WELMOED VILLAGE

LANDSCAPE STRATEGY & MASTERPLAN

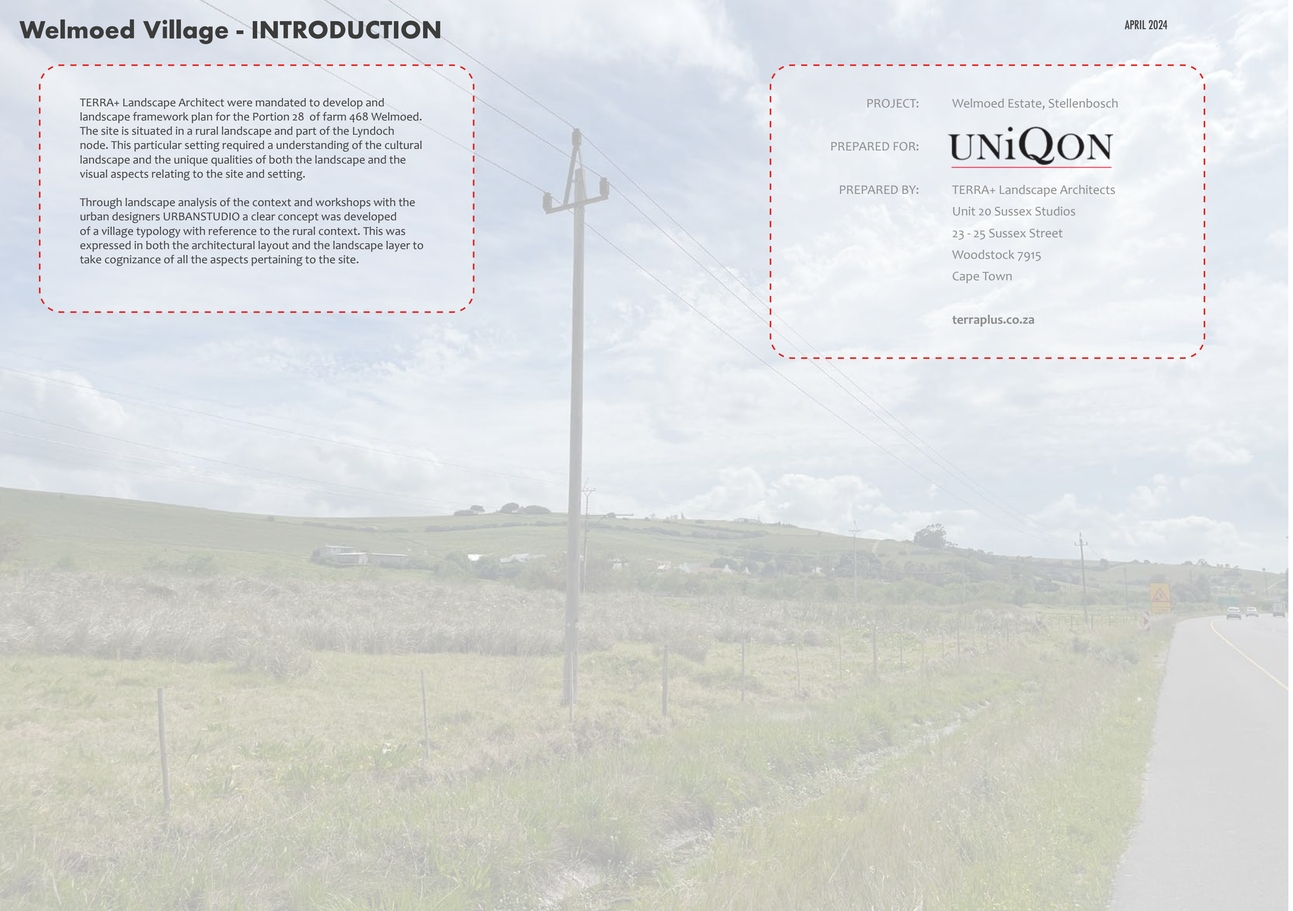
TERRA+
landscape architects

Welmoed Village - INTRODUCTION

APRIL 2024

TERRA+ Landscape Architect were mandated to develop and landscape framework plan for the Portion 28 of farm 468 Welmoed. The site is situated in a rural landscape and part of the Lyndoch node. This particular setting required a understanding of the cultural landscape and the unique qualities of both the landscape and the visual aspects relating to the site and setting.

Through landscape analysis of the context and workshops with the urban designers URBANSTUDIO a clear concept was developed of a village typology with reference to the rural context. This was expressed in both the architectural layout and the landscape layer to take cognizance of all the aspects pertaining to the site.



PROJECT: Welmoed Estate, Stellenbosch

PREPARED FOR: UNIQON

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Welmoed Village

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Welmoed Village - LANDSCAPE ANALYSIS AND STRATEGY

METHODOLOGY

The relative position and spatial implications of a site in the broader landscape makes a significant contribution to how the site is developed and perceived by the public and end-users.

To understand these subtle qualities one must unpack the various layers that encompass the entire site and then the interactions that these layers have with each other and the context. That is in essence the making of the cultural landscape.

There should also be a recognition that the current state, past status and potential future developments are within a continuum of change. How these changes are implemented with the recognition of past impacts and future potentials can result in development which is relevant, resilient and enduring.

For the site/study area this methodology has been applied.

