

CITY OF CAPE TOWN
AGRICULTURAL LAND REVIEW

Prepared for:



CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

Prepared by :
iKapa Enviroplan
A Setplan – DJ Environmental Consultants Joint Venture
in association with
Agri Informatics and Prof. Theo Kleynhans

Report 1498/2
October 2008

TABLE OF CONTENTS

CHAPTER 1 : INTRODUCTION.....	1
1.1 Background; 2006 Agricultural Land Study	1
1.2 Appointment and Planning Team.....	1
1.3 Task Approach and Review Objectives.....	1
1.4 Methodology	2
1.5 Report Structure	3
1.6 Review Limitation.....	3
CHAPTER 2 : AGRICULTURAL CONSIDERATIONS.....	3
2.1 Current Agricultural Use and Trends.....	3
2.2 Food Security	4
2.3 Land Reform.....	4
2.4 Economic and Other Considerations.....	5
2.5 Environmental Considerations	6
2.6 Agricultural Potential Determinants.....	6
2.7 Functional Rural Hinterland.....	7
2.8 Protection of High Potential and Unique Agricultural Land	8
CHAPTER 3 : REVIEW OF AGRICULTURAL AREAS.....	9
3.1 Identification of Review Areas.....	9
3.2 Assessment Informants	10
3.3 Assessment and Recommendations.....	11
CHAPTER 4 : PROTECTION OF AGRICULTURAL LAND	17
4.1 Need for Protection.....	17
4.2 Categories of Protection and Use	17
4.3 Protection and Use Status of Agricultural Areas.....	17
CHAPTER 5 : RECOMMENDATION	22

TABLES:

Table 1: Agricultural Area Review and Recommendations

Table 2: Protection and Use Status of Agricultural Areas

LIST OF DIAGRAMS AND MAPS

Diagram 1: Review Areas

- Map 1.1: Helderberg – Erinvale Area
1.2: Helderberg – Sir Lowry’s Pass Road Area
2: Macassar and Faure Area
3: Bottelary and Blackheath Area
4: Botfontein Area
5: Joostenbergvlakte Area
6: Olyfantsfontein Area
7: Dassenberg Area
8: Mamre Area
9: Tygerberg Hills Area
10: Constantia Area
11: Philippi Area
12: Philadelphia Area

EXPLANATORY TERMS

Agricultural Address; meaning a composite and relatively homogenous agricultural area characterized by a specific agricultural commodity or practice.

Agricultural Building Blocks; meaning the City's intensive agricultural production areas and resources (e.g. water), agricultural working landscapes, rural areas suitable for land reform, community allotments and new farmer settlement, and extensive areas for livestock grazing and poultry farming, with such building blocks having a distinct relationship with the City's green structure.

Agricultural or Ecological Setback; referring to a buffer between agricultural lands and streams, rivers and wetlands to provide for off-channel reedbeds for denitrification, natural vegetation buffers to retard run-off and erosion, especially in areas abutting pediment slopes, to accommodate natural flood events, and to facilitate groundwater and nutrient recharge and revegetation.

Agricultural Working Landscape; referring to agricultural production areas which collectively comprise a landscape (e.g. "Cape Winelands", "Swartland Wheatlands").

Agri-estate; describing residential development within a working agricultural farm, where owners of residential properties have or do not have a vested interest in the agricultural activities.

Agri-tourism; meaning the employment of agricultural commodity production, practices, processing and lifestyle as a tourism attraction.

Agro-ecological Alignment; referring to optimising the interface between agricultural and natural areas through the introduction of ecological corridors and agricultural setbacks, interface uses, improving soil management etc., thereby enhancing environmental performance of agricultural production and the protection of conservation-worthy natural resources.

Bio-farming; referring to improved environmental performance of agricultural production systems through employing environmentally-friendly practices and inputs (e.g. natural as opposed to chemical pest management and soil enhancement).

City Building Blocks; meaning composite and integrated urban areas which through appropriate positioning relative to movement networks, the green structure and agricultural building blocks, determine the City's structure.

Conservation Stewardship; meaning the voluntary custodianship of natural resources initiated by individual landowners, landowners collectively or by a conservation agency, and often within programmes co-ordinated by such agencies.

Critical Mass; indicating the extent of activity required for operational feasibility (e.g. number of wineries to constitute a wine route).

Gateway Precincts; referring to the landscape traversed by major city access roads and the visual benefits derived from such gateway settings.

Green Building Blocks; meaning the City's nature reserves and heritage areas, its riverine corridors, sponge areas and wetlands, its metropolitan open space system and biodiversity corridors.

Green Structure; referring to the environmental footprint, including the component green building blocks.

High Potential Agricultural Land; means the best land available for, suited to and capable of consistently producing optimum yields of a wide range of agricultural products (food, feed, forage, fibre and oilseed), with minimum damage to the environment.

