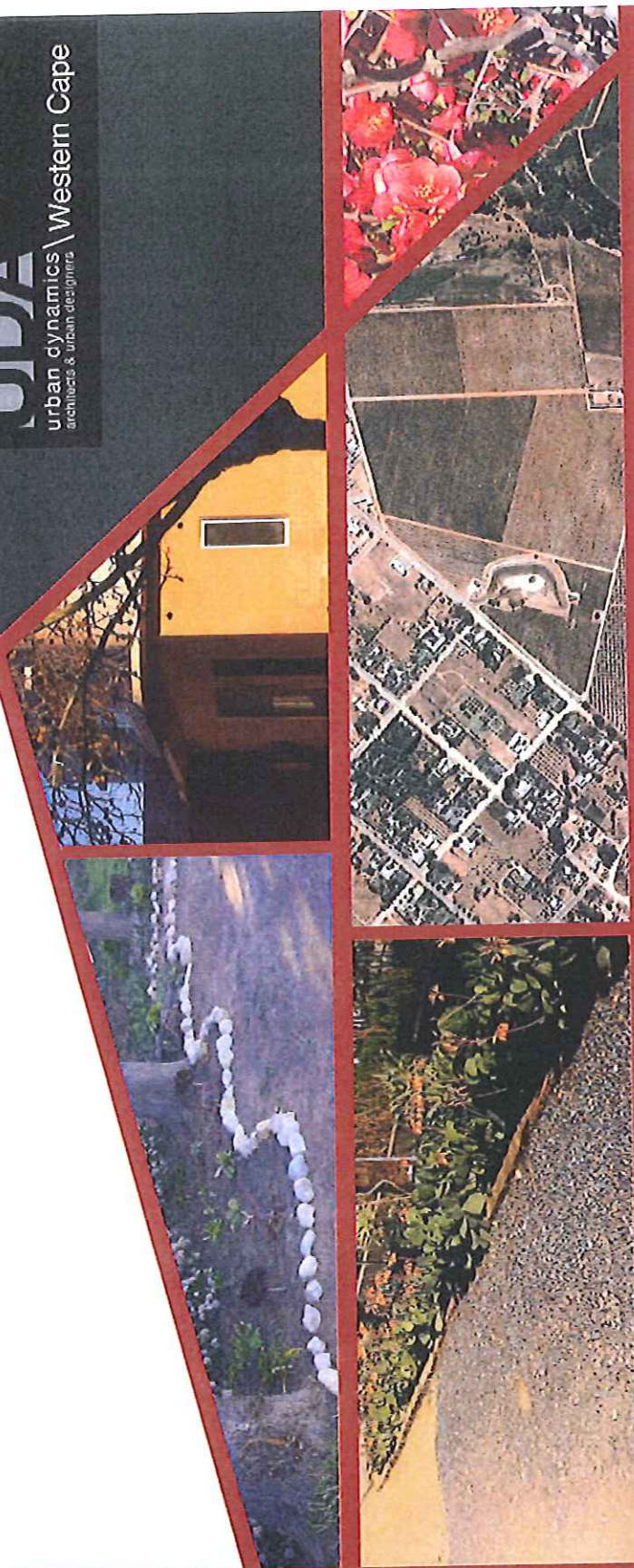




**Urban Design Report: Principles and Guidelines
Proposed Low Cost Housing Project, ERF 360, McGregor**

FINAL REPORT

Prepared for: Eco Impact Legal Consulting Pty(Ltd)
P.O. Box 45070, Claremont, Cape Town, 7735
Tel: (021) 671 1660

Prepared by: Urban Dynamics Architects & Urban Designers\ Western Cape Pty(Ltd)
P.O. Box 12427, Die Boord, Stellenbosch, 7613
No. 6 Neethling Street, Stellenbosch, 7600
Tel: (021) 882 9903 Fax:(021) 882 9572





BACKGROUND AND STATUTORY CONTEXT

After several studies were undertaken by the Langeberg Municipality, it was resolved that McGregor needed to be aligned with the principles advocated in the Provincial Spatial Development Framework (PSDF). Proposed extensions to the urban edge line of McGregor, as previously defined in the Spatial Development Framework 2007, addressed demands for land to be acquired in McGregor for the accommodation of families on the municipal housing waiting list and those families currently living in an informal settlement, situated south-east of McGregor, within the Hoekrivier floodplain.

On subsequent review of the proposed extension to the Spatial Development Framework, published in 2010, undertaken by Dave Dewar and Piet Louw, it was suggested that the interpretation of the problem was mis-located and that alternatives needed to be sought (Dewar, D; Louw, P; 2010). While these concerns are valid, the ability of the implementing agent, tasked with the delivery of BNG housing, to fully address these socio-economic challenges is limited. The urban design study thus seeks to establish a precinct plan that could facilitate, if not fully implement, an ongoing engagement of the issues raised by Dewar and Louw.

Preliminary studies initially identified various sites, including Erf 360, on which the proposed low cost housing could be built. Further specialist inputs and viability studies have been conducted by the Langeberg Municipality and it was resolved by the Council to acquire Erf 360 for the proposed low cost housing development. As such, Erf 360, forms the focus of the Urban Design Report.

In compliance with the provisions of the National Environmental Management Act (no. 107 of 1998), a Basic Assessment Report (BAR) is currently being prepared by EcolImpact Environmental Consultants. Several independent specialists have been appointed to carry out studies for inclusion in this.

The Notification of Intent to Develop (NID) form was submitted by EcolImpact to Heritage Western Cape (HWC). The interim assessment of the application by HWC identified some concerns regarding the impact of the proposed development on McGregor's heritage resources. Resultantly, HWC stated that a Heritage Impact Assessment (HIA), of which the VIA and the Urban Design Report forms part, is required in terms of Section 38(2) of the NHRA (Act 25 of 1999). The HIA prepared by Henry Aikman and interaction with the McGregor Heritage Society as well as existing architectural aesthetic guidelines informed the preparation of this Urban Design Report.

Urban Dynamics Architects and Urban Designers Western Cape (UDAWC) has been appointed to produce a suggested urban design precinct plan, including sketch plans, programmatic layouts and the architectural aesthetics of the unit typologies, incorporating the above mentioned HIA and heritage policy documents.

METHODOLOGY

Preceding the development of the draft Urban Design Report, meetings were held with the project team in an effort to ascertain the preliminary impacts and complexities of the proposed development on McGregor. The intention was to "steer", with specialist inputs, the best means of formulating a design approach to the site which would address and minimise the potential impacts of the proposed development of Erf 360 on the sense of place, and historic settlement pattern of McGregor.

Several site visits were undertaken to ensure familiarity with McGregor and Erf 360's location within the local context.

Further analysis was given to reviewing aerial photographs, baseline data (supplied by UDWC and the Langeberg Municipality), photographs of the site and the broader study area, the consideration of the various draft documents prepared and supplied by other specialists within the team. The draft Urban Design Report forms part of the HIA and environmental assessment process and is independently prepared by Urban Dynamics Architects and Urban Designers.

