

farm

live

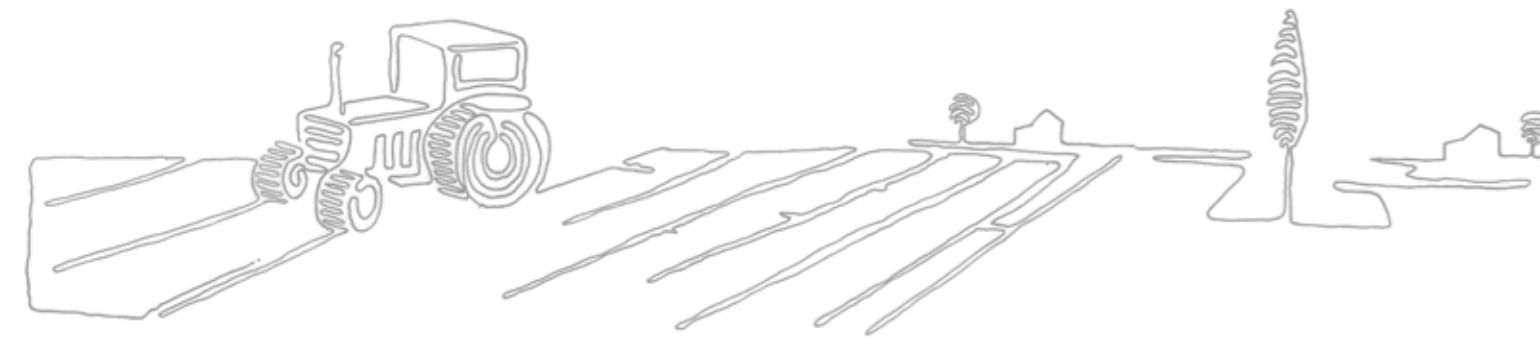
play

compendium




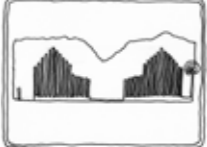




01

Verkykerskop

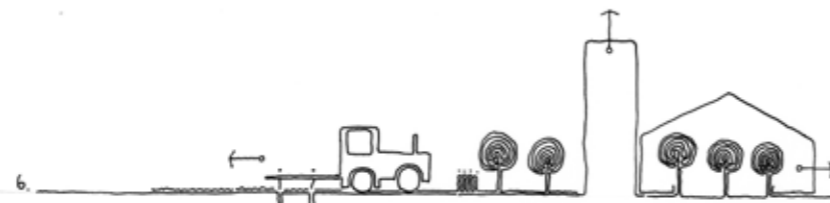
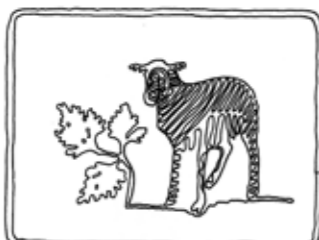
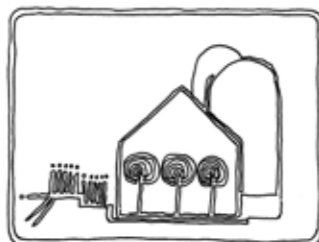
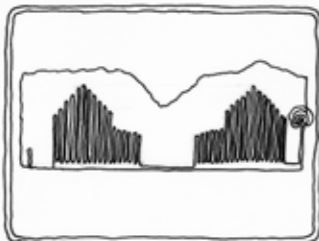
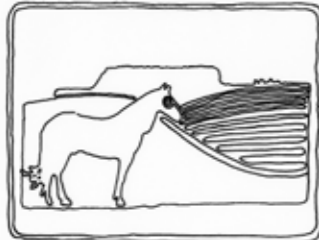
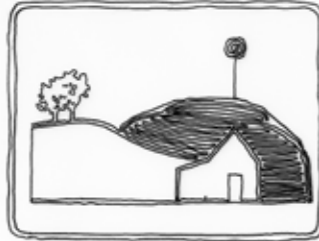
- "where we farm, play and live free"
- green living compendium
- authored by GWA Studio & Chris Chameleon



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VERKYKERSKOP GREEN LIVING PHILOSOPHY

The concept of sustainable or 'Green' living is receiving ever increasing attention. The impact of human industry upon the planet's ecosystems and weather patterns, and ultimately on humans themselves, has soared to levels never before anticipated and with consequences never foreseen.

Whereas most of us agree that we are adversely affecting the very health of the planet, we are slow to implement the actions that halt, ameliorate and eventually reverse this damage. The reason for this sluggish response is simple: It's just too much trouble!

Living 'Green' seems like a lot of trouble. It seems to involve constant sacrifice of the luxuries we have become accustomed to and we fear that it requires a new, frugal lifestyle that resembles that of a hermit from the dark middle ages, rather than that of a dynamic 21st century global citizen.

Smart people are beginning to understand that this holds no truth. The Verkykerskop Development Consortium chose to join the worldwide movement of people putting their money where their mouths are, and in South Africa at least, signals the dawn of a new era in Green Living.

Combining the age old practical wisdom of nature understood by our ancestors who lived off the veld in this area, with the genius of modern science's finest technology as reflected in the style and finishing of urban designers Gary White, Verkykerskop Country Village defines its own unique brand of Green Living and sets the standards which will open the way for others to follow. The holistic approach of the Verkykerskop developers and their professional team enables our villagers to farm, play and live free and in harmony with nature in this beautiful environment.

In this compendium you'll find details concerning all aspects of this exciting development, including opportunities for home food production and participation in estate farming, water and waste management systems, recreational facilities and the outdoors, the living opportunities we create, and options for integrated building systems.

The time for talking and dreaming is over and the time for action and reward is now a reality with the Verkykerskop Development. My choice a few years ago to invest in this area and make it my home is turning out all for the better, and I feel myself privileged to be an investor in the Verkykerskop Plaasdrorp development. Should our living philosophy appeal to you, you are welcomed to visit our village and if you like it (which you would), become part of our warm farming community.

Chris Chameleon, Proudly South African - Proudly Verkykerskopper



- Planet's ecosystems
- Health of the planet
- Smart people
- Urban designers
- Villages to farm, play and live free
- Home food production
- Water and waste management
- Integrated building systems

green living philosophy

Philosophy

03



A BIT OF BACKGROUND

Already in 2000 a few Johannesburg friends started to invest in the Verkykerskop area. Currently, Matt Hoffman, Beth Hillary, and Chris Chameleon are the owner-members of Verkykerskop Tourism cc which inter alia owns most of the land in Verkykerskop Village. In 2004 Matt introduced Louis Grobler to the unique potential installed in the village and its surrounds, who immediately persuaded some friends to join in and acquire the land surrounding the village. Verkykerskop Nedersetting Ontwikkeling (Edms) Bpk was established as development vehicle, with Louis, Kobus Coetsee, Alf Raspi and Joe Vogel as shareholders.

