CEPF FINAL PROJECT COMPLETION REPORT

I. Basic Data

Organization Legal Name: Grootbos Green Futures Foundation

Project Title (as stated in the grant agreement): Green Futures on the Cape Flats

Implementation partners for this project: Grootbos Green Futures Foundation, Cape Flats Nature, City of Cape Town, South African Biodiversity Institute (SANBI), the Working for Water Programme, the Working for Wetlands Programme and the Botanical Society of South Africa.

Project Dates (as stated in the grant agreement): 1 December 2006 to 30 June 2007.

Date of Report: 29 August 2007

Report written by: Sean Privett (Grootbos Green Futures Foundation)
Reviewed by Tanya Goldman (Cape Flats Nature)
Consultant used to compile information: (Gareth Rossiter)

II. Contributors

Gareth Rossiter was contracted by the Grootbos Green Futures Foundation as an independent consultant to undertake the feasibility study and business plan components. Gareth has compiled the information for outputs 1 (feasibility study), 2 (business plan), 3 (donor scan and draft funding proposals) and 6 (plant supply arrangements).
Sean Privett compiled the information for outputs 4 (five year restoration plan) and 5 (potential off-site restoration and landscaping projects).
Tanya Goldman provided significant input and guidance throughout the process and reviewed this report.

III. Project Outputs

Output 1. A feasibility study which would include a survey of urban horticultural, conservation and lifeskills colleges, and indigenous nurseries, explore potential markets and job opportunities and institutional arrangements and agreements needed to enable the establishment of Green Futures Colleges on the Cape Flats.

Green Futures on the Cape Flats

Report on the Feasibility Study

Report Compiled by Gareth Rossiter: Consultant to the Grootbos Green Futures Foundation for the Green Futures Colleges on the Cape Flats Feasibility Study; June 2007

Contents

Disclaimer: Gareth Rossiter, the consultant contracted to conduct this feasibility study, compiled this report. The comments and analysis are those of the writer and do not necessarily reflect the views of either the Grootbos Green Futures Foundation or any of the other partners of this venture.

This Feasibility Report should be read along with the document "Green Futures Colleges Programme: A Business Plan for 2007 – 2010" This report forms part of a suite of reports that were expected outcomes identified in the terms of reference for the feasibility study.

1. Introduction

There are high levels of unemployment in poor communities particularly amongst youth. While the economy is growing, youth from poor communities are not generally benefiting. They have had a poor education. This deficit and their limited networks impede their access to resources and jobs.

Because the problem is so extensive, the tendency has been to offer short training courses or short work contracts as a solution. This way many can benefit. The results have not seen sustainable impact for youth from poor communities. Poverty Relief Programmes in their current design are unable to fulfil the need for comprehensive measures needed to remedy the complex set of challenges that youth from poor communities face. Staff working in poverty alleviation programmes in the conservation sector such as Working for Water and Working for Wetlands have identified that they are not able to ensure effective exit strategies without more thorough interventions and that quick fix training solutions are not offering lasting benefits. The Green Futures Colleges Programme proposes an approach that builds on the lessons learnt from these poverty relief programmes.

In order to address this problem and the deficiencies found in the poverty relief programmes, comprehensive programmes of training and support to find and sustain employment are needed. Young people from disadvantaged backgrounds need technical training in sectors where there is tangible growth where there are likely to be opportunities for employment or job creation.

While it is relatively easy to ensure a thoroughgoing learning programme that develops vocational skills, develops fundamental learning and enhances life skills appropriate for a job seeker, it is not always as easy to run thorough placement programmes where learners are placed in appropriate jobs and supported with the integration into these. This is a difficult task requiring a good knowledge of the learner and technical skills that are required by the economic sector.

There is a growth in the indigenous landscaping and gardening sector[1] as a result of increase in public demand based on improved awareness brought about through public education. This is leading to an increased demand for water wise gardening that is being spurred by this increased public awareness in environmental issues. In addition the scarcity of water precipitated by droughts and urban demand for water and the convenience of propagating gardens that largely rely on rainfall has meant that more consumers of horticultural products and services are choosing indigenous gardens. Similar factors are driving demand in the public sector. Evidence of this found in the choices people are making for private gardens, but critically the choices contractors are making for landscaping of large developments. Further evidence is to be found in the growth in the small business sector particularly in landscaping.

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Vink, N and Tregutha, N: Agriculture and Mariculture (First Paper) Structure, Performance and Future Prospects; An Overview (2004)

Karaan, M. Kassier, E. Vink, N and Cherry, M: Agriculture and Mariculture (Second Paper): Strategic Trends and Expectations for various Agricultural Commodity Sectors in the Western Cape (2005)

Department of Water Affairs and Forestry: Report on Emerging Nurseries (2005)

The growth in the interest in indigenous gardens and plants combined with other factors of urban growth and building development has spurred growth in the nursery sector. Public awareness is providing new increased energy for urban conservation and restoration. And private and public spending is fuelling growth in nurseries and landscaping.

However, despite this growth, there is little if any training for skilled horticultural practitioners at the general and further educational levels[2]. No educational institutions (under the Department of Education) are currently training youth in indigenous horticulture, restoration and landscaping. There are a few NGOs who are providing skills training programmes, but none as comprehensive as what is being proposed. In addition there are very few success stories of black entrepreneurs making capital of this growth. Public conservation programmes that are seeking to alleviate poverty such as the Working for Water and Working for Wetlands Programmes are struggling to ensure exit strategies for beneficiaries from their programmes as the training and support measures that they are able to give within the frameworks of their programmes are restricted. Partners of this proposed programme and representatives of the nursery industry canvassed during this study agree that the development of indigenous horticulturists to work in the growing market and to feed the development of black-owned nurseries requires a thorough education and training programme that is of a high quality.

The Grootbos Green Futures College was established by the Grootbos Green Futures Foundation in 2003 on a privately owned fynbos reserve on the outskirts of Gansbaai. It sought to develop and implement a thorough learning programme (learnership) suited to local youth from disadvantaged backgrounds that focused on horticultural skills and knowledge, general education and life skills. It sought and was granted accreditation by the Primary Agriculture Education and Training Authority.

The college attracted the attention of the Cape Flats Nature partnership. This partnership between the South African Biodiversity Institute (SANBI), the City of Cape Town, the Table Mountain Fund, the Botanical Society of South Africa, Cape Nature and the Table Mountain National Park seeks to build good practice in sustainable management of City Biodiversity Network sites in a people-centred way that develops local leadership for conservation action and benefits the surrounding communities, particularly in townships where incomes are low and living conditions poor. The partnership is associated with Cape Action for People and the Environment (C.A.P.E.)

During the participatory programme design process for Cape Flats Nature, job creation emerged as a priority issue for community stakeholders at all the sites. The partnership believes that developing strong technical skills and well rounded young people who are able to take up employment in the public and private sectors would make a strong contribution to ensuring that conservation measures are sustained and grow particularly in low income communities where many highly vulnerable parts of the Biodiversity Network on the Cape Flats are located.

Together with the Grootbos Green Futures Foundation, the Cape Flats Nature partnership has undertaken this feasibility study which has been funded by the Critical Ecosystems Partnership Fund (CEPF). The study has been has been managed by the Grootbos Green Futures Foundation. This study has set out to raise resources for the programme, to develop comprehensive business plans, plans for restoration work and the development of agreements between partners.

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2 Not so at the higher education level

The Green Futures Colleges Programme envisages that over the next three years two hundred and eighteen (218) students from disadvantaged backgrounds will become sustained in employment. Students will be drawn from areas neighbouring each college. In the first phase the programme will comprise of three colleges namely Grootbos, Edith Stephens Wetland Park and Harmony Flats. In the next phase a further three colleges in locations around South Africa will be established. Students will be provided with a year long accredited learning programme (learnership) entailing tuition and practice in indigenous plant propagation, land restoration and landscaping. In addition the learners will develop a range of life skills (including numeracy, literacy, driving and computing).

The programme will seek to replicate the successful programme run at Grootbos over the last four years. (The Grootbos Green Futures College has achieved a sustained placement rate of almost 100%). The students will contribute to their tuition costs through work in the college nursery and through working on indigenous restoration and landscaping contracts. On completion of their programmes the colleges will support graduates to seek, find and sustain employment in the public or private sector working on indigenous landscaping, nursery or conservation projects.

The project being proposed here will begin the process to start the establishment of a national network of colleges by establishing two new colleges initially in the Cape Lowlands. These colleges will provide a thorough training in indigenous horticulture, restoration and landscaping to meet the market need. By ensuring a skilled supply of labour, the Green Futures Colleges Programme will be making a significant contribution to capitalising on the successful investment that has been made in public education for conservation, in ensuring that low- income communities have a stake and participate in conservation and in sustaining the momentum.

As a contribution to the cost of their tuition, students will, on the basis of agreements between the colleges and public organisations, undertake restoration work in and around the nature reserves where they are located.

2. Summary of the Study

The Green Futures Colleges Programme is an important intervention. It represents a bold approach to economic empowerment that is distinctive from existing poverty relief programmes because of its long-term perspective, its focus on moving beyond short-term employment, quick-fix training courses to interventions that have a lasting impact on livelihoods of households. It is appropriate that this kind of development model is located in the conservation sector where the issues of sustainable development are fundamental to the discourse.

The Green Futures Programme argues that the correct developmental approach to bringing real and lasting benefits to disadvantaged youth is through providing a comprehensive (and compensatory) learning programme to the target group that understands where their strengths and weaknesses lie. The Green Futures model argues that the benefits to poor families are sustained if at least one member gains access to a sustained income. The model is tried and tested and works.

At this current juncture there are a number of critical risks that could seriously constrain attempts to grow the Green Futures Colleges from a highly successful model developed in the private sphere into an extraordinary national programme in the public sphere. These are dealt with openly in this report in an attempt to provide those who are responsible for taking the initiative further with a clear understanding of the risks that will need to be managed and the effort that will be required to provide the kind of supportive environment in which the programme will thrive.

However, despite all these constraints, there are significant strengths and imperatives in the programme being proposed that, in the view of the writer, mitigate all these risks. It is on the basis of these strengths that this study recommends that the partners embark on a set up phase during which critical components are put in place to enable the programme to move into preparing to take on the first intake of learners at two new colleges on the Cape Flats.

The programme has broad support from a range of important constituencies. In the entire process of the study no one has voiced reservations that could be seen as substantive. And there are no reasonable factors considered during the process that should deter those committed to seeing its implementation from pursuing the admirable vision that the programme represents.

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During the feasibility study the following have been put in place

- A detailed three-year business plan has been developed.
- A comprehensive financing proposal to the Umsobomvu Youth Fund has been prepared.
- A financing proposal for a contribution of R120 000 to support the set up phase has been prepared for the Table Mountain Fund.
- A commitment from SANBI to consider financial support for the Programme Management position and housing the programme in the Urban Conservation Unit after considering the recommendations of this study.
- A financing proposal has been submitted to AgriSETA. There is in principle support from them for the programme.
- Support from employers in the sector has been canvassed.
- A detailed written request for a lease arrangement with the City of Cape Town was made in mid April 2007.
- A detailed proposal for an institutional framework, for the management of the programme and for the management of the array of partnerships.
- Research on micro economic perspectives and training provision has been conducted to support the premise of the need for the programme.
- The Working for Wetlands Programme has committed R200 000 for equipment and nursery infrastructure. This equipment has been purchased and is currently being stored. In addition there is agreement in principle that the Green Futures College nursery at Edith Stephens will produce plant stock for this programme.
- Information on market opportunities for plant sales and landscaping services has been gleaned.

Despite these factors there are challenges that need to be faced. The feasibility study has sought to focus on ensuring three critical components: anchor finance, agreements on lease of space and infrastructure needs and solid support from all the key stakeholders.

Although there are few formal agreements at this point, there has been significant progress towards reaching agreement. The study concludes that a broad consensus has been reached.

- With one exception[3] there are no agreements to finance the programme at this point. However the proposal to the Umsobomvu Fund is currently being prepared for submission by the Department of Water Affairs and Forestry along with a suite of other youth projects. The prospects of the application being successful seem good. If this is successful the anchor financing for the project will be secured. A reframed proposal to the Table Mountain Fund for R120 000 to support the set up phase will be submitted in August.
- SANBI has agreed in principle to support the programme management position pending the outcomes of this study. The study recommends that the partners move into the set up phase.
- Although there is no formal agreement between the partners at present, the contents of a Memorandum of Understanding have been canvassed and it is clear at this point that the endorsement of this should be a formality.

[3] Working for Wetlands has contributed R200 000 to nursery infrastructure at Edith Stephens.

- The City of Cape Town supports the housing of colleges at Edith Stephens Wetland Park and Harmony Flats Nature Reserve. Alternative land is being sought adjacent to the sites where the income generating nurseries will be able to operate.
- The City of Cape Town has a complex process of approval for lease agreements. The City has undertaken to seek to fast track the lease agreement for the Green Futures Colleges.

Concerted efforts will be required in the coming months to conclude agreements if the first new college is to open in 2008.

The feasibility study has identified that core to the successful implementation of the programme will be the establishment of a strong visionary programme management unit and programme advisory committee to oversee the establishment and effective implementation of programmes of learning at new colleges and to carry the vision of the Green Futures Colleges to the national stage. The unit will need to be staffed by competent and committed individuals. In addition this team will need to be supported by an advisory committee within the proposed institutional framework that is wholeheartedly committed to making the programme work. This will mean that all will have to put their shoulders to the wheel to provide the momentum and craft a strategy for the programme to be propagated, grow and thrive.

The process in the coming phase will have to ensure that a team is developed and that this team is fully supported by the implementing institutions and partners. Also that the responsibility for momentum rests between staff and advisory committee. This will need to be clearly outlined in the roles an responsibilities in the Memorandums of Understanding.

The report concludes that the factors that make this initiative strong and viable outweigh the weaknesses and risks that need to be managed. A set of recommendations are made that outline some of the steps that need to be taken in the set up phase and of measures that could be taken to mitigate risks.

3. Methodology

This feasibility study has been conducted between February and June 2007. The process and outputs for the study were set out clearly in the terms of reference that formed the basis for the commission. However, as with all processes of this nature, the execution of the study did not follow the planned process to the letter.

