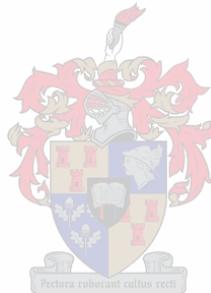


SUSTAINABLE UTILISATION OF THE JONKERSHOEK VALLEY

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**Assignment presented in partial fulfilment of the requirements for the
degree of Master of Town and Regional Planning at the University of
Stellenbosch.**

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DECLARATION

I, the undersigned hereby declare that the work in this assignment is my own work and that I have not previously in part or in its entirety submitted it at any university for degree purposes.

OPSOMMING

Jonkershoek is 'n skilderagtige vallei suidoos van Stellenbosch in die Wes-Kaap. Die studiegebied, wat ongeveer 62 vierkante kilometer beslaan, het 'n aangename landelike atmosfeer wat toegeskryf kan word aan 'n buitengewone kombinasie van kulturele en natuurlike elemente. Dit is in nasionale belang dat hierdie kenmerke vir die nageslag bewaar word.

In hierdie studie word ondersoek ingestel na die lewensvatbaarheid van die volhoubare benutting van die Jonkershoekvallei, tot voordeel van huidige en toekomstige inwoners en besoekers. Daar is eerstens gekyk na verskillende benaderinge in omgewingsetiek, in 'n soeke na 'n verwysingsraamwerk waarteen die mens besluite neem wat die omgewing raak. 'n Bevolkingsprofiel van die inwoners is saamgestel om 'n beeld te form van sosio-ekonomiese toestande in die vallei. Verder is gekyk of die wetlike en beplanningsraamwerk voldoende is om die omgewing te beskerm. 'n Opname is gemaak deur die verwagtinge en behoeftes van inwoners te toets aan die hand van verskeie ontwikkelings- en bewaringsvraagstukke. Praktisyns uit die beplanningsveld is ook betrek by die opname.

Hulpbron bewaring en ontwikkeling blyk die mees toepaslike etiese vertrekpunt te wees vir volhoubare ontwikkeling. Volhoubare benutting is egter slegs moonlik indien 'n balans gevind kan word tussen ekonomiese doeltreffendheid, omgewings-integriteit en menslike welstand. Daar is bevind dat voldoende maatreëls in plek is om die mens en die omgewing te beskerm en dat geïntegreerde ontwikkelingsbeplanning instrumenteel is in hierdie opsig. Die grootste tekortkoming lê op ekonomiese vlak en word veral gemanifesteer in 'n sosio-ekonomiese gaping tussen grondeienaars en voorheen benadeelde gemeenskappe.

Die volhoubare benutting van die Jonkershoekvallei is wel haalbaar, op voorwaarde dat die geïdentifiseerde tekortkominge aangespreek word deur van bestaande en potensiële ontwikkelings- en bewaringsgeleenthede gebruik te maak. In hierdie werkstuk word 'n aantal voorstelle gemaak wat hierdie proses kan bevorder. Die volhoubare benutting van die Jonkershoekvallei is dus 'n haalbare ideaal maar vereis dat dit aktief nagesteef word deur die hele gemeenskap.

SUMMARY

Jonkershoek is a scenic valley situated on the south-eastern periphery of Stellenbosch in the Western Cape. The study area of around 62 square kilometres has a pleasant rural atmosphere that can be ascribed to a unique combination of cultural and natural elements. It is in the national interest that these characteristics be preserved for posterity.

This study represents an investigation into the viability of the sustainable utilisation of the valley, for the benefit of current and future residents and visitors alike. Firstly, a study was made of different approaches in environmental ethics in an effort to find a frame of reference against which people make decision that impact on the environment. The regulatory and planning framework was assessed to establish whether it was sufficient to protect the environment and people. A population profile was compiled to form a picture of the socio-economic conditions in the valley. Finally, a survey was conducted by testing the needs and expectation of residents against several development and conservation issues. Practitioners from the planning field were also involved in this survey.

Resource conservation and development seems to be the most appropriate ethical approach for sustainable development. However, sustainable utilisation will only be possible if a balance is found between economic efficiency, environmental integrity and human well-being. It has been established that sufficient measures are in place to protect people and the environment and that integrated development planning was instrumental in this regard. The biggest shortcoming was on economic level and this is reflected in the socio-economic gap between landowners and previously disadvantaged communities.

The sustainable utilisation of the Jonkershoek valley is attainable, on condition that the identified shortcomings are addressed through the utilisation of existing and potential development and conservation opportunities. In this assignment a number of suggestions are made that could promote this process. The sustainable utilisation of the Jonkershoek valley is an attainable ideal that requires the dedication of the entire community.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Jonkershoek is a scenic valley situated on the south-eastern periphery of Stellenbosch in the Western Cape, only 60 km from the central business district of Cape Town. It has been inhabited since the earliest times, European settlers arriving ca 1679. The current population is estimated at around 640. The valley, with an area of about 62 km², is the main catchment for the Eerste River. In elevation it rises from under 200 metres above sea level to over 1500 metres, with several high mountains peaks forming an imposing visual backdrop. The valley has a pleasant rustic atmosphere, synonymous with the Winelands. This rural character can be attribute to a combination of historical landscape elements and outstanding natural scenery.

At present, Jonkershoek falls under the jurisdiction of the Winelands District Council, but it will become part of the greater Stellenbosch municipal area with the new municipal dispensation in 2001. Jonkershoek is situated in the local municipality WC024. The latter is made up of Stellenbosch, Pniel, Franschhoek, and their respective surrounding areas. At this point it not clear whether WC024 will be known as Simonsberg or Stellenbosch.

1.2 DEMARCATION OF THE STUDY AREA

The study area, as depicted in Map 1 and Map 4, comprises that portion of the Jonkershoek Valley immediately south-east of the residential areas of Rozendal and Karindal, with the south-western edge being a line joining the peaks of Stellenbosch Mountain, and the north-eastern edge being a line joining the peaks of Jonkershoek Mountain. The south-eastern edge of the study area is not determined by the watershed between the Eerste River and the Riviersonderend catchments, but follows the cadastral boundary of the Farm Jonkershoek 358.



Map 1

Jonkershoek Regional context

Legend:

Border of study area 

Scale 1 : 125 000



1.3 PROBLEM FORMULATION

During 1999, public participation meetings were held in Jonkershoek, as part of the integrated development planning process in terms of the Local Government Transition Act (Act 209 of 1993). Compared to other zones in the Stellenbosch district, Jonkershoek public meetings had the best attendance (Winelands District Council 1999b: 2, 1999c:2). This reflects the keen interest of the community in actual affairs, as well as the importance ascribed to the process. At these meetings, it became clear that the various interest groups had divergent expectations for the future of the valley. It also became clear that the valley is under severe development pressure because of its outstanding natural beauty, high cultivation potential and its proximity to Stellenbosch and the Cape metropolitan area.

The main interest groups are agricultural employees, landowners, tourists, the visiting public, and current and former employees of the Council for Scientific and Industrial Research (CSIR), South African Forestry Company Limited (SAFCOL) and the Western Cape Nature Conservation Board (WCNCB). These groups are not homogenous and have internal divisions as far as their expectations for the valley are concerned.

Agricultural employees represent a substantial portion of the population of the valley. Many families, who have been employed in the area for several generations, feel that they are entitled to preferential consideration where non-agricultural employment opportunities are concerned. Increased urbanisation and mechanisation may impact on the opportunities of this group.

Many landowners have invested considerable amounts on relatively expensive land in order to live in this attractive valley. The integrated development planning process highlighted concerns about the future of SAFCOL employees, should forestry activities become redundant. Although some of these residents are a relatively new addition to the area, they have already indicated their desire and intention to remain in Jonkershoek.

SAFCOL is the operator of the forestry industry on land leased from the State. Should their activities be terminated, it may have substantial ecological and social impacts.

Future use of land under their control will have significant implications for nature conservation in the area. Since the Western Cape Nature Conservation Board manages a substantial part of the area, which overlaps the forestry area in places, it has a central role to play in all development alternatives.

The visiting public, especially from neighbouring Stellenbosch, has a significant role to play in the valley. The development of tourism can produce income, especially for people employed in sectors with little potential for growth. Because of the sensitive nature of the conservation areas, there is a maximum carrying capacity that will be violated if tourism is allowed to develop unrestrained.

The main threats to the valley, problems of upkeep, as well as problems stemming from different expectations of stakeholders, are the following:

- **Urban expansion:** There are constant threats of urban expansion resulting from a) the expansion of Stellenbosch town into the valley and b) densification in the valley due to the subdivision of farms into smallholdings, the building of more and bigger houses on farms, often for guesthouses.
- **Lack of architectural and landscaping guidelines:** Because of insufficient co-ordination, an eclectic mixture of old and new styles is eroding the romantic Cape rural character of Jonkershoek.
- **Agriculture on unsuitable slopes:** From time to time new land is planted high up against the mountain on slopes that are too steep, resulting in the loss of soil through erosion and the defacing of mountain slopes.
- **The future of pine plantations:** The expansion of plantations will threaten the fynbos ecosystem as well as the supply of water from the Eerste River. Abandoning the plantations will threaten the livelihood of 15 families (SAFCOL employees) dependent on the industry, as well as those involved in the processing of timber in the district.
- **Expansion of recreation:** There is a great demand for recreational areas, mostly from tourists and people living outside the valley, e.g. hiking routes along the river and access to mountain areas over private land. Landowners are strongly set against such expansion. There is a limit to the recreational capacity of the valley; which

some believe has already been reached. Visitors to the area often wish to overnight in the valley, resulting in the proliferation of **guesthouses**.

- **Rural settlement:** SAFCOL employees have needs for urban facilities such as shops, schools and a clinic. These facilities are expensive to provide and not always compatible with the scenic natural area character of the valley. Some are currently in a legal process to gain ownership of houses, which they have occupied over a period of time.
- **The housing of farm employees:** Farm employees, who make up the bulk of the population, have different needs from that of the landowners. While there is a movement to ensure security of tenure for farm employees, there is a simultaneous reduction in the willingness of farmers to continue housing employees on farms.
- **Informal settlement:** Some residents are concerned that the availability of state land may promote informal or illegal settlement in the area, given the massive shortage of land available for this purpose.
- **Disused facilities:** Due to the restructuring of para-statal such as the South African Forestry Company Limited (SAFCOL), the Western Cape Nature Conservation Board and the Council for Scientific and Industrial Research, some valuable or potentially valuable facilities are not being used optimally.

The development challenges facing the valley are multiple and diverse. Finding optimal solutions is imperative and should be the responsibility and priority of all those involved. Failing to do so will result in insurmountable problems and utilisation potential may be compromised for all, forever.

1.4 OBJECTIVES OF THE STUDY

The first purpose of the study will be to analyse the needs and expectations of the inhabitants of the valley, the expectations of users, the biophysical environment, and from these analyses to determine the strengths, weaknesses, opportunities and threats of the valley. The second purpose will be to try and formulate development and conservation parameters, and principles that could be considered by the relevant authorities and residents to ensure the sustainable utilisation of the valley.

The ultimate objective is to contribute towards the quality of life of present and future residents and visitors alike. This should be possible through the sustainable utilisation of the socio-economic and biophysical assets available in the area. The significance of the study will be that it will bring together and systematise an array of data, and add missing data, so that a holistic integrated view of the problems and opportunities of the valley can be gained. Ultimately the data and results of the research will serve as input to the integrated development framework. Thus, in accordance with the post-modern paradigm, this study should be seen as an input towards the ongoing planning process and not as a final blueprint for the valley.

1.5 METHODS USED IN THE STUDY

This study involves four complementary elements. Chapter 2 starts off with a literature study on environmental ethics and sustainable development. The study focuses on existing in-depth studies in an effort to find guiding principles that may assist decision-makers when weighing up alternatives that involve both man and his environment. All people, knowingly or not knowingly, make decisions against some kind of ethical background.

Chapter 3 looks at the regulatory and land-use planning environment within which development and utilisation take place. This entails a brief overview of both national and provincial legislation that applies to Jonkershoek. The study then turns to provincial land-use planning policy, with the emphasis on the concept of bioregional planning and the implications that it may have for the study area.

Chapter 4 constructs a population and socio-economic profile by looking at relevant census data. This was done by electronically extracting the individual data profiles for the residents of Jonkershoek, from the 1996 national census data bank.

Chapter 5 represents the bulk of the research that was done in support of this study. It starts off by identifying eleven central development issues, which would form part of a comprehensive study on sustainability utilisation. The next step was to identify the main interest group in the valley and to identify people who could and would be prepared to speak on behalf of the identified interest groups. In addition to this, those planning practitioners who are directly and indirectly involved in the field of planning,

pertaining to Jonkershoek, were identified. This approach was followed due to disappointing public response rates to random surveys conducted in the past (Winelands District Council, 1999a: 8). A number of unstructured personal and telephonic interviews were also conducted.

A survey was done to gauge the opinion of the said parties and individuals. Two methods were employed. The questionnaire consisted of eleven questions. Each question started off by making a statement, which contained some basic background information. Firstly, respondents were asked what their opinions were on the matter. Secondly, they were invited to suggest a possible solution or outcome. This method of research was followed because part of this study was to find solutions. The respondents who were involved in the survey were the same people who could actually play leading roles in any public participation process in Jonkershoek.

English or Afrikaans questionnaires were delivered by hand or distributed electronically, e.g. fax and e-mail. A copy of the questionnaire forms part of this assignment (see Addendum B). The respondents were given ample time (one week to one month) to respond. This allowed them sufficient time to structure their own thoughts on the matter. The next step was to collect the individual questionnaires. After looking at the response, a follow-up interview was arranged to clarify some issues and to discuss other issues in greater detail. A complete list of interviews conducted in support of this study has been included (see Addendum A).

Once this study is completed, the writer will give some form of feedback to the participants. This will take the form of follow-up meetings and the electronic distribution of highlights from the research results. A complete copy of the study will also be made available.

In chapter 6, three scenarios are developed on the possible direction that the future utilisation of the Jonkershoek valley may assume. The three most common positions in environmental ethics are a departure point, namely ruthless development, resource development and conservation, and preservationism. The scenarios are then fused/combined to form a theoretical basis for land-use planning directives, which may promote sustainable utilisation in Jonkershoek.

Chapter 7 concludes by suggesting a number of practical guidelines to promote the sustainable utilisation of the Jonkershoek valley.

1.6 LIMITATIONS OF THE STUDY

There are currently a number of sensitive land claims being investigated in the valley, which in some cases even involved legal action. This is set against a background of an extended public participation process, characterised by variable levels of success. Some meetings were disrupted while others failed to attract representatives from all the interested and affected parties. This public participation process will serve as input towards the compilation of some form of integrated development planning framework or structure plan, which specifically relates to Jonkershoek.

In view of the above, the writer had to take special precautions not to interfere or disrupt the process. A precondition for this study was that it had to either promote the process or have no influence at all. Special care had to be taken to protect the identity or opinion of the participants. Another consequence was that controversial issues, especially land claims, had to be dealt with extremely sensitively.

A number of representatives of interest groups or spokespersons were identified with the help of the Winelands District Council. It was however not always possible to clarify the extent and composition of these groups. In addition, it was unclear whether the representatives were elected or not.

Substantial research has been done in Jonkershoek, but most of it is of a highly scientific nature and could not be used in this study.

CHAPTER 2

DEVELOPMENT AND ENVIRONMENTAL ETHICS

2.1 INTRODUCTION

Environmental ethics is a relatively new sub-discipline of applied ethics and philosophy. Originating around 30 years ago, it has developed in response to a perceived environmental crisis. Conventional ethics failed to conceptualise and react to current environmental problems.

When new problems appear, several strategies may be followed. Firstly, the new problem can be dealt with in terms of conventional ethical principals. Secondly, conventional principles are adapted to cover an expanded domain. Thirdly, incorporating radical ideas may develop completely new ethical positions. Finally, the old paradigm may be dismantled and rebuilt in a revolutionary way.

This chapter begins with a study of a number of distinct positions that have developed in environmental ethics. In section 2.3 the term ‘sustainable development’ is analysed by looking at different definitions and approaches to the concept. This is followed by a critical analysis of environmental ethics as such. Finally, the relevance of this theoretical basis for the studied topic is evaluated. This part of the study depends heavily on the work of Prof. J P Hattingh, Associate Professor in Philosophy, Stellenbosch University. He recently made a detailed study on this topic when he wrote an essay titled “Are we there yet? Taking stock of three decades of environmental ethics”. In addition to this, personal interviews were conducted with him.

2.2 DIFFERENT APPROACHES IN ENVIRONMENTAL ETHICS

All people make decision from different ethical positions, also as far as the natural environment is concerned. These positions are loosely integrated sets of values and principles used in a variety of situations to formulate environmental policies or to make environmental decisions in everyday life. Ethical positions are used to justify actions and decisions. However, these values and principles are hardly ever openly articulated or consciously supported.

Environmental ethics can be divided into two distinct schools of thought, namely those that are anthropocentric or those that are ecocentric in their approach. Anthropocentrism regards man as the “central fact or final aim of the universe, interpreting everything in terms of man and his values” (The living Webster’s Encyclopaedic Dictionary of the English Language 1977: 44). Ecocentric or ‘green’ approaches see man as secondary to ecology, with man being only another element in nature.

This study focuses primarily on anthropocentric approaches, namely ruthless development, resource conservation and development, and preservationism.

2.2.1 RUTHLESS DEVELOPMENT (DEVELOPMENTALISM)

The departure point of “ruthless developmentalism” is that only humans are valuable in and of themselves. The value of the non-human world is therefore determined by its value or resource value to humans. In practice this results in the unrestrained exploitation of natural resources (Hattingh 1999:10).

Value is further added by the physical transformation of nature. This transformation process promotes economic growth, which is in turn equated to progress. Continued exploitation and progress is based on the myth of superabundance, assuming that humans can move on once they have exhausted the resources in one place.

Hattingh argues that this kind of radical anthropocentrism lies at the bottom of current environmental problems. Clearly it is not compatible with concerns about the exhaustion of resources or the interests of future generations.

2.2.2 RESOURCE CONSERVATION AND DEVELOPMENT

The resource conservation and development or conservationism approach is essentially still anthropocentric, though more moderate than ruthless developmentalism. The emphasis remains on the value of the physical transformation of non-human resources. There is however an awareness that material growth and resources are limited. Also, present generations have an obligation towards the well-being of future generations and that this should be reflected in their courses of action.

Another characteristic is an aversion to wasting resources. This can however assume two positions. Firstly, waste refers to the inefficient use of resources. Secondly, it refers to not using a resource at all, e.g. not building a hydro-electricity dam in a wild river. Fox (1995:153) believes that an optimum level of resource utilisation can be found by employing utilitarian cost-benefit analyses and science. In other words, the aim is to establish the maximum sustainable yield or that which constitutes 'wise use'.

The American environmentalist, Gifford Pinchot (as quoted by Hattingh 1991:12) adopted this conservationist position. He advocated the wise use and scientific management of federal lands in order to ensure the greatest good, for the greatest number of people for the longest time. Through rational planning and development of resources it was possible to determine a maximum sustainable yield that would conserve resources for future use. However, this resulted in the opening of pristine federal land for mining, grazing and lumber companies. According to Pinchot, scientific management made it possible to receive the maximum benefits from resources, without exhausting it within one generation.

Critics of this position argue that it is similar to ruthless development, but only in a lesser degree. Others view it as half-way between ruthless development and wilderness preservation.

2.2.3 WILDERNESS PRESERVATION (PRESERVATIONISM)

Wilderness preservationists argue that humans can enjoy the instrumental values offered by members and elements of the non-human world. However, according to Fox (1995:155), there is a pre-condition that members and aspects of the non-human world are allowed to follow their own characteristic patterns of existence. This contributes towards the misconception that this is a non-anthropocentric position. The untouched world is still evaluated in terms of the use value that humans get from it.

The following is a list of potential uses for the non-human-world, which in turn justifies preservation:

- Life support system: as a source of vital free goods, e.g. clean air and water, ozone, food and material for shelter.

