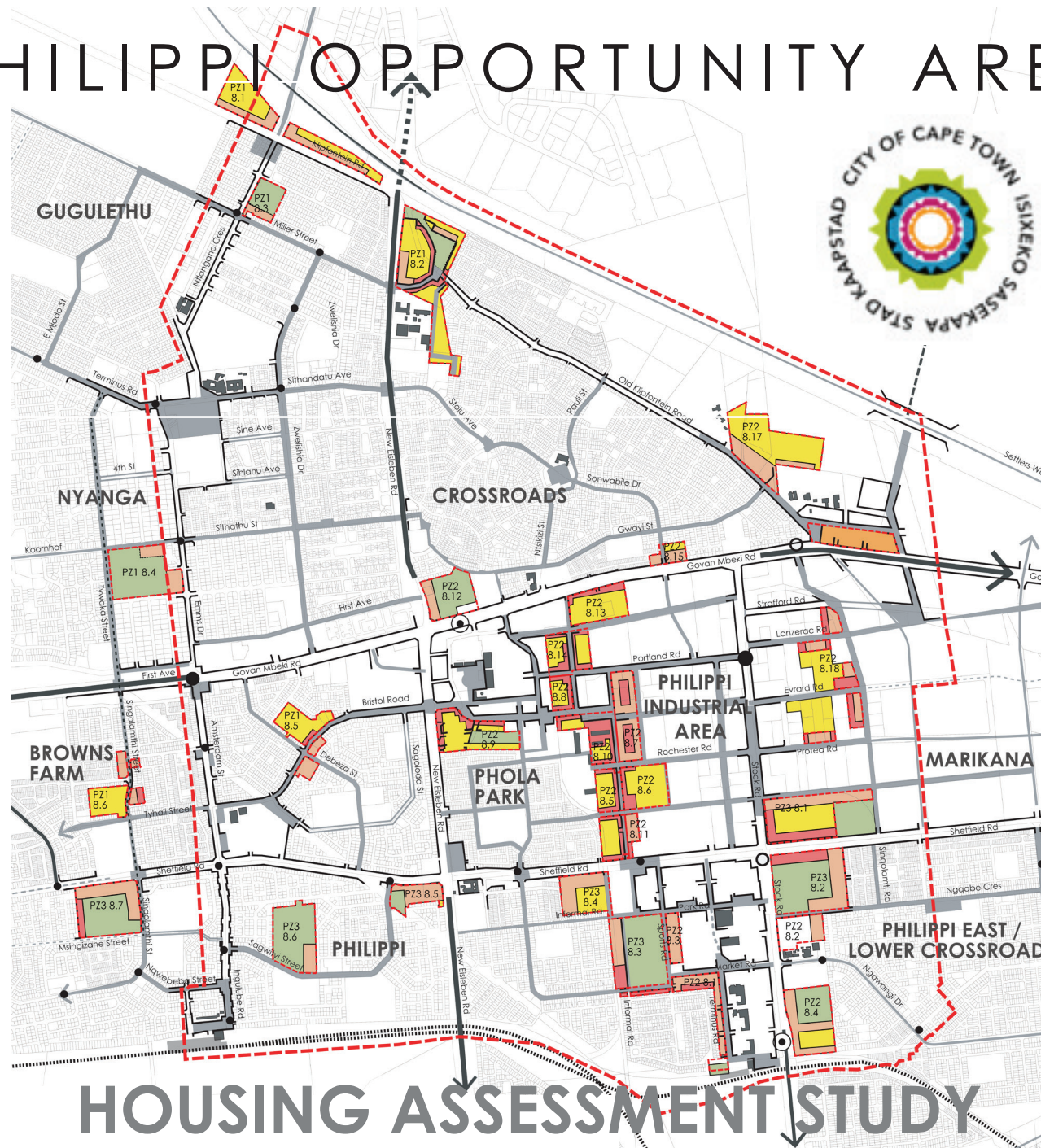


PHILIPPI OPPORTUNITY AREA



FINAL SUMMARY REPORT | JUNE 2022

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TABLE OF CONTENTS

1. PROJECT INTRODUCTION AND BACKGROUND	8	4. UPDATED POA HOUSING FRAMEWORK	44
1.1. PROJECT PROCESS AND METHODOLOGY	10	4.1. HOUSING OPPORTUNITIES PER PRIORITY ZONE	46
1.2. PHILIPPI OPPORTUNITY AREA REGENERATION FRAMEWORK	13	4.1.1. PRIORITY ZONE 1 (PZ1) NORTH- SOUTH ACTIVITY SPINE	46
1.2.1. PRIORITY INVESTMENT ZONES	15	4.1.2. PRIORITY ZONE 2 (PZ 2) TOWN CENTRE	48
1.2.2. FUTURE INVESTMENT AND DEVELOPMENT IN THE POA	15	4.1.3. POA PRIORITY ZONE 3 (PZ 3) WEST EAST GREEN SPINE	51
1.2.3. APPROACH TO HOUSING DEVELOPMENT IN THE POA	18	4.2. HOUSING OPPORTUNITIES BY TYPE	53
2. ABOUT THE POA	20	4.2.1. SITE & SERVICE- ROW HOUSING OPPORTUNITIES	54
2.1. CITY'S HOUSING DATABASE	21	4.2.2. 2/3 WALK-UP DUPLEX HOUSING OPPORTUNITIES	55
2.2. PLANNED HOUSING PROJECTS	22	4.2.3. PERIMETER WALKUP HOUSING OPPORTUNITIES	56
2.3. LAND OWNERSHIP	23	4.2.4. INFILL AND MICRO DEVELOPMENT HOUSING OPPORTUNITIES	57
2.4. LAND STATUS	24	4.2.5. HOUSING OPPORTUNITIES IN RELATION TO KNOWN DEMAND	58
2.5. EXISTING FORM & CHARACTER OF HOUSING IN THE POA	25	4.3. POA HOUSING INFILL ZONE	59
3. PREPARATORY AND SUPPORTING INVESTIGATIONS TO INFORM THE HOUSING ASSESSMENT PROCESS	26	5. TOWARDS IMPLEMENTATION	60
3.1. HOUSING SECTOR INPUTS ON APPROACHES TO HOUSING TYPOLOGIES AND IMPLEMENTATION IN THE POA	27	5.1. HIGH LEVEL COST ESTIMATE	61
3.2. SITE DEFINITION AND SELECTION CRITERIA	29	5.2. IMPLEMENTATION AND PROJECT PACKAGING	61
3.3. POA HOUSING DESIGN APPROACH	30	5.2.1. PROJECT PHASING AND PRIORITISATION	62
3.3.1. SUPPORTING SPATIAL INTEGRATION AND STRUCTURE	31	5.2.2. POA HOUSING PROJECT IMPLEMENTATION LEADERS	66
3.3.2. APPROACH TO STREET DESIGN	32	5.3. CONCLUSION AND NEXT STEPS	68
3.3.3. APPROACH TO DEVELOPMENT BLOCK DESIGN	34	ANNEXURES	70
3.4. SITE ASSESSMENT AND SCREENING	40	ANNEXURE A: HOUSING TYPOLOGY AND DEVELOPMENT BLOCK INVESTIGATION	72
3.4.1. ENVIRONMENTAL ASSESSMENT	41	ANNEXURE B: TECHNICAL ASSESSMENT AND HOUSING DEVELOPMENT RECOMMENDATION SUMMARIES PER SITE	74
3.4.2. ENGINEERING SERVICES ASSESSMENT	41	ANNEXURE C: WETLAND ECOLOGICAL QUALIFICATION REPORT	76
		ANNEXURE D: HIGH LEVEL IMPLEMENTATION COSTING	78

LIST OF FIGURES

FIGURE 1. POA SITE BOUNDARY	10	FIGURE 26. 20M ROAD RESERVE	33
FIGURE 2. POA HOUSING ASSESSMENT STUDY PROJECT PHASES AND SCOPE OF WORK	11	FIGURE 27. 40M ROAD RESERVE	33
FIGURE 3. POA REGENERATION THEMES	13	FIGURE 24. 14M ROAD RESERVE	33
FIGURE 4. POA REGENERATION CONCEPT	14	FIGURE 23. 8M ROAD RESERVE	33
FIGURE 5. PRIORITY ZONES FOR IMPLEMENTATION FROM THE POA REGENERATION FRAMEWORK (2020)	15	FIGURE 25. 16M ROAD RESERVE	33
FIGURE 6. POA REGENERATION FRAMEWORK	16	FIGURE 28. 10M ROAD RESERVE	33
FIGURE 7. PROPOSED HOUSING MIX AND LOCATION - POA REGENERATION FRAMEWORK (2020)	18	FIGURE 29. STRUCTURING THE DEVELOPMENT BLOCK TO ACCOMMODATE A RANGE OF BUILDING TYPOLOGIES	34
FIGURE 8. ESTIMATED HOUSING POTENTIAL- POA REGENERATION FRAMEWORK	19	FIGURE 30. PHASED IMPLEMENTATION WITH PRIORITISATION OF THE EXTERNAL EDGES OF THE DEVELOPMENT BLOCK . (DRAWING REFERENCE: KELVIN CAMPBELL / MASSIVE SMALL)	34
FIGURE 9. POA HOUSING WAITING LIST	21	FIGURE 31. TYPICAL DEVELOPMENT BLOCKS & PROPOSED HOUSING TYPOLOGIES IN THE POA	35
FIGURE 10. PLANNED HOUSING PROJECTS	22	FIGURE 32. PRECEDENT EXAMPLE: BITPROB. ERVEN SIZE DESIGNED TO ENABLE MICRO-DEVELOPMENT. DRAWING REFERENCE: BITPROP36	36
FIGURE 11. LAND OWNERSHIP	23	FIGURE 33. OPTIMAL ERVEN CONFIGURATION TO ACHIEVE HIGHER DENSITIES THROUGH PHASED IMPLEMENTATION	36
FIGURE 12. LAND STATUS	24	FIGURE 34. SUPPORTING PHASED IMPLEMENTATION & MULTIPLE HOUSING TYPOLOGY OPTIONS	36
FIGURE 13. EXISTING HOUSING TYPOLOGIES	25	FIGURE 35. CONTINUITY OF STREET EDGE: AT LEAST 60% OF THE BUILDING FOOTPRINT SHOULD BE PLACED ON OR WITHIN 2M THE STREET FRONTING PROPERTY BOUNDARY TO ENSURE STREET AND SPACE ENCLOSURE AND CONTINUITY IN THE STREET FACADE	37
FIGURE 15. DISTRIBUTION OF RESIDENTIAL PROPERTIES BY MARKET SEGMENT BY KECIA RUST (CENTRE FOR AFFORDABLE HOUSING FINANCE)	28	FIGURE 36. POSITIVE STREET CONDITIONS: LOCATION OF BUILDINGS TO THE FRONT OF PLOTS ALONG THE STREET BOUNDARY EDGE	37
FIGURE 16. EXAMPLES OF MICRO DEVELOPER LED HOUSING BY ZAMA MGWATYU (DEVELOPMENT ACTION GROUP)	28	FIGURE 37. POSITIVE STREET CONDITIONS: LOCATION OF PARKING TO THE REAR OF THE PLOT WITH THE BUILDING ALONG THE STREET EDGE	37
FIGURE 17. ENABLING IMPLEMENTATION BY JOHN SPYROPOULOS	28	FIGURE 38. HIGH DESITY OPTIONS TO EDGE OPEN SPACES	38
FIGURE 18. EXAMPLE OF MICRO DEVELOPER LED HOUSING - CHARLES RUDMAN (ON BEHALF OF CCT- HOUSING DEPARTMENT)	28	FIGURE 39. HIGH DENSITY TYPOLOGIES ON STRUCTURING ROUTES	38
FIGURE 19. DESIGN APPROACH FOR THE PLANNING AND DESIGN OF THE POA HOUSING SITES	30	FIGURE 40. HIGH DENSITY TYPOLOGIES AT PUBLIC FACILITIES	38
FIGURE 20. EXAMPLES OF HOUSING LAYOUTS STRUCTURED TO INTEGRATE WITH ITS SURROUNDS	31		
FIGURE 22. PASSIVE SURVEILLANCE FROM BALCONIES	32		
FIGURE 21. SUPPORTING ACTIVE AND SURVEILLED STREETS	32		

LIST OF FIGURES

FIGURE 41. MULTI-STOREY TYPOLOGIES OVERLOOKING SCHOOLS OR SPORTS FACILITIES CREATING SAFETY THROUGH SURVEILLANCE WHILST ACTIVATING SURROUNDING STREETS	39	FIGURE 63. WALK-UP DUPLEX HOUSING: TYPICAL BLOCK LAYOUT	55
FIGURE 42. PRECEDENT EXAMPLE: Ithemba Labantu, Philippi. Mixed Use Sports and Retention Pond Facility. Drawing Reference: Design Africa Architects	39	FIGURE 64. HOUSING TYPOLOGY BY TYPE: WALK-UP DUPLEX	55
FIGURE 43. SITE ASSESSMENT AND SCREENING SHEET EXAMPLE	40	FIGURE 65. PERIMETER BLOCK AREA AND YIELDS SUMMARY TABLE	56
FIGURE 44. SITE DEVELOPMENT SCENARIO SHEET EXAMPLE	40	FIGURE 66. PERIMETER BLOCK TYPICAL BLOCK LAYOUT	56
FIGURE 45. BULK WATER AND SEWER SERVICES (DRAWING PROVIDED BY JOHTAS CONSULTING)	42	FIGURE 67. HOUSING TYPOLOGY BY TYPE: PERIMETER BLOCK	56
FIGURE 46. ELECTRICAL SUPPLY (DRAWING PROVIDED BY JOHTAS CONSULTING)	43	FIGURE 68. MICRO-DEVELOPMENT / INFILL: AREA AND YIELDS SUMMARY TABLE	57
FIGURE 47. TOTAL POA HOUSING OPPORTUNITIES PER PRIORITY ZONE	45	FIGURE 69. MICRO-DEVELOPMENT / INFILL TYPICAL BLOCK LAYOUT	57
FIGURE 48. UPDATED POA HOUSING FRAMEWORK	45	FIGURE 70. HOUSING TYPOLOGY BY TYPE: MICRO-DEVELOPMENT / INFILL	57
FIGURE 49. PZ1: NORTH SOUTH ACTIVITY SPINE	46	FIGURE 71. HOUSING OPPORTUNITIES IN RELATION TO KNOWN DEMAND	58
FIGURE 50. PZ1 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE	47	FIGURE 72. UPDATED HOUSING FRAMEWORK WITH PROPOSED HOUSING INFILL ZONE	59
FIGURE 51. PZ2: TOWN CENTRE	48	FIGURE 73. PROJECT PHASING- SHORT TERM	62
FIGURE 53. PZ2 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE	50	FIGURE 74. PROJECT PHASING- SHORT TO MEDIUM AND MEDIUM TERM IMPLEMENTATION	63
FIGURE 54. PZ3: EAST-WEST GREEN SPINE	51	FIGURE 75. PROJECT PHASING MEDIUM TO LONG TERM	64
FIGURE 55. PZ3 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE	52	FIGURE 76. PROJECT PRIORITY- SHORT TERM PHASING /FAST TRACK PROCESS	65
FIGURE 56. SITE AND SERVICE / SEMI DETACHED AREA AND YIELDS SUMMARY TABLE	53	FIGURE 77. PROJECT PRIORITY- SHORT TO MEDIUM TERM PHASING/ HIGH PRIORITY	65
FIGURE 57. SITE AND SERVICE / SEMI DETACHED HOUSING - TYPICAL BLOCK LAYOUT	53	FIGURE 78. PROJECT PACKAGING- PROPOSED LAND ACQUISITION BY CCT	66
FIGURE 58. HOUSING TYPOLOGY BY TYPE : SITE AND SERVICE / SEMI DETACHED	53	FIGURE 79. PROJECT PACKAGING- CCT IMPLEMENTATION SITES WITH EXISTING INFORMAL SETTLEMENTS	67
FIGURE 59. SITE AND SERVICE / ROW HOUSING AREA AND YIELDS SUMMARY TABLE	54	FIGURE 80. PROJECT PACKAGING- PRIVATE OWNER LED IMPLEMENTATION SITES	67
FIGURE 60. SITE AND SERVICE / ROW HOUSING: TYPICAL BLOCK LAYOUT	54	FIGURE 81. PROJECT PACKAGING- WCPG LED IMPLEMENTATION SITES	67
FIGURE 61. HOUSING TYPOLOGY BY TYPE: SITE AND SERVICE / ROW HOUSE	54	FIGURE 82. PROJECT PACKAGING- CCT IMPLEMENTATION SITES: VACANT AND UNDERUTILISED	67
FIGURE 62. WALK-UP DUPLEX HOUSING AREA AND YIELDS SUMMARY TABLE	55		

LIST OF PHOTOGRAPHS

PHOTO 1. VARIOUS IMAGES DEPICTING THE RANGE OF CHALLENGES TO BE ADDRESSED IN SUPPORTING THE REGENERATION OF THE POA	9
PHOTO 2. MAU MAU HOUSING DEVELOPMENT: EXAMPLE OF CURRENT LOW DENSITY 37 UNITS/HA	25
PHOTO 3. STOCK ROAD HOUSING- PHASE 1: EXAMPLE OF HIGH DENSITY	25
PHOTO 4. CROSSROADS HOUSING DEVELOPMENT: EXAMPLE OF MEDIUM DENSITY 67 UNITS/HA	25
PHOTO 5. HOUSING IMPLEMENTATION WORKSHOP	27
PHOTO 6. PRECEDENT EXAMPLE: KUYASA STATION,PUBLIC SPACE ACTIVATION	31
PHOTO 7. PRECEDENT EXAMPLE: JOE SLOVO, PLAY PARK	31
PHOTO 8. PRECEDENT EXAMPLE: DROMMEDARIS, PLAY PARK	31
PHOTO 9. PRECEDENT EXAMPLES: DISTRICT SIX	32

1. PROJECT INTRODUCTION AND BACKGROUND

A multidisciplinary team, led by Ian Rout, was appointed by the City of Cape Town's Urban Catalytic Investment (UCI) and Human Settlement Directorates to undertake a **Housing Assessment** for the Philippi Opportunity Area (POA). The POA is one of three prioritised catalytic precincts in the City of Cape Town which seeks to target investment that supports inclusive economic growth and sustainable regeneration. Whilst Philippi is an area of high social deprivation, unemployment, and socio-economic vulnerability; it is considered one of Cape Town's poorest and most dangerous suburbs. However, Philippi also holds significant potential due to its central location in the Metro, amongst other locational attributes, its proximity to surrounding industrial areas, the Philippi Horticultural Area, and the Cape Town International Airport.

This study is a continuation and a more in-depth investigation of the work previously undertaken as part of the POA Regeneration Framework. It was completed in 2020, with a key objective of the study being to guide future investment in the area to set the site on a path for inclusive, thriving and resilient growth. A series of multi-sector interventions and projects were identified to help address a range of cross-cutting issues and challenges, including the need for increased and sustainable forms of housing in the POA. Several potential housing opportunities were identified in the POA Regeneration Framework, and in alignment with the vision to support transit-orientated development (TOD) and promote economic growth, it includes various housing options with an emphasis on high-density, mixed-use typologies. It was recognised in the study that a conventional housing delivery programme would not enable the proposed housing vision. This relates to the high-density nature of the proposed housing typologies, which are difficult to achieve within the framework of available state subsidy funding streams. Some of the proposed housing sites are either in private ownership or under-utilised land parcels requiring a change in use or zoning.

To take the high-level housing findings of the POA Regeneration Framework forward, a more detailed planning investigation was commissioned to **confirm the identified housing potential** and to identify the steps and processes required to support its future implementation.

The study area boundaries of the POA and housing assessment are identified in the adjacent images provided.

The team appointed to complete the study is as follows:

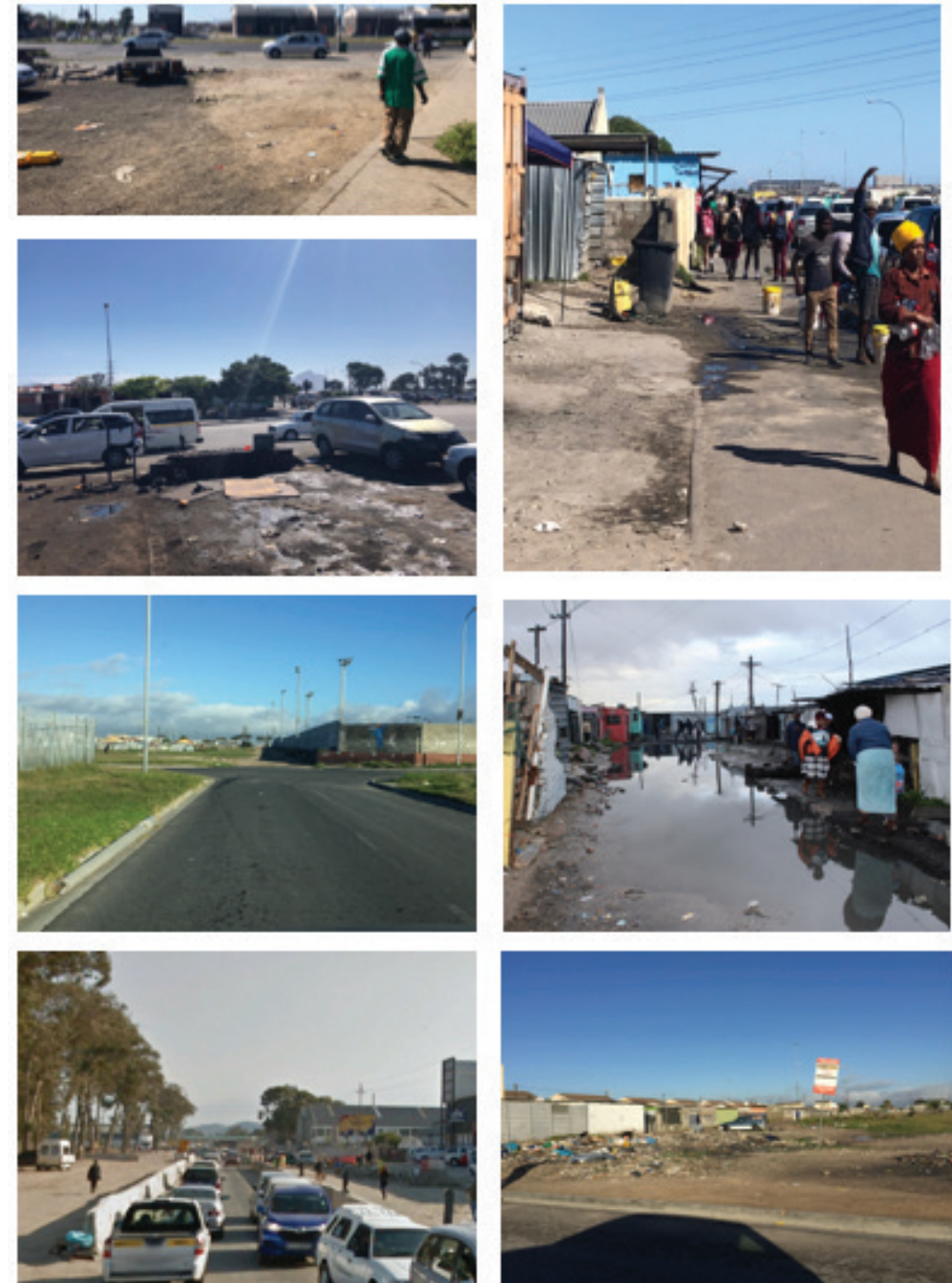


PHOTO 1. VARIOUS IMAGES DEPICTING THE RANGE OF CHALLENGES TO BE ADDRESSED IN SUPPORTING THE REGENERATION OF THE POA

- Ian Rout- Team leader and Housing sector specialist
- Bobby Gould Pratt (GAPP Architects and Urban Designers) - Urban Design and Architecture
- Evan Arendse (Built Environment Partnership) - Project Management, Engineering and Town Planning
- Jeremy Rose (Infinity Environmental) - Project Management and Environment

1.1. PROJECT PROCESS AND METHODOLOGY

As indicated in the adjacent table, the study was completed in four phases, with the critical tasks of the study including:

1. **A Housing demand and needs assessment**
2. **Review of the proposed housing sites** identified in the POA Regeneration Framework to confirm their land availability, ownership and associated housing typologies and yields;
3. **Town planning, environmental screening and Infrastructure assessment** to confirm possible development constraints on the various identified potential housing in the POA
4. **Stakeholder mapping exercise** with the identification of potential role players/partners and stakeholders to assist with the delivery of high-density, mixed-use housing typologies
5. **Implementation and delivery framework**, including the packaging of the potential housing projects with the identification of the potential project custodians owners for each site as well as the completion of a prioritisation/sequencing matrix and an Indicative Implementation programme;
6. **High level costing** to support capital budgeting processes; and
7. **Summary Report** including synthesis of all the key proposals and findings of the project.

The structure of this report is as follows:

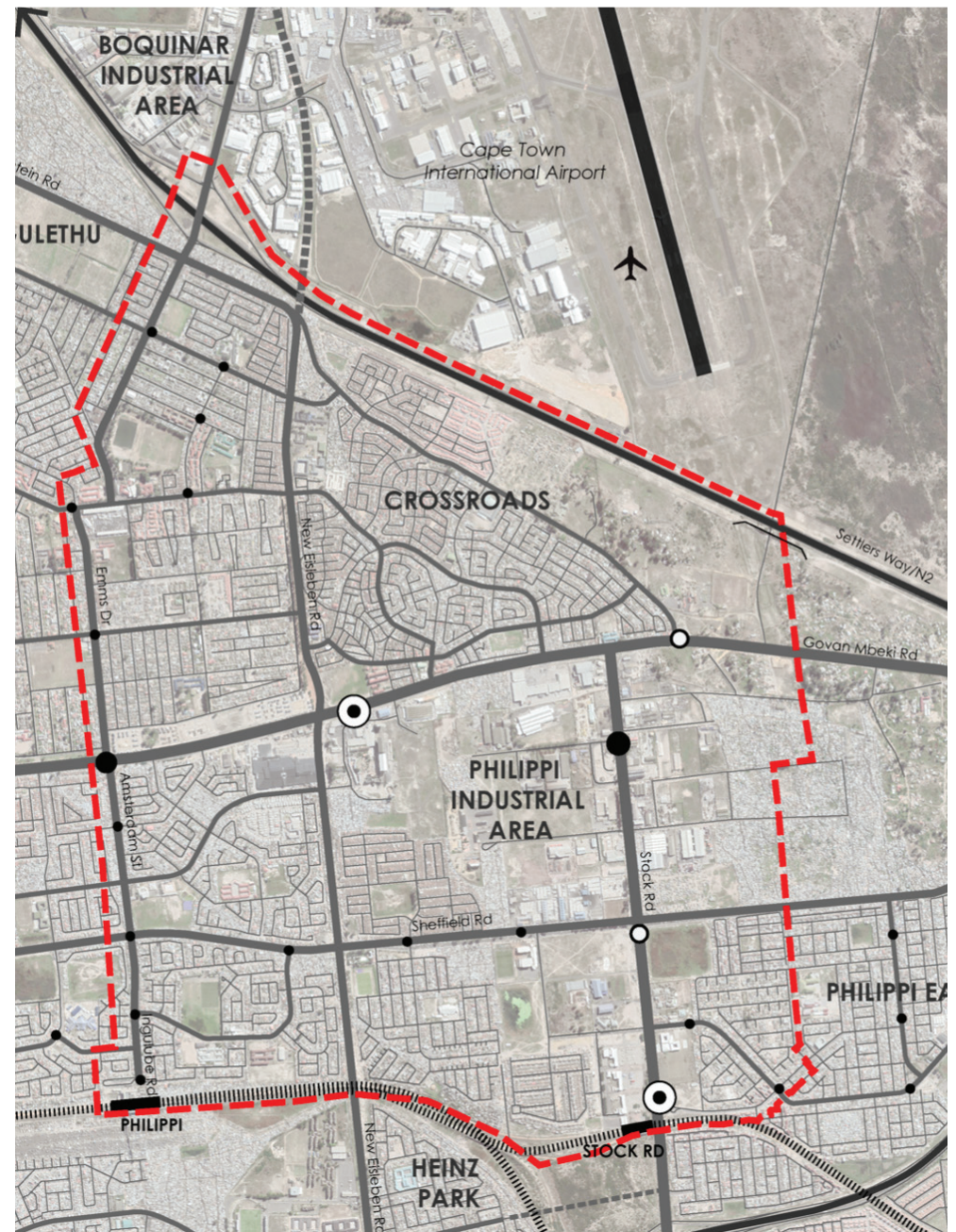


FIGURE 1. POA SITE BOUNDARY

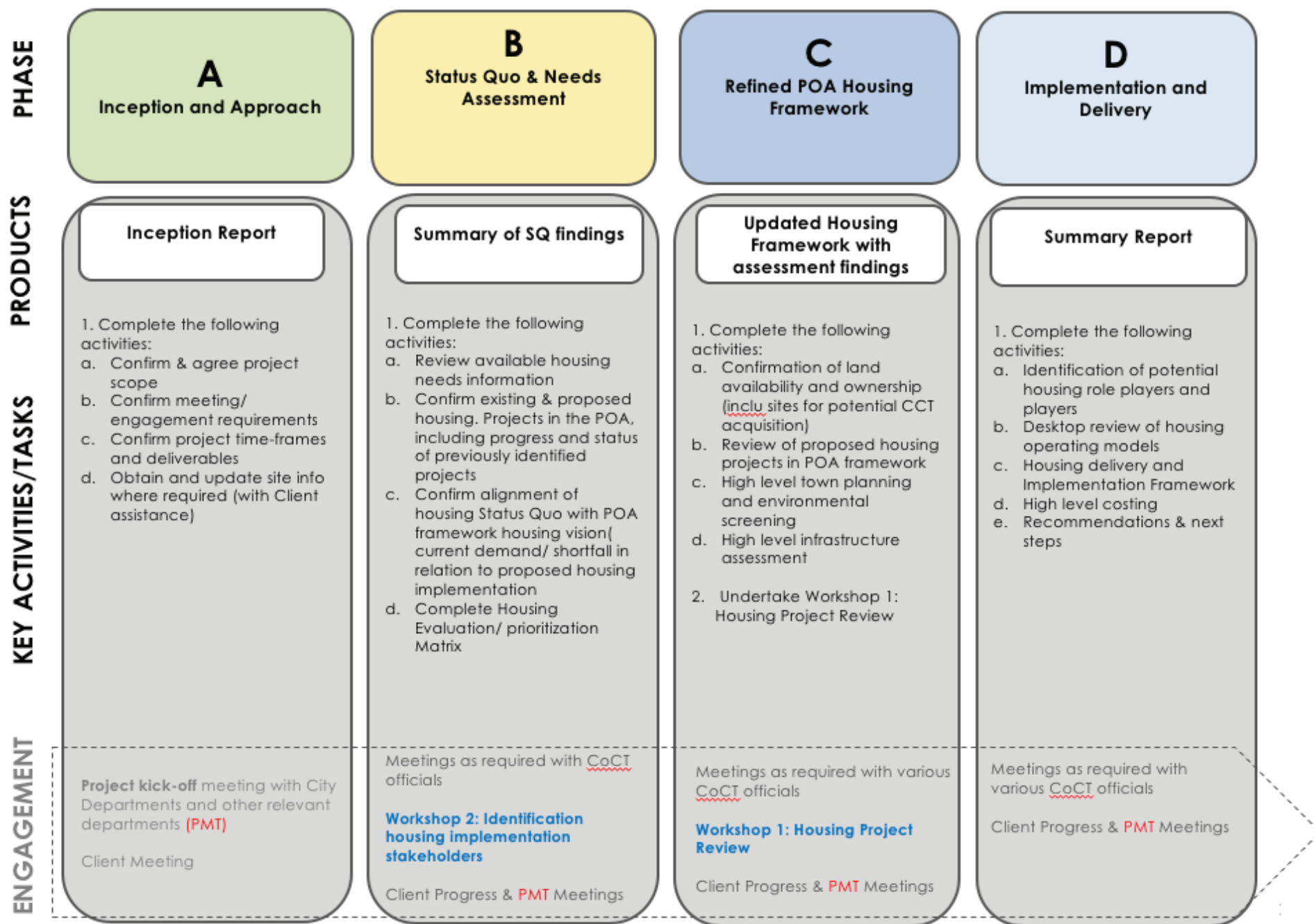


FIGURE 2. POA HOUSING ASSESSMENT STUDY PROJECT PHASES AND SCOPE OF WORK

Section 1 provides an introduction and background to the project as well as a summary of the POA Regeneration Framework- a previous study that forms the basis for the POA Housing study

Section 2 provides an overview of housing in the POA area that includes information from the CCT housing database, confirmation of property ownership and status for the potential POA housing sites as well as a description of the form and character of existing housing in the POA.

