be performed and issued by an Occupational Health Practitioner in the form of an Annexure 3. Failing to comply may result in the relevant employees being stopped without compensation to protect the Client in terms of CR 5.
Furthermore, the Principal Contractor and their contractors shall provide a tracking register clearly indicating the full names, surnames of employees and Expiry Dates
Expiry Dates of all medicals shall be clearly displayed on all induction cards.
Only certified copies will be allowed where original certificates is not available
Where there is uncertainty, the Principal Contractor shall consult an Occupational Medical Health Practitioner to determine what inoculation is required. All employees that may be exposed to sewage shall have received the relevant inoculation, be trained for the task, be in possession of the prescribed personal protective equipment.
Furthermore, the Principal Contractor shall provide task specific risk assessments with proof of training placed on file prior to any activity.
Furthermore, the Principal Contractor must ensure that all work-related activities are highlighted to the medical practitioner when conducting the examination.

4.10 Health and Safety Representative(s)

The Principal Contractor and their contractors must ensure that competent Health and Safety Representative(s) are appointed under consultation and trained to carry out their functions as soon as the total workforce has reached 20 employees or more. Should the Principal Contractor and their contractors have less than 20 employees, then the accumulative amount shall apply. The appointments must be in writing. The Health and Safety Representative shall carry out regular inspections at least monthly, keep records and report all findings to the Responsible Person forthwith and at Health and Safety meetings.

Note: The Principal Contractor and their contractors shall ensure that all certificates provided are issued by an accredited service provider as required by the National Qualification Framework Act 67/2000.

The number of representatives for each contractor shall be as per Section 17 of the OHS Act 85/1993, but as a minimum, The Principal Contractor shall appoint at least one competent Health and Safety Representative on the project.

4.11 Health and Safety Committees

Principal Contractor shall organize at least monthly Health & Safety meetings. Minutes and records shall be kept. Principal Contractors Health & Safety representative and responsible person shall attend this meeting. Principal Contractor to ensure that all Contractor Representatives attend these meetings.

Note: These monthly meetings shall be conducted regardless of how many contractors are appointed.

4.12 Health and Safety Training

4.12.1 Induction and Vetting

Principal Contractor shall ensure that all (including site visitors etc.) undergo site- specific induction presented by a competent person and proof placed in the Safety File prior to start of work. Employees to carry proof of inductions. **Principle Contractor to ensure that inductions and vetting system is arranged timelessly and must ensure their own inductions are still being done.**

4.12.2 Awareness

The Principal Contractor shall ensure that, on site, toolbox talks take place at least once per week. These talks should deal with risks relevant to the demolition work at hand. A record of attendance shall be kept in the Health and Safety file. All Principal Contractors have to comply with this minimum requirement. Contractors to ensure that the discussion is recorded on file (Topics with notes).

4.12.3 Health and Safety Site Rules

The Principal Contractors must develop a Set of Site-Specific Health and Safety Rules that will be applied to regulate the Health and Safety aspects on Site. This is a National Key Point and special care needs to be taken in terms of their Rules, Emergency and Specific Security requirements. These will be attached to the Health and Safety Specification as Appendix. Security and Access control must be included in the rules and those non- employees or visitors will not be allowed unaccompanied on site.

4.12.4 Competency

In accordance with the Construction Regulation the Principal Contractors shall appoint, in writing, competent persons (in addition to the Construction Managers – CR 8 (1)(2) & Construction Supervisor/s-8(7)(8) responsible for supervising construction work for the following work situations that may be expected on the site of the works, as applicable to the project.

A competent person may be appointed to do more than one part of the demolition work with the understanding that the person must be suitably qualified and able to manage and supervise at the same time the construction work on all the work situations for which he/she has been appointed.

The appointment of competent persons to supervise parts of the demolition work does not relieve the Principal Contractors from any of his responsibilities to comply with all requirements of the Construction Regulations.

Note: The Principal Contractor and their contractors shall ensure that all certificates provided are issued by an accredited service provider as required by the National Qualification Framework Act 67/2000 and the South African Qualifications Authority (SAQA).

4.13 Environmental

Environmental terms and conditions are to be adhered to. All relevant legislation and bylaws are to be adhered to. All necessary permits are to be applied for by the contractor such as transport permits, possession permits and flammable certificates.

5. GENERAL RECORD KEEPING

The Principal Contractor and their contractors shall keep and maintain Health and Safety records to demonstrate compliance with this Specification, with the OHS Act 85/1993, and with the Construction Regulations (February 2014).

The Principal Contractor and their contractors shall ensure that all records of incidents / accidents, emergency procedures training, inspections, audits, etc. are kept in a Health and Safety file held in the site office.

The Principal Contractor must ensure that every contractor keeps and maintains its own Health and Safety file and must be readily available at all times. (The file must include the Contractor's health and safety plan). These records are crucial for inclusion in the Principal Contractors' consolidated health and safety file for handover to the Client on completion of demolition work.

6. HEALTH AND SAFETY AUDITS, MONITORING AND REPORTING

The Client's Health & Safety Agent should conduct monthly Health and Safety audits/inspections with follow-up audits of the work. Operations including a full audit of physical site activities as well as an audit of the administration Health and Safety. The Health and Safety Agent may conduct unannounced visits as and when needed.

The Principal Contractor and their contractors are obligated to conduct similar audits on their contractors.

Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings.

Copies of the reports shall be kept in file and must be readily available for inspection. The Principal Contractor must audit their contractors and keep records of these audits in their Health and Safety files and must be available on request.
Note: The Principal Contractor shall ensure that all contractors' documentation is assessed and approved prior to start of work with proof placed on file.

6.1 Internal Audits/Inspections

The Principal Contractors SHE Officer to conduct weekly inspections with proof placed on file and signed off by the appointed construction manager.

7. EMERGENCY PROCEDURES AND EVACUATION PLANS

The Principal Contractor shall submit a detailed Emergency Procedure and Evacuation Plan with assembly point and contact details in the case of any emergency. The Emergency Procedures should be specific to each floor and be strategically displayed on each floor accordingly.

The procedure shall detail the response plan including the following key elements:

- List of key competent personnel; Details of emergency services.
- Actions or steps to be taken in the event of the specific types of emergencies; Information on hazardous material/situations.
- Emergency procedure(s) should include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, bomb threats, major incidents/accidents.

The Principal Contractor shall advise the Client, Agent, Engineer, and all relevant authorities forthwith, of any emergencies, together with a record of action taken. This shall be confirmed in writing as soon as possible after the incident.

A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel. These procedures form part of the OHS File. The Principal Contractor to ensure that the relevant staff is trained to perform such duties as required by the OHS Act. All emergency procedures must be monitored on a regular basis and must be in line with the building program.

The Emergency/Evacuation plan and routes must be revised on a regular basis because all employees and contractor (including staff) should any unforeseen event take place during the implementation phase/s of the project. Evacuation Drills must be conducted as and when needed. Contractor to assess all activities to ensure this is implemented with proof placed on file.

8. FIRST AID BOXES AND FIRST AID EQUIPMENT

The Principal Contractor and their contractors shall appoint in writing First Aider(s).

The appointed First Aider(s) are to be sent for accredited first aid training. Valid certificates are to be kept on site. All Contractors with more than 5 employees shall supply their own first aid box. Principal Contractor with more than 10 employees shall have a trained, certified first aider on site at all times & First aid Box adequately stocked always.

9. ACCIDENT / INCIDENT REPORTING AND INVESTIGATION

All incidents must be reported to the Health and Safety Agent as well as the client on the same day. Injuries are to be categorized into first aid, medical, disability, and fatal. The Principal Contractor and their contractors must stipulate in its construction phase, Health and Safety plan how it will handle each of these categories. When reporting injuries to the Client, these categories shall be used. All contractors must investigate and report on the 4 categories of injuries to the Principal Contractor at least monthly.
Contractors must investigate injuries and accidents involving their employees within seven days of the incident in the form on Annexure1 (General Administrative Regulations) and forward a copy on the investigation report to the Principal Contractor forthwith.

All incidents reportable in terms of the provision of Section 24 of the OHS Act 1993 must be reported to the local Dept. of Labour in the prescribed manner.

The Principal Contractor and their contractors must report all injuries to the Client in the form of a spreadsheet, which includes all contractor injuries/incidents including near misses, property damage and man-hours worked for the month as well as the cumulative total. This report must be done on a monthly basis and must form part of the Principal Contractor's progress report.

The Principal Contractor shall immediately notify the client and Client's Health & Safety Agent of any hazardous or potentially hazardous situations that may arise during the performance of demolition activities immediately or within 24 hours by means of a flash report.

In case of any Section 24 Incident, the Principal Contractor shall ensure that the Health and Safety Agent verify and peruse the report and all relevant documentation before it is sent to the Department of Labour.

10. HAZARDS AND POTENTIAL SITUATIONS

The Principal Contractor shall immediately notify the client and Client's Health & Safety Agent of any hazardous or potentially hazardous situations that may arise during the performance of demolition activities.

11. PERSONAL PROTECTIVE EQUIPMENT (PPE) AND CLOTHING

The Principal Contractor shall ensure that all workers are issued and wear but is not limited to i.e., hard hats, protective footwear, Hi-Viz vests and overalls. The Principal Contractor and their contractors shall make provision and keep adequate quantities of SANS approved PPE on site always.
Contractors to provide control measures should employees continuously fail to use the prescribed PPE.

Contractors to provide control measures should employees continuously fail to use the prescribed PPE.

Note-no employees will be allowed on site without a high viz vest.

12. OCCUPATIONAL HEALTH AND SAFETY SIGNAGE

The Principal Contractor shall provide adequate on-site OHS signage. Including but not limited to: "no unauthorized entry," "report to site office," "site office," and "hard hat area." Signage shall be posted up at all entrances to site as well as on site in strategic locations e.g., Access routes, entrances to structures and buildings, scaffolding and other potential risk areas / operations. All Contractors to adhere.

13. CONTRACTORS

The Principal Contractor shall ensure that all Contractors appointed by them comply with this Specification, the OHS Act 85/1993, and Construction Regulation (February 2014).

The Principal Contractor may only appoint a contractor after approving the contractor's health & safety plan with proof placed on file. The Principal Contractor must audit each of its Contractors at least monthly, with audit reports filed in the health & safety file on site.
The audit must include an administrative assessment as well as a physical inspection of the contractor's health & safety system.

The Principal Contractor must stop any Contractor from carrying out construction work that is not in accordance with the Principal Contractor's or Contractor's health & safety plan or if there is an immediate threat to the health and safety of persons.

The Principal Contractor shall take all reasonable steps necessary to ensure co-operation between all Contractors to enable each of those Contractors to comply with the provisions of these regulations.

The Principal Contractor must ensure that their contractors are registered and in good standing with a recognized compensation fund or with a licensed compensation insurer prior to work commencing on site.

The Principal Contractor must ensure that potential Contractors submitting tenders have made provision for the cost of health and safety measures during the demolition process; The Principal Contractor shall discuss and negotiate with their Contractor the contents of the health and safety Plan and shall finally approve that plan for implementation.

14. NO-GO AREAS

Principal Contractor and their contractors to avoid all no-go areas and ensure that all relevant parties/employees and visitors are adequately informed. **These areas will be identified by the Client.**

15. PHYSICAL REQUIREMENTS

16.1 Cranes (All) including a Crane Management Plan, Rescue Plan & (Emergency Procedures)

The Principal Contractor and all Contractors shall ensure that lifting machinery and tackle is inspected before use and thereafter in accordance with the Amended Driven Machinery Regulations (2015). There must be competent lifting machinery and lifting tackle inspectors who must inspect the equipment daily or before use, considering that:

- Contractors to plan carefully when crane work is required. Overhead electrical cables to be kept in planning.
- All lifting machinery and tackle must carry a load test certificate and must have an inspector register.
- All lifting machinery and tackle have a safe working load clearly indicated,
- Regular inspections and servicing are carried out.

Note: Records are kept of inspections and of service certificates conducted by an approved LMI

- There is proper supervision in terms of guiding the loads that includes a trained banksman/rigger to direct lifting operations and check lifting tackle,
- Rescue Plan to be provided.
- Inventory to be provided and updated as and when needed.

The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness to be available on site. Additionally, any loads that weigh more than a ton will require a lifting plan and must be signed off by a competent rigger.

16.2 Edge Protection and Penetrations

The Principal Contractor and their contractors must ensure that all exposed edges and openings are guarded at all times until permanent protection has been erected.
The Principal Contractor has the following options when contemplating the protection of openings, slabs and edges:

- A physical barrier at the edge of the opening, which must be strong enough to carry the weight of **any** person in the process of falling.
- External façade scaffold with fully boarded platform with a handrail.
- Any other suitable means of protection may be used that will prevent a fall.
- Timber to be nailed on all penetrations, alternatively any other means of protection may be used that will prevent a fall.
- Any person working on an unprotected slab/deck to wear fall arrest and prevention equipment devices, like safety harness, lifelines etc.

The Principal Contractors' risk assessment must include these items. E.g., all other openings and areas where a person may fall. **All Lifelines shall be certified as per the relevant standards and Anchorage points shall be load/pull tested by a competent person**

Note: Danger Tape and shade cloth shall not serve as edge protection.

Furthermore, the Principal Contractor shall provide adequate control measures to

avoid Falling Objects especially at all walkways.

16.3 Roof Work

All roof work must be conducted in accordance with Construction Regulation 10. A fall protection plan must be prepared by a competent person who should evaluate, revise and amend the plan at least monthly (30 Days) or after any change in activity or incident. Rescue Plan to be provided including methodology and key personnel to perform such rescue. *The Principal Contractor shall ensure that persons are trained and readily available with rescue equipment to perform such rescue*

(e)	a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

All employees shall be in possession of Working at Heights & Rescue Training conducted by an accredited service provider, competent Assessor/Facilitator and must be in line with the relevant Unit Standards and SAQA requirements (229998 & 229995)

Note, the Principal Contractor shall ensure that competent persons are available to assist with any rescues with proof of competence provided and must be in line with the relevant Unit Standards and SAQA requirements (229995).

The plan must also include the following but is not limited to,

- How the roof work was planned/Method Statements
- That the roof workers are competent (trained, experienced, knowledgeable)
- Lifelines (Proof of Certification) and anchor points (Load/Pull Tested) are provided and installed by a competent person and with proof placed on file
- That no Roof work is carried during inclement weather or where conditions are hazardous to workers.
- That fragile material/areas are demarcated, and signs posted;
- That suitable platforms are provided where fragile materials exist;
- That there are suitable and sufficient guardrails or barriers and toe boards or other similar means of protection to prevent the fall of any person, material or equipment.
- Rescue Plan
- All employees exposed to heights must be declared medically fit by an Occupational Health Practitioner. (Annexure 3)

Principal Contractor to consider self-rescue methods and fall protection equipment

Note: The Principal Contractor and their contractors shall ensure that all lifelines, anchor points and Safety Harnesses are inspected daily by a competent person with proof of inspections placed on file. Furthermore, The Principal Contractor and their contractors shall assess the fall risk at all times and ensure that Double Lanyard with Scaffold/Pylon Hooks or any other suitable control measures are used to prevent persons from falling.

16.4 Construction Vehicles and Mobile Plant

Construction Vehicles and Mobile Plant may be inspected by the Client prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the OHS Act and Regulations.

Construction Vehicles and Mobile Plant (Construction Vehicles & MP) to be:

- of acceptable design and construction
- maintained in good working order
- used in accordance with their design and intention for which they were designed
- operated/driven by trained, licensed competent and authorised operators/drivers. no unauthorised persons to be allowed to drive or operate construction vehicles & mobile plant
- operators and drivers of construction vehicles must be in possession of a valid medical certificate declaring the operator/driver physically and psychologically fit to operate or drive construction vehicles
- fitted with adequate signalling devices to make movement safe including reversing
- provided with roll-over protection, appropriate seat fitted which shall be used during construction vehicle operations.
- inspected daily before start-up by the driver/operator/user and the findings recorded in a register/log book
- construction vehicles to be fitted with two head and two taillights or as per the manufacturers design whilst operating under poor visibility conditions, in addition they shall be equipped with 'hazard warning' lights, which must be used whenever the construction vehicles is on site or as per the manufacturers specifications
- construction vehicles used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported **(PDP required when transporting employees)**
- operators to be issued with personal protective equipment as required and identified by the risk assessments
- only licensed and road worthy vehicles will be allowed onto public roads
- Principal Contractor to provide designated area should any plant and machinery be parked at night. plant to be fully secured to avoid possible unauthorized access.
- adequate lighting required as and when needed
- Control measures to prevent Possible collision of Plant
- Vehicles must be conspicuous (relevant signage, reflective tape.

Note, all plant operators shall have at least a code 10 Drivers licence

"CR 23. (2) A contractor must ensure that—
(c) the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
(d) every traffic route is, where necessary, indicated by suitable signs
No person may ride on a CV except in a safe place provided by the manufacturer for this purpose
The construction site must be organized to facilitate the movement of Construction Vehicles so that pedestrians and other vehicles are not endangered. Traffic routes are to be suitable, sufficient in number and adequately demarcated.
Construction Vehicles left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights reflectors or barricades to prevent moving traffic encountering the parked Construction Vehicles.

In addition, Construction Vehicles left unattended after hours must be parked with all buckets, booms etc. fully lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely. Workers employed adjacent to, or on public roads must wear reflective safety vests. All Construction Vehicles inspection records must be kept in the OH&S File.

The Principal Contractor shall provide control measures with procedures to ensure that construction vehicles and pedestrians remain within a safe zone

while mobile plant is operating on site. Should it be required that construction vehicles enter areas where heavy duty mobile plant is operating, the Principal Contractor shall ensure that these construction vehicles are clearly identifiable and are fitted with rotating amber lights and acoustic reversing alarms with sufficient control measures.

The Principal Contractor and their contractors shall ensure that adequate control measures are provided during Refueling of Mobile Plant, Construction Vehicles and or small plant on site. Furthermore, the Principal Contractor and their contractors should provide task specific risk assessment for each individual mobile plant being used on site.

Principal Contractor and their contractors shall provide task specific risk assessment for each individual mobile plant being used on site.

Furthermore, the Principal Contractor shall provide proof of the design specification and procedures for all relevant plant clearly indicating safety precautions, signage requirements and the inspection and service/maintenance frequency to comply with Section 8, 10 and Section 44 of the OHS Act 85/1993. These documents shall be readily available for inspection by any duly authorized persons

16.5 Asbestos

- Ensure compliance with the asbestos work plan in full, as per the OHS Act 85/1993.
- All Asbestos activities shall be done by a Registered Asbestos Contractor (RAC) as per the Asbestos Abatement Regulations and the AIA requirements. **Note, the RAC shall be registered as specified by the AIA and or as per the Asbestos Abatement Regulations 2020 as amended.**
- Notification of Asbestos Work given to the Department of Employment & Labour.
- Monitor the activities of the RAC to ensure compliance with the Asbestos Abatement Regulations 2020 according to the inspection schedule as prescribed by the Approved Asbestos Inspection Authority.
- Conduct asbestos air monitoring, associated laboratory tests and submit test results and reports. The reports shall include for remedial work/action to be taken by the RAC, where applicable, and the AIA shall brief the RAC accordingly
- Feedback of tests results, inspections and respective reports issued by the Approved Asbestos Inspection Authority to be readily available for all authorized persons
- Conduct a final inspection at the conclusion of the work and issue a site clearance certificate and job completion report certifying that all asbestos waste has been safely and correctly disposed of in full compliance with the Asbestos Abatement Regulations 2020 as amended.

16.6 Confined Space

"confined space" means an enclosed, restricted, or limited space in which, because of its construction, location or contents, or any work activity carried on therein, a hazardous substance may accumulate or an oxygen-deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, pump, sump, or similar construction, equipment, machinery or object in which a dangerous liquid or dangerous concentration of gas, vapour, dust or fumes may be present;

The Principal Contractor shall prepare a confined space procedure in line with General Safety Regulation (GSR) 5, CR 9 and Section 8 of the OHS Act 85/1993 including the following but is not limited to,

- **Confined Space Training issued by accredited service provider in line with the relevant Unit Standards**

- The areas have been declared safe to use/enter by a competent person in writing
- Task Specific Risk Assessments,
- Method Statements
- Emergency Procedures
- Adequate Supervision
- Permit to work in confine space (Including entry and exit)
- Adequate Lighting
- Safe Access
- Adequate Ventilation
- Breathing apparatus available
- Buddy System with ropes to be implemented
- Proof that continuous Gas assessments are being conducted
- Duration of working hours when working inside confined spaces
- Competent person/s and equipment to be readily available to assist with resuscitation
- Two Way Radios
- Tank Guards
- Gas/Oxygen Detectors
- Gas Free Certificates
- Area is clear of toxins and safe to enter

No breaks shall be taken in any confined spaces or when working in restricted areas.

16.7 Existing Structures

Any adjacent structures that may be affected by work must be considered in the planning process. Precautionary measures must be detailed and applied to prevent damage, uncontrolled collapse of existing structures and/or loss to property and persons during the entire construction phase.

16.8 Demolition during construction process-Method statement

Principal Contractor and their contractors shall appoint a competent person in writing to supervise and control all Demolition work on site at all times. Prior to any demolition work being carried out, the Principal Contractor shall submit a method statement and a detailed engineering survey for perusal/approval by the Client/Engineer. Acceptance will then be issued to the Principal Contractor to proceed with the demolition work.
The Principal Contractor shall ensure that demolition work complies with the Construction Regulations section 9 and 14 (February 2014).

Principal Contractor to ensure that:

- Demolition permits (If Applicable)
- All Demolition work to comply with the Engineers methodology, procedures, requirements and drawings.
- Work should be carried out by competent operatives experienced in demolition work under the control of an experienced, competent supervisor.
- Restricted areas and safe distances should be established.
- Underground services to be considered, including electrical cables, water mains, etc.
- All services should be disconnected prior to demolition.
- Adequate precautions against accidental collapse of the structure or adjacent structures should be in place.
- Pre-stressed reinforced concrete should be demolished under supervision of a suitability qualified and experienced engineer. (If Applicable)
- Measures should be taken to protect the public, e.g. 2m high fence, debris fans, etc.
- Floors/work areas should not be overloaded. **Principal Contractor must liaise with the Engineer regarding loading requirements**
- All plant and equipment should be suitable for the task, well maintained, and inspected and tested in accordance with legislation.

- Work at heights should be minimized.
- Measures should be taken to protect persons working at height, e.g. working platforms, harness, nets, etc.
- Appropriate personal protective equipment (PPE) should be worn.
- Adequate Dust Control
- Adequate measures to ensure the safety of public
- Identifying services of live services
- PPE
- Relevant signage to be displayed
- Noise- Procedure to control noise to be in place.
- Use of Portable Power Tools
- Combustibles
- Debris
- Housekeeping
- Demolition method statements & Risk Assessments

16.9 High and low voltage electrical installations

Should high voltage electrical lines/fencing be present on the site perimeter, the Contractor must take extra caution and demarcate as far as reasonably practicable. These demarcations must be maintained for the duration of the construction work. The minimum safety clearances as per Electrical Machinery Regulations must be adhered to.

The Principal Contractor must ensure that a Lockout/tag-out procedure is provided and must be adhered to by his/her employees. The Principal Contractor must ensure that safety measures stipulated in the Electrical Installation Regulations, Electrical Machinery Regulations, General Machinery Regulations and Construction Regulations are adhered to at all times. All installations must comply with SANS 10142 & the regulations of the OHS Act 85/1993 and Construction Regulation 24. The Electrical contractor must be registered with the Department of Employment & Labour.

The Principal Contractor and their contractors must ensure that prior notice is given to Local Authority Electrical Department of any work involving electrical installation. A Lockout certificate must be issued to the relevant Contractor.

The Principal Contractor must ensure that safety measures stipulated in the Electrical Installation Regulations, Electrical Machinery Regulations, General Machinery Regulations and Construction Regulations are adhered to at all times. All installations must comply with SANS 10142 & the regulations of the OHS Act 85/1993 and Construction Regulation 24. All temporary electrical installations including **Ready Boards** must be inspected at least weekly with proof placed on file. A diagram to be provided for all DBs' **The Principal Contractor shall ensure that they tie / connect into existing electrical systems without interruption as far as reasonably practicable.**

Note, The Principal Contractor and their electrical contractor shall study all electrical reports and design drawings provided by the Electrical Engineer and provide control measures as needed. The Principal Contractor and their electrical contractor shall ensure good communication with the appointed Electrical Engineer

Note, The Principal Contractor shall forward proof of competence of their Electrician who shall install and conduct inspections to the relevant Engineer for assessment & approval prior to commencement of any temporary Installations. In addition, **the Principal Contractor shall issue all method statements. Lock-out procedures and temporary and permanent Electrical Certificates of Compliance to the Electrical Engineer for comment and approval**

16.10 Civil Works

The Principal Contractor to ensure that they comply with Construction regulation 13 and 23 and that the following is undertaken during civil work:

- Excavation & Compliance to Construction Regulation 12, 13 and 10, CR 23 and the South African Road Traffic Signs Manuel (SARTSM) Chapter 13
- A competent site supervisor to be on site always.
- Plant and equipment inspected daily, and registers kept.
- All operators of plant and vehicles trained, competent and physically and psychologically fit. Certificates to be put in Health & Safety File.
- Workers that are working close to the traffic to be visible and wear reflective vests.
- Adequate safety signage to be posted ahead of any work area in the road.
- All signage, including delineators to be maintained and kept clean at all times.
- The required PPE must be worn always (Hard hats, safety shoes, overalls, etc.)
- Risk assessments to be conducted on all activities.
- Road Cleaning to be maintained daily
- Traffic and Pedestrian Accommodation
- Kerbs and channel
- Brick paving
- Bulk Earth Works and Layer Works
- Asphalt Surfacing

Laying of Pipes / Backfilling

- A competent site person to supervise lifting operations always.
- No employee to stand under any suspended load.
- Loads must not be slewed over personnel, plant, site huts or property.
- All lifting equipment and accessories must be marked with the Safe Working Load.
- Slings must not be placed on sharp edges.
- Work to be stopped when weather conditions prevent safe operations during trenching work or laying of pipes.
- Everyone to stand clear of area being backfilled by mobile plant.
- Method statement to be developed for connection to main sewer line and to water mains.

The Principal Contractor must ensure that the correct Lifting Machinery is used and must be used for its intended purpose as required by Section 10 and 44 of the OHS Act 85/1993 and Driven Machinery Regulation (DMR) 18(2015).
Excavators and Digger Loaders may not be used as lifting machinery, for lifting pipes or any slewing of material. All machinery shall be used for its intended purpose.

16.11 Temporary Works and Support Work for Structures

The Principal Contractor shall ensure that the provisions of Section 12 of Construction Regulations (February 2014) are adhered to.
These provisions must include but not be limited to ensuring that all equipment used is examined for suitability before use, that all Temporary Works and support work is inspected by a competent person immediately before, during and after placement of concrete or any other imposed load and thereafter daily until the Temporary Works and support work has been removed. Records of all inspections must be kept in a register on site. Temporary Works Design Drawings shall be provided by a competent person for all Temporary Works Structures.
Note: Authorization shall be provided in writing by a competent person before concrete is poured and before any temporary works structure is removed with proof placed on file. The Principal Contractor will ensure that all employees erecting temporary work (False Work, Formwork, Support Work) are competent to perform such work, including the Temporary Works Designer, Temporary Works Supervisor

and Temporary Works Inspector.

16.12 Excavations, shoring, dewatering/drainage

The Principal Contractor and any relevant Contractor shall make provision in their **tender (for bracing, shoring, dewatering and or drainage)** of any excavations as per this specification. **Principal Contractor to obtain a Civil Works Permit from the local authorities should any works be required close to any electrical kiosks**

Definition:

"**excavation work**" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

Excavation

13. (1) A contractor must—

(a) ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and

(b) evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

(2) A contractor who performs excavation work—

(a) must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;

(b) may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where—

(i) the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or

(ii) such an excavation is in stable material: Provided that—

(aa) permission has been given in writing by the appointed competent person contemplated in subregulation (1) upon evaluation by him or her of the site conditions; and

(bb) where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person contemplated in subregulation (1) and the professional engineer or technologist, as the case may be;

(c) must take steps to ensure that the shoring or bracing contemplated in paragraph *(b)* is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;

The Principal Contractor shall ensure the following but not limited to,

- Excavations/trenches are inspected before every shift, after blasting, after unexpected fall of ground, after substantial damage of supports, and after rain.
- A record of these inspections must be kept;
- The location and nature of all existing services must be established before trenching operation is undertaken.
- Safe work procedures have been communicated to the workers;
- The safe work procedures are enforced and maintained by the Principal Contractor and Contractors' Responsible Persons always;
- Safe access/egress is provided to all levels;
- No load, material, plant or equipment is placed or moved near the edge of any excavation or trench which may undermine the stability of the same unless adequate steps are taken to prevent the sides from collapsing.
- All excavations and trenches that are adjacent to public access routes must be barricaded and illuminated.
- All excavations next to any building to be carefully monitored during such an operation.
- The contractor shall comply with all the requirements as set out by legislation and shall include but is not limited to CR 10, CR 13, Section 8 and 9 of the OHS Act 85/1993.