The development of this report is based on an analysis of information and insights gained through a variety of activities conducted during the course of the study. It has involved research of official[4] and academic documents, research of internet sources, interviews with partners, canvassing support from employer groups, and negotiations and meetings with a variety of partners. In its conceptualising the terms of reference called for activities that would not only assess the feasibility of the programme, but undertake work towards creating conditions that would improve feasibility such as writing proposals and negotiating agreements. This work has been undertaken including the drafting of comprehensive funding proposal and the presentation of the programme to forums.

In its original conceptualisation in the Terms of Reference, financial support from the AgriSETA through an allocation from the National Skills Fund (NSF) for learnerships for unemployed people was assumed to be relatively easy to access. Grootbos Green Futures College has received this subsidy for some three years now.

After attending a public presentation to stakeholders by the AgriSETA in the Western Cape, it became apparent that the funds available to the SETA were limited and that chances of accessing these were not good. It has since become clear that some R1billion of NSF roll over funds were allocated to the provinces. Despite a range of approaches to find ways of applying for these resources from the Western Cape Provincial Government, where these are and how to apply for them still remains illusive.

A meeting was held in Pretoria with the CEO and Learnerships Manager of the AgriSETA. The approach was to inform them of the initiative and to ensure their support even if they were unable to support the initiative financially. The meeting was successful and cemented an important relationship for the Green Futures Colleges Programme. Advice was given to try to source provincial funds. In addition the representatives of the AgriSETA indicated support for the initiative.

The Programme Reference Group met in March to consider a concept document that was developed for discussion and consideration. The concept document sought to identify the key risk areas in the programme and to find solutions to some of the core issues that the programme should try to address.

Two matters transpired at the first advisory committee meeting that determined the path of the feasibility study.

[4] E.g. Report of the Working for Water Nursery Partnership on Emerging and Community Nurseries.

The Working for Water representative made a strong recommendation that an application be made to the Umsobomvu Youth Fund. Despite the risks identified by the proposer from a previous attempt with another application, it was argued that if these resources could be secured it would place the programme on a very sound financial footing. As such it was worth the risk. DWAF undertook to include the Green Future Programme in a suite of youth development proposals it was contemplating submitting to the Umsobomvu Youth Fund.

A great deal of time has been spent during the study to develop the business plan for the Umsobomvu Youth Fund. Even if the funds are not approved the exercise has been most informative and has led to the development of a proposal that takes the Green Futures Colleges Programme onto the national stage in the third year of operation after new colleges have been firmly established on the Cape Flats. It has enabled the conceptualisation of the programme to become broader and to incorporate some of the pressing development issues of some of the partners including envisaging sites for future colleges in other provinces that DWAF and SANBI have identified. This broader conceptualisation has encouraged a longer term perspective that in turn has forced the programme to answer questions of capacity and systems that would not have necessarily been addressed including the training of trainers and the development of a 'development office' to oversee the placement, mentoring and aftercare programme and to track the progress of students over time. While the management oversight of the placement, mentoring and aftercare programme will be the responsibility of this office the implementation will be undertaken by the educators at each the sites.

It was also apparent from this first meeting that there would be obstacles that would need to be overcome in negotiation between the City of Cape Town (as prospective landlord) and the Green Futures Colleges Programme. The issues ranged from the operating a nursery for income on sensitive nature sites, whether or not there would be sufficient infrastructure in place, the future of another project on the site and the complexity of securing lease arrangements.

Efforts have been made to address all these issues. Meetings were held with the site and area managers and with the senior officials involved. A proposal to seek use of a piece of city land opposite the Edith Stephens Wetland Park in the Silvern Block for nursery operations was proposed as a solution. In the case of Harmony Flats negotiations to use land adjacent to the reserve are under way.[5]

The concept and some content of the Green Futures Colleges Programme were presented to the Working for Water Nurseries Forum in June. This is a broad forum of nursery and landscaping businesses and associations of these across South Africa convened by the Working for Water Programme. It was the first and important step to build a working relationship with these important players. The presentation was well received. Members gave their support for the concept and agreed with the premise of the growing market and the need for skilled horticultural practitioners at the level being proposed. Some offered suggestions and others their time for consultation.

[5] Minutes of recent meetings that indicate progress are included in the annexes.

This report has been compiled at the end of this process which seeks to lay out the positive attributes of the proposed programme and the current risks that exist.

The analysis of these has lead to a set of recommended steps to be taken in the coming period to

- Take the process forward
- Ensure ongoing momentum
- Minimise the risks

4. The Proposed Programme: A Summary

Two Green Futures Colleges will be set up on the Cape Flats[6] during 2008 and 2009 to train young horticulturalists at the general and further education levels. The graduates of these colleges will be trained to meet the growing need for skilled people in the horticulture, landscaping and restoration industries. The colleges will be established with a view to their replication in three other centres[7] across South Africa in the third year of operation.

By the end of 2010 it is envisaged that there will be six Green Futures Colleges across the country training 112 learners a year.

The colleges will seek to emulate the successful Green Futures College model at Grootbos in Gansbaai[8] by working in close partnership with this college and drawing on the rich experience at this college in learning programme design, in curriculum development and quality assurance systems[9.] The Grootbos Green Futures Foundation will provide the necessary quality assurance expertise and systems into the foreseeable future.

The learners will graduate after a year of classroom tuition and practical experience with a level 1 learnership qualification[10] in horticulture specializing in indigenous flora and will be well equipped to take up employment in a variety of settings in conservation, nursery, gardening and landscaping settlings. The learners will be selected through a rigorous process from applicants from the neighbouring disadvantaged communities.

The learning programme covers areas of fundamental learning including language, mathematical and scientific knowledge and in general life skills including motor car driving and computer literacy that will build the foundations for further learning and application. The core of the curriculum programme will cover all aspects of horticulture. Landscaping and restoration work as well as business skills will be offered as areas of specialisation.

Each of the colleges will employ two educators. These educators will be responsible for the learning programme, for the placement of graduated learners with employers and the conducting of a mentoring programme to ensure effective aftercare. A programme manager will oversee the development of all six colleges and the nursery and landscaping business development.

A nursery and landscaping business venture will be set up at the site of each of the colleges. These will be managed and run by a small employed staff complement whose salaries will be linked to profitability of the business. These operations will sell plant material, landscaping and

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6 At the proposed sites of Edith Stephens Wetland Park and Harmony Flats Nature Reserve.

7 Proposed sites include other national botanical gardens and nursery and other sites of the Department of Water Affairs and Forestry. Feasibility studies will be conducted in year two.

8 The Grootbos Green Futures College has been operating for four years and has achieved a near 100% placement rate for its graduates each year.

9 The Grootbos College is accredited as a training provider with the AgriSETA.

10 Levels 3 and 4 qualifications will be added in subsequent years.

restoration services to the public and private market. Learners will work in the nursery and on the landscaping and restoration projects. The value of the work undertaken by the learners will be calculated and measured as a contribution of the learners to the costs of their studies. The colleges will own the majority share of the businesses and a reasonable percentage of the profits will over time be used to offset the costs of running the college.

The Colleges are planned as a partnership between the South African National Biodiversity Institute (SANBI), the Grootbos Green Futures Foundation, the Working for Water Programme, the Working for Wetlands Programme and the City of Cape Town (in the first instance). During the process of the feasibility study agreements will be reached and contracts signed on various aspects that reflect the exact nature of this partnership.

The proposed three-year budget to establish and maintain six colleges is R21 million. By 2013 the nursery and landscaping businesses will generate R 13 million a year. (Each nursery is expected to reach full production and sales targets within three years of operation.)

218 students will participate in these learnerships over the initial three years of the project. Class sizes will be fixed at 20. The cost of subsidy per learner in the third year of operation is R47 781. This reduces to below R40 000 a year after a further three years when the nurseries are operating optimally. For their year on the learning programme each learner will work in the nursery and perform landscaping and restoration tasks. They will receive a poverty relief related stipend amounting to R12 100 per year.

5. Conclusions:

Key Strengths, Risks and Opportunities

5.1 Key Strengths

5.1.1 Wide Support

There is strong support for the programme from the key organisations which will form the core of institutional partners for the programme.

These include:

The Department of Water Affairs and Forestry (The Working for Water Programme)

The WfW Programme has provided access to their WfW Nursery Partnership and is sponsoring the programme by placing it as a priority project on its list of applications to the Umsobomvu Youth Fund. Working for Water has identified some sites that they would be keen to have included for future colleges.

The Working for Wetlands Programme

Working for Wetlands has indicated strong support for the programme. There is interest in ensuring some of this programme's beneficiaries who show potential have opportunity to apply for placement on the programme. In addition this programme has provided start-up capital for the nursery infrastructure and has indicated interest in placing orders for plant material for its Peninsula Programme.

The City of Cape Town

The City has indicated support for the idea of the colleges. Branch, site and area managers have indicated strong support for colleges. They see these as opportunities to meet some of the needs expressed by communities that are their stakeholders for job creation and training. They also agree that the programme will provide the city an opportunity to pioneer the role of local government

SANBI

SANBI management is awaiting the outcomes of this report to proceed with an undertaking to investigate supporting the employment of the programme manager for an initial three-year period. In addition SANBI Urban Conservation Programme is preparing to take responsibility for the implementation of the programme and to house the programme management unit. SANBI's support will be with personnel and systems. Horticultural and other expertise will be made accessible to the programme.

The Grootbos Green Futures Foundation

The Foundation has for some time now seen the value in replicating the model that has been developed at Grootbos. Although it is a relatively small operation, there is a willingness and commitment to provide assistance with the replication and to act as the accredited training provider.

The Industry

Initial responses from industry representatives have been very positive. The Green Futures Colleges Programme was invited to give a presentation at the Working for Water Nurseries Forum. The presentation was received with interest and support. A variety of representatives have requested further discussion A relationship with nursery and landscaping employers will be critical for the programme for placement, for advice on curriculum matters and as potential customers for plants and services. It has not been possible to cement these relationships at this stage without clarity on direction.

The Botanical Society of South Africa

BotSoc has indicated strong support for the programme and intends to develop means to do so. They see the potential to build their membership base in low income communities by creating a special membership category that would enable graduates of the programme to join free of charge and receive the Veld and Flora publication. They also see an opportunity to popularise indigenous flora in low income communities, for example by subsidising plant sales from the College nurseries for use in local gardens.

Community Stakeholders

The pressure to develop employment creation and training programmes through conservation has come from community stakeholders. Their commitment is solid. In addition there is solid support voiced from community stakeholders, from NGOs and from poverty relief programme participants who were canvassed during the study or who had given support prior to the start of the feasibility study.

Given this wide support it would be important that the initiative is pursued vigorously.

5.1.2 A Tried and Tested Model

The programme proposes to use a model of training that has been tried and tested for four years now at Grootbos. The Grootbos case has demonstrated that with a small dedicated staff, with some expert support and with limited, but sufficient resources, an ambitious initiative like this can transform the lives of disadvantaged youth (and indeed the households from which they come).

The Grootbos Green Futures College Grootbos has attained a placement rate of close to 100%. It has a developed a sound reputation with employers and the conservation sector.

5.1.3 A Sound Developmental Approach

The Green Futures College model represents a sound developmental approach to providing a holistic and tailored learning programme for a year and then providing placement services and aftercare support. Its focus is on a quality service albeit for relatively few numbers that transforms individuals and their ability to earn an income in a sustainable job.

5.1.4 A Growing Market

The document “Marketing Plants and Landscaping Services” forms part of the suite of reports commissioned through this feasibility study.

There is range of business options that could be pursued for the nursery and landscaping businesses at each of the colleges. These include setting up a retail nursery at each site, running a propagation nursery and seeking contracts or sub contracts with large private landscaping projects or propagating indigenous plants for sale in the public sector (public works) and for restoration work.

The options are examined and arguments are presented for each. The conclusion is that the nurseries should focus on propagation and seek regular and significant customers primarily in the public sector, but also with larger private landscaping projects.

5.1.5 A Clear Gap for Training in a Growing Niche Market

There is a clear gap in the training market. An internet survey of training providers particularly those part of the Department of Education and Agriculture indicated that there are no schools or colleges that are providing qualifications a the general and further education levels that offer specialisation in indigenous horticulture. Indeed none were found to be providing a learnership at this level for youth wanting to enter the nursery or landscaping industries. There are a few NGOs training at this level but none have been identified who are providing a comprehensive year long certificated programme.

The pedagogical approach of the Green future College is also unique. Its education with production method is appropriate for the task of providing practical knowledge and skills, general education and preparing youth for employment.

Given the growing market based on micro economic research findings sited elsewhere, there is likely to be a growing demand both in the pubic and private sectors for the skills of learners and the services of the college.

5.2 Risks

5.2.1 Replicating the Model

The Green Futures College model has been developed in the private sphere. Part of its key success is that it has been driven by dedicated managers and staff and has had the space to innovate and respond. It is not constrained by running committees and community structures that may enhance sustainability and participation, but take time and resources. The programme has also not had to work within constraining bureaucratic structures and systems.

What is being proposed here is taking this model and placing it the public sphere. The process will have to take on board the considerations and interest of a range of partners from large organisations to smaller community structures.

Line functioning bureaucracies tend towards a stratification of tasks where the chiefs talk strategy and politics and technical functionaries or consultants work at filling in the details. The Green Futures Colleges Programme proposes a serious challenge for everyone. The implementation of the programme is not going to be easy. This will require everyone to get their heads around the challenges. There are few precedents that can be used[11]. At least in the initial stages of this programme it will require all to roll up sleeves and get their hands dirty. Those giving strategic direction need to understand what it will take to make this programme happen and to hear the voices of those who will be closer to the action of implementing. “Planting trees” of this kind requires less contemplation and more active teamwork.

The Grootbos Green Futures College is a relatively small entrepreneurial project. This now has to be transformed into a programme of colleges. While comprehensive more sophisticated systems for management and monitoring are needed with this transformation, it will also be important to transplant the detail, because it is this focus on detail and the individual that has made the programme successful.

5.2.2 Securing Finances

Although there are positive signs of concrete undertakings from Working for Wetlands and SANBI and the Table Mountain Fund, these provide only seed funding and are not of significant scale to enable the programme to proceed or to be seen as viable.

Currently the implementation of the programme hinges on the successful financing proposal to the Umsobomvu Fund. Although there are other sources of finances that could be tapped the programme needs an “anchor financing partner” to strengthen the case for feasibility of the programme and to enable the programme to then seek other smaller contributions.