Section 3 relates to the preparatory investigations that were undertaken to support the completion of the updated Housing Framework, including summaries of the technical site assessments, housing typology review, development guidelines and engagements with affordable housing experts

Section 4 comprises the updated POA housing framework and provides a description of the various locations identified for housing, the recommended form and layout of potential housing as well as recommendations on timeframes and steps required to prepare the various sites for implementation.

Section 4 provides a summary on approaches to support future implementation of the identified housing projects. It includes a high level cost estimate, recommendations on phasing as well as the next steps required to progress the findings of the study and realise the implementation of housing in the POA by a range of housing implementation partners.

1.2. PHILIPPI OPPORTUNITY AREA REGENERATION FRAMEWORK

A high-level summary and overview of the POA Regeneration Framework is provided below. The proposals in this previously completed study form the departure for the more detailed POA Housing Assessment.

The POA Regeneration Concept, gives guidance to an area larger than the POA study area boundary. As many of the solutions for supporting its transformation are closely connected to its surrounding context, including supporting improved linkages to adjacent growth areas, including the future expansion of the airport (aerotropolis), the addition of agricultural activities in the Philippi horticultural area (PHA) and the future development of the greenfields Swartklip site in the Mitchells Plain/Khayelitsha Metro node.

The POA Regeneration Framework is framed around eight regeneration themes that support the City's strategic intent to transform the POA into a transit-orientated development node while also keeping its redevelopment into an inclusive, thriving and resilient centre within the broader Cape Town Metro. These wide-ranging themes are cross-cutting and relate to building on the strengths and opportunities associated with the POA and addressing a variety of challenges limiting its growth potential and the quality of life for those living and working in the area. These themes are outlined in the adjacent table and relate to the following:

- Building on the **strategic location** of the POA and supporting improved access to growth areas surrounding the POA like the Airport and the PHA;
- Supporting **growth and investment** with an improved spatial structure and logic for investment within its existing and emerging activity nodes ;

INCLUSIVE	THEME 1: Introducing Structure and Hierarchy Providing a clear development logic for future investment THEME 2 : Safe and Vibrant Streets Introducing improvements to the spatial environment to create safer neighbourhoods to live, work and visit THEME 3: Active and Mixed Use Community Centres Transforming community and sports facilities into high quality, vibrant, mixed use neighbourhood centres that are active throughout the day and evening while serving a broad range of users	
	THEME 4: Creating a Legible Town Centre and Heart for the POA Clarifying the role of the Philippi nodes with the clustering of and inclusion of a range of offerings to support everyday community needs as well as visitors and investors to the POA THEME 5: Supporting Existing, Emerging and New Industries Steps to broaden and strengthen the economic base of the POA THEME 6: Strengthening Character and Identity Creating a unique sense of place and identity that celebrates the natural, social and built features of the POA	
	THEME 7: Diversification of the Land Use Mix Supporting the move from an industrial node to an active, vibrant and high density/ mixed use urban centre THEME 8: An Integrated and Multi-functional Green Network Optimising available open spaces to address a range of social and ecological needs within the POA	
THRIVING		
RESILIENT		

FIGURE 3. POA REGENERATION THEMES

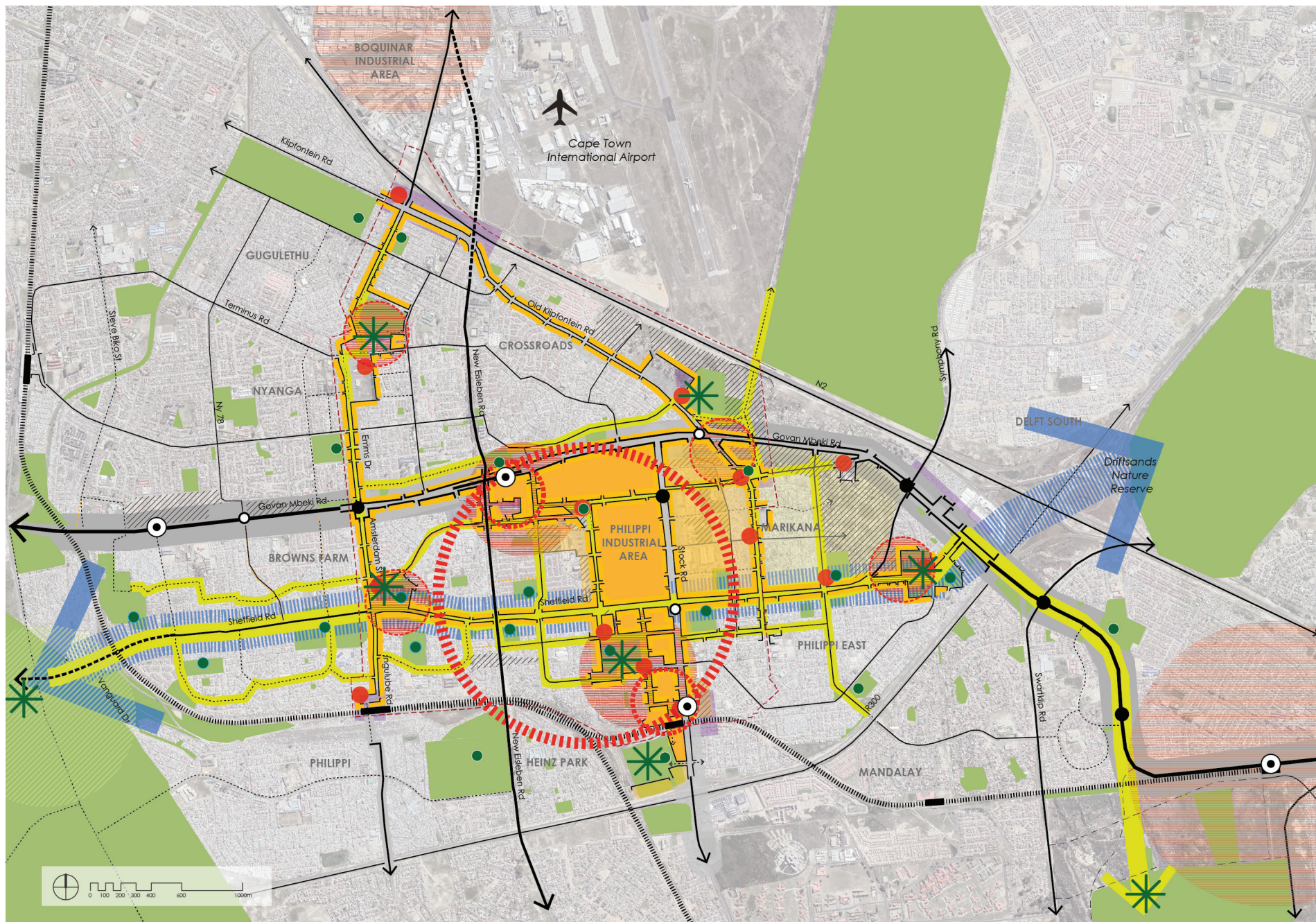


FIGURE 4. POA REGENERATION CONCEPT

- Addressing the existing poor **environmental conditions** within the POA with proposals for improved stormwater management and options to improve the character, quality and performance of existing open spaces;
- Addressing **social and community needs** with proposals that address the underprovision of education, sporting and social facilities;
- Supporting improved **access and movement to and within the POA** with a focus on enabling the development of safe and walkable street environments; and
- **Diversifying the land use mix**, including identifying vacant and underutilised land parcels for infill development.

The POA housing study supports and is an expansion of **Theme 7: Diversification of the Land Use Mix**.

1.2.1. PRIORITY INVESTMENT ZONES

Three Priority Investment Zones were identified in the POA Regeneration Framework (2020) to support a coherent and logical sequencing of projects. Each of the identified priority zones has a specific focus and character, which are as follows:

Priority Zone 1: creating a gateway to the POA, supporting the improved spatial connection between the NUNU town centre and the Philippi Station and strengthening the high street operations along with Emms, Amsterdam and Ingulube Streets;

Priority Zone 2: establishing the town centre of the POA, which includes its intensification and diversification of activity as well as supporting improved connection and functioning between its nodes;

Priority Zone 3: Addressing the stormwater and amenity challenges of the POA, with the upgrading of Sheffield as a multifunctional green spine

Within all the Priority Zones, a suite of projects was identified that would support catalytic change and regeneration. Projects from various sectors have been intentionally clustered within the Priority Zones to support integrated outcomes. A range of potential housing projects was identified in each of the Priority Zones with the intention

that the necessary supporting projects to make sustainable and dignified living environments will be implemented in conjunction with housing implementation.

1.2.2. FUTURE INVESTMENT AND DEVELOPMENT IN THE POA

The Regeneration Framework, as indicated in “POA REGENERATION FRAMEWORK” on page 16 outlines the location for future investment and development with the POA with the

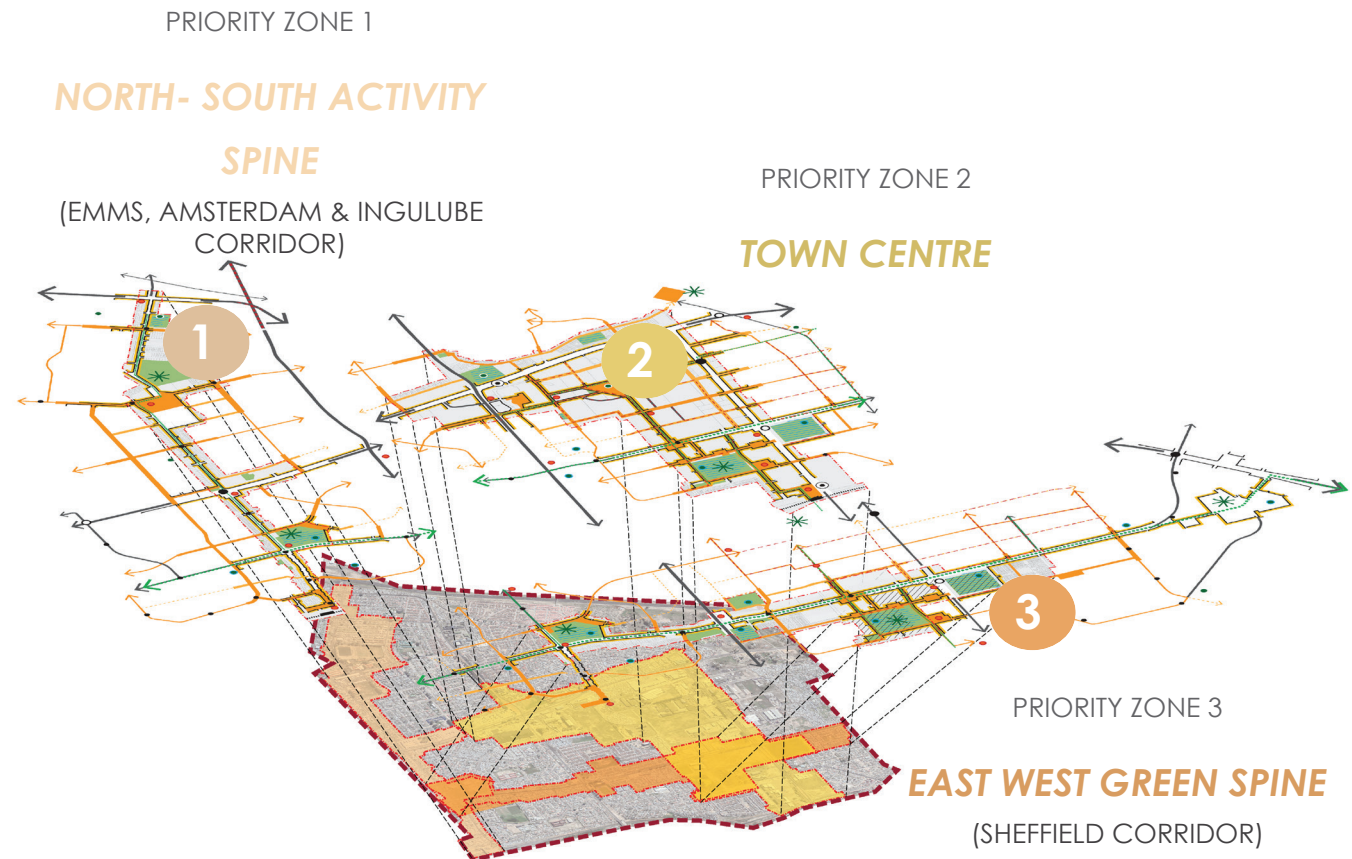


FIGURE 5. PRIORITY ZONES FOR IMPLEMENTATION FROM THE POA REGENERATION FRAMEWORK (2020)



FIGURE 6. POA REGENERATION FRAMEWORK

PROPOSED PUBLIC FACILITIES

Major Sports & Recreation Nodes	4
Local Sports Facilities, Parks & Food Gardens	17
Markets & Informal trading hives	13
Proposed ECD Centre	1
Proposed Primary Schools	1
Proposed Secondary Schools	2
Proposed Skills Development Centres	5
Proposed District Hospital	1
Proposed Health Care Facilities (Clinics)	2
Planned Regional Library & Relocation	1
Proposed Police Station	1
Proposed Fire Station	1
Proposed Post Office	3

LAND USE

Use	Area (sqm)	Area (ha)
Multi - functional Green Open Space (including Stormwater retention)	521448,89	52,14
Town Centre Core - High Intensity/ Mixed Use	668173,55	66,82
MU Industrial	323250,97	32,33
MU Residential	443910,85	44,39
In situ Upgrading	258545,58	25,85
Retail/Commercial Consolidation	237176,30	23,72

recommended distribution and intensification of land use activities. The framework includes a mix and range of development, including:

- new and infill residential development that provides various mixed-use housing typologies for a range of income groups
- new and infill industrial space, including formal and informal opportunities;
- retail and commercial areas, including formal and informal opportunities;
- new and upgrades to existing public and community facilities,
- provision of new and upgraded open and recreation areas

A mixed-use and integrated approach are recommended for all new and infill development in the POA. Vacant land is limited and therefore requires development approaches that support multi-functional, integrated and transversal methodologies to improve service delivery and promote regeneration in the POA. A targeted approach to regeneration is proposed with changes primarily focused on key structuring routes, activity nodes (new and existing) and within the Town Centre. The intensification and form of new and upgraded development across the POA will assist in creating a specific character and identity for the area that builds on the site's existing assets, including the existing well-established Philippi- East industrial area.

Changes to the movement network include new and upgraded streets, particularly in the town centre, where missing links are proposed to create a more refined grain movement network and land parcels that can be developed for mixed-use development. New NMT routes and safe streets within the POA are provided to support safe and convenient access within the POA, with priority being given to supporting improved access to key public facilities and amenities.

The breakdown of the recommended land use mix for the POA is provided above, showing a greater diversification of activities, including increased housing opportunities. The intention is to retain and support existing industrial activities while supporting the transition of the POA into a transit-orientated precinct.

The framework also provides direction on the future restructuring of the Marikana informal settlement by providing a spatial logic that promotes improved integration and links between it and the POA.

1.2.3. APPROACH TO HOUSING DEVELOPMENT IN THE POA

A total of 17 sites for potential housing development were identified for new and infill housing within the POA Regeneration Framework. A total of 78ha with an estimated **6400 potential housing opportunities** was identified.

Many of the potential housing projects identified in the matrix are dependent on other sector investigations, including:

- **POA Stormwater Investigation** to confirm options for improved stormwater management within the POA. Several underutilised and vacant sites within the POA have been identified for potential housing infill, but the extent and scale of the housing opportunity are dependent on the area required to manage flooding in the POA better; and
- **Sheffield Road Study** to confirm the required upgrades to the road. The form and extent of potential road widening will influence options to introduce mixed-use high-density development options along Sheffield Road.

A range of potential housing options were proposed, including mixed-use and high-density housing typologies. The inclusion of high-density typologies relates to the need to maximise the central location of the POA within the City, its proximity to many surrounding economic generators and the extensive levels of the existing infrastructure investment. The estimated 6400 potential new housing opportunities are based on the following typologies:

- Multistorey development (5-7 storey)
- 3/4 Perimeter Block Development
- 2/3 Storey Walkups



FIGURE 7. PROPOSED HOUSING MIX AND LOCATION - POA REGENERATION FRAMEWORK (2020)

- Single and double storey walkups
- Single units

A breakdown of the potential housing projects with a description of their location, size, type and number of units is provided overleaf in the adjacent table.

These housing proposals form the basis for confirming the housing potential and recommendations for future implementation, The proposed form and mix of housing typologies will be reviewed as well as confirming any potential development limitations on the identified housing sites.

Project	Project Description	Proposed Housing Typology	Brl Number	Site Size (Ha)	Average Du/Ha (net)
PRIORITY ZONE 2 : TOWN CENTRE					
Project Cluster A - Stock Road Station Node					
P2.2A	8.1: New MU high density housing on Teminus/ Market Road	New MU high density housing on vacant/ public land. 2/3 storey walkups with positive frontage onto public street and ground floor retail/ urban manufacturing where along Teminus Road (Brl 5268 Focus Area 2)	2/3 Storey Walkup	Brl 5268	2,24 220
P2.2A	8.2: Stock Road MU Infill housing	Development of MU Infill housing along Stock Road integrated with Beautiful Gate, above existing Police Station	MU'storey development	Brl 3719	1,75 350
P2.2A	8.3: Joe Gabi Station MU Infill housing	Development of MU Infill housing along Stock Road above the existing long distance bus terminus	MU'storey development	Brl 5268	1,03 350
P2.2A	8.4: Stock Road MU Infill housing	New MU high density on Vacant/ public land with a positive interface onto Stock Road. Potential site for CCT Infill housing.	3/4 Perimeter Block Development	Brl 3842	3,88 240
Project Cluster B - Philippi Village Node					
P2.2B	8.12: New Boleben/ Mau Mau Consolidation	New MU high density housing on vacant/ public land. 2/3 storey walkups with positive frontage onto public streets and ground floor retail	2/3 Storey Walkup	Brl RE/2849 & Brl 70	0,61 220
P2.2B	8.13: MU Infill Upgrade	Infill upgrade to existing informal settlement with MU high density housing	Single and double storey walkups	Brl 20193, Brl RE/64 & Brl 65	2,43 80
P2.2B	8.14: MU Infill Housing 3	MU High Density Housing on privately owned land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 592, Brl 20194 & Brl 20918	3,56 220
P2.2B	8.15: MU Infill Upgrade	Infill upgrade to existing informal settlement with MU high density housing	Single and double storey walkups	Brl 2902 & Brl 5287	0,69 80
Project Cluster C - Town Centre Core					
P2.2C	8.5: Sheffield Road 2 Infill Upgrade	Upgrade of existing informal settlement with MU high density housing and a positive interface onto Sheffield Road and the New Town Centre Linking route	Single and double storey walkups	Brl 90, Brl 96, Brl 95, Brl 89 and Brl 20205	3,01 80
P2.2C	8.6: MU Infill Housing 1	MU High Density Housing on privately owned land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 20196 and 631	2,77 220
P2.2C	8.7: MU Infill Housing 2	MU High Density Housing on privately owned land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 104, Brl 105, Brl 108, Brl 107 and RE/20858	1,92 220
P2.2C	8.8: MU Infill Upgrade	Infill upgrade to existing informal settlement with MU high density housing	Single and double storey walkups	Brl 20194 and Brl 72	0,92 80
P2.2C	8.9: MU Infill Upgrade	Infill upgrade to existing informal settlement with MU high density housing	Single and double storey walkups	Brl 12718	1,34 80
P2.2C	8.10: MU Infill Housing 3	MU High Density Housing on publically owned land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 20206	3,17 220
P2.2C	8.11: MU Infill Housing 3	MU High Density Housing on privately owned land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 20918	3,22 220
Project Cluster D - Old Klipfontein Road Spine					
P2.2D	8.16: MU Infill Housing 1	MU High Density Housing adjacent to Crossroads public space & heritage memorial on vacant land	Mixture of typologies- 2/3 storey walkups & 3/4 perimeter block development	Brl 113205, Brl 113204, Brl 113201 & Brl 161572	2,49 220
P2.2D	8.17: Marikana Transition Development	Development of vacant land for MU housing	Mixture of typologies	126, Brl RE/120, Brl 20889, Brl 589, Brl 143, Brl 135, Brl 532, Brl 584, Brl 585, Brl 586, Brl 416, Brl 3367, Brl 4115	5,72 350
PRIORITY ZONE 3 : EAST WEST GREEN SPINE (Sheffield Street)					
P2.3	8.1: Brl 60 Old Boys Town	Existing housing project/ informal settlement upgrade- needs to be aligned/ integrated with P2.2 project 2.1 & 2.3 Sheffield Street Stormwater study and MU retention facility upgrades	Single units	Brl 160	3,65 80
P2.3	8.2: Browns Farm Phase 5 housing	Existing CoCT TRA housing project- needs to be aligned/ integrated with P2.2 project 2.1 & 2.3 Sheffield Street Stormwater study and MU retention facility upgrades	2/3 Storey Walkup	RE/3105	2,32 220
P2.3	8.3: New MU high density housing on Brl 5268/ Sports Rd	New MU high density on Vacant/ public land. Requires existing sports and retention pond facilities to be rearranged on the site	3/4 Perimeter Block Development	Brl 5268	3,12 240
P2.3	8.4: Sheffield Road Infill Upgrade	Upgrade of existing informal settlement with MU high density housing and a positive interface onto Sheffield Road	Single and double storey walkups	6/680	2,54 80
P2.3	8.5: Sheffield Road Infill Upgrade	Upgrade of existing informal settlement with MU high density housing and a positive interface onto Sheffield Road	Single and double storey walkups	Brl 1997, Brl 2012 & Farm 1/679	1,45 80
P2.3	8.6: FAC Litha Labantu Phase 2	Existing housing project which needs to be redefined as a MU project to support the Sheffield Street Green-link concept	Single units		80
P2.3	8.7: MU Infill Housing	New MU Infill housing to activate an existing open/ retention pond space	2/3 Storey Walkup	Brl 1552	1,3 220
P2.3	8.8: MU Infill Housing	New MU Infill housing to activate an existing open/ retention pond space	2/3 Storey Walkup	Brl 2424	1,84 220
PRIORITY ZONE 1 : NORTH-SOUTH ACTIVITY SPINE (Emms/Ingulube High Street)					
Project Cluster A - Ntlangano Gateway					
P2.1A	8.1: Gateway In-situ upgrade	In-situ upgrade of existing informal settlement to support upgrading around the Ntlangano Gateway	2/3 Storey Walkup	RE/113276	4,47 220
P2.1A	8.2: Klipfontein Road Extension In-situ upgrade	In-situ upgrade of existing informal settlement to support the realignment of Klipfontein Road Extension	Single and double storey walkups	RE/2849 & RE/2327	6,11 80
P2.1A	8.3: New MU Infill housing	New High density Infill housing on a portion of existing open space to support improved safety and activation	2/3 Storey Walkup	RE/14241	0,43 220
Project Cluster C - Ingulube Gateway and High Street					
P2.1C	8.4: New MU Infill housing	New High density Infill housing on a portion of existing open space to support improved safety and activation	2/3 Storey Walkup	Brl 1203 & Brl 1188	2,19 220
P2.1C	8.5: MU Infill Upgrade	In-situ upgrade of existing informal settlement to support safe street upgrading, corner Betsol and Debelen Roads	Single and double storey walkups	Brl 11056, Brl 855, Brl 665 & Brl 666	2,17 80
P2.1C	8.6: MU Infill Upgrade	In-situ upgrade of existing informal settlement to support safe street upgrading, corner Singelamfisi and Mpolwen Roads	Single and double storey walkups	Brl 18891, Brl 17340, Brl 17339 & Brl 17338	2,13 80
Estimated Total:				78ha	6400 units

FIGURE 8. ESTIMATED HOUSING POTENTIAL- POA REGENERATION FRAMEWORK

2. ABOUT THE POA

A high-level overview of the POA area is provided in Section 2 to support the POA Housing Assessment Study, which includes the following:

1. Information extracted from the **City's Housing waiting list** database for claimants in the POA study area;
2. **Planned housing projects** in the POA study area;
3. A **breakdown of land ownership** for the sites identified for potential housing in the POA Regeneration Framework;
4. The **status of the land** identified for potential housing in the POA Regeneration Framework; and
5. A summary of the **existing housing mix** that currently occurs in the POA study area

2.1. CITY'S HOUSING DATABASE

The information extracted from the City's housing waiting list database is summarised below and indicates that there are potentially 24 920 housing claimants in the POA study* area. Most of the claimants in the database are in the lowest income category group and would therefore be eligible for UISP, BNG, IRDP and CRU forms of state housing support.

It should be noted that the current housing demand as per the City's housing database significantly exceeds the estimated number of housing opportunities available in the POA area. The housing typologies provided via the UISP, BNG and IRDP funding mechanisms generally do not support higher density options. This misalignment between housing demand and a lack of state-funded, high-density housing options typologies limits the ability to optimise the benefits of well-located land such as the POA for as many people as possible.