- Excavations signage must be provided on the bonnex snow netting indicating "Danger: Excavations" in three local languages. Afrikaans, English and Xhosa.
- **Permit/Authorisation in writing to be provided by competent person prior to any person entering the Excavation**

The Principal Contractor shall provide Emergency/Rescue Procedures and must include but is not limited to,

- Possible collapse of Excavation
- Persons Falling into Excavations
- Mobile Plant falling into Excavations

Should an HV cable be discovered, the Principal Contractor and their contractors shall cease all current works and activities, make the area safe and then immediately contact the Electrical Consultant/Client Representative to provide a method statement prior to re-commencement. Proof of Communication shall be provided.

Furthermore, the Principal Contractor and their contractors shall ensure that the excavated sides are battered and include considering dewatering/creating site run offs during winter. All deep excavations and high cut slopes should be battered back to a safe and stable angle during construction and as per the Client/Engineers requirements

Care must be taken to ensure that the excavated embankments are at the correct slope to remain stable.

Note, only competent persons with the relevant experience, knowledge, skill and proof of training in line with the National Qualifications Framework (NQF) 67/2000, NQF 67/2008, relevant Unit Standards and SAQA requirements shall be allowed to inspect and supervise excavation activities regardless the depth and once approved by the Engineer then only shall such persons be appointed in writing in line with Construction Regulation 13 of the OHS Act 85/1993.

The Principal Contractor shall appoint a competent person to inspect all excavations and forward such proof of competence to the Civil Engineer prior to commencement. The Client/Client Representative reserves the right to comment and approve/decline such person

16.13 Deliveries

- No contractor vehicles are to be left unattended during deliveries.
- Existing parking bays, other than what has been agreed for the use by the Contractor, are not for the contractor or construction vehicles.

16.14 Hazardous Chemical Agents (HCA) (if applicable)

The Principal Contractor works with Hazardous chemical agents to obtain copies of all the (SDS) Safety Data Sheets and this has to be kept on site in the Health and Safety File. Risk Assessments to be compiled. First Aider to have copies of SDSs.

All hazardous waste shall be disposed of at an authorized landfill site and proof of disposal shall be provided upon request. Employees shall be provided with suitable PPE including Respirators as and when needed. Adequate control measures should be taken to avoid exposure to employees and members of the Public.

16.15 Stacking of Materials

The Principal Contractor shall ensure that there are sufficient appointed stacking supervisors, and all materials and equipment are stacked and stored safely. Double handling of material should be avoided and for this purpose, pallets and other stacking options should be used.

16.16 Removal of Rubble & Debris

The Principal Contractor must ensure the safe removal of debris and rubble from all levels where demolition occur. A site-specific Risk Assessment must be placed on file prior to any commencement of works.

16.17 Permits

All relevant permits must be obtained from Local Authority (where needed) before any demolition and construction work commences.

A permit system is to be established for the following but not limited to the following:

- Hot works
- Entering Eskom controlled areas
- Entering deep excavations
- Entering confined spaces (where applicable)
- Entering energized sections of the solar plant

16.18 Plant and Machinery

16.18.1 Pressure Equipment Regulations

The Principal Contractor and their contractors shall comply with the Pressure Equipment Regulations and SANS 10087, including:

- Providing competency and awareness training to the operators,
- Providing PPE or clothing,
- Inspect Equipment regularly and keep record of inspections,
- Providing appropriate firefighting equipment (Fire Extinguishers) on hand.
- Correct storage of cylinders.

16.18.2 Fire Extinguishers and Firefighting Equipment

The Principal Contractor shall provide adequate, regularly serviced fire-fighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted as required. All fire extinguishers to be handled and inspected by competent persons in compliance with CR 29.

The Principal Contractor provides an initial Fire Risk Assessment. Note: The Principal Contractor shall ensure that sufficient and suitable storage is provided for all flammable liquids, solids, and gases.

The Principal Contractor shall ensure that sufficient number of workers is trained in the use of Fire Equipment.

16.18.3 Hired Plant and Machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply. The Contractor shall ensure that operators hired with

machinery are competent and that certificates are kept on site in the Health and Safety file. All relevant Contractors must ensure the same.

16.18.4 General Machinery

The Principal Contractor shall ensure compliance with the amended Driven Machinery Regulations (2015), which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing, and training those who operate machinery.

16.19 Portable Electrical Tools

The Principal Contractor and their contractors shall ensure that the use of all portable electrical tools follows relevant legislation.

The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g., Personal protection equipment, guards, etc.

A competent person to undertake routine/daily inspections and records are kept. Only trained people are authorised to use the tools, the safe work procedures to apply. Awareness training is to be carried out and compliance enforced at all times, and PPE and clothing are provided and maintained.

Note: All power tools shall be inspected by the Authorized Operator on a daily basis with proof placed on file.

19. PUBLIC AND SITE VISITOR'S HEALTH AND SAFETY

Both the Client and the Principal Contractor have a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities. Site visitors must be briefed on the hazards and risks they may be exposed to and what measures are in place or should be taken to control these hazards and risks. A record of these inductions must be kept on site in accordance with the Construction Regulations.

Appropriate Nets, Canopies, Hoarding. Fencing, Gantry's, and Crash Decks etc. must be provided to protect visitors' members of the public and their vehicles passing / entering the site, in accordance with Construction Regulation 27.
Principal Contractor to ensure that no unauthorized persons enter the site by implementing access control measures / registers.
Site visitors must not be left alone to walk the site but must be accompanied by an employee of the principal contractor.

20. NIGHT WORK

Adequate lighting/illumination to be provided where required with backup generators. Security to be provided as and when needed. All emergency procedures need to be in place. Adequate PPE to be provided for all employees e.g., Hi-Viz Vests.

21. WORKING HOURS

Working Hours to be agreed with the Client and Principal agent.

22. OCCUPATIONAL HEALTH

22.1 Occupational Hygiene

Exposure of workers to occupational health hazards and risks is common in any work environment, especially in construction. Occupational exposure is a major problem, and Principal Contractor must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards.

The Risk to be looked at includes Ventilation, Dust. Noise

Adequate ventilation / extraction / exhausting in hazardous areas e.g., chemicals/ adhesives / petrol or diesel/ motors running and in confined spaces /basements.

22.2 Noise

Tasks identified where noise exceeds 85 dBA. All reasonable steps to be taken to reduce noise levels at the source. Hearing protection to be used where noise levels cannot be reduced below 85dBA.

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment
- Monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme must be established and maintained for the necessary employees.
- Control of noise by referring to:
- Engineering methods considered.
- Admin control (number of employees exposed) considered.
- Personal protective equipment considered/decided on.
- Describe how records are going to be kept for 40 years.

22.3 Dust

Principal Contractor to ensure that employees working with grinders, drills, etc. are issued with dust masks and dust exposure to be minimized at all times. Suitable measures to be implemented by the Principal Contractor to ensure that members of the public are not detrimentally affected by such activities. Working Area to be fully clad with a Hundred Percent Shade Cloth or anything similar.

22.4 Welfare Facilities

The Principal Contractor to provide at least one sanitary facility for every 30 employees on site with separate facilities for male and female, including changing facilities & hand washing facilities. Safe and adequate eating areas must be provided. Waste bins must be strategically placed and emptied regularly. Safe and clean storage areas must be provided for workers to store personal belongings and personal protective equipment.

22.5 Waste Management

Principal Contractor must implement their waste management in line with Environmental Terms and Conditions.

Principal Contractor must provide sufficient waste skips and bins and hazardous bins and sealed for hazardous waste.

22.6 Alcohol and Other Drugs

The Principal Contractor and their contractors to ensure that no alcohol and other drugs are allowed on site. No person may be under the influence of alcohol or any other drugs while on the construction site. Any person on prescription drugs must inform his/her superior, who shall in turn report this to the Contractor forthwith. Any person suffering from any illness / condition that may have a negative effect on his/her safety performance must report this to his/her superior, who shall in turn report this to the Principal Contractor forthwith.
Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, to report back the next day for a preliminary inquiry. The Contractor concerned must follow a full disciplinary procedure and a copy of the disciplinary action must be forwarded to the Principal Contractor for his records. No Smoking is allowed on site.

22.7 Hazardous Biological Agents

Covid-19 directives have been repealed. However the virus is still prevalent, it is for this reason that all contractors like any other Employer is expected to comply with Hazardous Biological Agent Regulations promulgated under the OHS Act 85/1993 and COVID-19 Code of Practice including South African National Standards applicable in accordance with Section 44 of the OHS Act and provide control measures as needed. The Principal Contractor and their contractors must therefore determine mitigation measures to minimize risk as far as reasonably practicable, allowing work to continue safely and without harm to all relevant stakeholders, including Clients, Employees, Contractors, Suppliers, Manufacturers and all interested and affected parties.

23. ANNEXURE A- ACKNOWLEDGEMENT OF H & S SPECS

Annexure A: Acknowledgement of Health and Safety Specification

Acknowledgement of Receipt of the Health and Safety Specifications:

I,_____representing.

_____Contractor

Have satisfied myself with the content of the construction Health and Safety Specification and shall ensure that the Contractor and its personnel comply with all obligations / requirements in respect thereof.

Signature of Principal Contractor	**DATE**
Signature of Client Agent	**DATE**

COMMENTS:

24. ANNEXURE B APPOINTMENT OF PRINCIPAL CONTRACTOR

Appointment of Principal Contractor

IN TERMS, OF

OCCUPATIONAL HEALTH AND SAFETY ACT, ACT 85 OF 1993 & CONSTRUCTION REGULATIONS 2014

CONSTRUCTION REGULATION 5(1)(k)

I,.....Client Responsible Person,
for… ..... do hereby appoint:
……..……..……..……..……..as the Principal Contractor
of…..... *Project.*

Responsibilities:

- *Prepare a Health and Safety Plan to comply with the requirements of the Construction Regulation 5(1)(b), and in compliance with the Health and Safety Specification for the Project.*
- *Ensure co-operation between all contractors to enable each of those contractors to comply with the provisions of these regulations.*
- *Provide all contractors with the required safety specification for their area of responsibility.*
- *Appoint each contractor in writing in accordance with Construction Regulations.*
- *Ensure implementation of the contractor's health and safety plan.*
- *Stop contractors from working if not in accordance with the client specification.*
- *Provide health and safety information to contractors should their design change.*
- *Ensure all contractors are registered and in good standing with the compensation commissioner.*
- *Ensure contractors submitting tenders have made provision for health and safety during construction.*
- *Ensure risk assessments are conducted & the identified controls are communicated to all employees and visitors.*
- Ensure Compliance to Occupational Health and Safety Act 85/1993, Construction Regulations 2014, Community Fire Safety Bylaw and Relevant Sans Codes.

Signature: …… **Date:** ……

Client / Principal Agent

Acceptance

I,..... hereby accept and acknowledge that I understand the requirements of this appointment.

Signature: ……. **Date:** ……

25. Baseline Risk Assessment

Baseline Risk Assessment for Health and Safety Specification: THE DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED HOUSES AND ASSOCIATED INFRASTRUCTURE AT ACACIA PARK IN THE WESTERN CAPE			
Activity	**Hazard**	**Risk Rating**	**Control Measure**
Demolition	• Possible injuries to employees • Possible Damage to existing services • Possible damage to property • Uncontrolled or premature collapse of structure • Possible dust inhalation • Overloading of platforms can cause a collapse thereof • Fire affected platforms can collapse	**H**	• Demolition method statement and Risk Assessment to be provided to Safety Agent and Structural Engineer for approval • Competent person appointed in writing as Demolition Supervisor. • DSTI to be conducted daily prior to works with proof placed on file. • Demolition operation inspected regularly to prevent premature collapse. • Existing services to be located and made safe before demolition commences. • Task Specific PPE to be worn. • Propping to be done with engineer's approval • Wetting of work area to control dust (if approved) • Demolition areas to be adequately demarcated and signage clearly displayed. • No overhead works allowed • Mark out areas to be demolished. • No person or plant is allowed on fire affected platforms • No overloading/point loads on platforms allowed
Temporary Works	• Possible fatalities/ injuries • Possible Collapse of Structure	**H**	• Temporary Works designer to be appointed • Design drawings to be approved by engineer and must be site specific. • All works to be supervised by appointed Temporary Works Supervisor. • DSTI to be conducted daily prior to works and proof placed on file. • Task Specific Risk Assessments and Method Statement Required prior to activity. • Compliance with CR 12
Work at Heights including but not limited to, Roof Work, Scaffolds and Ladders, etc.	• Possible Fall of persons • Possible serious injuries/fatalities	**H**	• Task Specific Fall Protection & Rescue Plan, Risk Assessments and Method Statements to be provided • DSTI to be conducted daily prior to works and proof placed on file. • PC shall comply with relevant legislation but not limited to CR 9, CR 10, GSR 13A. • All work to be done under supervision. • All employees shall be in possession of Working at Heights Training issued by an Accredited Service Provider • PPE to be worn at all times. • Lifelines (Proof of Certification) and anchor points (Load Tested) are provided and installed by a competent person and with proof placed on file • Lifelines must be secured to a fixed structure • Only competent roof workers allowed to do roof work (trained, experienced, knowledgeable) • Compliance with Fall Protection Plan. • Ensure no Roof work is carried out during

			inclement weather or where conditions are hazardous to workers. • All employees exposed to heights must be declared medically fit by an Occupational Health Practitioner. (Annexure 3) • All Safety Harnesses shall be inspected on a Daily basis by a competent person with proof of inspections placed on file. • Suitable means of protection to prevent the fall of any person, material or equipment. • Ladders should be inspected visually on a daily basis and full inspection conducted monthly with proof of inspection placed on file.
Lifting Operations	• Possible injuries • Possible property damage • Uncontrolled release of material	**H**	• Task Specific Method Statements and Risk Assessments required with proof of communication. • DSTIs to be conducted daily prior to works starting • Pre-starts checklists to be completed prior to works starting. • Lifting machinery to be fitted with working anemometers. • All lifting operations to be supervised. • Only competent operators may operate lifting machinery with competency certificates placed on file. • All Banksmen and Riggers to have valid competency certificates on file. • No person to be under suspended loads. • No Crane operations when banksman/Rigger is not available or present. • Only appointed banksman/rigger to assist with lifting operations. • A rigging study must be provided for approval prior to any lifting activity exceeding 5tons.
Asbestos Work (If identified by AIA)	• Possible Occupational diseases due to exposure over a period of time.	**H**	• All Asbestos work to be conducted as per the Work Plan, AIA requirements and the Asbestos Abatement Regulations 2020 shall apply. • Only a Registered Asbestos Contractor (RAC) can remove and handle Asbestos Containing Material. • Asbestos Work Plan must be readily available prior to start of work. • DSTIs to be conducted daily prior to works starting • All works to be supervised by a competent person. • Asbestos area to be clearly demarcated and asbestos warning signs clearly displayed. • RAC to ensure as far as possible the breakage of asbestos containing material. • Employees must be trained in asbestos operation by authorized service providers. • Special PPE must be issued to the employees who will remove the Asbestos Material. • All asbestos containing material to be double bagged, tagged and disposed of at Hazardous Waste Disposal Sites. Proof of safe disposal to be placed on file.

			• All employees to be declared medically fit by an Occupational Health Nurse Practitioner or OHP. • Asbestos monitoring to be implemented
Use of Small Plant: **(Generator, Jackhammer, Chipper, Breaker etc.)**	• Possible Noise induced hearing loss • Possible inhalation of fumes • Possible fires • Possible soil contamination • Damaged equipment can lead to possible injuries • Possible fuel leaks can lead to soil pollution / contamination	**H**	• All work to be supervised. • DSTIs to be conducted daily prior to works starting with proof placed on file. • Dust masks, hearing protection, Hand protection (gloves) overalls and safety Boots to be worn. • Small plant to be checked daily prior to use to ensure that the equipment is in good working condition • Ensure the petrol cap fits correctly. • Use a funnel to refill the tank and do not over fill. • Do not smoke or talk on your cell phone while filling the generator. • If you spill petrol, contain the spill with the spill-kits provided. • Ensure the recoil start mechanism is in good working order and that the correct cover is fitted; enclosing the rotating drum. • Do not remove any guards or anything attached to the machine that serves as a safety component. • Drip trays to be used when refueling small plant. • When using vibrating equipment, take regular short breaks to avoid any injuries relating to vibration or implement rotational work.
Scaffold erecting & dismantling	• Possible fall or persons • Possible injuries/fatalities • Possible Collapse of Scaffold structures • Possible property damage	**H**	• Scaffolds to be erected by competent scaffold erectors in accordance with SANS 10085-1. • All scaffolds should be inspected by a competent scaffold inspector and hand-over certificates issued prior to use. • All scaffold work to be supervised by a competent scaffold supervisor. • DSTIs to be conducted daily prior to works starting with proof placed on file. • Work on scaffolds to be coordinated by appointed scaffold supervisor. • Safey Harness to be used when erecting & dismantling scaffolding. • All scaffolding to be inspected daily and after inclement weather and findings recorded in a register. • Fully boarded platforms must be provided at all times • As far as reasonably possible, employees to use tool lanyards when working on scaffolding. • No Items to be thrown to the ground from heights, but to be safely lowered. • No persons to work underneath overhead work area.
Off-loading of Material/deliveries	• Possible load falling • Possible injuries to employees and members of the public	**H**	• All work areas to be adequately demarcated • Dedicated walkways for employees to be in place. • All Activities to done under supervision. • Ensure a spotter is available when

			needed. • All vehicles to be escorted by flagpersons. • No unauthorised entry - Site security to be available. • Relevant construction signage to be displayed.
	• Possible Collision/contact with property or stationary vehicles, workers, and members of the public	**H**	• Driver to be in possession of a valid driver's license. • All notices and signs need to be obeyed. • Driver to adhere to the speed limits. • Employer and Driver to ensure that he is not intoxicated and must be sober habits.
Removal of Fire Suppression/Sprinkler systems and other equipment	• Possible injuries • Uncontrolled release of material		• Method Statement to be developed • Good co-ordination when stripping of equipment • All works to be supervised. • DSTIs to be conducted daily prior to works starting with proof placed on file. • Safe working distances should be maintained between employees • Task-specific PPE to be worn
Working Close to Public	• Possible Fatalities/Injuries	**H**	• Task Specific Risk Assessments to be conducted by competent persons • Adequate Site Hoarding and relevant signage displayed. • Principal Contractor to comply with CR 9 and Section 8 and 9 of the OHS Act 85/1993. • Spotters to be present
Carrying of material	• Possible Contact with fellow employees and results into possible injuries.	**M**	• All work to be supervised • DSTIs to be conducted daily prior to works starting with proof placed on file. • Employees to take caution when walking on site. • Employees to keep material as close to themselves or structure as possible to avoid possible contact with persons. • Ensure your vision is not obstructed. • Watch your blind spots and get assistance when carrying heavy and large objects
	• Possible Falling material and possible foot and body injuries	**M**	• Operatives to ensure that all material are adequately secured. • Appropriate PPE to be worn always. • Do not carry material in precarious (dangerous) positions so as to obstruct your vision etc.
	• Possible Ergonomics /Possible back injuries	**M**	• Employees to ensure that they use correct bending techniques. Please get assistance when lifting heavy objects.
Working with Hazardous Chemical Agents	• Possible Respiratory problems.	**M**	• All work to be supervised • DSTIs to be conducted daily prior to works starting with proof placed on file. • Safety Data Sheets to be communicated to all employees with proof placed on file. • Task Specific PPE to be used. • Adequate ventilation required. • Ensure that all containers are clearly and correctly labelled
	• Dermatitis, Skin burns, Skin sensitization	**M**	• Avoid contact with the skin as far as reasonably practicable. Use barrier cream if possible.
	• Possible Eye injuries	**M**	• Remove clothing that has been contaminated by wet hazardous

			substances.
		M	• Wear suitable PPE as listed below. Wash hands thoroughly after contact and use a barrier cream.
		M	• Follow Safety instructions (SDS) as indicated by the SDS.
Storage of Hazardous Chemical Agents	• Possible Explosion/fires Possible	**H**	• Comply with CR 25 & CR 29. • Store all Hazardous Substances in the correct categories. • Store all flammable material separately. Ensure relevant signage is clearly displayed. • Adequate fire extinguishers to be readily available. • Fire Risk Assessment to be conducted by a competent person. Hazardous bins to be provided
Working with Power Tools	• Possible Contact with moving parts.	**M**	• All works to be supervised • DSTIs to be conducted daily prior to works starting with proof placed on file. • Task Specific Method statements and Risk Assessments required as per CR 9. • Only competent personnel should operate these tools.
		M	• Portable Electrical Tools to be checked before use, guards are correctly fitted and work properly.
	• Noise above 85Dba	**M**	• Employees to be issued with relevant PPE including hearing protection.
	• Possible Malfunction of Blade	**H**	• Blades should be regularly inspected to ensure they are in sharp/good condition
	• Possible Back Injuries	**M**	• Employees to be trained in proper lifting and bending techniques.
Working with Hand Tools	• Possible injuries to employees	**M**	• All works to be supervised • DSTIs to be conducted daily prior to works starting with proof placed on file. • Visual checks must be completed by operatives on tools prior to use. • Task specific PPE to be worn. • Tools are required to be suitable for the purpose for which they are to be used. • Open bladed knives, screwdrivers, and other sharp tools are to be carried and used so as not to cause injury to the user or others. • Task specific PPE to be worn.
	• Possible Tripping over tools	**M**	• Tools should not be left lying around, they constitute a severe tripping hazard, and they are liable to get damaged.
Off-loading of containers by means of Cranes	• Possible fatalities/ injuries • Possible uncontrolled release of containers and material	**H**	• Task Specific Method Statements and Risk Assessments required with proof of communication. • All lifting activities to be supervised. • DSTIs to be conducted daily prior to works starting with proof placed on file. • Rescue Plan and task specific Fall Protection Plan required, to be compiled by competent person. • All work areas to be adequately demarcated with relevant signage displayed. • Competent flagpersons and riggers to be present • Only competent person to execute lifting

			operations • All operators to have relevant documentation as per CR 23 and DMR 18(2015) • Task Specific Risk Assessments and Method Statement must be readily available and communicated to all relevant persons with proof placed on file • Load test certificates for all lifting equipment and lifting Machinery. • All Contractors to be informed of existing services e.g., electrical cables. • Only certified and load tested Lifting Equipment and Machinery shall be used. • Lifting equipment shall be of good standard with correct latches etc.
Operating of Mobile plant	• Possible fatalities/ injuries • Possible Colliding with employees, public, possibly fatal. • Damage to property	**H**	• All works to be supervised. • Task Specific Risk Assessments to be provided. All operators to comply with CR 13 and CR 23. • Pre-start checklists to be completed prior to works commencing. • DSTIs to be conducted daily prior to works starting with proof placed on file. • Valid Competency Certificates and Drivers' License required for All operators • Competent person who is medically fit must operate mobile plant. This is also required for hired operators. • Always be aware of other plant in your area and if the plant comes too close or in your working area, stop operating and be safe. • Never reverse without checking behind you to ensure that it is safe to do so. • Operator must be on the lookout for fellow employees and members of the Public coming onto site unnoticed. • All plant shall a fully functional reverse buzzer.
	• Possible Risks when plant is stationary - People driving into plant.		• Mobile plant must have appropriate lighting and reflectors to identify the location of the plant. • Park in designated areas with boom/buckets lowered
	• Possible Damage to plant.		• Machine must be locked, and keys taken with operator or given to supervisor to prevent unauthorized person operating machine.
Material access to site	• Possible injuries to workers and members of the public. • Possible damage to property.	**M**	• Access route to and from the site will be clearly demarcated and identifiable. • Designated walkways to be in place. • Contractor will make the relevant resources available to carry material to and from site. • Flagpersons and spotters placed to control traffic when trucks enter or leave work area. • Flagpersons will wear reflective vest.
Temporary Electrical Installations	• Possible fatalities/ injuries • Possible Electrocution, even fatal. • Damage to equipment	**M**	• Task Specific Method statements and Risk Assessments required as per CR 9 • Only competent persons with proof of competency to conduct work and be appointed in writing. • Equipment to be used to detect live/high

			voltage cables. • Restricted areas to be identified. • All installations must comply with SANS 10142 & the regulations of the OHS Act 85/1993 CR 24 and Electrical Installation Regulations • Toolbox Talks to be conducted on Risk Assessments with declarations / acknowledgement signed daily. • Relevant PPE to be used. • Lockout procedures to be provided and adhered to. • CoC must be issued for all electrical installations. • All temporary electrical installations need to be inspected at least weekly and prior to use. • All cables to be treated as live • Suitable PPE shall be used • Only insulated tools to be used.

Note:

The above list is by no means exhaustive and should not be limited to these activities but must cover all activities that forms part of the said construction work. Each activity must be split down to individual tasks and all associated hazards identified and listed in the risk assessment. This ensures that the critical tasks and subsequent critical hazards are not missed.

All Activities are to be re-assessed by the Principal Contractor and their contractors prior to start of work and must be communicated with all relevant employees with proof placed in file.

NB:
Although of the work related to health and safety work is mentioned /noted in certain measured items in the bill of quantities it remains the contractor's responsibility to allow in his tender price for all work related to health and safety and the requirements as per this Health and Safety Specification and the OH'S Act 85/1993.

Additional Information/General Notes

1. All work operations shall be limited within site boundary.
2. The roads should be kept clean at all times and deliveries and vehicle movement will be limited to reduce noise levels or interruption within the area.
3. Principal Contractor to adhere to site speed limits and inform their delivery companies of the same.
4. Where unidentified services are located on site, the contractor is to report this immediately to the principal agent and is to adequately protect these services until identified and the necessary instruction issued by the principal agent.
5. Park all vehicles in designated area as provided by the Client.
6. Avoid loitering.

7. Principal Contractor and their Contractors to only use access routes that has been identified by the Client.
8. Adequate signage and demarcation required.
9. Principal Contractor to only work in the areas allocated by the client.
10. Working hours shall be confirmed with the Client.
11. Contractor to provide additional toilet for security.
12. All site personnel and workmen must wear presentable, clean and tidy company uniforms, with their required PPE. The name of the contractor's company must be clearly printed on the uniform.
13. Principal Contractor to consider load shedding schedules when planning and risk assessing all work activities.

Important Note:
The Health and Safety Specification was compiled with the input of all Designers. The Principal Contractor must ensure that continuous monitoring of risk and hazards are conducted.

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ANNEXURE 2.9: EPWP SPECIFICATION

public works & infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

EXPANDED PUBLIC WORKS PROGRAMME

EXPANDED PUBLIC WORKS SPECIFICATION

The following Specification is divided into the following compliance categories that must be fulfilled: -

1. EPWP NYS Specification
2. EPWP Reporting requirements
3. Project Steering Committee
4. Community Liaison Officer
5. Sub-contracting
6. DPW Projects Branding

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SL 01. SCOPE

This project is part of the Expanded Public Works Programme (EPWP) and aims to train young people and provide them with practical work experience under the National Youth Service (NYS) training. Youth aged between 18 and 35 will be recruited through EPWP processes and be trained in skills relevant to the work that will be done on this project.

The training of the youth employed will have to be conducted by an accredited Training Service Provider contracted by a contractor in conjunction with EPWP processes (where EPWP NYS Coordinator will give guidance). The contracted Training Service Provider

will have at all times provide the Contractor with an update on youth training each have received.

The Contractor will be required in both training and on-site exposure to employ all of the youth for a minimum period of 9 months. Furthermore, the Contractor will be required to avail services of an adequately qualified foreman/ supervisor specifically for EPWP NYS youth Participants to act as their construction mentor for the duration of on-site training. The contractor may not be required to employ all youth in the programme at the same time, but may phase the youth throughout the project, as long all youth will receive their minimum duration stated earlier.

This specification contains the standard terms and conditions for Participants employed in elementary occupations and training on a Special Public Works Programme (SPWP) for the National Youth Services Programme. These terms and conditions do NOT apply to person's permanent employed in the supervision and management of a SPWP.

SL 02. TERMINOLOGY AND DEFINITIONS

SL 02.01 TERMINOLOGY

02.01.01 **"SPWP" –** The Code of Good Practice for Special Public Works Programmes, which has been gazetted by the Department of Labour, and which provides for special conditions of employment for these EPWP projects. In terms of the Code of Good Practice, the Participants on these projects are entitled to formal training, which will be provided by an accredited training provider/s appointed (and funded) by the Department of Public Works through contracted Contractor. For projects of up to six months in duration, this training will cover life-skills and information about other education, training and employment opportunities.

02.01.02 **"EPWP" –** Expanded Public Works Programme, a National Programme of South Africa Government, approved by Cabinet.

02.01.03 **"NYS" –** National Youth Service means a structured skills development programme aimed to capacitate youth.