The prospects of this proposal being successful appear good. It is however critical that momentum is continued. A set up phase, which should include the appointment of a programme manager,

[11] Perhaps the Working on Fire programme provides some useful clues.

would ensure that preparation tasks[12] can be undertaken including the submission of other proposals to other donors either to supplement the contribution of Umsobomvu Youth Fund or to minimise the risk should the application to UYF not be successful.

This strategy will ensure that all preparations are made so that implementation can begin as soon as possible in 2008.

Other sources of finance particularly those in provincial budgets or allocations need to be pursued.

5.2.3 Securing Lease Agreements, Ensuring Adequate Infrastructure:

There is support from the City officials (Environmental Resources Management Directorate and its Biodiversity Management Branch specifically) for the proposed programme. The securing of a lease from the City will take some months still as it has to go through both political and bureaucratic processes. There are strong assurances that this process is well under way.

The Biodiversity Management Branch of the City voiced concern about the running of "commercial" nurseries on ecologically sensitive land (the sites). Proposals to find land adjacent to the sites on which to house the nurseries are now being actively pursued. In the case of Edith Stephens Wetland Park there is land opposite that is also owned by the City. There are a number of NGO partners interested in working on this land. The current proposal is that they form a hub on this land (the Silvern Block). This will entail additional costs to secure the area and to develop infrastructure. It will only be worth considering if other partners and projects can be found to join the venture of developing the land to a level where operations would be secure. In the case of Harmony Flats negotiations around land adjacent to the site are taking place.

There has been little progress around the infrastructure development at Edith Stephens and Harmony Flats that will enable the colleges to start at these sites in the near future. A great deal of attention needs to be given to these matters. They currently present critical impediments to the programme. Without sufficient classroom space, ablution facilities and recreational space the colleges will not be able to start at these sites in 2008.

[12] Finalising agreements, working with the City officials around infrastructure needs, preparing revised curricula

Opportunities

Some Business Opportunities

The key to the success and sustainability of the colleges will be the extent to which the nursery operations are able to generate the projected targets for income. This is likely to be challenging given a competitive commercial environment and the fact that these colleges are not likely to have serious marketing and commercial expertise. The proposed best option for the colleges will be the sourcing of business from in the public sector and to pursue (at the corporate level) bulk business to supply plant and undertake landscaping services.

The agreement in principle with the Working for Wetlands Programme provides a good example as a starting point. Indications are that the Extended Public Works Programme is considering including landscaping work of public grounds around public buildings as part of their programme. This will provide the colleges with an important opportunity. Information on this initiative needs to be pursued actively. Concluding a large agreement around plant supply could be a very useful kick-start to sustaining the nursery ventures that are a cornerstone of the model.

Capitalising on Strengths, Managing Risks, Preparing the Ground

This chapter suggests some ways to build on key strengths, to manage the risks that are currently impediments to the successful implementation of the programme and to prepare the ground for the implementation of the first new college in 2008.

6.1 Capitalising on Strengths

6.1.1 Building Broad Support, Communicating Progress, Building the Team, Ensuring Momentum

Given the wide support in principle for the programme it would be important that the initiative is pursued vigorously. The feasibility study has identified that core to the successful implementation of the programme will be the establishment of a strong visionary programme management unit and programme advisory committee to oversee the establishment and effective implementation of programmes of learning at new colleges and to carry the vision of the Green Futures Colleges to the national stage. The unit will need to be staffed by competent and committed individuals. In addition this team will need to be supported by an advisory committee within the proposed institutional framework that is wholeheartedly committed to making the programme work and to undertaking work towards this end. This will mean that all will have to put their shoulders to the wheel to provide the momentum and craft an appropriate strategy for the programme to be propagated, to grow and to thrive.

Recommended Steps

- At this stage following the completion of the feasibility study it may be useful to provide feedback to all stakeholders (including institutional partners, community and other NGO stakeholders) on progress to date. A recommended process would be to involve these partners in planning exercises where the roles of partners, the institutional framework proposal and plans for the set up phase are proposed and partners are given opportunity to make changes and recommendations[13].
- At Edith Stephens Wetland Park, where the first new college is most likely to open earliest in April 2008, it may be advantageous to seek to establish an interim college committee towards the end of this year once the financing position is secure. It is important to bring community stakeholders on board as soon as possible. The community will also ensure momentum. The committee will need to be established before student applications are received as they will have a role in the selection process. Community ownership needs to be built as early on as possible.
- There has been interest shown by some employers in the Western Cape who are members of the Working for Water Nursery Partnership. It would be beneficial to hold a meeting with this group, to brief them and to seek their participation and representation on the Programme Advisory Committee.

6.1.2 Ensure Agreement Amongst Partners

A key constraint during the feasibility study has been the lack of cohesiveness of the respective institutional parties. It is important that this report and the plan be seen as a proposal for moving forward. From this point the modus operandi of the programme should be one that seeks the full endorsement of the programme with modifications from partners and that builds interest and involvement of all partners. To date there has been little participation. This report and the imperative to move into a set up phase calls for greater participation at this point.

Recommended Steps

- Move into multi partner discussion around settling agreements and planning the set up phase. This process should involve bringing partners together and conducting agreement workshop/s. This will form part of the programme manager's task when appointed.
- At a certain point it will be important to ensure that if agreement is not possible with one or other of the partners that a strategy is developed to move forward. The programme is sufficiently robust in its concept to allow for alternatives to be developed should that be necessary.

6.1.3 Building the Model and Systems for Replication

Despite the fact that there are still a number of key outstanding issues that need resolution and conclusion, there are a number of areas where progress needs to be made in preparation for the implementation phase.

There are many activities that can usefully take place in the coming months with limited resources. Proposed concrete steps that will require limited resource but place the implementing organisations

[13] A draft Memorandum of Understanding was developed at Programme Advisory Committee Meeting at the end of July.

in a firmer position to fulfil their roles are dealt with in detail later in this chapter. These activities are also spelt out in some detail in the proposal to the Table Mountain Fund for support for the set up of the Programme Management function and include a range of activities including curriculum review, development of management and monitoring systems, planning the training of trainers, undertaking more detailed work for the placement and aftercare process.

Recommended Steps:

- Undertake a planning exercise with the implementing partners to plan for the activities for the coming six months.
- Ensure that systems for monitoring and management of the programme are developed, that the placement and aftercare services are prepared and that a course for training new educators is developed.

6.2 Managing Risks

6.2.1 Replicating the Model: Managing Transition from the Private to Public Spheres, from Project to National Programme

The programme needs to be effectively incubated and provided with a supportive environment in which it can grow and thrive. It will require the attention and understanding by a team of programme champions.

Recommended Measures:

- Identify programme champions in the partner organisations who will give the programme thought and add real value to its development. This may mean a network of people who are talking to one another or who can be consulted by the staff.
- Ensure that the Programme Advisory Committee is able to be active and supportive rather than just an appropriate "approval mechanism".
- Find ways to ensure the active involvement of partners through joint strategy and planning that will ensure clarification of roles and buy in.
- Communicate progress and the future, the role of the institutions and community partners effectively to all partners.
- Establish an interim college committee at Edith Stephens to support the work of establishing this first new college and to ensure that this voice of the programme is firmly established and heard.

6.2.2 Securing Consensus: Addressing Issues, Communicating the Advantages for All.

Recommended Measures:

- Securing agreement on institutional arrangements with the key institutional partners. A Memorandum of Understanding that has been drafted needs to be endorsed and put into action.

6.2.3 Securing Finances: Pursuing the Anchor, Leveraging other Resources

Currently two proposals that have been completed as part of this feasibility study will need follow up. These are to the Umsobomvu Youth Fund and the Table Mountain Fund. In addition a process to secure agreement to cover the programme management and to ensure financial support from SANBI will need attention.

Should all the proposals be successful and undertakings that have been made in principle the programme will be able to start on a very sound financial footing.
However there may be delays and problems with securing financing contracts.

Recommended Steps:

- Plan for the programme to start in April 2008. Allow for a June start up if financing contracts are delayed and/ or if infrastructure is not in place.

- Undertake further investigations around finances that may be available through the province.
- Once anchor finance has been secured, follow up additional smaller sources of funds to broaden donor base.

6.2.4 Securing Lease Agreements: Finding Agreement or Finding Alternatives

Recommended Steps:

- On the basis of the response to this report every effort should be made to secure an agreement from the City. The Programme Manager should provide technical support to City officials if necessary.

6.3 Preparing the Ground

The preparation of the ground for the implementation of the programme in 2008 should proceed apace based on the resources that are available.

- Should there be agreement from the Table Mountain Fund, there are activities that could proceed that would not involve concluding longer term contracts, but will ensure that pieces of work are completed in preparation for the work that will needed for the implementation.
- If there is agreement from SANBI, the programme will be in a position to appoint a programme manager which will enable additional preparation work to be undertaken.
- Only once there is agreement on significant longer term finance from Umsobomvu Youth Fund will the programme will be able to appoint educators and nursery staff.

The strategy suggested here is to move rapidly with an assumption of approval and to prepare for an April 2008 start up. At some stage over the next months a decision will need to be taken on the start up time. Despite arguments for delaying the start up by a year if a January 2008 start up is not possible, it is recommended that this should be avoided.

6.3.1 Establishing a Programme Team

The programme needs a broader team of champions to drive this process. These should be drawn from partner institutions is critical. It will be extremely difficult to get this programme off the ground without the full and active support of all the partners. Institutional partners and community partners all need to play their part and be prepared to put effort into ensure the programme gets off the ground.

6.3.2 The Programme Advisory Committee

Recommended Steps:
Although this has already been established it will be critical in the next set up phase to make this functional and highly supportive structure.

- A Memorandum of Understanding to capture the agreement between the parties on this advisory group is needed. All need to participate in the development of this agreement and the parties need to have clarity on their respective roles and responsibilities.
- The Programme Advisory Committee needs to comprise permanent representatives who are able to engage with the complexity of the process. It is not advisable at least during this initial stage that representation on this committee rotates.

6.3.3 Programme Management Team

Recommended Steps:
As soon as finances are secured undertake recruitment firstly of programme manager and later of trainers and nursery staff for Edith Stephens.

6.3.4 Developing the Capacity of Implementing Partners

SANBI is proposed as the implementing agency. The Green Futures Colleges Programme should be housed in the Urban Conservation Programme. SANBI does not at present have the capacity to manage this programme. It will not just mean employing a person but also gearing the existing arrangements to meet the needs of the programme.
This will require the employment, deployment and development of human resources and the development of systems to manage and monitor the programme.

The capacity of Grootbos Green Futures College could be enhanced during this period through contracting, in the first instance short-term work to undertaken to strengthen systems and prepare the college to undertake work in training trainers and ensuring systems are more robust.

6.3.5 Proposed Project Schedule for the Coming Nine Months

Key priority steps need to be taken following the review and acceptance of this report. They include:

- the revision and submission of a proposal for start up support from the Table Mountain Fund.
- the acceptance of a budget for the programme management function by SANBI, the refinement of a job description and the recruiting of the programme manager.

The timing of the schedule of activities below is based on projections that these above matters can be concluded by the end of October 2007.

Activities	From	To
1. Learners		
1.1 Applications for ESWP College are invited	1 January 2008	31 January 2008
1.2 Learners are selected for Edith Stephens (ESWP)	1 February 2008	29 February 2008
1.3 College established. First Quarter learning programme is conducted at ESWP	1 April 2008	30 June 2008
2. Nursery and Landscaping		
2.1 Nursery staff oriented and trained for ESWP	1 January 2008	31 January 2008
2.2 Nursery infrastructure is established at ESWP	1 January 2008	31 January 2008
2.3 Nursery systems (production, sales, financial) are developed	1 February 2008	31 March 2008
2.4 Nursery staff are assisted to establish nursery	1 February 2008	31 March 2008
3. Restoration		
3.1 Restoration Plans will be concluded with public organisations	1 January 2008	31 March 2008
3.2 Plants will be grown for restoration work	1 December 2007	30 June 2008

4. Placement		
4.1 Development Placement opportunities are canvassed	1 January	31 March 2008
4.2 A placement data base is developed	1 January	31 March 2008
5. Staff		
5.1 Programme Manager recruitment	1 October 2007	31 October 2007
5.3 Educators and nursery staff are recruited for Edith Stephens	1 October 2007	15 November 2007
5.5 Educators at ESWP are trained in assessment methods and systems.	1January 2008	15 April 2008
5.6 Educators from ESWP trained in mentoring methodologies and approach	1 January 2008	15 April 2008
6. Institutional Framework and Systems		
6.1 Programme Advisory Group is established and functions effectively. Memorandum of Understanding is agreed	1 September 2007	30 September 2007
6.2 Preparations are made at Grootbos	1 September 2007	30 November 2007
6.3 Preparations are made at SANBI	1 September 2007	30 November 2007
6.4 Community and Institutional partners are briefed and plan together	1 November 2007	31 January 2008
6.5 College committee is established at ESWP	1 October 2007	30 October 2007
6.6 Policy and Procedures frameworks are developed for college, employment, institutional arrangements	1 September 2007	30 November 2007
6.7 Agreements with all partners are concluded	1 September 2007	30 November 2007
6.8 A staff performance management system is developed and implemented	1 November 2007	30 November 2007
6.9 Operational systems developed for planning, teaching, assessment, production, administration and sales	1 November 2007	31 March 2008

Growing Trees

I took a journey back to a previous part of my life last month. I had cause to drive past a smallholding where I had lived for eight years. It was mid winter and the biting cold winds swept across the valley. My purchasing of this rather barren piece of land with dry winter grass, no trees and a small thatch dwelling was a personal challenge to learn new things; to dig and plant, to tend to livestock, to build and to work with and fix machines. We managed over time to transform this piece of land into a lush and productive little farm.

It has been some time since I last saw the trees we planted. I remember digging the holes, mixing and tipping the compost. I was a novice with an urban book education then and the young man at the nursery patiently gave me full instructions on what to do with my young saplings .He made sure that I purchased the right trees, ones that were indigenous and hardly. I followed his instructions to the letter. As winter approached in the early years of their growth we constructed grass covers to protect the young trees from the bitter winter frost.

At some stage in their development they were left to fend for themselves. Life moved on and, before long, I started to sit in their shade; they had grown so tall.