Figure 1



Figure 2



Figure 3



Sites initially identified in preliminary studies for the development of low cost housing



1.1 MCGREGOR'S LOCAL CONTEXT - PROPOSED STATE SPONSORED HOUSING DEVELOPMENT

McGregor is surrounded by beautiful natural and scenic features: two flanking seasonal rivers, panoramic views of the Langeberg Mountain ranges, a network of formal and informal tourist and scenic routes provides access to outlying farms, tourist destinations and the passive and active recreational opportunities in the valley. The value of these amenities is further heightened by the Krans Nature Reserve to the north-west.

Rural landscape elements and McGregor's contained village scale; vineyards, olive groves, orchards, cultivated and grazing fields, rivers, lei-water irrigation systems, dams and reservoirs, copses of trees, loosely defined treed "avenues and windrows", including buildings (homesteads, labourers cottages and buildings with associated support functions) and settlement patterns of historical significance, together all contribute to the scenic and heritage value of the area. The largely preserved street grid settlement pattern of McGregor is especially significant to the town's unique sense of place due to its containment within a legible urban edge - especially along Buitekant Street.

Buitekant Street, running adjacent to Erf 360, forms a portion of the property's north-western boundary interface. Buitekant Street was part of the original 8 x 4 grid as laid out in 1862. As the name implies it was, and still largely is, the south-eastern boundary of McGregor. Development of McGregor was slow and until recently (1990's) the southern most portion of the land closest to Erf 360 remained underdeveloped. Today while retaining, to a degree, its characteristic Georgian and Victorian architectural village appearance, it has become home to a privileged, lifestyle community.

Erf 360 is located on the periphery of McGregor's gridiron settlement pattern and is directly adjacent to Buitekant Street. The Hoeksriver corridor, running north-south, establishes the south-eastern most boundary of McGregor. The 17.41ha, sloping site is currently zoned Agricultural Zone 1, and as such, it's extensive vineyards form an agricultural buffer between the Critical Biodiversity Area (CBA) of the Hoeksriver and, the comparatively more developed, town of McGregor.

The acquisition of Erf 360 by the municipality sees the proposal of approximately 500 low cost housing units, 17 GAP housing units, and 5 extensive residential agricultural allotments, including their associated community facilities and public open space (POS) requirements.

McGregor, like many towns in the Western Cape, has a large informal housing component. Informal housing in McGregor was first established approximately 20 years ago, and has, over the decades, steadily grown. Residents of the informal settlement are precariously located on low-lying land, adjacent to the Hoeksriver corridor, and within the 1:100 year floodplain.

In collaboration with other specialists, several urban design layouts were developed. Subsequent refinement of these by Urban Dynamics Architects and Urban Designers Western Cape have seen several revisions in the urban design layout. The most current urban design layout, Version 5A-5B, forms the focus of this urban design document and is the culmination of extensive site analyses, viability studies and specialist inputs.

It must be noted that the proposed relocation and accommodation of a number of families on the municipal housing waiting list in state sponsored housing units brings with it an inherent urbanity (unit typology, size,

population threshold, etc.) never formally seen in McGregor. While remaining cognisant of the unique heritage of McGregor, this poses several challenges and concomitant design solutions. These will be explored in further detail below.

Erf 360 was conceptually identified as a transitional zone. Representative of both the river on the site's eastern boundary and McGregor's historic settlement grid on its north-western boundary. It was vital to the integrity of the proposed development that the design be distinguished both by its location within time, designed and built in the 21st Century, and its geographical location, on the edge of McGregor. It was important that, while different in nature, the proposed development, feel no less valid, integral or authentically a part of McGregor and its living heritage. As such a method of adopting two paradoxical spatial qualities, that of continuity and dis-continuity, helped resolve the apparent opposition the development and potential new residents face.

Figure 5



The Urban Design Precinct Plan seeks to:

1. Maintain the integrity of the existing street grid;
2. to respond to the topography of Erf 360;
3. and to resolve the geometric characteristics of the above-mentioned settlement patterns by:

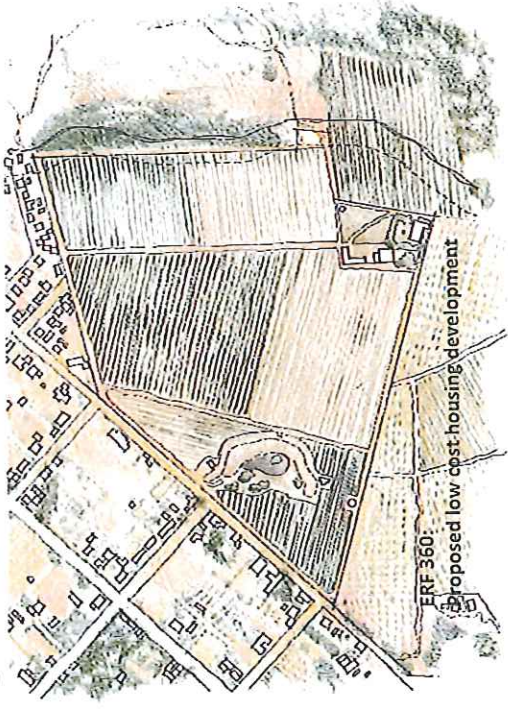
- A. Maintaining an agricultural transition zone between the two patterns (historic and newly proposed).
- B. Connecting the historic to the new - Kerk Street Extension