For the purposes of forming a joint vision and a single application for the development of the village and surrounding land, a developers consortium was formed between Verkykerskop Tourism, Verkykerskop Nedesetting Ontwikkeling and the Verkykerskop Boerevereniging. A consortium agreement was signed in 2005. In addition to the village itself an area of 850 hectares of farmland surrounding it is included in the development master plan.

After receiving a mandate from the Phumelela Local Municipality in respect of the future planning of the Verkykerskop Area in 2006, LMV Town Planners and Engineers together with the municipality formed a Project Steering Committee involving a broad range of stakeholders including the consortium and its professional team, and other spheres of government.

The planning work and public participation over three years culminated in the approval of the Verkykerskop Micro Spatial Development Framework in 2009. Engineering, architectural and layout planning have been done in detail, with only the concluding stage being addressed currently, namely Environmental Authorization together with submission and approval of the Township Layout Plans.

With the golden thread being our proud "Green Living" philosophy and our motto of "farm, play and live free", this compendium seeks to portray the developer's vision, the various living concepts that we incorporate, important development details, and the progress status of the development. Despite all the required statutory documentation that are available, we felt it necessary to provide an overview of the Verkykerskop Development in one brief compendium. We hope this document will be of use to statutory decision makers, prospective investors, and the public at large.

We wish to thank you for your interest taken and we hope you enjoy the read

Dr Louis Grobler

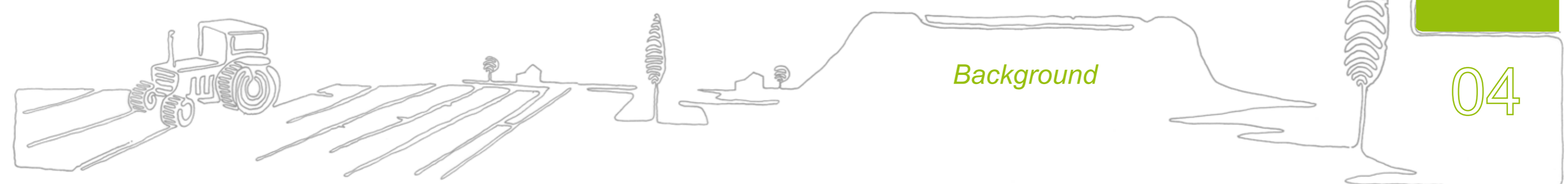


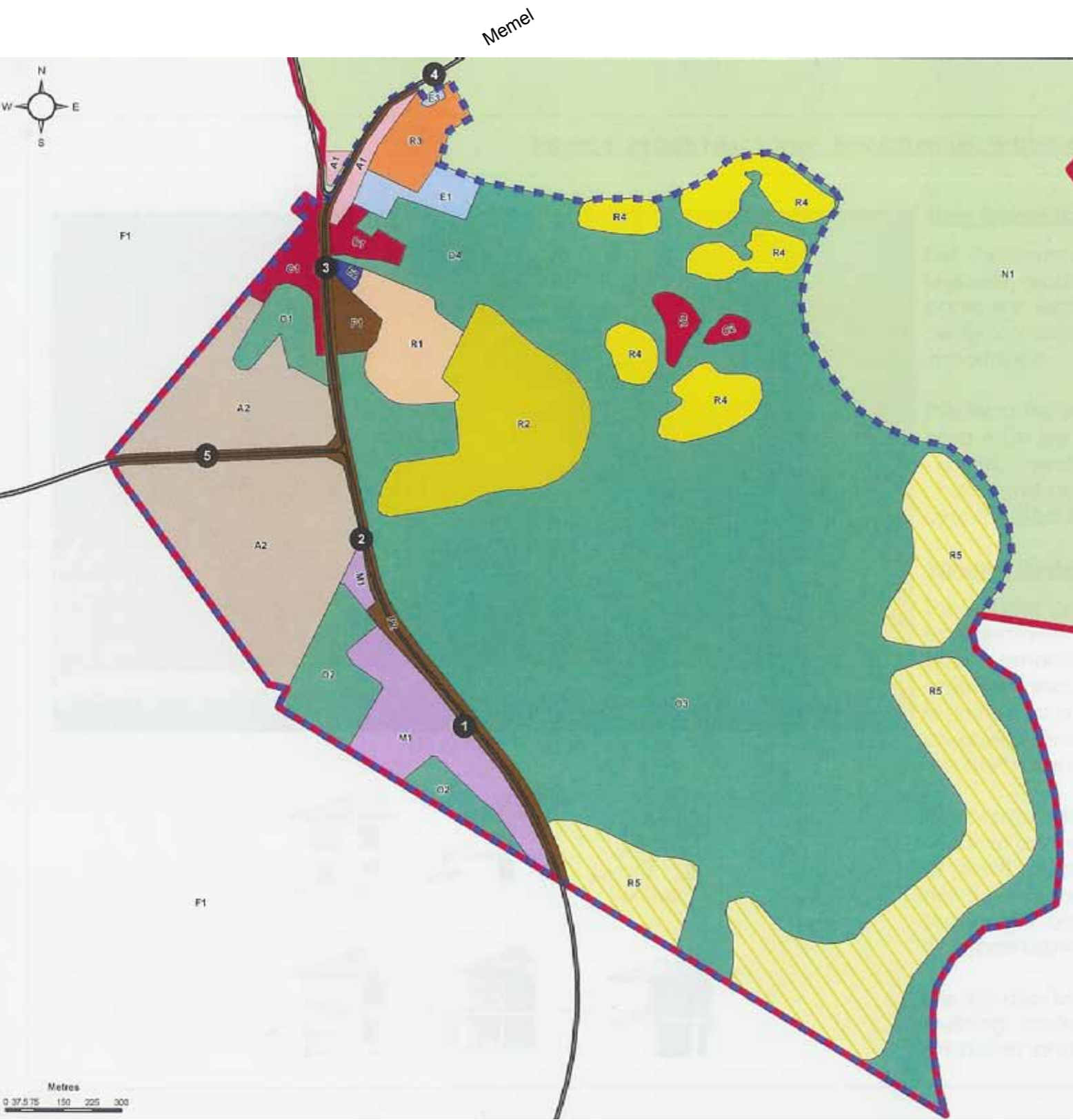
- Verkykerskop Tourism cc
- Village and its surrounds
- Verkykerskop Nedersetting Ontwikkeling (Edms) Bpk was established as development vehicle
- "farm, play and live free"

background

Background

04





Proposed micro SDF 2008/2009

P1/C1/E2: The existing focal point (general dealer and associated buildings) and Ufsluit Guest House should be retained as the foremost commercial node, also known as village commons.