SL 02.02 DEFINITIONS

02.02.01. **"Employer" –** means any Department employing Participants to work in elementary occupations on a SPWP;

02.02.02. **"Client" –** means the Department of Public Works.

02.02.03. **"Participants" –** a recipient/s of National Youth Service programme who benefits through participation in an elementary occupation on a SPWP.

02.02.04. **"department" –** means any department of the State, implementing agent or contractor;

02.02.05. **"elementary occupation" –** means any occupation involving unskilled or semi-skilled work;

02.02.06. **"management" –** means any person employed by a department or implementing agency to administer or execute a SPWP;

02.02.07. **"task" –** means a fixed quantity of work;

02.02.08. **"task-based work" –** means work in which a Participant is paid a fixed rate for performing a task;

02.02.09. **"task-rated Participant" –** means a Participant paid on the basis of the number of tasks completed;

02.02.010. **"time-rated Participant" –** means a Participant paid on the basis of the length of time worked

02.02.011. "Service Provider" – means the consultant appointed by Department to coordinate and arrange the employment and training of labour on EPWP infrastructure projects.

SL 03. APPLICABLE LABOUR LAWS

In line with the Expanded Public Works Programme (EPWP) policies, the Ministerial Determination, Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of labour in government Notice No. R63 of 25 January 2002, of which extracts have been reproduced below, shall apply to works described in the scope of work and which are undertaken by unskilled or semi-skilled Participants.

The Code of Good Practise for Employment and Conditions of Work for Special Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. R64 of 25 January 2002 shall apply to works described in the scope of work and which unskilled or semi-skilled Participants undertake

SL 04. EXTRACTS FROM MINISTERIAL DETERMINATION REGARDING SPWP

SL 04.01 TERMS OF WORK

04.01.01 Participants on a SPWP are employed on a temporary basis.

04.01.02 A Participant may NOT be employed for longer than 24 months in any five-year cycle on a SPWP.

04.01.03 Employment on a SPWP does not qualify as employment and a Participant so employed does not have to register as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

SL 04.02 NORMAL HOURS OF WORK

04.02.01 An employer may not set tasks or hours of work that require a Participant to work–

(i) more than forty hours in any week
(ii) on more than five days in any week; and
(iii) for more than eight hours on any day.

04.02.02 An employer and a Participant may agree that the Participant will work four days per week. The Participant may then work up to ten hours per day.

04.02.03 A task-rated Participant may not work more than a total of 55 hours in any week to complete the tasks (based on a 40-hour week) allocated to him.

04.02.04 Every work is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the Participant ends work on one day until the time the Participant starts work on the next day.

SL 04.03 MEAL BREAKS

04.03.01 A Participant may not work for more than five hours without taking a meal break of at least thirty minutes duration.

04.03.02 An employer and Participant may agree on longer meal breaks.

04.03.03 A Participant may not work during a meal break. However, an employer may require a Participant to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another Participant. An employer must take reasonable steps to ensure that a Participant is relieved of his or her duties during the meal break.

04.03.04 A Participant is not entitled to payment for the period of a meal break. However, a Participant who is paid on the basis of time worked must be paid if the Participant is required to work or to be available for work during the meal break.

SL 04.04 DAILY REST PERIOD

Every Participant is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the Participant ends work on one day until the time the Participant starts work on the next day.

SL 04.05 WEEKLY REST PERIOD

Every Participant must have two days off every week. A Participant may only work on their day off to perform work which must be done without delay and cannot be performed by Participants during their ordinary hours of work ("emergency work").

SL 04.06 WORK ON SUNDAYS AND PUBLIC HOLIDAYS

04.06.01 A Participant may only work on a Sunday or public holiday to perform emergency or security work.

04.06.02 Work on Sundays is paid in terms of Basic Conditions of Employment Act rate of pay.

04.06.03 A task-rated Participant who works on a public holiday must be paid –

(i) the Participants daily task rate, if the Participant works for less than four hours;
(ii) double the Participants daily task rate, if the Participant works for more than four hours.

04.06.04 A time-rated Participant who works on a public holiday must be paid –

(i) the Participants daily rate of pay, if the Participant works for less than four hours on the public holiday;
(ii) double the Participants daily rate of pay, if the Participant works for more than four hours on the public holiday.

SL 04.07 SICK LEAVE

04.07.01 Only Participants who work four or more days per week have the right to claim sick-pay in terms of this clause.

04.07.02 A Participant who is unable to work on account of illness or injury is entitled to claim one day's paid sick leave for every full month that the Participant has worked in terms of a contract.

04.07.03 A Participant may accumulate a maximum of twelve days' sick leave in a year.

04.07.04 Accumulated sick-leave may not be transferred from one contract to another contract.

04.07.05 An employer must pay a task-rated Participant the Participants daily task rate for a day's sick leave.

04.07.06 An employer must pay a time-rated Participant the Participants daily rate of pay for a day's sick leave.

04.07.07 An employer must pay a Participant sick pay on the Participants usual payday.

04.07.08 Before paying sick-pay, an employer may require a Participant to produce a certificate stating that the Participant was unable to work on account of sickness or injury if the Participant is –

(i) absent from work for more than two consecutive days; or

(ii) absent from work on more than two occasions in any eight-week period.

04.07.09 A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.

04.07.10 A Participant is not entitled to paid sick-leave for a work-related injury or occupational disease for which the Participant can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

SL 04.08 MATERNITY LEAVE

04.08.01 A Participant may take up to four consecutive months' unpaid maternity leave.

04.08.02 A Participant is not entitled to any payment or employment-related benefits during maternity leave.

04.08.03 A Participant must give her employer reasonable notice of when she will start maternity leave and when she will return to work.

04.08.04 A Participant is not required to take the full period of maternity leave. However, a Participant may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.

(i) A Participant may begin maternity leave:–

1. four weeks before the expected date of birth; or on an earlier date;
2. if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the Participant or that of her unborn child; or
3. if agreed to between employer and Participant; or
4. on a later date, if a medical practitioner, midwife or certified nurse has certified that the Participant is able to continue to work without endangering her health.

04.08.05 A Participant who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.

04.08.06 A Participant who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the SPWP on which she was employed has ended.

SL 04.09 FAMILY RESPONSIBILITY LEAVE

04.09.01 Participants, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances:-

i. when the employee's child is born;
ii. when the employee's child is sick;
iii. in the event of the death of:–
    1. the employee's spouse or life partner
    2. the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling

SL 04.10 STATEMENT OF CONDITIONS

04.10.01 An employer must give a Participant a statement containing the following details at the start of employment:–

i. the employer's name and address and the name of the SPWP;
ii. the tasks or job that the Participant is to perform;
iii. the period for which the Participant is hired or, if this is not certain, the expected duration of the contract;
iv. the Participants rate of pay and how this is to be calculated;
v. the training that the Participant may be entitled to receive during the SPWP.

04.10.02 An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.

04.10.03 An employer must supply each Participant with a copy of the relevant conditions of employment contained in this specification.

04.10.04 An employer must enter into a formal contract of employment with each employee. A copy of a pro-forma is attached at the end of this specification.

SL 04.11 KEEPING RECORDS

04.11.01 Every employer must keep a written record of at least the following –

i. The Participant/s employment contract;
ii. Payments (proof of payments) made to each Participant.
iii. Certified copy of an Identity Document
iv. Signed monthly attendance registers
v. in the case of a task-rated Participant, the number of tasks completed by the Participant;
vi. in the case of a time-rated Participant, the time worked by the Participant;

04.11.02 The employer must keep this record for a period of at least three years after the completion of the SPWP.

SL 04.12 PAYMENT

04.12.01 The Participants shall be remunerated monthly in terms of the amount agreed upon by Ministerial Determination 4 and paid monthly on the day agreed upon with the contractor.

04.12.02 Payment must be made through electronic fund transfer (EFT) into Participant bank account.

04.12.03 An employer must give a Participant the following information in writing –

i. the period for which payment is made;
ii. the number of tasks completed or hours worked;
iii. the Participants earnings;
iv. any money deducted from the payment;
v. the actual amount paid to the Participant.

04.12.04 After the Participant is paid s/he must acknowledge receipt of payment by signing payment register.

04.12.05 If a Participants employment is terminated, the employer must pay all monies owing to that Participant within one month of the termination of employment.

SL 04.13 DEDUCTIONS

04.13.01 An employer may not deduct money from a Participants payment unless the deduction is required in terms of a law.

04.13.02 An employer who deducts money from a Participants pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.

04.13.03 An employer may not require or allow a Participant to:–

i. repay any payment except an overpayment previously made by the employer by mistake;
ii. state that the Participant received a greater amount of money than the employer actually paid to the Participant;

SL 04.14 HEALTH AND SAFETY

04.14.01 Employers must take all reasonable steps to ensure that the working environment is healthy and safe and that all legal requirements regarding health and safety are strictly adhered to in accordance to Occupational Safety and Health Act no 85 of 1993.

04.14.02 A Participant must:

i. work in a way that does not endanger his/her health and safety or that of any other person;
ii. obey any health and safety instruction; in accordance to Occupational Safety and health Act no 85 of 1993
iii. use any personal protective equipment or clothing issued by the employer;
iv. report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

04.14.03 Employers must conduct occupational medical examinational fitness test.

SL 04.15 COMPENSATION FOR INJURIES AND DISEASES

04.15.01 It is the responsibility of employers to arrange for all persons employed on a SPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.

04.15.02 A Participant must report any work-related injury or occupational disease to their employer or manager.

04.15.03 The employer must report the accident or disease to the Compensation of Injuries and Diseases Act Commissioner within 07 days.

04.15.04 An employer must pay a Participant who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months.

04.15.05 The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

SL 04.16 TERMINATION

04.16.01 The employer may terminate the employment of a Participant provided he has a valid reason and after following existing termination procedures.

04.16.02 A Participant will not receive severance pay on termination.

04.16.03 A Participant is not required to give notice to terminate employment. However, a Participant who wishes to resign should advise the employer in advance to allow the employer to find a replacement.

04.16.04 A Participant who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the Participant may be re-engaged if a position becomes available for the balance of the 24-month period.

04.16.05 A Participant who does not attend required training events, without good reason, will have terminated the contract. However, the Participant may be re-engaged if a position becomes available for the balance of the 24-month period.

SL 04.17 CERTIFICATE OF SERVICE

04.17.01 On termination of employment, a Participant is entitled to a certificate stating:–

i. the Participants full name;
ii. the name and address of the employer;
iii. the SPWP on which the Participant worked;
iv. the work performed by the Participant;
v. any training received by the Participant as part of the SPWP;
vi. the period for which the Participant worked on the SPWP;
vii. any other information agreed on by the employer and Participant.

SL 05. EMPLOYER'S RESPONSIBILITIES

The employer shall adhere to the conditions of employment as stipulated in the *Code of Good Practice for Employment and Conditions of Work for Special Public Works Programmes*. Over and above the conditions stipulated above, he shall be responsible to:

05.01 formulate and design a contract between himself/ herself and each of the recruited youth Participants, ensuring that the contract does not contravene any of the Acts stipulated in South African Law, e.g. Basic Conditions of Employment Act, etc. (A copy of a pro-forma contract is attached at the end of this specification);

05.02 screen and select suitable candidates for employment from the priority list of youth Participants provided by the Umsobomvu Youth Fund (UYF);

05.03 ensure that the recruited youth Participants are made available to receive basic life skills training which will be conducted and paid for by the Umsobomvu Youth Fund;

05.04 ensure that all youth Participants receive instruction on safety on site prior to them commencing with work on site;

05.05 ensure that all youth Participants are covered under workmen's compensation for as long as they are contracted to the contractor. Payment to the Compensation Commissioner shall be the responsibility of the contractor;

05.06 assist in the identification and assessment of potential youth Participants to undergo advanced technical training in respective trades;

05.07 test and implement strict quality control and to ensure that the health and safety regulations are adhered to;

05.08 provide all youth Participants with the necessary protective clothing as required by law for the specific trades that they are involved in.

05.09 provide overall supervision and day-to-day management of youth Participants and/or sub-contractors; and

05.10 ensure that all youth Participants are paid their wages on time through a pre-agreed payment method as stipulated in the contract with the youth Participant.

SL 06. TRAINING OF YOUTH PARTICIPANTS

SL 06.01 PREAMBLE

The Code of Good Practise for Employment and Conditions of Work for Special Public Works Programmes encourages:-

06.01.01 optimal use of locally-based labour in a Special Public Works Programme (SPWP);

06.01.02 a focus on targeted groups which consist of namely youth, consisting of women, female-headed households, disabled and households coping with HIV/AIDS; and

06.01.03 the empowerment of individuals and communities engaged in a SPWP through the provision of training.

SL 07. YOUTH PARTICIPANTS SELECTION CRITERIA

The youth Participants of the programmes should preferably be non-working individuals from the most vulnerable sections of disadvantaged communities who do not receive any social security pension income. The local community must, through all structures available, be informed of and consulted about the establishment of any EPWP–NYS.

In order to spread the benefit as broadly as possible in the community, a maximum of one person per household should be employed, taking local circumstances into account.

Skilled artisans from other areas may be employed if they have skills that are required for a project and there are not enough persons in the local communities who have those

skills or who could undergo appropriate skills training. However, this should not result in more than 80% of persons working on a programme not being from local communities.

Programmes should set participation targets for employment with respect to youth, single male- and female-headed households, women, people with disabilities, households coping with HIV/AIDS, people who have never worked, and those in long-term unemployment.

07.01 The proposed targets as set out in sub clauses should accommodate:-

(i) 100% youth from 18 to 35 years of age;
(ii) 60% women;
(iii) 2% disabled.

SL 08. PROVINSIONAL RATES OF PAY

The payment conditions is that a proof be provided in the claim processing of the services rendered and of that cost incurred. The cost incurred means and referred to a periodical or once off proof of payment on any direct or indirect procured services in the EPWP-NYS training bill of quantity where their expenses are charged against line-item provisional sums. The line items are set to have a mark-up/ profit value as a separate profit and attendance item to accommodate administration cost and transaction cost where necessary including any other cost incurred activities to render the service complete.

It is stipulated that youth Participants on the EPWP-NYS receive a minimum Stipend per day whilst on off-site and on-site training in ALL provinces. The Stipend means and referred to a claim of a progressive work based experiential training and exposure of any Participant in EPWP-NYS programme. The progressive work referred to a productive days work relevant or similar in nature to the required training standards received by Participant/s and of any relevant cost to be claimed. The failure in compliance in that particular day work will be at a contractor's cost remunerated within the required Building Industrial Councils rate of pay.

SL 09. PAYMENT FOR TRAINING ON YOUTH PARTICIPANTS

SL 09.01 (TARGET: - NUMBER OF YOUTH PARTICIPANTS)

09.01.01 Orientation and Life Skills

Orientation and Life Skills development training for youth Participants for an average of set days per youth Participant is necessary at inception of the project once all recruitment processes are exhausted. All youth Participants are entitled to undergo life skills training.

Training on this life skills module will be flexible enough to meet the needs of the employer. Training should take place immediately after site hand-over and during the period of site establishment and pre-planning before actual construction starts, alternatively this will be spread over the duration of the contract period. The contractor will be required to work closely with the Training Service Provider so that the timeframe of the training is aligned with the construction works schedule and the demand for Participants.

09.01.02 Technical skills training

Technical skills training for youth Participants for an average of set days per youth Participant is necessary immediately once they conclude their life Skills training. The Employer shall assist in identifying youth Participants for further training. The youth Participant/s will undergo further technical training to prepare them for opportunities as semi-skilled labourers. Such training will comprise of an off-site theoretical component and practical training on-site.

The contractor will be responsible to supervise and appoint appropriate supervision that will act as mentor on Participants for on-site practical work based experiential exposure. The programme will consist of accredited theoretical instruction away from the construction site as well as on-site practical work under the supervision of the employer. The Youth Participants will be entitled to full training programme completion once all training modules are completed.

SL 010. PAYMENT REDUCTION

Payment reduction due to not meeting the training target, then as per the contractual penalties obligations of the contract will be applicable up until such time the requirements are met. The contractual penalties obligations is referred to as is detailed in the contractual arrangements between the contractor and DPW. The payment reduction means no other or alternative clause that will substitute the contractual penalties obligations.

SL 011. PROFIT AND ATTENDANCE

The profit and attendance referred to means a line-item mark-up percentage of any services rendered within the re-measured progressive claims to DPW by a contractor. The payment conditions are that proof be provided in the claim processing of the services rendered and of that cost incurred. The cost incurred means and referred to a periodical or once off proof of payment on any direct or indirect procured services in the EPWP-NYS training bill of quantity where their expenses are charged against line-item provisional sums. The line items are set to have a mark-up/ profit value as a separate profit and attendance item to accommodate administration cost and transaction cost where necessary including any other cost incurred activities to render the service complete.

SL 012. PAYMENT FOR TRAVELLING OFF AND ON-SITE TRAINING

The unit of measurement for travelling shall be the cost for the youth Participant off or on-site that must be arranged by the contractor. Amounts quoted shall be corrected according to re-measurement based on actual invoices. The unit of measurement for travelling shall be the amounts in Rand from a particular transport service taxi. The tendered percentages will be paid to the contractor on the value of each payment pertaining to the travelling to cover contractor’s expenses in this regard.

SL 013. EMPLOYMENT OF YOUTH PARTICIPANTS THAT ARE PAID STIPEND

Employment of youth Participants on the-job training shall provide youth Participants with on and off-the-job training to enable them to fulfil their employment requirements. The employer shall also be expected to closely monitor the job performance of youth Participants and shall identify potential youth Participants for skills development programmes. The unit of measurement shall be the number of youth Participants at an

EPWP–NYS Stipend rate per day as the amount agreed by Ministerial Determination multiplied by the period employed in that particular month.

The rate tendered shall include full compensation for all costs associated with the employment of youth Participants and for complying with the conditions of contract. The cost for the training shall be excluded from this item. This item is based on 9 months minimum appointment for youth Participants. The submission of attendance registers by contractor to DPW is very critical as they are the source leading to training monitoring, transactions and auditing. The attendance registers will be used as a source to quantify eligibility of productive due days for payment.

SL 014. PROVISION OF EPWP DESIGNED OVERALLS AND HARD HATS TO YOUTH PARTICIPANTS

The youth Participant/s will each be supplied with 2 sets of EPWP branded overalls, 1 set of EPWP branded hard hat and 1 set of Safety Boats. Youth Participant/s colour of their overall/s should be orange (top and bottom) as per DPWP corporate identity on branding specification with the exception on Correctional Services contracts where the overalls should be blue (top and bottom). An amount has been provided in the Schedule of Quantities under this sub-item for the supply of EPWP designed protective clothing by the contractor.

It is the responsibility of the contractor to purchase or to delegate to its Training Service Provider for the purchase of Participant/s protective clothing. The sets of protective clothing as stated will be provided once and if a need arise to replace for whatever reasons such cost will be recovered from those in need for second set outside the provisional sums arrangement in the contracted bill of quantities.

SL 015. PROVISION OF SMALL TOOLS FOR YOUTH PARTICIPANTS

The contractor will provide or delegate to its training Service Provider all youth Participants with prescribed tools for their respective service areas/ trades. The specification for the mentioned tools to be provided by the Training Service Provider. The tools will become the property of the youth Participant after the completion of the programme.

The contractor together with Training Provider need to provide youth Participants with relevant training tools during their stay within respective training venues/ areas. The tools provide particular on site must be under the control and supervision of the contractor’s responsibility.

SL 016. APPOINTMENT OF YOUTH PROJECT TRAINING COORDINATOR/S

The appointment of Youth Project Training Coordinator/s (PTC) for the duration of the programme will be determine in the inception of the project. The Youth PTC will be appointed by EPWP-NYS Office and will act as Participant Liaison Office to facilitate and coordinate the training programme between the youth Participants, Training Provider, the contractor and EPWP-NYS Office (Maximum ratio is 1:30 – Youth PTC to Youth Participants). The coordination of the training programme as the core function of EPWP NYS will require PTC to reside within DPWI Offices in order to monitor and report on compliance issues of work-based access, experiential exposure and mentoring on site of Youth by Contractors.

The item rate shall include full compensation for the cost of liaising with all relevant stakeholders on all issues regarding the training. The Youth PTC will assist in

administration and promotion of fair, transparent, reliable and competitive private procurement processes and keep/ update documentation. The Youth PTC is required to processes and keep Stipend transaction records among other roles and give inputs on progress work claims, verifications for payments and final accounts.

SL 017. LIAISON WITH SERVICE PROVIDER

The tendered rate shall include full compensation for the cost of liaising with the Service Provider and Social Facilitators on all issues regarding the youth Participants training works.

SL 018. LOGISTICS FOR EXIT WORKSHOP

The tendered rate shall include full compensation for the cost of liaising with the relevant Service Providers for the arrangements of all learner profiling and exit workshop events. The items range from catering, clothing, venue hire and decoration and entertainment items, etc.

SL 019. EPWP REPORTING SYSTEM REQUIREMENTS

The Project must be registered on the NDPW EPWP reporting system by the public Body and report on:-

SL 019.01 Certified copy of participants' id (not later than 3 months at the time of system enrolment),

SL 019.02 Beneficiary contract need to be uploaded on the system when registering a project for EPWP compliance.

SL 019.03 The contractor is required to submit monthly beneficiary reports (Annexure B), which are to be attached to payment certificates and invoices as per attached Reporting Templates.

SL 019.04 The contractor needs to ensure that participants are registered under workman's compensation and that UIF is deducted for EPWP beneficiaries.

SL 019.05 Payment shall only be processed once compliance with EPWP and other Reporting requirements has been proven.

SL 019.06 The reported information must be accompanied by:-

1. Copies of ID (once off) when participants contracted,
2. Beneficiary Contract of Employment (once off),
3. Attendance registers (monthly) and
4. Proof of Payment (monthly)

SL 019.07 All copies of these documents should be kept safe on site for the duration of the contract for Audit purpose.

SL 020. PROJECT STEERING COMMITTEE (PSC)

Each project shall have a Project Steering Committee (PSC) that shall consist of the following stakeholders:

- Department of National Public Works representative.
- Municipal representative.
- Community representatives.
- Client department representative.
- Main Contractor.

SL 020.01 Operating Procedures

The PSC shall oversee the following

(a) The PSC will adhere to government legislation and policy guidelines which are relevant to enable it to execute its work. The Intermediary guidelines will also be adhered to e.g. procurement policies.
(b) The meetings will be scheduled and will be held on agreed dates and times.
(c) That targets set in terms of work opportunities are met.
(d) That local labour is recruited according to agreed procedures and processes
(e) Manage EPWP participant grievances.
(f) Responsible for communication with local EPWP beneficiaries.

SL 020.02 Secretariat

The contractor shall appoint a Community Liaison Officer (CLO) who shall provide secretariat support to the PSC.

SL 20.03 PSC Meetings

The PSC shall meet once a month prior to the site meetings and report the resolutions at the Site Meeting.

SL 20.04 Funding of PSC

The activities of the PSC will be voluntary and members would receive no remuneration for their time. The contractor may provide refreshments on the day of a meeting. It is thus important that community members of the PSC be drawn from the local area in order to avoid travelling costs.

SL 021. <u>COMMUNITY LIAISON OFFICER (CLO)</u>

SL 021.01 The Contractor shall allow for and pay any and all costs necessary for the engagement of the services of a Community Liaison Officer (CLO) for the full duration of a project.

SL 21.02 A CLO will be identified by the local structures (Project Steering Committee) of the ward areas and appointed following a fair and transparent interviewing process, to be conducted in the presence of local structures and the contractor representative, in order to assist the Contractor in the procurement of any local labour, etc. required for this project.

SL 21.03 The Contractor is to liaise with the CLO and afford him any assistance needed in ensuring sound working relations with the local community.

SL 21.04 Key Responsibilities of the CLO are envisaged to include and not necessary be limited to:

a) Assisting local leadership in conducting skills and resources audit which facilitates sourcing labour from within the ward or targeted areas for employment, as required by contractor,
b) Assisting in the procurement of materials from local resources, as required by the contractor,
c) Assisting the contractor by identifying areas of potential conflict and or threats to the project or to stakeholders in the project and recommend appropriate action to the contractor.

d) Assisting contractor and stakeholders in the project in the resolution of any conflict which may arise.
e) Establishing and ensuring that sufficient and open communication channels between the contractor and the work force are maintained.
f) Establish and ensuring that efficient and open communication channels between the contractor and the community are maintained.
g) Identifying and reporting to the Contractor regarding issues where communication between stakeholders is necessary, recommend courses of action and facilitate such communications.
h) Assisting the Contractor and the work force in the establishment of grievance procedures and necessary recommendation to the Contractor regarding the grievances and solution thereto.
i) Attending to site meetings and project implementation meetings as required by the Contractor and prepare periodic reports as may be required by the Contractor from time to time.
j) Attending to such other duties which are consistent with the functions of a CLO, as may be required by the Contractor from time to time.

SL 022. CONTRACTUAL OBLIGATIONS IN RELATION TO LABOUR

The beneficiaries to be employed in the programme (EPWP) shall be directly contracted to the employer. Over and above the construction and project management responsibilities, the employer will be expected to perform the tasks and responsibilities as set out in clause SL 05 above.

SL 023. SUBCONTRACTING

SL 023.01 All tenders exceeding R 30 million, the Preferential Procurement Regulations 2017 prescribes a mandatory requirement for bidders to subcontract a minimum of 30% of their contract value to any one or more of the following categories;

a) An EME or QSE
b) An EME or QSE which is at least 51% owned by black people;
c) An EME or QSE which is at least 51% owned by black people who are youth;
d) An EME or QSE which is at least 51% owned by black people who are women;
e) An EME or QSE which is at least 51% owned by black people with disabilities;
f) An EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
g) A cooperative which is at least 51% owned by black people;
h) An EME or QSE which is at least 51% owned by black people who are military veterans.

SL 023.02 For this contract, the main Contractor will be required to appoint a number of emerging sub-contractors to undertake work to the minimum of 30% of the contract value on the following services:

(1) Corrective Maintenance which comprises of various building trades
(2) Preventative Maintenance which comprises of:
(a) Facilities Management (more fully described in Part D and F)
(b) Building Fabric and Services Maintenance
(c) Security & Emergency Preparedness
(d) Grounds Maintenance Incl. Civils
(e) Swimming pools, Jacuzzi's & water features
(f) Cleaning & Hygiene

(g) Waste Management
(h) Energy Management and Utilities Supplies
(i) Environmental Management (Incl. Pest Control)
(j) Fire and Emergency Management

The contractor will be required to submit the Empowerment Implementation Plan within 21 days of Site handover.

SL 023.03 The main contractor must ensure that they use the list of prospective subcontractors from Consolidated Supplier Database (CSD) from National Treasury as per the agreed designated group/s targets and subject them to a transparent and competitive bidding process based on a criteria agreed between the DPWI and contractor.

SL 023.04 Bidders must ensure that the proposed sub-contractor(s) conform to the following:
a) Possess relevant accreditation where applicable,
b) Be registered with relevant bodies (CIDB, various Councils, etc.) where applicable,
c) Possess necessary capabilities to deliver the sub-contracted work,
d) Meet the requirements in terms of the stipulated designated groups
e) Consideration of Geographical location at the place where the project will be delivered.

SL 023.05 Bidders that fail to meet the required pre-qualification criteria and/or subcontracting requirements will be disqualified

SL 023.06 The Department to provide a list of prospective subcontractors from Central Supply Database (CSD) for the Contractors consideration.

SL 023.07 Should the Main Contractor deem the local selected-contractors not to meet the minimum requirements of the set criteria, which shall include the sub-contractors' experience and qualifications, the Main Contractor shall demonstrate to the Project Manager that they have done proper assessment of the sub-contractors and provide detail on how they reached such a decision. Further to the above the main contractor shall provide an alternative solution.

SL 023.08 The Main Contractor will be responsible for managing the emerging sub-contractors and will be expected to;
- Mentor and monitor the Subcontractors and their work output and quality;
- Issue a certificate of experience to each Subcontractor once the works have been completed;
- Prepare and submit a comprehensive report on the performance of SMMEs on a quarterly basis for the duration of the project

SL 023.09 The Main Contractor will be responsible to ensure that all sub-contractors comply with all EPWP requirements in terms of recruitment of participants and reporting amongst others as set-out in this specification

SL 023.10 The Main Contractor must allow 10% of the Net Contract Value for this project to be assigned to targeted labour. The contract in its entirety is to subscribe to a minimum of 100 000 person-days allocated to ALL the labour components for this project i.e. main contractor and all the sub-contractors deriving benefit from this procurement

SL 023.11 The Main Contractor and sub-contractors will be required to compile monthly progress reports to be submitted with payment certificates. The reports shall include planned

targets with regards to the works and employment, employment of EPWP beneficiaries and project expenditure. Failure to produce monthly reports will render payment certificates incomplete.

SL 023.12 The Main Contractor will be required to utilise local material suppliers from the Western Cape Province.