Figure 6





Figure 8: Conceptual Design Approach

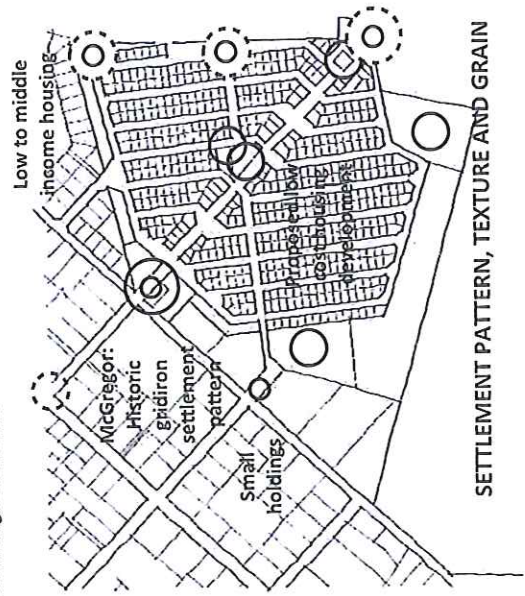
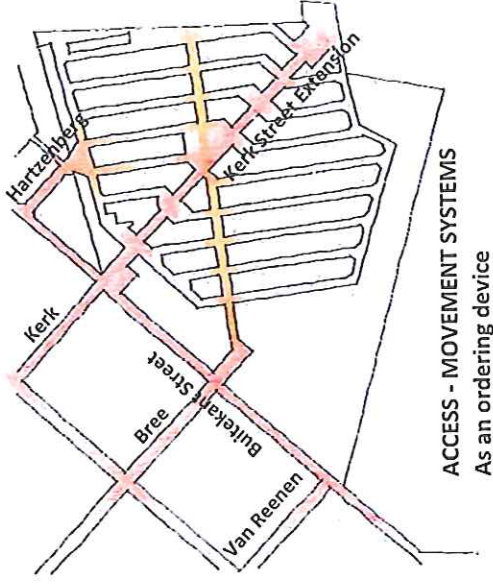
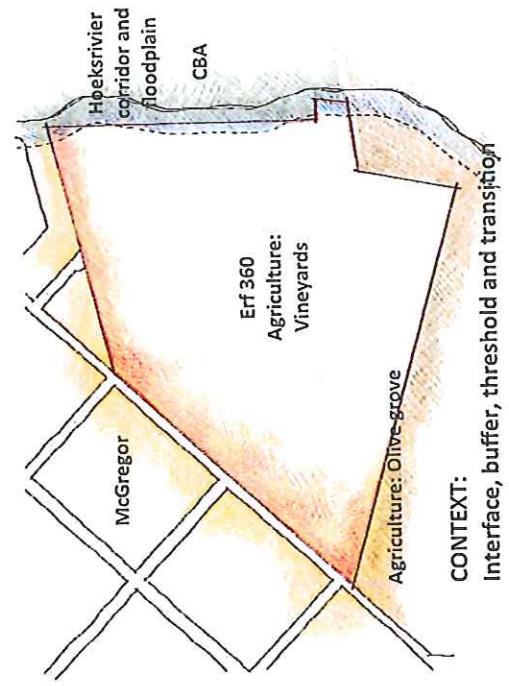


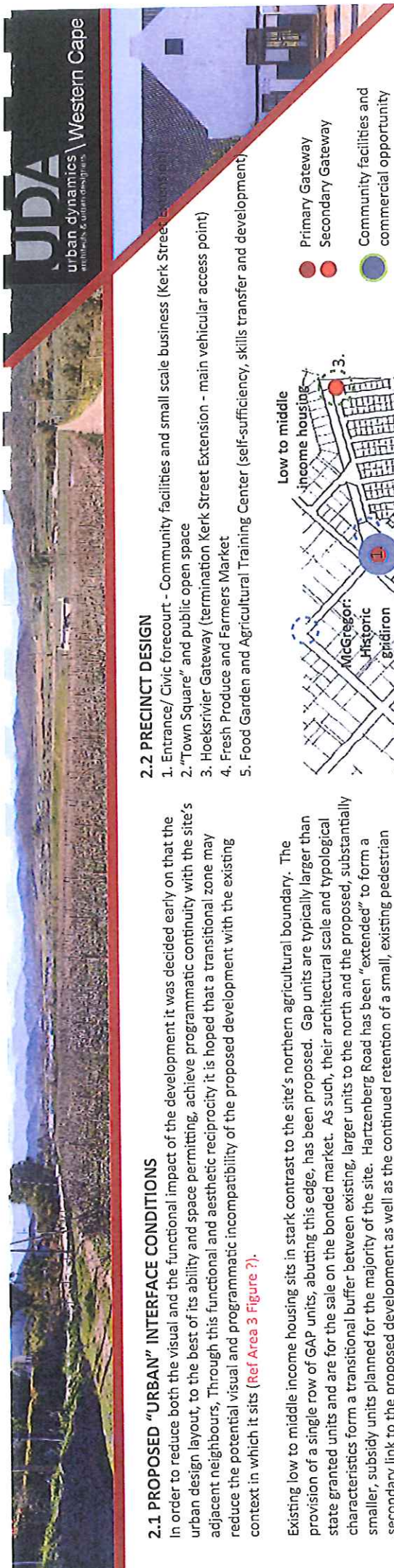
1.2 ACCESS - Movement Systems as an Ordering Device

Historic continuity was retained by boldly extending Kerk Street into the proposed development. Central to the scheme, this proposed tree lined avenue operates like a fulcrum around which there is an interplay of geometrical continuity and discontinuity in movement systems, settlement pattern and landscape elements. This main, vehicular access avenue forms the "gateway" to both the development and the Hoeksrivier further south-east. It operates as a civic link both internally, through the provision of new community facilities just off Buitekant Street and within the heart of the proposed development, and externally, grafting itself onto the existing historic grid and settlement pattern. Furthermore, continuity was retained by locating housing units parallel with the existing contours of the site. The proposed state sponsored housing settlement pattern does not take its queue directly from the fabric of McGregor but rather resonates with the predominating flow of the river and contours of the site, maximising on views to the east, and "turning out" of the urban grid and thus preserving the integrity of the historic settlement pattern.

A pedestrian access avenue which intersects the Kerk Street extension, breaks, for a moment, its "movement" further south-east. Here civic opportunity is created through discontinuity and by the provision of a community facility and public open space at the heart of the development. Both the pedestrian and vehicular avenues terminate on the lower banks of the Hoeksrivier floodplain strengthening, regulating and mediating the existing dialogue between McGregor and the utilisation of its surrounding natural amenities.

The spatial concepts of continuity and discontinuity, while conceptually helpful, serve a far more pragmatic and cost-effective end. By positioning the majority of the low cost housing units in sympathy with the sloping contours of the site it is possible to reduce the physical impact to the site during the initial earth moving and shaping stages of the project. The cartesian continuity of the main tree lined Kerk Street avenue extension with the grid layout of existing McGregor and the discontinuity of the intersecting pedestrian avenue substantially reduce the visual impact of the proposed units from the north-eastern and south-eastern edge of the site.





2.1 PROPOSED "URBAN" INTERFACE CONDITIONS

In order to reduce both the visual and the functional impact of the development it was decided early on that the urban design layout, to the best of its ability and space permitting, achieve programmatic continuity with the site's adjacent neighbours. Through this functional and aesthetic reciprocity it is hoped that a transitional zone may reduce the potential visual and programmatic incompatibility of the proposed development with the existing context in which it sits (Ref Area 3 Figure ?).

Existing low to middle income housing sits in stark contrast to the site's northern agricultural boundary. The provision of a single row of GAP units, abutting this edge, has been proposed. Gap units are typically larger than state granted units and are for the sale on the bonded market. As such, their architectural scale and typological characteristics form a transitional buffer between existing, larger units to the north and the proposed, substantially smaller, subsidy units planned for the majority of the site. Hartzenberg Road has been "extended" to form a secondary link to the proposed development as well as the continued retention of a small, existing pedestrian access route which currently opens onto the site. This formalisation in the termination of the pedestrian route, alleviates, to a small degree the highly internalised and imbedded nature of the existing fabric to the north of the site and promotes permeability and connectivity.