HOUSING WAITING LIST *								
Average age: 39 years								
Total no.	% of Total	INCOME GROUP	FUNDING MECHANISM					
20 462	82.1%	0 -R1500	UISP	BNG	IRDP	CRU	SOCIAL HOUSING	FLISP
3 440	13.8 %	R1501- R3500						
780	3.1 %	R3 501 - R7 500						
105	0.4%	R7 501 - R10 000						
133	0.6%	R10 001 +						
24 920	TOTAL							
19 867	79.7%	35 years and older						
110	0,44%	Disabled: all						
84	0.33%	Disabled: 35 years and older						

FIGURE 9. POA HOUSING WAITING LIST

* Statistics based on information received from the CCT: Housing Department. Confirmation on the spatial boundaries for the information provided could not be abstained, with the potential for a greater area being included for the housing demand analysis, as the POA area boundary does not align with typical GIS boundaries. The housing demand in the POA could therefore be less than what is stated above.

2.2. PLANNED HOUSING PROJECTS

Several state-led housing projects are in various phases of planning and implementation in the POA by the City of Cape Town and the Western Cape Provincial Government.

The intention for identifying these projects is to guide future planning processes for projects that are still in the inception phase. This includes the City projects identified in the adjacent plan, which to date have not proceeded further than the identification of the sites for possible implementation.

A joint City and HDA housing project has recently started implementation (April 2022) in close proximity to the POA study area. It is located on the Japhta K Masemola side of Sheffield Road, with a site size of 5,6ha. It will provide 384 BNG houses. It should be noted that the numeration process to identify eligible applicants for this housing project found that 40% of those applying for housing did not qualify as their household income exceeded R3500 per month. This recently verified data indicates a need for housing in the higher-income categories within the broader Philippi area.

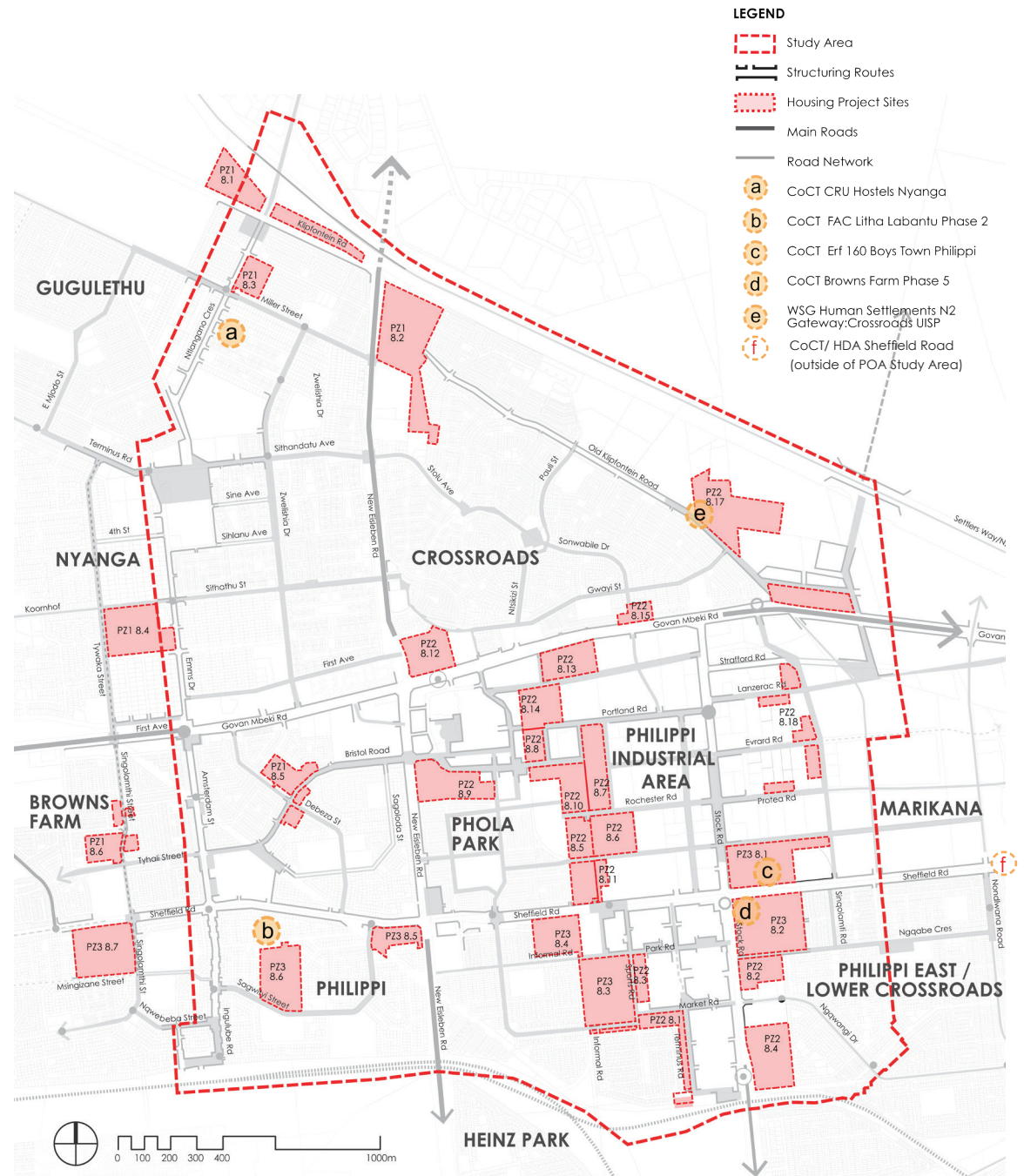


FIGURE 10. PLANNED HOUSING PROJECTS

2.3. LAND OWNERSHIP

The land identified for potential implementation in the POA Regeneration Framework has multiple owners, as indicated below, with just over half of the land owned by the State.

Approximately 26.ha is owned by the City of Cape Town. Much of this land is located in a central position occurring between the Philippi Village hub and Jo Gqabi /Stock Road Station. The largest of these vacant sites is the strategically located Erf 5268 property.

Large tracts of privately owned land (36.ha) are also located within the POA. Some are under-utilised or entirely vacant, providing immediate land acquisition and development potential.

A variation in state and private ownership allows a range of possible housing typologies and implementation approaches to be considered for the POA.

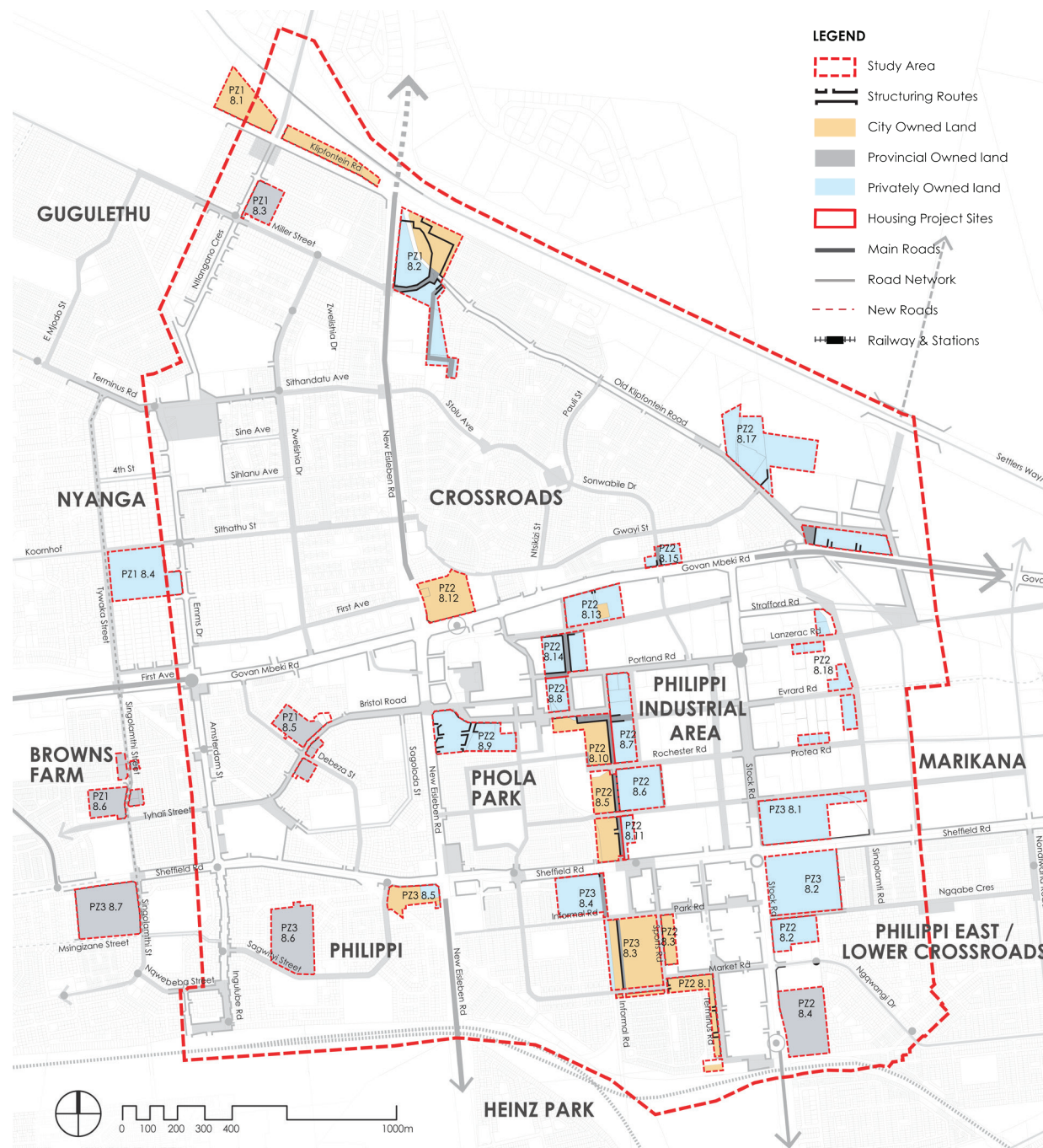


FIGURE 11. LAND OWNERSHIP

	Site size (Ha)	% of total
City of Cape Town	26,32	36,5 %
Provincial Government of the Western Cape	11,58	16,1 %
Private	36,4	47,4 %
Total	74,3	

2.4. LAND STATUS

As indicated below, the status of the sites identified for possible development for housing is as follows:

- over half (55.5%) of the identified housing sites are currently informally occupied,
- 24% are brownfields sites that are underutilised and have the potential for infill development; and
- 20% are vacant.

The current land status of the various land parcels forms a key informant to confirming the appropriate mix of housing typologies as well as possible approaches to implementation in the POA.

	Site Size (ha)	% of Total
Vacant	15,02	20,2%
Underutilised	18,07	24,3%
Informally Occupied	41,21	55,5%
Total	74,3	

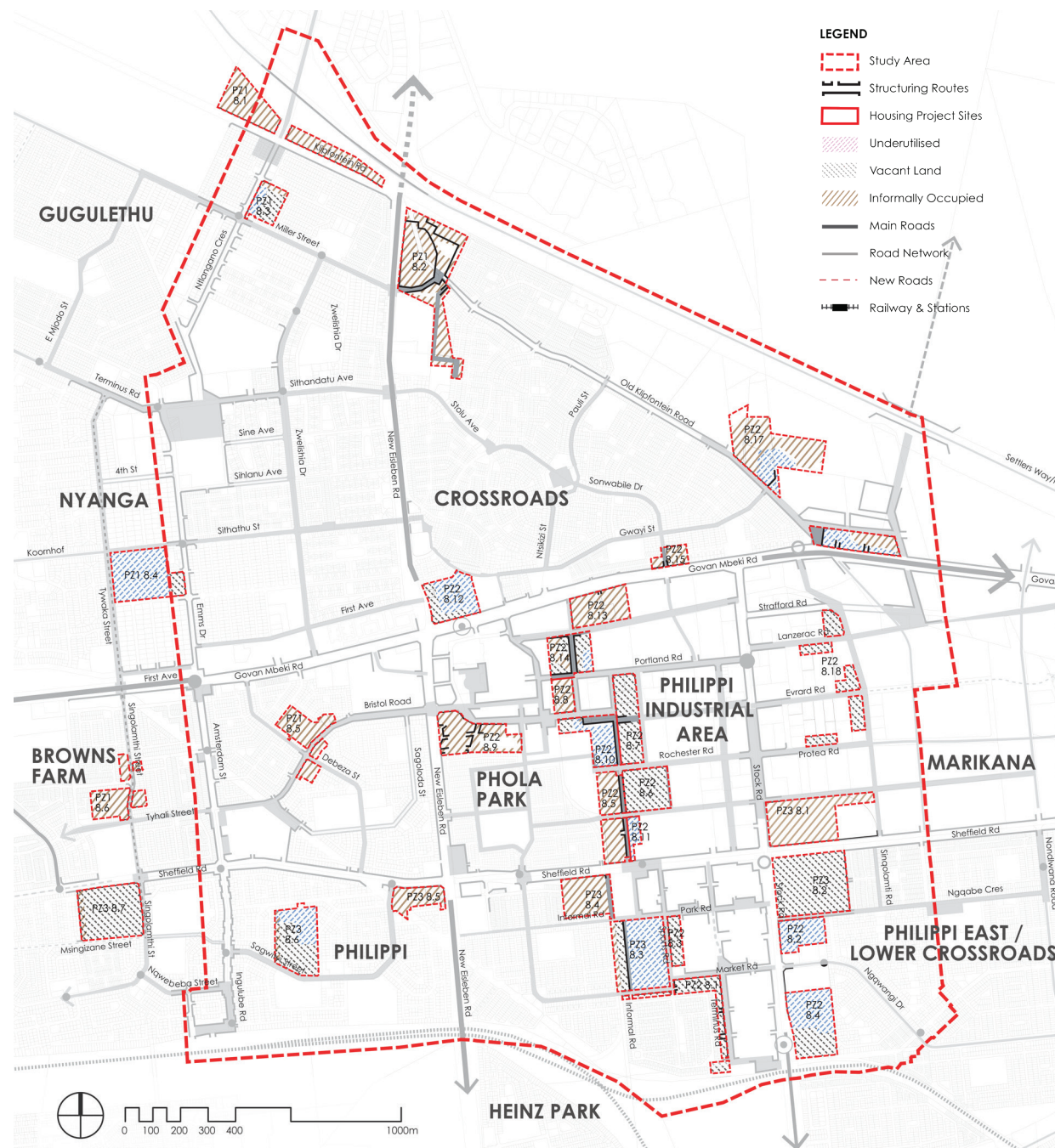


FIGURE 12. LAND STATUS

2.5. EXISTING FORM & CHARACTER OF HOUSING IN THE POA

Currently, there are various housing types in the POA, including both formal and informal typologies. Formal structures also range in style and density, with low-density options being the dominant form of housing that includes detached, semi-detached or row housing. Most properties with formal structures include a backyard structure.

Many of the informal settlements in the study area are located on key roads and infrastructure servitudes. This includes land around the proposed Borchers Quarry Extension, the Sheffield Road servitude, the rail servitude by Philippi Station, and stormwater ponds. Housing solutions for these informal settlements will be needed to enable the envisioned infrastructure improvements critical for the POA's regeneration into a thriving and functional settlement.

There are few examples of both high-density and mixed-use development in the POA. New housing projects in the area, such as the Mau Mau housing project on Govan Mbeki Road are of a higher-density but have not been designed to support mixed-use activities, such as ground floor retail. Moving forward, the design and implementation of housing developments in strategic locations, such as activity corridors, should ensure the inclusion of economic opportunities (ie: ground floor retail or micro- industry)

The continuation of low density and mono-functional housing typologies will not address the critical housing need and backlog in the area or support the making of vibrant, active and safe neighbourhoods.

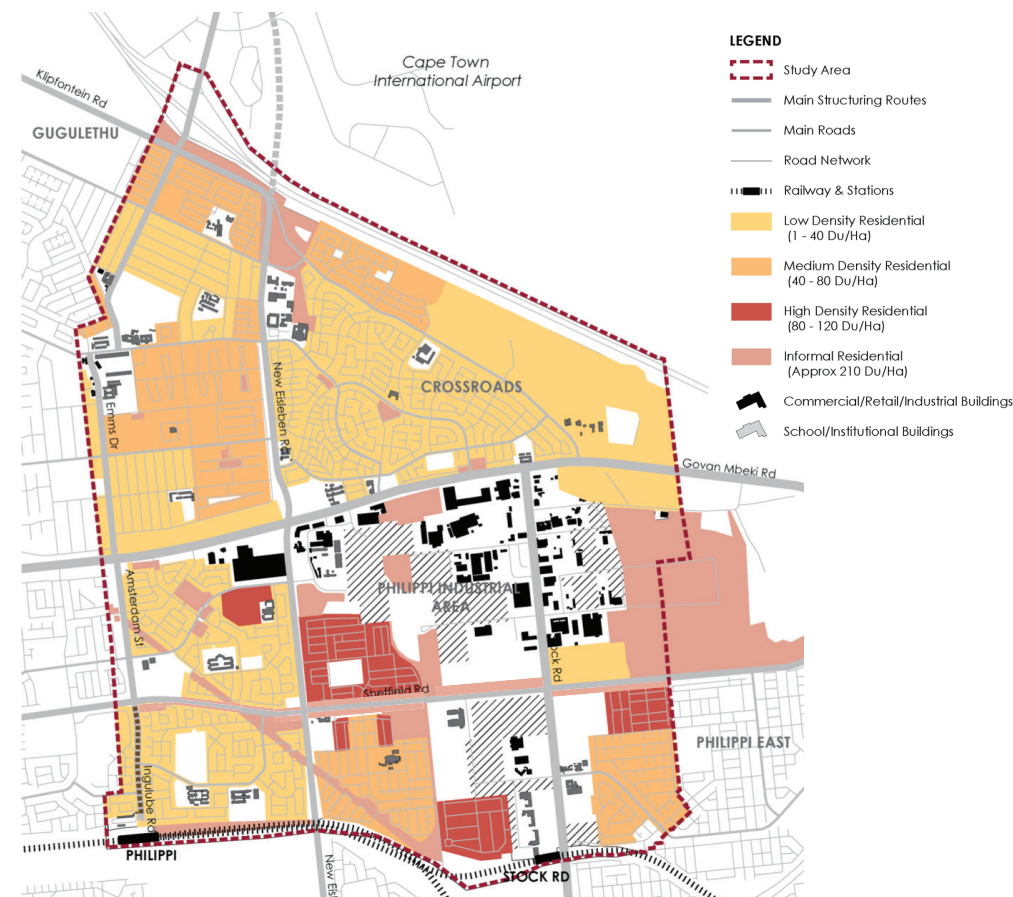


FIGURE 13. EXISTING HOUSING TYPOLOGIES



PHOTO 2. MAU MAU HOUSING DEVELOPMENT: EXAMPLE OF CURRENT LOW DENSITY 37 UNITS/HA



PHOTO 3. STOCK ROAD HOUSING- PHASE 1: EXAMPLE OF HIGH DENSITY



PHOTO 4. CROSSROADS HOUSING DEVELOPMENT: EXAMPLE OF MEDIUM DENSITY 67 UNITS/HA

3. PREPARATORY AND SUPPORTING INVESTIGATIONS TO INFORM THE HOUSING ASSESSMENT PROCESS

In order to review the proposed housing opportunities identified in the POA Regeneration Framework and start to confirm the housing potential within the POA, a range of preparatory activities and products were completed to support and inform this assessment process. These included the following:

1. **Engaging with Housing sector experts** to give guidance on how to enable the development of high-density housing typologies and their implementation in the POA;
2. Confirmation of the **Site Definition and Selection Criteria** to be applied when confirming appropriate housing typologies and implementation approaches on the various identified sites in the POA. A consistent and agreed approach is required as the sites have varying ownership, land use and locational features that should inform final recommendations on housing typology options and strategies for implementation.
3. Confirmation of the **Design Approach** to be used when testing the design potential of the various sites. This is required to ensure the design approach used in the site planning process aligns with the overall development intent and vision for the future regeneration of the POA.
4. Confirmation of the available **Housing Typologies** in the POA with the completion of supporting conceptual building design and site/development block configurations. The level of detail for the housing design layouts and development blocks is indicative. It has been completed to a level that will confirm the housing potential on the various sites and the infrastructure improvements required to

support future housing development in the POA.

5. Completion of a high-level **Site Assessment and Screening** of the various sites to confirm any possible development constraints or limitations. This included inputs from town planning, environment, engineering and urban design specialists.

3.1. HOUSING SECTOR INPUTS ON APPROACHES TO HOUSING TYPOLOGIES AND IMPLEMENTATION IN THE POA

A housing Implementation Workshop took place on 27 September 2021 at the Civic Centre Council Chambers. Housing practitioners drew from the private, public, third sectors and academia were engaged in obtaining a collective understanding of possible approaches to enable higher-density housing in the POA

The objective of the Workshop was to identify possible implementation partners in the POA and to understand how best to structure the packaging of the POA Housing Framework to attract and support these partners to achieve a mix of higher-density housing options.

The workshop minutes, attendance register and copies of the presentations given by the housing sector specialists are included in Annexure A. A summary of the key discussions points is as follows;

1. There is an urgent need to **change perceptions of the POA** and **create**

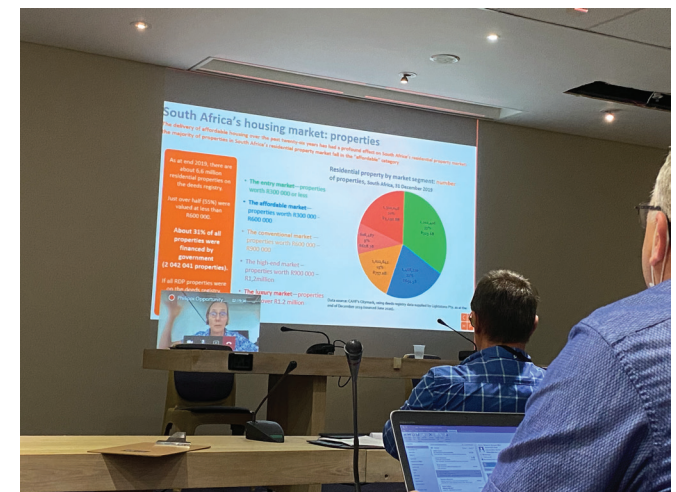


PHOTO 5. HOUSING IMPLEMENTATION WORKSHOP

certainty and confidence in the area. Aspects in support of this include:

- Creating a clear housing pipeline - An informed and empowered local community will lead to reduced land speculation and land invasions, thereby creating less risk for existing property owners
 - Address crime & grime - Besides improving quality of life, existing property owners will be incentivised to invest in their properties and more likely to attract new investment. It will also support improved access to financial support from financial institutions
 - Adopt an integrated and holistic approach to the provision of housing that includes the provision of social facilities
2. Housing Strategies should also focus on existing housing/ infill development to address housing shortages. This relates to:
- New stock being more expensive to build than redeveloping old stock.
 - Infill development by micro-developers will occur with or without support. Therefore, the focus is required to enable micro-development considering the minimum actions needed to support the making of safe, dignified and healthy living environments. This includes confirming the key fixes and non-negotiable elements to securing the public environment. Du Noon was identified as an example where inadequate support was provided to micro-developers.

The most significant prospect to achieving affordable rental housing stock is through 'Private Affordable Rental Housing' with small-scale landlords. The following two forms could work in conjunction with each other:

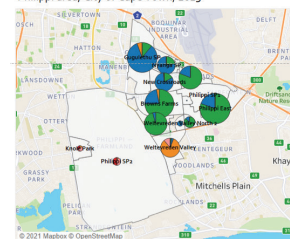
- Formal backyard structures
 - Developers of brownfield sites
 - State to prepare sites for development (site & services) via USIP funding streams
3. The greatest potential for achieving residential property ownership is by the following:
- Site and service
 - BNG – Langa Model (achieves slightly higher densities that aren't reliant on the sectional title but restricts backyard development)
 - FLISP
4. Social Housing is not a viable housing implementation option in the POA in short to medium term. Sites suitable for social housing could be held back for long-term implementation until the area stabilizes and confidence improves. Development block sizes that accommodate perimeter block designs typical of social housing should also be provided in current planning arrangements for the POA with the view that they can be converted for social housing in the long term.

The Philippi Opportunity Area: distribution by segment 2019

Within the overall POA and surrounding neighbourhoods, as highlighted in the map below, there are 24 346 residential properties. Of these, the majority (72%) are valued at less than R300 000 (as of 31 December 2019). One quarter of all residential properties in this area are in the affordable market (R300 000 – R600 000), and a very few houses in the so-called conventional market (R600 000 – R900 000)

Distribution of residential properties by market segment

Philippi area, City of Cape Town, 2019



Data source: CAHF's Citymark, using deeds registry data supplied by Lightstone Pty. as at the end of December 2019 (sourced June 2020).

Number of residential properties

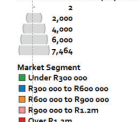


FIGURE 15. DISTRIBUTION OF RESIDENTIAL PROPERTIES BY MARKET SEGMENT BY KECIA RUST (CENTRE FOR AFFORDABLE HOUSING FINANCE)

TYPES OF DEVELOPERS



FIGURE 16. EXAMPLES OF MICRO DEVELOPER LED HOUSING BY ZAMA MGWATYU (DEVELOPMENT ACTION GROUP)

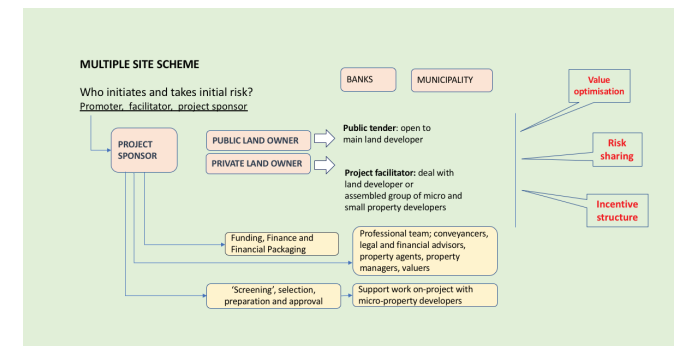


FIGURE 17. ENABLING IMPLEMENTATION BY JOHN SPYROPOULOS



FIGURE 18. EXAMPLE OF MICRO DEVELOPER LED HOUSING - CHARLES RUDMAN (ON BEHALF OF CCT- HOUSING DEPARTMENT)

3.2. SITE DEFINITION AND SELECTION CRITERIA

As the individual sites identified for housing within the POA have varying ownership, use and locational features, a differentiated approach to the selection of appropriate housing typologies and possible implementation mechanisms is required. A set of guiding principles and assumptions was completed to inform this process and to support a consistent approach that considers the varying attributes of the sites. These are outlined below:

1. Approach to Implementation

- CCT to undertake site preparation activities, including rezoning and subdivision processes where applicable, to enable development on the various sites identified for housing within the POA
- Prioritization to be given to typology options that support implementation by private developers, including micro developers

2. Approach to Strategically Located Sites

- Publicly owned sites:
 - to be designed to enable high density 3 to 4 storey walkup typologies in the long term (i.e.: site & service layouts to support 3 to 4 storey typologies that private/ micro developers can further densify over time)
- Privately owned sites:
 - Sites that are needed to support the restructuring of the POA, as per the overall POA Regeneration Framework, should be acquired by the City (i.e. sites that need the development of new roads to integrate the area)
 - to be developed as high-density 3 to 4 storey walkups (site & service based on semi-detached house typology that private/ micro developers can further densify & FLISP)

3. Approach to Informal Settlements

- The relocation of communities outside of the POA is to be minimised as part of the housing upgrading process within informal settlements. Where possible, preference is to be given to accommodating existing communities on the site as part of the housing upgrading process. When communities can't be accommodated within their existing location, preference is to be given to their relocation within the bigger basket of POA housing properties identified for housing upgrades

- Upgrading proposals on informal sites is to predominantly comprise of site & service layout configurations that support semi-detached or row house typology options that enable private/micro developers to further densification **except** for existing informal settlements on high order structuring routes within the POA (as indicated in the POA Regeneration Framework) Upgrades to these strategically located sites should support the construction of higher density, mixed use typologies to maximise on the their accessible and visible location

4. Approach to Services

- It is assumed that services can/ will be upgraded and should not be considered as a development constraint

5. Approach to Sites in Private Ownership

- Private sites to be retained in private ownership (CCT to provide support to assist with enabling development, including rezoning and subdivision processes where required). This principal would not apply for informally occupied and strategically located sites where CCT will enter into discussions to confirm options to enable formal development to occur, which may include the purchasing of these sites by the CCT

6. Approach to Sites owned by WCPG

- Single-owned WCPG sites: WCPG to lead/ manage the development process with support from CCT

7. Approach to Sites with Multiple State Ownership

- To support the efficient use of land and housing layouts, CCT to initiate land transfer processes to support CCT ownership and to lead/ manage the overall development planning and implementation process

3.3. POA HOUSING DESIGN APPROACH

The planning and design approach for completing the high-level housing layouts is informed by the strategic objectives outlined in the POA Regeneration Report. This includes prioritising design principles that align with SPLUMA and supporting the POA's redevelopment into an inclusive, walkable, mixed-use, economically vibrant, inclusive and qualitative living environment.

