ADDITIONAL ITEMS

7.5	**HUMAN SETTLEMENTS:**

7.5.1	**APPOINTMENT OF A PROJECT MANAGEMENT CONSULTANT FOR TOWNSHIP APPROVALS FOR THE KAYAMANDI TOWN CENTRE PROJECT**

Collaborator No: **612115**
IDP KPA Ref No:
Meeting Date: ***17 October 2018***

1. SUBJECT: APPOINTMENT OF A PROJECT MANAGEMENT CONSULTANT FOR TOWNSHIP APPROVALS FOR THE KAYAMANDI TOWN CENTRE PROJECT

2. PURPOSE

To obtain the necessary authorization for the intended amendment of a contract concluded with Jubelie Project.

3. DELEGATED AUTHORITY

Council

4. EXECUTIVE SUMMARY

As part of the planning for the Northern Extension, Jubelie Projects was instructed to do a feasibility study of Kayamandi with emphasis Zone O and the Town Centre. They were duly appointed, subsequent to the initial investigation to formally undertake a feasibility study for the Town Centre, Zone O and to use any information on Kayamandi (including Enkanini) in order to provide a holistic development picture of Kayamandi. The latter resulted in a framework for possible future development opportunities in Kayamandi and environs.

It is therefore not practical or cost effective for Stellenbosch Municipality to appoint new service providers for what is merely a continuation of a second phase of their first appointment which related into the Zone O and the Town Centre of Kayamandi.

5. RECOMMENDATIONS

(a) that Council notes, in terms of MFMA Section 116(3), the reasons for the change of scope for Zone O and the Town Centre;

(b) that Jubelie Project be appointed for the planning and implementation phases for the Kayamandi Town Centre project and Zone O project, and that their scope of work for both projects includes:

- Detailed Town Planning;
- Preparation and submission of engineering drawings for approval;
- Tendering process; and
- Project and contract management;

(c) that Council gives reasonable notice of intention to amend the contract or agreement in terms of section 116(3)(b)(i);

(d) that the local community be invited to submit representatives to the Municipality in terms of section 116 (3)(b)(ii); and

(e) that the Municipal Manager be authorized to conclude the contract or agreement after (d) above is finalized in terms of the applicable Act/Regulation.

6. DISCUSSION / CONTENTS

6.1 Background

On the 28 May 2015, during the 35th Council Meeting, after debating the proposed Northern Extension of Stellenbosch, Council resolved to proceed with "*the appointments of a seasoned project manager to project manage amongst other the planning, feasibility studies, fund raising, property negotiations, design and implementation of this project*".

Jubelie Projects was selected from the multi-disciplinary team of professionals from tender B/SM 28/16.

On 23 August 2016, the Municipality entered into a Service Level Agreement (SLA) with Jubelie Projects to proceed with the council approval recommendations in three phases:

- Phase 1 – Feasibility study within 150 days of appointment;
- Phase 2 – Development approvals within 380 days of Phase 1; and
- Phase 3 – Detailed designs within 100 days of Phase 2.

The Service Level Agreement *inter alia* refers to the following:
"*Clause 2.2 – Jubelie must oversee the planning and development of the area……, inclusive of land acquisitions and disposals, raising of development finance and acquiring all required approvals and authorisations.*

Clause 2.3 – The development objectives include …… the areas of Kayamandi, Cloetesville and Ida's Valley."

An order was issued on 10 February 2017 to the service provider for Phase 1 of their appointment – feasibility study.

During March 2017, Stellenbosch Municipality extended their scope to conduct a feasibility study for the Kayamandi Town Centre. This was done as the service provider had to consider the planning for the Northern Extension in a holistic manner and as the redevelopment of the Town Centre was integral to the planning of the Northern Extension.

Jubelie Project was also appointed during 2013 to attend to the emergency work when a large portion of Zone O informal settlement was destroyed in a fire. Subsequent to their emergency work appointment they were appointed to finalise the detailed town planning and LUPA submission for Zone O.

The informal areas of Kayamandi should be seen as an integrated development. No one part of Kayamandi can develop without considering relocating residents to other areas, as formalisation of these areas cannot cater for all the informal structures in these areas. For this reason, council decided to consider planning for the Northern

Extension of Stellenbosch. The Northern Extension, Kayamandi Town Centre, Enkanini and Zone O should therefore be seen as an integrated and holistic development, ***a mega project***, preferably with the same team responsible for the planning and implementation of these areas.

Zone O & Kayamandi Town Centre development potential:

• Zone O	703
• Kayamandi Town Centre	1 909
	2 612

Jubelie Projects is a majority black owned company with more that 80% of its shareholding vesting in black ownership. It is also a BBBEE level 2 contributor. Jubelie Projects is a QME with a turnover of approximately R15m per year.

Jubelie Projects is a specialist subsidy (low cost) housing consulting firm and the directors of the company has managed the implementation of more than 30 000 state subsidized housing units in the last 20 years. In 2016, Jubelie Project was appointed by the Western Cape Government: Human Settlements, as project and construction managers for 2 of the Province's catalytic housing projects. The first project is in Paarl (Vlakkeland) consisting of ±2 500 housing units and the other a project in Worcester (Transhex) consisting of ±9 000 housing units.

Jubelie Projects has successfully implemented the following projects within Stellenbosch Municipality:

- Zone O emergency services;
- Northern Extension feasibility study;
- Zone O LUPA application;
- Jamestown services and tops 162 housing units;
- Feasibility study De Nova;
- Klapmuts WWTW environmental approvals (EIA);
- Access to Basic Services;
- Access road Langrug township;
- Kayamandi Town Centre feasibility study; and
- Watergang installation of civil services 295 erven.

There is no doubt of Jubelie's track record and capabilities to implement housing projects, in particular state subsidized projects such as the Kayamandi Town Centre.

Lastly the communities of Kayamandi are extremely volatile. As part of Jubelie's appointment for the Northern Extension, Zone O and Kayamandi Town Centre they have built relationships with these communities and trust within the communities. It will be to the advantage of the Municipality to continue with them as service providers.

6.2 Discussion

The intention was always to appoint a single service provider for all the phases of the Northern Extension project. Subsequently the Kayamandi Town Centre was included in this appointment and orders were issued to complete Phase 1 – Kayamandi Town Centre: Feasibility study.

Both the feasibility studies were presented to council and approved (attached **ANNEXURE 1**, Council resolution).

It is in the best interest for the Municipality to proceed with the current service provider for Phase 2 of their initial scope.

In compliance with S116(3)(a) of the MFMA and paragraph 3.3.2 *supra*:

6.2.1 Herewith the reason for the proposed amendment

6.2.1.1 Jubelie Projects has done a number of projects in Stellenbosch in general and five (5) projects in Kayamandi and environs, in particular.

6.2.1.2 In the absence of an approved Master Plan or SDP for the entire Kayamandi, the combination of the above-mentioned projects was in an *ad-hoc* manner used as a Master Plan for Kayamandi as these projects are interlinked.

6.2.1.3 As part of the planning for the Northern Extension, Jubelie Projects was instructed to do a feasibility study of Kayamandi with emphasis Zone O and the Town Centre. They were duly appointed, subsequent to the initial investigation to formally undertake a feasibility study for the Town Centre, Zone O and to use any information on Kayamandi (including Enkanini) in order to provide a holistic development picture of Kayamandi. The latter resulted in a framework for possible future development opportunities in Kayamandi and environs.

6.2.1.4 The outcomes of this framework were included in the initial planning for the Northern Extension. A key element of this study/framework was the issue of how to deal with amongst other the overcrowding and excessively high densities in the Town Centre, Zone O and Enkanini, and the backyarders in general.

6.2.1.5 This report was submitted to Council at its meeting of 28 March 2018 and Council has already applied its mind in the approval of the feasibility study for the Town Centre by the same service provider, to introduce new ideas would detract from this.

6.2.1.6 Having said the above and taking into consideration the amount of work that has been completed as well as the body of information that has been generated, which includes a particular design methodology and expressing the ideas of Council. The wealth of experience that the service provider has gained could only be beneficial to Council.

6.2.1.7 Should we not (re)appoint the service provider:

- It would cost the Municipality significantly more to go through an initial design process again.
- It would be impractical and not cost effective for Council to follow a different procurement process.
- The feasibility studies incorporating concept designs and layout plans were approved by Council might have to be revised or rescinded or amended.

6.2.1.8 **It is therefore not practical or cost-effective for Stellenbosch Municipality to appoint new service providers for what is merely a continuation of a second phase of their first appointment.**

6.3 <u>Financial Implications</u>

It is estimated that the Town Centre will yield 1 909 BNG opportunities and Zone O will yield 703 opportunities.

(a) <u>Kayamandi Town Centre</u>

Application for Planning of Kayamandi Town Centre has already been made to Western Cape Government: Human Settlements who has approved an amount of R1 385 920 to fund the feasibility study phase and R1 303 9440 for the planning and environmental approvals.

The professional fees required for the Kayamandi Town Centre in order to obtain township approvals, implementation and electrical designs is R5 503 086.82 (attached **ANNEXURE 2**).

This project will be done in three (3) financial years as follows:

2018/19 = R1 039 979.74

2019/20 = R2 860 2022

2020/21 = R1 602 904.34

(b) <u>Zone O, Kayamandi</u>

The Zone O LUPA application is completed and will be submitted to the planning department for approval. Service provider fees will be capped at the quantum fees as published by the National Department of Human Settlements from time to time.

The professional fees required for the implementation of the project is R10 689 698.64 (attached **ANNEXURE 3**).

This is a multi-year project and will be completed within 3 financial years as follows:

2018/19 = R1 193 514.61

2019/20 = R4 878 836.70

2020/21 = R4 617 347.33

Both projects are in the budget and funds are available on u- key number 20180716042599 and 20180716042614.

6.4 <u>Legal Implications</u>

6.4.1 SCM Guide for Accounting Officer

In terms of paragraph 5.9.5.2, of the SCM Guide for Accounting Officers **a single source selection** may be appropriate, but only if it present a clear advantage over competition; e.g. for tasks that represent a **natural continuation** of previous work carried out by the Service Provider.

Further in terms of paragraph 5.9.5.3 the reason for a single source selection should be recorded and approved by the Accounting Officer or his/her delegate prior to the conclusion of a contract.

See **ANNEXURE 4** for abstract from Guidelines.

6.4.2 Municipal Finance Management Act (MFMA)

In terms of Section 116(3) of the MFMA a contract or agreement procured through the supply chain management policy of the municipality may be amended by the parties, but only after:

a) The reasons for the proposed amendment have been tabled in the council of the municipality; and

b) The local community-

i) has been given reasonable notice of the intention to amend the contract or agreement; and

ii) has been invited to submit representations to the municipality or municipal entity.

6.4.3 Comments from Legal Service

In order to ensure uniformity in application of the MFMA Section 116(3), the National Treasury issued MFMA Circular number 62/2012 where it is stated that contracts for construction related goods or services may be expended or varied by 20% of the original contract value, and contractors for general goods or services may be expanded or varied by 15% of the original contract value, though internal process. Any expansion or variation in excess of the aforementioned thresholds must be reported to Council and dealt with in terms of the provision of Section 116(3) of the MFMA.

The item and recommendations are supported.

6.5 Staff Implications

None

6.6 Previous / Relevant Council Resolutions:

None

6.7 Risk Implications

This report has no risk implications for the Municipality.

6.8 Comments from Senior Management:

This said item served before the BAC and all directors support the recommendations.

ANNEXURES

Annexure 1: Council resolution.

Annexure 2: Professional fees quotation for Kayamandi Town Centre

Annexure 3: Professional fees quotation for Zone O, Kayamandi

Annexure 4: Abstract from Guidelines

FOR FURTHER DETAILS CONTACT:

NAME	Tabiso Mfeya
POSITION	***Director***
DIRECTORATE	***Planning & Economic Development***
CONTACT NUMBERS	***021 808 8491***
E-MAIL ADDRESS	***tabiso.mfeya@stellenbosch.gov.za***
REPORT DATE	***12 October 2018***

ANNEXURE 1

7.5.3	KAYAMANDI TOWN CENTRE REDEVELOPMENT PROJECT: FEASIBILITY REPORT

Collaborator No: *572529*
IDP KPA Ref No:
Meeting Date: *14 March 2018*

1. SUBJECT: KAYAMANDI TOWN CENTRE REDEVELOPMENT PROJECT: FEASIBILITY REPORT

2 PURPOSE

To report on the feasibility of the redevelopment of Kayamandi Town Centre.

3. DELEGATED AUTHORITY

In terms of system of delegations which reads as follows:

- Item 516 (Section 9 of the Housing Act) (Page 115) –
  Take all reasonable and necessary steps, within the framework of national and provincial housing legislation and policy to ensure –

(a) that the inhabitants of its area of jurisdiction have access to adequate housing on a progressive basis;

(b) services in respect of water, sanitation, electricity, roads, stormwater drainage and transport are provided in a manner which is economical/efficient; and

(c) that appropriate housing development is initiated, planned and co-ordinated.

4. EXECUTIVE SUMMARY

The objective of this project is to:

(a) Submit a planning application for the Town Centre of Kayamandi;

(b) conduct geotechnical investigation;

(c) compile engineering design and submit for approval; and

(d) apply for funding approval to install services and build multi-storey top structures.

16TH COUNCIL MEETING: 2018-03-28: ITEM 7.5.3

RESOLVED (nem con)

(a) that the recommendations of the feasibility report be implemented with regard to the:

- detailed planning and land use rights;
- detailed engineering designs;
- installation of civil and electrical engineering;
- high density residential development layout; and

(b) that funding be sourced from the Provincial Department of Human Settlements (PDoHS) to implement the project.

Collaborator No:
IDP KPA Ref No:
Meeting Date: *28 March 2018*

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1. SUBJECT: KAYAMANDI TOWN CENTRE REDEVELOPMENT PROJECT: FEASIBILITY REPORT

2 PURPOSE

To report on the feasibility of the redevelopment of Kayamandi Town Centre.

3. DELEGATED AUTHORITY

In terms of system of delegations which reads as follows:

- Item 516 (Section 9 of the Housing Act) (Page 115) -
  Take all reasonable and necessary steps, within the framework of national and provincial housing legislation and policy to ensure –

(a) that the inhabitants of its area of jurisdiction have access to adequate housing on a progressive basis;
(b) services in respect of water, sanitation, electricity, roads, stormwater drainage and transport are provided in a manner which is economical/efficient; and
(c) that appropriate housing development is initiated, planned and co-ordinated.

4. EXECUTIVE SUMMARY

The objective of this project is to:

(a) Submit a planning application for the Town Centre of Kayamandi;

(b) conduct geotechnical investigation;

(c) compile engineering design and submit for approval; and

(d) apply for funding approval to install services and build multi-storey top structures.

5. RECOMMENDATIONS

(a) That the recommendations of the feasibility report be implemented with regard to the:
- detailed planning and land use rights;
- detailed engineering designs;
- installation of civil and electrical engineering;
- high density residential development layout; and

(b) that funding be sourced from the Provincial Department of Human Settlements (PDoHS) to implement the project.

Table 1: Kayamandi-Enkanini Socio Economic Survey Profile Summary

	Aerial photography count			Survey units and Households		Household Income Profile							
	Area (ha)	Structure Count 2017	Structures / ha	Survey No. Units	Households Total	>R3 500		Single with no dependents		Potential Beneficiary		Total	
					no	no	%	no	%	no	%	no	%
TOWN CENTRE PRIMARY AREA													
Zone A	5.3	1,138	213	606	1,107	138	12.5%	547	49.4%	422	38.1%	1,107	100.0%
Zone J	2.1	409	197		409	51	12.5%	202	49.4%	156	38.1%	409	100.0%
Zone K	3.4	473	140	187	203	56	27.6%	85	41.9%	62	30.5%	203	100.0%
Zone L	0.0			240	277	61	22.0%	132	47.7%	84	30.3%	277	100.0%
Subtotal	**10.8**	**2,020**	**187**	**1,033**	**1,996**	**306**	**15.3%**	**966**	**48.4%**	**724**	**36.3%**	**1,996**	**76.6%**
												-	
TOWN CENTRE SECONDARY AREA												-	
Zone D	0.3	41	158	109	120	26	21.7%	53	44.2%	41	34.2%	120	100.0%
Zone F	1.4	295	213	184	305	78	25.6%	145	47.5%	82	26.9%	305	100.0%
Zone I	1.8	304	173	159	252	58	23.0%	109	43.3%	85	33.7%	252	100.0%
Zone M	0.5	51	98	48	50	11	22.0%	14	28.0%	25	50.0%	50	100.0%
Zone P	0.4	76	206	56	77	15	19.5%	27	35.1%	35	45.5%	77	100.0%
SubTotal	**4.3**	**767**	**179**	**556**	**804**	**188**	**23.4%**	**348**	**43.3%**	**268**	**33.3%**	**804**	**100.0%**
												-	
TOWN CENTRE (Zone A-P)	15.1	2,787	185	1,589	2,800	494	17.6%	1,314	46.9%	992	35.4%	2,800	100.0%

The total demand for housing within the Town Centre is ± 2800 opportunities. In order for the Municipality to be able to start the project within the Town Centre 891 households must be relocated to a decanting site.

The Town Centre will provide about 1909 housing opportunities (see attached the layout plan as **ANNEXURE 3**).

The total backlog can be accommodated in any of the following ways:

(a) Qualifiers
- BNG Single free standing units;
- BNG Multi-storey units; and
- Enhanced serviced sites.

(b) Non-qualifiers
- Community Rental units;
- Social Housing;
- Enhanced serviced sites; and
- Lower and upper GAP housing.

Various investigations have been done by Jubelie to determine the formalisation of the greater Kayamandi including Zone O and Enkanini. Refer to the feasibility report for detail.

In order to maximise the residential yield, it is proposed to develop the Town Centre with four and five storey units (see attached proposed housing typologies as **ANNEXURE 4**).

6.3 Communication

Municipal officials and the professional team met on numerous occasions with the Ward Councillors, Ward Committee members and targeted community representatives to discuss the development strategy of the Kayamandi Town Centre. During these engagements, presentations were done by the consultants, depicting the study area, traffic impact assessment, surveys conducted and possible different

6.9.3 *Director: Community and Protection Services:*

Not applicable.

6.9.4 *Director: Strategic and Corporate Services:*

Not applicable.

6.9.5 *Director Human Settlements and Property Management*

Agree with the recommendations.

6.9.6 *Chief Financial Officer:*

Finance supports the item depending on budget availability and a supporting financial and funding model for the project.

6.9.7 *Municipal Manager:*

Agree with the recommendations.

ANNEXURES

Annexure 1: Feasibility studies and detailed town planning of Kayamandi Town Centre
Annexure 2: Aerial photography
Annexure 3: Layout plan
Annexure 4: Proposed housing typologies

FOR FURTHER DETAILS CONTACT:

NAME	LESTER VAN STAVEL
POSITION	*MANAGER: NEW HOUSIN*
DIRECTORATE	*HUMAN SETTLEMENTS & PROPERTY MANAGEMENT*
CONTACT NUMBERS	*021 808 8402*
E-MAIL ADDRESS	*Lester.vanstavel@stellenbosch.gov.za*
REPORT DATE	*26 February 2018*

ANNEXURE 2

JUBELIE Projects

6 September 2018

Attention: Lester van Stavel
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

QUOTATION FOR THE APPOINTMENT OF A PROJECT MANAGEMENT CONSULTANT FOR IMPLIMENTATION PHASE OF ZONE O PROJECT KAYAMANDI

Jubelie Project Management was appointed as a Professional Resource Team by The Provincial Government: Department of Human Settlements during 2012. Jubelie Project Management is a consultant firm specialising in housing development, and more particularly, subsidized housing developments. They were seconded to the Cape Winelands district for a period of three year in which they assisted Human Settlements and Municipalities in the implementation of housing projects.

During March 2013 a large portion of Zone O was destroyed by a fire. As part of their PRT appointment they assisted Stellenbosch Municipality in April 2013 to evaluate the damages and to develop alternative models to incrementally upgrade the area.

As a continuation of their emergency work, Stellenbosch Municipality requested the service provider to continue with the detailed planning and implementation / formalisation of Zone O. The service provider submitted quotes during February 2015 to obtain development rights, manage the installation of civil services as well as top structures.

Stellenbosch then issued an order during Feb 2015 for the planning approvals as it had limited funding for implementation at that stage.

Jubelie Projects is a majority black owned company with more that 80% of it's shareholding vesting in black ownership. It is also a BBBEE level 2 contributor. Jubelie is a QME with a turnover of approximately R 15m per year.

Jubelie is a specialist subsidy (low cost) housing consulting firm and the directors of the company has managed the implementation of more than 30 000 state subsidized housing units in the last 20 years. In 2016 Jubelie was appointed by the Western Cape Government : Human Settlements, as project and construction managers for 2 of the Province's catalytic housing projects. The first project is in Paarl (Vlakkeland) consisting of

Town planning incl urban design	704.28	100%	704.28	719	506 377.32
Architectural services to be recovered from contract					527 250.00
Civil Engineer	2 378.00	100%	2 378.00	719	1 709 782.00
Site supervision - civil	505.92	100%	505.92	719	363 756.48
Social facilitation	333.50	100%	333.50	719	239 786.50
Legal fees	42.16	100%	42.16	719	30 313.04
Totals	**15 264,74**		**13 406,10**		**10 166 236,64**
				Less: Previous appointment	-776 912.00
					9 389 324,64

Please note that the above quote specifically excludes Client Environmental Control Officer as well as Client Health and Safety Officer, as these services is deemed to be appointed by Stellenbosch Municipality directly.

This quote is based on the IRDP quantum of the Western Cape Government : Department of Human Settlements as published on 27 October 2017. Zone O currently has an approval based on the UISP quantum as published. Jubelie will be responsible to submit applications tor the Department of Human Settlements to amend this proposal to be in line with the IRDP quantum. In the interim, payment for work done will be limited to UISP funding approval.

The fees and compensation for the services rendered by the Project Manager, that are to be paid by the Stellenbosch Municipality shall be determined according to the subsidy made available, as determined by the National Department of Human Settlements, from time to time. Changes in compensation will only apply to work not yet undertaken by the Project Manager at the time when the revised subsidy became effective.

Our quote for the electrical engineering services is R 395 887,50 (Three Hundred and Ninety Five Thousand Eight Hundred and Eighty Seven Rand and Fifty Cents) including VAT at 15% (fifteen percent).

Activity	Estimated Value of works	ECSA fee percentage	Sub-total	Discount	Total Quote
Electrical Enginneering designs	16 752 000	9%	1 507 680.00	25%	1 130 760.00
			ADD VAT @	15%	169 614.00
					1 300 374.00

The fees for the services rendered by the Electrical Engineer shall be adjusted from time to time in accordance with an adjustment in the value of the project.

ANNEXURE 3

JUBELIE Projects

6 September 2018

Attention: Lester van Stavel
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

QUOTATION FOR THE APPOINTMENT OF A PROJECT MANAGEMENT CONSULTANT FOR TOWNSHIP APPROVALS FOR THE KAYAMANDI TOWN CENTRE PROJECT

During March 2017 Stellenbosch appointed Jubelie Projects to conduct a feasibility study for the Kayamandi Town Centre. Herewith our quotation for the planning approvals.

Kayamandi development potential based on the council approved feasibility study is 1 909 residential opportunities.

Jubelie Projects is a majority black owned company with more that 80% of it's shareholding vesting in black ownership. It is also a BBBEE level 2 contributor. Jubelie is a QME with a turnover of approximately R 15m per year.

Jubelie is a specialist subsidy (low cost) housing consulting firm and the directors of the company has managed the implementation of more than 30 000 state subsidized housing units in the last 20 years. In 2016 Jubelie was appointed by the Western Cape Government : Human Settlements, as project and construction managers for 2 of the Province's catalytic housing projects. The first project is in Paarl (Vlakkeland) consisting of +- 2500 housing units and the other a project in Worcester (Transhex) consisting of +- 9000 housing units.

Jubelie has successfully implemented the following projects within Stellenbosch Municipality:

- Zone O emergency services
- Northern Extension feasibility study
- Zone O LUPA application
- Jamestown services and tops 162 housing units
- Feasibility study De Nova
- Klapmuts WWTW environmental approvals (EIA)
- Access to Basic Services
- Access road Langrug township
- Kayamandi Town Centre feasibility study
- Watergang installation of civil services 295 erven

The fees and compensation for the services rendered by the Project Manager, that are to be paid by the Stellenbosch Municipality shall be determined according to the subsidy made available, as determined by the National Department of Human Settlements, from time to time. Changes in compensation will only apply to work not yet undertaken by the Project Manager at the time when the revised subsidy became effective.

Our quote for the electrical engineering services is R 1 300 374,00 (One Million Three Hundred Thousand Three Hundred and Seventy Four Rand) including VAT at 15% (fifteen percent). This includes the services report and preliminary designs.

Activity	Estimated Value of works	ECSA fee percentage	Sub-total	Discount	Total Quote
Electrical Engineering designs	25 500 000,00	9%	2 295 000,00		
Preliminary design phase		20%	459 000,00	25%	344 250,00
			ADD VAT @	15%	51 637,50
					395 887,50

The fees for the services rendered by the Electrical Engineer shall be adjusted from time to time in accordance with an adjustment in the value of the project.

Total quotation value	
Zero rated	R 5 107 199,32
Vattable at 15%	R 395 887,50
	R 5 503 086,82

Due to the current budget constraints we propose the following program which could be fast tracked when additional funding becomes available.

DELIVERABLES FOR 2018/2019		R value
November 2018	Conveyancers Report	40 241,72
	Cadastral base map	60 362,58
	Heritage aaplication	50 000,00
December 2018	Draft 1 layout plan	504 176,45
March 2019	Draft 2 layout plan	134 447,05
Nov'18 – Jun'18	Social Facilitation	53 054,29
	Project Management	252 433,43
		1 094 715,52
Less 5%	Discount	54 735,78
		1 039 979,74

DELIVERABLES FOR 2019/2020		R value
July 2019	Traffic Impact Assessment	197 180,61
	Phase 1 geotech	126 761,42
	Engineering input layout plan	204 282,09

ANNEXURE 4

[illegible] The consultant who has submitted the highest ranked technical proposal should be selected and invited to negotiate a contract.

5.9.3 Least-cost selection

5.9.3.1 This method is more appropriate to selection of consultants for assignments of a standard or routine nature (audits, noncomplex projects, and so forth) where well-established practices and standards exist and in which the contract amount is small. Under this method, a "minimum" qualifying mark for the "functionality" is established. Proposals to be submitted in two envelopes are invited. Technical envelopes are opened first and evaluated. Those securing less than the minimum mark should be rejected and the financial envelopes of the rest are opened in public. The firm with the highest points should then be selected. Under this method, the qualifying minimum mark should be established, keeping in view that all proposals above the minimum compete only on "cost" and promotion of HDIs and RDP objectives. The minimum mark to qualify should be stated in the RFP.

5.9.4 Selection based on [illegible] qualifying

5.9.4.1 This method may be used for very small assignments for which the need for preparing and evaluating competitive proposals is not justified. In such cases, the accounting officer should prepare the TOR, request expressions of interest and information on the consultants' experience and competence relevant to the assignment and select the firm with the most appropriate qualifications and references. The selected firm should be requested to submit a combined technical-financial proposal and then be invited to negotiate the contract.

5.9.5 Single-source selection

5.9.5.1 Single-source selection of consultants does not provide the benefits of competition in regard to quality and cost and lacks transparency in selection and could encourage unacceptable practices. Therefore, single-source selection should be used only in exceptional cases. The justification for single-source selection should be examined in the context of the overall interests of the client and the project.

5.5.3 Single source selection may be appropriate only if it presents a clear advantage over competition

- for tasks that represent a natural continuation of previous work carried out by the firm
- where a rapid selection is essential (for example, in an emergency operation),
- for very small assignments or
- when only one firm is qualified or has experience of exceptional worth for the assignment.

5.5.3 The reasons for a single-source selection should be recorded and approved by the accounting officer or his / her delegate prior to the conclusion of a contract

5.5.4 When continuity for downstream work is essential, the initial RFP should outline this prospect and if practical, the factors used for the selection of the consultant should take the likelihood of continuation into account. Continuity in the technical approach, experience acquired and continued professional liability of the same consultant may make continuation with the initial consultant preferable to a new competition, subject to satisfactory performance in the initial assignment. For such downstream assignments the accounting officer should ask the initially selected consultants to prepare technical and financial proposals on the basis of TOR furnished by the accounting officer which should then be negotiated

5.5.5 If the initial assignment was not awarded on a competitive basis or was awarded under tied financing or reserved procurement or if the downstream assignment is substantially larger in value, a competitive process acceptable to the accounting officer should normally be followed in which the consultant carrying out the initial work is not excluded from consideration if it expresses interest.

5.5.6 Where, in exceptional instances, it is impractical to appoint the required consultants through a competitive bidding process and a South African based consultant is used the *Guidelines on Hourly Fee Rates for Consultants* issued by the Department of Public Service and Administration may be used as a benchmark to establish the appropriate tariffs or to determine the reasonableness of the tariffs.

7.5.2	332 TEMPORAL HOUSING PROJECT: SCOPE CHANGE

Collaborator No: **612119**
IDP KPA Ref No:
Meeting Date: ***17 October 2018***

1. SUBJECT: 332 TEMPORAL HOUSING PROJECT: SCOPE CHANGE

2 PURPOSE

To obtain the necessary authorization for the intended amendment of a contract concluded with Re A Letamisa Projects.

3. DELEGATED AUTHORITY

Council

4. EXECUTIVE SUMMARY

On 22 May 2018, the entire site which was earmarked to build temporary units in Kayamandi was destroyed by certain community members. This resulted in additional cost and specification changes that exceed the allowed 20% in term of Circular number 62/2012 (National Treasury) as mentioned in paragraph 6.4.3.

5. RECOMMENDATIONS

(a) that Council notes, in terms of MFMA Section 116(3), the reasons for the change of scope/specification of the TRA;

(b) that the tender amount (B/SM 09/18) be increased from R17 995 476 to R23 479 817.84;

(c) that Council gives reasonable notice of intention to amend the contract or agreement in terms of section 116(3)(b)(i);

(d) that the local community be invited to submit representatives to the Municipality in terms of section 116 (3)(b)(ii); and

(e) that the Municipal Manager be authorized to conclude the contract or agreement after (d) above is finalized in terms of the applicable Act/Regulation.

6. DISCUSSION / CONTENTS

6.1. <u>Background</u>

During November 2018, Re A Letamisa Projects was appointed as the contractor for the construction of 332 temporal housing units (TRA) at Watergang, Kayamandi, B/SM 09/18 at a cost of **R17 995 476.00** (see attached MBD7.2 **ANNEXURE 1**). The site handover was held on 05 December 2017 (see attached site handover minutes as **ANNEXURE 2**).

At 5 months after the start date the site experienced severe damage due to community unrest which took place on 22 May 2018. At the time of the riot there were 90 units built which were almost ready for occupation. The contractor was requested to de-establish the site until further notice.

The senior management of the Municipality held meetings with the community to address the matter. Meetings were held on 31 July 2018 and 03 September 2018. At both meetings the community agreed that the contractors must go back to site but before commencing with the entire project a show house should be built. The community was also unhappy with the quality of the current TRA & requested a better product.

6.2 Discussion

The New housing department has proposed a new design which is similar to the Klapmuts project. In order to get the community buy-in on this product, a show house will be built and community members will be invited to comment on the new proposed unit.

The scope of work for the contractor will therefore change. The new design does also resort under the alternative building technology but different from the initial scope and this will have a financial implication on the project (see attached plan and specification for the initial TRA & the proposed TRA as **ANNEXURE 3**).

The initial awarded tender amount was R17 995 466 and the new amount on the proposed structure will be R23 479 817.84 i.e. a difference of R5 484 351.84 from the original tender amount which amounts to 30.4% of the original tender price (see attached quote from the contractor as **ANNEXURE 4**).

6.2.1 The following reasons must also be taken into consideration

6.2.1.1 Although intensive public participation occurred which resulted in the fact that the contractor could increase the productivity on-site, certain community members on 22 May 2018 move onto the site and destroyed the entire property (all units and site office were vandalised).

6.2.1.2 The contractor in terms of the General Conditions of Contract for construction works (GCC) was requested to de-establish the site till further notice; this has contractual cost implications for the client (Stellenbosch Municipality).

6.2.1.3 During public engagements, after the riot that took place it became evident that certain specifications of the units need to be addressed in order for the project to continue.