A small creche, located to the north-west of the site, sits directly adjacent to Buitekant Street and finds itself part of a substantially larger small scale retail and community facility "forecourt". These, more civic buildings, are in keeping with the nature of existing facilities located further north-west on Kerk Street and create an urban gesture which grounds, activates and legitimises the primary entrance to the proposed development through the creation of a civic node on the intersection of Buitekant and the Kerk Street Extension.

An extensive row of large trees has been proposed along Buitekant Street. The intention of which is to loosely delineate the current extent of McGregor's historic town grid and settlement pattern - allowing for the future visual transition and mediation of the proposed development against its immediate neighbours.

Extensive residential erven have been planned for on the north-western edge of Erf 360. These resonate strongly with the existing scale and size of the wealthier residents opposite. The look of these will be strongly regulated by the suggested heritage guidelines so as to increase their compatibility with the units directly opposite and to reduce their visual impact and maintain selective views over the slope towards the river and mountains to the south-east. A portion of the site's original vineyards could be retained and managed by the new residents while the scale of these properties promotes the establishment of gardens/ orchards similar to those opposite.

The original homestead, located on the site's south-eastern most boundary, could be adaptively repurposed to accommodate an agricultural skill development and transfer center. This, in conjunction with the proposed food gardens and a newly accommodated fresh produce and framers market (on the site's southern boundary, adjacent to the olive farm, on the surface of the newly infilled dam), hopes to provide self-sufficiency for "new" residents, job creation and a broadening of the local eco-agricultural tourism economy. A secondary civic node is thus established at the intersection of Buitekant and Bree Streets.

The eastern edge of the site abuts partially the 1:100 year floodplain and the CBA of the Hoeksrivier corridor. Small areas of public open space have been set aside on this edge to further set back units and to allow for future, environmentally appropriate, vegetative buffer management. The proposed tree lined avenue of the Kerk Street Extension and primary pedestrian route, help to formalise and regulate entry and exit into and out of this valuable natural amenity. The proposed tree lined avenues will mature into visual breaks in the dense fabric of the proposed row-house typology.

2.2 PRECINCT DESIGN

1. Entrance/ Civic forecourt - Community facilities and small scale business (Kerk Street Extension)
2. "Town Square" and public open space
3. Hoeksrivier Gateway (termination Kerk Street Extension - main vehicular access point)
4. Fresh Produce and Farmers Market
5. Food Garden and Agricultural Training Center (self-sufficiency, skills transfer and development)

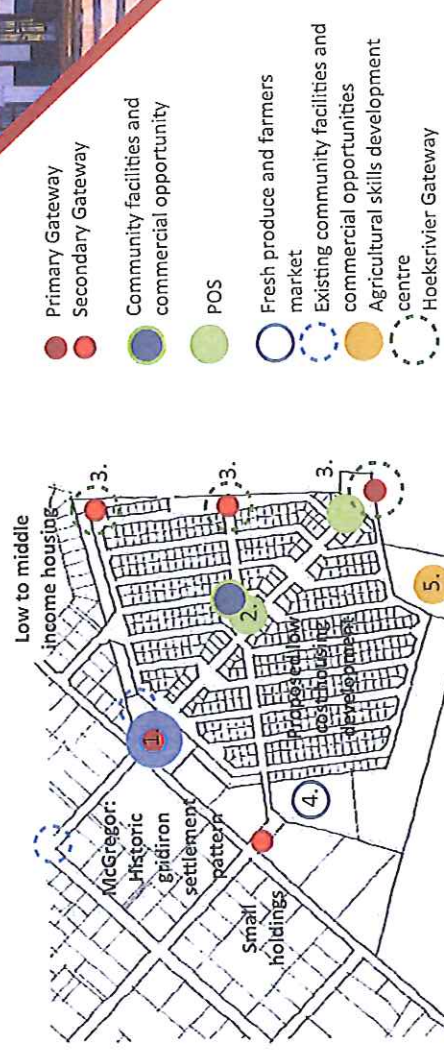


Figure 10:
SETTLEMENT PATTERN, TEXTURE AND GRAIN

Circles indicate varying community, commercial and natural amenities and facilities

3. PROPOSED SETTLEMENT PATTERN AND TEXTURE: Unit Typologies

The low cost housing units form the majority of the proposed units within the development, as such, their individual unit resolution and urban configuration forms the focus of this section.

Each erf is approximately 123.5m² (9.5 x 13m). Their predominant semi-detached urban configuration allows units to be paired in a way which substantially increases their bulk, loosely resonating with the existing historical typology of McGregor. A shared partition wall also increases significantly the internal occupiable area of each unit as well as reducing building costs, allowing money to be spent on rural landscape elements within the proposed development. The placement of all windows and doors, including the roof pitch of all units have been aligned with the heritage guidelines as stipulated by the McGregor Heritage Society in their guidelines booklet.