A summary of the key design approaches to be applied in the high-level housing layouts is provided below, which includes:

- Supporting **Spatial Integration and Structure**
- Approach to the **Design of Streets** with a confirmation of typical street sections;
- Approach to the **Design of Development Blocks**, including typical block configurations that support a range of housing typologies; and
- Approach to the **Housing Typology Design, Selection and Location** in the POA

As indicated in the adjacent image, the housing potential on each of the POA housing sites will be confirmed with the application of these typical design guidelines which will then be moderated concerning each of the site's specific features and conditions.

A) POA REGENERATION FRAMEWORK GUIDING DEVELOPMENT OBJECTIVES AND DESIGN PRINCIPLES

B) USE OF TYPICAL STREET SECTIONS

- | | |
|---|--|
|  | 1: Residential Street type 1 (8 m), type 2 (10m), type 3 (12m) |
|  | 2: Neighbourhood Street type 1 (14m), type 2 (16m) |
|  | 3: Activity/ High Street (20-24m) |
|  | 4: Activity Corridor (40m) |

C) USE OF TYPICAL DEVELOPMENT BLOCK LAYOUTS BY TYPOLOGY

- | | |
|---|---|
|  | Perimeter Block |
|  | Walk-up/ Duplex |
|  | Rowhouse / Infill: Micro Development |
|  | Site & Service / Semi- detached / Infill: Micro Development |

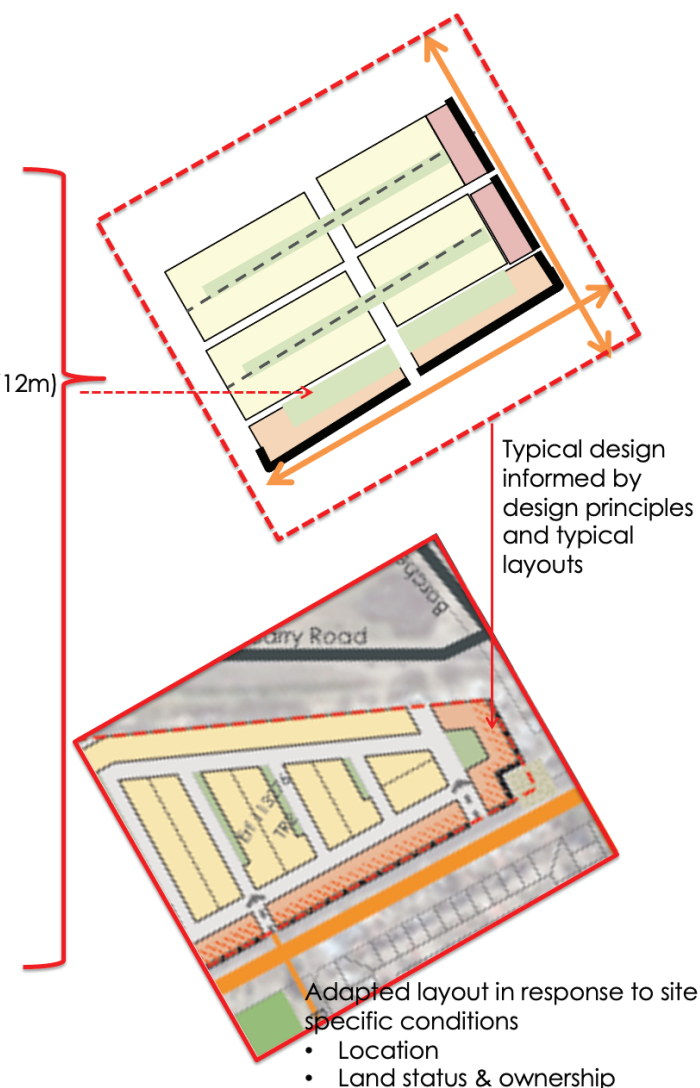


FIGURE 19. DESIGN APPROACH FOR THE PLANNING AND DESIGN OF THE POA HOUSING SITES

3.3.1. SUPPORTING SPATIAL INTEGRATION AND STRUCTURE

Increased spatial integration and walkability within the POA can be influenced by how the various individual POA housing sites are configured and planned. The following principles have been applied:

PRINCIPLES:

1. Internal subdivision of the POA housing sites and the location of development blocks should relate to and support integration with its surrounding context. i.e., the internal street network to link with surrounding streets; and
2. Housing layouts include multifunctional open spaces such as play parks and public squares on large sites. These facilities should be positioned in external locations to support sharing and increase from surrounding residents in the area
3. Housing layouts to support and enable economic activity on high-order streets including ground floor retail/ micro-industry spaces as well as trading spaces on sidewalk spaces

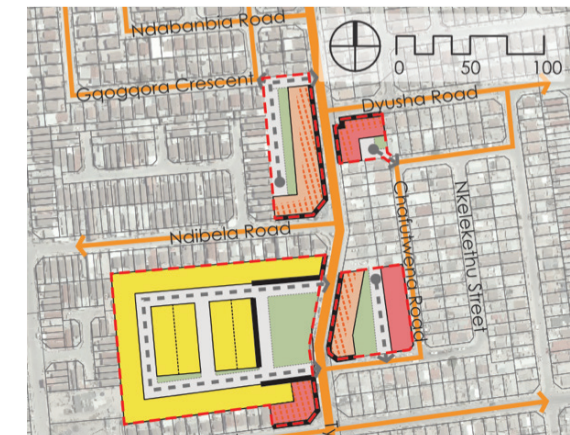
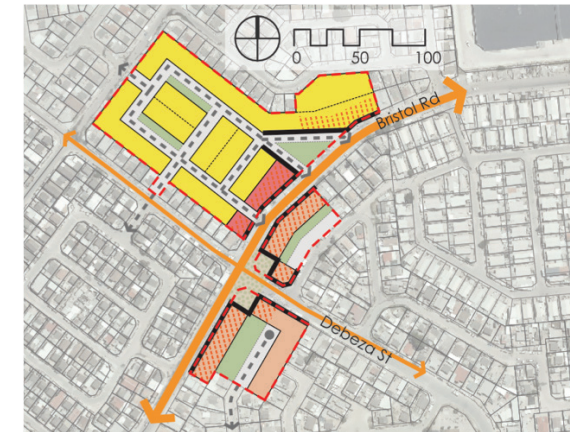


FIGURE 20. EXAMPLES OF HOUSING LAYOUTS STRUCTURED TO INTEGRATE WITH ITS SURROUNDS



PHOTO 6. PRECEDENT EXAMPLE: KUYASA STATION,PUBLIC SPACE ACTIVATION



PHOTO 7. PRECEDENT EXAMPLE: JOE SLOVO, PLAY PARK



PHOTO 8. PRECEDENT EXAMPLE: DROMMEDARIS, PLAY PARK

3.3.2. APPROACH TO STREET DESIGN

The manner in which streets are designed influence the character and performance of a settlement. The design of new streets in the POA will focus on supporting walkability with the making of active, safe and vibrant streets.

GUIDING PRINCIPLES:

1. Ensuring positive building frontage onto streets with minimal setbacks to create spatial enclosure. The inclusion of active uses on the ground floor is to be supported in the street design.
2. Promoting a shared street design approach to streets design, such as 'woonerf' concepts for lower-order streets
3. Promote transitions from public to private spaces in the street cross-section design to support the making of safer environments. This includes the provision of level changes (stoeps), low walls and verandahs where possible
4. Make provision for SUDS
5. Minimal parking provision- not all units have a dedicated parking space
6. Multifunctional parking courts and on-street parking spaces are included in typical street designs
7. Provision of elements and infrastructure that support outdoor life and placemaking, such as tree planting, pedestrian lighting and seating
8. Accommodating street trading on key access routes



FIGURE 22. PASSIVE SURVEILLANCE FROM BALCONIES

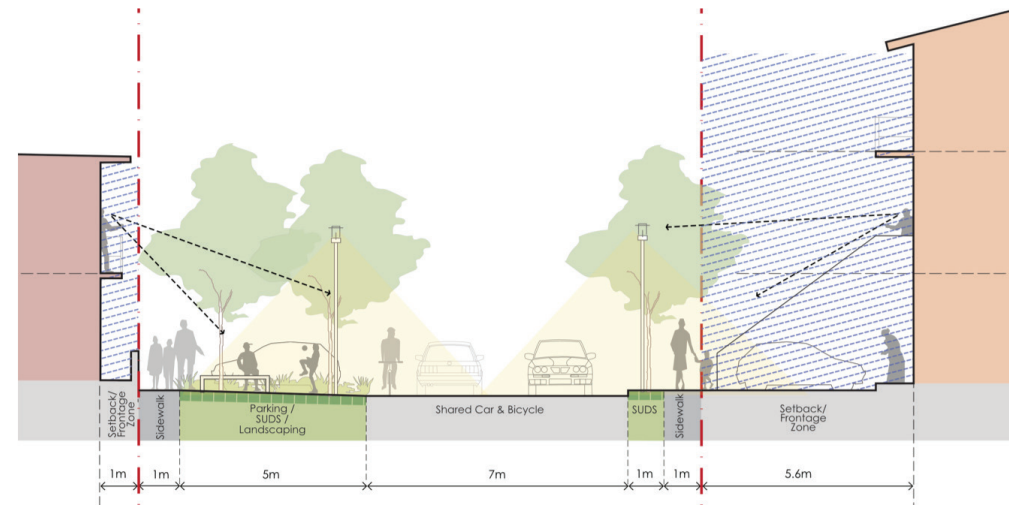


FIGURE 21. SUPPORTING ACTIVE AND SURVEILLED STREETS



PHOTO 9. PRECEDENT EXAMPLES: DISTRICT SIX



3.3.2.1. TYPICAL POA STREET SECTIONS

A hierarchy of street sections is provided with varying street widths based on City standards and best practices. Common elements within the typical street sections include:

- Minimum building setbacks to create active street conditions in the POA;
- Covered/ sheltered building edges on high-order street categories
- Low boundary walls and visually permeable fencing treatment
- Inclusion of a sidewalk and tree planting on at least one side of the street

TYPICAL STREET SECTIONS

-  1: Residential Street type 1(8 m), type 2 (10m), type 3 (12m)
 2: Neighbourhood Street type1(14m), type 2 (16m)
 3: Activity/ High Street (20-24m)
 4: Activity Corridor (40m)

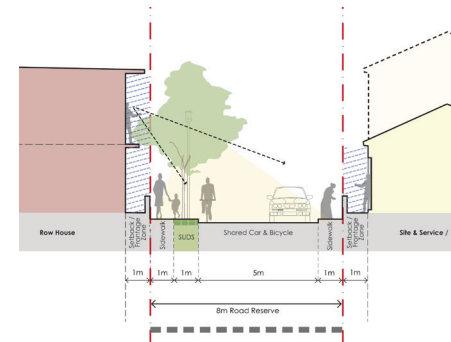


FIGURE 23. 8M ROAD RESERVE

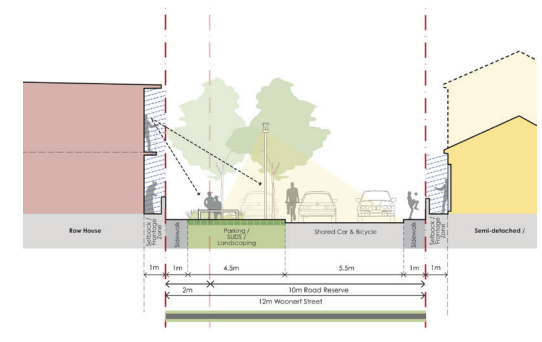


FIGURE 28. 10M ROAD RESERVE

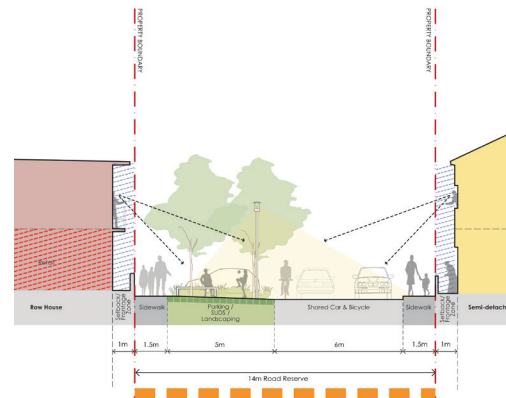


FIGURE 24. 14M ROAD RESERVE

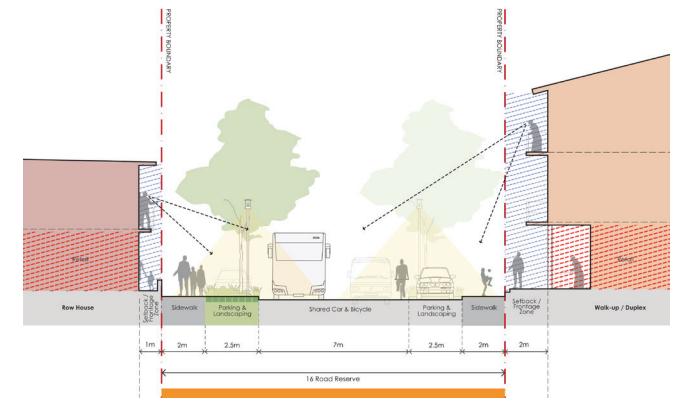


FIGURE 25. 16M ROAD RESERVE

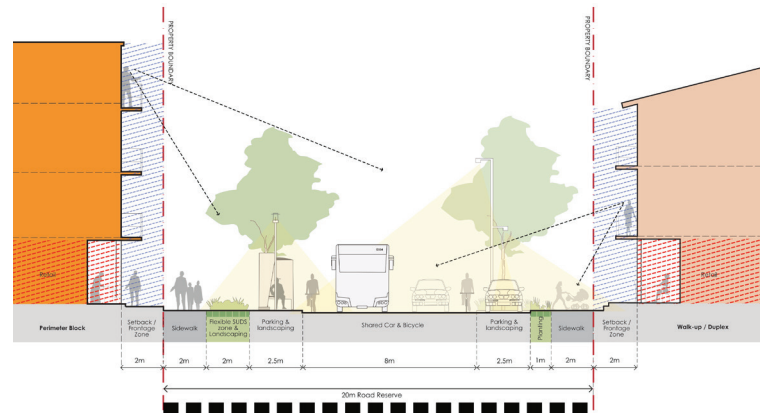


FIGURE 26. 20M ROAD RESERVE

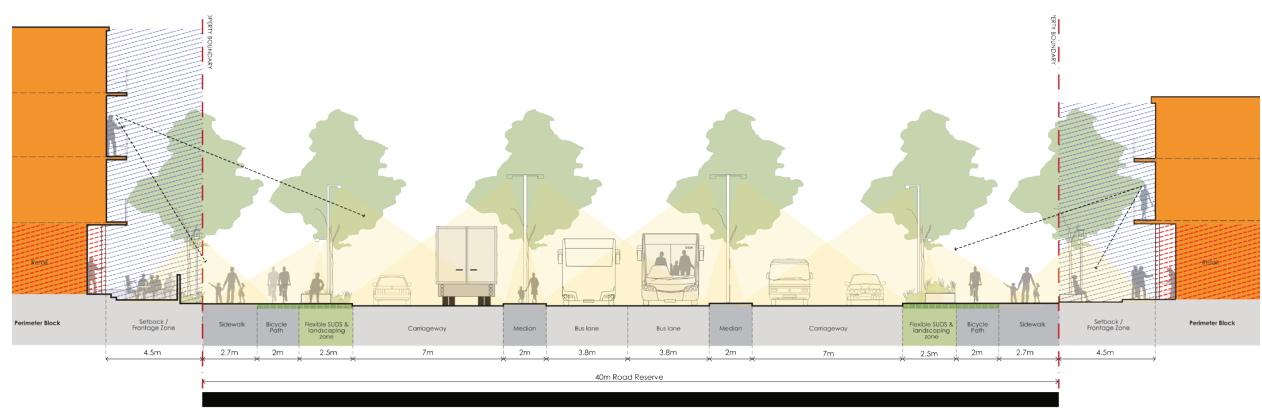


FIGURE 27. 40M ROAD RESERVE

3.3.3. APPROACH TO DEVELOPMENT BLOCK DESIGN

Development blocks are formed by grouping individual erven or plots together with the street system, creating the primary structure of the housing layout. The final development block configuration(s) to be applied in the POA will influence options for the implementation of high-density housing typologies as well as the character of the area.

GUIDING PRINCIPLES:

1. Enable multiple typology options to support a variety and range of living options;
2. Support the making of active, safe and vibrant streets with multiple entrances orientated onto the road, i.e., apply extended, narrow erf sizes;
3. Promote flexibility and be resilient to changing need;
4. Enable high-density housing typologies
5. Support phased growth that will also support higher densities over time.

3.3.3.1. TYPICAL POA DEVELOPMENT BLOCK CONFIGURATIONS

The recommended development block configuration indicated in the adjacent table relates to supporting maximum flexibility and incremental change as the POA.

The various block configurations are based on a 90m x 1064 superblock module which accommodates both high-density typologies and lower-density options.

This superblock size accommodates a mix of typology options which supports a contextually responsive design approach. It also promotes available subsidy housing options and examples of best practices in South Africa for high-density housing typologies.

More detail is provided in Annexure A on the proposed design and layouts for the various POA housing types and their associated development block configurations. The arrangements are based on best practices and include examples of similar housing projects successfully implemented in South Africa. These layouts form the basis for confirming the development potential and housing estimates on each housing site in the POA.

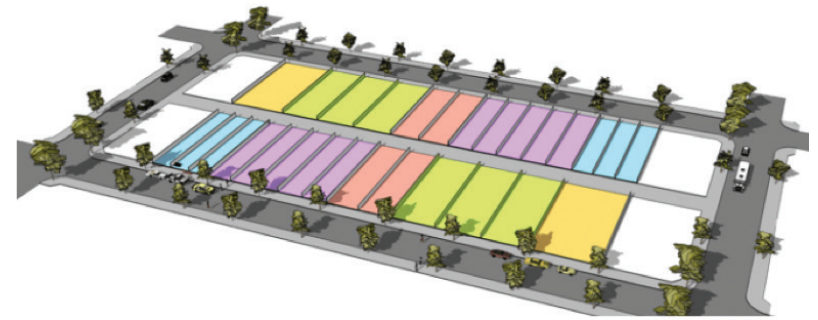


FIGURE 29. STRUCTURING THE DEVELOPMENT BLOCK TO ACCOMMODATE A RANGE OF BUILDING TYPOLOGIES

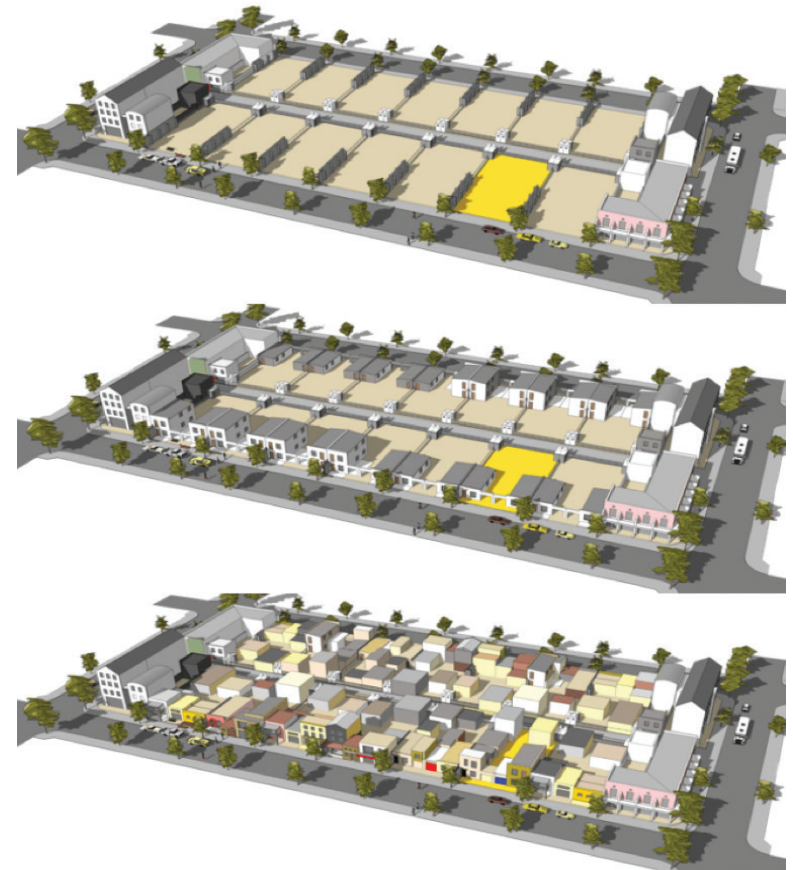


FIGURE 30. PHASED IMPLEMENTATION WITH PRIORITISATION OF THE EXTERNAL EDGES OF THE DEVELOPMENT BLOCK . (DRAWING REFERENCE: KELVIN CAMPBELL / MASSIVE SMALL)

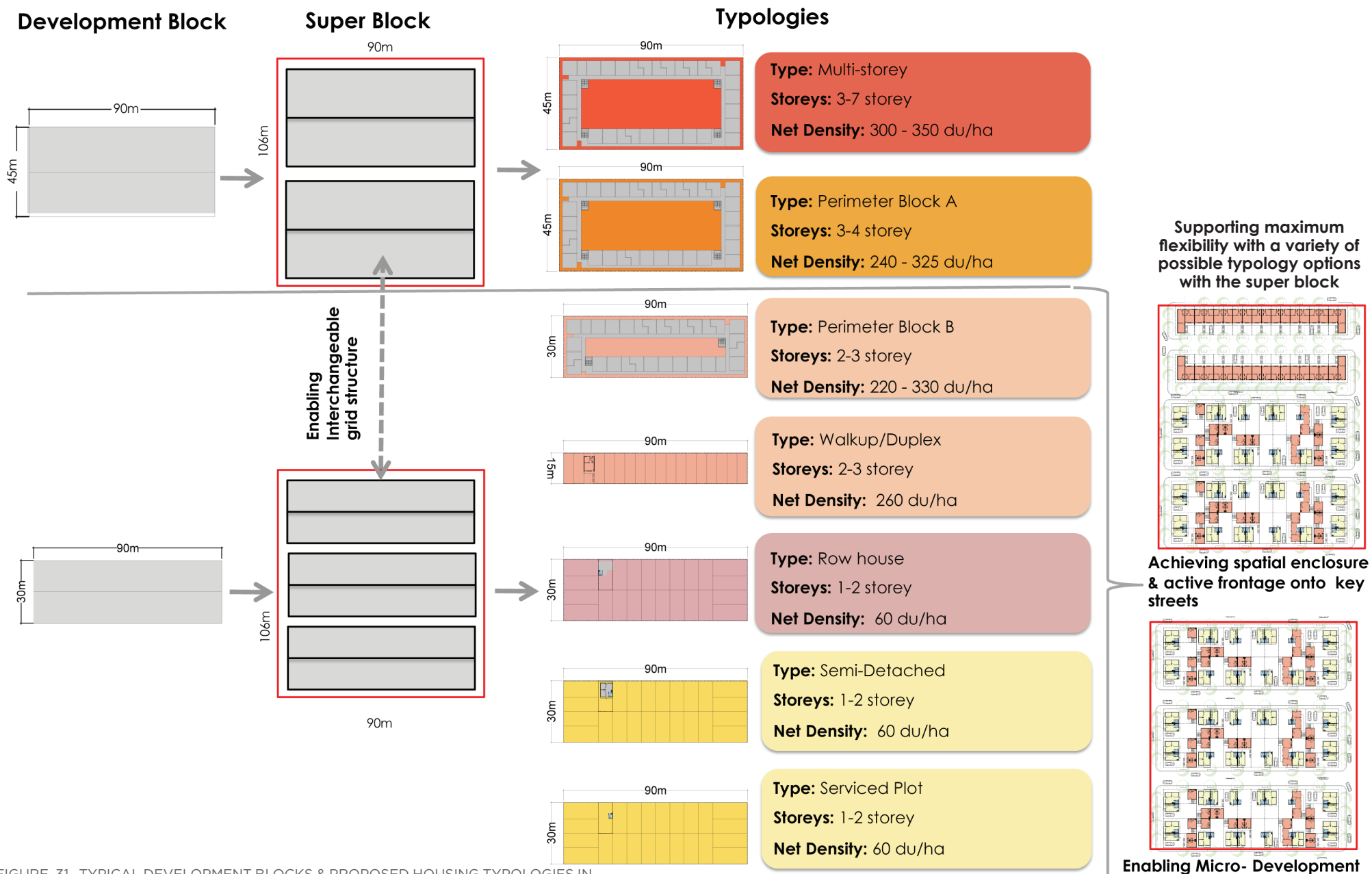


FIGURE 31. TYPICAL DEVELOPMENT BLOCKS & PROPOSED HOUSING TYPOLOGIES IN THE POA

3.3.3.2. ENABLING MICRO-DEVELOPER LED HOUSING DELIVERY

In response to current trends, the identified development block configuration must support both incremental and micro-developer led housing delivery options. As indicated on the right, the optimal erf size configuration enables a phased implementation by state housing mechanisms and micro-developers. The identified erf and development block configuration is a pragmatic design solution that allows flexibility, supports the economy of scales, and achieves higher-density development while supporting qualitative living environments.

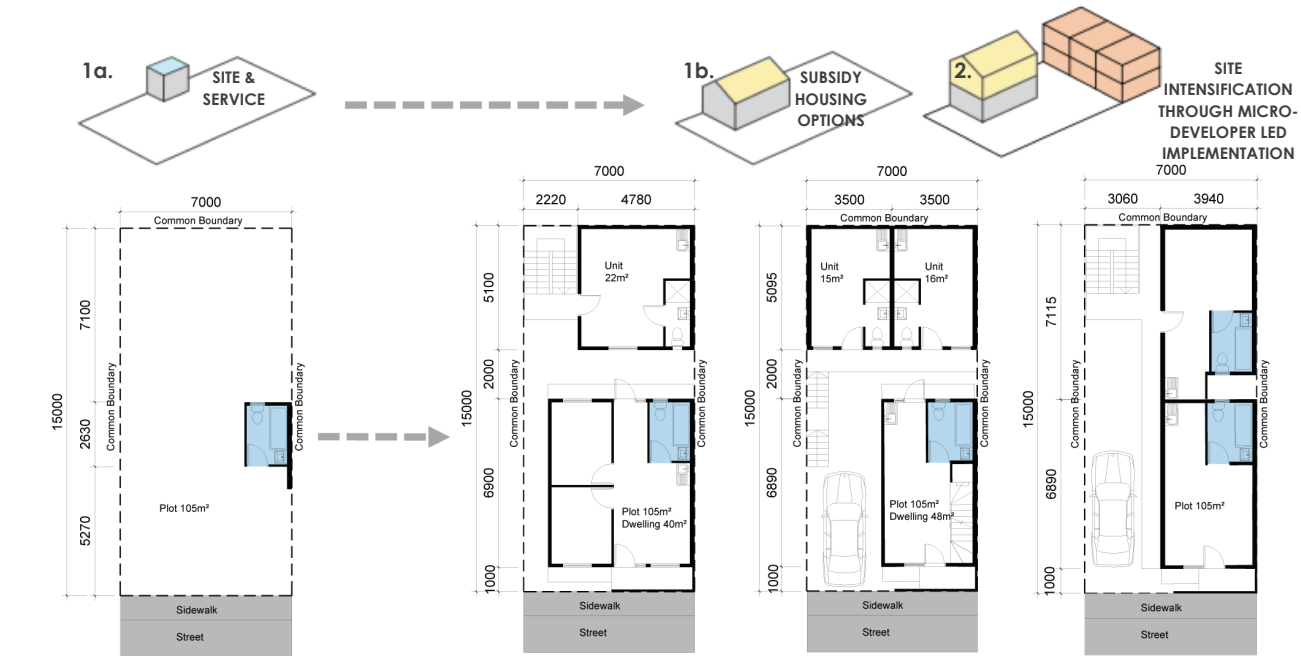


FIGURE 33. OPTIMAL ERVEN CONFIGURATION TO ACHIEVE HIGHER DENSITIES THROUGH PHASED IMPLEMENTATION



FIGURE 34. SUPPORTING PHASED IMPLEMENTATION & MULTIPLE HOUSING TYPOLOGY OPTIONS

3.3.3.3. APPROACH TO HOUSING TYPOLOGY DESIGN, SELECTION AND LOCATION

3.3.3.4. LAYOUT AND DESIGN ON THE SITE

The placement and design of buildings on the site directly impact the potential for achieving mixed-use development, activation of the street and options for future infill development

GUIDING PRINCIPLES:

1. Support mixed-use developments, including ground floor retail/ office/ micro-industry use. Minimal building setbacks from the street support active ground floor usage as well as the layout of the ground floor area
2. Support the making of positive street conditions by :
 - Positioning building footprints within proximity to the street edge or applying minimal street boundary setbacks
 - Orientation of primary building entrances onto the street and locate windows, balconies and external stairs (where applicable) to face onto the street edge
3. Create dignified living environments with the location of service cores in an embedded area on the site
4. Locate the 1st phase of housing development at the front of the site to enable later infill development at the back of the site. Considerations to support infill development include:
 - Enabling separate access
 - Locate greatest height at the back of the site
 - Orientation of windows and doors away on upper levels to limit overlooking onto neighbouring private areas

3.3.3.5. APPROACH FOR THE SELECTION OF HIGH DENSITY HOUSING OPTIONS

The following principles have been followed for prioritising high-density housing typologies on the various POA sites related to their size, location and existing use. This is to ensure a balance of housing options that meets the needs of the local community and optimises the strategic location of the POA.