Fig. 1 - Macro context with study area shaded in red

MEANING OF THE SITE IN THE BROADER CONTEXT

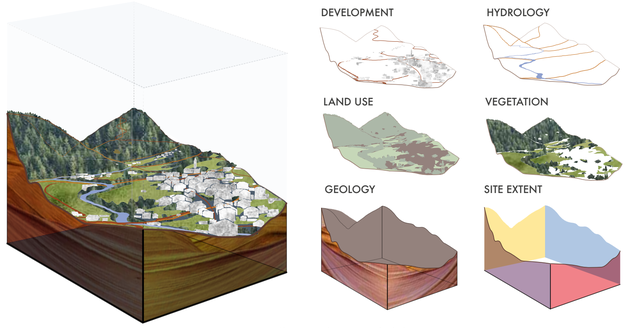


Fig. 2 Landscape analysis layers

Fig. 5 Impressions of landscapes are always rooted in our memory and experience of the space. Rarely is it a static and finite image. It changes through time and repeated experiences

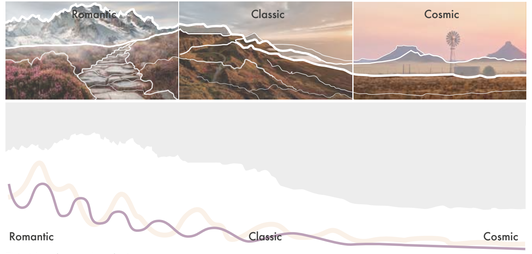


Fig. 4 Landscape typology

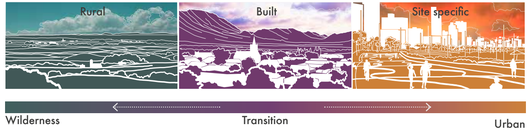


Fig. 3 Landscape typology

STUDY AREA CONTEXT

The study area is a combination of interconnected and interacting layers which provides a particular character to the study area.

The position relative the dominant landforms such as Stellenbosch Mountains, part of a notable biodiversity area, to the east and the expansive view across the valley to the south and southeast contribute to a bucolic and romantic landscape infused with beauty.

The landforms denotes peaks, ridge and valleys which in-turn determines hydrological patterns. The implication of this is a number of dams nestled between rolling hills in the drainage lines leading to the major valley shaped by the dominant Eerste River.

Landscape patterns of cultivated land and hedgerows follow these landforms and presents an organised pattern of fields , vineyards and demarcated land.

The urban pattern is one of tucked homesteads between hills and the notable linear development along the R310 and the Eerste river with farms such as Meerlust and Spier which follows the river basin.

It is important to note that this is not a landscape of tree-lines and wind-breaks but rather indigenous low growing hedgerow with smaller trees populating the drainage lines and areas difficult to cultivate. The trees dominant on the site are the exotic eucalyptus and palm trees which are in clusters around the built forms.

Fig. 6 Landscape Patterns

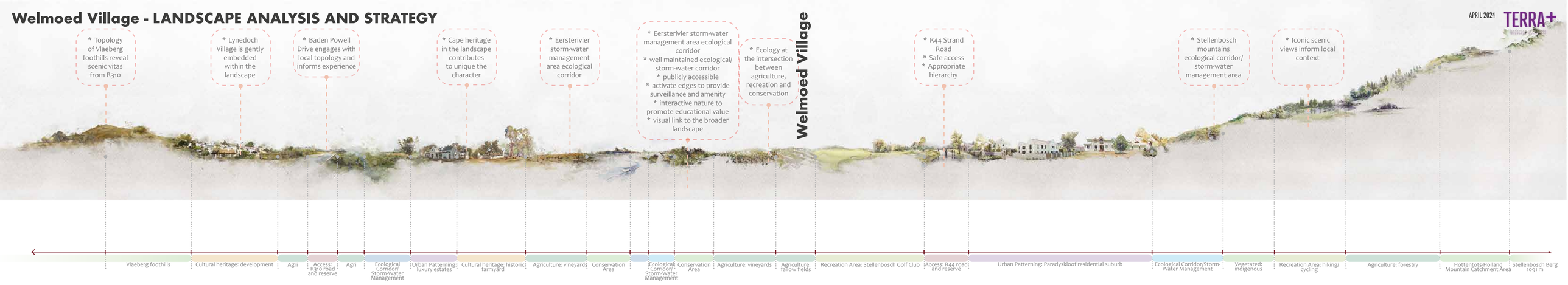
Fig. 7 View of the site with hedgerows and tree clusters visible in dark green

Fig. 8 Initial concept of the “waft and weave” of landscape elements

Fig. 9 Hydrology patterns

Fig. 10 Ridge-lines and slopes

Welmoed Village - LANDSCAPE ANALYSIS AND STRATEGY



INTRINSIC QUALITIES OF THE SITE AND CONTEXT - DESIGN INFORMANTS

HYDROLOGY

Drainage lines and streams organise the site and can be formalised in swales and open channels to accommodate excess storm-water run-off

CONNECTIVITY

Historic and informal access routes and pedestrian connections are recognised and integrated in the overall design

URBAN PATTERN

Historic urban patterning and werf qualities are developed through layout and materiality

HERITAGE

Recognise and retain heritage elements in the layout by understanding the value of the cultural landscape layers

AGRICULTURE

Utilising agricultural patterns to organise the landscape

CONSERVATION

Rehabilitation of landscape areas to increase biodiversity and create ecological corridors

RECREATION

Ensure ample space is allowed for recreational facilities and access to recreational spaces.

PERI-URBAN AGRICULTURE

FYNBOS REHABILITATION

SUSTAINABLE HYDROLOGY

PLANTING ... intrinsic qualities inform design principles

CONCEPT DEVELOPMENT

The design intent is to capture the intrinsic qualities of the site and develop these as meaningful spaces imbued with the contextual references gleaned from the analysis. The management of natural and urban systems are essential for a functional development. These systems include connectivity through the space, storm-water management and green connections making reference to contextual landscape patterns and features.

A clear hierarchy of street-scape is developed through tree and shrub planting, defining the main route through the development with an avenue of trees and the minor streets with clustered tree planting. Where the visual connections were strengthened with seams of shrub planting along the routes through the existing vineyards.

The greening and street layout of the site also supports the storm-water management with the use of open channels and swales carried the majority of the storm-water to detention facilities on the site.

The greening of the site is through a waft and weave of green seams connecting a rehabilitated fynbos edge which will enhance biodiversity whilst providing a valuable recreational facility. All planting will utilise endemic and indigenous species to ensure resilience and responsible water use .