SL 023.13 SANCTIONS

023.13.01 SANCTIONS FOR SUB-CONTRACTING

Compliance with the Preferential Procurement Regulations 2017 with regards to sub-contracting will be assessed six monthly (every six months). In the event that the FMSP fails to substantiate that any failure to achieve the subcontracting targets relating to the granting of a preference was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties (P) in an amount determined in accordance with the following formula:

A rectification period of one month will be allowed for the FMSP to rectify the reason/s for non-compliance. Failure to rectify these reasons within the rectification period will result in the penalty being deducted from that month's certification. Failure to meet the preferential procurement offer in the tender for three consecutive six monthly periods will constitute Breach of Contract in terms of Clause 33".

$$P = 0.50 \times \frac{(D - Do)}{(100)} \times NA$$

where D = Required Subcontractor percentage.
Do = the Sub-Contractor percentage which the Employer's Representative, based on the credits passed, certifies as being achieved for the assessment period
NA = Net Amount, being Tender Sum excluding VAT, and escalation
P = Rand value of penalty payable.

023.13.02 SANCTIONS FOR NON- COMPLIANCE OF EXPANDED PUBLIC WORKS (EPWP) TRAINING AND EMPLOYMENT TARGETS

Compliance with the EPWP targets (SL 023.10) will be assessed six monthly (every six months). In the event that the FMSP fails to substantiate that any failure to achieve the labour targets relating to the granting of a preference was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties (P) in an amount determined in accordance with the following formula:

A rectification period of one month will be allowed for the FMSP to rectify the reason/s for non-compliance. Failure to rectify these reasons within the rectification period will result in the penalty being deducted from that month's certification. Failure to meet the preferential procurement offer in the tender for three consecutive six monthly periods will constitute Breach of Contract in terms of Clause 33".

$$P = 0.50 \times \frac{(D - Do)}{(100)} \times NA$$

where D = Required target number of youth to be trained and employed.
Do = the number of youth trained and employed which the Employer's Representative, based on the credits passed, certifies as being achieved for the assessment period
NA = Net Amount, being Tender Sum excluding VAT, and escalation for the EPWP portion of the Bill of Quantities.
P = Rand value of penalty payable.

SL 024. CONTRACT DOCUMENT

In order to make tender / contract documents fully EPWP compliant (labour-intensive construction projects) the following clauses and / or additions need to be included in the documentation:

SL 024.01 Tender Document Cover

The following EPWP Logo to be included on the bottom of the front cover

public works & infrastructure
Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

EXPANDED PUBLIC WORKS PROGRAMME

SL 024.02 Tender Notice and Invitation to Tender

The following must be included in the notice and invitation to tender (for Contract Documentation for the Works):

"Only tenderers who employ staff which satisfy EPWP requirements are eligible to submit tenders."

SL 024.03 Tender Data

The following must be included in the tender data in accordance with the provisions of the CIDB Standard for Uniformity in Construction Procurement:

F.2.1 only those tenderers who have in their employ management and supervisory staff satisfying the requirements of the scope of work for labour-intensive competencies for supervisory and management staff are eligible to submit tenders.

F.2.18 The tenderer shall, when requested by the Employer to do so, submit the names of all management and supervisory staff that will be employed to supervise the labour-intensive portion of the works together with satisfactory evidence that such staff members satisfy the eligibility requirements.

SL 024.04 Contract Data

The following must be included in the contract data in the contract with the Employer:

Payment for the labour-intensive component of the works

Payment for works identified in the Scope of Work as being labour-intensive shall only be made in accordance with the provisions of the Contract if the works are constructed strictly in accordance with the provisions of the Scope of Work. Any non-payment for such works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

Linkage of payment for labour-intensive component of works to submission of project data

The Contractor's payment invoices shall be accompanied by labour information for the corresponding period in a format specified by the employer. If the contractors choose to delay submitting payment invoices, labour returns shall still be submitted as per frequency and timeframe stipulated by the Employer. The contractor's invoices shall not be paid until all pending labour information has been submitted.

EPWP - EMPLOYMENT AGREEMENT

[Example]

CONTRACTOR
Name:
Address:
ID:

AND

WORKER
Name:
Address:
ID:

1. I am pleased to confirm that you have been appointed to work on a task-based employment contract within an EPWP project. During this contract you will undertake various tasks.

2. This contract must be in conjunction with the standard terms and conditions of employment applicable to a EPWP, a copy of which is attached.

3. The project where you will be employed is located at …….

4. The contract will start on ……
   and end on……

5. You must be aware that this contract is a limited term contract and not a permanent job. Your minimum period will be 6 months and the contract may be terminated for one of the following reasons:
   (a) Funding for the programme in your areas comes to an end.
   (b) You repeatedly do not perform in terms of the tasks set out in your work programme.
   (c) If you breach any of the terms and conditions of this contract.

6. Disciplinary:
   You will be employed as a general labourer within the EPWP team.

7. While you are working you will report to ……..

8. Payment
   You will be paid a fixed amount of R …….. for a …….basis.

9. The contractor shall not be required to provide to local beneficiaries:
   - holiday, leave, sick or severance pay;
   - a pension or similar scheme;
   - a medical aid or similar scheme.

10. Signatures

Signed on this day ……. of …….. 20……

Contractor: ……. Date: …….

Worker:……. Date: …….

Witness: ……. Date: ……

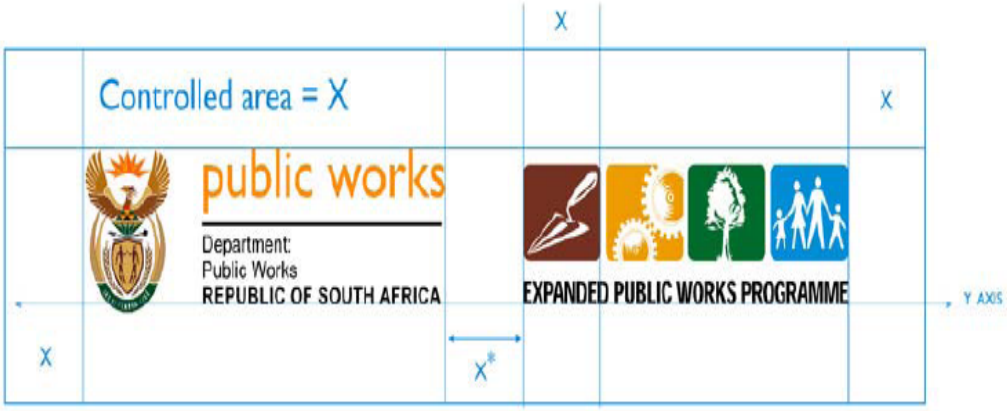
ANNEXURE A.1 – EPWP BRANDING REQUIREMENTS

(Please note that the new Public Works and Infrastructure logo should be used instead of the Public Works Logo)

The EPWP identity construction

The logo spacing guide is used to check relationship of the Public Works Logo and Expanded Public Works Programme logo.

HORIZONTAL RELATIONSHIP



In the horizontal relationship the DPW logo always appears on the left and EPWP logo on right.
* NOTE The space between the public works logo and EPWP logo may increase but never decrease less than X width. The logos must always bottom align with Y axis.

The EPWP identity - Acceptable colour application

The EPWP identity - Typography

The fonts chosen for the EPWP identity is Gill Sans and Arial. The following versions of the Gill Sans and Arial family can be used.

Primary descriptor: Gill Sans Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 *&!?@

Primary descriptor: Gill Sans Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 *&!?@

Secondary typography: Arial Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 *&!?@

Secondary descriptor (EPWP): Arial Narrow

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 *&!?@

Secondary typography: Arial Regular

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 *&!?@

The EPWP identity - Colour palette

The Primary colour palette for the EPWP identity is Black and Yellow. The Secondary colour palette appear in the logo and is an integral part of the EPWP identity.

PRIMARY COLOUR PALETTE

SECONDARY COLOUR PALETTE

The EPWP co-branding in promotional material

The Expanded Public Works Programme corporate identity is likely to be applied in conjunction with many other role players. When using the horizontal version of the EPWP identity the following scenarios applies.

National branding scenario

The EPWP master brand logo is applied to the front, with the sector indicated on the back. The project identity is always applied to the left sleeve.

Master Brand logo version

public works
Department: Public Works
REPUBLIC OF SOUTH AFRICA

EXPANDED PUBLIC WORKS PROGRAMME

ANNEXURE B.1 – EPWP BENEFICIARY REPORTING TEMPLATE

ANNEXURE B.2 – EPWP PROGRESS DATA REPORT TEMPLATE

BENEFICIARY INFORMATION
PLEASE PROVIDE BENEFICIARY INFORMATION ON THIS SHEET

									JULY			
First name	Initials	Last name	I.D. Number	DOB	Gender	Has disability	Education level	Start date	Number of labour days for July	Daily task rate for July	Total wages paid July	Total number of training days July
				dd/mm/yyyy	M or F	Y or N	See codes at bottom of list	dd/mm/yyyy			DO NOT ENTER DATA IN THIS COLUMN	
TOTALS (DO NOT ENTER DATA IN THIS LINE)									0			0

- Education Levels – use the codes (1,2,3) on the excel spreadsheet
  - (1) Unknown
  - (2) No Schooling
  - (3) Grade 1-3 (Sub A – Std 1)
  - (4) Grad 4 (Std 2) ABET 1
  - (5) Grade 5-6 (Std 3-4) ABET 2
  - (6) Grade 7-8 (Std 5-6) ABET 3

PROGRESS REPORT DATA

	2011					
	TOTAL up to JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Financial Report						
Expenditure (Total monthly for Project)						
EPWP Certified Contractors						
Number of contractors						
Amount Spent (by Contractor)						
SMME Contractors						
Number of contractors						
Amount Spent						

Milestones	If milestone has been achieved provide the achievement date, otherwise indicate "NO" for each milestone not achieved.
Project approved	
Consultant appointed	
Detailed Design specifications approved	
Tender report approved	
Construction started	
Implementation complete	
Actual Outputs	
Type of output	
Quantity achieved	
Date achieved	

ANNEXURE 2.10: CPG

CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME IMPLEMENTATION GUIDE

6 FEBRUARY 2023

NDPWI CONTRACT PARTICIPATION GOALS AND CIDB BUILD PROGRAMME IMPLEMENTATION GUIDE

1. PURPOSE

The purpose of this Contract Participation Goal (CPG) guideline is to provide guidance on the implementation of the CPGs which forms part of the Economic Reconstruction and Recovery Plan which also includes the cidb BUILD Programme that entails Enterprise Development and Skills Development through infrastructure and construction projects.

2. INTRODUCTION

The applicable cidb Standards establishes uniformity and standardisation of implementing CPGs and the cidb BUILD programme on construction and engineering works.

A separate CPG section for the Bill of Quantities was created to include all CPGs and the cidb BUILD programme for the following reasons (Document available @ www.publicworks.goc.za/consultantsdocs.html under Forms and Documents / Consultant's Guidelines / **Item 3 Quantity Surveyors/**):

- The implementation of CPGs should not give any bidder a competitive advantage. Borderline value thresholds can be manipulated by tenderers electing to tender just below the CPG value threshold requirement thereby creating a competitive advantage in not pricing for CPG;
- Bidders can determine the project estimate cost of the project through reverse calculations;
- Provisional amounts to be provided for in the Bills of Quantities, which is adjusted once enterprises and individual beneficiaries have been identified and associated cost have been determined;
- Different methods of calculating CPG values in terms of the definition used for "Contract Amount" in the respective cidb Standards; and
- Ease of extracting CPG reports and associated costs as well as contributions in the form of one overall report and/or individual CPGs.

Targeted enterprises or beneficiaries of any CPG may not participate or form part of more than one CPG.

All CPGs are Conditions of Contract, i.e. the tender does not need to submit any proof of CPG participation at the time of tender.

Sanctions (penalties) are applicable to all CPGs where the contractor fails to achieve the minimum specified requirements, unless the contractor can prove to the Employer's satisfaction that the non-achievement was beyond his/her control. The minimum percentage sanctions currently indicated in the tender documents are recommended by the cidb and can be adjusted to be project specific. All sanctions to be fair and reasonable and exclude VAT. Note that minimum percentage sanctions applicable to the cidb BUILD Programme elements is 30%.

The minimum required specifications and pricing instructions have been included in the Scope of Works (PG01.1, PG01.2) and the Pricing Assumption documents (PG02.1 and PG02.2) respectively.

Normative reference documents:

- SANS 10845-5:2015 ISO 10845-5:2011. Construction procurement – Part 5: Participation of targeted enterprises in contracts. South African Bureau of Standards.

- SANS 10845-8:2015 ISO 10845-8:2011. Construction procurement – Part 8: Participation of targeted labour in contracts. South African Bureau of Standards.

Even though minimum project requirements are prescribed by the cidb, CPGs may be implemented on any project where feasible, irrespective of the cidb prescribed project value, categories and construction period.

In calculating the respective CPGs, allowances and VAT are excluded from the Tender Amount at the time of award.

Allowances include the following:

- Provisional amounts (Contractor and Consultants)
- CPG allowances (Contractor and Consultants)
- Nominated and/or selected subcontractors (Contractor)
- Other expenses included in consultant pricing activity schedule (Consultants)
- Contract price adjustment (Not provided for within the B of Q by NDPWI)
- Contingency amounts (Not provided for within the B of Q by NDPWI)

Note: CPG values in the CPG Bill of Quantities Section will be recalculated based on the awarded "Tender Amount" excluding provisional amount, allowances and VAT, i.e. the Contract Amount as defined by the cidb Standards. No penalties will be applied should the CPG value based on the original "Tender Amount" or the "Contract Amount", have been achieved. The CPG values do not increase in the event of any expansion to the construction cost after award by way of variation orders or remeasurements.

The main contractor shall submit monthly reports in terms of CPGs achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative. The final CPG reconciliation will form part of the final account, clearly indicating the CPG targets, CPGs achieved and penalties applied if applicable.

3. FEASIBILITY STUDY

The project must be introduced to the local community well in advance before going out on tender (at least 12 months) if possible upon which a feasibility study must be conducted to determine both the viability and extent of implementing the respective CPGs. A Social Facilitator to be appointed to assist in this regard either as a disbursement to the Principal Agent or a direct appointment.

Liaise with:

Community leaders
Business forum/s
Any other Civic organisations / forums
Department of labour
Emerging contractor development forum/s

Refer to the cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017 for:

- Appendix A: Guidelines for Undertaking a Feasibility Study for Specifying CPGs.

3.1 Establish a Community Project Steering Committee

The objectives of this Memorandum of Understanding (MOU) Agreement are to establish and enter into an agreement with the Community Project Steering Committee, representing the affected communities on the following aspects:

- Targeting strategies and contract participation goals to be implemented on the project;
- Establish minimum requirements of beneficiaries for subcontracting, NYS and skills development.
- Establish respective roles and responsibilities of:
  - NDPWI
  - Community Project Steering Committee
  - Community Liaison Officer (CLO)
  - Consultants
  - Contractor
- Deliverables and Timeframes
- Mediation for the resolution of community matters affecting the performance of the construction works contract;
- Enter into a written agreement

Refer to the cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017 for:

- Appendix B: Guidelines for Community Engagement.

4. CONTRACT PARTICIPATION GOALS

4.1. Targeted Local Material Manufacturers CPG

A targeted local manufacturer is a targeted enterprise that operates or maintains a factory or establishment that produces on its premises materials or goods required by the principal contractor for the performance of the contract.

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the item in the CPG section of the Bills of Quantities.

The main contractor shall submit monthly reports in terms of CPG monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

4.1.1. Applicable standards and implementation documents

- The cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017; and
- cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020

4.2.2 Minimum Requirements

- Grade 7GB / 7EC and higher (project value above R20 000 000);
- Minimum construction period 6 months;
- Selected materials subject to Local Content requirements as published by TDI&C from time to time;
- Material to meet SABS / SANS requirements;
- Material to meet minimum specified requirements; and
- Must be economically viable in terms of price and be aware of price fixing and / or cover quoting.

4.2.3 Penalties

The percentage penalty applicable to be **indicated** in the Scope of Works (PG01.1 or PG01.2) and is applied to the prorate targeted value of material not achieved with (Excluding VAT). **The percentage penalty is project specific to a maximum of 30% and should be fair and reasonable.**

4.2.4 CPG Calculation

- Feasibility study to indicate achievable CPG and specified in the Scope of Works (PG-01.1. / PG-01.2)
- CPG is Expressed as a percentage of the "Contract Amount" = Tender amount at the time of award excluding allowances and VAT.
- Feasibility study established compliant material manufacturers.

The PQS determines value of material obtainable from compliant local material manufacturers, expressed as a percentage of Contract Amount (Pre-tender estimate excluding allowances and VAT / Tender amount excluding allowances and VAT). The actual CPG to be achieved will be based on the Tender amount of the awarded bid, excluding allowances and VAT.

CPG calculation example:
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
CPG to be achieved = 5% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG target value = R130 Mil x 5% = R 6,5 Mil (Value of material to be purchased from local manufacturers, excluding VAT)

Calculation of penalty:
Percentage penalty applicable = 10% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG target value = R6,5 Mil excluding VAT
CPG Achieved = R5,5 Mil (R1 Mil shortfall) excluding VAT
Penalty = R1 Mil x 10% = R100 000 excluding VAT

4.2. Targeted Local Building Material Suppliers CPG

A targeted local supplier is a targeted enterprise which:

- owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public in the usual course of business; and
- engages as its principal business and in its own name, in the purchase and sale of goods.

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the item in the CPG section of the Bills of Quantities.

The main contractor shall submit monthly reports in terms of CPG monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative

4.2.1. Applicable standards and implementation documents

- The cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017; and
- cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020

4.2.2 Minimum Requirements

- Grade 7GB / 7EC and higher (above R20 000 000);
- Minimum construction period 6 months;
- Selected materials subject to Local Content requirements as published by TDI&C from time to time;
- Material to meet SABS / SANS requirements;
- Material to meet minimum specified requirements; and
- Must be economically viable in terms of price and be aware of price fixing and / or cover quoting.

4.2.3 Penalties

The percentage penalty applicable to be **indicated** in the Scope of Works (PG01.1 or PG01.2) and is applied to the prorate targeted value of material not achieved with (Excluding VAT). **The percentage penalty is project specific to a maximum of 30% and should be fair and reasonable.**

4.2.4. CPG Calculation

- Feasibility study to indicate achievable CPG and specified in Scope of Works (PG-01.1. / PG-01.2)
- CPG is Expressed as a percentage of the "Contract Amount" = Tender amount at the time of award excluding allowances and VAT.
- Feasibility study established compliant material suppliers.

The PQS determines value of material obtainable from compliant local material suppliers, expressed as a percentage of Contract Amount (Pre-tender estimate excluding allowances and VAT or the Tender amount excluding allowances and VAT). The actual CPG to be achieved will be recalculated based on the Tender amount of the awarded bid, excluding allowances and VAT.

CPG calculation example:
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
CPG to be achieved = 5% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG target value = R130 Mil x 5% = R 6,5 Mil (Value of material to be purchased from local suppliers, excluding VAT).

Calculation of penalty:
Percentage penalty applicable = 20% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG target value = R6,5 Mil excluding VAT
CPG Achieved = R5,5 Mil (R1 Mil shortfall) excluding VAT
Penalty = R1 Mil x 20% = R200 000 excluding VAT.

4.3. Targeted Local Labour Skills Development CPG

Targeted labour are individuals who:

a) are employed by the principal contractor, sub-contractor or targeted enterprises in the performance of the contract;
b) are defined as the target group in the Scope of Works (PG-01.1. / PG-01.2); and
c) permanently reside in the target area or who are recognized as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area.

Targeting of local labour by skills categories is only permissible within categories of semi-skilled and unskilled labour.

Contract participation goals for semi-skilled and unskilled labour shall be limited to on-the-job training to targeted labour to enable such labour to master the basic work techniques required to undertake the work in accordance with the requirements of the contract and in a manner that does not compromise worker health and safety. Training can either be provided by an appointed suitably qualified training service provider or a foreman or artisan employed by the main contractor.

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the item in the CPG section of the Bills of Quantities.

The contractor to submit monthly reports on training provided to include beneficiary particulars, type of training provided and the number of man hours converted to working days.

4.3.1. Applicable standards and implementation documents

- The cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017; and
- cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020

4.3.2. Minimum Requirements

- Grade 7GB / 7EC and higher (above R20 000 000)
- Minimum construction period 12 months.
- Only semi-skilled and unskilled labour.
- Subject to the nature of the work.

4.3.3 Penalties

Failure to achieve the minimum Targeted Local Labour Skills Development CPG will result in a payment reduction of an amount specified in the Scope of Works (PG01.1 or PG01.2) per working day where training was not provided.

4.3.4 CPG Calculation

- Feasibility study to indicate achievable CPG and specified in the Scope of Works (PG-01.1. / PG-01.2).
- Expressed as a percentage of the “Contract amount” = Tender amount at the time of award excluding allowances and VAT.

The cidb standard provides 2 calculation methods:

Method 1:
Converting the total monetary value of wages and allowances paid to targeted labour, exclusive of any value added tax or sales tax required by law, to a percentage of the applicable contract amount and multiplying such values by the appropriate weightings for the different target groups, if any, as identified in the feasibility study and targeting strategy; **or**

Method 2:
Converting the amount (number) equal to the person days worked for which the principal contractor, sub-contractors or targeted enterprises contract to engage targeted labour expressed as a percentage of the total person days worked associated with the targeting strategy that is identified in the feasibility study and defined in the Scope of Works (PG-01.1.

/ PG-01.2).

Method 2 should be used for ease of calculation and standardisation. The POPI Act also makes it very difficult to obtain all the personal information, especially from subcontractors and SMME subcontractors.

The number of working days allocated to local labour skills development will be derived from the feasibility study based on the nature of the work, the contract period and local labour available.

The PQS to determine the number of CPG % expressed as a percentage of the total number working days required to complete the Works.

The labour intensity outputs per person per day for the respective trades as per the EPWP LABOUR INTENSITY OUTPUTS PER PERSON PER DAY FOR BUILDING WORKS could be used as a guide in determining the number of working days applicable to the beneficiaries.

A suitably qualified and experienced training service provider to be appointed by the main contractor.

CPG calculation example:
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
Number of working days required to complete the Works based on the construction period = 600 days
CPG percentage participation to be achieved = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
Required number of working days training to be provided = 180 days (600 x 30%)

Calculation of penalty:
Payment reduction = R 5 000 per day for not providing training as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG = 600 x 30% = 180 working days training to be provided
CPG Achieved = 160 days (20 days shortfall where no training was provided)
Penalty = 20 days x R5 000 payment reduction per day= R100 000 excluding VAT

4.4 Cidb BUILD Programme: Enterprise Development (Principal contractor including subcontractors)

The aim is to promote enterprise development by providing for a **minimum** contract participation goal (CPG) of **five percent (5%)** of the **contract amount** as defined in the Standard (Tender amount, excluding allowances and VAT) on selected contracts to be undertaken by joint-venture partners or to be sub-contracted to developing contractors that are also to be beneficiaries of enterprise development support from the main contractor. **A minimum 5% CPG is applicable to projects with a tender amount above R20 000 000**. The contract participation goal for projects above R30 Million (Tender Value) to be 30% depending on the nature of the works and the extent of specialised work. The participation goals may therefore vary between 5% and 30% on projects above R30 Million. Note that the 30% threshold is subject to a specific directive yet to be issued in this regard at the time of compilation of this implementation guide, although it is advisable to apply to avoid disruptions on site). **The training to be provided to the SMME business owners which is limited to one beneficiary per business.**

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the item in the CPG section of the Bills of Quantities.

It is ***applicable to contracts in Grades 7 to 9 General Building and Civil Engineering contracts and can be adopted to other CIDB Classes of Works*** at the discretion of the end users/Construction Management Branch.

A targeted enterprise is an enterprise which:
a) Is a contractor registered with the cidb acting in the capacity of a subcontractor or JV partner; and
b) The contractor does not have an equity holding exceeding 20% in the enterprise, either directly or through a flow through calculation in accordance with the Construction Sector Code of Good Practice published in General Notice 862 of 2009 in Government Gazette No 32305 of 2009 in terms of BBBEE Act of 2003) (Act 53 of 2003); and
c) Employs at least three permanent employees other than the owner; and
d) Be registered in terms of the Company's Act of 2008 (Act No. 71 of 2008) or Close Corporation Act of 1984

(Act No. 69 of 1984); and

e) Is 50% or more black owned or 30% or more black women owned; and
f) Has entered into a written relationship agreement of co-operation and assistance with the developed enterprise (main contractor) for the duration of the contract.

Where 30% black woman owned is an enterprise in which black people who are women:

a) Hold more than 30% of the voting rights that are not subject to any limitation; and
b) Hold more than 30% of the economic interest.

The criteria for The Standard for Indirect Targeting and the Skills Standard is as follows:

There must be a needs analysis for indirect targeting and development or skill standard and should be development in at least any two developmental areas namely;

a) Management and labour skills transfer;
b) Establishment of Administrative systems
c) Establishment of Cost Control systems
d) Establishment of construction management systems and plans (health and safety, quality and environmental)
e) Planning, tendering and programming skills transfer
f) Business skills transfer with emphasis on entrepreneurial and negotiation skills
g) Technical skills transfer with emphasis on innovation
h) Legal compliance
i) Establishing financial loan capacity / Credit rating/history
j) Contractual knowledge

The above needs analysis shall be mutually agreed upon between the contractor and the targeted enterprise. However, it is advisable to provide the same training to all the SMMEs

The main contractor shall submit monthly reports in terms of CPG monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative.

Training requirements

The main contractor must develop a training plan to address the developmental needs of the Targeted Enterprise. As a guide the development plan should refer to applicable unit standards that reside in NQF level 3 National Certificate: Supervision of Construction Process qualification or equivalent. Contractual knowledge development and planning, tendering and programming skills transfer must be pitched at NQF 3 level and aligned to the outcomes of the applicable unit standard.

The contractor shall appoint an enterprise development coordinator to:

a) develop a project specific enterprise development plan; and
b) submit to the employer's representative a monthly enterprise development report.

To assist the contractor to comply with contractor development, the contractor is guided by the **cidb Competence Standard for Contractors, Government Gazette No. 41237, 10 November 2017**, which outlines the minimum recognised qualifications to which development of Targeted Enterprises must be undertaken by the main contractor. Note that development will not necessarily translate into an accredited outcome.

4.4.1 Applicable standards and implementation documents

- Minimum Targeted Enterprise Development Contract Participation Goal in accordance with the cidb Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, No 36190 Government Gazette, 25 February 2013; and
- cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020

read in conjunction with:

- The cidb Standard for Targeting Enterprises and Labour through Construction Works Contracts as published in the Government Gazette Notice No. 41237 of 10 November 2017, and
- SANS 10845-5:2015 ISO 10845-5:2011. Construction procurement – Part 5: Participation of targeted enterprises in contracts. South African Bureau of Standards.

4.4.2 Minimum requirements

- Grade 7GB / 7 EC or higher
- In the case of a JV at least one of the JV partners must be 7GB / 7CE or higher.
- Minimum construction period 6 months
- **Minimum 5%** of contract amount to be subcontracted to beneficiaries to receive training and a maximum 30% on projects above R30 million.
- Minimum 25 % of project to be subcontracted to CE, EB, GB and/or ME.
- Only Qualifying Small Enterprises (QSE) and Exempt Micro Enterprises (EME)

4.4.3 Penalties

Minimum thirty percent (30%) **penalty** of the value not achieved in terms of % to be subcontracted and the training value, excluding VAT.

4.4.4 CPG Calculation

- Feasibility study to indicate achievable percentage CPG and specified in the Scope of Works (PG-01.1. / PG-01.2)
- CPG is expressed as a percentage of the "Contract amount" = Tender amount at the time of award excluding allowances and VAT.