6.2.14 It is therefore not practical or cost effective for Stellenbosch Municipality to appoint new service providers for the change in specifications as the contractor has not defaulted on the initial appointment.

6.3 Financial Implications

A funding application was submitted to the Provincial Department of Human Settlements and funding was approved and paid to the Municipality's project (see attached funding approval, **ANNEXURE 5**). The total amount of R19 622 528 has been approved for the project.

There will be a shortfall on the project of R3 857 289.84 but funding application for the additional cost required will be requested from PDOHS.

The Municipality has made provision on the budget and an amount of R19 358 122.00 is available for the project on u-key number 20180716042599 cost code 501010088191.

6.4 Legal Implications

6.4.1 SCM Guide for Accounting Officer

In terms of paragraph 5.9.5.2, of the SCM Guide for Accounting Officers **a single source selection** may be appropriate, but only if it present a clear advantage over competition; e.g. for tasks that represent a **natural continuation** of previous work carried out by the Service Provider.

Further in terms of paragraph 5.9.5.3 the reason for a single source selection should be recorded and approved by the Accounting Officer or his/her delegate prior to the conclusion of a contract.

See **ANNEXURE 4** for abstract from Guidelines.

6.4.2 Municipal Finance Management Act (MFMA)

In terms of Section 116(3) of the MFMA a contract or agreement procured through the supply chain management policy of the municipality may be amended by the parties, but only after:

a) The reasons for the proposed amendment have been tabled in the council of the municipality; and

b) The local community-
   i) has been given reasonable notice of the intention to amend the contract or agreement; and
   ii) Has been invited to submit representations to the municipality or municipal entity.

6.4.3 Comments from Legal Service

In order to ensure uniformity in application of the MFMA Section 116(3), the National Treasury issued MFMA Circular number 62/2012 where it is stated that contracts for construction related goods or services may be expended or varied by 20% of the original contract value, and contractors for general goods or services may be expanded or varied by 15% of the original contract value, though internal process. Any expansion or variation in excess of the aforementioned thresholds must be reported to Council and dealt with in terms of the provision of Section 116(3) of the MFMA.

The item and recommendations are supported.

6.5 Staff Implications

None

6.6 Previous / Relevant Council Resolutions:

None

6.7 Risk Implications

This report has no risk implications for the Municipality.

6.8 Comments from Senior Management:

The said item served before the BAC and all directors support the recommendations.

ANNEXURES

Annexure 1: MBD7.2 form
Annexure 2: Minutes of site handover meeting
Annexure 3: Plan and specification of TRA
Annexure 4: Quote from the service provider
Annexure 5: PDoHS funding approval
Annexure 6: Abstract from Guidelines

FOR FURTHER DETAILS CONTACT:

NAME	**Tabiso Mfeya**
POSITION	***Director***
DIRECTORATE	***Planning & Economic Development***
CONTACT NUMBERS	***021 808 8491***
E-MAIL ADDRESS	***tabiso.mfeya@stellenbosch.gov.za***
REPORT DATE	***12 October 2018***

ANNEXURE 1

MBD 7.2

STELLENBOSCH
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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

MBD 7.2 – CONTRACT FORM – RENDERING OF SERVICES

NOTE:

1. This form must be completed in duplicate by both the successful bidder (Part 1) and the purchaser (Part 2). Both forms must be signed in the original so that the successful bidder and the purchaser will be in possession of originally signed contracts for their respective records.

PART 1 (to be completed by the TENDERER)

1. I hereby undertake to render services described in the attached bidding documents to **Stellenbosch Municipality**, in accordance with the requirements and task directives / proposals specifications stipulated in Tender Number **9/18 Construction of 332 Temporal Housing Units with Ablution Facilities in Watergang, Kayamandi, Stellenbosch**, at the price(s) quoted below / as per pricing schedule. My offer(s) remain(s) binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

   Bidding documents, *viz*
   (a) Invitation to bid
   (b) Tax clearance certificate
   (c) Pricing schedule(s)
   (d) Filled in task directive/proposal
   (e) Preference claims in terms of the Preferential Procurement Regulations 2017
   (f) Declaration of interest
   (g) Declaration of Bidders past SCM processes
   (h) Certificate of Independent Bid Determination
   (i) Special Conditions of Contract; and
   (j) General Conditions of Contract.

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfilment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

6. I confirm that I am duly authorised to sign this contract.

SIGNATURE		NAME (PRINT)	Mmule More
CAPACITY	Chief Operations Officer	DATE	5/11/2017
NAME OF FIRM	RE A Letamisa Trading & Projects		
WITNESS 1		WITNESS 2	
DATE	05/11/2017		

MBD 7.2

STELLENBOSCH
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CONTRACT FORM - RENDERING OF SERVICES

PART 2 (to be completed by STELLENBOSCH MUNICIPALITY)

1. I, Tabiso Mfeya In my capacity as Director Human Settlement and Property Management accept your bid under reference number 9/18 Construction of 332 Temporal Housing Units with Ablution Facilities in Watergang, Kayamandi, Stellenbosch dated 28 July 2017, for the rendering of services indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating service delivery instructions is forthcoming.

3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	B-BBEE STATUS LEVEL OF CONTRIBUTION	MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable)
Construction of 332 Temporal Housing Units with Ablution Facilities in Watergang, Kayamandi, Stellenbosch.	Offer of R 17 995 476.00 (including 10% Contingencies and 14% VAT Incl.) be accepted.	30 June 2018	1	N/A

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT Stellenbosch on this 05 day of DECEMBER 2017.

TO BE COMPLETED BY THE STELLENBOSCH MUNICIPALITY

SIGNATURE:	OFFICIAL STAMP: STELLENBOSCH MUNICIPALITY SUPPLY CHAIN SERVICES 05 DEC 2017 SUPPLY CHAIN MANAGEMENT
NAME (PRINT):	Tabiso Mfeya
WITNESS 1:	
WITNESS 2:	

4 11th Avenue, Orange Grove, Johannesburg
Cell: 079 756 1313 E-mail: info@lrprojects.co.za

RE A LETAMISA PROJECTS

3rd Floor, 7 Harbour Place

Cnr Christiaan Barnard &

Hemmerschlag way

Foreshore

8001

Dear Sir/Madam

Letter of Resolution to sign: Tender No – B/SM 09/18 Construction of 332 Temporal Housing Units Ablution facilities in Watergang, Kayamandi, Stellenbosch

This letter serves to confirm that Mmule More, ID No 8101130566084, in her capacity as Chief Operations Officer, is hereby authorised to sign the above mentioned bid, and any and all documents and/or correspondence in connection with and relating to the tender.

Yours Sincerely.

Ms. Mmule More

Date : 13/07/2017

Ms. Motshegwa More

13/04/2017

DAVID MOREROA
COMMISSIONER OF OATHS
SEEKANE INCORPORATED
No. 5 Humber Street
Woodmead

STELLENBOSCH MUNICIPALITY
SUPPLY CHAIN MANAGEMENT
2017 -07- 28
BID OPEN

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

ATTENDANCE REGISTER

Meeting: Signing of MBD 7. 2 for Tender 9/18 – Construction of 332 Temporal Housing Units with Ablution Facilities in Watergang, Kayamandi, Stellenbosch.

Time: 9h00

Date: 05 December 2017

Name & Surname	Company	Contact Number	Signature
FEZIWE NGQUBA	STELLENBOSCH MUN	021 808 8464	[signature]
Madla Mgogoshe	" "	021 808 8073	[signature]
TABISO NTEYA	" "	021 808 8495	[signature]
MMULE MORE	" "	079 756 1313	[signature]
Paula Ribeiro	Stellenbosch	021 808 8069	[signature]
Leucta Paul	SCM	X 8721	[signature]
BENTLEY LOUW	SCM	8177	[signature]

STELLENBOSCH MUNICIPALITY
SUPPLY CHAIN SERVICES
05 DEC 2017
SUPPLY CHAIN
MANAGEMENT

ANNEXURE 2

STELLENBOSCH
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MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

STELLENBOSCH MUNICIPALITY

CONSTRUCTION OF 332 TEMPORAL HOUSING UNITS AT WATERGANG, KAYAMANDI, STELLENBOSCH

CONTRACT Nº B/SM 09/18

MINUTES OF THE SITE HANDOVER MEETING HELD ON 05 DECEMBER 2017 AT 09H30 AT THE OFFICES OF STELLENBOSCH MUNICIPALITY, HUMAN SETTLEMENT BOARDROOM, ABSA BUILDING 3RD FLOOR, STELLENBOSCH

DISTRIBUTION LIST

To	Attention	E-mail	Present	Cell	Phone	Fax
SM	F Ngquba	feziwe.ngquba@stellenbosch.gov.za	Y	0823356530	021 808 6464	
SM	L Vanstavel	lester.vanstavel@stellenbosch.gov.za	Y		0218088403	
SM	V Swarn	viola.swarn@stellenbosch.gov.za	Y	0765004884		
SM	F Ntsondwa	unemployment.temp@stellenbosch.gov.za	Y		0218088403	
ReA	L Chirwa	lulu@realetamisa.co.za	Y	0769503471		
ReA	T Madiba	talamad@gmail.com	Y		0212048505	
ReA	L Dimngu	lennon@realetamisa.co.za	Y	0769504837		
ReA	M More	info@realetamisa.co.za	Y	0797661313		
XEC	N Maya	mayan@xabaengineering.co.za	Y	0783688557		0864154994
XEC	M Rode	rodem@xabaengineering.co.za	Y	0742864321		0864154994
PDoHS			N			

Abbreviations

SM – Stellenbosch Municipality
PDoHS – Western Cape Provincial Department of Human Settlement
ReA – Re A Letamisa Trading & Projects
XEC – Xaba Engineering & Consultants

MINUTE ITEMS ACTION

1 WELCOME AND ATTENDANCE

Mr M Rode from XEC opened the meeting and introduced all persons present. Those present are recorded in the above attendance and distribution list.

2 CONTRACT REPRESENTATIVES

2.1 Stellenbosch Municipality (Client)

New Housing Manager:	Mr Lester van Stavel
Project Manager:	Ms Feziwe Ngquba
LED/EPWP:	Ms Viola Swarn
Environmental Officer:	Ms Fundiswa Ntsondwa
Building Inspector:	Mr Shafiek Valentyn

2.2 Western Cape Provincial Department of Human Settlement (Funder)

Regional Project Manager: Corrie Landsberg

Telephone: 021 483 4894

Email: corrie.landsberg@westerncape.gov.za

Inspectorate: Richard Rhoda

Email: Richard.rhoda@westerncape.gov.za

Building inspector: Sedick Petersen

Email: Sedick.petersen@westerncape.gov.za

2.3 Xaba Engineering & Consulting (Consultant)

2.3.1 The Consultant's Representatives

Project Principal:	Mr Nkululeko Maya
Project Manager:	Mr Mfundo Rode
Engineer's Representative:	Mr Mfundo Rode

2.4 Re A Letamisa (Contractor)

2.4.1 The Contractors Representatives

Contract's Director:	Ms Lulu Chirwa
Site Agent(s):	Mr Lennon Dimngu

MINUTE ITEMS ACTION

2.4.2 Sub-Contractors:

It is a requirement of this Contract that 15% of the Works be subcontracted to Local SMME contractors with the only limitations and restrictions on the work and subcontracting thereof as specified in Section 20 of the Contract Document. The Main Contractor (ReA) shall act as mentor to the SMME sub-contractors and provide guidance and assistance with the execution of their relevant portion of the Works. Identifiable work packages are to be agreed with the Engineer prior to execution of the works and the size of such packages shall, where practical, allow for the relevant CIDB grading designation available within the registered local SMME contractors.

SM is to supply ReA with the list of registered SMME contractors. **SM**

The Main Contractor will submit details of all sub-contractors to be used on this contract before commencement of the specific potion of the works.

3 CONTRACTUAL MATTERS

3.1 Powers of the Engineer's Representative and other site staff

As per Clause 3.1.3 of the Contract Data an official letter will be submitted indicating the details and powers of the Engineers Representative, Mr Mfundo Rode, who will be supervising the construction work.

The letter is to be submitted within 14 days. **XEC**

3.2 Powers of Contractor's Agent

A letter is required from ReA stating the powers of the Site Agent(s). The letter is to be submitted within 14 days. **ReA**

3.3 Possession of Site and Commencement of Works

The GCC2010 governing this Contract stipulates that the Contract will come into effect on the date that the Contractor receives a Form of Offer and Acceptance completed.

Contractor has signed the contract document.

The launching date for this contract is **05 December 2017**, pending introduction of the Contractor to the community which is a pre-requisite for access to the site. The official commencement date will be recorded in the next meeting.

The Contractor can commence with full arrangements with regards to site establishment and taking full responsibility of the site as soon as possible from this the anticipated commencement date.

3.4 Completion of Contract Formalities (Agreements, Guarantees, Insurance)

3.4.1 Letter of Appointment and Contract Document

The letter of appointment was issued to the Contractor on 08 November 2017.

MINUTE ITEMS ACTION

The Contract Documents, Form of Acceptance has been signed by all parties concerned. The Contractor has been issued with one copy of the Contract document.

3.4.2 Occupational Health and Safety Requirements

The OHS undertaking must be signed by the Contractor and Employer in full before commencement of the works. **ReA/SM**

The Contractor is to submit his Occupational Health and Safety file within 4days SM (H&S Officer) for peruse and final approval. SM is still to appoint the H&S Officer. SM to issue ReA with a H&S Specification. **SM**

Contractor was requested to submit a valid Letter of Good Standing from the Compensation Insurer within 14days. **ReA**

3.4.3 Performance Guarantee and Schedules of Insurances:

The Contractor must submit an original performance guarantee to the value of R1,799,547.70 (10% of the contract sum). The original guarantee will be kept at the offices of SM for safekeeping until such time that all contractual obligations have been met and the Contract allows release of the guarantee.

As per the Contract Data, and subsequent clauses the Contractor will be responsible for all insurances required on the project. The Contractor was requested to submit their insurance cover within 14days, to insurance is in place. **ReA**

3.4.4 Programme of Works and Cash Flow

Completion is to be within the Contract period of 6 calendar months. The following anticipated special non-working days are not included and will form part of the contract:

- Contractors Year End Break 2017 & 2018 as published by SAFCEC.
- 2018 Public Holidays remaining
- 2018 Public Holidays
- 2018 Public Holiday up to final completion date.

Public Holidays are those as per the Public Holidays Act, 36 of 1994 as amended from time to time.

Including the above the contractual Completion date is will be June 2018. The exact date will be recorded in the next meeting. The programme will be adjusted accordingly for approval.

The Contractor was requested to submit a preliminary construction programme electronically for peruse by the Engineer. **ReA**

A detailed programme must be finalised within 14 days and forwarded to the Engineer for final approval. The Contractor must revisit Clause 5.6 of the GCC 2010 in terms of the details required in the programme. The programme must be linked to the cash flow, plant and resource schedule. **ReA**

MINUTE ITEMS ACTION

3.5 Drawings

XEC to issue the Contractor with a set of construction drawings. These will be scheduled in the drawing issue register attached as annexure to these minutes as well as an electronic (.pdf) copy of the drawings. **XEC**

It was requested that the Contractor timeously indicate any additional detail and information which they may require as well as specific milestone dates for information to base their proposed programme on.

3.6 Documents

3.6.1 Issued by the Client

The following documents are to be issued to the Contractor:

- One copy of the signed contract document – issued at the site handover meeting
- Electronic copy (excel.xls) of the BOQ for measurement and payment (previously e-mailed)
- One copy of the Employer's OHS specification
- One copy of Weather station for Stellenbosch area for all matters relating to rain delays

3.6.2 To be submitted by Contractor

The following documents are to be submitted by the Contractor:

- Insurance cover
- Letter of Good Standing with the Department of Labour
- Authority for signatory
- Health and Safety File
- Construction programme (electronically)
- Bank Guarantee (original)
- Cashflow
- Method Statements (Site Camp Establishment; Treatment of hazardous material)
- Quality Control Plan
- Notification of construction work (to be handed in to Local Office of Department of Labour)
- Site Instruction Book

3.7 Resources

The Contractor is to submit a resource schedules for the Contract which must be updated on a monthly basis as part of the monthly contractor's report

3.8 Working Times

Working times and non-working times will be as per the Contract Data and GCC 2010. Any work outside of these times must be agreed with the Engineer in advance.

The Contractor must submit a schedule indicating the pay/long weekends and any other non-working times as soon as possible and keep this updated throughout the Contract.

Contractor indicated that at this point in time they will generally not work on Saturdays unless specifically required. However, as project acceleration has been mentioned, this might be considered.

3.9 Site Instructions and Notifications

The Contractor will provide a site instruction book (triplicate: 1 Original (removable), 1 Copies (removable) and 1 Copy in book (fixed) for the duration of the Contract. All instructions must have a unique number and no pages are to be removed for any reason. Mistakes or amendments must be crossed out. Should a second book be required the numbering must be unique from the first book.

Site instructions will only be valid if signed by the Engineer or Engineer's Representative (refer to powers of the ER).

If the Contractor wants to issue site memos to the Engineer, then the Contractor must provide a triplicate book same as that of the site instruction book.

The Contractor is to provide and keep a detailed site diary to record all plant, labour, deliveries, site instructions, weather conditions and work completed. The diary must be signed off by the Engineers Representative on a daily basis. XEC confirmed that the Contractor can propose a diary template and that no specific one is specified.

Where day works have been agreed and approved on the contract this must also be recorded in the daily site diary.

Where applicable, river and ground water levels are to be measured and recorded as best and practically as possible on a daily basis, including photographs of all work.

3.10 Day Works and Variation Order Procedure

Any Day works or additional works required must be identified timeously and approved by the Engineer prior to commencement of the work. A detailed breakdown of rates and quantities must be submitted to the Engineer for approval. No Day works or additional works will be paid unless approved by the Engineer.

With regards to any alternatives offered on this contract, the following information must be submitted to the Engineer for an alternative to be considered:

- Official written request with full details of alternative offered
- Methodology (items below as applicable)
  - Plant
  - Labour
  - Materials
  - Work methodology / installation details
  - Specifications on equipment
- Risk assessment (OHS & Environmental) on alternative
- Time implication on the approved programme
- Cost implication / Saving

If approved, any variation orders required will be done by XEC. Variation orders are to be prepared by XEC and approved by the Employer.

3.11 Procedure for Provisional Sums

For all provisional sums, formal quotes are to be obtained for approval by the Engineer before purchasing, ordering or commencement of the work.

3.12 Labour Reports and Plant returns

Labour and plant returns must be submitted no later than 3 days before the scheduled monthly site meetings.
The Contractor is to be issued with an electronic copy of the EPWP report format for labour utilized on this project.
This report must accompany each and every payment certificate.

The Contractor is to also submit with each payment certificates a schedule of the value of works due to SMME sub-contractors. The schedule will be used to track the contractual obligation of 15% of the works to be executed by SMMEs.

3.13 Occupational Health and Safety Requirements

The OHS Agent on this Contract is still to be appointed and announced. The Agent will be acting on behalf of the Employer.

As the Contractor is still to submit the OHS plan, once reviewed, final comments will be forwarded to the Contractor for review, if any. As per the Regulations no works is to commence without approval of these documents.

3.14 Environmental Requirements

The Environmental Agent on this project is still to be appointed. All environmental matters must be managed as a priority on this project. Audits will be done on a monthly basis and as required by the contract.

The Contractor is to submit full details of the person(s) to be responsible for environmental matters on site.

3.14.1 Method Statements

The Contractor must submit their Method Statements for approval as per the Environmental Specifications before any work can start on site. Method Statements highlighted are site establishment and treating hazardous material.

3.14.2 Approvals and Records

The following method statements were submitted:

- Site camp establishment
- Treatment of hazardous material

3.14.3 Other Matters

The Contractor must contact the Environmental Officer/Agent (still to be appointed) on all environmental matters requiring clarification or conformation as early as possible.

For the spoiling, spreading or borrowing of any material along the route of the site the Contractor must submit to the Engineer a proposal with method statement for final comment and approval by the Environmental Officer. There will be areas along the route of the pipeline where material can possibly be spoiled in a responsible manner.

The borrowing of any material must comply with environmental approvals and legislation including any material (sand) bought from the local communities. If unsure contractor to contact the Environmental Officer.

3.15 Integrated Social Development – Community Liaison Officer (CLO)

- It was agreed by all that, in light of the December break, the matter of employment must be handled as a sensitive matter and all labour matters and reporting thereof be confirmed and agreed before any expectation is set with the communities.
- The Contractor must confirm if a "core team" will be required through training of local labour. This team should then be used throughout the project, irrespective of the area. If required the "core team" must include labour from both areas covered by the Contract.

4 SITE CONSIDERATIONS

4.1 Contractor's Camp, Site Offices and Access

All as per the Contract and Contract Specifications.

The Contractor is to confirm proposed site camp position(s) with the Engineer for approval by the Employer and/or land owner(s), as soon as possible.

4.2 Existing Site Facilities

The Contractor must make his own arrangements for the provision of electricity, sanitation and water to the campsite. The Contractor is to take note of all environmental requirements during establishment and throughout the contract.

All relevant method statements are to be submitted to Environmental Officer for approval.

All relevant municipal by-laws must be adhered to at all times

MINUTE ITEMS ACTION

4.3 Survey and Benchmarks

Existing benchmarks and beacons will be indicated on site and is on the setting out drawings. A setting out list has will be issued to the Contractor as part of the construction drawings.

4.4 Existing Services and Infrastructure

Existing services are as indicated on the drawings and visible on site. The Contractor is to locate, expose and protect existing services and structures prior to construction/excavation in that particular area. **ReA**

4.5 Sub-Contractors & Provisional sums

Work packages for local SMME contractors to be used as sub-contractors are to be submitted to the Engineer as soon as possible as well as proposed contractors; if already identified.

SM to provide a full list of all SM registered local SMME contractors. All SMME contractors to be CIDB registered with a CIDB designation of CE and/or GB.

4.6 Site Security

The Contractor is responsible for all security matters on site for the full duration of the Contract. It was suggested that Security be sourced from the local community.

5 PAYMENT CERTIFICATES & REPORTS

5.1 Dates of Measurement

Interim measurements will take place on the 15th of every month (a week prior the site meeting). The Contractor must submit the interim payment certificate to the Engineer by no later than the 20th of each month for checking and approval. Processing and payments will be in accordance with Clause 6.10.4 of GCC 2010.

5.2 Forms, Presentation and Processing of Certificate

The interim measurement will be presented for payment in the form a spreadsheet. The electronic copy of the BOQ has already been forwarded to the Contractor.

5.3 Progress and Record Reports

All reports and related matters are to be recorded formally at the monthly site meetings and minutes to be distributed.

The Contractor must submit a labour report (EPWP format) as well as a report on the SMME sub-contractor performance and payments with each interim payment certificate. The labour report must include the local labour utilized by the SMME sub-contractors.

MINUTE ITEMS ACTION

5.4 Material on site (MOS)

Payment for MOS will be as per Clause 6.10.1.5 (GCC 2010)

6 CLAIMS PROCEDURE

6.1 General

All claims on the project will dealt with as per Clause 10 of the GCC2010. Any intention to claim must be submitted in accordance with Clause 10.1.1 as complete at that stage of the claim procedure.

6.2 Weather

Clause 5.12.2 (GCC 2010) will apply in determining any extensions of time due to abnormal rainfall. The rainfall record applicable and forming part of the contract is: Station 0183685 (Stellenbosch). **XEC**

Days lost due to rain and consequential delays must be recorded in the site diary and approved by the ER or Engineer, with full record submitted with each site meeting.

The Contractor is to ensure approved rain gauges are installed on site. A rain gauge is proposed. The rain gauge will be read in relation to the applicable section where work is taking place.

7 SITE MEETINGS & MEASUREMENT DATES

Monthly site meetings will be held on site. Facilities will be as per the Contract. The following tentative dates are proposed for site measurements and meeting and will be confirmed closer to each respective date. It was also proposed that an hour of site walkround before each meeting be done, (say @09h00).

	Site Measurement		Site Meetings (Contractual)	
No.	**Date**	**Time**	**Date**	**Time**
1	**17/01/2018**	**10h00**	**24/01/2018**	**10h00**
2	14/02/2018	10h00	21/02/2018	10h00
3	14/03/2018	10h00	21/03/2018	10h00
4	11/04/2018	10h00	18/04/2018	10h00
5	16/05/2018	10h00	23/05/2018	10h00
6	13/06/2018	10h00	20/06/2018	10h00

The CLO & Environmental Officers are to attend and report at Site meetings.

7.1 Distribution of Minutes

Minutes will be distributed to all parties indicated on the distribution list.

8 GENERAL

MINUTE ITEMS ACTION

8.1 Communication

All correspondence between the Employer and the Contractor must be routed through the Engineer. Official language to be used with correspondence will be English.

Nobody will be permitted to grant interviews to the media without approval by SM.

8.2 Other

A GENERAL WARNING WAS GIVEN TO ALL PRESENT THAT SNAKES COULD BE ENCOUNTERED ON SITE. CONTRACTOR IS TO MAKE CONTACT WITH THE LOCAL EMERGENCY SERVICE PROVIDERS AND HOSPITALS AND TO ENSURE THAT ALL PROCEDURES ARE IN PLACE AND SNAKE ANTIVENOM IS AVAILABLE SHOULD A SNAKE BITE OCCUR.

9 MEETING CLOSE

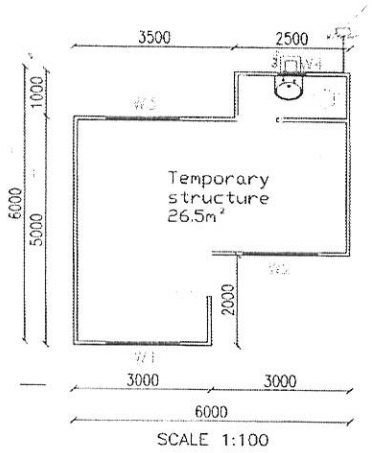
Mr M Rode thanked all for attending the meeting and requested that all matters on this contract be dealt with as early as possible for successful resolution and to avoid any unforeseen delays. The meeting was closed at 11h45.

10 APPROVAL OF MINUTES

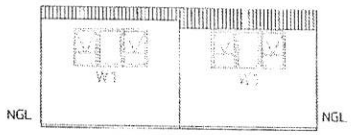
STELLENBOSCH MUNICIPALITY	**DATE**
RE A LETAMISA TRADING & PROJECTS	**DATE**
XABA ENGINEERING & CONSULTING	**DATE**

ANNEXURE 3

332/02 TEMPORARY HOUSING SUPERSTRUCTURE - SCALE 1:100



SCALE 1:100



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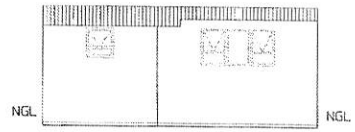

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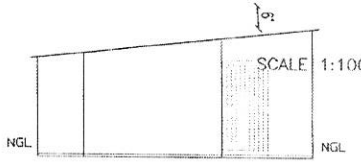


NOTE:
THE APPROVAL IS FOR CONSTRUCTION PURPOSES ONLY. THE DEVELOPER MUST SUBMIT SITE PLANS AND DRAINAGE PLAN PER SITE.

BUILDING DEVELOPMENT MANAGEMENT

APPROVED

IN TERMS OF SECTION 7(1) (a) OF THE NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT, NO 103 OF 1977

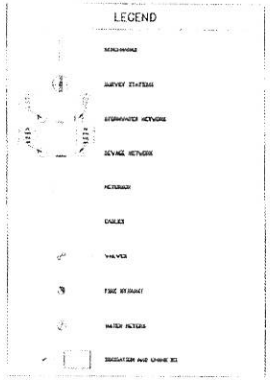
PROTO-TYPE

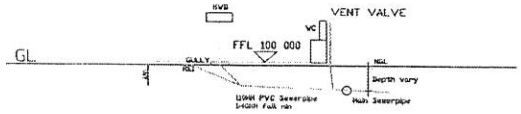
22/5/2017.

DIRECTOR: PLANNING & ENVIRONMENT — DATE

Specification:

- Units to have a minimum floor space of 24 m2 each, excluding the 2.5m x 1m toilet/wash trough cubicle at the rear of the structure.
- Units to consist of galvanized cold-rolled steel frame of 0.8mm thickness, clad with coloured sheeting or similar material of 0.5 mm thickness. Cladding should have a profile of at least 10mm as opposed to flat sheeting.
- All inside walls and ceilings of units are to be clad with "bubble foil" insulation complying with SABS 428 Fire Regulation.
- Steel frame must be designed using an approved Cold-rolled Steel Frame software package. Details of software package and detailed design must be submitted.
- Sidewalls must have a minimum height of 2.2m.
- Roofs must be single span galvanized corrugated roof sheets of 0.4mm thickness vertically fastened on a cold-rolled steel frame. Overlaps must comply with the normal galvanized steel roofing standards.
- The pitched roof must have a minimum slope of 6° with the minimum overhangs of 1.0m at the back and the front and 50 mm at the sides.
- Each unit must have 1 normal sized external door of either fabricated steel or solid wood and 1 normal sized internal door. Wooden doors must be pre-treated with 2 coats of an approved exterior varnish. Door must be lockable and must have either a 4 lever lockset or a 45mm padlock with 2 keys.
- Each unit must have 1 x windows of minimum 1600mm x 800mm and 1 x window of 600mm x 600mm of either steel or wooden frames. Wooden frames must be pre-treated with 2 coats of an approved exterior varnish. All window frames must be glazed with 4mm glass. 50% or more of the window should be able to open.
- Floors must be 15MPa concrete on 250-micron plastic, evenly on well-compacted soil. Minimum concrete thickness must be 60mm.





DRAINAGE SECTION
SCALE 1:100

GLAZING AREA

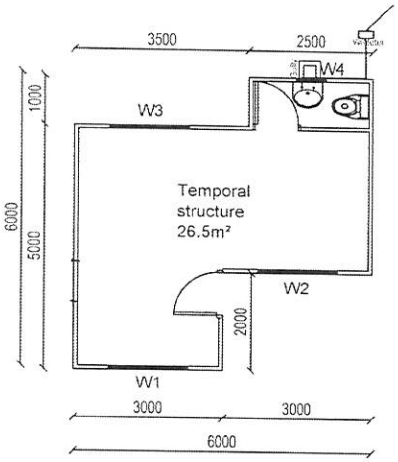
Windows	Size	Total
W1	1.600 X .800	1.28 SQM
W2	1.600 X .800	1.28 SQM
W3	1.600 X .800	1.28 SQM
W4	600 X .600	.36 SQM
	Total glazing	4.2 SQM
	Total floor area	26.5 SQM
		15.84 %

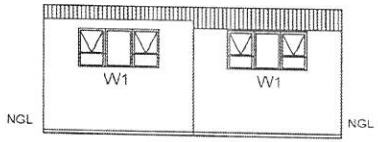
DESIGNER:
XABA
Engineering And Consulting
20 Graafland street
BrackenFell
7560
Cell : 074 286 4321

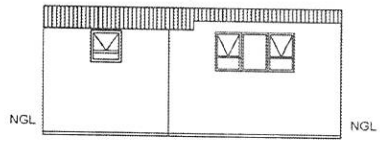
PROJECT:
STELLENBOSCH MUNICIPALITY
332 TEMPORARY HOUSING PROJECT
Kayamandi
Stellenbosch

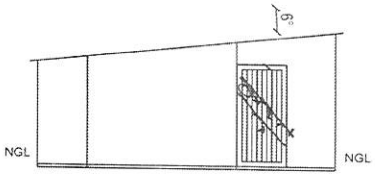
Drawn	: M.Rode	Checked	:F.Pekeur
Scale	: 1:100	Date	:21May17
Drawing	: Rev 00	Drawing No	:332-02

PROPOSED HOUSING STRUCTURE





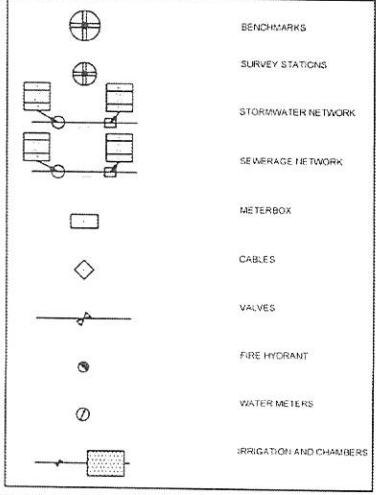


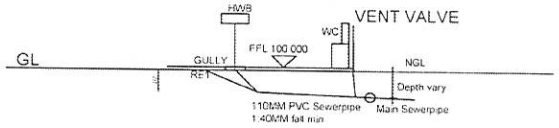


SPECIFICATION:

- Units to have a nominal floor space of 24 m2 each, excluding the 2.5m x 1m toilet/wash trough cubicle at the rear of the structure.
- Units to consist of galvanized cold-rolled steel frame of 0.5mm thickness, clad with coloured sheeting or similar material of 0.5mm thickness. Cladding should have a profile of at least 10mm as opposed to flat sheeting.
- All inside walls and ceilings of units are to be clad with "bubble foil" insulatiplying with SANS 428 Fire Regulation.
- Steel frame must be designed using an approved Cold-rolled Steel Frame software package. Details of software package and detailed design must be submitted.
- Sidewalls must have a minimum height of 2.2m.
- Roofs must be single span galvanized corrugated roof sheets of 0.5mm thickness suitably fastened on a cold-rolled steel frame. Overlaps must comply with the normal galvanized steel roofing standards.
- The pitched roof must have a minimum slope of 6% with the minimum overhangs of 150mm at the back and the front and 50 mm at the sides.
- Each unit must have 1 normal sized external door of either fabricated steel or solid wood and 1 normal sized internal door. Wooden doors must be pre-treated with 2 coats of an approved exterior varnish. Door must be lockable and must have either a 4 lever lockset or a 45mm padlock with 2 keys.
- Each unit must have 3 x windows of minimum 1600mm x 800mm and 1 x window of 600mm x 600mm of either steel or wooden frames. Wooden frames must be pre-treated with 2 coats of an approved exterior varnish. All window frames must be glazed with 4mm glass. 50% or more of the window should be able to open.
- Floors must be 15MPa concrete on 250-micron plastic underlay on well-compacted soil. Minimum concrete thickness must be 60mm.