The location is further ideal from a topographical perspective since it is located "on a saddle" between two prominent valleys.

From a regional perspective, the village commons will be located adjacent to a road junction of prominent rural roads.

Existing formal commercial activities should thus be extended with great care in an attempt to enhance village commons.

On the west side of the road, proper facilities have already been established (in the form of a square surrounded by historical buildings).

Provision of a pertinent focus on the east side of the main road could further strengthen the village commons (P1).

The village commons serves as gateway to the community and as a focus for its social and commercial activity.

Providing paving and suitable street furniture could ensure a strong focal point, typical of the "market square" concept with some commercial and institutional land uses.

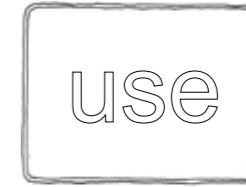
Verkykerskop, at present, functions as service centre to the surrounding rural communities, which should continue un-prohibited.

A greater emphasis could, however, also be placed on attracting "art and cultural" investors, further enhancing the tourism potential of the village.

Proper importance could also be given to the extensive cultural and historical heritage of the area by supplementing the village commons with facilities such as a museum and/or an interpretation centre.

Pending specific needs in the long term, the Afsluit Guest House could be converted into a school.

LMV Consulting Engineers / Urban Planners / Environmental Specialists



• Mixed use



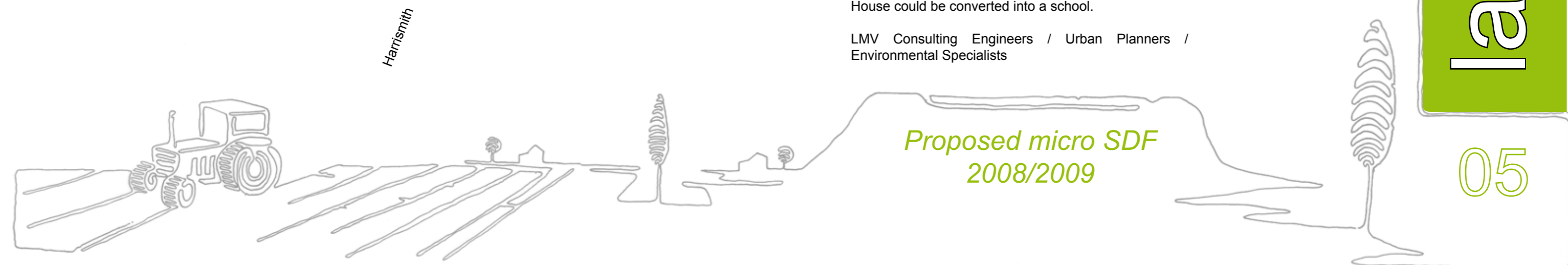
Orientation plan

- Study area boundary
- Urban fringe
- Road
- Access node

Future Land Use

- Agri-commercial
- Agri-residential (low)
- Chapel
- Commercial
- Commercial (Hotel)
- Community Facility
- Conservation
- Manufacturing
- Private open space
- Residential (150m²-600m² range erven)
- Residential (±300m² erven)
- Residential (600m²-1500m² range erven)
- Residential (300m²-500m² range erven)
- Residential (0.5ha-1ha range erven)
- Roads, streets and parking

*Proposed micro SDF
2008/2009*





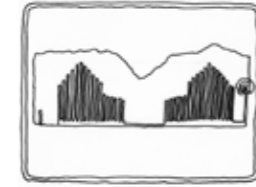
Proposed mixed land use

Successful communities require a full range of local services and facilities, including agri-commercial, commercial, health, spiritual, manufacturing, conservation and civic use. These need to be conveniently sited and connected to residential areas by safe and comfortable walking routes. A successful and sustainable village is a product of the distances people have to walk to access daily facilities, the presence of a sufficient range of such facilities to support their needs, and places and spaces where a variety of activities can take place.

Verkykerskop will develop around centers of activity with the incremental growth of housing, commercial, community and employment uses around the original core. Yet despite the virtues of this mixed use development, in contemporary development it often remains the exception, rather than the rule.

The benefits if mixed development in Verkykerskop include:

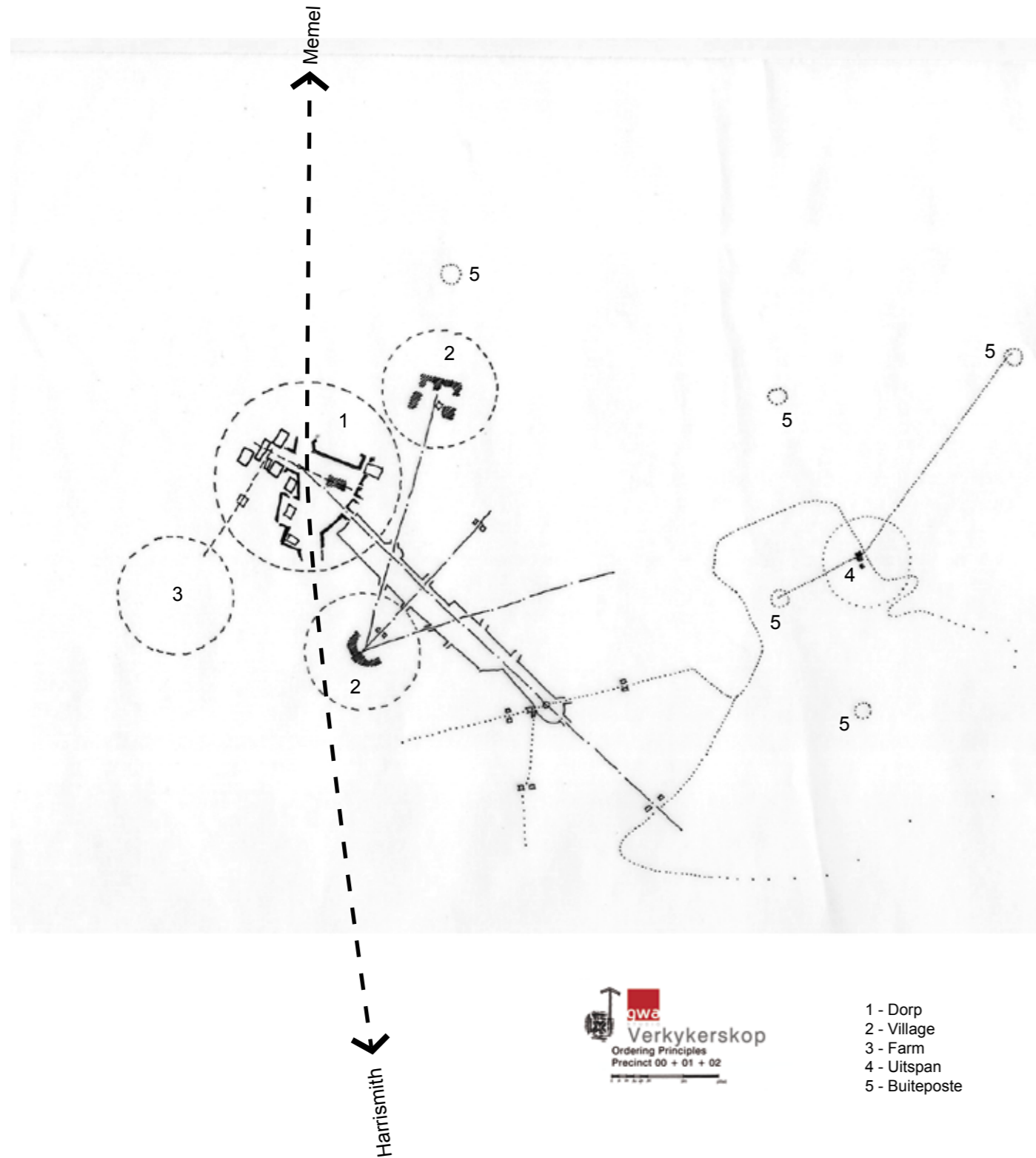
1. Vehicle travel and work congestion is eliminated
2. Greater opportunities for social interaction
3. Socially diverse communities
4. Greater feeling of safety, with eyes on the street
5. Urban vitality and street life
6. Greater energy efficiency and more efficient use of space and buildings.