- Early warning system: as a source of information about the possible deterioration of the environment.
- Silo: as a stockpile of genetic diversity for agricultural and medical purposes, e.g. genetic engineering
- Laboratory: as a resource for scientific study to understand, maintain and sustain life in general.
- Gymnasium: as a space for recreation and a challenge to measure ourselves against.
- Gallery: as a source of aesthetic pleasure
- Cathedral: as a source of spiritual inspiration
- Monument: as a source of symbolic instruction, e.g. as reminders of human freedom, as models of efficiency, as example of harmony and co-operation amongst vastly different entities
- Psychological rejuvenation and development: as a refuge from an otherwise heavily managed existence, to maintain psychological health through bonding with nature.

The position of the preservationist enjoys wide recognition in environmentalist circles. However, some argue that it is not sufficient to merely allocate nominal intrinsic value to aspects of the non-human world. Extensionism and ecological sensibility opposes preservationism on this issue. The radical environmentalist will argue that the preservationist does not consider the political forces that put wilderness areas under threat or the forces that make preservation possible at all.

2.2.4 ETHICAL EXTENSIONISM

Ethical extensionism represents a departure from the anthropocentric approach. Ethical extensionism is an attempt to award intrinsic value to aspects of the non-human world. Supporters would typically advocate the liberation of animals, e.g. not causing them to suffer, terminating animal experimentation and, killing them for food. Singer (as quoted by Hattingh 1999:17) equates human attitude towards animals to racism and sexism.

2.2.5 ECOLOGICAL SENSIBILITY

Ecological sensibility identifies the need for a new environmental ethic, rejecting the mere extension of already existing human values to non-humans. It argues that all living entities have interests, and as such these interests should be respected. In

practice, moral consideration is expanded to include both animals and plants, rejecting human superiority altogether (Hattingh 1999:18).

The essence of ecological sensibility is captured by the following quote of Leopold (as quoted by Hattingh 1999:19):

“A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise”.

The concept “biotic community” implies that the ethical boundaries are expanded beyond the extent of humans alone. He included water, soil, plants and animals, as entities to be respected.

The remaining positions are usually classified as radical environmental ethics.

2.2.6 DEEP ECOLOGY

“Deep ecology” views the individualistic notion of self-realisation as the origin of our environmental problems. It seeks to replace the social atomism, materialism and consumerism of modern society with spiritual self-realisation as an alternative notion of human well-being (Hattingh 1999:21).

2.2.7 SOCIAL ECOLOGY

The social ecology of Murray Bookchin (as quoted by Hattingh 1999:22) links the hierarchical thinking in contemporary society to our environmental problems. It distances itself from the concept of a purely natural environment, since humans have already altered the natural world. Small, independent, self-sufficient communities should therefore replace the existing hierarchical massive scale economies and political structures. Harmony with nature will only be accomplished if humans adopt and engage in a fully conscious, self-determining activity.

2.2.8 BIOREGIONALISM

Bioregionalism calls for a return to small, independent, self-sufficient communities. The emphasis is on learning how to live in a sustainable manner, much like the original natives who inhabited the land. Being essentially mystical, this approach calls for the rejection of capitalism, technology, industrialisation and consumerism, while it

embraces communalism, public participation, appropriate scale, and subsistence living and recycling.

2.2.9 ECOFEMINISM

Ecofeminism equates the domination of nature to the domination of women in a patriarchal society. The solution to the perceived problem includes a re-conceptualisation of the female self, which in turn can help to develop ecological sensibilities for overcoming environmental problems (Hattingh 1999:23).

2.3 SUSTAINABLE DEVELOPMENT

The term sustainability has become almost synonymous with development. The term is often used without proper definition. Clark states that the problem with attempting to define sustainable development is that there is no one definition. It has a life of its own and means something different to everyone (Clark, 2000).

There are two lines of development in the history of sustainable development. The first line starts with increasing concern in western countries about environmental degradation and the incompatibility between the industrial way of life and the continued existence of a safe, healthy clean and rich environment. The other line originated from resistance of poorer countries to policies based on western environmental concerns (Achterberg 1996:171).

The International Institute for Sustainable Development focuses on three global imperatives that need to be in place if sustainable development is to be achieved, namely environmental integrity, economic efficiency and human well-being (International Institute for Sustainable Development, 2000). The National Environmental Management Act (Act 107 of 1998) defines sustainable development as “the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations”. Chapter 1 (4a) of the Act lists a number of requirements that need to be considered for development to be sustainable.

The Brundtland Commission views sustainable development as “meeting the needs of the present without compromising the ability of future generations to meet their needs

(World Commission on Environment and Development 1987:8). The World Conservation Strategy defined sustainable development as the product of five interdependent requirements, namely a) the integration of conservation with development b) the satisfaction of basic human needs c) the achievement of equity and justice d) the provision of social self-determination and cultural diversity and, e) the maintenance of ecological integrity (Winelands District Council 2000b: 65). According to Erasmus, the essence of sustainable development is effective broadly based people's participation in the determination of priorities, the identification and appointment of resources and the selection of strategies. (Kok and Gelderblom 1994:56).

From the above analysis it seems that there is some measure of agreement on a) the balancing of the current and future needs of society, and b) the balancing of social, economic and environmental aspects. In spite of this, opposing interest groups are still likely to emphasis one such aspect at the expense of another.

2.4 ENVIRONMENTAL ETHICS IN PRACTICE

One may wonder, legitimately so, what, if any, is the practical value of environmental ethics. In search of an answer, the work of the environmentalist, Bryan Norton is studied. According to Norton (as quoted in Hattingh 1999:28), philosophers may differ in terms of their persuasions, but they usually support the same policies. This seems to be a unifying factor amongst the supporters of different positions. Norton also addresses the environmentalist's dilemma – that of not wanting to make exclusive use of either economic or moral language when making resource or environmental decisions.

Norton elaborated on the concept of contextual management. On the one hand it is ecologically and scientifically informed and on the other hand it is contextually constrained by the ever-widening spatial and temporal scales within which decision-makers have to act and manage. In the light of this scientific contextualism, the task of environmental ethics is to articulate relevant assumptions as well as the concrete ethical implications for everyday life situations and environmental management practices.

In a practical sense, Norton (1996:213) analysed different spatial and temporal frames within which human aspirations and environmental problems exist. He argues that

within a five year time-frame, autonomy as humans should be respected, enabling them to act as individuals and satisfying needs as consumers. He added that there is nothing really wrong with making use of economic cost-benefit analyses. However, this is not the only time frame within which we operate.

Choices as consumers and producers are more limited in an intermediate time-frame of 200 years. Accordingly, economic behaviour should reflect community interests and the interests of future generations. Finally, in an indefinite timeframe, humans form part of life on earth and for the sake of this global community, we should limit our choices in the narrower context of our lives.

Finally Norton deduced the normative principle that any choice or action is permissible on the condition that it does not destabilise, diminish or compromise the health of the socio-cultural or ecological systems on which it depends for its existence. In practice, this implies that choices based on economic considerations only cannot be justified. It should be evaluated in terms of the wider frames of socio-cultural and ecological considerations, where different kinds of space and time apply.

2.5 CONCLUSION

Environmental ethics is divided into two main schools of thought, namely anthropocentrism and ecocentrism. Planning essentially deals with shaping the relationship between mankind and the environment. With close to six billion people inhabiting the planet, it would be difficult to give serious consideration to any approach which does not award man central position.

A major distinction between the main ethical positions is the degree to which they are prepared to compromise. On the one hand, those whom subscribe to anthropocentrism may compromise environmental integrity, by developing a wilderness area. On the other hand, those whom subscribe to ecocentrism may compromise on human well being, by placing a moratorium on any new development of pristine land. Those who think in monetary terms alone may even be prepared to compromise the integrity of both the environment and people.

As such, none of these approaches meet the requirement of that which constitutes sustainable development, namely a balance between economic efficiency and environmental integrity, within the constraints of satisfying present and future human well-being. Of the various ethical positions studied, “resource development and conservation” seems best equipped to achieve the ideals of sustainable development.

From a planning perspective it is important to note that in any potential development or conservation situation, different role players and interest groups may operate from different perspectives. This is especially true in a multi-cultural society like South Africa, where different population groups enjoy distinctly different levels of economic development. On the one hand one can then safely assume that the level of support for conservation or development may differ depending on the needs and motives of each interest group. On the other hand one should not ignore the possibility that within each given group there may be deep internal divisions. This may be a unifying factor, with different factions from opposing interest groups, agreeing on important issues.

CHAPTER 3

REGULATORY AND PLANNING FRAMEWORK

3.1 INTRODUCTION

In this chapter a study is made of the regulatory and planning framework that shapes the relationship between people, and between man and the environment. The focus is on specific legislation and planning directives that regulates the behaviour of those who reside in or visit Jonkershoek. Subjects include national and provincial legislation, provincial planning policy, bioregional planning, biosphere reserves, current land-use, spatial planning categories, and proposed land-use planning directives.

Over and above the Constitution of the Republic of South Africa (Act 109 of 1996), which sets the foundation for all legislation, there are many other laws and ordinances that may have application in controlling these relationships. However there is no clarity as to which laws should be applied. In the description below, an effort will be made to describe only the relevant laws and ordinances in approximate order of relevance.

3.2 LAND-USE PLANNING ORDINANCE OF THE WESTERN CAPE PROVINCE (15 OF 1985)

The Land Use Planning Ordinance (15 of 1985) has played a significant role in land-use and, conservation and development in recent years. The two main features of the Ordinance are structure plans and zoning schemes. Structure plans distinguish between land designated for development and land for conservation. It has a medium to long-term focus. Claassen (2000:38) describes structure plans as an element of the ordinance that could proactively lead to both development and conservation.

The Ordinance demarcates and controls land-use through zoning schemes, including overlay zoning. Claassen (2000:38) calls this the reactive element of the Ordinance, implying that it only responds once development is proposed. Despite its positive attributes, the Ordinance has been largely discredited because it originated under the previous government. It may soon be replaced by the Planning and Development Act of the Western Cape (7 of 1999). Turning to Jonkershoek, much of the development and subsequent degradation took place under the Ordinance.

3.3 WESTERN CAPE PLANNING AND DEVELOPMENT ACT (ACT 7 OF 1999)

In the Western Cape, the Planning and Development Act (Act 7 of 1999) replaces the Development Facilitation Act (Act 67 of 1995) and the Local Government Transition Act (Act 97 of 1996) by incorporating their provisions. From the Local Government Transition Act, it incorporated preliminary ownership, accelerated development and tribunals. The Act replaces the integrated development plans of the Local Government Transition Act (Act 209 of 1993) with integrated development frameworks.

Integrated development plans promote the integration of all strategies relating to development. The purpose of this move is to optimise resource allocation in a particular geographical area. In this capacity, the integrated development framework lays down strategies, proposals, guidelines and development objectives, which promotes sustainable development and environmental protection. Finally, the Act borrowed enforced environmental impact analyses from the Environment Conservation Act (Act 73 of 1989).

Integrated development frameworks can further be subdivided into a number of sectoral plans. Each sectoral plan deals with a specific aspect or element of integrated planning. In short, Western Cape Planning and Development Act provides for integrated development frameworks, which incorporate sectoral plans such as spatial development frameworks. As such, spatial plans indicate the spatial implications of integrated development frameworks.

Of particular relevance to Jonkershoek is that the Winelands District Council is currently preparing the Winelands Integrated Development Framework. The spatial and land-use implications of the draft spatial plan, which has recently been made available, forms an integral part of this study. This spatial plan is based on the principles of bioregional planning and biosphere reserves. The Biosphere reserves concept is a model for land use planning and resource management, which aims to promote sustainable development.

3.4 ENVIRONMENT CONSERVATION ACT (ACT 73 OF 1989)

Two aspects of the Environment Conservation Act (Act 73 of 1989) are of particular significance, namely section 21 and section 26 regulations. Section 21 regulations identify development activities that require prior approval. Section 26 regulates the procedures for attaining approval. An environmental impact analyses is required to get consent for the activities identified in section 21. The power to approve or reject applications has been delegated to the provincial departments of nature conservation.

Claassen (2000:40) identifies several negative features of the Regulations, namely a) the authority to approve activities listed under section 26 is vested in a government officer, and not a democratically elected body, b) appeals may be directed to the provincial minister who is advised by the very same officer who made the decision against which the appeal is being lodged, c) alternatively, an appeal may end up in court, but this option is only available to the rich d) the Regulations are based on the assumption that the consequences of proposed developments can be accurately predicted through environmental impact analyses and, e) the Regulations duplicates the system of authorisation created under the Development Facilitation Act (Act 67 of 1995) and the planning ordinances.

Parts of this act have recently been replaced by the National Environmental Management Act (Act 107 of 1998). Some provisions remain, including provisions on environmental management advisory committees, special nature reserves, pollution, limited development areas and offence penalties.

3.5 LOCAL GOVERNMENT TRANSITION ACT (ACT 209 OF 1993)

Local governments are required by the Local Government Transition Act (Act 209 of 1993) to compile an integrated development plan, in terms of section 10. The Act promotes sustainable development and public participation. By implication, Jonkershoek can no longer be treated as an independent entity, but will be managed as part of a larger planning unit. Public meetings that were convened in terms of this Act, was a major contributory factor in the identification of the topic for this study

In future, this transitional Act may be replaced by the proposed Local Government Municipal Systems Bill (1999). In the Western Cape, the integrated development

planning process may in future be facilitated in terms of the Western Cape Planning and Development Act (Act 7 of 1999).

3.6 THE DEVELOPMENT FACILITATION ACT (ACT 67 OF 1996)

The purpose of the Development Facilitation Act (Act 67 of 1996) is to facilitate and accelerate the implementation of reconstruction and development programmes and projects. Section 3 lays down general principles of development, under the auspices of provincial development tribunals. Section 28 provides for development objectives to be compiled by municipalities.

Other elements include a) uniform procedures that will promote the provision and development of land for residential and small scale farming and, b) measure that will promote security of tenure by providing early and easy access to finances for land development.

3.7 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

The National Environmental Management Act (Act 107 of 1998) contributes towards development and conservation primarily through the processes and principles that it prescribes. In chapter 1, principles are set out “to serve as the general framework within which environmental management and implementation plans must be formulated” (2.1.c). The Act further emphasises a) the needs of people as being its primary concern b), the need for sustainable development, in an economic, social and environmental sense and, c) the importance of integrated environmental management.

Chapter 5 focuses on integrated environmental management, involving more than the natural environment. It specifically regulates activities or new developments that may have a significant affect on the environment, socio-economic conditions and/or cultural heritage. Section 24 provides mechanism for environmental impact assessment introduced under sections 21 and 26 of the Environment Conservation Act (Act 73 of 1989), and for the provinces to take over these functions (Claassen 2000:41).

Another significant new addition is the clause that provides for private prosecution. Under section 33 any person may act in the interest of the public or the environment, by

prosecuting in response to a violation of regulations that are concerned with the protection of the environment.

3.8 EXTENSION OF SECURITY OF TENURE ACT (ACT 62 OF 1997)

The Extension of Security of Tenure Act (Act 62 of 1997) determines the conditions under which the rural occupiers of land (other than labour tenants) may or may not be evicted. It aims to protect the owner by defining the duties of the occupier towards the owner. The occupier is protected from unfair evictions because of the occupation rights they enjoy under this law. In the process a more stable relationship is created between owners and occupiers, while procedures are in place to deal with both evictions and the extension of occupation rights (Department of Land Affairs, 1997:2).

The relative importance of the Extension of Security of Tenure Act (Act 62 of 1997) for Jonkershoek should not be underestimated. The same applies to the Land Reform Act (Act 3 of 1996). A number of land/housing claims are currently being lodged under this Act, better known for "ESTA Rights". The outcome of these claims is currently a central development issue in Jonkershoek.

3.9 LAND REFORM ACT (ACT 3 OF 1996)

Also known as the Labour Tenants Act, the Land Reform Act (Act 3 of 1996) protects labour tenants against illegal evictions. The Land Claims Court is instrumental in this regard. Another objective is to award labour tenants the right to apply for ownership of that portion of the farm over which they have historically had use rights. This is currently a heated debate-topic in Jonkershoek, like in most agricultural areas nationwide. The advantages and disadvantages of on-farm versus off-farm settlement are under investigation while the development of hamlets in traditionally rural area being considered. This Act may contribute towards the establishment of a hamlet in Jonkershoek.

3.10 FOREST ACT (ACT 84 OF 1998)

The Forest Act (Act 84 of 1998) partially replaces its predecessor, the Forest Act (Act 122 of 1984). Forestry is one of the major economic activities in the upper part of the Jonkershoek valley. The act acknowledges that a) plantation forestry has an important economic role to play, b) plantation forests have an impact on the environment and c)

that plantations need to be managed appropriately. Of special importance to Jonkershoek is the recognition that the state's role in forestry needs to change.

In practical terms, the act promotes the following:

- the sustainable management and development of forests
- community forestry
- the sustainable use of forests for recreational, environmental, educational, economic, spiritual, health and cultural uses
- greater participation in all aspects of forestry and forestry products industry by persons disadvantaged by unfair discrimination in the past.

3.11 NATIONAL HERITAGE RESOURCE ACT (ACT 25 OF 1999)

The National Resource Management Act (Act 25 of 1999) places a responsibility on local authorities to manage and protect conservation-worthy places and areas. Early settlers started cultivating the Jonkershoek valley around 300 years ago. Subsequently, there are numerous buildings and sites of national historic importance. This phenomenon is an asset to the valley and adds to unique character of Jonkershoek.

3.12 NATIONAL WATER ACT (ACT 36 OF 1998)

The National Water Act (Act 36 of 1998) represents a review of the Water Act (Act 54 of 1956) and the Mountain Catchment Areas Act (Act 63 of 1970). While honouring people's constitutional right to have access to sufficient water, it recognises the need for the integrated management of all aspects of water, in order to ensure sustainable and equitable access to this scarce resource.

Some provisions of this Act may have implications for Jonkershoek as a substantial number of farms are adjacent to the Eerste River. The National Water Act abolishes some of the automatic rights to use water, associated with land ownership along rivers. In future, water use will be subject to catchment management and conservation charges that cover the cost incurred. In terms of this Act, all mountain catchment areas are considered water protection areas and thus enjoy protection status. The Eerste River was not a declared mountain catchment area under the Mountain Catchment Areas Act (Act 63 of 1970) (Weidemann, interview).

3.13 NATIONAL VELD AND FOREST FIRE ACT (ACT 101 OF 1998)

At certain times of the year, Jonkershoek is prone to veld fires, although fires form a natural part of the life cycle of fynbos. The risk applies to both private and public land, fynbos, and pine forest. The National Veld and Forest Fire Act (Act 101 of 1998) provides for the establishment of veld fire associations to help prevent, predict, manage and extinguish veld fires.

3.14 CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)

The Conservation of Agricultural Resources Act (Act 43 of 1983) focuses on the a) the combating of invader plants and weeds and b) the conservation of soil, vegetation and water resources. The protection and use of virgin soil and indigenous vegetation are controlled under this Act and is as such of importance to Jonkershoek, especially with regard to sensitive land in private hands.

3.15 LOCAL GOVERNMENT MUNICIPAL STRUCTURES ACT (ACT 27 OF 1998)

The Local Government Municipal Structures Act (Act 27 of 1998) provides for the establishment of three new types of municipalities namely metropolitan, district and local municipalities. In the Jonkershoek region, the Winelands District Council and the Local Transitional Councils will be dissolved. A new district municipality (DC2) will be established, comprising the current Winelands and Breede River districts. Due to a mountain divide, these two areas will always remain two distinct places. Following the December 2000 municipal elections, the Winelands district will be divided into two local municipalities, namely WC023 and WC024. Jonkershoek is situated in the local municipality WC024.

3.16 CAPE NATURE AND ENVIRONMENTAL CONSERVATION ORDINANCE (19 OF 1974)

The aim of the Cape Nature and Environmental Conservation Ordinance is twofold. Firstly, it aims to conserve the natural resources through wise utilisation by providing both protection measures and regulations for utilisation, e.g. hunting and angling. Secondly, this ordinance provides for the establishment of different categories of nature reserves, namely provincial, local and private nature reserves. These are of particular importance in a nature area such as Jonkershoek.

3.17 PROVINCIAL PLANNING POLICY

Jonkershoek is situated in the fynbos biome, which forms part of the world-renowned Cape floral kingdom of the Western Cape. Since 1991, the Western Cape Nature Conservation Board has been promoting the establishment of a system of biosphere reserves throughout the fynbos biome. A biome is a group of ecosystems, which may differ considerably in the species they contain, but they function in ecologically similar ways.