LEGEND





DRAINAGE SECTION

GLAZING AREA		
Windows	Size	Total
W1	1.600 X .800	1.28 SQM
W2	1.600 X .800	1.28 SQM
W3	1.600 X .800	1.28 SQM
W4	0.600 X 0.600	0.360 SQM
Total glazing		4.2 SQM
Total floor area		26.5 SQM
		15.84 %

PROJECT MANAGER:

XABA

Engineering And Consulting

20 Graafland street
Brackenfell
7560
Tel (021) 974 6269

CLIENT:

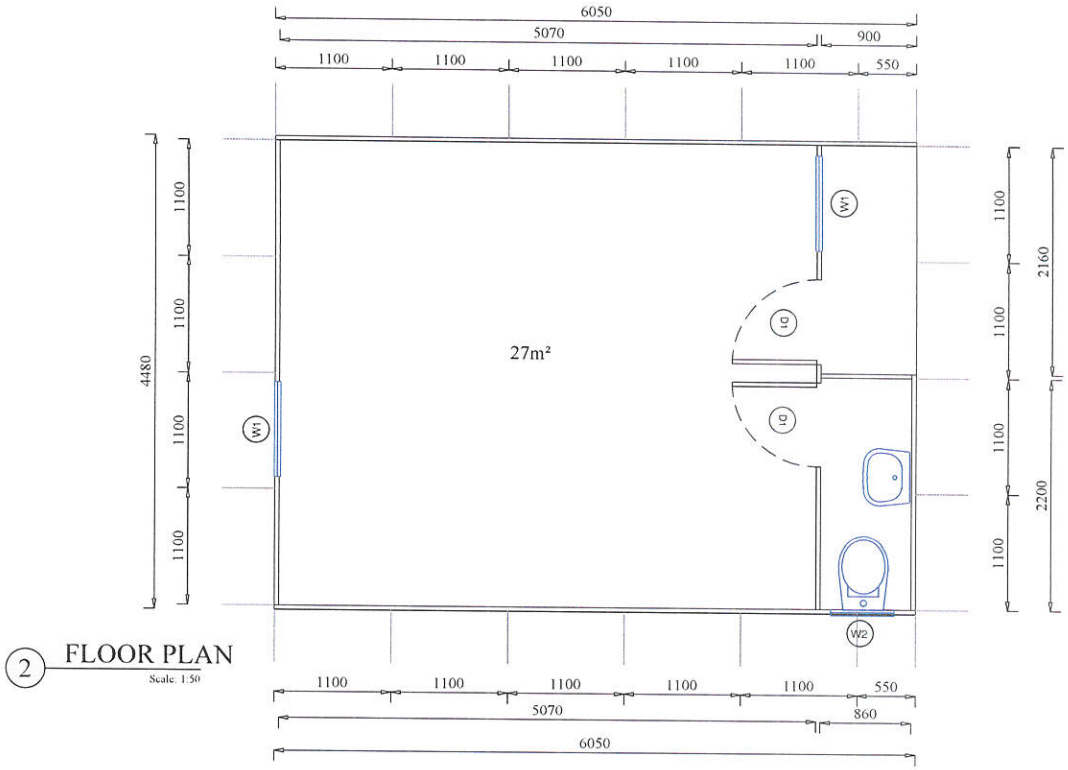
STELLENBOSCH MUNICIPALITY

PO Box 17
Stellenbosch
7599
Tel (021) 808 8111

PROJECT NAME:

Construction of 332 Temporal Housing Units at Watergang, Kayamandi, Stellenbosch

Drawn	: M.Rode	Checked	: F.Pekeur
Scale	: 1:100	Date	: 09DEC17
Drawing	: Rev 01	Drawing No	: 332/02



2 FLOOR PLAN
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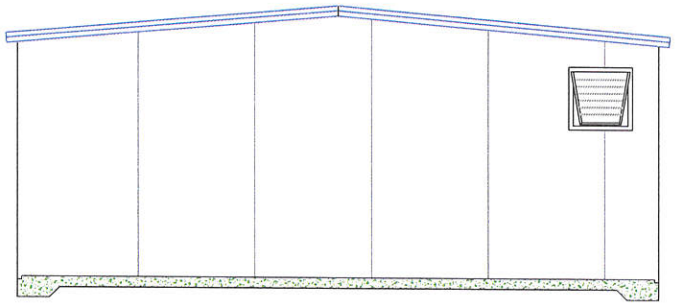
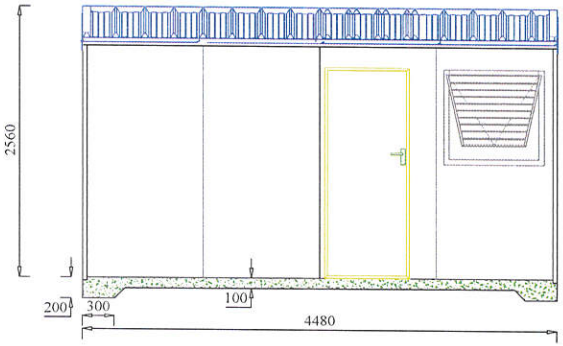


5 BACK ELEVATION
Scale: 1:50



4 FRONT ELEVATION
Scale: 1:50

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All dimensions given are in millimeters unless specified otherwise. Where dimensions are not given positions will be finalized on site. Do not deviate from drawing dimensions, do not scale, Ask WHEN IN DOUBT.

REV:	DESCRIPTION:	DATE:

NOTES:

PROPOSED FLOOR PLAN.

CLIENT SIGNATURE ON APPROVAL

CLIENT:
LULU MORE.

DESCRIPTION:
TEMP HOUSING PROJECT/
STELLENBOSCH.

INTASTOR
CONTROLLED ENVIRONMENTS
P.O.BOX 24294 LANDSDOWN 7779
LANDSDOWN ROAD PHILIPPI 7765
TEL: 021 371 3151
FAX: 021 371 3156
WEB SITE: www.intastor.co.za
E.Mail: michael.b@intastor.co.za

DATE:	CHECKED BY:
1 OKTOBER 2018	MJM BRITZ SACAP PAT 20104

DRAWN BY:
MJM BRITZ

ERF NR:	SCALE:	SHEET:	SIZE:
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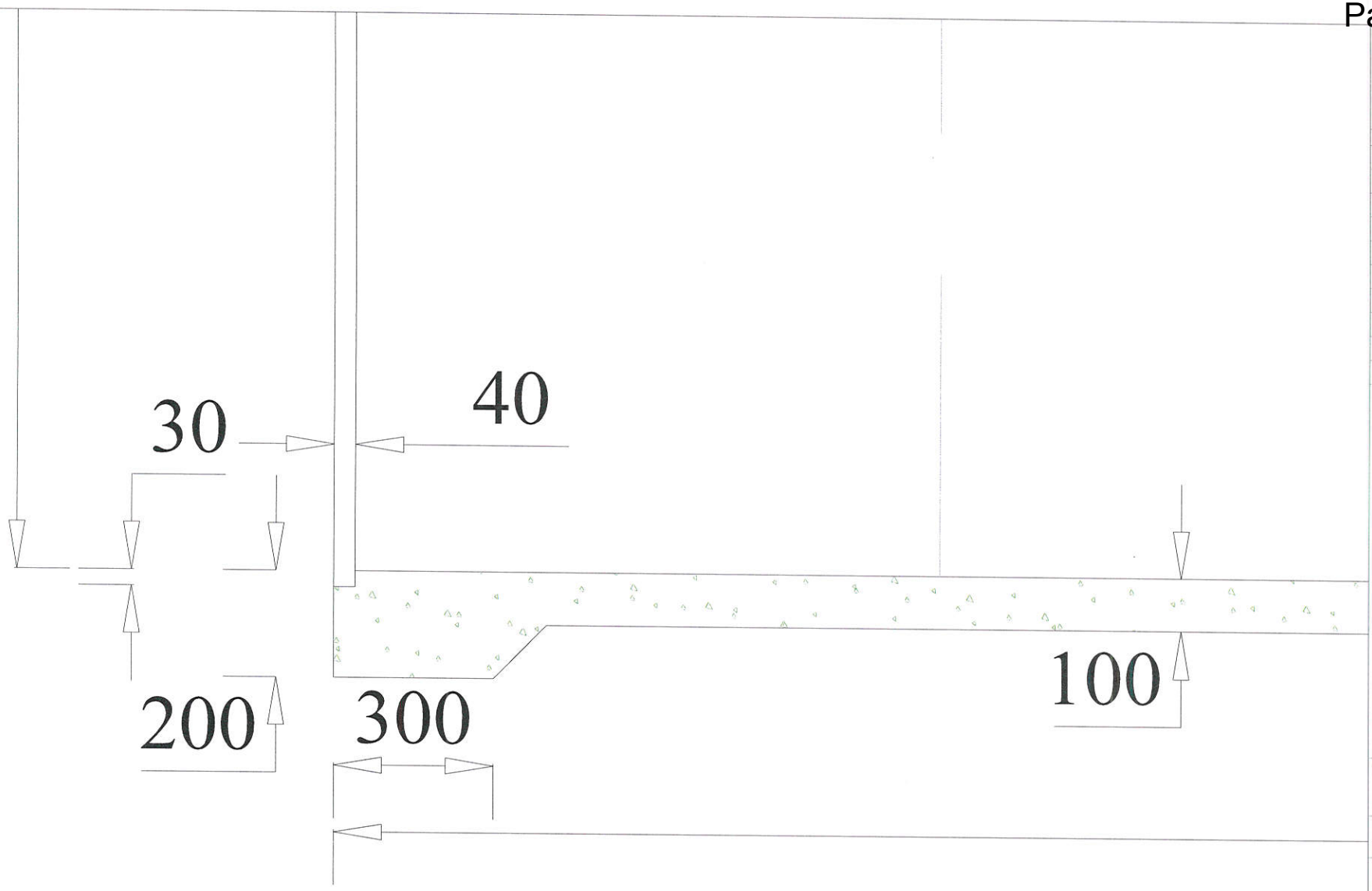
DRAWING NUMBER:	REV:
P-11411-001-A	0



1 Slab Detail
Scale: NTS

REV	DESCRIPTION	DATE

NOTES:

PROPOSED SLAB DETAIL
& FLOOR PLAN

CLIENT SIGNATURE ON APPROVAL

CLIENT:
LULU MORE.

DESCRIPTION:
TEMP HOUSING PROJECT/
STELLENBOSCH.

INTASTOR
CONTROLLED ENVIRONMENTS

P.O.BOX 24294 LANDSDOWN 7779
LANDSDOWN ROAD PHILIPPI 7765
TEL: 021 371 3151
FAX: 021 371 3156

WEB SITE: www.intastor.co.za
E.Mail: michaelD@intastor.co.za

DATE:	CHECKED BY:
1 OCTOBER 2018	MJM BRITZ SACAP PAT 20164
DRAWN BY:	
MJM BRITZ	

ERF NR:	SCALE:	SHEET:	SIZE:
3826	1:50	1/1	A3

DRAWING NUMBER: P-11441-001-A | REV: 0

c:\users\michaelD\documents\michael\temp housing stellenbosch 1 okt 2018.dwg

ANNEXURE 4

REALETAMISA TRADING AND PROJECTS
P.O. BOX 78767
SANDTON
0600
PHONE:011 025 9474
EMAIL:info@realetamisa.co.za
VAT NO. 424 026 8963

4 11th Avenue, Orange Grove, Johannesburg
Cell: 079 756 1313 E-mail: info@lrprojetcs.co.za

RE A LETAMISA PROJECTS

CLIENT DETAILS

ATT: FEZIWE NGQUBA
STELLENBOSCH MUNICIPALITY
OUDE BLOEMHOHOF BUILDING
71 PLEIN STREET
3RD FLOOR
STELLENBOSCH
7600
ORDER NUMBER:350723
VAT NO:4700102181

CONSTRUCTION OF 332 TEMPORAL HOUSING UNITS WITH ABLUTION FACILITIES IN WATERGANG ,KAYAMANDI ,STELLENBOSCH
Contract Number : B/SM 09/18

Account	Your Ref			
DEP001				Exclusive
DESCRIPTION	**QTY**	**UNIT PRICE**		**NETT PRICE**
Price per Unit	332	R 34 541,62		R 11 467 817,84
foundation	332	R 11 000,00		R 3 652 000,00
Plumbing	332	R 6 500,00		R 2 158 000,00
Earthworks	1	R 1 800 000,00		R 1 800 000,00
Site Re-Establishment	1	R 150 000,00		R 150 000,00
Preliminaries and General	6	R 270 000,00		R 1 620 000,00
Security	6	R 190 000,00		1 140 000,00
Add 10% Profit and Attendance	6	R 19 000,00		114 000,00
Supervision for duration of construction	6	R 80 000,00		R 480 000,00
Site Clearance	1	R 400 000,00		R 400 000,00
Engineering Costs For Foundation Designs & Certification	332	R 1 500,00		R 498 000,00

Quotation terms & Conditions

Price Excludes Electrical Works

Bank Details
Bank :FNB
Acc Number: 624 170 43833
Branch : 256205
Account Holder: Realetamisa Trading & Projects

Received in good order

Signature

SUB-TOTAL	**R 23 479 817,84**
VAT	**R 0,00**
TOTAL INCL. VAT	**R 23 479 817,84**

ANNEXURE 5

Western Cape Government
Human Settlements

SUB-DIRECTORATE: CONTRACT MANAGEMENT

REFERENCE: 16/1/1/2053/1
ENQUIRIES: Ms S Fortuin

The Municipal Manager
Stellenbosch Municipality
14 Plein Street
STELLENBOSCH
7600

Attention: Mr Lester van Stawel

KAYAMANDI, WATERGANG PHASE 2 HOUSING PROJECT: APPLICATION FOR APPROVAL OF THE (I) DEVIATION FROM POLICY TO OBTAIN ADDITIONAL FUNDING FOR A SECOND RETAINING WALL; (II) REDUCTION IN THE NUMBER OF SITES TO BE SERVICED FROM 295 TO 277 SITES; (III) PROVISION AND CONSTRUCTION OF 277 TRA UNITS; AND (IV) REVISED FINANCIAL DETAILS OF THE PROJECT, IN TERMS OF THE UPGRADING OF INFORMAL SETTLEMENTS PROGRAMME (UISP): PROJECT NO. 2053/1 & HSS no. W15030001

I have the pleasure to inform you that your application has been approved per resolution number 17/08 dated **20 February 2017** as set out below:

(a) Deviation from the housing policy to obtain additional funding for items not covered within the housing subsidy, for a second retaining wall, in the amount of **R2 236 347.00**;

Work Description	Cost
Excavation & Footing	R 84,525.00
Preliminary & General	R 183,250.00
Supply & Install Geo-grid material	R 119,280.00
Construction of retaining wall	R 399,280.00
Backfill with G7 material	R 439,208.00
Cart to spoil excess material	R 580,000.00
Material Spoil on site	R 227,500.00
TOTAL	**R2,033,043.00**
10% allowed for Contingency	R 203,304.30
TOTAL COST OF WALL	**R2,236,347.30**
Rounded	**R2,236,347.00**

(b) Reduction in the number of sites to be serviced from 295 to 277 sites, in the amount of **R13 691 833.00** (based on the 2014/2015 subsidy quantum);

27 Wale Street, Cape Town, 8001
tel: +27 21 483 4976 fax: +27 21 483 5433
HUMAN SETTLEMENT PROJECT ADMINISTRATION

Private Bag X9083, Cape Town, 8000
Shireen.Fortuin@westerncape.gov.za
www.westerncape.gov.za

Stages 1&2 (2014/15 Funding Limits)	SITES	Amount Per site	Total Amount
Geo-technical investigation	277	R 114.06	R 31,594.62
Land acquisition	277	0.00	0.00
Pre- planning	277	978.64	271,083.28
Interim engineering services	277	0.00	0.00
Subtotal	**277**	**1,092.70**	**302,677.90**
STAGE 3 (2014/15 funding limits)			
Detailed town planning	277	513.22	142,161.94
Land surveying and pegging	277	380.17	105,307.09
Contour survey	277	76.04	21,063.08
Land survey examination fee	277	117.85	32,644.45
Civil engineering fee	277	1,140.50	315,918.50
Site supervision fees	277	288.90	80,025.30
Permanent engineering services provision- **A grade level**	277	37,070.00	10,268,390.00
Subtotal for Stage 3		**39,586.68**	**10,965,510.36**
Subtotal for Stages 1, 2 & 3		**40,679.38**	**11,268,188.26**
Facilitation, Dispute resolution etc. (3% of total project cost)	277	1,220.38	338,045.26
Subtotal for Stages 1, 2 & 3		**41,899.76**	**11,606,233.52**
Extras			
Relocation grant	277	1,461.46	404,824.42
Geo-technical variation	277	2,406.00	666,462.00
Land rehabilitation	277	0.00	0.00
Total for extras		**3,867.46**	**1,071,286.42**
Sub-Total for Stages 1, 2 & 3 incl. extras		**45,767.22**	**12,677,519.94**
Project management (8% of total cost)	277	3,661.38	1,014,202.26
Total cost of project		**49,428.60**	**13,691,722.20**
Total Rounded x 277		**49,429.00**	**13,691,833.00**

(c) Financial details for the provision and construction of 277 TRA units, in the amount of R16 371 808.00 (based on 2014/2015 subsidy quantum); and

Item Description		Amount/unit	Units	Total
Indirect Cost as shown in Emergency Housing programme subsidy		R 1 575.12	277	R 436,308.24
Direct Cost as shown in Emergency Housing programme subsidy		R 3 648.41	277	R1,010,609.57
SHELTER COSTS	Roof sheeting	R 6,545.53		
	Side/Wall cladding	R10,780.38		
	Columns & anchor bolts	R 6,391.49		
	Column footing	R 1,537.74		
	Rafters	R 2,964.67		
	Purlins	R 3,848.40		
	Doors and Window post and frames	R 2,578.22		
	Side rails	R 3,156.56		
	Flashings	R 924.27		
	Door	R 2,378.23		

	Window	R 2,299.86		
	Flooring	R 7,702.21		
	Thermal improvement	R 2,772.80		
Subtotal		**R53,880.36**	**277**	**R14,924,859.72**
Total Rounded		**R59 104.00**	**277**	**R16,371,808.00**

(d) Revised financial details of the project consisting of 988 sites, in the amount of **R35 034 863.00** [i.e. R17 736 805.00 previously approved increased by R17 298 058.00], based on the 2014/2015 subsidy quantum;

CATEGORY	SITES	SUBSIDY QUANTUM	TOTAL
Planning Approval	711	2014/2015	R 799 875.00
Engineering Services	277	2014/2015	R13 691 833.00
1st Retaining wall	295		R 1 935 000.00
2nd Retaining wall	277		R 2 236 347.00
Construction of TRA units	277	2014/2015	R16 371 808.00
TOTAL	**988**		**R35 034 863.00**

WITH FURTHER CONDITIONS:

(e) **Your Council to note that the provision of funding for the TRA units to 277 sites is subject to the municipality not constructing houses on these sites for the next 3 years;**

(f) Your Council to ensure that the prefabricated units and construction material utilised meet the minimum general product performance requirements and specifications, as set out in Part B, section 2.5 C of the Emergency Housing Programme, Part 3 of the National Housing Code 2009;

(g) Your Council to note that the maintenance and management of services/units will be provided by own funds and that this approval is for the financial assistance for Indirect Costs;

(h) Your Council to develop a comprehensive stakeholder management plan to ensure that the affected community is properly informed of the intended / proposed relocation to eradicate any assumptions that may arise from the existing communities and submit this to the Department within 3 months of signing the Addendum to the Contract Agreement;

(i) Your Council should exercise proper planning and settlement layout that will ensure the safety (in terms of fire prevention strategies) of all occupants residing in the TRA units;

(j) Your Council must ensure that the affected persons receive tenure in the form of lease agreements/ permission to occupy, which must also be subject to the applicable policy for assistance to indigent persons, to provide for payment of rent and municipal services;

(k) Your Council to ensure the adequate provision and maintenance of road access, storm-water drainage, potable water and sewer reticulation to the temporary housing units;

(l) Your Council to ensure that a financial reconciliation of the costs of the construction of the second retaining wall is undertaken;

(m) All the other previously approved conditions to remain unchanged and in effect; and

(n) The existing Contract Agreement to be amended accordingly.

Yours sincerely

pp Stoffels

HEAD OF DEPARTMENT: HUMAN SETTLEMENTS
DATE: 20.02.2017

Western Cape Government
Human Settlements

SUB-DIRECTORATE: CONTRACT MANAGEMENT

REFERENCE: 16/1/1/2053/1
ENQUIRIES: Ms S Fortuin

The Municipal Manager
Stellenbosch Municipality
P O Box 17
STELLENBOSCH
7599

Attention: Mr L van Stavel

KAYAMANDI, WATERGANG PHASE 2 HOUSING PROJECT: APPLICATION FOR APPROVAL OF THE (I) INCREASE OF THE PROVISION AND CONSTRUCTION OF AN ADDITIONAL 55 TRA UNITS FROM 277 TO 332 TRA UNITS; AND (II) REVISED FINANCIAL DETAILS OF THE PROJECT, IN TERMS OF THE UPGRADING OF INFORMAL SETTLEMENTS PROGRAMME (UISP): PROJECT NO. 2053/1 & HSS no. W15030001

I have the pleasure to inform you that your application has been approved per resolution number **18/11** dated **08 February 2018** as set out below:

(a) The Increase of the provision and construction of an additional 55 TRA units from 277 to 332 TRA units, in the amount of **R3 250 720.00** (based on the 2014/2015 subsidy quantum); and

Item Description		Amount/unit	Units	Total
Indirect Cost as shown in Emergency Housing programme subsidy		R 1 575.12	55	R 86,631.60
Direct Cost as shown in Emergency Housing programme subsidy		R 3 648.41	55	R200,662.55
SHELTER COSTS	Roof sheeting	R 6,545.53		
	Side/Wall cladding	R10,780.38		
	Columns & anchor bolts	R 6,391.49		
	Column footing	R 1,537.74		
	Rafters	R 2,964.67		
	Purlins	R 3,848.40		
	Doors and Window post and frames	R 2,578.22		
	Side rails	R 3,156.56		
	Flashings	R 924.27		
	Door	R 2,378.23		
	Window	R 2,299.86		
	Flooring	R 7,702.21		
	Thermal improvement	R 2,772.80		
Subtotal		**R53,880.36**	**55**	**R2,963,419.80**
Total Rounded		**R59 104.00**	**55**	**R3,250,720.00**

27 Wale Street, Cape Town, 8001
tel: +27 21 483 4976 fax: +27 21 483 5433
HUMAN SETTLEMENT PROJECT ADMINISTRATION

Private Bag X9083, Cape Town, 8000
Shireen.Fortuin@westerncape.gov.za
www.westerncape.gov.za

(b) Revised financial details of the project consisting of 988 sites, in the amount of **R38 285 583.00** [i.e. R35 034 863.00 previously approved increased by R3 250 720.00], based on the 2014/2015 subsidy quantum.

CATEGORY	SITES	SUBSIDY QUANTUM	TOTAL
Planning Approval	711	2014/2015	R 799 875.00
Engineering Services	277	2014/2015	R13 691 833.00
1st Retaining wall	295		R 1 935 000.00
2nd Retaining wall	277		R 2 236 347.00
Construction of TRA units	277	2014/2015	R16 371 808.00
Construction of additional TRA units	55	2014/2015	R 3 250 720.00
TOTAL	**988**		**R38 285 583.00**

WITH FURTHER CONDITIONS:

(c) All the other previously approved conditions to remain unchanged and in effect; and

(d) The existing Contract Agreement to be amended accordingly.

Yours sincerely

HEAD OF DEPARTMENT: HUMAN SETTLEMENTS
DATE: 09·02·18

Xaba
Engineering and Consulting

1st Floor Willowbridge
Regus Offices
39 Carl Cronje Drive
Tyger Valley
Bellville

07 August 2018

Our Reference: ST/WC01/COM1801
Email reply to: rodem@xabaengineering.co.za
Your Reference: 332 TRAs Situational Assessment Report

Stellenbosch Municipality
Manager: New Housing
Human Settlements & Property Management
PO Box 17
STELLENBOSCH
7600

Attention: **Mr Lester Vanstavel**
E-mail: Lester.Vanstavel@stellenbosch.gov.za

Dear Sir,

STELLENBOSCH MUNICIPALITY
PROJECT MAMAGER FOR THE CONSTRUCTION OF 332 TEMPORAL HOUSING UNITS IN WATERGANG, KAYAMANDI

SITUATIONAL ASSESSMENT REPORT

Xaba Engineering & Consulting (XEC) was appointed by Stellenbosch Municipality on the 27 January 2017 as Consulting Engineers for the design and project management for the Construction of 332 Temporal (TRA) Housing project

The scope of work included but not limited to the design of top structures, project management services for the professional team comprising of the Contractor, the Occupational Health & Safety Officer, and the Environmental Consultant.

At 5months into the project implementation/construction, the site experienced severe damage due to the community unrest which took place on the dates, 21 & 22 May 2018.

In view of the current funding allocations and implementation of the Construction of 332 Temporal Housing Units project at Kayamandi, and with reference to the meeting held with the Department of Human Settlement & Property Management *(the Client)*, and Re A Letamisa Trading & Projects *(the Contractor),* on 10 July 2018, it was decided that the project will be implemented as per the original scope on the contract document (and its conditions), with minor amendments and associated additional works as an action/response plan.

It is worth to note that our Client is looking for the best technical and economical solution that also takes into consideration the project life span and maintenance requirements. The Client also relies heavily on our professional opinion and recommendations.

Xaba
Engineering and Consulting

Having investigated the site conditions and status quo of the project following the community unrest/riot, we therefore propose the following and it is in line with Stellenbosch Municipalities' drive towards improved conditions towards a more sustainable housing infrastructure development. It also carries shared urgency by the Western Cape Provincial Department of Human Settlement.

Following is a brief description of scope of work required, financial offer and delivery schedule:

PROJECT BRIEF

1. ***Condition assessments and status quo*** – XEC performed a site visit to assess the condition of the 90N° Temporal Housing Units already installed and assessment of new water and sewer infrastructure. This was followed by a further assessment with the Contractor's insurer representative, Mr Rolf Fricke. During the site visit, it was noticeable that the quality of the concrete floor slabs has deteriorated and cannot be accepted by the Client in its current state. The anchoring of units in most concrete slabs has been transfigured. Also, structural damages of concrete floor slabs and soil erosion effects were evident on site. Foregoing, the existing concrete floor slabs need to be demolished, and all new floor slabs at handover are expected. During construction, compelling reasons from the Contractor to vary the specifications with reference to the effect in resulting permeability and strength of concrete will thus be required.

   It was agreed that the superstructure steel frame and cladding (and installed windows and doors and plumbing in the houses) for the 90N° houses must be replaced entirely. From the meeting held on 10 July 2018, it was proposed that the use of ISO Board insulation, as an alternative to the current clad sheeting technology for the walls is a preferred choice by the Client. The Contractor will be required to provide quotations in this regard.

   The underground sewer and water plumbing is intact, and but needs only minor repair for the surface connections.

2. ***Existing Platforms and Earthworks*** – The condition assessment and status quo determination will be followed by a detailed specification for the refurbishment and upgrade of the existing earthworks platforms, as erosion of soils might have taken place due to inclement winter weather experienced. This will include (but may not be limited to) the preparation of specifications for shaping & stabilisation of the existing earthworks platforms to achieve the required MOD AASHTO density. A phased approach to the refurbishment and upgrade, identification of critical areas and quick wins and cost estimates and life cycle costing of solutions with clear recommendations to Stellenbosch Municipality.

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3. ***The Retaining Walls Installations*** – We have identified the need to install Terraforce retaining wall structures as additional associated works to the project. Retaining walls are typically built to stabilize an unstable or eroding slope, or to create more usable level land. Numerous options are available in terms of wall type, size, strength, and appearance. Two keys to avoiding retaining wall failure are proper soil stabilization and proper drainage behind the wall.

   Left unchecked, soil or gravel backfill behind a wall will exert unrelenting pressure on the structure and may ultimately cause the wall to collapse. A common method of avoiding this problem is to use geogrid (or alternative), a strong synthetic mesh laid down in layers between courses of a retaining wall and extending horizontally into the soil behind the wall. Geogrid is typically supplied in rolls of material, which can be cut to whatever size is required for a specific project. The material used for retaining wall backfill is also important. Heavy, clay soils will retain water for a long time, whereas light, sandy soil and small rocks or gravel allow water to drain easily. In addition, drainage systems are commonly built into or behind the wall to further reduce water pressure.

   We have allowed a cost for this exercise as part of the project, and Client is still to advise on the way forward.

4. ***Risk assessment and emergency planning and prioritization of critical areas and quick wins*** – Having suffered immensely due to community riots, a key focus of the project will be to assess and quantify the existing risk the condition of the Temporal Housing system poses to SM. This will lead to emergency planning (towards readiness, should the system be vandalised again) and prioritised implementation of solutions, quick wins and other high risk mitigation measures.

PROJECT TEAM

Consultant – Xaba Engineering & Consulting (Pty) Ltd

Contractor - Re A Letamisa Trading & Projects

Occupational Health & Safety – IX Engineers

Environmental (ECO) – Cornerstones Environmental Consultants

For the successful implementation of this project, it is proposed that the current project team structure be retained.

During implementation, monitoring of construction, commissioning and monthly reports will be produced. At completion, soft and hard copies of As-Built drawings for the project will also be produced.

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PROGRAM & DELIVERABLES

We will be available for a project re-inception meeting as soon as approval to proceed is given. Once the additional scope of work is agreed and approved, we will be available to start work immediately, and we anticipate all works to be completed by end March 2019.

The proposed deliverables schedule based on commencement of the construction work on 20 August 2018 is as follows:

DELIVERABLES SCHEDULE	
Deliverable	**Date**
Risk assessment, emergency planning and prioritization Report	17 August 2018
Prepare Earthworks Platform & Retaining Walls Specifications	17 August 2018
Approvals for Insurances, Professional Indemnity, Programme of Works, Health & Safety File etc	17 August 2018
Contractor re-establishment on site (2weeks)	20-31 August 2018
Construction commences	03 September 2018
Project Completion	15 March 2019
Preparation of As-Built Drawings and Close-Out	29 March 2019

**Please note that the construction period is subject to the approval of the Construction Programme from the Contractor.*

VALUE ENGINEERING & RISK ASSESSMENT

All projects developed by Xaba Engineering & Consulting (XEC) are subject to basic value engineering principles including a risk assessment to ensure that the Employer, in this case Stellenbosch Municipality, can meet their communities' service delivery requirements with an end product that offers value for money.