Now, many years on, the property is the most wooded in the village. I stood in awe of the trees, once fragile saplings that are now tall and handsome. And in the time between I have learnt a little about care, patience and a longer term perspective.

Gareth Rossiter June 2007

Output 2. A detailed business plan drafted, covering:

- **Establishing the college at both sites, including infrastructurerequirementsand lease and/orcontract agreements with the city; and**
- **Securing financial sustainability including a costing and marketing strategy for the nursery and indigenous landscaping services.**

Green Futures Colleges Programme

A Business Plan for 2007 –2010

Compiled by Gareth Rossiter: Consultant to Grootbos Green Futures Foundation for the Feasibility Study for Green Futures Colleges on the Cape Flats (June 2007)

Contents

Introductory Note

At the outset of the feasibility study it become clear that the key source of financing that was assumed for the programme (namely the AgriSETA) was not as certain as was assumed at first and that other sources would need to be found. A strategy was developed to seek to identify an anchor finance partner who will provide core funding over at least a three-year period to ensure that the programme is established and that it is able to develop a national identity. This anchor financing partner would also enable the programme to lever additional local, national and international donor finances.

This business plan developed here is based on one submitted to the Usombomvu Youth Fund. The plan assumes the success of the financing application to the UYF. Although this is not certain[14], it represents a plan based on the best possible scenario at this time. The dates of activities assume a start up of the first college in January 2008. These will need to be revised once greater clarity has been reached on financial and other agreements.

This business plan should be read in conjunction with the Feasibility Report which seeks to outline the current risks, strengths and weaknesses of the programme, makes conclusions and develops a set of recommendations of steps to be taken in the short term to minimize the impact of risks.

[14] Although not certain until approved and contracts are concluded, it was felt that a proposal, if well developed and motivated, and supported by a government department and government poverty alleviation programmes, will provide the programme with the best possibility of being supported and this support sustained.

Executive Summary

Name of Implementing Agent:	The South African National Biodiversity Institute (SANBI) and the Grootbos Green Futures Foundation on behalf of the Department of Water Affairs and Forestry
Type of Organisation:	A partnership between a Government Department (DWAF), a Parastatal Organisation (SANBI) and a Private Sector Trust (GGFF) in collaboration with local government (City of Cape Town) and poverty relief programmes (Working for Wetlands and Working for Water)
Management Structures:	Programme Advisory Committee, Programme Management Committee, College Committees
Key Training Needs Identified:	1. Training of youth in indigenous horticulture and landscaping including restoration conservation and in life skills appropriate for them to find sustainable employment in a growing sub-sector. 2. Training of horticulture and life skills educators to enable expansion of the programme in year two and three. 3. Training of educators in placement and providing mentoring support to learners.
Accreditation:	Service Provider: Green Futures Horticulture and Lifeskills College of the Grootbos Green Futures Foundation. (Accredited with the AgriSETA for the last three years. Accreditation No: PAET 1524) Training Materials: Developed from AgriSETA materials and others developed and acquired by the college.
Overall Project Objective:	Young people from disadvantaged communities (initially on the Cape Flats and Aghulhas Plain) are equipped through a certificated learning programme of technical and lifeskills to find employment in the indigenous horticulture, conservation, ecotourism and landscaping sectors.

Intended Beneficiaries:	42 young people are sustained in employment after the first eighteen months. 218 are sustained in employment after 3 years 10 horticulture and lifeskills educators are trained to run and expand the programme in the first year. Urban: 80 Peri Urban: 80 Rural: 58 Male: 98 Female: 120
Geographical Coverage Project Sites:	Young people from the Western Cape, Eastern Cape and Gauteng (at colleges to be located at Grootbos in Gansbaai, Edith Stephens Wetland Park in Phillipi, Harmony Flats Nature Reserve in Gordon's Bay, (and at other SANBI run botanical gardens, at KleitjiesKraal in Wolesley, Gamtoos in Eastern Cape and a site in Gauteng)
Duration:	Total Project - 42 months 3 intakes undergoing 12 months of training and 6 months aftercare
Project Start Date:	1 August 2007
Project Financing:	Total Project Budget: R21 361 310 less R 7 800 000 (from income from nursery and landscaping businesses at each college) = R 13 561 310 million

The programme will see the establishment in 2008/9 of two colleges on the Cape Flats. During the first eighteen months of operation the nurseries will seek to develop stock and establish contracts to supply largely the public sector, but also property development contractors so that they begin to record their targets of R600 000 in sales after three years of operation. In year two of operation further feasibility studies will be conducted to establish the suitability of the new sites across the country and to explore the measures that will need to be put in place to ensure the replication of the model to these. Educators and nursery staff will be trained and oriented in advance at the three established sites.

The Experience of Project Partners

The Department of Water Affairs and Forestry is charged with conserving the country's strategic natural resources so that all have sustained access to them. The Department seeks to integrate its work with the priorities for poverty alleviation.

The Working for Water, Working on Fire and Working for Wetlands programmes provide useful examples of the kinds of programmes that the department has developed. In addition a youth development strategy has been developed by the department to ensure that it is effectively integrating work with youth in its broader strategies.

Currently the Working for Water and Wetlands programmes are encountering difficulties in implementing effective exit strategies for their beneficiaries. There is a poor success rate with empowerment nurseries and community nurseries who are having to compete in a sector with constraints on capital, skills and access to markets.

This project seeks to provide work and training opportunities for disadvantaged youth in line with the policies of the department and national and provincial governments. At the same time it will seek to address some of the key challenges that are faced in ensuring secure employment for youth after the work placement and training programmes.

Management Structure

The South African National Biodiversity Institute (SANBI) will implement the programme for DWAF. The Grootbos Green Futures Foundation will assist SANBI in its implementation. The Grootbos Green Futures Foundation will act as the accredited training provider and ensure quality through training and supporting educators and through effective assessment methods and systems.
A Programme Advisory Committee will be formalised through a Memorandum of Understanding between the partners including the City of Cape Town, SANBI, Working for Water, Working for Wetlands and the Grootbos Green Futures Foundation. It is envisaged that employers will also join this committee at some stage. This committee will inform strategy, give direction and receive and comment on reports. A college committee including local staff will be established at each site.

A Programme Management Committee with representation from DWAF, SANBI and Grootbos will be formed to oversee the implementation of the programme and to meet contractual obligations.

A Comprehensive Learning Programme

The project will seek to replicate the model that has been developed at the Grootbos Green Futures College. Here the college has developed a comprehensive learning programme of tuition and practice in horticultural skills and knowledge and in a range of life-skills appropriate for youth wishing to find and sustain employment in the public and private sectors. While ensuring that the necessary technical skills are developed, the learning programme looks at the personal development of the individual learner and provides learning in areas that will enhance their opportunities to find employment including driving and computer skills.

Through a placement and aftercare support programme the Green Futures College at Grootbos has attained a near 100% placement rate for its learners.

The new colleges will follow this model. A nursery and landscaping business at each college will form part of the work of the college will not only provide the students with real place to learn, but provide exposure to the real work of work.

A well functioning placement service will form part of the function of the college. A data base of prospective employers will be kept. Students will be placed and an aftercare programme of support will be offered to students for on an ongoing basis after completing their studies by their educators. (The small size of classes will enable the educators to provide this service effectively and with attention to the individual.) These services will be managed by the development office.

Findings from readings of micro economic studies indicate a growth in the indigenous horticulture and landscaping sectors of a scale that translates into a real growth in work opportunities. Although horticultural qualifications at the General Education and Training and Further Education and Training levels are provided at some of the agricultural colleges under the Department of Education, there are none that are specializing in the propagation of indigenous flora, plant conservation, restoration and indigenous landscaping.

There appear to be a growing number of different kinds of opportunities for skilled young people in the sector. The placement programme will be developed in line with that of the prototype at Grootbos. It is a tailored programme that makes sure that students are placed in organisations in the public and private sector at a level that is appropriate for them.

The Grootbos Green Futures College has reached a near 100% placement rate over the four years that it has operated and provides placement and aftercare service to ensure that learners enter secure jobs and are able to adjust in these with the support that is needed to enable them to do so.

Youth Leadership and Development

The project emulates the real world of employment while developing technical and life-skills in a learning environment and approach that will assist learners to grow and develop rapidly.

While the programme trains learners specifically in the technical skills and knowledge that is required in the horticultural industry, the learning programme is designed to be an outward looking learning experience that ensures the full development of the learner at her/ his own pace. The programme comprises a range of excursions of different kinds, practical learning, the development of other skills such as driving and computer skills.

Because class sizes are small it is possible for educators to be effective mentors to their learners.

Monitoring and Evaluation

A range of systems will be developed from those already existing at Grootbos Green Futures Colleges to monitor the progress of learners from their initial assessments and to monitor their

progress after leaving the college and being placed. Longer term tracking systems will be developed to look at the progress of learners.

Although SANBI's overall research expertise is not in areas of economics and social science, the Cape Flats Nature project has experience in impact evaluation of its own work.
The Green Futures Foundation is an accredited training provider and has been collecting information (on learner assessments) and reporting this for over four years to the AgriSETA. In addition they have tracked the progress of all their learners now in employment. They keep good systems for recording placement opportunities. The systems that have developed are tailored specifically to the Green Futures College concept and are robust for the purposes. These systems will be transferred to each of the colleges.

The project is specifically designed to ensure that the training, placement and mentoring services offered are throughgoing. Class sizes will enable educators to give the right attention to the necessary mentoring and after care that will enable effective placement that will ensure the sustained employment of learners.

The project will undertake a review in quarter six after the first two new colleges have been established to identify the strengths and weaknesses in transferring the prototype to new sites. In addition feasibility studies will be conducted to assess the suitability and viability of replication in new sites across the country.

2. Background and Rationale

2.1 The Project and its Origins

Since 2003 the Green Futures Foundation at Grootbos has run a successful indigenous horticultural, landscaping and life skills learning programme for disadvantaged youth in the Gansbaai area which has achieved a placement rate for its learners that is close to 100%. The learning programme is a registered learnership with the AgriSETA and the Green Futures College is an accredited provider.

This programme attracted the attention of the Cape Flats Nature partnership. This partnership between SANBI, the City of Cape Town, the Table Mountain Fund, and the Botanical Society of South Africa "seeks to build good practice in sustainable management of nature sites in the City of Cape Town's Biodiversity Network in a people-centred way that develops local leadership for conservation action and benefits the surrounding communities, particularly in townships where incomes are low and living conditions poor"[15]. During Cape Flats Nature's participatory programme design process, job creation emerged as a priority issue for community stakeholders at all the sites.

Working for Water and Working for Wetlands Programmes officials have voiced concerns with the poor success rate they have with exit strategies for beneficiaries of these poverty relief programmes. In addition they identified that new strategies are needed to enable empowerment in the nursery and landscaping sectors where the success rate is low. They have identified sites where a Green Futures College intervention may be useful.

Together with the Grootbos Green Futures Foundation, the Cape Flats Nature partnership has undertaken a feasibility study funded by the Critical Ecosystem Partnership Fund (CEPF). The study has been managed by the Grootbos Green Futures Foundation. This study has set out to raise resources for the programme, to develop comprehensive business plans, plans for restoration work and the development of agreements between partners.

2.2 Problem Statement

There are high levels of unemployment in poor communities particularly amongst youth. While the economy is growing, youth from poor communities are not necessarily benefiting. They have had a poor education and limited networks to access resources and jobs.

In order to address this problem comprehensive programmes of training and support to find and sustain employment are needed. In addition young people need technical training in sectors where there is tangible growth where there are likely to be opportunities for employment or job creation. Because the problem is so extensive, the tendency has been to offer short training courses (or short work contracts) as a solution. This way many can benefit. The results have not seen sustainable impact for youth from poor communities.

[15] Cape Flats Nature Summary Statement

Given the current design of poverty relief programmes, they are unable to fulfil the need for comprehensive measures needed to remedy the complex set of problems that youth from poor communities face. Poverty alleviation programmes in the conservation sector such as Working for Water and Working for Wetlands have identified that they are not able to ensure effective exit strategies without more thorough interventions.

While it is relatively easy to ensure a thoroughgoing learning programme that develops vocational skills, develops fundamental learning and enhances life skills appropriate for a job seeker, it is not always as easy to run thorough placement programmes where learners are placed in appropriate secure jobs. This is a difficult task requiring a good knowledge of learners and technical skills that are required by the economic sector.

There is growth in the indigenous landscaping and gardening sector[16] as a result of increase in public demand based on improved awareness brought about through public education.

This is leading to an increased demand for water wise gardening that is being spurred by this increased public awareness in environmental issues and in the unique heritage that is found in the Cape Floristic Kingdom. In addition the scarcity of water precipitated by droughts and urban demand for water, and the convenience of propagating gardens that largely rely on rainfall, has meant that more consumers of horticultural products and services are choosing indigenous gardens. Similar factors are driving demand in the public sector.

All these factors as well as the growth in the interest in indigenous gardens and plants have meant real growth in the sector. Public awareness is providing new increased energy for urban conservation and restoration. And private and public spending is spurring the growth in the sector.

However, despite this growth, there is little if any training for skilled horticulturists at the general and further educational levels[17]. No educational institutions (under the Department of Education) are currently training youth in indigenous horticulture, restoration and landscaping. In addition there are very few success stories of black entrepreneurs making capital of this growth. Public conservation programmes that are seeking to alleviate poverty such as the Working for Water and Working for Wetlands Programmes are struggling to ensure exit strategies for beneficiaries from their programmes as the training and support that they are able to give within the frameworks of their programmes are restricted. All agree that the development of indigenous horticulturists requires a thorough education and training learning programme that is of a high quality.

16

Vink, N and Tregutha, N: Agriculture and Mariculture (First Paper) Structure, Performance and Future Prospects; An Overview

Karaan, M. Kassier, E. Vink, N and Cherry, M: Agriculture and Mariculture (Second Paper): Strategic Trends and Expectations for various Agricultural Commodity Sectors in the Western Cape

Department of Water Affairs and Forestry: Report on Emerging Nurseries

17 Not so at the higher education level

2.3 Feasibility Outcomes

The study finds that if critical risks are effective managed, the proposed replication of the Green Futures College model on the two sites on the Cape Flats is likely to achieve its desired objectives. The key factors leading to this conclusion are

- the learning programme is sound and of high quality. The placement rate after completion of the course is exceptionally good.
- there are real job opportunities in the growing indigenous nursery, landscaping and restoration industry. An effective partnership can be developed with the range of employers in the public and private sectors.
- with sound agreements between the key partners, the colleges would be able to lever an array of resources that will add significant value.
- with careful selection and tailored training the right kind of educators can be found and developed.
- there is a market for the kinds of skills being developed (as evidenced through the successful placement rate at Grootbos and through surveying players in the industry).