EXAMPLE 1: 5% CPG PARTICIPATION

Part 1: Calculation of minimum 5% CPG example:
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
CPG percentage participation to be achieved = 5% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG value = R6,5 Mil (Value of work to be subcontracted to emerging enterprises)

Calculation of penalty:
Percentage penalty applicable = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG Minimum 5% = R6,5 Mil
Achieved = R5,5 Mil (Only subcontracted work to the value of R5,5 Mil, i.e. R1 Mil shortfall)
Penalty = R1 Mil x 30% = R300 000 Excl. VAT

Part 2: Calculations in terms of training to be provided:
The number of enterprises to be developed is subject to the contract amount and the apportionment of the work as per Example 1 below.
Number of enterprises to be trained = 6 x 1 GB subcontractors
Total cost for training = R 1 660 000

Calculation of penalty
Total number of enterprises to be trained = 6
Total number trained = 4 (2 Shortfall)
Training cost per beneficiary = R1 660 000 / 6 = R 276 666,67 per beneficiary
Penalty = R 276 666,67 x 2 x 30% = R166 000 Excl. VAT

TABLE 1: EXAMPLE 1 - MINIMUM 5% CPG PARTICIPATION (MINI BILL OF QUANTITIES)

B of Q Item	Description	Unit	Rate	Quantity	Amount (R)
5	**Enterprise Development**				
5.1	Enterprise Development of Targeted Enterprise or JV partners				
5.1.1	Appointment of training co-ordinator *	Per Quarter	45,000	8	360,000
5.1.2	Appointment of Mentor /Training Service provider *	Per Quarter	101,250	8	810,000
5.1.3	Needs Analysis and Enterprise Development Plan per Targeted Enterprise **	No.	5,000	6	30,000
5.1.4	Monitoring and Interim reporting per targeted enterprise *	Per Quarter	20,000	8	160,000
5.1.5	Project Completion report per Targeted Enterprise*	No.	5,000	6	30,000
	Provisional Sum to be carried over to CPG bill of quantities				1,390,000

"Contract amount" Tender amount excl. allowances and VAT,	130,000,000	150 Mil - allowances and VAT = R130 Mil
CPG Monetary value (30%) to be subcontracted to beneficiary SMMEs	39,000,000	130 000 000 x 30% = 39 000 000
No of enterprises based on the CPG value and agreed by project steering committee	6	Grade 1 / 2 GB/CE,ETC.
Contract period (months)	24	
Number of Quarters	8	24 / 3 = 8

*** Rates prescribed by the cidb. PQS to determine rate depending on the location of the project**

**** Rates to be determined by PQS and adjusted to accepted quotation amounts**

The number of periods is project specific.

The training coordinator & the mentor/training service provider can be the same service provider which could reduce costs.

- The mini bill will be used to reflect actual cost once the bid has been awarded, the actual cost of the respective items are known and the provisional amount adjusted accordingly. Rather overestimate than underestimate in order not to negatively impact on the 20% expansion limitation on the project value.

- The Community Project Steering Committee needs to be sensitised with regards to the number of enterprise development beneficiaries and may insist that all SMMEs are to be trained which will have a major financial impact on the training allowance as reflected in Example 2 below.

- Training is a once off event for each SMME beneficiary. However, the example allowed for training throughout the contract period as and when SMMEs are appointed and additional mentoring. The training period should be project specific. The number of quarters training to be provided will depend on the nature of the work, the trades to be subcontracted, and the anticipated date of appointments in relation to the construction programme. One can if possible arrange one training session for all beneficiaries in some instances.

- The mini bill will be used to reflect actual cost once the bid has been awarded, the actual cost of the respective items are known and the provisional amount adjusted accordingly. Rather overestimate than underestimate in order not to negatively impact on the 20% expansion limitation on the project cost.

- The Community Project Steering Committee needs to be sensitised with regards to the number of enterprise development beneficiaries and agree on the beneficiaries of the CPG.

- Training to be provided as close as possible to the project site to minimize cost.

- The intention is not to provide training for the full duration of the project. The assessment of the SMMEs will determine the type of training to be provided whilst noting that this is managerial/business training for the

owners of the companies. It is also dependent on the nature of the works, SMME trades to be appointed and when the SMMEs are appointed. The ideal would be to limit the training sessions to a maximum of three sessions.

- Beneficiaries will not be replaced should a beneficiary exit the programme prematurely for whatever reason.

EXAMPLE 2: 30% CPG PARTICIPATION (MINI BILL OF QUANTITIES)

Part 1: Calculation of minimum 30% CPG example:
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
CPG percentage participation to be achieved = 30% **as specified** in the Scope of Works (PG-01.1. / PG-01.2)
CPG value = R39,000,000 (Value of work to be subcontracted to emerging enterprises to undergo training)

Calculation of penalty:
Percentage penalty applicable = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG Minimum 30% = R39,000,000 Mil
Achieved = R30 Mil (Only subcontracted work to the value of R30 Mil, i.e. R9 Mil shortfall)
Penalty = R9 Mil x 30% = R 2 700 000 Excl. VAT

Part 2: Calculations in terms of training allowance for training to be done:
The number of enterprises to be developed is subject to the contract amount and the apportionment of the work as per Example 1 below.
Number of enterprises to be trained = 15 (1GB) + 3 (1CE) + 5 (2GB) + 3 (2CE) = 26 SMME subcontractors
Total cost for training = R 4 020 000

Calculation of penalty
Total number of enterprises to be trained = 26
Total number trained = 24 (2 Shortfall)
Training cost per beneficiary = R4 020 000 / 26 = R154 615 per beneficiary
Penalty = R154 615 x 2 x 30% = R 92 769.23 Excl. VAT

TABLE 2: EXAMPLE 2 - 30% CPG PARTICIPATION

Example of calculating cost of SMME training (Worst case scenario)

B of Q Item	Description	Unit	Rate	Quantity	Amount (R)
5	**Enterprise Development**				
5.1	Enterprise Development of Targeted Enterprise or JV partners				
5.1.1	Appointment of training co-ordinator *	Per Quarter	45,000	8	360,000
5.1.2	Appointment of Mentor /Training Service provider *	Per Quarter	390,000	8	3,120,000
5.1.3	Needs Analysis and Enterprise Development Plan per Targeted Enterprise **	No.	5,000	26	130,000
5.1.4	Monitoring and Interim reporting per targeted enterprise *	Per Quarter	20,000	8	160,000
5.1.5	Project Completion report per Targeted Enterprise*	No.	5,000	26	130,000
	Provisional Sum to be carried over to CPG bill of quantities				3,900,000
	"Contract amount" Tender amount excl. allowances and VAT,	130,000,000	150 Mil - allowances and VAT = R130 Mil		

CPG Monetary value (30%) to be subcontracted to beneficiary SMMEs	39,000,000	130 000 000 x 30% = 39 000 000
No of enterprises based on the CPG value and agreed by project steering committee	26	Grade 1 / 5 GB/CE,ETC.
Contract period (months)	24	
Number of Quarters	8	24 / 3 = 8

*** Rates prescribed by the cidb. PQS to determine rate depending on the location of the project**

**** Rates to be determined by PQS and adjusted to accepted quotation amounts**

All rates are provisional and will be adjusted upon receipt of quotations from service providers and acceptance.

4.5 Cidb BUILD Programme: Skills Development (Principal contractor including subcontractors and consultants)

The aim is to provide opportunities to learners requiring structured workplace learning facilitated by the principal contractor including subcontractors and consultant service providers.

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the item in the CPG section of the Bills of Quantities.

The contract Skills Development Goal (CSDG) shall be expressed as follows:

- In the case of engineering and construction works contracts, design and build contracts and services contracts the contract skills development participation goals, expressed in Rand, shall be no less than the "contract amount" multiplied by a percentage (%) factor given in Table 2 for the applicable class of construction works used in the application of the Construction Industry Development Regulations issued in terms of the Construction Industry Development Board Act of 2000.

- In the case of professional services contracts the contract skills development goals, expressed in hours, shall be not less than the professional fees in millions of Rand multiplied by 150.

Upon registration of the project with the cidb, NDPWI will be invoiced to pay the cidb 0,2% to a maximum of R2 Mil under second contract (0002) on the WCS as a once off Payment. Project Managers must ensure that provision is for the payment of the BUILD programme costs when requesting funding prior to the invitation of tenders and ideally register a Contract 0002 on the WCS for that purpose as soon as they become aware that the cidb BUILD Programme will be applicable to the project. The PQS is to include the cost in his estimate based on the pretender estimate including allowances and VAT.

The main contractor shall submit monthly reports in terms of CPG monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative

Contract skills development credits will not be awarded for learners enrolled as beneficiaries of other funded or subsidised programmes.

In the case of services contracts:

a) The contract skills development goals shall be granted by multiplying the number of people employed by the contractors and placed for continuous training opportunities in a three-month period by the notional values contained in Table 3, or as revised in a Gazette notice.
b) The contractor may source beneficiaries of the contract skills development goal from the cidb Skills Development Agency (SDA).
c) All beneficiaries of the Standard must be registered with the cidb Skills Development Agency (SDA). Where an unemployed learner is employed directly by the service provider / contractor, the service provider / contractor shall pay the stipend directly to the learner
d) Where an unemployed learner is sourced through an SDA, training provider or skills development facilitator the consultant / contractor must pay the stipend to the SDA, training provider or skills development facilitator

who in tum will pay the learner

e) The notional cost of providing training opportunities will be increase by CPI on an annual basis. The new, revised costs will be published on the cidb website on the 1st of April in each year.

Credits towards the contract skills development goal for professional services contracts shall be granted by summating the hours of structured workplace learning opportunities provided to P1 and P2 learners as well as professional candidates in accordance with this standard.

No more than 45 hours may be claimed per week for any individual.

Contract skills development goal credits shall be reduced to the extent that they fail to comply with the requirements of this standard.

Role and function of skills development agency

The Skills Development Agency (SDA) will provide career management and compliance reporting functions for all learners for CSDG compliance in terms of this Standard. Where the service providers / contractors provide direct employment to unemployed learners, or enrols own employees for CSDG compliance, the service provider shall register them with the cidb SDA. The SDA can also act as an employment intermediary for unemployed learners. NOTE: The role and function of a cidb SDA is outlined in Annex B of the standard for skills development.

Providing workplace learning opportunities through direct employment from colleges and indirect employment through Skills Development Agency (SDA). The aim of the SDA will be to facilitate structured, workplace training for beneficiaries of the CIDB Standard for Developing Skills through Infrastructure Contractors (Skills Standard) and their roles will be to ensure the smooth processing of training learners or beneficiaries in partnership with the contractor.

Appointing a coach/mentor for learners whose responsibilities are:

a) Submitting compliance baseline training plans 30 days after contract award(60 to 90 days is more realistic);
b) Submitting quarterly compliance reports; and
c) <u>Submitting final contract compliance report prior to achieving Practical Completion and not 30 days after practical completion as per the cidb Standard. Certificate of Practical Completion will not be issued unless the report has been issued to the project manager.</u>

Career management and compliance reporting

The contractor shall enter into a contract agreement with the cidb SDA, training provider or skills development facilitator to manage their learners according to the provisions given below:

a) preparing training plans for registered learners, including details of the scope of experiential work to be covered and expected outcomes;
b) registering learners with the appropriate Sector Educational and Training Authority established in terms of the Skills Development Act of 2008 (Act 37 of 2008);
c) conducting entry and exit level medicals for learners at the conclusion of each placement opportunity;
d) providing personal protective equipment;
e) liaising with the supervisor to monitor onsite training progress of learners;
f) liaising with the supervisor to arrange for summative assessments at appropriate stages of the training; and
g) liaising with the supervisor to prepare reports for the employer's representative and cidb at practical completion of the contract.

The relevant training provider or skills development facilitator shall invoice the contractors for the provision of these services as per cost schedule in Table 3.

The cidb SDA shall open a trust fund to ring-fence monies essential for all learner requirements where necessary provided for in this standard such as personal protective equipment, medical assessments, insurance, course fees, monitoring as well as top up training and assessment.

Employment Intermediary

The cidb SDA can act as an employment intermediary for unemployed learners and provide contractors with learners qualifying for participation in the CSDG, as well as managing their employment functions such as payment of stipends, workman's compensation, provision of personal protective equipment, trade specific tools, etc.

In such cases, the consultant / contractor shall contract directly with an SDA, training provider or skills development facilitator of their choice for the recruitment, placement and management of learners. The contractor shall pay the SDA, training provider or skills development facilitator in accordance with the notional costs provided for in this standard, or as amended by a Gazette.

Provision of different types of workplace opportunities linked to work associated with a contract which culminate in or lead to registration in a professional category by one of the professional bodies listed in the standard (Table 3).

Table 3: Categories of registration

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 4)

Profession	Category of registration	Act
Architectural	Architect, Senior Architectural Technologist, Architectural Technologist or Architectural Draughts person	Architectural Profession Act of 2000 (Act No.44 of 2000
Construction Project Management or Construction Management	Construction Project Manager or Construction Manager	Project and Construction Management Professions Act of 2000 (Act No. 48 of 2000
Engineering	Engineer, Engineering Technologist, Engineering Technician or Certificated Engineer	Engineering Profession Act of 2000 (Act No. 46 of 2000)
Health and Safety Practitioners	Construction Health and Safety Agent, Construction Health and Safety Manager, Construction Health and Safety Officer	Occupational Health and Safety Act of 1993 (Act No. 85 of 1993) Construction Regulations, 2014
Landscape Architectural	Landscape Architect, Landscape Technologist, Landscape Technician or Landscape Assistant	Landscape Architectural Profession Act of 2000 (Act No. 45 of 2000)
Planning	Planner or Technical planner	Planning Profession Act, 2002. (Act No. 36 of 2002)
Quantity surveying	Quantity surveyor	Quantity Surveying Profession Act of 2000 (Act No. 49 of 2000)
Scientists	Natural scientists	Natural Scientific Professions Act (Act No. 27 of 2003)
Surveying	Land surveyor, Engineering surveyor or Technician engineering surveyor	Professional and Technical Surveyors' Act (Act No. 40 of 1984)
Valuers	Valuer or Associate Valuer	Property Valuers Profession Act (Act No. 47 of 2000)

Training Methods:

The contractor / service provider shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract or order:

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification;

Method 2: structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least 60% of the artisan learners being holders of public TVET college qualifications (N/A for consultants);

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas; or

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 3 above.

Employed learners may not account for more than 33 percent of the contract skills development goal. Not more than one method may be applied to any individual concurrently in the calculation of the contract skills development goal. The principle is that an individual can only be counted once towards the CSDG.

The contractor shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 4 (below) and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminary and General section in the Bill of Quantities/Pricing schedules/Activity schedule.

Table 4: Notional Cost of Training per Quarter per Beneficiary

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 9)

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	**R7 000**	**R0**	**R9 000**	**R16 000**	**R9 000**
Method 2					
TVET College graduates	**R14 000**	**R0**	**R9 000**	**R23 000**	**N/A**
Apprenticeship	**R14 000**	**R0**	**R12 000**	**R26 000**	**R12 000**
Method 3					
P1 and P2 learners	**R24 000**	**R20 000**	**R4 500**	**R48 500**	**N/A**
Method 4					
Candidates with a 3 year diploma	**R37 000**	**R20 000**	**R4 500**	**R61 500**	**R20 000**
Candidates with 4 year qualification	**R47 000**	**R20 000**	**R4 500**	**R71 500**	**R20 000**

Note: the required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. The notional cost of providing training opportunities will increase by CPI on an annual basis based on April CPI. Should the rates increase after bid award or during construction then the rates will be adjusted as a remeasuarble item.

4.5.1 Applicable standards and implementation documents

- Minimum Targeted Contract Skills Development Goal in accordance with the cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020
- cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020

4.5.2 Minimum requirements

Contractor:

- All classes of work from Grade 7 and above
- Minimum Construction Period 12 Months

Consultant:

- Minimum total tender value = R5 Mil
- Minimum service contract period = 12 Months

4.5.3 Penalties

Contractor:

- Minimum thirty percent (30%) penalty of the value of the CPG portion not achieved, excluding VAT; **AND**
- **The issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted**

Consultants:

- Minimum thirty percent (30%) penalty of the value of the CPG portion not achieved in terms of hours training to be provided and the associated notional cost , excluding VAT

4.5.4 CPG Calculation

Table 5: Contracting skills development goals for different classes of engineering and construction works contracts

Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 7)

Class of construction works as identified in terms of Regulation 25 (3) of the Construction Industry Regulations 2004		**Construction skills development goal (CSDG) (%)**
Designation	**Description**	
CE	Civil Engineering	0.25
CE and GB	Civil engineering and General Building	0.375
EE	Electrical Engineering works (buildings)	0.25
EP	Electrical Engineering works (infrastructure)	0.25
GB	General Building	0.5
ME	Mechanical Engineering works	0.25
SB	Specialist	0.25

Note: the required CPG will be recalculated based on the awarded tender amount and "Contract amount" once the beneficiaries have been appointed and actual costs are known. The notional cost of providing training opportunities is subjected to annual increases as per the CPI issued on the 1st of April annually by Stats SA. The rates will be adjusted as an adjustment to the provisional amounts should the rates increase after bid award or during the construction period. The ideal is to maximize the number of beneficiaries and not target beneficiary with the highest associated costs which will reduce the number of beneficiaries. The beneficiaries to be targeted can be established during the feasibility study which can be specifically specified.

Contractor CPG calculation:

"Contract amount" = Tender amount at the time of award excluding allowances and expenses, and VAT
"Contract amount" x factor from Table 3 above.
The PQS to make allowance for CPI increases for the full duration of the training within the provisional amount allowed for in the Bill of Quantities whilst noting that the cidb uses the April CPI for annual increases.

CPG calculation example:
"Tender Amount" = R150 Mil for GB, all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
Factor for "GB" = 0,5% (as per Table 4 above)
CPG in R value = R130 Mil x 0,5% = R650 000 i.e. total notional cost of training to amount to R650 000

Calculation of penalty (excluding escalation):
Percentage penalty applicable = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG value = R650 000
Achieved = R550 000 = R100 000 Shortfall
Penalty = R100 000 x 30% = R30 000 Excl. VAT

CPG calculation i**f escalation is applicable:**
CPG in R value = R130 Mil x 0,5% = R650 000
+ 6,5% annual increase (if applicable) = R42 250
Total CPG value to be achieved = R692 250

Calculation of penalty (including escalation):
Percentage penalty applicable = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG value = R650 000
+ 6,5% escalation = R42 250
Total CPG value = R692 250

Achieved = R500 000 = R192 250 Shortfall
Penalty = R192 250 x 30% = R57 675 Excl. VAT

Calculations based on "Contract Amount" after bid award and appointment of beneficiaries
Actual CPG training requirement value after award upon selecting method/s of training and appointment of beneficiaries = R676 000 [or R719 940 if is escalation is applicable] (Table 6 below). The provisional amount allowed for must therefore be adjusted accordingly. The new monetary value of training required will then form the basis for determining penalties applicable. No penalties will be applied should the CPG value, based on the "Contract Amount" be achieved. Note that it could emanate from the feasibility study that there are local candidate beneficiaries to which certain methods apply which could be specified specifically in the Scope of Works (PG-01.1 / PG01.2) to avoid increase in cost.

Table 6: Notional cost recalculation upon bid award and appointment of beneficiaries.
Source: cidb Standard for Developing Skills through Infrastructure Contracts as published in the Government Gazette Notice No. 43495 of 3 July 2020 (Page 10)

Skills Types	Number of learners	Notional Cost / Learner / Quarter	Notional cost / learner / year	Total Notional Cost over 12 months Contract
Method 2: Workplace learning opportunities, with unemployed TVET graduates	2	R23 000	R92 000	R184 000
Method 3: Candidacy for an unemployed learner with a 3-year qualification	2	R61 500	R246 000	R492 000
Total CPG value if escalation is not applicable / Sub-Total if escalation is applicable				**R676 000**
Add 6,5% escalation as per April CPI (if applicable)*				**R43 940**
Total CPG Value if escalation is applicable				**R719 940**

**Escalation percentage to be based on the latest CPI indices*

Consultant CPG calculation:

- CPG value based on the "Contract Amount" = Number of Hours training to be provided x the Notional Cost per hour of beneficiaries appointed.
- Number of hours training to be provided = "Contract Amount" x 150.
- "Contract amount" = Tender amount excluding allowances, expenses and VAT [Basic fee tendered item (1) from the activity schedule) excluding VAT]

Calculating consultant CPG example:

Step 1: Calculate number of Hours training to be provided:

"Tender Amount" = R5.1 Mil

"Contract amount" = R4.5 Mil (Basic fee tendered item (1) from the activity schedule) excluding VAT)

Number of hours skills development training required = R4.5 x 150 = 675 hours (hours to be rounded off)

Step 2: Calculate the Notional Cost per hour

(a) Notional Cost per quarter as per Table 3 of Clause C 3.16 (Scope of Services) and optional methods

(b) Number of Hours per quarter = 3 months x 20 days x 8 hours per day = 480 Hours

(c) Notional Cost per Hour = (a) / (b)

Step 3: Calculate Total Notional Cost

(a) Total hours training to be provided x notional cost per hour

Example: Calculating the Total Notional Cost

(a) Fees (1) from Activity Schedule = R4.5 Mil

(b) Number of hours skills development required = R4.5 Mil x 150 = 675 hours

(c) Total number of hours per quarter = 40 hours per week x 4 weeks x 3 months = 480 hours

(d) Notional cost per hour "Method 4" = R71 500 per quarter / 480 hours = R148.95 per hour

(e) Total Notional cost = R148.95 (Rate per hour) x 675 (total number of hours) = R100 541.25

(f) PM to insert the calculated amount into the activity schedule as a provisional amount which will be adjusted upon the selection and appointment of the beneficiaries.

Calculation of penalty:
Total notional cost = R 100 541.25
Achieved = R60 000 Shortfall of R40 541.25
Penalty = R40 541.25 x 30% = R12 162.38 Excl. VAT

Note: Annual escalation is applicable and allowance must be made in the provisional amount, as indicated in the above example for the contractor.

The project manager must indicate in the consultant tender document whether the CPG is applicable or not, and provide a provisional amount in the activity schedule. In the event of being indicated as applicable and the awarded consultant tender amount is less than R5 Million, the CPG will still be applicable.

If the estimate consultant fees is in the region of R5 Million make the CPG applicable and provide an allowance.

This CPG is strongly advocated by the cidb and one may apply same to projects where the cost / fees is expected to increase above the minimum thresholds.

4.6 National Youth Service Programme (NYS) CPG

- The programme shall be implemented in terms of the Implementation of the National Youth Service Programme under the Expanded Public Works Programme (EPWP) and shall be priced in the CPG section of the Bills of Quantities. The CPG determined in conjunction with NDPWI NYS component which would quantify the NYS bill of quantities

- This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than pricing the NYS component within the CPG section in the Bill of Quantities.

- Monthly proforma reports are to be submitted to the Employer's Representative.

4.6.1 Applicable standards and implementation documents

- National Youth Service Programme

4.6.2 Minimum Requirements

- Minimum contract value R2 Mil
- Minimum construction period 12 months

4.6.3 Penalties

Payment reduction as stipulated in the CPG bill of quantities per person not trained (Excluding VAT).

Calculation of penalty example:
Payment reduction per person not trained as stipulated in the NYS Bill of Quantities = R 2 500 per person.
Total number of NYS Beneficiaries as stipulated in the NYS Bill of Quantities = 25
Total Number of NYS beneficiaries trained = 20 (shortfall of 5 beneficiaries)
Penalty = 5 x R2 500 = R12 500 Excl. VAT

4.7 Labour Intensive Works CPG

The consultant team is expected to use their initiative to identify activities that can be done labour-intensively to comply with the set minimum labour intensity target based on the Generic labour intensive works specifications.

This CPG is a **Condition of Contract** therefore it is not a requirement to submit substantiating documentation with the tender other than making allowance in his pricing of items indicated "LI" in the Bills or Quantities.

The main contractor shall submit monthly reports in terms of CPG monthly achievement and accumulative targets achieved including audited supporting documentation to the Employer's Representative

4.7.1 Applicable standards and implementation documents

- Expanded Public Works Programme (EPWP) and generic labour intensive works specifications.

4.7.2 Minimum Requirements

- All civil works projects.
- As general construction projects are labour intensive by nature specific general building items need not to be indicated as "LI" in the Bills of Quantities. It is however a requirement to implement and indicate "LI" items as defined in the Scope of Works (PG01.1 and PG01.2) where feasible on projects below R30 Mil.
- Compulsory for projects above R30 Mil where feasible.
- Minimum construction period 6 months

4.7.3 Penalties

Minimum thirty percent (30%) penalty of the value of the works not done by means of labour-intensive methods, excluding VAT.

4.7.4 CPG Calculation

- Feasibility study to indicate achievable CPG and specified in the Scope of Works (PG-01.1. / PG-01.2)
- CPG determined by PQS in conjunction with consultant team and NDPWI representative.
- Example:

CPG Calculation
"Tender Amount" = R150 Mil all inclusive of allowances and VAT
"Contract Amount" = R130 Mil (Tender Amount at the time of award excluding allowances and VAT)
CPG value = R10 Mil (Total value of labour-intensive works specified in the Bills of Quantities)

Calculation of penalty
CPG value = R10 Mil
Percentage penalty applicable = 30% as specified in the Scope of Works (PG-01.1. / PG-01.2)
CPG Achieved = 9 Mil (R1 Mil shortfall)
Penalty = R1 Mil x 30% = R300 000 Excl. VAT

5. INFORM THE CIDB

Failing to inform the cidb is a criminal offence.

Cidb to be informed of:

- Bid award to be registered with the cidb within 21 days from date of award - SCM responsibility;
- List of skills development beneficiaries within 30 days from bid award – PM Responsibility (cidb informed to change to 90 days. Lists to be submitted soonest);
- Practical Completion within one calendar month from issuing certificate – PM Responsibility; and
- The compliance of such project with the Standard for Developing Skills through Infrastructure Contracts and the contract skills development achieved– PM Responsibility.

6. CIDB CONTACT PERSON CIDB BUILD PROGRAMME

Cidb contact person cidb BUILD Programme for assistance with implementation:
Mr Ishmail Cassiem, Mobile Nr 078 801 8476, Email: IshmailC@cidb.org.za

Fully understanding the contract participation goals demands self-study of the relevant cidb Standards as well as the Standards and SANS documents referred to within the respective cidb Standards and Practice Notes

ANNEXURE 2.11: HIV AND AIDS SPECIFICATION

ADDITIONAL SPECIFICATION

SH HIV/AIDS REQUIREMENTS

CONTENTS

SH 01 SCOPE
SH 02 MAINTENANCE REQUIREMENTS
SH 03 MAINTENANCE CONTROL
SH 04 COMMUNICATION
SH 05 PERFORMANCE MEASUREMENT
SH 06 MEASUREMENT AND PAYMENT

SH 01 SCOPE

This specification contains all requirements applicable to the Contractor for creating HIV/AIDS awareness amongst all of the Workers involved in this project for the duration of the construction period, through the following strategies:

- Raising awareness about HIV/AIDS through education and information on the nature of the disease, how it is transmitted, safe sexual behaviour, attitudes towards people affected and people living with HIV/AIDS, how to live a healthy lifestyle with HIV/AIDS, the importance of voluntary testing and counselling, the diagnosis and treatment of Sexually Transmitted Infections and the closest health Service Providers
- Informing Workers of their rights with regard to HIV/AIDS in the workplace
- Providing Workers with access to condoms and other awareness material that will enable them to make informed decisions about sexual practices

The Contractor shall be required to comply with the Occupational Health and Safety Act 85 of 1993, Construction Regulations 2014 and related regulations. Non-compliance with these regulations, in any way whatsoever, will be adequate reason for suspending the Works.

SH 02 DEFINITIONS AND ABBREVIATIONS

SH 02.01 DEFINITIONS

Service Provider: The natural or juristic person recognised and approved by the Department of Public Works as a specialist in conducting HIV/AIDS awareness programmes.

Service Provider Workshop Plan: A plan outlining the content, process and schedule of the training and education workshops, presented by a Service Provider which has been approved by the Representative/Agent.

Worker: Person in the employ of the Contractor or under the direction or supervision of the Contractor or any of his Sub-contractors, who is on site for a minimum period of 30 days in total.

SH 02.02 ABBREVIATIONS

HIV	:	Human Immunodeficiency Virus
AIDS	:	Acquired Immune Deficiency Syndrome
STI	:	Sexually Transmitted Infection

SH 03 BASIC METHOD REQUIREMENT

The Contractor shall, through a Service Provider, conduct onsite workshops with the Workers

The Service Provider shall develop and compile a Service Provider Workshop Plan to be presented at the workshops and which will be best suited for this project to achieve the specified objectives with regard to HIV/AIDS awareness.

The Service Provider Workshop Plan shall be based on the following information provided by the Contractor:

- Number of Workers and Sub-contractors on site
- When new Workers or Sub-contractors will join the construction project
- Duration of Workers and Sub-contractors on site
- How the maximum number of Workers can be targeted with workshops
- How the Contractor prefers workshops to be scheduled, *e.g.* three hourly sessions per Worker, or one 2.5 hour workshop per Worker
- Profile of Workers, including educational level, age and gender (if available)
- Preferred time of day or month to conduct workshops
- A Gantt chart reflecting the construction programme, for scheduling of workshops
- Suitable venues for workshops

The Contractor shall submit the Service Provider Workshop Plan for approval within 21 days after the tender acceptance date. After approval by the Representative/Agent, the Contractor shall make available a suitable venue that will be conducive to education and training.