Fig. 11 Hydrological concept

Fig. 13 Roadway paving and storm water

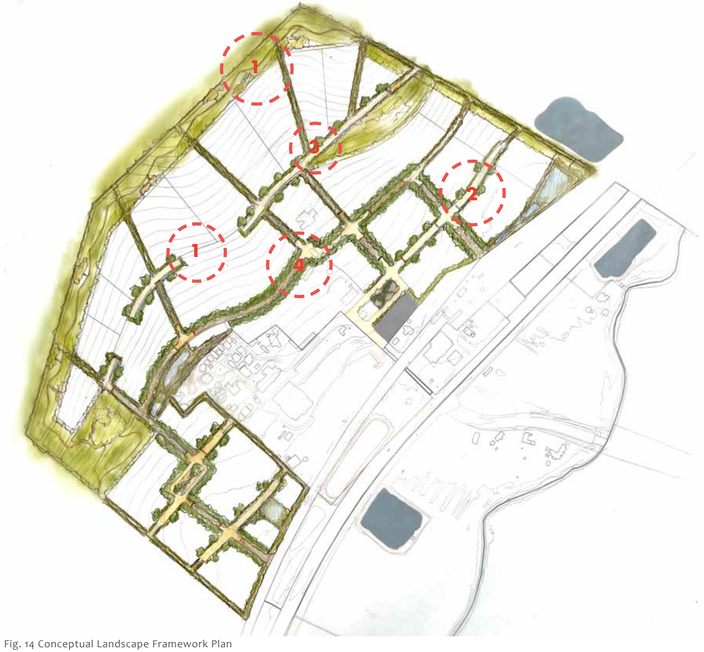


Fig. 14 Conceptual Landscape Framework Plan

Fig. 12 Roadway materiality

Fig. 15 Roadway lighting

Fig. 16 Storm water ecology

Fig. 17 Stormwater retention

Fig. 18 Roadway planting

Fig. 19 Roadway planting

Fig. 20 Public space planting

CONCEPT DEVELOPMENT

Early concept development explored the spatial qualities and landscape values through typical concept sections of a variety of street typologies. These enabled the professional team to develop a synergy in the services and allow fro quality urban spaces.

Strom-water and other systems were integrated and enough space allowed for tree planting to ensure greening of the site.

Another aspect essential to the concept development were the visual sensitivity of certain areas of the site. These were expanded upon in the Visual Statement Document developed by Claire Abrahamse where specific sensitive areas were identified. The tree planting and greening of the site is implemented to ensure adequate screening is provided and creating green visual connections.

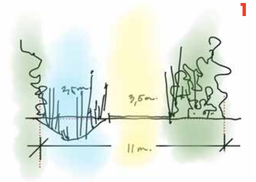


Fig. 21 Fynbos edge with internal pathways

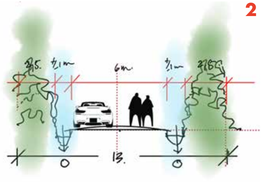


Fig. 22 pathways and minor fynbos edged streets

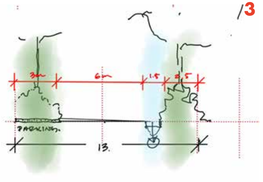


Fig. 23 13m tree planted street

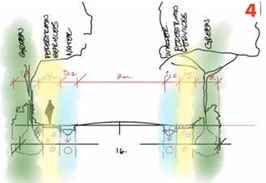


Fig. 24 Public space planting

Fig. 25 Visual screening and visual connections

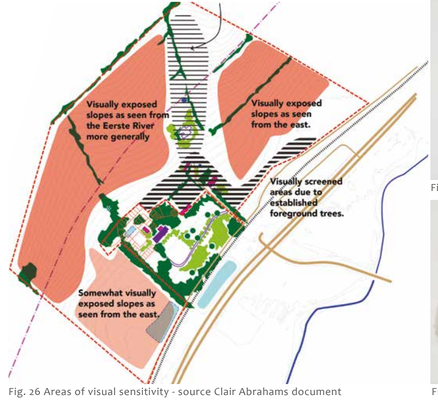


Fig. 26 Areas of visual sensitivity - source Clair Abrahams document

Fig. 27 Fynbos edge with internal pathways

Fig. 28 pathways and minor fynbos edged streets

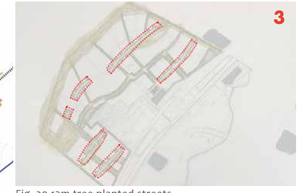


Fig. 29 13m tree planted streets

Fig. 30 13m and 16m tree lined streets

Welmoed Village - LANDSCAPE FRAMEWORK PLAN AND ILLUSTRATIVE SECTIONS

1. **Main Access Street (on contour)** - Tree planting in a linear pattern within the road reserve - (Refer to Illustrative Section 1)
2. **Main Access Street (against contour)** - Tree planting in a linear pattern within the road reserve - (Refer to Illustrative Section 2)
3. **Secondary Access Street (on contour)** - Tree planting in a cluster pattern within the road reserve - (Refer to Illustrative Section 3)
4. **Secondary Access Street (against contour)** - hedge/shrubs planting within the road reserve - (Refer to Illustrative Section 4)
5. **Access Pathway (against contour)** - hedge/shrubs planting as ecological connection (beetle banks) - (Refer to Illustrative Section 5)
6. **Access Pathway (within rehabilitated fynbos)** - Natural pathways and clearings for picnics and places of pause - (Refer to Illustrative Section 6)
7. **Rehabilitated Fynbos** - rehabilitated fynbos edge as ecological edge and connection to the broader landscape
8. **Internal Urban Parks** - Planted and landscaped urban parks
9. **Detention Ponds**- Planted and landscaped storm-water management facilities - (Refer to illustrative section 7)
10. **Existing vineyards**