- Mixed use
- Distances people have to walk
- Facilities to support their needs
- Incremental growth



Orientation plan



Axis

“The axis is perhaps the most elementary means of organizing forms and spaces in architecture and urban design. It is a line established by two points in space and about which forms and spaces can be arranged in a regular or irregular manner. Although imaginary and not visible, an axis is a powerful, dominant, regulating device. Although it implies symmetry, it demands balances. The specific disposition of elements about an axis will determine whether the visual forces of an axial organization is subtle or overpowering, loosely structured or formal, picturesque or monotonous.” d.k. ching

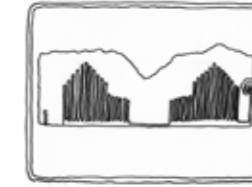
Since an axis is essentially a linear condition, it has qualities of length and direction, and induces movement and views along its path. This movement framework, in Verkykerskop therefore allows pedestrians with or without horses to wonder freely, between places of importance, and still enjoy prominent views towards the Free State landscape.

Prominent places include:

1. Dorp – walk able center with highest concentration of activities
2. Village – walk able neighborhood with horse related activities
3. Farm – walk able neighborhood with agricultural related activities
4. “Uitspan” – traditional farm buildings converted to boutique hotel with cottages
5. “Buiteposte” – secluded places for weekend living

This successful movement framework:

1. Provides maximum choice for how people will make their journeys
2. Takes full account of the kinds of movement a development will generate
3. Makes clear connections to existing places, routes and proposed routes



- Organizing forms and spaces
- Regulating device
- Length and direction
- Induces movement
- Views along its path
- Wonder freely



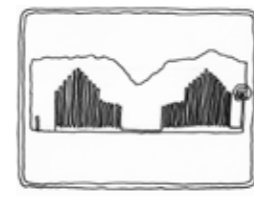
Orientation plan

ordering principles

Axis



ordering principles



- Patterns or arrangement
- Interrelationship between elements
- Public and private spaces