The following basic value engineering principles are reviewed as part of the project implementation process:

- Value for money capital expenditure – selection of materials, construction standards and optimum design that are appropriate to the level of service required
- Life cycle cost – the cost of maintenance, lifespan of infrastructure, ease of operation and maintenance and replacement costs are considered to ensure sustainable infrastructure
- Sustainability – energy efficiency (where applicable) and the sustainability of materials and construction standards impact on the sustainability and life span of the proposed infrastructure

As part of the above value engineering principles a basic risk assessment is also performed to identify risks to service delivery and implementation of the project. The following high level

Xaba
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risks have been identified and are highlighted to SM as risks to the development of the Construction of 332 Housing Units at Kayamandi;

- Financial risk – high construction costs, lack of funds, lack of cash flow to implement the project and limited construction period will result in a high monthly cash flow requirement;
- Local contractor procurement & community involvement/unrest – lack of involvement and clear communication with community interruption by community and potential unrest are risks that could delay service delivery;
- Environmental impacts – adverse weather conditions, damage to the environment and infrastructure impacts on project delivery on a frequent basis.

The costs mentioned on the table above are purely estimates for budgeting purposes based on experience, the actual costs will be determined once completed studies have been undertaken.

FINANCIAL

The summary table below is an estimate of the construction costs based on the elementary design specifications listed in the contract document, with associated works.

PROJECT COSTS	
Description	**Amount**
Section A: Preliminary and General	R 1 207 500.00
Section B: Shaping & Stabilization of Platforms	R 1 600 000.00
Section C: Installation of Retaining Walls	R2 100 000.00
Section F: Top Structures (complete incl. plumbing & drainage)	R 13 026 996.97
Sub-Total - Direct Costs (1)	**R 17 934 496.97**
Add Contingencies (10%)	R 1 793 449.70
Sub-Total (2)	**R19 727 946.67**
Allow 8% of Sub-Total (2) for XEC (as per ECSA Fee Gazette for Consulting Services - Professional Fees) – Indirect Costs	R 1 578 235.73
Sub-Total (3)	**R 21 306 182.40**
Add 15% VAT to Sub-total (3)	R 0
GRAND TOTAL	**R 21 306 182.40**

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CONCLUSION

In conclusion we note that the preparation of designs cost estimates is based on the data and information made available to us. Site conditions may impact further on the cost of implementation, we have however, endeavoured to be as conservative as possible whilst providing implementation which is economical and fit for purpose.

It is to be noted that in terms of the ECSA Guideline Scope of Services, certain of the activities mentioned in the report like preparation of the Earthworks Platform Specifications involve planning, further investigations and assessments, are not directly linked to our initial appointment and therefore would require implementation on a time and cost basis.

We will avail ourselves upon your request to present the Situation Analysis Report. We trust that this report provides sufficient information for Stellenbosch Municipality, however, should you require any further information or clarity on any issues, kindly contact us.

As always we are committed to deliver a successful project that will add great value to the Stellenbosch Municipality and the Kayamandi community.

Yours faithfully
for: **Xaba Engineering & Consulting**

M Rode
Project Manager

cc: Re A Letamisa Trading & Projects, Attention: Ms M More, By Email

ANNEXURE 6

rejected. The consultant who has submitted the highest ranked technical proposal should be selected and invited to negotiate a contract.

5.9.3 Least-cost selection

5.9.3.1 This method is more appropriate to selection of consultants for assignments of a standard or routine nature (audits, noncomplex projects, and so forth) where well-established practices and standards exist and in which the contract amount is small. Under this method, a "minimum" qualifying mark for the "functionality" is established. Proposals to be submitted in two envelopes are invited. Technical envelopes are opened first and evaluated. Those securing less than the minimum mark should be rejected and the financial envelopes of the rest are opened in public. The firm with the highest points should then be selected. Under this method, the qualifying minimum mark should be established, keeping in view that all proposals above the minimum compete only on "cost" and promotion of HDIs and RDP objectives. The minimum mark to qualify should be stated in the RFP.

5.9.4 Selection based on consultants' qualifications

5.9.4.1 This method may be used for very small assignments for which the need for preparing and evaluating competitive proposals is not justified. In such cases, the accounting officer should prepare the TOR, request expressions of interest and information on the consultants' experience and competence relevant to the assignment and select the firm with the most appropriate qualifications and references. The selected firm should be requested to submit a combined technical-financial proposal and then be invited to negotiate the contract.

5.9.5 Single-source selection

5.9.5.1 Single-source selection of consultants does not provide the benefits of competition in regard to quality and cost and lacks transparency in selection and could encourage unacceptable practices. Therefore, single-source selection should be used only in exceptional cases. The justification for single-source selection should be examined in the context of the overall interests of the client and the project.

5.9.5.2 Single-source selection may be appropriate only if it presents a clear advantage over competition.

- for tasks that represent a natural continuation of previous work carried out by the firm;
- where a rapid selection is essential (for example, in an emergency operation);
- for very small assignments; or
- when only one firm is qualified or has experience of exceptional worth for the assignment.

5.9.5.3 The reasons for a single-source selection should be recorded and approved by the accounting officer or his / her delegate prior to the conclusion of a contract.

5.9.5.4 When continuity for downstream work is essential, the initial RFP should outline this prospect and if practical, the factors used for the selection of the consultant should take the likelihood of continuation into account. Continuity in the technical approach, experience acquired and continued professional liability of the same consultant may make continuation with the initial consultant preferable to a new competition, subject to satisfactory performance in the initial assignment. For such downstream assignments, the accounting officer should ask the initially selected consultant to prepare technical and financial proposals on the basis of TOR furnished by the accounting officer, which should then be negotiated.

5.9.5.5 If the initial assignment was not awarded on a competitive basis or was awarded under tied financing or reserved procurement or if the downstream assignment is substantially larger in value, a competitive process acceptable to the accounting officer should normally be followed in which the consultant carrying out the initial work is not excluded from consideration if it expresses interest.

5.9.5.6 Where, in exceptional instances, it is impractical to appoint the required consultants through a competitive bidding process and a South African based consultant is used, the *Guidelines on Hourly Fee Rates for Consultants* issued by the Department of Public Service and Administration may be used as a benchmark to establish the appropriate tariffs, or to determine the reasonableness of the tariffs.

7.5.3	AURECON ELECTRICAL CONSULTANT FOR 332 TEMPORAL HOUSING PROJECT: CHANGE OF SCOPE

Collaborator No: 612120
IDP KPA Ref No:
Meeting Date: 17 October 2018

1. SUBJECT: AURECON ELECTRICAL CONSULTANT FOR 332 TEMPORAL HOUSING PROJECT: CHANGE OF SCOPE

2. PURPOSE

To obtain the necessary authorization for the intended amendment of a contract concluded with Aurecon.

3. DELEGATED AUTHORITY

Council

4. EXECUTIVE SUMMARY

On 22 May 2018, the entire site which was earmarked to build temporary units in Kayamandi was destroyed by certain community members. This resulted in additional cost and specification changes that exceed the allowed 20% in term of Circular number 62/2012 (National Treasury) as mentioned in paragraph 6.4.3.

5. RECOMMENDATIONS

(a) that Council notes, in terms of MFMA Section 116(3), the reasons for the change of scope/specification of Aurecon;

(b) that the tender amount (B/SM 28/16) be increased from R789 753.50 to R1 254 420.22;

(c) that Council gives reasonable notice of intention to amend the contract or agreement in terms of section 116(3)(b)(i);

(d) that the local community be invited to submit representatives to the Municipality in terms of section 116 (3)(b)(ii); and

(e) that the Municipal Manager be authorized to conclude the contract or agreement after (d) above is finalized in terms of the applicable Act/Regulation.

6. DISCUSSION / CONTENTS

6.1 Background

During September 2016, Aurecon was appointed as the electrical consultant for the 277 sites from the panel tender 28/16 (see attached **ANNEXURE 1**). Aurecon's price to do the work was R789, 753.50 (see attached **ANNEXURE 2**).

After the appointment of the electrical consultant, the layout due to practical reasons of the temporal housing units (TRA houses) had to be changed. There were lot of technical matters that the consultant had to deal with. This resulted into a change in design which was not part of their initial scope.

6.2 Discussion

The project is near completion and Aurecon has been working on the project for almost 24 months from the date of appointment. In order to complete/finalise the project it would be in the best financial interest of the Municipality to retain the services of Aurecon. Therefore, in compliance with S116(3)(a) of the MFMA, the following reasons are forwarded in support of the amendment of the scope and specifications of the original appointment:

6.2.1 The project was delayed due community unrest that took place on 22 May 2018. All service providers and consultants were requested to move off-site as result of the unrest.

6.2.2 The consultant has been working on the project notwithstanding the service provider has been off-site for almost five (5) months. This work by the consultants included factory inspection, site meetings, and witnessing of tests done at the factory for the Mini-subs and kiosks. The contract management aspect of the project had to continue irrespective of whether the service provider is on site or not.

6.2.3 It is therefore not practical or cost effective for Stellenbosch Municipality to appoint new service providers for the change in specifications as the service provider has not defaulted on the initial appointment.

6.3 Financial Implications

Aurecon has submitted a letter to the Municipality on 25 September 2018 requesting additional funding due to scope change (see attached **ANNEXURE 3**). Their cost is based on time and cost. The total cost required amounts to R464 666.72 which exceeds 20% of their initial appointment of R789 753.50.

6.4 Legal Implications

6.4.1 SCM Guide for Accounting Officer

In terms of paragraph 5.9.5.2, of the SCM Guide for Accounting Officers **a single source selection** may be appropriate, but only if it present a clear advantage over competition; e.g. for tasks that represent a **natural continuation** of previous work carried out by the Service Provider.

Further in terms of paragraph 5.9.5.3 the reason for a single source selection should be recorded and approved by the Accounting Officer or his/her delegate prior to the conclusion of a contract.

See **ANNEXURE 4** for abstract from Guidelines.

6.4.2 Municipal Finance Management Act (MFMA)

In terms of Section 116(3) of the MFMA a contract or agreement procured through the supply chain management policy of the municipality may be amended by the parties, but only after:

(a) The reasons for the proposed amendment have been tabled in the council of the municipality; and

(b) The local community-

iii) has been given reasonable notice of the intention to amend the contract or agreement; and

iv) has been invited to submit representations to the municipality or municipal entity.

6.4.3 Comments from Legal Services

In order to ensure uniformity in application of the MFMA Section 116(3), the National Treasury issued MFMA Circular number 62/2012 where it is stated that contracts for construction related goods or services may be expended or varied by 20% of the original contract value, and service providers for general goods or services may be expanded or varied by 15% of the original contract value, though internal process. Any expansion or variation in excess of the aforementioned thresholds must be reported to Council and dealt with in terms of the provision of Section 116(3) of the MFMA.

The item and recommendations are supported.

6.5 Staff Implications

None

6.6 Previous / Relevant Council Resolutions:

None

6.7 Risk Implications

This report has no risk implications for the Municipality.

ANNEXURES

Annexure 1: Council resolution.

Annexure 2: Quotation from service provider

Annexure 3: Professional fees quotation for Zone O, Kayamandi

Annexure 4: Abstract from Guidelines

FOR FURTHER DETAILS CONTACT:

NAME	Tabiso Mfeya
POSITION	***Director***
DIRECTORATE	***Planning & Economic Development***
CONTACT NUMBERS	***021 808 8491***
E-MAIL ADDRESS	***tabiso.mfeya@stellenbosch.gov.za***
REPORT DATE	***12 October 2018***

ANNEXURE 1

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

INNOVATION CAPITAL

MEMORANDUM

DATE	:	08 SEPTEMBER 2016
TO	:	MANAGER: SCM (I SAUNDERS)
FROM	:	DIRECTOR: HUMAN SETTLEMENTS & PROPERTY MANAGEMENT (T MFEYA)
RE	:	APPOINTMENT OF ELECTRICAL CONSULTANT FOR THE WATERGANG 277 SITES, KAYAMANDI

1. PURPOSE

The purpose of this submission is to request approval from the Director: Engineering Services to appoint an electrical consultant for the Watergang 277 sites, Kayamandi from tender BSM/28./16 (see attached Annexure 1).

2. BACKGROUND

The installation of civil engineering services on the above mentioned project has been completed. The Municipality has earmarked this site for the relocation of Zone O residents. At this stage the site has no electricity although civil engineering has been installed and therefore the allocation of serviced sites cannot take place until the site are electrified.

3. DISCUSSSION

It is the intent of the Department: New Housing to procure an electrical consultant from the multi-disciplinary team of professionals from tender **BSM 28/16**. The electrical consultant will be responsible for the following disciplines:

a) Electrical design for the 277 sites;
b) Project Management;
c) Tender documentation;
d) Site monitoring; and
e) Close out reporting for medium and low voltage reticulation for 277 sites.

Hereunder is a summary of the detailed work that must be conducted:

3.1 Documentation and Procurement

- Prepare and submit electrical engineering layout for approval.
- Prepare tender documentation.
- Evaluation of tenders.
- Preparation of contract documentation.

The typical deliverables will include:

- Tender documentation;
- tender evaluation report;
- tender recommendations; and
- contract documentation.

JR

3.2 *Contract Administration and inspection*

- Attend site handover.
- Issue construction documentation.
- Carry out contract administration procedures in terms of the contract.
- Prepare schedules of predicted cash flow.
- Attend regular site, technical and progress meetings.
- Inspect works for quality and conformity to contract documentation.
- Adjudicate and resolve financial claims by the contractor.
- Assist in the resolution of contractual claims by the contractor.
- Establish and maintain a financial control system.
- Clarify details and descriptions during construction as required.
- Prepare valuations for payment certificates to be issued by the principal agent.
- Instruct, witness and review of all tests and mock ups carried out both on and off site.
- Update and issue drawings register.
- Review and comment on operation and maintenance manuals, guarantee certificates and warranties.
- Issue contract instructions as and when required.
- Inspect the works and issue practical completion and defects lists.
- 17 Arrange for the delivery of all test certificates, statutory and other approvals, as built drawings and operating manuals.

Typical deliverables will include:

- Schedules of predicted cash flow;
- construction documentation;
- drawings register;
- contract instructions;
- financial control reports;
- valuations for payment certificates;
- progressive and draft final accounts;
- practical completion and defects list; and
- electrical certificate of compliance.

3.3 Close- out

- Inspect and verify the rectification of defects.
- Facilitate and/or procure final operations and maintenance manuals, guarantees and warranties.
- Prepare and/or procure as-built drawings and documentation.
- Conclude the final accounts where relevant.

3.4 Level 2 Site monitoring

- Review, at the earliest opportunity, a sample of each I with the requirements of the plans and specifications and review representative samples of important completed work prior to enclosure or completion as appropriate.
- Visit the works every fourth night to review important materials, critical work procedures and/or completed elements or components.
- Be available to provide the contractor with technical interpretation of the plans and specifications.

4. FINANCIAL IMPLICATIONS

The project has been budget for and funds are available on vote number 5/4400/4241.

JR

RECOMMENDATION

That the Director: Engineering Services considers and approves the request from the Department: New Housing to appoint the electrical consultant from the panel of consultants from tender BSM 28/16.

Feziwe Ngquba
PROJECT MANAGER: NEW HOUSING

Myra Francis
ACTING MANAGER: NEW HOUSING

Supported: Yes No

Johru Robyn
ACTING DIRECTOR OF HUMAN SETTLEMENTS AND PROPERTY MANAGEMENT

Date: 09-09-2016

Supported: Yes No

Israel Saunders
HEAD: SUPPLY CHAIN MANAGEMENT

Date: 14/09/2016

Approved: Yes No

AURECON. ELECTRICAL ENG
REF. BSM 28/16 PANEL.

T: +27 21 808 8464 | F: +27 21 887 6167 | E-mail: feziwe.ngqubal@stellenbosch.gov.za
Stadhuis/Townhall, Pleinstraat/Plein Street, Stellenbosch, 7600 | Postbus/Postal Address: PO Box 17, Stellenbosch, 7599 | Website: www.stellenbosch.gov.za

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South Africa

aurecon

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www.aurecongroup.com

Tel:021 526 9400
Fax: 021 526 9500
Email: capetown@aurecongroup.com

Client: **Municipality of Stellenbosch**
Client Address: **PO Box 17**
Stellenbosch, WCP 7599
Client Email: **feziwe.ngquba@stellenbosch.org**

Attention: Finance Department

Statement Date 1-Aug-18
Your reference:
Our reference: 113255
Project Name: Watergang 277 sites, Stellenbosch
Pag **1**

Terms are strictly 30 days net

STATEMENT OF ACCOUNT

DATE	DOCUMENT TYPE	DOCUMENT NUMBER	DEBIT	CREDIT	BALANCE
3-May-18	Invoice	160444	107,555.00	0.00	R 107,555.00
24-May-18	Payment	30055925	0.00	107,555.00	R 0.00
30-May-18	Invoice	161046	92,460.00	0.00	R 92,460.00
8-Jun-18	Payment	30056275	0.00	92,460.00	R 0.00
22-Jun-18	Invoice	161672	98,210.00	0.00	R 98,210.00
30-Jun-18	Payment	30056818	0.00	98,210.00	R 0.00

TOTAL AMOUNT DUE	R 0.00

Comments:

AGE ANALYSIS

Over 120 Days	Over 90 Days	Over 60 Days	Over 30 Days	Current
R 0.00	R 0.00	R 0.00	R 0.00	R 0.00

REMIT TO:

BAN ABSA
BRANCH & CODE: Hatfield 335545
ACCOUNT: Cheque
A/C 690144492
Please quote Ref: **113255 on all payments.**

REGIONAL OFFICES:

Bloemfontein Cape Town East London eThekwini George Kimberley Lesotho Mafikeng
Nelspruit Paarl Pietermaritzburg Polokwane Port Elizabeth Rustenburg Rivonia Tshwane

PROJECT NR. 113255
STELLENBOSCH - KAYAMANDI - WATERGANG PHASE B&C - 277 ERVEN
ELECTRIFICATION & STREETLIGHTS & READY BOARDS & LIGTHING

1-Aug-18

No.	Description	Original Order May-17	New Order Feb-18	CLAIMED Claimed up till 30-06-2017	CLAIMED Before 30-06-2018	TO BE CLAIMED After 30-06-2018	
	Eng Fee Value	R 357,426.00	R 508,658.49				
1	Stage 1 – Inception	R 17,871.30	R 25,432.92	R 17,871.30	R 7,561.62		
2	Stage 2 – Concept and Viability (also termed Preliminary Design)	R 53,613.90	R 76,298.77	R 53,613.90	R 22,684.87		
3	Stage 3 – Design Development (also termed Detail Design)	R 71,485.20	R 101,731.70	R 71,485.20	R 30,246.50		
4	Stage 4 – Documentation and Procurement	R 71,485.20	R 101,731.70	R 170,898.60	R (69,166.90)		
5	Stage 5 – Contract Administration and Inspection	R 125,099.10	R 178,030.47	R -	R 100,000.00	R 78,030.47	R 178,030.47
6	Level 2 Construction Monitoring	R 96,000.00	R 276,000.00	R -	R 168,000.00	R 108,000.00	R 276,000.00
7	Stage 6 – Close-Out	R 17,871.30	R 25,432.92	R -	R -	R 25,432.92	R 25,432.92
8	Disbursements	R 5,095.00	R 5,095.00	R 2,548.00	R -	R 2,547.00	R 2,547.00
9	**Total excluding VAT**	**R 458,521.00**	**R 789,753.49**	**R 316,417.00**	**R 259,326.09**	**R 214,010.39**	789,753.49
10A	VAT @ 14%	R 64,192.94	R 110,565.49	R 44,298.38			
10B	VAT @ 15%				R 38,898.91	R 32,101.56	
11	Total including VAT	R 522,713.94	R 900,318.98	R 360,715.38	R 298,225.01	R 246,111.95	

113255: **Aurecon Engineering Fees & Disbursements: Cashflow (Stellenbosch - 277 Erven Watergang - Kayamandi)**

No.	Description	Disbursements	Fees	Constr Monitor	Amount (excl. VAT)	Amount (incl. VAT)
i	29 March 2017 - Eng Fees Claim #1	R 2,548.00	**R 142,970.00**	R -	R 145,518.00	R 165,890.52
ii	9 May 2017 - Eng Fees Claim #2	R -	**R 64,577.00**	R -	R 64,577.00	R 73,617.78
iii	23 June 2017 - Eng Fees Claim #3	R -	**R 106,322.00**	R -	R 106,322.00	R 121,207.08
iv	Total Claim Againts Order #1 @ 14% VAT				R 316,417.00	R 360,715.38
a	30 March 2018 - Eng Fees Claim #	R -	0%	0%	R -	R -
b	30 April 2018 - Eng Fees Claim #4	R -	35%	40%	R 93,526.09	R 107,555.01
c	30 May 2018 - Eng Fees Claim #5	R -	30%	30%	R 80,400.00	R 92,460.00
d	30 June 2018 - Eng Fees Claim #6	R -	35%	30%	R 85,400.00	R 98,210.00
	TOTAL CLAIM: March 2018 to 30 June 2018				**R 259,326.09**	R 298,225.01
e	31 July 2017 - Eng Fees Claim #7	R -	50%	50%	R 93,015.24	R 106,967.52
f	31 Aug 2017 - Eng Fees Claim #8	R -	50%	50%	R 93,015.24	R 106,967.52
g	30 Sept 2018 - Eng Fees Claim #9	R 2,547	100%	0%	R 27,979.92	R 32,176.91
	TOTAL CLAIM: 1 July 2018 to 30 Sept 2018				**R 214,010.39**	R 246,111.95
	TOTAL Claimable againts Order #2 with VAT @ 15%				R 473,336.49	R 544,336.96

SUMMARY OF ORDERS

	Original Value	Reduced Value
Order #1 (No 329155 dated 09 Nov 2016) VAT excluded	R 458,521.00	R 316,417.00
Order #2 (No 346361 dated 22 Febr 2018) VAT excluded	R 473,336.50	R 259,326.11
Order #3 (Still to be generated) VAT excluded	R 214,010.39	R 214,010.39
Order #4 (Still to be generated) VAT excluded	R -	R -
Total (VAT Excluded)	R 1,145,867.89	R 789,753.50

Test 789,753.49

ANNEXURE 2

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15 December 2017

Feziwe Ngquba
Project Manager: New Housing
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

Dear Feziwe

113255 REVISED ELECTRICAL ENGINEERING SERVICES FOR WATERGANG 277 SITES, KAYAMANDI

Aurecon submits herewith a revised engineering fee calculations order due to scope changes and the final contract value for electrical works.

The contractor Maritz Electrical has been appointed for the above-mentioned project for the tender amount of R 6 749 817.42 (including VAT and 10 % contingencies). Aurecon therefore submits **revised engineering fees of R 789 753.49 (excluding VAT)** based on the contract amount and construction period of 160 days / 23 weeks.

The calculation of the revised fees is as follows:

No.	Description	Amount (excluding VAT)
1	Engineering Fees based on capital works: 10.5 % of R 5 382 629.52	R 565 176.10
	Less 10% Discount	R 56 517.61
2	Level 2 Site monitoring – 2 days a week for the construction period of 23 weeks	R 276 000.00
3	Subtotal for Engineering	R 784 658.49
4	Office Expenditure	R 5 095.00
5	**Total (excluding VAT)**	**R 789 753.49**

The revised cashflow for the project engineering fees and office expenditure is as follows:

No.	Description	% Fees	Amount
1	Stage 1 – Inception	5%	R 25 432.92
2	Stage 2 – Concept and Viability (also termed Preliminary Design)	15%	R 76 298.77
3	Stage 3 – Design Development (also termed Detail Design)	20%	R 101 731.70
4	Stage 4 – Documentation and Procurement	20%	R 101 731.70
5	Stage 5 – Contract Administration and Inspection	35%	R 178 030.47
6	Level 2 Construction Monitoring		R 276 000.00
7	Stage 6 – Close-Out	5%	R 25 432.92
8	Office expenditure		R 5 095.00
9	Total (excluding VAT)		R 789 753.49

A summary of engineering fees is included in Annexure A as reference which shows Aurecon is now due a new order of R 473 336.49 (excluding VAT) and R 539 603.60 (including VAT).

Do not hesitate to contact Jaysen Pillay or myself if you have any queries or require further information. Alternatively, if the revised engineering fees is accepted, please advise accordingly with new purchase order.

Yours faithfully

Andries Zwiegers
Technical Director

Enc: Annexure A – Summary of Engineering Fees
Proposal
Order
Revised Fees
Eng Fees Claim 1
Eng Fees Claim 2
Eng Fees Claim 3
Appointment letter for Maritz Electrical

Copies:

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Annexure A

Summary of Engineering Fees – 15 December 2017

No.	Date	Description	Amount
1.	22/09/2016	Engineering fee proposal	R 458 521.00
2.	09/11/2016	Order Number 329155	R 458 521.00
3.	09/05/2017	Revised engineering fees due to scope changes	R 652 364.00
4.	29/03/2017	Engineering Fees Claim 1	R 145 518.00
5.	09/05/2017	Engineering Fees Claim 2	R 64 577.00
6.	23/06/2017	Engineering Fees Claim 3	R 106 322.00
7.	30/06/2017	Order reduced for year end 2016/17	R 316 417.00
8.	14/12/2017	Revised engineering fees based on successful tender	R 789 753.49
9.		The value of the revised order for the project is: Item 8 Less the sum of Item 7	R 473 336.49
10.		Add 14 % VAT	R 66 267.11
11.		Total value of new order	R 539 603.60

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22 September 2016

Ms Feziwe Ngquba
Project Manager: New Housing
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

Dear Madam

ELECTRICAL ENGINEERING SERVICES FOR THE WATERGANG 277 SITES, KAYAMANDI

Thank you for the opportunity to submit a proposal for the above-mentioned project based on Tender BSM 28/16.

The fees are based on the Guideline Scope of Services and Tariff of Fees for Persons Registered in terms of the Engineering Professions Act, 2000, (Act No 46 of 2000) as published in the Government Gazette 39480, 4 December 2015 and is subject to a 10% discount, as per the tender conditions

The engineering fee is based on the median line of 12% calculated on a capital value as defined below. The fee calculation will be adjusted based on the final capital value of the project.

The preliminary capital works cost estimate based on recent works by Aurecon for the 277 sites is R 3,309,500.00 excluding VAT and includes

- MV and LV infrastructure
  - Miniature substations
  - MV and LV underground cables
  - Consumer distribution kiosks
- Service connections up till the erf boundary (No dwellings exist yet and the remaining of the service connection and the kWh-meter are excluded)
- Street lighting
  - 70 W HPS luminaires on galvanised steel poles

The scope of works (ref. CCF20160914_0002) includes Level 2 construction monitoring and will be calculated on a time and cost basis. The estimated project construction period is 2 months, therefore construction monitoring of 16 hours per week for a period of 8 weeks is foreseen. If the construction period is extended beyond 2 months, a pro rata adjustment will be made in this regard.

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Professional Fees

No.	Description	Amount
1.	Engineering fees based on capital works. 12% of R 3,309,500	R 397,140
	Less 10%	R 39,314
2.	Level 2 Site monitoring as discussed above	R 96,000
3.	Subtotal for Engineering	R 453,826
4	Office Expenditure	R 5,095
5	Total (VAT Excluded)	R 458,521

The **cash flow** will be as follows

No.	Description	% Fees	Amount
1.	Stage 1 – Inception	5%	R 17,871
2.	Stage 2 – Concept and Viability (also termed Preliminary Design)	15%	R 53,614
3.	Stage 3 – Design Development (also termed Detail Design) Plus: Office Expenditure	20% 50%	R 74,033
4.	Stage 4 – Documentation and Procurement	20%	R 71,485
5.	Stage 5 – Contract Administration and Inspection PLUS Level 2 Construction monitoring	35%	R 221,099
6.	Stage 6 – Close-Out Plus: Office Expenditure	5% 50%	R 20,419
7.	Subtotal excluding VAT		R 458,521

The total engineering fees and office expenditure for the project is **R 458,521 excluding 14% VAT.**

Do not hesitate to contact us should you have any queries or require further clarification. Alternatively if the proposal is accepted, please provide confirmation via works order for the commencement of the project.

Yours faithfully

Andries Zwiegers
Technical Director

Enc:

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9 May 2017

Ms Feziwe Ngquba
Project Manager: New Housing
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

Dear Madam

REVISED ELECTRICAL ENGINEERING SERVICES FOR THE WATERGANG 277 SITES, KAYAMANDI

I hereby submit the revised fee calculation for the above-mentioned project due to the scope changes. The fees are now calculated on the priced BOQ included as Appendix A.

The additional scope is as follows:

- Additional households - 2 x prefab units per erven in Phase B
- Distribution kiosks are non-standard as per Stellenbosch Municipality's requirements
- Consumer connection cables to households including junction boxes where required
- Installation of "free issue" prepayment meters
- Install Readyboards in Phase B - prefab units only (330) including 2 x additional light fittings, earthing and COC
- The Level 2B monitoring has been extended by 2 weeks due to the additional scope. This estimate allows for 2 visits per week up to a maximum of 10 weeks' subject to the Contractors schedule and performance.

The revised capital costs and engineering fees is thus

No.	Description	Amount
1.	Engineering fees based on capital works. 11.5 % of R 5,013,214	R 576,520
	Less 10%	R 57,652
2.	Level 2B Site monitoring as discussed above	R 128,400
3.	Subtotal for Engineering	R 647,268
4	Office Expenditure	R 5,096
5	Total (VAT Excluded)	R 652,364

The **cash flow** will be as follows

No.	Description	% Fees	Amount
1.	Stage 1 – Inception	5%	R 25,943
2.	Stage 2 – Concept and Viability (also termed Preliminary Design)	15%	R 77,830
3.	Stage 3 – Design Development (also termed Detail Design)	20%	R 103,774
	Plus: Office Expenditure	50%	R 2.548
4.	Stage 4 – Documentation and Procurement	20%	R 103,774
5.	Stage 5 – Contract Administration and Inspection	35%	R 181,604
	Plus: Level 2B Construction monitoring		R 128,400
	Plus: Office Expenditure	50%	R 2,548
6.	Stage 6 – Close-Out	5%	R 25,943
7.	Subtotal excluding VAT		R 652,364

The total engineering fees and office expenditure for the project is **R 652,364 excluding 14% VAT.**

Do not hesitate to contact us should you have any queries or require further clarification. Alternatively if the proposal is accepted, please provide confirmation via works order for the commencement of the project.

Yours faithfully

Andries Zwiegers
Technical Director

Enc:

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Tax Invoice

VAT Reg no 4320106703

Stellenbosch Municipality

PO Box 17
Stellenbosch

Attention: Feziwe Ngquba

Invoice Number :	147979
Project :	113255
Client VAT number :	4700102181
Our Ref :	Order No: 329155
Your Ref :	
Invoice Date :	29-March-2017
Terms of Payment :	Net 30 Days
Payment Due By :	**28-April-2017**

Project Name: Watergang 277 sites, Stellenbosch

For Professional Services Rendered

(See the attached Invoice Schedule for more detail)

Total Current Billings :		145,518.00
Add 14.00% VAT Amount :		20,372.52
Amount Due This Invoice :	**ZAR**	**165 890.52**

Banking Details:

Please make all payments to:

Account Name:	Aurecon South Africa (Pty) Ltd
Bank:	ABSA
Branch and Code:	Hatfield 335545
Account Type:	Cheque
Account Number:	690144492

Please forward remittance advice to capetown@aurecongroup.com, quote all invoice numbers paid

Project Director: Zwiegers, AJ

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Tax Invoice

VAT Reg no 4320106703

Stellenbosch Municipality

PO Box 17
Stellenbosch

Attention: Feziwe Ngquba

Invoice Number :	149911
Project :	113255
Client VAT number :	4700102181
Our Ref :	Order No: 329155
Your Ref :	
Invoice Date :	09-May-2017
Terms of Payment :	Net 30 Days
Payment Due By :	**08-June-2017**

Project Name: Watergang 277 sites, Stellenbosch

For Professional Services Rendered

(See the attached Invoice Schedule for more detail)

Total Current Billings :		64,577.00
Add 14.00% VAT Amount :		9,040.78
Amount Due This Invoice :	**ZAR**	**73 617.78**

Banking Details:
Please make all payments to:

Account Name:	Aurecon South Africa (Pty) Ltd
Bank:	ABSA
Branch and Code:	Hatfield 335545
Account Type:	Cheque
Account Number:	690144492

Please forward remittance advice to capetown@aurecongroup.com, quote all invoice numbers paid

Project Director: Zwiegers, AJ

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Tax Invoice

VAT Reg no 4320106703

Stellenbosch Municipality

PO Box 17
Stellenbosch

Attention: Feziwe Ngquba

Invoice Number :	151575
Project :	113255
Client VAT number :	4700102181
Our Ref :	Order No: 329155
Your Ref :	
Invoice Date :	23-June-2017
Terms of Payment :	Net 30 Days
Payment Due By :	**23-July-2017**

Project Name: Watergang 277 sites, Stellenbosch

For Professional Services Rendered

(See the attached Invoice Schedule for more detail)

Total Current Billings :		106,322.00
Add 14.00% VAT Amount :		14,885.08
Amount Due This Invoice :	**ZAR**	**121 207.08**

Banking Details:

Please make all payments to:

Account Name:	Aurecon South Africa (Pty) Ltd
Bank:	ABSA
Branch and Code:	Hatfield 335545
Account Type:	Cheque
Account Number:	690144492

Please forward remittance advice to capetown@aurecongroup.com, quote all invoice numbers paid

Project Director: Zwiegers, AJ

STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

SUPPLY CHAIN MANAGEMENT UNIT

Enquiries: Ms. G Mettler E-mail scm.appeals@stellenbosch.gov.za Ref: 6/1/1 Tel: (021) 808 8025 Fax: (021) 886 6749

As per fax: 021 703 0868
As per email: tenders@maritzelectrical.co.za

Attention: Ms. C Jordaan

JT MARITZ ELECTRICAL
PO Box 18441
Wynberg
Cape Town
8000

Dear Sir/Madam

BID: BSM 14/18: THE SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF THE MV AND LV NETWORK INCLUDING PREPAYMENT METERS, READY BOARDS AND INTERNAL LIGHTING FOR THE KAYAMANDI, STELLENBOSCH, PHASE B AND PHASE C HOUSING PROJECTS.