Homogeneous Farming Area; referring to composite areas of similar agricultural crop types and practices, with production economies and feasibility often benefiting directly from the extent of such areas and scale of production.

Horticultural Crops; referring to vegetable production.

Land Type Unit; meaning areas of similar soil potential as informed by soil type, soil depth, aspect and clay content based on Physical and Memoir data surveyed and compiled by the Agricultural Research Council of South Africa.

Meso-climate; referring to local climatic conditions influenced by terrain aspect, exposure to sea-breezes, soil type, etc., favouring agricultural production.

Mixed-farming; describing a combination of farming commodities, for example grain production, livestock grazing and fruit production.

Other Agricultural Areas; meaning areas of lower agricultural value or potential, but comprising the functional rural hinterland of the City of Cape Town.

Rain-fed; meaning dry-land production as opposed to irrigated production.

Rural Living; referring to the employment of extensive rural holdings (>8000m²) for residential purposes in order to benefit from and enjoy the opportunities of rural/agricultural areas (i.e. country living, keeping of livestock).

Small-grain; referring to wheat or barley as opposed to large grains such as maize.

Small-holding; describing an extensive land unit (>8000m²) used primarily for residential purposes, as opposed to small productive agricultural units or farms.

Soft Vegetable; referring to highly perishable vegetable crops, usually salad vegetables.

Stone-fruit; meaning deciduous fruit, including peaches, apricots, plums, pears, etc.

terroir; referring to the inter-relatedness of climate, terrain and soils, collectively representing localized production factors which enhance the suitability of certain areas for the production of quality wine.

Unique Agricultural Land; means land that is or can be used for producing specific high value crops. It is not usually high potential but important to agriculture due to a specific combination of location, climate or soil properties that make it highly suited for a specific crop when managed with specific farming or conservation methods. This includes land of high local importance where it is useful and environmentally sound to encourage continued agricultural production, even if some or most of the land is of mediocre quality for agriculture and is not used for particularly high value crops.

Value-adding; referring to activities introduced into a farming enterprise with the specific objective of increasing economic viability. Such activities can relate directly to the primary production (e.g. agri-product processing) or indirectly (e.g. agri-tourism through guesthouse development).

LIST OF ACRONYMS

CPPNE	Cape Peninsula Protected Natural Environment
GIS	Geographic Information System
HDI	Historically Disadvantaged Individual
LED	Local Economic Development
PHA	Philippi Horticultural Area
PNE	Protected Natural Environment
SAHRA	South African Heritage Resources Agency
SUAR	Sustainable Utilization of Agricultural Resources Bill
WWTW	Waste Water Treatment Works

CHAPTER 1 : INTRODUCTION

1.1 Background; 2006 Agricultural Land Study

Recognising the significance of agricultural land and its activities within the city complex (e.g. socio-economic, food production), the City of Cape Town commissioned an “Agricultural Land Study” in 2006. This study was undertaken by the Setplan-DJ Environmental Consultants Joint Venture, in association with agricultural specialists Professor Theo Kleynhans, Johan van Zyl and Francois Knight.

The findings of this study have, to date, played a significant role in identifying the City’s future spatial structure (e.g. 2030 time frame), informed by the reservation of high potential agricultural land given the following:

- Its socio-economic empowerment role in terms of food production, food security and contribution to LED;
- its economic role in food production and other commodities (e.g. wine), especially as input to the secondary and tertiary industry; and
- its relationship with the City’s green structure and biodiversity corridors.

However, given the need to maximise urban development within the city complex, as well as address urban development pressures and consider urban edge amendments in certain City locations (e.g. Bottelary Hills, Durbanville Hills, Dassenberg, Helderberg Basin, etc), the City’s spatial planners need to refine the proposed “city building blocks”, especially the edges of such blocks where they abut identified agricultural land.

While such decision-making is informed by the findings of the 2006 Agricultural Land Study (i.e. potential of such agricultural land), detail edge delineation of the urban building blocks cannot adequately be informed given that the aforementioned study was undertaken at a city-wide scale, specifically aimed at determining the City’s agricultural building blocks, as opposed to their detail edge definition.

Critical to finalizing the city structure in specific localities is therefore the need for defining the future built edge as informed by high value and other agricultural land worthy of protection (e.g. Bottelary Hills, Durbanville Hills, etc.).

1.2 Appointment and Planning Team

In order to achieve definition of high value and other agricultural land worthy of protection and to inform the urban spatial planning process, the City of Cape Town appointed iKapa Enviroplan, a Setplan-DJ Environmental Consultants Joint Venture, in association with agricultural resource economic specialist Professor Theo Kleynhans and agricultural and *terroir* specialist Francois Knight of Agri Informatics.