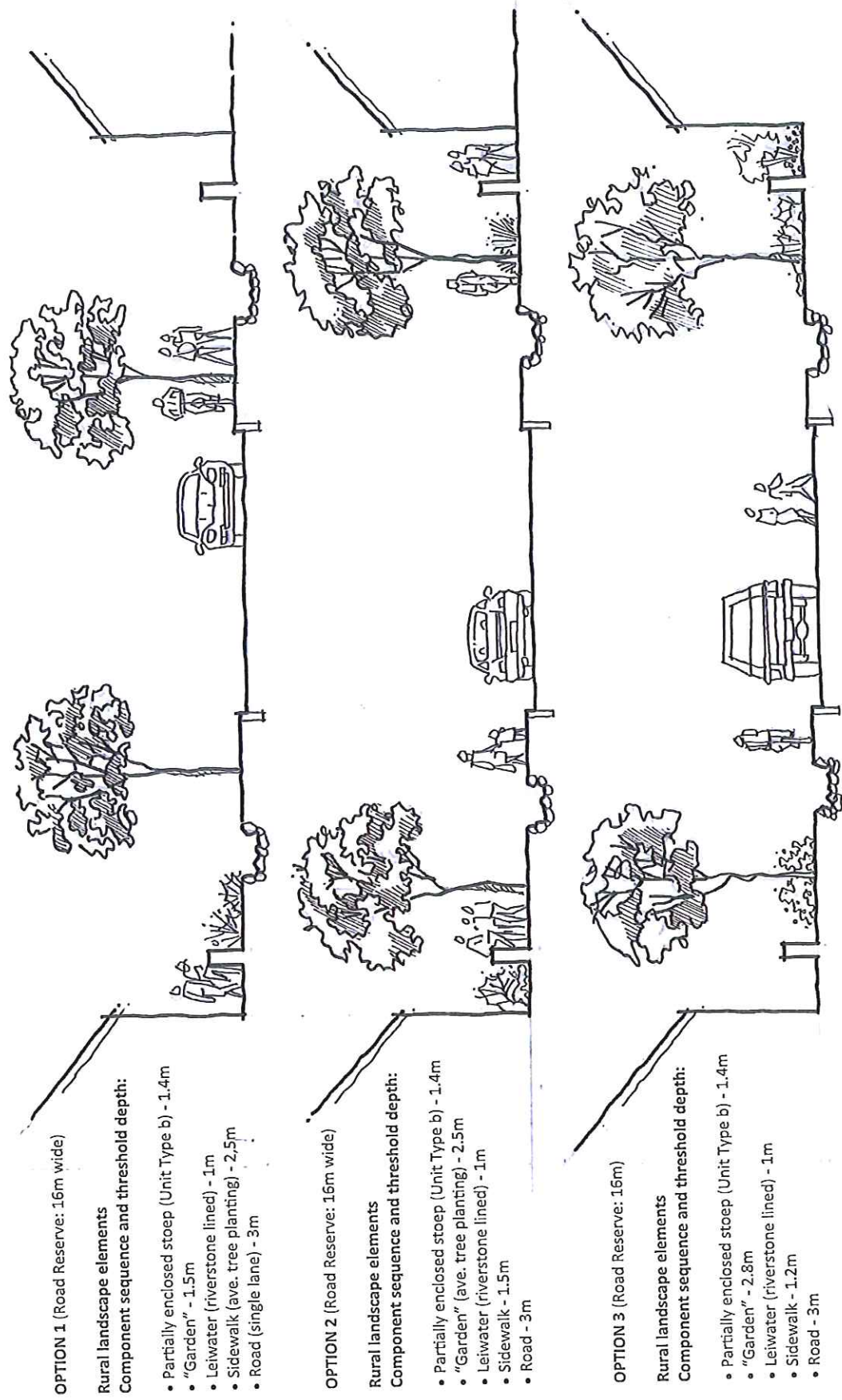
Units have been placed close to the street ensuring an active urban interface in a row-housing configuration. Along main access avenues units have been reorientated to address the street directly, promoting a sense of community, safety and surveillance. Unit B, selectively positioned along the Kerk Street Extension and intersecting the pedestrian avenue, has an additional element of facade complexity. A recessed stoep extends the transitional zone between the public and private threshold allowing residents to negotiate more freely the public interface. All erven have been designed in a manner which will allow for the acquisition of a vehicle or alternatively the incremental additions to their units over time.



4. STREETSCAPE - Urban-architectural Interface Conditions

Kerk Street Extension - Main Vehicular Access Avenue - Figure 13

Historic landscape and architectural elements are utilised to demarcate thresholds and transitional spaces between public and private interfaces - promoting surveillance and personalisation by residents

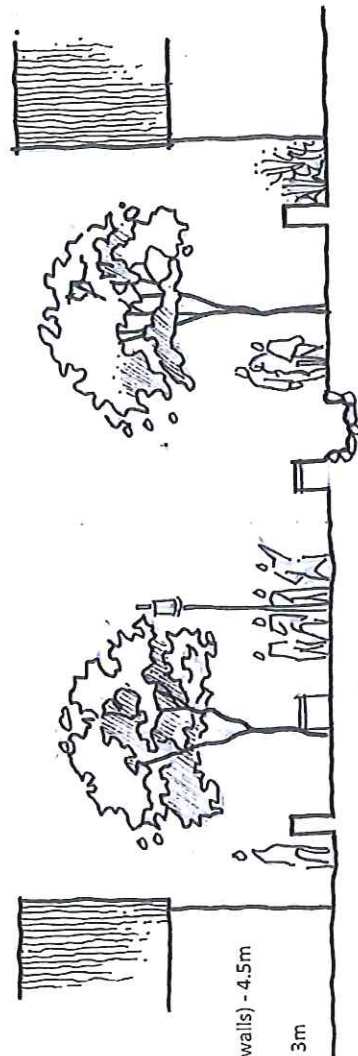




STREETSCAPE - Urban-architectural Interface Conditions

Pedestrian Access Avenue and Typical Street - Figure 15

Historic landscape and architectural elements are utilised to demarcate thresholds and transitional spaces between public and private interfaces - promoting surveillance and personalisation by residents



PEDESTRIAN AVENUE (Road Reserve: 10m)

Rural landscape elements

Component sequence and threshold depth:

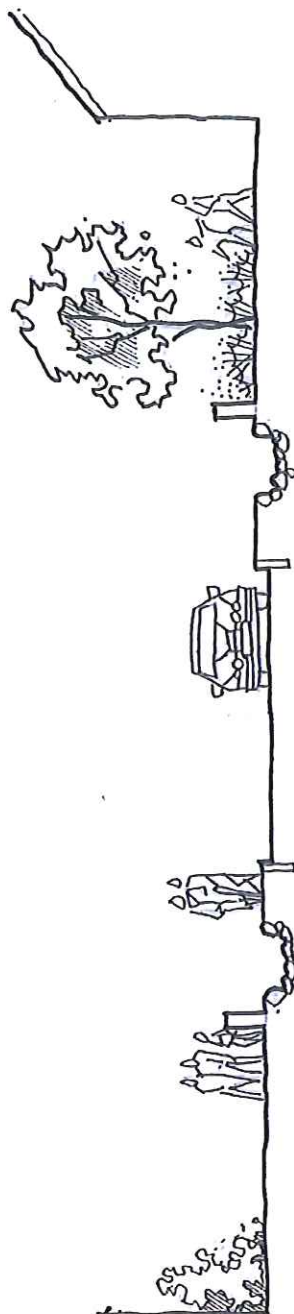
- Service alley/ garden (Unit Type a) - 1.4m
- "Ave. tree planting - 1.5m
- Pedestrian "boulevard" (flanked by alternating seating walls) - 4.5m
- Leiwater (riverstone lined) - 1m
- Pedestrian "boulevard" (ave. tree planting at centre) - 3m

OPTION 1 (Road Reserve: 10m)

Rural landscape elements

Component sequence and threshold depth:

- Garden/ parking (Unit Type a) - 5m
- "Boundary wall edge planting - 0.25m
- Leiwater (riverstone lined)- 1m
- sidewalk - 1.25m
- Road (single lane) - 2.5m

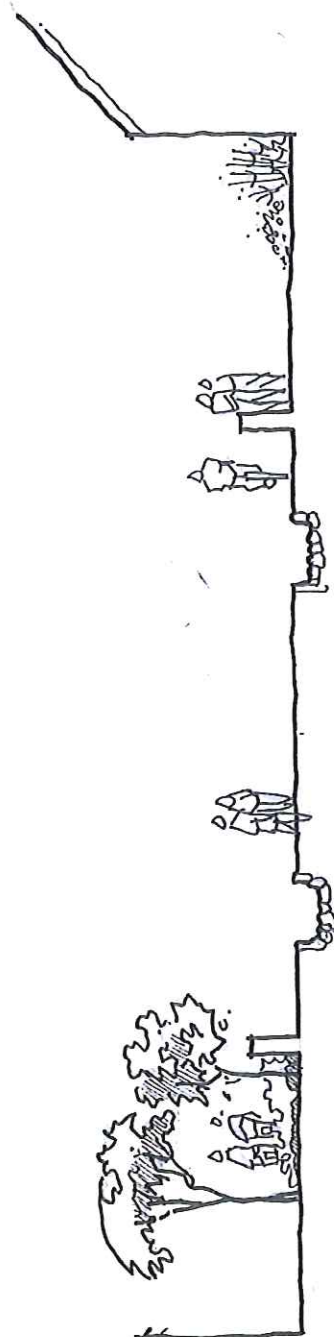


OPTION 2 (Road Reserve: 10m)