The Service Provider Workshop Plan shall address, but will not be limited to the following:

- The nature of the disease;
- How it is transmitted;
- Safe sexual behaviour;
- Post exposure services such as voluntary counselling and testing (VCT) and nutritional plans for people living with HIV/AIDS;
- Attitudes towards other people with HIV/AIDS;
- Rights of the Worker in the workplace;
- How the Awareness Champion will be equipped prior to commencement of the HIV/AIDS awareness programme with basic HIV/AIDS information and the necessary skills to handle questions regarding the HIV/AIDS awareness programme on site sensitively and confidentially;
- How the Service Provider will support the Awareness Champion;
- Location and contact numbers of the closest clinics, VCT facilities, counselling services and referral systems;
- How the workshops will be presented, including frequency and duration;
- How the workshops will fit in with the construction programme;
- How the Service Provider will assess the knowledge and attitude levels of attendees to structure workshops accordingly;
- How the video will be used;
- How the Service Provider will elicit maximum participation from the Workers;
- A questions and answers slot (interactive session)
- The Service Provider Workshop Plan shall encompass the Specific Learning Outcomes (SLO) as stipulated

SH 04 HIV/ AIDS AWARENESS EDUCATION AND TRAINING

SH 04.01 WORKSHOPS

The Contractor shall ensure that all Workers attend the workshops.

The workshops shall adequately deal with all the aspects contained in the Service Provider Workshop Plan. A video of HIV/AIDS in the construction industry, which can be obtained from all Regional Offices of the Department of Public Works, is to be screened to Workers at workshops. In order to enhance the learning experience, groups of not exceeding 25 people shall attend the interactive sessions of the workshops.

SH 04.02 RECOMMENDED PRACTICE

SH 04.02.01 WORKSHOP SCHEDULE

Presenting information contained in the Service Provider Workshop Plan can be divided in as many workshop sessions as deemed practicable by the Contractor, provided that all Workers are exposed to all aspects of the workshops as outlined in the Service Provider Workshop Plan.

Breaking down the content of information to be presented to Workers into more than one workshop session however, has the added advantage that messages are reinforced over time while providing opportunity between workshop sessions for Workers to reflect and test information. Workers will also have an opportunity to ask questions at a following session.

SH 04.02.02 SERVICE PROVIDERS

A database of recommended Service Providers is available from all Regional Offices of the Department of Public Works

SH 04.02.03 HIV/AIDS SPECIFIC LEARNING OUTCOMES AND ASSESSMENT CRITERIA

Workers shall be exposed to workshops for a minimum duration of two-and-a-half hours. In order to set a minimum standard requirement, the following specific learning outcomes and assessment criteria shall be met.

04.02.03.01 UNIT 1: The nature of HIV/AIDS

After studying and understanding this unit, the Worker will be able to differentiate between HIV and AIDS and comprehend whether or not it is curable. The Worker will also be able to explain how the HI virus operates once a person is infected and identify the symptoms associated with the progression of HIV/AIDS.

Assessment Criteria:

1. Define and describe HIV and AIDS
2. List and describe the progression of HIV/AIDS

04.02.03.02 UNIT 2: Transmission of the HI virus

After studying and understanding this unit, the Worker will be able to identify bodily fluids that carry the HI virus. The Worker will be able to recognise how HIV/AIDS is transmitted and how it is not transmitted.

Assessment Criteria:

1. Record in what bodily fluids the HI virus can be found
2. Describe how HIV/AIDS can be transmitted
3. Demonstrate the ability to distinguish between how HIV/AIDS is transmitted and misconceptions around transmittance of HIV/AIDS

04.02.03.03 UNIT 3: HIV/AIDS preventative measures

After studying and understanding this unit, the Worker will comprehend how to act in a way that would minimise the risk of HIV/AIDS infection and to use measures to prevent the HI virus from entering the bloodstream.

Assessment Criteria:

1. Report on how to minimise the risk of HIV/AIDS infection
2. Report on precautions that can be taken to prevent HIV/AIDS infection
3. Explain or demonstrate how to use a male and female condom

4. List the factors that could jeopardize the safety of condoms provided against HIV/AIDS transmission

04.02.03.04 UNIT 4: Voluntary HIV/AIDS counselling and testing

After studying and understanding this unit, the Worker will be able to recognise methods of testing for HIV/AIDS infection. The Worker will be able to understand the purpose of voluntary HIV/AIDS testing and pre- and post-test counselling

Assessment Criteria:
1. Describe methods of testing for HIV/AIDS infection
2. Report on why voluntary testing is important
3. Report on why pre- and post-test counselling is important

04.02.03.05 UNIT 5: Living with HIV/AIDS

After studying and understanding this unit, the Worker will be able to recognise the importance of caring for people living with HIV/AIDS and be able to manage HIV/AIDS.

Assessment Criteria
1. List and describe ways to manage HIV/AIDS
2. Describe nutritional needs of people living with HIV/AIDS
3. Describe ways to embrace a healthy lifestyle as a person living with HIV/AIDS
4. Explain the need for counselling and support to people living with HIV/AIDS

04.02.03.06 UNIT 6: Treatment options for people with HIV/AIDS

After studying and understanding this unit, the Worker will be familiar with the various treatments available to HIV/AIDS infected or potentially HIV/AIDS infected people

Assessment Criteria
1. Discuss anti-retroviral therapy
2. List methods of treatment to prevent HIV/AIDS transmission from mother-to-child
3. Describe the need for treatment of opportunistic diseases for people living with HIV/AIDS
4. Describe post exposure prophylactics

04.02.03.07 UNIT 7: The rights and responsibilities of Workers in the workplace with regard to HIV/AIDS

After studying and understanding this unit, the Worker will be able to identify the rights and responsibilities of the Worker living with HIV/AIDS in the workplace. The Worker will recognise the importance of accepting colleagues living with HIV/AIDS and treating them in a non-discriminative way

Assessment Criteria:
1. Discuss the rights of a person living with HIV/AIDS in the workplace
2. Discuss the responsibilities of a person living with HIV/AIDS in the workplace
3. Report on why acceptance and non-discrimination of colleagues living with HIV/AIDS is important

SH 04.03 DISPLAYING OF PLASTIC LAMINATED POSTERS AND DISTRIBUTION OF INFORMATION BOOKLETS

The Contractor shall obtain a set of four laminated posters conveying different key messages and information booklets, which are available from all Regional Offices of the Department of Public Works.

The above-mentioned posters and information booklets have been prepared to raise awareness and to share information about HIV/AIDS and STI's

Posters or display stands shall be displayed on site as soon as possible, but not later than 14 days after the date of site handover

Posters shall be displayed in areas highly trafficked by Workers, including toilets, rest areas, the site office and compounds

The posters on display must always be intact, clear and readable

Information booklets must be distributed to all Workers as soon as possible, but not later than 14 days after site handover, or as soon as the Worker joins the site

SH 05 PROVIDING WORKERS WITH ACCESS TO CONDOMS

The Contractor shall provide and maintain condom dispensers and make both male and female condoms, complying with the requirements of SANS ISO 4074, available at all times to all Workers at readily accessible points on site, for the duration of the contract. The Contractor may obtain condom dispensers from the Department of Health and condoms may be obtained from the Local Clinic or the Department of Health.

At least one male and one female condom dispenser and a sufficient supply of condoms, all to the approval of the Representative/Agent, shall be made available on site within 14 days of site hand over. Contractors should note that arrangements to obtain condoms from the Department of Health Clinics prior to site hand over may be necessary, to ensure that condoms are available within 14 days of site handover.

Condoms shall be made available in areas highly trafficked by Workers, including toilets, the site office and compounds.

SH 06 ENSURING ACCESS TO HIV/AIDS TESTING AND COUNSELLING FACILITIES AND TREATMENT OF SEXUALLY TRANSMITTED INFECTIONS (STI)

The Contractor shall provide Workers with the names of the closest Service Providers that provide HIV/AIDS testing and counselling and Clinics providing Sexually Transmitted Infection (STI) diagnosis and treatment. Information on these Service Providers and Clinics must be displayed on a poster of a size not smaller than A1 in an area highly trafficked by Workers

SH 07 APPOINTMENT OF AN HIV/AIDS AWARENESS CHAMPION

Within 14 days of site handover the Contractor shall appoint an Awareness Champion from amongst the Workers, who speaks, reads and writes English, who speaks and understands all the local languages spoken by the Workers and who shall be on site during all stages of the construction period. The Contractor shall ensure that the Awareness Champion has been trained by the Service Provider on basic HIV/AIDS information, the support services available and the necessary skills to handle questions regarding the HIV/AIDS programme in a sensitive and confidential manner

The Awareness Champion shall be responsible for:

7.1 Liasing with the Service Provider on organising awareness workshops;
7.2 Filling condom dispensers and monitoring condom distribution;
7.3 Handing out information booklets;
7.4 Placing and maintaining posters

SH 08 MONITORING

The Contractor shall grant to the Representative/Agent reasonable access to the construction site, in order to establish that the Contractor complies with his obligations regarding HIV/AIDS awareness under this contract

The Contractor must report problems experienced in implementing the HIV/AIDS requirements to the Representative/Agent

The attached SITE CHECKLIST (SCHEDULE A) shall be completed and submitted at every construction progress inspection to the Representative/Agent

The attached SERVICE PROVIDER REPORT (SCHEDULE B) shall be completed and submitted on a monthly basis to the Department's Project Manager, through the Representative/Agent

The attached CONTRACTOR HIV/AIDS PROGRAMME REPORT (SCHEDULE C), a close out programme report, shall be completed by the Contractor at the end of the contract

SCHEDULE A

HIV/AIDS PROGRAMME: SITE CHECKLIST

When did construction commence _____

Name of Departmental Project Manager _____

Please refer to HIV/AIDS Programme activities during the reporting period

Tick the block if Contractor satisfactorily complied with specifications																												
DATE	**PI**				**PI**				**PI**				**PI**				**PI**				**PI**				**PI**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Programme implemented within 14 days of site handover																												
Awareness champion on site																												
HIV/AIDS awareness service provider report																												
Male condom dispenser																												
Sufficient male condoms available																												
Male condom dispenser in a highly trafficked area																												
Female condom dispenser																												
Sufficient female condoms available																												
Female condom dispenser in a highly trafficked area																												
All four types of posters displayed																												
Posters in a good condition																												
Posters in a highly trafficked area																												
Posters displayed on local support services: clinic & VCT centre																												
Support service poster/s in highly trafficked area																												
Support service poster/s in a good condition																												
Please indicate the applicable number for the reporting period																												
Workers on payroll (at PI)																												
Sub-Contractors who will be on site for longer than 30 days (at PI)																												

Workshop attendees							
Number of workshops held							
Scheduled workshops according to approved workshop plan							
Booklets distributed							
Male condoms distributed							
Female condoms distributed							
_____ Representative/Agent							
_____ Contractor							

SCHEDULE A

Date of progress inspection (dd/mm/yy) _____

Reporting period: (dd/mm/yy)_____ to (dd/mm/yy) _____

Deviations from HIV/AIDS awareness programme plan:

Corrective actions

_____ _____

Representative/Agent Departmental Project Manager

_____ _____

Date Date

SCHEDULE B

HIV/AIDS AWARENESS PROGRAMME: SERVICE PROVIDER REPORT

Reporting period: (dd/mm/yy)_____ to (dd/mm/yy) _____

Number of workshops conducted in reporting period _____

Number of scheduled workshops according to approved workshop plan _____

Deviations from workshop plan:

State reasons for deviating from workshop plan:

Corrective actions:

_____ _____

Service Provider Contractor

_____ _____

Date Date

HIV/AIDS AWARENESS PROGRAMME: WORKSHOP CONTENT ADDRESSED

Fill in the applicable information with regard to each workshop conducted																												
DATE	**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
Content of workshop: *(Mark the content included)*																												
SLO1																												
SLO2																												
SLO3																												
SLO4																												
SLO5																												
SLO6																												
SLO7																												
HIV/AIDS in construction video																												
Indicate the duration of the workshop in hours																												
Total number of Workers																												
Indicate workshop venue																												

SCHEDULE B

HIV/AIDS AWARENESS PROGRAMME: ATTENDANCE REGISTER

Fill in your name and indicate attendance by ticking the appropriate date																												
DATE		**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**				**W/S**			
		D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M	D	D	M	M
No	**NAMES**																												

SCHEDULE B

SCHEDULE C

CONTRACTOR HIV/AIDS PROGRAMME REPORT

Project name _____

Project Location _____

Contract value of project (R) _____

Department of Public Works Project Manager _____

HIV/AIDS Programme duration: (dd/mm/yy) _____ to (dd/mm/yy) _____

AWARENESS MATERIAL

Describe location of posters displayed during the programme _____

_____

Comments on posters _____

_____

_____

Indicate total number of booklets distributed _____

Comments on booklets _____

_____

_____

CONDOMS

Indicate total number of male condoms distributed _____

Indicate total number of female condoms distributed _____

Describe where male condom dispenser was placed _____

Describe where female condom dispenser was placed _____

HIV/AIDS WORKSHOPS

Indicate the total number of HIV/AIDS workshops conducted _____

Indicate the duration of workshops _____

Indicate the total number of Workers that participated in the HIV/AIDS workshops _____

Indicate the total number of Workers that were exposed to the video on HIV/AIDS in the Construction Industry

_____

Comments on HIV/AIDS workshops on site _____

_____

GENERAL

Briefly describe programme activities and satisfaction with outcome _____

_____

_____

Additional comments, suggestions or needs with regard to the HIV/AIDS awareness programmes on site

_____

_____

_____

Please indicate if your company has a formal HIV/AIDS policy focussing on HIV/AIDS awareness raising and care and support of HIV/AIDS Workers	Yes	No	Currently developing one

Please indicate if, to your knowledge, you have lost any workers during the duration of the project to HIV/AIDS related sicknesses. One or more of the following might indicate an HIV/AIDS related death:

Excessive weight loss	Coughing or chest pain	Vomiting
Reactive TB	Pain when swallowing	Meningitis
Hair loss	Persistent fever	Memory loss
Severe tiredness	Diarrhoea	Pneumonia

Number of HIV/AIDS-related deaths _____

_____ _____

Contractor **Date**

_____ _____

Departmental Project Manager **Date**

ANNEXURE 2.12:
SOCIAL FACILITATION PROCESS AND GOALS

Project Beneficiation Report for the Acacia Park Project

WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE

Submitted By
Independent Development Trust

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Date:
02 June 2025

DOCUMENT CONTROL:

Document Version	1
Description	**Project Beneficiation Report for the Acacia Park Project**
Project	Acacia Park Development Project
Date:	02/06/ 2025
Purpose	ISFP for signing

IMPLEMENTING AGENT SIGN-OFF

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Review and Control						
Project name		WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE				
Document number		1004310	**Project number**		WCS -045142	
Client		Independent Development Trust (IDT)				
Client contact		Alan Wright	**Client reference**		WCS -045142	
Rev	**Date**	**Revision details/status**	**Author**	**Reviewer**	**Verifier** (if required)	**Approver**
1	2025/06/02	DRAFT Project Beneficiation Report for Acacia Park submitted by Zutari to IDT for review	Paul Zulu	Amelia Visagie	Wim van Schalkwyk	Alan Wright
Current revision						

Review			
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4 Opportunities....5
5 Benefits....5
6 Conclusion and Recommendations....6

1 Introduction

The National Department of Public Works and Infrastructure (DPWI) appointed the Independent Development Trust (IDT) as the Implementing Agent for the Implementation of the Acacia Park Project (WCS 045142), which entails the demolition of 112 prefabricated houses and the construction of 113 Residential Units (3 Bedroom Brick Houses) and associated infrastructure.

The existing Service Delivery Agreement ("SDA") between the IDT and DPWI enables the implementation of the project. IDT, as the Implementing Agent, has appointed Zutari as the Social Facilitator of the Acacia Park Project.

This report outlines the potential social, economic, and environmental benefits resulting from the Acacia Park Parliamentary Village redevelopment project.

2 Purpose of Document

The Project Beneficiation Report is linked to the Social Impact Opportunities Register, which is a structured document or system that tracks potential and actual opportunities to create positive social impact within this project, organisation, or community. It helps identify, plan, and manage initiatives that contribute to social well-being and sustainable development.

This document, informed by the definition above, outlines the Social Impact opportunities aligned to the Acacia Park Project and surrounding communities within the project scope environment.

It results from various engagements with project stakeholders and project area research since Zutari's appointment as Social Facilitator in October 2024. It follows the Terms of Reference for the appointment of the Social Facilitator and the Cabinet-approved social facilitation framework of DPWI.

Zutari has developed a Social Facilitation Plan linked to the Acacia Project, and this social impact register plan specifically speaks to social opportunities linked to the project.

3 Project Overview

Location: Acacia Park Parliamentary Village, Cape Town

Scope:

- Demolition of 112 prefabricated houses
- Construction of 113 new brick houses
- Installation of supporting infrastructure

Target Beneficiaries are as follows:

- Parliamentary housing residents,
- Local community members,
- SMMEs, skilled and unskilled laborers.

4 Opportunities

The following opportunities have been identified within the Acacia Park Project scope area, more precisely within Ward 56 of Sub-Council 3 of Cape Town Metropolitan:

a) Job creation.
b) Skills development.
c) Enterprises/Sub-contractor development.
d) Capacity building: Leadership development and training of community structures.
e) Building material recycling
f) Utilization of local resources

Note. The above-identified opportunities are not exhaustive of the project benefits, as they are based on feasibility studies' conclusions; however, beyond the above, as new unforeseen opportunities emerge, they will be added to the Social Impact Register. NB Unforseen opportunities can include the following example but not limited to it: the unintended opportunities that might arise from an intervention not directly linked to planned outcomes, for example because someone gets a job on Acacia Park project and they now have an income their child ends up getting a scholarship, because the parent was able to pay for their interview process in Johannesburg as they had the money for transport due to them working on the project. In M&E this is an example of unintended impacts which can either be positive or negative

5 Benefits

The following social, economic, environmental, institutional and governmental benefits have been identified:

TYPE OF BENEFIT	ASSOCIATED
Social Benefits	• Improved Living Conditions: Modern, permanent housing structures will enhance the quality of life, privacy, safety, and dignity of residents. • Health and Safety Improvements: Replacing aging and potentially hazardous prefab structures will reduce exposure to damp, poor insulation, and structural risks. • Community Empowerment: The project's participatory planning process will encourage community involvement, enhancing a sense of ownership and cohesion. • Security of Tenure: Residents will benefit from clear, long-term occupancy and property management agreements, contributing to stability.
Economic Benefits	• Job Creation: Local hiring during demolition, construction, and ancillary services will generate employment for both skilled and unskilled workers. • Skills Development: The project offers opportunities for local workers to receive on-site training, improving future employability. • Local Enterprise Development: Targeted procurement from local suppliers, contractors, and SMMEs will boost the township economy and promote entrepreneurship. • Increased Property Value: New housing and upgraded infrastructure will raise the area's property values, attracting further investment.

Environmental Benefits	• Sustainable Construction Practices: The project promotes the use of environmentally friendly building materials and methods to reduce the carbon footprint. • Upgraded Infrastructure: Modern water and sanitation systems will reduce environmental contamination and improve overall hygiene. • Improved Waste Management: Demolition and construction debris will be managed using best practices to minimize environmental degradation.
Institutional and Governance Benefits	• Enhanced Public Sector Capacity: The successful delivery of this project will strengthen the implementing agencies' ability to manage future developments. • Transparency and Accountability: Clear communication, stakeholder involvement, and regular reporting promote good governance and public trust.

6 Conclusion and Recommendations

The Acacia Park project offers multifaceted benefits that extend beyond housing provision. To maximize beneficiation, Zutari's Social Facilitation Plan and PIP will ensure that the following are implemented and closely monitored:

- Implementation of a structured local recruitment and training plan by the Main Contractor.
- Development of a procurement plan prioritizing local Small, Medium Enterprises (SMMEs).
- Establish an ongoing community engagement and feedback mechanism.
- Influence the Integration of green infrastructure features where possible.
- Monitor and evaluate social and economic impacts post-implementation.

Annexure A

Social Impact Opportunities matrix table

Opportunity Type	Purpose/Objective	Outcome	Resource Allocation	Time Frame
Job Creation	To provide temporary and permanent employment opportunities for local residents during the construction and post-construction phases of the Acacia Park Project within Ward 56 of Sub-council 3.	Employment of at least local workers, contributing to reduced unemployment and improved household income. Based on the Bill od Quantities (BOQ) calculations-***(Maximum number of employment opportunities from a days point of view is 143 817 and from these days employed personal working on a full time over a 24 months project duration adds too 37 people being employed as artisans across the different occupational trades opportunities, 44 being employed within the semi-skilled classification and 106 being employed as unskilled labour.)*** .	Contractor labour budget, CWP/EPWP funds, local wage subsidy (if applicable).	24 months (aligned with project construction timelines).
Skills Development	To provide accredited and non-accredited training for local workers in construction, plumbing, electrical work, and project administration.	At least the targeted number of local participants ***(as informed by EPWP targets)*** receive NQF-accredited training, enhancing employability.	Skills development fund, collaboration with SETAs, and contractor training budget.	12 months (starting early in project implementation).

Enterprises/Sub-contractor Development	To promote the inclusion of local SMMEs and emerging contractors in the supply chain for construction, catering, cleaning, and material supply.	Minimum of 5-10 SMMEs contracted and mentored through formal subcontracting agreements. ***(Target to be confirmed by IDT as guided by the BOQ and CDP project target)***	30% of procurement spend allocated to local SMMEs, supported by a business development services fund ***(CIBD-IDT partnership CDP support program)***	Ongoing over the 24-month project period.
Capacity Building – Leadership Development	To build leadership, governance, and conflict resolution skills among community leaders and project steering committees.	Improved stakeholder collaboration and reduced conflict, with at least 3 community leadership workshops delivered.	NGO/facilitator fees, training materials, venue, and catering.	6 months (initial 3 months for training, follow-up sessions over 6 months).
Building Material Recycling	To minimise environmental impact and support green job creation by reusing salvaged material from demolished prefabricated houses.	At least 40% of usable materials recycled or repurposed; creation of informal recycling micro-enterprises and support of local NGO's and ECDs with material for refurbishments based on needs.	Waste management service provider, storage, and logistics for salvaged materials, tools.	4–6 months (during demolition and early construction phases).
Local Utilisation of Local Resources	Linked to all the above and to maximise local benefication of the project scope area residents and businesses	Community empowerment targets are achieved sustainably beyond the project duration	Project budget linked to community empowerment initiatives	18-24 months

Impact Measurement:

The success of the above initiatives will be tracked and reported on as guided by the social facilitation PIP and aligned deliverables linked to the project activities and associated social benefits.

Report Sub-Council 3 Acacia Park Desktop Research Report - Community Profile and Baseline Report

WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE

Submitted By
Independent Development Trust

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Date:
02 June 2025

DOCUMENT CONTROL:

Document Version	1
Description	**Report Sub-Council 3 Acacia Park Draft Desktop Research Report-Community Profile and Baseline Report**
Project	Acacia Park Development Project
Date:	02/06/ 2025
Purpose	ISFP for signing

IMPLEMENTING AGENT SIGN-OFF

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Review and Control						
Project name		WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE				
Document number		1004310	**Project number**		WCS -045142	
Client		Independent Development Trust (IDT)				
Client contact		Alan Wright	**Client reference**		WCS -045142	
Rev	**Date**	**Revision details/status**	**Author**	**Reviewer**	**Verifier** (if required)	**Approver**
1	2025/05/28	DRAFT Desktop Research Report -Community Profile and Baseline Report submitted by Zutari to IDT for review	Paul Zulu	Amelia Visagie	Wim van Schalkwyk	Alan Wright
Current revision						

Review			
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1. Executive Summary

Through this community profile and baseline report, we explores the viability of the Acacia Park Parliamentary Village redevelopment project, which involves demolishing 112 prefabricated houses and constructing 113 modern brick homes and associated infrastructure. The report includes demographic, socio-economic, and community profiling of Ward 56, identifies service delivery gaps, and presents recommendations to ensure sustainable, community-aligned development.

2. Introduction:

This document presents a Community Profile and Baseline Report to support the implementation of the Acacia Park Parliamentary Village **DEMOLITION OF 112 PREFAB HOUSES AND the ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE**. Acacia Park Parliamentary Village is geographically located in Ward 56, within Sub-Council 3 of Cape Town.

The Acacia Park housing project stretches beyond the Parliamentary Village and aims to empower surrounding residents within the constituency of Ward 56 and Sub-Council 3 at large by enhancing civic participation, fostering social cohesion, and promoting locally driven development initiatives.

Acacia Park is located in Ward 56, which is characterised by a blend of formal and informal settlements, economic disparities, and a diverse socio-cultural makeup. Understanding the unique dynamics of this area is critical to determining the viability of the Acacia Park project and tailoring its approach to local priorities, assets, and challenges.

This study provides a comprehensive overview of the Acacia Park Parliamentary Village and Ward 56 demographics, social and economic conditions, infrastructure, local institutions, and community leadership structures. It also assesses existing development initiatives, service delivery gaps, and the community's readiness to engage in participatory development processes.

The findings and recommendations presented herein are informed by desktop research and different stakeholder interviews and are intended to guide the strategic design and roll-out of Acacia Park Parliamentary Village Project interventions in Ward 56.

3. Background and purpose

Acacia Park was originally designed to house Members of Parliament (MPs) but has aged significantly. The redevelopment project intends to modernize housing infrastructure and align with sustainable, inclusive urban development goals. To achieve this, it is therefore critical to conduct a community profile to understand the project contextual environment for planning and alignment with the project objectives and social facilitation objectives linked to the project.

Doing community profiling and baseline before initiating a community-driven construction project ensures that the project is viable, sustainable, and aligned with community needs. Here are the key reasons why it's important:

1. Assessing viability
    - Technical feasibility: Determines whether the site, design, and construction requirements are practical and achievable.
    - Legal feasibility: Confirms compliance with zoning laws, building codes, and regulatory approvals.
    - Financial feasibility: Evaluate whether the project can be funded and sustained within the available budget and funding sources.
2. Identifying risks early
    - Help uncover potential challenges such as environmental constraints, land ownership issues, or social resistance.
    - Allows for the development of mitigation strategies to reduce risks before they escalate.
3. Informed decision-making
    - Provides stakeholders and decision-makers with clear data and analysis to make sound investment and planning decisions.
    - Helps determine whether to proceed, revise, or halt the project before significant resources are committed.
4. Stakeholder alignment
    - Assesses community needs and expectations to ensure the project has local support and delivers relevant benefits.
    - Builds trust and transparency with stakeholders through early engagement and evidence-based planning.
5. Optimizing resource use
    - Ensures that time, money, and human resources are invested in a project that is likely to succeed.

- Prevents wasteful spending on projects that are not technically or socially feasible.

6. Securing funding and partnerships
   - Many donors, investors, and government bodies require a feasibility study to justify funding.
   - Demonstrates due diligence and strategic planning, increasing the likelihood of securing financial and institutional support.
7. Sustainability and long-term impact
   - Evaluates the long-term benefits and potential challenges of maintaining the infrastructure post-construction.
   - Helps design projects that are environmentally sound, socially accepted, and economically viable.

4. Overview of Acacia Park, Ward 56, and Sub-Council 3

4.1. Acacia Park

Acacia Park Parliamentary Village, a residential complex in Cape Town, South Africa, is primarily designed for Members of Parliament (MPs). The aim is to explore the history, purpose, demographic community profile, and key features of the village, as well as its significance to the parliamentary system of South Africa.

4.2. Location Overview

Acacia Park Parliamentary Village is in Goodwood, Cape Town, within the Western Cape Province of South Africa. This village, along with two other parliamentary villages (Pelican Park and Laboria Park), provides housing for MPs and their families.

4.3. Historical background/origins of Acacia Park

Acacia Park Parliamentary Village was established to provide secure, convenient housing for South African parliamentarians who work in Cape Town, the legislative capital of the country. Its establishment aimed to improve accessibility to Parliament while maintaining a balance between work and family life for MPs.

4.4. Development over time

Over the years, Acacia Park has evolved in both its physical structure and the amenities it provides; however, over the years, it has become inevitable that the housing structures need a modern upgrade, hence the demolition of 112

prefabricated houses and the erection of 113 3-bedroom brick houses and associated infrastructure.

4.5. Demographic community profile of Acacia Park and current structure and facilities

4.5.1. Residential facilities

Acacia Park consists of houses and apartments that provide accommodation for MPs and their families. These units vary in size and are fully furnished, offering comfort and privacy for residents.

4.5.2. Amenities

The village includes recreational facilities such as parks, sports fields, swimming pools, and children's play areas. There are also medical services, educational support (such as daycare facilities), and transportation services specifically designed to shuttle MPs to and from the Parliament buildings.

4.5.3. Security

Acacia Park is a high-security area, ensuring the safety of the MPs and their families. This includes 24-hour guards, controlled access points, and surveillance systems. The village is known for providing a secure environment while maintaining a level of privacy.

4.6. Role and function of Acacia Park

4.6.1. Housing for Parliamentarians

Acacia Park plays a crucial role in the South African parliamentary system by providing convenient, affordable housing to members of Parliament. Many MPs come from different provinces across South Africa, and Acacia Park ensures they have a place to stay close to the parliamentary buildings in Cape Town.

