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# PROPOSED DEVELOPMENT ON ERF 940 (A Portion of Portion 562\*) KURLAND, BITOU MUNICIPAL AREA: TOWN PLANNING INPUT

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## PLANNING REPORT FOR THE EIA PROCESS

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Submitted by:



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On behalf of:

The **Bitou Housing Team** and the



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## REPORT ON SPATIAL PLANNING ASPECTS, REZONING AND SUBDIVISION

### 1. INTRODUCTION

The purpose of this report is to provide information with regard to the spatial planning and settlement layout issues pertaining to a proposed housing project on Erf 940 (To be registered: A portion of Erf 562) Kurland. Note that in the initial design Phases the subject property was registered as Erf 562 Kurland. Par 2 has reference. This report relates to the formulation of a layout plan, designed to address the requirement of accommodating a residential development, with supporting urban land uses and infrastructure on the subject property. Note that the layout design and proposed land use yield will only be final once the town planning process is completed. The intended housing project referred to in this report, will translate to the subdivision and rezoning of Erf 940 (A Ptn of Erf 562), Kurland.

The issues discussed in this report are the key principles, at this stage, underlying the planning approach to the project. Additional issues may be identified during the EIA process, and other participation/technical input processes, which may also be addressed in the formal rezoning and subdivision application.

The preliminary/draft plans, to be read with this report, are the following:

1. Information Base Plan (K2.3 Rev2)
2. Land Use Design Context (K3.1.3 Rev2)
3. Kurland Land Use Design Concept (K3.2.2 Rev2)
4. Design Alternative Concept
  - Design Option 1 (K4.1.3 Rev2)
  - Design Option 2 (K4.2.3 Rev2)
  - Design Option 3 (K4.3.4 Rev2)
  - Design Option 4
  - Design Option 5
  - Design Option 6
  - Draft 1 Layout Plan: Kurland 940

In addition to the base data sets referred to in this report, the following site specific, preliminary reports were available and considered in the land use proposal and layout design:

- Final Report on the Socio-economic Surveys in Harkerville (Forest View Barracks), Green Valley (Wittedrift) and Kurland Village (The Craggs) – Embale Shamba, 2016
- Aquatic area base plan with buffer zones (SESCC)
- Biodiversity Survey – Mark Barry Environmental, 2020

#### Quick facts of the concept land use/ design option plans

- Anticipated total site yield: 1500 residential units – varying typologies
- Total area of Erf 562= 95.7ha\*
- Estimated developable footprint area = 43ha
- Estimated gross density on developable land (Erf 562) = 35 units/ha
- Natural area set aside in Erf 562(excluding active parks) : 52.7ha

**Quick facts of the draft layout plan: Erf 940\***

- **Land earmarked for non-residential uses within the proposed settlement boundary (Draft1 Layout):**
  - **Supportive community facility uses: 14 erven (5,91 ha)**
  - **Conservation open spaces within the subject property: 11,56ha**
  - **Active open space areas: 11 erven**
  - **Retail/business/mixed use provision: (excluding the proposed external agriculture and municipal initiatives) 21Erven (3,19ha)**
- **Possible 1503 housing opportunities, to be implemented in Phases.**
- **Designed to include two mixed/community use nodal/focus areas**

## 2. THE PROJECT SITE: BACKGROUND AND DESCRIPTION

Property*	Size (ha)	Owner	Document	Zoning
Erf 940 (A Ptn of Ptn 562) Kurland (to be registered. See Par 7.1)	74,8530	National Government of Republic of South Africa	S G Diagram SG.No 1920/2020	Agriculture
Erf 562 Kurland	95.7567 ha		Title Deed T 13951/2007	

Plans for the alternative utilization of Erf 940 (A Ptn of Ptn 562) trace back to the zoning thereof for resort rights, many years ago. The Department of Rural Development and Land Reform (DRDLR) bought the property from the original owners, for land reform purposes in 2007. A few structures were erected on site. Various large erven [Erf 564 (Now erven 574 to 583), Erf 939, Erf 563 (Now erven 565 to 573) and Erf 536 Kurland] along Forrest Hall Road and in the central part of Erf 562)) were subdivided (as per SG diagrams) and some offered/sold/transferred to beneficiaries. Recently Erf 393 was also divided (SG Diagram 1919/2020) from Erf 562 (division not yet registered). The site (Erf 940 (A Ptn of Ptn 562) Kurland) property boundary is shown on the plans attached.

The DRDLR is the custodian of the property. After negotiations, they have recently decided to transfer the Erf to the Municipality of Bitou to accommodate the intended housing project, with the exception of two parts of the site, which they wish to retain:

- An area and building in the north-east of the property, to be transferred to the identified occupant (shown on diagram SG 1919/2020); and
- And the southern portion of the site for an agricultural project. The subdivision of the relevant portions was approved by the Municipality. Surveying and transfer is managed by DRDLR.

## 3. STRATEGIC LAND USE CONTEXT

### 3.1 SPATIAL CONTEXT OF KURLAND AND POPULATION

In the broad urban/development pattern of Bitou, Kurland is deemed a second order activity node, as noted in the discussion of the BSDF, below.

The existing, formal Kurland settlement (referred to as Kurland Village) consists of about 930 formal dwellings and an informal settlement, Xawa Xawa, in the north western part of the village. Many backyard dwellings are included in the urban fabric. The BSDF population projection was stated as 4693 people in 2016 with an estimated increase to 7893 by 2040. In terms of dwelling units, the increased demand is estimated at 2109 by 2025 and 2941 by 2040.

The socio-economic profile of the community is described in the specialist study, which formed part of the BSDF. It is noted that 58% of the working community works in Kurland and surrounding area and 18 % works in Plettenberg Bay.

## 4. DEMAND AND SUPPLY OF SUBSIDIZED AND AFFORDABLE HOUSING: BSDF

### 4.1 DEMAND FOR SUBSIDY HOUSING

The need for housing has to be evaluated in terms of the municipal surveys of the demand for subsidy housing in the various parts of the Bitou municipal area.

The BSDF estimates the total Bitou housing backlog at 4 298 families. A large portion of the informal population reside in additional/backyard structures within the area.

By analyzing the income profile of the population, the BSDF estimates that 64% of the households in the identified population qualifies for subsidy housing, being households that earn less than R 3 500 per month. The average household income of the Kurland population is estimated at R 2447-26.

The housing demand in Kurland as it relates to the housing waiting lists of the Municipal Housing Department is about 870 families currently residing in informal housing in Xawa Xawa and in backyards. The data base of Craggs and Kurland confirms this number.

#### 4.2 DEMAND FOR GAP AND AFFORDABLE HOUSING

The demand for affordable and gap housing is difficult to estimate since the families in the related income bracket may be absorbed in the existing rental units and/or may not appear in the formal data base. In a report on affordable housing in the Eden District<sup>1</sup>, several strategies are proposed to address the affordable housing challenge. One such solution is to provide small gap housing (bonded or partially-bonded/FLISP) opportunities in areas where large subsidy projects are planned. Portions of land may be set aside for this purpose and may be sold or developed in partnership with a developer, if viable.

From the Income Profile (2011 figures) in the BSDF the income levels give an indication of the percentage of the population that may qualify for FLISP (Finance Linked Individual Subsidy Program) housing:

ANNUAL INCOME	% OF HOUSEHOLDS
R 38 201 – R 76 400	13.8
R 76 401 – R 153 800	9.0
R 153 801 – R 307 600	6.7

The maximum income for FLISP qualifiers is R 270 000 pa (R 22 500 pm). It means that the households that qualify for FLISP, based on 2011 income figures, will be less than 29.5% but more than 22.8% of the total households.

The settlement planning and layout process creates erven to accommodate housing opportunities. A variety of unit types, whether fully subsidized or FLISP, may be accommodated on site, within a variety of layout typologies.

#### 4.3 PLANNED SUPPLY OF SUBSIDY HOUSING

The draft concept layout options are based on technical data sets available to date and will provide the structure for detailed layout planning and the basis for submission of rezoning and subdivision applications to follow. The project intent is to accommodate the current backlog (waiting list of 870 families) within a coordinated design at an urban density which relates to the optimal use of land, rather than spreading the current demand over the total project area. The project implementation will be done in phases and sub-phases, with the area of future phases retained, undeveloped, until/if required in future. In this manner area is retained to extend the project, in future if demand is proven, to accommodate an additional, estimated 630 families, given the densities/typologies currently used in the design (See Par 8 & 9).

An alternative approach may be to lower the settlement density, include mostly single units in open yards, for instance, and thus to spread the current backlog over the developable portion of Erf940. Alternative densities (see calculations below) will result in an additional requirement for the purchase/expropriation of land, in the Kurland

<sup>1</sup> Feasibility Assessment of Affordable Housing in the Eden district municipal area, 2016. Delplan and WM de Kock Associates for Department of Human Settlements, 2016.

area, to accommodate the expressed future need. The required densities, in turn, dictates the housing typologies to be accommodated on site. Note that a proportion of the developable land component must be dedicated to the provision of urban supportive facilities, such as education-, retail/commercial-; social/health-; recreational and other urban supportive uses. This integrated approach makes the effective use of residential land more critical. It is deemed good practice to plan the site as whole, both for the purpose of efficient layout design and for the purpose of economic engineering design. The layout therefore makes provision for more than only the present (previously calculated/established) demand for subsidy housing but rather for harnessing the ultimate (longer term) potential of the site.

## 5. ALTERNATIVE SITES

Land available to accommodate a housing project in the beneficiaries' vicinity is scarce. Area topography, conservation- and active use areas, price ownership (private) and other factors contribute to making the securing of land for housing projects difficult. From a strategic and practical perspective, it is preferable to extend the urban fabric of Kurland, rather than creating a separate settlement in the area. Land situated north-west of the existing Kurland township was also considered but the owner is still farming there and does not wish to sell. Erf 940 (A Ptn of Ptn 562) belongs to the state and in a spirit of good corporate governance the decision was made to utilize part of the land to address the residents' housing need, subject to due process.

## 6. STATUTORY FRAMEWORK

The spatial planning legislative framework, within which the planning and design of the site is done, consists of the following:

### 6.1 SPATIAL PLANNING LAND USE MANAGEMENT ACT, NO 16/2013 (SPLUMA)

The spatial principles in the Act represent a new approach to address the spatial injustices of the past and to prevent unsustainable development.

The five founding principles as set out in Section 7 (a) to (e) of SPLUMA that apply throughout the country and to the all SDFs are (as quoted from the Eden SDF <sup>2</sup>):

1. **Spatial Justice:** Redressing past spatial and other development imbalances through improved access to and use of land by disadvantaged communities.
2. **Spatial Sustainability:** Relates to the need to promote spatial planning and land use management and land development systems that are based on and promote the principles of socio-economic and environmentally sustainable development in South Africa.
3. **Efficiency:** The spatial efficiency pillar places significant importance on the optimization of existing resources and the accompanying infrastructure, including the oiling of development application procedures in order to promote growth and employment.
4. **Spatial Resilience:** Relates to mitigation, adaptability and innovations to secure communities from spatial dimensions of socio-economic and environmental (climate change) shocks.
5. **Good Administration:** Spatial planning vision and objectives are not only highly dependent upon a strong co-ordinating role of central government, but is also predicated upon good governance mechanisms, incorporating meaningful consultations and coordination with a view to achieving the desired outcomes across the various planning spheres and domains.

<sup>2</sup> Draft Eden Spatial Development Framework, 2017



Based on these principles, a township layout is designed, with due consideration to the spatial dynamics of the area and how it will function as a future residential neighbourhood.

#### WESTERN CAPE LAND USE PLANNING ACT, NO 3 OF 2014 (LUPA)

LUPA, based on the national legislation for spatial planning (SPLUMA) reiterates the land use planning principles of SPLUMA which must be applied in land use planning.

#### 6.3 EDEN SPATIAL DEVELOPMENT FRAMEWORK, 2017 (ESDF)

The recent draft ESDF, among many other directives for efficient growth of the region, promotes containing urban growth to sustain a stronger economy, mitigate disaster risks and to protect the environment. It also promotes the development of settlements where the access, economic, social and educational needs are met. The densification of the urban areas and a more effective use of space for large urban uses are emphasized. For example, a more effective use of sites for schools are proposed by clustering/sharing social/educational/recreational use areas, where possible and the 'wrapping' some of the boundaries of school by housing.