1.3 Task Approach and Review Objectives

While the 2006 Agricultural Land Study identified the broader agricultural blocks or addresses (e.g. Durbanville Hills, Bottelary Hills, etc.), the current planning requirement requires a review of the agricultural potential of such blocks at and in the immediate environs of where refinement of the urban building blocks is required.

Consequently, the task approach focuses on the review of agricultural areas at such identified locations, with such review informed by an evaluation and consideration of the following:

- (i) The status of the “homogenous farming area” (e.g. fragmentation) in which such agricultural area is located.
- (ii) Current and future agricultural performance and significance of the area.
- (iii) Current environmental status and future performance of the area.
- (iv) Specific agricultural potential informants inherent to the area.
- (v) Other heritage, cultural and aesthetic considerations.

Thereby the need for protection of the agricultural areas is ascertained, their boundaries defined, their protection status determined and the spatial relationship between such agricultural areas and the urban building blocks established.

1.4 Methodology

The review methodology includes:

- (i) Assessment of the Agricultural Review Areas in terms of the following:
 - q Identification (as per Spatial Planning Directorate; City of Cape Town) of areas requiring review in terms of agricultural potential.
 - q Consideration of the “homogenous farming area” to which the affected agricultural area relates to in terms of:
 - Its contribution to the homogenous area;
 - the resultant fragmentation / consolidation / reinforcement of the homogenous area as result of the urban building block finalization; and
 - occurrence of bio-physical or infrastructural elements (e.g. river course, steep slopes, road or rail), which currently bisect and weaken the periphery of the homogenous area and which could serve as its edge, as well as that of the proposed urban building block
 - q Assessment of current and future potential agricultural activity performance of the affected agricultural area (i.e. in terms of perennial, annual or horticultural crops, and irrigation potential).
 - q Detail scrutiny of agricultural potential informants of the Land Type Units informing the agricultural potential classification of the affected agricultural area, especially “*terroir*” in the Tygerberg, Durbanville and Bottelary Hills and Helderberg Basin areas.
 - q Assessment of the environmental performance of the affected agricultural area and its immediate environs in terms of biodiversity significance (e.g. part of a biodiversity corridor, or presence of remnant vegetation).
 - q Consideration of heritage, cultural and aesthetic attributes of the affected agricultural area, including its contribution to both the agricultural working and cultural landscapes.

The assessment was conducted through:

- In-field inspection and evaluation of the affected areas
- Desktop evaluation of existing current data (e.g. July 2008 Biodiversity Map)
- Discussion with District Planners of the City of Cape Town

- (ii) Recommendations for the Agricultural Review Areas regarding:
 - q Agricultural potential and value as emanating from the review assessment
 - q Agricultural protection required given agricultural potential, existing or emerging agricultural use

- (iii) Mapping of the areas of agricultural potential and value in a GIS package (ArcMap shapefile format) indicating the following:
 - q Areas of agricultural potential and value
 - q Recommended protection status of such agricultural areas
 - q Interface of such agricultural areas with the urban and green building blocks

1.5 Report Structure

- (i) Chapter 2 puts forward Agricultural Considerations critical to informing the protection of agricultural land.
- (ii) Chapter 3 identifies the Review Areas and includes the Review of the Agricultural Areas, its findings and recommendations.
- (iii) Chapter 4 puts forward the need for Protection of Agricultural Land, outlining categories and proposals for protection and use, together with recommended interventions required within the Review Areas.
- (iv) Recommendations in Chapter 5 conclude the review.

The report is supported by mapping which illustrates each of the review areas, their interface with urban, rural and conservation areas, and their recommended protection status.

1.6 Review Limitation

The review, while including an in-field visual inspection and current literature review, does not include detail in-field agricultural resource analysis (e.g. soil potential, water quality). It is largely based on Physical and Memoir data (i.e. per Land Type Unit) surveyed and compiled by the Agricultural Research Council of South Africa and supplied by the Resource Development Section of the Department of Agriculture of the Western Cape.

Consequently, given the geographic variation of agricultural potential over short-distances, this review is not intended as a guide to agricultural potential or value on a detailed cadastral basis, but rather as an informant for the identification of a contiguous or homogenous agricultural area and the degree of protection required.

Furthermore, this study does not represent a spatial plan, but rather an agricultural land assessment in selected review areas to serve as an informant to spatial planning, both urban and rural in such areas.

CHAPTER 2 : AGRICULTURAL CONSIDERATIONS

The following agricultural considerations inform this review:

2.1 Current Agricultural Use and Trends

Agricultural areas within the City's jurisdictional area, many of which have a production history spanning the past 200 to 300 years, reflect the following trends:

- (i) While the practising of intensive agriculture has occurred within clearly distinguishable small-grain and viticulture areas, emerging new production areas are now forthcoming given market and demand growth, new cultivation technologies, new crop types and varieties, availability of irrigation water and realization of *terroir* qualities. Examples include viticulture expansion into the western Tygerberg Hills and Philadelphia area, replacement of stone fruits with vines in the Helderberg Basin, and the wide-spread emergence of olive cultivation.