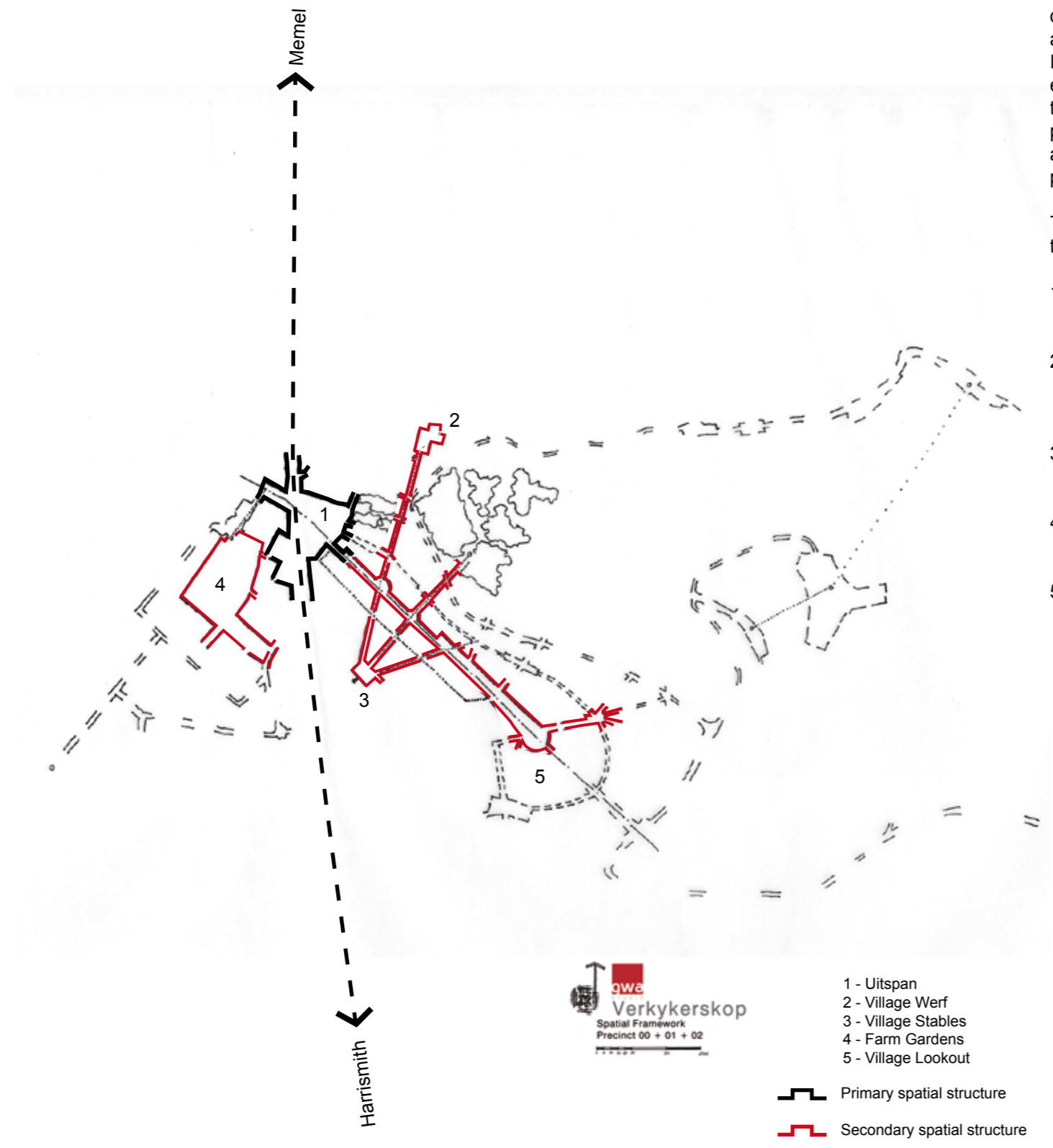
Orientation plan

Spatial framework

Spatial structure refers to the pattern or arrangement of development blocks, streets, buildings, opens spaces and landscape which make up urban or rural areas. It is therefore the interrelationship between all these elements, rather than their particular characteristics that bond them together. This allows for public and private spaces to be arranged according to significant and function. These arrangement of space form the prevalent feeling of place.

The spatial framework is important in order to achieve the following:

1. Integration
Connection and overlap with existing context and area
2. Functional efficiency
So that individual elements [buildings, streets, open space] work together as part of an efficient whole
3. Environmental harmony
Create development forms that are energy efficient and ecological sensitive
4. A sense of place
Create somewhere that is recognizable distinct but simultaneously strengthens local identity
5. Community viability
Respond to realities of market influences on development mix and delivery



- 1 - Uitspan
- 2 - Village Werf
- 3 - Village Stables
- 4 - Farm Gardens
- 5 - Village Lookout

- Primary spatial structure
- Secondary spatial structure

Spatial Framework





Verkyerskop Farming Philosophy

“Define all farms as parks, where the public has a right to be, make all regional parks into working farms. Create stewardships among groups of people, families and cooperatives, with each stewardship responsible for each of the countryside”. C. Alexander

To most people staying in urban areas, the countryside is only a recreational resource – a place to escape to, leaving the city behind. The connection between food and the land on which it is produce has become increasingly remote as an issue that directly concerns urban and rural welfare.

Farming as a living philosophy concept therefore creates both place for escape and production. People everywhere within the village should be familiar with the broad scientific principles of production, handling and use of food that appears on the table. It teaches through direct experience something of rural occupations and the basis for alternative sustainable value. The concept of productivity in urban and rural areas has wide implications.

Farming benefits/implications include:

1. Food security and production
2. Social interaction
 - a. Dietary diversity
 - b. Personal psychological benefits
 - c. Community cohesion and well-being
3. Agricultural production
 - a. Marketed
 - b. Non-marketed
4. Indirect economic benefits
 - a. Sustainable tourism
 - b. Recreational
 - c. Economic diversity and long term stability
5. Ecological benefits
 - a. Hydrologic functions
 - b. Air quality
 - c. Soil quality



- Recreational resource
- Place to escape
- Connection between food and the land
- Production
- Principles of production
- Direct experience
- Food security



Orientation plan



farming

Farming



PLAYING AND FARMING

Right next to the inner village, access is gained to Aansluit Landgoed, a 600 ha estate comprising of mostly virgin veld. The secure-fenced area will continue as a productive working farm for everybody's pleasure and delight.

Close to the entrance and adjacent to the original homestead, Afsluit Gastehuis, provision was made for a landscaped green area within which the farm sheds, stables, kraal, stock pens, and so forth are situated. Further beyond, gravel roads lead to the various plateaus and valleys of the farm.

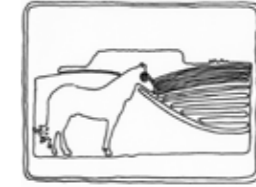
A number of living spaces are created on the estate, which include Aansluit Village just across the road from the existing village, the Nguni Cultural Village next to the police station, and some hamlets and Buiteposte further afield.

Within the green open space (the farm) that will remain between the living spaces, facilities will be created for outdoors sports and indoors recreation. Three clubs will be formed to control voluntary participation, namely the Aansluit Farming Club, the Aboukir Equestrian Club, and the Buitepos Country Club. While membership to the latter two will be open to the community the farming club will be limited to residents. The Aansluit Farming Club will farm the land and manage the domestic animals on behalf of those resident participants who wish to own some stock of their own.

To enhance the experience of the visitor to Verkykerskop and to integrate Verkykerskop into the region as a tourist destination, visitors will be offered controlled access to the recreational facilities and the private open spaces for sports, hiking, birding, mountain biking, horse riding, fishing and so forth. Visitors and holiday makers and weekenders will be encouraged to bring their horses along and lodge them with the equestrian club during their stay, or they could make use of the resident horse stud.

Sporting and outdoors opportunities on the farm and on the dams are foreseen to be popular attractions. A number of new dams will be built in the valleys and stocked.

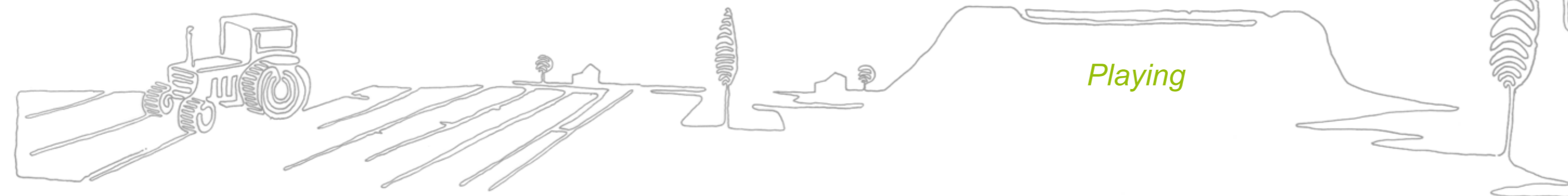
As walking, cycling and riding will take precedence as modes of transport, only the most necessary vehicular roads will be constructed on the open spaces, and no unguided vehicular access will be allowed. Since the Verkykerskoppers are traditionally a horse