#### 6.4 BITOU SPATIAL DEVELOPMENT FRAMEWORK, 2019 (BSDF)

The development objectives of the BSDF is based on the SPLUMA principles referred to above. Based on the existing urban structure, population projections and a land use budget, Kurland is seen as a second order activity node. With regard to sustainable human settlements, the BSDF emphasizes that they should be based on Smart Growth principles. In short these principles entails the following:

- A mixed of different kinds of land uses e.g. residential, retail, business and recreational opportunities.
- Well-designed compact neighborhoods
- A variety of transportation choices including private, public and non-motorized transport
- A variety of housing opportunities in terms of function, form and affordability.
- Encourage growth in existing communities through infrastructure upgrade, urban renewal, new amenities and densification
- Preserve open spaces, natural beauty and environmentally sensitive areas
- Protect and enhance agricultural land and secure these as a productive land base for food security, employment, etc.
- More appropriate and less expensive infrastructure and green buildings and promoting renewable and sustainable technologies.
- Foster a unique neighborhood identity building on the unique and diverse characteristics of each community.
- Nurture engaged citizens through residential, work, and play areas.
- Engage citizens to participate in community life and decision -making.

In particular and with regard to Erf 940 (A Ptn of Ptn 562), the BSDF provides the following guidelines:

- Erf 940 (A Ptn of Ptn 562) is recognized as an area for future provision of housing.

- Certain nodes and corridors are earmarked for business and community facilities.
- Provision be made for a school in the new development, if feasible.

## 6.5 BITOU HOUSING SETTLEMENT PLAN

The Housing Settlement Plan (HSP) is dated 2010 and the housing demand figures are out of date. The areas identified for housing have since been analyzed and more clearly demarcated. No mention was made of the site concerned as the availability of the land was confirmed after the HSP was drafted.

The present IDP and BSDP provide more accurate and recent information on the housing demand and supply pipelines that are envisaged.

## 6.6 INTEGRATED DEVELOPMENT PROGRAMME (IDP)

The latest 2012 – 2017 IDP includes the SDF proposals in which the development of Erf 940 (A Ptn of Ptn 562) in Kurland is earmarked as one of the proposed housing projects.

## 6.7 BITOU LAND USE PLANNING BYLAW

The Bitou Planning Bylaw prescribes the procedure for applying for a change in land use, rezoning and subdivision and will be complied with in the planning applications to follow. Note that the environmental impact assessment study is a principle input to the finalization of a development/layout plan. Conversely the EIA has to relate to an intended land use – hence the environmental and planning processes area managed on an iterative basis to derive a feasible layout and land use rights combination.

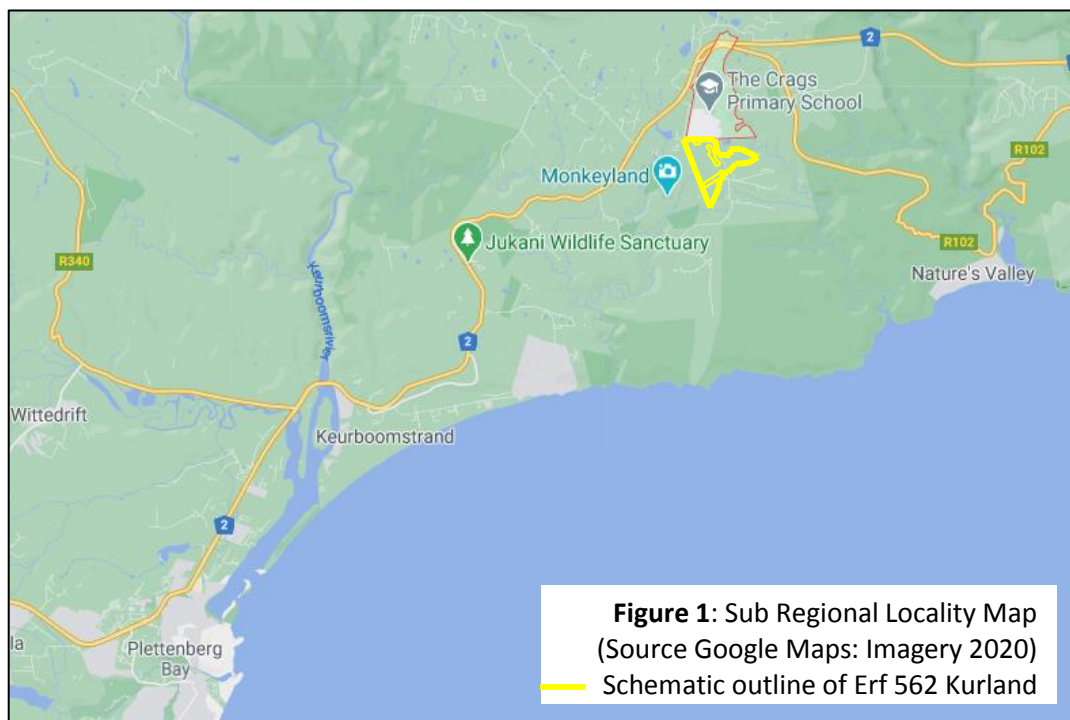
## 6.8 ZONING SCHEME BY-LAW

The municipality is still busy with the compilation of their new Zoning Scheme Bylaw. The created erven, within the proposed layout, will be zoned in terms of this By-law. This By-law will be based on the Provincial Standard Draft Zoning Scheme By-law and in the meanwhile the preliminary future zonings of the erven shown in the layout will be based on this Standard By-law.

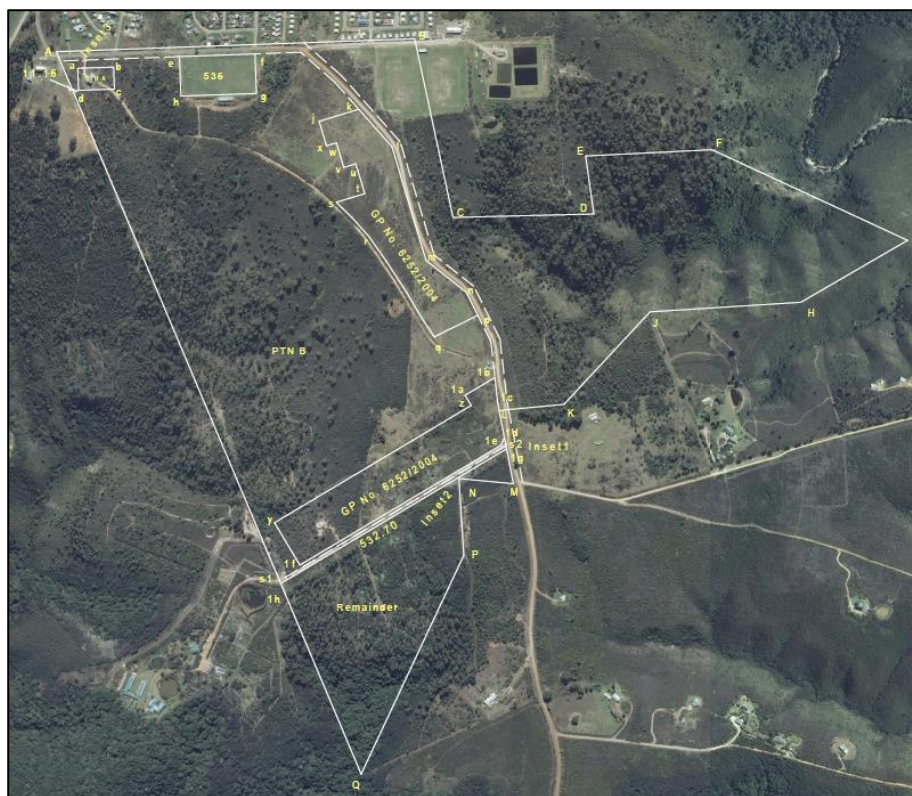
# 7. CHARACTERISTICS OF THE SITE

## 7.1 LOCALITY AND SITE DESCRIPTION

The subject property, being Erf 940 (A Ptn of Ptn 562) Kurland ('the Erf'/'the subject property'/'the site'), is situated south of/ adjacent to the existing Kurland area (Kurland Bricks and Kurland Village Settlement), approximately 20km north-east of Plettenberg Bay.



On a local level, the property lies south of the east-west section of Forrest Hall Road (OP 07220, servitude, tarred road), south of Kurland town, on both sides of the north-south portion of Forrest Hall Road (OP 07220, servitude, dirt road), nearly up to the Tenikwa access road turn-off. The Site Boundary Plan, below, shows the site boundaries and area exclusions.



**Figure 2: Site Boundary Plan: RE/562 Kurland: DRDLR (also see updated SG diagram SG1920/2020)**

(Base Plan Surveyor General Plan, with intended DRDLR divisions.)

As noted, property ownership vests with the South African Government by virtue of T381331/2006 (Transferred by endorsement, T13951/2007). There are no title conditions prohibiting development.

Erf 562 (registered remainder) measures 95,7567 ha in extent as per Surveyor General Diagram Nr 6249/2004. Note that an application for subdivision (Section 15(2)(a) and (d) of the Bitou Municipality By-law on Land Use Planning, 2015) of the erf (Re/562) was approved by the Bitou Local Authority to create three portions:

- A portion zoned Residential Zone I (Northern gatehouse area- now shown on diagram SG1919/2020)
- A portion measuring 74.6950 , zoned Agriculture Zone I and
- The Remainder measuring 10.990ha zoned Agriculture Zone I.

Such division has not yet been registered, but will be taken into account in the design/planning of the proposed development.

Subsequent division reduced the remainder (now framed as Erf 940) to 74,8530ha as shown on SG diagram SG 1920/2020. The relevant Surveyor General diagram shows:

- The outside figure of the subject site;
- The exclusion areas (previously divided):
  - Erf 564 (Now erven 574 to 583);
  - Erf 563 (Now erven 565 to 573);
  - Erf 536 Kurland
  - Erf 939 Kurland (not registered)
- An 18,89m wide Servitude Road;
- Three 3m wide pipeline servitudes;
- A 5,00m wide Servitude Road

The relevant servitudes will be retained and/or incorporated as use areas in the proposed layout.

For project purposes, the initial project site may be described in three sections:

- The Central/western Area – south of Kurland Village, west of the Forrest Hall Road servitude and the excluded row of Erven 565 to 573 and north of the row of excluded erven 574 to 583
- The Southern Area, south of Erven 574 to 583Kurland;
- The Eastern Area, east of Forrest Hall Road.
- See Par.8.3.

The subject property includes areas of natural and disturbed veld, low-lying areas with trees/bush, as described in the various environmental input reports. The following built/use features, within the site boundary, were noted during site visits:

- Forrest Hall road surface
- Northern Gatehouse
- Southern Gatehouse
- Community sports fields with related buildings and infrastructure
- Road to Sewer works
- Sewer manholes and pump station
- Community sports fields – buildings and infrastructure
- Power lines
- Farm pond
- Internal dirt road (withdrawn servitude- to be re-registered) and constructed crossings



## 7.2 LAND USE CONTEXT

Generally, the immediate Kurland area includes the Kurland settlement/Village area, which accommodates houses on individually registered, serviced erven, with municipal streets and various supportive urban uses (The Craggs Primary School, municipal clinic, various churches and crèches). Backyard housing and informal settlements are found within the existing urban fabric.

The area surrounding the residential settlement can be described as industrial (Kurland Bricks), natural environment, limited retail, community uses (church/cemetery/skills center/shops), municipal/provincial infrastructure, rural living and tourism related activities. The latter category includes the Peppermill Café, Elephant Sanctuary, Birds of Eden, Kurland Park Equestrian, Africanyon River Adventures offices, Tenikwa, Monkeyland, Bramon, Lakewood, amongst others and contributes not only the unique context of the area, but also to providing job opportunities to many of Kurland's residents. These tourism facilities/activities/companies are accessed via the N2, R102, 'Animal Ally' and the extension of Forrest Hall Road. Figure 3 shows the relative position of some of the land uses in the area. Land use surveys were conducted. Generally, the Biodiversity specialist describes the "area to the west and north of Kurland as cultivated, while the landscape to the east (into the National Park) is covered by plantations, indigenous forest and fynbos".



**Figure 3:** Google Map: Uses in the Kurland vicinity

The recently renovated Engen garage (with convenience store) is located at the access point from the N2 to the Kurland area.