- (ii) Several of the City's unique production areas, including intensive vegetable producing areas, (e.g. PHA), world class wine producing areas (e.g. Durbanville and Tygerberg Hills, and Constantia/Tokai) or areas producing vines of origin and olive oil of distinction (e.g. Bottelary Hills and the Helderberg Basin), being threatened by urban expansion or compromised by urban development models (e.g. agri- and eco-estates).
- (iii) Value-adding development initially intended to promote agri- and eco-tourism (e.g. overnight accommodation, conference facilities, reception venues, product processing) totally dominating and even displacing the primary agricultural activity, and compromising agricultural performance on adjacent properties (e.g. traffic or dust impact).
- (iv) Intensive food growing areas (i.e. vegetables) being limited to three production areas, namely the PHA, Botfontein and areas abutting the N2 at Joostenbergvlakte.
- (v) Smallholding areas becoming predominantly rural living areas, with limited agricultural production.
- (vi) Urban agricultural activities being restricted mostly to urban spaces (i.e. public open spaces, schools, river corridors), with little or no dedicated areas being allocated (e.g. allotment areas).
- (vii) The demise of mixed farming in marginal agricultural areas which comprise the major portion of the City's rural hinterland given crop and product security threat, mass production and consumer demands, limited market access and unfavourable economies of scale in production.

2.2 Food Security

Food security and food price escalation are currently under local and world-wide scrutiny, with the following aspects focussing on the need for agricultural land protection:

- (i) Need for increased local production to ensure food security to meet the growing need of urban populations and to stabilize prices through:
 - Supporting and strengthening small and emerging farmers
 - Creating food gardens and allotments by communities
 - Reserving, availing and optimally utilizing land for agricultural production in close proximity to consumers
- (ii) Addressing poverty through food production, with local authorities partnering with government (e.g. Department of Agriculture) and communities in the quest to produce food and promote food security.
- (iii) Need to reduce the carbon footprint attributable to food production, with local production reducing the distance between production areas and consumers, placing an emphasis on agricultural land protection and production within and peripheral to urban areas.

2.3 Land Reform

The Government's Land Reform Programme comprises a series of interventions to effect transformation of the existing pattern of land ownership in South Africa. Integral to such interventions is the transfer of 30% of all market-based (i.e. commercial agricultural land) from white to HDI ownership by 2014.

Critical in achieving such transformation is the protection and reservation of such agricultural land, especially within and peripheral to urban areas in order to benefit the emerging farmer regarding market and consumer proximity, and access to social services and facilities, production requisites and financial services.

2.4 Economic and Other Considerations

- (i) Contribution to Food Security
- Food security is determined by affordability of food and access to food. Affordability refers to the income of the consumer. The viticulture lands within the City boundaries contribute more indirectly to food security via their role in the tourism industry by adding variety, amenities and ambience to the City's landscape, and through generation of employment in secondary industry. This is particularly true for the contributions of Constantia, the Durbanville and Tygerberg Hills and the Helderberg Basin, which are of global importance and thus irreplaceable. In contrast, the PHA and other horticultural (i.e. vegetable) producing areas of Botfontein and Joostenbergvlakte contribute more directly to food security, and job creation, but are not irreplaceable.

The grain areas also contribute to food security and job creation. However, their role is limited and can therefore not claim the same protection status as viticultural and horticultural areas.

- (ii) Contribution of Agricultural Production
- q Vegetables (Botfontein, Joostenbergvlakte, PHA):
 - Type; mainly highly perishable products with a short shelf life and frequent delivery requirement (e.g. lettuce)
 - Quality; high soft vegetable quality due to short travelling time to the market compared to other production areas located further away from the market (i.e. outside the City boundaries)
 - Affordability; low transport cost due to close proximity to the market. Alternative production areas outside the City's boundaries will bring extensive logistical and probably environmental challenges, as well as a higher cost of production
 - q Wine (Constantia, Durbanville and Tygerberg Hills, Bottelary Hills and Helderberg Basin):
 - Direct income generation; high wine quality due to most favourable *terroir* (i.e. inter-relatedness of meso-climate, terrain and soils). Wine production under rain-fed conditions can still generate a high income, despite low yields per hectare compared to irrigated vineyards elsewhere, due to the impact of excellent *terroir* and accessibility of the wine farms for tourists and product price
 - Indirect income generation; the multiplier effect of attracting tourists to the City's winelands (e.g. Constantia, Durbanville) as a premier tourist destination with diverse activities, especially for short-stay City visitors
- (iii) Critical mass/ minimum scale of an activity
- Critical mass as a tourist attraction; a minimum number of wine cellars (i.e. wine tasting venues) has to be maintained to ensure the viability of a City wine route in the areas of Constantia and Durbanville Hills. Furthermore, such critical mass (i.e. number of cellars) provides a regional wine character and diversity
 - Critical mass for input suppliers (e.g. vegetable plant nurseries in Philippi); allows for a viable scale of production or provision of inputs. It also enables more efficient information flow and technology transfer