The Programme

The learning programme that is to be replicated is sound and has a strong track record in training and placement of unemployed youth.

Institutional Framework

The programme represents a strong array of partners. The institutional framework that will support the colleges will ensure that all these partners and stakeholders participate in a way and at a level that will bring great benefit to the programme and insure its success and sustainability.

Agreements between Partners

At present the agreements that have been reached are in principle.
These will be firmed up in the coming months into contracts[18] and memorandums of understanding.

The feasibility study has identified that core to the successful implementation of the programme will be the establishment of a strong visionary programme management unit to oversee the establishment and effective implementation of programmes of learning at new colleges and to carry the vision of the Green Futures Colleges to the national stage.

The project being proposed here will ensure the establishment of a national network of colleges providing a thorough training in indigenous horticulture, restoration and landscaping to meet the market need. By ensuring a skilled supply of labour, the Green Futures College Programme will be making a significant contribution to capitalising on the successful investment that has been made in public education for conservation, in ensuring that poorer communities have a stake and participate in conservation and in sustaining the momentum. And importantly, as a contribution to the cost of their tuition, students will, on the basis of agreements between the colleges and public organisations, undertake restoration work in and around the nature sites where they are located.

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18 For lease, plant supply, placement

3. Overall Programme Objective and Results

1. Young people from disadvantaged communities (initially on the Cape Flats and Aghulus Plain) are equipped through a certificated learning programme of technical and lifeskills to find employment in the indigenous horticulture and landscaping sector.
2. Nursery and landscaping businesses at each college provide a conducive learning environment for the development of technical skills, and opportunity for learners to contribute to their studies through work and generate income to support the costs of the colleges.
3. Learners are placed in decent public and private sector jobs and supported for an initial period.
4. Colleges provide support for restoration work that is undertaken in nature parks and urban spaces and corridors adjoining these.
5. Staff are trained and supported to run the college and business effectively. Educators are trained in preparation for the establishment of other colleges in other centres.
6. The colleges are run efficiently and effectively and their work can be sustained.

4. Institutional Arrangements, Management and Service Provision

4.1 Management

The Department of Water Affairs and Forestry, as a national government department has reach across the country. One of its core mandates of ensuring a policy framework for the provision of water to urban and rural households, farms and industries means that it has physical and policy reach into most areas and facets of our society. It has a depth and breadth expertise in dealing with poverty alleviation strategies and working with youth.

The Department of Water Affairs and Forestry is proposing the programme to the Umsobomvu Youth Fund as one of a suite of projects being developed as part of its youth development strategy.

An agreement will be entered into with the South African National Biodiversity Institute to operate as the implementing agent on behalf of DWAF (as it does with the Working for Wetlands programme).

The South African National Biodiversity Institute has a depth of project management experience. SANBI is being nominated by the Department of Water Affairs and Forestry to be the implementing agency for this project as the DWAF has confidence from its experience in using SANBI as the implementing agency for its Working for Wetlands Programme.

SANBI is the institutional home to the country's expertise in biodiversity management particularly of flora. It will not only provide technical expertise in the propagation of indigenous plants, but provide seed, root stock and access to markets for plants and landscaping services.

In addition, the network of nine botanical gardens around South Africa will provide good sites for the national replication of the Green Futures colleges in other centres from the third year, because of the existing infrastructure and the technical expertise of staff working at these sites.

It is appropriate for SANBI to provide the institutional home for the colleges.

SANBI's Urban Conservation Programme will be responsible to DWAF (and the Umsobomwu Youth Fund) for the implementation and management of institutional arrangement for the proposed colleges

It will provide strategic management and guidance to the project through:

1. Managing the executive committee comprising SANBI, GGFF and project manager.
2. Convening the advisory committee on a regular basis to report and decide on future developments.
3. Contracting of staff including staff for the nursery and landscaping business and educators.
4. Being responsible for reporting to the donor organisations on the outputs of the programme.

5. Establishing a unit in the medium term to provide management, co-ordination and administrative services to the colleges. These would include services of monitoring and evaluation.
6. Providing line function management support and supervision.

SANBI will in turn enter into an agreement with the Green Futures Foundation (as the accredited training provider) to provide services to assure the quality of training through providing training and support to educators and in ensuring the quality of assessments. This management arrangement will bring together the strengths of the two organisations in the implementation of the Green Futures Colleges project.

The Grootbos Green Futures Foundation is a private foundation and the flagship college is located at Grootbos private nature reserve in Gansbaai. The Foundation has had the vision and flexibility to develop a high quality integrated and successful model at this site. It has advanced to be an accredited training provider and has the skills and systems to assist in the replication of the model in other sites. It sees itself functioning in the quality assurance role and in the provision of advice and support.

It does not, however, have the personnel and systems to manage this replication. It sees its role in continuing with the development of its own college, with the advancement of curriculum and in assisting others to replicate the model.

Grootbos Green Futures Foundation will take up the following supportive roles in the establishment and running of the two colleges:

1. Provide strategic and practical direction and guidance by being represented on the project executive committee and on the programme advisory committee.

2. Assure quality of training and certification through:
   - being the registered "training provider" and providing reports of all colleges to the AgriSETA
   - undertaking ongoing work at the new colleges to assure the quality of training and of assessments
   - ensuring the training of the educator teams in the delivery of the curriculum and in assessment and reporting and professional development
   - providing assessment and moderator inputs to new colleges.

3. Provide services to support implementation including:
   - assisting with selection of teaching and nursery/landscape business staff
   - providing induction training to all new college staff
   - providing training and mentoring to teaching staff on the implementation of the curriculum and on assessment
   - providing structured mentoring to nursery/landscaping business.

The Green Futures College Programme will be managed through:

1. A programme advisory committee comprising representatives of Working for Water, Working for Wetlands, the City of Cape Town, SANBI (Urban Conservation Programme) and Grootbos Green Futures Foundation will provide leadership and strategic management for the programme.
2. A programme management committee will comprise the Department of Water Affairs and Forestry, SANBI, Grootbos Green Futures Foundation and the programme manager. This committee will oversee the development of strategy and plans and the implementation of these, including the appointment of staff for each of the colleges.
3. A project manager who will oversee the management of both of the colleges, the expansion of the Green Future Colleges vision to other sites at the appropriate time, and be responsible for the general smooth running of the project. The project manager will be responsible for reporting through the executive committee, to SANBI on agreed deliverables, to donors and to GGFF who will account to the AgriSETA to ensure the registration of learnerships and certification.
4. A staff team at each of the colleges will comprise two teaching staff, an administrator and a nursery manager with two assistants responsible for the functioning of the nursery and landscaping business unit. The College Manager will be the lead educator and will be responsible primarily for managing the learning programme and will ensure proper co-ordination with the nursery/ landscaping team. The teaching team will be responsible for placement of learners.
5. The nursery manager will manage this business venture. She/he will develop a network of clients and be responsible for (and partly paid on the basis of) the turnover of the business.

4.2 Core Partners

In addition to the management arrangements, the project will have formal partnership agreements with key partners to regulate relationships and to ensure that through strong partnerships the programme has maximum impact and its sustainability is assured. The community stakeholders will be represented at the college level on college management committees. These committees will provide advice on the strategy and operations of the individual colleges within the overall national programme.

The partnership agreements with key institutional partners are likely to cover

1. City of Cape Town
   The partnership agreement between the City and the Green Futures Programme will Include:
   - a lease agreement for use of land and infrastructure of City sites
   - an agreement on restoration work to be undertaken by the colleges
   - an agreement on student placements and allocations for the City
   - an agreement on nursery sales.

2. Working for Wetlands Programme

   The partnership agreement between Working for Wetlands and the Green Futures will include:

   - a contract around funding and the reporting on the outputs
   - a contract to provide plants
   - an agreement around giving opportunity at the colleges for Working for Wetlands beneficiaries who have displayed potential.

3. Working for Water Programme

   The partnership agreement between Working for Water with this programme will entail

   - an agreement for placement opportunities for Working for Water beneficiaries
   - a contract for plant provision from the nursery business
   - communication with the Working for Water Nurseries Partnership
   - an agreement around giving opportunity at the colleges for Working for Wetlands beneficiaries who have displayed potential.

4. Students

   The agreements between the college and students will be regulated through:

   - signing of contracts that set out the basis of the agreement between the college and the student as well as the AgriSETA for the duration of the learning programme
   - student representation on the college committees to ensure the effective participation of students in the strategy of the college, in selection of future students, and the resolution of problems and meeting of challenges.

5. Community Stakeholders

The agreement with community stakeholders will ensure their participation in key aspects of the college programme that most influence them. The agreement will ensure that these groups are represented on the individual college committees so that there is stakeholder participation in important matters such as the strategy and policy of the college, the selection of staff and students and the resolution of college level problems.

6. Employers

   Agreements will be reached with employers:

   - to consider Green Futures students for interviews
   - to regulate the mentoring and aftercare programme once learners have been placed.
   - to offer bursaries linked to post study employment for students.

In addition there will be a range of contracts with funding partners. These will be regulated through the contracts agreed.

4.3 Integration of Project into Current Partner Activities

With the exception of the Grootbos Green Futures Foundation, the work being proposed in this programme is new for the range of Service Provider Organisations. None have experience in running a learning institution and operating an "education with production" enterprise. The partner organizations will need to take stock of their deficiencies and to take the necessary steps to ensure adequate compensatory measures.

The Programme is being considered because it fits squarely into the vision of each of the key partners and indeed provides each with a vehicle to address gaps in their programmes. The programme envisages a thorough developmental approach to the development of skills for employment and life for youth from disadvantaged backgrounds.

SANBI has a richness of technical and academic skills. It has a mission to take the conservation agenda into low-income communities and to demonstrate all kinds of advantages to ensure sustainability. The programme will need to be given a protected space within SANBI to ensure that it is not swamped by the organization's "mainstream" activities and marginalised. Its firm place in the Urban Conservation Programme will be critical.

Educators who are appointed will be trained and oriented to ensure that the model developed in the private sphere is effectively replicated into the public sphere. This will be accomplished through a two month induction programme to be conducted at Grootbos.

In addition, Grootbos Green Futures Foundation will need to take steps to enhance its capacity to provide support and service to the establishment of the new colleges and to enhance its operations. A development manager will be appointed and based in the first phase at Grootbos to develop the systems for placement and tracking. This office will ultimately be transferred to SANBI. Short-term assistance will be recruited to assist with the revision of curricula and the training of new educators.

4. Beneficiary Details

The project is targeting unemployed youth from poor communities that adjoin the sites. A few students in each intake may come from other communities (linked to partner organisations) and their choice as candidates will be based on the same criteria and subjected to the same selection process.

Basic requirements to apply for consideration include

- being under 35 years old and currently unemployed
- having a basic level of spoken and written English (although this may not be important at all sites)
- having at least a grade 9 level of education
- having an interest in working with plants
- living in a community close to the site
- being self-motivated and prepared to study for a year.

A quarter (or two, dependent on securing finance) prior to the start of a learning programme invitations for applications will be distributed widely in the targeted neighbouring communities and through partner organisations who have stated a wish that they would like their beneficiaries to be considered for the learning programme[19]. The invitations will be posted at public amenities and distributed through stakeholder community organisations.[20]

A college committee will be established at each college. These committees will comprise representatives of staff, past students, partner institutions, and community stakeholder organisations and NGOs. The college committees will nominate a selection panel who will be responsible for the conducting of the selection process.

An application form will require the beneficiaries to indicate how they meet the basic requirements. They will need to provide support for their application from professionals and/or members of the community. An initial shortlist will be developed. This shortlist of candidates will be requested to participate in the selection process.

The shortlist will be developed by the selection committee using a scoring instrument. The shortlist will be open for scrutiny to all members of the college committee prior to it being published.

The selection process will then entail the completion of an assessment instrument that will be used both in the selection process and as a base-line measure of the starting levels of knowledge and skills of the students. The assessment will be thoroughgoing involving written, interview and practical problem solving exercises.

On the basis of this process candidates will be selected. The final list of successful candidates will be open to a review by the College Committee. Once there is agreement by the College Committee, the candidates will be informed of their selection. This process should not take more than 6 weeks.

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19 e.g. Working for Water, Working for Wetlands, City of Cape Town

20 In the case of Edith Stephens Wetland Park and Harmony Flats, details of these are included as appendix 4

5. Special Programme Measures

Assessment Systems

All learners will complete oral and written assessment tasks to measure their competencies before they undertake the learning process. These will be used by educators to gain an understanding of the level of each learner and will be used to measure progress and the impact of the learning programme on each learner's development.

The learning programme is a registered learnership and results in a General Education Certificate in Horticulture. All learners will be registered with the Department of Labour through the AgriSETA, All educators will be trained as assessors. Assessment will be conducted continuously and take on a variety of forms including oral, written and practical forms. Assessments will be moderated externally to ensure that quality is maintained.

The Qualification

The program includes a range of learning outcomes specific to horticulture but also covers a range of fundamental educational learning in language and mathematics, in science, business, banking, health and computing. In addition learners will do a course in first aid and learn driving. The materials being used have been developed by the AgriSETA and by Grootbos Green Futures College. The curriculum will be adapted for students based on where they are located (urban or rural) and on specifics of the local flora.

The pedagogy is based in an "education with production" approach. Students will work in the nursery for a significant time of the week. In addition they will undertake restoration work in public places and landscaping contract work organized by the college nursery. This is all part of the learning programme. In this way they will receive practical training and be contributing to the cost of their studies.

Student Leadership

A class committee will represent the interest of the student body with their educators, the nursery staff and the school management. Students will also have representation on the college committee. The class will elect these representatives. Alumni of the college will also be represented on the College Committee.