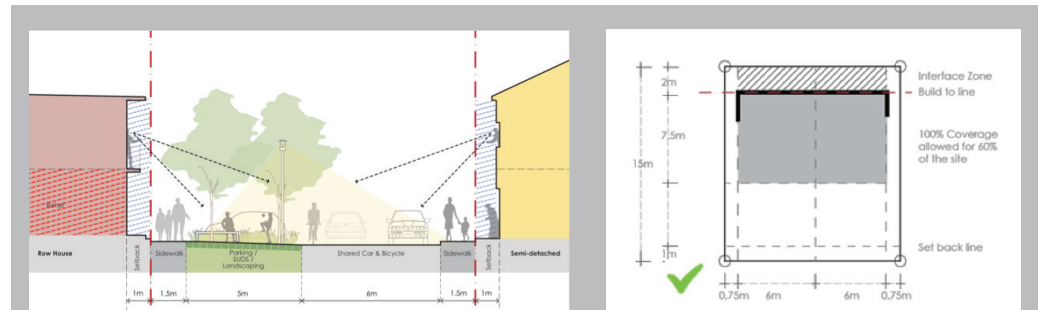


FIGURE 35. CONTINUITY OF STREET EDGE: AT LEAST 60% OF THE BUILDING FOOTPRINT SHOULD BE PLACED ON OR WITHIN 2M THE STREET FRONTING PROPERTY BOUNDARY TO ENSURE STREET AND SPACE ENCLOSURE AND CONTINUITY IN THE STREET FACADE



FIGURE 36. POSITIVE STREET CONDITIONS: LOCATION OF BUILDINGS TO THE FRONT OF PLOTS ALONG THE STREET BOUNDARY EDGE

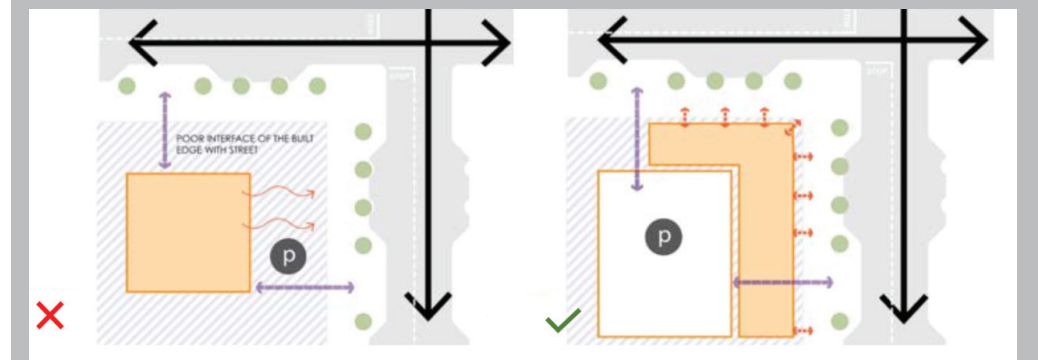
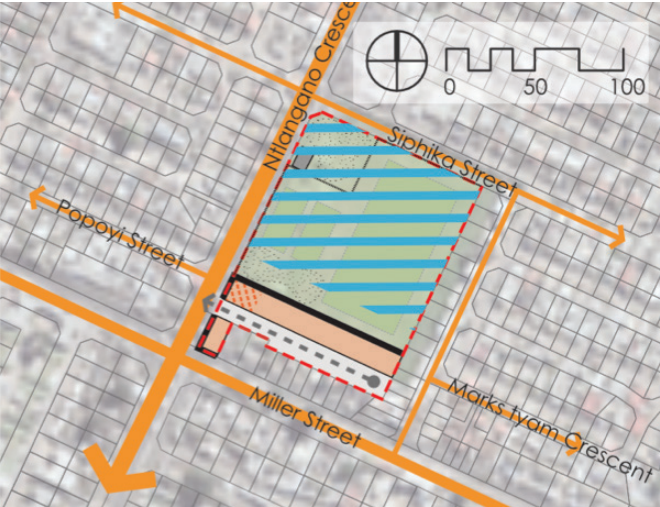
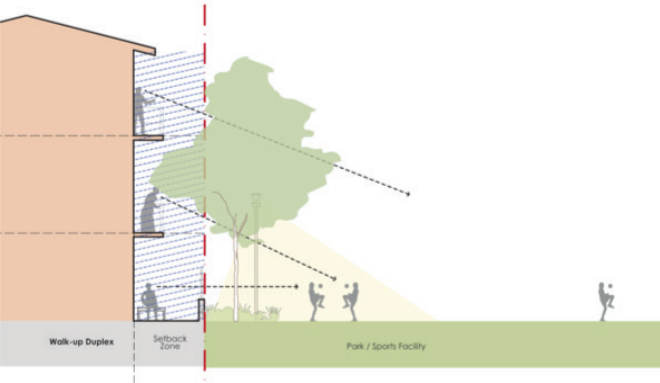


FIGURE 37. POSITIVE STREET CONDITIONS: LOCATION OF PARKING TO THE REAR OF THE PLOT WITH THE BUILDING ALONG THE STREET EDGE

SITE SIZE:

Best use and site optimisation to influence the prioritisation and selection of the typology types. This is particularly relevant for small areas, where high-density typologies will maximise the locational value of the identified sites.

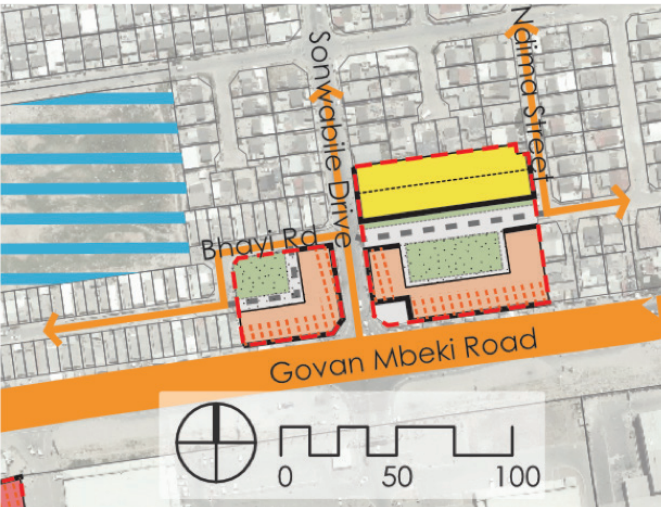
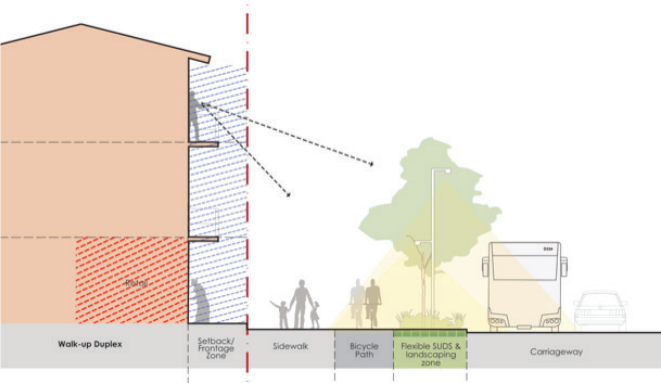


Smaller sporting sites are optimised by bordering them with multi-storey walk-up/duplex units. These higher densities increase viability while simultaneously creating safety through surveillance with the inclusion of overlooking features such as verandahs, balconies and doorways/ windows

FIGURE 38. HIGH DENSITY OPTIONS TO EDGE OPEN SPACES

PLACEMAKING AND LEGIBILITY:

Support structure and placemaking by locating high-density options (2/3 storey typologies) on high-order streets and lower-density typologies in embedded/ less visible locations.

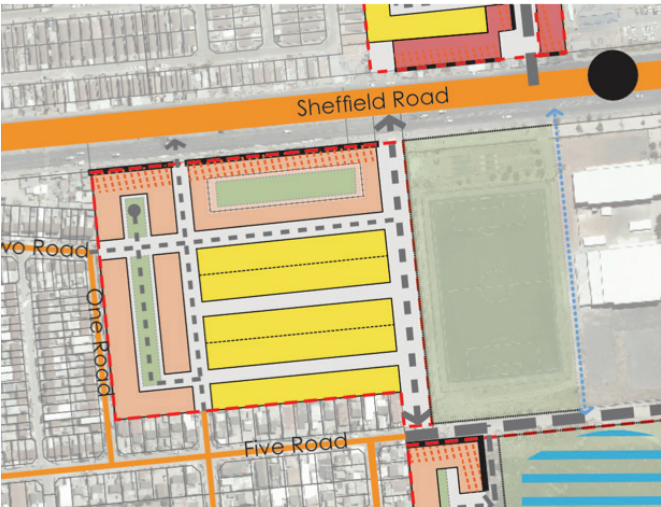


Higher density multi-storey typologies are located on high-order Govan Mbeki Road, while lower-density 1-2 storey units are set back within the residential built fabric

FIGURE 39. HIGH DENSITY TYPOLOGIES ON STRUCTURING ROUTES

STRATEGICALLY LOCATED SITES:

High-density typologies to be located in strategic and highly accessible locations, i.e., at public transport interchanges and community facility nodes



Multi-storey Perimeter Block's and 3-4 storey walk-up/duplexes with ground floor retail are located on the high-order, highly accessible Sheffield Road, which is planned for IRT upgrades

FIGURE 40. HIGH DENSITY TYPOLOGIES AT PUBLIC FACILITIES

Formed by the grouping of individual erven or plots and together with the street system form the primary structure of the housing layout. The final development block configuration(s) to be applied in the POA will influence options for the implementation of high density housing typologies as well as the character of the area.

GUIDING PRINCIPLES:

- Enable multiple typology options to support variety and a range of living options;
- Support active, safe and vibrant streets;
- Promote flexibility and be resilient to changing need;
- Enable high density housing typologies
- Support phased growth that will also support higher densities to be achieved over time.

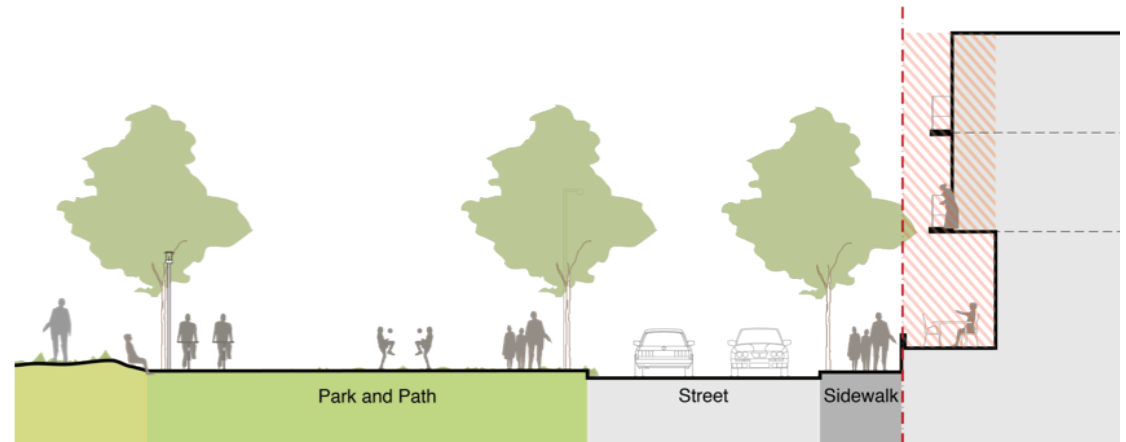
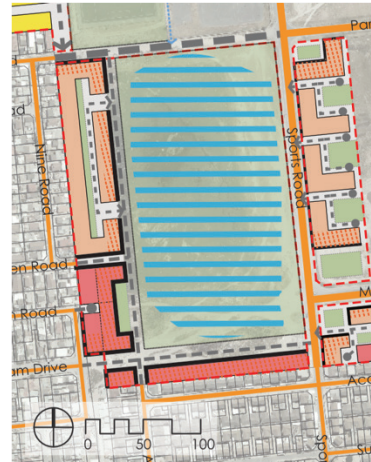


FIGURE 41. MULTI-STOREY TYPOLOGIES OVERLOOKING SCHOOLS OR SPORTS FACILITIES CREATING SAFETY THROUGH SURVEILLANCE WHILST ACTIVATING SURROUNDING STREETS



FIGURE 42. PRECEDENT EXAMPLE: ITHEMBA LABANTU, PHILIPPI. MIXED USE SPORTS AND RETENTION POND FACILITY. DRAWING REFERENCE: DESIGN AFRICA ARCHITECTS

3.4. SITE ASSESSMENT AND SCREENING

A high-level site assessment and screening of the POA housing sites has been undertaken to confirm if there are any town planning, environmental, heritage, engineering and urban design considerations that will limit or influence development potential options. This information is also critical for informing possible approaches to phasing and implementation, its layout and design and the appropriate form of housing that should be identified on the site.

An assessment sheet has been completed for every site that includes a summary of its site information (site size, zoning, use and ownership) and its vital site development informants. An example is provided overleaf indicating the information available for each site, with all the individual site assessments being available in Annexure B.

The following development informants were considered in the screening process for the various POA sites:

POA PRIORITY ZONE 1: Node A – Site PZ1 8.1
Cnr Klipfontein Rd & Ntlangano Crescent

KEY SITE INFORMATION

Property Information: RE/113276 owned by the City of Cape Town
Erf1 60010 owned by the City of Cape Town
TR2, Transport 12: Public Road & Public Parking
Current Zoning: Informal Housing
Land Status: Informal Housing
Developable Area: 4.3 ha



Site Development Informants:



TOWN PLANNING:

- Statutory approval process:**
- Existing power line servitude, will not inhibit development, adequate setbacks will be considered when detailed site development planning process is underway.
 - Title deed restrictions to be checked by conveyancer
 - Site encroachments requires Coct anti-land invasion unit to assist in moving structures.
 - Rezoning application required to enable housing establishment

ENVIRONMENT:

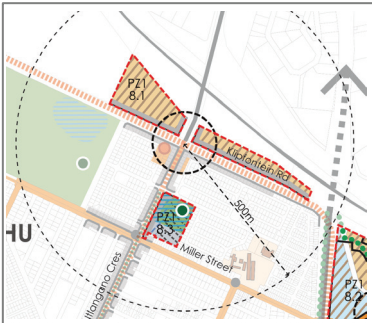
- No known environmental constraints
- Authorisations not required

ENGINEERING:

- Sufficient water storage/supply capacity
- Sufficient sewer treatment capacity
- Electrical Supply Authority CoCt South
- Electrical Capacity limited in area

Development Risks:

- Informally occupied- Enumeration process urgently required to confirm existing numbers and how many can be accommodated on the site
- Forms part of a larger dense, informal settlement. Any intervention will need to be planned in relation to the surrounding informal settlement located outside the subject property boundaries as well as consider possible infrastructure improvements including improved access to water, waste management or sanitation services.



URBAN DESIGN:

- Forms part of Ntlangano Gateway & existing link to N1 and airport
- Located on a key NMT and structuring route (Emms/ Ingulube High street corridor)
- Strategic and highly visible location with good retail/ trading potential
- Western side of site could be impacted by future road improvements including Borchers Quarry & Klipfontein Road extension (no detail design available)
- Future public transport route on Klipfontein Road

FIGURE 43. SITE ASSESSMENT AND SCREENING SHEET EXAMPLE

TOWN PLANNING AND REGULATORY PROCESSES:

- Existing servitude and title deed restrictions that limit development potential on the site
- Potential requirement for land disposal or sale agreement to enable housing development
- Requirement for rezoning and subdivision
- Heritage considerations that limit development potential and or should inform approaches to the design of the site
- A need for a water use license to enable the development
- Site Encroachment to be addressed
- Need for a Housing Enumeration process

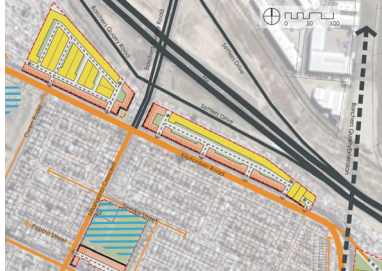
POA PRIORITY ZONE 1: Node A – Site PZ1 8.1
Cnr Klipfontein Rd & Ntlangano Crescent

Recommended Development Scenario



Optimal Land Mix:	Estimated Developable Area (gross)	Estimated Developable Area (net)	Density		Potential Housing Yield	
			Conservative without M.D.	Potential with M.D.	Conservative without M.D.	Potential with M.D.
MU Residential	4.3 ha	2.7 ha	Net 128 du/ha	207 du/ha	339 units	549 units
			Gross 79 du/ha	127 du/ha		
State Funding	USP/ IRDP/ BNG/ FLSP		Implementation		Mixed: State (CCT) & Micro Developers	

Conceptual Design Approach



DESCRIPTION:

- A mix of typologies with inclusion of retail opportunities on key edges of the site.
- Inclusion of a public space with trading opportunities on Erf 113276 to reinforce gateway location.
- Inclusion of existing onsite community.

Proposed zoning:

- General Residential Sub-zoning 2 (GR2)

Possible Departures:

- Possible common boundary building line setbacks



SITE DEVELOPMENT CONSIDERATIONS

TOWN PLANNING & REGULATORY PROCESSES:

- ✓ Check ex Servitudes/ Title deed
Land Disposal/ sale agreement
- ✓ Re-Zoning & subdivision required
CCT Site reservation to be addressed
Heritage considerations
Water use license application required
EIA required
- ✓ Site Encroachments to be addressed
- ✓ Enumeration Process Required

ENGINEERING & SERVICES:

- Water & sewer pipe upgrades TBC
- Electrical upgrades TBC
- Services pending authority feedback
- Stormwater assessment required

ENVIRONMENT & URBAN DESIGN:

- Ex Wetlands/ Stormwater pond onsite
- Mature Trees onsite

✓ Ex structures onsite

✓ Strategic location

✓ Access constraints

Detail Design: Contextual informants

✓ Delivery				
✓ Design, Tender, Construction				
✓ Town Planning Approvals				
✓ Environmental Approvals				
✓ Change of Ownership				
Anticipated Timelines	1-2 years	2-5 years	5-10 years	10+ years
	Short Term		Medium Term	Long Term

FIGURE 44. SITE DEVELOPMENT SCENARIO SHEET EXAMPLE

ENGINEERING & SERVICES:

- Location of existing services on the site
- Need for water and sewer pipe upgrades
- Need for possible electrical upgrades
- Need for a Stormwater assessment

ENVIRONMENT AND URBAN DESIGN:

- Existing wetlands and stormwater ponds on the site
- Mature trees on the site
- Existing structures on the site;
- Confirmation of the site's location significance within the POA; and
- Identify any contextual informants that should inform detailed planning and design for the site, including proximity to public transport, public facilities and economic activity.

For ease of reference, a development scenario sheet for every site that includes its proposed housing layout and the recommended approach to enable its future implementation is also included in Appendix B. This product intends to have a summary of every site containing all essential information to support decision-making and facilitate implementation.

3.4.1. ENVIRONMENTAL ASSESSMENT

The sites identified for potential housing in the POA were assessed for environmental constraints and a review of the ecological legislative requirements was undertaken. Key findings are as follows:

- 15 sites have no known environmental constraints and require no environmental authorisations.
- 1 site will require environmental and water use authorisation, but has no significant constraints to development other than the management of stormwater.
- 5 sites support or are adjacent to semi-natural wetlands (associated with stormwater ponds) and may require some level of mitigation in the design of the proposed development, as well as environmental and water use authorisations.
- 6 sites are constrained by the current noise impacts of the Cape Town International Airport but will become available for residential

development on completion of the planned runway realignment or may require noise mitigation if developed in the short term.

- All sites over 5 000 square metres or comprising three or more erven are likely to require heritage notifications of intent to develop. Still, no significant heritage resources are expected to be impacted on any sites.

3.4.2. ENGINEERING SERVICES ASSESSMENT

3.4.2.1. WATER

There is sufficient capacity i.e. water resources, storage is available (at Faure and Blackheath reservoir) as well as conveyance. A 1830mm diameter conveyance line from the south is feeding a 535mm distribution main running north along Stock Road that reduces to a 300mm diameter main in the vicinity of the Philippi Market. There is also a supply main from the north via a 1500mm bulk main feeding a 700mm diameter distribution main. Both these zones are pressure managed, a high density development (multi-storey) will require high pressure settings that affect pipe sizing and overhaul of pressure reducing valves. The estimated water demand for the POA sites is expected to be 2.63ML per day and a peak demand of 109L/S. Expected upgrades would be on the distribution pipelines as City confirmed sufficient capacity on storage and conveyance. City Bulk Water Management is to confirm the required upgrades.

3.4.2.2. SEWER

The POA sites form part of the Philippi collector sewer catchment. This catchment drains to the Cape Flats Wastewater Treatment Works, which has sufficient capacity for the additional flow. The Philippi bulk collector pipeline located along Sheffield Road experience various collapses. The bulk collector pipeline commences with 600mm diameter line, becomes a 750mm diameter line and then a 825mm diameter line. To accommodate the proposed densities, the upper reaches of the bulk collector will require upgrading, approximately 3km length. The expected sewer discharge from the POA sites are estimated to be 2.1ML per day. Currently a City funded project for reconstruction of the Philippi bulk collector is underway. Designs could be amended to include POA sites. Mr Anic Smith: Head Planning and Design is leading the project from City's side.

3.4.2.3. ELECTRICAL

The electrical supply to the POA sites is provided by both Eskom and City. The area supply split occurs at New Eisleben Road, as being the general boundary between the two supply areas. Approximately 38MVA capacity is

required to supply the POA sites. Potentially a new HV step-down substation will be required and 3-4 MV brick-built distribution substations to distribute the supply to the new areas. Both Eskom and City is to confirm the load demand and upgrade required.

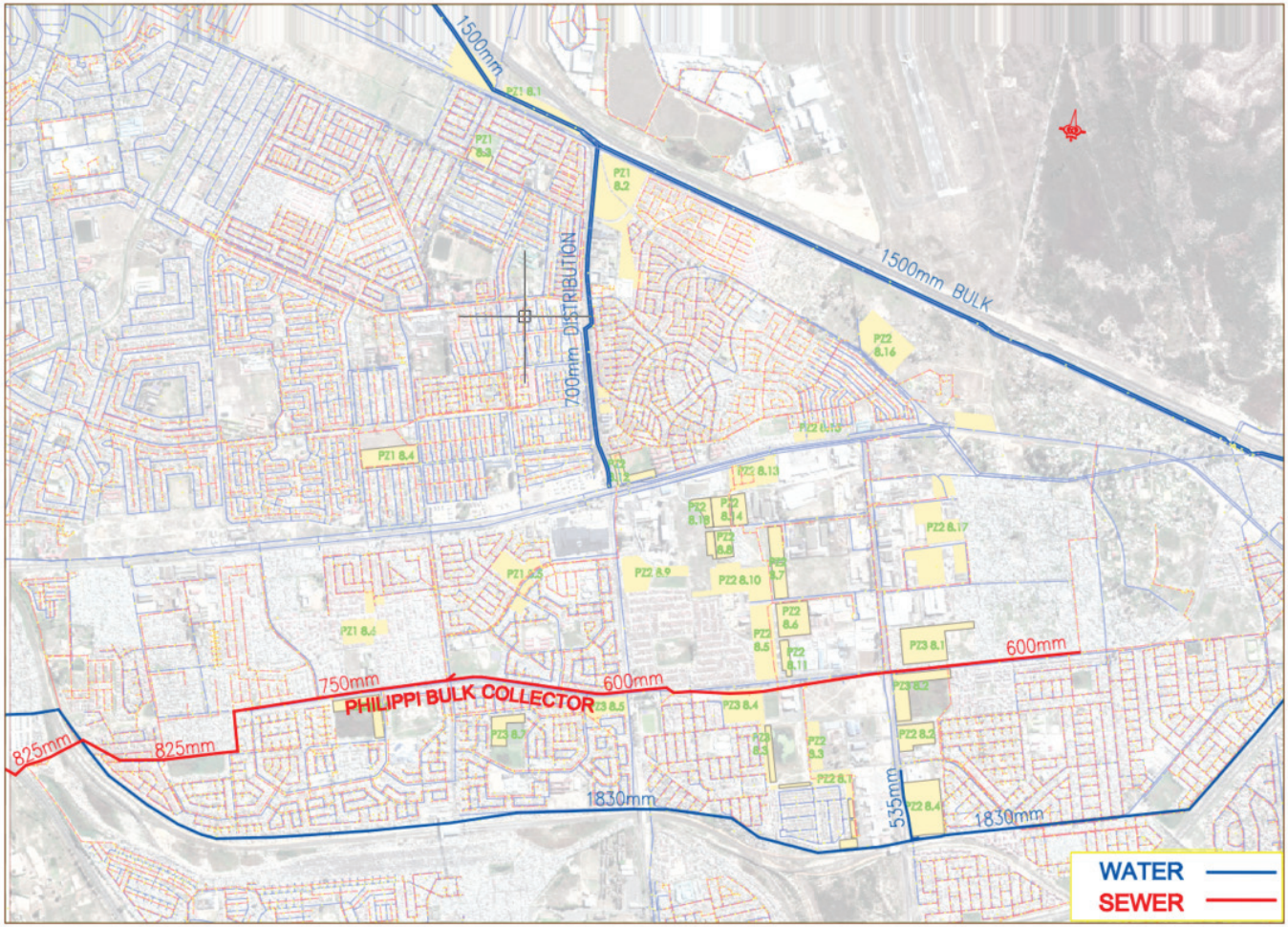


FIGURE 45. BULK WATER AND SEWER SERVICES (DRAWING PROVIDED BY JOHTAS CONSULTING)

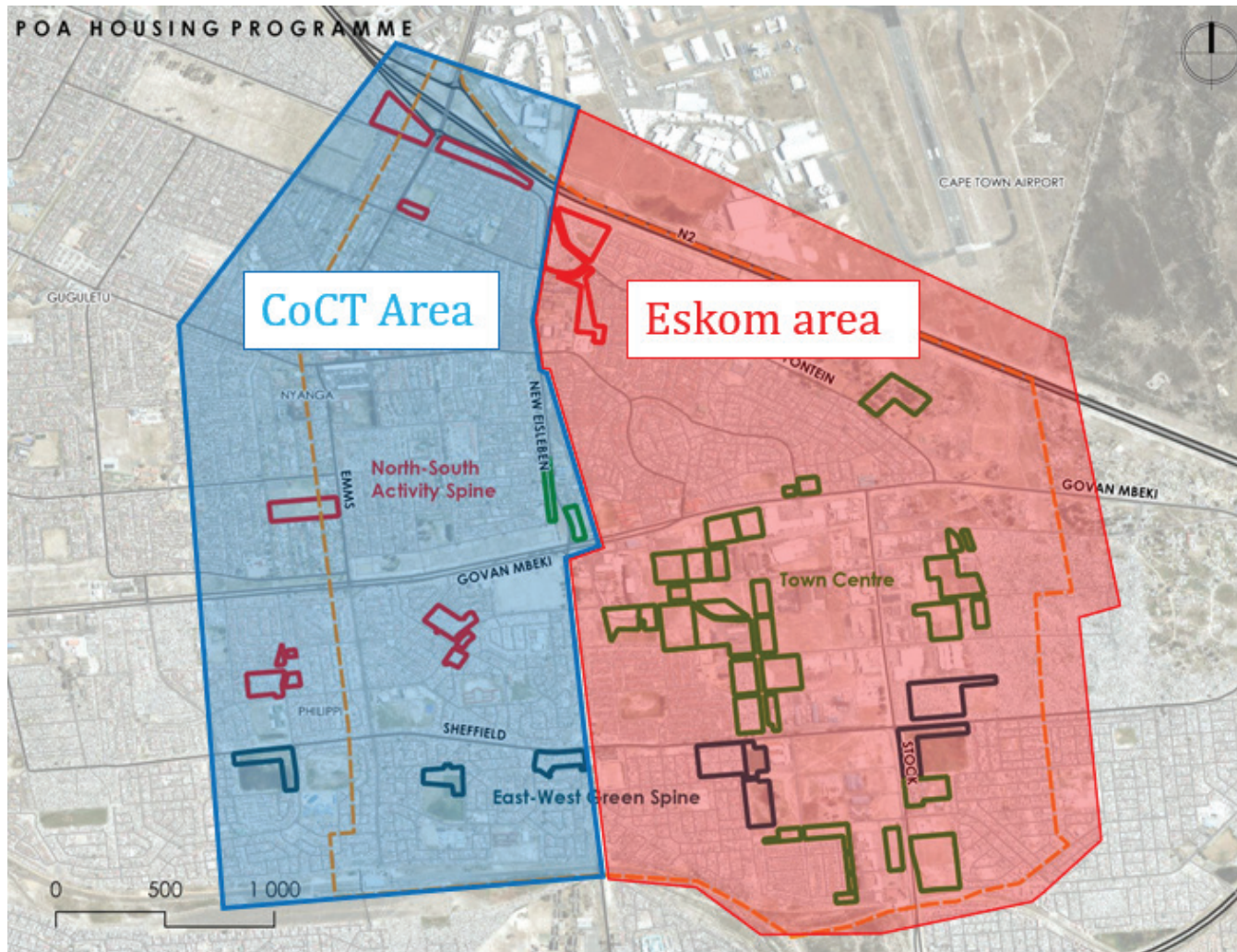


FIGURE 46. ELECTRICAL SUPPLY (DRAWING PROVIDED BY JOHTAS CONSULTING)

4. UPDATED POA HOUSING FRAMEWORK

The updated POA Housing Framework has also considered the following recently completed or current studies in the study area, including:

- Site-specific studies in the study area, including The Philippi Village Framework; the Erf 5268 Development Vision, Philippi Fresh Produce Market Focus Area Plan & Terminus Road Housing Site Development Plan;
- Study area-wide investigations including the POA Heritage Study, POA Stormwater Study and the Sheffield Road Modeling Study.