- (iv) Employment Opportunities
Employment generation, especially in the vicinity of lower income neighbourhoods, is reflected in the following:
- 1 person per hectare as permanent labour
 - 2 persons per ha for harvesting (seasonal labour)
 - 1 person per ha for processing (permanent)

Each agricultural employment opportunity typically provides for four or more people dependent on such income generated in agriculture.

- (v) Resource Awareness
Demonstration of agricultural production provides exposure to local urban communities (e.g. Philippi, Botfontein, Durbanville). Persons growing up in an urban environment without direct contact to agricultural production become less aware of their dependence on natural resources. Exposure to agricultural production activities within reach of their residential area creates opportunities to observe directly where their food comes from, providing a valuable learning experience.

2.5 Environmental Considerations

Critical to the sustainable utilization of agricultural resources is the success and degree to which agro-ecological alignment can be achieved, with the following serving as examples:

- (i) Agriculture serving as a functional buffer between development and the natural environment (e.g. abutting the urban edge).
- (ii) Agricultural areas also functioning as “open space” within or abutting urban development (e.g. vineyards in Aurora).
- (iii) Agricultural areas serving as passive and intensive recreation areas (e.g. equestrian).
- (iv) Enhancing the environmental performance of agricultural practices and areas through the following:
 - Pursuance of bio-farming
 - Introduction and maintenance of agricultural setbacks along drainage courses and cultivation limits on hill- and mountain-sides
 - Protection of remnants and establishment of ecological linkages and corridors
 - Implementation of conservation stewardship programmes and establishment of conservancies and private nature reserves

2.6 Agricultural Potential Determinants

The agricultural potential of a farm is fundamentally determined by the availability and quality of the natural resources; namely soil, climate and water, and for extensive grazing purposes, also the composition of the natural vegetation. The evaluation of only one of these factors in isolation can result in a much skewed view of the potential. As extreme example, the potential of a sheep farm in the Karoo can be high due to a high grazing potential, but zero in terms of horticultural crops due to low rainfall and lack of irrigation water. Therefore, the potential should always be assessed with the spectrum of current and potential agricultural uses in mind.

A further complicating factor is the fact that a reasonable degree of modification of the soil and water supply to crops can be made through soil preparation, agronomic practices and irrigation, given water availability. However, the climate is less modifiable and often the main determinant in the range of crops suited to a specific site. Access to market can also influence the suitability, rather than the potential of a

farm. Close proximity to the City (i.e. market) is always a preferred attribute of a good locality for the production of soft vegetables.

Thus, for the purpose of this study an attempt is made to identify those critical determinants of agricultural potential in each of the review areas and to evaluate the irreplaceability thereof. The very favourable and unique mesoclimates for wine grapes in the designated areas place an exceptional agricultural value on the land, amplified by the fact that good soils are also found there. Small tracts of poorly drained soils within these areas could perhaps offer a limited opportunity for some form of non-agricultural development, but the natural wetlands associated with these poorly drained areas will often confound the concept, presenting an environmental consideration.

In the case of Philippi the potential to grow horticultural crops is high although the intrinsic soil potential is low. This is mainly due to its close proximity to the market and labour pool, and the availability of groundwater for irrigation. Crime, safety and the sustainability of the groundwater source appears to severely constrain the viability of the area, but such factors fall beyond the scope of this study and were not factored in.

The potential of the areas currently used for small grain production is relatively high due to higher rainfall compared to most other grain areas in the Western Cape. It is however not considered irreplaceable and thus receives a lower priority for protection than the wine and vegetable production areas.

2.7 Functional Rural Hinterland

Although the rural area of the City of Cape Town only accommodates 1% of its metropolitan population, the rural landscape encompasses an area significantly larger than its urban component.

However, the rural area is perceived as the City's growth frontier, a perception reinforced by the following:

- (i) Agricultural areas traditionally not playing a significant role in urban structuring.
- (ii) Such areas being poorly and collectively defined (e.g. Rural zoning) irrespective of use (e.g. intensive, rural living).
- (iii) Reservation of agricultural areas being determined by a single factor (e.g. soil potential).
- (iv) Such areas often being mono-functional (e.g. grain production).
- (v) Agricultural areas being perceived to be in relative abundance.