### 7.3 GENERAL ACCESS

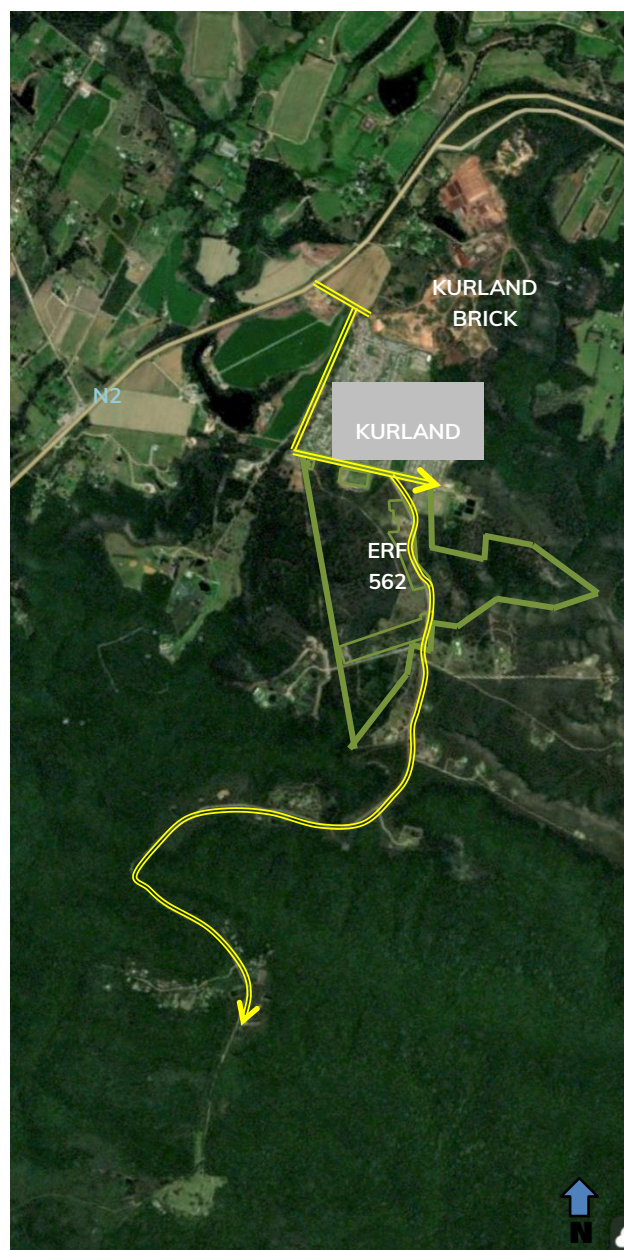
A Traffic Impact Assessment is being conducted as part of the technical preparation for the finalization of the layout and land use proposals. Notwithstanding the principles/ information/conclusion of such report, the following general observations, with input from ITS Traffic Engineers, can be made with respect to access to the site area: Forrest Hall Road (OP 07220) links the site, Kurland Village and numerous privately owned properties to the N2 highway. Such road, being protected via a registered 18.89m wide Right of Way servitude traverse the site.

Various roads, from within Kurland Village are planned (registered) to intersect with Forrest Hall Road, including Bloekom Street, Kershout Street, Freedom Street, Aandblom Street, Geelhout Street and Witbaraks (tbc) Street.

The road within the section of the Forrest Hall Road servitude, which runs along the southern boundary of Kurland Village has been extended to provide access to the Fire Safety Facility, the municipal sewer works and a municipal property (Portion 21/303). Freedom Street links the Kurland Village area to the site, in this area.

A Right of Way Servitude, linking the Teniqua/Tenikwa Wildlife Awareness Centre to Forest Hall Road, bisects Erf 562, running just south of excluded erven 574 to 583 Kurland.

In addition to the Forrest Hall Road Servitude, a secondary servitude was surveyed, providing a parallel running access-way across the site. Such diagram has been withdrawn for amendment. An amended servitude line is shown on SG 1920/2020.



**Figure 4:** General position of Forrest Hall Road

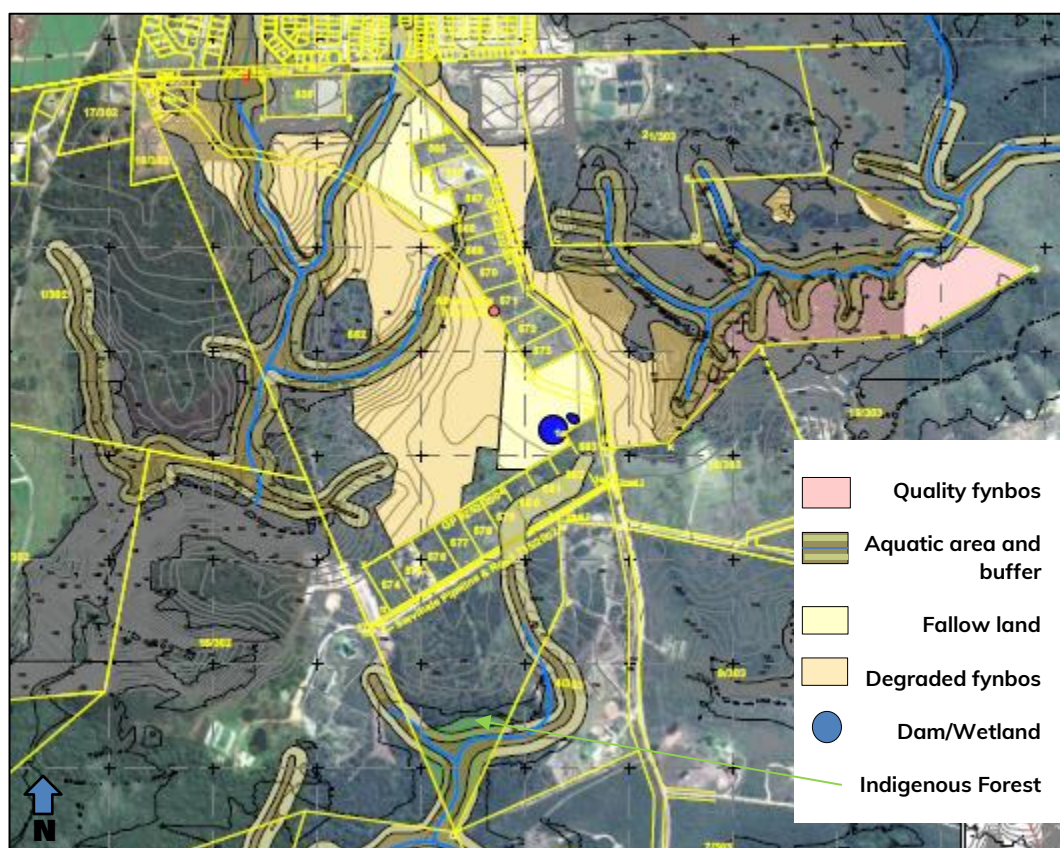


## 7.4 PHYSICAL SITE CHARACTERISTICS AND ENVIRONMENTAL SENSITIVITIES

The natural and physical environment will be comprehensively described in the specialist's reports, yet to be finalized, which may impact the land use intent and/or layout, during commenting/due process.

Nonetheless, various sets of information was incorporated to derive a base plan upon which the preliminary development design is based, including available contours, site features surveys (in process), botanical assessment zones, aquatic zones and related environmental buffers.

In principle, the far eastern side of the site is undevelopable due to the presence of good quality fynbos vegetation, the steep gradient and the extent of the aquatic habitat and related environmental buffer areas.



**Figure 5:** Sketch Plan: Combined environmental datasets received thus far  
*Extract of the Information Base Plan (K2.3 Rev2March2021)*

The central part of the site includes area of fallow land and degraded fynbos, as well as zones of aquatic habitat, with the associated buffer areas (mostly along low lying areas/ 'incised topography').

Along the western site border is an area of trees, not classified as indigenous forest.

A dam and/or wetland is shown, on environmental base plans, in the south-western corner of the central part of the site (See Par. 2.3 and 4.4). The position of the wetland/dam on the top of an elevated flat area, not fed by any watercourses is described in the Biodiversity Survey as a 'bench'. In this instance, the Biodiversity Report concludes, onsite inspection that "... the wetland appears to be partly artificial due to the presence of a few small manmade earth channels".

A section of indigenous forest has been demarcated in the southernmost tip of Erf 562, which does not form part of the area considered for the housing project.

An updated contour survey has been commissioned and areas with a gradient greater than 1:4 will be demarcated, for exclusion from the delineated developable area.

The Biodiversity Survey concludes that: “According to the 2012 South African Vegetation Map, the site has been largely mapped as Tsitsikamma Sandstone Fynbos, while the southern tip intrudes into Southern Afrotemperate Forest. This was confirmed in this study. The site comprises a mixture of fynbos, fallow land, alien forest/woodland and some indigenous forest. The eastern part is considered to contain the best quality fynbos on the steep north-facing slopes above the valley. It is also considered to be the most sensitive. Fynbos in the remainder of the site has been mapped as degraded due to alien infestation and senescence, and considered to be of medium sensitivity. No Species of Conservation Concern or regional endemics were recorded. One protected tree species (i.e. *Afrocarpus falcatus*) was recorded in the western part of site. Given the presence of conservation worthy fynbos on site, albeit partly in a degraded state, as well as mapped CBA’s and ESA’s, one can investigate development opportunities on certain locations where it poses the least impact on biodiversity. In this regard, suitable areas are found alongside the main gravel road through the site (on both the western and eastern sides of the road), as well as the north-western corner of the site. Watercourses should be suitably buffered and protected from development. The remainder of the site should be set aside as a public open space system and managed as such. The potential impact on vegetation type per se is not of a great concern. Lastly, alien control, especially black wattle, blackwood, pines and gums, will be important in the open spaces. A sustained effort will be required to control it”. Fire Management is also noted as a required action. The possible accommodation of the Biodiversity Survey recommendations, within the layout plan is illustrated later in this report.

## 7.5 ENGINEERING SERVICES

Various base sets, showing the position of existing engineering services have been received. Such information is tested against a site survey. From the preliminary investigation, the following may be noted, as it affects the layout:

- Service lines (Electricity, water, sewer) and related infrastructure (manholes etc.) lie within the existing access servitude of Forrest Hall Road;
- The intent is to relocate the existing sewer pump-station, within the Forrest Hall road servitude, as part of the overall engineering services design;
- Electricity lines to be contained in servitudes within the layout, once the site survey and engineering comment on the final layout is concluded;
- The Bitou Municipality will undertake the planned upgrading of the sewer works within the existing municipal property. Final comments regarding the space requirement awaited as it is intended to possibly utilize the remainder of the municipal erf 21/303 for supportive urban functions, such as sports fields, after consultation with the relevant authorities and the planning participation process. Odor- and other technical control systems and monitoring measures to be implemented;
- Services demand-, supply capacity – and upgrading requirement calculations will be updated once the final layout is concluded (after final environmental input) and reflected in the submission documentation annexed to the planning application.
- External servitudes will be required to secure the bulk- and link services networks. Such servitudes to be secured prior to the registration of individual erven.



## 8. THE LAYOUT CONCEPT

### 8.1 LEVEL OF THE PLAN

As noted, for discussion/illustrative purposes, the preliminary design options show concept layouts with land uses and street blocks. The residential usage areas are shown as blocks, with various density options. The placement of supportive uses, to the standard noted in Par 9.2 will be open to final consultation during the circulation of the Draft Layout and the subsequent participation process.

The plans do, however, provide sufficient information to state the general, intended usage, for the purpose of providing input to the Environmental Process. Par 8 and 9 has reference.

### 8.2 LAYOUT DESIGN OBJECTIVE

As noted, the principle development intent is to accommodate the relevant housing backlog, at time of the project implementation, on site or on part of the site. The planning- and design objective is to create a technically sound and enjoyable living environment, utilizing the full site (developable area) in an effective manner, based on SPLUMA (Spatial Planning and Land Use Act, 2016 ((Act 13 of 2016) design principles. Effective utilization of available land is crucial. The implementation of the development footprint may be divided into phases and sub-phases.

### 8.3 THE SITE DEFINITION: TECHNICAL FACTORS

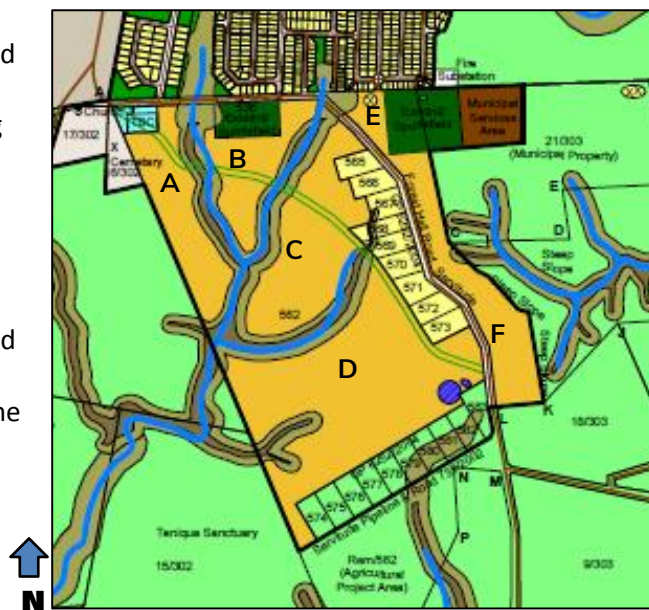
Thus far, the following technical information set, were consulted/introduced to create an internal development structure (also refer to Par.7.1):

- Cadastral Boundaries;
- Exclusion areas, including the northern gatehouse property;
- Gradient analysis –areas steeper than 1:4 gradient to be exclusion from the development use areas;
- Environmentally sensitive areas, including specific biodiversity delineation zones and aquatic zones and related buffers;
- Various areas on site has not been categorized in terms of the existing environmental input reports. No ‘conservations concerns’ were noted in information provided to date;
- Streams and dams/wetland areas;
- All existing roads, traversing the site and linking to the adjacent areas, and the status of such roads;
- Legal and title conditions;
- Site visits;
- Available engineering information;
- Discussions with various departments of the local authority;
- Preliminary input from community structures;
- Inputs from consulted professionals.