The Department of Planning, Local Government and Housing supported the Western Cape Nature Conservation Board in their efforts. Since 1998, bioregional planning principles have been faded into provincial planning principles. The Department requires that local authorities recognise bioregional planning principles in planning projects that are financially supported by the Provincial Administration of the Western Cape. In practice, this results in the incorporation of the said principles into integrated development frameworks. In support of this, the Department has prepared an information document "Towards the application of bioregional planning and the implementation of UNESCO's biosphere reserve programme in the land-use planning within the framework of Act 7 of 1999 in the Western Cape Province". The UNESCO biosphere reserve concept was accepted as a land management model that focuses on sustainable development (Derrick Moss, interview).

As part of its recommendations, the Provincial Administration of the Western Cape has suggested that the entire province be divided into land-use categories which corresponds with the land management principles of bioregional planning and the Man and Biosphere Programme. Accordingly, the spatial plan of the Draft Winelands Integrated Planning Framework suggests that a system of spatial planning categories be implemented. This system of spatial planning categories is consistent with UNESCO's biosphere reserve concept (United Nations Education, Science and Culture Organisation 2000:www).

3.18 BIOREGIONAL PLANNING

The International Union for the Conservation of Nature defines a bioregion as a "land or water territory, the limits of which are not defined by political boundaries, but by the geographical boundaries of human communities and ecologies" (World Resource

Institute 2000.www). For practical and planning purposes, it is important to align administrative boundaries with bioregional boundaries.

A bioregion is characterised by its landforms, river catchments, vegetative cover and, human culture and history. It should reflect a unit of planning and management that people would identify as “home” (Winelands District Council 2000c: 17). The bioregion is thus the geographic space within which development and conservation programmes are launched, with sustainable development being the objective. Jonkershoek is situated in such a bioregion, namely the Winelands.

International experience has shown that sustainable development is only possible through the conservation of bio-diversity. Bio-diversity conservation requires that environmental integrity be maintained in the bioregional demarcation and land use planning process. This approach has developed into what is generally known as bioregional planning.

In terms of the Global Bio-diversity Strategy (World Resource Institute, 2000), bioregional planning is an integrative multi-disciplinary approach to regional planning and management. It entails the establishment of an ecological and social framework within which governments, business and the community share responsibility for co-ordinating land use planning and devising development options that meet human needs in a sustainable way, without further loss of bio-diversity. In simple terms, bioregional planning strives towards finding a long-term or permanent balance between ecological processes and human needs, within a specific area.

In terms of the new municipal demarcation, WC23 and WC24 (approximately the existing Winelands district) could together qualify as a bioregion (Winelands District Council 2000a:30), with Jonkershoek being located within WC024. This sub-district forms a geographic and socio-economic entity for the purpose of integrated planning.

3.19 BIOSPHERE RESERVES

The biosphere reserve concept is a spatial model for the implementation of bioregional planning principles. It originated from UNESCO’s Man and Biosphere Programme, which translates sustainable development into practical terms (United Nation

Education, Science and Culture Organisation 2000:www). The biosphere reserve concept is a model for land use allocation and management, designed to deal with harmonising the conservation of bio-diversity with its sustainable use.

Biosphere reserves have three basic, but complementary functions (Winelands District Council 2000e: 27):

- to contribute to the full hierarchy of conservation of bio-diversity, including landscapes,
- to foster economic and human development which is socio-culturally and ecologically sensitive
- To foster support for research, monitoring, education and, information exchange related to local, national and global issues of conservation.

The biosphere reserve model consists of three physical elements (Cape Nature Conservation 1999; 10):

- **CORE AREA** This area enjoys statutory protection and utilised for low-impact activities that are non-disruptive and non-consumptive, while protecting bio-diversity. Land-uses include research, environmental education and recreation. Core areas are mostly public land, but can also be privately owned if sufficiently protected.
- **BUFFER ZONE** This area usually surrounds the core area and forms an additional level of protection against human activity. Uses include co-operative and non-consumptive activities such as environmental education, ecotourism, and research. Buffer zones are usually in private or community ownership.
- **TRANSITION AREA** This area accommodates consumptive and non-consumptive activities such as agriculture and settlements. Sustainable resource development in this area is made possible through co-operation between interest groups. Private or community ownership is the rule.

3.20 SPATIAL PLANNING CATEGORIES

A spatial framework, which forms part of the Draft Winelands Integrated Planning Framework (2000a, b, c, d, e) has been prepared by Dennis Moss Partnership, in accordance with the UNESCO Biosphere Reserve concept. Spatial planning categories have been determined at provincial level and it has been suggested that the categories be applied to the entire Western Cape Province. This framework is important to this study as it may have far-reaching implications for future land-use in Jonkershoek, as will be demonstrated in section 3.22. A more complete description of the spatial planning categories has been included as an in this report (see Addendum C).

Seven categories for land-use classification have been identified:

- **Category A** comprises a core of relatively undisturbed natural area with ecological or cultural value. Two sub-categories have been identified, namely wilderness areas and other statutory conservation areas.
- **Category B** acts as a buffer between categories A and C. Not only does it link core areas; it also extends conservation efforts to ecologically and scenically important areas. There are four sub-categories: public conservation areas, private conservation areas, ecological corridors and rehabilitation areas.
- **Category C** represents agricultural areas, which can be subdivided into extensive and intensive uses
- **Category D** covers urban related areas, with little natural environments remaining, but where sustainable resource utilisation takes place. Sub-categories include: district towns, main local towns, local towns, rural settlements, institutional settlements, on-farm settlements, farmsteads, tourism facilities, resorts and related uses, and any use not covered by the previous sub-categories.
- **Category E** represents industrial areas as the places where the most intense levels of human activity take place. There are four sub-categories, namely agriculture, light, heavy and extractive industry.
- **Category F** incorporates surface infrastructure necessary for the maintenance of settlements and economic activities. Sub-categories include: national, trunk, main, divisional and minor roads, 4x4 trails, railway and power lines, communication structures, reservoirs and dams, and 'other buildings and structures.



Map 2
Jonkershoek
Current land-use

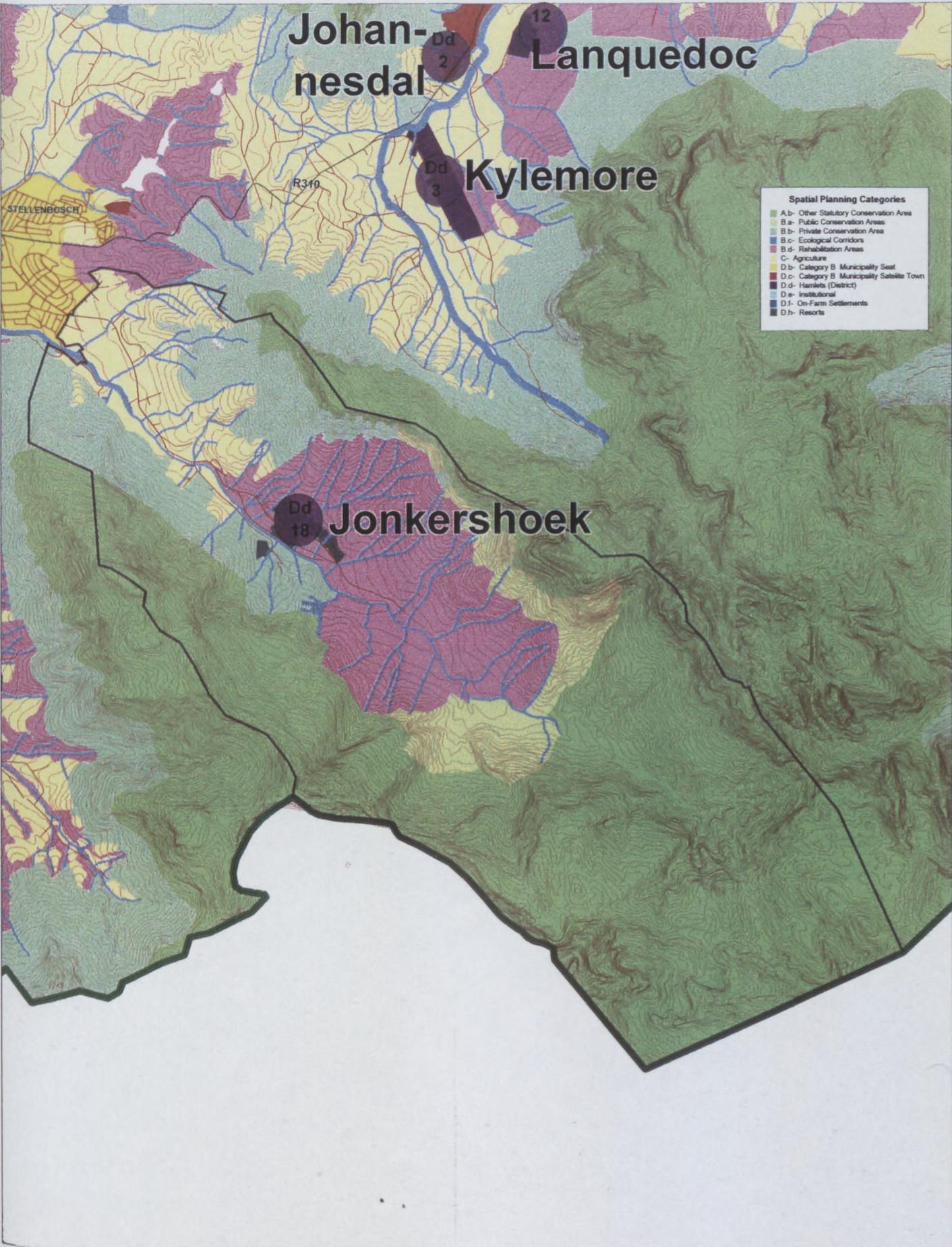
Source: Winelands District Council, as prepared by Dennis Moss Partnership

Legend

- A – Agricultural precinct
- B – Para-statal precinct
- C – Forestry precinct
- D – Conservation precinct

Scale 1 : 85 000





Spatial Planning Categories	
■	A.b- Other Statutory Conservation Area
■	B.a- Public Conservation Area
■	B.b- Private Conservation Area
■	B.c- Ecological Corridors
■	B.d- Rehabilitation Areas
■	C- Agriculture
■	D.b- Category B Municipality Seat
■	D.c- Category B Municipality Satellite Town
■	D.d- Hamlets (District)
■	D.e- Institutional
■	D.f- On-Farm Settlements
■	D.h- Resorts

Map 3

**Jonkershoek
Proposed spatial planning categories**

Scale 1 : 75 000



Source: Winelands District Council, as prepared by Dennis Moss Partnership

3.21 CURRENT LAND-USE

Jonkershoek has a predominantly rural character. The valley can be divided into four distinct land use areas (see Map 2). Moving up in the valley, from the urban edge of Stellenbosch, the first part is a primarily agricultural precinct. Annual crops are the main forms of cultivation, with patches of perennial crops and fynbos. There are two wineries in the valley. A number of farmhouses, employee housing and houses on smallholdings are spread out along the valley floor. Higher slopes are covered in fynbos and natural grass, with a few houses placed high up on the mountainside.

In the centre of the valley there is a para-statal precinct. The majority of the structures can somehow be linked to current or earlier public sector activities, which includes fish farming, research, forestry and nature conservation. Other uses include recreation and education facilities. These buildings, together with related employee housing form a small urban node of low density.

Adjacent to the para-statal precinct, in a south-western direction, is the forestry area. This area is covered in exotic pine forests, with some patches of fynbos in-between.

The upper-reaches of the valley are characterised by sensitive fynbos, which surrounds the tributaries of the Eerste River. The Eerste River runs more or less down the centre of the valley. The slope increases until the topography becomes mountainous.

3.22 PROPOSED LAND USE PLANNING DIRECTIVES FOR JONKERSHOEK

3.22.1 BACKGROUND

Future land-use patterns may look distinctly different from what is happening at the moment. Jonkershoek land-use planning is covered in the spatial framework of the Draft Winelands Integrated Development Framework (see Map 3). Although not final yet, the proposed Jonkershoek land-use planning directives have been determined in accordance with UNESCO's Biosphere reserve concept (United Nation Education, Science and Culture Organisation, 2000). A unique set of directives accompanies each respective spatial planning category. If accepted, the proposed spatial planning categories may initiate wide spread changes in the valley. In essence, the main

difference between current land-use directives and the proposed system is that the latter provides for a more comprehensive range of land uses, each specified in greater detail. For example, under the current system, a farm would typically be designated for agriculture, in its entirety. Under the proposed system, different areas may be designated for different land-uses, e.g. residential, agricultural, industrial and conservation (Derrick Moss, interview).

The proposed land use directives are important as they have a direct impact on what people may or may not do on land. The directives, as illustrated below are not mandatory, but they may play a deciding role in the granting or refusal of any future application for a change in land-use.

The proposed spatial planning categories for Jonkershoek are as follows:

The agricultural precinct

The agricultural area currently under cultivation remains designated as such. However, private land on the upper slopes, above current farmland, has been designated private conservation area. The Eerste River and its subsidiaries, through out the valley, are to be categorised as ecological corridors. Several new land-use directives have been suggested for the transportation routes, which connects Stellenbosch with the upper valley.

The para-statal precinct

Five spatial planning categories have been identified for the middle part of the valley. There is presently an urban node of relative low density. This area has been designated as both a resort and a hamlet. Besides the ecological corridors, the area surrounding the hamlet is designated for either rehabilitation or as private conservation area.

The forestry precinct

The majority of what is currently covered in a mixture of pine forests and fynbos has been earmarked for rehabilitation. A network of ecological corridors covers this precinct.

The conservation precinct

The land surrounding the forestry precinct is designated as public conservation area. The mountainous area surrounding the valley forms part of the core conservation area, and is classified as a statutory conservation area. It should be noted here that it does not qualify as a wilderness area as such.

The following sections are summaries of the land-use directives, which apply to different land-use categories. Only those relevant to Jonkershoek are discussed, namely agriculture, rural settlement, private conservation areas, public conservation areas, statutory conservation areas, rehabilitation, transportation routes, resorts and ecological corridors (Winelands District Council 2000d: 200-230).

3.22.2 LAND-USE DIRECTIVES FOR AGRICULTURE

At present the term “agriculture” encompasses several different land uses, e.g. cultivation, residential, light industrial and even some forms of retail. It is suggested, under the Biosphere Reserve concept that the surface used for agricultural purposes be reserved for that purpose only. The land on which buildings and structures are located are to be demarcated and reclassified as urban-related, industry or surface infrastructure, as applicable. It is suggested that authority to change from one spatial planning category to another may in future be vested in the Winelands District Council planning and engineering department, or its equivalent under the new dispensation (Winelands District Council, 2000b:206). The approval of new building plans will only be considered after the applicable reclassification of land-use.

3.22.3 LAND USE DIRECTIVES FOR RURAL SETTLEMENTS

A total of 18 rural settlements are envisaged in the Winelands. All are extensions of existing rural settlements. Jonkershoek is one of them (see map 3).

The purpose of a rural settlement is to accommodate workers in the agricultural industry, while facilitating security of tenure. The services and facilities provided should promote sustainable community development. Economically viable market gardens are to be provided, with controls to regulate continued future usage (Winelands District Council, 2000b:215).

Size should however be determined by factors like the visual carrying capacity of the location and the value of agricultural land. Urban design and architectural control will apply. Detailed sectoral plans are to be prepared for each proposed rural settlement and it has been suggested that each be operated as a special management zone.

Special management zones are areas that are managed in terms of a formal agreement between landowners and individual local authorities. Landowners agree to manage land in accordance with International Organisation for Standardisation 14001:1996 Environmental Management System. In exchange, the landowners may be granted development right, subject to specific condition. The objective is to promote sustainable development (Winelands District Council 2000b: 221).

3.22.4 LAND-USE DIRECTIVES FOR PRIVATE CONSERVATION AREAS

Land-use directives for private and public conservation areas are more or less the same, the main difference being that a private conservation area does not enjoy statutory conservation status, unlike its public counterpart. The main purpose of this category is to protect the integrity of the core areas by forming a buffer around it.

Directives include a limitation of agriculture development, especially on the upper mountain slopes. Any new development should be subject to an environmental impact assessment under sections 26 and 28 of the Environment Conservation Act. Preferences will be given to developments that facilitate environmental education, research and nature-based recreation, e.g. ecotourism.

In return for the pro-active conservation of buffer areas, limited sustainable development rights in previously disturbed areas may be considered, e.g. a quarry turned into an angling pond. Such developments should be managed in accordance with an approved environmental management system. Management programs should also be establishment for the protection of rare endemic and endangered plant, and animal species. Plantations and invasive alien vegetation should be removed, without compromising those who are dependent on it (Winelands District Council 2000d: 202).

Finally, the establishment of conservancies should be promoted. This aspect is described in greater detail in section 5.11.

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3.22.5 LAND-USE DIRECTIVES FOR PUBLIC CONSERVATION AREAS

At the very top of the valley, between the area designated for rehabilitation and the statutory conservation area, lays state-owned land, mostly covered in fynbos. As part of the buffer zone, it surrounds the core area. Land-use directives are similar to those for private conservation areas, as discussed under section 3.22.4.

3.22.6 LAND-USE DIRECTIVES FOR STATUTORY CONSERVATION AREAS

Statutory conservation areas, e.g. parks and reserves, provide for the conservation of bio-diversity, outdoor recreation and limited sustainable resource use. The main idea is to keep the area in its pristine state. This applies to the flora and fauna as well as the landscape. Approved alteration of the natural environment will be allowed for the establishment of facilities that support research and environmental recreation. There should be a strict prohibition of all disturbances to the landscape, including 4x4 trails and the braai fires of day visitors.

The establishment of low impact recreational facilities, e.g. hiking and mountain-biking trail, and picnic sites should be promoted. The same applies to an infrastructure that supports environmental education. Access will however be limited and restricted by permit.

In Jonkershoek, the area classified as a statutory conservation area is mostly on the virtually impassable mountain slopes. Mountain related ecotourism and research are some of the only possible activities. The proximity of Stellenbosch University and some educational facilities in the valley should promote both research and ecotourism.

3.22.7 LAND-USE DIRECTIVES FOR REHABILITATION

A large tract of land in the centre of the Jonkershoek valley has been designated for rehabilitation. Rehabilitation applies to those areas which, despite significant alteration/degradation, justify to be rehabilitated to their natural state, or near natural state. Degradation is usually caused by consumptive land-uses, e.g. agriculture, forestry, excavations, earthworks and mining.

A number of guidelines for the rehabilitation of degraded areas have been proposed. It is suggested that any activity that disturbs the landscape be strictly controlled. All necessary measures should be taken to rehabilitate disturbed sites. Visual barriers or screens can be utilised to cover up damage.

Programmes should be established for the eradication of alien vegetation. Preference should then be given to endemic plant species in replanting programs. This also applies to the rehabilitation of pastures. Once the rehabilitation process has been finished, the area should be reclassified to public or private conservation areas, or ecological corridors.

Most of the Jonkershoek pine plantations have been designated for rehabilitation and will probably be reclassified as a public conservation area and/or biological corridor. Due to the sensitive nature of the catchment area, forestry is regarded as undesirable. The forest is currently public property and likely to remain as such. Other possible rehabilitation areas include cultivated slopes that are too steep and often characterised by poor soil quality, and areas degraded by bush fires (Winelands District Council 2000d: 205).

3.22.8 LAND-USE DIRECTIVES FOR TRANSPORTATION ROUTES

A narrow two-lane tar road winds from the edge of Stellenbosch town up to the entrance of the Jonkershoek nature reserve. Although the route is scenic, it is quite dangerous in places, with automobiles, farm vehicles, cyclists and pedestrians moving up and down its length.

In the land-use directives it is suggested that special speed reducing measures be introduced to make roads less dangerous, where applicable. Upgrading the quality of the visual environment should also be a priority. Scenic main roads should be designated as such and appropriate signage is to be installed. On such routes, provision should be made for cyclists. A bicycle trail has been constructed along a large part of the Jonkershoek road.

3.22.9 LAND-USE DIRECTIVES FOR RESORTS

In Jonkershoek, an area on the central valley floor has been designated as a resort, which is essentially tourist related. Resorts may include some residential housing. Currently, the area is characterised by structures associated with the administration of the para-statal, youth camping facilities and other tourism related amenities. It is in the vicinity of the same area where a possible hamlet is envisaged.