Stellenbosch Municipality has accepted your offer dated **2017/09/22** for the tender amount of **R6 749 817.42 (VAT and 10% Contingency included)**, for the rendering of services as indicated in your Tender, subjected only to the terms and conditions embodied in the Tender specifications and the general conditions of contract.

Please note this award is subject to a 14 day objection period as per SCM regulation 49 as well as to a 21 day for any potential objections or complaints lodged against the decision made.

Please note the above provisions will run concurrently from the date of notification of the decision.

If there is any uncertainty regarding the scope of work, it should be addressed as soon as possible. Please liaise with Ms F Ngquba at the following number 021 808 8464.

Yours faithfully

pp .....
Municipal Manager
pp Financial Services

Date 8/12/17

ANNEXURE 3

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Your ref: Contract BSM 28/16
Our ref: 113255/AZ/3

25 September 2018

Ms Feziwe Ngquba
Project Manager: New Housing
Stellenbosch Municipality
PO Box 17
STELLENBOSCH
7599

Dear Madam

ELECTRICAL CONSULTING ENGINEERING SERVICES FOR THE WATERGANG 277 SITES, KAYAMANDI – CHANGE TO SCOPE OF WORKS

This letter is an update on our previous letters dated 2 July, 29 August and 10 September 2018 regarding the above. The update was requested by Lester van Stavel during a meeting dated 19 September 2018

This letter includes scope changes from the start of the Construction phase till 12th October 2018:

- The cost till 14th September 2018 is actual cost; and
- From 18 September to 12th October is an estimate based on the average cost for the previous 10 weeks. It could be assumed that these cost are fixed and will not increase.

The existing contract between Stellenbosch Municipality and Aurecon for the abovementioned service refers.

Aurecon believes the scope of works that is related to the above project have changed substantially since the start of the construction phase. The following is the main scope changes:

1. Compilation of Addendum 1 - Conditions of Contract between Stellenbosch Municipality (SBM) and Maritz Electrical (The Contractor). Aurecon was requested by SBM to compile the Addendum. The request was received after site was hand over.

2. Site Instruction 5 which has led to Variation Order No 1 –the revise orientation of dwellings on erven and revise layout of the internal electrical installation of dwellings. This is a design change after site hand over.

3. The processing and compilation of Variation Order No 2 – Additional LV Kiosks and LV cables for Phase A area that is related to the work for Phase C. This is a design change after site hand over.

4. The processing and compilation of Variation Order No 4 - Design change to LV Kiosks of Phase B & C. This is a design change after site hand over.

5. The processing and compilation of Variation Order No 3 – Contractor standing time claim from 23 May 2018 to 29 June 2018 since the Contractor abandon site due to civil unrest in Kayamandi.

6. Factory inspections and witness of factory acceptance tests on two miniature substations and the compilation of a report. This cost is not covered by ECSA normal engineering fees and remuneration is normally on a time and cost basis.

7. Factory inspections and witness of factory acceptance tests (still to be conducted) on LV Kiosks and the compilation of a report. This cost is not covered by ECSA normal engineering fees and is normally remunerated on a time and cost basis. The cost for this is not included yet as the inspections must still be conducted

8. Aurecon was requested to continue to Manage the Contract between SBM and the Contractor during the period that the Contractor is off-site (Standing time for the Contractor)

   This matter was discussed with you and Mr Jan Coetzee after the project monthly site meeting no 4 dated 5 June 2018. During this meeting, Aurecon was taught (after requested how to handle) to claim for the availability of the Clerk of Works during the "off site" period. We have rather chose for the option to deploy the Clerk of Works (under the supervision of a professional engineer) in the office to manage the contract during the "off-site" period. With this approach we ensure continuity of the project from a contractual and technical point of view.

   The Contractor (and Aurecon) is still off-site and it was indicated by Lester van Stavel that allowance be made that the site is re-enter the middle of October, after the fence erection is planned to be completed.

   > The contract management aspect of the project which has continue irrelevant that there are no site activities, includes the following duties and deliverables: Day to day correspondence, arrangement of meetings & compiling minutes of meetings, comments and approval of manufacturing drawings, witness factory acceptance tests and the compilation of report(s), process of contractor's payments, compilation of variation orders, compilation of revised cashflows, compilation of site instructions, communication on health and safety, etc.

   The status of the project is unusual as there are no site activities (for the last 17 weeks) and the project is almost "hanging" with no written confirmation on the way forward. Currently the project has a negative impact on Aurecon's finance due to the matters as detailed in item 1 to 8 above.

9. Financial Implication due to Additional Scope of Works

   The cost is based on time and cost and is divided in two schedules, Annexure A-1 for cost till 30th June 2018 and the 2nd schedule, Annexure A-2 from 1st July to 12th October 2018. The cost is compiled in a schedule format for clarity and to ease discussions.

- **Annexure A-1**: The total estimate additional cost till 30th June 2018 is R213,056 (VAT Excluded)
- **Annexure A-2**: The total estimate additional cost from 1st July 2018 till 12th October 2018 is R251,610.72 (VAT Excluded)
- **The Total Cost (Annex A1 + A2)** due to additional scope of works amounts to **R464,666.72** plus VAT

Part of Annexure A-2 cost is an estimate cost for the four weeks 18 September to 12th October. This was requested by Lester van Stavel and the calculation was based on the average cost of the previous 10 weeks. This cost amounts to R16,756.08 per week plus VAT or a total cost of R67,024.32 plus VAT

Aurecon understand the sensitivity regarding finances and the negative impact that can have on a working relationship. It is therefore our intention to handle this matter with care. Aurecon have discussed already some of the matters in Annexure A-1 with yourself and Jan Coetzee on the 19 Sept 2018 and agreement was achieved on some items.

Your favourable consideration and reply will be appreciated

Yours faithfully

Andries Zwiegers
Technical Director

Attachments: Annexure A-1 & A2 Rev 3 dated 21 Sept 2018

Copies: Lester van Stavel
Jan Coetzee
Emmanuel Namanya

Change Request Register (SCOPE CHANGE REGISTER)

ANNEXURE A-1 (till 30th June 2018)

Project Name: Watergang 277 sites

Project No.: 113255

Date: 21-Sep-18 | Revision Nr.: 3

CR Ref. No.		Description of Change	Date Submitted	Instruction Initiated by	Units	Quantity Reimbursables	Quantity Hours					Rate Reimbursable	Total Reimbursables	Total Eng Fees in ZAR	Comments
							Snr Elec Eng & Proj Lead	Electrical Engineer	CAD Operator	Clerk of Works					
							R 1,678	R 781	R 541	R 750					
A		**PHASE 1 - DESIGN STAGE**													
		SUB TOTAL A: TOTAL ADDITIONAL COST FOR PHASE 1 - DESIGN STAGE											R -	R -	
B		**PHASE 2 - TENDER / PROCUREMENT STAGE**													
		SUB TOTAL B: TOTAL ADDITIONAL COST FOR PHASE 2 - TENDER & PROCUREMENT											R -	R -	
C		**PHASE 3 - CONSTRUCTION STAGE**													
1		**Compilation of Contract Addendum 1:** **i.** Including emails to PM to identify the matter. ii. Compilation of Story line of the compilation of the tender document. iii. Communication to obtain SBM contractual criterias and various discussions and emails on the matter with Procurement, PM and Electrical Engineer. iv. Review and submit for approval. v. Follow-up communication on progress of signature of Addendum by both parties. vi. The implementation thereof.		**SBM - PM**			16	4						R 29,964,77	*Aurecon was requested by PM to draft an addendum to the tender contract conditions in order to administer the contract between SBM and Maritz Electrical.*
2		Design Changes during the Construction Phase:													*Design changes at the request of SBM during construction (modified house layout, LV kiosk and missing Phase C information), which Aurecon addressed*
	2.1	Site Instruction No 1 & 2 - Not to Install Service cables for the Phase C Area	**16-May**	SBM - Electrical			0	0						R -	*No extra cost, part of CoW duties on site*
	2.2	Site Instruction 3 & 4 - Trench backfill material specification & arrangements for inspection and approvals	**22-May**	Aurecon - CoW			0	0						R -	*No extra cost, part of CoW duties on site*
	2.3	Site Instruction 5 - revised electrical installation of houses due to revised orientation on erf and revised layout of houses. i. Discuss the matter on site to achieve a practical solution ii. Communication to obtain the latest drawing of the revise house drawings from the housing contractor. iii. Compilation of the revised electrical layout drawng. iv. Submit revised drawing to SBM Housing Department for comments and offical apporval. v. Compile and issue Site Instruction to Contractor including drawing-register and drawing vi. Compile and issue Variation Order No 1	**5-Jun**	SBM - Electrical			3	8	2					R 12,361.63	*Aurecon was requested to revise the design to ensure that the design is inline with the revise house orientation and revise internal layout of the houses*
	2.4	Site Instruction 5 - Position and orientation of LV Kiosk on side walks	**5-Jun**	SBM - Electrical			0	0	0					R -	*No extra cost - part of CoW duties*
	2.5	Site Instruction ## - Additional LV Kiosks and primary cables in the Phase A and part of Phase C Area works i. Identify the missing kiosks ii. Mark-up and update drawings and cable schedules iii. Reissue drawings iv Compile and issue Site Instruction v. Compile Variation Order no 2		SBM - Electrical			2	4	2					R 7,560.86	*Aurecon to revise the design as two LV kiosk of the Phase A did not exist. This is in contradiction to the information received from SBM during the detail design stage.*

	2.6	Site Instruction ## - Design changes to LV kiosks in Phase B&C. i. Meeting with Electrical team at SBM offices to discuss design change ii. Circuit breakers rating and configuration were changed. iii. Compile and issue revised drawings to SBM for comments and approval. Revise drawinga as per comments twice. Compile final drawings and issue to contractor. iv. Disccussion with CBI, PPS and Contractor to address the special design. v. Issue a site instruction. v. Compile and and Issue Variation Order No. 4		SBM - Electrical			4	18	4					R 22,929.65	*The design changes were iniciate by SBM-Electrical engineer*
	2.7	Issue of Variation Order No 3. Standing time for Contractor from 22 May to 29 June. i. Discussions and evaluation of Contractor claim ii. Meeting with Contractor at Aurecon office to discuss iii. Finalise the cost associated with the variation order and motivation					3	6	0					R 9,717.55	*To compile a variation order for stading time till end June 2018*
	2.8	Issue of Payment Certificate No 4 dated 29 June 2018. i. This was an additional Payment Certificate for June ii. The purpose of the payment was to process the cost before the end of the financial year					1	3	0					R 4,019.98	*Administration of and additional payment certificateas requested by SBM*
3		Factory Inspection (Mini-subs) i. Preperation and arrangements for the FAT ii. Inspection of 2 x minisubs iii. Witness the routine tests vi. Compilation of FAT Report v. Various emails on the accreditation of Powertech's test bay					11	14						R 29,384.69	*Factory Inspection and Test witnessing of mini-subs at PowerTech transformers Factory in Cape Town*
4		Factory Inspection (LV Kiosks)					0	0						R -	*Factory Inspection and Test witnessing of LV Kiosks at PPS Factory* *To be conducted after 1 July 2018*
5		Maintaining of Contract during the off-site period of Contractor due to Civil Unrest in Kayamandi since 22 May 2018: The contractor have abanden the site due to civil unrest till instructed by SBM - PM to re-enter the site when return to normal.		SBM - PM										R -	*During the off-site period of Contractor due to unsafe site conditions (Tue 22 May – to 30 June 2018*
	5.1	Week 1: 22 to 25 May					0	0	0	0				R -	*The Clerk of Works cost for this week is still claim as part of the orignal scope of works, therefore as prt of the original order. (this is like a transition week from normal project execution to standing time for the contractor)*
	5.2	Week 2: 28 May to 1 June					5.5	9	0	0				R 16,253.93	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc.* *The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
	5.3	Week 3: 4 to 8 June					10.5	22	0	0				R 34,792.22	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc.* *The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
	5.4	Week 4: 11 to 15 June					2.5	11	0	0				R 12,782.71	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc.* *The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
	5.5	Week 5: 18 to 22 June					8.0	8	0	0				R 19,667.14	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc.* *The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
	5.6	Week 6: 25 to 29 June					3.0	11	0	0				R 13,621.51	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc.* *The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
							30	61							
		SUB TOTAL C: TOTAL ADDITIONAL COST FOR PHASE 3 - CONSTRUCTION STAGE (Till 30 June 2018)											R -	R 213,056.64	
		TOTAL ESTIMATE COST CHANGE DUE TO SCOPE CHANGES (Sum Total A + B + C)											R -	R 213,056.64	

Change Request Register (SCOPE CHANGE REGISTER)

ANNEXURE A-2 (from 1st July to 12th October 2018)

Project Name: Watergang 277 sites

Project No.: 113255

Date: 21-Sep-18 | Revision Nr.: 3

CR Ref. No.		Description of Change	Date Submitted	Instruction Initiated by	Units	Quantity Reimbursables	Quantity Hours					Rate Reimbursable	Total Reimbursables	Total Eng Fees in ZAR	Comments
							Snr Elec Eng & Proj Lead R 1,841	Electrical Engineer R 854	CAD Operator R 593	Clerk of Works R 750					
C		PHASE 3 - CONSTRUCTION STAGE													
1		Maintaining of Contract during the off-site period of Contractor due to Civil Unrest in Kayamandi since 22 May 2018: The contractor have abanden the site due to civil unrest till instructed by SBM - PM to re-enter the site when return to normal		SBM - PM											*During the off-site period of Contractor due to unsafe site conditions (From 1st July 2018 onwards)*
	1.1	Week 7: 2 to 6 July					15.5	16	0	0				R 42,202.80	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.2	Week 8: 9 to 13 July					2.5	0	0	0				R 4,602.00	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project.*
	1.3	Week 9: 16 to 20 July					0	10	0	0				R 8,544.00	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.4	Week 10: 23 to 27 July					4.50	4	0	0				R 11,701.20	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.5	Week 11: 30 July to 3 Aug					4.25	5	0	0				R 12,095.40	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.6	Week 12: 6 to 10 Aug					3	0	0	0				R 5,522.40	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.7	Week 13: 13 to 17 Aug					3.5	10	0	0				R 14,986.80	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.8	Week 14: 20 to 24 Aug					3.75	8	0	0				R 13,738.20	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.9	Week 15: 27 to 31 Aug					9.5	0	0	0				R 17,487.60	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.10	Week 16: 3 to 7 Sept					12.0	13	0	0				R 33,196.80	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
	1.11	Week 17: 10 to 14 Sept					6.5	10	0	0				R 20,509.20	*Aurecon continue with the normal duties of Contract Management including meetings, minutes, payments, correspondence, comments and approval of drawings, etc. The Clerk of Works was deploy in the office as electrical engineer to manage the contract and was overseer by the Pr Eng who was responsible for project to ensure compliance and continuity of the project*
											TOTAL EXPENDITURE ON ACTUAL HOURS			R 184,586.40	
	1.12	Week 18: 18 to 21 Sept					5.9	6.9						R 16,756.08	*Estimate cost as requested during meeting with Lester van Stavel on 19 Oct. The hrs are the average for previous 11 weeks*
	1.13	Week 19: 24 to 28 Sept					5.9	6.9						R 16,756.08	*Estimate cost as requested during meeting with Lester van Stavel on 19 Oct. The hrs are the average for previous 11 weeks*
	1.14	Week 20: 1 to 5 Oct					5.9	6.9						R 16,756.08	*Estimate cost as requested during meeting with Lester van Stavel on 19 Oct. The hrs are the average for previous 11 weeks*
	1.15	Week 21: 8 to 12 Oct					5.9	6.9						R 16,756.08	*Estimate cost as requested during meeting with Lester van Stavel on 19 Oct. The hrs are the average for previous 11 weeks*
											ESTIMATE TOTAL COST			R 67,024.32	*The cost is based on average hours*
		SUB TOTAL C: TOTAL ADDITIONAL COST FOR PHASE 3 - CONSTRUCTION STAGE (1st July to 12 October 2018)												R 251,610.72	

ANNEXURE 4

rejected. The consultant who has submitted the highest ranked technical proposal should be selected and invited to negotiate a contract.

5.9.3 Least-cost selection

5.9.3.1 This method is more appropriate to selection of consultants for assignments of a standard or routine nature (audits, noncomplex projects, and so forth) where well-established practices and standards exist and in which the contract amount is small. Under this method, a "minimum" qualifying mark for the "functionality" is established. Proposals to be submitted in two envelopes are invited. Technical envelopes are opened first and evaluated. Those securing less than the minimum mark should be rejected and the financial envelopes of the rest are opened in public. The firm with the highest points should then be selected. Under this method, the qualifying minimum mark should be established, keeping in view that all proposals above the minimum compete only on "cost" and promotion of HDIs and RDP objectives. The minimum mark to qualify should be stated in the RFP.

5.9.4 Selection based on consultants' qualifications

5.9.4.1 This method may be used for very small assignments for which the need for preparing and evaluating competitive proposals is not justified. In such cases, the accounting officer should prepare the TOR, request expressions of interest and information on the consultants' experience and competence relevant to the assignment and select the firm with the most appropriate qualifications and references. The selected firm should be requested to submit a combined technical-financial proposal and then be invited to negotiate the contract.

5.9.5 Single-source selection

5.9.5.1 Single-source selection of consultants does not provide the benefits of competition in regard to quality and cost and lacks transparency in selection and could encourage unacceptable practices. Therefore, single-source selection should be used only in exceptional cases. The justification for single-source selection should be examined in the context of the overall interests of the client and the project.

5.9.5.2 Single source selection may be appropriate only if it presents a clear advantage over competition

- for tasks that represent a natural continuation of previous work carried out by the firm,
- where a rapid selection is essential (for example, in an emergency operation),
- for very small assignments, or
- when only one firm is qualified or has experience of exceptional worth for the assignment.

5.9.5.3 The reasons for a single-source selection should be recorded and approved by the accounting officer or his / her delegate prior to the conclusion of a contract.

5.9.5.4 When continuity for downstream work is essential, the initial RFP should outline this prospect and if practical, the factors used for the selection of the consultant should take the likelihood of continuation into account. Continuity in the technical approach, experience acquired and continued professional liability of the same consultant may make continuation with the initial consultant preferable to a new competition, subject to satisfactory performance in the initial assignment. For such downstream assignments, the accounting officer should ask the initially selected consultant to prepare technical and financial proposals on the basis of TOR furnished by the accounting officer, which should then be negotiated.

5.9.5.5 If the initial assignment was not awarded on a competitive basis or was awarded under tied financing or reserved procurement or if the downstream assignment is substantially larger in value, a competitive process acceptable to the accounting officer should normally be followed in which the consultant carrying out the initial work is not excluded from consideration if it expresses interest.

5.9.5.6 Where, in exceptional instances, it is impractical to appoint the required consultants through a competitive bidding process and a South African based consultant is used, the *Guidelines on Hourly Fee Rates for Consultants* issued by the Department of Public Service and Administration may be used as a benchmark to establish the appropriate tariffs, or to determine the reasonableness of the tariffs.

7.7	**PARKS, OPEN SPACES AND ENVIRONMENT: (PC: CLLR N JINDELA)**

7.7.1	**DRAFT PARADYSKLOOF NATURE AREA ENVIRONMENTAL MANAGEMENT PLAN**

Collaborator No:
IDP KPA Ref No:
Meeting Date: **17 October 2018**

1. SUBJECT: DRAFT PARADYSKLOOF NATURE AREA ENVIRONMENTAL MANAGEMENT PLAN

2. PURPOSE

The draft Paradyskloof Nature Area Environmental Management Plan (EMP) (September 2018) (**ANNEXURE 1**) has been prepared to establish a distinct vision and overarching goal for the management of the Paradyskloof Nature Area in context off, and giving effect to, the relevant legislation and associated regulations. The purpose of this item is to acquire Council's approval to advertise the draft Paradyskloof Nature Area EMP for public input.

3. DELEGATED AUTHORITY

Council.

4. EXECUTIVE SUMMARY

Paradyskloof Nature Area (NA), an approximately 550 ha area consisting of Portion 2 of Farm 368 and portions of Farms 369 and 366 (municipal property), is situated on the south-eastern edge of Stellenbosch town above the neighbourhoods of Brandwacht and Paradyskloof. Most of the area (with specific reference to the northern and eastern, mountainous, area) is in a natural state with ±40 ha of mature pine still left within the old forestry area. The vegetation type of Paradyskloof NA is Cape Winelands Shale Fynbos and is a vulnerable terrestrial ecosystem.

The area is currently used for a range of outdoor recreational activities, research, events as well as for service delivery purposes. With regards to the latter a number of municipal infrastructure, including a water treatment works and reservoir, is located within the above area. Recently the clubhouse within the Paradyskloof NA has been refurbished by the Municipality.

Because of the area's ecological value, its value as public resource and its vulnerability to degradation due to past and present use it is important that an overarching management plan for the area be put in place to ensure that the Paradyskloof NA is managed in a sustainable manner. The proposed Paradyskloof Nature Area EMP is to serve this purpose.

5. RECOMMENDATIONS

(a) that Council approves the advertisement of the draft Paradyskloof Nature Area Environmental Management Plan (September 2018) for a period of 21 days for public input; and

(b) that the inputs received during the above public participation process be worked into a final draft Paradyskloof Nature Area Environmental Management Plan to be presented to Council for approval.

6. DISCUSSION / CONTENTS

6.1 Background

Stellenbosch Municipality is located within an area that forms part of the world-renowned Cape Floral Kingdom, internationally recognised as one of the six Floral Kingdoms of the world. The Cape Floral Kingdom is the smallest, covering a mere 0,06% of the earth's surface, and is the only Floral Kingdom contained in its entirety within a single country. The Cape Floral Kingdom is characterised by its exceptional richness in plant species and its high endemicity. The Cape Floral Kingdom is of immense scientific importance, both nationally and internationally. It covers only 4% of South Africa, but contains 45% of all plant species of Southern Africa.

The Municipality owns various tracts of land that can be described as natural or nature areas. Most of these areas are old forestry areas, such as the Paradyskloof NA, situated within or on the foothills of the local mountain ranges. Some of these areas house some municipal infrastructure but, with the phasing out of forestry, are mostly vacant, being rehabilitated back to its natural state.

Some of the threats or challenges facing the Municipality in managing these areas include:

Access control: Uncontrolled access poses various threats, mainly in terms of security (crime prevention), managing the risk of fire and vandalism.

Misuse and misunderstanding: The use of the relevant areas was primarily focused around the *instrumental* value of the site, which implies that the site has essentially been considered a mere resource utilised for forestry, infrastructure and recreational activities. These land-uses have caused degradation of the visual integrity and ecology of the various sites.

Fire: Given the nature of the ecology of the area within which the Municipality is located, the presence of biomass (especially in the old forestry area), challenges with access control most of these areas pose a risk of fire.

Infestation of alien vegetation: The infestation of alien plant species is a significant threat to the ecology and visual quality of the nature areas of Stellenbosch Municipality. The alien vegetation (which is a legacy of former forestry-related land uses) has resulted in a modified floral composition which is conducive to high-intensity fires.

The core value of these areas are the ecosystem goods and -services it provides to the area and its surroundings. It is therefor important that these areas be managed to address the challenges listed above, to maximize the value of these areas a resource and ensure sustainability.

6.2 Discussion

The Paradyskloof Nature Area EMP (September 2018) (Annexure A) has been prepared to establish as distinct vision and overarching goal for the management of the Paradyskloof Nature Area in context off, and giving effect to, the relevant legislation and associated regulations.

The EMP consists of management strategies and guidelines for the management of the area under the following themes:

- Administration
- Environmental Protection
- Land Use Management
- Environmental Auditing

6.3. Financial Implications

There is no direct financial implication should the recommendations as set out in this report be accepted.

The purpose of this item is to acquire Council's approval to advertise and request public comment on the draft EMP. Other than advertisement fees the execution of the above recommendation will have no financial implications to Council.

6.4 Legal Implications

The recommendations in this report comply with Council's policies and applicable legislation.

6.5 Staff Implications

This report has no staff implications for the Municipality.

6.6 Previous / Relevant Council Resolutions

No previous Council Resolutions in this regard.

6.7 Risk Implications

This report has no risk implications for the Municipality.

6.8 Comments from Senior Management

This Item was circulated to all directorates on 17 September 2018 for comment. Should Council accept the proposed resolution listed under #5 above, the Draft EMP will again be circulated to the various directorates for comment during the public participation process.

6.8.1 Director: Infrastructure Services

Provision must be made for a possible transport link (public road with cycle and pedestrian facility) in the vicinity of the north western boundary near the Welgevallen suburb, or, alternatively, amend the extents of north western boundary near the Welgevallen suburb to allow for a reserve for a public road.

Point 4.3.3 (d) that states that the clearing of new roads for recreational purposes are not permitted. Allowance should be made whereby a process can be followed for the purposes of constructing a new recreational road – should the need arise.

6.8.2 *Municipal Manager*

Document to be advertised for a period of 21 days.

ANNEXURES

Annexure 1: Draft Paradyskloof Nature Area Environmental Management Plan (Sep 2018)

FOR FURTHER DETAILS CONTACT:

NAME	Schalk van der Merwe
POSITION	Environmental Planner
DIRECTORATE	Community and Protection Services
CONTACT NUMBERS	021 808 8679
E-MAIL ADDRESS	schalk.vandermerwe@stellenbosch.gov.za
REPORT DATE	10 October 2018

ANNEXURE 1

CONSULTATIVE DRAFT

PARADYSKLOOF NATURE AREA

ENVIRONMENTAL MANAGEMENT PLAN

September 2018

STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

FIGURES

TABLES

1 INTRODUCTION

1.1 PURPOSE

The purpose of this Environmental Managament Plan (EMP) is to establish as destinct vision and overarching goal for the management of the Paradyskloof Natura Area (from heron refered to as the Paradyskloof NA or simply the NA) in context off, and giving effect to, the relevant legislation and associated regulations. Accordingly, the primary aims of this EMP include the following:

a) Facilitating the rehabilitation and long-term conservation of the Paradyskloof NA.
b) Promotion of a conservation ethos in the minds of the people of the area and the general public with the objective to create a shared responsibility to maintain the health, diversity and productivity of the area in a spirit of stewardship and caring.
c) Implementation of management practices that will benefit current and future generations.
d) Provision of sustainable outdoor recreational opportunities in the area.
e) Ensuring that future growth and development proposals for Stellenbosch are compatible with the vision, goals and objectives for the area and associated ecological systems.

1.2 VISION

In order to balance the conservation requirements of the Paradyskloof NA with the aspirations of all stakeholders and the place-specific environmental, social and economic constraints, the following vision is set for the area:

<u>To manage and protect the Paradyskloof NA as a functional and safe area that is recognised for its ecological and community-supporting functions.</u>

1.3 OVERARCHING GOAL

The over-arching goal of the Paradyskloof NA is to contribute towards environmental sustainability and the conservation of biodiversity as a prerequisite for the latter. This EMP builds on the recognition that for biodiversity conservation to succeed, the maintenance of environmental integrity (as defined by ecological, economic and social criteria) must be one of the primary determinants of land-use planning and the management.

Sustainability, under present circumstances, cannot be achieved without any form of management intervention and that such investment has to be financed to a significant extent. Accordingly, sustainable development projects or use within the area should ideally contribute towards the required financing of management activities in a spirit of partnership.

The CSIR (2002) states that sustainable development should *improve the state of any given situation.* Sustainable development requires a long-term, integrated, systems approach pertaining to economic, environmental, and social issues. Fostering a strong sense of community and building partnerships and consensus among key stakeholders are important elements of sustainable development (CSIR, 2002). The International Union for the Conservation of Nature (IUCN) defined sustainable development as '*development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs*'.

The International Institute for Sustainable Development (IISD) (1995) states that sustainable development occurs at the intersection of three global imperatives, namely *human well-being, environmental integrity* and *economic efficiency*. The interactive model of sustainability illustrates that sustainable development occurs where the three imperatives interact within an 'interactive zone' (Figure 1). Development outside this 'interactive zone' will not be sustainable. Mebratu (1998).[1] The EMP builds on the following understanding of the three global imperatives:

Figure 1: The interactive model of sustainability (Adapted from Mebratu, 1998).

1.3.1 Human Well-Being

Human well-being refers to both *material* and *spiritual* well-being. Material well-being refers to the absence of poverty. Spiritual well-being *inter alia* refers to the absence of inequality and being in a position to obtain new powers, emotionally, intellectually and physically and to be able to play a meaningful role in promoting and achieving sustainable development. It is recognised that the Paradyskloof NA has a significant impact on the well-being of the people of Stellenbosch and surroundings in terms of a number of important aspects.

1.3.2 Environmental Integrity

Environmental integrity refers to the relative '*wholeness*' of the environment. 'Environment' is defined as the aggregate of all external conditions and influences affecting the life of an organism. Environmental integrity is determined by the *value* of the environment or place (natural or human-made), with specific reference to its intrinsic, systemic, and/or instrumental value. The EMP builds on the recognition that the human-made environment is located within and 'contained' by the natural environment. The manner in which human settlements are developed, therefore, has an immense impact on the quality and integrity of the environment as a totality. It is therefore imperative that the human-made environment be planned, designed and developed in a manner that will ensure the maintenance of the values referred to above (i.e. intrinsic, systemic, and/or instrumental value). From a natural environmental perspective, ecological integrity is a key factor in the sustainable development equation. Ecological integrity *inter alia* requires that biodiversity is protected and essential ecological processes and services (e.g. water yield and quality, soil conservation, decomposition, etc.) are maintained. *Environmental health* is the key to sustainable development. The primary threat to environmental health is fragmentation of community-supporting ecosystems. Fragmentation generally leads to a cycle of environmental degradation, which subsequently influences the well-being of the dependent communities.

1.3.3 Economic Efficiency

Economic efficiency is understood as *the optimisation of benefit at the lowest cost*. It includes the innovative and efficient use of available resources. The Paradyskloof NA is an important public

[1] Mebratu, D. 1998: Sustainability and sustainable development: Historical and conceptual overview. *Environmental Impact Assessment and Review*, 18:493-520.

resource that has to be managed for the benefit of all concerned and in terms of best-practice management strategies in order to ensure efficiency.

2 PLANNING CONTEXT

Stellenbosch Municipality (from hereon also thefered to as the Municipality) has directed that the bioregional planning approach advocated by the Provincial Government of the Western Cape through its Bioregional Planning Policy and comprehensively described in the *Manual for application of Bioregional Planning in the Western Cape* (PGWC, 2003) be adopted in municipal planning projects.