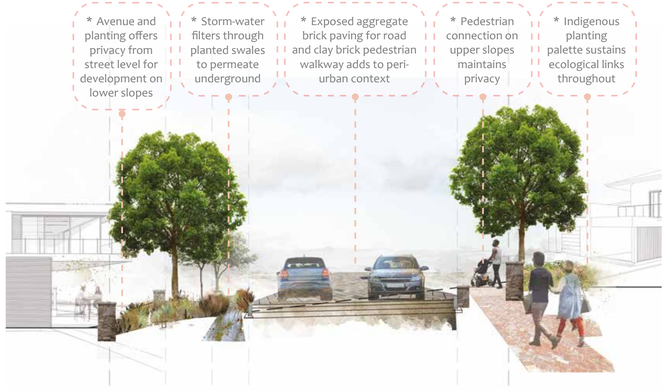


Fig. 31 Section 1 - Main Access Street along the contour

Fig. 32 Section 2 - Main Access Street against the contour

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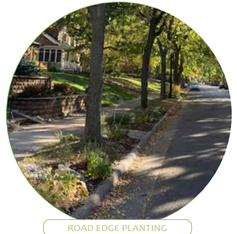
FYNBOS REHABILITATION

INDIGENOUS PLANTING

TANGIBLE HERITAGE



ROAD EDGE PLANTING

TERRACED PLANTING

STORM-WATER INFILTRATION

Welmoed Village - LANDSCAPE FRAMEWORK PLAN AND ILLUSTRATIVE SECTIONS

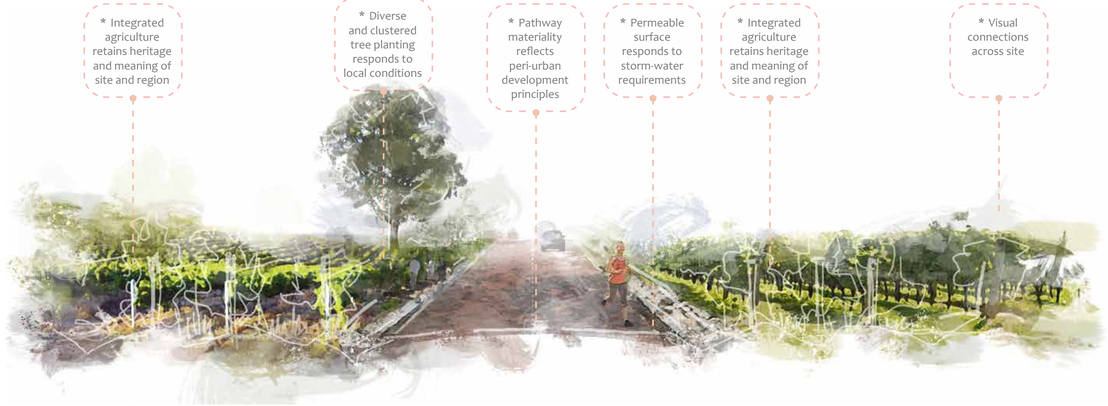


Fig. 33 Section 3 - Secondary Access Street along contour with tree clusters

Fig. 34 Section 4 - Secondary Access Street against contour with shrub and hedge planting

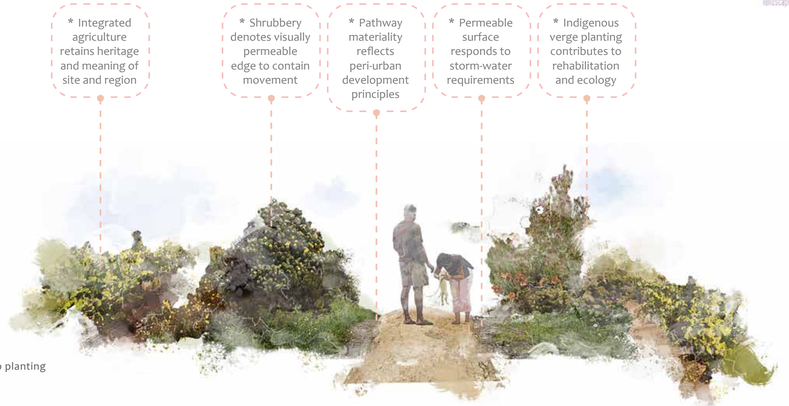


Fig. 35 Section 5 - Access pathways against contour with hedge and shrub planting