The directives are available for the promotion of attractiveness and compactness in tourism and recreation related developments. The same directives apply to rural settlements and resort-areas. Rural settlements have been discussed in Section 3.22.3. In the case of tourism and recreation related developments, the emphasis is on a) the sensitive reuse of existing facilities, especially when historically significant, b) establishing or upgrading attractive facilities with respect for the character of the district, c) co-operation between land-owners and the local authorities as well as between neighbouring land owners d), promoting the well-being of previously disadvantaged communities, e.g. development programmes or the cross-subsidisation of housing and, e) environmentally sensitive land management (Winelands District Council 2000d:222).

3.22.10 LAND-USE DIRECTIVES FOR ECOLOGICAL CORRIDORS

The Eerste River and its tributaries form a network of ecological corridors throughout the valley. Ecological corridors are natural linkages between ecosystems, which promote the sustenance of natural processes by allowing animals and plants to migrate, e.g. tracts of natural vegetation and rivers. Corridors usually add to the visual and biophysical quality of an area.

Corridors should be systematically researched and monitored. An absolute minimum of 10 meters should be maintained, while alien vegetation should be actively, yet carefully, replaced. Corridors are considered part of the buffer zone (Winelands District Council 2000d: 204).

3.23 CONCLUSION

During the past century the cultural and natural landscape of predominantly rural Jonkershoek changed significantly. Some of these changes are virtually irreversible, e.g. the replacement of large fynbos areas with pine forests, the establishment of vineyards on the upper mountain slopes and the building of houses high up on the mountainside. No matter how well intended or economically viable these alterations seemed at the time, most people would agree that Jonkershoek would have been better off without them. The regulatory and planning framework failed to protect the valley from such shortsighted interventions.

Since the inception of a new democratic dispensation in 1994, the regulatory and planning framework have improved in many ways. The process of change has by no means been completed yet. New and proposed legislation should be in a better position to protect both the community and the ecology in future, marking a new era in the history of Jonkershoek. However, there are no guarantees. Due to intense population pressure and the need for economic growth, the valley may yet be faced with another set of challenges.

CHAPTER 4

POPULATION AND SOCIO-ECONOMIC PROFILE

4.1 INTRODUCTION

Individuals, by anonymous data records of all census participants were accessed electronically. Jonkershoek is identified as enumeration areas 1090120 and 1090154 (see Map 4) in the 1996 national census (SSA 1996). The census data were also collected for households, e.g. the levels of service delivery and dwelling size. In this study comparisons are often made in terms of population groups. This was done in order to highlight inequalities and to focus attention on areas where improvement is needed most.

The figures shown here could have changed in the five years since the 1996 census, but should still be sufficient for the purposes of this study.. Making population estimates (growth) for such a small population can be full of pitfalls. For example, the closure of one major employer, such as a para-statal company, could significantly boost unemployment figures. No previous census data record, specifically pertaining Jonkershoek, could be found.

4.2 POPULATION FIGURES FOR JONKERSHOEK

According to the 1996 national census statistics, around 630 people inhabited Jonkershoek. Coloured inhabitants form the biggest group at 45%. This was followed by whites who made up about 32% of the population. Black inhabitants represent approximately 11% of the population, while almost as many did not specify their population group (see Table 4.1).

For the total population, the number of males and females are more or less evenly distributed. The only significant exception is that black males outnumber black females by two to one. This may be the result of past employment practices such as the use of gender specific migratory labour or the provision of male only hostel accommodation. It is however to be expected that this trend may have changed since 1996, with increased migration being at the order of the day.

An analysis of household data revealed a significant phenomenon. Coloureds form the largest group of inhabitants (45% Coloured vs. 32% whites), but whites represent the largest number of households (40% whites vs. 38% Coloureds). It can thus be deduced that the average Coloured household is larger than the average white. This may be due the higher fertility rates among Coloureds (see Figure 4.1).

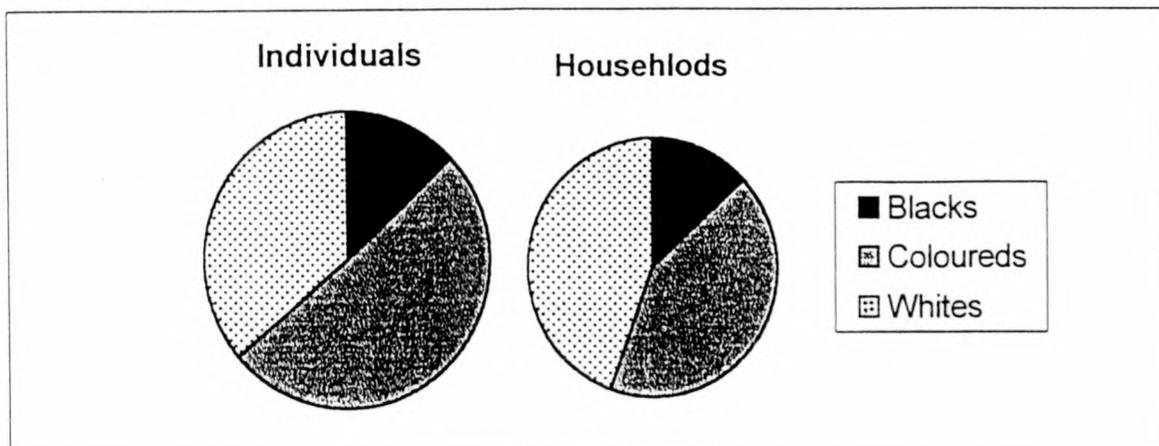
Households are often used as the units for public spending. If this was done in Jonkershoek, the white population would benefit more than the Coloured population. Although there are more White households, the white population is smaller than the Coloured population.

TABLE 4.1 POPULATION FIGURES FOR JONKERSHOEK*

GENDER	POPULATION GROUP				
	BLACK	COLOURED	WHITE	UNSPECIFIED	TOTAL
MALE	50	136	96	36	318
FEMALE	23	146	105	37	311
TOTAL	73	282	201	73	629
% of total population	11	45	32	11	100
Number of Households	22	71	74	19	186
% of total households	12	38	40	10	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

FIGURE 4.1 COMPARISON OF RELATIVE POPULATION GROUP AND HOUSEHOLD SIZES



4.3 AGE DISTRIBUTION

Jonkershoek has a relatively young population, with 32% being of a highly reproductive age (15-29 years). Almost 80% of the population are under the age of 45. Fifteen percent of the population is between 45 and 59 years of age, while only 7% of the population is 60 years or older (see Table 4.2).

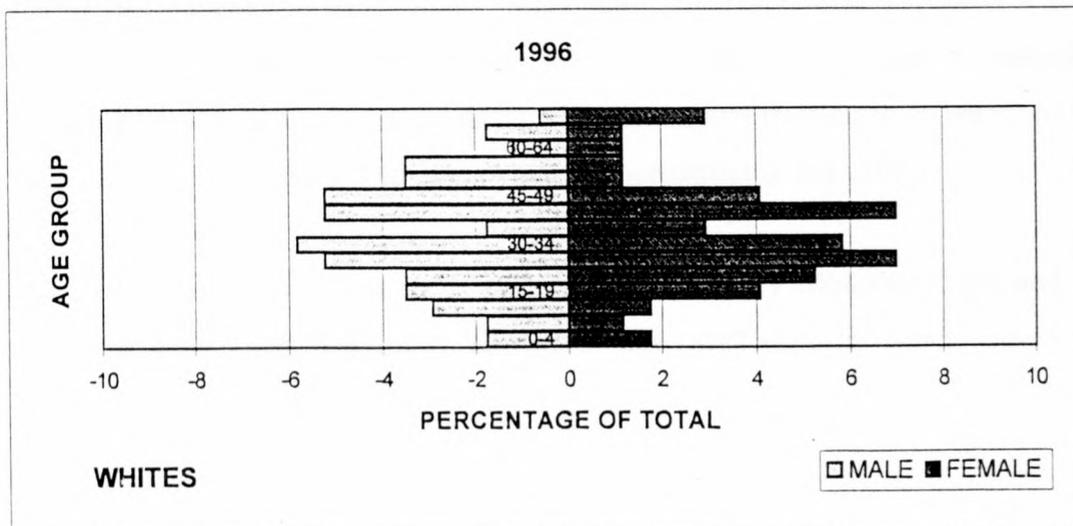
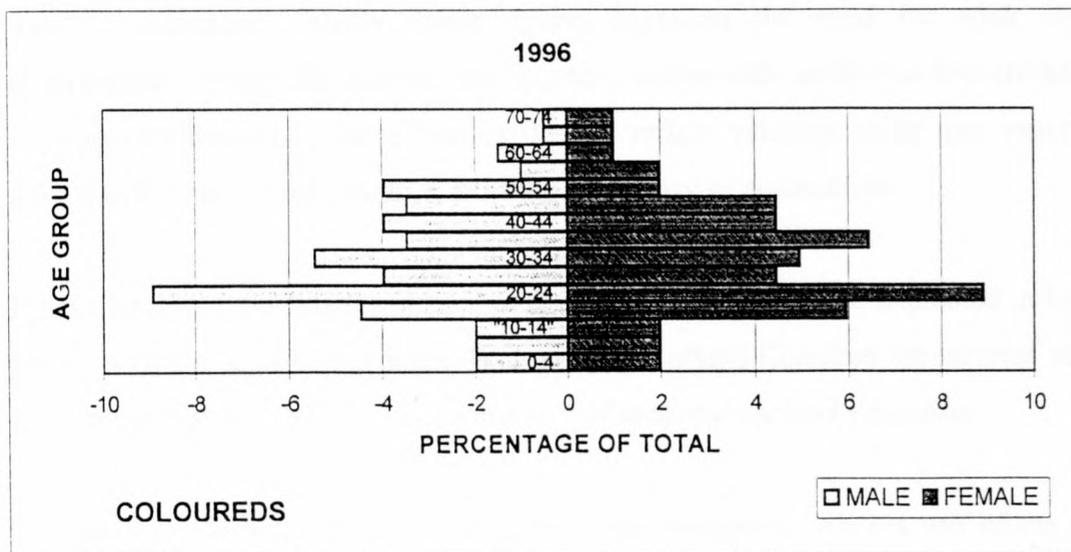
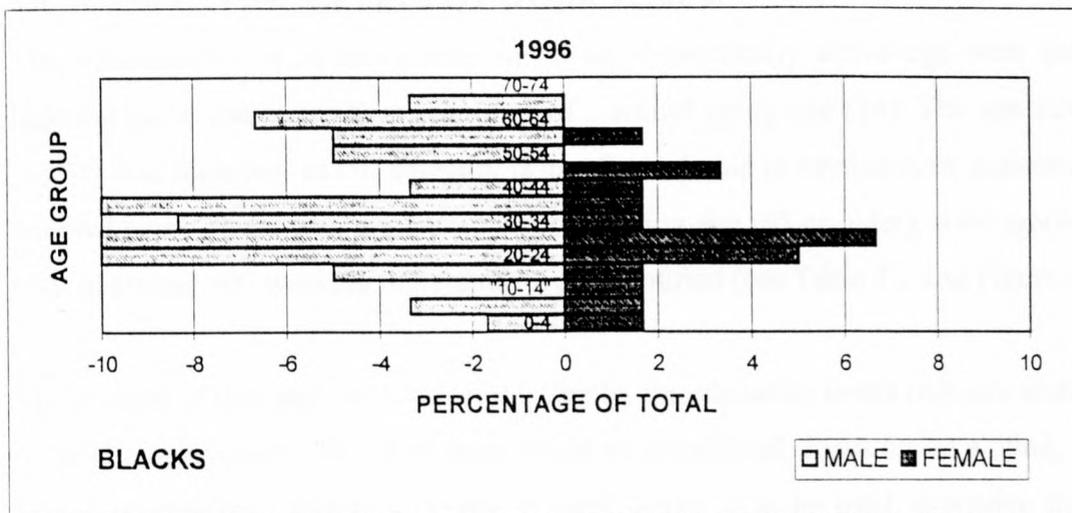
Figure 4.2 depicts the age structure of different population groups in Jonkershoek. These pyramids were constructed for a relatively small population, which makes the results less effective than for larger populations. The black male population is larger than the female populations, probably due to migratory labour practices. In all three population groups, there were relatively few children under 15 years. One explanation may be the absence of a school in the valley. The presence of migratory labour could also have contributed towards this trend. Coloured males and females between the ages of 15 and 24 represent the largest age group, while the average age of whites is higher than that of Coloureds.

TABLE 4.2 AGE DISTRIBUTION BY POPULATION GROUP*

AGE	BLACK		COLOURED		WHITE		UNSPECIFIED		TOTAL	
	M	F	M	F	M	F	M	F	M	F
0-14	8	6	31	39	18	18	11	11	68	74
15-29	16	8	44	44	24	33	14	15	98	100
30-44	12	3	32	35	26	27	8	9	78	74
45-59	6	6	24	20	22	11	2	1	54	38
60+	8	0	5	8	8	12	1	0	22	20
TOTAL	50	23	136	146	98	101	36	36	320	306

*Information relates to Jonkershoek and was derived from 1996 census statistics.

FIGURE 4.2 AGE DISTRIBUTION IN JONKERSHOEK, CENSUS 1996



4.4 EDUCATION LEVELS OF WORK FORCE

The education levels of those who are of an economically active age were studied, ignoring those who are still in school or of a school going age (14). The age category '15-19' was included, as this category is usually included in employment statistics on a national level. Those who are retired or of a retiring age (65 or older), were ignored. A total of around 400 working individuals were identified (see Table 4.3 and Figure 4.3).

The purpose of this analysis is threefold. Firstly, the education levels indicate what kind of local employment creation projects could be considered, focusing on skilled, semi-skilled or unskilled labour. Secondly, if local labour is to be used, extensive training may be necessary. Thirdly, these figures highlight the need for adult literacy programmes. As with the national census, those adults with Grade 6 or less are deemed illiterate. Unfortunately these figures do not reflect valuable skills and experience gained over time by, for example, working in forestry or aquaculture.

Blacks represent the smallest group, a phenomenon which can be explained in historic terms, with the area being in the Western Cape where Coloured labour was usually preferred. Most blacks (62%) had some sort of secondary school education.

Coloured employees represent the biggest employee group. Almost half of the group (47%) can be considered illiterate, while only one respondent indicated a tertiary education. The main reasons for this may be a) the historic lack of educational opportunities, b) those who did attain an education, chose to migrate, in search of better opportunities c) limited skilled employment opportunities in the valley.

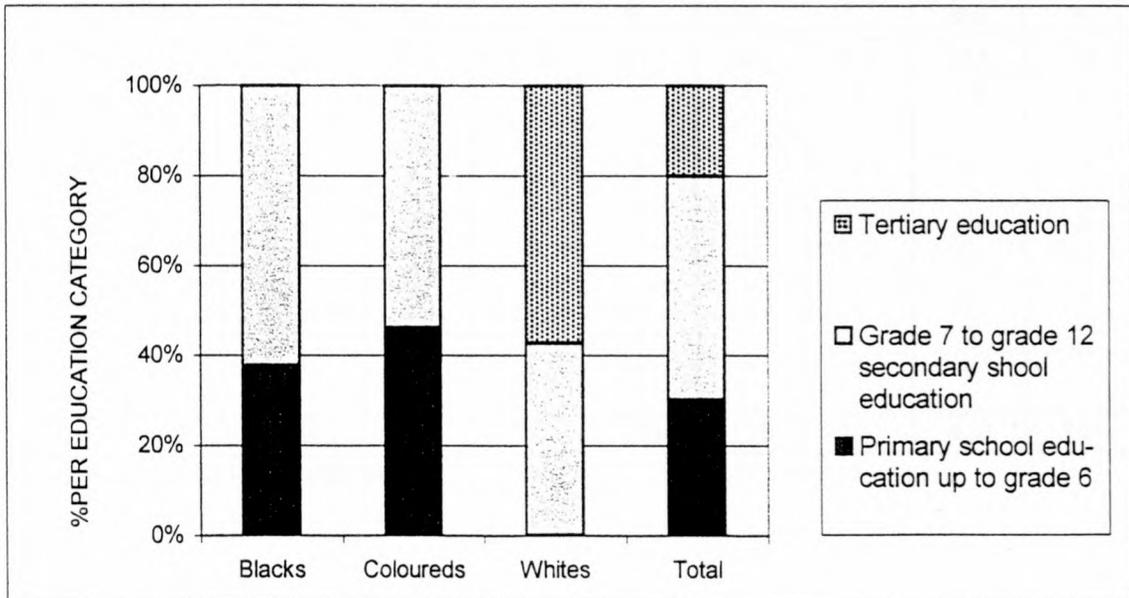
The majority of white residents had some sort of tertiary education. Educated white residents were often employed elsewhere like Stellenbosch, which offers more opportunities for skilled labour.

TABLE 4.3 HIGHEST LEVEL OF EDUCATION OF WORK FORCE (15-64YRS)*

HIGHEST LEVEL OF EDUCATION	POPULATION GROUP							
	BLACK		COLOURED*		WHITE*		ALL #	
	No.	%	No.	%	No.	%	No.	%
Primary school education up to Grade 6	20	35	95	46	1	0	122	30
Grade 6 or less - Internationally regarded as Indicator of Illiteracy								
Grade 7 or Secondary school Education up to grade 12	33	65	111	54	56	42	202	50
Tertiary education	0	0	1	0	75	58	82	20
TOTAL	53	100	207	100	132	100	404	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

FIGURE 4.3 EDUCATION LEVELS OF THE WORK FORCE (15-64 YEARS)



4.5 EMPLOYMENT LEVELS

Jonkershoek enjoys relatively high levels of employment, compared to national rates. On average, 80% of the population are employed, while only 5% are unemployed (see Table 4.4).

The national average unemployment rate is 34%, while the Western Cape is the province with the nation’s lowest unemployment rate at 18% (SSA 2000). The Jonkershoek figures do not indicate whether the majority of the population is meaningfully employed. The unemployed probably moved else where in search of

work. It may be that the unemployment situation has deteriorated since the last census, in line with the national trend of job losses in the formal sector.

Many residents are involved in seasonal employment, e.g. grape harvest. But these jobs are limited, resulting in competition for employment. This often leads to friction between those who have been in the valley for an extended period, and those who are new to the valley, or perceived as such. This has led to racial tension in the past (Cartwright, interview).

TABLE 4.4 EMPLOYMENT STATUS OF WORK FORCE (15-64YRS)*

EMPLOYMENT STATUS	POPULATION GROUP							
	BLACK		COLOURED		WHITE		ALL	
	No.	%	No.	%	No.	%	No.	%
Employed	39	80	139	81	94	69	311	75
Unemployed - not looking for work	5	10	8	5	0	0	15	4
Not working - not looking for work	0	0	4	2		0	4	1
Housewife	2	4	7	4	12	10	24	6
Student	3	6	7	4	24	17	43	11
Pensioner/retired	0	0	1	1	3	2	5	1
Disabled	0	0	3	2		0	3	1
Not working - none of the above	0	0	2	1	3	2	5	1
TOTAL	49	100	171	100	136	100	410	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

4.6 OCCUPATIONS

An analysis was made of residents who are in the economically active age group, from 15 to 64 (see Table 4.5 and Figure 4.4). 'Elementary occupations' formed the biggest group (29% of the total). This can be the result of low skill levels and high levels of employment in agriculture.