To assist with future planning, a breakdown of the housing potential in the POA is provided per Priority Zone that includes a high level description of each site and its recommended prioritisation for implementation as well as a breakdown by the various identified housing typologies across the POA.

	Total Area (gross) (ha)	Developable Area (Net) (ha)	EST YIELD/ # UNITS- conservative Before Infill by Micro Developers	EST YIELD/ # UNITS- Total Potential (After infill by Micro Developers
PZ 1	21.5	9.8	1060	1950
PZ 2	42.5	21.7	2757	4562
PZ 3	23.1	9.3	1519	2057
TOTAL:	87.1 ha	40.8 ha	5336	8569

 * SITES WITH EXISTING STORMWATER PONDS & LOCATED ON SHEFFIELD ROAD - Final confirmation of the housing potential on these sites is subject to the current Sheffield Road and Philippi Stormwater studies

LEGEND

- Structuring Routes
- Primary Mobility Routes
- Secondary Mobility Routes
- Housing Project Sites
- 3-4 Storey Perimeter Block Development
- 2-3 Storey Walk-up / Duplex
- Rowhouse
- Semi-detached / serviced plots
- Major PTI (Planned)
- MyCiti Stations (Planned)
- MyCiti Stops (Planned)
- Railway & Stations
- Sites with Existing Stormwater Ponds
- Priority Housing Infill Zone

FIGURE 48. UPDATED POA HOUSING FRAMEWORK

4.1. HOUSING OPPORTUNITIES PER PRIORITY ZONE

4.1.1. PRIORITY ZONE 1 (PZ1) NORTH- SOUTH ACTIVITY SPINE

A total of 1950 housing opportunities are estimated in the PZ1: North-South Activity Spine. The rationale and focus of the PZ 1 housing projects with their recommended layouts and supporting typologies relate to promoting the following strategic spatial objectives: Establishing the gateway into the POA on Ntlangano Crescent (and existing link to the airport);

- Supporting upgrades and the formalisation of existing informal settlements; and
- Improved functioning of existing open spaces in the area.

A high level description for each site and its recommended form of development is provided on the adjacent page with a full description and its accompanying site layout being provided in Appendix B. It should be noted that these layouts are high-level and have been completed to a level of detail to confirm the potential number of housing opportunities and outline the required steps and processes to enable development on the various sites.

The table below summarises the housing potential on the various housing sites within PZ1 and indicates its prioritisation for implementation and the

INDIVIDUAL SITE DESCRIPTIONS AND COMMENTS:

- 8.1 8.5** Upgrades to existing informal settlements:
 - A mix of typologies, but predominantly site & service that private micro developers can densify at a later stage.
 - A numeration process is urgently required to confirm existing numbers living on the various sites
 - Inclusion of public space, play courts and SUDS within the design layouts
- 8.2** Mixed housing with a proposed consolidation of the various properties with different ownership supports the improved optimisation of the general site area. The proposed housing layout endorses the extension of Klipfontein Road across the site and requires adjustments to the current alignment of the existing road servitude
- 8.3 8.4** Infill housing on underutilised portions of existing sports facilities to support activation around the site and improved edge conditions as well as to create a revenue stream for upgrades to existing facilities

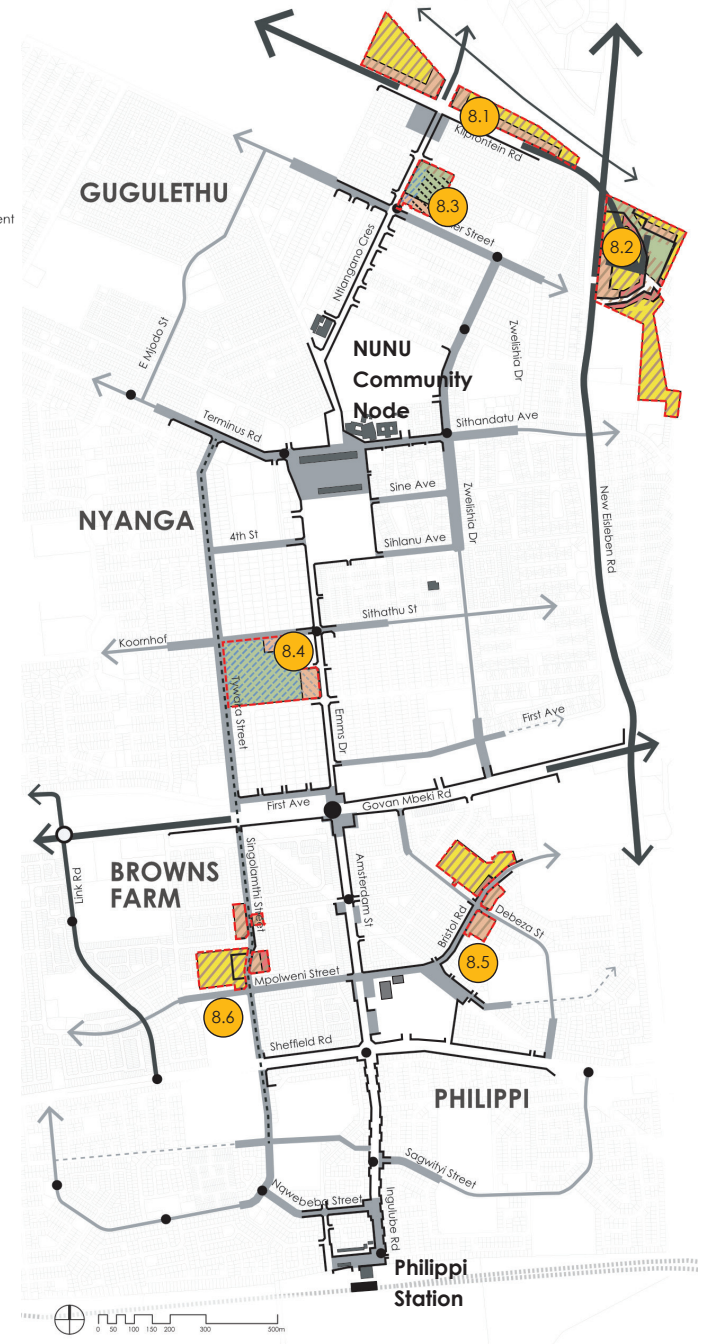
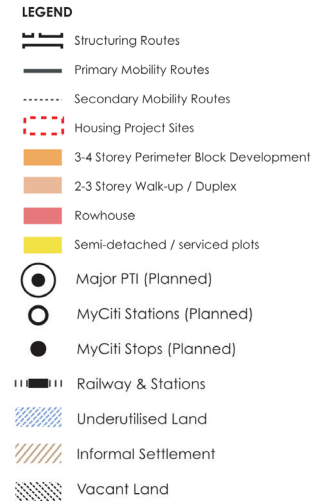


FIGURE 49. PZ1: NORTH SOUTH ACTIVITY SPINE

HOUSING SITE	SITE SIZE (HA)	TYPOLOGY	EST YIELD/ # UNITS- Conservative	EST YIELD/ # UNITS- Total Potential	IMPLEMENTATION	
					TIME FRAMES	PRIORITY
PZ1-8.1 (public- CCT)	4.3	Mixed: Serviced Plot/ self help & Walkup/ Duplex	339	549	Short term	High
PZ1-8.2 (mixed: public & private)	7.1	Mixed: Serviced Plot/ self help & Walkup/ Duplex	297	693	Medium term	High
PZ1-8.3 (public- WCPG)	1.4	3 Storey Walkups	48	48	Short term	Moderate
PZ1-8.4 (private)	4.2	3 Storey Walkups	140	140	Short term	Moderate
PZ1-8.5 (mixed public- CCT & WCPG)	2.2	Serviced Plot/ self help & Walkup/ Duplex	105	268	Short/ medium term	High
PZ1-8.6 (mixed public- CCT & WCPG)	2.1	Serviced Plot/ self help & Walkup/ Duplex	131	252	Short / medium term	High
TOTAL:	21.5 HA	TOTAL EST. UNITS:	1060	1950		

FIGURE 50. PZ1 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE

4.1.2. PRIORITY ZONE 2 (PZ 2) TOWN CENTRE

A total of 2757 housing opportunities are estimated in the PZ2: Town Centre. The rationale and focus of the PZ 2 housing projects with their recommended layouts and supporting typologies relate to promoting the following strategic spatial objectives:

- Optimising housing opportunities around the Stock Road Station and Philippi Village Activity Nodes;
- Establishing a new direct internal linking route between the activity nodes while also creating direct access to currently inaccessible and underutilised land;
- Supporting upgrades and formalisation of existing informal settlements
- Establishing a clear transition between existing industrial activities and new housing development on the Marikana side of the study area. The location and layout of the proposed MU housing projects support the future upgrading and formalisation of Marikana by following the proposed alignment of the new structuring routes identified in the POA Regeneration Framework that were highlighted to enable spatial integration

A high level description for each site and its recommended form of development is provided on the adjacent page with a full description and its accompanying site layout being provided in Appendix B. It should be noted that these layouts are high-level and have been completed to a level of detail to confirm the potential number of housing opportunities and outline the required steps and processes to enable development on the various sites.

The table below summarises the housing potential on the various housing sites within PZ2 and indicates its prioritisation for implementation and the anticipated timeframes required to enable implementation.

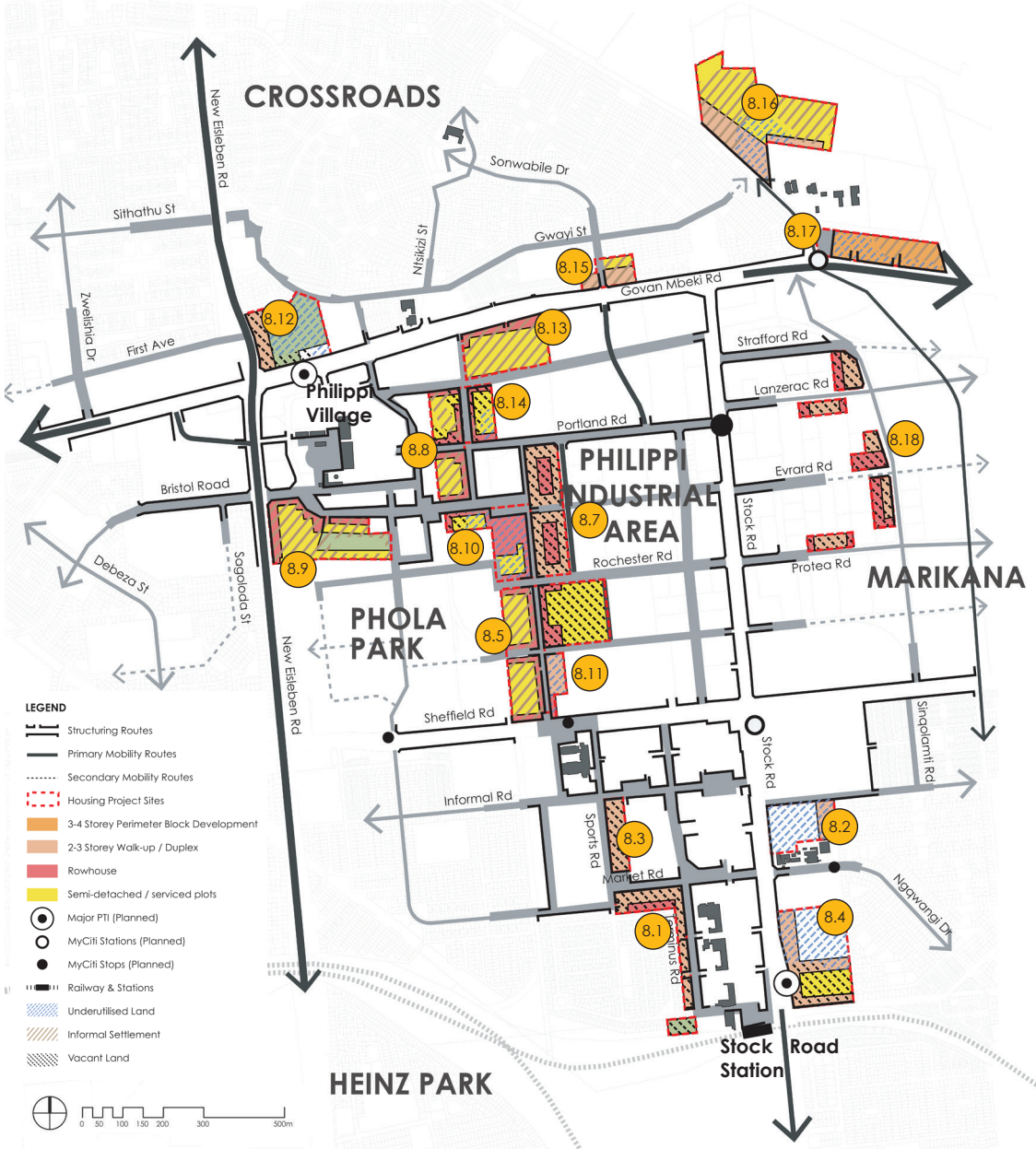


FIGURE 51. PZ2: TOWN CENTRE

INDIVIDUAL SITE DESCRIPTIONS AND COMMENTS:

- 8.1 8.3 Mixed-use infill development on Erf 5268. Site 8.1-Terminus Road is currently in the design development and planning phase and will be the first implementation project for the POA Housing programme
- 8.2 Proposed infill housing on underutilised sections of the Beautiful Gate property
- 8.4 Mixed-use infill housing on an existing underutilized school site. New development on the site relates supporting improved security and to optimize the inherent retail potential on the Stock Road edge of the site which is adjacent to the Stock Station, MyCiTi station and Jo Gqabi Long Distance bus terminus
- 8.8 Upgrades to existing informal settlements:
- 8.9 8.13 • A mix of typologies, but predominantly site & service that private micro developers can densify at a later stage.
 - 8.15 • A numeration process is urgently required to confirm existing numbers living on the various sites
 - Inclusion of public space, play courts and SUDS within the design layouts
- 8.8 8.14 Designed to align and integrate with the proposed expansion and upgrades to Philippi Village. These sites could be implemented independently or as part of the overall Philippi Village expansion programme. These sites are in private ownership
- 8.9 Siyangena informal settlement upgrade: designed to optimise the locational potential on New Eisleben Road as well as to link with the proposed stormwater improvements within Philippi Village. This site is in private ownership
- 8.10 Infill on underutilised sections of the Police Training Facility: These projects are critically required to establish key links between the activity nodes within the Philippi Node
- 8.5 Upgrades to an existing informal settlement on City owned land. This project forms part of the new structuring route between Philippi Village and Stock Road Station.
- 8.7 8.11 A mix of new high density housing projects with ground floor activation along the new linking route between Philippi Village and Stock Road Station. The properties are in private ownership requiring a co-ordinated implementation process
- 8.12 High density mixed used development on the proposed Sport Facility at the intersection of New Eisleben Road and Govan Mbeki. The proposed layout intends to create active frontage and secure the facility, while not compromising on the functioning of the sports facility.
- 8.16 Infill housing along Old Klipfontein Road. The proposed layout responds to preserving the agricultural character of its location which has been identified as a heritage asset, with lower density forms of development. This project is dependent on the finalisation of the ACSA flight path.
- 8.17 High density, mixed use housing that forms part of a larger public precinct with a range of community facilities. The proposed layout supports the future development of the proposed 'CrossRoads' public space on the intersection of Govan Mbeki and Old Klipfontein Roads. This project is dependent on the finalisation of the ACSA flight path.
- 8.18 Infill, mixed use housing that aligns with the proposed layout for the future restructuring of the Marikana informal settlement. The sites function as a transition between industrial and housing activities in the area.

HOUSING SITE/ OWNERSHIP	SITE SIZE (HA)	TYPOLOGY	EST YIELD/ # UNITS- Conservative	EST YIELD/ # UNITS- Total Potential	IMPLEMENTATION	
					TIME FRAMES	PRIORITY
PZ2-8.1 (public- CCT)	1.8	Row House, Walkup/ Duplex and Perimeter block	170	191	Short term	High
PZ2-8.2 (private)	1.8	2/ 3 Storey Perimeter	81	81	Short/ Medium term	Moderate
PZ2-8.3 (public- CCT)	1.0	2/ 3 Storey Perimeter	105	105	Short term	High
PZ2-8.4 (public- WCPG)	3.9	Serviced plot/ self help & Walkup/ Duplex	240	293	Short/ Medium term	High
PZ2-8.5 (mixed public- CCT & Eskom)	3.1	Serviced plot/ self help & Walkup/ Duplex	115	345	Short/ Medium Term	High
PZ2-8.6 (private)	2.5	Serviced plot/ self help & Walkup/ Duplex	109	327	Medium Term	High
PZ2-8.7 (private)	2.7	Serviced plot/ self help & Walkup/ Duplex	339	407	Medium Term	High
PZ2-8.8 & 8.14 (private)	3.3	Row House, Walkup/ Duplex and Perimeter block	114	340	Medium Term	High
PZ2-8.9 (private)	3.4	Serviced plot/ self help & Walkup/ Duplex	107	320	Medium Term	High
PZ2-8.10 (public- CCT)	2.2	Serviced Plot/ self help & Walkup/ Duplex	62	185	Short/ Medium term	High
PZ2-8.11 (private)	0.5	Row House, Walkup/ Duplex	77	87	Medium to Long term	Low
PZ2-8.12 (public- CCT)	2.7	2/ 3 Storey Perimeter	46	46	Short/ Medium Term	High
PZ2-8.13 (mixed: public & private)	2.5	Serviced plot/ self help & Walkup/ Duplex	109	326	Medium Term	High
PZ2-8.15 (private)	0.7	Serviced plot/ self help, Row House & Walkup/ Duplex	77	99	Medium Term	High
PZ2-8.17 (private)	7.7	Serviced plot/ self help & Walkup/ Duplex	779	1074	Medium/ Long Term	Moderate
PZ2-8.18 (private)	2.7	Serviced plot/ self help & Walkup/ Duplex	228	336	Medium/ Long Term	Moderate
TOTAL :	42.5 HA	TOTAL EST UNITS:	2757	4562		

FIGURE 53. PZ2 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE

4.1.3. POA PRIORITY ZONE 3 (PZ 3) WEST EAST GREEN SPINE

A total of 2057 housing opportunities are estimated in the PZ3: West-East Green Spine. Most of the proposed housing supports improved surveillance on poorly functioning stormwater ponds along Sheffield Road and optimises underutilised or vacant open spaces on Sheffield Road. The outcomes of the POA Stormwater and Sheffield Road Studies could impact the proposed number of housing opportunities identified in this zone.

A high level description for each site and its recommended form of development is provided on the adjacent page with a full description and its accompanying site layout being provided in Appendix B. It should be noted that these layouts are high-level and have been completed to a level of detail to confirm the potential number of housing opportunities and outline the required steps and processes to enable development on the various sites.

The table below summarises the housing potential on the various housing sites within PZ3 and indicates its prioritisation for implementation and the anticipated timeframes required to enable implementation.

INDIVIDUAL SITE DESCRIPTIONS AND COMMENTS:

- 8.2
8.5
 Infill housing to the edges of existing stormwater ponds that includes a mix of typologies that support improved surveillance and activation of these open spaces. It is assumed that the remaining open space will be upgraded as multifunctional stormwater and recreational areas such as the Ithemba Labantu facility on New Eisleben Road
- 8.6
8.7
- 8.1
8.2
8.3
8.4
 Housing sites located next to or adjacent to each other include integrated planning approaches to SUDS management. These projects will need to be planned and designed in a cohesive manner to ensure optimal stormwater management.
- 8.6
 Proposed infill housing on underutilised portions of existing sports facilities to support active street frontage and create a revenue stream for future upgrades/ maintenance. Development potential is constrained by the existing onsite wetland.
- 8.5
 Site layout and optimisation are constrained by the existing electrical servitude across the site. Buildings to be positioned to support improved surveillance onto the undevelopable portions of the site. Open space to be planned as an integrated NMT route and recreational space

These sites have been identified as CCT Housing Sites



FIGURE 54. PZ3: EAST-WEST GREEN SPINE

FURTHER DETAIL REQUIRED: SHEFFIELD ROAD STUDY	FURTHER DETAIL REQUIRED: STORMWATER STUDY	HOUSING SITE/ OWNERSHIP	SITE SIZE (HA)	TYPOLOGY	EST YIELD/ # UNITS- Conservative	EST YIELD/ # UNITS- Total Potential	IMPLEMENTATION	
							TIMEFRAMES	PRIORITY
*	*	PZ3-8.1 (*CCT-HR) (Private)	4.6	Serviced plot/ self help & Walkup/ Duplex	409	648	Medium term	tbc
*	*	PZ3-8.2 (*CCT-HR) (Private)	5.8	Serviced plot/ self help & Walkup/ Duplex	176	288	Medium term	tbc
	*	PZ3-8.3 (mixed: public-CCT & private)	5.5	Serviced plot/ self help & Walkup/ Duplex	160	220	Short to Medium term	tbc
*	*	PZ3-8.4 (private)	2.5	Serviced plot/ self help & Walkup/ Duplex	267	364	Medium term	tbc
*	*	PZ3-8.5 (mixed: public-CCT & private)	1.5	Row House, Walkup/ Duplex and Perimeter block	178	182	Medium term	tbc
	*	PZ3-8.6 (* CCT- HR) (public- WCPG)	3.6	Row House, Walkup/ Duplex and Perimeter block	81	81	Medium term	tbc
*	*	PZ3-8.7 (public-WCPG)	4.3	Row House, Walkup/ Duplex and Perimeter block	249	275	Medium term	tbc
		TOTAL :	23.1 HA	TOTAL EST UNITS:	1519	2057		

FIGURE 55. PZ3 HOUSING POTENTIAL AND PRIORITISATION SUMMARY TABLE

4.2. HOUSING OPPORTUNITIES BY TYPE

A breakdown of the various proposed housing options is provided below. A careful balance has been sought between the types of housing options offered in the POA that responds to both the need for entry-level housing and the need to provide higher density but more expensive housing options that will better optimise the POA's accessible location within the City.

4.2.3.1. SITE & SERVICE- DETACHED HOUSING OPPORTUNITIES

SITE & SERVICE & SEMI DETACHED Av. 60 du/ha	Total Developable Area (Net) (ha)	Developable Area by Typology (Net) (ha)	EST YIELD/ # UNITS
PZ 1	9.8	6.3	375
PZ 2	21.7	9.6	574
PZ 3	9.3	1.9	115
TOTAL:	40.8	17.7 ha	1064
% of Total Developable Area	43%		
% of Total Housing Yield (conservative)			20%
% of Total Housing Yield (total)			12%

FIGURE 56. SITE AND SERVICE / SEMI DETACHED AREA AND YIELDS SUMMARY TABLE

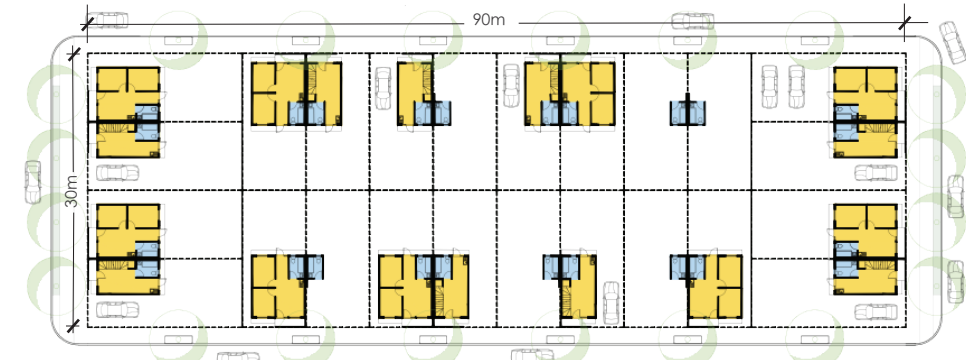


FIGURE 57. SITE AND SERVICE / SEMI DETACHED HOUSING - TYPICAL BLOCK LAYOUT

A total of **1064 units in the Site and Service- Detached housing** category have been identified in the POA. As indicated in the table adjacent, 43% of the total developable area has been allocated to this form of housing and will provide 12% of the total housing yield.

As indicated in the typical development block layout below, housing units are positioned at the front of erf to support active street frontage, with service cores being positioned to support future expansion at the back of the site.

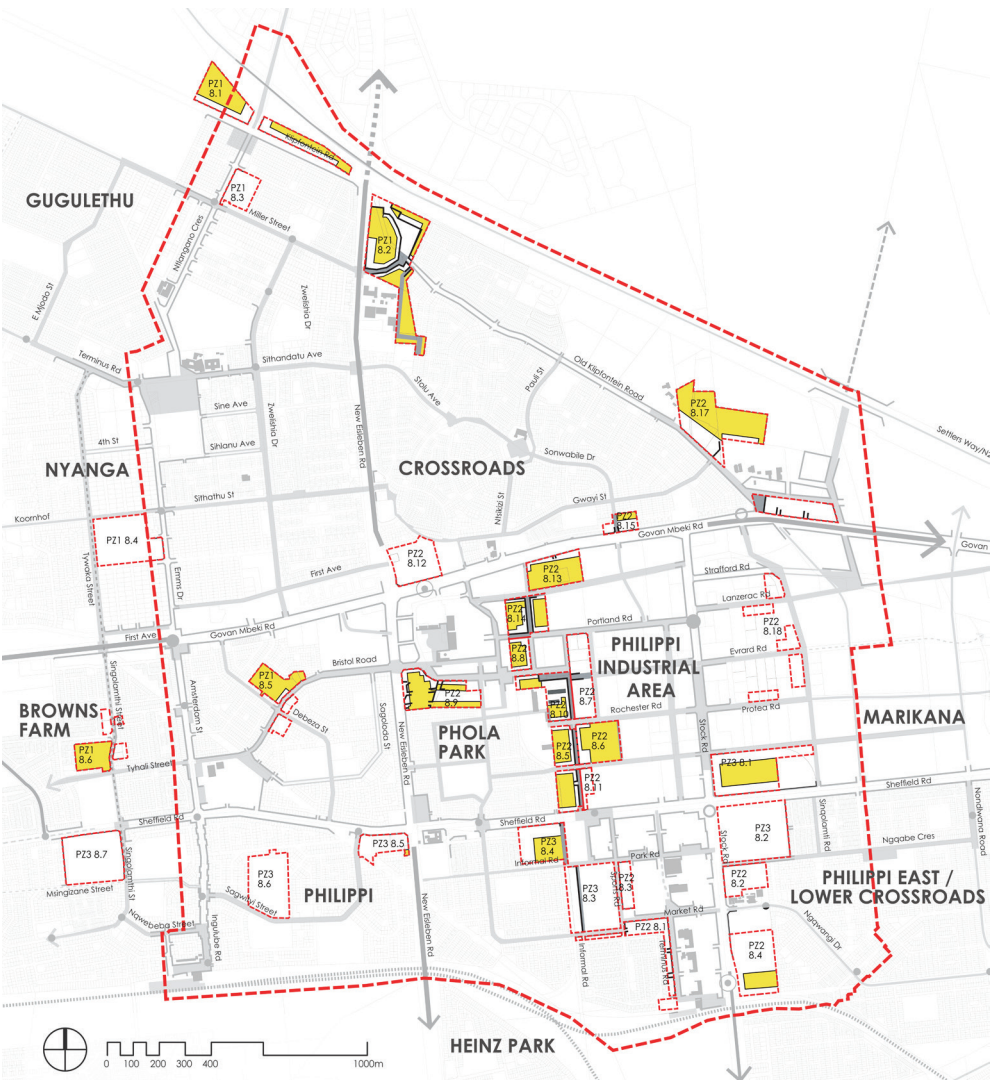


FIGURE 58. HOUSING TYPOLOGY BY TYPE : SITE AND SERVICE / SEMI DETACHED

4.2.1. SITE & SERVICE- ROW HOUSING OPPORTUNITIES

A total of **553 units in the Site and Service- Row housing** category have been identified in the POA. As indicated in the table below, 23% of the total developable area has been allocated to this form of housing and will provide 6% of the total housing yield.