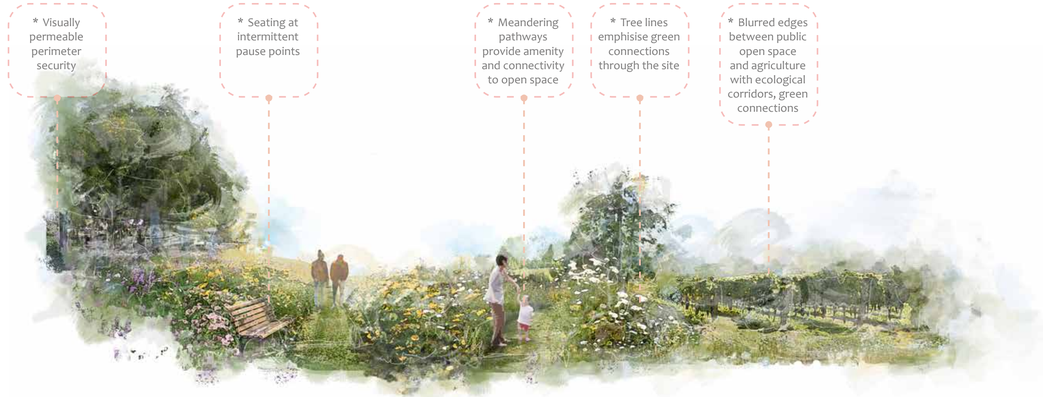


Fig. 36 Section 6 - Natural pathways and open clearings in rehabilitated fynbos

Fig. 37 Section 7 - Detention ponds and pathways

Fig. 38 Section 8 - Residential development and integrated agricultural fringe

Fig. 39 Circulation - pedestrian connectivity and street hierarchy

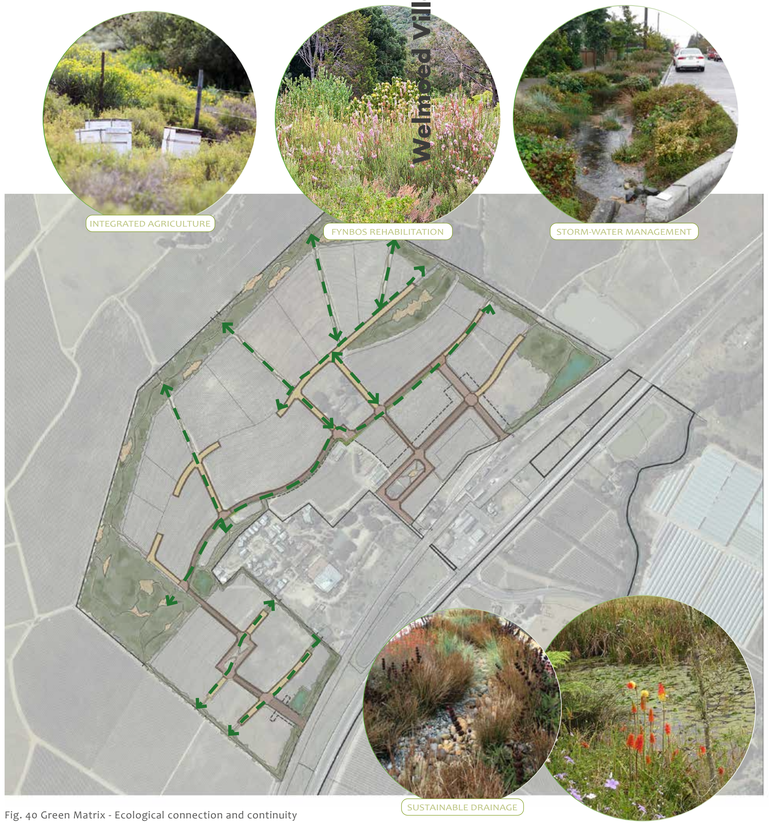


Fig. 40 Green Matrix - Ecological connection and continuity

Fig. 41 Green Elements - Tree planting and green structures

Welmoed Village - LANDSCAPE PRINCIPLES

LANDSCAPE PRINCIPLES

Landscape principles are developed to ensure the identity and character of the design intent is maintained for the project. The use of materials and specific placement of circulation routes and green edges contribute to the unique sense of place.

The rural quality of the site is expressed in the use of natural materials proposed for roadways, walkways and other landscape elements such as retaining walls and storm-water management systems. The planting and greening of the site is a further mechanism to develop the character of the development. Placing trees in particular patterns not only allows for a hierarchy of green systems, but recognizes the contextual landscape patterns and ensures the development and project is resilient and relevant.

The series of illustrative sections explore edge conditions, materiality, the spatial relationship of pedestrian and street, and the crucial allocation of services to accommodate landscaping and other elements