The formal participation process will provide additional and important inputs, which may be incorporated, as far as it affects a possible development layout. The prescribed circulation to technical authorities will similarly yield information which may affect the final layout design and land use allocation.

Preliminary, general site components:

- The overall project site (95.7ha) may be described in three components, with various technical features to be considered, as noted throughout this report, including:
  - Central: (west and south of Forrest Hall Road; north of Holdings 574-583; west of Erven 565 to 573):
    - Approximately 56ha.
    - This area is directly south of the existing Kurland Village infrastructure, with some urban supportive facilities currently accommodated on the project site, such as the ablution facility and clubhouse of the upgraded Kurland and New Horizon Sports Facility;
    - Note the exclusion of the gate-house area (north-west site corner, (delineation confirmed as Ptn 939) and Erf 536 (Sports field);
    - Environmental features (steep slope/low lying strips of land/aquatic buffer areas) and the alignment of Forest Hall Road create six development components/blocks, of which four, Blocks A to D fall in the central zone. See Figure 6.
    - Municipal Engineering service components and Eskom power lines are located within the Forrest Hall road servitude area and around the sports fields;
    - Directly adjacent land uses, including cemeteries, churches, open spaces, natural areas, residential grain, street network are noted;



**Figure 6:** Sketch Plan: Anticipated development blocks  
(Extract of the Kurland Land Use Context Plan Ref. K3.1.3.Rev3)

- East: (east of Forrest Hall Road):
  - Approximately 29ha.
  - The greater part (east) of this area has a steep slope and is considered a conservation/natural area due to the occurrence of good quality fynbos as identified in the relevant environmental reports, hence an area of approximately 22ha was excluded from the anticipated development footprint area;
  - The road to the sewer works and the Kurland Fire Substation (Bitou Municipality) falls within the project area, as does a part of the sports field near Solomon- and Freedom Streets. The sports fields accommodate an ablution facility/block, lights. These features, as well as power lines (proposed servitudes) will be accommodated in the area anticipated for development;
  - Directly adjacent land uses, including municipal works area, sports fields and associated infrastructure, open spaces, natural areas, residential development grain, fire station, street network are noted;
- South: (south of Holdings 574-583 and the access road to the Teniqua Wildlife Awareness Centre): 11 ha. This area has previously been earmarked as a project area by the Western Cape Department of Rural Development and Land Reform for agriculture project purposes. The division of the site, to register the agriculture project as a separate area, was concluded in 2020 by the Bitou Municipality. Updated SG diagrams were done. The division is in the process of being registered.

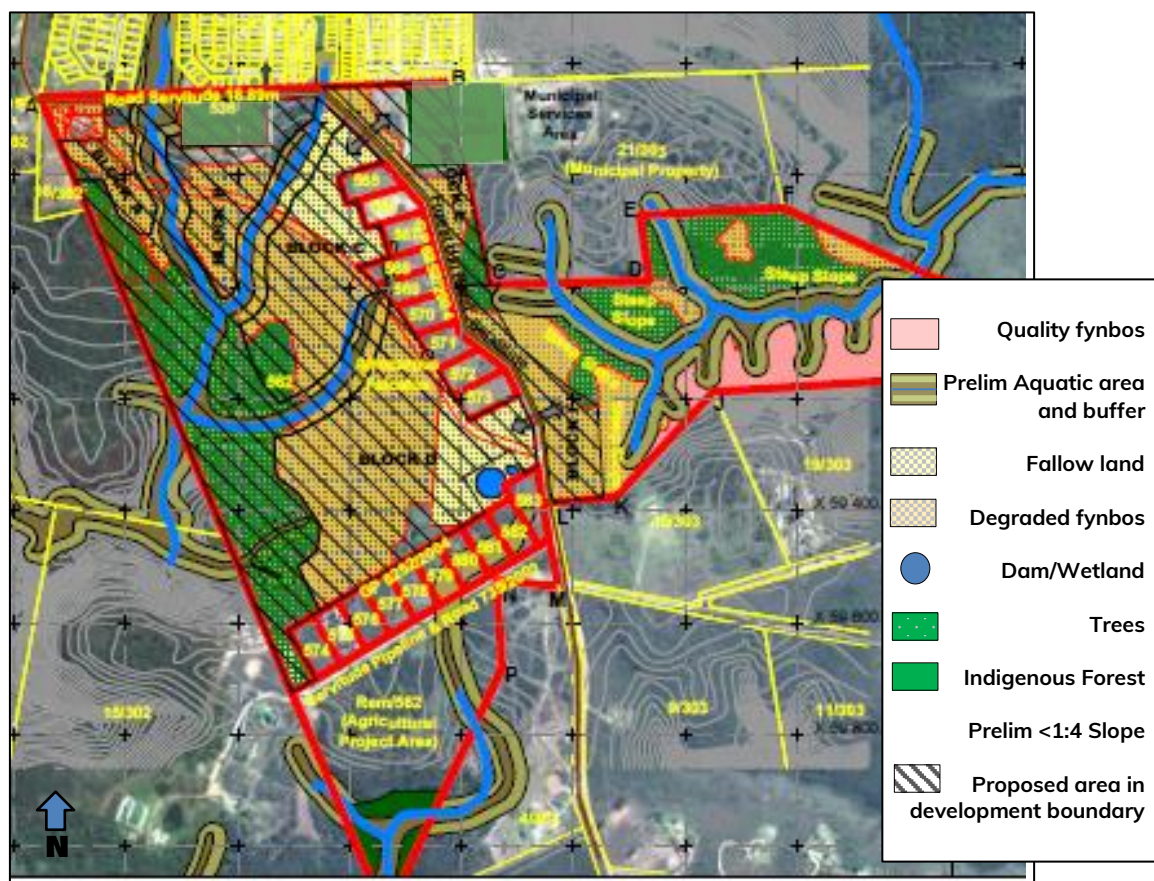
Preliminary calculations show the following:

ERF 562 (95,7ha) (Preliminary calculations- approximate areas, at the time of creating the concept plans):

	Footprint area* - anticipated residential blocks	Anticipated roads & exclusion areas & supportive use	Anticipated 'Green' area (excluding active parks)
	Possible development area/blocks and other use areas		
Central/Western Area	23,7ha	12,6ha	19ha**
Eastern Area		7ha	21,8ha
Southern Section		0	11,6ha
		43ha	52ha
Site % (approx.)		45%	54%

\* Including potential residential use areas, internal parks and roads and supportive use facility areas. Note that the green areas will be included as "Open Space" even within the development boundary.

\*\* As noted the use of the 'tree areas' to be further investigated, which may extend the development blocks slightly.



**Figure 7:** Extract Sketch Plan: Information Base Plan and Development Component Areas

## 9. DESIGN CONCEPT

The Development option plans (Par 9.3) have reference. Note that the six option plans are not the final layout design, but merely illustrate impacts and concepts considered and debated in the design process.

In addition to general design principles and standard technical design parameters as per the 'Red Book', the following principles may be noted, based on technical input received thus far.

- Land-use intent:
  - As stated, the principle project intent is to utilize the site to accommodate the existing housing backlog in the Kurland area in a manner that land is optimally used so that current and future demand may be accommodated in a coordinated manner;
  - The principle land use/design intent is to create an environment which accommodates residential neighborhoods, whilst assimilating environmental exclusion areas; providing supportive land uses and optimizing development integration, where feasible. The creation of an effective and enjoyable settlement extension, within the project context is the design objective. Internal design will relate, amongst other factors, to integration and creation of a 'sense of place'.
  - Only design/land use comments/input received to date are reflected.
- In addition to the principle project- and land use intent, specific land use requirements have been noted in consultation, at various stages of developing the design concept (April 2020 to June 2021), including:
  - Specific categories of land, as delineated by the relevant environmental- and slope base data sets (fynbos, aquatic areas and buffers, slope greater than 1:4) to be excluded from the development footprint area, but logically integrated in the project context;
  - Road/access alignments as per existing/registered servitudes to be retained, in part, as roads and/or walkways/ access, with the exception of the inclusion of an amended alignment, with a traffic circle where Forrest Hall Road changes direction from east-west (south of Kurland) to north-south through the project site;
  - Accommodation of a school/sports-fields (as per previous community engagement) to be investigated in consultation with the Department of Education;
  - Retaining sport facilities in the area and also encroachment on the project site;
  - Retaining access to tourism/heritage/agriculture uses in the area;
  - Integration with the excluded erven along Forest Hall Road, in terms of a context/principle approach to infill and/or alternative use;
  - Design to include link/combined use with municipal property 21/303;
  - The sewer works is to be extended/upgraded. Such upgrading may be within the existing footprint and/or within Municipal property 21/303;
  - Access points to adjacent areas were increased based on input regarding fire safety procedures/ requirements.

The possible layout/design options (See Par. 9.3) were presented to illustrate the general design concept and to point out design issues, to be debated in the prescribed circulation/participation discussions, such as, but not limited to:

- The requirement for an additional educational site and the placement thereof;
- The most effective road network, from a functional and costing perspective;
- The creation and positioning of nodal areas/'village squares';
- The exclusion of environmentally sensitive areas – practicality, exclusion vs integration possibilities;
- Integration with adjacent uses and general connectivity requirements;
- Land utilization in terms of densities/housing typologies and related land requirements.

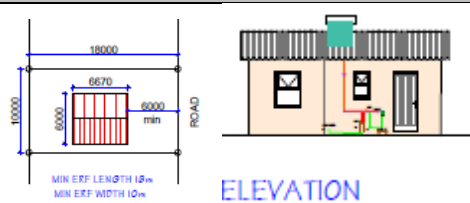


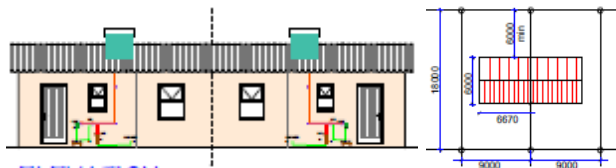
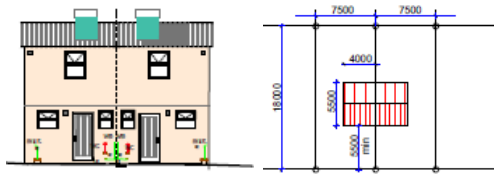
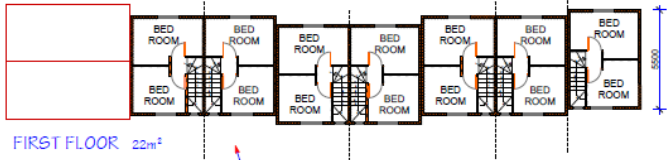
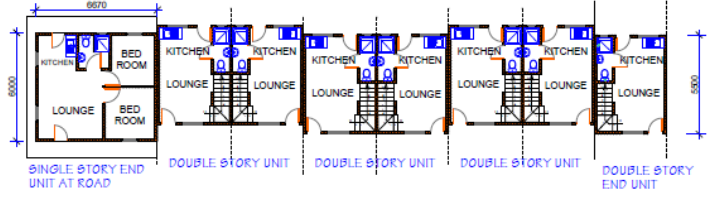

## 9.1 DESIGN PRINCIPLES

In addition to general principles, norms and standards applicable to the creation of settlements/integrated neighborhoods, the following design principles were applied to this specific project layout design approach:

- **Open Space Network:**
  - Low lying 'fingers' (guided by contours) and aquatic buffer areas excluded from the development area, where practical. Retained in the layout as interconnected open space;
  - Majority of demarcated sensitive biodiversity areas excluded from development area, subject to practical layout considerations and maintenance considerations;
  - Green spaces to be extended to form human-scale linkage between cells;
  - Open Space system extended to include storm water management areas and soft open spaces;
  - Green space vehicular crossings kept to a minimum;
  - Distinction to be made between active and passive/conservation green spaces;
  - Residential design to allow roads along the open space and/or 'eyes on site' – views from double storey units. Open spaces should not be too wide. Views across these 'fingers' to be facilitated;
  - The majority of the eastern part of the site (21ha of the 28ha) will remain undeveloped based on environmental input/area delineation;
  - The 'dam area' in the central-southern part should possibly be kept as part of a park/within a community facility erf, albeit not considered a permanent water feature;
  - Following discussions with the relevant Fire Safety Department, the draft layout was reviewed to ensure that the adjacent and internal open spaces are accessible.
- **Road/Access Network:**
  - Road hierarchy adopted: 20m; 16m, 13m; 10m wide reserves as required by the Bitou Municipality Minimum Standards for Civil Engineering Infrastructure. (Note that a 12m is required for local collector roads, but this has been increased to 13m to allow additional reserve width for pedestrian movement and storm-water management, if required)
  - Forrest Hall Road, from north-west corner of the site, to the south eastern corner of the central area, is deemed to be a seam, i.e. spine within a developed area: Fully designed, 20m wide reserve, traffic calming circles proposed (to be designed – detailed traffic input to be incorporated);
  - Forrest Hall Road reserve area to be widened to 20m, depending on position of engineering services, upgrading (road and service) design. Outline Services Reports/Input to advise;
  - Circles (or other design functions) introduced to increase legibility and reduce speed on main road network;
  - Intersection to north-west of site (external) to be considered to facilitate split in traffic to Animal Alley and Church/cemeteries/ Woman on the Move and other use areas;
  - The existing road to Municipal works to be formalized within a road reserve and the intersection and extension to be facilitated in design;
  - Existing linkage lines into Kurland Village to be used to foster integration;
  - A secondary spine to be accommodated to separate walking residents, away from the main spine or the main spine to be designed to enable safe pedestrian movement and proved additional emergency services access;
  - Street design to enable access to holdings along Forrest Hall Road, although future uses on these properties will be subject to separate traffic impact investigations and land use rights applications;
  - Some access linkage to the south, from the Central portion, (across the agricultural holdings) and to the west to be investigated;
  - Street naming process to be initiated. Theme provisionally proposed: Forrest trees/plants (linking to the Forrest Hall Road name);

- Public Transport terminus not required internally (Subject to TIA) – lay-byes to be provided in higher order road reserves only. Passenger collection areas may be accommodated in the design of the mixed use site, if required.
- Residential design, densities and typologies
  - Five clusters/parts of neighborhood/village cells are formed by the formative elements on site;
  - One of these components/parts should accommodate a school/sport area – two alternative positions have been investigated thus far. The option of placing the school site adjacent to the eastern sports field, to be used in conjunction with the municipal area (21/303) is preferred since there is sufficient space and a skills/educational/recreational node can be considered;
  - Draft alternative layouts, for discussion purposes, are based on 18m deep blocks, which may accommodate single storey- or double storey linked units on individual erven generally ranging from 72 to 180m<sup>2</sup> (average; principle designs below), semi-detached units (double or single storey) and erven to accommodate loose standing houses ( anticipated 180-250m<sup>2</sup>;
  - Input was received of a process to establish a housing waiting (temporary relocation area) on Erf 562. Such area has been set-aside and is subject to alternate technical/approval processes. The area can be assimilated into the neighborhood design, at a later stage, as a high density erf (anticipated 11 units) or can be subdivided into individual erven;
  - To accommodate the backlog on site, linked units, on a relatively small development footprint is proposed, rather than large, single unit erven, spread over a much larger footprint (more than one extension area);
  - Residential use will be clustered into neighborhoods, with central ‘square’ areas in each block;
  - Linked blocks should, as far as possible be placed on the contour and no more than six units to be linked;
  - The side units of the linked blocks, should, in some instances, be single storey units for specific allocation to older beneficiaries and the disabled;
  - Units in linked blocks to be placed in such a way that back-yards don’t abut ‘visible’ roads;
  - Preferably pan-handle design should not be used;
  - As noted the design concept is intended to form the basis in identifying, amongst other elements, areas to be set aside for housing. The density will be a function of the available area, given the intent to accommodate the stated housing backlog on a single extension (project site). Per illustration:

Design principle	Density and yield estimate
Individual erven- single units – free standing, single storey	
 <p>MIN ERF LENGTH 18m MIN ERF WIDTH 10m</p> <p>ELEVATION</p> <p>Sketch source: Keith Lourie Architecture</p>	
One free standing house per erf (average 180m <sup>2</sup> )	Estimate 25units/ha Yield 575 units on the provisional block area
Individual erven- pairs of linked houses – free standing, single storey	

 <p>FI EVATION</p>	<p>Sketch source: Keith Lourie Architecture</p>
<p>Single storey, semi detached (average 160m<sup>2</sup>)</p>	<p>Estimate 28units/ha Yield 644 units on the provisional block area</p>
<p>Individual erven- pairs of linked houses – free standing, double storey</p>	
	<p>Sketch source: Keith Lourie Architecture</p>
<p>Double storey, semi detached (average 135m<sup>2</sup>)</p>	<p>Estimate 30units/ha Yield 690 units on the provisional block area</p>
<p>Individual erven – linked housing units, single and double storey combination</p>	
<div data-bbox="252 1046 922 1205">  <p>FIRST FLOOR 22m<sup>2</sup></p> </div> <div data-bbox="539 1227 1018 1272"> <p>DOUBLE STORY UNITS IN PAIRS ARE MORE ECONOMICAL - EVEN NUMBERS ARE THEREFORE PREFERABLE</p> </div> <div data-bbox="225 1294 938 1496">  <p>SINGLE STORY END UNIT AT ROAD</p> <p>DOUBLE STORY UNIT</p> <p>DOUBLE STORY UNIT</p> <p>DOUBLE STORY UNIT</p> <p>DOUBLE STORY UNIT</p> <p>DOUBLE STORY END UNIT</p> <p>GROUND FLOOR 22m<sup>2</sup></p> </div> <div data-bbox="236 1552 587 1585"> <p>TYPICAL ROW HOUSING</p> </div> <div data-bbox="220 1597 1070 1765">  </div>	
<p>Double and single storey row houses on individually registered erven ranging between 72 to 162m<sup>2</sup> (average)</p>	<p>Sketch Source: Keith Lourie Architecture</p> <p>Estimate 65units/ha Yield 1495 units on the provisional block area</p>



Preliminary/ illustrative rendering of the Kurland design concept

The concept layouts (See Par 9.3) reflect residential blocks which may accommodate any of the stated densities/typologies. A combination of designs within the erf layout concepts will be used.

Flats/high density/3 storey walk up sectional title units were not considered at this stage since such typology is more congruent with an 'inner city' context. Nonetheless, one erf was set aside for 11 units, which may be (separate from the current housing project) be developed, if required. Based on the final confirmation of development space available for the housing footprint (final layout) and the analysis of the target community (non-qualifiers for example) such typology may be considered. Creation of additional space for flats will require separate/additional application processes.

- Supportive land uses (See Par. 9.2)
  - Existing areas are provided for a central community node in the existing Kurland Village - approximately 1.5km from the northern, internal community node positions proposed in the design concept. A second community node (internal) was initially proposed in the south-east corner of the central block. I.e. 750m walking distance from nodes within any part of the extended Kurland Village. Based on design concept discussions with the municipal planning officials and subsequent to interaction with the ward committee, alternative central nodal (commercial and supportive facility-uses) areas were investigated. See Options 4 to 6;
  - The main community node (on site) may accommodate Local Economic Development (LED) projects, if required, a market (if identified as a funded project), central park, area where municipal supportive social functions may be accommodated), recreation infrastructure, stalls, mobile clinic/library areas, tourism facilities, etc. The layout creates the space for an integrated node. The municipal departments, community structures, local businesses, greater community, provincial departments to collaborate to design and implement appropriate structures/spaces/uses, with relevant management structures;
  - The dam/wetland to be considered as open space. Visible edges required;
  - Secondary social/business supportive nodes may be included in the detailed design, along the main or secondary spine;
  - The sports fields on Erf 536 to be retained, with a narrow extension area to accommodate an existing building to be excluded from the residential footprint area;



- The sports fields near the fire station to be retained, possibly in an amended configuration, to include a possible school site. Residential erven along selected boundaries of the school site to be considered;
- Access to the Municipal Portion 21/303 to be facilitated to encourage active, coordinated use (municipal works function/ community use areas/LED initiatives/TRA);
- Configuration of excluded area at north-west corner of the site (old gate-house, now private residence) to be confirmed and requirements of the church on nearby land to be confirmed during layout comment stages;
- Access to the municipal cemetery to be debated, prior to finalizing the layout, in coordination with the TIA requirements
- A “green strip/hedge” or fence should be provided along the boundary of the existing cemetery;
- Holdings 574 to 583 (Excluded, south of central area of site) to be retained as predominantly small scale farming/ agriculture/ low density residential (small holdings) at this stage – subject to municipal evaluation;
- Holdings 565 to 573, along Forrest Hall Road are privately owned. A framework to show integration of this area, either as residential or as mixed use, to be considered, in due course, prior to evaluation of individual layout/rights applications (may be submitted by individual owners to the municipality in due course, if/when sufficient municipal infrastructure is made available);
- The southern portion of Erf 563 (south of holdings 565 to 563) is to remain undeveloped – to accommodate agriculture projects (approximately 11ha);
- Use of allocated supportive use area (to municipal standard, where practical), to be in line with previously indicated requirements of the community and to accommodate possible municipal/provincial initiatives – to be advised. Municipal sectoral planning to coincide with the implementation framework of the housing project;
- Area around the sewer works (external to project site) may include agricultural/ recreation/ educational/ occasional/supportive uses – to be advised;
- It is not practical to keep the single specimen *Africocarpus Falcatus* in the current position—more appropriate trees (Keurboom) should be included in the landscape design Of the proposed mixed use/open space areas. Nonetheless, the street design will be done in such a way, on local level, that the identified tree is retained in the street reserve.

## 9.2 SUPPORTIVE FACILITY CONCEPT

Notwithstanding further design inputs, amended layouts and possible exclusion/ addition/ exchange areas, it is anticipated that approximately 1500 units (maximum) can, technically, be erected on site.

The Western Cape Government, Department of Environmental Affairs and Development Planning, has issued a “Quick Reference for the Provision of Facilities within Settlements of the Western Cape” (I.e. development parameters relating to supportive land uses).

The Schedule below provides an indication of the type of and extent/order of facilities envisioned. Again, input received during the participation process may alter such intent.

LAND USE	STANDARD WC:DEADP	TECHNICAL PROVISION BENCHMARK, BASED ON 1000-1500-UNITS
GENERAL LAYOUT AND DESIGN PRINCIPLES	Strive for:	

		<ul style="list-style-type: none"> <li>- A compact/dense settlement – to also rationalize facility size, encourage walkability, lower parking requirements and facilitate accessibility</li> <li>- Space Utilization Efficiency, Multi-functionality and Clustering;</li> <li>- Economies of Scale, Strategic Resource Allocation and achieving maximum impact</li> </ul> <p>Four persons per dwelling unit to be used for calculation in this table.</p>	
RECREATIONAL FACILITIES AND OPEN SPACE	SMALL NEIGHBORHOOD PLAY LOTS/ PARK	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Quality space, may be combined with other uses, central in neighborhoods</li> <li>• 1 per 250 dwelling</li> <li>• Size: 400m<sup>2</sup></li> <li>• 500m -750m walking distance from users</li> <li>• Could do fewer, but better quality (for of safety/maintenance)</li> <li>• Promote multi-functionality</li> </ul>	4-6 Small Parks required (0,24ha max required)
	COMMUNITY/FUNCTIONAL PLAY PARKS	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Serves broader area</li> <li>• Formal and informal recreation</li> <li>• Adjacent to schools or natural areas / multi use areas/ community uses/ agriculture plots</li> <li>• Not as localized as play lots</li> <li>• Serving wider community: accessible</li> <li>• 0,9ha per 250 dwellings</li> <li>• Minimum 1.5ha</li> <li>• 1-3km walking distance</li> <li>• Clustering of uses important</li> </ul>	0,36-0,54ha required
	COMMUNITY SPORTS- FIELD	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• May be formal or informal</li> <li>• Size determined by type of activity</li> <li>• Min size 0,2ha</li> <li>• Not more than 2km away from schools</li> <li>• 1 per 1250 dwelling units</li> </ul>	One required – 0,2ha
	REGIONAL PARKS/ STADIUMS	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Regional Park: Serves region – 1 per 5000units</li> <li>• Within 10km</li> <li>• Greater upkeep requirement</li> </ul>	Not applicable
	CEMETERIES	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Space intensive – not at settlement core</li> </ul>	