- Aansluit Landgoed, a 600ha estate, virgin veld
- Green open space
- Aansluit Farming Club
- Aboukir Equestrian Club
- Buitepos Country Club
- Walking
- Cycling
- Riding

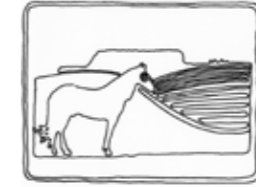
playing
community
holiday

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mad society (with several stud breeders, a gymkhana club, regular organized fun rides, and an annual horse auction), the developer is in the process of constructing stables. We are proud to announce that our gymkhana turf has been inaugurated by an event as part of the October 2009 festival. We have made provision for a jumping circuit, exercising rings, and penstocks where horses can safely roam. The stabling and grooming services will be provided by the Aboukir Equestrian Club, which already hosts the Aboukir Arab Stud on the Estate. With the auction kraals in the village, Verkykerskop possesses excellent facilities for handling a large equestrian event such as a national gymkhana or endurance event. We foresee that Verkykerskop could become the equestrian sporting capital of South Africa, with the Oaklands Polo Club 30km down the road from us. In order to integrate these equestrian facilities fully into the village, it is being placed in one of the most attractive areas on the land, within the green landscaped area and adjacent to the inner village.

So as to address all recreational needs across the spectrum of taste, separate provision is made for motor cycles, four wheelers, and shooting at a distant locality where it will not impact on the game, riders and hikers. To enhance the farm life style that is promoted, the keeping of dogs and cats will be allowed, but it will be strictly controlled given the conservation objectives.



- Jumping circuit
- Excellent facilities
- Address all recreational needs across the spectrum
- Farm life style
- Conservation objectives

playability



WATER, WASTE WATER AND SOLID WASTE

Water, waste water and solid waste management plans have been devised by our engineers in cooperation with our environmental specialists and in keeping with engineering and environmental best-practice.

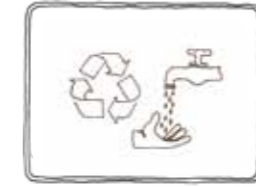
A water resource study was done with inputs from Geologic geohydrologists and Schoeman & Vennote Water Engineering Specialists, after which our civil engineers Lidwala engineered the water services plans.

The total annual water demand of the development is close to 100 000 m³, which equates to an average daily demand of 264 kl/day and a daily peak demand of 422 kl/day and a required peak design extraction rate of 4,9 l/s.

As part of the geohydrological study, a number of successful boreholes were drilled with a safe annual water yield close to the annual water demand. However, the water delivery and management plan proposed the incorporation of a stormwater storage dam so as to provide water to the development at a very secure level of certainty into the future. The 13m high dam was designed with a capacity of 330 000 m³ and a full supply surface area of 7 ha. The dam will have the following positive environmental impacts:

- It will stabilize the active erosion that has taken place in the dam basin. It impounds the upper tail of the active erosion, preventing it from creeping up into the wetland.
- It acts as a stormwater retention dam, impeding energy dissipation, the main cause of erosion in the valley floor.
- It will charge the alluvium downstream of the dam wall even during the dry season.
- As the dam will have a net retention of water even at the end of a dry year, and since it will be fitted with a scour pipe, the dam can be used to provide a base flow to the valley downstream, which was not there before.
- The dam will have secondary benefits in terms of birding, fishing and other recreational activities which will enhance the living experience of the villagers and tourists.

Despite the adequate availability of water for Verkykerskop, the Green Living commitment encompasses a waterwise use regime to be incorporated into the rules of the home owners association so as to ensure responsible use of this scarce resource. Water demand management mechanisms that are proposed include the following:



- Water demand of the development is close to 100 000m³
- Successful boreholes
- Stabilise the active erosion
- Stormwater retention dam
- Charge the alluvium downstream

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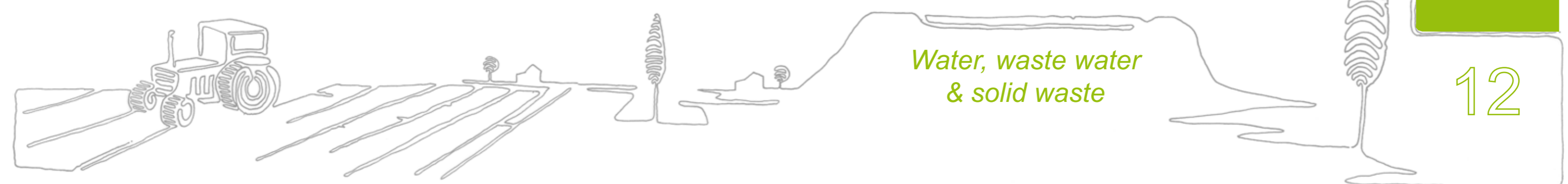
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*Water, waste water
& solid waste*

12



- Parks and trees in common areas will be designed to be independent of watering after establishment.
- Building regulations will enforce roof water collection by means of gutters, and collecting tanks will be encouraged.
- Garden watering rules will be set, e.g. garden watering from the potable water system will be prohibited during peak demand seasons (December holiday season and Easter weekend). Building codes will require separation of sewage waste water and wash waste water so that the latter will be retained on site for garden watering.
- Pertinent to the more rural erven (in the hamlets), the size of lawns and acres will be restricted, leaving the natural veldt undisturbed as far as possible. A list of waterwise trees will form part of the home owners association rules.
- A small number of agricultural stands to the south west of the inner village will have irrigation rights for agricultural gardening on a small scale. Other than this, no large scale irrigation will be done from the potable water system. Irrigation for these stands will be augmented by recycled sewage water and roof rain water collection.

Conventional toilets with central collection and treatment was opted for all the living areas. The total sewage effluent is in the region of 60 000 m³ pa. Collection of water bourne sewage will be done in a number of zones which means that several localized treatment plants as opposed to one central plant will be provided, being more cost effective due to the low density of the development. This arrangement also makes better use of the natural filters to further filter treated effluent. By using several treatment plants there will be no need for sumps and pump stations. This arrangement will reduce the risk for contaminating the storage dam catchment. The treated and cleaned outflow from the sewage works will be pumped up to a retention pond from where common areas, parks, sports fields and paddocks will be irrigated, augmented from secondary boreholes when necessary.

For residential customers, waste will be picked up at cluster points of about 20 to 30 stands, with a maximum walking distance of about 100m.

For agricultural plots the carrying distance might be significantly longer.

Erf boundary collection will only be done for corporate or institutional customers such as the police, the clinic, and the schools.