Rural landscape elements

Component sequence and threshold depth:

- Garden/ parking (Unit Type a) - 5m
- sidewalk - 1.5m
- Leiwater (riverstone lined) - 1m
- Road (single lane) - 2.5m

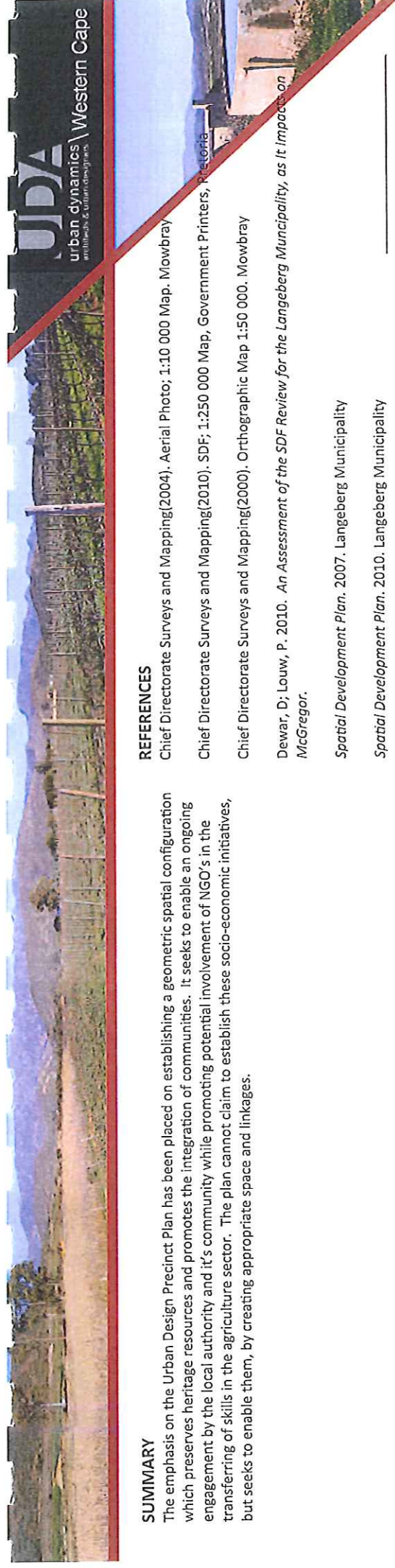


SUMMARY

The emphasis on the Urban Design Precinct Plan has been placed on establishing a geometric spatial configuration which preserves heritage resources and promotes the integration of communities. It seeks to enable an ongoing engagement by the local authority and it's community while promoting potential involvement of NGO's in the transferring of skills in the agriculture sector. The plan cannot claim to establish these socio-economic initiatives, but seeks to enable them, by creating appropriate space and linkages.

REFERENCES

- Chief Directorate Surveys and Mapping(2004). Aerial Photo; 1:10 000 Map. Mowbray
- Chief Directorate Surveys and Mapping(2010). SDF; 1:250 000 Map, Government Printers, Pretoria
- Chief Directorate Surveys and Mapping(2000). Orthographic Map 1:50 000. Mowbray
- Dewar, D; Louw, P. 2010. *An Assessment of the SDF Review for the Langeberg Municipality, as it Impacts on McGregor*.
- Spatial Development Plan*. 2007. Langeberg Municipality
- Spatial Development Plan*. 2010. Langeberg Municipality
- Draft Review of the Spatial Development Framework. 2010. BKA (Pty)Ltd. Langeberg Municipality.
- The Heritage of McGregor: A Unique Village: Some Building Guidelines. 2005. McGregor Heritage Society.
- Aikman, H. 2013. Draft Phase One Heritage Impact Assessment Report.
- Lynch, K. 1992. Good City Form: MIT press. London.
- UDAWC, 2013. Draft Phase One Visual Impact Assessment Report
- Google Maps/ Google Earth (08 Aug 2013 - accessed 08:45am)
- Personal Photographic Records. 2013. Urban Dynamics Architects and Urban Designers Western Cape.



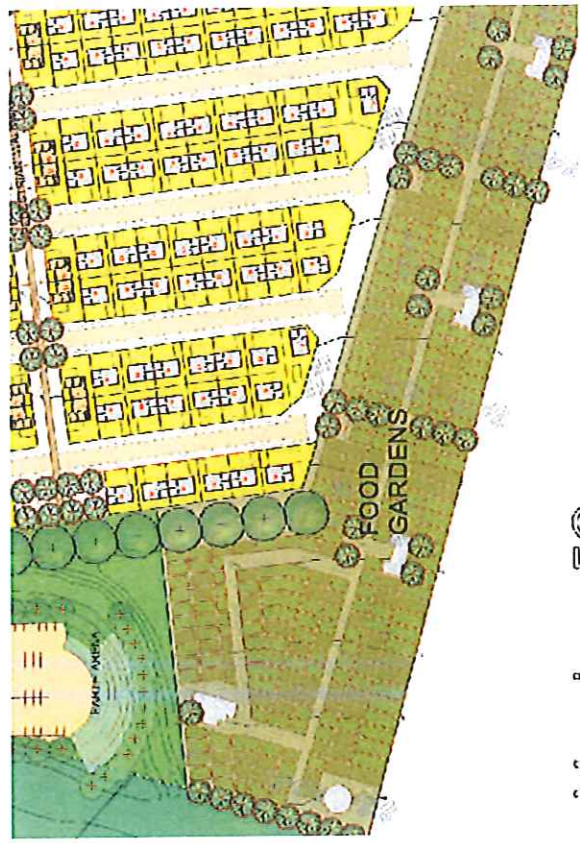
Spatial hierarchy

In response to comments received from the Heritage-Western Cape meeting of 11 November 2013