		<ul style="list-style-type: none"> <li>• Ideally next to open space/ police stations/ places of public worship, in urban-rural transition area</li> <li>• From 0.8ha for 1250 units</li> <li>• A cemetery is a high-order facility and, as such, generally should only be provided at 1 per 100 000 people along public transport routes</li> <li>• Should not be close to hydrological features, floodplain or sensitive areas</li> </ul>	<p>Approx. 0,8ha space to be provided/available for 1250 units – smaller community facility – if required.</p> <p>Available facilities to be investigated/ requirement to be confirmed</p>
EDUCATIONAL FACILITIES	ECD (Early Childhood Development Centers/Pre-primary school, including Daycare, crèche nursery school, after-care.	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 0,15m<sup>2</sup> per person of the residential population it serves</li> <li>• Min building footprint: 130m<sup>2</sup> to 500m<sup>2</sup> (large ECD)</li> <li>• 1.5m<sup>2</sup> per child (site area)</li> <li>• walking distance 750m (15min)</li> <li>• 1 ECD for every 600 families needed</li> <li>• Preferably on route to school</li> </ul>	<p>Note:</p> <ul style="list-style-type: none"> <li>- acknowledge existing facilities in Kurland</li> <li>- Crèches may be operated from residential premises (with consent, if larger)</li> </ul> <p>Three formal ECD sites may be required (combined 900m<sup>2</sup>)</p>
	PUBLIC PRIMARY SCHOOL	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 1 Primary school per 1000 dwellings, if required by the Education Department</li> <li>• Min size 1.4ha (excluding sports-fields) or 2,8ha if sports-fields included</li> <li>• Walking distance 1.5Km (30min walking)</li> <li>• Linkage to food-garden areas to be encouraged</li> <li>• Preferably on a higher order road, flat area</li> </ul>	<p>Primary school site not required by the Department of Education</p>

	PUBLIC SECONDARY SCHOOL	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 1 Primary school per 1500 dwellings (some schools serve up to 6250 families)</li> <li>• Min size 2,6ha, if not shared and 3ha if includes sports-fields</li> <li>• Walking distance 1.5Km (30min walking)</li> <li>• Linkage to food-garden areas to be encouraged</li> <li>• Preferably on a higher order road</li> </ul>	1 Secondary school site required by the Department of Education
	TERTIARY FACILITIES	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>- Generally speaking, tertiary education facilities are regional facilities, serving the population far beyond its immediate surrounds</li> <li>- The site size needs to be determined by the size of facility to be provided, which should be benchmarked against the site size of similar educational facilities</li> <li>- Minimum threshold = 37500- 250 000 families, depending on the type of facility</li> </ul>	Best suited in larger urban centers – no requirement on the specific site for such regional facility
HEALTH & WELFARE FACILITIES	MOBILE CLINIC	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 1 per 1250 units</li> <li>• The mobile clinic should be placed in a central/accessible location to capture the majority of surrounding potential users and generally within walking distance</li> <li>• The ideal location for a mobile clinic may be a centrally located local park, community centre, or government facility precinct – if it should exist</li> <li>• The mobile clinic should appear in the same place, generally at the same times and in a predictable manner</li> <li>• Sheltered waiting areas and ablutions preferable</li> <li>• walking distance 1Km</li> <li>• preferably at cluster of community facilities/uses</li> </ul>	<p>Reach and capacity of existing clinic to be confirmed</p> <p>Space to be identified for possible mobile clinic</p>
	COMMUNITY HEALTH- LOCAL PUBLIC CLINIC	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 1 per 5000 dwellings in rural areas</li> <li>• Close to public transport routes, away from environmentally sensitive areas</li> <li>• Size depends on population served:  0,125ha per 5000 people</li> </ul>	Capacity of existing Kurland clinic to be confirmed

		<p>0,25ha per 10000 people</p> <p>0,5ha per 20000 people</p> <p>1ha for 40 000 people</p> <ul style="list-style-type: none"> <li>Walking distance 2-5Km or on public transport route</li> </ul>	Community too small to warrant an additional facility – to be confirmed
	PUBLIC HOSPITALS (SECONDARY FACILITIES)	<p><b>WCD EA&amp;DP</b></p> <ul style="list-style-type: none"> <li>Regional / District Facility</li> <li>Close to highway</li> <li>1 per 112 500 dwellings</li> </ul>	Regional – See Spatial Development Framework
	PUBLIC HOMES FOR THE AGED	<p><b>WCD EA&amp;DP</b></p> <ul style="list-style-type: none"> <li>1 per 16 250 dwellings</li> <li>Examples 0,3-2.2ha</li> <li>Based on need (as per the Department of Social Development) and policy of governing authority re home based care</li> <li>Close to public health care facilities and other amenities, public transport</li> </ul>	Regional – See Spatial Development Framework
	CHILDRENS HOMES	<p><b>WCD EA&amp;DP</b></p> <ul style="list-style-type: none"> <li>Need based on demand</li> <li>Generally: 1 per 10-15 000 dwellings</li> <li>Near to schools/community facilities</li> <li>30min walk to primary school</li> <li>Size 2ha, or smaller if clustered with other support uses</li> </ul>	<p>Refer to Socio-Economic study</p> <p>Note that Places of Safety may house children in residential homes, with the required permits.</p>
	LIBRARIES	<p><b>WCD EA&amp;DP</b></p> <ul style="list-style-type: none"> <li>1 per 2500 dwellings</li> <li>Clustered with other community facilities</li> <li>0.1 to 0.2 ha</li> <li>walking distance 4-5Km</li> <li>Mobile libraries may be considered</li> </ul>	Library (extent and reach) in Kurland to be confirmed
	PLACES OF WORSHIP	<p><b>WCD EA&amp;DP</b></p> <ul style="list-style-type: none"> <li>Placed within walking distance of its users, and be located along main roads of a neighborhood</li> <li>1 per 500 dwellings (depending on religious diversity)</li> <li>From 150m<sup>2</sup> to 0,3ha</li> </ul>	2-3 sites to be provided

PUBLIC SERVICE FACILITIES		<ul style="list-style-type: none"> <li>• Within 1.5km walking distance</li> </ul>	
	COMMUNITY CENTRES/HALLS	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Central to overall community, combined with other uses such as libraries, clinics, etc.</li> <li>• 1 per 2500 dwellings</li> <li>• Walking distance 500m (15min walk) to 2.5km</li> <li>• 5min walk from public transport point</li> </ul>	Existing Kurland Community Hall provided
	MAGISTRATES COURT	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Regional Facility – one per magistrates district</li> </ul>	Magistrates court situated along N2 in New Horizons
	HIGH COURT	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Regional Facility</li> <li>• 1 per 50 000 families (minimum)</li> <li>• In major urban nodes</li> </ul>	Not applicable
	MUNICIPAL OFFICE	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Central – in urban node</li> <li>• Minimum population: 50 000 (12500 units)</li> <li>• Min size: 3 000 m<sup>2</sup>, depending on clustering of uses</li> <li>• 2km walking distance or on public transport route</li> </ul>	Main municipal office not required – regional function  Municipal pay-point/general multi use space may be considered
	POST OFFICE	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• 1 per 2500 units</li> <li>• Min size 100 m<sup>2</sup></li> <li>• walking distance 1.2km/public transport</li> <li>• Could be space in shopping facility</li> <li>• Can be clustered with municipal uses</li> </ul>	Space provision/allocation in greater community area to be confirmed by PO
	POLICE STATION	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Central in regions they serve</li> <li>1 per 6250 units in a rural setting</li> <li>• Min size: 0.1-1ha</li> </ul>	Regional Function  Extent and reach of the Craggs Police

		<ul style="list-style-type: none"> <li>• Within 4-8km, within developed (settlement) areas. Not always possible in a rural context</li> <li>• Satellite facilities may be considered by SAPS</li> </ul>	Station to be confirmed
	FIRE STATIONS	<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• On higher order road – central and/or close to risk areas</li> <li>• Allowing for 8-13min response time (23min in rural areas)</li> </ul> <p>1 per 15 000 units</p> <ul style="list-style-type: none"> <li>• Min size: 1.2ha</li> <li>• Not directly adjacent to residential areas (noise /24hour factor)</li> <li>• Not in highly congested areas</li> </ul>	Extent and reach of existing fire service to be investigated.
WASTE MANAGEMENT FACILITIES		<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Regional Municipal Facility – from 90ha</li> <li>• Should not be within or adjacent to sensitive ecological areas, heritage areas or water catchment areas or steep areas</li> <li>• The Minimum Requirements for Waste Disposal at Landfill, 2nd Edition (Department of Water Affairs and Forestry, 1998) provides a comprehensive set of locational criteria.</li> </ul>	Regional facility not required,  Waste transfer site/ recycling initiatives may be investigated.
WASTE WATER TREATMENT FACILITY		<b>WCD EA&amp;DP</b> <ul style="list-style-type: none"> <li>• Technical requirements determine size</li> <li>• There are no accessibility, distance and site spacing criteria for a wastewater treatment facility, however, cognizance must be taken of the National Water Act, 1998 (Act No. 36 of 1998) requirements, where the treatment facility should be located 100m away from a watercourse.</li> <li>• The site must not be proximally windward of any residential area or a buffer area may be required</li> <li>• Sewage Treatment Facilities must cater for the size of the population and anticipated future growth; average dry weather flow, wet weather flow and storm water ingress.</li> <li>• DWAF effluent standards apply</li> <li>• All wastewater treatment facilities must cater for the volume of effluent produced.</li> </ul>	Technical determination of existing facility's capacity and upgrading requirement to be done.

In summary, **the land use intent**, as reflected in the environmental assessment process, should consider an **integrated housing project, including houses of various typologies** (based on a maximum 1500 units, to be

accommodated in phases to be implemented over time), **infrastructure** and the following standard/required provision **support facilities** (if required, on total site area) (also see Par 9.4 i.r.o community facility provision in the Draft 1 Layout):

- Internal active/passive open space (not conservation areas); neighbourhood- and community parks (at least seven sites);
- Community sports fields (at least one site);
- Three Crèche sites (minimum requirement);
- One School site;
- Two community facility/mixed use node areas (to accommodate supportive uses, job creation uses, retail, market, mobile services (library/clinic); post boxes, etc.);
- Two or three church/religious sites;
- Areas of small business;
- Open spaces suitable for job creation projects;
- Conservation areas

Opportunity for comment of the placement of these intended facilities, other uses and residential layout design will be provided in the planning participation process (Also see par 9.4).

### 9.3 DESIGN OPTIONS

In addition to the design considerations noted in the preceding paragraphs, design alternatives were considered (April 2020 to June 2021) in respect to:

- Activity spines and nodes – additional/alternative considerations

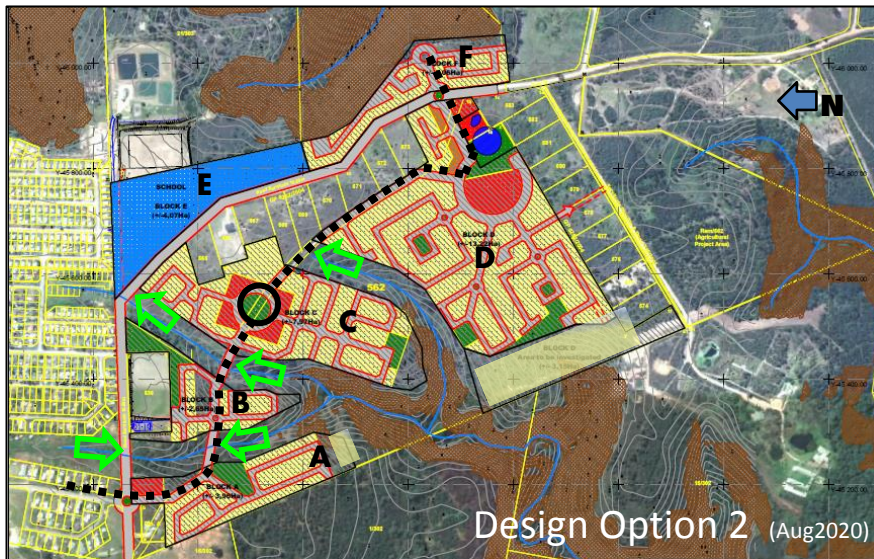
Forrest Hall Road and an on-site dirt road (old servitude) traverse the site. Both these access ways have existing crossings over the low-lying site features.

In Design Option 2 (see sketch below), the existing, internal dirt road was proposed as the activity spine road, (■■■■■) which links activity (social and commercial uses) in Blocks A, B, C and D, crossing over three 'green fingers' and forming a link with Forrest Hall Road, starting (north) at the intersection of Aandblom Street and the latter mentioned road. This possible internal spine thus links from the north—west of the project area to the south-east, where it intersects with Forrest Hall Road between existing erven 573 and 583. Note that Forrest Hall Road is retained, in this Design Option, in the current position, albeit within proposed urban fabric. The main node (community facilities and retail) sits within the proposed development area (Block D) and a secondary node internal to Block C (mostly community facilities). The possibility of an internal access link south is also indicated.