Placement, Mentoring and Aftercare

The Development Manager will develop systems for a placement, mentoring and aftercare service for all students. Ongoing contact with prospective employers (in the public and private sectors will be kept with the view to finding placements for students once they complete their programme and for ensuring the effective implementation of a mentoring and aftercare programme that will continue for at least six months after placement. An ongoing tracking system will ensure that the programme is able to provide ongoing mentoring to its students, promote their careers and track their progress.

In addition to finding placement opportunities the development office will be responsible for soliciting business (plant supply or landscaping sub contract services) from employers.

A tracking system will be established to keep abreast of the progress of all alumni of the Colleges. This so that effective impact analysis can be made and also so that measures are taken to encourage the ongoing career development of learners by ensuring advancement when appropriate opportunities for study or employment advancement arise.

The mentoring and aftercare programme will be managed by the development manager who will be supported by the educators at each of the colleges. The programme will ensure that each learner receives effective mentoring in their job placement and that aftercare services, including regular telephonic communication and face-to-face meetings, take place with each of the learners. These measures will ensure that the transition between learning and work is mediated effectively. In addition troubleshooting will enable effective action to be taken promptly.

6. Project Sustainability

Financial Sustainability

The project is designed to ensure that within two to three years the nursery and landscaping businesses at each college will generate at least R600 000 towards the cost of each of the colleges[21]. (This is a projection based on the achievement of the nursery at Grootbos that generated R520 000 in 2006.) This is a measure of the contribution that students will make towards the costs of their fees.

At this point there is commitment in principle or pending of the following:

- On the basis of the recommendations of the Feasibility Report ,SANBI will consider covering the programme management costs for at least the first three years and by implication cover the costs of the housing of the programme management function within the Urban Conservation Programme of SANBI, ensuring proper supervision and support.
- The Working for Wetlands Programme has already committed R200 000 for the nursery infrastructure for the nursery at the Edith Stephen's Wetland Park. There is a verbal undertaking to consider covering the costs of nursery infrastructure at other sites. In addition an agreement in principle to source plant material from Green Futures nurseries based on programme requirements (specifically at this stage from the ESWP nursery) has been reached.
- A proposal is being revised to be considered by the Table Mountain Fund to fund part of the costs of the next set-up phase. An amount of R120 000 has been requested to fund the establishment and operations of the Programme Management Unit specifically some of the costs to set up a development function to support placement, mentoring and aftercare and to track and support alumni. Also these resources will be used to strengthen Grootbos Green Futures College to provide training and support to the intake of staff for the new

[21] A separate document entitled "Nursery Marketing Strategy" refers. The business strategy for the nurseries is outlined in this document which seeks to examine a variety of options and recommends the most appropriate.

colleges and to assist with the adaptation of the existing curriculum to suit the new urban Cape Flats environment. They will also be used to train trainers.

A medium term strategy will be developed with each of the colleges to seek to access more local resources to support the costs of running the colleges. It is envisaged that, with the reputation developed by high quality graduates from the colleges being taken up by industry, Green Futures will be able to encourage companies benefiting from learners whom they employ to support a bursary programme.

In addition to this attempt to find support from the local industry, each college will be strengthened to source local finance through local or provincial government and local capital.

Institutional Sustainability

The institutional framework has been designed to ensure that all the partners from institutions and organizations to community stakeholders, employers and students are involved at a range of levels in practical ways to ensure a robust arrangement that makes certain all have a stake in the programme. Clarity of roles and levels at which issues get resolved will ensure that problems and issues get addressed at the appropriate level and that all partners understand their role and function in the running of the colleges or in the development of the strategy of the programme.

7. Monitoring and Evaluation

Impact Assessment

The impact of the project will be measured through

- tracking the employment history of graduates, and the income they earn
- tracking the impact on households that results from the regular income from an earning member
- surveying the lifestyle and aspirational changes that result from acquiring marketable skills and sustained employment for graduates
- tracking the further learning and the improvement of income of students over time
- tracking direct conservation impacts through restoration projects implemented by Colleges.

Base-line information will be collected from students at the application stage.

Monitoring Systems

Monitoring systems will be developed to measure all the key indicators for the programme[22]. These systems will be functional, aligned as best as possible to monitoring what is appropriate, and integral to the ongoing functioning and management of the programme at the college level.

[22] A comprehensive table of these indicators and the systems to measure these is attached as Annex 3.

Output 3. Donor scans completed, proposals drafted, funding opportunities with the Agriseta, Working for Wetlands and other pursued, results documented and agreements in principle secured.

During the feasibility study the following has been achieved:

- a comprehensive financing proposal to the Umsobomvu Youth Fund has been prepared,
- a financing proposal for a contribution to support the set up phase has been prepared for the Table Mountain Fund,
- a commitment from SANBI to consider financial support for the Programme Management position and housing the programme in the Urban Conservation Unit,
- a financing proposal has been submitted to the Agriseta. There is in principle support from them for the programme.
- The Working for Wetlands Programme has committed R200 000 for equipment and nursery infrastructure.

Much of the above is further outlined in the attached feasibility and business plan. The detailed funding proposals and further documentary evidence is available on request.

Outputs 4 . Five year restoration work programme for the college at each site developed, based on areas of synergy between site restoration objectives and the curriculum and including appropriate plant lists.

Green Futures Colleges Programme

Restoration plans for Edith Stephens Wetland Park and Harmony Flats Nature Reserve

Compiled by Sean Privett for the Grootbos Green Futures Foundation for the Feasibility Study for Green Futures Colleges on the Cape Flats (June 2007)

Introduction

Several surveys of the natural vegetation remnants on the Cape Flats have been done over the past fifteen years. The first comprehensive study by McDowell et al. (1991) indicated that 45% of Cape Flats Sand Fynbos had been built over by 1983 and six years later a further 11% had been destroyed by development. By 2004, following accelerating developments, only 19% of this vegetation type remained as small remnants across the Cape Flats. These remnants now are critical to the conservation of biodiversity in the Cape Floristic Kingdom and many, including Edith Stephens and Harmony Flats, have been incorporated into the City of Cape Town's biodiversity network.

Conservation targets are 23% for Cape Flats Sand Fynbos and exceed the remaining available vegetation (19%), thus any actions to restore and appropriately manage vegetation remnants are of critical importance. A paltry 0.3% of the conservation target is formally protected. There is a need for carefully controlled restoration of local indigenous species at both these sites, where past human impacts have significantly altered the natural vegetation.

The development of Green Futures Colleges at Edith Stephens Wetland Park (ESWP) and Harmony Flats Nature Reserve (HF) will provide an opportunity for site managers to implement an ecologically sound restoration program that is consistent over time and meets site restoration requirements. At the same time the restoration of appropriate indigenous vegetation at ESWP and HF is seen as an important component of the practical curriculum of the colleges. The Green Futures program is practically based with a strong emphasis on horticulture and conservation. From discussions with a variety of people involved in managing and developing restoration plans on the Cape Flats it is clear that very strict guidelines will need to be enforced and the students activities carefully managed, monitored and evaluated. This document provides an outline of the activities proposed for restoration on the two sites as well as some ideas for linking to surrounding communities and off-site projects.

Vegetation and Environmental characteristics of the sites

Edith Stephens Wetland Park

According to Mucina and Rutherford (2006) the vegetation in the area of the ESWP can be characterised as Cape Flats sand fynbos. This vegetation unit historically occurred in an altitude range of 20 – 200m from Blouberg and Koeberg Hills in the north to Lakeside and Pelican Park in the south, from Bellville to Joostenberg Hill in the east, and to the southwest of the Bottelary Hill to Macassar and Firgrove in the south (Mucina and Rutherford 2006).

It is characterised as moderately undulating with flat plains, with dense, moderately tall, ericoid shrubland containing scattered emergent tall shrubs. Proteoid and restioid fynbos are dominant, with asteraceous and ericaceous fynbos occurring in drier and wetter areas, respectively (Mucina and Rutherford 2006). Typically this vegetation is characterised by acid, deep tertiary grey regic sands. However according to Holmes (2002) the soils at ESWP have been found to be alkaline, ranging from 7.0 – 7.7, which suggests that terrestrial vegetation at the site would have been more of a Dune Fynbos or Thicket (also known as Strandveld) nature. The ESWP site is characterised

by having been heavily impacted by human activity in the past. As a result, with the exception of the obvious wetland areas, the current vegetation cover does not represent what would naturally have grown there.

According to Holmes (2002), it is possible that vegetation transitional between Dune Fynbos and Cape Flats sand fynbos (Sand Plain Fynbos) occurred in the less alkaline areas (Holmes 2002). Dune Fynbos tends to predominate on alkaline sands that burn regularly, whereas thicket develops in relatively fire-protected areas. Dune Fynbos may progress to thicket in the absence of fires. Thus the target plant communities at ESWP comprise alkaline wetland, Dune Fynbos, transitional Dune/ Sand Plain Fynbos and thicket (Holmes 2002). The degree of water logging during winter (i.e. height above the water table) and soil alkalinity largely would have determined the positions of the different plant communities and their transitions (Holmes 2002).

Regardless of the exact composition of the original vegetation it is clear that the site has significant conservation value. A total of 99 indigenous species and 42 introduced species have been recorded at ESWP (Helme 2002). Of these eight are Red Data Book species (Isoetes capensis, Hydrodictyon africanum, Gladiolus quadrangularis, Lachenalia arbuthnotiae, Lachenalia reflexa, Ischyrolepis sabulosa, Lampranthus reptans, Cotula vulgaris). Cape Flats sand fynbos is critically endangered with less than 1% statutorily conserved. The ESWP is presently heavily degraded, with little of its original botanical wealth remaining and has potential for significant restoration input.

Harmony Flats

The Harmony Flats site has a more authentic natural vegetation cover. The condition of the vegetation varies across the reserve; with certain areas more heavily degraded than others. The vegetation on the site can be described as a mixture of Renosterveld and lowland fynbos and has been classified as Lourensford Alluvium Fynbos (Mucina and Rutherford 2006). This was once restricted to the low lying areas between Firgrove and Gordons Bay, including much of the Strand and Somerset Wes area in an altitude range of 20 – 150 m (Mucina and Rutherford 2006).The geology is plinthic, duplex, silty soils often with small cobbles and pebbles embedded. It has the dubious distinction of being the most threatened vegetation type in the entire country, with less than 7% remaining (Rouget *et al.* 2004). It is therefore a critically endangered vegetation type. The conservation target of 30% is unattainable making Harmony Flats an extremely important refuge for this vegetation type. This vegetation unit falls within an area that has been farmed since the earliest European colonisation. As a result it is difficult to know what the pristine state would have been as grazing, mowing and changes in fire regimes could well have resulted in species been lost and structural changes occurring in the vegetation (Mucina and Rutherford 2006). There is a draft plant species list for the reserve and it surrounds and opportunities exist for propagation and re-introductions of appropriate local species in disturbed areas within the reserve and surrounding areas.

Restoration methodologies

Edith Stephens Wetland Park

There is an ongoing research and monitoring program in place at ESWP that was developed by Dr. Pat Holmes (Holmes 2002). The ESWP was zoned according to the current land-use plans and vegetation condition, and various levels of restoration were applied to each zone (see table 1 below). However, other than the botanical reserve (zone 1), the boundaries between the zones are relatively flexible. Zone 4, the most degraded zone needs to be developed in a way that integrates the conservation function with the recreational function, and allows the public to explore the zone with more freedoms than the other zones. Within this zone there is flexibility to develop information gardens, useful plant gardens and aesthetic landscaped areas.

Zone 1, the Botanical Reserve also known as Isoetes Vlei is managed by Kirstenbosch National Botanical Gardens. Zone 2 is the seasonal wetland area, zone 3 is the primary restoration area (see proposed methodology below) and Zone 4 is the most degraded of the areas, identified for agriculture projects and recreation. It is listed in the action plan for minimal weed control only. This area is suitable for picnic areas, open field (for soccer and other activities) and a demonstration Strandveld garden. This is also an area where the Green Futures students can develop horticultural displays, water-wise gardens and landscape areas to improve the aesthetics of the site. These gardens should use local indigenous species only (Appendix 1) because of its proximity to the conservation area and would need protection from trampling and browsing. It has been suggested that a strategically positioned hedge of thicket species could act as a natural buffer between the recreation and conservation zones.

The ESWP zones according to the current land-use plans and vegetation condition. Various levels of restoration are applied to each zone (Table 1).

Table 1. Restoration Plan Overview

Zone	*Locality*	*Action*	*Method*
1 3.6 ha	Botanical Reserve (erf 609-28)	Control alien shrubs Control alien herbs* Monitor	Follow up treatments Uproot or cut flowerheads before seed set; remove material Regular monitoring of key species
2 ±12 ha	Degraded areas with some indigenous species (SE of 609-83; 609-81&82, SE of 609-13)	Control alien shrubs] Control alien herbs* Monitor	Follow-up treatments Uproot or cut flowerheads before seed set; remove material Regular monitoring
3 ±2 ha	Degraded areas with few or no indigenous species (N&W of 609-83)	Control alien shrubs Control alien herbs* Species re-introduction:	follow-up treatments Uproot or cut flowerheads before seed set; plough/remove material herbicide Kikuyu species re-introduction to create indigenous pockets
4 ±4 ha	Highly disturbed area # (609-13)	Control alien shrubs Control Kikuyu [Indigenous garden]	follow-up treatments mowing; prevent spread into conservation area (herbicide)

		[Recreation field]	
5 linear 200m X1m	Border between recreation & conservation area (609-13)	Plant a "hedge" of Dune Fynbos & Thicket shrubs – create a buffer that attracts frugivores Ongoing Kikuyu control	- Propagate suitable plants (Table 3); plant in autumn & protect from browsers & fire - Identify boundary & prevent spread of Kikuyu beyond this using herbicide

* grasses & forbs

Design and implementation to follow landscaping plan (that could include a demonstration Strandveld garden)

Species re-introduction (from Holmes 2002)

The aims of species re-introduction are to return species that may have become locally extinct at ESWP, to increase the plant structural diversity and richness of the park, and to provide refuges for appropriate red data species that have few protected sites remaining to them. All of these aims would also increase the botanical interest of the site and may concomitantly enhance bird and insect diversity. A further long-term benefit would be the suppression of alien weed species. Following weed control, two methods of species re-introduction are possible: firstly by sowing viable seed, and secondly, by propagating plants from seed and cuttings and planting on site.