4.6.2. Logistical support for Parliament

By offering proximity to Parliament and related transport services, Acacia Park helps MPs avoid the challenges of daily commuting, allowing them to focus on their legislative duties. This logistical support is essential for the smooth functioning of the parliamentary system.

4.7. Community and Social Environment

4.7.1. Life in Acacia Park

Residents of Acacia Park are mostly public servants, which fosters a unique community environment. The village provides a space for MPs to connect outside of

formal parliamentary settings, potentially fostering cross-party relations and friendships.

4.7.2. Social events and activities

There are organized social events and activities that help to build a sense of community within the village. This might include sports tournaments, family days, or charity events that MPs and their families participate in.

4.8. Challenges and criticism

4.8.1. Accessibility and Transport

While Acacia Park offers transport services, there may be challenges for those who prefer more flexibility or independence in their commuting. The reliance on shuttles could be viewed as a limitation.

4.8.2. Public perception

There have been some public concerns regarding the expense of maintaining Acacia Park and the other parliamentary villages. Critics have questioned whether providing such housing for MPs is necessary or financially justifiable, given the costs to taxpayers.

4.9. Prospects

Potential for expansion or modernization:

As the needs of parliamentarians evolve, so too might the infrastructure and facilities of Acacia Park. As of 2023 government plans for future developments and improvements, such as enhancing digital infrastructure or upgrading housing units, and this is currently an ongoing process.

Sustainability initiatives:

In line with global trends and current energy challenges within the South African Energy Sector, there may be opportunities for Acacia Park to implement environmentally sustainable practices, such as solar energy, water conservation methods, or green building techniques, as the village develops.

4.10. Conclusion

Acacia Park Parliamentary Village serves a vital function in supporting the work of South African parliamentarians by providing secure, convenient housing close to Parliament. It plays a significant role in facilitating the operations of government while fostering a unique community of public servants. While it faces some challenges and public scrutiny, Acacia Park continues to be a key asset for the South African Parliament.

4.11. Wider context community surrounding Acacia Park

Acacia Park is demarcated within Sub-Council 3 of the Cape Town Municipality. The information presented below covers geographical information, demographics, key focus areas, and existing data for the region of sub-council 3 Ward 56 within which Acacia Park is located.

Subcouncil 3 consists of five wards that include Milnerton, Milnerton Ridge, Montague Gardens, Royal Ascot, Sunset Beach, Rugby, Ysterplaat, Joe Slovo Park, Summer Greens, Tygerhof, Century City, Acacia Park, Brooklyn, Kensington, Maitland, Killarney Gardens, Flamingo Vlei, Dunoon, Table View and surrounds.

Wards in this Sub-council 3 include:

Ward 4**,** Ward 55**,** Ward 56**,** Ward 104**,** Ward 113.

Subcouncil members

Chairperson

- Phindile Maxiti

Ward councillors

- Anthony Benadie
- Cheslyn Steenberg
- Fabian Ah-Sing
- Meisie Makuwa
- Susan van der Linde

PR councillors

- Ashwin Jansen
- Linda Mazwi
- Phindile Maxiti

Ward 56 Profile:

STAKEHOLDERS	Councillor & Ward Committee Community-Based Organizations and Residents Subcouncil Public participation
WARD 56 GENERAL INFORMATION	Ward 56 contains a diverse population and a broad socio-economic spectrum. The Ward consists of a combination of middle- and low-income residents and includes a business

	and industrial area. Challenges and priorities differ vastly across communities.
WARD 56 AREAS / BOUNDARIES	Acacia Park: West of Jakes Gerwel Drive and Southeast of The N1 Freeway, Kensington. Maitland: North of Northern Railway Line, Windermere, Wingfield.

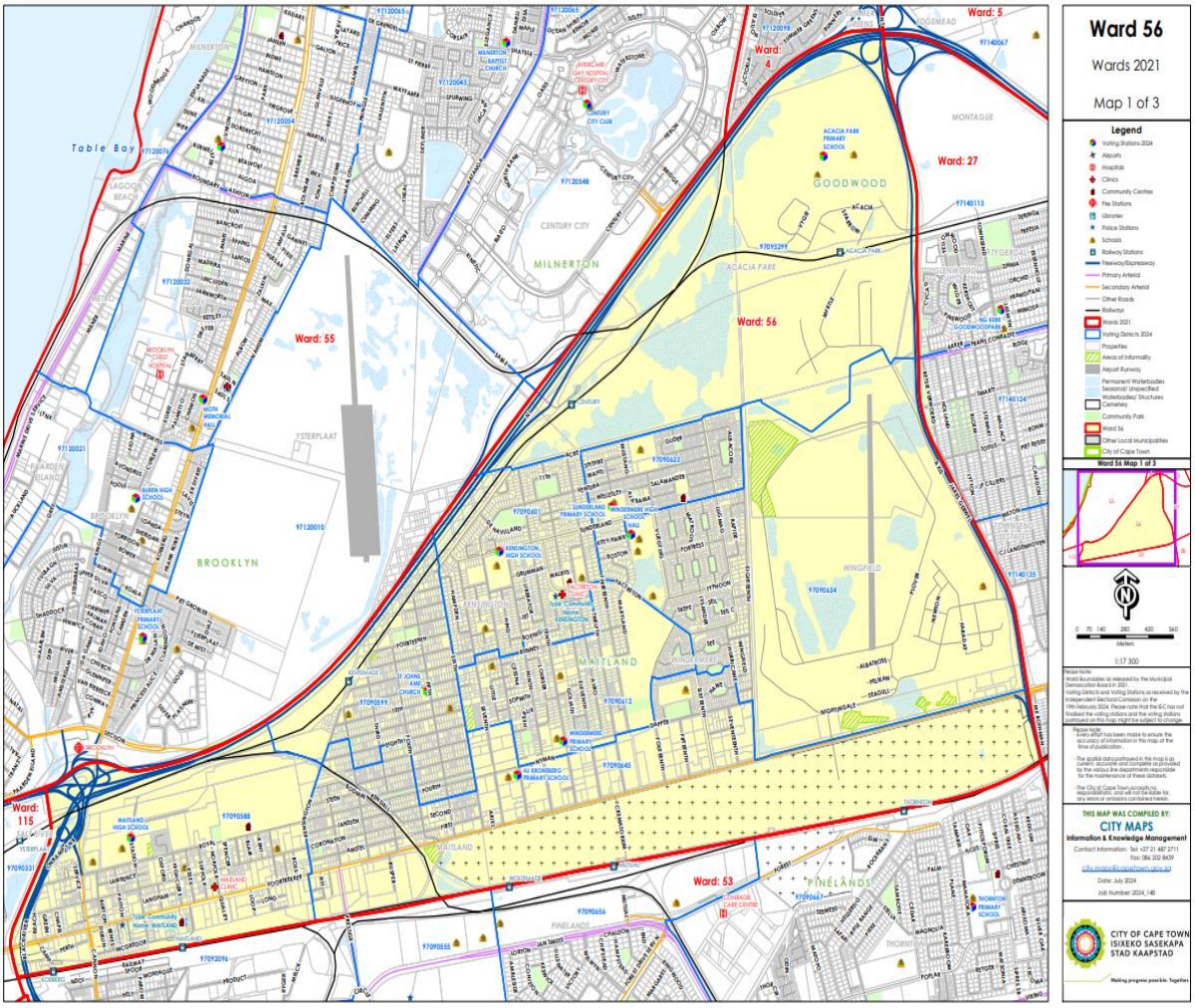

Figure 1: Ward 56 Map. This map shows a representation of Ward 56, within which the Acacia Park Project falls, and the surrounding wards within Sub-Council 3 and Sub-Council 4, respectively.

5. Demographic Profile

The data below represents the demographic profile of Ward 56 based on the 2011 Census:

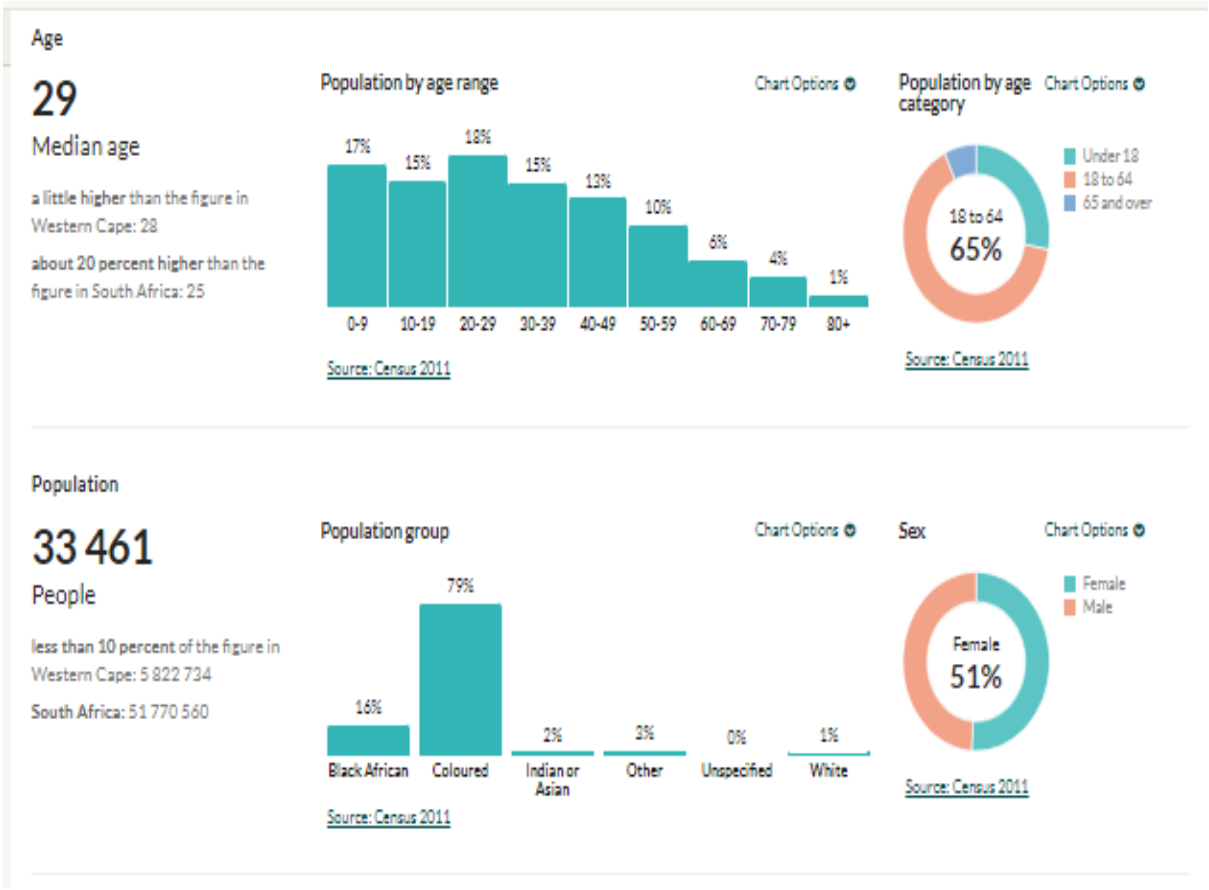

Figure 2: Population Demographics of Ward 56 as of 2011, the data indicates that the total population of Ward 56 was 33,461, of which 51% of the population was female and 79% of the population was coloured, and 16% was black African.

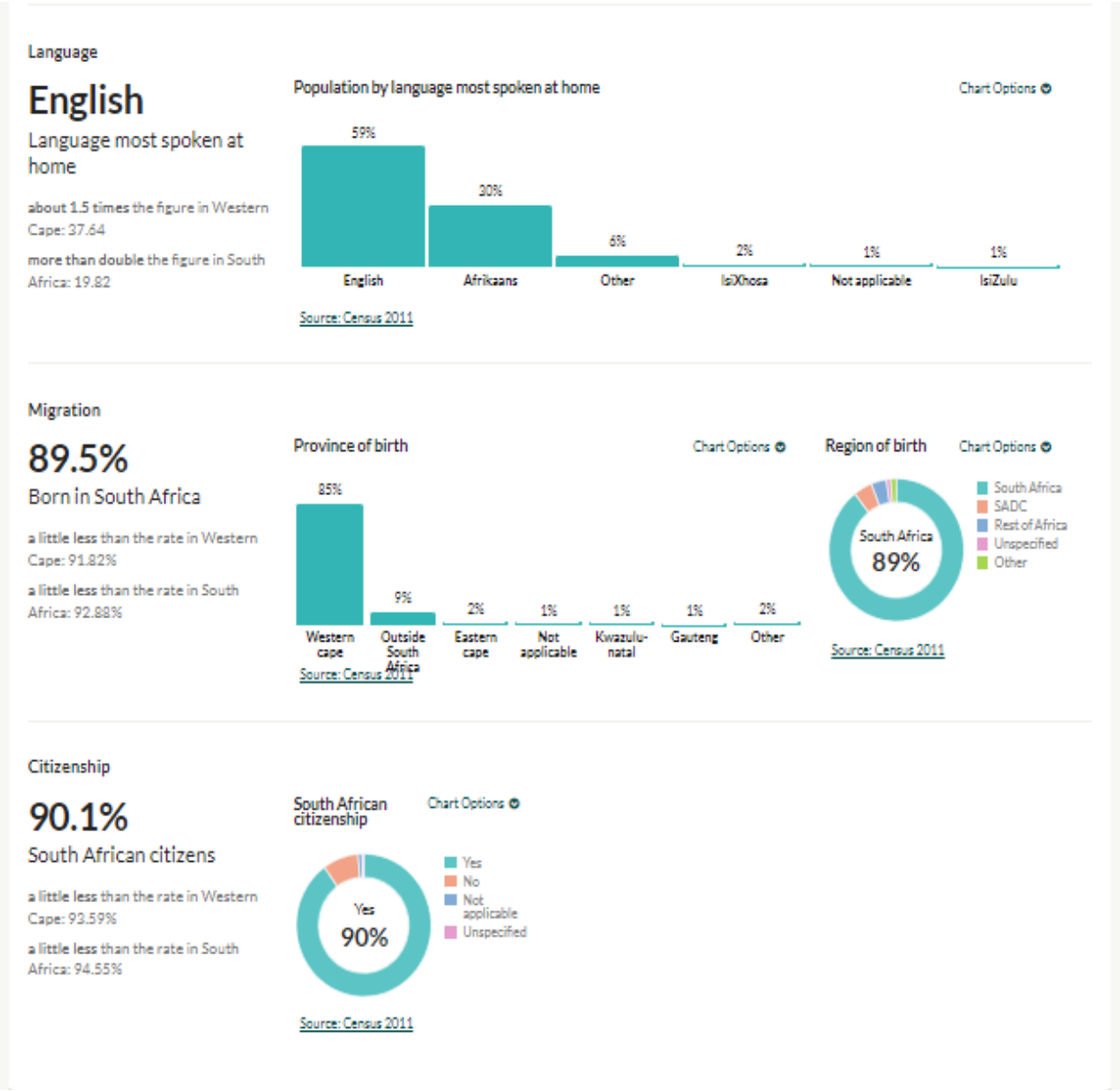

Figure 3: Language and citizenship distribution within Ward 56 in the graphs above show that English is spoken by the majority, followed by Afrikaans at 30%. 90.1 % of the residents in Ward 56 are South African Citizens.

6. Socio-Economic Overview

The socio-economic status of Ward 56 indicates 60% of the housing structures are formal houses, while 6,7% of the total 8,671 households are informal dwelling structures, commonly referred to as shacks. 60 % of the households are headed by men, while 40.4% are female-headed households. Of the total households in Ward 56, 50.9% of them are fully paid for, while 39% of the rest are either rented or still being paid for.

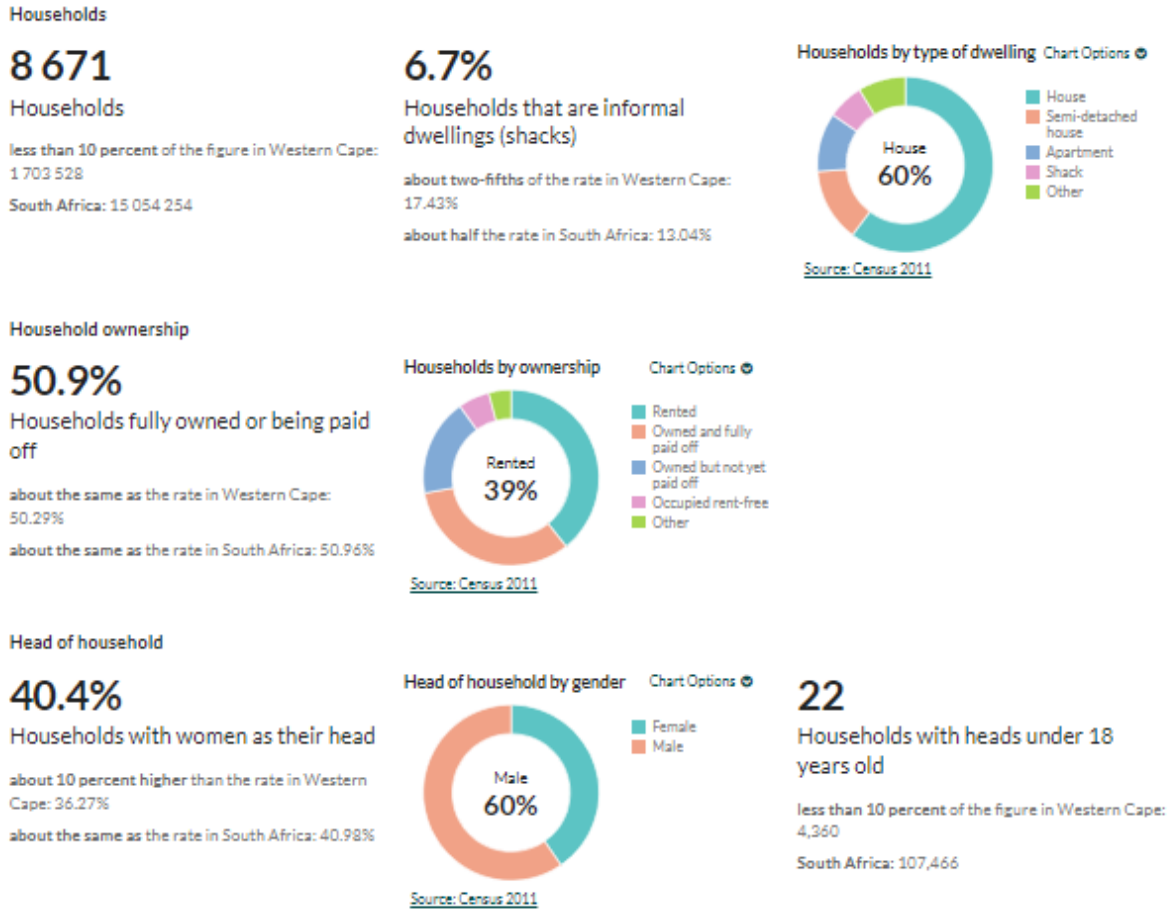

Figure 4: Statistical distribution of household data across Ward 56

Reflected above and shown in the table below is the summary of the households in Ward 56 at the time of the Census in 2011 and the projected population growth as of the year 2021.

2011 Census Number of Households	2011 Census Population	Estimated 2021 Number of Households	Estimated 2021 Population	Initial review and comment - for estimated population growth of more than 50%
8 576	33 903	11 251	42 356	N/A

Figure 5: Household income and assets profile of households within Ward 56

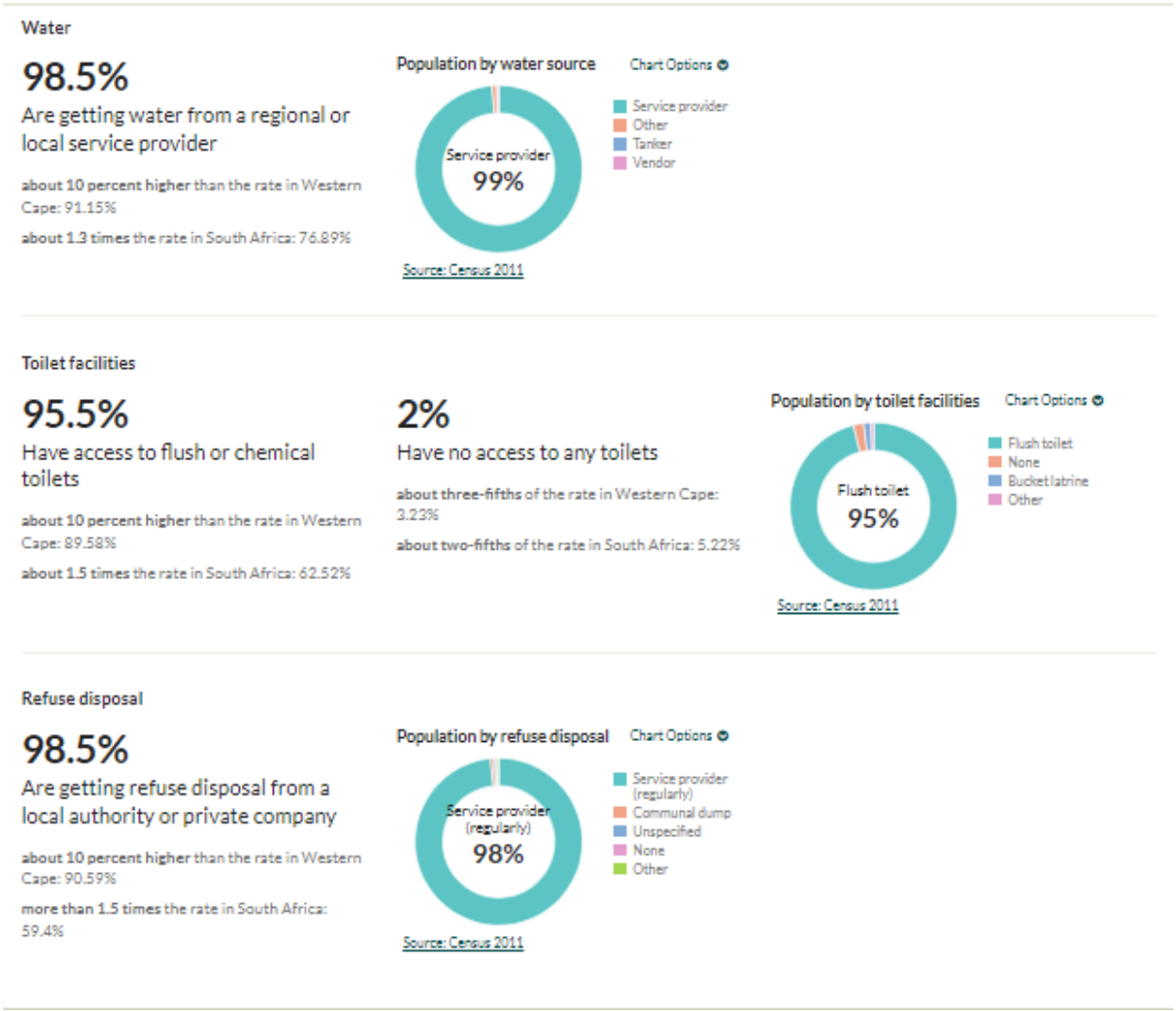

Figure 6: Shown above is the availability and distribution of services across Ward 56 based on the 2011 Census data.

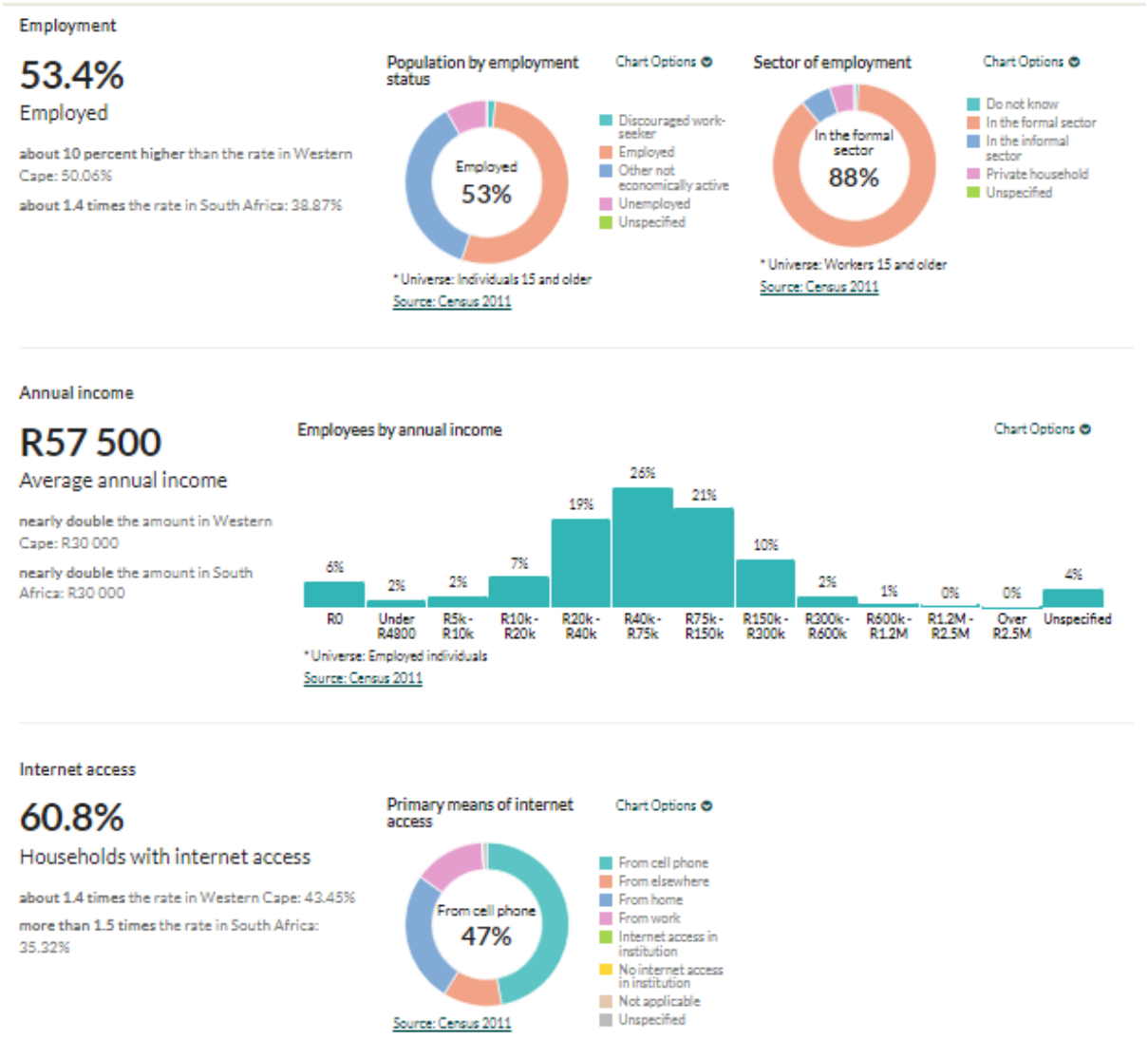

Figure 7: Employment Statistics of Ward 56 as informed by the 2011 Census data

7. Community Assets and Infrastructure

The table below outlines the community assets and infrastructure within Ward 56, which form part of the project scope demarcation, and the geographic location of the Acacia Park project as the project site area.

TYPE OF ASSET/INFRASTRUCTURE	NAME OF ASSETS/ INFRASTRUCTURE
HEALTH FACILITIES	
Hospitals / Clinics	Kensington Community Health Clinic
EDUCATIONAL FACILITIES	

Schools	Kenmere Primary School Windermere Primary School Kensington High School WD Hendricks Primary School Wingfield Primary School Factreton Primary School H.J. Kroneberg Primary School
PARKS & RECREATIONAL FACILITIES, POS & INFRASTRUCTURE	
Developed Parks	35
Road Reserves	TBC
Public Open Spaces / Cemetery	Maitland Cemetery
WATER SOURCES & RESERVOIRS	
Kensington Swimming Pool	
LIBRARIES	
Maitland Library / Kensington Library	
COMMUNITY HALLS / FACILITIES	
Halls	Kensington Civic Centre Maitland Hall Factreton Community Centre
SPORTS FIELDS	
14th Avenue Sports Field Royal Road Sport grounds	
MUNICIPAL OFFICE (S)	
Milnerton Traffic Licensing Department Milnerton Driving Centre Maitland Parks Depot	
PUBLIC TRANSPORT	
Taxis Golden Arrow Bus Service (GABS) Railway	

PUMP STATIONS
None
POLICE STATION
Kensington Police Station Maitland Police Station
FIRE STATION
Brooklyn Fire Station

8. Community structures and stakeholders

Various community structures and stakeholders exist in the community of Ward 56, in which the Acacia Park project is located.

Shown in the table below are some of the community structures and stakeholders identified this far.