The township establishment conditions will encompass a solid waste management plan comprising of a central site for separation and recycling, but no landfill on site. Collection services will only be available to village stands,



- Conventional toilets with central location
- Waste will be picked up at cluster points
- Erf boundary
- Corporate or institutional customers such as the police, the clinic, and the schools
- Separation and recycling
- No landfill on site

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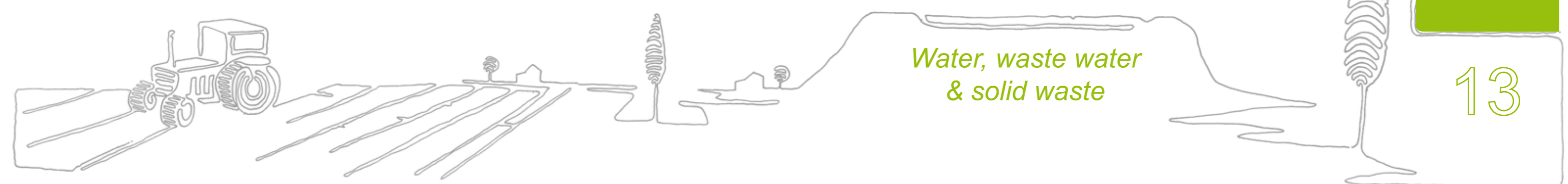
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*Water, waste water
& solid waste*

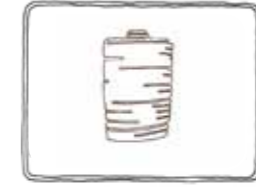
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however, the customer base will include the farms in the district. These customers will be required to deliver their waste to the separation and recycling site themselves.

Waste management plan will implement the following standards:

- Organic matter will not be collected at individual erfs but customers must take whatever waste is not composted on the erf to the common compost heap for use in common gardens.
- No hazardous waste will be handled by the waste site in the village. Customers will be responsible for removal of hazardous waste and dispose of it in accordance with common regulations.
- Streams of non-hazardous inorganic waste will be separated by the customer before taking it to the collection point, separating glass, plastic, metal, paper and organic matter.
- Penalties will be charged to the bill of the customer for non-compliance with the waste separation rules.



- Common compost heap for use in common gardens

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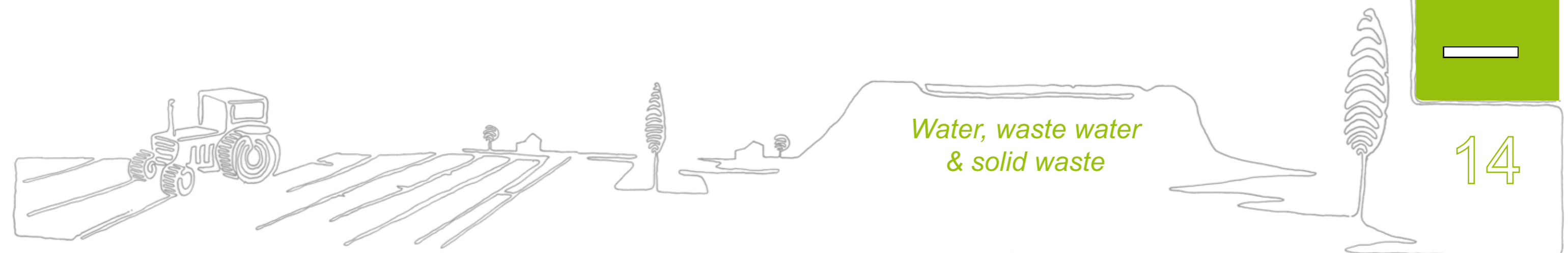
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*Water, waste water
& solid waste*

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TRANSPORT

In support of the Green Living experience we want to enhance, the transport network comprises of the following elements:

The Main Provincial Road through the village will be deproclaimed and developed as a boulevard as part of the urban architecture. Provision will be made for structured street parking and bus and taxi bays.

Distributor Roads will branch off into the village, and will be tarred or cobble-stone paved. Inside the living areas these avenues are an intrinsic element of the urban design and will enhance the living experience once again.

Village Streets, being the secondary streets inside the village, will be unpaved gravel roads.

There will be Avenues that are only for walking and non-motorized transport. Horse transport (by cart or by riding) will receive a special place in the village design, linking horse facilities located in the village with the stables and paddocks on the fringes of the village.

Farm Roads (or trails) are those on the green open space between the living areas, providing access to the outlying areas of the farm. We have laid out over 30km of trails specially for hiking, jogging, cycling and riding, taking the villager to all the outlying areas though all the beautiful vistas and views.

In the inner village, the Dorp Squares and Plains will give preference and right of way to pedestrians, keeping them clear of cars.

Car Parks will be provided where cars don't impact on the livability of the inner village.



- Main provincial road deproclaimed and developed as a boulevard
- Structures street parking
- Bus and taxi bays
- Tarred or cobble-stone paving
- Village streets
- Unpaved gravel roads
- Horse transport
- Inner village right of way to pedestrians

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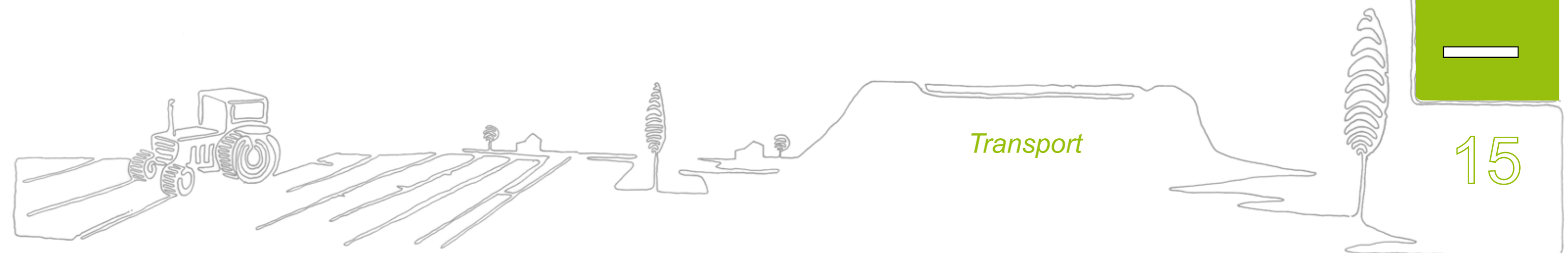
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Transport



Energy

It is essential to begin transforming the way we use energy to improve energy efficiency. In South Africa the NERSA (national energy regulator) and the government are proposing a power conservation program.