SITE & SERVICE & ROW HOUSING Av. 60 du/ha	Total Developable Area (Net) (ha)	Developable Area by Typology (Net) (ha)	EST YIELD/ # UNITS
PZ 1	9.8	1.2	70
PZ 2	21.7	5.5	329
PZ 3	9.3	2.6	154
TOTAL:	40.8ha	9.2 ha	553
% of Total Developable Area		23%	
% of Total Housing Yield (conservative)			10%
% of Total Housing Yield (total)			6%

FIGURE 59. SITE AND SERVICE / ROW HOUSING AREA AND YIELDS SUMMARY TABLE

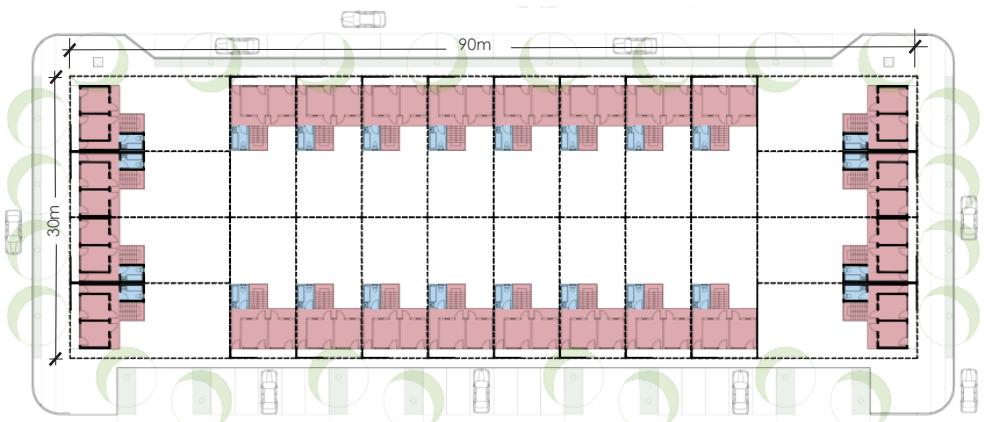


FIGURE 60. SITE AND SERVICE / ROW HOUSING: TYPICAL BLOCK LAYOUT

As indicated in the typical development block layout below, housing units are positioned at the front of erf to support active street frontage, with service cores being positioned to support future expansion at the back of the site.

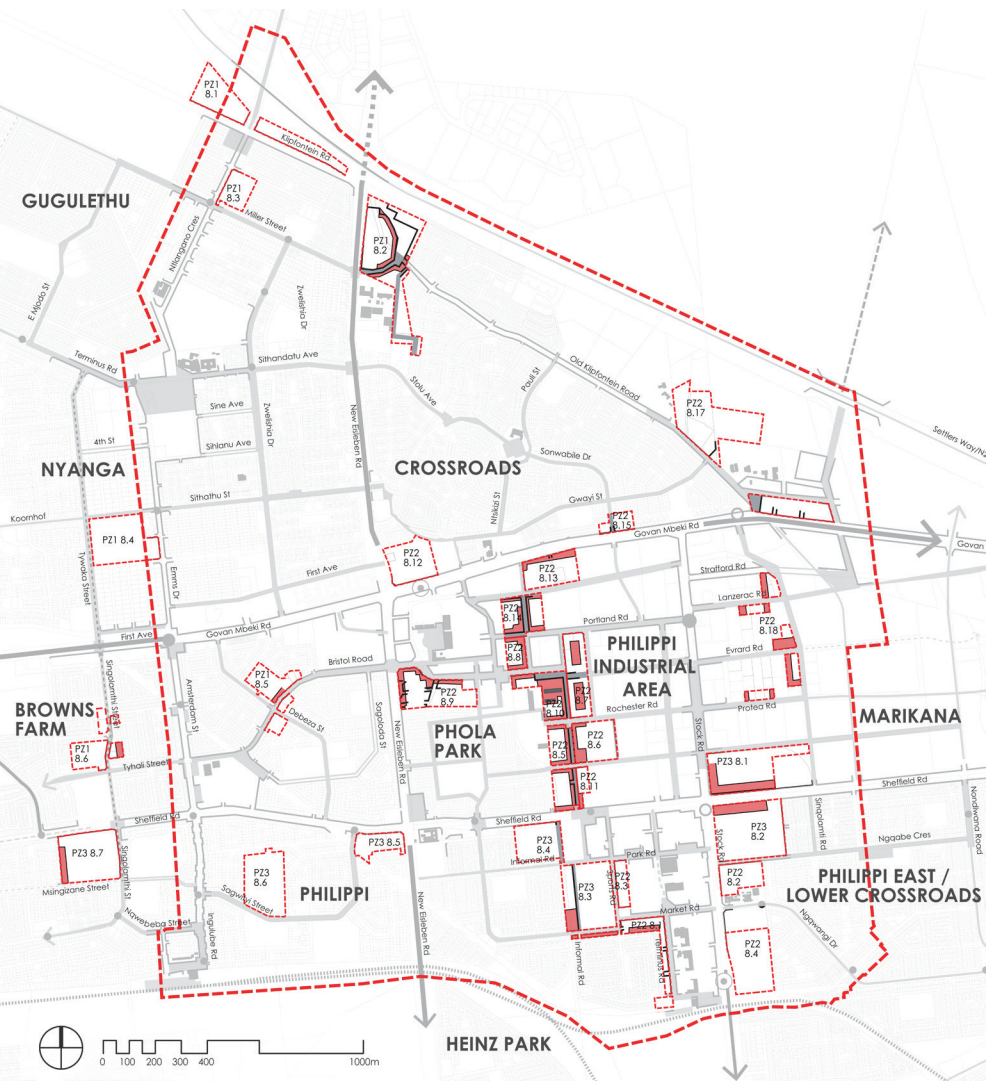


FIGURE 61. HOUSING TYPOLOGY BY TYPE: SITE AND SERVICE / ROW HOUSE

4.2.2. 2/3 WALK-UP DUPLEX HOUSING OPPORTUNITIES

A total of **3254 units in the Walk-up Duplex housing category** have been identified in the POA. As indicated in the table below, 31% of the total developable area has been allocated to this form of housing and will provide 38% of the total housing yield.

2/3 STOREY WALKUP DUPLEX Av. 260 du/ha	Total Developable Area (Net) (ha)	Developable Area by Typology (Net) (ha)	EST YIELD/ # UNITS
PZ 1	9.8	2.4	615
PZ 2	21.7	5.3	1390
PZ 3	9.3	4.8	1250
TOTAL:	40.8ha	12.5 ha	3254
% of Total Developable Area		31 %	
% of Total Housing Yield (conservative)		60%	
% of Total Housing Yield (total)		38%	

FIGURE 62. WALK-UP DUPLEX HOUSING AREA AND YIELDS SUMMARY TABLE

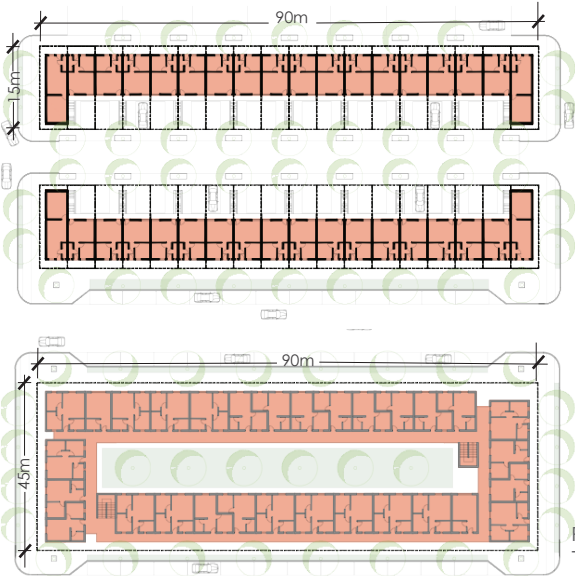


FIGURE 63. WALK-UP DUPLEX HOUSING: TYPICAL BLOCK LAYOUT

As indicated in the typical development block layout below, a perimeter block design approach has been adopted to support higher densities. The two layouts indicate a completely enclosed central courtyard or a service road running through the center of the block that can function like a pedestrian friendly woonerf street. The walkup units would range in height between 2 to 3 storeys.

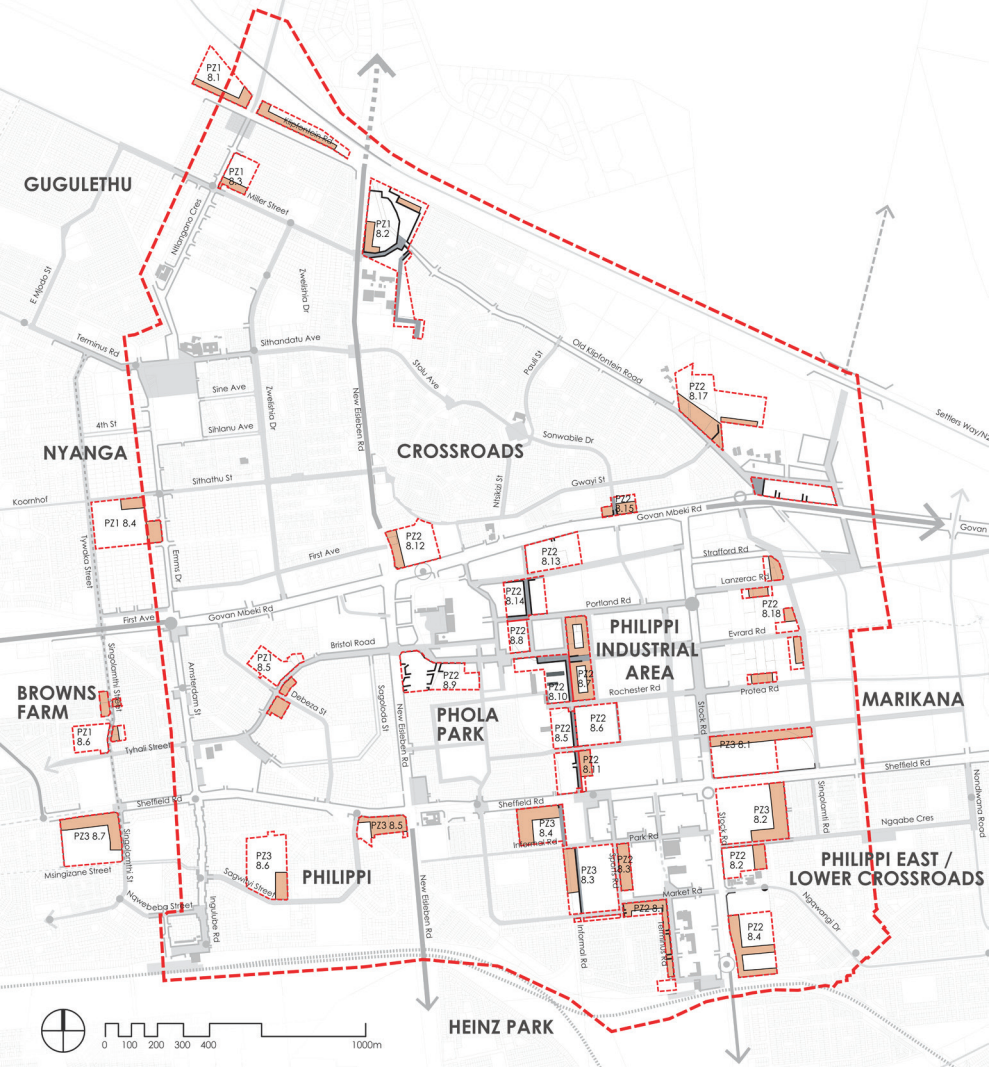


FIGURE 64. HOUSING TYPOLOGY BY TYPE: WALK-UP DUPLEX

4.2.3. PERIMETER WALKUP HOUSING OPPORTUNITIES

A total of **465 units in the Perimeter Walkup Housing** category have been identified in the POA. As indicated in the table below, 3% of the total developable area has been allocated to this form of housing and it will provide 5% of the total housing yield.

2/3 STOREY WALKUP DUPLEX0 Av. 300 DU/HA	Total Developable Area (Net) (ha)	Developable Area by Typology (Net) (ha)	EST YIELD/ # UNITS
PZ 1	9.8	0	0
PZ 2	21.7	1.3	465
PZ 3	9.3	0	0
TOTAL:	40.8ha	1.3 ha	465
% of Total Developable Area		3 %	
% of Total Housing Yield (conservative)			9%
% of Total Housing Yield (total)			5%

FIGURE 65. PERIMETER BLOCK AREA AND YIELDS SUMMARY TABLE

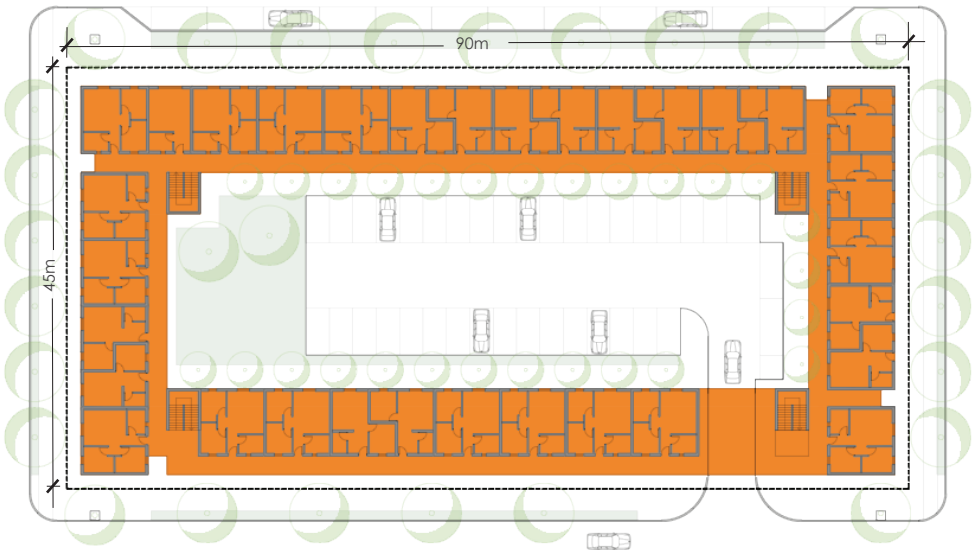


FIGURE 66. PERIMETER BLOCK TYPICAL BLOCK LAYOUT

Only one site has been identified for this form of housing due to the dependence on social housing companies being the only currently available implementing agent. A similar project is currently being planned in Khayelitsha by the Provincial Government and it is hoped that the lessons learnt from this project can be applied to the POA, when complete. It should be noted that the flexible development block design applied across the POA housing sites supports a range of differing typologies, thereby making it possible for the Perimeter Walkup typology to be used more extensively in the future, when funding, management and implementation mechanisms have been confirmed.



FIGURE 67. HOUSING TYPOLOGY BY TYPE: PERIMETER BLOCK

4.2.4. INFILL AND MICRO DEVELOPMENT HOUSING OPPORTUNITIES

A total of **3234 units** in the **Infill and Micro Development Housing** category have been identified in the POA. As indicated in the table below, 66% of the total developable area has been allocated to this form of housing and it will

INFILL/ MICRO DEVELOPM ENT Av. 180 du/ha	Total Developabl e Area (Net) (ha)	Developable Area by Typology (Net) (ha)	TOTAL EST YIELD/ # UNITS	EST YIELD/ # UNITS (less semi- detached & row house units)
PZ 1	9.8	7.4	1335	890
PZ 2	21.7	15.0	2708	1805
PZ 3	9.3	4.5	808	539
TOTAL:	40.8ha	27 ha	4851	3234
% of Total Developable Area (includes semi- detached & row house sites)		66%		
% of Total Housing Yield (total)			38%	

FIGURE 68. MICRO-DEVELOPMENT / INFILL: AREA AND YIELDS SUMMARY TABLE

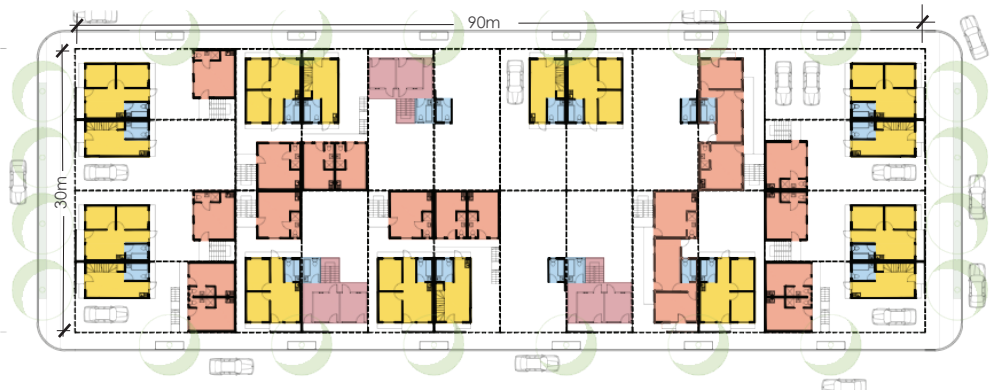


FIGURE 69. MICRO-DEVELOPMENT / INFILL TYPICAL BLOCK LAYOUT

provide 38% of the total housing yield. The Infill and Micro development would occur on all sites already identified for Site and Service- Detached housing and Site and Service-Row housing typologies. As indicated below in the typical development block layout, micro infill units would be positioned at the back of the erven, when an existing house has already been implemented. The recommended service core location on the erf also allows the option for micro development forms of housing to occur independently of any state led row house or detached housing development.

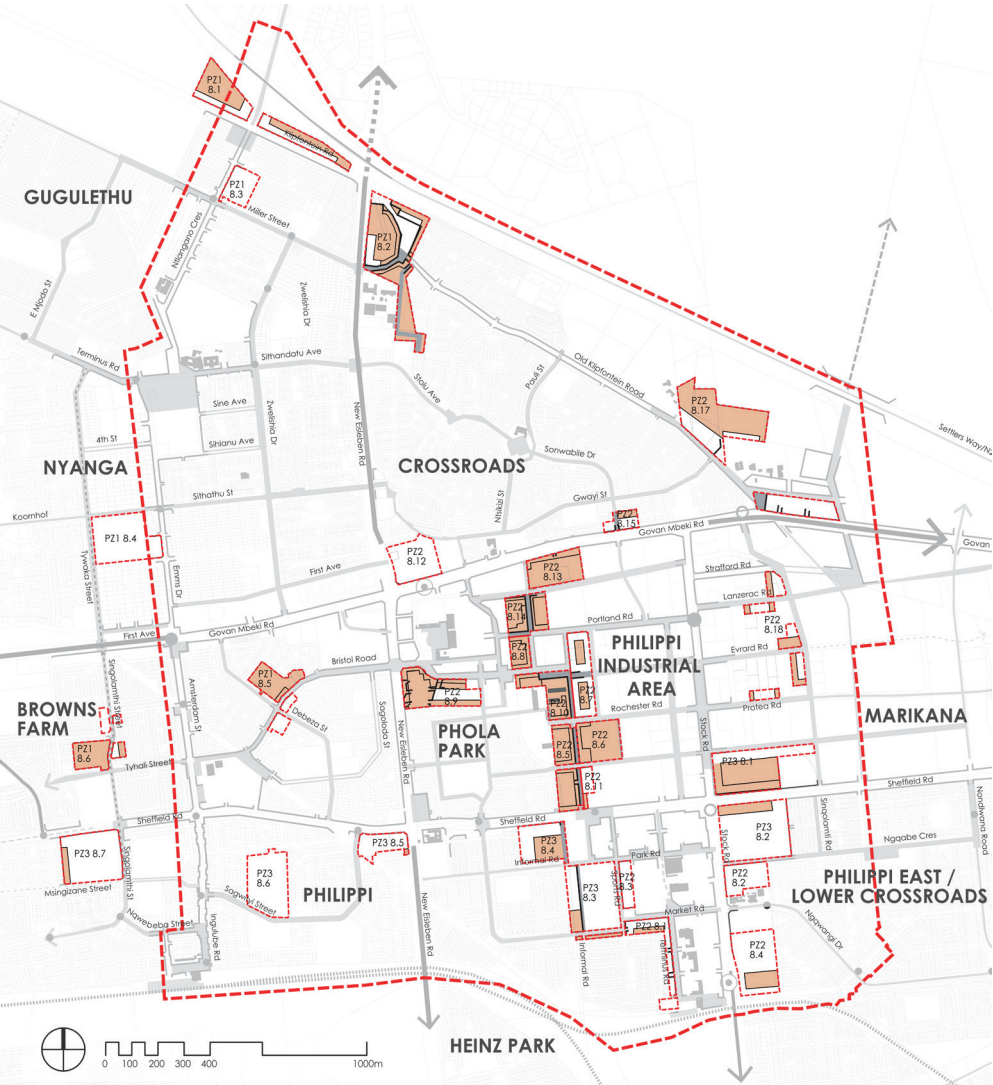


FIGURE 70. HOUSING TYPOLOGY BY TYPE: MICRO-DEVELOPMENT / INFILL

4.2.5. HOUSING OPPORTUNITIES IN RELATION TO KNOWN DEMAND

The adjacent table provides a breakdown of the number of housing units identified for each housing typology category in relation to the housing waiting list.

The total number of housing units that can be provided via subsidised forms of housing including UISP, IRDP, BNG & FLISP is 1617. This is a very small component in relation to the total housing demand required for the broader Philippi area. It should be noted that 66% of the total development area has been allocated for subsidised forms of housing in the housing split.

A further 3233 rental units in the form of infill and micro development will also contribute towards addressing the affordable housing shortage in the POA area.

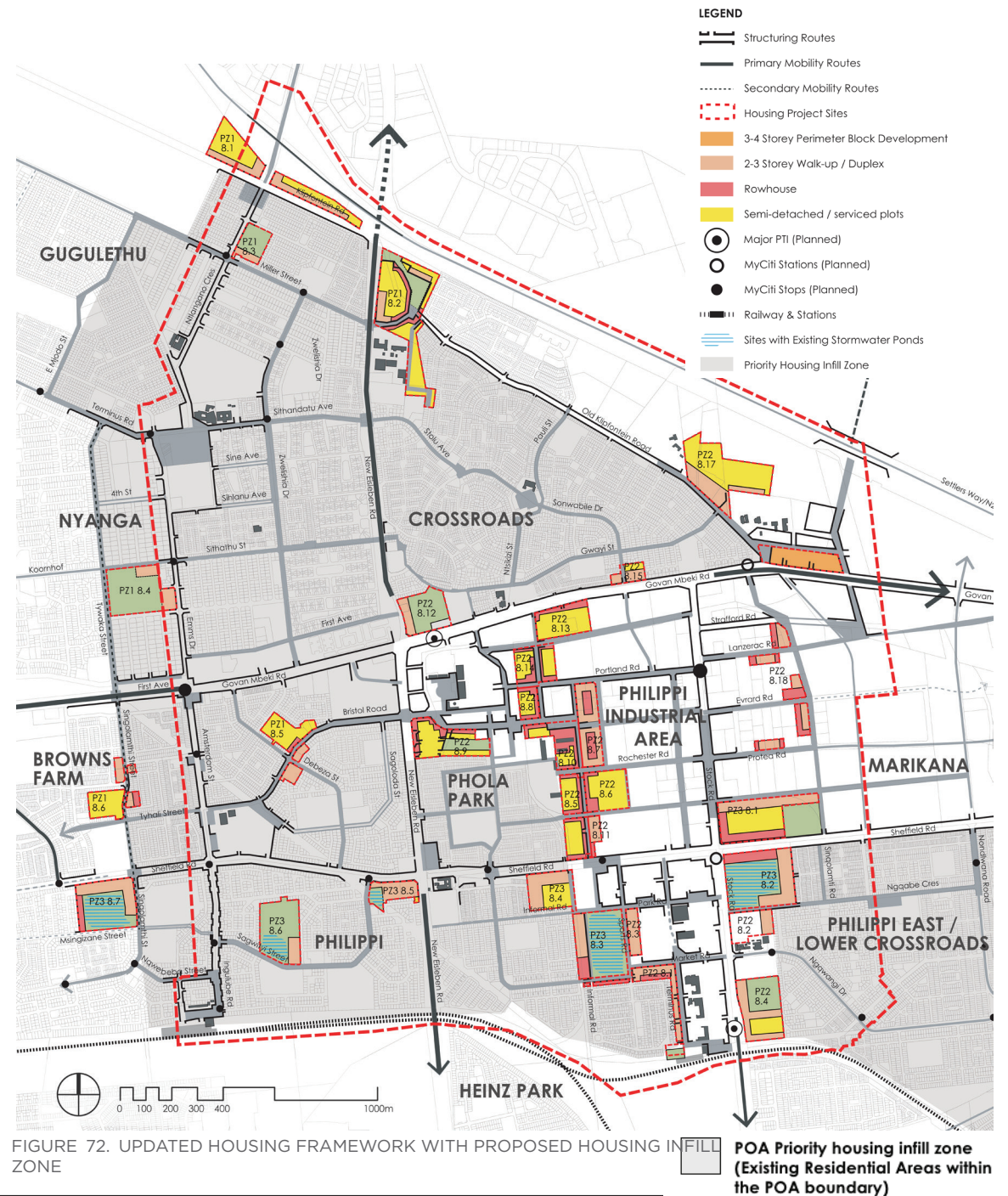
POA HOUSING OPPORTUNITIES		INFILL/ MICRO DEVELOPMENT			MICRO DEVELOPMENT	WALKUP DUPLEX	PERIMETER BLOCK	
		SERVICED SITE	SEMI DETACHED	ROW HOUSE				
			1 064	553		3 254	465	
		1 617			3 719			5 336
HOUSING WAITING LIST*	UISP							
	IRDP							
	BNG							
	CRU							
	FLISP							
		23 922						
		23 922 (-22 305 shortfall)			1 018 (+2 701 additional)			24 920
	Private Rental	POA INFILL/ MICRODEVELOPMENT (CONFIRMED)			3233			3 233
		POA PRIORITY INFILL OVERLAY ZONE (UNCONFIRMED)						TBC

FIGURE 71. HOUSING OPPORTUNITIES IN RELATION TO KNOWN DEMAND

4.3. POA HOUSING INFILL ZONE

To further support the speedy delivery of accessible housing in the POA, it is recommended that infill housing by micro developers is actively supported in all existing residential areas. In support of this, the following actions are required:

- Completion of **development guidelines and by-law processes** to effectively manage and promote infill development by micro-developers. A focus is required to support speedy implementation while ensuring the making of safe and qualitative living environments;
- Impacts to **engineering services** (electrical, water, sewer) and **stormwater functions** to be confirmed with recommendations for necessary upgrades;
- An **indicative POA Infill Housing boundary** is provided in the adjacent plan which relates to existing formally developed residential areas in the POA
- Confirmation of the **Final Infill Boundary** should be subject to the recommendations of the engineering and stormwater studies. It is expected that phasing recommendations that are linked to planned service improvements are provided as well as potential no-go areas for infill/densification due to existing stormwater constraints in the POA. The recommendations of the completed POA heritage study should also be considered in the confirmation of the final infill boundary to ensure areas of heritage significance in existing formal residential areas are protected.



5. TOWARDS IMPLEMENTATION

To support the future implementation of the POA Housing Framework, the following is provided in this chapter:

- A high level cost estimate;
- Housing project phasing and prioritisation recommendations;
- Identification of the recommended implementation leaders for the various housing projects with land acquisition/ disposal suggestions; and
- Identification of the next steps and actions to support future implementation

5.1. HIGH LEVEL COST ESTIMATE

High level cost estimates have been compiled for the housing typologies proposed for the sites investigated. As proposed in previous sections of this report, two options have been considered, "Without Micro Development" (Scenario 1) and "With Micro Development" (Scenario 2).

The full costing model is available in Appendix D and considers the following:

- Provision of municipal services to units;
- Building costs; and
- Professional fees

In terms of implementation costs, Scenario 1 is consistently lower for all sites considered due to the inclusion of space for "Site & Service" opportunities, which do not require construction of top structures by the developer. Sites which have limited Site and Service opportunities significantly reduces the cost difference between the 2 scenarios considered.

Having considered the two scenarios and the benefits of each, it should be noted that higher density construction would generally be more expensive per unit due to the increased construction costs associated with multi-storey construction methods. However, the long term return on investment, measured in terms of the number of residents impacted by the developments and efficient use of well situated land, is considerably higher for high density developments (Scenario 2) than for other types of development.

5.2. IMPLEMENTATION AND PROJECT PACKAGING

A phased approach to implementation will be required as some of the identified sites require a range of steps to be completed before they are ready for construction. The factors influencing the various sites readiness for implementation are listed below and have been taken into consideration in the recommended phasing and prioritisation plans provided below.