STREETS FOR LIVING

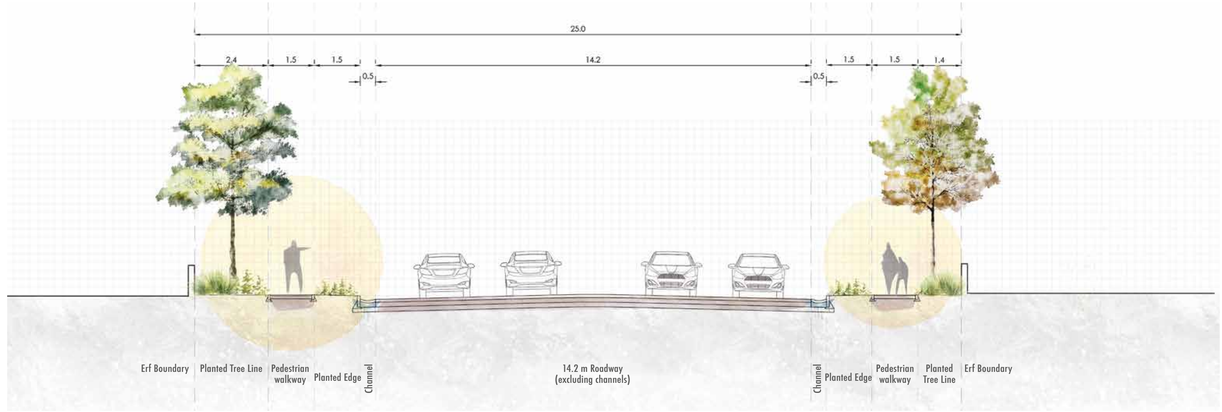
PAVED STREETS

PEDESTRIAN FRIENDLY

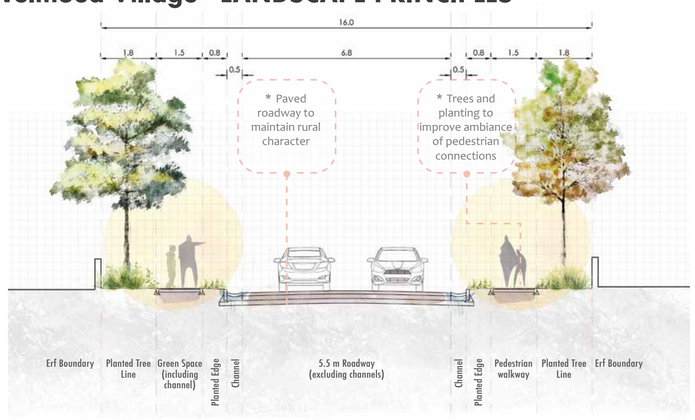
LANDSCAPE ELEMENTS

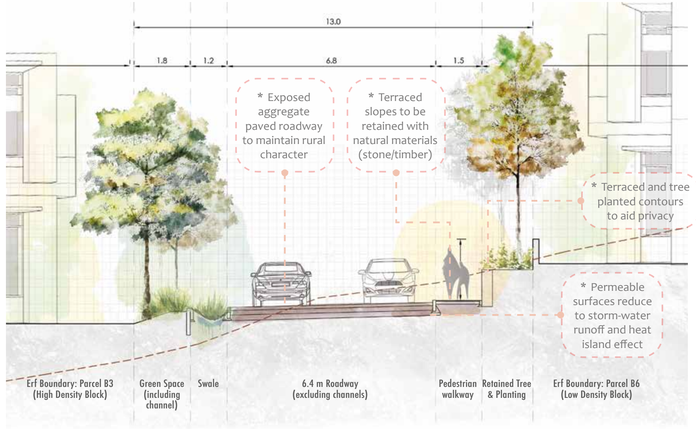
INTEGRATION OF LANDSCAPING

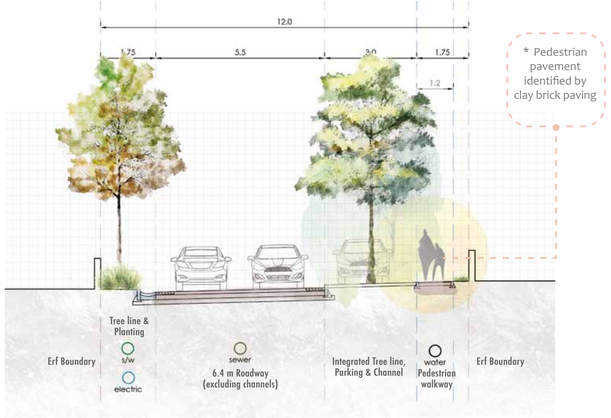
VARIETY OF MATERIALS

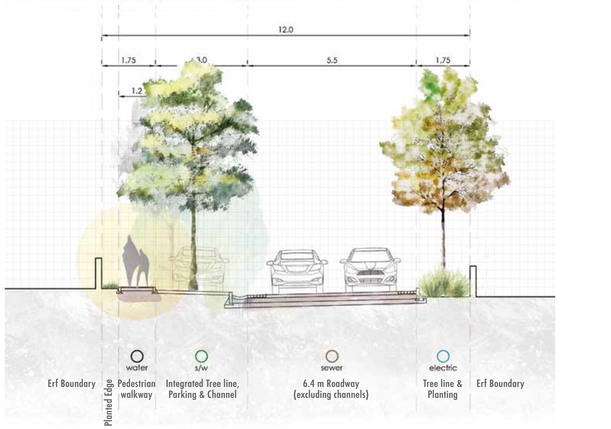


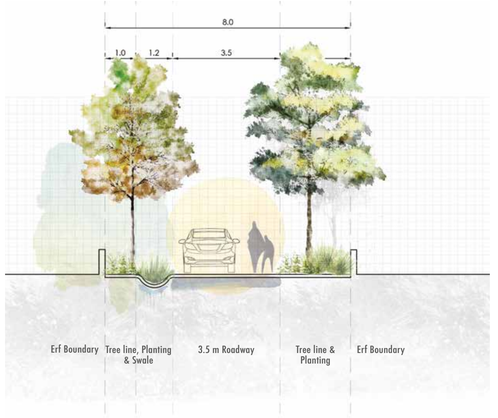
Welmoed Village - LANDSCAPE PRINCIPLES

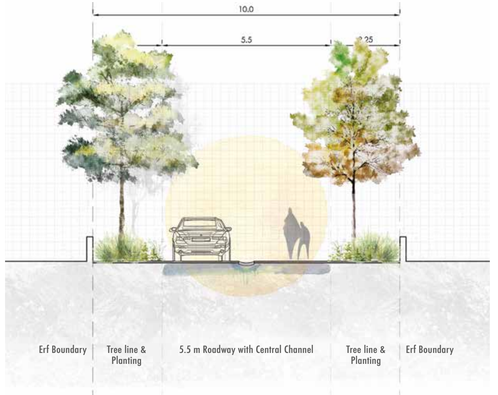


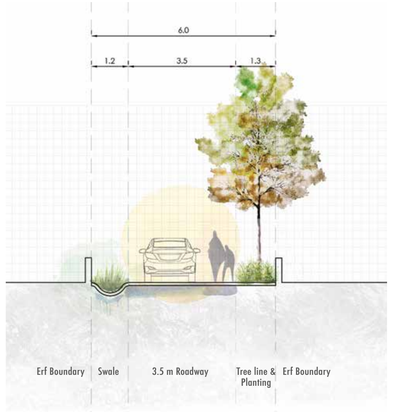












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Welmoed Village - LANDSCAPE PRINCIPLES

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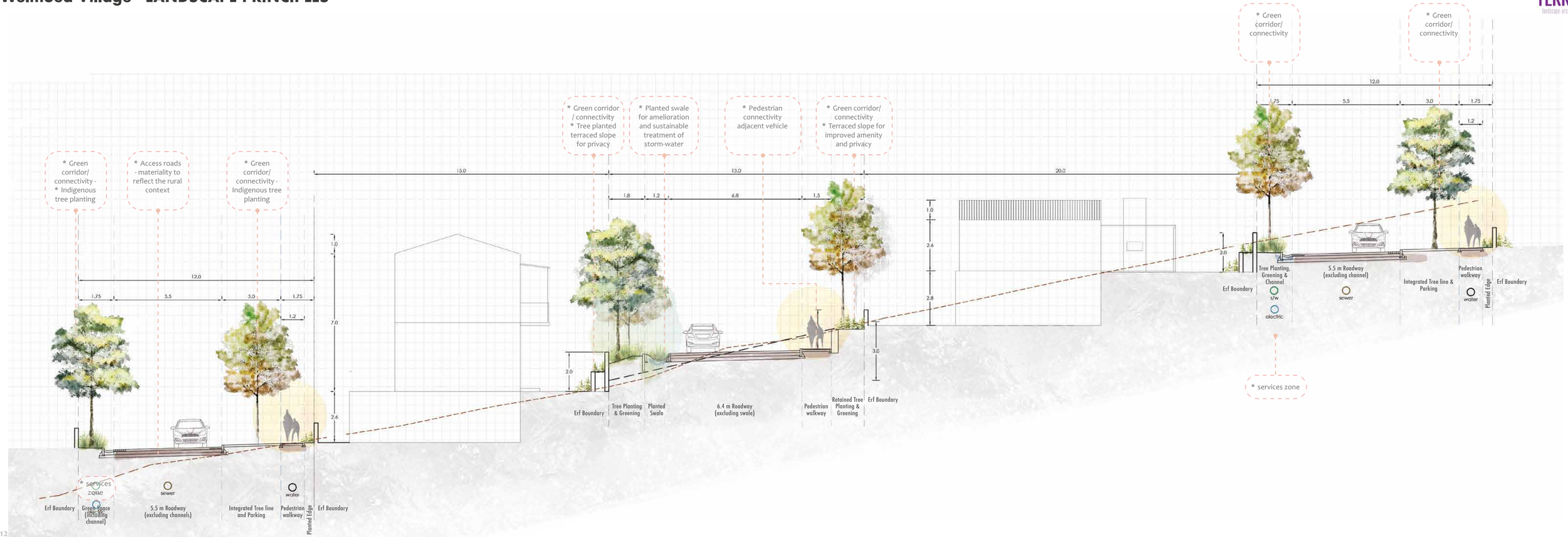