The Municipality recognises that one of the critical determinants of the success of an EMP planned in term of the bioregional planning approach is the extent to which all spheres of government co-operate and co-ordinate their activities as it relates to the subject area. This EMP therefore gives effect to the requirement that the planning and management of land units should be undertaken within the context of distinct levels, namely the *national level, provincial level* and the *local level.*

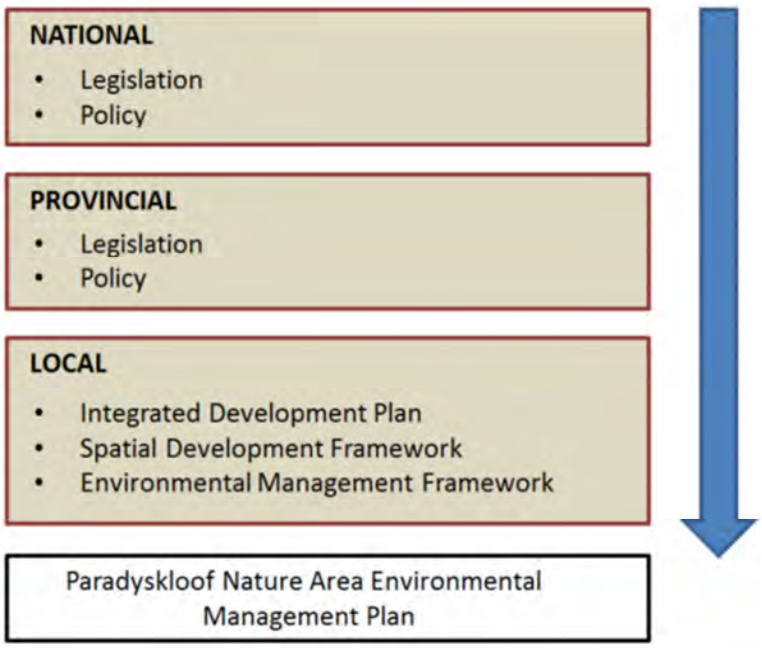

Figure 2: Planning levels applicable to the Paradyskloof Nature Area EMP.

Effective integrated planning at these levels requires innovative forms of institutional integration and co-operation. Dialogue amongst all stakeholders, participatory planning and institutional flexibility are, therefore, essential to plan and manage effectively.

The Paradyskloof NA EMP responds to the relevant legislation, policy and regulations, the most important of which are summarised below.

2.1 NATIONAL

2.1.1 South African Constitution

The South African Constitution, 1996 (Act 108 of 1996) places an obligation on all to ensure that sustainable development is promoted and that the integrity of the environment is respected. In Section 24(b)(iii) of the Bill of Rights chapter of the Constitution, it is stated that 'everyone has the right to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that secure ecologically sustainable development and use of natural resources, whilst promoting justifiable economic and social development'.

2.1.2 National Environmental Management Act

Section 28 of the National Environmental Management Act, 107 of 1998 (NEMA), creates a general duty of care on every person to *take reasonable measures to prevent significant pollution or degradation of the environment from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment*. The Act provides for the preparation of environmental management plans by the relevant departments involved in the management of the environment.

2.1.3 National Environmental Management: Biodiversity Act

The National Environmental Management: Biodiversity Act, 10 of 2004 (NEMBA) has the following objectives:

a) To provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998 (Act 107 of 1998).
b) To provide for the protection of species and ecosystems that warrant national protection.
c) To provide for the sustainable use of indigenous biological resources.
d) To provide for the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources.

2.1.4 National Water Act

The purpose of the National Water Act, 36 of 1998, is to ensure that South Africa's water resources are protected, used, developed, conserved and controlled in a manner that takes into account, amongst others, basic human needs, equitable access thereto, the promotion of efficient, sustainable and beneficial use of water, facilitation of social and economic development, and protection of aquatic and associated ecosystems.

2.1.5 National Veld And Forest Fire Act

Veld fires in South Africa are dealt with under the National Veld and Forest Fire Act, 101 of 1998. The purpose of the National Veld and Forest Fire Act is *to prevent and combat veld, forest and mountain fires throughout the Republic*. The Act places the duty on land owners to make provision for the management of veld fires on their own land. Failure to do so may result in penalties being enforced

and claims lodged against a landowner if the above Act's requirements were not met. In terms of the National Veld and Forest Fire Act the following responsibilities apply to landowners:

a) *The landowner on whose land a fire may start, or from whose land it may spread across boundaries, must have in place:*
   - *Such equipment, protective clothing and trained personnel required to extinguishing such fire as may occur as prescribed in the FPA* (Fire Protection Association) *regulations.*
   - *If there are no regulations applicable, then as reasonably required in the circumstances.*
   - *Take all reasonable steps to notify the Fire Protection Officer (FPO) of the local FPA should a fire break out.*
   - *Do everything in their reasonable power to stop the spread of the fire.*

b) *The Act also requires that should the owner be absent, a known and identified other person responsible needs to be present on or near this land to:*
   - *Extinguish a fire if one breaks out, or assist or instruct others to do so.*
   - *Take all reasonable steps to alert the neighbours and the FPO.*
   - *The owner may appoint an agent to act on his or her behalf to perform these duties.*

2.1.6 National Heritage Resources Act

South Africa' heritage are dealt with under the National Heritage Resources Act, 25 of 1999 which aims to *promote good management of the national estate, and to enable and encourage communities to nurture and conserve their legacy so that it may be bequeathed to future generations.*

2.1.7 Conservation of Agricultural Resources Act

The purpose of the Conservation of Agricultural Resources Act, 43 of 1980 (CARA) is to provide control over the utilization of the natural agricultural resources in order to promote the conservation of soil, water sources and the vegetation and the combating of weeds and invader plants.

2.1.8 Spatial Planning and Land Use Management Act

The Spatial Planning and Land Use Management Act, 16 of 2013 (SPLUMA), includes the following stipulations:

Land use planning principles and objectives
Section 59 (4): To promote environmental integration in land use planning, a competent authority must—

a) *strive towards ecologically, socially and economically sustainable development, taking into account —*
   - *(i) the economic potential of the relevant area or region;*
   - *(ii) biodiversity;*
   - *(iii) social needs;*
   - *(iv) cultural heritage resources;*
   - *(v) agricultural resources*

b) *ensure that development heeds the natural processes that control the relevant area;*

c) *strive to achieve development that is harmonised with the ecological characteristics of the environment;*

d) promote the conservation and management of biodiversity;
e) discourage development in unsuitable environments such as —
(i) areas with a high water table;
(ii) swamps;
(iii) flood plains;
(iv) steep slopes;
(v) areas sensitive to drift-sands and sea-level rise;
(vi) areas with high biodiversity importance;
(vii) areas with important cultural and scenic landscapes –
f) minimise the fragmentation of natural habitat in ecological corridors and areas with high biodiversity importance;
g) facilitate soil conservation and the control of pollution;
h) address the land use implications of —
(i) the provision and conservation of energy;
(ii) the management of the demand for energy;
(iii) climate change mitigation and climate change adaptation strategies;
i) protect the cultural heritage and tourism resources of the Municipality.

2.2 PROVINCIAL

2.2.1 Constitution of the Western Cape Province

The EMP supports and gives effect to the Constitution of the Western Cape, Act 1 of 1998. In terms of Chapter 10 of the Constitution, this province has to adopt and implement strategies to actively promote and maintain the welfare of the people and the environment of the Western Cape, including policies aimed at achieving inter alia the following:

a) Safety and security.
b) The protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination.
c) The promotion of a market-orientated economy.
d) The development of rural communities and the promotion of the welfare of rural workers.
e) The protection of the environment of the Western Cape, including its unique fauna and flora, for the benefit of present and future generations.
f) The protection and conservation of the natural historical, cultural historical, archaeological and architectural heritage of the Western Cape for the benefit of present and future generations.

2.2.2 Western Cape Provincial Spatial Development Framework

The Western Cape Provincial Spatial Development Framework (generally referred to as the PSDF) is aligned with the National Spatial Development Perspective (NSDP) and other national policy frameworks, and endorses the vision of the Western Cape Provincial Government to create *'A Home for All'.* The PSDF is purported to support the development growth path paved by the iKapa Elihlumayo Strategy and the other lead strategies.

2.2.3 Provincial Bioregional Planning Policy

As stated above, the PGWC is advocating a bioregional planning approach as described in the *Manual for application of Bioregional Planning in the Western Cape* (PGWC, 2003). The Stellenbosch Municipality has adopted the said approach for the planning, development, and management of its area of jurisdiction.

2.3 LOCAL

2.3.1 Stellenbosch Integrated Development Plan

The Stellenbosch Integrated Development Plan (IDP) includes a needs-analysis, which puts forward a number of needs for each paricular area within the municipality.

2.3.2 Stellenbosch Spatial Development Framework

The primary goal of the Stellenbosch Spatial Development Framework (SDF) is to give practical effect to the mission statement of the people of the local municipal area, as expressed in the SDF of the Stellenbosch Municipality, namely: *'The spatial development framework of the Stellenbosch Municipality should be measured by the 'triple bottom line' of economic efficiency, environmental sustainability and social justice with an emphasis on the issues facing the rural and urban poor.'*

2.3.3 Stellenbosch Environmental Management Framework

The Stellenbosch Environmental Management Framework (SEMF) is Stellenbosch Municipality's strategic environmental management policy that responds to and complies with the relevant statutes and directives. As such, the SEMF serves as a:

a) Spatial and strategic supplement to the SSDF.
b) Policy for ensuring environmental sustainability and for the aligning/integrating land-use activities in accordance with defined sustainability objectives.
c) Strategy towards enhancing the well-being of the people and the environment of the Municipality by providing for:
    (i) A uniform, effective and comprehensive system of environmental planning and management throughout the Municipality.
    (ii) Environmental and sustainability principles, norms and standards.
    (iii) Sustainable and efficient use of land and other forms of environmental capital.
    (iv) Providing for cooperative governance and intergovernmental relations within the sphere of the Municipality and between the latter and all other institutional spheres and the private sector.
d) A compilation of and alignment directive for the strategies and plans of the various sectoral departments and directorates of the Municipality.

2.3.4 Stellenbosch Municipality: By-Law Relating To Plantations, Parks, Gardens, Recreational Facilities And Nature Reserves (P.N. 373/1988)

According to the above by-law *no person shall in or on premises, buildings, land, plantations, a commonage, enclosures, nature reserves, parks, gardens, open erven and spaces, picnic areas, nurseries, trees, sport and recreation facilities which are vested in or under control of the Council –*

(a) disfigure or deface any post, railing, fence, seat, barrier, gale, notice board, plate, house, building, shed, urinal, closet, flag, mark or other article or thing by pasting thereon or affixing thereto in any way any bills, papers, placards or notices or by cutting, writing, stamping, painting, drawing or marking thereon in any way whatsoever,

(b) remove, destroy, damage or deface any notice or sign

(c) make a fire or commit any acts whereby a fire may be caused, except in places where fireplaces are provided;

(d) saw, cut, gather, remove dig up, burn, pick or break any timer, tree, shrub, brushwood, fencing, pole, lawn, plants, fruits, flower or equipment, or climb therein or thereon or damage it in any way;

(e) remove or disturb any soil or water at a place other than that specially provided by Council;

(f) erect or cause to be erected any post, rail, fencing, tent, screen, stand, swing, building or construction of whatever nature without the written permission of the Council;

(g) park, drive, ride pull or propel any type of vehicle except a manually operated wheelchair or perambulator when used for the conveyance of an invalid or a child;

(h) leave any refuse, building waste, rubbish, paper, materials or any object except in containers provided for that purpose;

(i) injure, kill, hunt, capture, or disturb any animal or bird, or damage or destroy the nest or eggs of any bird or interfere with the animal life in any other way;

(j) break, damage, hurt, destroy, disfigure or remove any flora, fauna or nest of fauna or objects of historical or scientific interest or any property in the nature reserve;

(k) introduce any flora, fauna, weapon, trap, net, explosive or poison into the nature reserve, or be in possession thereof in the nature reserve;

(l) fire a fire-arm or an air-gun, discharge any firework, catapult or sling or throw a stone or other missile;

(m) in any other way cause a nuisance, obstruction, disturbance or annoyance to the public, to brawl, fight, swear or use obscene, indecent or improper language, gamble, beg, behave in an indecent or offensive manner or drink intoxicating liquor;

(n) sell or offer for sale or hire, or hawk or exhibit any article or distribute any pamphlet, book, handbill, or other matter;

(o) present any public entertainment;

(p) play a musical instrument, and

(q) deliver or say any speech, public address or prayer of whatever nature or sing any song or hold or participate in any public meeting or function unless he has previously obtained the written permission of the Council to do so;

(r) enter upon any ablution or sanitary conveniences indicated as having been provided for persons of the opposite sex;

(s) enter or leave other than by an entrance or exist provided for that purpose, or

(t) refuse to leave when requested to do so by an authorised officer of the Council or a member of the South African Police;

(u) wash any article or animal under a tap, in a pond, fountain or in an ornamental pond or otherwise pollute water, or

(v) swim in a dam or wash any clothes or other things or pollute the water therein in any other manner, and

(r) perform any act whatsoever which may injure persons, damage or destroy any property.

3 PROPERTY DESCRIPTION

3.1 LOCATION

The Paradyskloof NA is located within Stellenbosch Municipality (refer to Figure 3) on the south-eastern edge of the town of Stellenbosch. It is bordered by University of Stellenbosch oened farm land and nature areas to the north, Stellenbosch Mountain to the east and privately owned farm land to the south.

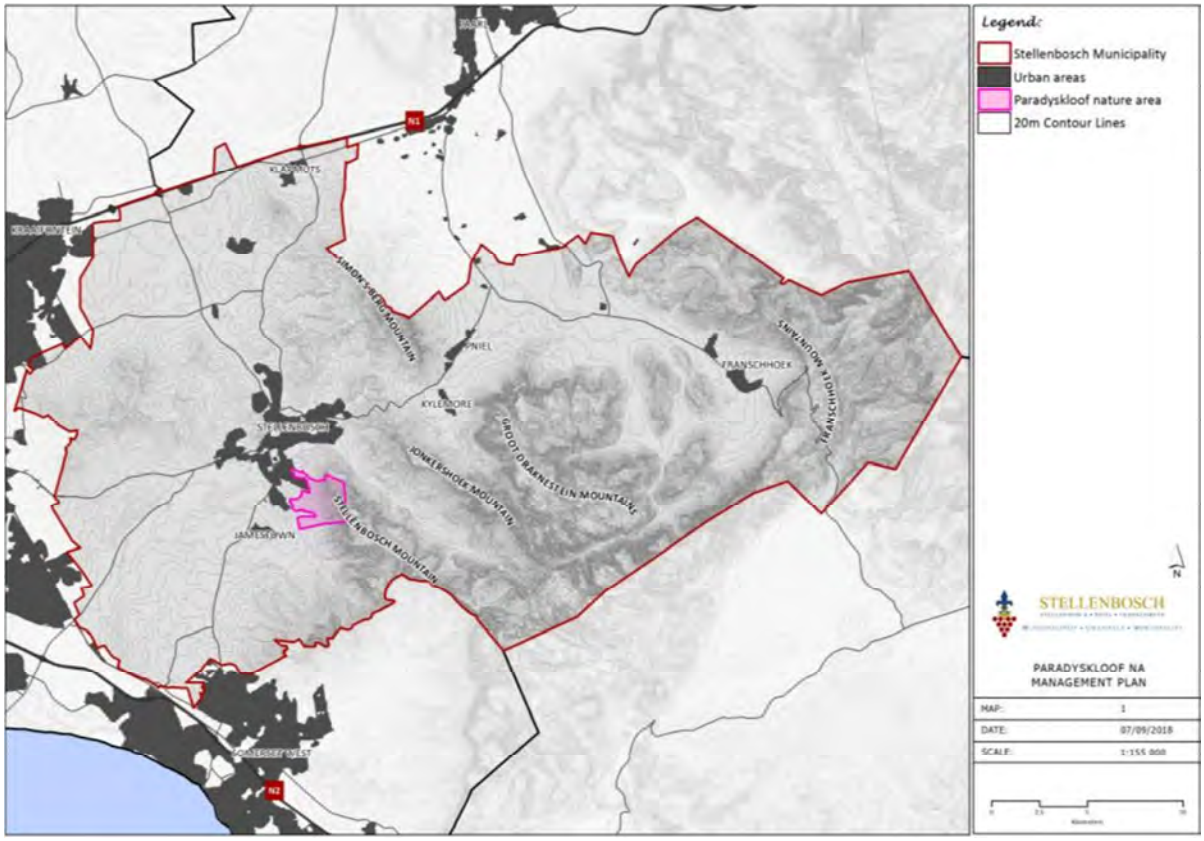

Figure 3: Paradyskloof nature area in context of Stellenbosch Municipality

To the west the area is bordered by the Paradyskloof- and Brandwacht neigbourhoods of Stellenbosch town and land used for farming purposes (Figure 4). The area consist of Portion 2 of Farm 368, and portions of Farms 369 and 366 with a total area of approximately 550 ha. The relevant property is municipal owned land and zoned for agricultural purposes.

The eastern, mountainous, half of the area has always been kept in a natural state with the western half largely used for forestry. Most of the timber have, however, been harvest with an approximately 40 ha portion still planted with pine trees.

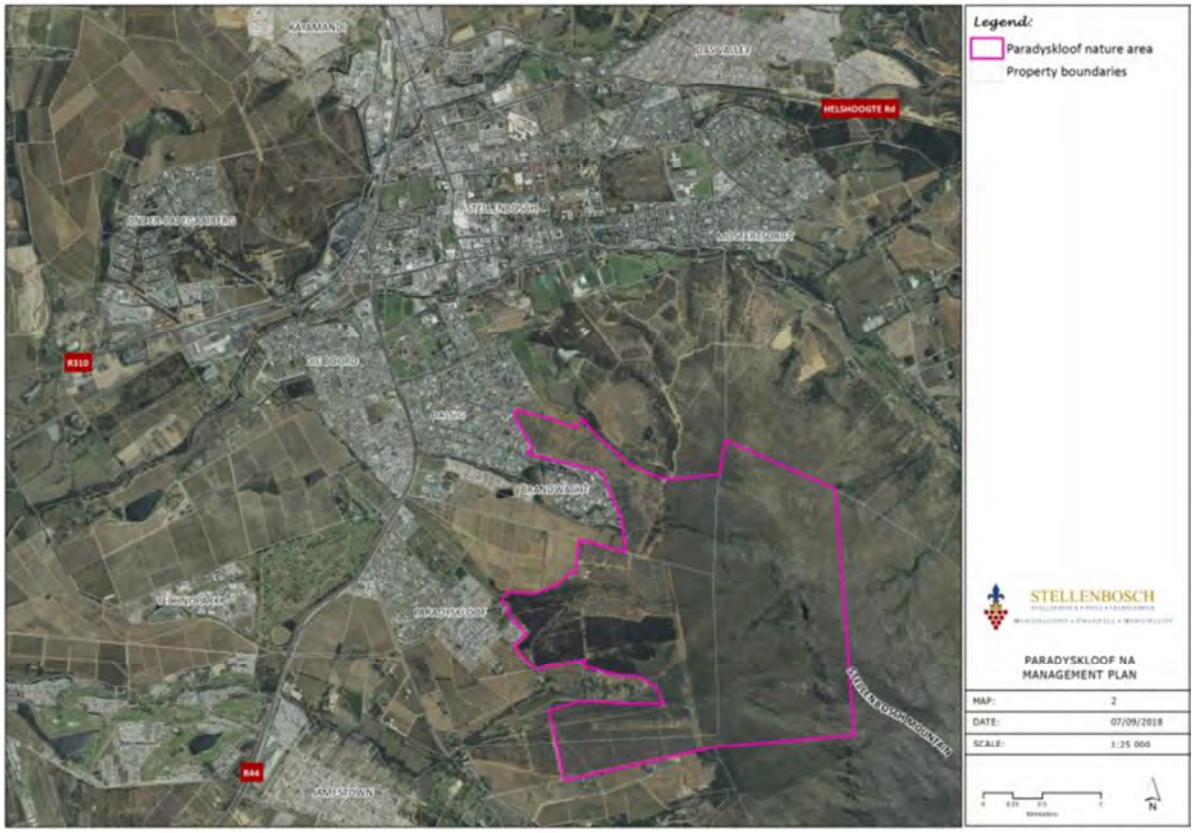

Figure 4: Paradyskloof NA in context of Stellenbosch town

3.2 LANDSCAPE PERSPECTIVE

The Paradyskloof NA forms part of the Cape Winelands Biosphere Reserve (CWBR) which was approved by United Nations Educational, Scientific and Cultural Organization (UNESCO) and included in the World Network of Biosphere Reserve during 2007. The Paradyskloof NA forms part of a system of nature- and/or protected areas that collectively form the core and buffer areas of the CWBR. This system is based upon the principle that a system of protected areas is a key element of any strategy to maintain biodiversity and ecosystem functions on a larger regional scale. It is imperative that such a system be designed and managed to represent and protect the diversity of ecological processes, communities, species and gene pools (Global Biodiversity Strategy, 1992).

Various protected areas in the proximity of the Paradyskloof NA include the Papegaaiberg Nature Reserve, Jan Marais Nature Reserve, Jonkershoek Conservancy, Bottelary Hills Renosterveld Conservancy, Hottentots-Holland Nature Reserve, Koopmanskloof Private Nature Reserve and Simonsberg Nature Reserve (Figure 5).

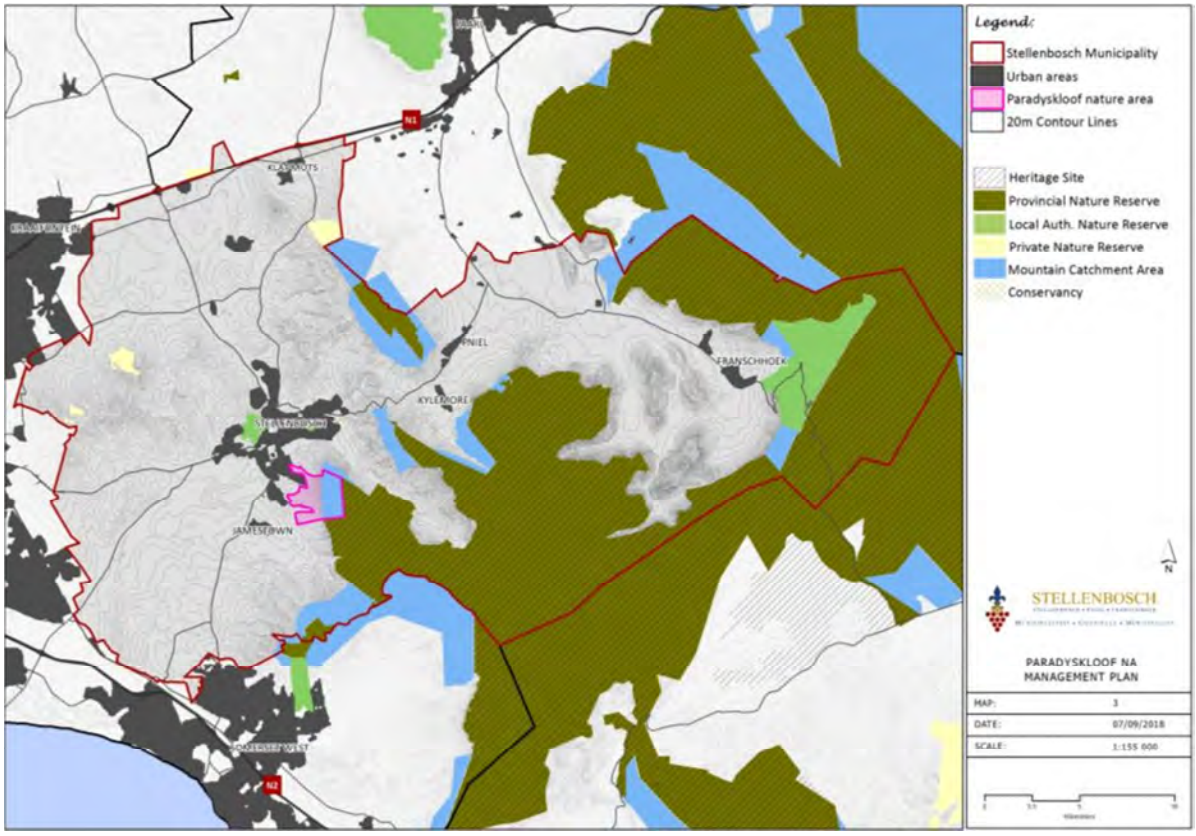

Figure 5: Paradyskloof NA in context of surrounding protected areas

3.3 BIOPHYSICAL CHARACTERISTICS

3.3.1 Climate

Stellenbosch has a typically Mediterranean climate. Summers are dry and warm to hot. Daytime temperatures range from 24°C to 35°C, with some February and March days rising to over 40°C. A south easterly wind often blows in summer bringing cooler air from the nearby coast. Winter is typically wet, windy and cold with daytime temperatures range from 10°C to 20°C. Rains are brought with north westerly winds. Stellenbosch normally receives about 673mm of rain per year. Snow is usually seen a couple of times in winter on the surrounding mountains. Spring and autumn daytime temperatures hover in the 20°C's.

3.3.2 Topography

The Paradyskloof NA slopes upward from its lowest point closest to Brandwacht, at 160 meters above seal level, to the east rising to approximately 1050 m at its highest point. The north-south firebreak, dividing the property in half, is located at 350 m above sea level. Apart from the steep slope the area is characterised by three valleys draining from Stellenbosch Mountain towards the Eerste- and Blaauwklippen Rivers respectively.

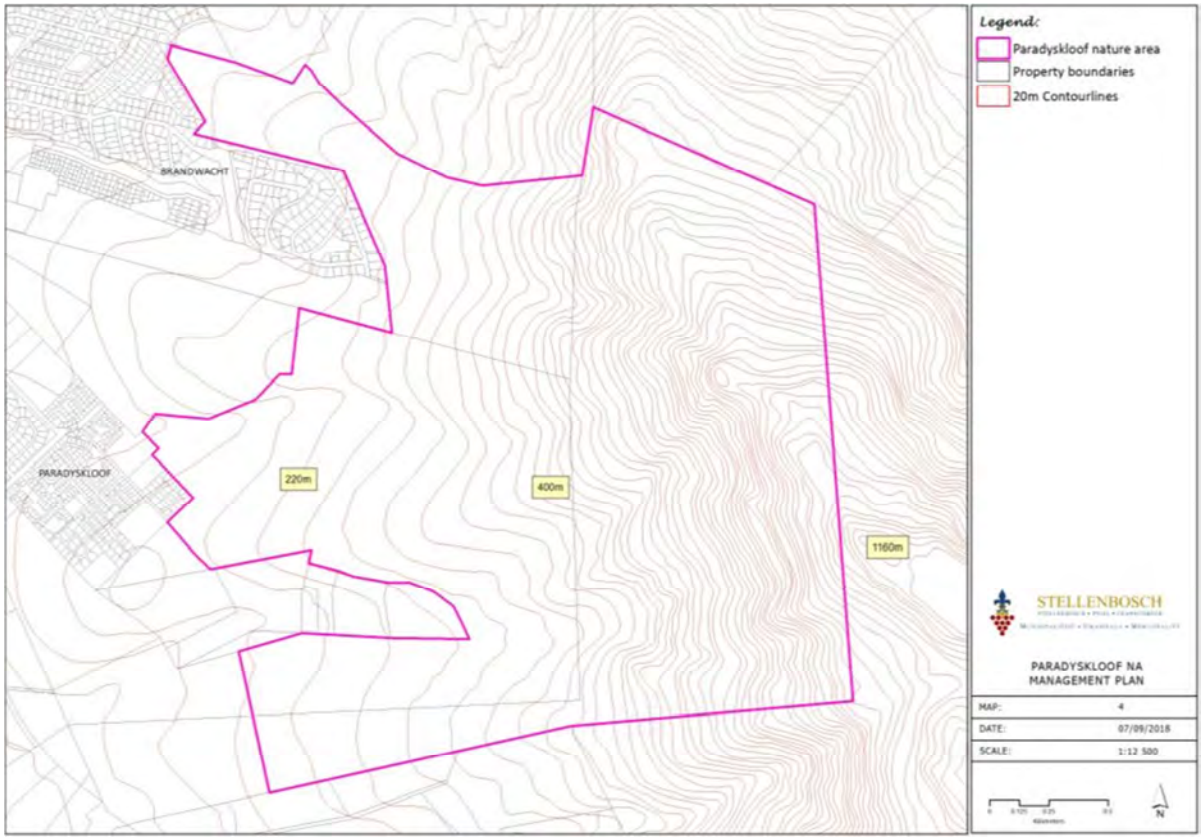

Figure 6: Paradyskloof NA topography

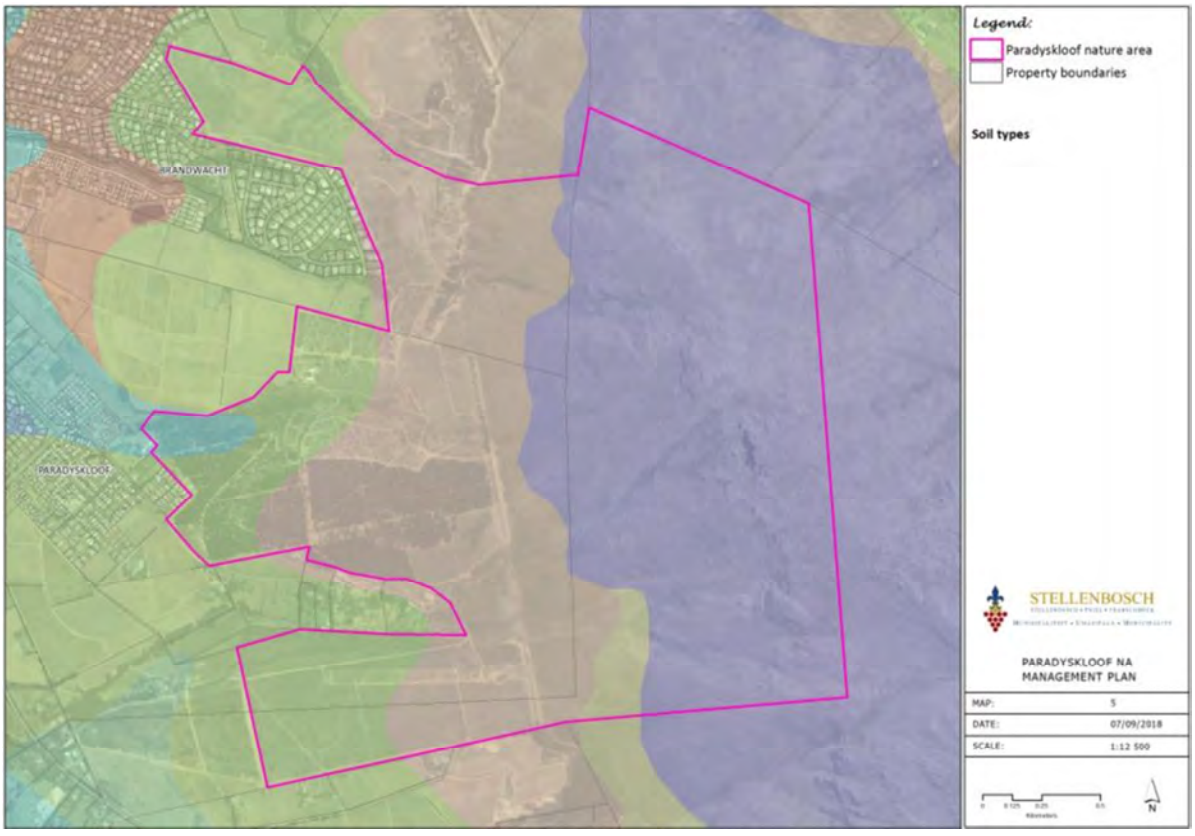

Figure 7: Paradyskloof NA soil

3.3.3 Soil

The higher lying areas of Paradyskloof NA is dominated with rock with little to no soil. The lower lying, or western portion of the Paradyskloof NA consist of red and yellow freely drained mesotropic to eutropic soils.

3.3.4 Hydrology

The Paradyskloof NA borders the Hottentots-Holland mountain catchment area and forms part of quarternary catchment[2] No. G22H (refer to Figure 8). The catchment functions of the NA may seem insignificant, however, it performs an important function as part of an integrated group of ecosystems that collectively determine the health of the entire catchment. A primary threat to environmental health is fragmentation of the community-supporting ecosystems. Fragmentation generally leads to a cycle of environmental degradation which consequently influences the well-being of the dependent communities.