The concept of Greenhouse Gas Emissions and energy efficiency are not visible and need be packaged in a customer friendly manner.

Therein lays the case energy efficiency integration in a marketable and transparent manner. By implementing legislation that will enforce the user to use less and more energy efficient appliances, which in return will put less demand on the network, and in return reduce costs to consumer and in return offer the consumer more disposable income to invest more in more energy efficient systems.

Early implementation is key to success and leadership in the private sector is also essential.

South Africa receive 6.5 kWh/M². One of the highest levels in the world. Solar energy is an abundant source of renewable energy and an obvious choice when seeking alternative sources of energy.

Solar heating is the usage of solar energy to provide process, space or water heating. The heating of water is covered in solar hot water. Solar heating design is divided into two groups:

- Active solar heating uses sun radiation to heat water (directly or indirectly) with the help of a thermodynamic collector.
- Passive solar heating does not require electrical or mechanical equipment, and may rely on the design and structure of the house to collect, store and distribute heat throughout the building.

Also solar energy can be used to cool -solar cooling.

Steps to improve energy efficiency may include:

- Window glazing
- Affect of colour of the roof paint
- Affect of wall paint colour
- Roof and wall Insulation
- Building orientation and layout to optimise for air conditioner applications
- Greenhouse affect
- Light movement sensors
- Optimisation of lights – choices of lights



- Energy efficiency
- Packaged in a customer friendly manner
- Reduced costs to consumer
- Early implementation
- Solar energy

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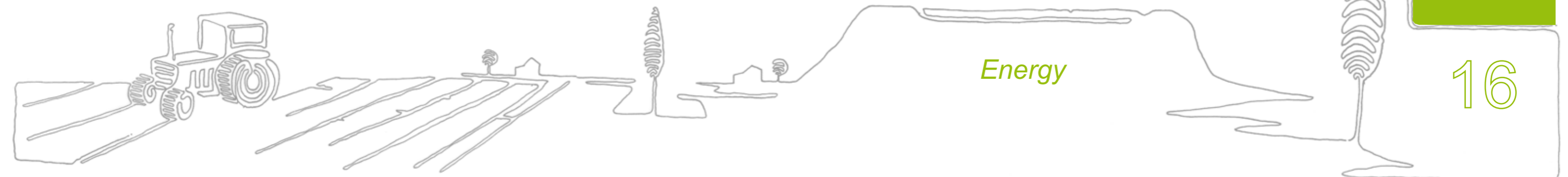
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building technologies

“Living” Type

Dorp

Farm Living

Zoning

Institutional

Commercial

Agri-production

Residential: Farm home

“Living” Option

A - Police Station, Old Post Office, Boeresaal

B - Agri-shop, Smileys Restaurant & General Dealer, Butcher shop etc.

A - Stables, barn, warehouse, workshop

B - Aansluit Manor House, Bywonershuis, staff quarters

C - Productive home

D - Country Villa

Locality / where found



Type

Type 1a

type 1b

type 2a

type 2b

type 2c i

type 2c ii

...

Layout / Architectural options



Level of service

Eskom electricity, Municipal water network

Eskom electricity, Municipal water network

Eskom electricity, Own farm water supply

Eskom electricity, Own farm water supply

Eskom electricity with energy efficient measures, municipal water supply supplemented by own farm water supply

Eskom electricity with energy efficient measures, municipal water supply supplemented by own farm water supply

Eskom electricity with energy efficient measures, municipal water supply

Production / Environmental specifications

Municipal sewage network

Municipal sewage network

On-site septic tank & soak away

Local septic tank & soak away

Rain collection, sonal sewage network & recycling of purified water for irrigation

Rain collection, sonal sewage network & recycling of purified water for irrigation

Gardening only with rain collection & domesticly used water, local septic tank & soak away

Power planning

R50 000 to harvest 1KWh/day;
R200 000 to harvest the full demand of 6KWh/day
Building measures can save x % on energy at an additional y % of building cost

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building technologies

“Living” Type

Village Living

Buitepos Living

Uitspan Living

Zoning

Residential: Village Home

Residential: Remote Village Home

Residential: Remote Village Home

Residential: Remote Village Home

Time share

Temporary accomodation

“Living” Option

Village Home

A - Hamlet Cottage

B - Subsidized Family Home

A - Private Cluster Cottage

A - Hotel Cottage

B - Camp Site

Locality / where found



Type

Type 3

type 4a

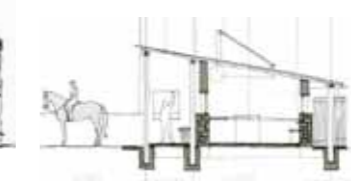
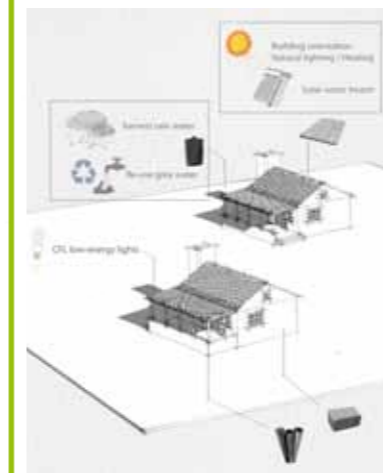
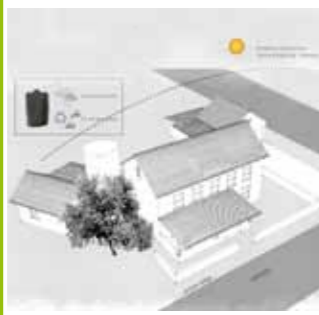
type 4b

type 5a i

type 5a ii

type 5c i

Layout / Architectural options



Level of service

Eskom electricity but with energy efficient measures, municipal water supply

Renewable energy only (no Eskom or generator), municipal water supply

Subsidized Eskom electricity; solar geyser, other energy efficient measures not affordable, subsidized municipal water system

Renewable energy only (no Eskom or generator), municipal water supply

Energy self-sufficient (no Eskom but generator backup allowed for main building), municipal water supply

Renewable energy only (no Eskom or generator), fountain water supply

Production / Environmental specifications

Rain collection, municipal sewage network and recycling for farm irrigation

Gardening only with rain collection & domestic used water, sonal sewage network and recycling of purified water for farm irrigation

Municipal sewage system

Sonal sewage network and purification and let purified water into nature - no gardening only natural landscaping

Sonal sewage network and recycling of purified water for own garden irrigation, roof rain water collection

Roof collected water, septic tank & soak away

Power planning

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First 50kW subsidized by Eskom

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