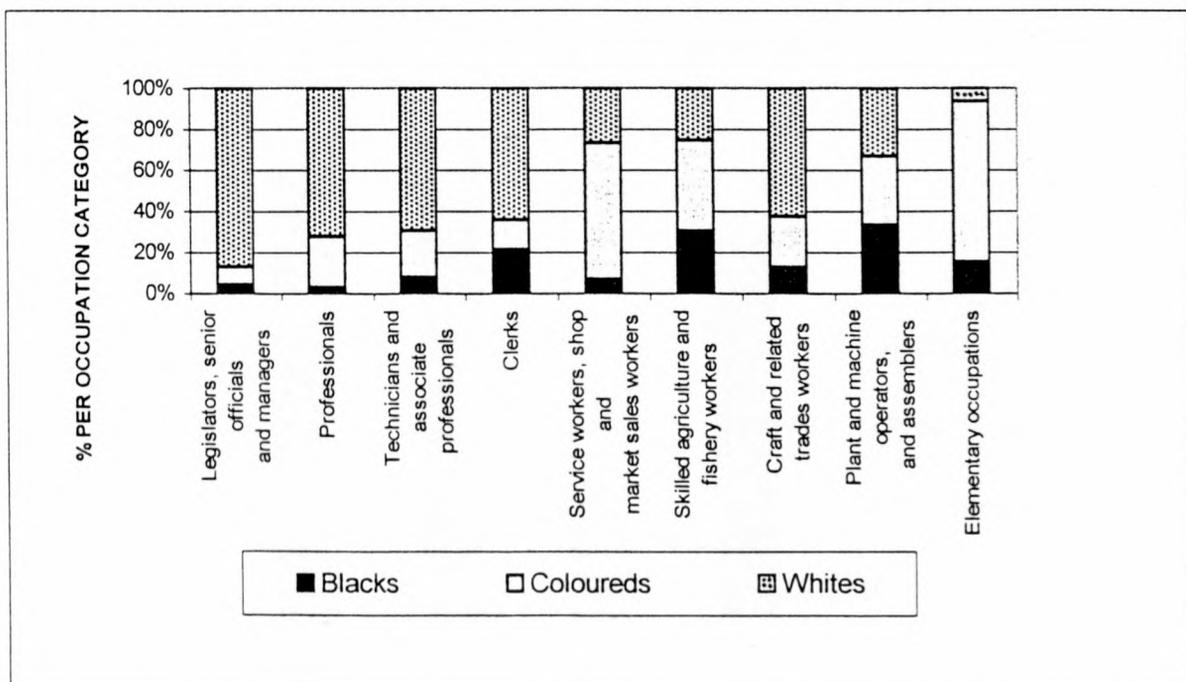
A large percentage (35%) of white inhabitants was employed as managers and professional. It is to be expected that many of them will only be resident in the area, while working in neighbouring Stellenbosch. Skilled black and Coloured workers were mostly employed in agriculture and fisheries.

TABLE 4.5 OCCUPATIONS OF WORK FORCE (15-64YRS)*

OCCUPATION	POPULATION GROUP				
	BLACK	COLOURED	WHITE	UNSPECIFIED	TOTAL
Legislators, senior officials And managers	1	2	20	1	24
Professionals	1	9	26	3	39
Technicians and associate professionals	1	3	9	2	15
Clerks	3	2	9	3	17
Service workers, shop and Market sales workers	1	10	4	7	22
Skilled agriculture and Fishery workers	13	19	11	1	44
Craft and related Trades workers	1	2	5	2	10
Plant and machine operators, And assemblers	2	2	2	2	8
Elementary occupations	17	87	7	15	126
Occupation unspecified	14	42	63	14	133
TOTAL	54	178	156	50	438

*Information relates to Jonkershoek and was derived from 1996 census statistics.

FIGURE 4.4 OCCUPATIONS OF THE WORK FORCE (15-64 YEARS)



4.7 HOUSEHOLD INCOME DISTRIBUTION

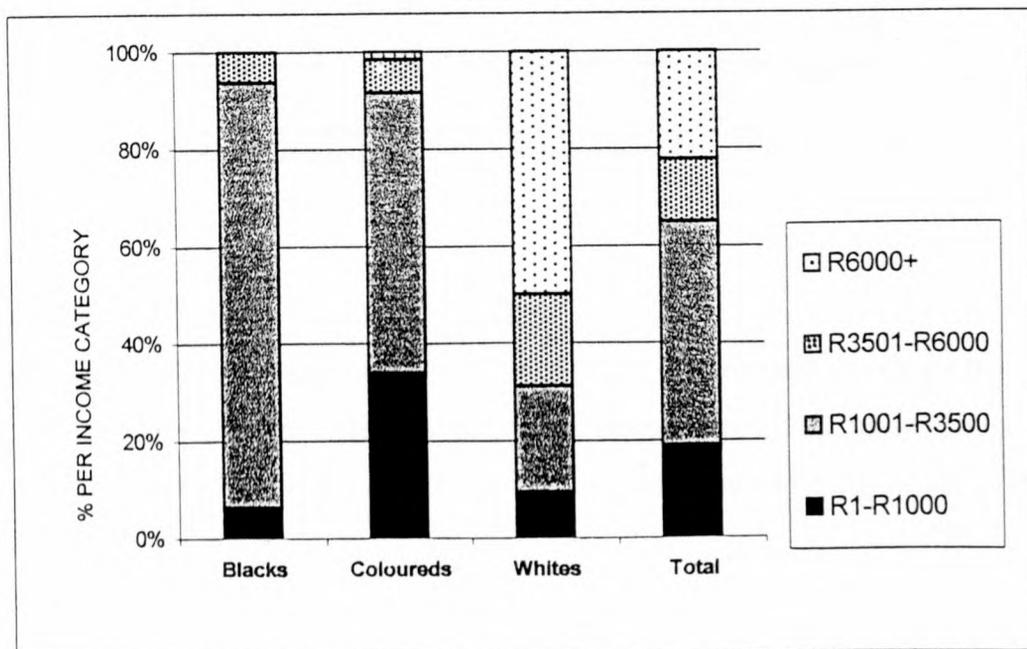
The majority (64%) of black households live on an income of between R1001 and R3500 per month, while only 5% had to get by R1000 or less, per month (see Table 4.6 and Figure 4.5). Looking at the Coloured population, the majority (48%) also lives on R1001-R3500 per month, while a significant number (28%) make do with R1-R1000 per month. One explanation may be that these figures only represent cash incomes and that employee benefits to farm workers, e.g. housing were not reflected in the calculation. One in five white households earns R1000-R3500 per month. The majority of white households live on an income of R6000 or more.

TABLE 4.6 HOUSEHOLD INCOME DISTRIBUTION*

INCOME CATEGORY	POPULATION GROUP							
	BLACK		COLOURED		WHITE		TOTAL*	
	No.	%	No.	%	No.	%	No.	%
NONE	0	0	0	0	2	3	0	0
R1-R1000	1	5	20	28	6	8	28	15
R1001-R3500	14	64	34	48	14	19	68	38
R3501-R6000	1	5	4	6	12	16	19	10
R6000+	0	0	1	1	32	43	33	18
OTHER/UNSPES.	6	27	12	17	8	11	33	18
TOTAL	22	100	71	100	74	100	181	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

FIGURE 4.5 HOUSEHOLD INCOME DISTRIBUTION



4.8 TYPES OF DWELLINGS

A total of 144 dwellings were identified in the 1996 census (see Table 4.7). Of these, the majority (89%) was houses of brick structure, on a separate stand or yard. Only 1% of the households indicated that they lived in informal dwellings. This figure compares favourably with 18% (living in informal structures) for the Winelands district as a whole (Winelands District Council 2000c: 28).

A comparison was made between the number of dwellings as opposed to the number of household. There are 40 more households than dwellings. This may indicate that there is some measure of dwelling sharing or crowding in Jonkershoek, with more than one household sharing a dwelling.

TABLE 4.7 TYPE OF DWELLING OCCUPIED BY HOUSEHOLDS*

DWELLING TYPE	No.	%
House or brick structure On separate stand or yard	128	89
Town/cluster/semi-detached House (simplex, duplex or triplex)	1	0
House/flat/room, in backyard	3	2
Informal dwelling/shack, in backyard	2	1
Room/flatlet not in backyard but on shared property	6	4
Caravan/tent	4	3
TOTAL	144	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

4.9 HOUSEHOLD DWELLING SIZE

The majority (56%) of households was housed in 3 to 5 roomed dwellings (see Table 4.8). This figure does not reflect the actual size or condition of the house. Many of the houses are employee housing and are in need of renovation and better levels of service delivery.

TABLE 4.8 NUMBER OF ROOMS PER HOUSEHOLD

NUMBER OF ROOMS*	FREQUENCY
1	4
2	14
3	28
4	29
5	24
6	11
7	10
8	7
9	10
10+	7
TOTAL	144

*This figure includes kitchens but not bathrooms and toilets.

4.10 DWELLING OWNERSHIP

As much as 80% of households did not live in houses that they owned (see Table 4.9). This may be ascribed to the fact that most houses in the valley are there to house employees involved in agriculture, forestry or nature conservation. The low level of ownership does not compare favourably with the rest of the Winelands where 56% of households owned the dwellings they occupied (Winelands District Council 2000c: 30).

TABLE 4.9 LEVEL OF DWELLING OWNERSHIP*

OWNERSHIP	No.	%
Yes	23	17
No	115	80
Unspecified	6	3
TOTAL	144	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

4.11 LEVELS OF SERVICE DELIVERY

Jonkershoek is a predominantly rural area, but the majority of the households still enjoy relatively high levels of service delivery (see Tables 4.10-4.14). The local authority removes refuse at least once a week from 58% of households. The use of communal or individual refuse dumps still accounts for 36% of all disposals. This may be due to the rural character of the area.

Telephones are available to most households, with private or cellular phones being the most common at 58%. Only 4% of all households indicated that they did not have access to a phone or a nearby phone.

Most households (93%) have flush or chemical toilets. These are however dependent on septic tanks and french drains with a limited capacity and are better suited for areas with a low population density.

Piped water (in dwelling) is available to 75% of households, while 8% of households still relied on dam, river or spring water.

As much as 92% had access to electricity, while the rest still relied on candles or paraffin.

TABLE 4.10 HOUSEHOLD REFUSE REMOVAL*

TYPE	No.	%
Removed by local authority at least once weekly	91	58
Removed by local authority less often	3	2
Communal refuse dump	35	22
Own refuse dump	22	14
Unspecified	7	4
TOTAL	158	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

TABLE 4.11 TELEPHONE FACILITIES TO HOUSEHOLD*

TYPE	No.	%
In dwelling/cellular	86	54
At a neighbour nearby	11	7
At a public telephone nearby	34	22
At another location nearby	18	11
At another location not nearby	5	3
No access to telephone	2	1
Hostel with phone	2	1
TOTAL	158	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

TABLE 4.12 TOILET FACILITIES TO HOUSEHOLD

TYPE	No.	%
Flush or chemical toilet	147	93
Pit latrine	9	6
Bucket latrine	1	1
None of the above	1	1
TOTAL	158	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

TABLE 4.13 MAIN WATER SUPPLY TO HOUSEHOLDS*

TYPE	No.	%
Piped water in dwelling	118	75
Piped water to site	7	4
Borehole/rain-water tank/well	20	13
Dam/river/spring	13	8
TOTAL	158	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

TABLE 4.14 FUEL USED BY HOUSEHOLDS FOR LIGHTING

TYPE	No.	%
Electricity direct from authority	146	92
Paraffin	3	2
Candles	9	6
TOTAL	158	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

4.12 LANGUAGE

A very large majority (77%) of Jonkershoek residents is Afrikaans speaking. This trend is typical of most rural areas in the Western Cape, which is traditionally populated by Afrikaans speaking Coloureds and whites. The rest speak either English or Xhosa (see Table 4.15).

TABLE 4.15 FIRST LANGUAGES IN JONKERSHOEK

LANGUAGE	No.	%
AFRIKAANS	484	77
ENGLISH	78	12
XHOSA	61	10
OTHER	6	1
TOTAL	629	100

*Information relates to Jonkershoek and was derived from 1996 census statistics.

4.13 CONCLUSION

The Jonkershoek population profile is typical of rural areas in the Western Cape with the largest sector of the population being Coloured, followed by whites. The black population is a small but growing minority, in contrast with the national trend where blacks are the majority.

From the data it is clear that there is a direct relation between education levels, occupations and incomes. A large sector of the population with low education levels does elementary jobs, and has limited incomes and opportunities. This trend applies mostly the Coloured population. Unemployment is limited though.

Most people live in free standing three to five roomed houses, which tend to be spread out. Security of tenure is limited. The levels of service delivery are relatively high if compared to the rest of the country. Aspects that correlate well with national trends, are the stark disparities in income and the distribution of wealth.

CHAPTER 5

DEVELOPMENT ISSUES IN JONKERSHOEK

5.1 INTRODUCTION

The sustainable utilisation of the Jonkershoek valley is a multi-disciplinary concept, which involves a wide range of development issues. These include socio-economic, ecological and aesthetic aspects, which would need to be included in guidelines for the sustainable utilisation of the valley. As part of an integrated development planning process, representatives of the major interest groups in the valley were involved in a survey. The purpose of the survey was to assess the needs, expectations and inputs of the various parties in order to find areas of common ground, which could act as a departure point for compiling guidelines for sustainable usage. In the process issues which justify special attention were identified. Professionals, who are directly involved in the planning field were also involved in the process as they may have a significant influence on the outcome of the Jonkershoek integrated development planning process. The major Jonkershoek interest groups are as follows (in alphabetical order):

- **Jonkershoek Environmental Forum:** this represents the predominantly white land owners, who usually reside on their farms and smallholdings. Quite often, these landowners are the custodians of sensitive fynbos areas on their properties.
- **Jonkershoek Housing Forum:** this represents most previously disadvantaged Coloured and black residents, some of whom are currently involved in housing claims. Others include employees or former employees of para-statal such as SAFCOL or the Western Cape Nature Conservation Board. Farm workers are also represented.
- **Jonkershoek Residents Group:** this came into existence as a result of predominantly White, current and former CSIR-employees who are presently lodging housing claims.
- **Jonkershoek Women's Group:** this includes the spouses of SAFCOL employees and women from neighbouring farms who are involved in a project to establish cottage industries. This initiative made possible with the help and guidance of the Stellenbosch branch of the Afrikaans Christian Women's Association (ACVV) and SAFCOL donations. Research involved an unstructured interview with the relevant social worker.

- **South African Forestry Companies Limited:** this is one of the largest single employers in the valley and is responsible for forestry activities in the upper precinct of the valley.
- **Western Cape Nature Conservation Board,** this acts as the custodian of conservation areas in public ownership, since 1987. WCNCB is one of the larger employers in the valley and manages large areas, which are used for recreation.

Spokespeople were identified and asked to give their opinion through questionnaires and interviews (see Addendum A and Section 1.5). Their contributions were taken as being representative of the respective groups. However, the opinions given can ultimately only be taken as the personal view of the interviewee as it is not the result of a group discussion or public meeting.

Planning professionals who were approached to take part in the survey are:

- Leon Fourie, Planner at the Municipality of Stellenbosch, which will have jurisdiction over Jonkershoek once it is incorporated under the new municipal dispensation.
- Derrick Moss, as representative of Dennis Moss and Associates, who compiled the Draft Winelands Integrated Development Framework on behalf of the Winelands District Council (structured interview only).
- Lindie Terblanche, Planner at the Winelands District Council. The latter body has jurisdiction over Jonkershoek
- Neville van der Westhuizen, as representative of Settlement Planning Services, in the capacity of Planner for Jonkershoek, as appointed by the Winelands District Council.

This chapter focuses on a combination of research done in support of this study, the work of previous researchers and information gathered from relevant sources on Jonkershoek.

5.2 URBAN EXPANSION

There is a trend towards residential densification within the predominantly agricultural precinct, with Jonkershoek being sought after real estate. This trend is reflected in regular applications to a) move the urban edge of Stellenbosch higher up in the valley, b) the subdivision of farms and smallholdings and c) the building of more and bigger dwellings on farms.

This section deals mostly with urban densification within the agricultural precinct and with pressure on the urban edge of Stellenbosch. Section 5.11 deals with the housing of employees which is related to urban densification as it deals with the establishment of a rural settlement or a hamlet higher up in the valley.

All those who took part in the survey were unanimous in their belief that uncontrolled urban expansion may ruin the unique character of Jonkershoek, which is both scenic and rural. Some of the landowners did however believe that a limited level of development is inevitable, e.g. enlarging dwellings or building new houses on empty plots. New constructions are acceptable provided that special care is taken to harmonise such structures with the surroundings. However, all agreed that the urban edge of Stellenbosch should be enforced. The protection of agricultural land is also viewed as important.

From the survey, a number of suggestions were offered as possible solutions for what is generally perceived as a problem:

- Absorbing the need for housing in a carefully planned hamlet can contain increased urban sprawl or low-density settlement patterns.
- The declaration of the valley as an urban conservancy (discussed under Section 5.11) may promote control and restrict development.
- Measurers, similar to those that protect natural areas, should be introduced to protect valuable agricultural land.
- Unwanted developments can be controlled or contained by enforcing existing legislation more effectively

From various newspaper articles and letters to the editor (Eikestadnuus, 25 June 1999, p.7 & 18 August 2000, p. 6), it is clear that Stellenbosch residents share this view on

the preservation of the current urban edge, represented by Omega Street and Berg-en-Dal Avenue. The establishment of this perimeter may be largely attributed to the efforts of Professor Page, formerly the Head of the Department of Town and Regional Planning at the University of Stellenbosch.

Since 1970, the local authorities have turned down most, if not all applications for subdivisions or multi-unit housing developments, including proposals for Klein Gustrow, Klein Rozendal, Waterhof and Tricelle. However, several new houses and structures were erected in terms of the existing zoning scheme. Thus, the construction of multiple dwellings on existing land units is more prevalent than subdivision.

5.3 ARCHITECTURAL AND LANDSCAPING GUIDELINES

The increased construction, upgrading and renovation of buildings in the valley have left a marked impact on the aesthetic quality of the area. To a certain extent, this trend clashes with the romantic rural character of the valley. Structures next to the public roadside and on the middle and upper slopes, in the predominantly agricultural precinct at the entrance of the valley, are especially visible and vulnerable. Some are visible from beyond Stellenbosch town. To enhance the aesthetic appeal of the valley, it may be necessary to apply architectural and landscaping guidelines.

The preliminary Jonkershoek Spatial Development Framework (Winelands District Council 1999a: 21) made a number of suggestions in this regard. Over and above the usual criteria used in the authorisation of new constructions, it was recommended that architectural and landscaping guidelines be compiled for the regulation of walls and entrances, as well as the promotion of vegetative covers to fences.

There is a general consensus, amongst those interviewed, about the need for some sort of guidance. However, some are not convinced that it will be possible to implement in practice. While some respondents advocate guidelines, other insist that only the strict enforcement of regulations will be effective.

Suggestions, which have been made on how to implement aesthetic guidelines, include the following:

- Inhabitants have already been mobilised into a number of interest groups, namely the Jonkershoek Environmental Forum, Jonkershoek Housing Forum and Jonkershoek Residents Group. These forums could potentially foster greater co-operation within the community.
- A body, similar to the Stellenbosch Heritage Committee should help determine the acceptability of new constructions, although it may be difficult to apply this measure to gates, walls and fences.
- The South African Heritage Resources Agency could be consulted in this regard.
- The creation of a conservancy would promote voluntary co-operation.
- Guidelines, as suggested in the Draft Winelands Integrated Development Framework Documents 1 and 3, could be implemented.
- Implementing regulation in the public realm or para-statal precinct may be easier than in the private realm or agricultural precinct.
- If ever it became known that regulations were violated, it should be remedied even if demolition is necessary.

Suggestions have been made on the kind of aesthetic guideline that should be implemented:

- The colour white should be reserved for historic buildings and hamlets only. An effort should be made to harmonise buildings with the environment by careful consideration of the colour schemes and the use of brick, stone and wood. One respondent did however question the applicability of such a measure, as the valley is not a cluster-housing scheme.
- A contour or combination of both contour and slope should be used as a criterion for a building line above which nothing may be built or cultivated. The ability to enforce this was questioned in a few cases.
- The planting of screens should be part of the building design, while an aesthetic evaluation should be part of the scrutiny process. The provision of guidelines will help both the designer and the evaluator.
- There should be setback or building line from the road and a co-ordinated signage policy.

It has been suggested that in the Draft Winelands Integrated Development Framework (2000d: 242) that a number of sectoral plans be compiled in terms of the Western Cape

Planning and Development Act (Act 7 of 1999). These included a sectoral plan for the “protection of visually sensitive areas and development guidelines”, which would be of special interest to the study area.

5.4 AGRICULTURAL EXPANSION

From time to time new vineyards are established high up on mountain slopes, in fynbos areas. This practice may result in soil erosion and have a visual impact on the surrounding area. During public participation meetings such expansion of farms was identified as being detrimental to the scenic natural beauty of Jonkershoek (Winelands District Council 1999b: 18). It must be noted that this accusation was not aimed at agriculture as such, as the presence of farms at the bottom of the valley was identified as a major contributor towards the unique rural character of the area (Winelands District Council 1999b: 4). One option is to allow this expansion practice to continue due to the economic benefits that it may have for the area. Alternatively, some kind of restriction or control may be used to stop this from happening.