12

LANDSCAPE PLANTING STRATEGY

Planting and the use of plants are beneficial in creating an overall structure to the landscape and implementing a variety of typologies to order the site. The existing landscape elements of the site are indicators to the use of trees and planting. The overall landscape is defined by clusters of trees and densely vegetated drainage lines.

The spatial qualities of various landscape elements such as trees and high hedges further define spaces and provide mechanisms to develop an overall hierarchy of spaces within the site whilst recognising the contextual landscape patterns.

Planting and landscape elements provide an essential ecological function. The varying scales of ecological connectors can be expressed and developed through the varying use of plants and trees. These create micro-climates and habitats for animal and insect life essential to a healthy ecological system. The choice of plants and planting matrixes intentionally mimic the natural plant patterns found in the local biomes.

The intent is for a rich diverse and authentic mix of planting and trees to give identity and a unique sense of place.

NOTE: The plants and trees are indicative and include but are not limited to the plant and tree lists provided.

SWALE & WETLAND PLANT PALETTE

TREES FOR SEASONAL WATER
Syzigium cordatum (Water berry)
Combretum kraussii (Forest bushwillow)
Cunonia capensis (Butter spoon)

HERBACEOUS PERENNIALS
Berula erecta

SEDGES
Cyperus papyris
Cyperus textilis
Elegia juncea
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Agapanthus praecox
Chasmanthe aethiopica
Kniphofia bruceae (= K. praecox)
Kniphofia uvaria
Spiloxene aquatica
Wachendorfia thyrsiiflora
Zantedeschia aethiopica

GROUNDCOVERS
Lobelia anceps
Cliffortia ferruginea

SWALE & WETLAND

Kniphofia uvaria

Wachendorfia thyrsiiflora

Zantedeschia aethiopica

Cyperus papyris

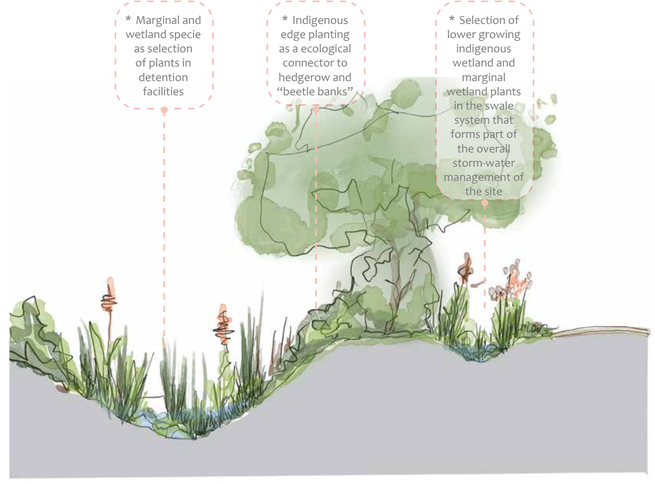

Fig. 42 Planting Section 5 - Swale and seasonal wetland typology

HEDGE ROW PLANT PALETTE

SHRUBS FOR VISUAL BARRIER
Dodonea augustifolia (Sand Olive)
Searsia crenata (Dune crow-berry)

TALL FLOWERING SHRUBS
Grewia occidentalis (Crossberry)
Halleria lucida (Tree fuscia)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)
Coleonema pulchellum

FYNBOS PERENNIALS
Phylica gracilis

SEDGES
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Agapanthus praecox
Chasmanthe aethiopica
Watsonia Borbonica

GROUNDCOVERS
Arctotisstoechadifolia
Asystasia gangetica
Cineraria saxifraga
Diascia integerrima


Apodytes dimidiata


Sersea crenata


Coleonem pulchellum


Metalasia muricata


HEDGE ROW PLANTING

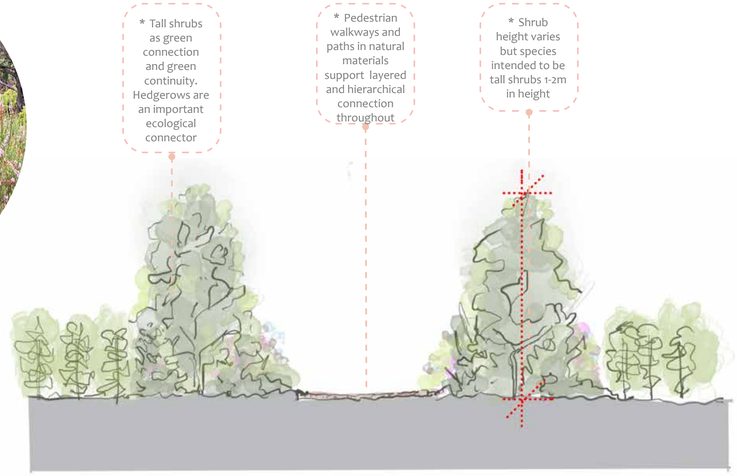

Fig. 43 Planting Section 2 - Hedge row typology

FYNBOS REHABILITATION PALETTE

SMALL TREES
Dodonea augustifolia (Sand Olive)
Halleria lucida (Tree fuscia)
Searsia crenata (Dune crow-berry)
Oleo europaea sups africana