In reality, rural areas are and have the potential to be one of the primary building and structuring blocks of the City given the following:

- (i) Such areas comprising primary production units with associated employment, income generation, investment, and secondary and tertiary sector linkages.
- (ii) The agricultural and working landscape contributing to the unique rural landscape which is the physical and visual setting for Cape Town, with such rural landscape also informing the setting of the City's gateway precincts.

Agricultural areas require to be managed fundamentally different to the urban environment in order to achieve a functional rural hinterland. Critical to reinforcing and maintaining this unique valuable City asset and not comprising future City prospects is the protection and reservation of agricultural land which constitutes a functional rural hinterland.

2.8 Protection of High Potential and Unique Agricultural Land

Given that only 4 million hectares of the total 120 million hectares of agricultural land in South Africa comprise high potential land, and recognising that this non-renewable and scarce land resource is being increasingly employed for non-agricultural uses, the National Department of Agriculture has put in place a National Policy on the Protection of High Potential and Unique Agricultural Land (2006).

Such Policy includes the key strategic objectives that underpin the Sustainable Utilization of Agricultural Resources (SUAR) Bill, namely environmental conservation, optimum productivity and economic sustainability. Furthermore, such Policy seeks to protect high potential agricultural land for food security, with the subdivision of agricultural land as well as changes in land use not resulting in poverty traps, but promoting agricultural production and the emergence of progressive entrepreneurs.

Objectives of the Policy include:

- (i) To ensure that high potential and unique agricultural land is used only for agricultural purposes to enhance food security.
- (ii) To provide user-friendly guidelines for agricultural land use changes as well as subdivision of agricultural land.
- (iii) To regulate and control access to agricultural land by proponents of non-agricultural development.
- (iv) To preserve the agricultural land resource for the benefit of communities whose livelihood is based on agriculture for;
 - q Income generation;
 - q food security;
 - q job opportunities; and
 - q a better quality of life.
- (v) To promote knowledge and enhance skills transfer amongst stakeholders on matters pertinent to land use planning in general and preservation of agricultural land, in particular.
- (vi) To ensure expedient and high level decision-making in cases of adjudication.
- (vii) To provide uniform norms, standards and procedures pertaining to changes in the agricultural land use and sub-division of agricultural land.

The following definitions, as put forward in the policy, inform the review:

- (i) *“High Potential Agricultural Land”*; means the best land available for, suited to and capable of consistently producing optimum yields of a wide range of agricultural products (food, feed, forage, fibre and oilseed), with minimum damage to the environment.
- (ii) *“Unique Agricultural Land”*; means land that is or can be used for producing specific high value crops. It is not usually high potential but important to agriculture due to a specific combination of location, climate or soil properties that make it highly suited for a specific crop when managed with specific farming or conservation methods. This includes land of high local importance where it is useful and environmentally sound to encourage continued agricultural production, even if some or most of the land is of mediocre quality for agriculture and is not used for particularly high value crops.

CHAPTER 3 : REVIEW OF AGRICULTURAL AREAS

3.1 Identification of Review Areas

The 12 agricultural areas requiring review as identified by Spatial Planning are illustrated in Diagram 1 and include:

- (i) Helderberg, including:
 - Helderberg – Erinvale
 - Helderberg – Sir Lowry’s Pass Road
- (ii) Macassar and Faure
- (iii) Bottelary and Blackheath
- (iv) Botfontein
- (v) Joostenbergvlakte
- (vi) Olyfantsfontein
- (vii) Dassenberg
- (viii) Mamre
- (ix) Tygerberg Hills
- (x) Constantia
- (xi) Philippi
- (xii) Philadelphia

Reasons for the review of each area vests in the following:

- (i) **Helderberg – Erinvale**
 - Up-slope high value residential development on the pediment slopes of the Helderberg to benefit from panoramic False Bay views, with existing “smallholding” and small farm properties being targeted for sub-division.
 - Potential subdivision pressure to realize urban development models (e.g. agri-estate) in the Helderberg Basin farms (e.g. Lourensford Estate, Fleur du Cap, Vergelegen and Morgenster) as well as on properties abutting the Lourens River, a declared PNE.
- (ii) **Helderberg – Sir Lowry’s Pass Road**
 - Residential development pressure on the Schapenberg, up-slope of Sir Lowry’s Pass Village Road.
 - Urban transformation of the corridor between Sir Lowry’s Pass Village Road and the N2/T2, eastwards towards Sir Lowry’s Pass Village.
 - Urban development pressures north of Gustrouw Road and subdivision within the Firlands and Spring Waters Smallholding areas.
 - Additional residential estate development in the vicinity of the Tredonne and High Riding Smallholding areas.
- (iii) **Macassar and Faure**
 - Developments abutting the MR168, especially north of the N2.
 - Residential and golf estate development east of Faure.
 - Threatened Eerste River and Kuils River corridors.
 - Subdivision of the Macassar Smallholding area.
 - Retention and reinforcement of a corridor between the False Bay coast and the “Winelands”.
- (iv) **Bottelary and Blackheath**
 - Increased up-slope development of the Bottelary Hills north of Langverwacht and east of the MR177.