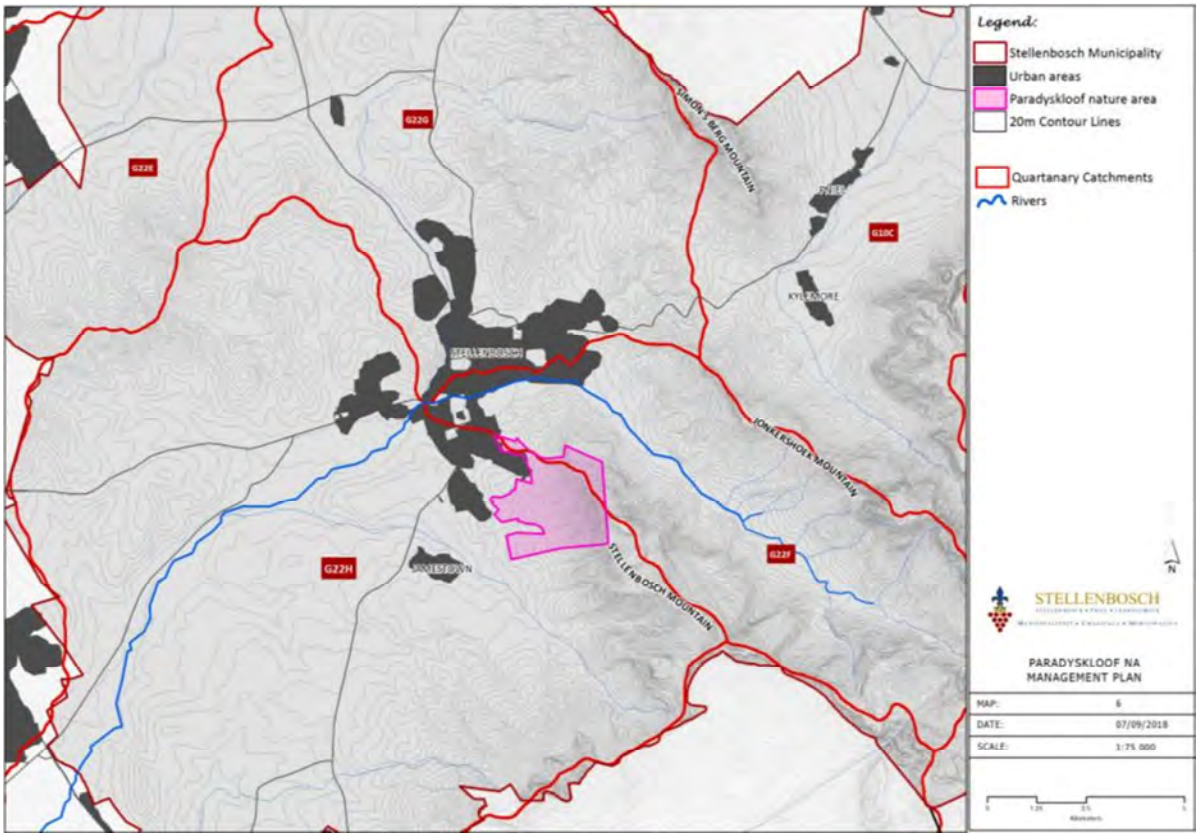

Figure 8: Paradyskloof NA in catchment area context.

Ecosystems and/or catchments are mutually dependent on every natural component for their existence. The loss, or degradation, of one component thus affects all others, potentially leading to the collapse of the total system on which communities may depend for their livelihood. Hence the

[2] Catchment (or catchment area) is defined as the entire land area from which water flows into a river; catchments can be divided into smaller 'sub-catchments' which are usually the area which drains a tributary to the main river or a part of the main river.

importance of conserving every natural part, or life form, of a system that forms part of the natural water cycle[3]. Government policy, which forms the basis of the National Water Act, 1998 (Act 36 of 1998), states that *'since many land-uses have a significant effect on the water cycle, the regulation of land-use should, where appropriate, be used as an instrument to manage water resources'*.

3.3.5 Fauna

The Paradyskloof NA, especially the higher lying area, is home to leopards, caracals, klipspringers, baboons, honey badgers, mongoos and numerous smaller annimals like micem shrews and rats. Birdlife includes kingfishers, black eagles, spotted eagle owls, sugerbirds, orange-breasted sunbird and protea seedeaters[4]. On warm days rock agama lizards can be seen basking in the sun. Berg adder, puff adder, boomslang and Cape cobra are fairly common.

3.3.6 Flora

The area forms part of the world-renowned Cape Floral Kingdom internationally recognised as one of the six Floral Kingdoms of the world. The Cape Floral Kingdom is the smallest, covering a mere 0,06% of the earth's surface, and is the only Floral Kingdom contained in its entirety within a single country. The Cape Floral Kingdom is characterised by its exceptional richness in plant species and its high endemicity. More that 8 700 species are known to occur, with more than 68% being endemic[5]. The Cape Floral Kingdom is of immense scientific importance, both nationally and internationally. It covers only 4% of South Africa, but contains 45% of all plant species of Southern Africa. Approximately 75% of all plants in the South African Red Data Book are found in the Cape Floral Kingdom. Many Fynbos species are extremely localised in their distribution, with sets of such localised species organised into 'centres of endemism' (Low and Rebelo, 1996).

The vegetation type of Paradyskloof NA is Cape Wineland Shale Fynbos and is a vulnerable terrestrial ecosystem. Cape Wineland Shale Fynbos soil is naturally poor in nutrients, moist and is slightly acidic. The biodiversity of the Cape Wineland Shale Fynbos is incredibly high. The Cape Wineland Shale Fynbos comprises of a diversity of protea, erica, geophyte and daisy species as well as some endemic species. The vegetation type is of conservation significance because of its high vulnerability state due to its location on lower slopes, which are mostly used for agricultural and urban development. Of the 54% remaining natural areas only 25% are formally protected.

The information provided by the South African National Biodiversity Institute (SANBI) and the Cape Action for People and the Environment (C.A.P.E.) with regard to the irreplaceability[6] of habitats indicates that the middel to higher lying area above Paradyskloof and Brandwacht is of immense conservation importance (Figure 9). This is mainly due to the fact that the area is, or used to be, the habitat of the now almost extinct West Coast Renosterveld. The objective is to rehabilitate and

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[3] The water (hydrological) cycle describes the natural process of moving water out of the oceans, into the atmosphere, and back to the land and oceans.

[4] http://www.capenature.co.za/wp-content/uploads/2015/10/Jonkershoek-Map-Brochure1.pdf

[5] Confined, or exclusive, to a particular specified area.

[6] The potential contribution of a site to a preservation or representation goal. It is a fundamental way of measuring the conservation value of any site. An irreplaceable site will appear in every analysis of alternative combinations of sites. In other words, it is one which must be included in a conservation area because significant options for preservation are lost if the site is excluded.

conserve as much as possible of this area. More recent data, however, that was released as part of the Western Cape Biodiversity Spatial Plan (2017), shows that a large portion of the area is regarded a Critical Biodiversity Areas (CBAs) (Figure 10). The various catogaries indicated on Figure 10 are defined in Table 1 below.

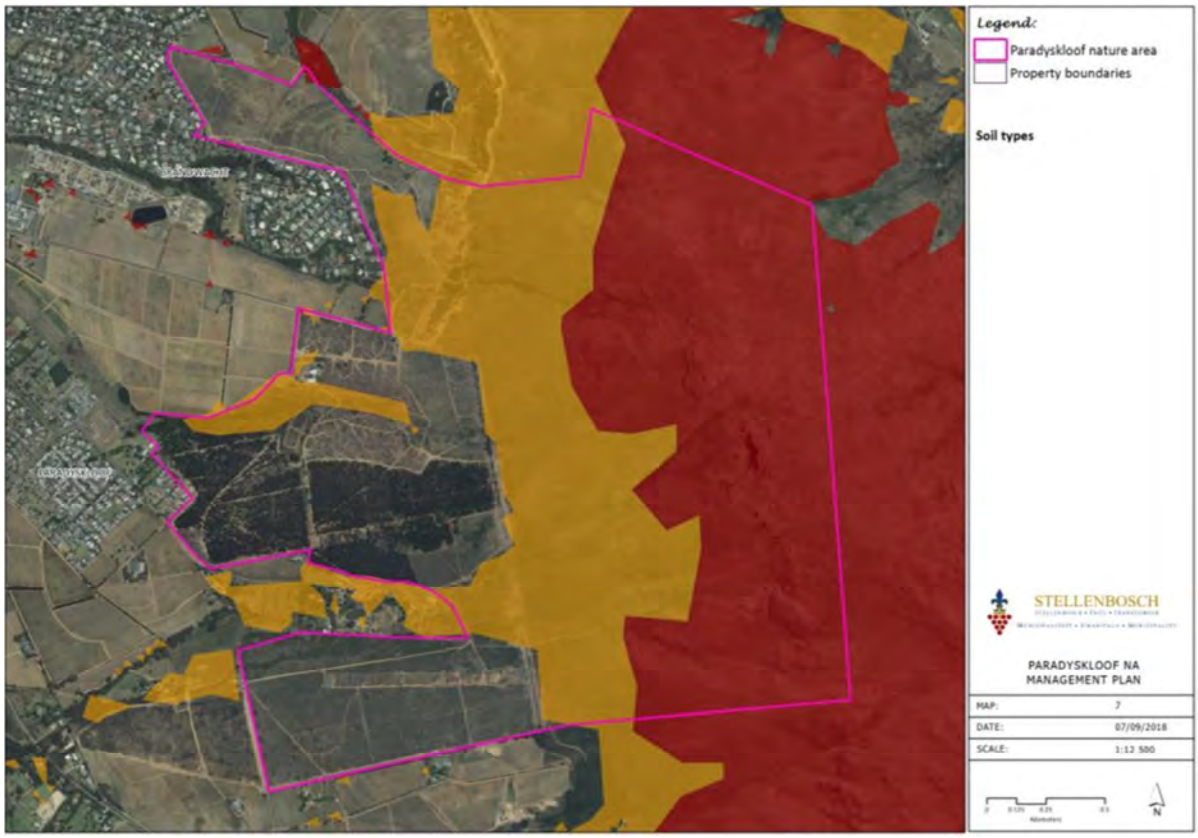

Figure 9: Irreplaceability of habitats in the Paradyskloof NA (Source: CAPE).

Table 1: Western Cape Biodiversity Spatial Plan map categories

MAP CATEGORY		DEFINITION
	Protected Area	Areas that are proclaimed as protected areas under national or provincial legislation.
	CBA 1	Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.
	CBA 2	Areas in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.
	ESA 1[7]	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.
	ESA 2	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.
	Other Natural Area	Areas that have not been identified as a priority in the current systematic biodiversity plan, but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although they have not been prioritised for biodiversity, they are still an important part of the natural ecosystem.

[7] Ecological Support Area

Figure 10: Critical Biodiversity Areas (Source: SANBI)

3.4 INFRASTRUCTURE

A number of municipal infrustructure is located within the Paradyskloof NA including water treatment works, reservoir and recently drilled boreholes. Being an old forestry area the western portion of the area has kilometers of existing service roads. The Paradskloof NA also has a "clubhouse" that was recently refurbished by the Municipality (Figure 11).

3.5 USE

The Paradyskloof NA is utilised in various ways, including:

a) Forestry: Most of the south-western portion of the Paradyskloof NA was at some point used for forestry. Whilst most of the trees in the area have been harvested over time the area still consist of an approximately 40 ha area of mature pine.

b) Outdoor recreation: As mentioned above, the Paradyskloof NA's western section has numerous existing service roads. These roads, and a system of tracks and trails are used for recreational purposes. These uses include

- Cycling (mountain-biking)
- Hiking
- Walking of dogs
- Running
- Horseriding

c) Research

d) Municipal infrastructure and service delivery: As described in Chapter 3.3 above, the Paradyskloof NA includes various area which form part of active municipal infrastructure that are used and maintained on a daily basis.

e) Events: The Paradyskloof NA is the subject of numerous event applications, mainly associated with mountain-biking or trail-running as well as the use of the clubhouse.

f) Filming: Stellenbosch Municipality from time-to-time received applications for filming or photoshoots within its nature areas.

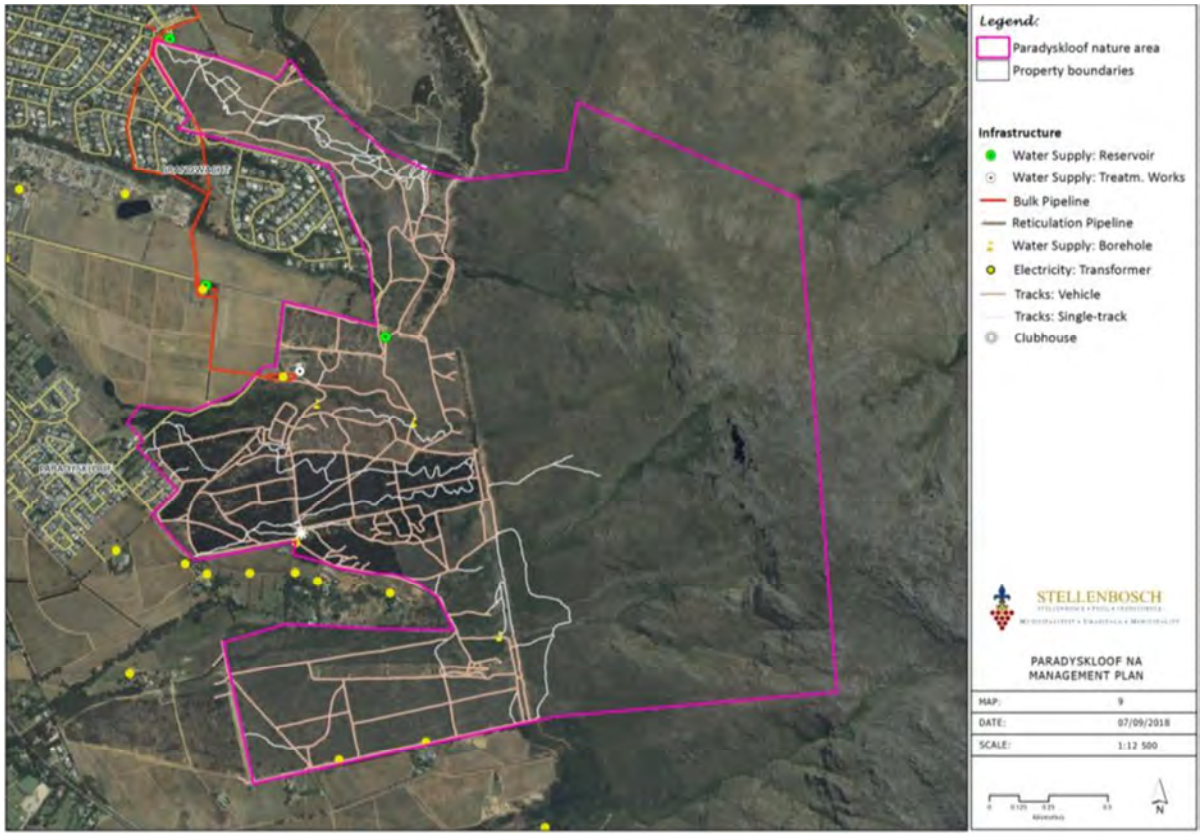

Figure 11: Existing infrastructure within the Paradyskloof NA

3.6 THREATS

The easten portion of the Paradyskloof NA is in a natural state whilst the western part has been impacted upon by historic land-uses, with particular reference to the forestry activities that have been largely phased out over the recent past. These activities resulted in:

(i) Severe habitat fragmentation and degradation.
(ii) General loss of biodiversity in affected areas.
(iii) Increased soil erosion.

Further threats to be addressed or mitigated include the following:

a) Access control: Uncontrolled access poses various threats to the area, mainly in terms of security (crime prevention), managing the risk of fire and vandalism.

b) Misuse and misunderstanding: The use of the area was primarily focused around the *instrumental* value of the site, which implies that the site has essentially been considered a mere resource utilised for forestry, infrastructure and recreational activities. These land-uses have caused degradation of the visual integrity and ecology of the site.

c) Fire: Given the nature of the ecology of the area, the presence of the forest, biomass, limited control of access and various other factors that increase the risk of an ignition the Paradyskloof NA is a risk to fire.

d) Infestation of alien vegetation: The infestation of alien plant species is a significant threat to the ecology and visual quality of Paradyskloof NA. The alien vegetation (which is a legacy of former forestry-related land uses) has resulted in a modified floral composition which is conducive to high-intensity fires. In turn, these are immensely disruptive to the ecology of fynbos and ecosystem processes.

4 MANAGEMENT DIRECTIVES

This section comprises the management strategies and guidelines in terms of which the Paradyskloof NA is to be managed in order to achieve the objectives documented above. The management strategies and guidelines are adressed under the following themes:

- Administration
- Environmental Protection
- Land Use Management
- Environmental Auditing

4.1 ADMINISTRATION

The long-term sustainability of the area largely depends on its effective administration. Of key importance in this regard is that the principle of economic efficiency be given effect through the general administration of the area and that its positive role and functions in respect of the promotion of environmental integrity and human well-being be understood and supported at all levels. Institutional commitment to achieving effective administration of the NA through, *inter alia*, the allocation of adequate budgets is of paramount importance.

Stellenbosch Municipality, through the Department: Community Services and its Nature Conservation section, is responsible for the management of the Paradyskloof NA. In terms of the principle of *inclusivity* the management of the NA is an ongoing inclusive process that gives meaningful consideration to the changing and dynamic interests, needs and values of the people of Stellenbosch and those that have an interest in ensuring a sustainable future for the area. In this regard, it is important that the following be achieved:

a) Continued participation, representation and involvement of all stakeholders promoting broad-based policy learning and capacity development.

c) Developing and utilising the skills and capacities of the people living in the area in the management of the NA.
d) Encouraging on-going involvement of local people in the programs identified for the management of the NA.

Accordingly, the Municipality is to facilitate the establishment of a Friends of Paradyskloof NA that complies with and has the capacity to give effect to the above requirements. Whilst Stellenbosch Municipality is responsible for the general maintenance of the area and the implementation of this EMP the it will rely on the Friends of the Paradyskloof NA for specific management activities as required (Figure 12) or where the Municipal is limited through capacity constraints. The Municipality and representatives of the Friends of the Paradyskloof NA in turn will serve on the Stellenbosch Protected Areas Forum, attended by the Department of Environment and Development Planning, Cape Nature, Stellenbosch University and representatives from other protected areas throughout the municipal area. The Stellenbosch Protected Areas Forum is technical / scientific in nature and meets on matters concerning the management and conservation of protected areas in Stellenbosch Municipality.

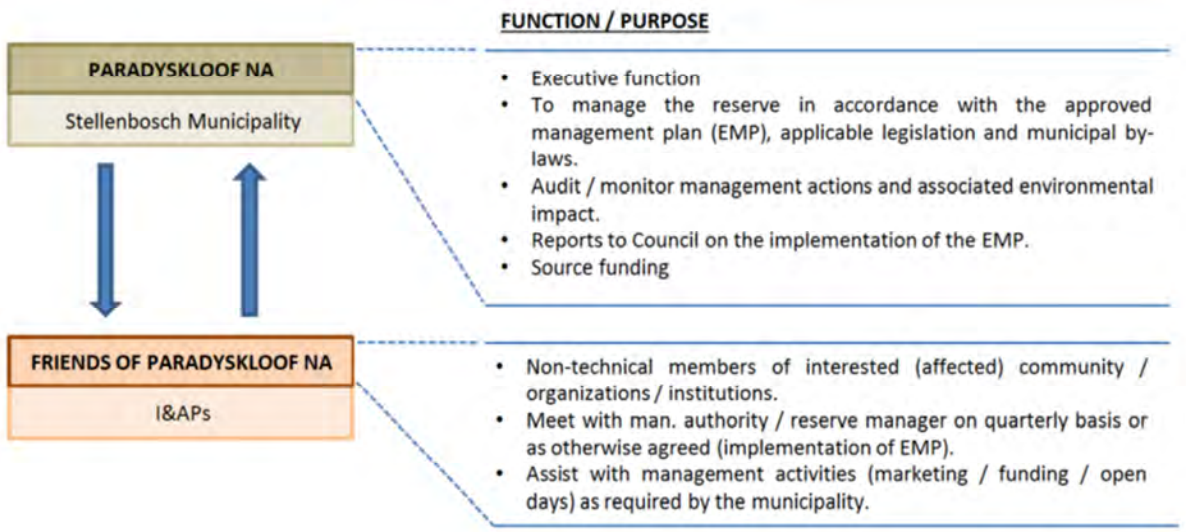

Figure 12: Paradyskloof NA management structure

Table 2: Guidelines for inception phase management

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
1	Compile an annual budget for Paradyskloof NA.	Annual at the beginning of the new financial year
2	Explicitly provide for the required funding for the Paradyskloof NA in the Stellenbosch Integrated Development Plan.	Ongoing
3	Solicit funds from potential donors.	Ongoing

4.2 ENVIRONMENTAL PROTECTION

Natural resources are defined *as any materials, services and conditions that are necessary for the survival of living organisms, and have the potential to enhance quality of life. They are, in a sense, inherited by people, and are therefore part of the earth's (the natural) and people's (the cultural) heritage. Living resource conservation is specifically concerned with plants, animals and micro-organisms, and with those non-living elements of the environment on which they depend. Living resources have two important properties, the combination of which distinguishes them from non-living resources - they are renewable if conserved, and they are destructible if not* (Perry, 1954).

The intention and focus of environmental protection on the Paradyskloof NA is to facilitate the removal or mitigation of threats to the ecological of the NA, to restore the biodiversity and ecological integrity of the area to the extent that it can function as a self-sustaining system.

4.2.1 Alien Clearing

Invasive alien plants are plant species that have been introduced, either intentionally or unintentionally, to South Africa. They can reproduce rapidly in their new environments and, as mentioned above, tend to out-compete indigenous plants. The result usually includes a variety of negative ecological, social, and economic impacts. Invasive alien species pose the biggest threat to biodiversity after direct habitat destruction.

Stellenbosch Municipality has prepared and adopted the Stellenbosch Municipality Invasive Alien Management Plan (April, 2017). In terms of this plan the Paradyskloof NA has *high indigenous biodiversity that is under threat by invasive alien plants.* The northern section of the site contains *Acacia saligna*, *Acacia mearnsii* and *Eucalypus grobulus*. In the central area (towards the neighbourhood of Paradyskloof) most of the natural vegetation originally has been transformed into pine plantations. This is be attributed to the plantation history of the area, consequently filling the seed bank with pine seeds over the plantation period. New seedlings sprout from the seed bank when vacant space becomes available after harvesting or clearing activities. There is a high occurrence of seedlings within the site, which is contributed to the disturbance caused by clearing efforts that occurred in the area. Within the disturbed area opportunistic recruitment of other invasive species, such as *Acacia saligna* and *Acacia mearnsii* is able to establish. Though their infestation is less severe than that of *Pinus pinea*, it is important to take into account the fast spreading nature of the species (via wind or human dispersal from already established populations) may lead to high infestation in the area if left unmanaged. The area is infested with *Pinus pinea*, *Eucalyptus grobulus*, *Acacia implexa, Acacia melanoxolyn, Acacia mearnsii, Acacia saligna* and *Acacia pygnantha,* of which *Acace saligna* and *Acacia mearnsii* infestation is the most severe, collectively covering up to 25% of the central area of Paradyskloof NA (Figure 13).

In terms of the above Invasive Alien Plant Management Plan past clearing efforts have taken place within the Paradyskloof NA, though the lack of follow up strategies has enabled the establishment of seedlings within the cleared areas. Initial clearing methods must be follow-up and monitored to ensure successful clearing of invasive alien plants. Accordingly:

- Clearing efforts should initiate at the top of the infested area, in terms of slope, and continue downwards. This will reduce erosion effect as well as minimize the re-establishment process of invasive alien plants within the cleared areas from overhead populations.
- Strategic placement of large tree trunks should reduce soil erosion on slopes after invasive alien clearing.
- Because the northern section of the Paradyskloof NA is less infested clearing strategies should start there, on the upper slopes, and continue downwards.
- Removal strategies for clearing invasive alien species in the area should be a combination of mechanical and chemical methods. All species should be removed mechanically by uprooting young plants and tree felling of larger trees (via axe or chainsaw), followed by the application of chemical herbicides to the cut surface to prevent resprouting. Each species has its own corresponding herbicide requirements to prevent resprouting activities and should be applied soon after tree felling. The use of herbicides may have negative effects on the health of soil composition and the natural ecosystem and should thus be used with caution and in reasonable/prescribed amounts.
- Continuous follow-up and removal of new seedlings after the initial clearing efforts are essential in order to clear the property of invasive alien plants. Follow ups and monitoring should occur annually and remaining or re-established invasive species should be removed when located.

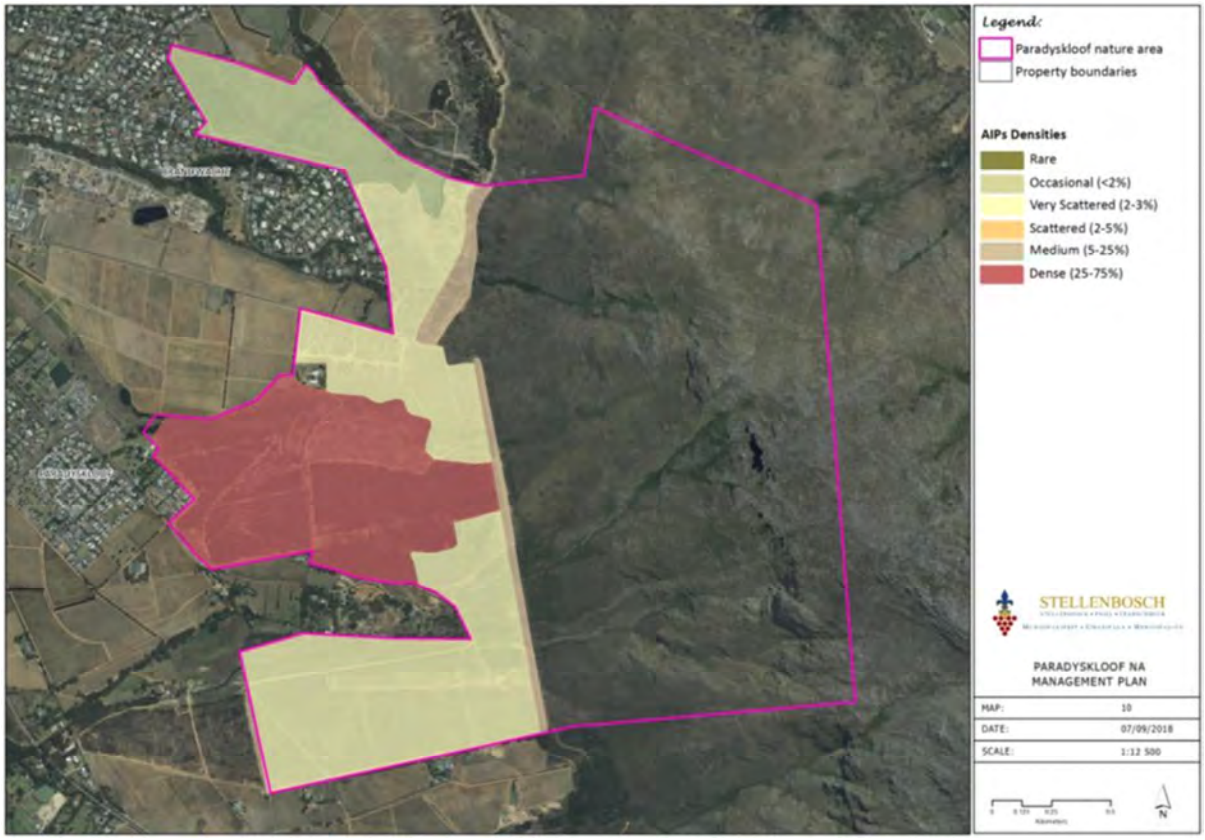

Figure 13: Paradyskloof NA AIPs densities

Table 3: Guidelines for alien clearing

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
4	Implement the Stellenbosch Alien Invasive Plan (IAP) Management Plan (2017).	Annual between the months of September and May
5	Map the areas that have been cleared of alien plants, indicating the date of operations, species removed and the current status of the portion of the site.	Annual as clearing is undertaken
6	Conduct an audit on the implementation of the IAP Management Plan.	Annually, by end of June

4.2.2 Flora

'Natural vegetation is the visual expression of the environment, it is a product of the action of environmental factors over time and hence can be a valuable indicator of potential productivity of ecosystems' (Bayer, 1970).

Table 4: Guidelines for flora conservation

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
7	Institute research to verify existing botany reports and assessments pertaining to the vegetation types that occur in the Paradyskloof NA.	Once the vegetation has recovered to the extent that a reliable information can be gathered and conclusions can be drawn
8	Institute scheduled research and monitoring to determine the recurrence of species.	Annually
9	Prevent the non-sustainable harvesting of plants used as traditional medicines dedicated training and education of local people, law enforcement and monitoring.	Annualy. Efficiency of strategies to be audited

4.2.3 Fauna

Biodiversity conservation essentially means conserving all the elements ('parts') of the natural environment. The mix of species in an ecosystem enables that system both to *provide* a flow of ecosystem services under given environmental conditions, and to *maintain* that flow if environmental conditions change.

The loss of biodiversity, therefore, limits the resilience of the affected ecosystem, which in turn, may have direct negative economic implications. Therefore, in order to promote biodiversity conservation in the NA it is imperative that the conservation of the faunal component receives appropriate attention.

Table 5: Guidelines for fauna conservation

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
10	Continually monitor and record occurrence of wildlife.	On-going
11	Prevent all forms of unnatural predation through on-going education and law enforcement.	On-going

4.2.4 Soil

Former and current land-uses resulted in loss of topsoil in places within the NA. Appropriate measures must be taken to protect areas susceptible to erosion by installing all the necessary temporary and permanent drainage works as soon as possible. Steep slopes and other areas prone to erosion must be maintained or restored according to the following guidelines:

a) Warning signage displaying NO ENTRY, must be installed on all roads, trails or walkways that are permanently or temporarily closed.

b) Existing erosion areas must be back-filled (using on-site material), compacted and restored to a proper condition.

c) Roads, trails or walkways, permanently closed for use, must be:
   i) ploughed,
   ii) the top soil scarified (to make sure that no downhill trenches or drainage lines are created),
   iii) water diversion walls created by hand at a distance of 10 metres apart (depending on the slope) leading 5 metres into the natural vegetation,
   iv) and revegetated by either soughing or transplanting appropriate material.

d) Areas, where the above measures are not sufficient, must be logged, parallel to the contour in order to prevent further soil erosion. Logs must be laid in lines 15 metres apart, depending on the slope (the steeper the slope the closer the barriers must be laid to each other). Logs must be secured by means of steel pegs hammered through a drilled hole on each end of the log (logs longer than 2 metre must be secured by an additional steel peg through the middle of the log). Where logs are laid across a road, the log must be laid up to a minimum of 1 meter past the edge of the road.

e) Roads (to stay in use) must be graded to have a slight gradient to the inside (up-hill) (refer to Figure 14). A drainage ditch must be created on the inside of the road. Gravel humps must be created at an angle across roads to drain water from the road surface into to the drainage ditch. At selected locations (depending on the slope) furrows must be created across the roads surface to discharge the water collected in the drainage ditch. The guiding principle behind the creation of a drainage ditch and discharge furrows is to not allow water to reach a speed at which it will create erosion. After a rain event all roads must be inspected to determine if any maintenance is required.

f) Erosion sites on bicycle tracks and walking trails must be logged following the contours and spaced vertically 0.8-1.2 m apart, depending on the steepness of the slope.

g) Logs must be untreated pine (or gum) poles of not less than 150 mm with a taper of not more than 75 mm over its length.

h) Cut and fill slopes will be shaped and trimmed to approximate the natural condition and contours as closely as possible and be undulating. Levels, incongruous to the surrounding landscape, will be reshaped using a grader and other earthmoving equipment.