Both of these methods were tested at ESWP by Holmes (2002) and the conclusions of her study were as follows:

- ploughing greatly enhanced the establishment and growth of introduced seed or plant material,
- To attain a rapid cover of desirable indigenous species, planting propagated material is superior to sowing seeds,
- Sowing seeds was nearly a complete failure in the unploughed plots: thus a relatively competition-free environment is needed for successful seed germination and establishment (i.e. using a combination of herbicide and ploughing treatments that prevent a rapid re-growth of the mat-forming grasses).
- The fast-growing shrubs and perennial species contributed most to this cover, especially: *Senecio halimifolius*, *Chrysanthemoides monilifer*a, *Salvia africana-caerulea* and *Pelargonium capitatum*,
- Many alien weed species quickly re-establish along with the introduced indigenous species and these should be controlled as soon as possible before they outcompete the establishing indigenous species: especially *Acacia saligna*, *Inula graveolens*, *Erigeron sp.*, *Senecio pterophorus* and other prominent perennials.
- The long-term management of the site is important to ensure that the re-introduced species reach maturity and produce seeds in the local area to disperse into other degraded areas nearby, and also for use in further restoration work. It is important that the

restoration site is not burnt for another few years. To this end, firebreaks around the site should be maintained during the summer months.

It is therefore recommended that the focus for restoration at ESWP be on the introduction of established plant material but that this can be supplemented by broadcast sowing (especially of the common pioneer species). The following methodology (from Holmes 2002 & 2004) is proposed for restoration at ESWP:

Weed control

Invasive tree species (primarily *Acacia saligna*) have been largely eradicated at ESWP. Ongoing follow up will be needed to keep these species under control. However, the major weed problem at ESWP is herbaceous weeds, including the aggressive perennial grass *Pennisetum clandestinum* (Kikuyu) and a variety of annual grasses and forbs (Helme & Maze (2000). These need to be addressed before species re-introduction can be considered. This is because these herbaceous species may form a dense ground layer that prevents successful germination from sown seeds and lowers the success rate of establishment from propagated plants. Plant establishment may only occur sporadically without intensive herbaceous weed control.

Ploughing proved the most effective means to control weeds and prepare the ground for sowing and planting in the highly degraded areas of ESWP where no indigenous species persist. In all areas of the park where indigenous species persist, alien herbaceous species should be hand-pulled where possible (suitable for some forb species), or else selectively cut, to prevent seed-set and additions to the seed banks. This would have to be done in early Spring (September – October) to prevent alien seed being dropped onto the site. However, it may take many years before this approach results in a decline in weed populations and herbaceous weed control should be considered an ongoing task. It is important that uprooted and cut weeds are placed in bags and removed off the site, as seeds of annuals can mature on cut material. Material could be dried and burnt to kill seed.

Seed/cuttings material

Seed/cutting material should be collected from within ESWP or nearby remnants. The main seed-collecting period is between September and February, but as species ripen seeds at different times, collections need to be done throughout the year. Seed should be stored under cool, dry conditions and protected from granivory until required for the autumn sowing. Prior to sowing, seed should be given a smoke treatment to enhance germination.

Propagation

Producing large individual plants in 1-4 liter containers is relatively expensive, thus it is recommended that seedling trays be used to produce large quantities of small plants for establishing in the field in late autumn (after the first heavy rains have fallen).

Planting

It is recommended that species be planted in relatively dense formations in order to facilitate the rapid development of canopy cover and to compensate for the inevitable deaths. A minimum of five plants per m^2 is recommended. The concept behind creating pockets of indigenous vegetation is to introduce structural diversity to the ESWP while also re-introducing species that once would have occurred there. Those pockets that successfully establish may act as foci for further seed dispersal into the matrix of the park over the longer term. It is recommended that the red data species be propagated before re-introduction to the field as this is likely to be less wasteful of plant material than broadcast sowing.

Sowing

As a secondary approach seed of common pioneer species can be sown in the ploughed and planted areas. The equivalent of 10 kg/ha of cleaned seed equivalent (i.e. the weight of seed without surrounding structures and stalks) is recommended in fynbos restoration projects.

Fire, goat and trampling protection

Given the investment in restoration it is crucial that the sites are protected from fire, trampling and livestock grazing. All plots and plantings should be protected from fires, firstly by fire prevention, by fire-vigilance during high-risk periods and by the creation of fire-tracer belts from which to back-burn should a fire burn out of control at the site. Fire belts should be 5m wide on the high-risk sides of the plots (S-SE) and 3m wide elsewhere. Weed-eaters or mowers may be used to create the fire belts (Holmes 2002).

All of the above activities can easily be integrated into the Green Futures curriculum at ESWP. This will provide the conservation management team with extra manpower and provide the opportunity to hasten the restoration progress in the park.

Harmony Flats

The natural vegetation in the area is a low shrubland, with a high diversity of annuals and bulbs. The remaining vegetation has been substantially modified by human impact, most notably by fire. Although adapted to fire to a certain degree, over the last twenty years or so, the frequency of fires has been much higher than optimal, and in some cases have been an almost annual occurrence. This has resulted in an increase in grasses, bulbs and annuals, with a reduction of reseeding shrubby perennials. However the plant communities on Harmony Flats although somewhat modified, are still regarded as functional and viable, particularly if given greater levels of fire protection (Helme 2004).

Threats to the site

Too frequent fires remain the greatest threat to the vegetation of Harmony Flats despite significant efforts to reduce fire frequency. Indigenous grasses such as *Hyparrhenia hirta* (thatching grass)

and *Cynodon dactylon* (kweek) are often invasive in disturbed areas, especially those that are seasonally wet. They are also favored by frequent fires. The invasive alien grass Kikuyu (*Pennisetum clandestinum*) is a threat in certain areas, notably along road verges and where rubble has been dumped. The woody alien Port Jackson (*Acacia saligna*) is also invasive in the area but has recently been eliminated from HF.

- The Green Futures students at Harmony Flats should be trained up as fire fighters as part of there curriculum adding to the existing fire fighting capabilities of the community groups.
- The GF students can also be trained in alien clearing and contribute to the ongoing alien control program at the site.

As no existing restoration management plan has been developed for HF it is imperative that this be undertaken before a work plan can be drawn up. It is evident that the site has varying degrees of disturbance and that the natural vegetation varies accordingly. These zones need to be drawn up and possible restoration intervention agreed upon with site managers and authorities.

Restoration intervention can be divided into three basic groups at HF.

1. Indigenous landscaping in surrounding open areas
In those areas outside of the proclaimed nature reserve restoration/indigenous landscaping will greatly enhance the aesthetic beauty of the area and create a buffer between the nature reserve and surrounding high density developments. This includes along the surrounding road verges, on the road verges leading to HF and on the outskirts of the adjacent sports facility.

2. Heavily disturbed areas within HF nature reserve
There are certain areas within the reserve boundaries that have undergone significant impacts in the past (road verges, trenches, areas dug up for the abattoir etc). These will require more intensive restoration input as there is presently little to no indigenous cover. The methods used would be similar to those described above for ESWP and would include a combination of weed control, propagation and seed sowing. It is imperative that only material sourced from within the reserve or nearby areas be used for this purpose. A species list compiled for the area stands at over 240 species, with at least 21 rare or threatened (Appendix 2 - Helme 2004). Only species listed can be used for this purpose.

3. Natural vegetation areas
The majority of the site has significant indigenous cover and is especially rich in geophytes, annuals and grasses. However due to too frequent fires, there has been a reduction of reseeding, shrubby perennials. Any interventions within this area have to be carefully vetted by conservation partners. The focus would be on propagating rare species (and those impacted by too frequent fires) and carefully reinstating them into appropriate areas on the site (see Appendix 2).

The Green Futures Nursery at HF should have a focus towards propagating the rare and endemic species from the site. This will require significant technical input from horticulturalist at Kirstenbosch. As an example, the only known viable populations of the bulb, *Ixia versicolor* (Iridaceae) are known from this site (Helme 2004). Similarly, the recently described *Merciera tetraloba* (Campanulaceae) is to a certain extent dependent on the conservation of natural habitat

at HF for its survival. A strong partnership between the Green Futures nursery and SANBI staff at Kirstenbosch could significantly improve the long term conservation status of these and other rare species at Harmony Flats.

Curriculum development

The Green Futures curriculum at ESWP and HF will need to be developed to include theory and practical restoration training aligned with the timing requirements of management. A guideline of these requirements is given below in Table 2.

Table 2. Monthly restoration tasks for Green Futures curriculum.

January – February	Mowing/spraying/ploughing/hand pulling
March – April	Final preparing of areas to be restored
May	Sowing and planting of rooted cuttings
June – October	Propagating material in the nursery
November- January	Primary seed collecting time and plot weeding

Monitoring

As with any restoration project ongoing monitoring and evaluation is crucial. It is important to monitor the regenerating vegetation into the future to see how effective the methods are, whether they require adapting, whether any important indigenous components are completely missing or under-represented and in order to plan for their future introductions. Similarly, it is important to monitor alien recruitment in order to plan for follow-up clearance. The Green Futures curriculum should include a monitoring component that is linked to the monitoring requirements of the site managers.

Successful Restoration Depends Upon Collaboration

Collaboration is the recipe for success in restoration projects. In order to successfully implement restoration projects at ESWP and HF close collaboration will be required between the South African National Biodiversity Institute (SANBI), the City of Cape Town, Working on Wetlands and Green Futures. The City of Cape Town is the essential catalyst for restoration as they are the custodians of these natural areas and it is through them that we can carry out our restoration work.

Conclusions

The Green Futures Colleges at Edith Stephens Wetland Park and Harmony Flats Nature Reserve can play a valuable role in the conservation management and restoration of these sites. The

students provide a permanent, focused and well managed work force. The theoretical and practical curriculum must include unit standards that focus on site conservation and ecology, there conservation significance in the regional context and provide students with a practical opportunity to contribute to there conservation through restoration and landscaping projects.

At the ESWP this methodology has been well developed over the last five years and the students can slot into and expand the existing restoration work plans. At HF there is a need to develop a site specific restoration plan that zones the nature reserve and surrounding areas according to the different levels of intervention required. This needs to be undertaken in conjunction with City of Cape Town officials who are the custodians of the property.

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Appendix 1. Suitable Plant Species to be propagated fro re-introduction in the different plant communities at Edith Stephens Wetland Park.

Species	Family
Wetland	
Bolboschoenus maritimus	Cyperaceae
Chondropetulum tectorum	Restionaceae
Cliffortia ferruginea	Cyperaceae
Cyperus longus	Cyperaceae
Ficinia dunensis	Cyperaceae
Ficinia indica	Cyperaceae
Hellmuthia membranacea	Cyperaceae
Ischyrolepis sabulosa	Restionaceae
Lampranthus reptans#	Mesembryabthemaceae
Lobelia alata	Campanulaceae
Mariscuc thunbergii	Cyperaceae
Schoenus nigricans	Cyperaceae
Dune Fynbos	
Aizoon paniculatum	Aizoacea
Aspalathus hispida*	Fabaceae
Aspalathus nigra *	Fabaceae
Asparagus aethiopicus	Asparagaceae
Asparagus asparagoides	Asparagaceae
Asparagus capensis	Asparagaceae
Asparagus compactus	Asparagaceae
Asparagus rubicundus	Asparagaceae
Carpobrotus edulis	Mesembryabthemaceae
Chondropetalum nudum	Restionaceae
Chondropetulum tectorum	Restionaceae
Chrysanthemoides monilifera	Asteraceae
Chrysocoma coma-aurea	Asteraceae
Cliffortia ericifolia #	Rosaceae
Cynanchum africanum	Apocynaceae
Ehrharta calycina	Poaceae
Ehrharta erecta	Poaceae
Ehrharta villosa	Poaceae
Euphobia mauritanica	Euphorbiaceae
Gomphocarpus fruticans	Apocynaceae
Helichrysum niveum	Asteraceae
Helichrysum patulum	Asteraceae
Ischyrolepis eleocharis	Restionaceae
Lampranthus explanatus #	Mesembryabthemaceae
Leonotis leonuris	Lamiaceae
Lessertia tomentosa	Fabacceae
Leucadendron levisanus #	Proteaceae
Limonium equisetinum	Plumbaginaceae
Metalasia muricata	Asteraceae
Nylandtia spinosa	Polygalaceae
Orpheum frutescens	Gentianaceae
Otholobium fruticans	Fabacceae
Passerina palacea	Thymeliaceae
Passerina vulgaris	Thymeliaceae

Pelargonium betulinum	Geraniaceae
Pelargonium capitatum	Geraniaceae
Plecostachys serpyllifolia	Asteraceae
Psoralea laxa	Fabacceae
Psoralea reptans	Fabacceae
Ruschia macowanii	Mesembryabthemaceae
Salvia Africana-lutea	Lamiaceae
Salvia lanceolata	Lamiaceae
Satyrium odorum	Orchidaceae
Suthelandia fruticosa	Fabacceae
Tetragonia frutescens	Aizoacea
Thamnochortus erectus	Restionaceae
Thamnochortus spicigerus	Restionaceae
Watsonia meriana	Iridacea
Willdenowia teres	Restionaceae
Zygophyllum flexuosum	Zygophyllaceae
Zygophyllum morgsana	Zygophyllaceae

Thicket

Cotyledon orbiculare	Crassulaceae
Euclea racemosa	Ebenaceae
Lycium afrum	Solanaceae
Lysium ferocissimum	Solanaceae
Maytenus heterophylla	Celastraceae
Myrica cordifolia	Myricaceae
Olea exasperate	Oleaceae
Olea europaea subsp. africanum	Oleaceae
Pterocelastrus tricuspidatus	Celastraceae
Putterlickia pyracantha	Celastraceae
Rhus crenata	Anacardiaceae
Rhus glauca *	Anacardiaceae
Rhus lucida	Anacardiaceae
Solanum guineense	Solanaceae

* Recorded in the 1990's at ESWP
# Red data species

Appendix 2. Species List for Harmony Flats Nature Reserve: compiled by Pat Runnalls, Edited by Rupert Koopman (up to and including 13 May 2005)

* denotes Red Data listing, some are in the new list

Aizoaceae

1. Aizoon sarmentosa

Alliaceae

2. Tulbaghia capensis

Amaryllidaceae

3. Amaryllis belladonna
4. Ammocharis (previously Cybistetes) longifolia
5. Crossyne guttata
6. Gethyllis afra

Anacardiaceae

7. Rhus laevigata
8. Rhus rosmarinifolia

Anthericeae

9. Chlorophytum undulatum

Apiaceae

10. Annesorhiza sp.
11. Centella sp (genus under revision)
12. Arctopus monacanthus

Asparagaceae

13. Asparagus stipulacea
14. Asparagus rubicundus

Asphodelaceae

15. Bulbine cepacea
16. Bulbine filifolia ?
17. Bulbinella cauda-felis
18. Bulbinella nutans var. nutans
19. Chlorophytum undulatum (Family?)
20. Trachyandra chlamydophylla
21. Trachyandra hirsuta
22. Trachyandra hispida

Asteraceae

23. Arctotis acaulis
24. Athanasia juncea
25. Berkheya armata
26. Berkheya rigida
27. Corymbium africanum subsp. scabridum
28. Corymbium cymosum
29. Cotula coronopifolia
30. Cotula turbinata
31. Dimorphotheca pluvialis
32. Gazania ciliaris
33. Gazania rigida
34. Gnaphalium capense
35. Helichrysum asperum
36. Helichrysum litorale
37. Oedera capensis
38. Othonna digitata
39. Othonna heterophylla
40. Pteronia hirsuta
41. Relhania fruticosa
42. Stoebe cinerea ?
43. Stoebe plumosa
44. Ursinia dentata
45. Ursinia discolor

Boraginaceae

46. *Echiostachys incanus

Brassicaceae

47. Heliophila pusilla

Campanulaceae

48. *Merciera tetraloba (new species, described 2002)
49. Monopsis debilis
50. Roella ciliata

Colchicaceae

51. Onixotis punctata
52. Onixotis stricta = O. triquetra
53. Wurmbea inusta
54. Wurmbea spicata
55. W. sp (prob marginata)

Crassulaceae

56. Crassula dejecta

Cyperaceae

57. Ficinia albicans
58. Ficinia brevifolia
59. Ficinia cf. bulbosa
60. Ficinia indica
61. Ficinia tenuifolia
62. Isolepis antarcticus
63. Tetraria sp.