- (v) **Botfontein**
 - Increased subdivision and non-agricultural use of land south-west of Botfontein Road given the future eastward expansion of the Protea Village/Crammix developments.
 - Increased development pressure on the horticultural area north of Botfontein Road given the southerly expansion of Wallacedene.
- (vi) **Joostenbergvlakte**
 - Future potential impact of the southerly expansion of Fisantekraal and development of the Darwin Road corridor on the horticultural area north of the Joostenbergvlakte Smallholdings.
 - Subdivision and land use change pressures within the “N1 gateway precinct” and the horticultural area south of the N1.
 - Non-conforming use and subdivision pressure within the Joostenbergvlakte Smallholdings.
- (vii) **Olyfantsfontein**
 - Clarification of the reservation of viticulture lands abutting the Perdeberg/Windmeul “winelands” located on the City’s north-eastern boundary.
- (viii) **Dassenberg**
 - Clarification of the agricultural potential of the Klein Dassenberg Smallholding area given development pressures on the eastern edge of Atlantis and along Dassenberg Road towards the N7, and the fixing of an urban edge for Atlantis.
- (ix) **Mamre**
 - Clarification of the agricultural potential of the Mamre Commonage given development pressures within the town, the fixing of its urban edge and the employment of the commonage for agricultural purposes in terms of the Mamre Commonage Land Transformation Project.
- (x) **Tygerberg Hills**
 - Development pressures within the Durbanville Hills area, especially within the Tygervalley Road and Vissershok Road, Adderley and Spes Bona - Wellington Road areas, as well as on the west-facing pediment slopes of Kanonberg (i.e. western Tygerberg).
- (xi) **Constantia**
 - Development pressures, especially for agri-estates, on the pediment slopes of the Constantiaberg in the Tokai-Constantia area.
 - Clarification of the agricultural potential of Sonnestraal Farm.
- (xii) **Philippi**
 - Increasing development pressure and non-conforming use, including informal settlement, within the PHA.
- (xiii) **Philadelphia**
 - Clarification of the agricultural potential for viticulture in the area extending north of the Tygerberg Hills towards Philadelphia and Klipheuwel, especially given the potential realization of *terroir* qualities.

3.2 Assessment Informants

Given that agricultural areas do not derive their significance from soil potential alone, the review areas were assessed in terms of a broad range of informants, including

agricultural potential, economic, land use, landscape and environmental significance in order to inform the functional significance of agricultural areas under review.

Table 1 (Review of Agricultural Areas and Recommendations) details the assessment in accordance with the following:

- (i) **Soil potential** for the various production types (e.g. perennial) as informed by slope, soil depth, drainage and soil texture per Land Type Unit.
- (ii) **Terroir** collectively representing localized production factors (e.g. aspect, soil, micro-climate) which enhance the suitability of certain areas for the production of quality wine.
- (iii) **Irrigation water**, including groundwater, irrigation scheme water or recycled water from waste water treatment plants available for agricultural production.
- (iv) **Primary or secondary production**, with secondary production denoting increased non-agricultural or agri-processing activities, as opposed to primary production (e.g. viticulture).
- (v) **Critical mass** indicating the extent of activity required for operational feasibility.
- (vi) **Agri-tourism** being an indicator of agri-related tourist attractions.
- (vii) **Food security** referring specifically to vegetable production.
- (viii) **Market proximity and crop perishability** indicating the need for market proximity given crop perishability and transport cost.
- (ix) **Existing agriculture** denoting current agricultural activities/use.
- (x) **Homogenous farming area** identifying composite areas of similar agricultural crops types and practices.
- (xi) **Rural living** referring to smallholding areas.
- (xii) **Land use buffer/interface** identifying agricultural areas which serve as a buffer/interface between conflicting uses.
- (xiii) **Agricultural working landscape** referring to production areas which collectively comprise a landscape.
- (xiv) **Cultural/heritage landscape** referring to landscapes reflecting either cultural or heritage aspects.
- (xv) **Natural landscape** denoting extensive unspoilt/undeveloped natural areas.
- (xvi) **Biodiversity interface** denoting agricultural areas serving as interface/buffer between developed areas and areas of biodiversity.
- (xvii) **Open space** referring to agricultural areas which also serve an open space function.
- (xviii) **Recreation** referring to agricultural areas used for active and passive recreation.