Survey respondents were divided on this issue. Roughly half of the respondents were very much set against the above expansion practice, requiring the stricter enforcement of regulations against it, if possible. The rest assumed a relatively neutral stance on this issue, recognising the right of farmers to utilise their land and the economic need for agriculture. It was to be expected that farm owners would be more hesitant to condemn agricultural expansion. Comments included the following:

- Vineyards have economic benefits and once well established, are not visually unappealing. However, any damage, such as soil erosion should be contained at the owner's cost.
- The vineyards form part of a cultured landscape and the contrast with the fynbos adds to the character of the valley. Agriculture should not be restricted in the predominantly agricultural precinct.
- Rather than expand agriculture into fynbos, ecologically low value area, such as some parts of the pine plantations could be utilised.
- The establishment of a conservancy may be useful in this regard.
- In terms of the Environment Conservation Act (Act 73 of 1989) the establishment of new farmland is subject to environmental impact assessment and public

participation. This is deemed adequate to guide the establishment of new farmland in future.

Concerns and issues raised during the Jonkershoek public participation process included: a) that farm employees were poorly paid, b) that farm employees had very little security of tenure, c) that state land should be made available for small farm development, e) that there were insufficient restrictions over the expansion of agricultural land or building developments on agricultural land (Winelands District Council 1999b: 22). In essence, the emphasis was on the need for socio-economic development of farm employees, while protecting the natural assets of the valley.

In terms of the proposed bioregional planning principles for land-use classification, the Jonkershoek mountain slopes are considered bufferzones (see Sections 3.18 to 3.22 and Map 3). This classification system is reflected in the Winelands Integrated Development Framework and places a restriction on future agricultural development. What is more, some areas have been designated for rehabilitation, which may reverse the removal of fynbos. The protection of sensitive nature areas in private ownership is discussed further in Section 5.11, under the heading of Nature Conservation.

One option for agricultural expansion is to replace the pine plantations with alternative uses, including olive groves. This aspect is discussed in Section 5.5 as SAFCOL is conducting experiments in this regard.

5.5 FORESTRY ACTIVITIES

Forestry was first established in Jonkershoek in 1935. Until around 1986 all functions were under the control of the Department of Forestry, but in 1987 conservation was transferred to the provincial level of government, namely Cape Nature Conservation. In 1991 the research function was delegated to the CSIR, while in 1992 forestry activities were transferred to the South African Forestry Company Limited. Since 1992 the Department of Forestry has assumed a policymaking function.

Today, pine forest covers 777 ha in the upper reaches of the valley, primarily on the eastern side of the Eerste River. In the past five years, 50 ha were removed while plans are under way to remove another 50 ha in the near future. Areas where the plantations

have been reduced are replanted with fynbos or maintained as fire breaks. It takes around 35 years to complete the cycle from sapling to saw mill. The average age of the Jonkershoek plantations is 14 years. These plantations produce a fairly high timber yield at between 300 and 400 cubic meters per hectare. Based on around R150 per cubic meter, the estimated total value of the plantation is between R35 to R40 million.

Around 15 staff members are employed on a permanent basis, while most of the timber is processed in saw mills around Stellenbosch, e.g. Mondi. The expansion, continuation or termination of forestry in the upper parts of the valley may have wide ranging socio-economic and ecological implications for the valley and surrounding areas. Any expansion or change in land-use would be subject to an environmental impact assessment.

Respondents were more or less evenly split on this issue. Reasons cited for retaining the forests included:

- The contrast between cultured forests and the natural landscape of the fynbos covered mountains adds to the aesthetic appeal of the valley.
- The combination of forest and fynbos offers recreational and ecotourism opportunities that would not be possible if the forest was removed.
- It is premature to talk of the termination of forestry activities until a viable alternative is found.
- The conversion from forestry to another use will not be without problems.
- The CSIR is still conducting a long-term hydrological research project on catchment management.

According to Dr Dave Scott (interview), research on catchment management, which is translated into governmental regulations on afforestation, was initiated in 1972. The project will be reaching its end around 2002, after completing a 30-year growth cycle. However, complementary research projects are running until 2010 and the research facility has the potential for conducting other forms of research.

Those against Jonkershoek forestry use the following arguments:

- Saw mills in the Western Cape as well as forestry activities are not profitable.
- The area can be put to better use if rehabilitated or cultivated, e.g. agriculture.
- The impact of the termination on the local population will be relatively minor, while the ecology stands to benefit significantly.

It may be possible that the attitude of different interest groups towards forestry is affected by external factors. For example, a cordial relationship with SAFCOL may result in a positive attitude towards forestry as a whole and *vice versa*.

In terms of the Biosphere Reserve model for land-use planning the forestry area has been designated for rehabilitation. SAFCOL is currently conducting an experiment that involves the growing of olives. The trees have taken well to the soil and thus far the project has been a success. This may well prove to be a viable alternative to timber.

Geological conditions make the northern slopes better suited for cultivation than those to the south. This trend is reflected in current land-use patterns. Alternative forms of cultivation in the timber and fynbos areas of the upper valley are limited. The soil has a high acid content due to a high quartzite level. This usually makes the soil unsuitable for most forms of cultivation (Beyers et al, 1995:24). The shallow Mispah soils, which originated from Table Mountain Sandstone, support fynbos and pine but has a low agricultural potential other than for vines and olives (Winelands District Council 1999a: 18)

From a planning perspective, the future of forestry activities will form part of a management plan as compiled by its current custodian, namely the SAFCOL Forestry Management Policy Plan (Winelands District Council 1999a: 22). This plan recognises that a) forestry should not limit access to nature areas b) afforestation has taken place too high on the slopes and that this issue needs to be addressed, c) forestry management has a direct impact on run-off water quality and volume d) changes in cultivation and local processing practices is subject to the implications that it may have for erosion, water run-off, labour, housing and infrastructure.

5.6 EXPANSION OF RECREATION

Because of the tourism boom in the Western Cape, there is a growing demand for related facilities in Jonkershoek, e.g. ecotourism, guided walks, hiking routes along the river and easier public access. Despite potential local economic benefits, some residents are opposed to this, being worried about their safety, littering, and the carrying capacity of the area.

Most visitors to the nature areas are attracted by the natural beauty and the peaceful atmosphere (Boon 1997:15). User groups to the nature areas, each with specific recreational requirements, include: mountain climbers and hikers, road cyclists and mountain bikers, bird watchers, tourists, anglers, joggers, walkers, swimmers and canoeists. Jonkershoek tourist facilities include: conservation areas, wineries, a hotel, youth camping facilities, guest houses, picnic areas and a routes for pleasure drives.

There is only one two-lane tar-road up the valley to the conservation area. The interface between road users and the owners of adjacent land is a potential source of conflict. The provision of picnic places and roadside stopping places should be complemented by an efficient policy to control litter and braai fires. Roads inside the reserve are not paved (Winelands District Council 1999a: 20).

The term recreational carrying capacity refers to that level of recreation that is sustainable. According to Stankey (as quoted by Boon, 1997:30) recreational carrying capacity refers to the amount and character of use that can be supported over a specified time by and area developed at a certain level without causing unacceptable change to the physical environment or to the experience of the user. Research by Boon (1997:31) concluded that recreational visitors to Jonkershoek feel that visitor numbers over weekends and on public holidays surpass the carrying capacity, resulting in a compromised outdoor experience.

The survey (by the writer) pointed out that most respondents were concerned about increased visitor numbers, but they were more positive about the increase in tourism if it formed part of a well-researched plan. A respondent from the Western Cape Nature Conservation Board pointed out the number of stakeholders in the valley, namely the Department Water Affairs and Forestry, SAFCOL and the Western Cape Nature

Conservation Board, makes it difficult to control public utilisation, from an administrative point of view. Co-operation was needed to prevent over-crowding and degradation. The following inputs were made in the survey:

- It is preferable to use existing tourist facilities to the maximum before looking at expansion.
- All new ventures should be strictly scrutinised under Section 21 regulations of the Environment Conservation Act.
- A greater public appreciation for nature can be nurtured through easier access.
- Current problems are the result of a lack of proper guidance and planning.
- Under-utilised facilities could be put to good use in tourism related community projects.

Boon (1997:39) made a number of recommendations for sustainable recreation management in Jonkershoek, which included the following:

- The main purpose of the conservation areas should remain conservation, while recreation should be accommodated.
- Marketing efforts should focus on ecotourism and the ‘wilderness experience’, and include Stellenbosch in a combined tourism marketing campaign.
- Pro-active management and investment policies will ensure long-term usage.
- Including Jonkershoek in a biosphere reserve will promote international co-operation and funding.
- Visits during off-peak days, e.g. weekdays should be promoted while allowing certain activities only on certain days.

During the public participation process a number of suggestions were made, including the following: a) that a particular fence along the Eerste River be removed; b) that the area along the river be upgraded and that the public be given greater access to the river, c) that residents be given access to local campsites; d) that Jonkershoek natural assets be marketed locally and abroad (Winelands District Council 1999b: 25).

5.7 HOLIDAY ACCOMMODATION

The regional growth in tourism, the potential increase in visitor numbers to the conservation areas and the need to create employment have created a large demand for local holiday accommodation. Building more guesthouses, a hotel or a golf resort may satisfy this demand. Alternatively, existing structures may be converted in accommodation facilities, e.g. historic monuments.

Buildings in Jonkershoek with conversion potential can be divided into two categories, namely those on private land and those on public land. The latter includes homesteads on farms currently under the control of para-statal. To convert a private homestead into a guesthouse, the normal procedures would need to be followed by applying to the local authority and would be subject to the integrated development framework. Those on public land may involve a more elaborate bureaucratic procedure. The relevant para-statal may choose to run such an accommodation facility by themselves. Alternatively, it could be contracted out on a tender basis.

In the preliminary Jonkershoek Spatial Development Framework (Winelands District Council 1999a: 21), a number of guidelines were suggested for the consideration of guesthouse applications. These were similar to the considerations which would be applied in the case of an application for subdivision, e.g. the impact on traffic flows, sewage treatment, total increase in density, architectural design and the increase in the total number of driveways off the only main road.

One third of the respondents to the survey indicated that they were not against the idea of guesthouses or even a small hotel being erected, provided that it fitted in with the scenic rural character of Jonkershoek. The over-all majority had nothing against existing facilities being converted into guesthouses, rather than new structures being built. The idea of a golf resort was universally unpopular. It was also suggested that a limited number of people be allowed to overnight in the conservation area. Cape Nature Conservation is planning a small campsite, which may be used for this purpose.

5.8 EMPLOYMENT OPPORTUNITIES

There is an unemployment rate of 14% in the Winelands District. Agriculture is the biggest employment sector in Jonkershoek, but it is generally accepted that this sector has a relatively low potential for new employment creation, aggravated by the loss of jobs through the restructuring of para-statal, e.g. the Western Cape Nature Conservation Board. However, only around 5% of residents classified themselves as being unemployed during the 1996 national census (SSA 1996).

In recent years, the Western Cape Nature Conservation Board has reduced their staff contingent by around 50%, leaving about 45 permanent staff members. Of these, only about 25% are housed locally, on WCNCB land. An important spin-off of conservation is that around 300 jobs have been created in alien vegetation eradication programmes. The WCNCB is implementing this programmes on behalf of the Department of Water Affairs and Forestry and it is executed on both private and public land. Daily employee remuneration varies from the minimum of R33 to R120 for a team leader (Gentle, interview).

Survey participants unanimously agreed on the need for employment creation. The majority expressed their concern that job creation should be appropriate to the valley and its carrying capacity, implying that only local, and not regional unemployment can and should be addressed in the valley. In addition, it is believed that the capacity to create new jobs in the valley is limited.

Suggestions for potential areas of development and redevelopment included: service industries, ecotourism, guest-houses, recreation, education, fynbos cultivation and harvesting, fishing guides, hiking guides, organic farming, micro-farming and aquaculture (fish farming).

Contentious issues were identified during the public participation process. These included: a) that people from outside the valley are employed in the valley, as opposed to locals, b) that unemployment was on the increase, c) that employers favoured Coloured employees and d) that whites were favoured for promotion (Winelands District Council 1999b:18). It is clear that certain national and historic realities are also

reflected in Jonkershoek employment trends. These issues would need to be addressed in any long-term employment creation strategy, if sustainability is the objective.

The Jonkershoek Women's Group was established in 1997, to promote the socio-economic empowerment of women and to alleviate unemployment. The group consists primarily of the spouses of both SAFCOL and farm employees. With the co-operation of SAFCOL and the Afrikaans Christian Women's Association of Stellenbosch (ACVV), a work group was established to teach women sewing skills, which are then used in the production of household items. The products are then sold to sustain the group. Membership has been fluctuating between three and twenty. A potential additional economic activity that would suite the skills and needs of the women's group is market gardening, provided that land can be found for this purpose. However, experience has shown that those employment creation projects, which do not guarantee some kind of fixed income, struggle to attract continuous interest (Cartwright, interview).

5.9 HOUSING CLAIMS

A central, and to a certain extent overriding issue in Jonkershoek is the current dispute over the ownership of a number of properties in the para-statal precinct in the centre of the valley. What is evident from the survey is that there is little agreement on this emotional and political issue, although this was to be expected. Important here is that the necessary legal procedures have already been started in terms of the Extension of Security of Tenure Act (Act 62 of 1997), under the auspices of the Department of Land Affairs. It is therefore not the purpose of this study to find a solution for the above matter, as the relevant authorities are already dealing with it.

5.10 THE HOUSING OF FARM EMPLOYEES

Around 30% of the inhabitants of the Winelands live on farms. There is currently a move to ensure security of tenure for farm employees in terms of The Land Reform (Labour Tenants) Act (Act 3 of 1996) and The Extension of Security of Tenure Act (Act 62 of 1997). In Jonkershoek, this could take on the form of on-farm housing or an employee village /hamlet somewhere in the valley or neighbouring area. Alternatively, employees could live in Stellenbosch town. While there is an 18% shortage of formal housing in the Winelands District, the 1996 national census did not indicate any

significant incidence of homelessness or informal dwellings in Jonkershoek, although this may have changes since then. However, there were 40 more households than dwellings in Jonkershoek, indicating possible crowding or multiple occupancy.

One potential site for the location of a hamlet is that area on the central valley floor, which is currently characterised by a low-density sprawl of para-statal administrative buildings and other related structures. The preliminary Spatial Development Framework identified sufficient land for a residential component and the provision of much needed social facilities (Winelands District Council 1999a: 22). Such centralised housing and community facilities could, for example, serve the needs of agricultural employees better than accommodation on farms and smallholdings.

A significant majority of the respondents was in principle in favour or not against the establishment of a hamlet in the valley, especially coming from those who actually reside in Jonkershoek. However, this support was not unconditional or without concern. Suggestions and preconditions included the following:

- Such a hamlet should be small and contained.
- Without proper funding, it would not be possible. It may be necessary to get international aid.
- Hamlet accommodation may break the cycle of dependency whereby farm employees become dependent on their employers for housing and therefore forfeit the option of selling their labour elsewhere under better employment conditions.
- Hamlets should complement and not substitute on-farm housing.
- Hamlets are acceptable provided they are based on the improvement and expansion of existing settlements.
- Unless people are given security of tenure, they will forever be caught up in a cycle of servitude and subject to removals.

Those who were against the idea of a hamlet, argued along the following lines:

- The making available of land will attract more migrants to the area and thus there is no guarantee that the area will not become the target for informal settlement.

- The costs involved in establishing and maintaining a small residential settlement removed from the main town may be too high for both the local authorities and the residents to sustain.
- On-farm housing has the benefit that it will cost less to up-grade than to replace. It is part of the agricultural community and other existing forms of tenure for on-farm settlement should be explored.

During public participation meetings the need for the identification of land for housing development was expressed. It was also suggested that a 'town' be established on state owned land (Winelands District Council 1999b: 35). The infrastructure on state owned land could form the basis for a rural settlement, but several public facilities, which would form part of such a settlement are lacking. A number were identified at the above meetings and include: a community hall, a pre-school and/or primary school, transport to schools for learners, adult education facilities, a post-office and public telephones, a satellite police unit, bus stops, shops, a clinic, and a library (Winelands District Council 199b: 37).

Whether a hamlet is established or not, a number of current social problems would need to be addressed. The lack of a clinic affects residents, many of whom are too poor to travel into town for medical help. One solution is a mobile clinic, which would visit the community regularly. To make it viable, this facility could also service other hamlets in the district. The absence of an efficient public transport system makes it difficult and expensive to arrange community activities, e.g. adult education and skill workshops, at night. Taxis usually only operate during the day and the absence of streetlights makes pedestrian traffic difficult. The absence of shops forces the already impoverished resident to travel into town for shopping, or to buy basics at a premium, from informal 'backyard' shops (Cartwright, interview).

5.11 NATURE CONSERVATION

Large parts of the upper valley and, the middle and higher slopes are covered in sensitive fynbos and thus justifies protection. Fynbos on the middle and higher slopes, especially on the Stellenbosch Mountain side of the Eerste River, is located on private land and currently zoned for agricultural uses. Public conservation areas in the upper valley are covered in both pine forest and fynbos, while Assegaibos (164 ha) is the

only proclaimed nature reserve. The Eerste River is a prominent ecological corridor through the valley, although long stretches along its banks are lined with alien vegetation, some of which are considered desirable. This section of the study primarily focuses on fynbos in private ownership, although it should not be seen as isolated from that in public nature areas.

Various institutional arrangements are available to aid the conservation of nature. One option is to establish a conservancy, which would comprise a voluntary agreement between landowners, to manage the environment. Conservation objectives are achieved by co-operation and commitment to the conservation of the environment on private property. Conservancies are not necessarily restricted to agricultural areas, as they can also be established in urban and industrial areas. In the Jonkershoek, Western Cape Nature Conservation Board could facilitate the establishment of conservancies by providing administrative assistance, but the initiative should still have to come from the owners (Western Cape Nature Conservation Board, 1997). The conservancy model is considered to be an ideal mechanism for conserving natural resources on private land and for integrated land management on a broad scale. Conservancies also provide 'building blocks' for bioregional and/or biosphere reserve planning and management (Winelands District Council 2000d: 236).

Survey respondents agreed on the need to protect fynbos in Jonkershoek, although some have had reservations as to the possibility of implementing protection measures successfully. Suggestions and comments included the following:

- Co-operation is only possible if there is a political will to do so. Leadership is needed to take the initiative. This may be difficult in Jonkershoek, as there are only a small number of landowners.
- Certain alien trees, e.g. oak, pine and poplar, in the lower part of the valley, forms part of the cultured landscape and should be retained. The establishment of pockets of indigenous fynbos in cultivated areas is unattractive.
- Conservancies are the most relevant and effective means of protecting fynbos in Jonkershoek. A conservancy could be established for the protection of fynbos on private and public land. Another could be established for the management and protection of the Eerste River.

- The existing citizens' forums could form the basis for the establishment of a conservancy.
- The ability of some residents to participate in the conservancy may be restricted, as they do not own the land which they live on.
- Jonkershoek needs to be included in a biosphere reserve. Measure stricter than a co-operation agreement may be necessary to guarantee success.

The present agricultural landscape is to a large extent the result of past regulations and legislation. One of the main directives was that, in South Africa, land ownership is absolute, meaning that an owner had the right to exercise all land-use rights bestowed on him, in terms of the applicable zoning (1990:85). Thus, land zoned as farmland, even if it is covered in endangered fynbos on steep slopes, could be turned into vineyards. Trümpelmann (1990:86) identified the lack of compensation for farm owners who relinquish the right to utilise previously unploughed land, as a major obstacle in the way of protecting private conservation areas. New legislation still does not address this issue, which is further aggravated by governmental financial constraints.

The argument of Trümpelmann can be countered because South Africa has moved into a new paradigm of environmental "socialism" (Claassen, interview). That is, it is now generally accepted especially in conservation circles that the environment belongs to "the people". This is reflected in the section 21 regulations which clearly forbids the ploughing of new land without permission. No mention is made in that Act of compensation. Claassen (1975) struggled with the same problem, but it seems as if society has shifted towards socialism as far as the environment is concerned.

In future, amendments to the Environment Conservation Act (Act 73 of 1989), as reflected in the National Environmental Management Act (Act 107 of 1998) may be sufficient to protect nature areas. An additional safeguard will be the implementation of bioregional planning principles and the voluntary co-operation agreements associated with conservancies.