Designation/Role/Stakeholder	Representative
Sub-Council Manager	Roxanne Moses
Executive Personal Assistance	Terri Felix
Ward 56 Chairperson	Councilor Cheslyn Steenberg
Civic-Based Organizations	Faiek Fredericks
Civic-Based Organizations	Mogammat Dawood Esack
Designated Vulnerable Groups	Mariam Oliver
Education	Esther Charmaine Julius
Education	Ronethea Daniels
Safety And Security Organizations	Leigh Anderson
Youth	Faith Janet Julius

Engagements that took place so far with some of the structures and stakeholders shown above at a sub-council level are as follows:

a) Introduction of Zutari and the IDT team to the sub-council leadership.

b) Information gathering consultative meetings during the desktop research and community profiling phase.

c) Presentation of the potential upcoming Acacia Park Project to the council for information sharing and awareness purposes.

From the meeting engagements, one key important consideration where around the recruitment process and procedures of potential project employees in terms of local level municipal processes vs national level processes. This is further analyzed in the section under recruitment processes of projects at the provincial level vs national level, and clarity will need to be provided on the next phases of the project on whether the Acacia Park Project will be guided by provincial or national guidelines at community level activities linked to EPWP and CDP programs.

9. Current Development Initiatives

Projects like the Bodmin Housing Development are ongoing. Informal trading and waste management improvements are underway but need scaling. This entails that there are already various infrastructural projects at the community and municipal level taking place in Ward 56.

10. Community Needs and Priorities

The following community needs and priorities were identified through the desktop research study and engagements with the Subcouncil representatives and will be expanded on in the next phases of the project activities linked to the social facilitation plan.

SOCIO-ECONOMIC GROUPS IN THE COMMUNITY OF WARD 56	
SOCIO-ECONOMIC GROUPS	**CHALLENGES**
Middle to low Income	• Quality of service delivery vs rates paid • Service delivered by the City of Cape Town at high costs • Lack of regular maintenance of the assets and infrastructure of the Ward
Unemployed / Lower than R 3,500 income per month	• Housing needs
Homeless people / Street People / Vagrants	• Lack of housing opportunities (safe spaces), lack of employment opportunities, and a need for rehabilitation programmes • Substance abuse
Youth	• Unemployment, lack of suitable social upliftment interventions

SWOT ANALYSIS OF WARD 56

The table below outlines the SWOT analysis of Ward 56 as informed by the engagements during a public participation process to develop the ward-level business plan for the financial year 2024-2025.

STRENGTHS	WEAKNESSES
• Informal Trading Plan • Strong Business and industrial base • Proximity to employment areas/areas with high economic growth • Access to reliable public transport • Good educational facilities	• Open spaces – prone to land invasion • Replacement and upgrade to aging infrastructure • No safe space • Recurring influx of illegal informal trading • Lack of implementation of an informal trading plan • Overpopulated area / densified informal settlement • Illegal dumping, health hazard • Illegal rubbish collectors on Bin collection days • Excessive vagrants and homeless / street people • Increased crime • High unemployment • Illegal sewer connections to the Stormwater system • Illegal electricity connections • Illegal building and land use contraventions • Water and sanitation constraints resulting in sewage spills and blocked drains
OPPORTUNITIES	**THREATS**
• Maximizing and upgrading parks and public open spaces to modern uses of recreational and cultural spaces • Recycling Opportunities	• Invasion of public open spaces and parks • Illegal occupation of land • Vandalism of City infrastructure • Aging infrastructure

	• Protest and Riots

The following table outlines the service needs and gaps identified in Ward 56 through a public participation process to build the 2024-2025 business plan.

SERVICE NEEDS / GAP ANALYSIS / CHALLENGES			
SOCIAL ISSUES / CHALLENGES	**REQUIRED INTERVENTIONS**	**COMMUNITY INTERVENTION**	**MUNICIPAL INTERVENTION**
Homeless people / Illegal land invaders/street people	• Court interdict to remove homeless people and illegal land invaders. • Increased collaborative transversal line department interventions • Campaigns to intensify, consequences to be actioned on and understood	• Log service requests • Report criminal activity • Support the Give Dignity/ Give Responsibly Campaigns	• Intensified awareness campaigns • Drive eviction processes • Transversal line department interventions • Driving the establishment of safe spaces across the City of Cape Town, in affected areas • Protection of land that is at high risk of being invaded
Public Transport Network	• Enforcement of traffic bylaw contravention • Routine inspections in hotspot areas • Support the Upgrade of Maitland PTI • Support the realignment of Camp-Bench Road as part of congestion relief	• Log service requests • Report unlawful driving	• Enforcement of traffic bylaw contravention • Routine inspections in hotspot areas

	• Support the implementation of NMT • Support the proposed Sable Rd Extension to link Voortrekker Rd with N1/Century. • Support NMT along 12th, 13thAve Bunney Street • Upgrade walkways – Nyman, Albacore, Lugmag & Chapman • Re-open the railway road linking Kensington with Maitland		
Safety concern with increased crime	• Public safety awareness campaigns and preparedness plans with communities • Increased law enforcement/metro police interventions • Provide CCTV Cameras • Support of Maitland CIDs' efforts for safer Maitland • Advocate for greater collaboration between Law Enforcement (LE) agencies • Provide training to community ambassadors to become eligible to start their own businesses • Address problematic liquor establishments	• Log of service requests • Report unlawful criminal activities	• Deployment of increased metro police/law enforcement visibility • Increased collaborative interventions of SAPS, Law Enforcement, Metro Police, and Neighbourhood Watches

	• Apply for the installation of a traffic light at the corner of Voortrekker & 18thAve		
Illegal traders	• Enforcement of informal trading bylaw contraventions	• Log service requests • Report illegal activities	• Awareness and education on the informal trading plan for the area • Enforcement of bylaw by Illegal Trading Unit • Implementation of an Informal trading plan • Issue of fines
Housing Needs	• Housing need • Support the release of City-owned land for housing. • Advocate for community participation in the process of integrated human settlements • Monitor the Bodmin Housing Development • Promote the investigation of publicly owned land for infill housing.	• Community support with initiatives to create a more accessible community for the delivery of services	• Human Settlement to investigate housing opportunities and access to municipal services to be delivered

	• Advocate for the Ndabeni Trust land to be alienated to provide housing via government or private developers.		
Diverse Community and lack of community leadership	• Capacitation of community leadership.	• Community support and buy-in.	• Implementation of a program that supports the growth of community leadership.
Informality	• Establish committees within each informal settlement. • Engage with departments on a regular regarding departmental implementation plans to address service delivery.		
Public Open Spaces / Amenities	• Address concerns relating to the Maitland Cemetery • Establish Da Havilland Park as a recreational facility with a running track and other recreational items. • Upgrade the open space along 13thavenue • Restore the green space between 5th Avenue and Nyman • Develop a functional streetscape plan for Acre Road.		

LOCAL NEEDS IDENTIFIED WITHIN WARD 56

The following table outlines the local needs and priorities of Ward 56 that need strategic and well-coordinated resources and interventions to address them.

Local Needs	Priority
Housing needs	• De-densification of informal settlements and re-blocking • Housing development
Unemployment	• Job creation through recycling initiatives to combat area cleaning and illegal dumping • Food gardens – food security and job creation • Connect job seekers to businesses in the area
Electrification of Informal Settlements	• Overcrowding, illegal electricity connections • Recurring electricity cuts
Multipurpose Facility and Health Care Facility	• To accommodate sports and recreational activities for the youth and elderly • Access to medical care
Implementation of an Informal Trading Plan	• To ensure a flawless implementation of informal business activities
Address illegal dumping and area cleaning	• To ensure the environment is clean and that dumping sites are controlled and well managed
Address illegal building and land use contraventions	• To ensure that statutory regulations are adhered to and personal and public property is protected from illegal occupations
Address illegal sewer connections to the stormwater system	• To prevent illegal practices, health risks, and possible damage to municipal infrastructure
Effective and efficient public transport system	• Improved travel times and an effective logistical transport system to enhance economic activities

Increased law enforcement and metro police visibility	• To enhance law and order, a safe and secure business and community environment

11. Community profile assessment

Informed by the above objectives and purposes of the community profile and baseline done on Acacia Park and Ward 56, which is part of the greater Sub-Council 3, the following is noted:

Viability	• Technical: Demolition and rebuilding are structurally feasible • Legal: Compliant with zoning laws • Financial: Requires mixed funding (public and private)
Risk assessment	Key risks include stakeholder resistance, illegal land use, and political interference in labour recruitment.
Stakeholder alignment	Early engagements suggest local support, though formal structures for ongoing consultation are needed.
Sustainability considerations	Solar energy, green building, and greywater systems should be included.

Comparison of labour recruitment practices between National vs Provincial/ Municipal level projects

The recruitment of local labour can differ significantly between national government and provincial/municipal projects in South Africa due to differences in policy mandates, funding structures, institutional roles, and procurement frameworks, are shown in the table below.

Aspect	National Government Project	Provincial/Municipal Project
Legislative Drivers	Typically follows national policies like the EPWP, B-BBEE Codes, and CIDB requirements.	Guided by national policies but more influenced by Integrated Development Plans (IDPs) and Local Economic Development (LED) strategies.
Focus	Emphasis on broad-based national employment, skills	Emphasis on localized economic development, community empowerment, and spatial

	development, and achieving macroeconomic goals.	transformation, and adherence to local recruitment processes and procedures to ensure maximum utilization of local level labour.

The recruitment process will differ depending whether it is on National, Provincial or Local level. See table below for more detail.

Recruitment Process	National Government Project	Provincial/Municipal Project
Labour Planning	Labour targets are often pre-defined in project business cases; national departments may appoint implementing agents or SOEs like SANRAL, and DPWI.	Labour targets are aligned with local employment priorities, sometimes driven by ward Councillors, local forums, or community committees.
Recruitment Agents	Implemented via contractors with obligations to recruit a quota of local labour. May use EPWP databases or partner with SETAs.	Often done directly through local municipalities or ward councilors offices, using Community Liaison Officers (CLOs) and local labour desks.
Selection Process	More structured and aligned to tender requirements; typically merit-based with documentation and oversight.	More community-influenced, with CLOs, local committees, or councilors helping to identify beneficiaries, can be politicized.
Transparency Mechanisms	National audits, project reporting to Treasury, and use of digital databases for tracking beneficiaries.	Local oversight committees may exist; however, transparency often varies widely between municipalities.

Challenges and considerations on a national and provincial level are shown in the table below, and these influence how recruitment practices of local labour are adhered to and are to be considered when implementing national or provincial level contracts.

Challenge	National Projects	Provincial/Municipal Projects

Capacity	Often better resourced and professionally managed.	Limited HR and procurement capacity in some municipalities can hamper recruitment fairness and efficiency.
Community Involvement	Less community control; more technocratic.	Greater community involvement but higher risk of elite capture or factional disputes.
Monitoring & Evaluation	M&E typically embedded in project governance frameworks.	Often lacking rigorous M&E; dependent on local reporting mechanisms.

Examples of the difference between National and municipal project recruitment.

Below is an example of how recruitment processes would be applied on a national budget-driven project initiative vs a provincial/ municipal budget-driven project initiative level project.

- National example: A SANRAL highway construction project uses appointed CLOs, partners with SETAs for training, and requires contractors to comply with specific EPWP targets (e.g., 30% local labour from affected areas).
- Municipal example: A City of Cape Town housing development may recruit via ward councillor offices, engaging local labourers through a labour desk. Labour quotas may be negotiated with local project steering committees.

And therefore, based on the above analysis and examples, regarding the Acacia Park Project, a decision needs to be made by the client, project implementing partner, or the project principal consultant to determine which route to follow in terms of recruitment considerations for the project.

It is important, therefore, to determine based on the facts below which approach to the recruitment of local labour would be most appropriate for the project, based on the context of various considerations of whether it is a national or provincial project.

Feature	National Government	Provincial/Municipal
Centralized or localized?	Centralized mandate, national policy-led	Localized approach, community-influenced
Labour quotas?	Often predefined and contractually enforced	Negotiated or aligned with local priorities
Recruitment agent?	Implementing agency or contractor	Municipality, CLO, or ward office
Transparency level	High (formal systems)	Variable (community involvement, risk of politicization)
Community role	Limited	Significant

Other key considerations on the Acacia Park Project

The table below outlines an analysis of the business factors surrounding the project scope area and research-based analysis on each factor to take note of, based on each of the business factors under consideration and their possible impact on the project.

Business Factor	Analysis Result
Manufacturing and Service Businesses in Sub-Council 3, City of Cape Town	Sub-Council 3 of the City of Cape Town encompasses areas such as Edge Mead, Milnerton, Platte Kloof, Table View, and Dunoon. This region is strategically located along major transport corridors like the N1 and M5, offering excellent connectivity to Cape Town's central business district and key industrial zones.
Manufacturing and Service Industries in Sub-Council 3	While Sub-Council 3 itself is not a primary industrial hub, its proximity to significant industrial areas like Epping Industria and Montague Gardens positions it advantageously within Cape Town's broader manufacturing and service landscape.
Key Industrial Areas Nearby	Epping Industria: Recognized as Cape Town's largest and most centrally situated industrial area, Epping hosts a variety of industries including textiles, automotive, logistics, construction, recycling, and food processing. Notable companies operating here include Nampak, SA Metal Group, Distell Ltd, AVI Ltd, and Afrox. Montague Gardens: Located adjacent to Sub-Council 3, Montague Gardens is a well-established industrial zone housing businesses involved in manufacturing, warehousing, and distribution.
Focus on the Built Environment	The manufacturing sector in Cape Town, particularly in areas surrounding Sub-Council 3, includes businesses that supply equipment and services for the built environment. These encompass the production of fabricated metal products, machinery, equipment, and materials essential for construction and infrastructure projects.
Economic Development Initiatives	Cape Town has implemented several programs to bolster manufacturing and service industries:

	- Green Cape: This initiative supports the development of green technologies and industries, promoting sustainable manufacturing practices. - Productivity Efficiency Programme: Aimed at small, medium, and micro-sized enterprises (SMMEs), this program assists businesses in enhancing operations and preserving jobs. - Special Purpose Vehicles (SPVs): The city supports various SPVs that focus on industry clusters, including the Cape Clothing and Textile Cluster and Blue Cape for marine manufacturing. Sub-Council 3's strategic location offers businesses in the manufacturing and service sectors, especially those related to the built environment, access to key industrial areas and economic development programs. The proximity to hubs like Epping Industria and Montague Gardens, combined with city-led initiatives, provides a conducive environment for growth and collaboration in these industries.

12. Recommendations

Having considered all the meeting engagements with local sub-council 3 leadership representatives and data gathered during the desktop research and review of ward 56 business plans for the 2024/2025 financial year the following recommendations to be supported by the Social Facilitation Plan and the PIP for the Acacia Park Project and the surrounding communities of Ward 56:

- Establish a Local Project Steering Committee with Councillors, CLOs, and civic representatives.
- Formalize transparent labour recruitment through a hybrid model (EPWP + community representatives).
- Launch Local Infrastructure Maintenance Programs using EPWP and SMMEs Implement Green Building Solutions (solar, rainwater systems).
- Upgrade Public Spaces to support recreation, trade, and youth programming Facilitate Community Training & Leadership Programs to grow local capacity.
- Enhance Stakeholder Communication via monthly progress forums and newsletters.

Project Progress Report Stage 2
Social Facilitation for the Acacia Park Project

for

WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE

Submitted By
Independent Development Trust

Corner of Oberon and Sprite Avenue
Glenwood Office Park
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Date:
02 June 2025

DOCUMENT CONTROL:

Document Version	1
Description	**Project Progress Report** **Social Facilitation for the Acacia Park Project**
Project	Acacia Park Development Project
Date:	02/06/ 2025
Purpose	ISFP for signing

IMPLEMENTING AGENT SIGN-OFF

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	Designation	National Programme Manager (PMSU)
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Review and Control						
Project name		WCS -045142: ACACIA PARK –DEMOLITION OF 112 PREFAB HOUSES AND ERECTING OF 113 3-BED BRICK HOUSES AND ASSOCIATED INFRASTRUCTURE				
Document number		1004310	**Project number**		WCS -045142	
Client		Independent Development Trust (IDT)				
Client contact		Alan Wright	**Client reference**		WCS -045142	
Rev	**Date**	**Revision details/status**	**Author**	**Reviewer**	**Verifier** (if required)	**Approver**
1	2025/06/02	DRAFT Progress Report submitted by Zutari to IDT for review	Paul Zulu	Amelia Visagie	Wim van Schalkwyk	Alan Wright
Current revision						

Review			
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6 Next Steps and Priorities....8
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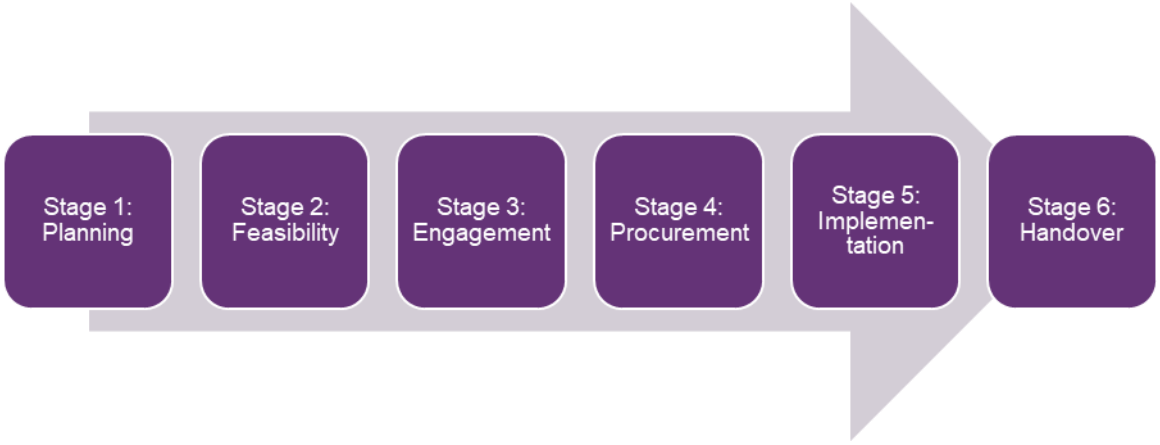
1 Introduction

The National Department of Public Works and Infrastructure (DPWI) appointed the Independent Development Trust (IDT) as the Implementing Agent for the Implementation of the Acacia Park Project (WCS 045142), which entails the demolition of 112 prefabricated houses and the construction of 113 Residential Units (3 Bedroom Brick Houses) and associated infrastructure.

The existing Service Delivery Agreement (SDA) between the IDT and DPWI enables the implementation of the project. IDT, as the Implementing Agent, has appointed Zutari as the Social Facilitator of the Acacia Park Project.

The scope of work is organized into 6 Stages, as outlined in the Terms of Reference, illustrated in the diagram below.



2 Project progress

The overall project progress as per the activities indicated in the Project Implementation Plan is shown in the table below.

Table 1: Project progress

Phases	Completed	On Target	Behind Target	Not yet started
1. Stage 0: Ramp Up Stage	x			
2. Stage 1 - Initiation/project identification and planning: STAGE /GATE NO-FDPM-PJ-S0	x			
3. Stage 2 - Social development feasibility study: STAGE/GATE NO-FDPM-PJ-A)	x			

4. Stage 3 - Planning/project landing and stakeholder engagement: STAGE /GATE NO-FDPM-PJ-S1-B)		x		
5. Stage 4 - Procurement /community empowerment: STAGE/GATE NO FDPM-PJ-S1)				x
6. Stage 5 - Implementation: STAGE/GATE NO-FDPM-PJ-S5)				x
7. Stage 6 - Project handover: Following the completion of the project, Zutari will support the close-out of stakeholder engagement activities and the reporting on the project's social metrics.				x
8. Co-creation of a sustainability plan				x
9. Self-sustaining and independent Community				x
10. Exit plan implemented				x

3 Client Engagement and Meetings

The following meetings were held to conclude the Community Profile and Baseline Report, as well as the Project Beneficiation Report. See a summary of all meetings below:

Table 2: Previous meetings and workshops held

Name of meeting	Meeting date	Stakeholder
Meeting with Sub-Council 4 Manager	10/03/2025	City of Cape Town (CoCT)
Meeting with Sub-Council 3 Manager: Introduction of Zutari and IDT to discuss the research study for the Acacia Park Project	14/03/2025	CoCT
Meeting with Sub-council 3 manager: Information gathering for community profile and baseline report for Sub-council 3 and Ward 56	25/03/2025	CoCT Sub-Council 3 Manager
Meeting with IDT to discuss Sub-Council 3 Acacia Park Project Presentation	15/04/2025	IDT
Activity day meeting- Acacia Park Project presentation meeting to Sub-Council 3	20/05/2024	IDT, CoCT Sub-Council 3 Manager, Chairman, and Ward Councillors

The next steps in client meetings and workshops that will be needed to complete stage 3 deliverables are suggested in the table below:

Table 3: Next suggested meetings and workshops

Name of meeting	Purpose	Target date
Local leadership engagement meetings	Build a stakeholder database and relations for the upcoming project activities	June 2025-August 2025
Stakeholder engagement meetings with IDT & EPWP	Finalise the draft integrated plan with targets	June 2025-July 2025
Stakeholder engagement meetings with IDT & EPWP	Engage in project-linked activities, status updates, and reviews	Ongoing

4 Development of the Community Profile Baseline Report and Project Beneficiation Report

The Community Profile Baseline Report was developed after consultative meetings with the Sub-Council Managers of Sub-Councils 3 and 4. Supported by a desktop research methodology and targeted stakeholder interviews, the research report outlines the profile of Acacia Park and the greater Ward 56 in Sub-Council 3 which includes the geographic scope area that is influencing the Acacia Park Project and as linked to the 8 strategic objectives of the project implementation, reflected in the SF PIP.

The Community Profile Baseline Report, Project Beneficiation Report, and Social Impact Register have been submitted to the client for review and sign-off as of the 2nd of June 2025.

5 Challenges and Mitigation Measures

The following challenges were experienced, and mitigations were put into place:

Challenge	Mitigation
1. Lack of credible current statistical data from the 2022 census	Consultative meeting engagements on the ground with the Sub-council Managers and council, as key informants, to get the latest possible information from business plan documents for the financial year 2024-2025. Sub council manager to send updated census information to the team as soon as they have access to it.

	Stats SA has still not released all the data and has now made the decision not to release 5 large segments of the census data due to irregularities and uncertainty of the accuracy of the data. Source:**https://www.businesstechafrica.co.za/news/2024/08/22/stats-sa-census-2022-release-concerns-persist/**
2. Bill of Quantities (BoQ) calculations and projections linked to EPWP skills development and the CDP program	Zutari brought a project manager on board to assist with the calculations, and it was submitted to the client, though this was not in the scope mandate of the Zutari deliverables. If further work needs to be done on the BoQ, the Social Team needs to be informed early and a VO should be considered.
3. The communication and lag time of feedback and various operational commitments by the Sub-Council 3 management	Zutari had to actively engage other linked stakeholders within the COCT to get the requested information from the sub-council. Organising a meeting between IDT, the Council, and Zutari was quite a struggle, though eventually a late date in May 2025 was agreed upon, thereby leading to a meeting on the 20th of May 2025. A good working relationship has been established, and the team will continue to develop this relationship. NB to get clarity on whether the Acacia Park project will be registered as a National or Local project.
4. Decision whether this project is going to be registered on a National or Local level	The Principal Consultant to update the Social team and the IDT to whether this project is going to be registered as a National Project or a local project, as this has an influence on procedures and protocols to follow. IDT and the Social team to meet with the Principal Consultant to clarify this.
5. Timelines of the construction phases of the project	Timelines for the construction phases are not communicated to the Social Team. The contractor has not yet been appointed, and this was not communicated to the Social Team, based on the second round of tender that went out. It is understood that a third-round tender for the contractor will be going out, and therefore, future timelines to be communicated to the different PSPs so that deliverables can be achieved in time.
6. Process and administrative issues regarding invoices and internal IDT	The governance procedures that had to be followed and the internal IDT delegation of authority had an influence on the first payment of the invoice. This influenced the timelines for the second phase deliverables as some work activities had to be scaled down to avoid a budget overrun vs the cash inflow from activities linked to stage 2 deliverables, until the issue was resolved as of the 28th of May 2025.

delegations to follow.	
7. Communication not filtering through to the Social Team	Clear communication with guidelines from IDT and the Principal Consultant in advance is suggested.

6 Next Steps and Priorities

As informed by the SFIP, the following activities will take priority:

- Continual stakeholder identification, engagement, and analysis at the community level.
- Continual engagement with local authorities to introduce the project and get clarity on whether it is a National or Local project.

The following activities are dependent on the sensitivity of the project and when the IDT will give a green light to go ahead and involve grassroots levels of the communities around the project, i.e., ward communities, local NGO's, religious leaders, and political representatives, and any other relevant groups to the project activities.

- Initial community engagement and project introduction, and awareness campaign
- Community engagement to identify beneficiaries and the establishment of representative structures.
- Establishment, training, and induction of Project Liaison Committee (PLC)
- Induction and appointment of CLO
- Introduce PLC and CLO to the contractor.
- Design and development of the local workers recruitment plan/strategy

Key deliverables and upcoming deadlines: July 2025- 31 October 2025.

- Stakeholder Engagement Plan and Report
- Local Authority Engagement Report
- CLO Recruitment Report
- PLC Induction Report
- Worker recruitment strategy/plan
- Project Site Handover Report
- M&E of the project stage progress report

Coordination and collaboration plan with the client and partners

Collaboration with the client and other PSPs linked to the Acacia Park Project is largely in the planned activities indicated in 6 above, during the implementation of the planned activities.

7 Conclusion

Overall, the project health indicates a good progression based on the approved SF PIP and planned timelines and activities within the MS Project schedule. Zutari is ready for Stage 3 activities and is already engaged in those key activities to ensure deliverables are produced and submitted on time as expected and planned.

The support and collaboration provided by working with IDT have tremendously had a positive impact on the project and the direction it is taking, in addition to other collaborations from the CoCT, Virtual Consortium, and the DPWI-EPWP department.

ANNEXURE 2.13: RISK REGISTER

IDT ACACIA PARK

Risk Management Module

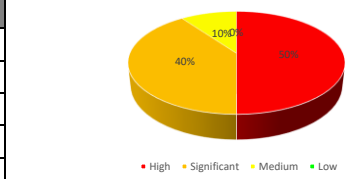
Document: **Programme Risk Register**

Version: 1

Date: 03-Jun-25

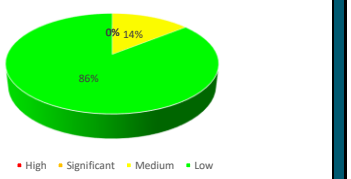
PRE-MITIGATION RATING SUMMARY

Total	10
High	5
Significant	4
Medium	1
Low	0
Closed	0



POST-MITIGATION RATING SUMMARY

Total	10
High	0
Significant	0
Medium	1
Low	6
Closed	3



Risk Identification & Definition			Pre-Mitigation Rating				Mitigation				Post-Mitigation Rating			
Ref. No.	RISK	Risk Description	Probability (0-10)	Impact (0-10)	Risk Rating (0-100)	Rating Classification	Risk Mitigation Measures / Controls	Mitigation Responsibility	Risk Owner	Update / Review Date	Probability (0 - 10)	Impact (0 - 10)	Risk Rating (0 - 100)	Risk Classification
001	Sewer overflow at Block E	Sewer Line 18th Avenue If the line is not replaced and moved outside of the retention pond, the sewer manholes will continue to overflow due backlog of sewer in the system	10	8	92	High	Replace damaged line and reposition the line outside of the retention pond.	DPWI/ Civil	R. Engelbrecht		1	1	1	Low
005	Landscape Architect	A Landscape Architect will be required for the SDP approval.	7	8	83	High	Landscape Architect to be appointed to provide a landscape plan for the site	Architect	I. Gabier		3	3	13	Low
006A	Detail Design by others	Stage 2 Concept Design to be reviewd by D&B contractor.	6	6	52	Significant	Cost to be allowed for in Tender Documentation	Quantity Surveyor	S. Essop		3	3	13	Low
006B	Detail Design by others	Will depend on D&B contractor approval date	6	6	52	Significant	The construction handover date can be reduced if current Architect executes Stage 4	Project Management	S. Ishmail		3	3	13	Low
007	Quantity Surveyor Oversight	Quantity Surveyor Oversight required	5	6	51	Significant	Quantity Surveyor to continue with Stages 3, 5 and 6 and ommitted from D&B team	IDT	D. Bonga		4	4	16	Low
009	Quantity of Asbestos Elements	Asbestos The Asbestos assessment indicated that certain building elements tested positive for Asbestos. The removal of the Asbestos during the demolition process would need an AIA to be involved.	8	6	68	High	AIA to be informed and a registered Asbestos removal contractor to be appointted to manage the Asbestos removal.	H&S Agent	S. Julies		3	3	13	Low
010	Demolition	The approval process by DPWI for demoltion must still be done.	8	8	84	High	DPWI to fast-track	DPWI	S. Ishmail		3	5	29	Medium