Initial comments received note:

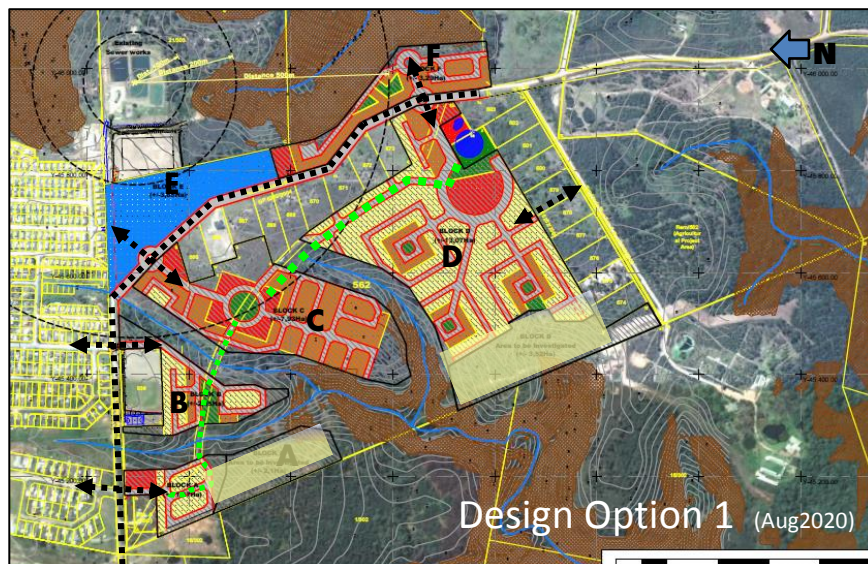
- The many (6) gully/steep/environmental "green finger" road crossings will be costly and is not supported from an impact perspective;
- The internal nodes fosters a sense of place, but potential businesses will not the benefit from the passing traffic, affecting their viability.
- The linkage of a strong internal spine to link with Aandblom Street may cause congestion at the entrance to the new extension, close to the turn of Forrest Hall Road from the north to below the existing Kurland.
- The duplication of collector roads is not technically necessary and will not be cost-effective.





Design Option 1 (below) shows that the internal dirt road is retained, albeit in a slightly amended position (not directly adjacent to existing Erven 570-573) and not as a main vehicular spine. The existing bridge crossings will be kept for pedestrian purposes as part of a pedestrian/cycle network, whilst vehicle access will be along Forrest Hall road to the five residential neighborhood cells.

The latter option will facilitate the upgrading of Forrest Hall road, lessen the number of road bridge crossings and reduce the affect that through traffic will have on quiet neighborhood cells. Business use will be retained, within this Design Option, in the nodes in Blocks D (main) and Block C (secondary node). Commercial/business opportunity will, however, be extended to Forrest Hall road, although access to these non-residential stands could be off internal roads.

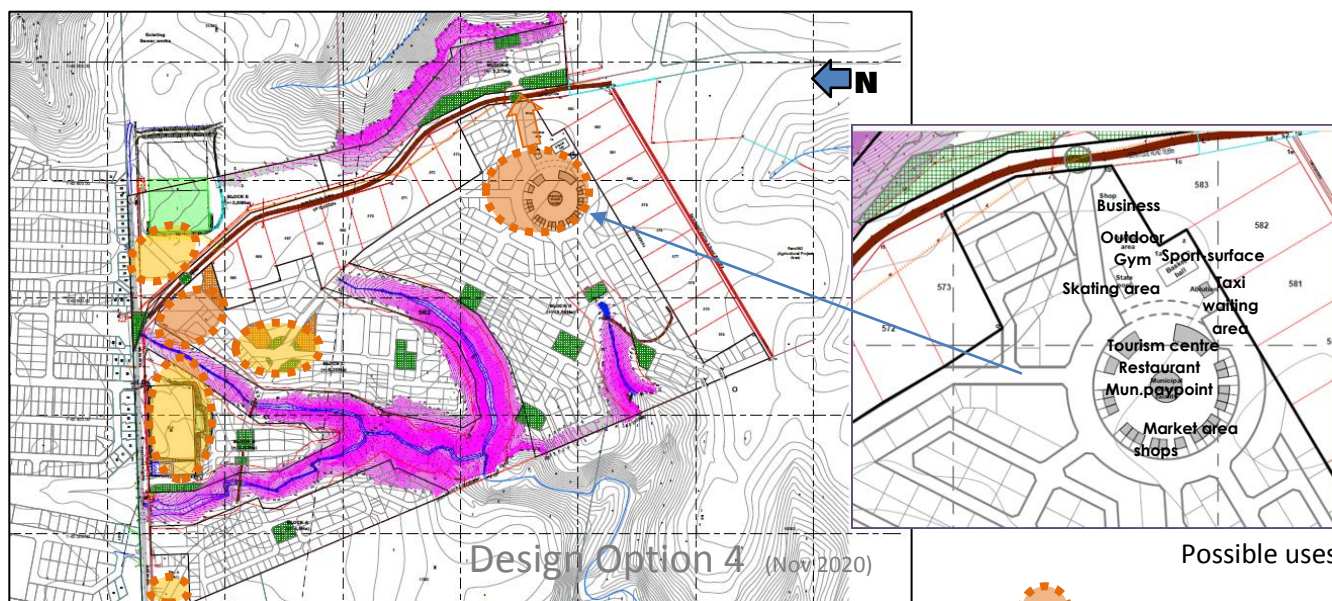


Note was taken of the embankment adjacent to the sports-field (Erf 536) which hindered the extension of Stinkhout Street. An extension of the sportsgrounds area was also requested. The formalization of the existing access road, within the layout, towards the fire station and municipal services area was also required during consultation.





Design Options 1, 2 and 3 show internal community 'village commons' in Blocks C (secondary) and D(main), with limited business/community uses extending from such community nodes to the Forrest Hall Spine.

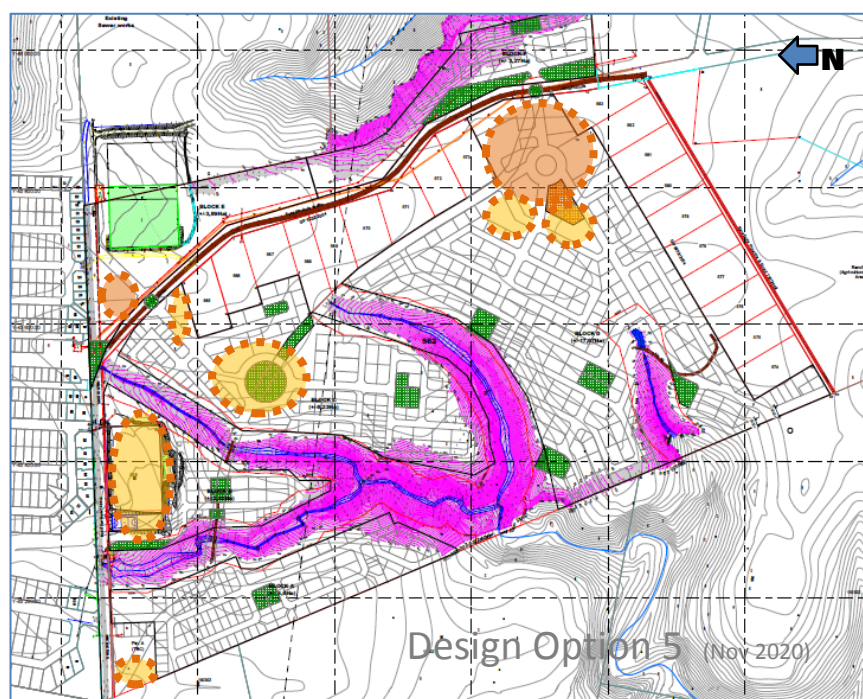
Design Options 4 and 5 were put forward after the incorporation of the detailed survey (slope analysis, infrastructure on site) was done, additional technical comments were received and some community input was included. The re-orientation of blocks to allow for linked/row housing units (aligned along contours) resulted in a significant change in the residential block layout. Active parks were re-positioned to assist with storm-water attenuation (if required) and to provide lines of site into green spaces, specifically along neighborhood collector roads.



Possible uses

-  Retail/mixed use area
-  Social/community uses:

Design Option 4 shows a range of business and community facility (Church/crèche/municipal/other) uses along Forrest Hall Road, with five relatively large areas allocated for commercial use, whilst Option 5 shows a strong southern commercial node on Forrest Hall Road with social uses along the east-west section of Forrest Hall and in internal nodes.



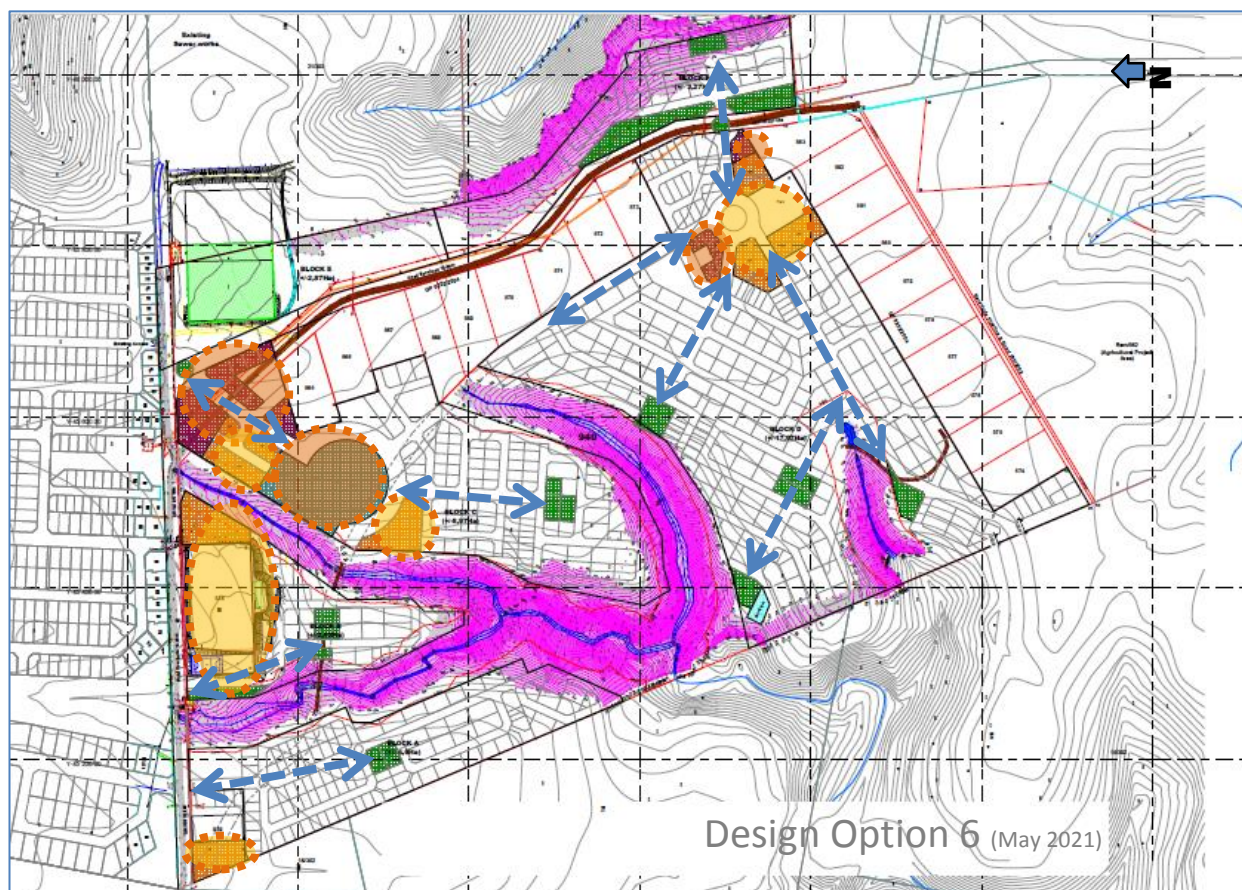
The most prominent comments on design concepts 5 and 6 were that the main community node should be located more towards the north so that it may also serve the existing Kurland community, the design should provide more diverse retail options, such as business rental and a variety of business site sizes and the sustainability of businesses



would be enhanced if located closer to Forrest Hall road than to the internal local access road.