spatial hierarchy

november 2013



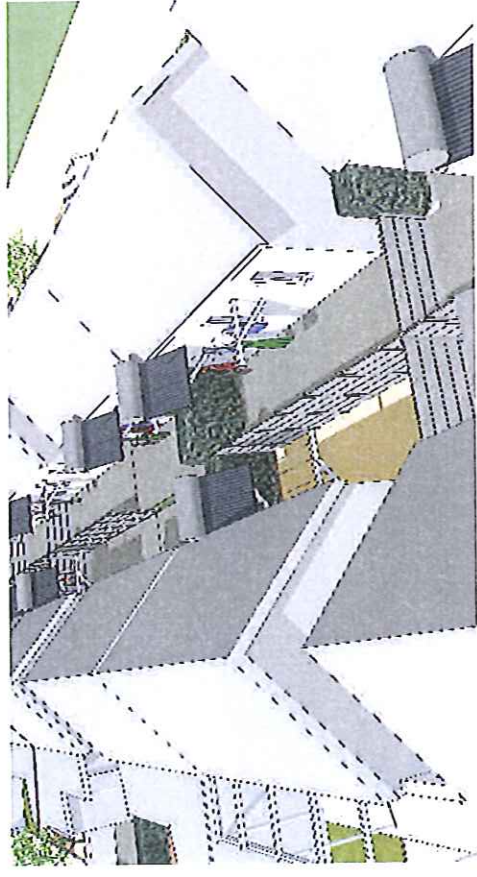
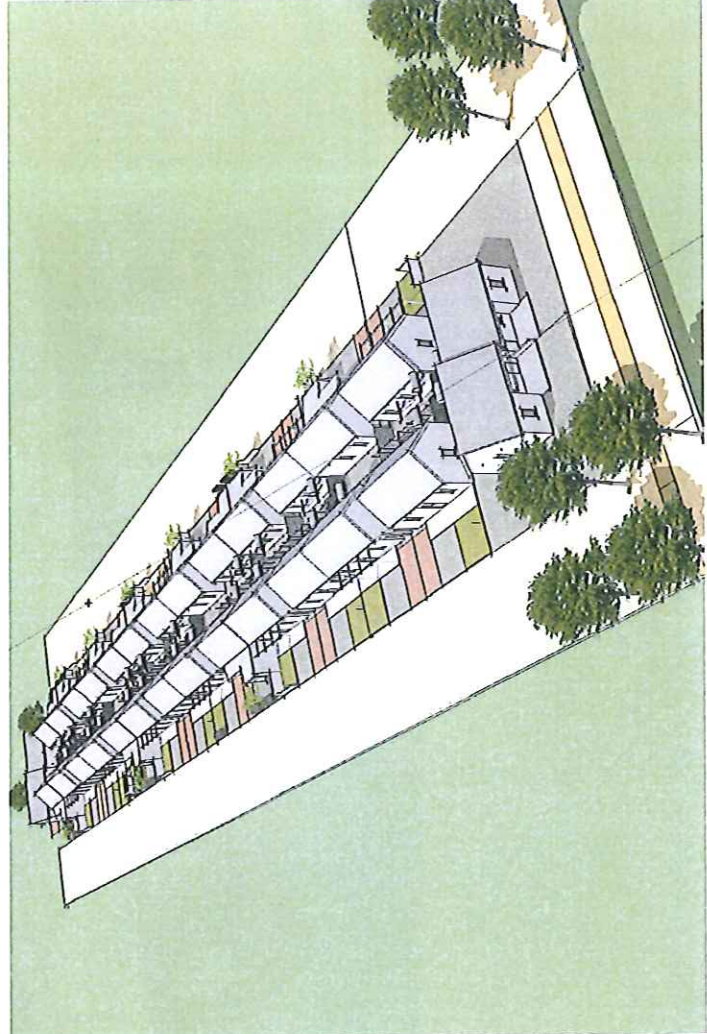
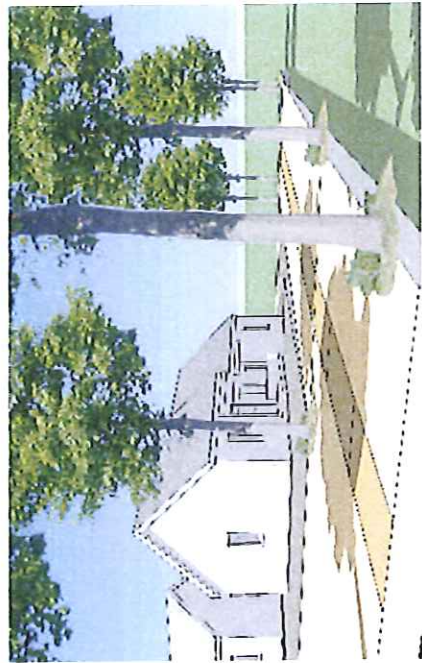
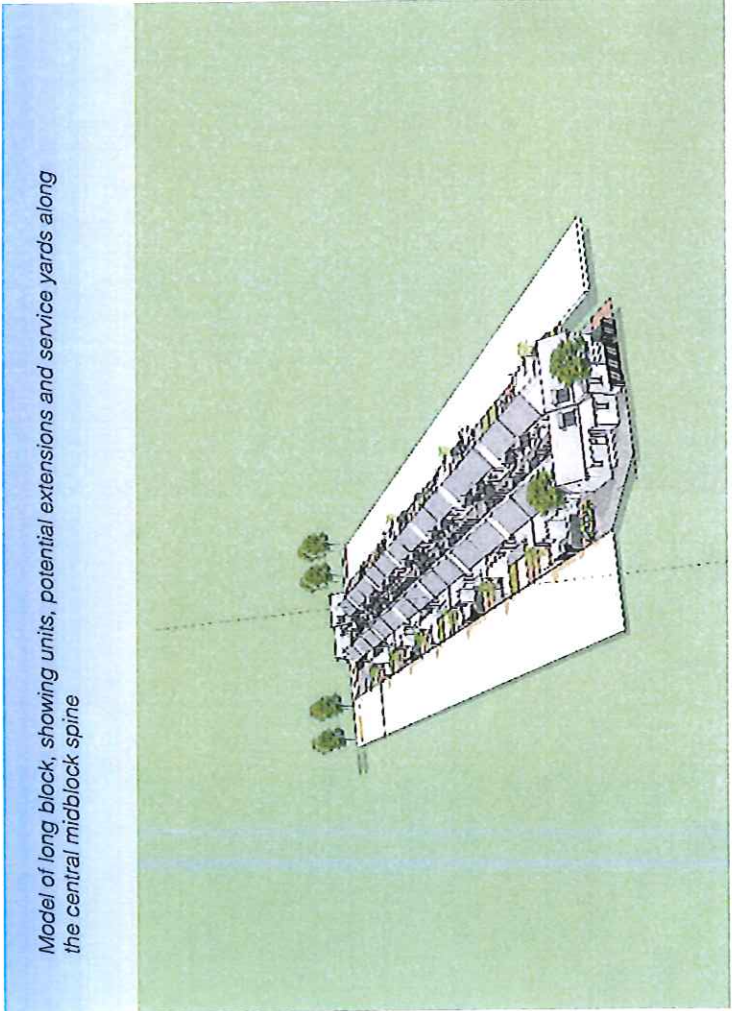
Food garden and market interfaces