The preliminary Spatial Development Framework (Winelands District Council 1999a: 23) for Jonkershoek identified a number of elements which would need to be assessed

and addressed in any management plan for the upper catchment area. These included: a) the sustainable level of recreational use, b) the viability of an ecotourism facility, c) co-operation with private owners of land adjacent to the public conservation areas, d) co-ordination between SAFCOL and the Western Cape Nature Conservation Board, and e) identifying a sustainable visitor infrastructure with regards to user conflict, litter, erosion and sign-posting.

5.12 VACATED AND DISUSED FACILITIES.

A concentration of older farm buildings and structures associated with the administration of para-statal, are located on the central valley floor. In recent years there has been a decrease in the extent of the facilities needed for administrative purposes. The available facilities have been re-allocated for alternative, but not always optimal uses. In some cases this phenomenon may be the result of the earlier restructuring of para-statal, e.g. the Department of Forestry. The resulting decrease of the number of employees may have led to the reduction in the demand for office space and housing. Unless such facilities are put to better use they will deteriorate further, rendering their socio-economic potential obsolete. None of the above is in any way a planning problem unique to Jonkershoek.

Suggestions, from the survey, for the re-commissioning of used facilities included:

- An open bidding system or tender process could be used. This is favoured above *ad hoc* decisions by state department. The reassignment of facilities may lead to new land uses, as current structures are replaced.
- Each facility should be evaluated on its own merits and be considered for redevelopment or demolition, where applicable.
- These facilities should be addressed in the integrated development framework.
- Preference should be given to community projects.
- State infrastructure could be made available on a lease basis, e.g. historic buildings.
- The creation of new facilities should be avoided due to the visual impact and the impact on services.

It is not the purpose of this section to find reasons for neglect, to take stock of or to re-assign such facilities. Nor does the writer wish to insinuate that the current state of affairs is the result of mismanagement. Instead, the importance of finding appropriate procedures to deal with better uses for dormant opportunities is being emphasised.

One of the facilities with the best commercial potential is the Jonkershoek fish farm, which was started in 1892. It was destined to be closed down in 1986, but the University of Stellenbosch took it over for genetic, feeding and breeding research purposes. Besides research, it is currently operated as a self-sufficient commercial venture, which supplies juvenile trout to around 20 farms in the district. The facility employs four permanent and two part-time staff members. However, the real benefit comes from indirect employment opportunities created outside the valley. These include numerous angling facilities, restaurants and the production of trout roe (“caviar”).

The facility is located on Western Cape Nature Conservation Board property and is operated by the University on a contractual basis. It is currently only being run at a third of its original capacity, but WCNCB is currently in the process of developing one of the disused trout ponds into a commercial angling facility. Development potential is limited by the availability of a constant stream of fresh water, which is reduced by the proliferation of exotic vegetation in the catchment area. Due to the absence of an effective security fence, theft of stock from the pond has been a problem in the past.

Some residents in the area have an historic involvement with this facility. Trout breeding is a sophisticated operation, but expertise and training is available at the University of Stellenbosch, e.g. a one-year correspondence course in aquaculture. The facility can form the basis for community development projects. The facility can also be used for the cultivation of alternative fish species, e.g. tilapia, which requires less advanced skill levels (Stander, interview).

5.13 CONCLUSION

This chapter looked at some of the primary development and conservation issues relevant to Jonkershoek. The issues should not be seen as separate entities, but rather as interdependent parts of a bigger whole. There is a high degree of interconnectivity among them. This point is illustrated the following example:

- The creation of employment is, to a certain extent dependent on the provision of current and new holiday accommodation. The viability of new guesthouses will increase along with the availability of recreational facilities, e.g. trout angling ponds. The existence of the angling facility is dependent on the availability of a constant flowing mountain stream. The volume of water is indirectly proportional to the level of alien vegetation on the mountain slopes. The level of alien vegetation is determined by the frequency of eradication programmes. The frequency of the alien eradication programmes influences the number of people, which need to be employed.

CHAPTER 6

THE APPLICATION OF ENVIRONMENTAL ETHICS TO JONKERSHOEK

6.1 INTRODUCTION

In this section three scenarios are developed on the possible direction which the future utilisation of the Jonkershoek valley may assume. The three most common positions in environmental ethics are used as a departure point, namely ruthless development, resource development and conservation, and preservationism. They are treated as separate entities. This is done for reasons of practice as it would not be possible to identify a specific point where the ruthless development ethical stance becomes resource conservation, or where resource conservation becomes preservationism.

6.2 SCENARIO 1: RUTHLESS DEVELOPMENT IN JONKERSHOEK

The term ruthless development conjures up visions of wilderness areas being bulldozed, toxic industrial waste being dumped into rivers, indigenous forests being trucked to the saw or paper mill, sensitive nature areas turned into ecological wastelands through single species cultivation or herds of animals being slaughtered. This kind of destruction still happens, but not to the same extent as during the Industrial Revolution and even during the best part of the previous century. (The terminology is unfortunate as the word "ruthless" biases the reader).

It is difficult to imagine this kind of scenario ever unfolding in Jonkershoek, thanks to growing public concern for the ecology, land-use controls, legal procedures and conservation bodies. But this does not necessarily mean that Jonkershoek is safe from exploitation. The perception of ruthless development should be adapted to a more contemporary version.

In contemporary terms, ruthless development would typically involve unrestrained development e.g. owners being allowed to do as they please for the sake of maximum economic development, disregarding community welfare and aesthetic standards. In Jonkershoek this would mean that farmers could cultivate all their land, including that on steep upper slopes, in an effort to increase their crop and the agricultural output in the Winelands. This practice is common-place in Europe. Such mountain slopes could be used in commercial protea cultivation for the lucrative export market.

Once forestry activities have been completed the ecologically disturbed land could be sold off for agricultural, residential and commercial recreation purposes. Capital generated could be used to fund solutions for the housing backlog in the region. Not restricting the construction of new dwellings could further alleviate the housing shortage while providing owners with a steady flow of income.

In anticipation of potential residential development, some landowners have reduced investing in the replanting of vineyards on land adjacent to the Stellenbosch urban edge. Developing this would not reduce the agricultural output of the valley as such. Yet, the tax basis in the area would be extended.

If subdivision were allowed, low-density property development would attract the same up-market investors for which Franschhoek is well known. An exclusive golf estate, hotel, condominium and/or resort development should prove to be highly profitable in this beautiful valley. In the process, employment will be created while taxes raised could be used for the cross-subsidisation of developing communities.

Creating complementary tourist facilities, e.g. 4x4 trails for which there is a growing market, could boost visitor numbers. Ecological wastelands, like the pine plantations could be better utilised in this way. Picnic and braai facilities in the nature areas are severely limited, and offer another development opportunity. By attracting more visitors in this way, income from entrance fees can be increased.

There is a severe shortage of land available for low cost housing development. Government owned land in the para-statal precinct could be earmarked for this purpose, in line with growing demands for the redistribution of state-owned land. Not only is the site relatively close to employment opportunities in Stellenbosch, it is also carefully 'hidden' in a valley which is currently only being utilised by a small handful of privileged environmentalists and rich owners who have turned the valley into a very low density residential area.

Neglecting to protect the area from environmental degradation would also constitute ruthless development. Should erosion not be contained, the agricultural potential of the area will systematically be washed into the Eerste River. Alien vegetation threatens the

survival of the indigenous fynbos by competing for resources and because it burns at a temperature which destroys fynbos seed. If fire breaks are not maintained, the majority of the study could be destroyed in a single inferno. Wild veld fires have destroyed large tracts of vegetation along the upper reaches in recent years.

It is unlikely for this kind of scenario to develop in Jonkershoek in its totality. It may however be that some aspects of it became a reality. This may seem a little farfetched, but, in the past, development often took place along the above lines.

6.3 SCENARIO 2: RESOURCE DEVELOPMENT AND CONSERVATION IN JONKERSHOEK

Resource development and conservation constitutes a compromise between ruthless development and preservation. In order to develop and conserve Jonkershoek resources at the same time, it is necessary to find sustainable solutions for the development issues.

Urban expansion

Urban expansion has to be contained, if the “romantic” rural character of the valley is to be retained. This applies to the urban edge of Stellenbosch, densification on private land and the proposed rural settlement. Although a complete termination of construction is unlikely, need should be the criteria for approval and not profit. Interested and affected parties would have to agree on this issue if it is to be achieved. There already seems to be communal consensus on this issue, therefore it is likely that containment would continue to be the future norm.

Architecture and landscaping

Jonkershoek is blessed with a number of imposing Cape Dutch style homesteads, together with an eclectic mix of modern and old fashioned building styles. It is debatable whether the buildings of Jonkershoek are a major asset to the valley. It would be difficult to foster agreement on a particular “Jonkershoek style” for architecture or landscaping. It would also be difficult to legislate and enforce such guidelines, given the existing range of styles on separate title properties. The best option would be if owners were to agree on the need for conformity. In an era of growing individualism, this too may not be practically possible, despite some measure of current consensus on

the issue. There rests a special responsibility on both property owners and the local authorities as, eventually, they will have a very large influence on what is to be constructed, and what not.

Agriculture

Due to limited restrictions on the expansion of agriculture in the past, most of the arable land that could have been developed, has already been turned into vineyards, orchards or plantations. It is thus suggested that all existing agricultural land be optimally utilised before any consideration is given to the expansion of agricultural land. If there is enough land available for activities which reduce the available land, e.g. building more houses on subdivided land, then the question should be asked as to whether activities which seek to increase the available land, while reducing valuable fynbos reserves, should be allowed. Due to the combined effect of new legislation and public resistance, it is unlikely that any major expansion of agricultural land will take place.

Forestry

The fact that pine forests were established in Jonkershoek, cannot be changed at this point in time. It may be that this is not the optimal use for the land involved. What remains now is to find an optimal solution. Due to its small scale, the viability of forestry activities in the area is limited. It seems likely for forestry to be terminated in the foreseeable future, without a major impact on the local economy. The forests cannot simply be abandoned, as it would be a tremendous waste and create a considerable fire hazard. Immediate termination seems unlikely. Given the average growth cycle of around 30 years, and the average age of Jonkershoek plantation of around 15 years, one can safely assume that the plantation will gradually be phased out within the next 15 years. Any acceleration of the process should be well justified and may have cost implications over and above the normal expenditure. SAFCOL is likely to remain in charge until forestry is terminated.

If feasible, re-establishing fynbos would be considered the final or rehabilitation stage in the production cycle. However, it is not unthinkable that part of the forest land be made available for alternative uses, especially the land adjacent to the para-statal precinct. Possibilities are limited due to poor soil quality. Options include agricultural

uses, e.g. olives and protea farming. Alternatively, future uses could be linked to the suggested rural settlement on adjacent land.

Recreation

Tourism could be the future economic mainstay of Jonkershoek, provided it is developed, managed and marketed efficiently. There are a number of pitfalls though. The types of facilities required have to be appropriate to the valley and visitor numbers must be within the carrying capacity of the valley. The involvement of the local community will foster a greater appreciation for the importance of visitors and for the protection of those attractions which act as magnets, e.g. the nature areas. Thus a sustainable relationship between the community and conservation would be attained. Ecotourism is likely to develop, especially in the light of the pending inclusion of the valley into a biosphere reserve. Ecotourism should not be taken for granted, but actively pursued, e.g. by building a visitor centre or compiling a tourism plan.

Holiday accommodation

The growth in accommodation is based on the assumption that local and regional tourism will continue to grow steadily. Although this is likely, the possibility exists that growth could stagnate due to perceived or actual violence and crime. Should this happen, accommodation will probably revert back to residential uses.

On a local level, the biggest potential growth injection could be the inclusion of Jonkershoek in a biosphere reserve, which would attract both national and international visitors. The local authorities could facilitate the provision of accommodation by 'fast tracking' the application process for converting residences into guesthouses, thus making the process more user friendly. Market forces will still be the determining factor.

Due to general public resistance, the construction of new guesthouses should be limited. Converting existing structures into holiday accommodation will create the majority of new facilities. However, new facilities cannot be ruled out, should it meet the prescribed standards. The range of accommodation choices will grow. This could include campsites, chalets in the conservation areas, new uses for the youth camping centres, a youth hostel, new uses for under-utilised facilities and even a small hotel.

The emphasis should be to accommodate all budgets. Guest houses usually cater for the wealthier groups, while some of the existing Jonkershoek youth camping and accommodation facilities are not open to the public.

Employment creation

Jonkershoek does not have the capacity for mass employment creation. As a departure point the focus should be on creating employment for the local community, utilising the available opportunities and skills. Agriculture may have a limited capacity for new job creation, but there is enough scope for the socio-economic upliftment of those currently employed in this sector, e.g. the improvement of living conditions and through training opportunities.

The real opportunities lie in small-scale projects, which will address both local unemployment and under-employment, but unless alternative sources of capital can be found, market forces will be the determining factor. Job creation should be for the sake of socio-economic development of the community, and not simply for the sake of economic growth, although growth should mean more jobs. Improving the general wellbeing of employees through the provision of basic social services, will increase worker productivity.

Jonkershoek should be seen in regional context. It can form part of a local economic development policy for Stellenbosch. Due to the significant role that tourism can play in terms of employment creation and conservation, a co-operation agreement between the public and private sectors is an essential prerequisite for any future development.

Housing claim

The importance of this issue should not be underrated. It seems that the majority of other developments are related or subject to an acceptable situation being found for this political issue. Also, without pro-active outside intervention or arbitration, it may be difficult for this issue to be resolved. It is advisable that all relevant parties negotiate, co-operate and perhaps compromise in this regard, because delaying an outcome may only complicate an increasingly complex situation, which affects more than the housing issue at stake. It is unlikely that the private and public sectors would invest in any projects before an acceptable solution is found. The Department of Public Works, in

whom the ownership of the disputed properties is vested, will have a deciding role to play in finding a solution.

Housing of farm employees

The housing of farm employees is closely related to the housing claims as the potential area for settlement overlaps. At the moment there is more support for the hamlet idea, than resistance against it. The farm employee population of Jonkershoek is relatively small and should easily be accommodated in a small hamlet. Accommodating employees in neighbouring Stellenbosch may be an alternative. At this point the likelihood of a hamlet actually being established is unclear as capital to build it will have to be found and the cost of maintaining it may be too high for the community or authorities to sustain. There are some houses in the area, but few are not occupied by either those who claim it or those who work for the para-statal. Housing provided on the standard government subsidy might not be appropriate to the valley character. Aesthetic criteria are not more important than community welfare, but the tourist industry and related employment is dependent on the valley remaining a worthwhile scenic destination. The attraction of Jonkershoek will be jeopardised by inappropriate urban settlement.

The establishment of a hamlet is based on two assumptions. One is that landowners would want to move employees off their land and not provide acceptable on-farm housing. If this is the case, it is unlikely that all employees be moved. Another assumption is that once employees have been moved, landowners will still need their employment. It may be that owners would try to mechanise or become less labour intensive.

If it is the wish of the Jonkershoek community to have a hamlet in the valley, and if it is found to be both viable and feasible, a system for home ownership would need to be found which is sustainable. If this is not done, the potential exists that the hamlet would become “gentrified” due to the demand for property in the valley. One solution is to sell properties back to homeowners’ organisations to protect future workers from having to compete with market forces, which they can ill-afford. But by doing this, owners would be denied the benefit of property appreciation.

Nature conservation

Most people view conservation as synonymous with Jonkershoek and it is likely to remain being a priority for residents and visitor alike. The conservation areas at the top of the valley, under the control of a provincial conservation body, will continue to be managed by this body for the foreseeable future. The only major threat in this regard is a lack of funding for maintaining the reserves in a sustainable way. The current trend is for reserves to become financially more self-reliant, but it is doubtful whether this will be sufficient. Inclusion into a biosphere reserve could generate funds from abroad, which will promote conservation in Jonkershoek. It is likely that nature conservation in Jonkershoek will remain sustainable in future.

Fynbos in private hands remains at risk of deterioration and destruction. To protect fynbos effectively, it is imperative that some kind of co-operation agreement be reached between landowners, and between the Western Cape Nature Conservation Board and landowners. An agreement would typically include co-operation on the eradication of alien vegetation, the maintenance of firebreaks and, soil erosion control. Different statutory models exist for such voluntary or compulsory agreements, e.g. conservancies, special management zones, private nature reserves or the declaration of environmentally sensitive areas. However, no measure will be effective unless the participants volunteer to co-operate, as the cost of enforcing controls can be prohibitive.

A weakness of such an approach is that it will probably only include landowners. If this were the case, channels of communication would need to be established between the various Jonkershoek interest groups. It may be possible that, in the near future, some form of ownership be extended toward previously disadvantaged communities, e.g. the property claim or hamlet, thus creating the opportunity to broadening the base of an ownership-based conservancy.

Establishing a conservancy provides no guarantees for conservation. As long as owners view fynbos slopes as potential farmland for exploitation, fynbos will remain at risk. Fortunately there is a growing concern for nature amongst Jonkershoek residents, and both the establishment of a biosphere reserve and conservancies seem likely at this point.

Disused and vacated facilities

The majority of disused and vacated facilities are located on public land, with the ownership vested in the Department of Public Work. Through their own management initiatives, procedures are in place to deal with the re-allocation of state property. However, the operation of the state does not take place in isolation of the community affected by it. The community and/or entrepreneurs are free to take a pro-active stance to initiate projects. If an open bidding or tender system is employed to reallocate the said facilities, community involvement and employment creation could be criteria for awarding the applications

Releasing state owned facilities to private entrepreneurs often involves a tedious process. For any developer to persevere along these lines, the reward needs to justify the efforts. Unless an efficient system for reallocation is found, investors may easily be deterred from becoming involved in projects in the valley

6.4 SCENARIO 3 : PRESERVATIONISM IN JONKERSHOEK

Strictly speaking, preservationism, or wilderness preservation as it is sometimes called, only applies to wilderness areas. Wilderness areas are rare in the Western Cape Province and Jonkershoek is not considered as such. Most of the study area has been altered by human intervention and it would be meaningless to attempt to preserve it in its current state. However, attempts are under way to rehabilitate some parts of the valley and it has been designated for this purpose in terms of proposed spatial planning categories.

With the potential phasing out of pine forests, the opportunity exists to replace the plantation with fynbos, especially since so much of the region's original floral wealth has already been destroyed. Alien vegetation eradication programmes could be extended to so-called desirable aliens like pine, oak and poplar. Prohibiting or severely limiting all further agricultural development on privately owned nature areas would aid this objective.

The development of a rural settlement or hamlet clashes with the principle of preservation. The same applies to more holiday accommodation, the housing of farm

employees in the valley, the creation of employment locally, and subdivision. Disused facilities should be dismantled as they serve no further purpose. Recreation can be accommodated, but visitor numbers should be limited and definitely not expanded. Strict regulations should be introduced to halt any further aesthetic degradation of the area. This would include prescriptions on landscaping and architecture.

The preservation or partial preservation of Jonkershoek, especially the nature areas, can be justified in terms of the many uses that it offers. These include: genetic diversity, research, recreation, education and aesthetic pleasure offered by the natural beauty.

It is unlikely for this kind of scenario to develop in Jonkershoek in its totality. It may however be that aspects of it became a reality.

6.5 SYNOPSIS

The three scenarios sketched above are not mutually exclusive, but should rather be seen as three distinct levels of development, which form part of a development continuum. Ruthless development represents the maximum level of development, resource development and conservation the middle ground, and preservationism the lowest level of development.

It has been suggested in the preliminary Jonkershoek Spatial Development Framework that the valley be divided into four distinct precincts for planning purposes, namely a) the farm and small holding precinct at the entrance to the valley, b) the para-statal precinct on the central valley floor, c) the forestry area and d) the fynbos conservation area. The writer would like to suggest additional land-use planning directives, based on different departures in environmental ethics:

- On a horizontal level, the permissible level of development should be seen as a continuum, with the highest level of utilisation being allowed closest to Stellenbosch town. Utilisation gradually diminishes as one moves higher up the valley. The lowest level of utilisation should be at the top of the valley, in the fynbos conservation area, which is designated for preservation

- This directive of diminishing levels of utilisation should also be applied on a vertical level. The most intense level of utilisation should be permitted nearest to the river, on the valley floor, without violating the ecological corridor. As one moves up higher on the mountainside, utilisation should decrease, with the sensitive fynbos slopes and mountain tops being designated for preservation.
- If proven socio-economically viable, an exception to the above guideline, would be the establishment of a hamlet roughly where the para-statal precinct is currently situated. This exception may be justified due to the presence of existing structures, which may be absorbed into the proposed rural settlement. An additional motivation is that there can be no sustainable utilisation in Jonkershoek unless the needs of the whole Jonkershoek community are taken care of. Appropriate housing for previously disadvantaged communities would be the first step in this direction.
- The feasibility of new land-uses should be evaluated on a time scale. The shorter the period of impact of a decision or change, the more consideration should be given for its approval, e.g. compare the building of an entrance gateway with the building of a dam. While an entrance gateway could be demolished within a day, decommissioning a dam may take years.