#### Activity Spines and Nodes: Design Option 6:

- The main 'village common' and retail area were moved northward, now located in Block C, with business areas also provided at a secondary node in Block D
- A range of business sites/options are provided for, including the option for providing rental space/markets in a coordinated "village common" precinct, to include a variety of community related uses in combination to the retail possibilities.
- More detailed road alignment input was received , resulting in a repositioning of the intersection, where Forrest Hall Road turns from an east-west – to a south-north direction



- The internal access way which links the main 'village common' to the secondary node in Block D and also the central areas of Blocks A and B to the main nodal area is retained, albeit not as a through road, but as a pedestrian/cycle route (also emergency/additional access);
- The internal link road position is directly adjacent to the row of private erven to facilitate access and possible future development access (in the final design a road was included along the boundary of the proposed development and external Erven 574-581);
- An amended Forrest Hall road design was done to encourage the slowing of traffic, whilst facilitating through traffic. Access to business premises will be off internal/secondary roads and intersections will be designed to use traffic circles. The access to Block C was re-located to accommodate the engineering design, aimed at placing the traffic circle in a position to facilitate all existing roads which intersect near this point and to better sight distances to such intersection.
- The layout of the business area adjacent to the 'Village common' in Design option 6, and in the secondary node, is done in such a way that vehicular access from Forrest Hall road will not be required. Measures to

ensure that unsightly backyards of small/medium business premises do not have a negative visual impact on travelers along Forrest Hall Road, must be incorporated in development conditions so that the economic benefit of the road fronting businesses is not negated;

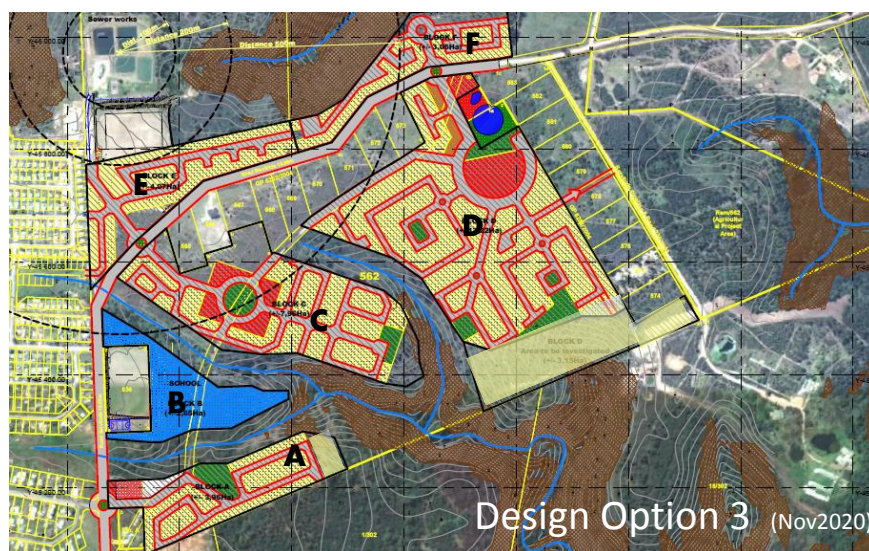
- Placement of supportive facilities – additional/alternative considerations

The alternative placements of social facility and commercial/retails nodes are discussed in the previous section.

The main 'Village common' area is large enough to accommodate a variety of social/health/recreation/activity park/informal and formal retail activities. A local precinct plan can integrate viable municipal/LED land use sector functions, with input from the community.

Church sites purchased/rented by different religious denominations draw members of such congregations from the larger area, rather than from just the adjacent residential fabric. Hence church sites were placed at accessible positions, either along main roads or in the main community nodal areas, to discourage the movement of non-residents through the neighborhood cells.

The Kurland/New Horizon Sports field area was enlarged to accommodate existing infrastructure which encroached onto the project site and also to allow for parking and better access.



Various options were discussed in the possible placement of a school site. The first option related to the placement of a school site, outside the development boundary, along Forest Hall Road, to the south west of the existing Kurland Village. The positive aspect to such placement was that there is larger, undeveloped space available on an even gradient. Two main aspects negated this option: The area is privately owned and walking distances from the main residential component (Block D) is further than in other position options.

The placement of a site to possibly accommodate an educational facility (School) in Block B was investigated. See Design Option 3. This location was proposed based on the central position and the possible incorporation of the existing fields in the use/maintenance/management of an educational facility. After discussions this position was discarded because the gradient and the size of the site was too limited, should the school be fenced, the access way (pedestrians/cycles) which links all blocks will be cut off, road access from the existing Kurland is problematic, given the position of the fenced sports fields.- amongst other factors. The school site, proposed in Block E (See specifically Design Option 6) was deemed more viable:

- The site in Block E can be accessed from the existing Kurland without crossing Forrest Hall Road;

- Crossing of Forrest Hall Road from the project site can be managed at two controlled/designed intersection point, with a possible walkway, off the Forrest Hall Road reserve, if required, from the entrance to block D to the school site;
- The site area is large enough and has extension possibilities, should the municipality be required and willing to make a section of Ptn 21/303 available;
- This position will enable compatible uses (food gardens/training areas/nature education facilities/LED, etc.) to be established on municipal land, if required.

- Housing density and typology - options

The guiding principles for all development, as contained in SPLUMA, advocate the effective use of the available areas. Higher density not only relate to efficient use of land and services but also translate to more viable/sustainable social- and commercial land use. At an individual residential stand size (200m<sup>2</sup> average), approximately 500units may be accommodated on the available area, which implies that additional land for housing development needs to be identified and that the provision of supportive facilities needs to be duplicated in such area.

The housing typologies as noted in Par9.1 apply. Comments regarding the requirement to include FLISP (Finance linked subsidy) erven were received. In the absence of final figures regarding the number of families qualifying for such funding, a provisional area to accommodate 8% of the planned erven have been identified at the entrance to Blocks A and D. Erf sizes area an average of 180m<sup>2</sup>average size. Should more FLISP erven be required, the final layout will be updated to incorporate such requirement (individual erven, rather than linked-units). Note that the general/road layout will be affected. As noted the layout may accommodate the following housing options:

- Individual houses (double or single storey)
- Semi-detached single or double storey houses
- Single and double storey row (linked) houses
- Rental units

The block design (standard 18m deep blocks) allows for easy change to placement of different typology divisions. The draft 1 layout will be scrutinized by an architect to ensure optimal visual and practical unit placement, prior to the finalization of such plan.

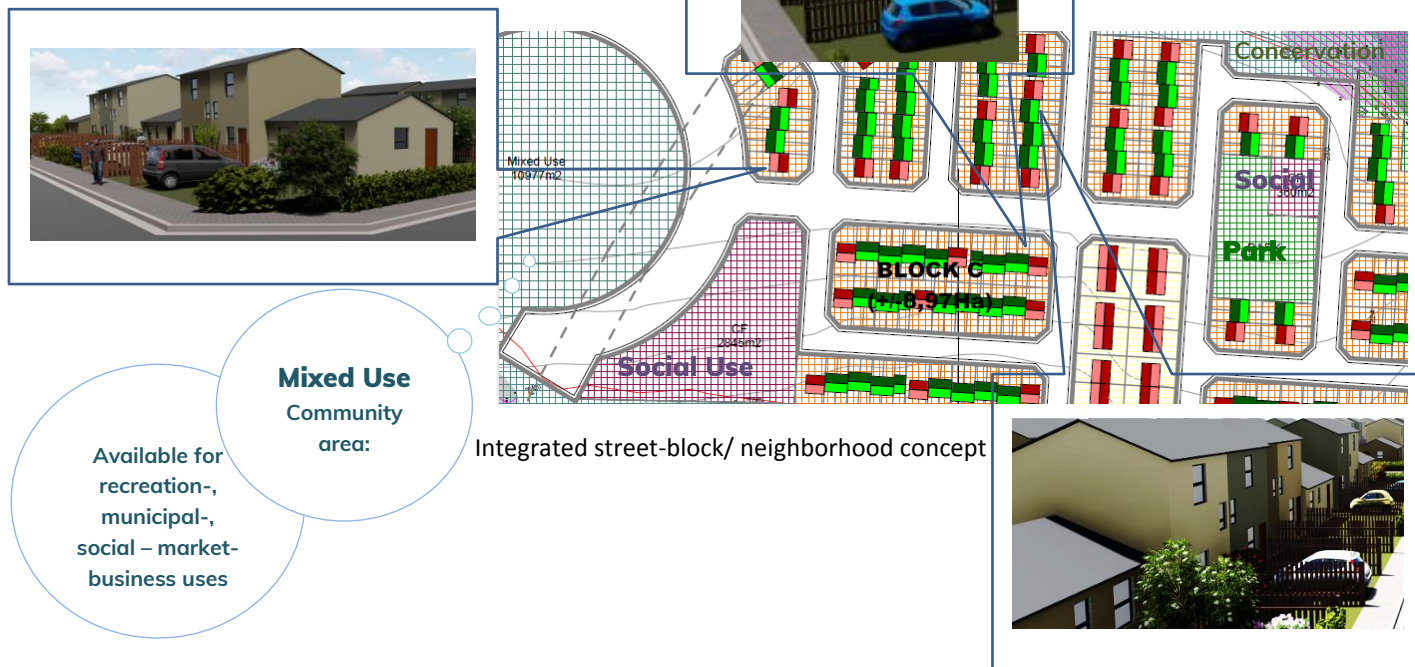
- Other design/layout considerations:

With respect to integration with adjacent areas, the majority of roads from the existing Kurland area were extended into the new development area. The design options do, however, not support extension of the residential component to the south, east or west. The intent is to address the historic backlog and future demand in one contained, phased project. Nonetheless, from a fire-safety perspective, internal road layout in Blocks A and D (See Option 6) were amended to allow access to the adjacent areas.

Design options 1 to 3 were presented for discussion in Nov 2020. At that stage the designers had queries regarding the status of the treed area along the western project area boundary. It was confirmed that the relevant area is not deemed an indigenous forest area. The areas that are suitable for development use, based on the gradient analysis and the environmental buffer delineation and subsequent specialist input, were incorporated in the development layout/use of blocks A and D.

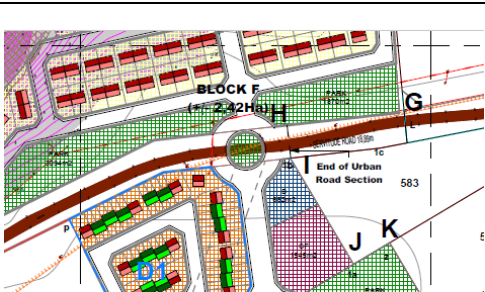


## 9.4 DRAFT 1 LAYOUT PLAN



The Draft1 Layout of Kurland Erf 940 is attached. Note that such plan is a synthesis of technical base information and comments received in respect of the various the Design Concepts. The Draft 1 Layout represents the land use proposal which will be circulated and presented for further comment (official and I&AP's/the public) and may thus change during the layout plan finalization process.

In essence the Draft 1 layout plan includes six neighborhoods/sections (Blocks A-F), which form part of an over-all development extension, integrated/linked on an external and internal level and includes, at this stage, the following uses:



The site plan for Block F shows a residential development. It includes a road section, a green space, and a community facility. The plan is divided into several areas, each with a different color and pattern. The areas are labeled with letters A through K. The plan also shows the location of a school and a community facility. The plan is a detailed drawing of the proposed development, showing the layout of the roads, the locations of the buildings, and the green spaces. The plan is a technical drawing, and it is used to show the proposed development to the public and to the planning authorities. The plan is a key part of the planning process, and it is used to make decisions about the proposed development. The plan is a detailed drawing of the proposed development, showing the layout of the roads, the locations of the buildings, and the green spaces. The plan is a technical drawing, and it is used to show the proposed development to the public and to the planning authorities. The plan is a key part of the planning process, and it is used to make decisions about the proposed development.

Proposed Land Use	No of Erven	Area (ha)
Row Housing	1339	12,03
Semi- detached housing	28	0,4
Single residential (average 180m <sup>2</sup> )	125	2,56
High density housing (flats; 11units)	1	0,22
School	1	3,36
Community Facility	13	2,61
Mixed use (retail/tourism/business/recreation/ municipal/community facility/ utilities)	1	1,98

	Business	17	0,86
	Parking/market	3	0,35
	Active Parks	11	1,94
	Conservation	2	11,56
	Municipal	1	0,12
	Roads		

## 10. THE WAY FORWARD: PLANNING APPLICATIONS

The detailed subdivision of the erven, and allocation of proposed zoning rights, based on the principles noted in this report, will form part of a formal town planning application. Input will be received via the technical project team, the consulted authorities, as result of the EIA participation process. Such feedback will be considered in deriving a final layout plan.

Planning applications required for the development, in terms of Section 36 of LUPA and Section 17 and 20 of the Bitou Land Use Planning Bylaw, will then be submitted by applying for the following:

- Subdivision and rezoning of the land portions in the subdivisational area into residential and non-residential erven and a remainder as indicated on the subdivisational plan.

Opportunity will be provided to all (authorities, residents, interested parties) to comment on the layout and land use (zoning) proposal and supportive studies/document sets.

Only after environmental authorization is granted may project implementation commence.

## 11. CONCLUSION

The site is deemed to be well situated to provide in the need for housing in the Kurland area. Various layout options were considered (nodal positions, access- and activity spines, densities, housing typologies, alternative positions of social/commercial/educational facilities) and combined to form a Draft Layout Plan. The proposed land use and draft layout for the project complies with the SPLUMA principles and will create a well-balanced neighborhoods that will provide in the housing needs of the area, in a phased, coordinated manner.

The Environmental Assessment process is to reflect the possible use of the site as an **integrated housing project, including houses of various typologies** (based on a maximum 1500 units), **infrastructure**, with a variety of **support facilities**.

W M de Kock Pr Pln, A/111/85  
June 2021

L. Groenewald Pr Pln A/2362/2016