Site Phasing and Prioritisation Considerations:

1. Property ownership:

- CCT only ownership (no partnership agreements required)
- Private ownership
- Multiple private ownership
- Sites requiring land disposal or acquisition processes to be undertaken

2. Existing land status:

- Vacant land
- Informally occupied
- Sites with wetlands and stormwater ponds

3. Sites with project packing requirements:

- Rezoning and subdivision
- Title deeds and departures
- EIA's for sites with wetlands

4. Sites with Complex design and planning co-ordination requirements:

- Sites requiring CCT interdepartmental or WCPG engagement and agreement- including school sites, sports sites, planned infrastructure upgrades including roads, services, stormwater
- Planned upgrades in the surrounding area requiring integrated planning and co-ordination

5.2.1. PROJECT PHASING AND PRIORITISATION

5.2.1.1. PROJECTS FOR SHORT TERM IMPLEMENTATION

The sites identified for implementation in the short term are all owned by the City, except for sites PZ1 8.3 (WCPG- public ownership) & PZ1 8.4 (private ownership) In the case of sites PZ1 8.3 and PZ 8.4, which are both existing sports facilities, CCT would provide facilitation support to enable implementation. Many of the identified sites are informally occupied and urgently require enumeration processes to be completed. The sites identified as fast track priority projects are all in CCT ownership.

The sites recommended for implementation in the short term have locational significance within the POA and will start to demonstrate the regeneration vision for the POA by contributing to the completion of some key restructuring proposals in the POA, including

- Establishing a dignified gateway into the POA at its existing N2/ Airport entrance on Ntangano Crescent;
- Supporting improved connectivity between the existing Philippi nodes with a new internal linking route between them; and
- Transforming poorly secured sporting facilities into active and safe spaces .



FIGURE 73. PROJECT PHASING- SHORT TERM

5.2.1.2. PROJECTS FOR SHORT TO MEDIUM AND MEDIUM TERM IMPLEMENTATION

The sites identified for implementation in the short to medium term and medium term categories will require more time to undertake site preparation processes. Many of these sites are in private ownership and have been identified for potential City acquisition, or require potentially time consuming engagement and agreement processes to be completed to support future implementation. These sites will also contribute to establishing confidence and certainty in the POA as well as establishing the main restructuring elements of the Regeneration Framework

The sites that are located on or adjacent to Sheffield Road and/ or include an existing stormwater pond have not been identified as high priority projects due to the current specialist investigations in the area that could impact their development potential. Completion of these projects will confirm their priority status.

Sites in the short to medium term- high priority timeframe category could potentially be implemented in the short term. It is recommended that engagement with the private and/ or WCPG owners of these sites are initiated immediately to confirm if some of the identified projects can be reprioritised as 'fast track' projects.

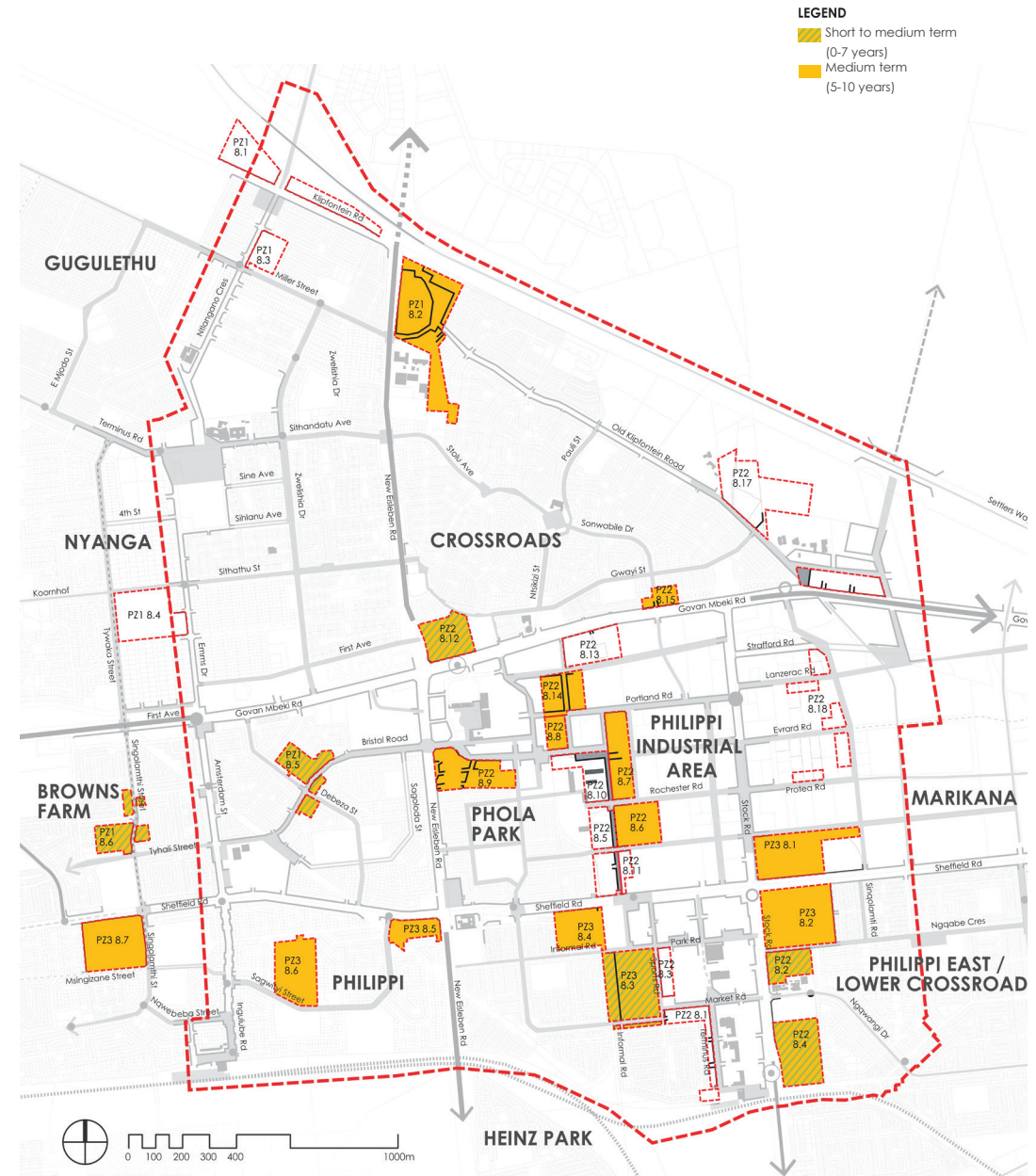


FIGURE 74. PROJECT PHASING- SHORT TO MEDIUM AND MEDIUM TERM IMPLEMENTATION

5.2.1.3. PROJECTS FOR LONG TERM IMPLEMENTATION

The sites identified for implementation in the long term are very small (Golden Arrow site- PZ2 8.11) have regulatory planning uncertainties that relate to final decisions needing to be taken on the ACSA flight path, or require further discussions with the existing property owners to confirm their potential for mixed use residential development. Although these housing projects will make a significant contribution to the regeneration of the POA and the delivery of housing in general, it is recommended that limited City budget and time resources are directed to the other identified housing sites that have greater development certainty .

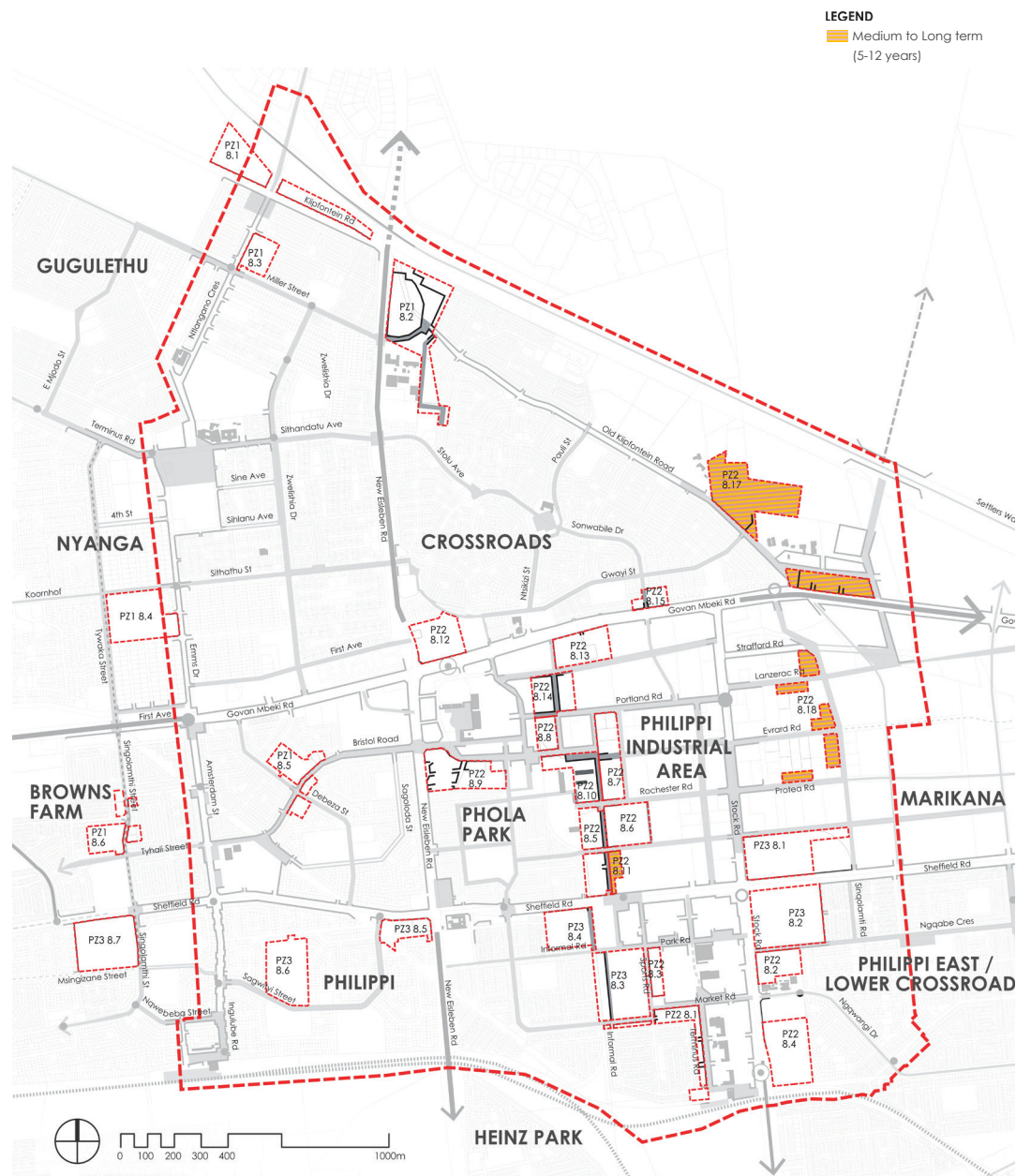


FIGURE 75. PROJECT PHASING MEDIUM TO LONG TERM

5.2.1.4. PROJECT IMPLEMENTATION PRIORITISATION

The projects that should be prioritised first for implementation have been identified as 'fast track' and 'high priority' projects. Fast track projects are all owned by the City of Cape Town and will not require engagement and agreement processes to be secured with other property owners.

The high priority projects are predominantly in private and WCPG ownership and will therefore require different processes to be followed to secure their development. The high priority projects that should immediately start with processes to support implementation have also been identified.

The following sites that are recommended for planning and engagement processes immediate implementation are as follows:

Short term: Fast Track: (City owned sites)

- PZ 1- 8.1
- PZ 2- 8.10
- PZ 2- 8.5
- PZ 2- 8.3 (portion on Philippi Agrihub edge)
- PZ 2- 8.1 (planning processes have started)

Short to Medium Term: (Duel City/ WCPG ownership and privately owned sites)

- PZ 1- 8.1 (duel City and WPGG ownership)
- PZ 2- 8.3 (public ownership- portion on Park edge/ subject to findings of POA stormwater Study)
- PZ 2- 8.8 & 8.14 (Private ownership)
- PZ 2- 8.9 (Private ownership)
- PZ 2- 8.12 (Subject to findings of POA stormwater study)

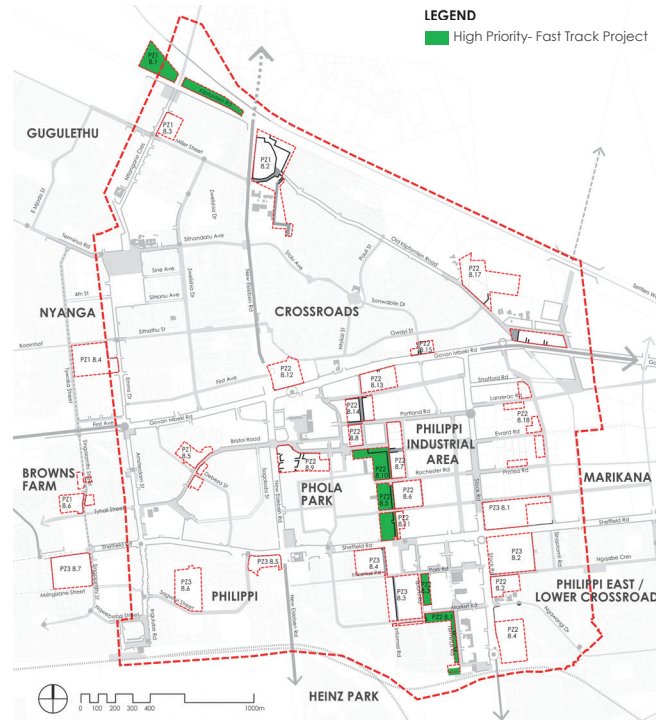


FIGURE 76. PROJECT PRIORITY- SHORT TERM PHASING /FAST TRACK PROCESS

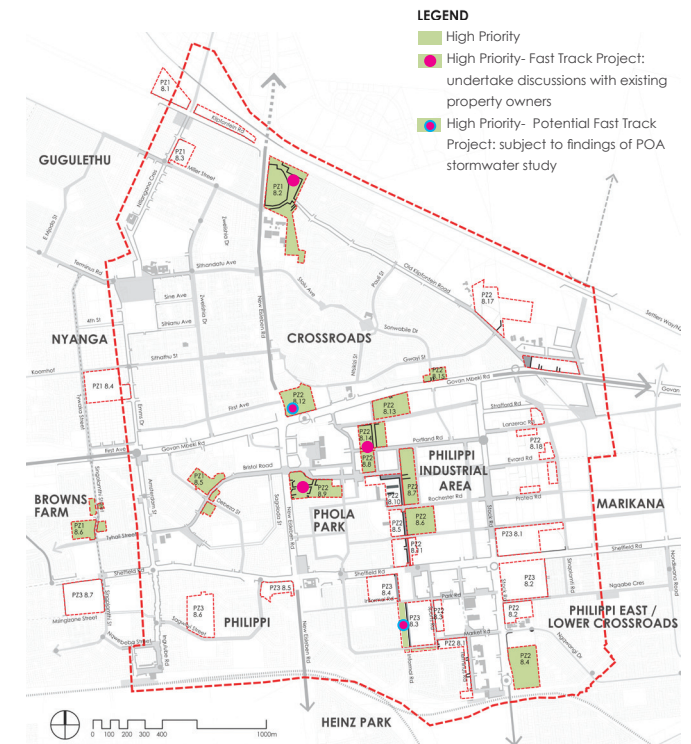


FIGURE 77. PROJECT PRIORITY- SHORT TO MEDIUM TERM PHASING/ HIGH PRIORITY

5.2.2. POA HOUSING PROJECT IMPLEMENTATION LEADERS

As the various POA sites having differing property owners, it is critical to confirm the envisioned implementation leaders for the various sites. As discussed in previous sections of the report, it is envisioned that CCT can partner with private property owners and the WCPG and provide site preparation support where necessary, but that it would not be the implementation leaders for all the identified projects. s

In some instances it is recommended that some privately owned sites are acquired by CCT to ensure that the restructuring objectives of the POA are realised as well as to enable the formalisation of sites that informally occupied.

The adjacent drawings indicate the proposed implementation leaders on the various housing sites and also provides recommendations for site acquisition and disposal. It should be noted that no engagement with private property owners or WCPG has been undertaken and these discussions could influence final decisions to proceed with site acquisition or disposal processes.

Completion of a property evaluation exercise on the various proposed sites for CCT acquisition will also assist with confirming required budgets and the possible phasing of CCT led projects for implementation.

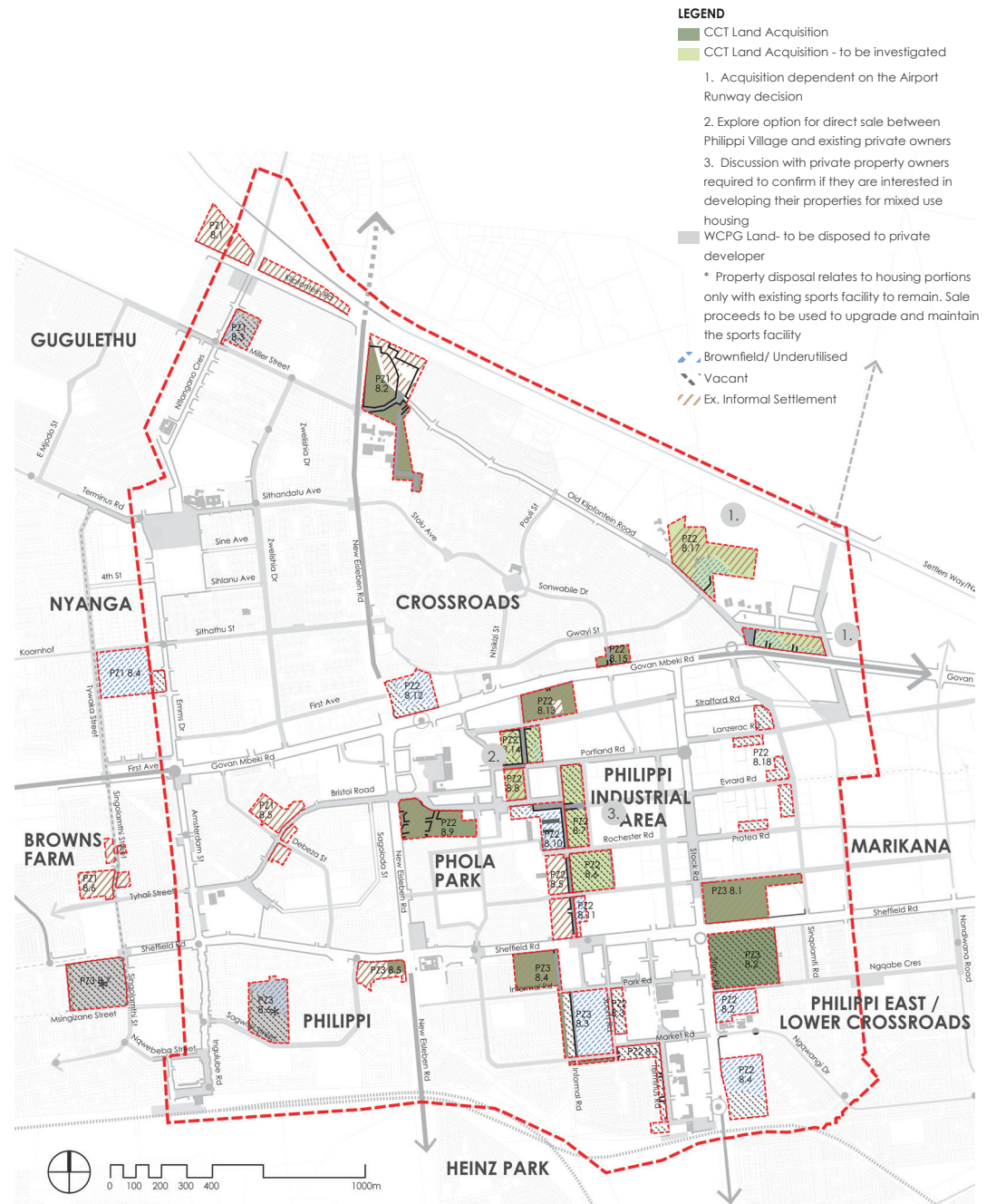
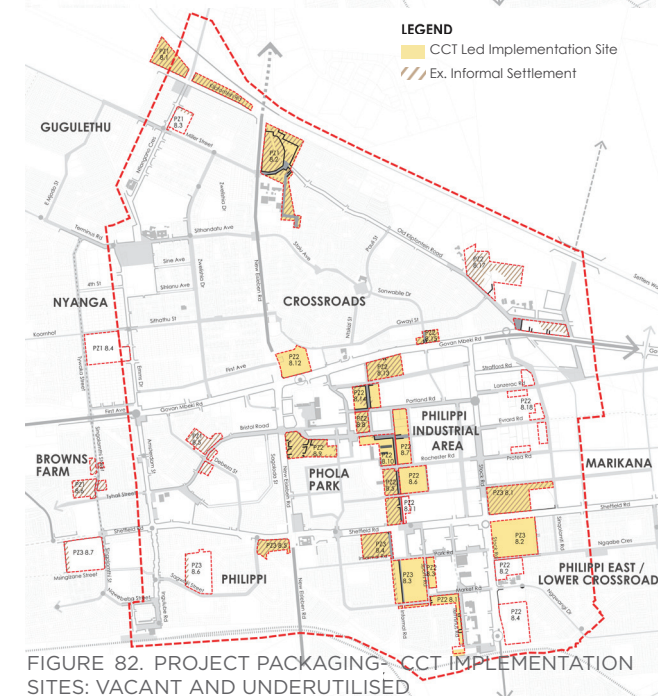
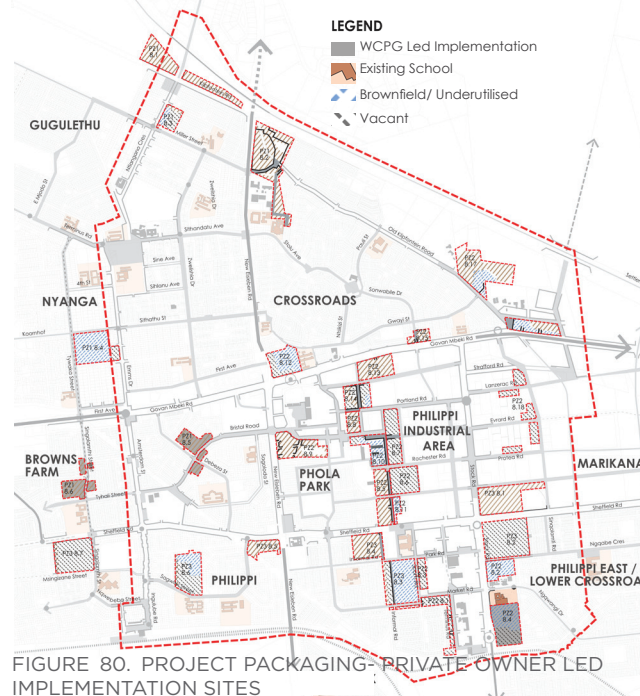
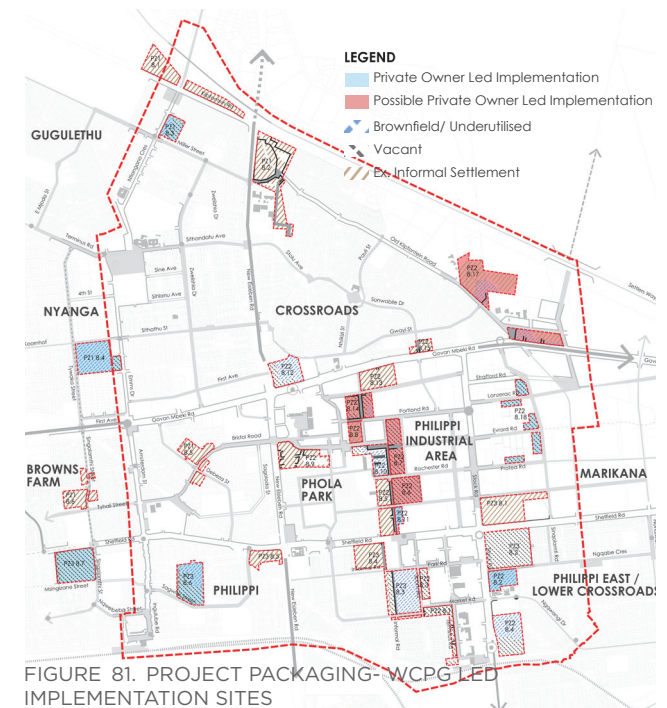
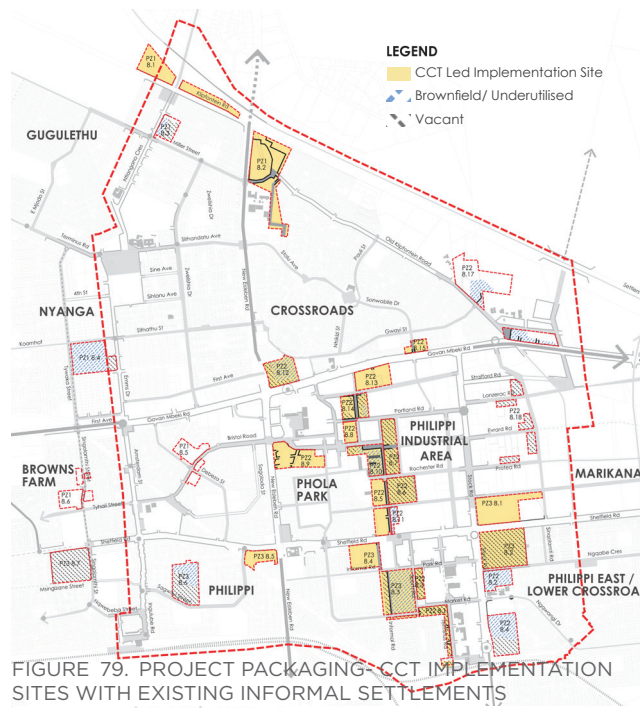


FIGURE 78. PROJECT PACKAGING- PROPOSED LAND ACQUISITION BY CCT



5.3. CONCLUSION AND NEXT STEPS

The updated POA Housing framework provides certainty on the sites which should be developed for housing as well as giving direction on its preferred form and the sequencing of projects for future implementation.

A substantial number of housing projects have been identified requiring the City to partner with a range of partners to achieve the speedy delivery of housing as well as its strategic objectives to support the regeneration of the POA into a thriving environment to live and work. Achieving the total number of potential housing opportunities will also be dependent on actively working with private partners with a specific focus on micro developers. The POA Housing Assessment Study has outlined a different approach to the possible delivery of housing and achieving increased densities that works within the current state subsidy system while also creating opportunities for private partnerships.

The next steps and actions required to take the findings of POA Housing Assessment further and support future implementation are outlined below:

- 1. Undertake an enumeration process on informally occupied sites** in order to:
 - Confirm the alignment/ mismatch between numbers living in existing informal settlements in the POA and the POA site layout proposals.
 - Obtain a better understanding of the economic profile and affordability requirements for housing
- 2. Undertake discussions with the various existing property owners. The focus of the discussions will vary, including:**
 - A. Initiate negotiations with Province on WCPG-owned sites
 - School and Recreation sites- agreement on Implementation Driver
 - Land disposal and sale agreement to Private Implementation Partners
 - B. Initiate negotiations with private property owners
 - Land disposal/ Sale agreements to CCT
 - Preparing for and enabling infill development (Micro developers)

C. Undertake discussions for sites with CCT interdepartmental co-ordination requirements

- Housing reservations
- Stormwater
- Transport
- Sports and Recreation

3. Undertake community engagement on informally occupied sites in order to:

- Create awareness of the project and obtain inputs on the conceptual site layouts
- Discuss implementation options and confirm preferred implementation processes to be followed on informally occupied sites

4. Undertake a property valuation exercise to confirm the value of sites identified for potential CCT acquisition

5. Completion of framework agreements to enable private implementation partnerships on CCT sites

6. Completion of a study to confirmation of the final boundaries of the POA Infill development area with specialist inputs from engineering, heritage and urban design to confirm no-go areas in existing residential areas.

7. Initiate parallel processes to support private development partners

- Completion of title deed processes for existing residential properties without title deeds to enable private finance
- Amendments to By-Laws to support Micro development, including the completion of a POA infill development overlay zone to support

increased densities. This should include design guidelines to support dignified living environments and protect the quality and character of the public environment

- Investigate and confirm options where CCT can provide institutional support for Micro-developers, including approved plans, access to funding, access to professional support, tenant agreements & capacity building, building inspectors as mentors
- 8. Appoint a multidisciplinary consultant team to start planning and design processes for the identified 'Fast Track Sites'**
 - 9. Identify a dedicated CCT team to drive the implementation of POA Housing Projects**

ANNEXURES

ANNEXURE A: HOUSING TYPOLOGY AND DEVELOPMENT BLOCK INVESTIGATION

ANNEXURE B: TECHNICAL ASSESSMENT AND HOUSING DEVELOPMENT RECOMMENDATION SUMMARIES PER SITE

ANNEXURE C: WETLAND ECOLOGICAL QUALIFICATION REPORT

ANNEXURE D: HIGH LEVEL IMPLEMENTATION COSTING