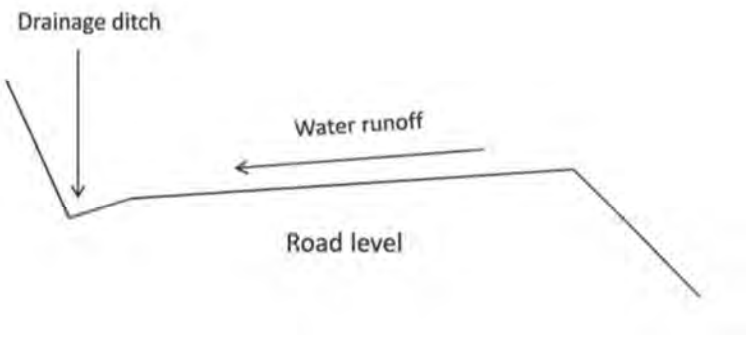

Figure 14: Road surface slope with a drainage ditch

Table 6: Guidelines for the conservation of soils

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
12	Restore erosion sites in accordance with the guidelines above.	On-going Quarterly photographic monitoring at fixed points Annual auditing
13	Inspect drainage ditches on all roads after exceptional rain event to determine whether maintenance is required.	On-going
14	Implement preventative measures on potential erosion sites. All roads and tracks, used or closed, are considered potential erosion sites.	On-going Quarterly photographic monitoring at fixed points Annual auditing
15	Prevent overuse of routes and sites susceptible to erosion through appropriate signage.	Monthly site inspection

4.2.5 Water

The role and potential impact of Paradyskloof NA seems negligible when considered against the scale of the catchment as a whole. The area is, however, vital components of the catchment and should be managed accordingly.

Table 7: Guidelines for managing Paradyskloof NA as part of the Eerste River catchment

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
16	Remove all forms of pollution.	On-going
17	Manage invasive alien plants in terms of the Stellenbosch (IAP Management Plan (2017).	On-going

4.2.6 Fire

The Paradyskloof NA is susceptible to fire due to activities on the property as well as land uses on adjoining properties. Any fire management regime must therefore provide innovative measures to combat the occurrence and spread of wild fires. The overarching fire management goals as it pertains to the Paradyskloof NA are to:

a) Protect people and property.
b) Protect natural and cultural resources from undesirable effects of fire.
c) Suppress unwanted fire.
d) Allow fire to assume its natural role in the ecosystem.
e) Manage fire cooperatively with neighbouring land owners and other stakeholders.

The fire management regime of the NA is premised upon the following risk management strategies:

Table 8: Fire management strategies

Management Strategies	Guidelines
a) Avoiding the risk	Prohibiting high-risk human activities in close proximity to the NA.
b) Reducing the hazard	Prescribed burning, preparation of firebreaks or manual clearing of fire hazards as well as regular inspections.
c) Reducing ignitions	Education and awareness programs, fire bans, reduction in activities during high-risk season or periods, efficient ignition investigation.
d) Reducing consequences	Contingency plans, community education programs for self-protection (lives and property), and building restrictions and standards for areas prone to veld fires.
e) Implementing an innovative artificial burning regime	Such regime and associated practices are to reduce the risk of wild fires spreading and causing extensive ecological and financial damage. Such artificial regime implies the creation of a mosaic of veld ages that will enhance the capacity of the area to and maintain its ecological functioning.

This EMP builds on the recognition that the threat of fires to the Paradyskloof NA and the relevant reasons for such threat are unique. Due to surrounding land uses and human behaviour wild fires will probably not be prevented through any measures taken. The solution lies in a combination of options (a), (b) and (c) above.

It is important to understand the basics of fire before preparation can be made for efficient control thereof. It is essential to note that three environmental components are required for a fire to occur. These are oxygen, heat and fuel (refer to Figure 15). Whilst the atmosphere contains 21% oxygen, only 16% oxygen needs to be in the air for a fire to start. Fuel is any living or dead material that will burn. If ignition occurs in the situation or environment where all three elements are present combustion will result and a fire will continue to burn until one of the three elements are removed. It is difficult to exclude oxygen from fires. Heat is considered a constant. However, a reduction in fuel will reduce the total energy output (refer to Figure 16). Fuel or more specifically the amount of fuel is the aspect that can be influenced most. It therefore becomes the most critical factor in the prevention and control of fire.

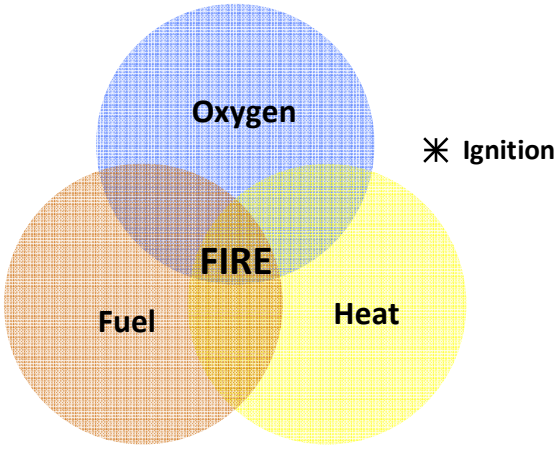

Figure 15: Basic elements of fire

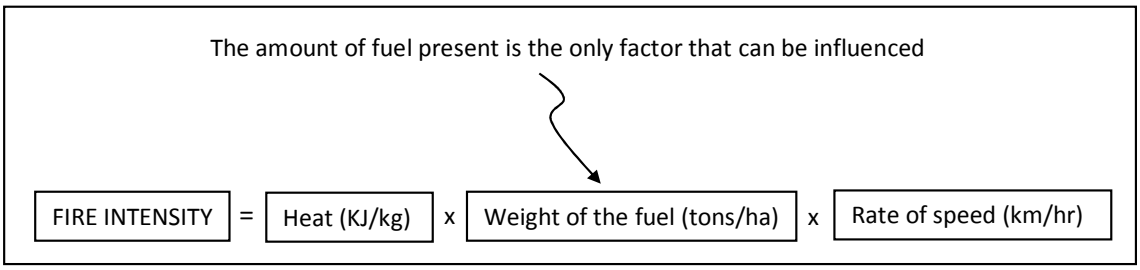

Figure 16: The factors determining the intensity of fire

Two ways of reducing the fuel load are alien vegetation clearing or control and the establishment and maintenance of firebreaks.

4.2.6.1 Alien Clearing

Invasive alien plants are characterised by being able to reproduce rapidly in their new environments, and this is usually due to a combination of factors, including:

- A lack of natural enemies in the new environment
- Resistance to local diseases and other plant pathogens
- Highly competitive growth and colonising strategies that provide them with a competitive edge, and an ability to out-grow local indigenous plants

Invasive alien plants can significantly alter the composition, structure and functionality of ecosystems and increase the fuel load for fires. They degrade the productive potential of the land, intensify the damage caused by veld fires and flooding, increase soil erosion, and impact on the health of rivers and estuaries.

4.2.6.2 Firebreaks

Fire breaks are cleared paths which will prevent the spread of fire by removing the fuel from the fire path. Section 12 of the National Veld and Forest Fire Act *stipulates that every owner on whose land a veldfire may start or burn or from whose land it may spread must prepare and maintain a firebreak on his or her boundary between his or her land and any adjoining land*. In terms of Section 13 of the Act above *a landowner is obliged to prepare and maintain a firebreak, with due regard to the weather, climate, terrain and vegetation*. The firebreak must:

- be *wide enough and long enough to have a reasonable chance of preventing a veldfire from spreading to or from the neighbouring land*,
- *not cause soil erosion*, and must
- be *reasonably free of inflammable material capable of carrying a veldfire across it.*

In terms of Section 16 of the National Veld and Forest Fire Act the right or duty to prepare and maintain a firebreak prevails over any other prohibition in any other law on the cutting, disturbance, damage, destruction or removal of any plant or tree, except the owner must where possible, transplant any plant which is protected in terms of any law or where it is safe and feasible, position the firebreak so as to avoid such plant or tree.

A fire break is a means of access for personnel and equipment, to serve as a control line and to serve as a line from where a fire can be attacked from, for example by setting a backburn. The firebreaks are to be linked to access roads, thereby reducing the areas requiring preparation and increasing accessibility to the various sites. Locations where firebreaks are required vary. Individual circumstances will determine what type, width and length will be applicable. When constructing firebreaks it is important that all vegetation cover is removed and that only rocks and soil (minerals) are exposed. A fire can travel very slowly through the grass roots or decayed vegetation and great care must be taken to ensure that minimal earth is exposed throughout the length and width of the break. The following factors must be taken into account with the construction of firebreaks.

- Access: The placement of firebreaks on a slope must be determined by access to the break.
- Slope: Slope is the steepness of the land and has the greatest influence on fire behaviour. The steepness of the slope affects both the rate and direction of the fire spread. Fires usually move faster uphill than downhill and the steeper the slope, the faster the fire will move. This is because:
    - on the uphill side, the flames are closer to the fuel;
    - the fuels become drier and ignite more quickly than if on the level ground;
    - wind currents are normally uphill and this tends to push heat flames into new fuels;
    - convected heat rises along the slope causes a draft which further increases the rate of spread; and
    - burning embers and chunks of fuel may roll downhill into unburned fuels, increasing spread and starting new fires.
- Aspect: Aspect is the direction the land faces - north, south, east or west. The aspect of a slope influences a fire's behaviour in several ways:
    - southern aspects receive more direct heat from the sun, drying both the soil and the vegetation;
    - fuels are usually drier and less dense on southern slopes than fuels on northern slopes;
    - heating by the sun also causes earlier and stronger slope winds; and

- on south-facing slopes, there will normally be higher temperatures, stronger winds, lower humidities, and lower fuel moistures.

- Terrain: *Terrain* or special land features may control wind flow in a relatively large area. Wind flows like water in a stream and will try to follow the path of least resistance. Ridges, trees, and rocks may alter wind flow and cause turbulence or eddies to form on the windward side of obstructions. Also, when wind flows through a restriction, such as a narrow canyon, it increases in strength. Wind movement can be critical in chutes or steep v-drainages. These terrain features create a chimney effect, causing a forced draft, as in a stove chimney. Fires in these chutes or drainages spread quickly and are dangerous.
- Elevation
- Vegetation type
- Moisture content
- Size and shape of material.
- Volume and area covered.
- Fuel content (breaks alignment should avoid heavy fuel concentrations and be situated in areas with the lightest fuels possible).
- Wind direction (internal belts should as far a possible run parallel with the prevailing winds).
- Spotting distance.
- Firebreaks should be anchored, iether to a natural barrier, road or another firebreak.
- Natural or existing barriers like roads, paths, streams, lakes, vleis, rivers, rock outcrops, or any other break in fuel should be utilise as far as possible.

There are four methods of preparing a firebreak and proper consideration should be given to each before commencing the preparation of a firebreak.

- Manual: Preparing a firebreak manually involves the utilisation of a team of workers working in a planned manner using manual tools.
- Burning: After deciding where the belt is to go, an adequate tracer is cut around the entire belt, and then the belt itself is burnt. This is the most common form of preparing a firebreak.
- Ploughing/brushcutting: Ploughing/brushcutting with a tractor is a common method of constructing breaks where the vegetation is low or has been previously removed. The positive thing with brushcutting is that the roots are not destroyed and this will assist in reducing erosion on these breaks. Bushcut material should be removed two months after cutting, and mulched at a organic dump.
- Application of herbicide: With this method herbicide is used to kill off all the plant growth in the firebreak.

Firebreaks currently being maintaind in and around Paradyskloof NA exist along the edge of Brandwacht- and Paradyskloof neighbourhoods, towards the north of the area as well as a firebreak between the old forestry section and the eastern mountain slopes (Figure 17).

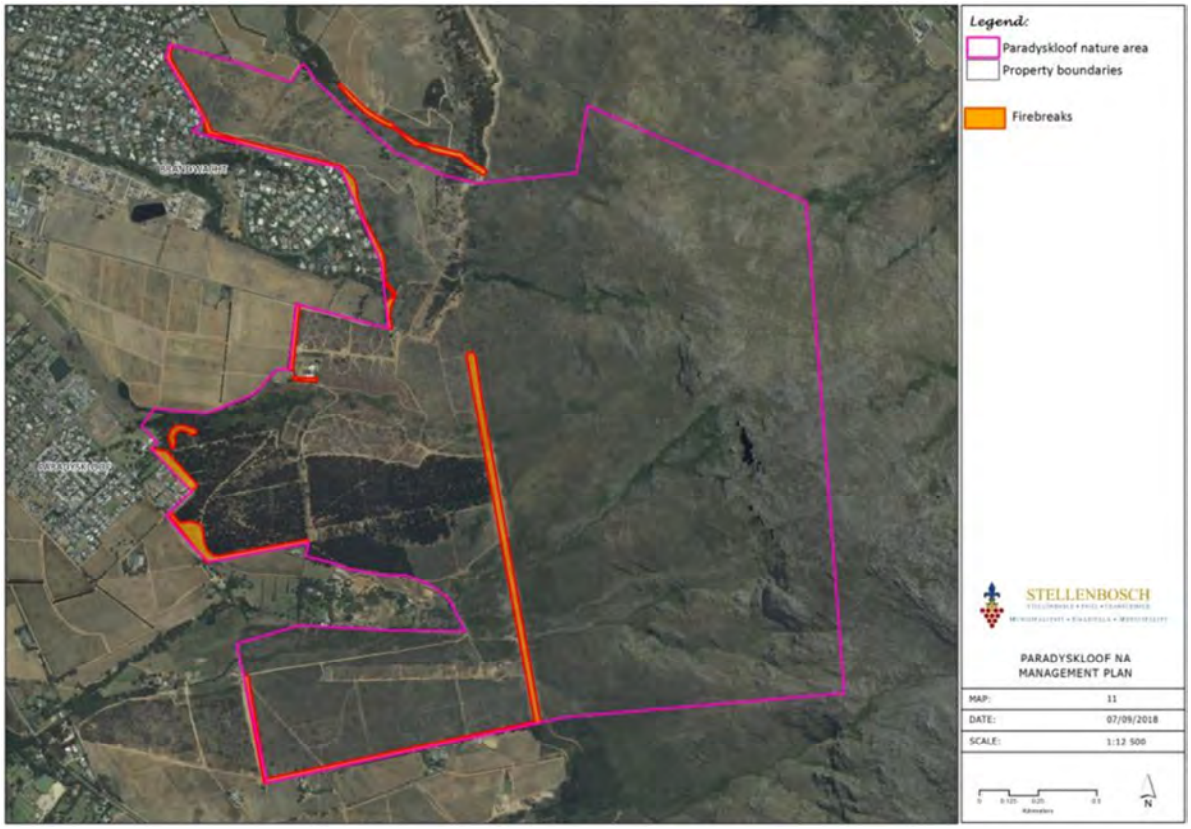

Figure 17: Firebreaks in and around Paradyskloof NA

Table 9: Guidelines for management of fire within the Paradyskloof NA

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
18	Maintain the existing firebreaks.	Annually Completed by end October
19	Conduct inspection of the area along with a representative of the local fire protection association to identify the need for additional firebreaks.	Immediatly
20	Prepare firebreaks as required.	Completed by end October
21	Prepare and maintain a register of veld fires including the extent and date.	Compliance audited annually

4.3 LAND USE MANAGEMENT

4.3.1 Management / Use Areas

Chapter 3.5 above lists the main uses of the Paradyskloof NA. Because the area has such a spectrum of uses and comprises an area with variable degrees of degradation, ecological importance and topographical characteristics, a uniform set of management principles and rules for utilisation of the area is not feasible. The area must be retained as a public resource, used for recreational purposes on a daily basis whilst the environmental integrity of the area is protect at the same time.

The management and use of the Paradyskloof NA is therefore predribed by way of defining the areas within which the various activities or use is allowed within. Table 10 below describes the various areas depicted by Figure 18. The various areas and uses are informed by existing infrastructure and use as well as the information contained in the Western Cape Biodiversity Spatial Plan.

Table 10: Paradyskloof NA Management / Use Areas

Area	DEFINITION
Conservation 1	Areas proclaimed as protected areas under national or provincial legislation. User activities with minimal impact allowed in these areas.
Use	• Research • Hiking • Trail-running
Conservation 2	Areas in a natural condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure. User activities with minimal impact allowed in these areas.
Use	• Research • Hiking • Dog-walking • Trail-running • Mountain-biking on defined routes
Rehabilitation	Areas in a degraded condition to be rehabilitated.
Use	• Research • Hiking • Dog-walking • Trail-running • Mountain-biking on defined routes • Approved events
Recreation	Infrastructure for recreational use.
Use	• Hiking • Dog-walking • Trail-running • Mountain-biking • Approved events • Film-shoots
Uitility	Areas that contains municipal infrastructure.
Forestry	Existing pine forest to be maintained as such and potentially harvested harvested.

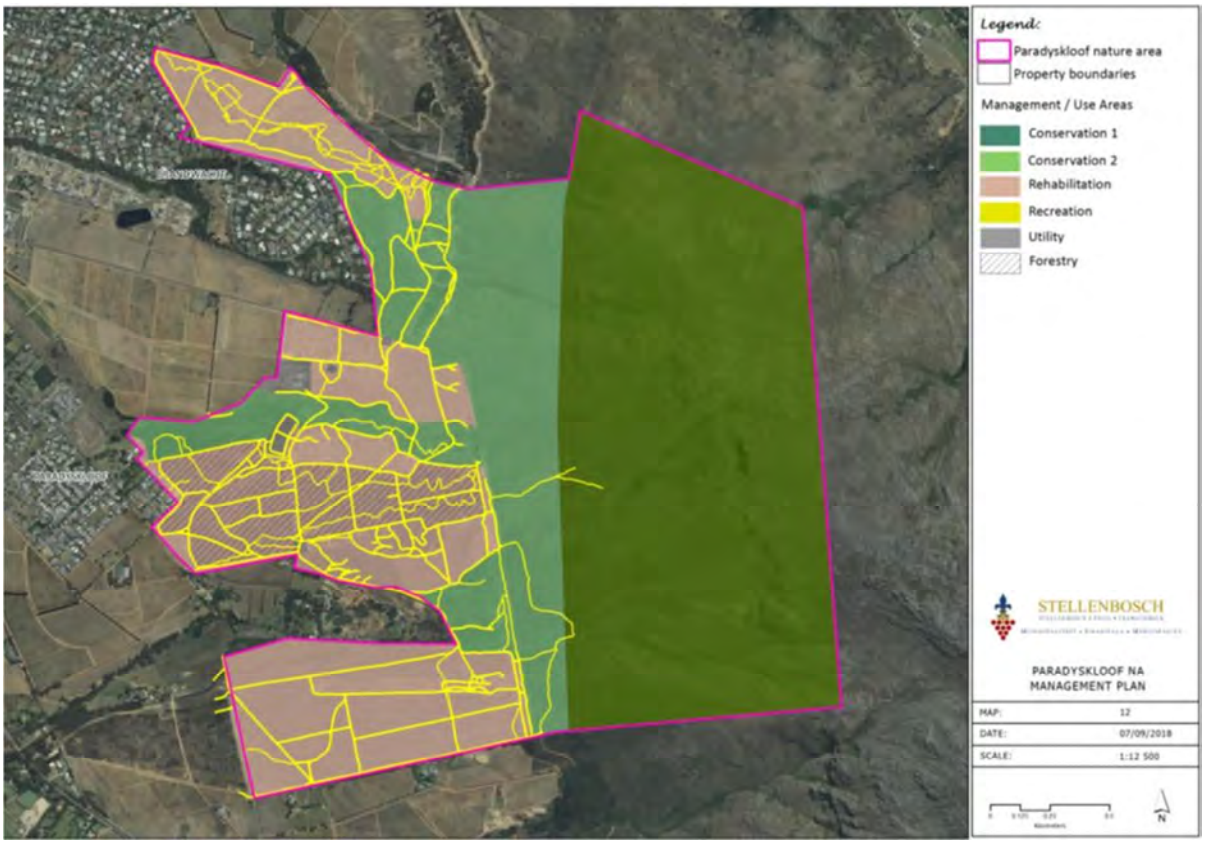

Figure 18: Paradyskloof NA Management / Use Areas

Table 11: Guidelines for management of the Paradyskloof NA Management / Use Areas

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
22	Investigate formally declaring the Paradyskloof NA as a nature reserve.	Immediately after EMP approval
23	Communicate the applicable use areas and associated appropriate activities through signage at the NA entrances and on-site.	Immediately after EMP approval
24	Conserve and protect Conservation 1 and 2 areas.	Audited
25	Inspect Recreation Areas to assess the impact of use and degredation.	Annually
26	Implement nessecary rehabilitation works where required.	Ongoing
27	Investigate the possible utilisation / harvesting of the the existing pine plantation or part thereof.	Immediately after EMP approval

4.3.2 Clubhouse

Stellenbosch Municipality has recently refurbished the clubhouse situated within the Paradyskloof NA (shown on Figure 11 above). The facility is intented to be used for municipal meetings and functions and to serve as an educational centre. Managed correctly this facility can add immense value to the Paradyskloof NA by way of drawing visitors to the area and providing income that can contribute to the management of the area.

Various risks or challenges associated with the facility include the following:

i) Use of the facility may become a source of nuisance for users of the area or neighbouring landowners if permitted uses is not defined and managed.
ii) Use of the facility may become a source of pollution.
iii) The facility present a fire risk.
iv) The facility runs the risk of becoming delapitated or a financial burden if not managed correctly or used to its full potential.

The following set of rules must be implemented in order to adress the above risks / challenges:
a) An official application for use of the clubhouse must be submitted to the Department: Community Services.
b) Use of the clubhouse must be approved by the Department: Community Services.
c) Conditions set by the Department: Community Services must at all times be complied with.
d) The person/organisation organising or applying for approval for the use of the clubhouse assumes responsibility for the event aswell as his/her or its guests complying to the above conditions of approval.
e) Fire is only allowed in designated areas.
f) Access for public users of the clubhouse may only by gained from the Paradyskloof Rd gate.
g) A maximum of 10 vehicles are allowed to enter the premises to attend a event held at the clubhouse. If the amount of guests attending an event require more than the allowed 10 vehicle access arangement must be made for the additional guest to be transported from the access gate up to the clubhouse.

Table 12: Guidelines for management and use of the Paradyskloof NA clubhouse

REF –NR	ACTIONS/IMPLEMENTATION	TIME FRAME
26	Maintain the clubhouse in good order.	Immediately Ongoing
27	Maintain a 15 meter cleared area around the clubhouse to act as a firebreak. This area is to be kept clear of any form of biomass.	Immediately Ongoing
28	Investigate / explore alternative uses for the clubhouse.	Immediately after EMP approval
29	Conduct inspection of the clubhouse following each event / function.	Ongoing
30	Consider each event or function in terms of the applicable event / function criteria.	Ongoing
31	Investigate the feasibility of entering into a lease agreement with a private entity or organisation to occupy a portion of the facility.	Immediately

4.3.3 Recreational Use

A primary function of the Paradyskloof NA is to enhance the well-being of the people of Stellenbosch and those visiting the area. Accordingly, the NA has an important role, namely to provide the foundation for recreational and tourism opportunities which are environmentally compatible. Chapter 3.5 above lists the range of outdoor- or recreational activities Paradyskloof NA is utilised for.

Rules applicable to the recreational use of the area are:

a) Entry and use is at a person's own risk. Stellenbosch Municipality and/or its employees shall not be liable for any damage, loss, theft, injury, accident or death suffered by any person, howsoever caused.
b) No lighting of fires (exept at the clubhouse, for an approved function or event).
c) No smoking.
d) Only existing roads, trails or tracks may be used. The construction or clearing of new roads, trails or tracks are prohibited.
e) Public vehicle / motorised access to the area is prohibited unless authorised.
f) Visitors to comply to all signage including access signage and route markers.
g) Any user of the area utilising the area for cycling, hiking or any other permitted activity must be equiped with the necessary safety gear and equipment.
h) All users must utilize the area in a manner that considers the enjoyment and safety of other users.
i) Various routes (roads, tracks or trails) may exclude particular activities such as cycling. In such cases where a route is temporarily closed for rehabilitation or maintenance, or permanently excludes a particular use, appropriate signage will be installed to communicate such information which must be adhered to as in (f) above.

Table 13: Guidelines for management of recreational use of the Paradyskloof NA

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
32	Maintain existing roads, trails and tracks to be fit for recreational use.	Ongoing
33	Inspect roads, trails and tracks to be fit for recreational use.	Monthly during summer or after heavy rain events. Weekly during summer.
34	Repair damaged roads, trails and tracks.	Ongoing
35	Close routes that require maintenance or rehabilitation and are not deemed to be safe for recreational use by installing appropriate signage and access barriers.	Ongoing
36	Install appropriate signage and route markers throughout the area.	Immediately after EMP approval
37	Inspect and maintain signage and route markers throughout the area.	Monthly

4.3.4 Municipal Infrastructure

As decribed in Chapter 3.4 above the Paradyskloof NA houses various municipal infrastructure. It is important that the Municipality are able to access, maintain and effect required improvements to these infrustructure. Although the importance of these works can not be underestimated it must be planned and excecuted in a manner that has te least possible impact on the area.

Table 14: Guidelines for management of municipal infrastructure

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
38	Maintain all infrustructire in good working order.	Ongoing

39	Development proposals or plans for maintenance work within the Paradyskloof NA to be circulated to the Department: Community Services for input.	Ongoing

4.3.5 Events

As mentioned in Chapter 4.3.3 (Recreation) above the Paradyskloof NA is a important resource used for spiritual, scientific, educational, recreational and tourism opportunities. Stellenbosch Municipality receives various applications for events in Paradyskloof NA for consideration. It is the Municipality's responsibility to ensure that such events are compatible with the area of Paradskloof NA, that such an event does not present an threat or impact to the area that can not be avoided or mitigated and that the area can ulimately benefit from such an event.

In order to give effect to the potential of the Paradyskloof NA in this regard events must be used as a way to create a strong element of ecological and cultural awareness with event organisers and participants in order to ensure environmental sustainability. The following applies to events in Paradyskloof NA:

(i) Events are to be held in a manner that has the least possible negative environmental impact.

(ii) Event applications must be submitted timeously for consideration, preferably 90 day prior to such an event.

(iii) Potential effects of an event must be considered by the municipality and an approval granted only if the potential impact of such an event is considered to be acceptable or is of such a nature that the likely impacts can be avoided and/or mitigated.

(iv) The applicant applying for an event license is to provide a scope of the proposed event activities, an assessment of the likely environmental impacts of such activities, recommended mitigation measures to be implemented and the degree to which the proposed mitigation measures are expected to address the identified environmental impacts.

(v) An application for an event in a nature area is to be circulated to the relevant municipal department tasked with the management of such an area for consideration, comment and the provision of conditions before a decision for the granting/refusal of an event license is made.

(vi) An applicant may be liable for an application fee, the criteria of which have been approved by the Council of Stellenbosch Municipality.

(vii) An event license granted is only valid upon acceptance of the set conditions for the hosting of the particular event and payment made of the application fee by the event organizer.

(viii) Unless specified otherwise, the event organizer assumes responsibility for the event's compliance to conditions imposed during the granting of an event permit.

(ix) The event organizer is responsible for any rehabilitation to a nature area damaged or degraded during an event. The scope of such rehabilitation work will be the restoration of an area to the state prior the hosting of the relevant event.

(x) In the event that rehabilitation work is required the municipality may direct an event organizer to investigate, evaluate and assess the impact of specific activities and report thereon and to complete rehabilitation measures before a specified reasonable date.

Table 15: Guidelines for events in the Paradyskloof NA

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
40	Consider all events in the area in terms of the above criteria.	Ongoing

41	Development a set of application fees for submission to Council.	Immediately after EMP approval

4.3.4 Development

It is imperative that the integrity of the Paradyskloof NA be protected through appropriate planning and management intervention. Accordingly any physical development in the Paradyskloof NA is to be planned and implemented to have the least possible impact and to have any such impact mitigated.

Table 16: Guidelines for development

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
42	Development proposals within the Paradyskloof NA to be circulated to the Deapertment: Community Services for comment.	Ongoing

4.4 ENVIRONMENTAL AUDITING

This EMP builds upon the notion that uncertainty (or lack of knowledge) about the status and function of ecosystems can be addressed in an *adaptive management strategy* - an approach that relies on continual assessment and adjustment. Although repeated revision of management decisions is at the core of adaptive management, this does not threaten resource security, rather it provides for sustainability of resource use. Threats to resource security can be minimised if management objectives are set clearly. In addition, adaptive management will reduce the sort of pressure that stymies action because initial choices are not viewed as final. The dimension of continual improvement is embodied in adaptive management. Continual improvement is defined as the process of enhancing management actions to achieve improvements in overall performance (i.e. remaining dynamic). It is achieved by continually evaluating environmental performance against set environmental policies, objectives and targets with the purpose of identifying opportunities for improvement. Accordingly, the Paradyskloof NA EMP is a dynamic document which is subject to updating and amendment in accordance with the results of monitoring and auditing and the outcomes of on-going scientific research.

4.4.1 Auditing Strategies

Table 17: Auditing actions

REF -NR	ACTIONS/IMPLEMENTATION	TIME FRAME
43	Audit all documented impacts of management actions on the environment.	Annually in October
44	Implement procedures for handling incidents of non-conformance with the EMP.	Annually in October
45	Manage environmental records, including the results of audits and reviews.	Immediately after EMP approval
46	Submit audit report to the Municipality.	Annually in October

4.4.2 Auditing Procedures

The environment audit to be undertaken is a methodical examination of the site's environmental information to verify whether, and to what extent, the management actions have complied with set

performance criteria. The review of the EMP on a five-year basis is based upon the results of the environmental audits the objective being to ensure its continuing appropriateness and effectiveness.

The environmental audit consists of three stages, namely *pre-audit*, *on-site audit* and *post-audit*. Pre-audit includes the administrative issues associated with planning the audit, selecting the institution to conduct the audit, and preparing the audit protocol. The main purpose of the pre-audit stage will be to develop an audit plan, based on the most recent information and the results of the previous year's audit. The audit plan must also address where the audit is to be conducted, what the scope and objectives of the audit are, how the audit will be conducted (keeping in mind that the results of the audit must be comparable to previous year's audit results), and when the audit is to be conducted.

The on-site audit involves the recording of required information. The audit team gathers information by observation, conducting photographic studies, taking measurements, and conducting tests as was determined during the pre-audit stage. During the on-site audit stage the strength and weaknesses of the methods of information gathering must be evaluated in order to determine whether the process of auditing is effective in achieving its goal. In keeping with the adaptive management approach, the auditing process must also be looking for continual improvement. All the information obtained is recorded and a comprehensive record of the audit and the state of affairs produced.

The audit report is completed during the post-audit stage. Such report will reflect previous results, current results, and recommended improvement goals. The audit report will also indicate failures or deficiencies and recommendations for corrective actions.

4.4.3 Environmental Indicators

Table 18: Environmental Indicators for the auditing process (*Environmental Indicators for National State of the Environment Reporting* [DEAT, 2002]).

ENVIRONMENTAL MANAGEMENT	
Environmental Management	EM01 – Multilateral environmental agreements EM02 – Budgetary allocation to natural resource management EM03 – Budgetary allocation to environmental education EM04 – Budgetary allocation to environmental research EM08 – Voluntary use of environmental accounting and reporting EM10 – Environmental reporting by the Municipality
BIODIVERSITY & NATURAL HERITAGE	
Species Diversity	BD01 – Threatened and extinct species per taxonomic group BD02 – Endemic species per taxonomic group BD03 – Alien (non-indigenous) species per taxonomic group BD04 – Population trends of selected species BD05 – Distribution and abundance of selected alien species
Habitat Change	BD06 – Extent of conserved area BD08 – Disturbance regimes: fire frequency
Resource Value	BD11 – Contribution to job creation: eradication of alien species
LAND USE	
Land Use	LU01 – Land cover LU02 – Land productivity vs potential
Land Condition	LU03 – Soil loss LU04 – Land degradation

5 VALIDITY

The Paradyskloof NA EMP is based upon and aims to give effect to a long-term vision for the area which is not subject to *ad hoc* or short-term amendment. However, in terms of the principle of continual improvement the EMP is subject to revision in accordance with the results of on-going monitoring and auditing to be undertaken as described in Chapter 4.4. It will be valid, in its current form, for a period of 5 years from the date approved by Council of Stellenbosch Municipality after which comprehensive revision has to be considered.

6 CONCLUSION

The Paradyskloof NA EMP is a mechanism intended to facilitate the achievement of the vision set for the area. The EMP and its associated processes of community participation, education and performance auditing presents an opportunity for all concerned to participate in the long-term management of the area for the benefit of the current and future generations. The implementation of the EMP presents the first step in such process. This document should therefore not be seen as a final product, but rather as a step towards the implementation of integrated bioregional planning as '*an organised process that enables people to work together, think carefully about the potential and problems of their region, set goals and objectives, define activities, implement projects, take actions agreed upon by the communities, evaluate progress and refine their approach*'.