SHRUBS
Grewia occidentalis (Crossberry)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)
Eriocephalus africanus var. africanus
Euryops thunbergii
Galenia secunda
Gnidia spicata
Helichrysum cymosum
Helichrysum teretifolium
Leucadendron floridum
Leucadendron salignum
Leucospermum hypophyllocarpodendron
Osteospermum spinosum
Morella quercifolia
Passerina ericoides
Pharnaceum lanatum
Phylica parviflora
Plecostachys polifolia
Plecostachys serpyllifolia
Polpoda capensis
Protea scolymocephala
Serruria fasciflora
Serruria trilopha
Staavia radiata
Stilbe albiflora
Stoebe cinerea
Syncarpha vestita
Trichocephalus stipularis
Erica margaritacea
Aspalathus variegata (probably extinct)
Athanasia capitata
Cliffortia ericifolia
Erica pyramidalis
Erica turgida
Erica verticillata

SEDGES
Elegia tectorum
Juncus capensis
Thamnochortus erectus

GEOPHYTES (BULBS)
Aristea lugens
Babiana angustifolia
Babiana odorata
Babiana secunda
Hesperantha pallescens
Hesperantha spicata subsp. fistulosa
Lachenalia liliflora
Lachenalia mediana var. rogersii


Dodonea augustifolia


Haleria lucida


Sersea crenata


Olea europaea sups africana


FYNBOS REHABILITATION

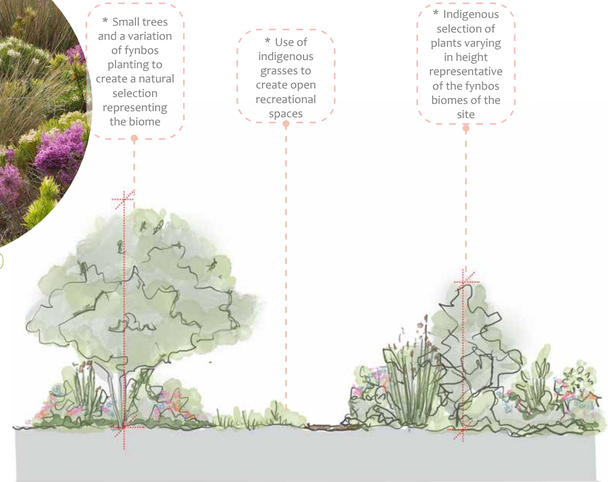

Fig. 44 Planting Section 3 - Rehabilitated fynbos typology

CLUSTERED TREE SCREENING PALETTE

TREES FOR VISUAL BARRIER
Acokanthera oppositifolia
Apodytes dimidiata
Buddleja saligna
Diospyros whyteana
Kiggelaria africana
Olea europaea subsp. africana
Ekebergia capensis
Celtis africana
Curtisia dentata

SHRUBS FOR VISUAL BARRIER
Dodonea augustifolia (Sand Olive)
Searsia crenata (Dune crow-berry)

TALL FLOWERING SHRUBS
Grewia occidentalis (Crossberry)
Halleria lucida (Tree fuscia)
Osteospermum moniliferum
Polygala myrtifolia (September Bush)


Apodytes dimidiata


Kiggelaria africana


Eckebergia capensis


Celtis africana


SCREENING PLANTING

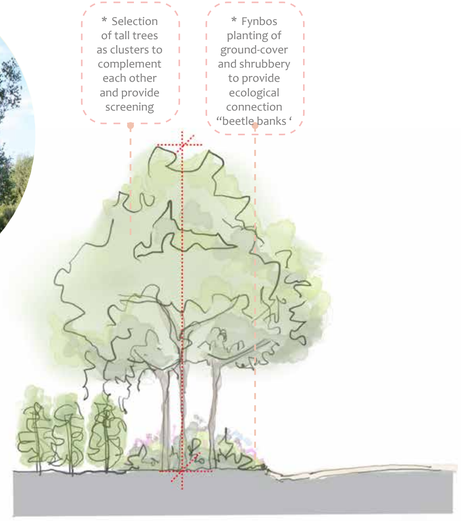

Fig. 45 Planting Section 4 - Screening street tree typology

AVENUE STREET TREE PALETTE

STREET TREES
Afrocarpus latifolius
Dais Cotinifolia
Euclea natalensis/racemorus
Scotia brachypetala/afra
Syzigium guinense
Virgilia xanthophloea

VERGE PLANTING
Phylica gracilis
Plectranthus various
Dietes grandiflora
Felicia various
Pelargonium various
Aristea various
Baleria various


Afrocarpus latifolius


Dias cotinifolia


Euclea natalensis


Scholia brachypetala


AVENUE STREET TREES

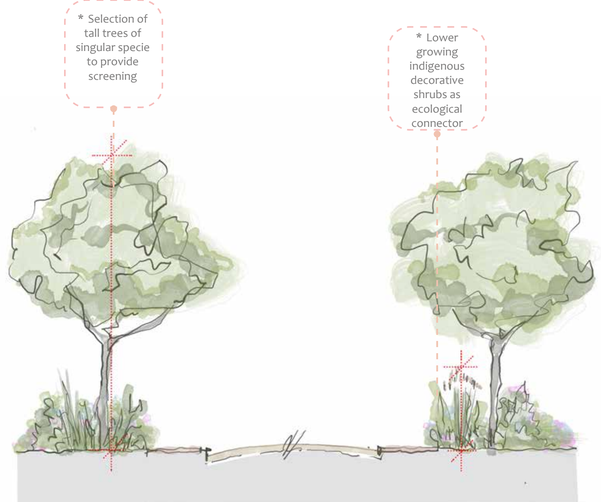

Fig. 46 Planting Section 5 - Avenue street tree typology