Droseraceae

64. Drosera cistiflora
65. Drosera trinervia

Ericaceae

66. Erica imbricata
67. Erica quadrangularis

Eriospermaceae

68. Eriospermum capensis
69. Eriospermum lanceifolium
70. Eriospermum spirale

Euphorbiaceae

71. Euphorbia arceuthobioides

Fabaceae

72. Aspalathus ericifolia
73. Aspalathus ericifolia subsp. ericifolia
74. Aspalathus hispida
75. Aspalathus parviflora
76. Aspalathus quinquefolia
77. Aspalathus spinosa
78. *Indigofera psoraloides
79. Lebeckia carnosa
80. Lotononis prostrata
81. *Otholobium fruticans

Gentianaceae

82. Orphium frutescens
83. Sebaea aurea
84. Sebaea exacoides

Geraniaceae

85. Monsonia speciosa
86. Pelargonium capitata

87. Pelargonium myrrhifolium subsp. myrrhifolium
88. Pelargonium pinnatum
89. Pelargonium radulifolium
90. Pelargonium rapaceum
91. Pelargonium triste

Haemodoraceae

92. Wachendorfia paniculata

Hemerocallidaceae

93. Caesia contorta

Hyacinthaceae

94. Drimia pusilla
95. Lachenalia contaminata
96. Lachenalia orchioides
97. Lachenalia unifolia
98. Polyxena corymbosa
99. Ornithogalum (Formerly Albuca) fragrans
100. Ornithogalum (Formerly Albuca) juncifolia
101. Ornithogalum thyrsoides
102. Tenicroa filifolia

Hypoxidaceae

103. Empodium plicatum
104. Pauridia minuta
105. Spiloxene alba
106. Spiloxene aquatica (not on Harmony but on adjacent road reserve, with Onixotis)
107. Spiloxene capensis
108. Spiloxene schlechteri
109. Spiloxene serrata

Iridaceae

110. *Babiana angustifolia
111. Galaxia sp.
112. Geissorhiza aspera
113. Geissorhiza imbricata
114. Geissorhiza setacea
115. Gladiolus alatus
116. Gladiolus gracilis
117. Hesperantha radiata
118. Hesperantha sp
119. *Ixia dubia
120. **Ixia versicolor (last viable population, according to Nick Helme)
121. Lapeirousia corymbosa
122. Micranthus junceus
123. Micranthus tubulosus
124. Morea (Homeria) collina
125. *Moraea elsiae
126. Moraea fugax
127. Moraea gawleri
128. Moraea inconspicua
129. Moraea lugubris
130. Moraea papillionacea
131. Moraea tripetala
132. *Moraea villosa
133. Romulea cruciata
134. Romulea flava var. flava
135. Romulea hirsuta
136. Romulea obscura
137. Romulea rosea
138. Sparaxis grandiflora

Lamiaceae

139. Salvia africana-caerulea

Lobeliaceae

140. Cyphia bulbosa
141. Cyphia volubilis

Malvaceae

142. Hermannia cuneifolia

Mesembryanthemaceae

143. Carpanthea pomeridiana
144. Erepsia anceps.
145. Lampranthus aduncus
146. Lampranthus baccans ?
147. *Lampranthus filicaulis
148. *Lampranthus reptans
149. *Lampranthus scaber

Orchidaceae

150. Bartholina burmanniana
151. Corycium orobanchoides
152. Disa (Monadenia) bracteata
153. *Disa tenella subsp. tenella
154. Holothrix villosa var. villosa
155. Pterygodium catholicum
156. Pterygodium alatum

Oxalidacea

157. Oxalis depressa
158. Oxalis flava
159. Oxalis pardalis
160. Oxalis pes-caprae
161. Oxalis tenuifolia

Poaceae

162. Cymbopogon marginata
163. Cynodon dactylon
164. Ehrharta calycina
165. Eragrostis curvula

166. Koeleria capensis
167. Pentaschistis curvifolia
168. Pentaschistis sp.
169. Themeda triandra
170. Tribolium uniolae

Polygalaceae

171. Muraltia empleuridioides ?
172. Muraltia stipulacea
173. Polygala garcinii

Proteaceae
174. *Leucadendron lanigerum
175. Protea scolymocephala

Restionaceae
176. Calopsis fruticosa
177. *Calopsis rigorata.
178. Chondropetalum nudum
179. *Chondropetalum rectum
180. *Elegia verreauxii
181. Ischyrolepis capensis
182. Ischyrolepis curviramis
183. *Ischyrolepis duthieae
184. Staberoha distachyos
185. Thamnochortus fruticosus
186. Thamnochortus sp.

Rosaceae

187. Cliffortia juniperina

Rubiaceae

188. Anthospermum ericifolium
189. Anthospermum galioides subsp. galioides

Rutaceae
190. Agathosma cerefolium
191. Diosma hirsuta

Santalaceae
192. Thesium euphrasioides
193. Thesium patulum

Scrophulariaceae

194. Diascia cf. elongata
195. Dischisma capitata
196. Nemesia barbata

Solanaceae

197. Lycium ferocissimum

Sterculiaceae

198. Hermannia cuneifolia var. cuneifolia
199. Hermannia sp.

Tecophilaeaceae

200. Cyanella hyacinthoides

Thymeleaceae

201. *Cryptadenia (Lachnaea) grandiflora
202. Gnidia laxa
203. Struthiola ciliata

Zygophylaceae

204. *Zygophyllum sessifolium

Output 6. : Potential for plant supply arrangement negotiated with Working for Water and/or Working for Wetlands and/or Kirstenbosch, and explored with the Working for Water Nurseries Partnership with commercial nurseries, and results documented and agreements in principle secured.

Green Futures Colleges Programme

Green Futures Nurseries
Developing a Marketing Strategy

Ensuring Plant Agreements

Compiled by Gareth Rossiter: Consultant to Grootbos Green Futures Foundation for the Feasibility Study for Green Futures Colleges on the Cape Flats (June 2007)

i. Introduction

The business plan for the Green Futures Colleges Programme envisages that after two to three years of operation each of the nursery operations will be generating R600 000 income from sales and landscaping services. This represents a significant challenge to the Green Future Colleges Programme and requires separate consideration of strategy, business plans and marketing.

The Green Futures College Nursery at each college serves a two-fold objective.

- In the first instance the nurseries form an integral part of the "education with production" pedagogy of the Green Futures model. These nurseries provide the critical workplace and practical horticultural experience for learners.
- In the second instance, the nurseries fulfill an economic objective. They should generate an income to cover some of the running costs of the colleges. Learners are able to contribute the creating value in plants and landscaping services through "sweat equity". In this way they are able to contribute to the costs of their studies without having to pay fees.

The case of the Grootbos Green Futures College Nursery has been used as a reference point for developing this strategy. It managed in 2006 to sell plants to the value of R520 000. This was achieved after a number of years of operation. Large stocks are stored at a storage nursery in Flower Valley away from the campus. A variety of plant stock is propagated some for quick turn around (cash) and others for longer-term returns. The size of this business in 2006 was based on one large contract being secured. This size of income had not been reached before.

The Grootbos Green Future College nursery is not replicable in all respects to the proposed new sites. Grootbos is located in a rural area and on a private reserve. The two new colleges being proposed for the first phase of the programme are located close to urban areas. The marketing opportunities for these are different. The proximity to urban markets provides a greater opportunity for retail sales.

ii. The Nursery and Landscaping Market

iii. Opportunities

In the business plan it is argued that the nursery sector is growing and that there is particular opportunity in the niche indigenous plant sector with a growth in popularity of water wise gardening. It is on this basis (and from the experience at the Grootbos Green Future College) that the feasibility study argues that there is sufficient growth in the market to support the development of a trained labour force of horticultural practitioners with qualifications at the general and further education and training levels.

The growth in the market also provides an opportunity for plant sales and landscaping services. In addition should there be an increase in public spending on indigenous gardening and landscaping and in the promotion of these in low- income urban settings, the nurseries at the colleges will be well placed to ensure a share of this business.

iv. Constraints

It will not be possible, until such time as the nursery businesses are viable and profitable entities, to employ high level business management, marketing and entrepreneurial skills. This will mean that these skills will not be located at each of the sites. Initially it is proposed that a development manager will be employed who will seek to develop business and relationships with private and public clients for all the colleges.

In addition it will take some time to develop a level of stock to be able to generate the volumes that are envisaged and needed to meet the financial targets that are being set. A two to three year period will be required to reach full production and sales capacity.

Currently the City has indicated a reservation about having a propagation nursery on any of its nature sites. Proposals that the nurseries at Edith Stephens and Harmony Flats are located at adjacent sites will entail a range of capital costs and ongoing security overheads.

v. Market Options

Although each of the following options is dealt with separately, it does not preclude the nursery businesses from pursuing a combination of these as a marketing strategy. However, the analysis of the options is designed to present the complex set of options to assist t he programme and each college from developing an appropriate mix as a marketing strategy.

1. Establishing Retail Nurseries

There are some clear advantages of managing a series of retail nurseries as one of the business options that should be considered for the Green futures Colleges. This option would see the nurseries purchasing the majority of plant stock from wholesalers and producing some of the stock.

Advantages

- This would ensure that the bulk of the risk of propagating plants is vested with the wholesaler. If a good market for retail plants is established this would see a regular cash flow for the business.
- This model will provide a useful training and learning ground for learners around running a business, including costing, marketing and direct sales to the public.
- If successful this option would likely result in steady inflows of cash that would enhance college sustainability.

Constraints

- The population in the immediate surrounds of the proposed colleges comprise largely of low-income communities. The market is limited. These communities do not have disposable income. It could be exploited if there was a level of subsidy for plants that would enable the colleges to price them for communities that made them attractive. This would necessitate the nursery project being linked to an urban environmental project that promoted indigenous greening of low-income townships.
- In addition each of the colleges will not be able to employ high-level business skills to ensure the success of this. Nursery managers are likely to be skilled nursery people who will not necessarily have the experience to manage an ambitious business project.
- The option is not likely to generate alone the levels of income that are being targeted.
- The option, if followed exclusively will not tap sufficiently into business in the public sector that should be a mainstay for a public sector initiative.

In Conclusion

This option should be pursued actively by each of the colleges. The more cash that can be generated in this way, the better for health of the colleges' general cash flow.

2. Seeking Plant Supply and Landscaping Custom with Large Scale Property Developments.

It is income from this kind of business that has produced the best return for the Grootbos Nursery. Securing this business will require high-level active marketing and promotion though networking and reaching out to key individuals involved at a high level in property development.

Advantages

- Large accounts will bring in a significant proportion of targeted income.
- Large contracts allow for longer term planning, well suited to a propagation nursery.

Constraints

- It is unwise to "put all the eggs in one basket". Should these kinds of accounts not transpire, the nurseries will end up with unsold stock and no other options to move the stock.

3. Seeking Plant Supply Business in the Public Sector

Information gleaned during the course of the feasibility study have indicated that the Extended Public Works Programme is looking at the landscaping of gardens around public owned properties as an additional public works programme that will form part of its suite of programmes to support poverty alleviation. This is but one example and there are others. Already there is an in principle agreement that the nursery at Edith Stephens will produce plant stock for the Working for Wetlands Programme.

It would seem that the programme is well placed to seek and find business for plant supply in this market segment.

vi. Recommendations

- Develop business skills capacity and systems at the programme management unit level. Employ a development manager who will actively pursue, under the supervision of the programme manager, large-scale plant supply and landscaping subcontracts with property developers and public sector initially in the Western Cape.
- Explore rigorously large-scale public sector plant supply contracts for public works programmes. (The EPWP. Working for Water and Working for Wetlands)
- At the central programme management unit level pursue Plant Supply: In Principle Agreements up front with public and private sector parties if possible. The agreement that has been made in principle with the Working for Wetlands Peninsula Project will need to be translated into a firm contract once the conditions for the Colleges to proceed have been met.
- Develop detailed nursery business plans for each of the nurseries once established.

An agreement has been reached in principle with the Working for Wetlands Peninsula Project. Under this arrangement the Green Futures College Nursery at the Edith Stephens Wetland Park will produce some 80 000 plants annually for the Working for Wetlands Project.

In addition the nurseries will be producing plant stock for the restoration work[23] that will be undertaken at various sites in and around the nature reserves where they are to be located.

[23] The Restoration Plan Refers.