3.3 Assessment and Recommendations

In order that each agricultural review area be assessed within both the spatial context of the current and proposed urban edge as well as the agricultural/rural context, such review areas were accordingly divided into appropriate spatial components. These components of the agricultural review areas are depicted on the Agricultural Area Maps (Maps 1.1, 1.2 and 2-12) as areas abutting or encompassed by denoted line segments.

Accordingly each review area component is assessed in terms of the informants detailed in Section 3.2, with each informant being allocated a High, Medium or Low rating reflecting its significance within the local agricultural context.

Consequently, Table 1 (Agricultural Area Review and Recommendations) puts forward the findings and recommendations for the spatial components of each review area, with such recommendations focussing on the significance of agriculture, its functional role and protection required.

Refer Table 1 – attached

(pages 12 – 16)

CHAPTER 4 : PROTECTION OF AGRICULTURAL LAND

4.1 Need for Protection

The role and function of agricultural land in the City of Cape Town as detailed in this review dictates its protection, albeit with varying degrees, as informed by its significance. Such protection also vests in legislative requirements, including the Conservation of Agricultural Resources Act (Act 43 of 1983), Subdivision of Agricultural Land Act (Act 70 of 1970), the Land Use Management Bill (2004) and Sustainable Utilization of Agricultural Resources Bill (2006).

4.2 Categories of Protection and Use

Informed by Agricultural Considerations (Chapter 2) and the Review of Agricultural Areas (Chapter 3), the following categories of protection and future use are put forward within the Review Areas:

- (i) High potential and unique agricultural land worthy of statutory protection given unique production, cultural and heritage attributes.
- (ii) High potential and unique agricultural land worthy of long-term protection given production attributes.
- (iii) Agricultural areas of significant value given existing use (e.g. vegetable production areas) and food security.
- (iv) Areas of significant value given potential and emerging agricultural use due to new cultivation technology, availability of irrigation water, new varieties and crop types, and the realization of *terroir* qualities.

Areas of lower agricultural value or potential within or peripheral to the Review Areas which do not require reservation over and above that afforded by current legislation (i.e. Subdivision of Agricultural Land Act (Act 70 of 1970)) are designated as "other agricultural areas", with such areas comprising part of the functional rural hinterland of the City of Cape Town.

Existing smallholding areas, where located within or peripheral to the Review Areas, are denoted accordingly given their potential impact on agricultural land of high potential or significant value.

4.3 Protection and Use Status of Agricultural Areas

Informed by the assessment (Section 3.3) and the categories of protection and use (Section 4.2), the review areas and their respective spatial components are assigned protection and use status as detailed in Table 2 (Protection and Use Status of Agriculture Areas) and depicted in Maps 1.1, 1.2, 2-12. Table 2 details the protection or use status for the composite agricultural areas comprising each Review Area, together with recommended interventions to secure such status. Detail recommendations per spatial component are outlined in Table 1.

Refer Table 2 – attached

(pages 18 – 21)

CHAPTER 5 : RECOMMENDATION

The review puts forward the following recommendations:

- (i) Recognition of the protection and use status afforded to agricultural areas in this report in the City of Cape Town's review of its IDP and Spatial Development Framework, and compilation of its District Plans.
- (ii) The protection and use status of agricultural areas inform the fixing, amendment and management of the City's urban edge.
- (iii) City of Cape Town, in consultation with the South African Heritage Resources Agency, pursue the statutory protection of high potential and unique agricultural areas identified in this review.
- (iv) City of Cape Town, through appropriate planning and land use management, foster a functional rural hinterland to secure the City's setting, including the City's gateway precincts, its future growth corridors, rural living areas and ecological corridors.
- (v) Intensive food production areas (i.e. vegetables) be secured, and where possible expanded or duplicated in order to reinforce food security, especially where accessible to the urban poor or located in close proximity to waste water treatment works.
- (vi) The City of Cape Town fix development limits (i.e. both urban and agricultural) on hill- and mountain-side slopes in order to protect visual amenity and environmental impact (e.g. slope stability and soil erosion) in accordance with the "Guideline for the Management of Development on Mountains, Hills and Ridges of the Western Cape", Western Cape Government (2002) and current Department of Agriculture guidelines restricting cultivation on steep slopes.
- (vii) The City of Cape Town liaise with the Department of Agriculture : Western Cape in matters pertaining to high potential and unique agricultural land (e.g. protection, rezoning, sub-division).

References

- (i) National Policy on the Protection of High Potential and Unique Agricultural Land, Department of Agriculture, 2006.
- (ii) Guideline for the Management of Development on Mountains, Hills and Ridges of the Western Cape, Western Cape Government, 2002.
- (iii) Physical and Memoir Data, Agricultural Research Council, 1998.
- (iv) Biodiversity Map, City of Cape Town, 2008.