Current Jonkershoek land-use patterns and the proposed integrated development framework is more or less in line with the resource development and conservation scenario. It is probable that future utilisation will be in accordance with this. However due to the fact that the socio-economic development of the previously disadvantaged part of the population were neglected in the past, it will become a priority in future. The sustainable utilisation of the Jonkershoek valley depends on land-use management in accordance with recommendations for sustainable development.

CHAPTER 7

RECOMMENDATIONS

7.1 GUIDELINES FOR THE SUSTAINABLE UTILISATION OF JONKERSHOEK

The following management directives aim to promote the utilisation of the Jonkershoek valley in a sustainable way. Most of these guidelines were derived from the development issues identified and studied in Chapter 5, striving to achieve what is deemed to be sustainable development. These guidelines could serve to inform decision-makers from the local authorities, resident forums and the planning profession.

Guidelines:

- Jonkershoek should be utilised and protected as a national asset and not developed as a local asset. As such, the criteria for evaluating new developments should be the greater good, and not individual benefit.
- An open bidding or tender system could be employed for the reallocation of disused and under-utilised facilities. Community involvement and employment creation should be the main criteria for awarding applications.
- Once included in a biosphere reserve, the valley could benefit from internationally funded capital investment programmes. International funding should be actively sought by the relevant authorities.
- Agriculture may not be in a favourable position to create new jobs, but it has an important role to play in the socio-economic development of under-employed and impoverished residents, currently working in the industry.
- Expanding the number of accommodation choices will attract a more diverse user public, although the aim should never be to promote mass tourism. Preference should be given to low impact options like camping or converting existing facilities into youth hostels, for example.
- There can be no sustainable utilisation unless interested and affected parties cooperate in the public participation process. The existence of various community forums will be instrumental in this regard. The productive capacity of the community is undermined due to current infighting, which in turn is conducive to a breakdown in goodwill. An appreciation for the inter-dependence of the various stakeholder groupings could initiate productive co-operation and growth.

- Architectural and landscaping guidelines are necessary to maintain and promote the rural character of the valley, although it is not a top priority. If such guidelines are to be effective, they should be readily available, reasonably simple and actively promoted. It is unlikely for an obligatory system to work, making voluntary co-operation the most viable option. Community forums and conservancies can aid this process.
- It is highly probable that the forestry activities will be terminated, it is just a matter of time. The 30-year time frame within which timber cultivation operates will be a determining factor and makes a premature withdrawal unprofitable and unlikely. Provided there is no outside intervention, SAFCOL will probably be operational for another 15 years. Appropriate alternative uses should be found for land that becomes available as forests are harvested. Community projects should be given favourable consideration. Uses on land adjacent to the para-statal precinct will be different from that higher up in the valley
- Employment creation programmes should be aimed at employing existing facilities and resources primarily for the benefit of resident. Any activity that will generate a massive influx of new job seekers, or tourism beyond the carrying capacity, should be avoided.
- To protect nature areas in private ownership, the establishment of conservancies seems the most viable option, however it may be necessary to include stakeholders other than landowners to promote the legitimacy and sustainability of such an exercise.
- Finding a permanent solution for the property claim issue is of paramount importance. Failing to do so will cause most other development initiatives to suffer as a result. Finding a solution may start a new socio-economic era in the developmental history of the valley. The fact that Jonkershoek is a national asset should not be disregarded when looking for solutions.
- Growth in local and regional tourism is based on the assumption that the current wave of urban terrorism and crime will not stifle tourism. In Jonkershoek, visitor numbers will continue to increase and the local community should seize the opportunity to benefit from it. The focus should not be on quantity but rather to develop a quality niche in the ecotourism market.

- Optimal utilisation of the aquaculture (fish farming) facilities should enjoy high priority. This opportunity is virtually guaranteed of success due to depleted ocean and fresh water fish stocks. It will probably create more indirect than direct employment opportunities. It should be considered as a community development project, however an injection of private or public capital is needed to promote the success of such a venture.

7.2 CONCLUSION

Jonkershoek is a national treasure and should be managed as such. To make the utilisation of the valley sustainable, a balance has to be found between environmental integrity, economic efficiency and human well-being. Since the dawn of the new political dispensation in 1994, a new generation of planning measures has been implemented to promote the achievement of this ideal. The introduction of an integrated development planning policy represents a significant accomplishment in this regard. Statutory measures are now in place for the protection of the environment and society.

Legislating for economic efficiency, as a key factor in human well-being, remains a complex challenge. The improvement of the socio-economic conditions of a major section of the Jonkershoek population is the biggest obstacle in the way of the sustainable utilisation of the valley. As long as residents struggle to meet their basic human needs, they will not share a common concern for the environment, which is essential for sustainable conservation.

The development and conservation challenges facing the valley are multiple and diverse, but so are the opportunities. As custodians of the valley, there rests a tremendous responsibility on the resident to address these challenges, while taking advantage of the opportunities as they unfold. The sustainable utilisation of the Jonkershoek Valley is an attainable ideal, provided that it is actively pursued by the entire community.

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ADDENDUM A

LIST OF INTERVIEWS

Bouma, Raymond. Founding member of Jonkershoek Environmental Forum. On 1 August 2000.

Bailey, Gregory. Founding member of Jonkershoek Housing Forum. On 7 August 2000.

Cartwright, Natasha. Social worker, ACVV, Stellenbosch. On 14 September 2000

Claassen, P. E. Senior lecturer at School of Public Management and Planning, University of Stellenbosch. Supervisor to study.

Du Preez, Braam. SAFCOL Area Manager. On 23 August 2000

Fourie, Leon. Planner at Stellenbosch Municipality. On 31 July 2000

Gentle, Mark. Cape Nature Conservation Board Area Manager. On 11 July 2000

Hattingh, Johan. Professor in Philosophy, University of Stellenbosch. On 17 March 2000.

Le Maitre, David. Chairman of Jonkershoek Residents' Group. On 9 August 2000

Moss, Derrick. Planner at Dennis Moss & Associates. 16 August

Simmers, Adrian. Founding member of Jonkershoek Housing Forum. On 7 August 2000

Scott, Dave. Researcher at CSIR, Stellenbosch. On 1 September 2000.

Stander Henk. General Manager of Aquaculture Program, University of Stellenbosch.

On 4 September 2000

Terblanche, Lindie. Planner at Winelands District Council. On 13 July 2000

Tomatso, Bogani. Member of Jonkershoek Housing Forum. On 7 August 2000

Van der Westhuisen, Neville. Planner at Settlement Planning Services. On 11 August 2000.

Van Zyl, Hannes. Chairman of Jonkershoek Environmental Forum. On 8 August 2000

Wheeler, Anita. Manager of Jonkershoek Nature Reserve. On 11 July 2000

Weidemann, Erwin. Department of Water Affairs and Forestry Area Manager, Worcester. On 20 October 2000.

Zietsman, Larry. Professor in Geography, University of Stellenbosch. On 3 July 2000

ADDENDUM B QUESTIONNAIRE USED IN SURVEY

DEVELOPMENT ISSUES IN JONKERSHOEK

1. URBAN EXPANSION

Background: There is a trend towards residential densification within the predominantly agricultural precinct, with Jonkershoek being sought after real estate. This trend is reflected by regular applications to move the urban edge of Stellenbosch higher up in the valley, the subdivision of farms and smallholdings, and the building of more and bigger dwellings on farms.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

2. ARCHITECTURAL/LANDSCAPING GUIDELINES

Background: The increased construction, upgrading and renovation of buildings in the valley have a marked impact on the aesthetic quality of the area. This is especially true for structures on the middle and upper slopes, and next to the public roadside. To enhance the aesthetic appeal of the valley, it may be necessary to apply architectural and landscape guidelines e.g. zoning restrictions on a) building above a certain level, b) design and the paint colour of buildings, c) roadside walls, fences, gates and signs.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

3. AGRICULTURAL EXPANSION

Background: From time to time new vineyards are established high up on mountain slopes, in fynbos areas. This practice may result in soil erosion and it may have a visual impact on the surrounding area. One option is to allow all agriculture to continue due to the economic benefits that it has for the area. Alternatively, development can be restricted by declaring some parts as environmentally sensitive areas.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

4. FORESTRY ACTIVITIES

Background: Pine forest covers 800 ha in the upper reaches of the valley. Around fifteen staff members are employed on a permanent basis, while most of the timber is processed by saw mills in the Stellenbosch area. The expansion, continuation or termination of forestry in the upper parts of the valley may have wide ranging socio-economic and ecological implications for the valley and surrounding areas.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

5. EXPANSION OF RECREATION

Background: Because of the tourism boom in the Western Cape, there is a growing demand for related facilities in Jonkershoek, e.g. ecotourism, guided walks, picnic areas, hiking routes along the river and easier public access. Despite potential local economic benefits, some residents are opposed to this, being worried about their safety, littering, and the carrying capacity of the area.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

6. EMPLOYMENT OPPORTUNITIES

Background: There is an unemployment rate of 14% in the Winelands District. Agriculture is the biggest employment sector in Jonkershoek, but it is generally accepted that this sector has a relatively low potential for new employment creation, aggravated by the loss of jobs through the restructuring of para-statal, e.g. Cape Nature Conservation. There exists a real need to create more jobs locally.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

7. LAND CLAIMS

Background: Some Jonkershoek interest groups, especially the employees and former employees of the parastatals, e.g. SAFCOL, CNC and the CSIR, are of the opinion that they are entitled to land and dwellings which they have inhabited over a period of time.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

8. HOUSING OF FARM EMPLOYEES

Background: Around 30% of the inhabitants of the Winelands District live on farms. There is currently a move to ensure security of tenure (ownership) for farm employees, in keeping with new labor legislation. This could take the form of on-farm housing, or a worker village/hamlet somewhere in the valley or neighboring area. However, 18% of the inhabitants of the Winelands District are already without formal housing.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

9. NATURE CONSERVATION

Background: The Jonkershoek Nature Reserve could become a biosphere reserve, however there is little control over sensitive fynbos areas in private ownership. One option a co-operation agreement between Cape Nature Conservation and landowners, based on management guidelines for aspects like the eradication of alien vegetation, the maintenance of firebreaks and erosion control. Alternatively, an additional level of control can be introduced by having the area declared an environmentally sensitive area.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

10. VACATED AND DISUSED FACILITIES

Background: Some of the structures in the valley are vacated or not used according to their original purpose, e.g. trout research station. These facilities may be put to better use or deteriorate further.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

11. HOLIDAY ACCOMMODATION

Background: The regional growth in tourism, the potential increase in visitor numbers to the conservation areas and the need to create more employment have created a large demand for local holiday accommodation. Building more questhouses, a hotel or a golf resort may satisfy this demand.

What is your view on this? _____

What do you suggest as a possible solution/outcome? _____

12. ANY ADDITIONAL COMMENTS

ADDENDUM C

SUMMARY OF SPATIAL PLANNING SUB-CATEGORIES

CATEGORY A: CORE AREAS		
SUB-CATEGORY		DESCRIPTION
A.a:	Wilderness areas	Statutory and <i>de facto</i> wilderness areas providing 'benchmarks' for environmental health and primitive, non-consumptive, non-mechanised outdoor recreation.
A.b:	Other statutory conservation areas	Statutory conservation areas, e.g. national parks, provincial and private nature reserves (zoned Open Space III), etc. - providing for biodiversity conservation, outdoor recreation and limited sustainable resource use.
CATEGORY B: BUFFER ZONES		
B.a	Public conservation areas	Public conservation areas with statutory conservation status - not qualifying for A.a status, surrounding, or within Core Areas, e.g. contractual national parks, national monuments, local authority nature reserves.
B.b:	Private conservation areas	<i>De facto</i> conservation areas in private ownership, no statutory conservation status, but ideally within registered conservancies – protecting integrity of core areas.
B.c:	Ecological corridors	Natural linkages between ecosystems that contribute to the maintenance of natural processes, e.g. rivers, tracts of natural vegetation.
B.d:	Rehabilitation areas	Areas designated for rehabilitation (i.e. conservation-worthy areas previously degraded by agriculture, mining, forestry).
CATEGORY C: TRANSITION ZONES		
C.a:	Extensive agricultural use	Agricultural areas covered with natural vegetation - used for sustainable low-impact land-uses, e.g. indigenous plant harvesting, extensive stock-farming, game-farming, eco-tourism, etc.
C.b:	Intensive agricultural use	Agricultural areas used for multiple agricultural resource uses e.g. cultivated areas, forestry areas, etc.

CATEGORY D: URBAN-RELATED AREAS		
SUB-CATEGORY		DESCRIPTION
D.a:	Category C Municipality seat	Location of a Category C municipal authority.
D.b:	Category B Municipality seat	Location of a Category B municipal authority.
D.c:	Category B Municipality satellite town	Town that previously had municipal status, now forms part of a Category B Municipality and has a municipal office.
D.d:	Rural settlements	Areas where historic settlement occurred and developed in favour of previously disadvantaged communities.
D.e:	Institutional settlements	Nodal settlements and infrastructure associated with institutions, such as educational centers, prisons, etc.
D.f:	On farm settlements	Agricultural settlement nodes together with the communal infrastructure, as required.
D.g:	Farmsteads	Main farmsteads including on-farm infrastructure required for logistical farm purposes, e.g. sheds, packing facilities, dairies, etc.
D.h:	Tourist Facilities	Providing for tourist related development in the rural areas..
D.i:	Resorts and- related uses	Providing for Resorts and related uses inclusive of residential housing in the rural areas.
D.j:	Buildings / Developments not provided for above	Providing for structures, buildings and developments not listed under D.a. – D.i.

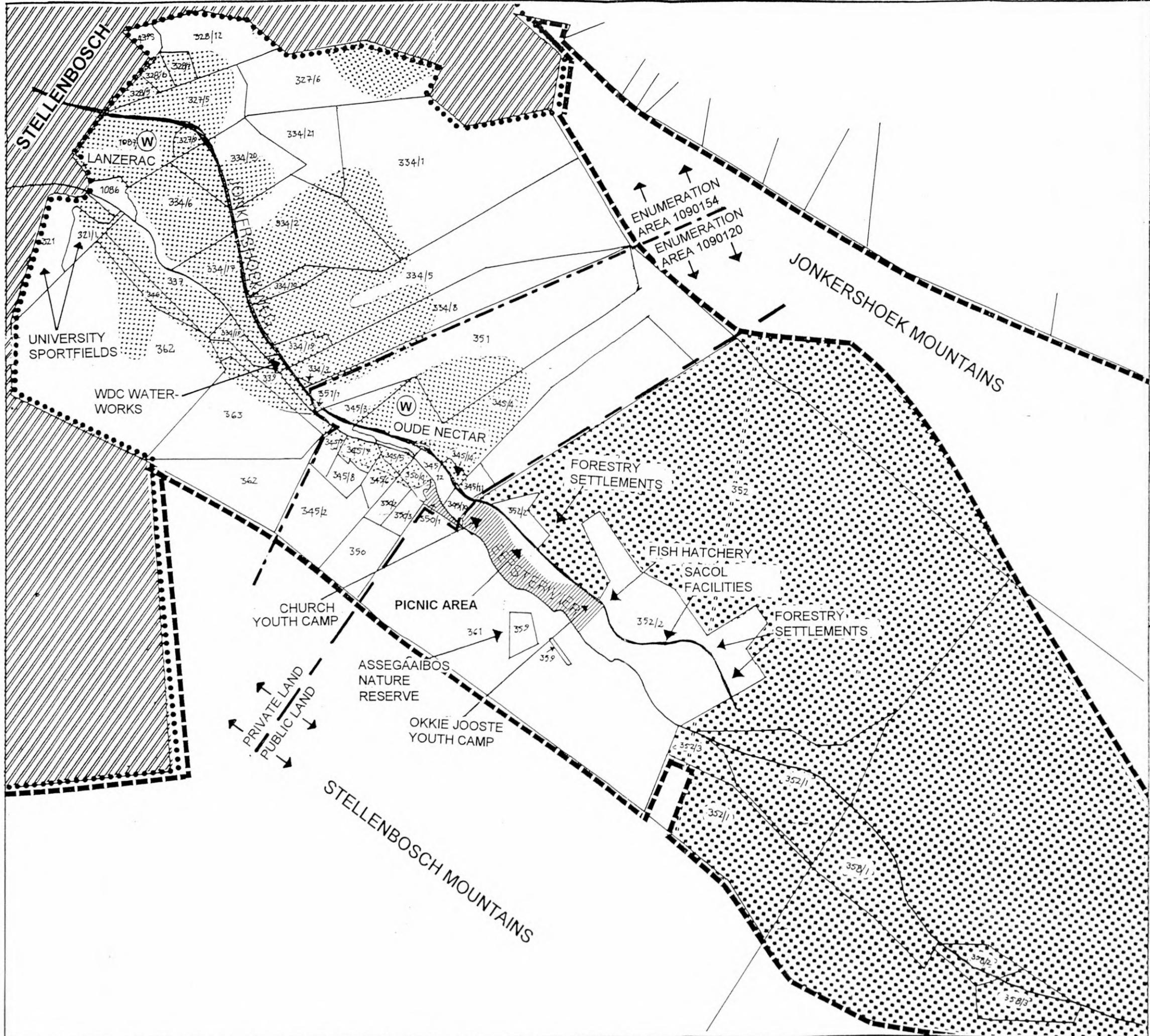
CATEGORY E: INDUSTRIAL AREAS

E.a:	Agricultural industry	Agricultural industrial developments, such as silos, wine cellars, packing facilities, dairies, saw-mills, etc.
E.b:	Light industry	Areas designated for light industrial activities, such as small factories, brick-yards, saw-mills, metal-works, etc.
E.c:	Heavy industry	Areas designated for heavy industrial activities, such as steel mills (e.g. Namakwa Sands), etc.
E.d:	Extractive industry	Settlements and infrastructure associated with multiple consumptive resource extraction, e.g. mining.

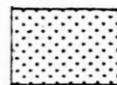
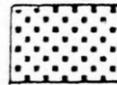
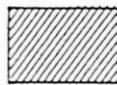
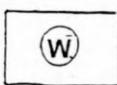
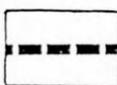
CATEGORY F: SURFACE INFRASTRUCTURE & BUILDINGS

F.a:	National roads	As proclaimed in terms of the South African National Roads Agency Limited and National Roads Act, 1971 (No. 7 of 1998).
F.b:	Trunk roads	As proclaimed in terms of the Roads Ordinance (No. 19 of 1976).
F.c:	Main roads	As proclaimed in terms of the Roads Ordinance (No. 19 of 1976).
F.d:	Divisional roads	As proclaimed in terms of the Roads Ordinance (No. 19 of 1976).
F.e:	Minor roads	As proclaimed in terms of the Roads Ordinance (No. 19 of 1976).
F.f:	4X4 trails	4X4 trails within Category B and C.
F.g:	Railway lines	Railway lines and associated infrastructure.
F.h:	Power lines	Power lines and associated sub-stations and infrastructure.
F.i:	Communication structures	Cellular network towers, radio towers, telecommunication infrastructure.
F.j:	Dams & reservoirs	Major dams and reservoirs.
F.k:	Other buildings & infrastructure	Buildings & infrastructure not included in Category D, E and F.a-F.j.

(SOURCE: WINELANDS INTEGRATED DEVELOPMENT FRAMEWORK)



LEGEND

- AGRICULTURE - VINYARDS & ORCHARDS 
- FORESTRY & FYNBOS 
- RECREATIONAL USES 
- WINERIES 
- CORE CONSERVATION AREA 



SCALE 1 : 25 000

MAP 4 JONKERSHOEK DETAIL STUDY OF AREA

SOURCE: ADAPTED FROM TRÜMPELMANN, 1990