Buitekant Street Interface



Intersection at Buitekant and Kerk, with the extended Kerk street avenue

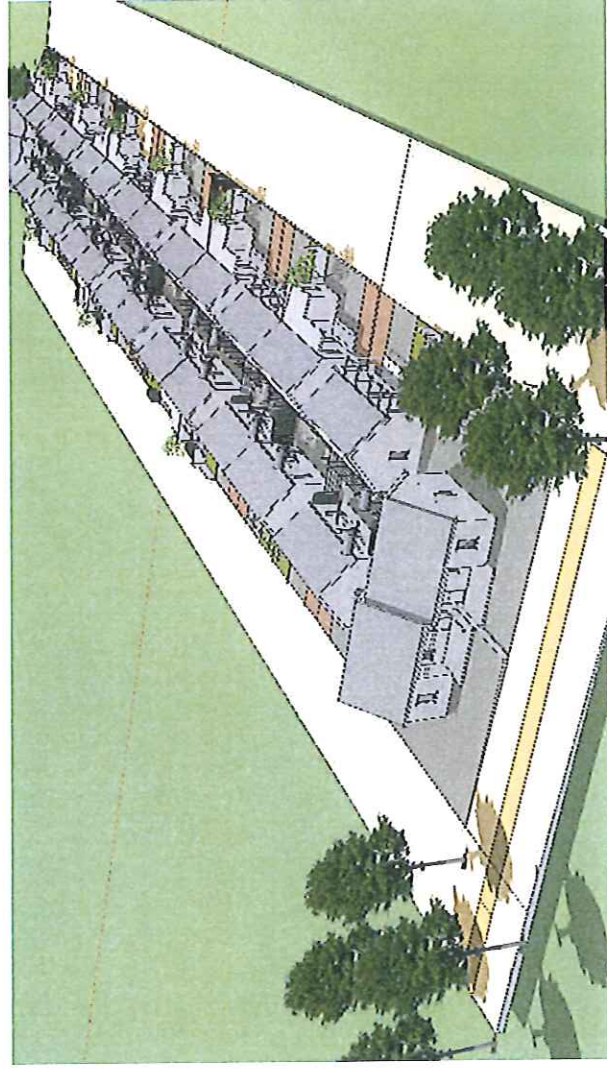




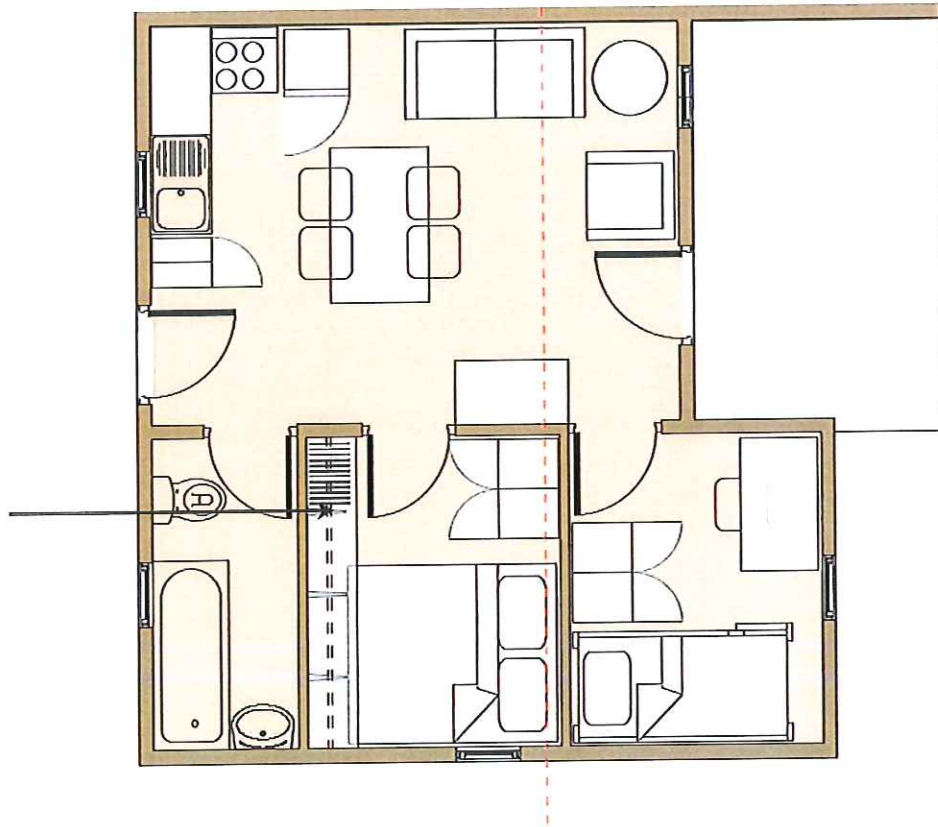
Layering of street edge in time



Service yards concealed from street by units or trees

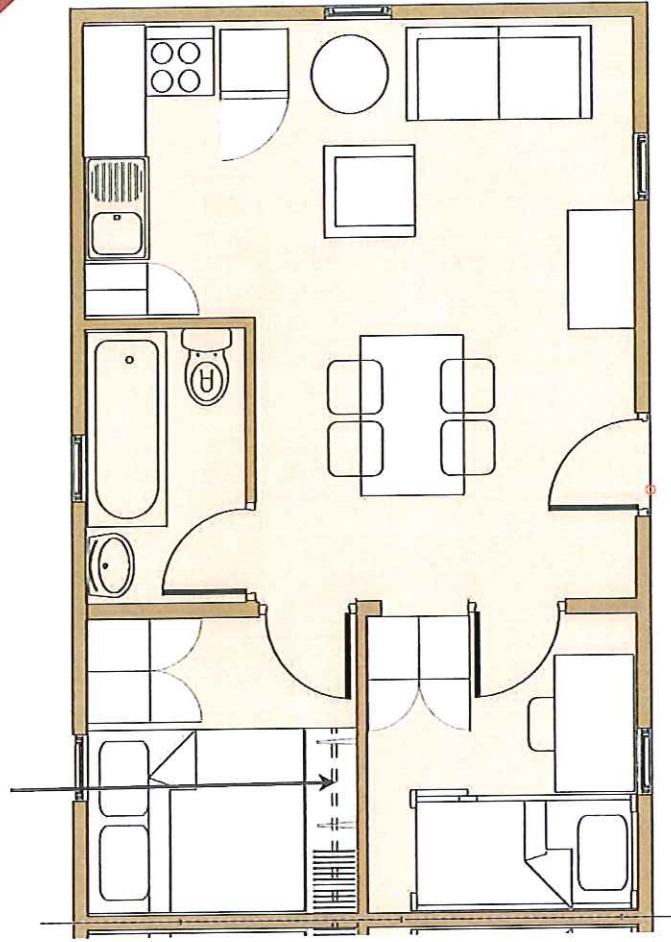


500mm shelf at 2.1 m with hanging space below behind blind or curtain



Potential furniture layout

500mm shelf at 2.1 m with hanging space below behind blind or curtain



Potential furniture layout